



Our reference
F19/13/03-D21/26182

9 March 2022

Farm and Aerodrome and Audit and Risk Committee Meetings

Notice is hereby given that the **Farm and Aerodrome Committee and Audit and Risk Committee** will be held in the **Council Chambers, Stratford District Council, 63 Miranda Street, Stratford** on **Tuesday 15 March 2022** beginning at **12 noon**.

At this stage the meeting will be held in the Council Chambers, however should it be required due to the Covid Protection Framework, the meeting may be moved to an alternative venue or held virtually.

Timetable for 15 March 2022 as follows:

12 noon	Farm and Aerodrome Committee
1.30pm	Afternoon tea for Councillors
2.00pm	Audit and Risk Committee

Yours faithfully

Sven Hanne
Chief Executive

AGENDA

Audit and Risk Committee



F19/13/05 – D22/7596

Date: Tuesday 15 March 2022 at 2 PM

Venue: Council Chambers, 63 Miranda Street, Stratford

The meeting location may change, or will be held via Audio Visual Link, if required due to current COVID-19 Alert Levels or Government Guidelines.

1. Welcome

1.1 Opening Karakia
D21/40748 Page 6

1.2 Health and Safety Message
D21/26210 Page 7

2. Apologies

3. Announcements

4. Declarations of members interest
Elected members to declare any real or perceived conflicts of interest relating to items on this agenda.

5. Attendance Schedule
Attendance schedule for Audit and Risk Committee meetings.
Page 8

6. Programme of Works
D21/42807 Page 9

Recommendation

THAT the Audit and Risk Committee's rolling programme of works up to the end of 2023 be received.

/
Moved/Seconded

7. Confirmation of Minutes

7.1 Audit and Risk Committee – 16 November 2022
D21/41130 Page 10

Recommendation

THAT the minutes of the Audit and Risk Meeting of Council held on Tuesday 16 November 2022 be confirmed as a true and accurate record.

/
Moved/Seconded

8. [Matters Outstanding](#)
D18/27474 Page 17

Recommendation

THAT the matters outstanding be received.

/
Moved/Seconded

9. [Information Report – Building Consent Authority Accreditation Report](#)
D22/7412 Page 18

Recommendation

THAT the report be received.

Recommended Reason

As an accredited Building Consent Authority the Stratford District Council must ensure its procedures and practices for building consent matters meet legal requirements.

/
Moved/Seconded

10. [Information Report – Health and Safety](#)
D22/7619 Page 21

Recommendation

THAT the report be received.

/
Moved/Seconded

11. [Information Report – Risk Management](#)
D22/7622 Page 25

Recommendation

THAT the report be received.

Recommended Reason

To provide an update to the Audit and Risk Committee of any significant risks and any incidents or threats in relation to significant risks on Council's risk register from the previous quarter.

/
Moved/Seconded

12. Information Report – Audit NZ Matters Outstanding
D22/7505 Page 151

Recommendation

THAT the report be received.

Recommended Reason

This report informs the Committee of the issues identified in the final Audit New Zealand Management Report for the 2020/21 Annual Report and Long Term Plan 2021-31, summarising the actions that have or intend to be taken by Council officers to respond to audit recommendations with respect to each issue raised.

/
Moved/Seconded

13. Information Report – Capital Works Programme – Key Projects Update
D22/7023 Page 185

Recommendation

THAT the report be received.

Recommended Reason

To present an update on the progress of our key capital projects in the 2021/22 financial year, as requested in the September 2021 Audit and Risk Committee meeting.

/
Moved/Seconded

14. Information Report – Local Elections 2022
D22/7772 Page 192

Recommendation

THAT the report be received.

Recommended Reason

To give assurance to the Audit and Risk Committee that the Council is undertaking all necessary steps to manage the local elections for 2022 and the associated risks.

/
Moved/Seconded

15. Information Report – Internal Audit Report 2020/21 – Update
D22/7129 Page 224

Recommendation

THAT the report be received.

Recommended Reason

The Audit and Risk Committee is tasked with reviewing and monitoring the internal audit activities of Council on behalf of elected members.

/
Moved/Seconded

16. Correspondence
- Office of the Auditor-General – Change of Appointed Auditor, 2 February 2022
Page 230
17. General Business
18. Questions
19. Closing karakia
D21/40748 Page 232



Our reference
F19/13/03-D21/40748

Karakia

Kia uruuru mai
Ā hauora
Ā haukaha
Ā haumāia
Ki runga, Ki raro
Ki roto, Ki waho
Rire rire hau Paimārire

I draw in (to my being)
The reviving essence
The strengthening essence
The essence of courage
Above, Below
Within, Around
Let there be peace.



Our reference
F19/13/03-D21/26210

Health and Safety Message

In the event of an emergency, please follow the instructions of Council Staff.

Please exit through main entrance.

Once you reach the footpath outside please turn left and walk towards the War Memorial Centre congregating on the lawn outside the Council Building.

Staff will guide you to an alternative route if necessary.

If there is an earthquake – drop, cover and hold where possible. Stay indoors until the shaking stops and you are sure it is safe to exit or remain where you are until further instruction is given.

Under the current Pandemic setting visitor access beyond the customer service centre is restricted. Mask wearing is mandatory in all public areas as well as any areas where social distancing cannot be consistently achieved, such as corridors, staff rooms and bathrooms.

We recommend mask wearing for the duration of meetings unless social distancing of a minimum of 1 metre can be consistently achieved.

5. Attendance schedule for 2022 Audit and Risk Committee meetings.

Date	15/03/22	17/05/22	19/07/22	20/09/22	15/11/22
Meeting	A	A	A	A	A
Neil Volzke					
Grant Boyde					
Rick Coplestone					
Peter Dalziel					
Jono Erwood					
Amanda Harris					
Alan Jamieson					
Vaughan Jones					
Min McKay					
John Sandford					
Gloria Webby					
Philip Jones (Chair)					

Key	
A	Audit and Risk Meeting
D	Meeting deferred
NC	Non-committee member
✓	Attended
A	Apology/Leave of Absence
AB	Absent
S	Sick
(AV)	Meeting held, or attended by, Audio Visual Link

Audit and Risk Committee - Programme of Works (D21/42807)

	Mar-22	May-22	Jul-22	Sep-22	Nov-22	Mar-23
Standing Items	<ul style="list-style-type: none"> -Audit Correspondence Received (change of auditor) -Health and Safety Report -Risk Management Review (Global Risks Report 2022) - LTP Capital Projects status update -Audit NZ Matters raised (updated audit report for 2020/21) 	<ul style="list-style-type: none"> -Audit NZ Correspondence Received -Health and Safety Report -Risk Management Review - LTP Capital Projects status update 	<ul style="list-style-type: none"> -Audit NZ Correspondence Received -Health and Safety Report -Risk Management Review - LTP Capital Projects status update 	<ul style="list-style-type: none"> -Audit NZ Correspondence Received -Health and Safety Report -Risk Management Review -Audit NZ Matters raised - LTP Capital Projects status update 	<ul style="list-style-type: none"> -Audit NZ Correspondence Received -Health and Safety Report -Risk Management Review - LTP Capital Projects status update 	<ul style="list-style-type: none"> -Audit NZ Correspondence Received -Health and Safety Report -Risk Management Review -Financial Report -Audit NZ Matters raised - LTP Capital Projects status update
Annual Items	<ul style="list-style-type: none"> - Internal Audit (status report on previous year audit) 	<ul style="list-style-type: none"> -Cyber Risk prevention update - Annual Plan 2022/23 update (include investigation into financial budget models) 	<ul style="list-style-type: none"> - Review of Insurances -Civil Defence Readiness - Internal Audit Plan 2022/23 	<ul style="list-style-type: none"> -Annual Report update -Internal Audit Report (outcomes) 	<ul style="list-style-type: none"> -Committee Self-Review 	<ul style="list-style-type: none"> - Internal Audit (Plan for 2022, and status report on previous year audit) - Annual Plan 2022/23 update
One-Off Items	<ul style="list-style-type: none"> -IANZ Building Accreditation update - Local Elections 2022 		<ul style="list-style-type: none"> - 3 Waters Reforms: risk identification and management 	<ul style="list-style-type: none"> - Risk 32 - Lone Worker deep dive 		<ul style="list-style-type: none"> - Climate Change resilience, strategic risk deep dive

MINUTES

Audit and Risk Committee



F19/13/05 – D21/41130

Date: Tuesday 16 November 2021 at 2pm
Venue: Council Chambers, 63 Miranda Street, Stratford

Present

P Jones (the Chair), the District Mayor N C Volzke, the Deputy Mayor A L Jamieson, Councillors J M S Erwood, P S Dalziel and M McKay.

In attendance

Councillors G W Boyde, G M Webby, A K Harris and W J Sandford.

The Chief Executive – Mr Sven Hanne, Director Corporate Services – Mrs T Radich, the Director Assets – Mrs V Araba, the Director Community Services – Ms Kate Whareaitu, the Director Environmental Services – Mr Blair Sutherland, the Administration and Communication Support Officer – Ms R Vanstone, the Roading Engineer – Mr Steve Bowden, the Communications Manager – Ms Gemma Gibson, the Health & Safety/Civil Defence Advisor – Mr Mario Bestall, the Audit Director, Audit New Zealand – Mr Chris Webby (*via audio visual link*) and one member of the media (Stratford Press).

1. Welcome

The Chair welcomed the District Mayor, Councillors, staff and the media to the meeting.

The Chair noted the health and safety message and emergency procedures on page 5 of the agenda.

2. Karakia – opening

The opening karakia 'Kia Uruuru Mai' was conducted by the District Mayor.

3. Apologies

No apologies were received.

4. Announcements

The Chief Executive announced that Mr Barry Jagersma, who gave 34 years of service to this Council as a roading engineer, passed away earlier today. Mr Hanne offered condolences to the Jagersma family on behalf of the organisation.

5. Declarations of Members Interest

The Chair requested councillors to declare any real or perceived conflicts of interest relating to items on this agenda.

There were no declarations of interest relating to items on this agenda.

6. Attendance Schedule

The attendance schedule for Audit and Risk Committee meetings was attached.

7. Programme of Works
D21/6382 (Page 8)

Recommendation

THAT the Audit and Risk Committee's rolling programme of works up to the end of the 2022 be received.

DALZIEL/VOLZKE
Carried
A&R/21/44

The Audit Director was admitted to the meeting by audio visual link at 2.05pm.

8. Confirmation of Minutes

8.1 **Audit and Risk Committee Meeting Minutes – 21 September 2021**
D21/33297 (Page 9)

Recommendation

THAT the minutes of the Audit and Risk Committee Meeting held on Tuesday 21 September 2021 be confirmed, with any amendments, as a true and accurate record.

ERWOOD/McKAY
Carried
A&R/21/45

9. Matters Outstanding
D18/27474 (Page 15)

Recommendation

THAT the matters outstanding be received.

McKAY/VOLZKE
Carried
A&R/21/46

10. Information Report – Receive Draft Annual Report 2020/21
D21/40294 (Page 16)

Recommendations

1. THAT the report be received.
2. THAT the draft Annual Report 2020/21 be received.

Recommended Reason

The draft Annual Report 2020/21 has been released to Audit New Zealand for the annual audit, which is expected to be completed by 8 December 2021 and adopted by Council on 14 December 2021.

ERWOOD/DALZIEL
Carried
A&R/21/47

The Chair welcomed Mr Chris Webby, Audit New Zealand's (Audit NZ) Audit Director to the meeting.

The Audit Director noted the following points:

- A team of auditors was onsite earlier in the month. An auditor continues to work offsite with council staff.
- Regarding central government's Three Waters announcement, a subsequent event note will be added to the Annual Report, and a matter of emphasis in the Audit Report, which will cover the decision.
- The Annual Report is scheduled to be signed off on 14 December. At this stage there are no issues.

The Chair noted that he is aware of three councils that, due to the current shortage of auditors, will not meet the 14 December deadline. Mr Webby confirm that this Council will be able to meet the deadline.

The Director Corporate Services noted the following points:

- The cover of the Annual Report is yet to be designed and formatted.
- The Annual Report also covers non-financial information and performance including highlights for the year.

Questions/Points of clarification:

- Councillor Dalziel noted an unnecessary 'etc' on page 20 (of the agenda) under the heading, Financial Position, of the draft Annual Report and that the second sentence did not read well. Mrs Radich responded that these would be corrected in the final version.
- Councillor Dalziel noted his preference for more explanatory notes in the report for the ratepayer reader.
- Councillor Dalziel questioned whether the net debt figure of 16 per cent noted on page 32 is correct. Mrs Radich responded that this figure would be reviewed and finalised prior to release.
- The Mayor noted that reserve fund movements in the water supply reserve on page 91 showed a deficit. He questioned how the deficit would be affected by the transfer of net debt to the Three Waters entity. Mr Webby responded that a solution had yet to be worked through this early in the development of Three Waters however speculated whether councils could plan in the next 2.5 years to 'cushion' ratepayers somewhat.
- The Chair noted that council had not achieved budget with capital expenditure as yet and was keen to communicate the primary reasons and implications for ratepayers of capital works not being carried out. Major variances and comments should also be included in the summary document to all ratepayers. Mr Webby added that note 29 in the Annual Report could also be an appropriate place to cover this off. The Mayor added that ratepayers would find it helpful to see a list of projects and how individual spend is made up in the summary document. Service level impact could be added to the Long Term Plan Variations page of the Annual Report on page 34.
- The Chair asked whether a surplus of \$7 million is required given the view that a council should break-even. He asked how the surplus had arisen noting that sometimes there is confusion between an accounting surplus and a situation of over-rating and how this situation impacts the ratepayer. Mrs Radich responded that this would be addressed in the final report.

The Audit Director left the meeting at 2.31pm.

11. Information Report – Health and Safety

D21/40386 (Page 155)

Recommendation

THAT the report be received.

JONES/DALZIEL
Carried
A&R/21/48

The Health and Safety/Civil Defence Advisor noted the following points:

- It had been a relatively quiet period concerning health and safety incidents since the last meeting.
- The review of the health and system is progressing and would be available on council's website soon. The review would give contractors more scope to work within in terms of identifying risk and understanding the requirements for prequalification. Mr Bestall emphasised that the system is not 'broken' but rather in need of 'tweaking'.
- A lone worker system/product will be presented to the Senior Leadership Team on 1 December.

Questions/Points of clarification:

- Mr Bestall clarified that WorkSafe had not responded to the truck trailer tip incident, when asked by the Chair.
- Councillor Boyde sought clarification on whether any aerodrome matters needed to be referred to the Farm and Aerodrome Committee. Mr Bestall confirmed that nothing needed to go to the committee until all initial discussions with PCBU's had been undertaken.

The Health and Safety/Civil Defence Advisor left the meeting at 2.38pm.

12. Information Report – Risk Management

D21/40347 (Page 159)

Recommendation

THAT the report be received.

Recommended Reason

To provide an update to the Audit and Risk Committee of any significant risks and any incidents or threats in relation to significant risks on Council's risk register from the previous quarter.

DALZIEL/ERWOOD
Carried
A&R/21/49

The Director Corporate Services noted the following:

- The report highlights incidents or threats on some top 10 risks.
- Regarding reforms to the local government sector (risk 78), the raw risk rating of 20 Extreme demonstrates that reforms will have a major impact and are almost certain. With council's controls currently in place, the effect of reforms could be serious rather than major though. The Chair noted his view that it is almost certain that there will be major impacts if Three Waters continues. Councillor McKay noted that there had been no indication of 'room to move' so a risk rating of almost certain is realistic. The residual risk rating will be updated to reflect that.
- Concerning risk 64, there have been many developments since even the last meeting. Elected members were satisfied with the current risk ratings. The Chief Executive added that elected members had had good visibility of this council's response to the covid situation in the community and Councillor Boyde noted that he felt well informed. Mrs Radich noted that the Senior Leadership Team

review the organisation's resilience including continuity plans on a weekly basis. Government guidance (sometimes vague) is followed.

- The Mayor noted that it would be a mistake for the Council and the community to view the current local covid situation solely in the context of 'the now' but rather take a more futuristic view since this will not be the only time that covid affects the area. Mayor Volzke also noted that it was important to remember that council is not a lead agency in this set of circumstances and that it is not for us to provide a public health response.
- Mr Hanne added that council is currently doing a stocktake of policies and procedures and pandemic plans with a view to centralising all pandemic related responses.
- Concerning risk 11, Mrs Radich noted that the server failure incident was listed as a potential threat. Operationally the failure caused system slowness and was resolved in 5 days which is not considered ideal but the organisation was able to continue functioning. Council continues to await an incident report.
- Concerning risk 55, the Director Environmental Services will report back to this committee on the outcome of the IANZ review. Mr Hanne noted significant improvements to building services since a year ago. Elected members were satisfied with the current risk ratings in this area.

13. Information Report – Long Term Plan Capital Works Programme – Key Projects Update

D21/40292 (Page 166)

Recommendation

THAT the report be received.

Recommended Reason

To present an update on the progress of our key capital projects in the 2021/22 financial year, as requested in the September 2021 Audit and Risk Committee meeting.

JAMIESON/VOLZKE

Carried

A&R/21/50

The Director Assets noted that the report is provided at the request of the committee and will become a regular item on the Audit and Risk Committee agenda. It provides elected members with an easy to see update on key capital projects. Council will continue to develop tools and processes to manage current projects. A recently established role with oversight of all capital projects will aid with project delivery going forward.

Questions/Points of clarification:

- Councillor Erwood sought clarification on the \$273,995 in costs associated with the bike park which was thought to have been completely funded by central government. Mrs Radich clarified that appendix 1 shows costs paid out (in this case, contract costs) to date, regardless of funding, but not income coming in.
- The Chair asked for an explanation of the table in appendix 1. Mrs Araba clarified that the green graphs the end of the project. Mrs Radich clarified that the next report will show an estimate of contract payments.
- Mrs Araba clarified that no projects were suffering from delays in receiving materials, when asked by the Chair. Mr Hanne noted that the biggest risk in this area probably came from the new pool development but that the contract team had been able to order materials in advance of the most recent covid lockdown and was therefore not impacted, as yet.
- The Chair confirmed that, moving forward, this report will come to each Audit and Risk Committee meeting with dollars included.

14. Information Report – Central Government Reforms

D21/40500 (Page 171)

Recommendation

THAT the report be received.

Recommended Reason

To provide Elected Members with a high level assessment of the wide range of Central Government driven reforms currently under way and the likely impact on local government in general and this council in particular.

JONES/DALZIEL
Carried
A&R/21/51

Questions/Points of clarification:

- The Chair clarified that LGNZ could influence the reforms through working group participation.
- Councillor Dalziel acknowledged the well written report and summary. He asked how staff were feeling about the reforms. Mr Hanne responded that the reform programme undermined how people felt about the future and how they saw themselves fitting into that future. In terms of workload, 1-2 fulltime equivalent positions have provided continuous responses. Coupled with that additional pressure, staff had continued to do an exceptional job in project delivery while feeling, like everyone else in the country, tired, anxious and generally 'cooped up'. As an organisation, the Council was in a 'bidding' type situation for quality staff, for example, building staff. Local government staff generally have a unique skill set and are hard to train. While we are not seeing it at the moment, big job changes are on the horizon. In addition, staff are being reminded about personal wellbeing, which is often put aside in busy times.
- The Mayor noted that the lack of questions from elected members should not be regarded as an acceptance or agreement of the reforms.
- The Chair noted that there has been a breakdown in relationship between local government and central government. As with Three Waters, central government 'holds all the cards'. As a council, we have to carry on to do the best for our communities.
- Councillor Boyde asked whether council were able to 'front foot' human resource requirements around reforms. Mr Hanne clarified that different reforms would require different approaches and that, if additional resource is required, he would address this.
- Councillor Boyde added that, despite the reforms, the same consistent high level of service needed to be maintained. The Chair agreed that business as usual needed to continue and that as we progressed down the transition route, resources would likely be diverted from other areas.
- Mr Hanne added that some of the transition agencies would likely make offers to council's best staff.

15. General Business

No general business was discussed.

16. Questions

No questions were asked.

17. Karakia – closing

The closing karakia 'Kia Uruuru Mai' was conducted by the Director Corporate Services.

The meeting closed at 3.13pm.

P Jones
Chairman

Confirmed this 15th day of March 2022.

N C Volzke
District Mayor

Audit and Risk Committee Matters Outstanding Index

ITEM OF MATTER	MEETING RAISED	RESPONSIBILITY	CURRENT PROGRESS	EXPECTED RESPONSE
Lone Worker Solutions – review of products	21 September 2021	Mario Bestall	Underway	May 2022 Audit and Risk Committee meeting
Health and Safety Framework Review – including pre-qualified contractors	22 June 2021	Sven Hanne/Mario Bestall	Underway	May 2022 Audit and Risk Committee meeting
Internal Audit – stocktake	21 September 2021	Christine Craig		March 2022 Audit and Risk Committee meeting

INFORMATION REPORT



F19/13/04 – D22/7412

To: Audit and Risk Committee
From: Director – Environmental Services
Date: 15 March 2022
Subject: Building Consent Authority Accreditation Report

Recommendation

THAT the report be received.

Recommended Reason

As an accredited Building Consent Authority the Stratford District Council must ensure its procedures and practices for building consent matters meet legal requirements.

/
Moved/Seconded

1. Purpose of Report

- 1.1 This report provides the Audit and Risk Committee with a summary of the recent monitoring assessment of the Council's Building Consent Authority by International Accreditation New Zealand ("IANZ").

2. Executive Summary

- 2.1 Between 29 November and 2 December 2021, the Council's Building Consent Authority was audited by IANZ. Councils are required to be accredited to operate as Building Consent Authorities and regular auditing is one of the requirements for accreditation.
- 2.2 The audit identified several areas where changes are required to be made to achieve full compliance with the regulations in the Building Act 2004. Since the audit, an Action Plan identifying the specific changes to be made has been prepared, submitted to IANZ and approved. Most of the changes identified on the Action Plan have been made but there are still some to be completed.
- 2.3 Following the audit IANZ has reissued a Certificate of Accreditation to continue operating as a Building Consent Authority and will return in November 2023 for another audit.

3. Local Government Act 2002

Under section 10 of the Local Government Act 2002, the Council's purpose is to "enable democratic local decision making by and on behalf of communities; as well as promoting the social, economic, environmental, and cultural well-being of communities now and into the future"			
Does the recommended option meet the purpose of the Local Government 4 well-beings? And which:		Operating as a Building Consent Authority supports the economic and environmental wellbeing of the Stratford community.	
Social	Economic	Environmental	Cultural
	✓	✓	

4. Background

- 4.1 The Council's Building Consent Authority is required to be audited for compliance with the Building (Accreditation of Building Consent Authorities) Regulations 2006. Audits are a requirement of the Ministry of Business, Innovation and Employment and are undertaken on their behalf by IANZ.
- 4.2 Audits take place on a cycle with varying time periods between audits, but every Building Consent Authority must be audited at least two yearly in order to retain accreditation.
- 4.3 The audits involve examining each Building Consent Authority's procedures and practices against the requirements in the regulations. Where either a procedure or a practice does not comply with the regulations the Building Consent Authority is required to remedy the non-compliance. Non-compliances are categorised as either serious non-compliances or general non-compliances.
- 4.4 The Council's Building Consent Authority has been audited several times since 2006 and has successfully retained accreditation to operate following each audit. Each audit has identified a series of non-compliances that have required remediation.

5. Information Summary

- 5.1 The audit ran between 29 November and 2 December 2021 and was undertaken partly remotely and partly onsite due to Covid-19 related travel restrictions. The audit was undertaken by an IANZ Assessor who worked remotely and a Technical Expert who was onsite. The audit was also remotely attended by a Senior Advisor from the Ministry of Business, Innovation and Employment as an observer.
- 5.2 The audit identified ten areas of non-compliance. Three of the non-compliances were addressed during the audit leaving 7 to be addressed following the audit. These non-compliances were all general non-compliances; there were no serious non-compliances identified.
- 5.3 The specific areas that the non-compliances relate to are:
 - The content of building consent application processing checklists
 - The content of training plans and their linkage to competency assessments
 - Administrative procedures around the processing clock for Code Compliance Certificates
 - Contractor procurement processes
 - The content of contracts with contractors
 - Delegations.
- 5.4 The process for addressing the non-compliances identified during an audit involves preparing an Action Plan which must identify how the non-compliances will be remedied

and what evidence will be provided showing the remediation has taken place. The Action Plan must be submitted to IANZ for approval.

- 5.5 The Action Plan has been prepared and has been approved by IANZ. Since the Action Plan was approved we have been working on making the changes needed. Information showing that we have addressed the non-compliances must be provided to IANZ by 8 April 2022.
- 5.6 While the audit has identified some areas where our procedures and practices need to be improved, this is a usual outcome of the audit process. The audit identified a relatively small number of non-compliances which can be resolved without significant changes to our practices and procedures. We have been categorised as a low risk Building Consent Authority and have retained accreditation which enables us to continue providing these services to our community.

6. Strategic Alignment

6.1 Direction

Retaining accreditation to operate as a Building Consent Authority is a requirement of the Building Act 2004 and enables the Council to perform a regulatory function.

6.2 Annual Plan and Long Term Plan

Operating as a Building Consent Authority is consistent with both the Annual Plan and Long Term Plan.

6.3 District Plan

This matter does not give rise to any conflict with the District Plan.

6.4 Legal Implications

There is no need for specific legal advice regarding this matter.

6.5 Policy Implications

This matter does not give rise to any conflicts with Council policies.



Blair Sutherland
Director – Environmental Services



[Approved by]
Sven Hanne
Chief Executive

Date: 7 March 2022

INFORMATION REPORT



F19/13/04 – D22/7619

To: Audit and Risk Committee
 From: Health and Safety/Emergency Management Advisor
 Date: 15 March 2022
 Subject: Health and Safety Report

Recommendation

THAT the report be received.

_____/_____
 Moved/Seconded

1. Purpose of Report

- 1.1 This report presents a summary of a three monthly progress and any highlights for the main areas of activity within for the period to 28 February 2022.

2. Executive Summary

- 2.1 This report provides an overview of Council's health and safety performance through statistical data reported and recorded in the health and safety software (Vault) for the three months ending 28 February.
- 2.2 Results of data analysed since 1 November show that there has been a total of 23 events logged in Vault. This incorporates 10 pool events that are now being logged in Vault and 1 positive observation noted.

3. Incidents

1 November 2021 – 28 February 2022

	Period 1 November 2021- 28 February 2022	Running YTD Balance (1 July 2021 - 30 June 2022)
Events	23	48
<i>Of which:</i>		
Injury	-	1
ACC Claims	-	1
Notifiable	-	-
Near Miss	1	4
Observations	1	4
Other	21	38
Type of Incident		
Slips/Trips/Falls (no injury)	-	1
Sprains/Strains	1	3
Cuts/Abrasions/ Bleeding nose	2	3
Bruising	1	5
Near Miss	1	4
Aggressive/Abusive Customer	6	8
Trespass	4	6
Vehicle Damage	2	4
Insect Stings	-	-
Plant/Equipment	2	5
Other	4	9

Level of Treatment		
No Treatment	19	14
First Aid	4	15
Medical Centre/ DR	-	-
Hospital	-	-
Level of Investigation		
No Investigation	17	38
Formal Investigation	6	10
WorkSafe Investigation	-	-
Health and Wellbeing		
Workstation Assessments	4	7
EAP Referrals	3	4
Health Monitoring Assessments	0	28
Health and Safety Committee Meeting	1	2
Site Reviews	4	6

- 3.1 The reported number of events reported was steady and about the same for the period last year. As usual there was an array of incidents ranging from a disgruntled members of the public not wishing to wear a mask (including contractors in the building), members of the public upset that the pool was only open for swimmers and not for leisure, several minor vehicle incidents, possible covid exposure to staff through public interaction and three more serious events that are explained below.

Of note, was the fire incident that took place in the building last month along with two contractor events consisting of a near miss with a gas main and a power line strike on Pembroke Road.

Background to Incidents

Incident 1

Contractors were tasked to install a new water connection on Flint Road and had been notified by First Gas that a gas main was present at 1.8 metres deep. Special instructions were given to wait until First Gas was present on site and a permit issued before digging commenced, however on the day the Council contractor took it upon themselves to start clearing the site without First Gas present. When First Gas arrived on site work was halted and checked with a permit issued to continue. There was no damage accounted for.

The important message in this is that processes are there for a reason and while no harm, the potential to have had this near miss proliferate into a major incident is monumental.

Incident 2

Council contractor was tasked with the installation of the second water trunk line on Pembroke Road. A plate compactor had been lowered into the excavation and was getting unpacked by the spotter when the excavator was backing out and hit the overhead power line. Work stopped immediately and PowerCo was notified. No one was hurt in the incident.

Incident 3

Contractors had been tasked with laying new vinyl flooring in renovated ladies' toilets in Council's administration building. Preparation of the floor had taken place and glue had been applied with the intent of laying vinyl flooring thereafter. The glue had been applied and contractors were outside when there was "explosion sound" noted before smoke and fire was noticed by staff.

Fire crews attended the scene but fire had already been extinguished by a staff member. It was surmised that the fire had been started by the work carried out by

plumbers that had been on site earlier but this did not match up with the damage within the vicinity of the work completed by the plumbers.

The Issue

Incident 1

All planning and paperwork was in place for the work to begin but because First Gas were not on site at the agreed time the contractor, wanting to be productive, took it upon himself to start the work. The employee has not been with the company long and wanted to make a good impression.

Incident 2

Upon investigation it was found that crew felt to be under pressure to achieve target as they had other contractors on site that were reliant on what they produced. This was not standard practice as the excavator was not used for this purpose usually and had a predetermined path of where it could go. It was also not best practice to use a dedicated spotter for an alternate task. An audit carried out on site the previous week confirmed that there was work being carried out with proximity to powerlines and the potential to hit them was highlighted.

Incident 3

An investigation that ensued showed that the cause of the fire had been attributed to a gas hot water cylinder in the room directly next to the ladies toilets. The fumes from the glue had been accumulating since no mechanical extraction had been used. This created a trap and a highly combustible atmosphere with the vapours finding a path through a hole in the floor skirting through to the cylinder next door and a pilot light that is perpetually on. This was later verified by the Chief Fire Officer/Investigator as the most likely cause of the fire as there were no signs of any combustion present left by the plumbers in the hole that they had drilled through the wall.

Corrective Actions – Short and Long-term

Incident 1

Reiterate to contractor employees the importance of working under special conditions and permits.

First Gas and contractor employees have undertaken short training sessions encompassing requirements when working around gas mains. This includes short videos along with the assurance that whenever future work such as this is carried out around critical infrastructure that extra supervision will be present on site.

Incident 2

Other crews stood down until this work had been caught up sufficiently to take pressure off the programme and allow crew to get ahead for a couple of days to decrease time pressure/urgency. Delineation has been created under powerlines to highlight their position along with assurance from the contractor that the spotter will only be used for that purpose.

All toolboxes thereafter to re-iterate the minimum approach distances (MAD) to powerlines as per PowerCo permit and ensure that crews do not feel pressured to perform. The excavator is to be used only in placement of pipeline materials and nothing else meaning that there is no deviation in its course.

Incident 3

The investigation had found that there was no paperwork to follow up on from the work conducted. It is the opinion of the Health and Safety Advisor that it is doubtful had paperwork / toolbox processes been in place, that the fire source would have been picked up.

There was no Simultaneous Operations (SIMOPs) management on site. SIMOPs are multiple independent operations that occur on a location at the same time.

All JSA's are to be handed in at least a day prior to any work commencing. They must be completed by the contractors doing the work and not filled out by the main (office bound) contractor.

As a result of the incident internal processes are being reviewed and implemented.

4. Civil Defence

- 4.1 Training has only recommenced since the holiday break but is difficult to completely gain any traction currently with staff on split shifts due to Covid business continuity.

Council through TEMO continue to support the DHB and MSD in the Care in Community Model, coordinating the delivery of oximeters, hygiene packs, kai packs (when they are ready) and rapid antigen tests as a contingency. Over the past weeks there has seen a distinct surge in requests and this is expected to continue.

5. Contractors

- 5.1 Contractors continue to be a vital component of Council operations and with that carry critical risk to the work they do for us. Both Stratford District Council and its contractors are individually responsible for providing and maintaining a safe working environment for its respective workers and are required by legislation to provide and maintain facilities at work for their workers' health and safety.

Effective communication and information sharing between the contractor and Council engaging supervisor and any other Council employee is critical.

Although this report highlights several contractor incidents, it is important to place into perspective that whilst any incident is an incident that could have been prevented, contractors working for Council have not had any lost time injuries or notifiable events reported.

6. Site reviews

- 6.1 Four site reviews have been conducted over the period with minor non-conformances noted and corrective actions issued.

7. EAP Referrals

- 7.1 Referrals to EAP have increased over the period with staff identifying issues such as anxiety, confidence, family and grief. Whilst there is no direct correlation to our Covid climate and all staff referrals are confidential. It is assumed that for many people, the uncertainty surrounding coronavirus is the hardest thing to handle. We still do not know exactly how we will be impacted, how long this will last, or how bad things might get. And that makes it all too easy to catastrophise and spiral into overwhelming dread and panic.



M Bestall
Health and Safety/Civil Defence Advisor



[Approved by]
Sven Hanne
Chief Executive

Date: 7 March 2022

INFORMATION REPORT



F19/13/04 – D22/7622

To: Audit and Risk Committee
From: Director – Corporate Services
Date: 15 March 2022
Subject: Risk Management

Recommendation

THAT the report be received.

Recommended Reason

To provide an update to the Audit and Risk Committee of any significant risks and any incidents or threats in relation to significant risks on Council's risk register from the previous quarter.

Moved/Seconded

1. Purpose of Report

- 1.1 To provide a high-level update on Council risk, in accordance with Council's Risk Management Policy.

2. Executive Summary

- 2.1 The key risks to Council that have required active management by the Senior Leadership Team are *Risk 64 – Infectious Disease Outbreak / Pandemic, Risk 32 – Lone Worker, and Risk 51 – Natural Disaster or Fire.*
- 2.2 There have been 5 new risks identified by the Senior Leadership Team and added to Council's risk register since the last Audit and Risk Committee meeting.
- 2.3 The Global Risks Report 2022, published by the World Economic Forum, is attached to this report for the Committee's information. It highlights the top emerging risks for 2022 as:
- Climate Change
 - Digital Dependency and Cyber Vulnerabilities
 - Barriers to Migration
 - Crowding and Competition in Space
 - Resilience to the Covid Pandemic

3. Local Government Act 2002

Under section 10 of the Local Government Act 2002, the Council's purpose is to "enable democratic local decision making by and on behalf of communities; as well as promoting the social, economic, environmental, and cultural well-being of communities now and into the future"	
Does the recommended option meet the purpose of the Local Government 4 well-beings? And which:	Affects all four wellbeings in some way.

Social	Economic	Environmental	Cultural
✓	✓	✓	✓

3.1 Risk Management aims to protect all areas of Council operations.

4. Background

- 4.1 The Council maintains a full risk register, which currently has 90 risks. Of these, 10 of the highest risks in terms of likelihood and consequence are monitored and reported to the Audit and Risk Committee.
- 4.2 In August 2021, the Risk Management Policy was updated and one of the changes to the previous reporting system was that only high-level risks would feature in this regular report to the Audit and Risk Committee.
- 4.3 The risk register includes a description of the risk, and evaluates the risk in terms of likelihood and consequence without any controls in place. Controls (risk reduction methods and mitigations) have been established for each risk, and then the risk is re-evaluated to get a residual risk score. In terms of what constitutes a significant risk, the raw risk score is taken into account rather than the residual risk as it is important that the Senior Leadership Team and the Audit and Risk Committee regularly monitor that the controls in place are appropriate and effective.

5. Information Summary

- 5.1 *Risk 64 – Infectious Disease Outbreak / Pandemic*
Due to Covid-19 case numbers significantly increasing and becoming widespread in the Taranaki region, particularly with rapid transmission of the Omicron variant, Council has taken additional steps to protect Council staff and ensure the resilience of Council operations. These include the following actions:
- The administration building staff have been split into two teams, Team A and Team B. Team A will work in the office every Monday and Tuesday and every second Wednesday, with Team B working in the office on the other days. When not in the office, the teams will be working from home. The teams have been split evenly for each department, and in a way where there are staff in each team to be able to carry out normal functions if the other team were to be affected by Covid-19.
 - Each staff member has been initially handed out 2 RAT (Rapid Antigen Test) tests for individual use, to be used if and/or when they feel symptoms or have been exposed to a potential Covid-19 case.
 - All staff working in the administration building will be required to undertake a RAT test at least on a weekly basis, and must test negative before entering the administration building.
 - All Council staff roles have been evaluated in line with standard risk criteria and a total of 64 staff out of 73 permanent staff were identified as requiring a vaccine mandate to continue in their current role. All permanent staff were able to show evidence of full vaccination.
 - The Stratford swimming pool is vaccination pass only in the weekdays, with some restrictions on swimmers during the weekends.
 - Regular staff communications to stay home if sick or feeling unwell.
 - The War Memorial Centre function room has been set up during the week for those staff who are unable to work from home on their 'off' days.
- 5.2 *Risk 32 – Lone worker*
As a result of the internal audit, a weakness was identified at the Stratford urban water treatment plant, due to its isolated location and workers sometimes working there alone. Solutions have been implemented to ensure that the site is secure and only

people with access can now gain entry to the treatment plant area, and the workers within.

The new standard operating procedure for lone staff working at the water treatment plant is to lock the compound gate after entry. All visitors are required to contact water treatment staff prior to arrival. In the case of an emergency and access is needed a padlock key will be stored in a coded lock box outside of the compound gates. In the event of a medical emergency FENZ will cut the padlock.

Council staff are investigating the cost of a key pad locking system for the compound gate with a buzzer/warning light system in two areas of the water treatment plant to alert water treatment plant staff of someone's presence.

A coded lock box is to be installed by 1 April 2022. Key pad lock and buzzer/warning light system quotes are to be obtained by 1 June 2022.

5.3 *Risk 51 – Natural Disaster or Fire (first incident)*

Between 3-6 February 2022, a heavy rain warning was issued for Taranaki, particularly around Mount Taranaki. Rainfall for the weekend of 5-6 February totalled 221 millilitres.

Then on 12-13 February 2022, Cyclone Dovi hit Taranaki with a heavy rain warning, strong wind warning, and wave warnings all being issued. Power outages affected 36 Stratford residents.

In terms of Council's 3 waters infrastructure, there were short term impacts in terms of manhole lids lifting, sewage discharges into surface water and people's properties. The weather events have shown that storm water infrastructure requires upgrading at two locations

In terms of Council's roading network, there was some minor flooding during the heavy rain event, with the water lifting off the seal on Standish Road. As a result of Cyclone Dovi, some trees fell bringing powerlines down. Both these events highlighted the under capacity of many culverts. Some council culverts are 225 millimetres (mm) or 300mm in diameter which are systematically being replaced with 375mm diameter as a minimum – however this is over a 10 year period due to the financial impact on ratepayers. Until the capacity of the culverts are all increased there will continue to be some localised flooding.

Risk 51 – Natural Disaster or Fire (second incident)

In mid-February 2022, while contractors were working on renovations in the ladies bathroom in the Council administration building, a fire broke out. The fire was contained to the bathroom area. Staff used a fire extinguisher to put the fire out and all staff were evacuated out of the building due to smoke inhalation risk and further potential explosion. Four firefighter crews were on the scene and conducted an investigation and identified that a contractor had been using flammable glue while preparing to lay vinyl which had reacted with other activity in the confined space at the time.

The Health and Safety Advisor led an internal debrief and investigation into the cause of the fire and future learnings.

5.4 *Risk 78 – Government Policy impacting on Local Government*

Three Waters Reforms – with the Government announcement that the reforms will be mandatory for all local authorities, Council is still working through how this will affect three water operations and project delivery during the life of the Long Term Plan 2021-31 as the assumption was initially made that Council would retain ownership of its 3 Waters assets and continue providing existing services directly to the community.

For the Annual Plan 2022/23, Council is continuing to invest in its 3 Waters Activity infrastructure and capacity as per normal, with some additional service level improvement expenditure budgeted for.

Council staff will be, as part of preparations for the transition phase, requested to provide further information to the Department of Internal Affairs or any other authority involved in the development of the post-reform entities. An assessment will be made

at the time of each request as to how or whether Council will respond to the request, and the time Council staff will allocate to any such task.

There is a risk that the new water entities and other associated organisations may start poaching engineering and management staff as part of their recruitment processes which are seen to be ramping up. Council staff involved in the 3 Waters activities are aware of the reforms and the risk that it poses to their existing employment with the Council. However, the Government has confirmed that all existing Council employees who work primarily in water services (except senior executives) will be eligible to transfer their employment to the new water services entity in their area on 1 July 2024.

5.5 **New Risks Identified**

The following new risks have been added to Council's Risk Register:

86	Asset/Infrastructure Failure Causing Public Health Risk	High
87	Public Damage to Council Assets and Infrastructure	High
88	External Communication Systems not Functioning	Moderate
89	Council Rates Applied Inconsistently	High
90	Council Infrastructure Causing Harm	Very High

Refer to **Appendix 1** - New Risks Report attached for a detailed analysis of each new risk.

6. **Strategic Alignment**

6.1 **Direction**

Not applicable.

6.2 **Annual Plan and Long Term Plan**

Not applicable.

6.3 **District Plan**

Not applicable.

6.4 **Legal Implications**

Not applicable.

6.5 **Policy Implications**

This report is in line with the Risk Management Policy.

Attachments:

Appendix 1 - New Risks Report

Appendix 2 - Top Ten Risk Register

Appendix 3 - Global Risks Report 2022, World Economic Forum



Tiffany Radich
Director – Corporate Services



[Approved by]
Sven Hanne
Chief Executive

Date: 7 March 2022

APPENDIX 1

New Risks Report

Risk Alert Number	Risk Subject	Risk Description	Risk Score Raw	Control Description	Residual Risk Score	Control Responsible Person	Risk Reported Month Start Date
86	Asset / Infrastructure Failure causing Public Health risk.	IF Council assets or infrastructure fails to work as intended, THEN the public may be exposed to health, wellbeing or safety risks.	4 High	Ensure asset replacement programme is maintained. Identify potential issues that may arise at resource consent stages. Maintain incident response plan including public notification procedures. Ensure staff and contractors are trained on response and notification procedures. Ensure response plan requirements are followed.	3 Moderate	John Cooper	01/07/2021
87	Public Damage to Council Assets and Infrastructure	IF the public cause damage to Council assets and infrastructure, THEN existing service levels may discontinue and/or Council will incur financial loss.	4 High	Use security cameras for areas that are at high risk of vandalism or deliberate damage. Have insurance on Council assets and infrastructure (in accordance with the Insurance Framework) that is sufficient to cover replacement. Require insurance indemnity for organised events.	2 Moderate	Victoria Araba	01/11/2021
88	External (online) Communication Systems are not Functioning	IF external/online communication systems are not functioning temporarily, THEN Council may be unable to effectively deliver important messages to the community - resulting in public confusion and inadequate guidance on potentially important or emergency situations.	3 Moderate	Ensure alternative communication options are available when Facebook is unable to be used to communicate to the public. Use of Antenno app, Stratford Press, mailouts by post or email, the digital sign on Broadway, and Council's website are other options that are able to be used as alternative communication methods. Council website to be single source of truth.	Low	Kate Whareaitu	01/11/2021

APPENDIX 1

Risk Alert Number	Risk Subject	Risk Description	Risk Score Raw	Control Description	Residual Risk Score	Control Responsible Person	Risk Reported Month Start Date
89	Council Rates are Applied Inconsistently	IF Council Rates are perceived to be inconsistently applied by Council to ratepayers, THEN Council could be subject to legal or central government scrutiny, and/or reputational damage and community mistrust and disengagement.	6 High	Ensure legislation is complied with at all times to avoid legal action. Rates Remissions Policy and Rates Postponement Policy should be used to counteract some negative impact of rates. LTP workshops and Annual Plan workshops should refer to the Revenue and Financing Policy, which is the overarching guide in how rates will be used to fund Council Activities (this Policy may be reviewed at any time). Ensure any changes to rates are publically notified and subject to the Special Consultative Procedure (Annual Plan open for feedback instead). Seek expert legal advice where implementing a new rate or new way of applying an existing rate.	3 Moderate	Tiffany Radich	01/11/2021
90	Council Infrastructure Causing Harm	Quality Infrastructure - IF Council infrastructure assets are unsafe and cause harm, public damage, or endanger the public, THEN Council's reputation may be at risk, and Council could be subject to various forms of penalties.	12 Very High	Yet to update. Regular contractor physical checks of infrastructure. Approved asset management plans, and align capital investment with the AMP's.	4 High	Victoria Araba	01/02/2022

APPENDIX 2

Top Ten Risk

Risk Alert	Risk Category	Risk Subject	Risk Description	Risk Score Raw	Control Description	Residual Risk Score
51	Operational	Natural Disaster or Fire - Response preparedness	IF a Natural Disaster or Fire causes significant damage to infrastructure and buildings THEN community welfare may be severely compromised, putting peoples lives at risk, and staff may be unable to access systems to carry out their day to day duties and functions.	15 Very High	Civil Defence Emergency Management plans are in place. Procedures following an emergency event are widely known by a number of staff due to Civil Defence Foundational training being rolled out to majority of council staff. Business Continuity Plans need to be in place and practiced regularly for all activities - Directors responsible for having a plan in place for each of their departments to ensure core functions can continue to be delivered.	12 Very High
64	Operational	Infectious Disease Outbreak / Pandemic	IF an infectious human disease outbreak / pandemic threatened NZ and reached the district, THEN this could impact staff availability, local services could temporarily close down, and the community access to healthcare is limited potentially resulting in population decline.	15 Very High	Health and Safety Advisor to keep aware of any public health notifications of disease outbreaks. Ensure there is a plan to respond to any notifications. Civil Defence covers infectious human disease pandemics and will take responsibility for local management. Follow Ministry of Health's NZ Influenza Pandemic Action Plan.	8 High
78	Operational	Government Policy Impacting on Local Government	IF Government Policy significantly changes the services Council delivers or the way they are delivered, THEN this could put financial pressure on the district to fund investment in changes, or it may mean previous investment has become redundant.	20 Extreme	Where a policy change may have a significant negative impact on the Council then staff and elected members should consider making a submission to suggest and encourage alternative options. Council officers and elected members need to keep up to date with proposed changes to legislation and govt policy, and anticipate potential impacts of legislative changes and respond strategically, rather than being in a reactive position or being overly proactive. This could include joint collaboration with business and other councils, accessing alternative funding sources, or obtaining legal or professional advice. Council Council have several security measures in place such as enterprise grade firewalls, email filtering, backups, antivirus and device management. If a breach was detected Council would activate the insurance policy and engage an IT security company resource to assist with recovery.	6 High
12	Data and Information	Cyber Attack	IF the systems are compromised and subject to a cyber attack, THEN system downtime, loss of data, ransoms may be demanded, potential privacy breach, reputational damage, and potential loss of funds.	16 Very High	Conduct 2 yearly Asset Criticality Review. Ensure there are established Civil Defence Emergency Management response procedures in relation to fixing critical assets in an emergency event. Management practices and staff training, retention to ensure appropriate skill level in critical asset maintenance.	4 High
71	Operational	Critical Asset Failure	IF a critical asset (water treatment plants, stormwater, wastewater, reticulation, roading) failed, THEN unexpected financial burden may arise and there could be significant disadvantage and risk to the community.	15 Very High	Relies on the accuracy and quality of the advice given by staff to elected members - ensure agenda, reports, and other papers are always reviewed by CEO, and Directors if appropriate. Information related to decision making should be given to elected members in a timely manner. Elected members should receive initial induction training and attend LGNZ, SOLGM conferences where material is relevant to get a better understanding of governance decision making. Council has a Professional Indemnity insurance policy for all elected members and independent committee members.	4 High
72	Reputational and Conduct	Elected Members - Decision Making	IF elected members make significant decisions based on inaccurate/insufficient information, "biased" influences, conflicts of interest not disclosed, or lack of understanding of the financial or legislative impacts, THEN there could be funding access difficulties, audit scrutiny, financial penalties, and/or community distrust in elected members. Potential breach of Local Authorities (Member's Interests) Act 1968, and Councillors may be personally financially liable under S.47 of LGA 2002.	12 Very High	Restore from backup - backups encrypted, and stored off-site at approved data-centres (Tier 3). Fail-over for Melbourne data centre replicates to Sydney data centre.	3 Moderate
11	Data and Information	Server Failure	IF the server failed THEN systems down, data unavailable, potential data loss	12 Very High		

APPENDIX 2

32	Health, Safety, and Wellbeing	Lone Worker	IF a staff member is seriously injured or killed during field inspections/site visits, THEN possible health and safety breaches, death or serious injury.	12 Very High	Quality assurance, Ongoing training/awareness of HSE requirements and responsibilities, Better use of council data/knowledge base on dangerous or insanitary sites before staff member deploys to site, Use of GPS tracking, mobile phone tracking. Compliance officers to wear body cameras when on duty.	3 Moderate
58	Reputational and Conduct	Contractor Damage or Breach	IF Council and/or council contractors are found to be liable for public/environmental damage, or any actions that are unsafe or non-compliant with legislation and applicable policies and standards, THEN fines, possible injury, long-term damage, reputational damage could result.	12 Very High	Appropriate procedures and guidelines are in place to monitor contractor actions and our own including health and safety audits, contractor meetings/KPI's. The Council requires all physical works contractors to go through a thorough health and safety pre-qualification process and become approved before commencing any physical work. All relevant staff are kept up to date with pre-approved contractors register. Mini audits and random checks should be built into contracts. Contractor public liability insurance required for all major contracts.	3 Moderate
55	Reputational and Conduct	Building Control functions undertaken negligently	IF council issues building consent, code of compliance certificates, or other building function decisions negligently or without appropriate quality controls and the structural integrity of the building work fails or the work is unsafe THEN the property owner could demand compensation, and it could result in reputational damage, possible legal costs, and building industry distrust may result.	12 Very High	Quality assurance. Resourcing and ongoing training of competent staff. Low tolerance for poor quality documentation from consent applicants. Reporting of substandard work practices observed. More use of standard online templates for processing applications. Council has public liability insurance.	2 Moderate

The Global Risks Report 2022

17th Edition

INSIGHT REPORT



In partnership with Marsh McLennan, SK Group and Zurich Insurance Group

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The report and an interactive data platform are available at wef.ch/risks22

The Global Risks Report 2022 17th Edition

Strategic Partners

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Preface

Saadia Zahidi, Managing Director

A divergent economic recovery from the crisis created by the pandemic risks deepening global divisions at a time when societies and the international community urgently need to collaborate to check COVID-19, heal its scars and address compounding global risks.

In some societies, rapid progress on vaccination, leaps forward on digitalization and a return to pre-pandemic growth rates herald better prospects for 2022 and beyond. Others could be weighed down for years by struggles to apply even initial vaccine doses, combat digital divides and find new sources of economic growth. Widening disparities within and between countries will not only make it more difficult to control COVID-19 and its variants, but will also risk stalling, if not reversing, joint action against shared threats that the world cannot afford to overlook.

Last year's edition of the *Global Risks Report* warned of potential knock-on economic risks that are now clear and present dangers. Supply chain disruptions, inflation, debt, labour market gaps, protectionism and educational disparities are moving the world economy into choppy waters that both rapidly and slowly recovering countries alike will need to navigate to restore social cohesion, boost employment and thrive. These difficulties are impeding the visibility of emerging challenges, which include climate transition disorder, increased cyber vulnerabilities, greater barriers to international mobility, and crowding and competition in space.

Restoring trust and fostering cooperation within and between countries will be crucial to addressing these challenges and preventing the world from drifting further apart.

The 17th edition of the *Global Risks Report* identifies tensions that will result from diverging trajectories

and approaches within and between countries and then examines the risks that could arise from such tensions. This year's report also highlights the implications of these risks for individuals, governments and businesses.

The Global Risks Perception Survey (GRPS), which has underpinned the report since 2006, was refreshed this year to gather new and broader insights from nearly 1,000 global experts and leaders who responded. The 2021-2022 GRPS includes the following sections:

- **COVID-19 Hindsight** invites respondents to opine on the reverberations of the crisis, allowing comparability with the results from the previous year.
- **Future Outlook** captures respondent sentiment, informing our analysis of how individual contexts may influence global risk perceptions and affect mitigation.
- **Horizon** captures respondents' perceived trajectory and sense of urgency of global risks, informing our analysis of choices and trade-offs that decision-makers may face.
- **Severity** ranks potential damage while **Effects** asks respondents to consider cascading impacts in conjunction with the severity of the risk itself.
- **International Mitigation** asks respondents to assess international efforts in 15 global governance areas to identify achievements and areas of opportunity for global action and cooperation.
- **Open questions on risks, trends and warning signs** source expert knowledge.

This year the *Global Risks Report* also draws on the views of over 12,000 country-level leaders who identified critical short-term risks to their 124 countries, gathered through the World Economic Forum's Executive Opinion Survey. The areas highlighted in these responses are likely to inform national decision-making and provide a perspective on how short-term risk national priorities may compare with global risks and perspectives.

We are ever grateful to our partners in the report's development: Marsh McLennan, SK Group and Zurich Insurance Group. We also thank our academic partners: the National University of Singapore, the Oxford Martin School at the University of Oxford and the Wharton Risk Management and Decision Processes Center at the University of Pennsylvania.

This report continues to leverage the collective intelligence of an expanding community of the world's foremost risk experts, convened by the World Economic Forum's Global Risks Practice: the Global Risks Report Advisory Board, the Chief Risk Officers Community and the Global Future Council on Frontier Risks, as well as a series of consultations with regional and thematic experts from the public and private sectors.

The report also draws from and supports the World Economic Forum's platforms dedicated to catalysing a new economy and society, accelerating climate action for people and planet, leveraging Fourth Industrial Revolution technologies, stewarding industry transformations and enhancing global and regional cooperation. These platforms and their stakeholders use the insights from this report to shape their agendas for tackling the world's greatest challenges and embedding greater resilience and cooperation.

Executive Summary

As 2022 begins, COVID-19 and its economic and societal consequences continue to pose a critical threat to the world. Vaccine inequality and a resultant uneven economic recovery risk compounding social fractures and geopolitical tensions. In the poorest 52 countries—home to 20% of the world's people—only 6% of the population had been vaccinated at the time of writing. By 2024, developing economies (excluding China) will have fallen 5.5% below their pre-pandemic expected GDP growth, while advanced economies will have surpassed it by 0.9%—widening the global income gap.

The resulting global divergence will create tensions—within and across borders—that risk worsening the pandemic's cascading impacts and complicating the coordination needed to tackle common challenges including strengthening climate action, enhancing digital safety, restoring livelihoods and societal cohesion and managing competition in space.

The *Global Risks Report 2022* presents the results of the latest Global Risks Perception Survey (GRPS), followed by an analysis of key risks emanating from current economic, societal, environmental and technological tensions. The report concludes with reflections on enhancing resilience, drawing from the lessons of the last two years of the COVID-19 pandemic. The key findings of the survey and the analysis are summarized below.

Global risks perceptions highlight societal and environmental concerns

Asked to take a view of the past two years, respondents to the GRPS perceive societal risks—in the form of “social cohesion erosion”, “livelihood crises” and “mental health deterioration”—as those that have worsened the most since the pandemic began. Only 16% of respondents feel positive and optimistic about

the outlook for the world, and just 11% believe the global recovery will accelerate. Most respondents instead expect the next three years to be characterized by either consistent volatility and multiple surprises or fractured trajectories that will separate relative winners and losers.

For the next five years, respondents again signal societal and environmental risks as the most concerning. However, over a 10-year horizon, the health of the planet dominates concerns: environmental risks are perceived to be the five most critical long-term threats to the world as well as the most potentially damaging to people and planet, with “climate action failure”, “extreme weather”, and “biodiversity loss” ranking as the top three most severe risks. Respondents also signalled “debt crises” and “geoeconomic confrontations” as among the most severe risks over the next 10 years.

Technological risks—such as “digital inequality” and “cybersecurity failure”—are other critical short- and medium-term threats to the world according to GRPS respondents, but these fall back in the rankings towards the long term and none appear among the most potentially severe, signalling a possible blind spot in risk perceptions.

The 2021-2022 GRPS included a question on international risk mitigation efforts. “Artificial intelligence”, “space exploitation”, “cross-border cyberattacks and misinformation” and “migration and refugees” are the areas where most respondents believe the current state of risk mitigation efforts fall short of the challenge—that is, efforts are “not started” or in “early development”. Meanwhile, for “trade facilitation”, “international crime” and “weapons of mass destruction”, large majorities perceived risk mitigation efforts to be “established” or “effective”.



REUTERS/HEO RAN

A divergent economic recovery threatens collaboration on global challenges

Economic challenges flowing from the pandemic persist. The outlook remains weak: at the time of writing, the global economy was expected to be 2.3% smaller by 2024 than it would have been without the pandemic. Rising commodity prices, inflation and debt are emerging risks. Moreover, with another spike in COVID-19 cases towards the end of 2021, the pandemic continues to stifle countries' ability to facilitate a sustained recovery.

The economic fallout from the pandemic is compounding with labour market imbalances, protectionism, and widening digital, education and skills gaps that risk splitting the world into divergent trajectories. In some countries, rapid vaccine rollout, successful digital transformations and new growth opportunities could mean a return to pre-pandemic trends in the short term and the possibility of a more resilient outlook over a longer horizon. Yet many other countries will be held back by low rates of vaccination, continued acute stress on health systems, digital divides and stagnant job markets. These divergences will complicate the international collaboration needed to address the worsening impacts of climate change, manage migration flows and combat dangerous cyber-risks.

Short-term domestic pressures will make it harder for governments to focus on long-term priorities and will limit the political capital allocated to global concerns. "Social cohesion erosion" is a top short-term threat in 31 countries—including Argentina, France, Germany, Mexico and South Africa from the G20. Disparities that were already challenging societies are now expected to widen—51 million more people are projected to live in extreme poverty compared to the pre-pandemic trend—at the risk of increasing polarization and resentment within societies. At the same time, domestic pressures risk stronger national interest postures and worsening fractures in the global economy that will come at the expense of foreign aid and cooperation.

A disorderly climate transition will exacerbate inequalities

Respondents to the GRPS rank "climate action failure" as the number one long-term threat to the world and the risk with potentially the most severe impacts over the next decade. Climate change is already manifesting rapidly in the form of droughts, fires, floods, resource scarcity and species loss, among other impacts. In 2020, multiple cities around the world experienced extreme temperatures not seen for years—such as a record high of 42.7°C in Madrid and a 72-year low of -19°C in Dallas, and regions like the Arctic Circle have averaged summer temperatures 10°C higher

than in prior years. Governments, businesses and societies are facing increasing pressure to thwart the worst consequences. Yet a disorderly climate transition characterized by divergent trajectories worldwide and across sectors will further drive apart countries and bifurcate societies, creating barriers to cooperation.

Given the complexities of technological, economic and societal change at this scale, and the insufficient nature of current commitments, it is likely that any transition that achieves the net zero goal by 2050 will be disorderly. While COVID-19 lockdowns saw a global dip in greenhouse gas (GHG) emissions, upward trajectories soon resumed: the GHG emission rate rose faster in 2020 than the average over the last decade. Countries continuing down the path of reliance on carbon-intensive sectors risk losing competitive advantage through a higher cost of carbon, reduced resilience, failure to keep up with technological innovation and limited leverage in trade agreements. Yet shifting away from carbon-intense industries, which currently employ millions of workers, will trigger economic volatility, deepen unemployment and increase societal and geopolitical tensions. Adopting hasty environmental policies will also have unintended consequences for nature—there are still many unknown risks from deploying untested biotechnical and geoengineering technologies—while lack of public support for land use transitions or new pricing schemes will create political complications that further slow action. A transition that fails to account for societal implications will exacerbate inequalities within and between countries, heightening geopolitical frictions.

Growing digital dependency will intensify cyberthreats

Growing dependency on digital systems—intensified by COVID-19—has altered societies. Over the last 18 months, industries have undergone rapid digitalization, workers have shifted to remote working where possible, and platforms and devices facilitating this change have proliferated. At the same time, cybersecurity threats are growing—in 2020, malware and ransomware attacks increased by 358% and 435% respectively—and are outpacing societies' ability to effectively prevent or respond to them. Lower barriers to entry for cyberthreat actors, more aggressive attack methods, a dearth of cybersecurity professionals and patchwork governance mechanisms are all aggravating the risk.

Attacks on large and strategic systems will carry cascading physical consequences across societies, while prevention will inevitably entail higher costs. Intangible risks—such as disinformation, fraud and lack of digital safety—will also impact public trust in

digital systems. Greater cyberthreats will also hamper cooperation between states if governments continue to follow unilateral paths to control risks. As attacks become more severe and broadly impactful, already-sharp tensions between governments impacted by cybercrime and governments complicit in their commission will rise as cybersecurity becomes another wedge for divergence—rather than cooperation—among nation-states.

Barriers to mobility risk compounding global insecurity

Growing insecurity resulting from economic hardship, intensifying impacts of climate change and political instability are already forcing millions to leave their homes in search of a better future abroad. “Involuntary migration” is a top long-term concern for GRPS respondents, while 60% of them see “migration and refugees” as an area where international mitigation efforts have “not started” or are in “early development”. In 2020, there were over 34 million people displaced abroad globally from conflict alone—a historical high. However, in many countries, the lingering effects of the pandemic, increased economic protectionism and new labour market dynamics are resulting in higher barriers to entry for migrants who might seek opportunity or refuge.

These higher barriers to migration, and their spill-over effect on remittances—a critical lifeline for some developing countries—risk precluding a potential pathway to restoring livelihoods, maintaining political stability and closing income and labour gaps. At the time of writing, the United States faced over 11 million unfilled jobs in general and the European Union had a deficit of 400,000 drivers just in the trucking industry. In the most extreme cases, humanitarian crises will worsen since vulnerable groups have no choice but to embark on more dangerous journeys. Migration pressures will also exacerbate international tensions as it is increasingly used as a geopolitical instrument. Destination-country governments will have to manage diplomatic relationships and immigrant skepticism among their populations.

Opportunities in space could be constrained by frictions

While humans have been exploring space for decades, recent years have witnessed increased activity, not only creating new opportunities but also signalling an emerging realm of risk, particularly with growing militarization and weaponization in the arena. New

commercial satellite market entrants are disrupting incumbents' traditional influence over the global space commons in delivering satellite services, notably internet-related communications. A greater number and range of actors operating in space could generate frictions if space exploration and exploitation are not responsibly managed. With limited and outdated global governance in place to regulate space alongside diverging national-level policies, risks are intensifying.

One consequence of accelerated space activity is a higher risk of collisions that could lead to a proliferation of space debris and impact the orbits that host infrastructure for key systems on Earth, damage valuable space equipment or spark international tensions. Limited governance tools increase the likelihood of space activity escalating geopolitical tensions, and recent weapons tests in space underscore such risks. Increased space activity could also lead to unknown environmental impacts or raise costs for public goods such as weather monitoring or climate change surveillance.

Year two of the pandemic yields insights on resilience

In 2021, countries deployed new mechanisms to respond to a public health crisis with shifting characteristics, leading to both successes and

failures. Two interlinked factors were critical for effective management of the pandemic: first, the readiness of governments to adjust and modify response strategies according to changing circumstances; and second, their ability to maintain societal trust through principled decisions and effective communication.

Reflecting on the distinct resilience goals of governments, businesses and communities will help ensure that agendas are aligned in achieving a whole-of-society approach to tackling critical risks of any nature. For governments, balancing costs, regulating for resilience and adjusting data-sharing arrangements to ensure sharper crisis management are key to galvanizing stronger interaction between public and private sectors. Businesses—recognizing that better national-level preparedness is critical for planning, investing and executing their strategies—can leverage opportunities in areas such as supply chains, codes of conduct within their industry and inclusion of a resilience dimension into workforce benefit offerings. Communities can help local governments to join up with national efforts, improve communication and support grassroots resilience efforts. At an organizational level, strategies such as grounding resilience analyses in key delivery requirements, appreciating systemic vulnerabilities and embracing a diversity of approaches can help leaders build better resilience as well.



REUTERS/MUHAMMAD HAMED

CHAPTER 1

Global Risks 2022: Worlds Apart

6%

vaccination rate in poorest 52 countries

97%

public debt-to-GDP in 2020

51 million

increase in extreme poverty projections

197

countries aligned on the Glasgow Climate Pact

84%

of experts are worried or concerned about
the world

A divergent recovery

At the start of 2022, the COVID-19 crisis is still ongoing and its economic ructions continue to be felt. Disparities in progress on vaccination are creating a divergent economic recovery that risks compounding pre-existing social cleavages and geopolitical tensions. These tensions and the economic overhang of the pandemic will make it difficult to ensure a coordinated and sufficiently rapid approach to global challenges—most notably climate change.

Vaccination and accelerated digitalization have enabled some countries to recover rapidly from the economic crisis created by the COVID-19 pandemic, but many others are still struggling to avoid the worst consequences. At the time of writing, half of the world’s population was still unvaccinated,¹ 40% remained offline,² and only 35% of the world’s students lived in countries where schools are fully open.³ Some 37% of respondents to this

year’s Global Risks Perceptions Survey (GRPS) believe the world will follow a fractured trajectory in the medium term, increasingly separating relative “winners” from “losers” of the COVID-19 crisis (see Figure 1.1). By the time the GRPS was conducted (see the Technical Notes in Appendix C), only 11% believed the global recovery would accelerate over the next three years.

Economic, geopolitical, public health and societal fractures—which increase after pandemics⁴—risk leading to divergent and delayed approaches to critical challenges facing people and planet: accelerating the green transition in response to climate change (see Chapter 2), coordinating against heightened digital vulnerabilities (see Chapter 3), managing mobility and migration (see Chapter 4) and safeguarding the next global commons: space (see Chapter 5).

FIGURE 1.1

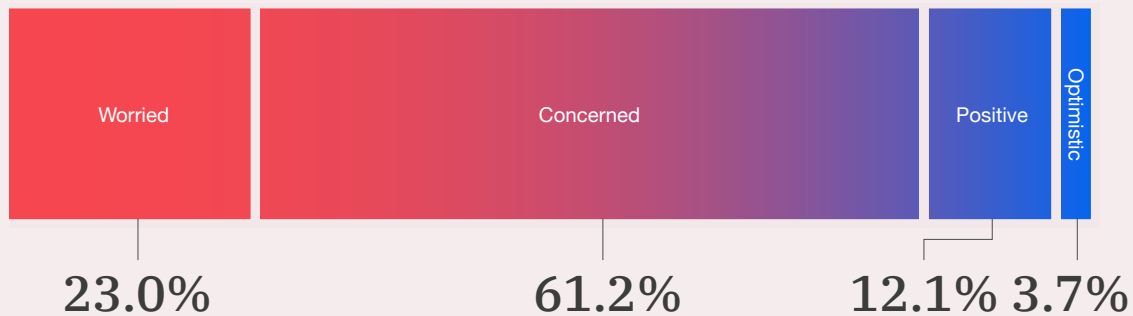
“What is your outlook for the world over the next three years?”



Source: World Economic Forum Global Risks Perception Survey 2021-2022

APPENDIX 4

FIGURE 1.2

“How do you feel about the outlook for the world?”

Source: World Economic Forum Global Risks Perception Survey 2021-2022

Effective domestic and international action on these challenges depends on restoring trust within societies, galvanizing national and global leaders and finding new opportunities for collaboration (see Chapter 6). Fully 84%

of GRPS respondents were either concerned or worried about the outlook for the world (see Figure 1.2); lack of optimism could create a vicious cycle of disillusionment and social unrest.

A turbulent global context

The pandemic persists

The world continues to grapple with the effects of COVID-19 on public health. At the start of 2022, 5.4 million deaths from COVID-19 had been reported globally, out of 282 million confirmed cases.⁵ Moreover, a significant proportion of those infected by COVID-19 have long-lasting symptoms—some 10% show persistent ill health 12 weeks after having the disease.⁶ COVID-19 vaccination has progressed steadily but unevenly around the world. At the time of writing, 50 countries had vaccinated more than 70% of their population,⁷ with some now starting to receive booster shots, while the vaccination rate in the poorest 52 countries—home to 20% of the world’s population—was still only 6%.⁸ Potentially more infectious variants of the virus—notably the new Omicron variant—along with waning immunity among the vaccinated and a continued high proportion of people who are unvaccinated meant that the number of new cases increased again

towards the end of 2021.⁹ Unsurprisingly, “infectious diseases” are still considered a critical short-term threat to the world in the GRPS.

The COVID-19 crisis has also had extensive collateral health impacts, partly because other diseases were deprioritized. The pandemic led to an additional 53 million cases of major depression globally.¹⁰ “Mental health deterioration” was one of the top five risks that GRPS respondents saw as having deteriorated the most during COVID-19. The incidence of non-communicable diseases—which cause 41 million deaths every year, mostly in low- and middle-income countries—has also worsened worldwide due to treatment delays caused by COVID-19.¹¹ Antimicrobial resistance caused nearly 2 million deaths in 2020 and this number may increase—particularly for malaria and tuberculosis—because of the inappropriate use of antibiotics to treat COVID-19.¹² The pandemic and its collateral health impacts

will continue to put pressure on health systems across the globe, widen health inequalities between and within countries, create social frictions and weigh down long-term economic growth potential.

Risks to economic recovery

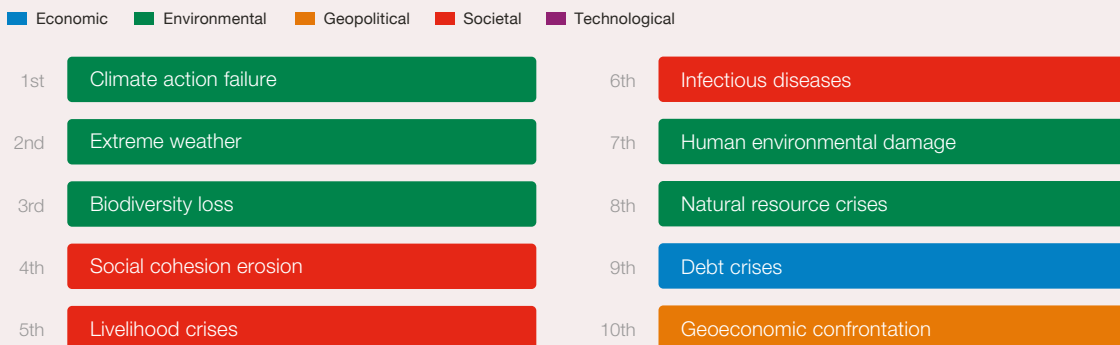
The global economic recovery from the recession caused by responses to the COVID-19 pandemic continues but is slowing. After a contraction of 3.1% in 2020, global economic growth is expected to reach 5.9% in 2021 and slow to 4.9% in 2022.¹³ By 2024, the global economy is projected to be 2.3% smaller than it would have been without the pandemic.¹⁴ Risks to economic growth are considerable, including risks from a potential resurgence of COVID-19 as new variants emerge. The previous edition of the GRPS identified “commodity shocks”, “price instability” and “debt crises” as critical medium-term concerns. These are already emerging to some extent. At the time of writing, commodity prices had increased nearly 30% since end of 2020;¹⁵ they could remain volatile because of growing tensions between Europe and Russia, China’s energy shortage,¹⁶ continued supply chain disruptions and transition challenges from disinvestment in fossil fuel reserves. Inflation has accelerated in many countries as a

result of pandemic-related disruptions to supply chains combined with resurgent consumer demand and higher commodity prices. This will dampen consumer sentiment—which has been fundamental for recovery—and will increase risks from central bank interest rate rises.¹⁷ In advanced and developing economies alike, higher prices and more expensive debt would impact lower-income households especially hard, while small and medium-sized enterprises (SMEs) that are still trying to avoid bankruptcy would suffer from weakening consumption.

Moreover, sovereign debt has spiked because of the pandemic. Government debt globally increased by 13 percentage points, to 97% of GDP, in 2020.¹⁸ Already-strained public finances in developing countries are at heightened risk from debt deleveraging¹⁹ and an appreciation of the US dollar—the US Dollar Index had risen 7% since the start of 2021.²⁰ GRPS respondents identified “debt crises” as a critical short- and medium-term threat to the world, and one of the most potentially severe risks over the next decade (see Figure 1.3). Debt overhangs will make it more difficult for countries to deal with the economic impacts of COVID-19 and finance a socially just, net zero transition.

FIGURE 1.3

“Identify the most severe risks on a global scale over the next 10 years”



Source: World Economic Forum Global Risks Perception Survey 2021-2022



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Economic divergence

COVID-19 prompted a global recession, but stark differences in vaccination rates between countries now risk leading to even greater economic divergence than they experienced before the pandemic. A greater prevalence of COVID-19 in low-vaccination countries than in high-vaccination ones will weigh on worker availability and productivity, disrupt supply chains and weaken consumption. Moreover, a lower post-pandemic risk appetite in the vaccinated world—comprised mostly of advanced economies—could weaken their investment in the non-vaccinated world. The economic disruption from the pandemic has also created stronger incentives in the vaccinated world to prioritize resilience over cost minimization. Governments and industries may now drive regional convergence at the expense of global integration as they seek to minimize supply chain disruptions.

Polarized connectivity, education and income trajectories risk further fragmenting the global economy, and divergence is likely to be aggravated by slowing and disparate growth. Advanced economies are

expected to surpass their pre-pandemic growth path by 0.9% by 2024, but developing economies (excluding China) will be 5.5% below it—with Latin America and Sub-Saharan Africa trailing even further behind.²¹ Economic decoupling risks further hindering already-limited means to restore growth in developing economies. Such decoupling will make it harder for emerging economies to leverage young workforces, large consumer markets and competitive costs. They also risk having less access to financing and technology to face global challenges, including climate change.

Although employment is approaching pre-pandemic levels in many advanced economies, globally the jobs recovery from the COVID-19 crisis is lagging the economic recovery—global employment remains lower than it was before the pandemic and the Great Resignation in advanced economies has caused labour market

Income disparities risk increasing polarization and resentment within societies

participation to fall. Youth, women and lower-skilled workers have been especially affected. It will take the global economy at least until 2023 to create the jobs lost to COVID-19, but many of these jobs are expected to be of low productivity and poor quality, according to the International Labour Organization.²² “Livelihood crises” is the second most immediate threat to the world in the GRPS, and the top one at the country level in the Executive Opinion Survey (EOS). It is the most immediate national threat in 97 countries, including 16 of the G20 economies.

A bifurcated economic recovery is likely to prompt an upsurge in economic migration. At the same time, worsening extreme weather and a rise in political instability, state fragility and civil conflict are likely to further swell refugee numbers. GRPS respondents rate “involuntary migration” as a critical threat to the world over the next decade. Yet, it is a top-10 concern in only 13 countries surveyed by the EOS—among them Armenia, El Salvador, Guatemala, Honduras, Nicaragua, Ukraine and Venezuela, which have recently experienced challenges related to migration and refugees. These results suggest that migration is perceived as a short-term challenge localized in certain countries, but a global risk in the longer term. However, the clash between heightened migration pressures in origin countries and increasing barriers to migration in destination countries

risks creating tensions internationally and, in the worst cases, humanitarian crises.

Erosion of social cohesion

“Social cohesion erosion” is the risk that has worsened the most globally since the start of the COVID-19 crisis, according to the GRPS. It is perceived as a critical threat to the world across all time spans—short, medium and long term—and is seen as among the most potentially damaging for the next 10 years. In 31 out of the 124 countries surveyed in the EOS—including Argentina, France, Germany, Mexico and South Africa among the G20—“social cohesion erosion” was seen as a top-10 short-term threat to their countries. Inequality—economic, political, technological and intergenerational—was already challenging societies even before income disparities increased through the pandemic.²³ These disparities are now expected to widen further: research by the World Bank estimates that the richest 20% of the world’s population will have recovered half their losses in 2021, while the poorest 20% will have lost 5% more of their income.²⁴ By 2030, 51 million more people are projected to live in extreme poverty compared to the pre-pandemic trend.²⁵ Income disparities exacerbated by an uneven economic recovery risk increasing polarization and resentment within societies.



GETTY/STR

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Differing views over vaccinations and COVID-related restrictions are also adding to social pressures, with a number of countries, including in Europe, seeing riots by those opposed to government's COVID responses. Racial justice also remains a pressing issue in many countries, notably the United States.

A recent poll in the United States, for example, found “division in the country” to be voters’ top concern: they expected it to worsen in 2022.²⁶ In Europe, another recent poll revealed significant generational differences, with 65% of respondents over 60 saying that they were “not impacted at all” by the pandemic, compared with just 43% of respondents under 30.²⁷ The attack on the US Capitol in January 2021 was one manifestation of the instability that political polarization risks creating.

Notwithstanding the agreements made at COP26 signal international commitment to climate action (see Box 1.1), short-term domestic pressures will make it harder for governments to focus on long-term national priorities and will limit the attention and political capital that some governments worldwide will be able or willing to allocate to global concerns. Such pressures could also lead to stronger national interest postures, which would worsen fractures in the global economy, potentially coming at the expense of foreign aid and cooperation needed to resolve conflicts, protect refugees and address humanitarian emergencies. The UK government, for instance, already dropped its target of spending 0.7% of gross national income on foreign aid until at least 2024.²⁸ Fragile economies could spiral into deeper crises.

Geopolitical tensions

Widening geopolitical fractures risk being another force for global divergence. Competition between the United States and China is increasing. China's growing military prowess is changing the balance of power in the Western Pacific.²⁹ The United States is strengthening alliances focused on the Pacific in response, most recently with the Australia-UK-US security pact

Countries may drive regional convergence at the expense of global integration

(AUKUS). Other states, such as Russia and Turkey, are also showing greater capability and willingness to project power abroad. Meanwhile, key global and regional powers are testing boundaries of international law and cooperation by conducting military exercises around tense areas, such as the Russia-Ukraine border and the Taiwan Strait. Competition is intensifying in newer dimensions and geographies, as evident in the militarization and weaponization of space (see Chapter 5) and in developments in cyberspace, where already-sharp tensions between governments impacted by cybercrime and governments complicit in their commission will continue to rise (see Chapter 3).

Competition is also increasing in the exercise of “soft power”. For example, China's vaccine diplomacy, external financing strategy and economic rebound—its economy is expected to have grown by 8% annually in 2021³⁰—have allowed it to continue to expand its influence throughout the developing world. Brazil, Indonesia, Mexico and Turkey are among the top buyers of Chinese COVID-19 vaccines,³¹ and net debt payments to China rose by 62% in 2020.³² Developing countries may increasingly look to China for financial, technological and scientific support to thrive in the post-pandemic economy.

Geopolitical tensions are spilling over into the economic sphere. For example, India and Japan put protectionist policies in place during the pandemic.³³ Western companies in sensitive sectors such as technology are encountering increasing difficulties in doing business in China and Russia, and Western countries are themselves restricting investment from geopolitical competitors in strategic sectors. GRPS respondents identified “gEOeconomic confrontations” as a critical medium- and long-term threat

to the world, and the most potentially severe geopolitical risk for the next decade (see Figure 1.3). Geopolitical and geoeconomic tensions will make it more difficult to tackle common global challenges, notably climate change.

Risk of climate action failure

The 2021 United Nations Climate Change Conference (COP26) succeeded in getting 197 countries to align on the Glasgow Climate Pact and other landmark pledges (see Box 1.1), but even these new commitments are expected to miss the 1.5°C goal established in the 2016 Paris Climate Agreement and increase the risks from a disorderly climate transition (see Chapter 2).³⁴

The economic overhang of the COVID-19 crisis and weakened social cohesion—in advanced and developing economies alike—may further limit the financial and political capital available for stronger climate action. The European Union, the United Kingdom and the United States, for example, were reluctant to commit to a formal climate finance target to respond to worsening climate change impacts in developing country Parties.³⁵ China and India lobbied to change the Pact’s wording from “phase out” to “phase down” of “unabated coal power and inefficient fossil fuel subsidies”.³⁶

The economic crisis created by the COVID-19 pandemic risks delaying efforts to tackle climate change by encouraging countries to prioritize short-term measures to restore economic growth, regardless of their impact on the climate, over pursuing green transitions. Brazil, for example, joined the other 140 countries responsible for 91% of the Earth’s forests in endorsing the Glasgow Leaders’ Declaration on Forests and Land Use,³⁷ even as deforestation in the Amazon accelerated to a 15-year high in 2021 following the pandemic-induced recession of 2020.³⁸ Geopolitical tensions and nation-first postures will also complicate climate action. COP26 revealed heightened tensions on climate damage compensation, with affected countries facing pushback from large emitters, including the United States.³⁹

Climate change continues to be perceived as the gravest threat to humanity. GRPS respondents rate “climate action failure” as the risk with potential to inflict the most damage at a global scale over the next decade (see Figure 1.3). However, EOS results hint at divergent senses of urgency between regions and countries. “Climate action failure” ranks 2nd as a short-term risk in the United States but 23rd in China—the two countries that are the world’s largest CO₂ emitters. In addition to its 2nd place rank in the United States, it ranks among the top 10 short-term risks in 11 other G20 economies.



REUTERS/HANNIBAL HANSCHKE

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BOX 1.1


Outcomes of COP26 and COP15


The 2021 United Nations Climate Change Conference (COP26, held in Glasgow, the United Kingdom), which passed the Glasgow Climate Pact,¹ concluded with important steps towards the 1.5°C scenario: it requested governments from 153 countries to update and strengthen their nationally determined contributions (NDCs), bolstered climate adaptation finance efforts, and continued the mobilization of billions of US dollars for climate funding and trillions to be reallocated by private institutions and central banks towards global net zero. COP26 was the first with financial sector attendance, represented by the Global Financial Alliance for Net Zero (GFANZ), whose members manage over US\$130 trillion in assets and already actively fund sustainable investments.²


For the first time, the Pact made explicit mention of the importance of transitioning away from coal—but did not commit to “phase out” inefficient fossil fuel subsidies. However, as the United Nations Environment Programme (UNEP)’s Emissions Gap Report 2021 shows, reaching the 1.5°C target remains unlikely.³


Another key outcome was an agreement on the fundamental norms related to Article 6 of the Paris Agreement (on carbon markets), making it now fully operational.⁴ Businesses and governments also agreed on more aggressive investment in clean technologies,⁵ including a faster transition to electric vehicles and landmark pledges on methane emissions and deforestation.⁶

Key pledges achieved at COP26:

-  India pledged to reach net zero emissions by 2070 and announced a target of 50% renewable energy by 2030. All the largest emitters have now agreed to start phasing out fossil fuels.

-  46 countries pledged to transition from coal to clean power by 2040.

-  104 countries pledged to a 30% cut in methane emissions by 2030. Methane accounts for 30% of historical global warming.

-  141 countries that account for 91% of the world’s forests pledged to end deforestation by 2030.

The 2021 Conference of the Parties for the Convention on Biological Diversity (COP15, held in Kunming, China) resulted in “strong declarations for safeguarding life on Earth”,⁷ along with joint measures for conservation actions and addressing unsustainable production and consumption;⁸ it also paved the way to negotiate a post-2020 global biodiversity framework for part two of COP15 in May 2022.⁹

Footnotes

- 1 UNFCCC. Decision -/COP.26, Advance unedited version. https://unfccc.int/sites/default/files/resource/cop26_auv_2f_cover_decision.pdf
- 2 UNEP. 2021. “Emissions Gap Report 2021. Addendum to the Emissions Gap Report 2021.” Report. UNEP. 2021. <https://wedocs.unep.org/bitstream/handle/20.500.11822/37350/AddEGR21.pdf>
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- 7 WWF. 2021. WWF reaction to the adoption of the Kunming Declaration at COP15. World Wildlife Fund. 13 October 2021. https://www.panda.org/wwf_news/?3962441/WWF-reaction-to-the-adoption-of-the-Kunming-Declaration-at-COP15
- 8 IUCN. 2021. IUCN closing statement – part one of the UN Biodiversity Conference. 18 October 2021. <https://www.iucn.org/news/secretariat/202110/iucn-closing-statement-part-one-un-biodiversity-conference>
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Secure digitalization

COVID-19 spurred a leap in digitalization, but to varying extents across countries. While moving towards hyperconnectivity has made some countries more competitive, others could remain stuck in a pre-pandemic analogue economy. In the latter economies, the need for rapid digitalization to avoid a widening digital divide remains pressing.⁴⁰ In the EOS, “digital inequality” is a top short-term risk in Latin America and Sub-Saharan Africa—the two regions expected to grow the least in 2022—as well as in low-income countries more widely. Governments, businesses and individuals in developing economies will be seeking to digitalize rapidly but may have limited technical and financial resources to enhance cyber

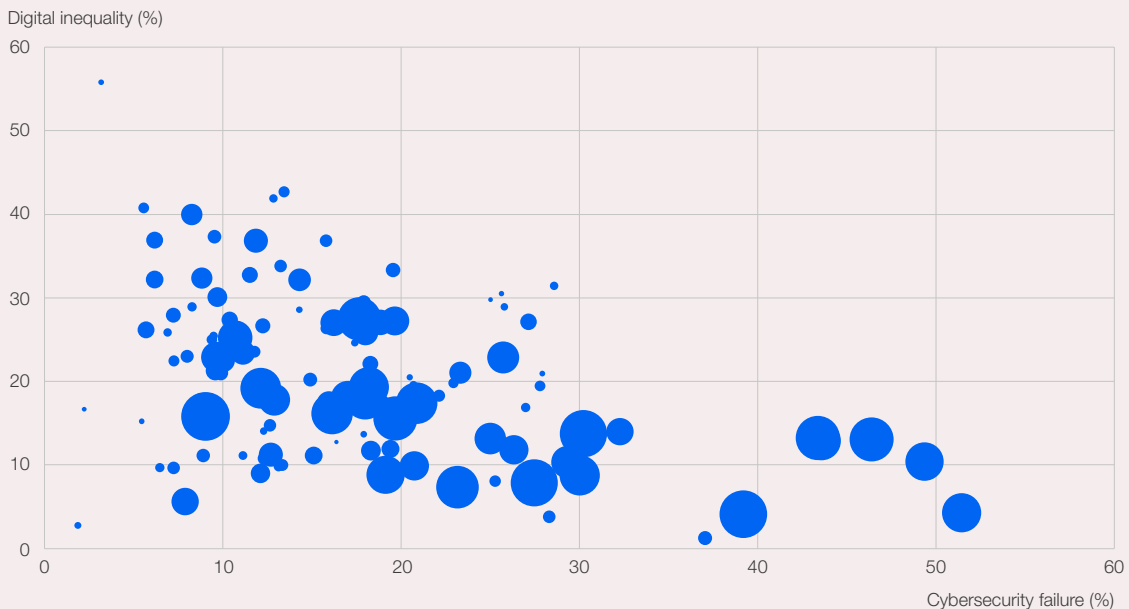
defences against critical infrastructure breaches or cyber regulations to safeguard data and privacy.

More parts of the world risk becoming a base from which cybercriminals can attack globally, which could deepen digital divides if such countries then face restrictions on their access to digital technologies. Rapid digitalization in advanced economies during COVID-19 has also led to new cyber vulnerabilities. “Cybersecurity failure” was identified by GRPS respondents as a critical short-term threat to the world and scores especially high with EOS respondents in high-income countries (see Figure 1.4). There is a risk that concerns over cybersecurity could further hamper attempts to promote rapid and inclusive digitalization globally.

FIGURE 1.4

Score of “Digital Inequality” and “Cybersecurity Failure” in EOS 2021 versus GDP per Capita in 2020

● GDP per capita US\$ (2020) from smallest to largest



Sources: World Economic Forum Executive Opinion Survey 2021; World Bank Open Data, “GDP per capita (current US\$)”, <https://data.worldbank.org/indicator/NY.GDP.PCAP.CD>, accessed 7 December 2021.

Note: Excludes Luxembourg, Switzerland and Ireland, which have the highest GDPs per capita in the EOS sample (all above US\$80,000) and are distant from the rest of the sample (fourth highest is the United States, with US\$63,544).

Space as a new frontier of divergence

Space is another area where global divergences risk complicating the collaboration needed to manage the development of a common good. Competition in space is rising and is a growing preoccupation for the world's leading militaries—evidenced by recent anti-satellite (ASAT) and hypersonic weapons tests.⁴¹ Disparate economic and technological trajectories risk precluding many countries from accessing the

opportunities that space entails for tackling climate change and expanding connectivity, and from ensuring that their interests are accounted for in global decision-making around space governance and commercialization. Meanwhile, increased private sector participation in space and a higher risk of congestion are creating new challenges for space governance. However, there is still time for countries to come together to ensure common benefits and sustainable management of what should be a universal resource.

Emerging tensions in global cooperation

The global divergence that risks resulting from ruptures within the world economy, stronger competition for geopolitical advantage and domestic pressures to prioritize national objectives will create complex challenges for global cooperation over the next years. Four such areas are analysed in the following deep dive chapters:

- Mounting conviction for a fast but disorderly climate transition, slowed by social, political and economic complexities, risks creating a kaleidoscope of net zero trajectories, each with different speeds and complications (see Chapter 2).
- Rapid digitalization risks exposing economies to new and more intense cyber vulnerabilities, as new technologies and an ever-expanding attack surface enable a more dangerous and diverse range of cybercrimes (see Chapter 3).
- Increased pressure for migration from origin countries as they become more insecure risks conflicting with higher barriers in destination countries (see Chapter 4).
- A new space race marked by accelerated commercial and military activity risks exacerbating tensions and oversaturation of this frontier common,

highlighting the need for strengthening international governance of space (see Chapter 5).

The COVID-19 pandemic exposed the shortcomings of global cooperation, but the way forward is not clear. There is a need for stronger global governance and more effective international risk mitigation efforts, since the global, interconnected challenges highlighted in this report cannot be solved by national governments alone. Yet coming together with common purpose to achieve lasting results will be challenging: effective global governance depends on international cooperation,⁴² and it will be difficult to secure traction, harness the necessary capabilities and achieve resolution on critical issues in an international relations context characterized by economic divergence, skepticism around globalization, a narrower focus on national interests and intensified geopolitical competition. Existing institutions of global governance are under pressure—as shown, for example, by the challenges that an under-resourced World Health Organization (WHO) continues to face in responding effectively to the COVID-19 pandemic.⁴³

Appreciating this challenge, the final chapter of the report reflects on how governments can hedge against the prevailing limitations of multilateralism by pursuing a whole-of-society approach to bolstering national resilience (see Chapter 6).

Reflecting on the future

Crises prompt unexpected paths. Different blind spots, triggers and shocks can have a wide range of outcomes, all with varying likelihoods and impacts. As readers consider the results of the GRPS survey, review the emerging global context and read the deep dives, this report invites them to consider the behaviours and actions of specific stakeholders and to consider the consequences for a range of risk outcomes, from probable to improbable and manageable to severe.

Among the most notable areas of socio-economic concern are the divergent recovery, economic hardship and growing inequality, along with their interaction with ideological polarization and the sense of disenfranchisement of large sections of the global population. Governments' struggles to contain the pandemic

and a lack of global collaboration on COVID-19 offer a sobering view of prospects for managing future global risks such as extreme weather and for pursuing bolder climate action. When it comes to business and industry, even enterprises with the financial room to manoeuvre sometimes struggle to deliver on environmental, social and governance (ESG) commitments while also strengthening the resilience of their supply chains, adapting to social and technological change and remaining vigilant to threats such as cyberattacks.

Two years on from the start of this unprecedented crisis, the actions and behaviours of all stakeholders will determine how quickly the world recovers and embeds the resilience needed to prepare for the next major shock.



REUTERS, COURTESY NXP SEMICONDUCTORS

Global Risks Perception Survey 2021-2022 Results

Scars of COVID-19

“Social cohesion erosion”, “livelihood crises” and “mental health deterioration” are three of the five risks that have deteriorated the most globally through the crisis, according to the GRPS. These three risks—and the pandemic itself (“infectious diseases”)—are also seen as being among the most imminent threats to the world. This societal scarring compounds the challenges of effective national policy-making and reduces the attention and focus needed on international cooperation for global challenges.

Looming debt crises

“Debt crises” were identified as an imminent threat to the world for the next two years, but GRPS respondents believe they will reach their most critical point in three to five years. Government stimulus was vital to protect incomes, preserve jobs and keep businesses afloat, but debt burdens are now high and public budgets will continue to be stretched after the pandemic, even as they are needed for financing just and green transitions.

The planet cannot wait

“Extreme weather” and “climate action failure” are among the top five short-term risks to the world, but the five most menacing long-term threats are all environmental. “Climate action failure”, “extreme weather” and “biodiversity loss” also rank as the three most potentially severe risks for the next decade. While GRPS respondents’ concern about environmental degradation predates the pandemic, increasing concern with climate action failure reveals respondents’ lack of faith in the world’s ability to contain climate change, not least because of the societal fractures and economic risks that have deepened.

Connectivity blind spots

“Digital inequality” is seen as an imminent threat to the world as 3 billion people remain offline. However, it is also the case that many countries and industries were able to quickly access and seamlessly adapt to new forms of human interaction and remote work. This digital leap came with increased vulnerability. GRPS respondents believe “cybersecurity failure” will continue to test the world’s digital systems over the next two years and, to a lesser extent, in three to five years. No technological risk appears among the most potentially severe for the next decade. This suggests lower relevance to respondents—or a blind spot in perceptions given the potential damage of cyber-risks—compared to economic, societal and environmental concerns.

Growing rivalries

GRPS respondents believe “gloeconomic confrontations” will emerge as a critical threat to the world in the medium to long term and as one of the most potentially severe risks over the next decade. While pressing domestic challenges require immediate attention, the pandemic and its economic consequences have proven once again that global risks do not respect political frontiers. Humanity faces the shared and compounding threats of economic fragmentation and planetary degradation, which will require a coordinated global response.

To see the full results of the GRPS 2021-2022 see: <https://www.weforum.org/reports/global-risks-report-2022/data-on-global-risks-perceptions#report-nav>

FIGURE I

COVID-19 Hindsight

Risks that worsened the most since the start of the COVID-19 crisis

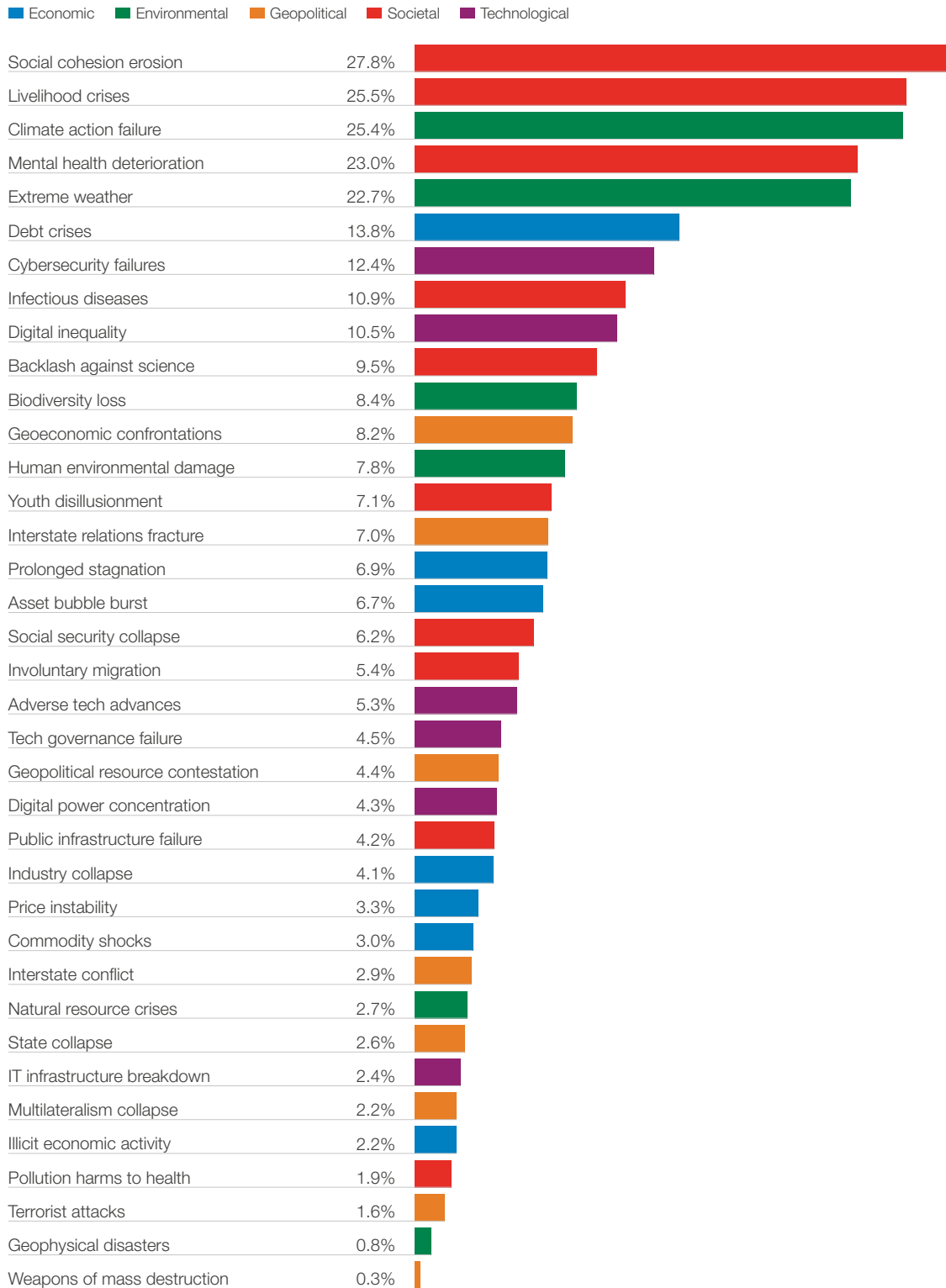


FIGURE II

Global Risks Horizon

When will risks become a critical threat to the world?

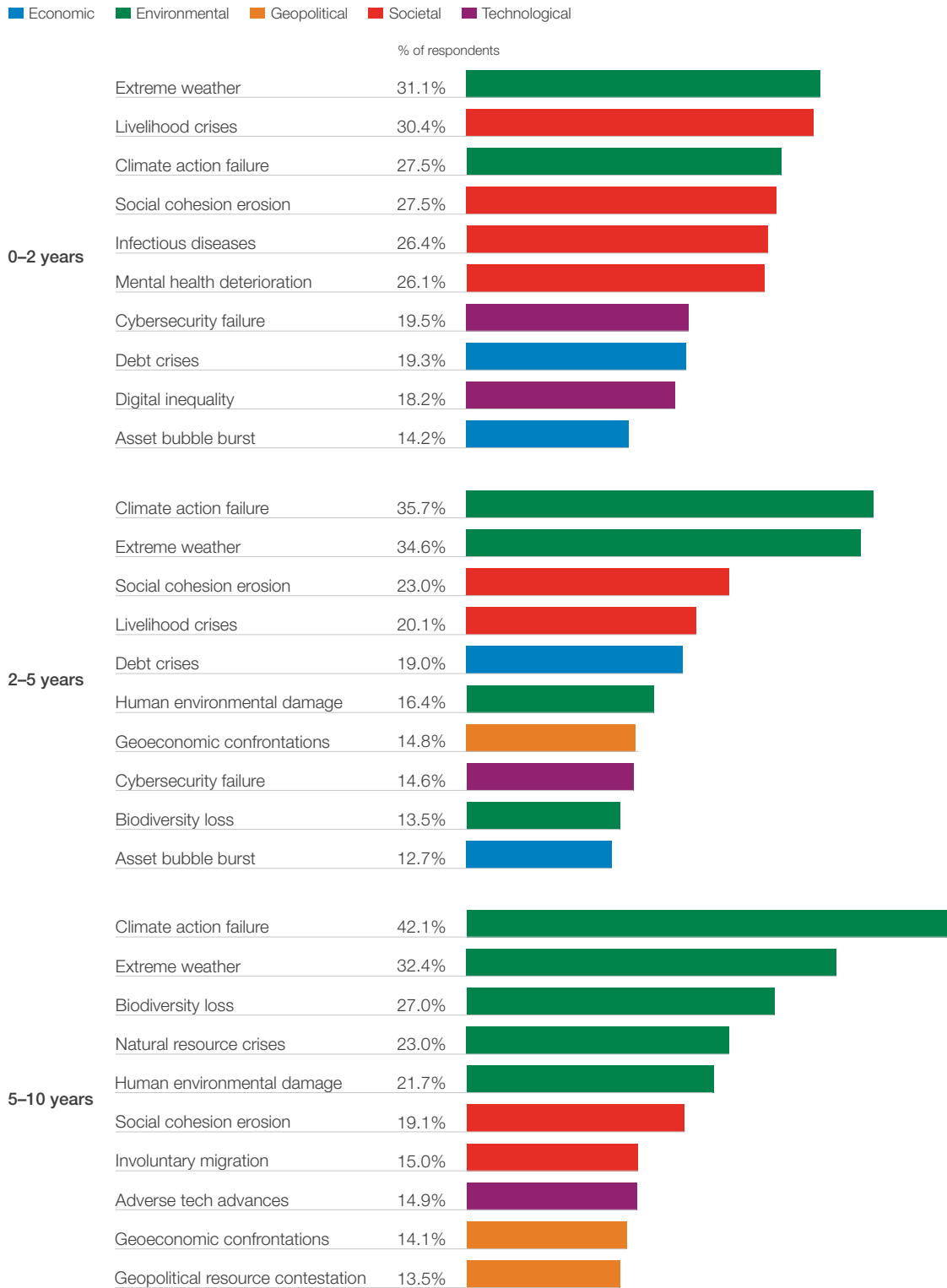
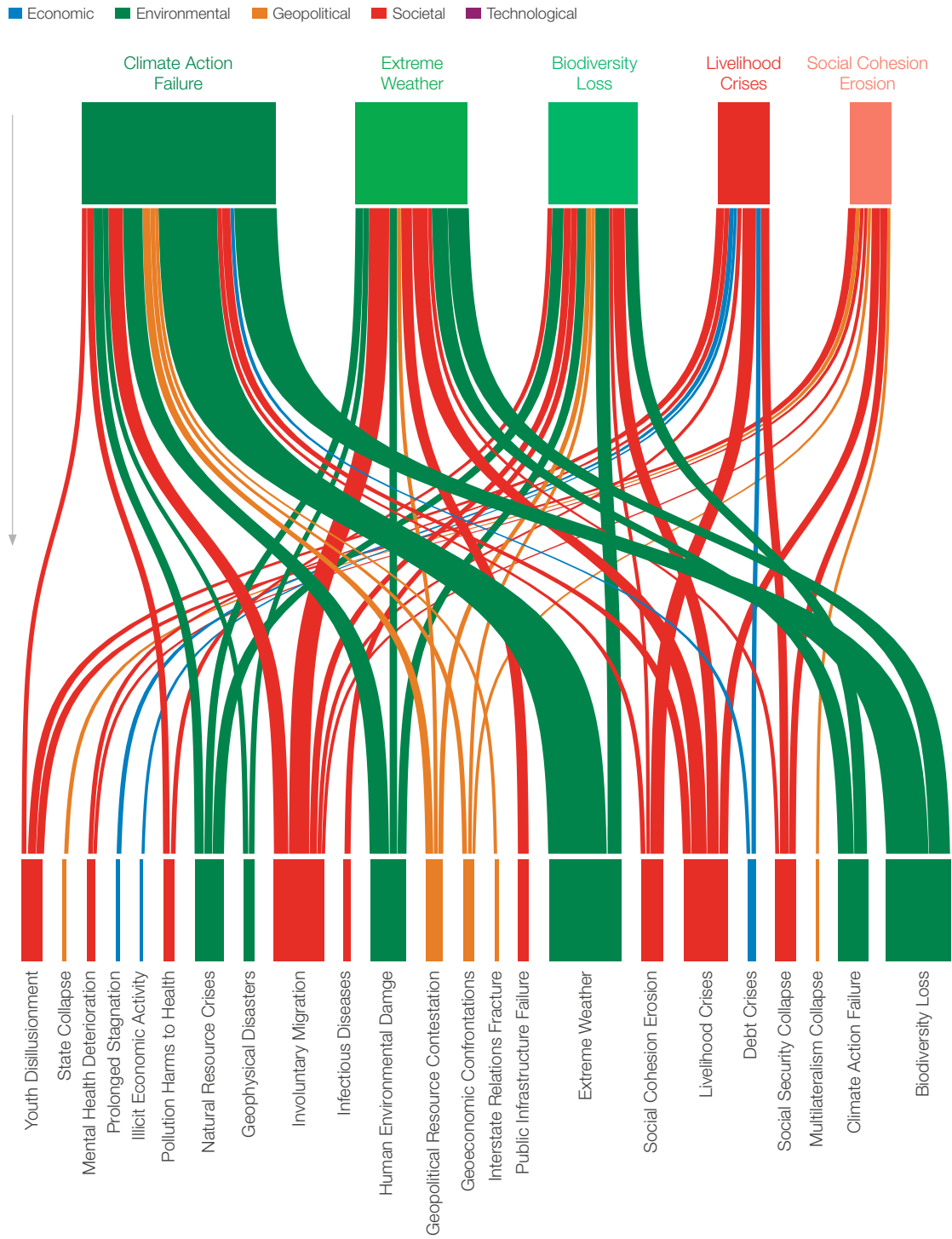


FIGURE III

Global Risks Effects

Most potentially damaging risks (top row) and risks they will aggravate (bottom row)*

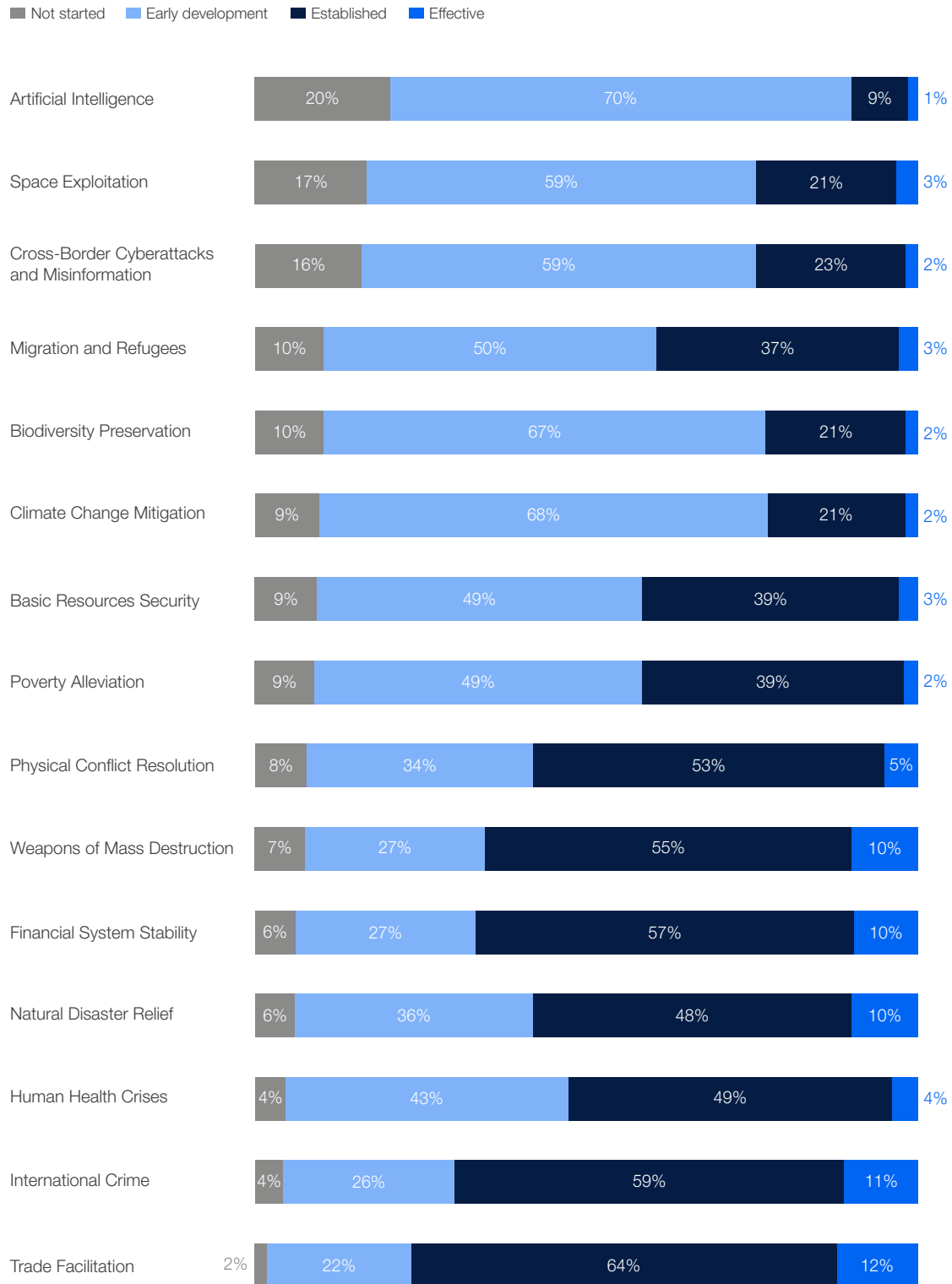


*Line thickness scaled according to tally of links (see Appendix C: Technical Notes).

FIGURE IV

International Risk Mitigation Efforts

Current state of international risk mitigation efforts in each area



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CHAPTER 2

Disorderly Climate Transition

1.8°C

most optimistic scenario of global warming
after COP26

US\$

130 trillion

committed private capital to carbon neutrality

40 million

jobs created through re-skilling in renewables
sector by 2050

Top 5

environmental risks lead the way in long-term
concerns according to GRPS respondents

Climate (in-)action

Accelerating and widespread climate change manifests itself in irreversible consequences.¹ The overwhelming weight of scientific analysis points to environmental adjustments and cataclysmic feedback loops that will push ecosystems beyond tipping points.² At that moment, decarbonization efforts would be rendered mute.

The latest nationally determined contributions (NDCs) to decarbonization made at the 2021 United Nations Climate Change Conference of the Parties (COP26) still fall short of the 1.5°C goal set out in the Paris Climate Agreement (for an extensive summary of COP26 outcomes, see Chapter 1, Box 1.1).³ The current trajectory is expected to steer the world towards a 2.4°C warming,⁴ with only the most optimistic of scenarios holding it to 1.8°C (see Figure 2.1).

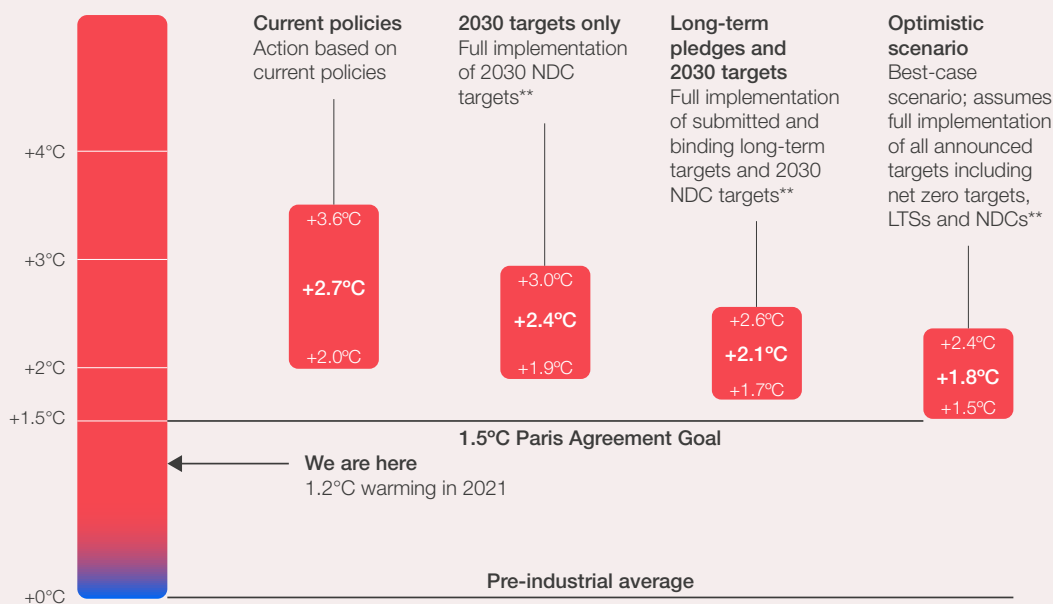
Without stronger action, global capacity to mitigate and adapt will be diminished, eventually leading to a “too little, too late” situation and ultimately a “hot house world scenario” with runaway climate change that makes the world all but uninhabitable.⁵ The world will face high costs if we collectively fail to achieve the net zero goal by 2050.⁶ Complete climate inaction will lead to losses projected to be between 4% and 18% of global GDP⁷ with different impacts across regions.⁸

The transition to net zero—the state in which greenhouse gases (GHG) emitted into the atmosphere are balanced by their removal from the atmosphere*—could be as transformative for economies and societies as past industrial revolutions. However, the complexities of the technological, economic and societal

* Net zero carbon dioxide (CO₂) emissions are achieved when anthropogenic CO₂ emissions are balanced globally by anthropogenic CO₂ removals over a specified period. Net zero CO₂ emissions are also referred to as “carbon neutrality.” This definition of “net zero” is from the IPCC (Intergovernmental Panel on Climate Change). 2018: Annex I Glossary. <https://www.ipcc.ch/sr15/chapter/glossary/>

FIGURE 2.1

Global Temperature Scenarios by 2100



** Nationally determined contributions (NDCs) are non-binding national plans for climate action, including targets for GHG emissions reductions. Long-term strategies (LTSs) are national mid-century development plans for confronting climate change. If 2030 NDC targets are weaker than projected emissions levels under current policies, then current policies are used here.

Source: Based on the Climate Action Tracker. <https://climateactiontracker.org/>

changes needed for decarbonization, coupled with the slow and insufficient nature of current commitments, will inevitably lead to varying degrees of disorderliness.

As climate change intensifies and some economies recover more quickly than others from COVID-19, a disorderly transition could bifurcate societies and drive countries further apart, and a too-slow transition will only beget damage and disruption across multiple dimensions over the longer term (see Box 2.1). Within countries, the disruptive potential of the transition could be amplified by disconnects between governments, businesses and households with respect to policy commitments, financial incentives, regulations and immediate needs. A sustained lack of coordination between countries would likely have profound geopolitical implications, with rising friction between strong decarbonization advocates and those who oppose quick strong action by using tactics such as stalling climate action or greenwashing— the practice of making people believe that a company or authority is more environmentally friendly than it actually is.

Tailwinds for a fast, but disorderly, transition

Clear evidence of rising physical risks, such as melting land ice, rising sea levels and prolonged periods of extreme heat and cold,⁹ as well as their associated consequences for human and economic

COVID-19 lockdowns saw a global dip in GHG emissions. However, upward trajectories soon resumed

systems,¹⁰ are intensifying momentum for the transition. And while COVID-19 lockdowns saw a global dip in GHG emissions, upward trajectories soon resumed:¹¹ GHG emissions rates rose faster in 2020 than their average over the last decade,¹² illustrating how the global economy is still heavily dependent on fossil fuels.

Governments, businesses, investors and communities are increasingly converging on the need for a quicker transition—each group setting higher expectations of the other. Green parties and green policies— such as a carbon border adjustment tax¹³— have gained traction in many countries, regions and industries, as have multilateral ideas like climate clubs.¹⁴ A plethora of climate risk disclosure frameworks and measurement standards are now being combined within a new International Sustainability Standards Board (ISSB) by the International Financial Reporting Standards (IFRS). This will help clarify what needs to be done, and by whom, to highlight and prevent greenwashing and stalling on climate action.

The rise of stakeholder capitalism, shareholder activism and increased appetite from companies to use environmental,

BOX 2.1

Global Risks Perception Survey Ranks “Climate Action Failure” as Top Risk

Respondents to the Global Risks Perception Survey (GRPS) 2021–2022 rank “climate action failure” as the most critical threat to the world in both the medium term (2–5 years) and long term (5–10 years), with the highest potential to severely damage societies, economies and the planet. Most also believe too little is being done: 77% said international efforts to mitigate climate change have “not started” or are in “early development”. (The survey was conducted before COP26. See Appendix C, Technical Notes).



REUTERS/PRAPAN CHANKAEW

social and governance (ESG) targets and metrics,¹⁵ coupled with ESG-based investments, is re-shaping the financial and economic landscape,¹⁶ and an increasing number of organizations are committing to decarbonize their operations. As banks, insurers and institutional investors are steering capital towards net zero, financial systems are rapidly emerging as critical enablers of the transition. A growing share of the US\$100 trillion bond market is mobilized for climate change solutions, and it is expected to reach the milestone of US\$1 trillion in annual issuances by 2022.¹⁷ Moreover, during COP26, the Glasgow Financial Alliance for Net Zero (GFANZ) announced that over US\$130 trillion in private capital has been committed to carbon neutrality—enough to achieve net zero by 2050.¹⁸ Similarly, parties at COP26 agreed on the framework for Article 6 of the Paris Agreement, enabling the immediate operationalizing of global carbon markets, ending uncertainty about the Clean Development Mechanism (CDM) and further establishing a new central UN supervisory body to trade carbon credits on specific projects.

These commitments by both businesses and governments are being closely monitored by civil society organizations and investors,¹⁹ which fear untenable populist promises are being made for short-term political or financial gain.²⁰

Headwinds slowing the transition

The risk of a disorderly transition is aggravated by the interdependencies and distributed nature of economic and financial systems, the historic shielding of climate change externalities from citizens and businesses, decarbonization costs, and the many divergent interests at play that will complicate the transition. In the short term, these complexities are likely to prompt many actors to avoid or defer action.

Some national and business actors are still deliberately manoeuvring to stall or scale back the green transition. Governments need to balance the needs of populations dependent on carbon-intensive industries with international commitments. Yet some

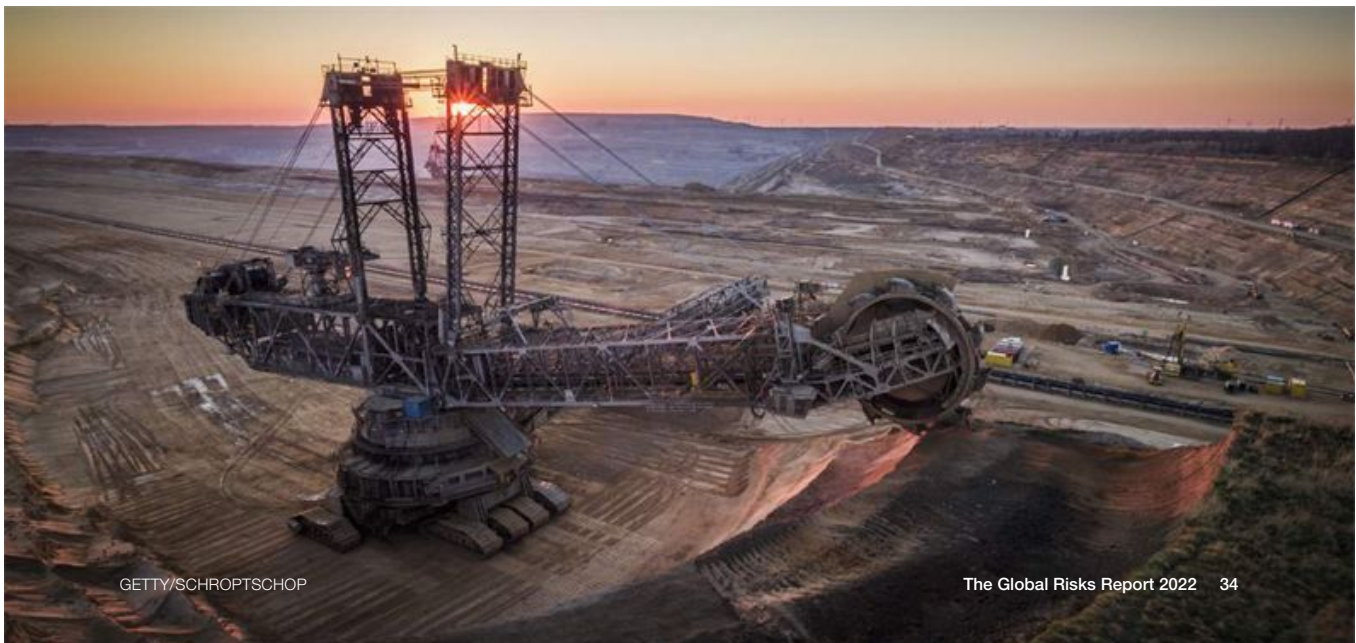
of these commitments are lofty and lacking scientific credibility,²¹ legislatures are preemptively blocking new climate laws,²² and regulations are being contested in courts by both proponents who push for more climate action and those who advocate for less.²³ Geopolitical tensions and rising competition over climate-friendly raw materials also further threaten to undermine international cooperation on green transition progress.²⁴ Some actors show little interest in the multilateral platforms on which climate action is taking place;²⁵ others continue to prioritize nationally important industries and could, in the wake of increased global tensions, shift to national security concerns over action on the transitions.

With government finances under pressure, regulatory obligations are not going far or fast enough, and there is an assumption that market forces will come to the rescue. In many countries there are insufficient incentives for households and businesses to invest in net zero technologies and few penalties for failing to do so. Slow uptake of new technologies such as low-carbon energy generation and carbon capture and storage, continued household overconsumption of carbon-intensive products and services,²⁶ and a failure to grasp the seriousness of climate threats all point to a slower transition that preserves “order” in the near term.²⁷ New innovations that require high amounts of energy during production and use, such as crypto-mining or crypto-trading,²⁸ often coming from fossil

Post-COVID-19 recovery measures mostly neglect the green transition in favour of short-term stability

fuel energy sources, can also offset efforts to reduce ecological footprints.

Post-COVID-19 recovery measures mostly neglect the green transition in favour of short-term stability,²⁹ while loose monetary policies further distort green, market-based solutions or investments;³⁰ they also exacerbate the problem of zombie companies.³¹ Carbon-intensive technologies continue to receive public subsidies,³² with over 50 developed and emerging economies committing US\$345 billion to fossil fuels in 2020—a figure lower than in previous years largely because of depressed consumption and prices during the pandemic.³³ At the time of writing, the economic rebound following the impact of COVID-19 has seen (fossil) energy demand outstrip supply,³⁴ resulting in sharply increased energy prices, even as the world turns against fossil fuels.³⁵ Moreover, some business actors continue their efforts to slow the transition. Climate-sceptic lobbying,³⁶ greenwashing and sowing misinformation and distrust about climate science remain pervasive in many countries.³⁷



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Some economic incentives also complicate attempts to coordinate measures that could internalize costs in high-emission industries and countries, minimize market disruptions and more fairly redistribute burdens and rewards. Instead of fostering decarbonization, the lack of global emission prices and reporting requirements continues to shield consumers and producers from the cost of inaction.³⁸ This incentivizes countries and businesses not to curb emissions, but instead to game the system and avoid liability by offshoring carbon-intensive activities or trading their emissions to countries with less stringent regulations.³⁹ Developing countries attracted to emissions in-shoring schemes by short-term financial gain

squander the opportunity to use carbon allowances for their own development and risk undermining their future access to trade flows and the finance needed for mitigation and adaptation.⁴⁰

Businesses may be unprepared for transition risks such as rapid shifts in policies and regulations, the need to develop low-carbon technologies and changes in consumer behaviour and investor preferences.⁴¹ These risks have the potential to destabilize the financial system,⁴² as in aggregate they can increase default rates and asset volatility. They are further amplified in economies with low investment capability, high reliance on fossil fuels and less-inclusive political systems.⁴³

Consequences

The consequences and repercussions of the transition will necessarily reflect the speed at which it takes place; the efforts that go into it; and whether it is slow or aggressive, concerted or entrenched, and focused more on mitigation or adaptation. The goal of 1.5°C is so fundamental that societies need to be prepared to assume negative consequences of policies taken by governments today to avoid the worst consequences tomorrow. This includes job losses, increased costs and geopolitical insecurity associated with a disorderly transition. Only a socially just transition will make the consequences bearable for large parts of societies with governments needing to create policies and social-protection systems that help reduce the impacts for those affected. A rapid decarbonization would increase economic and societal disruption in the short term, while a slower pace with fewer short-term impacts would entail much larger costs and greater disorderliness in the long-term.

GRPS respondents drew attention to the societal consequences of environmental degradation at a global scale. They identify “climate action failure” and “extreme weather” as strong aggravators of “involuntary migration”, “livelihood crises”

and “social cohesion erosion”. In contrast, respondents to the Executive Opinion Survey (EOS) see the impacts from “climate action failure” as top risks in the short-term at a country level: “human environmental damage” and “extreme weather” are considered top-10 risks in 90 economies and 60 countries, respectively. All countries ranking these risks highly are particularly prone to wildfires, droughts, floods, deforestation and pollution.

Varying speeds

A hasty pace

Concerted, aggressive action now will, because of the scale of the endeavour, bring discontinuities and thus disruptions, as efforts within and between industries, businesses and governments fail to align. It would alleviate long-term environmental consequences but could have severe short-term economic and societal impacts. Missteps will likely threaten national energy security, for example, and result in volatile energy prices. Over the longer term, countries will face questions regarding the viability of vehicle fuel and gas supply arrangements when much of the population has shifted away from combustion engines, gas boilers and heating.



APPENDIX 4

GETTY/AERIAL PERSPECTIVE WORKS

As carbon-intensive industries employ millions of workers, their rapid termination could trigger economic volatility and increase societal and geopolitical tensions. Up to 8.5 million jobs in the energy sector (almost 30%) could be lost in fossil fuels and nuclear energy by 2050, although with re-skilling up to 40 million new jobs could be created, mostly in renewables.⁴⁴ Earlier or current investments in carbon-intensive technologies could result in stranded assets. These—even if they are the result of wilfully made investments in carbon-intensive technologies for short-term gain instead of long-term investments in clean technologies⁴⁵—could impact the financial sector,⁴⁶ as well as the transition, when they are trapped in industries such as those that extract resources required for low-carbon technologies.⁴⁷ Despite these short-term disruptions, the social and economic consequences of unmitigated global warming and entire nations being flooded or disappearing would be even more cataclysmic: countries' complete economies and assets would be left stranded.

Non-holistic government approaches also pose risks. Adopting low-carbon and more sustainable technologies too hastily, in a way that neglects systemic interdependencies—such as transitioning one system before another linked or dependent one is ready—could lead to production shortages and disrupt secondary economic cycles if redundant systems are not in place to prevent energy supplies from collapsing. Poor regulation of new green markets could create

unwanted monopolies in geopolitically contested industries such as rare earth elements extraction.

Some approaches to the green transition reflect blind spots that risk damaging outcomes for workers and the environment.⁴⁸ These include focusing solely on carbon dioxide (CO₂) emissions and ignoring methane,⁴⁹ or the increased use of resources for low-carbon technologies. They also risk setting regulatory requirements to phase out technologies before substitutes exist or, in other words, a focus on supply constraint of fossil fuels rather than an equal emphasis on demand-destruction in the most carbon-intensive industries.

Slow transition

In contrast, a slower but more orderly transition might be more manageable in the short term but would result in the need for deeper and faster changes by 2050. This would lead to more pronounced long-term disorder, amplified at the same time by more damaging economic activity such as the closing off of opportunities, damaging impacts through environmental degradation impacting societal well-being and infrastructural fragilities.

The long-term financial impacts would disproportionately affect large and/or developing countries.⁵⁰ Some of these countries face political and financial barriers to swiftly reducing their reliance on fossil fuel energy production such as cutting coal use;⁵¹ others rely on natural gas to

reach a higher level of industrialization before decarbonizing,⁵² even though these policies further aggravate the destruction of ecosystems. Consequently, the loss of (arable) land would increase migration pressure and the number of climate refugees (see Chapter 4). This slow pathway may lead countries to prioritize adaptation over mitigation efforts. Yet, once carbon prices increase and demand destruction ends up making fossil energy investment a losing bet, leapfrogging to renewables sooner than later could prove to be a more effective long-term investment for such developing countries.

Divergent paces

It is most likely that national transition programmes will move at different paces as a result of differences in political will (decarbonization ambitions and political interest), economic structure (service versus manufacturing) and capabilities (technological know-how and financial wherewithal). Countries that move faster will be able to consolidate their own national capabilities and clean tech industries; those that move more slowly will lack competitiveness in this area but be able to leverage the best that has been developed elsewhere. Initiatives that pay closer attention to scope 3* emissions will shine a spotlight on global value chains and will increasingly disadvantage exports from laggard countries. Furthermore, the heterogeneity of climate action worldwide will be a risk for trade flows in the future, especially for the less-developed economies. By facing narrower access to trade finance, they risk exclusion from the opportunities for orderly climate mitigation and adaptation.⁵³

Reputational damage and liability issues for governments and businesses seen as complicit in, if not responsible for, climate change could lead to breakdowns in trust between nations, higher global tensions and the possibility of sanctions being introduced against laggard nations, or fines/trade tariffs against relapsing businesses.

Transition policies risk losing public support if they neglect the impacts—on land use, resources, nature—of large-scale water and wind energy installations,⁵⁴ or emanate from failure to create just pricing schemes for communities willing to invest in green energy, such as a shift of fossil fuel to renewable energy subsidies or equal feed-in tariffs for individuals and large-scale providers.⁵⁵ Poor grid stability through the intermittency of renewable energy sources, shortages in storage capacity and the phasing out of existing baseload energy technologies that have a low carbon intensity yet are politically highly controversial, such as nuclear energy,⁵⁶ could also dwindle public support for cleaner energy sources.

Especially at risk are unskilled workers unable to transition their skill sets

Biotechnical and geoeengineering solutions

While negative emission technologies are an essential component of all IPCC 1.5°C scenarios, geoeengineering solutions could be silver-bullet solutions, but they may not adequately explore systemic interdependencies and implications.⁵⁷ Moreover, the deployment of such untested technologies carries unknown risks. Some geoeengineering approaches—such as weather modification or solar radiation management (SRM)—could spiral out of control or create friction if they are used for geopolitical advantage in the absence of any governance framework,⁵⁸ as the effectiveness could vary regionally.⁵⁹ They could exacerbate geopolitical tensions between countries where the local climate is improving and those that are suffering from the unintended consequences.⁶⁰

On the other side, biotechnical solutions such as carbon dioxide removal (CDR)

* Scope 1 emissions are direct emissions from owned or controlled sources. Scope 2 emissions are indirect emissions from the generation of purchased energy. Scope 3 emissions are all indirect emissions (not included in scope 2) that occur in the value chain of the reporting company, including both upstream and downstream emissions. This definition of "Scope 3 emissions" is from the Greenhouse Gas Protocol. 2021. https://ghgprotocol.org/sites/default/files/standards_supporting/FAQ.pdf

from the atmosphere need to be scaled up to come close to keeping the 1.5°C scenario within reach under all IPCC scenarios.⁶¹ The robustness of any net zero strategy that relies on CDR depends both on the effectiveness of the underlying projects that drive the CO₂ removal and, especially, on the permanence of the stored carbon.⁶² Other solutions, such as carbon capture, utilization and storage (CCUS), are already heavily subsidized,⁶³ but they risk being used for greenwashing as carbon-heavy industries eventually fail to structural change their value chains to reduce their emissions.⁶⁴ Similarly, Bio-energy Carbon Capture and Storage (BECCS) solutions could create unintended geopolitical consequences or prove to be counterproductive.⁶⁵

prices and physical climate impacts, among other issues. They may also face increased service disruption from utilities where system dependencies and discontinuities have not been adequately anticipated by participants. Especially at risk are unskilled workers, those unable to transition their skill sets and those currently employed in carbon-intensive industries that undergo radical transformation.⁶⁶ Many of these workers are already facing challenges related to automation and the hyper-globalization of the pre-COVID-19 era, when key heavy industries such as coal and steel were offshored to emerging markets.⁶⁷ Middle-class households could also be left behind if aggressive transition measures impact their finances and their purchasing power diminishes substantially.

Stakeholder consequences

Loss of agency: Consequences for individuals

The type of transition will have far-reaching socio-economic implications for individuals. Where policies, incentives and innovations fail to stimulate effective market solutions, households will see increases in their cost of living due to rising decarbonization requirements for homes, rising fossil fuel

Loss of income would inhibit people's access to new technologies and upward mobility, entrenching inequalities for generations. Unequal transition speeds could widen inequalities between economies and create pressure on workers to migrate to countries where their skills are still in demand (see Chapter 4). Failed or slow climate action could worsen gender inequalities as, in many low-income economies, women are responsible for gathering and producing



GETTY/VISOOT UTHAIRAM



REUTERS/OCTAVIO JONES

food, securing water and collecting bioenergy sources such as firewood and crop waste. Together, these consequences could trigger disillusionment with climate action and lead to the radicalization of marginalized socio-economic groups across the political spectrum.

Loss of control: Consequences for governments

Governments will face backlash whether climate action is slow or aggressive. Steeper transition costs such as high and quick increase in the price of carbon and fossil fuels could weaken public support for fast action; conversely, slow action could trigger further radicalization from those who feel authorities at all levels do not act fast enough, with a potential increase in inter-generational friction and more fiscal drain due to increased recovery funding. Investing in a net zero economy could create unsustainable levels of debt for economies lacking the means of such large-scale investment, or the loss of rent/tax revenue for economies heavily dependent on carbon intensive resource production, which would cripple public finances already vulnerable from the economic impacts of COVID-19 fallouts (see Chapter 1). Especially at risk are more climate-vulnerable countries; such green investment could be seen as a diversion from pandemic-related recovery programmes and the enhancement of core public infrastructure and services. Unequal access to low- or zero-carbon innovations could undermine support for governments in some countries.⁶⁸

A socially unjust transition would exacerbate geopolitical and economic friction and inequalities between countries and regions. Laggard economies—especially those reliant on carbon-intensive sectors and that fail to keep up with technological innovation—risk losing competitive advantage and leverage in trade agreements, civil unrest, regime change and massive economic and societal disruption. Unequal access to materials and funding to enable the transition could increase tensions, as could unintended consequences—such as the destruction of ecosystems in developing countries to extract resources for next-level electrification of mobility in developed economies.⁶⁹

Failed or delayed financial promises by advanced economies—such as a decline in promised foreign direct investment (FDI),⁷⁰ or shortcomings to the globally agreed annual \$100 billion for emerging and developing countries to finance their transition to lower emissions and adaptation measures to the physical consequences of climate change⁷¹—could leave developing countries stranded with costly, aggressive transition plans, unable to provide for vulnerable populations.

A zero-sum political game, with a first-come, first-served mentality, compounded by a lack of solidarity and combined with the absence of clear climate governance or enforceable accountability measures would increase tensions between economies transitioning quickly and those preferring or needing a slower transition.

Loss of market share: Consequences for businesses

Policies triggering the premature termination of large-scale industries would disrupt markets, affect financing mechanisms and limit investment opportunities.⁷²

Inconsistent policy signals, choices crippling competitiveness, and conflicting rhetoric, regulations and incentives would generate discontent among businesses. The transition could lead to stranded assets in carbon-intensive industries,⁷³ while devaluations could potentially affect the financial system,⁷⁴ leading to loss of liquidity and increasing liability, credit and market risks.⁷⁵ Businesses perceived as lagging, or as complicit in slowing down climate action,⁷⁶ could lose consumer and investor confidence and face additional state intervention and liability risk through judicial action.⁷⁷ Overall, businesses could also lose out on opportunities to invest in net zero technologies and the skilled professionals of the future,⁷⁸ impacting their long-term viability.

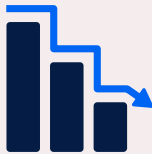
A disorderly transition could see more frequent and severe supply chain disruptions due to labour and product shortages, especially as sectors and companies switch operating models or simply go out of business. These disruptions present challenges to the

resilience of business models across all industries.

Loss of nature

How the speed and degree of transition impacts natural ecosystems will, in turn, help or hinder its effectiveness. Some actions taken to mitigate climate change will incur costs for nature. In the rush to increase biomass use for BECCS, to use more agricultural land to create biofuels for industries such as aviation, and to extract minerals needed for the decarbonization of the world's economy,⁷⁹ additional negative impacts on ecosystems and indigenous societies in emerging economies are difficult to avoid. Solutions used for carbon offsetting, such as restoring or reforesting land—so-called offset forests—could be destroyed if that land is damaged by more severe weather such as wildfires or floods, eventually unleashing the stored carbon. Poorly sited windfarms or hydroelectric dams can affect ecosystems and wildlife at a large scale, and they also present societal risks (such as forced relocation of local residents) and political risks (such as by controlling downstream water-access to neighbouring countries). The continued degradation of nature will add to stress on local residents, public health, businesses and ultimately the stability of society, while regional population growth will further impact the use of land and resources such as water and food.

Shocks to Reflect Upon



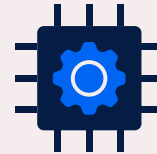
Green Market Crash

What if the boom in sustainable investments becomes a bubble, followed by a crash that cripples innovation and progress?



Fusion Power at Last

What if a new transformative technology emerges but cannot be mass-produced at low cost, disadvantaging developing economies and impacting climate action dynamics?



Collateral Geo-Damage

What if unilateral implementation of large-scale geoengineering solutions creates unexpected knock-on effects that developing economies are ill-equipped to handle?

Towards a more sequenced transition

Beyond the sheer scale, complexity and interdependency of the needed changes, the climate transition will be disorderly because decades of inaction and hesitant implementation of transition measures on local and global levels have steered the planet onto a path that will be difficult to change.

In a recovering yet diverging global economy, countries will need to transition at varying paces to prevent short-term disruptions from offsetting long-term gains, but the consequences of disparate transitions will be felt worldwide. The least disruptive climate transition measures will be those that holistically integrate the needs of individuals, societies, businesses and planet. Domestic and international

collaboration should focus on educating the public about the value and need of climate action, including a change in consumer behaviour and demand-destruction for carbon intensive goods. Businesses of all sizes need to be incentivised to proactively factor in transition risks and move to circular economy models, while governments should be encouraged to take bold and immediate steps towards implementing robust legal frameworks that ensure a just transition.

Any transition of this scale will be disruptive. All stakeholders need to focus on actions that will drive an innovative, determined and inclusive transition in order to minimize the impacts of disorder, facilitate adaptation and maximize opportunities.



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CHAPTER 3

Digital Dependencies and Cyber Vulnerabilities

435%

increase in ransomware in 2020

3 million

gap in cyber professionals needed worldwide

US\$

800 billion

estimated growth in value of digital commerce by 2024

95%

cybersecurity issues traced to human error

Digital distress

Governments, societies and companies increasingly rely on technology to manage everything from public services to business processes, even routine grocery shopping.¹ Converging technological platforms, tools and interfaces connected via an internet that is rapidly shifting to a more decentralized version 3.0 are at once creating a more complex cyberthreat landscape and a growing number of critical failure points. As society continues to migrate into the digital world, the threat of cybercrime looms large, routinely costing organizations tens—even hundreds—of millions of dollars. The costs are not just financial: critical infrastructure, societal cohesion and mental well-being are also in jeopardy.

Digital everything

Growing dependency on digital systems over the last 20 years has drastically shifted how many societies function.² The COVID-19-induced shift to remote work has accelerated the adoption of platforms and devices that allow sensitive data to be shared with third parties—cloud service providers, data aggregators, application programming interfaces (APIs) and other technology-related intermediaries.³ These systems, while powerful tools for data and processing, attach an additional layer of dependency on service providers. Remote work has also moved digital exchanges from

office networks to residential ones, which have a greater variety of connected devices with less protection against cyber intrusion. In parallel, the appetite for capabilities predicated upon using multiple technologies working in concert—including artificial intelligence (AI), Internet of Things (IoT)/Internet of Robotic Things-enabled devices, edge computing, blockchain and 5G—is only growing.⁴ While these capabilities afford tremendous opportunities for businesses and societies to use technology in ways that can dramatically improve efficiency, quality and productivity, these same capabilities also expose users to elevated and more pernicious forms of digital and cyber risk.

In the future, the interconnectedness and convergence of these digital tools will continue to increase as society embraces the next version of the internet built upon blockchain technology. One manifestation of this migration will be the metaverse: a network of 3D virtual spaces, enabled by cryptocurrencies and non-fungible tokens (NFTs) among other technologies, with unprecedented socio-economic interoperability and immersive virtual reality experiences.⁵ Users will be required to navigate security vulnerabilities inherent in both increased dependency on and growing fragmentation in these types of complex technologies often characterized by decentralization and lack of structured guardrails or sophisticated onboarding infrastructure.



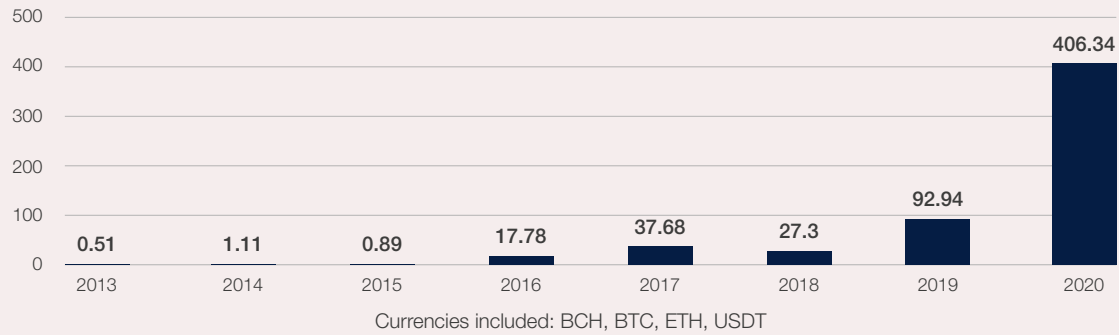
GETTY/FILIPPOBACCI

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FIGURE 3.1

Total Cryptocurrency Value Received by Ransomware Addresses, 2013-2020

Cryptocurrency value in millions of US\$



Source: Based on Chainalysis. Ransomware 2021: Critical Mid-Year Update. Insights blog. <https://blog.chainalysis.com/reports/ransomware-update-may-2021>

Cyber vulnerabilities

In the context of widespread dependency on increasingly complex digital systems, growing cyberthreats are outpacing societies' ability to effectively prevent and manage them. For example, the digitalization of physical supply chains creates new vulnerabilities because those supply chains rely on technology providers and other third parties, which are also exposed to similar, potentially contagious, threats.⁵ In December 2021, just one week after discovering a critical security flaw in a widely used software library (Log4j), more than 100 attempts at exploiting the vulnerability were detected every minute, illustrating how free access coding can spread vulnerabilities widely.⁷ Information technology (IT) monitoring and management software also illustrate the potential for contagious exposure, which can break through the defences of critical cybersecurity supply chains, as shown by the Solar Winds Orion attack that occurred in late 2020.⁸ While a state-based institution with highly sophisticated capabilities probably lodged this attack, other criminal organizations will certainly attempt to replicate this approach.⁹ At the same time, older vulnerabilities persist with many organizations still relying on outdated systems or technologies.

Malicious activity is proliferating, in part because of the growing vulnerabilities—but also because there are few barriers to entry for participants in the ransomware industry and little risk of extradition, prosecution or sanction.¹⁰ Malware increased by 358% in 2020, while ransomware increased by 435%,¹¹ with a four-fold rise in the total cryptocurrency value received by ransomware addresses (see Figure 3.1).¹² “Ransomware as a service” allows even non-technical criminals to execute attacks, a trend that might intensify with the advent of artificial intelligence (AI)-powered malware.¹³ In fact, profit-seeking groups of cyber mercenaries stand ready to provide access to sophisticated cyber-intrusion tools to facilitate such attacks. Furthermore, cryptocurrencies have also allowed cybercriminals to collect payments with an only modest risk of detection or monetary clawback.¹⁴

Attacks themselves are also becoming more aggressive and widespread.¹⁵ Cyberthreat actors using ransomware are leveraging tougher pressure tactics as well as going after more vulnerable targets, impacting public utilities, healthcare systems and data-rich companies.¹⁶ For example, before it disbanded, DarkSide—the group accused of being responsible for the Colonial Pipeline attack—offered a suite of services (“triple” or “quadruple” extortion)



REUTERS/JIM YOUNG

to clients beyond simply encrypting files; these included data leaks and distributed denial-of-service (DDoS) attacks. Hacker groups will also contact victims' clients or partners to get them to urge the victims to pay ransoms. Among the services offered is the collection of top executive information for blackmail.¹⁷

Sophisticated cyber tools are also allowing cyberthreat actors to attack targets of choice more efficiently, rather than settling for targets of opportunity, highlighting the potential to carry out more goal-oriented attacks that could lead to even higher financial, societal and reputational damage in the future. Increasingly sophisticated use of spyware technologies, for example, has allowed for targeted attacks against journalists and civil rights activists across geographies—spurring a wave of political and industrial blowback in the form of government sanctions and lawsuits.¹⁸ The ability to tailor attacks at will includes timing them for when cybersecurity teams and leadership could be distracted by other priorities, such as during peak COVID-19 outbreaks or a natural disaster. Cyberthreat actors are also accessing higher-quality and more sensitive information from victims. And deepfake technology is allowing cyberthreat actors to improve social engineering ploys, proliferate disinformation and wreak societal havoc, especially at times of high volatility.¹⁹

Global Risks Perception Survey (GRPS) respondents reflect these trends, ranking “cybersecurity failure” among the top-10 risks that have worsened most since the start of the COVID-19 crisis. Moreover, 85% of the Cybersecurity Leadership Community of the World Economic Forum have stressed that ransomware is becoming a dangerously growing threat and presents a major concern for public safety.²⁰ At a regional level, “cybersecurity failure” ranks as a top-five risk in East Asia and the Pacific as well as in Europe, while four countries—Australia, Great Britain, Ireland and New Zealand—ranked it as the number one risk. Many small, highly digitalized economies—such as Denmark, Israel, Japan, Taiwan (China), Singapore and the United Arab Emirates—also ranked the risk as a top-five concern.

Already-stretched IT and cybersecurity professionals are under an increasing burden, not only because of the expansion of remote work but also because of the growing complexity of regulations for data and privacy, even though such regulations are critical to ensuring public trust in digital systems.²¹ There is an undersupply of

“Cybersecurity failure” is one of the risks that worsened the most through COVID-19

cyber professionals—a gap of more than 3 million worldwide²²—who can provide cyber leadership, test and secure systems, and train people in digital hygiene.²³ As with other key commodities, a continued lack of cybersecurity professionals could ultimately hamper economic growth,²⁴ although new initiatives to “democratize” cybersecurity, for example, by providing free cybersecurity risk management tools, could help fill some of the gaps for small businesses or other institutions.²⁵

There are concerns that quantum computing could be powerful enough to break encryption keys—which poses a significant security risk because of the sensitivity and criticality of the financial, personal and other data protected by these keys. The emergence of the metaverse could also expand the attack surface for malicious actors by creating more entry points for malware and data breaches.²⁶ As the value of digital commerce in the metaverse grows in scope and scale—by some estimates projected to be over US\$800 billion by 2024—these types of attacks will grow in frequency and aggression.²⁷ The myriad forms of digital property such as NFT art collections and

digital real estate could further entice criminal activity.

For governments attempting to prevent cybersecurity failures, patchwork enforcement mechanisms across jurisdictions continue to hamper efforts to control cybercrime.²⁸ Geopolitical rifts hinder potential cross-border collaboration, with some governments unwilling or unable to regulate cyber intrusions that originate inside and impact outside their borders. Unsurprisingly, given the geopolitical tensions around digital sovereignty, according to GRPS respondents, “cross-border cyberattacks and misinformation” and “artificial intelligence” were among the areas with the least “established” or “effective” international risk mitigation efforts.

Companies must also act ahead of new regulatory shifts, as the political undercurrents/geopolitical tensions between various countries might impact cross-border data flows. This might mean moving data processing to jurisdictions that might allow for better customer protection around data privacy issues.²⁹

Consequences

Often-repeated examples of past cyber intrusions are worth re-examination, as these cases demonstrate how damaging attacks on large and strategically significant systems—such as banking, hospital, Global Positioning System (GPS) or air traffic control systems—could be.³⁰ As resources are increasingly digitized, notable as well is the heightened risk of cyber espionage attacks that typically target intellectual property and result in high developmental and reputational costs to both private and public sector organizations.³¹

The interaction between digitalization and growing cyberthreats carries intangible consequences as well. The growth of deepfakes and “disinformation-for-hire” is likely to deepen mistrust between societies, business and government.³² For example,

deepfakes could be used to sway elections or political outcomes.³³ More concretely, in one recent case, cybercriminals cloned the voice of a company director to authorize the transfer of US\$35 million to fraudulent accounts.³⁴ There is also a booming market for services designed to manipulate public opinion in favour of clients, public or private, or to damage rivals.³⁵ Fraud, too, will become easier and therefore more frequent with banking, health and civic processes going remote.

Patchwork enforcement mechanisms continue to hamper efforts to control cybercrime

In 2021, UK internet banking fraud rose by 117% in volume and 43% in value compared with 2020 levels, as people spent more time shopping online.³⁶ Digital safety overall—from health misinformation and extremism to child exploitation—faces new challenges with unexperienced and more vulnerable populations coming online.³⁷

Even in the best-case scenario of aggressive digital threat defences, there will be significant increases in the cost of operations for all stakeholders. This could be particularly challenging for small- or medium-sized businesses that might spend 4% or more of their operational budget on security, compared to larger organizations that might spend closer to 1–2%.³⁸ Indeed, amid the rising frequency and severity of ransomware claims, cyber insurance pricing in the United States rose by 96% in the third quarter of 2021, marking the most significant increase since 2015 and a 204% year-over-year increase.³⁹ Respondents to the GRPS indicate a long-term concern with these developments, with “adverse tech advances” appearing as a top-10 risk over a 5-to-10-year horizon.

Cyberthreats also continue to drive states apart, with governments following increasingly unilateral paths to control

risks. As attacks become more severe and broadly impactful, already-sharp tensions between governments impacted by cybercrime and governments complicit in their commission will rise as cybersecurity becomes another wedge for divergence, rather than cooperation, among nation states.⁴⁰ Particularly in an era of rising tensions between superpowers, cyberattacks are another battlefield in which escalation is a key risk (see Chapter 1).⁴¹ If cyberthreats continue without mitigation, governments will continue to retaliate against perpetrators (actual or perceived), leading to open cyberwarfare, further disruption for societies and loss of trust in governments’ ability to act as digital stewards.

Digital security divides: Consequences for people

Among the most vulnerable are those who are only now coming online or will soon do so. Around 40% of the world’s population is not yet connected to the internet.⁴² These individuals are already facing inequalities in digital security, which will only widen with the advent of internet 3.0 and the metaverse.⁴³ Within digitally advanced societies, vulnerable populations are also often more digitally at risk: for example, a recent study finds that low-income residents of San Francisco—

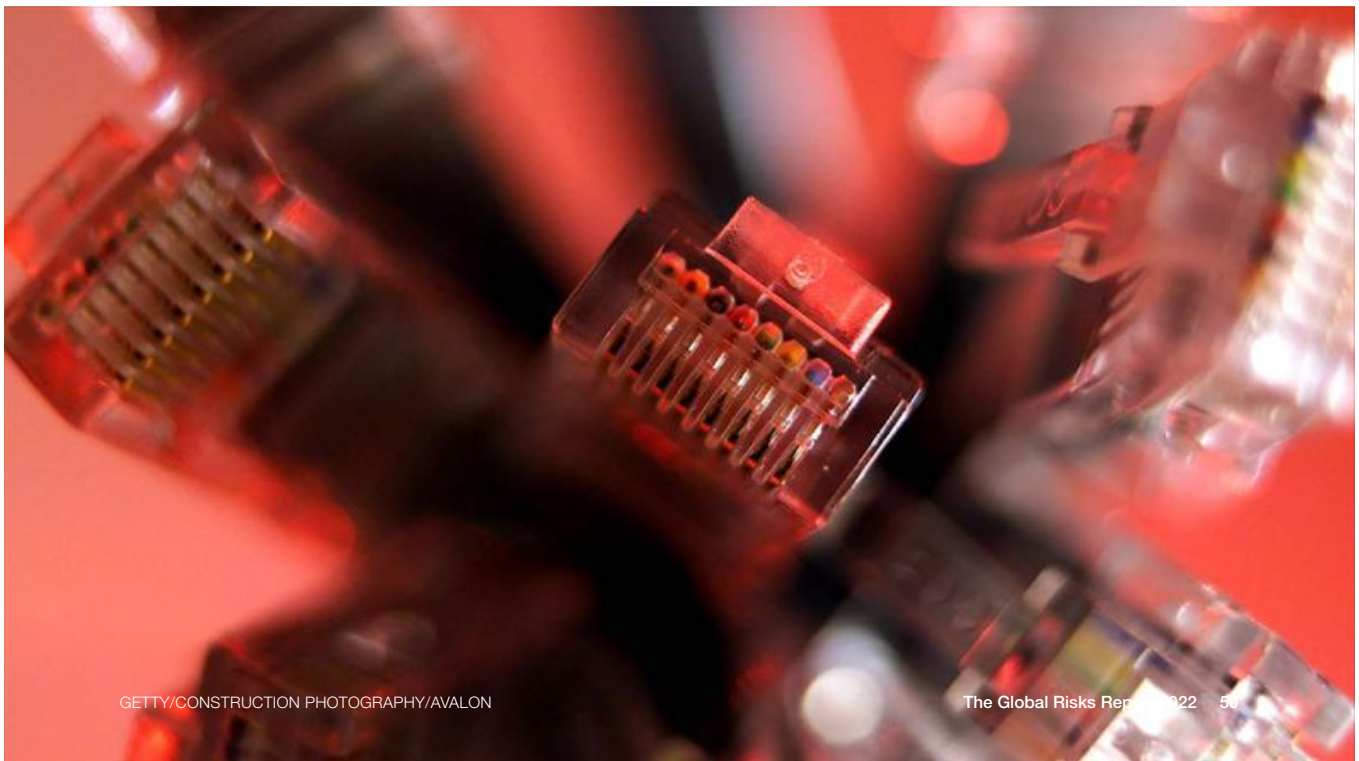
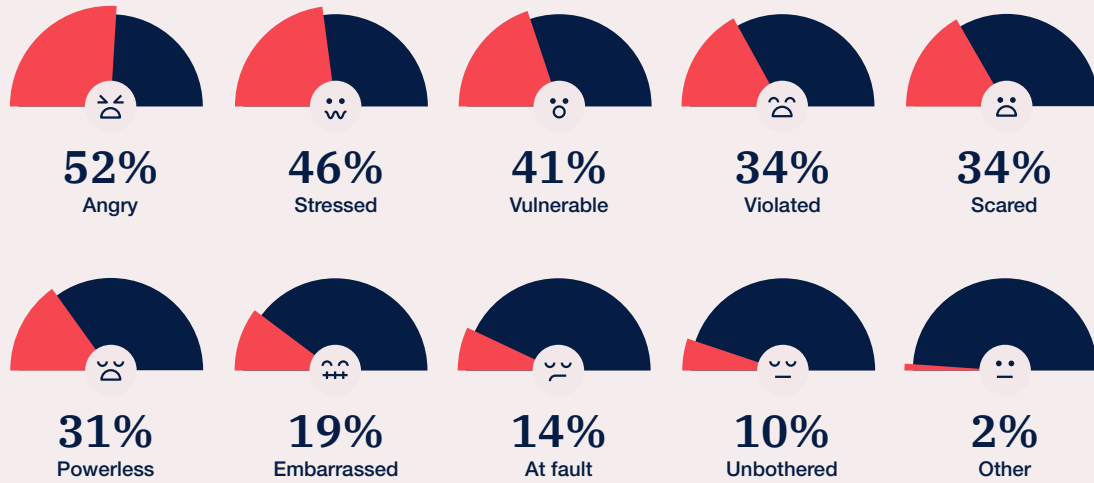


FIGURE 3.2

Emotions Experienced after Detecting Unauthorized Access

Global total of those who detected unauthorized access in past 12 months



Source: NortonLifeLock Inc. 2021. "2021 Norton Cyber Safety Insights Report: Global Results". Norton and The Harris Poll. May 2021. https://now.symassets.com/content/dam/norton/campaign/NortonReport/2021/2021_NortonLifeLock_Cyber_Safety_Insights_Report_Global_Results.pdf

the cultural heart of Silicon Valley—are more likely than wealthier residents to be cybercrime victims.⁴⁴ In other situations, obligatory digital identity markers could introduce new risks for citizens, particularly evident in the growing risk that deepfakes could compromise biometric authentication.⁴⁵

Individuals will increasingly experience anxiety as control over their data becomes more precarious and they are subjected to personal attacks, fraud, cyberbullying and stalking (see Figure 3.2).⁴⁶ A perceived lack of agency could also lead to apathy in taking responsibility for securing one’s own digital footprint, as evinced by the continued market dominance of instant messenger applications plagued by privacy controversies.⁴⁷ Even with more widespread “reject all” options on websites intended to simplify personal data privacy, there are drawbacks and caveats—such as limiting functionality and other options. Importantly, these features are just a tiny part of the larger privacy

equation. Websites are still littered with tracking pixels and third-party scripts that remain powerful ways to fingerprint online behaviours.⁴⁸

Overreaching or underdelivering: Consequences for governments

Government at all levels faces mounting responsibilities and many are struggling to uphold their end of the digital social contract: securing critical infrastructure; addressing threats to “epistemic security” from disinformation; protecting the integrity of civic processes and public services; legislating against cybercrime; training and educating populaces around cyber literacy; regulating digital service providers; and ensuring the availability of resources, such as rare-earth minerals, for the digital economy. The necessary oversight could lead to overreach as governments move to shut down systems, erect higher digital barriers or embark on digital colonization (by monopolizing digital systems) for geopolitical ends.⁴⁹ While such actions might carry the ostensible goal of reducing

attacks and disruption, these policies could quickly become a vehicle for oppression. Already suffering from a loss in public trust as a result of the COVID-19 crisis, governments may face further societal anger if they are unable to both keep up with the shifting threat landscape and responsibly manage these challenges.

Pay, protect or perish: Consequences for businesses

As cyberthreats continue to grow, insuring against such risks will become increasingly precarious, with insurers themselves facing retaliatory attacks for attempting to curb ransomware payments.⁵⁰ Thus, when an attack occurs, businesses will either be forced to pay increasingly high ransoms or suffer the reputational, financial, regulatory and legal consequences of cyberattacks. As previous incursions (like SolarWinds) have demonstrated, exposure to vendors and supply chain partners must also be assessed and managed. The impact of disruptive cyberattacks could be financially devastating for businesses that fail to invest in protections for their digital infrastructure, particularly in a scenario

in which governments begin prohibiting ransom payments or penalizing poor cybersecurity practices.⁵¹ Furthermore, as environmental, social and governance (ESG) concerns come increasingly into focus (see Chapter 2), businesses that fail to demonstrate strong corporate governance around cybersecurity—such as by implementing robust systems and process oversight protocols, and by practicing accountability and transparency in the event of a breach—could suffer reputational harm in the eyes of ESG-focused investors.

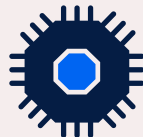
Businesses also operate in a world in which 95% of cybersecurity issues can be traced to human error,⁵² and where insider threats (intentional or accidental) represent 43% of all breaches.⁵³ Some companies will inevitably move to greater segmentation of digital systems to better account for insider risk. Companies could begin or continue to lock up key data as a result of the cybersecurity issues. Workforce efficiency, too, could suffer if accessing data and information is less seamless.

Shocks to reflect upon



NotPetya 2.0

What if an attack that is even more wide-ranging and costly than NotPetya—with the ability to self-propagate and even mutate to avoid preventative controls—created cascading lockups of systemically important businesses, bankrupting organizations, disrupting services and unwinding the digital transformation efforts made over the past years?



Sovereignty slips

What if the shifts towards privately held IT infrastructure as well as cryptocurrency and decentralized finance undermine governments' control over data, processes and financial systems?



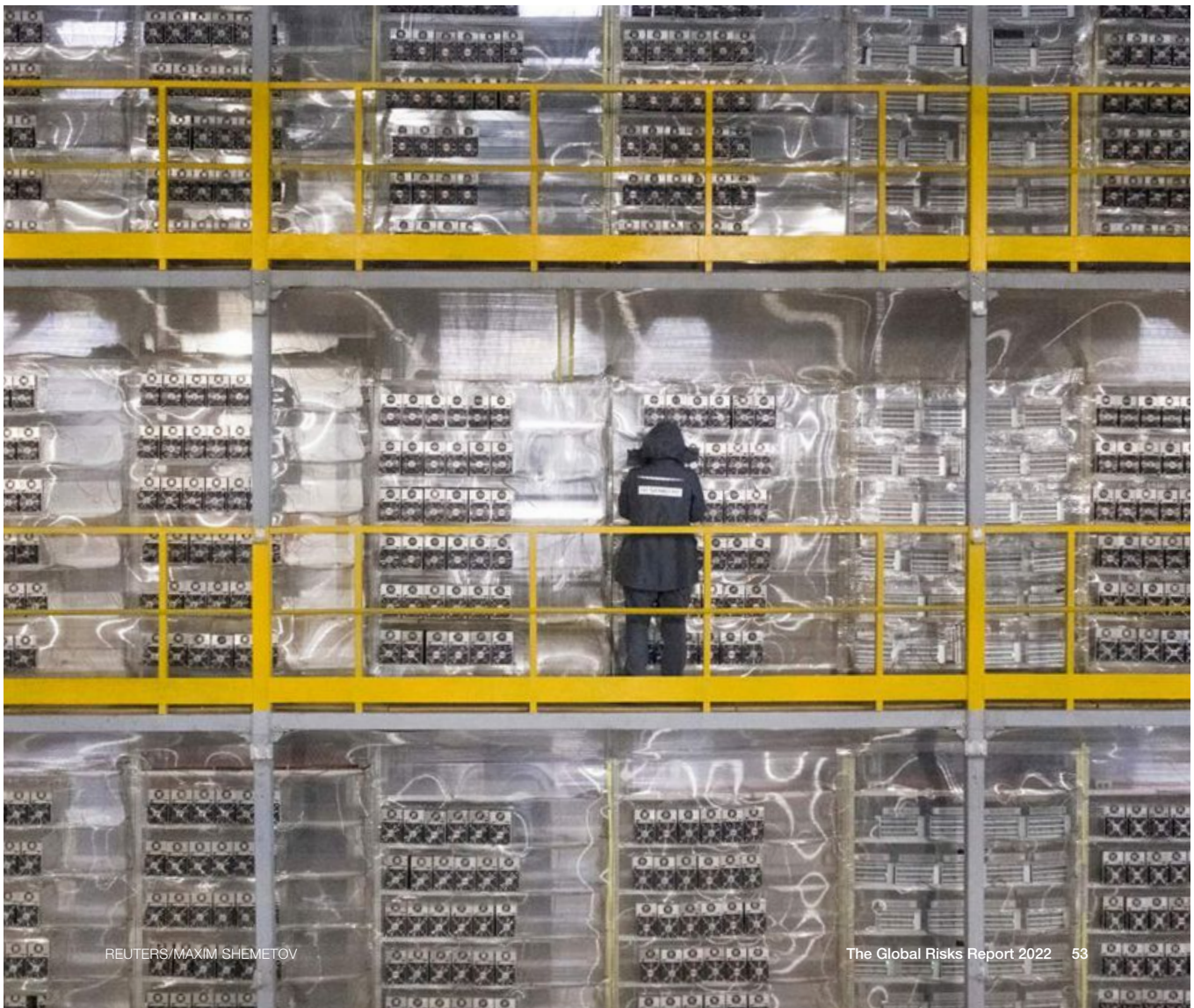
Undetected disruption

What if subtle changes in health, banking or other data go undetected for years, but carry significant consequences for premature death, loss of funds or other significant consequences over time? How can cyber espionage compromise return on R&D investment and competitiveness in the future?

Towards greater cyber resilience

As our reliance on digital technologies grows and Internet 3.0 becomes reality, efforts aimed at building norms and defining rules of behaviour for all stakeholders in cyberspace are intensifying. While multistakeholder international dialogues can help strengthen links between actors operating in the digital security realm, cooperation between organizations could unlock best practices that can be replicated across industries and economies. Initiatives should focus on emerging technologies, such as blockchain, quantum and artificial intelligence, as well as the modes of digital exchange they facilitate, like the metaverse. Leaders must remain attentive to perennial concerns like cybercrime and ransomware

attacks as well. At the organizational level, upskilling leaders on cybersecurity issues and elevating emerging cyber risks to board-level conversations will strengthen cyber-resilience. In a deeply connected society, digital trust is the currency that facilitates future innovation and prosperity. Trustworthy technologies, in turn, represent the foundation on which the scaffolding of a fair and cohesive society is built. Unless we act to improve digital trust with intentional and persistent trust-building initiatives, the digital world will continue to drift towards fragmentation and the promise of one of the most dynamic eras of human progress may be lost.



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CHAPTER 4

Barriers to Migration

200 million

projected climate refugees by 2050

~25%

remittances-to-GDP in El Salvador and Honduras

9%

decline in FDI to low-income countries in 2021

4,800

estimated migrants perished or missing in 2021



Nowhere to go

Large parts of the global population face an increasingly insecure outlook (see Chapter 1). Global Risks Perception Survey (GRPS) respondents perceive “livelihood crises” as one of the most potentially severe risks over the next decade. Millions of people are already seeking to cross borders in search of better economic opportunities.

Over the last decade, the number of international migrants has grown consistently, from 221 million people in 2010 to 281 million in 2020.¹ Economic hardship, climate change, conflict and political instability are forcing millions more people to leave their homes. These trends are reflected in the GRPS, where “involuntary migration” is ranked as a top long-term concern.

Better international collaboration is required to manage these flows to ensure that economic migrants are not exposed to exploitation and that involuntary migrants—refugees—crossing into other countries receive the assistance and shelter that they need. The scale of the challenge has put significant pressure on existing frameworks for migration and refugee protection, such as the 1951 Refugee Convention and 1967

Protocol;² this pressure is compounded by fractures within the international community and national interest postures that risk limiting global capacity to address this challenge. Some 60% of GRPS respondents believe “migration and refugees” is an area where international mitigation efforts are falling short (that is, they have either “not started” or are in “early development”).

Economic migration often has considerable benefits for both origin and destination countries. It is “the most effective way to reduce poverty and share prosperity”, according to a World Bank report,³ and can support economic growth by helping address labour shortages in destination countries. While most cross-border migration takes place between low- and middle-income countries, 83% of non-migrant residents in the 22 richest Organisation for Economic Co-operation and Development (OECD) countries have experienced net economic gains from the influx of migrants.⁴ On the other hand, some project-based migration undertakings to enhance cross-border infrastructure have had negative impacts in destination countries, where the



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tendency to employ workers from origin countries has reduced opportunities for income and skills transfer for native, destination-country workers.⁵

Refugees can also ultimately make a positive contribution to the economies of destination countries, depending partly on a balanced intake across countries that have the capacity to take them in. Their ability to contribute often depends on whether they receive support to deal with the aftereffects of forced displacement—for example, counselling for post-traumatic stress, which is not normally afforded to economic migrants. Instead, millions of refugees remain crowded in camps on the fringes of society—often in countries in the Global South that do not have the economic capacity to absorb them.

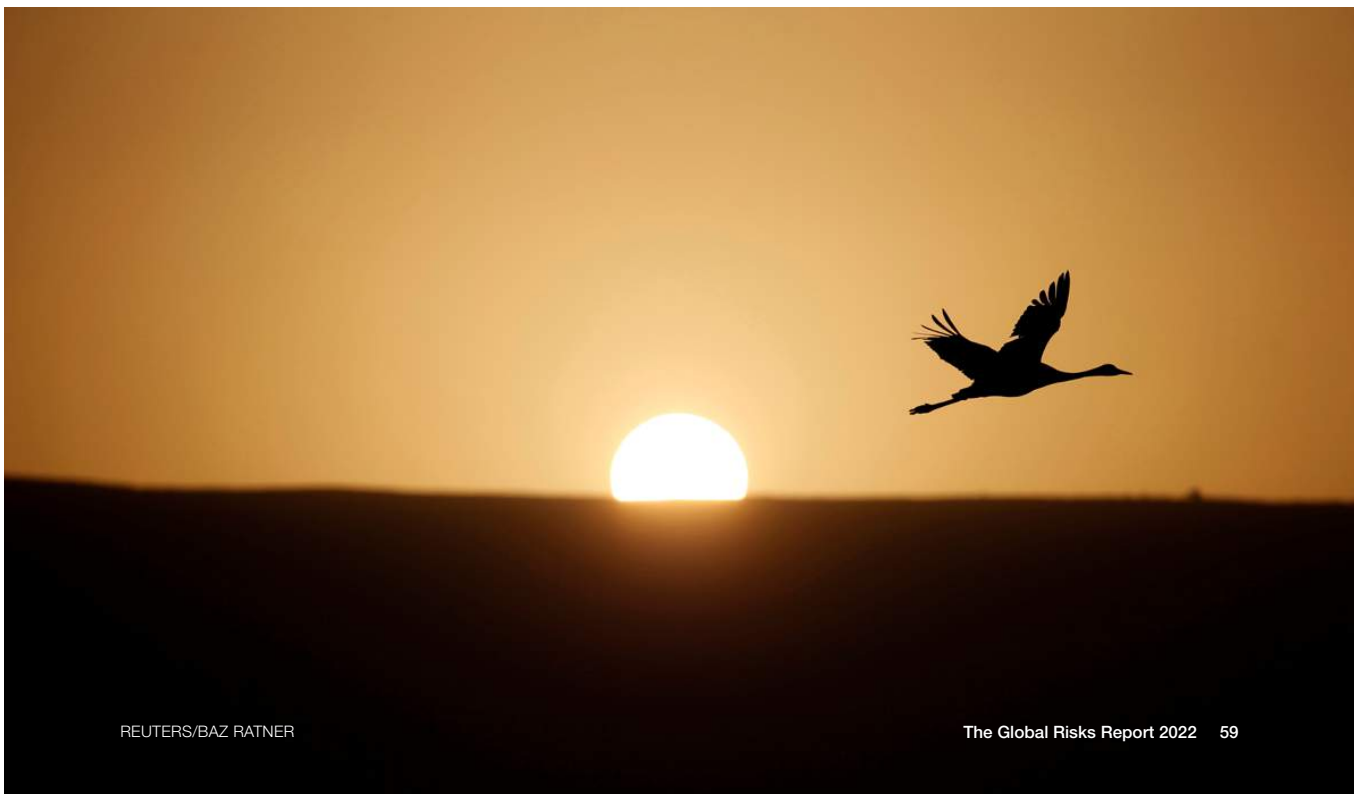
However, national-level barriers to the movement of people are increasing. Disillusionment with globalization has fuelled nativist discourses and national interest policies in many destination countries in recent years, and COVID-19 has accelerated this trend. An IPSOS–World Economic Forum Survey from April 2021 found that positive views towards globalization fell during the pandemic by an average of 10 percentage points across

25 countries.⁶ Many governments, reflecting popular attitudes, have expressed concern about pressures on education and healthcare services, housing capacity and local employment; for others, integration concerns have been a priority.

Higher barriers to both orderly and disorderly migration elevate the risk of forgoing potential pathways to restoring livelihoods, closing income and labour gaps and maintaining political stability. Instead, the clash between heightened insecurity in origin countries and migration barriers in destination countries will exacerbate global divergence (see Chapter 1), aggravating tensions within and between countries that could complicate an equitable recovery and lead to ever more desperate measures by those who feel compelled to move.

Growing insecurity in origin countries

Movement restrictions related to COVID-19 interrupted some migration flows;⁷ as these restrictions are lifted, divergent economic recoveries will likely amplify pressures to migrate that have been restrained through the pandemic.⁸ Many origin countries—mostly less advanced and less vaccinated



ones (see Chapter 1)—face highly insecure economic outlooks as growth stagnates, public finances continue to be stretched and pandemic-related stimuli—on which vulnerable groups have depended—are scaled back.⁹ Employment in these countries may also decline if the pandemic persists, exacerbated by a worldwide trend for workplace automation, re-shoring business operations and shortening supply chains that may affect foreign direct investment (FDI) inflows, exports and growth.¹⁰ In many lower-income countries, where informal work is prevalent, informal migrant workers are particularly exposed to the pandemic’s economic fallout because of their low income and lack of access to state support.¹¹

Climate change is a key driver of migration. It displaces people directly because of natural disasters and it can displace them indirectly by encouraging economic migration from weakening economies vulnerable to the adverse impacts of climate change. The inability to adapt to

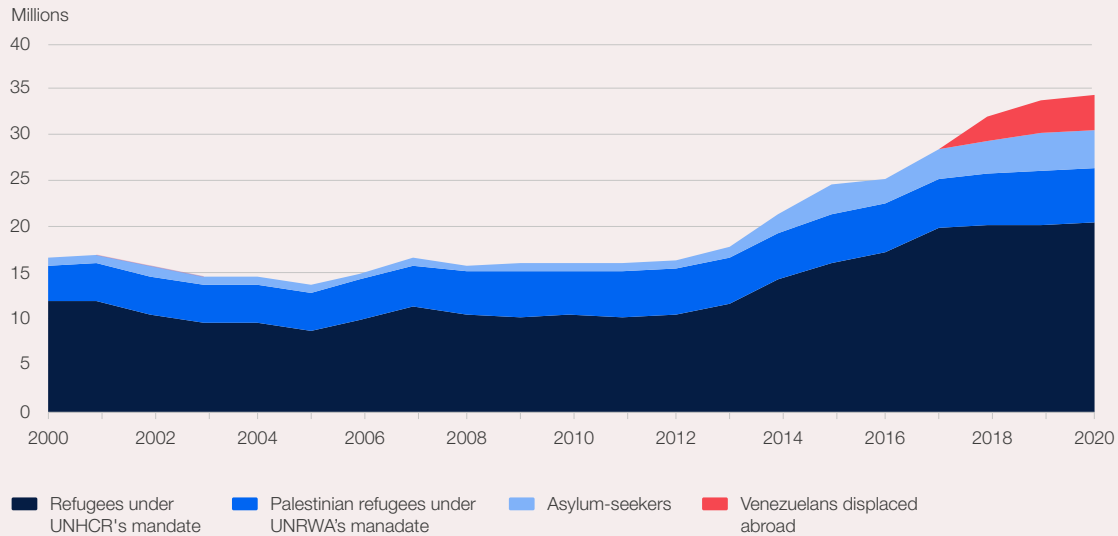
Climate change, conflict and political instability will force millions to leave their homes

or mitigate the impacts of climate change threaten to make certain densely populated parts of the world uninhabitable.¹² More frequent and extreme weather events—including fires, floods and droughts—could displace more than 200 million people by 2050.¹³ Water scarcity is a key driver of migration because of its impact on health and livelihoods as well as the conflicts it risks triggering.¹⁴ GRPS respondents rated “extreme weather” and “climate action failure” as strong aggravators of “involuntary migration”. Densely populated countries that are highly dependent on agriculture—such as India, Nigeria, Pakistan and the Philippines¹⁵—are especially vulnerable to climate insecurity. Worsening extreme weather will trigger large-scale migration and displacement, but the



FIGURE 4.1

Refugees, Asylum-Seekers and Venezuelans Displaced Abroad, 2000–2020 (Millions)



Source: Data from UNHCR, "Refugee Data Finder". <https://www.unhcr.org/refugee-statistics/download/?url=rVpdj6>, accessed 1 December 2021.

Note: UNHCR = United Nations High Commissioner for Refugees; UNRWA = United Nations Relief and Works Agency.

international community's reluctance to recognize "climate refugees" and "environmental migrants" is widening their legal protection gap.¹⁶ Legislative and governance frameworks remain ill-equipped to protect millions at risk of displacement who do not qualify as traditional refugees.¹⁷ These governance voids could leave governments blindsided in the event of a sudden, high-impact environmental shock. Moreover, the failure to achieve inclusive transitions to net zero economies (see Chapter 2) could worsen economic insecurity for businesses and households in those origin countries left behind.

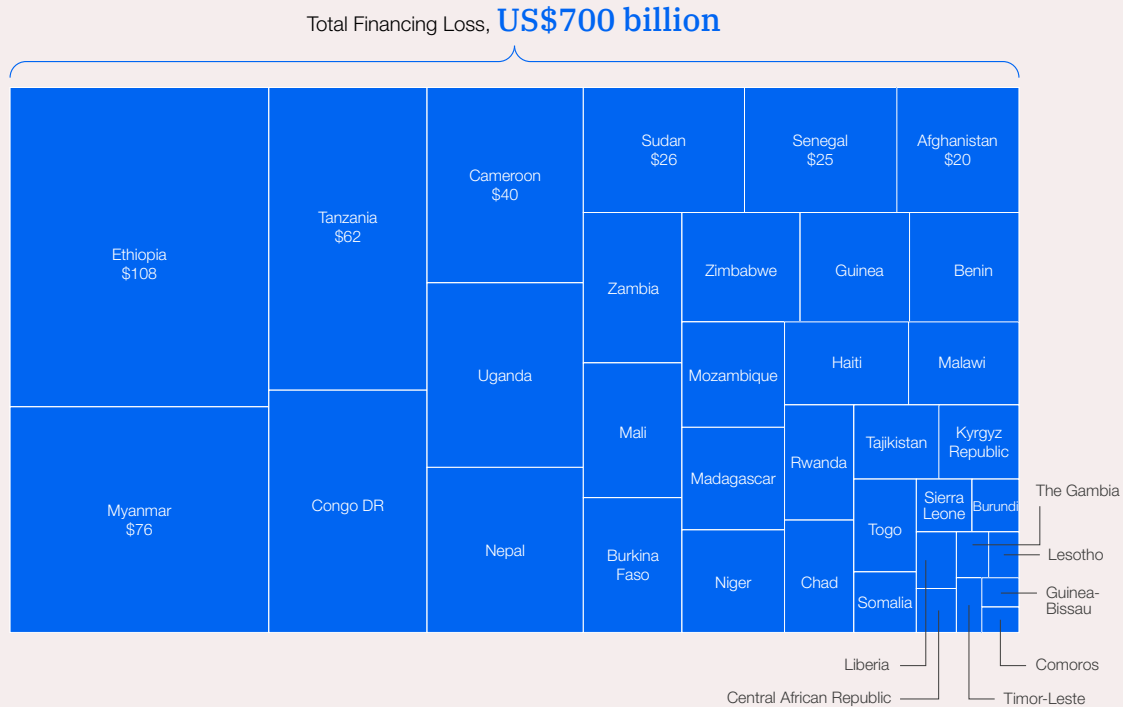
Conflict and political insecurity are also major drivers of involuntary migration. In 2020, there were over 34 million people displaced abroad globally from conflict alone—a historical high (see Figure 4.1)—mostly due to long-standing conflicts and political turmoil in Afghanistan, Myanmar, South Sudan, Syria and Venezuela,¹⁸ and

to expanding conflicts within and beyond the borders of Ethiopia.¹⁹ According to the Executive Opinion Survey (EOS), "involuntary migration" is a top short-term threat in Armenia, Ukraine and Venezuela, which have experienced conflict and political instability.²⁰ Political turmoil may well worsen in the aftermath of the COVID-19 pandemic, compounded by the reduction of international security forces from conflict zones such as Afghanistan and the Sahel region of Africa. Moreover, some political leaders have reacted to economic crises and social unrest with authoritarianism, discriminatory policies, or extremist discourses that put ethnic or religious minorities at risk of marginalization or violence.

National-level barriers to the movement of people are increasing

FIGURE 4.2

Developing Countries' Financing Loss versus GDP, 2020 (US\$ billions)



Source: Data from OECD. Global Outlook on Financing for Sustainable Development 2021. <https://www.oecd.org/development/global-outlook-on-financing-for-sustainable-development-2021-e3c30a9a-en.htm>; World Bank Open Data, "GDP (current US\$)" and "GDP per capita (current US\$)". <https://data.worldbank.org/indicator/NY.GDP.MKTP.CD>, accessed 1 December 2021.

Global cooperation to resolve or mitigate ongoing humanitarian crises is being challenged by financial pressures in advanced economies, greater focus on domestic priorities and a more tense geopolitical context (see Chapter 1). Already, the pandemic has diminished external financing to developing countries by US\$700 billion—equivalent to the combined GDPs of 36 of the world’s poorest economies (see Figure 4.2).²¹

Mobility barriers in destination countries

There are three potential barriers to cross-border migration: post-pandemic effects on international mobility, future employment trends and increased national interest postures of many countries.

The COVID-19 pandemic and its economic ramifications have emboldened some groups and political leaders to adopt more hostile postures against migration, foreigners or communities with foreign roots. Restrictions on international movement as a result of the pandemic remained in place in 32 countries at the time of writing.²² These include critical destination and corridor countries such as China, India, Russia, the United Arab Emirates and the United States. Future easing of restrictions will depend on the progress of vaccination and the evolution of COVID-19, but persistent vaccination gaps globally, and particularly within origin countries, means international mobility will continue to be restricted for many.

The pandemic may also narrow future employment opportunities for migrant workers in destination countries, both

because of the economic disruption it created and because of the accelerating automation and digitalization of tasks and services. The World Economic Forum's *Future of Jobs Report* found that 50% of employers globally planned to automate tasks in response to COVID-19, often in sectors that have relied on migrant workers.²³ The report also estimates that 85 million jobs will be destroyed by automation by 2025, and although 97 million new jobs will emerge, these jobs may not necessarily match the skillsets of many migrants.²⁴ The short-term economic rebound from the pandemic has resulted in a surge in hiring in some key sectors for migrants such as hospitality and healthcare, but in the long-term, new consumption patterns in destination countries—such as more e-commerce and less business travel—are expected to shrink demand for jobs in migrant-

intensive industries such as agriculture, food services and warehousing.²⁵

National interest postures have also become more entrenched across both developing and advanced economies. For example, Chile and Peru have reframed their migration governance mechanisms, which complicates access for migrant and refugee populations to essential financial and healthcare services.²⁶ Meanwhile, restrictive policies originally grounded in public health concerns have not been rolled back, as indicated by sustained declines in issued visas for the United Kingdom and the perpetuation of Title 42 expulsions at the US border.²⁷ Other destination countries have sought to harden borders to prevent the arrival of involuntary migrants, as evidenced in fresh ambitions to build walls in Europe and Turkey.²⁸

Consequences

Barriers to orderly migration could have negative global consequences, such as widening labour gaps and income disparity, triggering or worsening humanitarian crises and increasing societal polarization.

Economic consequences. The economic rebound from COVID-19 has created labour shortages in specific industries—albeit some may be temporary—by disrupting market dynamics and supply chains and prompting workers to re-evaluate their personal and career choices. At the time of writing, the United States faced over 11 million unfilled jobs in general and the European Union had a deficit of 400,000 drivers just in the trucking industry.²⁹ The hospitality sector, one of the most severely affected by the pandemic, is especially vulnerable to long-term labour shortages that migration could close. In the United States, a survey found that over 50% of former hospitality employees would not return to their previous jobs, and 60% of workers seeking employment would not consider the hospitality sector.³⁰

A decrease in migrant employment could weaken the global flow of remittances such that growth in income fails to keep pace with inflation, thereby limiting social mobility in origin countries. Remittances also support private consumption, savings and investment in origin countries and can equate to a significant proportion of GDP (from nearly one-fourth of GDP in El Salvador and Honduras to over one-third in Somalia).³¹ They proved to be resilient through the pandemic, falling by 2% annually in low- and middle-income countries in 2020³²—far less than the 30% drop in FDI³³—and quickly recovering to rise by 7.3% in 2021.³⁴ Combined with stagnant tourism and pressures on exports,³⁵ a fall in remittances would weaken another important source of financing for many developing countries.

Businesses risk worker deficits and demand shocks from constrained migration

APPENDIX 4



GETTY/PAUL RATJE

Humanitarian consequences.

Humanitarian crises could worsen where barriers to exit prevent vulnerable groups from escaping persecution or violence. In some fragile states, governments could block their citizens' departure to halt depopulation as well as capital flight. In Afghanistan and Myanmar, governments have reportedly impeded citizens from leaving the country.³⁶ Blocking emigration prevents people from seeking more secure livelihoods and diasporas from reuniting with families. It can exacerbate societal fractures by closing a mechanism to reduce poverty and narrow inequality, fuelling citizens' animosity towards government and potentially empowering criminal or even terrorist groups that offer hope to disaffected individuals.

More limited international mobility opportunities will push migrants to embark on more perilous journeys and risk worsening or triggering humanitarian crises in neighbouring and corridor countries. One such case is the Syrian crisis, which by 2021 had already displaced nearly 6 million Syrians abroad—mostly to Turkey, Lebanon and Jordan—but could further deteriorate.³⁷ An estimated 700,000 Central American migrants transited through

Mexico in 2021—a rapid return to pre-pandemic levels³⁸—and those unable to enter the United States are unlikely to return to their origin countries.³⁹ At one point, 15,000 Central American refugees were stranded for days in precarious conditions under a bridge on the Mexico-US border.⁴⁰ According to the EOS, “involuntary migration” is a top short-term threat in El Salvador, Guatemala, Honduras and Nicaragua.

These perilous journeys can also lead to tragic loss of life, such as when people become lost at sea or face harsh weather while stuck in borderlands.⁴¹ At the time of writing, nearly 4,800 migrants were estimated to have perished or gone missing in 2021, most of them trying to reach Europe from Africa.⁴² Although there is worldwide consensus on the urgent need to combat human trafficking, the International Organization for Migration estimates that organized human-trafficking groups operate in every country.⁴³

Geopolitical consequences. Migration pressures could exacerbate geopolitical tensions and even fuel cross-border conflicts. For example, in the Middle East, half a million Afghans are expected

to take increasingly drastic measures to circumvent migration restrictions and flee to neighbouring countries⁴⁴—including Iran, which has enlarged its military presence along the border to deter a potential Taliban incursion.⁴⁵ Management of migration flows has become a tense issue between Turkey, which hosts some 3.6 million Syrian refugees,⁴⁶ and the European Union.

Geopolitical rifts could also worsen—and new ones emerge—if origin country migration is increasingly used as a geopolitical instrument. The crossing of migrants from Morocco into the Spanish enclave of Ceuta aggravated tensions that originated in the European Union’s lack of support for Morocco’s claims over the Western Sahara.⁴⁷ Political tensions between Belarus and the European Union escalated considerably as Belarus encouraged travel from the Middle East, moved migrants to camps along its border with Poland and pushed them to cross over, prompting Poland to deploy troops in response.⁴⁸ In such cases, destination-country governments seeking to comply with international laws on the treatment of refugees—thereby preserving their

Geopolitical rifts could worsen if migration is used as a geopolitical instrument

reputation among the global community in the spheres of global development and human rights—will have to carefully manage diplomatic relationships with neighbours to arrive at a way forward while responding to immigrant scepticism among a significant proportion of their populations.

Consequences for stakeholders

People, governments and businesses in origin and destination countries face distinct challenges from divergent perspectives on migration. But stakeholders in both geographies also face common challenges: social unrest if migration is used to discriminate against and marginalize certain groups; hardening political contexts if governments exploit migration challenges to justify more control over citizens and markets; and some negative economic



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consequences if legitimate diaspora networks in destination countries created by migration are undermined.

Left alone: Consequences for people

By 2020, there were more than 4 million stateless persons in the world, the highest number in a decade;⁴⁹ but this number risks increasing due to heightened social polarization and strained government capacity. Limited options for migrants to gain admittance to destination countries upon entry—even temporarily—could be compounded by corridor countries refusing to allow them to remain within their borders. People in this situation—who are unwilling or unable to return home and whose governments do not take responsibility for their welfare—are at risk of being stranded in irregular settlements or facilities with minimal access to basic goods and services, financial support or diplomatic assistance. Others unable to escape insecurity are at risk of violence or falling prey to extremist ideologies and organizations. Refugees would face poor conditions and even violence in transit and in camps if international cooperation to manage involuntary migration is lacking. Even more economic migrants could resort to desperate measures and become

vulnerable to exploitation by human-smuggling cartels.

In destination countries, growing extremism could create greater challenges for migrants trying to assimilate.⁵⁰ Citizens could also see their civil liberties violated by governments using migration management to justify widespread population surveillance and intrusions on personal information.

Last resort: Consequences for governments

Remittances improve living standards in origin countries and provide an important source of financing.⁵¹ Without them, governments in origin countries whose economic stability hinges on remittances may face severe complications in their ability to govern—some could be at risk of degenerating into failed states. Destination-country governments also face risks domestically from failing to address citizens’ concerns with migration. Adopting stricter migration measures could encounter some popular backlash as pro-migration advocates make their voices heard on the streets and online, while failing to effectively manage inflows risks stoking the growth of populism.

Shocks to Reflect Upon



Not in My Country

What if xenophobic political parties in federal democracies start winning more elections and securing leadership positions in destination-country border or sanctuary towns? What if they ignore federal law and start taking border protection or mobility policies into their own hands, facilitating vigilante behaviour?



Show Me the Money

What if stricter migration policies lead to more burdensome regulation, reduced competition and higher fees in remittance services? What if traditional remittance channels are choked off and cryptocurrencies become the prevalent method for sending remittances, exposing digitally insecure migrants to cybertheft?



Too Little, Too Late

What if stalled or delayed climate action means that ecosystems reach their tipping points suddenly and unexpectedly, accelerating climate migration into neighbouring countries as droughts, floods and resource scarcity worsen?



APPENDIX 4

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Little room: Consequences for businesses

Businesses in destination countries are at risk from a global worker deficit and demand-side shocks that could result from constrained migration. Migrant workers comprise an attractive consumer group that can contribute to developing domestic markets and support international expansion by boosting brand awareness

in their home countries. But businesses perceived to favour stricter foreign labour requirements, or that are seen as not making enough effort to support their migrant staff, could face a public backlash from migrant communities and their supporters. On the other hand, businesses that welcome migrant workers with a view to low-cost labour may expose themselves to union pushback.

Towards two-way bridges

At a time of global divergence, migration could foster economic integration. International mobility could narrow inequality within and between countries by matching job seekers in origin countries with unfulfilled vacancies abroad in growth industries—such as healthcare, renewable energy and transportation.⁵²

More efficient and orderly channels for migration—including coherent legal and policy frameworks, cross-border cooperation and alignment and better enforcement against smuggling operations—could

prompt closer political ties between countries and encourage collaboration on issues of mutual concern such as shared infrastructure for cross-border financial flows. The global community could also build goodwill across geopolitical divisions by strengthening collaboration mechanisms for refugee intake.

Migration offers opportunities but also entails challenges for origin, corridor and destination countries. Leaders have the chance to jointly identify where new bridges can be built for mutual benefit.

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CHAPTER 5

Crowding and Competition in Space

5

number of new government-developed space stations by 2030

70,000

estimated number of satellites to launch in coming decades

28

nations with domestic space regulation

1 million

estimated number of debris pieces 1 centimetre and larger

Space is getting busier

Humans have been inspired by space exploration for decades but growing commercial and geopolitical interests are increasingly influencing this frontier. While early space activity was conducted or funded by the public sector, the last decade has seen growing private investment. New commercial entrants are disrupting traditional incumbents' control in delivering satellite services, especially in internet-related communications or launch services. Some governments are encouraging private space activity to further national "territorial" claims or to foster the development of high-value jobs, especially in the zone of Low Earth Orbit (LEO) or Medium Earth Orbit (MEO), as well as enhancing their military or defence-oriented presence.* Increased exploitation of these orbits carries the risk of congestion, an increase in debris and the possibility of collisions in a realm with few governance structures to mitigate new threats.

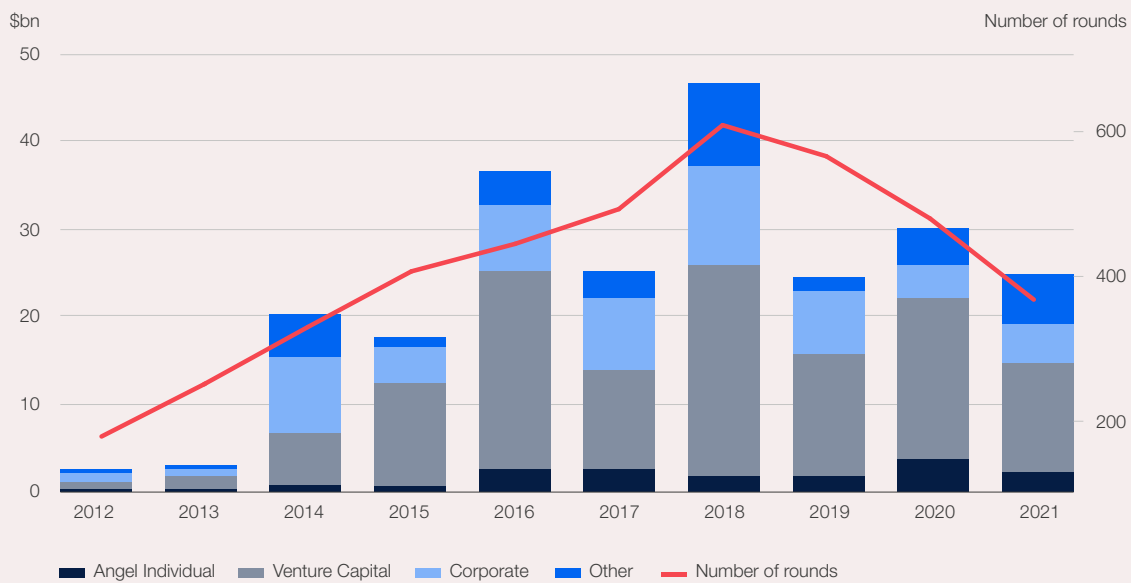
A LEO/MEO space race

The traditional Geostationary Orbit (GEO) commercial satellite market, which has dominated the communications sector for decades, is now losing commercial value because of competition from new players seeking to provide services from LEO or MEO. More recently, in the last decade, the financing of new applications for space-based initiatives has grown fast: businesses, start-ups and research entities are proliferating, raising money in the billions, and thereby driving down the cost of launch systems, particularly in LEO (see Figure 5.1).¹ Lower costs bring more opportunity for a greater diversity of actors to launch constellations of smaller satellites. With this more cost-effective access to space, attention is increasingly shifting to new opportunities in areas such as hyperspectral remote sensing, energy

* Low Earth Orbit (LEO) is generally considered to encompass Earth-centred orbits with an altitude of 2,000 kilometres (1,200 miles) or less. The Geostationary Orbit (GEO) encompasses a higher-altitude orbit, typically at an altitude of 35,000 kilometres above the Earth's equator while Medium Earth Orbit (MEO) comprises a range of orbits between LEO and GEO.

FIGURE 5.1

Space Investment: Equity Capital by Investor Type (US\$ Billions)



Source: Space Capital. Q3 2021. <https://app.powerbi.com/view?r=eyJrjoiNGY4MWI4OWEiMjNmZS00OTM3LWV5M2QyTgxZTdjODk3YTllwidiCl6iYzMDZkMTJlTEwODMNGNhOS04Yjk2LTdjYzM3ODcwMWIzMiIsImMiOjN9>

generation, manufacturing, mining and tourism.² However, the largest growth is still expected to come from industries that are already expanding digital connectivity on Earth, such as direct-to-consumer broadband access.³

National ambitions

Space programmes are still widely seen as a sign of national prestige, as they project geopolitical and military power as well as have scientific and commercial significance. Powers such as China, Europe (EU and ESA), France, Germany, India, Japan, NATO, Russia, the United Kingdom and the United States have publicly announced space forces and continue to build space infrastructure, with plans for at least five new space stations by 2030 in the works.⁴ The first commercial space station is also slated for completion in the next decade.⁵ Next-step deep space exploration projects are under development, such as the United States-led Artemis programme—which aims to reopen exploration of the Moon and eventually develop outposts on Mars and

Businesses, start-ups and research entities are proliferating

asteroids.⁶ In addition, new space-faring powers will emerge as more economies begin to see opportunities to expand both geopolitical and commercial influence in this arena. Among countries that have expressed interest are Argentina, Brazil, and Mexico in Latin America; Egypt, Iran, Turkey, Saudi Arabia, South Africa and the United Arab Emirates in Africa and the Middle East; and Australia, Indonesia, Malaysia, New Zealand, South Korea and Vietnam in the Asia-Pacific region.⁷

Alongside new programme development, the critical infrastructure on which many civil and commercial entities rely must be maintained and secured.⁸ Satellites in LEO as well as in MEO and GEO are used for multiple purposes that include climate and natural resource monitoring, broadband internet, and radio and television broadcasting, as well as position,



REUTERS/ALY SONG

navigation and timing services.⁹ While this infrastructure will continue to remain vital for governments, businesses and societies, it is also creating opportunities for nations with an advanced space industry, supported by national-level regulation, to stake claims to specific orbital sectors by virtue of first-mover advantage.¹⁰ Finally, space will continue to be of critical military

importance: armed forces have long relied on space-based or space-supported technologies—including Global Positioning System (GPS) for navigation, dedicated military satellite-based communications for secure digital connectivity and spy satellites for intelligence—making such systems tempting military targets and spurring the need for enhanced defensive measures.¹¹

Consequences

A greater number and diversity of actors operating in space could generate new or exacerbate old frictions if not responsibly managed. The trend in commercial, civil and military sectors is to replace traditionally large and expensive single geostationary satellite systems with a more distributed system of multiple smaller satellites in LEO. Approximately 11,000 satellites have been launched since Sputnik 1 in 1957, but 70,000 more could enter orbit in the coming decades if proposed plans play out.¹² The vast majority of these new planned and approved satellites will be launched by a handful of operators that will have increasing influence over the regulatory landscape.

Once in orbit, and unless actively decommissioned, many of these satellites could remain in space for hundreds of years.¹³ Smaller, low-cost satellites are also proliferating because of lower costs and fewer barriers to entry.¹⁴ While the risk is still relatively low, an increase in the number of satellites also increases the opportunity for collisions, or, at the least, a need to engage in emergency manoeuvres to avoid contact.

Collisions could hinder future space development or aggravate international tensions. This is because when objects in space collide, they may break up and produce debris that—even at sizes of 1 to 5 centimetres in diameter—could cause severe damage.¹⁵ For example, the International Space Station (ISS) was damaged in May 2021 when a piece of debris penetrated its robotic arm.¹⁶ Such strikes have been documented for decades, but they may become more

frequent. One theory, known as the "Kessler Effect" (see Box 5.1), posits the potential consequences of a cascading effect.¹⁷ Estimates put the current number of smaller pieces of debris (larger than 1 centimetre in size) at nearly a million,¹⁸ while larger objects over 10 centimetres number in the thousands (see Figure 5.2). Providing orbital servicing and debris removal could, however, help alleviate some of the worst consequences.¹⁹ Tracking debris is a critical tool in preventing collision or damage, but it will need to become increasingly sophisticated to maintain reliability in a more congested realm.

With such possibilities becoming likelier in a congested space, the lack of updated international rules around space activity increases the risk of potential clashes. The most relevant of space agreements, the Outer Space Treaty, was concluded in 1967 and still, through the UN Office for

BOX 5.1

The Kessler Effect

First identified by NASA scientist Donald Kessler in 1978, this describes a scenario where the density of objects (satellites and debris) in LEO is high enough that collisions between objects could cause a cascade in which each collision generates space debris that increases the likelihood of further collisions and an exponential growth of debris. One implication is that the distribution of debris in orbit could render space activities and the use of satellites in specific orbital ranges difficult for many generations.



REUTERS/JOE SKIPPER

Outer Space Affairs (UNOOSA), governs much of the activity taking place in space. However, few effective governance tools have emerged in recent years to reflect new realities, such as the pressing need for an authority to govern satellite launches and servicing, space traffic control and common enforcement principles.²⁰

As an exemplar challenge, the 1972 Space Liability Convention—which governs international responsibility for space objects launched from Earth—lacks precision around hybrid aircraft and rocket transport systems. For example, different legal authorities may govern depending on whether a vehicle is deemed to have launched when an aircraft takes off with a rocket attached or when the rocket detaches from the aircraft—and whether the hybrid vehicle is an aircraft or spacecraft while both pieces are attached. New addenda may be needed to clarify when space law should supersede aviation law.²¹ Even the most robust governance realm, electromagnetic spectrum management, which is governed by the International Telecommunication Union (ITU), faces serious crowding pressures with new satellite systems and increased competition in the terrestrial spectrum usage of emerging 5G technologies.²²

Respondents to the Global Risks Perception Survey (GRPS) reflect these

gaps: 76% of respondents characterized the current state of international risk mitigation efforts in space as either “not started” or in “early development”.

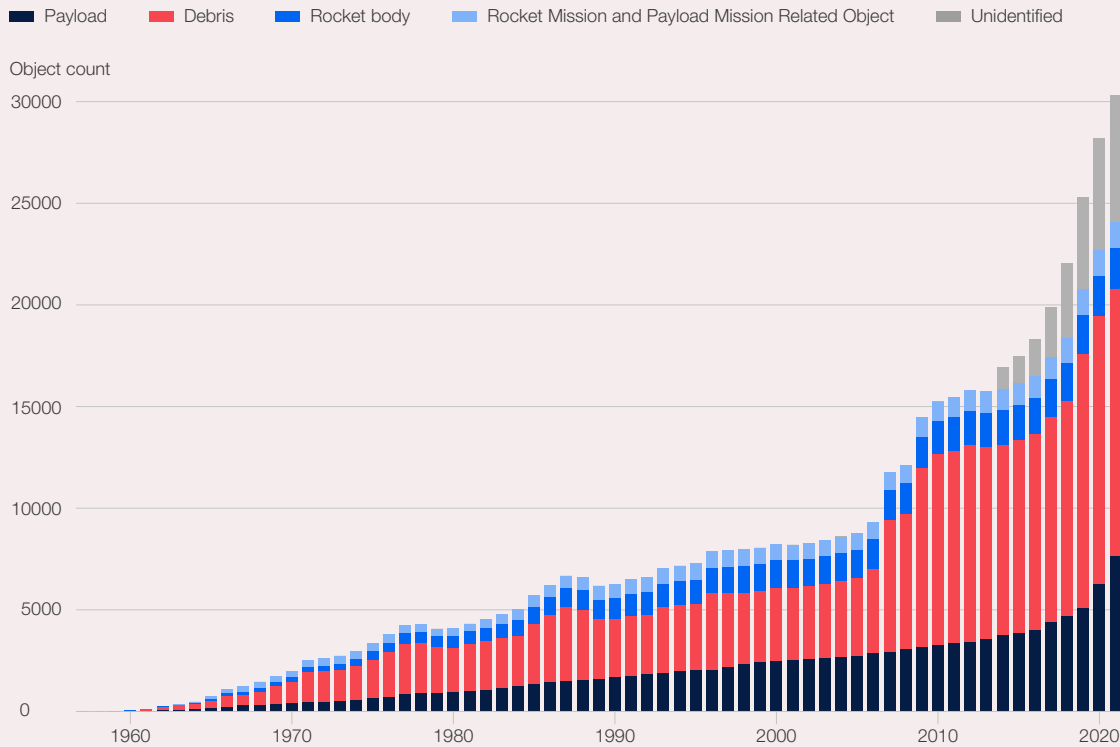
Governments, too, have developed their own national space policies,²³ with commercial interests as a key pillar of their national strategies, alongside national security and civil space policy. Although many governments have cooperated behind the scenes historically and still do today,²⁴ there is significant policy divergence among the 28 nations with space regulation,²⁵ and countries now operate at different scales and with different levels of ambition.²⁶ Such fragmentation compromises the further development of beneficial commercial space activities, which require shared norms across states to be able to function.²⁷

National space ambitions also bring a growing risk of the militarization of space. The US military created a Space Force as a separate branch of its armed services in 2019, while Japan’s Space Operations Squadron and the United Kingdom’s

National space ambitions bring a growing risk of militarization of space

FIGURE 5.2

Evolution of the Number of Objects in All Orbits, 1960–2020



Source: European Space Agency. 2021. ESA's Annual Space Environment Report. 27 May 2021. https://www.sdo.esoc.esa.int/environment_report/Space_Environment_Report_latest.pdf

Space Command were both created in the last two years. Other leading armed forces also now typically include a space component—for instance, in 2021, the French Air Force became the Air and Space Force (Armée de l'Air & de l'Espace). In November of 2021, an anti-satellite weapons test conducted by Russia created significant debris and threatened astronauts on the ISS.²⁸ Other countries have conducted similar testing, raising the spectre of repeat occurrences from other nations, which would add considerably to the problem of space debris (see Figure 5.2).²⁹ A hypersonic weapons arms race also risks contributing to the militarization of space—China, Russia and the United States are all developing such weapons and each tested them in the second half of 2021.³⁰ And with expanding geospatial

intelligence, all of Earth is observable by satellites, which could spur some nations to blind, jam or otherwise interfere with satellite Earth observation.³¹ As technology advances, space mineral exploitation—already heralded as part of some deep-space exploration programmes—could also be viewed as another competitive wedge over a more distant horizon.³²

Gaps in space governance render arms races even more likely. For example, the Outer Space Treaty prohibits nuclear weapons in space but does not address conventional weapons, which is particularly worrisome in today's context of conventional weapons development and testing in space. New rules are unlikely in the near future, as there is little agreement over key issues such as

boundaries, control over space objects, or dual-use systems.³³ Any further decline in cooperation on space governance will only exacerbate risks.³⁴

Service disruption and environmental unknowns: Consequences for people

Societies are dependent on space infrastructure in myriad everyday ways. GPS satellites not only allow for safe navigation in the air, land and sea, but they also underpin financial transactions, data transmissions and energy control systems. Threats—such as a massive solar storm or jamming or spoofing of GPS satellites—could cause the internet to slow, navigation systems to fail, and controls for energy grids, water or transportation to crash. Ripple effects across societies could be extensive, even for a few seconds of disruption.³⁵

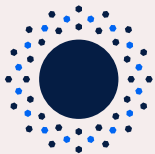
There are also significant unknowns about the impacts of rapid space development on Earth’s environment—including damage to the ozone layer, butterfly effects from black carbon (soot) emissions, and possible alterations of the polar jet stream.³⁶ Of course, technological advances, such as developments in space-based solar power, could offset many of the potential negative environmental impacts of growing space exploration and exploitation.³⁷

Gravitational push and pull: Consequences for governments

Notwithstanding high levels of private sector investment, increased commercialization and growing geopolitical competition will demand higher government spending on space programmes and defence at a time when public finances are under greater pressure due to the economic overhang of COVID-19 (see Chapter 1). For example, governments will increasingly need to compete for talent, with private sector entities offering more lucrative employment packages. Defence agencies will need to continue to expend resources to defend against more-sophisticated space-based weaponry and increasingly effective space-based tools of statecraft, such as enhanced surveillance or espionage.

Yet, for a large majority of governments, space technology and access will remain out of reach altogether at a time when reliance on space technologies is growing for all. Forty-one nations have registered space agencies with UNOOSA,³⁸ yet the many governments not represented will continue to struggle to develop their capacities or earn a seat at the table in key decision-making processes. Without concerted effort to facilitate inclusive growth in the space realm, inequalities in the commercial and geopolitical benefits accruing from space development will only grow.

Shocks to Reflect Upon



Kessler Collapse

What if a cascading chain of collisions between near-Earth objects and space debris result in a saturated Low Earth Orbit that renders space practically unusable for further commercial development?



Solar Disruption

What if a massive solar event or geomagnetic storm disrupts satellite-based services and functions, causing massive, cascading economic and societal consequences on Earth?³⁹



Property in Space

What if violations of the Outer Space Treaty—such as mineral resources being claimed in a Moon "gold rush"—are carried out without meaningful consequences?

Opportunity blocks: Consequences for businesses

Venture financing flooded into the space industry following the successful launches of commercial space flights. As commercial activity in space grows, more companies could crop up seeking entry while investor interest is high. However, if manufacturing,

tourism or other space ventures fail to take flight, speculators and space industry companies could see their bubble burst. Similarly, grassroots campaigns to ban space pollution and prevent privatization of important science data could give investors pause, stifling the unmitigated venture financing in the field.⁴⁰

Towards cooperation in space

Although space represents yet another realm in which geopolitical and commercial tensions will play out, important traditions of cooperation in this arena should not be forgotten. Norms of behaviour established through voluntary measures that are not legally binding with the goal of building trust and establishing mutual understanding have helped mitigate escalating tensions in the past. While this trend could continue, more robust formal governance will be required in a more crowded and competitive space. Specific and functional bilateral or multilateral agreements between major space powers could help create norms and influence broader global behaviours.

Space situational awareness, space traffic management and debris mitigation are areas in which norms-based and eventually formal international agreements would benefit all actors. Critically, and like other realms where technology is developing at a faster pace than its regulation, bringing private sector actors into the agreement processes will help ensure that such pacts reflect both commercial and technical realities. Taking advantage of these opportunities to achieve widely accepted norms could then help facilitate discussions around more challenging issues in space, such as limits on weaponization, ownership and appropriate venues from which to govern the realm.



REUTERS/ROSCOSMOS

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CHAPTER 6

Refreshing Resilience

COVID-19 Lessons for a Whole-of-Society Response

67.2%

COVID-19-vaccinated population in high-income countries

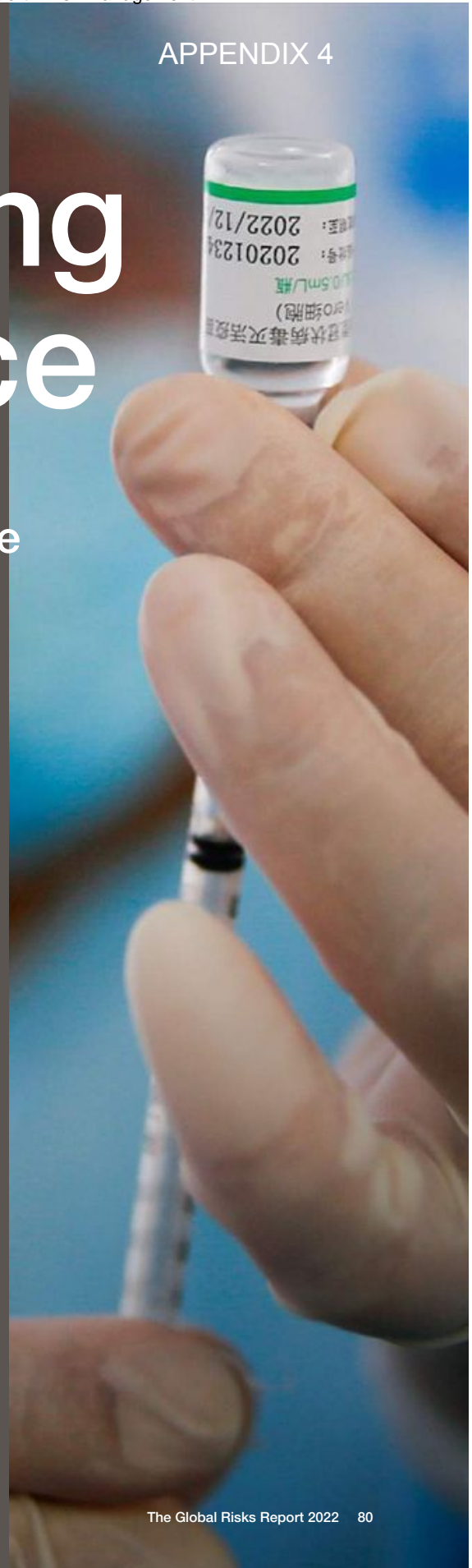
20-40x

increase in number of daily COVID-19 cases between peak and trough

2.1 million

maximum estimated excess deaths in Africa by 2021

REUTERS/SEBASTIAN CASTANEDA



The Global Risks Report 2022 80

Adaptive resilience to the pandemic at the national level

The 2021 *Global Risks Report* closed with a reflection on the extent to which shortcomings in the pandemic response could be attributed to long-standing complacencies, the novel and specific complexities of COVID-19, the volatile and divisive (geo)political environment or simple mismanagement. This chapter takes stock of national response strategies implemented in the second year of the pandemic, and then reflects on collaborative opportunities within countries to improve preparedness for future crises and organizational resilience.

During 2020, national governments sought to protect lives and livelihoods against a novel virus that was resulting in a significant mortality rate—with the backdrop of significant shortcomings in

national and global preparedness. In 2021, as the virus evolved more contagious variants, governments sought to deploy new responses, in alignment with measures developed the previous year, to return to societal and economic normalcy. Most countries experienced several surges during the year, with the number of daily cases characterized by exponential growth and a 20- to 40-fold increase between peak and trough (see Figure 6.1). By this measure, most countries presented both success stories and cautionary tales at different times.

Most countries saw both success stories and cautionary tales at different times

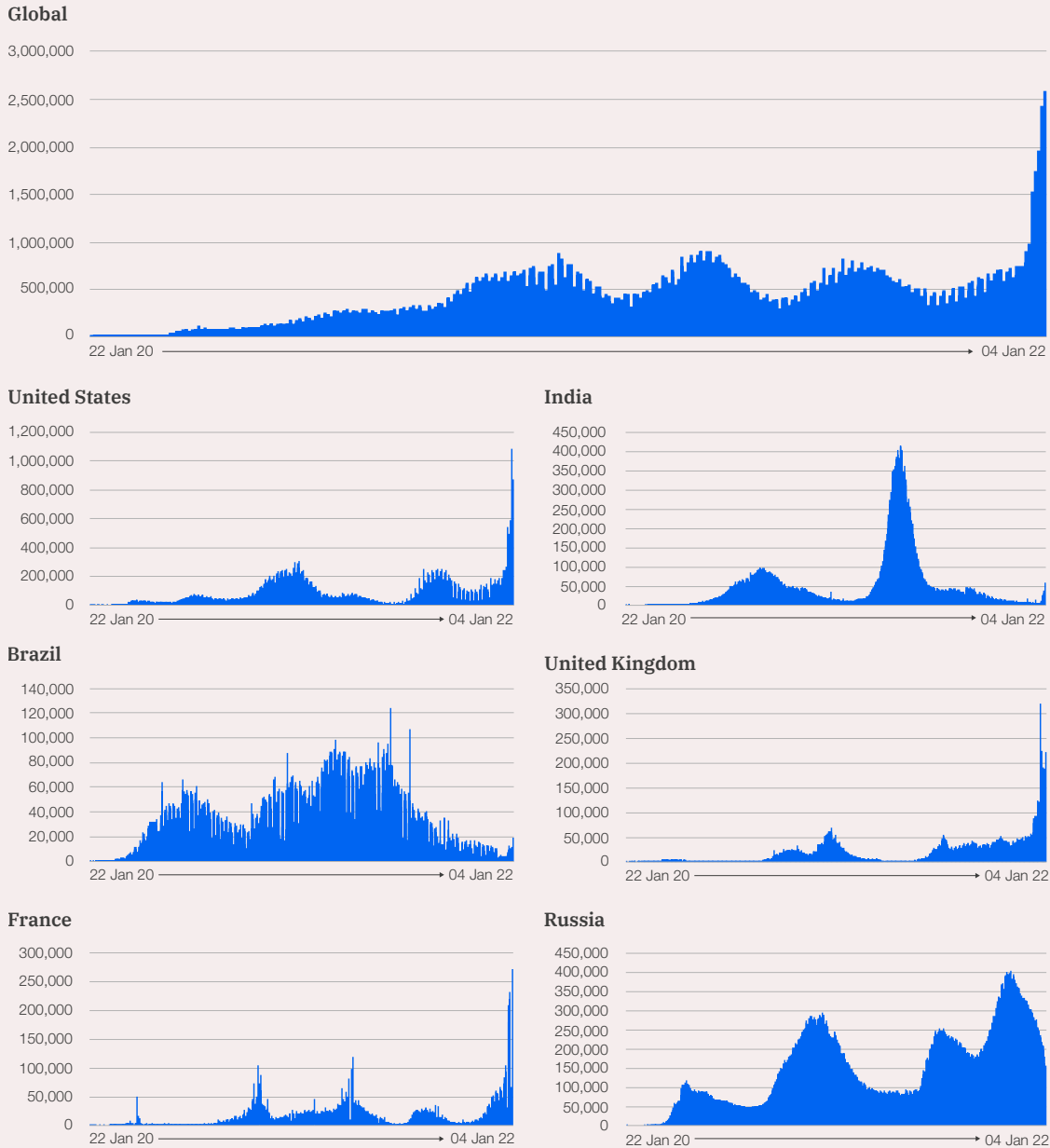


REUTERS/ELOISA LOPEZ

The Global Risks Report 2022 81

FIGURE 6.1

COVID-19 Daily New Cases: Global and Top Six Countries by Infections



Source: Worldometer. Covid-19 Coronavirus Pandemic – “Daily new cases”. <https://www.worldometers.info/coronavirus/>, accessed 5 January 2022.

Two interlinked factors have proved critical for the effective national management of the pandemic: first, governments’ readiness to adjust response strategies according

to changing circumstances; and second, their ability to maintain societal trust and compliance through principles-based decisions and effective communications.

Flexible response strategies

In general, effective national responses were characterized by a holistic view of societal well-being, multi-pronged approaches to transmission control and health system protection, robust coordination of policy and process, reliable logistics and the deployment of new interventions and increasingly granular and real-time data where available. Countries such as Chile and Finland were better able to manage peak periods than those with less well-rounded approaches.¹ They achieved this via cross-departmental policy agendas; expanded networks of community health workers; key health worker protections; a range of individually imperfect but collectively effective transmission control measures such as testing, tracing, and isolating; digital healthcare technologies; and early investment in anticipation of future needs.

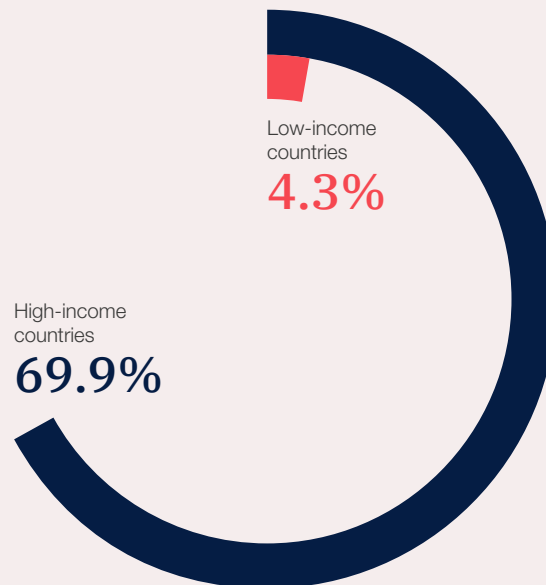
Critical for many countries was the establishment of well-judged policy transitions between enabling social interaction and economic activity when possible and returning, when needed, to the kind of mobility constraints that were default strategies in the early stages of the crisis. Rapid and wholesale easing of constraints on social and economic activity often resulted in a steep rise in case numbers, although the impact on health systems and mortality was often mitigated by high vaccination rates. Some countries that had prided themselves on very low case numbers for a long time found it hard to acknowledge or pivot when that was no longer the best indicator to measure the state of the pandemic.² The Omicron variant, with its higher infectiousness, will moreover force governments to revisit the balance between sustaining economic activity and limiting spread. Some are choosing to minimize disruptions in light of the virus' evidently milder threat, although they must be prepared to reinstate restrictions as necessary given that healthcare systems remain at risk of collapse.³

The arrival of effective vaccines and antiviral treatments changed the game in terms of managing the impact of the virus

on citizens' health and national health systems, enabling greater latitude in other policies.⁴ Mass deployment of affordable rapid tests also helped people move and mingle again while mitigating transmission risk. However, although a range of vaccines was technically available from early in the year, differing negotiating powers, contracting approaches and approval regimes had a strong impact on programme rollout timetables. Many high-income countries had privileged access to vaccines: by early December 2021, all but three Organisation for Economic Co-operation and Development (OECD) countries had double-vaccinated at least 50% of their populations.⁵ Some middle-income countries had also achieved high levels of vaccination: for example, the 79% vaccination rate in Malaysia was largely due to effective distribution,⁶ while Brazil's 65% was attributed to strong vaccine enthusiasm.⁷

FIGURE 6.2

Percentage of the Population Who Are Fully Vaccinated



Source: ONE. 2021. "Data dive: The astoundingly unequal vaccine rollout". January 2022.



APPENDIX 4

REUTERS/ELOISA LOPEZ

The lowest vaccination rates were mostly found in low-income countries (see Figure 6.2), especially in Africa, that had to rely on “vaccine diplomacy” initiatives from individual countries and multilateral agreements such as the Covid-19 Vaccines Global Access (COVAX) programme. The latter suffered from low contributions from high-income countries, high levels of bureaucracy, unpredictable supplies, and storage and distribution challenges.⁸ Relatively younger populations and “a favorable climate may have blunted the mortality of the virus in these countries, though excess deaths were estimated at between 0–2.1 million in Africa by May 2021,⁹ and long Covid may emerge as a longer-term challenge given the large number of non-fatal cases.

In general, successful vaccine rollout programmes struck a balance between speed and robustness, recognizing that perfect was sometimes the enemy of good. Vaccine effectiveness was found to improve following a second dose but waned over time, leading advanced economies to introduce booster jab programmes in which take-up and speed were key priorities.¹⁰ By the latter part of the year, analysis showed that fully vaccinated individuals were less likely to transmit the virus, experience severe or long-haul symptoms, occupy hospital beds or die.¹¹

Although global eradication of COVID-19 is no longer a viable option, persistent transmission of SARS-Cov-2 allows the emergence of new variants that are more contagious and may be more virulent and escape immunity conferred by infection or existing vaccines. Hence, the relatively slower vaccine rollouts in middle- and low-income countries, as well as vaccine hesitancy wherever present, remain a continued pandemic risk for all countries and require anticipation of further policy transitions. As and when new variants arise, governments will need to reimpose an appropriate set of control measures.

Maintaining societal trust

Maintaining societal trust involved galvanizing compliance and cooperation across citizens and the business community through frequent changes of government policy over an extended period. This often proved

Mass and affordable testing helped people move and mingle while mitigating transmission

challenging as, during 2021, many citizens became even more weary of lockdowns and obligations such as mask-wearing. In late November, several European countries and Australia experienced riots when governments tightened regimes in the face of ballooning case numbers.¹²

Moreover, in advanced economies with widespread access to vaccines, significant percentages of the adult population remained unvaccinated at the end of 2021 due to misplaced concerns about the risk of the vaccines relative to that of catching the virus, over-confidence in their own natural immunity and adherence to a range of theories that lack scientific basis.¹³ In other countries, general distrust of the government has resulted in widespread vaccine hesitancy, with alternative sources of authority, including local opinion and religious leaders, not sufficiently able to help allay fears.¹⁴

The trust component of managing this crisis has often depended on a balance between imposing constraints or coercions based on science and policies that encourage good behaviour. Communication has needed to steer a narrow course between individual freedoms and collective resilience; indeed, nearly 50% of the World Economic Forum

global risk experts identified this tension as one of the most critical for societies to manage.¹⁵ The challenge will only intensify as the pandemic extends into its third year and the public grows increasingly weary, especially during festive seasons as expectations for unfettered social activity increase.

The faster distribution of testing kits, along with easier self-administration and greater reliability of results, were helpful for enabling social interactions and international mobility. Widespread availability of affordable testing will be crucial as restrictions are increasingly lifted and greater social activity causes demand to outstrip supply, as has already been seen in some countries. However, regarding vaccines, some governments have become concerned that voluntary measures have reached their limits, especially with the arrival of the Omicron variant.¹⁶ Plans for vaccination requirements, with sanctions on employment or mobility for those who continue to resist, will test societal goodwill and compliance as well as government determination in light of divisive politics.¹⁷ Additionally, national resilience strategies for future pandemics may require anticipation of some level of distrust and defiance of restrictions and interventions aimed at protecting vulnerable population segments.



Preparing national resilience ecosystems for future crises

The COVID-19 crisis repeatedly surprised those charged with anticipating its trajectory and will likely leave further complex problems in its wake. Nor is the pandemic and its response the only challenge that governments, societies and businesses are facing. As the *Global Risks Report* sets out, new crises may lie just over the horizon.

Many critical risks demand a whole-of-society response. This involves not only the engagement of different sectors leading to multiple individual actions, but also more effective interaction between different sectors in ways that are accretive to well-being and prosperity.¹⁸

Countries must distinguish between different resilience goals to harness their collective capabilities more effectively and navigate the many inevitable trade-offs, as failure to appreciate where agendas are misaligned will limit the traction any solutions can gain. One such goal might be community resilience to potential disasters; another might be reliable critical economic and societal infrastructure; a third might be long-term strategic imperatives such as industrial transformation.¹⁹ Each of these goals requires different strategies, providing a frame for different cross-sectoral interactions.

Government lens

National risk assessments and resilience strategy reviews should be used to reveal where momentum is insufficient and greater government intervention is needed. It is not desirable or feasible for governments to seek to fill all gaps themselves: instead, they should look to harness the capabilities and energies of other sectors to complement enhanced competencies that ought to lie in the public realm.²⁰ Strategies should set out what is needed and examine all available levers with fresh eyes. They should identify where governments may need to compel action by others, and where they can exercise power as a

client, stimulate new initiatives, facilitate collaboration or simply act as cheerleader for good practices.

In their interactions with the private sector, governments that are more dirigiste might want to adjust their approaches to models for stockpiling critical goods, requisitioning and procurement in a crisis.²¹ All might also seek tougher cybersecurity mandates and set out stronger expectations of stress testing for critical infrastructure.²² They might seek to bring about a research and development ecosystem for resilience, coordinate crisis management exercises involving public and private sectors and provide a level of backstop for pooled insurance schemes targeted at catastrophic risks.²³

On three issues, finding a balanced path is critical. First, it is essential to allocate risk in a way that means the taxpayer does not ultimately pay up in every crisis nor do governments sweep risks off the public balance sheet onto the private sector. More transparent, analysis-led discussions about risks and tolerances should spur more equitable, creative solutions about the cost and pricing of risk as well as fiscal and market buffers that might mitigate fallout in the event of crisis.

Second, regulating for resilience must factor in rapid changes in assets, industries and systems; conflicting priorities in regulatory mandates; and enforcement challenges. Arguably, systemically important assets, firms and sub-sectors ought to experience greater oversight to prevent “hidden” assets in digital ecosystems, dominant firms in niche but critical industries and growing segments of certain sectors

Government should harness capabilities in other sectors to enhance public competencies

where the plausible near-simultaneous failure of several providers could have negative far-reaching consequences.²⁴ For regulatory regimes that primarily look out for present-day consumers, long-term resilience should be a central tenet and capability underpinning the development and implementation of major critical infrastructure capital investment plans.²⁵ Stronger cross-sector regulatory hubs could sharpen debate and help reconcile differing agendas of bodies with separate statutory powers.²⁶

Third, data-sharing arrangements must be adjusted in a way that enables both pre-emptive resilience building and sharper crisis management. There are good reasons for constraining some flows of data and intelligence, including national security, commercial confidentiality, antitrust constraints and personal privacy. Acknowledging this, governments may seek to identify crisis circumstances—such as a cybersecurity lapse—in which they should compel critical infrastructure operators to provide data to government bodies. In other situations, such as an earthquake, they might permit, or even encourage, competing firms to share data with each other to ensure strategic supplies for the nation. Prior to crises, governments should consider how to develop more collaborative approaches to scenario and impact analyses, build semi-accessible and proprietary data into resilience analytics and crisis decision-making, and better facilitate

pre-competitive data sharing by companies for innovations that will benefit both participants and the national good.²⁷

Business lens

Many companies have sought to understand how they can contribute to the resilience of the countries in which they operate. They recognize that better national-level preparedness leads to shock events having smaller impacts on the economy and stability of government policy, creating a better environment in which to plan, invest and execute.

Opportunities fall into four groups. First, large firms already look intensively at business interruption risks across supply chains, managed service providers, utilities and customers with a view to softening the impact of bottlenecks and outages; smaller firms could do the same with a lighter touch.²⁸ Second, nationally important companies worked with each other where permitted during the pandemic; more broadly scoped codes of conduct could set out best-practice behaviours per industry for future crises.²⁹ Third, the pandemic spurred companies to look harder at the resilience of their workforces and the communities in which they are located; large employers could build a resilience dimension into health and benefits offerings.³⁰ Fourth, some firms have been seeking to take a more



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active role in addressing large-scale public policy challenges that affect their business but cannot be resolved by government alone; more of that effort could be directly positioned in support of public goods.³¹

While public funds have traditionally directed resilience efforts, there is a growing imperative for businesses to take up the mantle of driving innovation in order to reduce blind spots and counter stovepiping tendencies within government. Greater private sector participation in strategic forums can allow experts and practitioners to contribute to and challenge government agendas. Dynamic cross-sectoral interactions around priorities, policies and operating practices can also help uncover efficient and efficacious solutions as well as generate broader traction for fresh initiatives.³²

Community lens

Both the pandemic and extreme weather events have highlighted areas where central governments and local bodies can combine more effectively. Failure to join up policy agendas across national government departments can have devastating impacts at the local level, where crises play out and disconnects are exposed. Similarly, “air gaps” between central and local governments—often due to struggles for authority or weaknesses in liaison networks—have compromised data flows, the effectiveness of initiatives and local trust.³³ Improved communication processes, better devolution of decision-

Better national preparedness creates a better environment to invest

making authorities, stronger coordination of on-the-ground efforts between central government specialist agencies and local administrations and better capacity-building at local and national levels would go a long way in supporting resilience.

There is scope for central and local governments to do more to support resilience efforts at the community level, often in partnership with non-governmental organizations and businesses. Local resilience forums can galvanize communities to provide detailed intelligence on situational vulnerabilities and likely impacts of key risks, helping to prioritize resilience measures. Enhancing awareness and participation, empowering local actors and building capabilities are vital for the cultural shift that is essential for sustaining resilience programmes over the long term.

There are multiple opportunities to enrich interfaces between academic communities and government agendas at local, national and international levels, especially for the provision of expertise and evidence on matters of science and technology.³⁴ Collaborative exploration of risk and resilience issues—before, during and after a crisis—would benefit from stronger, more flexible communication channels and higher levels of trust (see Box 6.1).

BOX 6.1

From Insights to Practice

Based on the challenges of the past year, the World Economic Forum has worked with two of its principal risk communities, the Chief Risk Officers Community and the Global Future Council on Frontier Risks, to identify five practical lessons to improve organizational practice for resilience:

- 1. Ground analyses in delivery requirements.**

It is often useful to start not with specific risks but with the types of failure, damage and attrition that could compromise core business goals. Working back from these undesirable outcomes makes for a more open assessment of current practices and a better appreciation of the capabilities, levers, tools and processes that might need to be introduced, deployed, redesigned or enhanced.

- 2. Appreciate vulnerabilities within the broader ecosystem.**

As well as examining the critical assets and operations they control, organizations should look at the broader ecosystem in which they operate. They should examine their resilience to shortfalls, outages and delays of the third-party assets and services on which they depend, and the tolerances of those who depend on them.

- 3. Embrace a diversity of resilience strategies.**

Some possible crises can be mitigated by placing more emphasis on just-in-case reliability than on just-in-time efficiency. Others may be best served by implementing back-ups and redundancies, adjusting operational processes, or ensuring that the organization can move quickly and adapt in order to maintain business continuity. Supportive employee behaviours are as vital as structural measures, especially when empowered by good leadership and effective communication.

- 4. Connect resilience efforts with other goals.**

Many organizational environmental, social and governance (ESG) goals are shared with a broad-based resilience platform and would benefit from improved alignment. For example, shortening supply chains can advance net zero strategies as well as reduce exposure to adverse geoeconomic developments, while strong community relations may help recovery initiatives in the event of a disaster.

- 5. Consider resilience to be a journey not a destination.**

Organizations with leading resilience programmes learn from stress-testing exercises and actual crises to emerge stronger, more supple and better prepared. They are alert to changing circumstances that may demonstrate elevated risks, vigilant in challenging themselves about blind spots and shortcomings that require additional action and eager to adapt response strategies to better achieve critical goals.

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Appendices

APPENDIX A

Descriptions of Global Risks 2022

Global Risks

A “global risk” is the possibility of the occurrence of an event or condition that, if it occurs, could cause significant negative impact for several countries or industries. For the purposes of this report, the scope is over the next 10 years.

To ensure legibility, the names of the global risks have been abbreviated in the figures. The portion of the full name used in the abbreviation is in bold.

	Global Risk	Description
Economic	Asset bubble bursts in large economies	Prices for housing, investment funds, shares and other assets in a large economy increasingly disconnect from the real economy
	Collapse of a systemically important industry	Collapse of a systemically important global industry or firm with an impact on the global economy, financial markets and/or society
	Debt crises in large economies	Corporate and/or public finances overwhelmed by debt accumulation and/or debt servicing in large economies, resulting in mass bankruptcies, defaults, insolvency, liquidity crises or sovereign debt crises
	Failure to stabilize price trajectories	Inability to control an unmanageable increase (inflation) or decrease (deflation) in the general price level of goods and services
	Proliferation of illicit economic activity	Global proliferation of informal and/or illegal activities that undermine economic advancement and growth: counterfeiting, illicit financial flows, illicit trade, tax evasion, human trafficking, organized crime etc.
	Prolonged economic stagnation	Near-zero or slow global growth lasting for many years
	Severe commodity shocks	Abrupt shocks to the supply and demand of systemically important commodities at a global scale that strain corporate, public and/or household budgets: chemicals, emissions, energy, foods, metals, minerals etc.
Environmental	Biodiversity loss and ecosystem collapse	Irreversible consequences for the environment, humankind, and economic activity, and a permanent destruction of natural capital, as a result of species extinction and/or reduction
	Climate action failure	Failure of governments and businesses to enforce, enact or invest in effective climate-change adaptation and mitigation measures, preserve ecosystems, protect populations and transition to a carbon-neutral economy
	Extreme weather events	Loss of human life, damage to ecosystems, destruction of property and/or financial loss at a global scale as a result of extreme weather events: cold fronts, fires, floods, heat waves, windstorms etc.
	Human-made environmental damage	Loss of human life, financial loss and/or damage to ecosystems as a result of human activity and/or failure to co-exist with animal ecosystems: deregulation of protected areas, industrial accidents, oil spills, radioactive contamination, wildlife trade etc.
	Major geophysical disasters	Loss of human life, financial loss and/or damage to ecosystems as a result of geophysical disasters: earthquakes, landslides, geomagnetic storms, tsunamis, volcanic activity etc.
	Natural resource crises	Chemical, food, mineral, water or other natural resource crises at a global scale as a result of human overexploitation and/or mismanagement of critical natural resources

Geopolitical	Collapse of a multilateral institution	Dissolution of a global multilateral institution established to resolve economic, environmental, geopolitical and/or humanitarian crises with regional or global implications: border disputes, environmental commitments, migration crises, health emergencies, trade disputes etc.
	Fracture of interstate relations	Economic, political and/or technological rivalries between geopolitical powers resulting in a fracture of bilateral relations and/or growing tensions
	Geoeconomic confrontations	Deployment of economic levers, including investment controls, trade controls, non-tariff barriers and/or currency measures, by global or regional powers to decouple economic interactions between nations and consolidate spheres of influence
	Geopolitical contestation of strategic resources	Concentration, exploitation and/or mobility restriction by a state of goods, knowledge, services or technology critical to human development with the intent of gaining geopolitical advantage
	Interstate conflict	Belligerent bilateral or multilateral conflict between states with global consequences: biological, chemical, cyber and/or physical attacks, military interventions, proxy wars etc.
	State collapse	Collapse of a state with global geopolitical importance as a result of internal conflict, breakdown of rule of law, erosion of institutions, military coup, regional or global instability
	Terrorist attacks	Large-scale, scattered or isolated terrorist attacks carried out by individuals or non-state groups with ideological, political or religious goals, resulting in loss of life, severe injury and/or material damage
	Weapons of mass destruction	Deployment of biological, chemical, cyber, nuclear or radiological weapons, resulting in loss of life, destruction and/or international crises
Societal	Collapse or lack of social security systems	Non-existence or widespread bankruptcy of social security systems and/or erosion of social security benefits: disability, elderly, family, injury, maternity, medical care, sickness, survivor, unemployment etc.
	Employment and livelihood crises	Structural deterioration of work prospects and/or standards for the working-age population: unemployment, underemployment, lower wages, fragile contracts, erosion of worker rights etc.
	Erosion of social cohesion	Loss of social capital and a fracture of social networks negatively impacting social stability, individual well-being and economic productivity as a result of persistent public anger, distrust, divisiveness, lack of empathy, marginalization of minorities, political polarization etc.
	Failure of public infrastructure	Unequitable and/or insufficient public infrastructure and services as a result of mismanaged urban sprawl, poor planning and/or under-investment, negatively impacting economic advancement, education, housing, public health, social inclusion and the environment
	Infectious diseases	Massive and rapid spread of viruses, parasites, fungi or bacteria that cause an uncontrolled contagion of infectious diseases, resulting in an epidemic or pandemic with loss of life and economic disruption
	Large-scale involuntary migration	Large-scale involuntary migration induced by climate change, discrimination, lack of economic advancement opportunities, persecution, natural or human-made disasters, violent conflict etc.
	Pervasive backlash against science	Censure, denial and/or scepticism towards scientific evidence and the scientific community at a global scale, resulting in a regression or stalling of progress on climate action, human health and/or technological innovation
	Pollution-driven harms to human health	Physical and mental health impacts from harmful chemical or other particulates in the air, water or food, which may stem from energy generation, industrial and agricultural practices, waste management failures, natural disasters, human behaviour and other sources
	Severe mental health deterioration	Pervasiveness of mental health ailments and/or disorders globally and across multiple demographics, negatively impacting well-being, social cohesion and productivity: anxiety, dementia, depression, loneliness, stress etc.
	Widespread youth disillusionment	Youth disengagement, lack of confidence and/or loss of trust of existing economic, political and social structures at a global scale, negatively impacting social stability, individual well-being and economic productivity

Technological	Adverse outcomes of technological advances	Intended or unintended negative consequences of technological advances on individuals, businesses, ecosystems and/or economies: AI, brain-computer interfaces, biotechnology, geo-engineering, quantum computing etc.
	Breakdown of critical information infrastructure	Deterioration, saturation or shutdown of critical physical and digital infrastructure or services as a result of a systemic dependency on cyber networks and/or technology: AI-intensive systems, internet, hand-held devices, public utilities, satellites etc.
	Digital inequality	Fractured and/or unequal access to critical digital networks and technology, between and within countries, as a result of unequal investment capabilities, lack of necessary skills in the workforce, insufficient purchase power, government restrictions and/or cultural differences
	Digital power concentration	Concentration of critical digital assets, capabilities and/or knowledge by a reduced number of individuals, businesses or states, resulting in discretionary pricing mechanisms, lack of impartial oversight, unequal private and/or public access etc.
	Failure of cybersecurity measures	Business, government and household cybersecurity infrastructure and/or measures are outstripped or rendered obsolete by increasingly sophisticated and frequent cybercrimes, resulting in economic disruption, financial loss, geopolitical tensions and/or social instability
	Failure of technology governance	Lack of globally accepted frameworks, institutions or regulations for the use of critical digital networks and technology, as a result of different states or groups of states adopting incompatible digital infrastructure, protocols and/or standards

APPENDIX B

Executive Opinion Survey: National Risk Perceptions

Table B.1 presents the top five risks for each of the 124 economies surveyed by the World Economic Forum's Executive Opinion Survey (EOS) between May and September 2021. Over 12,000 leaders answered the following question: "What five risks will pose a critical threat to your country in the next two years?" and were asked to select these from a list of 35 risks, with no particular order. "Risk 1" indicates the most frequently selected risk in each economy. Where there is a tie, the tied risks are presented alphabetically in the same cell, separated by a dotted line ("---") and the next cell in the row contains an ellipsis ("..."). For example, in Armenia, two risks ("human-made environmental damage" and "large-scale involuntary migration") are tied for third place and there is therefore no risk in fourth place.

The question posed to EOS respondents is comparable to the following question asked to GRPS respondents: "Please identify your top five global risks of concern [that will become a critical threat to the world] over the next 0–2 years". The list of 35 risks to select from in the EOS is also comparable to the list of risks in the Global Risks Perception Survey (GRPS), except for two new risks that were added to the GRPS after the EOS was conducted—"geoeconomic confrontations" and "pollution-driven harms to human health"—and one risk that changed name from "geopolitization of strategic resources" in the EOS to "geopolitical contestation of strategic resources" in the GRPS (see Appendix C, Global Risks Perception Survey Technical Notes).

TABLE B.1

Top Five Risks Identified by the Executive Opinion Survey

Economy	Risk 1	Risk 2	Risk 3	Risk 4	Risk 5
Albania	Fracture of interstate relations	Human-made environmental damage	Failure of cybersecurity measures	Debt crises in large economies	Infectious diseases
Angola	Employment and livelihood crises	Prolonged economic stagnation	Human-made environmental damage	State collapse	Widespread youth disillusionment
Argentina	Prolonged economic stagnation	Employment and livelihood crises	State collapse	Failure to stabilize price trajectories	Digital inequality
Armenia	Interstate conflict	Prolonged economic stagnation	Human-made environmental damage Large-scale involuntary migration	...	Failure of cybersecurity measures Fracture of interstate relations
Australia	Failure of cybersecurity measures	Extreme weather events	Climate action failure	Infectious diseases	Debt crises in large economies

Economy	Risk 1	Risk 2	Risk 3	Risk 4	Risk 5
Austria	Climate action failure	Erosion of social cohesion	Debt crises in large economies	Digital power concentration	Prolonged economic stagnation Extreme weather events
Azerbaijan	Natural resource crises	Asset bubble bursts in large economies	Debt crises in large economies	Climate action failure Collapse of a multilateral institution Human-made environmental damage Infectious diseases	...
Bahrain	Prolonged economic stagnation	Debt crises in large economies Failure of cybersecurity measures	...	Infectious diseases	Employment and livelihood crises
Bangladesh	Employment and livelihood crises	Digital inequality Geopolitization of strategic resources	...	Human-made environmental damage	Climate action failure Failure of cybersecurity measures
Barbados	Extreme weather events	Prolonged economic stagnation	Employment and livelihood crises	Collapse of a systemically important industry	Climate action failure Infectious diseases
Belgium	Climate action failure	Debt crises in large economies	Extreme weather events	Asset bubble bursts in large economies Fracture of interstate relations	...
Benin	Proliferation of illicit economic activity	Failure to stabilize price trajectories	Severe commodity shocks	Pervasive backlash against science	Erosion of social cohesion
Bolivia	Employment and livelihood crises	Proliferation of illicit economic activity	Digital inequality Human-made environmental damage	...	State collapse

Economy	Risk 1	Risk 2	Risk 3	Risk 4	Risk 5
Bosnia and Herzegovina	Human-made environmental damage Prolonged economic stagnation	...	Employment and livelihood crises	Digital inequality Widespread youth disillusionment	...
Botswana	Employment and livelihood crises	Collapse or lack of social security systems	Prolonged economic stagnation	Widespread youth disillusionment	Debt crises in large economies
Brazil	Prolonged economic stagnation	Employment and livelihood crises	Digital inequality	Human-made environmental damage	Geopolitization of strategic resources
Brunei Darussalam	Employment and livelihood crises	Prolonged economic stagnation	Failure of technology governance	Human-made environmental damage	Failure of cybersecurity measures
Bulgaria	Human-made environmental damage	Infectious diseases	Interstate conflict	Debt crises in large economies Employment and livelihood crises	...
Cambodia	Human-made environmental damage	Prolonged economic stagnation	Adverse outcomes of technological advances Infectious diseases	...	Biodiversity loss and ecosystem collapse Debt crises in large economies
Cameroon	Employment and livelihood crises	Terrorist attacks	Debt crises in large economies	Human-made environmental damage	Natural resource crises
Canada	Debt crises in large economies	Climate action failure	Extreme weather events	Employment and livelihood crises	Infectious diseases
Cape Verde	Employment and livelihood crises	Prolonged economic stagnation	Human-made environmental damage	Debt crises in large economies	Biodiversity loss and ecosystem collapse Failure of cybersecurity measures
Chad	Debt crises in large economies	Employment and livelihood crises	Breakdown of critical information infrastructure	Terrorist attacks	Human-made environmental damage
Chile	Prolonged economic stagnation	Erosion of social cohesion	Collapse or lack of social security systems	State collapse	Extreme weather events

Economy	Risk 1	Risk 2	Risk 3	Risk 4	Risk 5
China	Extreme weather events	Asset bubble bursts in large economies	Infectious diseases	Collapse or lack of social security systems	Geopolitization of strategic resources
Colombia	Employment and livelihood crises	Human-made environmental damage	Prolonged economic stagnation	State collapse	Proliferation of illicit economic activity
Congo	Employment and livelihood crises	...	Biodiversity loss and ecosystem collapse	...	Interstate conflict
	Human-made environmental damage		Digital inequality		State collapse
Costa Rica	Prolonged economic stagnation	Employment and livelihood crises	Digital inequality	State collapse	Debt crises in large economies Extreme weather events
Côte d'Ivoire	Terrorist attacks	Debt crises in large economies	Failure to stabilize price trajectories	Employment and livelihood crises	Human-made environmental damage
Croatia	Prolonged economic stagnation	Geopolitization of strategic resources	Digital inequality	Human-made environmental damage	Widespread youth disillusionment
Cyprus	Climate action failure	Debt crises in large economies	Geopolitization of strategic resources	Asset bubble bursts in large economies	...
				Infectious diseases	
				Prolonged economic stagnation	
Czech Republic	Debt crises in large economies	Collapse of a systemically important industry	Asset bubble bursts in large economies	Infectious diseases	Failure to stabilize price trajectories
Denmark	Climate action failure	Asset bubble bursts in large economies	...	Failure of cybersecurity measures	Debt crises in large economies
		Infectious diseases			
Dominican Republic	Extreme weather events	Employment and livelihood crises	Debt crises in large economies	Digital inequality Failure of cybersecurity measures	...

Economy	Risk 1	Risk 2	Risk 3	Risk 4	Risk 5
Ecuador	Collapse or lack of social security systems	Prolonged economic stagnation	Employment and livelihood crises	Proliferation of illicit economic activity	Digital inequality
Egypt	Natural resource crises	Infectious diseases	Debt crises in large economies	Failure to stabilize price trajectories	Employment and livelihood crises
El Salvador	Prolonged economic stagnation	State collapse	Extreme weather events	Employment and livelihood crises	Collapse or lack of social security systems Digital inequality
Estonia	Interstate conflict	Debt crises in large economies	Asset bubble bursts in large economies Fracture of interstate relations	...	Human-made environmental damage
Finland	Prolonged economic stagnation	Debt crises in large economies	Climate action failure	Asset bubble bursts in large economies	Infectious diseases
France	Erosion of social cohesion	Debt crises in large economies Geopolitization of strategic resources	...	Climate action failure	Failure of cybersecurity measures
Georgia	Interstate conflict	Digital inequality	Failure to stabilize price trajectories	Debt crises in large economies	Employment and livelihood crises
Germany	Climate action failure	Erosion of social cohesion	Digital power concentration	Debt crises in large economies	Fracture of interstate relations Geopolitization of strategic resources
Ghana	Employment and livelihood crises Human-made environmental damage	...	Geopolitization of strategic resources	Failure of cybersecurity measures	Collapse of a systemically important industry
Greece	Prolonged economic stagnation	Extreme weather events	Debt crises in large economies	Interstate conflict	Digital inequality

Economy	Risk 1	Risk 2	Risk 3	Risk 4	Risk 5
Guatemala	Proliferation of illicit economic activity	State collapse	Extreme weather events	Failure of public infrastructure	Erosion of social cohesion Human-made environmental damage
Honduras	State collapse	Employment and livelihood crises	Extreme weather events	Proliferation of illicit economic activity	Prolonged economic stagnation
Hong Kong SAR, China	Asset bubble bursts in large economies	Prolonged economic stagnation	Infectious diseases	Interstate conflict	Erosion of social cohesion
Hungary	Failure to stabilize price trajectories	Extreme weather events	Climate action failure	Infectious diseases	Fracture of interstate relations
Iceland	Asset bubble bursts in large economies Climate action failure	...	Collapse of a systemically important industry	Failure of cybersecurity measures Infectious diseases	...
India	Fracture of interstate relations	Debt crises in large economies	Widespread youth disillusionment	Failure of technology governance	Digital inequality
Indonesia	Debt crises in large economies Human-made environmental damage	...	Employment and livelihood crises	Geopolitization of strategic resources	Failure of cybersecurity measures
Iran	Employment and livelihood crises	Widespread youth disillusionment	Prolonged economic stagnation	Natural resource crises	Biodiversity loss and ecosystem collapse
Ireland	Climate action failure Failure of cybersecurity measures	...	Fracture of interstate relations	Debt crises in large economies Prolonged economic stagnation	...
Israel	Terrorist attacks	Asset bubble bursts in large economies Interstate conflict	...	Failure of cybersecurity measures	Weapons of mass destruction
Italy	Climate action failure Debt crises in large economies	...	Extreme weather events	Geopolitization of strategic resources	Digital inequality

Economy	Risk 1	Risk 2	Risk 3	Risk 4	Risk 5
Japan	Prolonged economic stagnation	Extreme weather events	Interstate conflict	Failure of cybersecurity measures	Asset bubble bursts in large economies Infectious diseases
Jordan	Debt crises in large economies	Employment and livelihood crises	Natural resource crises	Prolonged economic stagnation	Failure to stabilize price trajectories
Kazakhstan	Employment and livelihood crises Failure to stabilize price trajectories	...	Severe commodity shocks	Interstate conflict	Geopolitization of strategic resources
Kenya	Employment and livelihood crises	Debt crises in large economies	Human-made environmental damage	Prolonged economic stagnation Terrorist attacks	...
Republic of Korea	Asset bubble bursts in large economies	Employment and livelihood crises Infectious diseases	...	Debt crises in large economies	Human-made environmental damage
Kuwait	Asset bubble bursts in large economies Collapse or lack of social security systems	...	Failure of technology governance Geopolitization of strategic resources	...	Human-made environmental damage Infectious diseases
Kyrgyzstan	Employment and livelihood crises	Interstate conflict	Failure of technology governance	Climate action failure	Failure to stabilize price trajectories
Lao PDR	Failure to stabilize price trajectories	Employment and livelihood crises	Human-made environmental damage	Biodiversity loss and ecosystem collapse	Breakdown of critical information infrastructure Infectious diseases
Latvia	Interstate conflict	Asset bubble bursts in large economies	Digital inequality	Debt crises in large economies Prolonged economic stagnation	...

Economy	Risk 1	Risk 2	Risk 3	Risk 4	Risk 5
Lebanon	State collapse	Human-made environmental damage	Collapse or lack of social security systems	Debt crises in large economies Prolonged economic stagnation	...
Lesotho	Digital inequality	Infectious diseases	Climate action failure	Extreme weather events	Debt crises in large economies
Lithuania	Interstate conflict	Severe commodity shocks	Asset bubble bursts in large economies Failure of cybersecurity measures	...	Human-made environmental damage
Luxembourg	Asset bubble bursts in large economies	Climate action failure Debt crises in large economies	...	Digital inequality Fracture of interstate relations	...
Malawi	Failure to stabilize price trajectories	Human-made environmental damage Prolonged economic stagnation	...	Proliferation of illicit economic activity	Debt crises in large economies Employment and livelihood crises
Malaysia	Human-made environmental damage	Employment and livelihood crises	Prolonged economic stagnation	Geopolitization of strategic resources	Debt crises in large economies
Mali	Employment and livelihood crises Terrorist attacks	...	Debt crises in large economies	Collapse or lack of social security systems	Failure of technology governance
Malta	Human-made environmental damage	Collapse of a systemically important industry	Proliferation of illicit economic activity	Failure of cybersecurity measures	Asset bubble bursts in large economies
Mauritius	Prolonged economic stagnation	Collapse of a systemically important industry	Employment and livelihood crises	Extreme weather events	Erosion of social cohesion
Mexico	Proliferation of illicit economic activity	Prolonged economic stagnation	State collapse	Employment and livelihood crises	Digital inequality
Moldova	Prolonged economic stagnation	Large-scale involuntary migration	Interstate conflict	Extreme weather events	Proliferation of illicit economic activity

Economy	Risk 1	Risk 2	Risk 3	Risk 4	Risk 5
Mongolia	Human-made environmental damage	Employment and livelihood crises	Prolonged economic stagnation State collapse	...	Geopolitization of strategic resources
Montenegro	Employment and livelihood crises	Fracture of interstate relations	Prolonged economic stagnation	Digital inequality	Human-made environmental damage
Morocco	Natural resource crises	Employment and livelihood crises	Prolonged economic stagnation	Digital inequality	Extreme weather events Interstate conflict
Namibia	Employment and livelihood crises	Digital inequality	Prolonged economic stagnation	Extreme weather events	Debt crises in large economies
Nepal	Employment and livelihood crises	Human-made environmental damage	Geopolitization of strategic resources	Infectious diseases	Digital inequality Prolonged economic stagnation
Netherlands	Climate action failure	Erosion of social cohesion	Failure of cybersecurity measures	Asset bubble bursts in large economies	Debt crises in large economies
New Zealand	Failure of cybersecurity measures	Asset bubble bursts in large economies Infectious diseases Prolonged economic stagnation	Climate action failure Extreme weather events
Nicaragua	State collapse	Prolonged economic stagnation	Employment and livelihood crises Extreme weather events	...	Collapse or lack of social security systems
Nigeria	Terrorist attacks	Prolonged economic stagnation	Widespread youth disillusionment	Employment and livelihood crises	Human-made environmental damage
North Macedonia	Human-made environmental damage	Failure of public infrastructure	Debt crises in large economies	Prolonged economic stagnation	Digital inequality
Pakistan	Debt crises in large economies	Extreme weather events	Failure to stabilize price trajectories	Failure of cybersecurity measures	Human-made environmental damage

Economy	Risk 1	Risk 2	Risk 3	Risk 4	Risk 5
Panama	Collapse or lack of social security systems	Prolonged economic stagnation	Employment and livelihood crises	Digital inequality	Human-made environmental damage
Paraguay	Proliferation of illicit economic activity	Collapse or lack of social security systems	Digital inequality	Human-made environmental damage	Employment and livelihood crises State collapse
Peru	State collapse	Prolonged economic stagnation	Employment and livelihood crises	Digital inequality	Human-made environmental damage Proliferation of illicit economic activity
Philippines	Prolonged economic stagnation	Digital inequality	Extreme weather events	Employment and livelihood crises	Failure of public infrastructure
Poland	Human-made environmental damage	Infectious diseases	Interstate conflict	Fracture of interstate relations Prolonged economic stagnation	...
Portugal	Prolonged economic stagnation	Debt crises in large economies	Employment and livelihood crises	Digital inequality	Collapse or lack of social security systems
Qatar	Climate action failure	Digital inequality	Collapse of a systemically important industry Fracture of interstate relations Infectious diseases Natural resource crises
Romania	Human-made environmental damage	Employment and livelihood crises	Debt crises in large economies Geopolitization of strategic resources	...	Large-scale involuntary migration
Russian Federation	Interstate conflict	Failure to stabilize price trajectories	Infectious diseases	Employment and livelihood crises	Severe commodity shocks

Economy	Risk 1	Risk 2	Risk 3	Risk 4	Risk 5
Rwanda	Employment and livelihood crises	Prolonged economic stagnation	Extreme weather events	Digital inequality	Failure of cybersecurity measures
Saudi Arabia	Failure to stabilize price trajectories	Human-made environmental damage Infectious diseases	...	Interstate conflict	Fracture of interstate relations Prolonged economic stagnation
Senegal	Employment and livelihood crises	Debt crises in large economies	Terrorist attacks	Human-made environmental damage	Digital inequality Natural resource crises
Serbia	Human-made environmental damage	Debt crises in large economies	Employment and livelihood crises	Digital inequality	Geopolitization of strategic resources
Sierra Leone	Employment and livelihood crises	Human-made environmental damage	Prolonged economic stagnation	Failure to stabilize price trajectories	Widespread youth disillusionment
Singapore	Prolonged economic stagnation	Infectious diseases	Asset bubble bursts in large economies	Failure of cybersecurity measures	Climate action failure
Slovakia	Collapse of a systemically important industry	Collapse or lack of social security systems	Debt crises in large economies Human-made environmental damage	...	Digital inequality
Slovenia	Severe commodity shocks	Geopolitization of strategic resources	Asset bubble bursts in large economies	Extreme weather events Human-made environmental damage	...
South Africa	Prolonged economic stagnation	Employment and livelihood crises	State collapse	Failure of public infrastructure	Proliferation of illicit economic activity
Spain	Employment and livelihood crises	Prolonged economic stagnation	Debt crises in large economies	Climate action failure Fracture of interstate relations	...

Economy	Risk 1	Risk 2	Risk 3	Risk 4	Risk 5
Sri Lanka	Human-made environmental damage	Debt crises in large economies	Employment and livelihood crises — — — Infectious diseases	...	Digital inequality
Sweden	Asset bubble bursts in large economies	Terrorist attacks	Climate action failure	Debt crises in large economies	Human-made environmental damage
Switzerland	Asset bubble bursts in large economies	Prolonged economic stagnation	Debt crises in large economies — — — Fracture of interstate relations — — — Geopolitization of strategic resources — — — Interstate conflict
Taiwan, China	Infectious diseases	Extreme weather events	Geopolitization of strategic resources	Failure of cybersecurity measures	Asset bubble bursts in large economies
Tajikistan	Interstate conflict	Failure to stabilize price trajectories	Extreme weather events	Employment and livelihood crises — — — Infectious diseases	...
Tanzania	Debt crises in large economies	Employment and livelihood crises	Human-made environmental damage	Climate action failure — — — Infectious diseases	...
Thailand	Debt crises in large economies	Human-made environmental damage	Prolonged economic stagnation	Digital inequality	Employment and livelihood crises
Trinidad and Tobago	Prolonged economic stagnation	Employment and livelihood crises	Digital inequality	Collapse of a systemically important industry	Extreme weather events
Tunisia	State collapse	Debt crises in large economies	Employment and livelihood crises	Prolonged economic stagnation	Proliferation of illicit economic activity
Turkey	Employment and livelihood crises	Prolonged economic stagnation	Fracture of interstate relations	Human-made environmental damage	Failure of technology governance

Economy	Risk 1	Risk 2	Risk 3	Risk 4	Risk 5
Ukraine	Prolonged economic stagnation	State collapse	Climate action failure Failure to stabilize price trajectories Interstate conflict
United Arab Emirates	Infectious diseases	Asset bubble bursts in large economies	Debt crises in large economies Failure of cybersecurity measures	...	Climate action failure Employment and livelihood crises
United Kingdom	Failure of cybersecurity measures	Debt crises in large economies	Prolonged economic stagnation	Infectious diseases	Extreme weather events
United States	Asset bubble bursts in large economies	Climate action failure	Extreme weather events	Debt crises in large economies	Employment and livelihood crises
Uruguay	Severe commodity shocks	Prolonged economic stagnation	Employment and livelihood crises	Extreme weather events	Collapse or lack of social security systems
Venezuela	State collapse	Prolonged economic stagnation	Human-made environmental damage	Large-scale involuntary migration	Proliferation of illicit economic activity
Viet Nam	Biodiversity loss and ecosystem collapse	Asset bubble bursts in large economies	Infectious diseases	Extreme weather events Geopolitization of strategic resources	...
Yemen	Failure to stabilize price trajectories	State collapse	Failure of public infrastructure	Employment and livelihood crises Interstate conflict Natural resource crises	...
Zambia	Employment and livelihood crises	Debt crises in large economies	Failure to stabilize price trajectories	Human-made environmental damage	Prolonged economic stagnation

APPENDIX C

Technical Notes: Global Risks Perception Survey 2021–2022

The Global Risks Perception Survey (GRPS) is the World Economic Forum's source of original risks data, harnessing the expertise of the Forum's extensive network of academic, business, government, civil society and thought leaders. Survey responses were collected from 8 September to 12 October 2021 from the World Economic Forum's multistakeholder communities (including the Global Shapers Community), the professional networks of its Advisory Board, and members of the Institute of Risk Management. The results of the GRPS are used to create the graphics depicting the Global

Risks COVID-19 Hindsight, Future Outlook, the Global Risks Horizon, Global Risks Severity, Global Risks Effects and International Risk Mitigation Efforts presented at the beginning of the report and to offer insights used throughout.

Both the GRPS and the *Global Risks Report* adopt the following definition: *a global risk is the possibility of the occurrence of an event or condition which, if it occurs, could cause significant negative impact for several countries or industries. For the purposes of this report, the scope is over the next 10 years.*

Updates in the GRPS 2021–2022

New list of risks

The list of 37 global risks included in the survey was updated in 2021.

Two new risks were added in response to observed economic, geopolitical and environmental trends. These new risks are: (1) "Goeconomic confrontations" and (2) "Pollution harms to human health".

The names and definitions of the remaining 35 risks have been revised and, where applicable, have been modified and/or expanded to reflect new ways in which the risks may materialize and the potential adverse outcomes they may cause. However, to ensure comparability over time, although names and definitions were modified, the fundamental concept of the risk remained consistent with that in previous versions of the survey.

New sections

The GRPS 2021–2022 was extensively reformed this year to gather fresher, broader and more informed risk perceptions and to incorporate new approaches to risk management and analysis. The GRPS 2021–2022 is comprised of six sections:

- 1. COVID-19 Hindsight and Future Outlook (new):** asks respondents to form an opinion about how the COVID-19 pandemic aggravated risks, permitting some comparability with GRPS results from previous years. This opinion then facilitates the projection of their views forward beyond the pandemic. This section also captures respondent sentiment on the outlook for the world to inform an analysis of how individual contexts may influence global risk perceptions and the perceived status of mitigation efforts.
- 2. Global Risks Horizon:** recognizes that respondents may have varying perceptions on the evolution of global risks within a 10-year horizon. This section asks respondents to take a view on risks in the short term (0–2 years), medium term (2–5 years) and long term (5–10 years), also capturing respondents' sense of urgency about global risks and informing an analysis of choices and trade-offs that may face decision-makers.
- 3. Global Risks Severity (new):** asks respondents to rank the potential damage of a global risk over the next 10 years and reminds respondents to consider multiple criteria—including human suffering, societal disruption, economic shock, environmental degradation and political instability. This section

uses ranking rather than a 1–5 rating scale to allow respondents to answer the question with more confidence.

4. Global Risks Effects (new): recognizing that risks are not isolated but affect and amplify each other through negative feedback loops, this section incentivizes a holistic view of global risks by asking respondents to consider cascading impacts in conjunction with the severity of the risk itself.

5. Global Governance – International Risk Mitigation Efforts (new): recognizing that risk

mitigation needs to be a part of the global agenda, this section asks respondents to assess the current state of international mitigation efforts in 15 global governance areas. It identifies achievements and areas of opportunity for global action and cooperation and informs an analysis of how the various stages of effectiveness may influence future preparedness.

6. Open Questions (new): complements risk identification with a series of questions to detect blind spots, trends and shocks. This section ensures that the GRPS is a flexible and engaging mechanism to source expert knowledge.

Methodology

COVID-19 Hindsight & Future Outlook

COVID-19 Hindsight:

For each of the 37 global risks listed in Appendix A, respondents were asked to identify three global risks that they believe had worsened since the start of the COVID-19 crisis. A simple tally for each of the 37 global risks was calculated on this basis. The results are illustrated in Figure I.

Future Outlook:

Respondents were asked to express their feeling about the outlook for the world in four sentiments: worried, concerned, positive, optimistic. A simple tally for each of the four sentiments was calculated on this basis. The results are illustrated in Figure 1.2.

Respondents were then asked to characterize their outlook for the world over the next 3 years with the following four answer options: accelerating global recovery; fractured trajectories, separating winners and losers; consistently volatile with multiple surprises; progressive tipping points with increasing catastrophic outcomes. A simple tally for each of the four sentiments was calculated on this basis. The results are illustrated in Figure 1.1.

Global Risks Horizon

For each of the 37 global risks listed in Appendix A, respondents were asked to identify when they believe a risk will become a critical threat to the world, within the following timeframes:

- Short-term threats: 0–2 years

- Medium-term threats: 2–5 years
- Long-term threats: 5–10 years

A simple tally for each of the 37 global risks was calculated on this basis. The results are illustrated in Figure II.

Global Risks Severity

For each of the 37 global risks listed in Appendix A, respondents were asked to choose nine risks and rank order them from 1 to 9 according to their perceived severity of impact—“most severe” was defined as having the potential to yield the most damage on a global scale within the next 10 years. Respondents were asked to value the impact of risks considering multiple criteria, including human suffering, societal disruption, economic shock, environmental degradation and political instability.

The results were aggregated according to the following scoring schedule:

- 9 points each time a risk was selected as the most severe risk
- 8 points each time a risk was selected as the second-most severe risk
- 7 points each time a risk was selected as the third-most severe risk
- 6 points each time a risk was selected as the fourth-most severe risk

- 5 points each time a risk was selected as the fifth-most severe risk
- 4 points each time a risk was selected as the sixth-most severe risk
- 3 points each time a risk was selected as seventh-most severe risk
- 2 points each time a risk was selected as the eighth-most severe risk
- 1 point each time a risk was selected as the ninth-most severe risk

A simple sum of the scores for each of the risks according to the above scoring schedule was calculated on this basis. The results are illustrated in Figure 1.3.

Global Risks Effects

In the Global Risks Severity component, for each of the risks ranked most severe, second-most severe and third-most severe, respondents were then asked to select two risks that will be aggravated by those top severe risks.

A simple tally of the number of times a risk was identified as being aggravated by another for each of the most, second-, third-, fourth- and fifth-most severe risks was calculated on this basis. The results are illustrated in the Global Risks Effects (Figure III).

In the Global Risks Effects graph, the size of each of the most concerning risk nodes is scaled according to the above scoring schedule. The thickness of each of the links between a risk and the risks being aggravated is scaled according to the above tally.

Global Governance – International Risk Mitigation Efforts

From 15 international risk areas listed below, respondents were asked to rate the state each area was with regard to international risk mitigation efforts: “not started”, “early development”, “established”, or “effective”.

A simple tally for each of the four possible states was calculated on this basis. The results are illustrated in Figure IV.

The 15 international areas were: Artificial Intelligence (e.g., autonomous weapons, bias); Basic resource security (food and water); Biodiversity preservation; Climate change mitigation; Cross-border cyberattacks and misinformation; Financial system stability; Human health crises; International crime; Migration and refugees; Natural disaster relief; Physical conflict resolution; Poverty alleviation; Space exploitation; Trade facilitation; Weapons of mass destruction.

Completion thresholds

A total of 1,183 responses to the GRPS were received. From these, 959 were kept, using as a threshold at least one non-demographic answer.

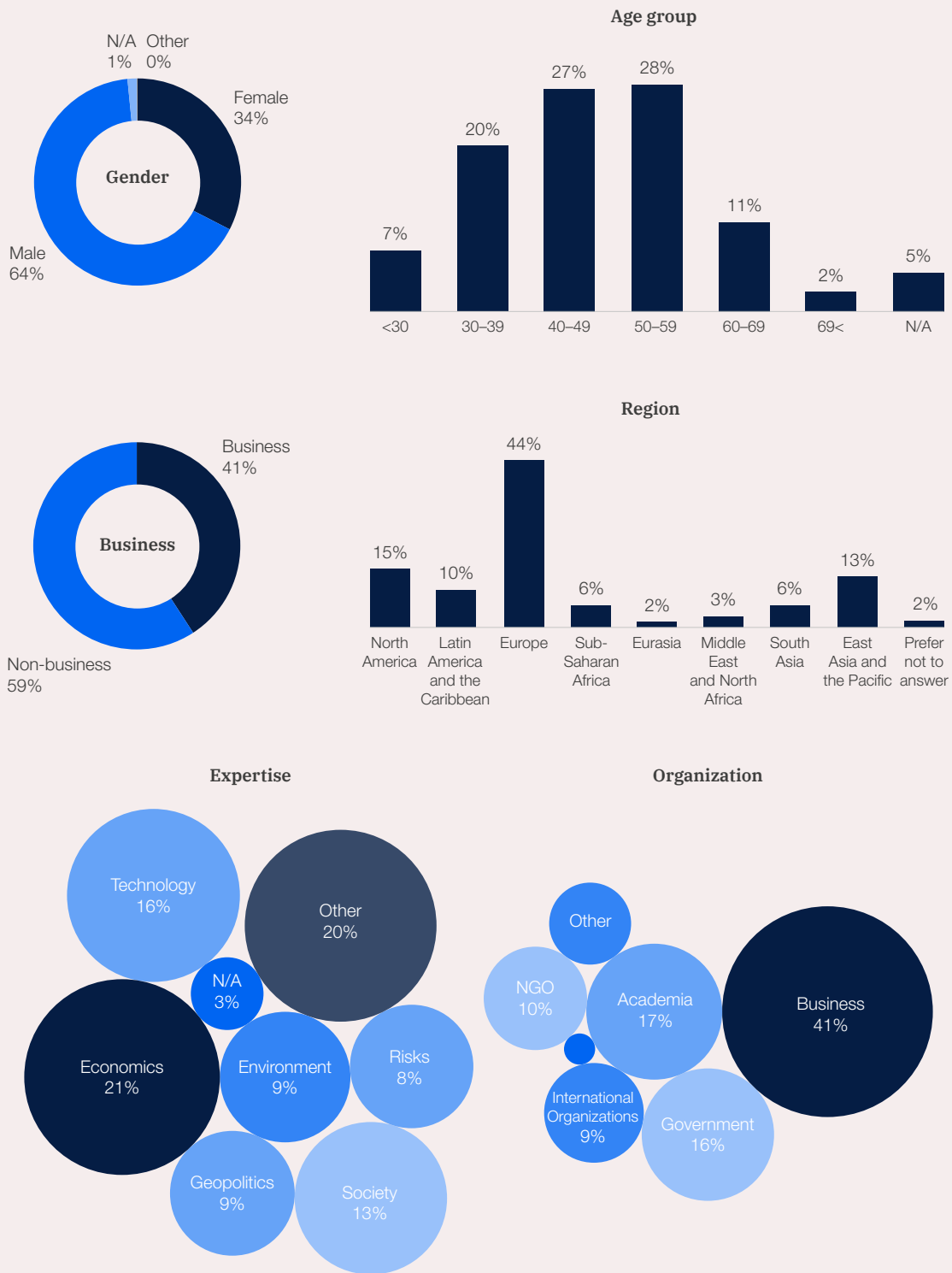
- **Section 1 - COVID-19 Hindsight & Future Outlook:** 959 respondents selected the three global risks.
 - **Future Sentiment:** 957
 - **Future Outlook:** 957
- **Section 2 - Global Risks Horizon:** 926 (0–2 years); 912 (2–5 years); 904 (5–10 years) respondents placed at least one risk within a possible timeframe. The results were computed among all respondents of the survey.
- **Section 3 - Global Risks Severity:** 893 respondents; 888 ranked at least one severe risk and assigned at least one driver.
- **Section 4 - Global Risks Effects:** 837 respondents identified at least one risk aggravating another.
- **Section 5 – Global Governance – International Risk Mitigation Efforts:** 829 (climate change) respondents scored at least one level of response, either global or regional. The results were computed among all respondents of each risk area within the section.
- **Sample distribution:** the 959 respondents from Section 1 were used to calculate the sample distribution by place of residence (region), gender, age, area of expertise and institution.

Figure C.1 presents some key descriptive statistics and information about the profiles of the respondents.

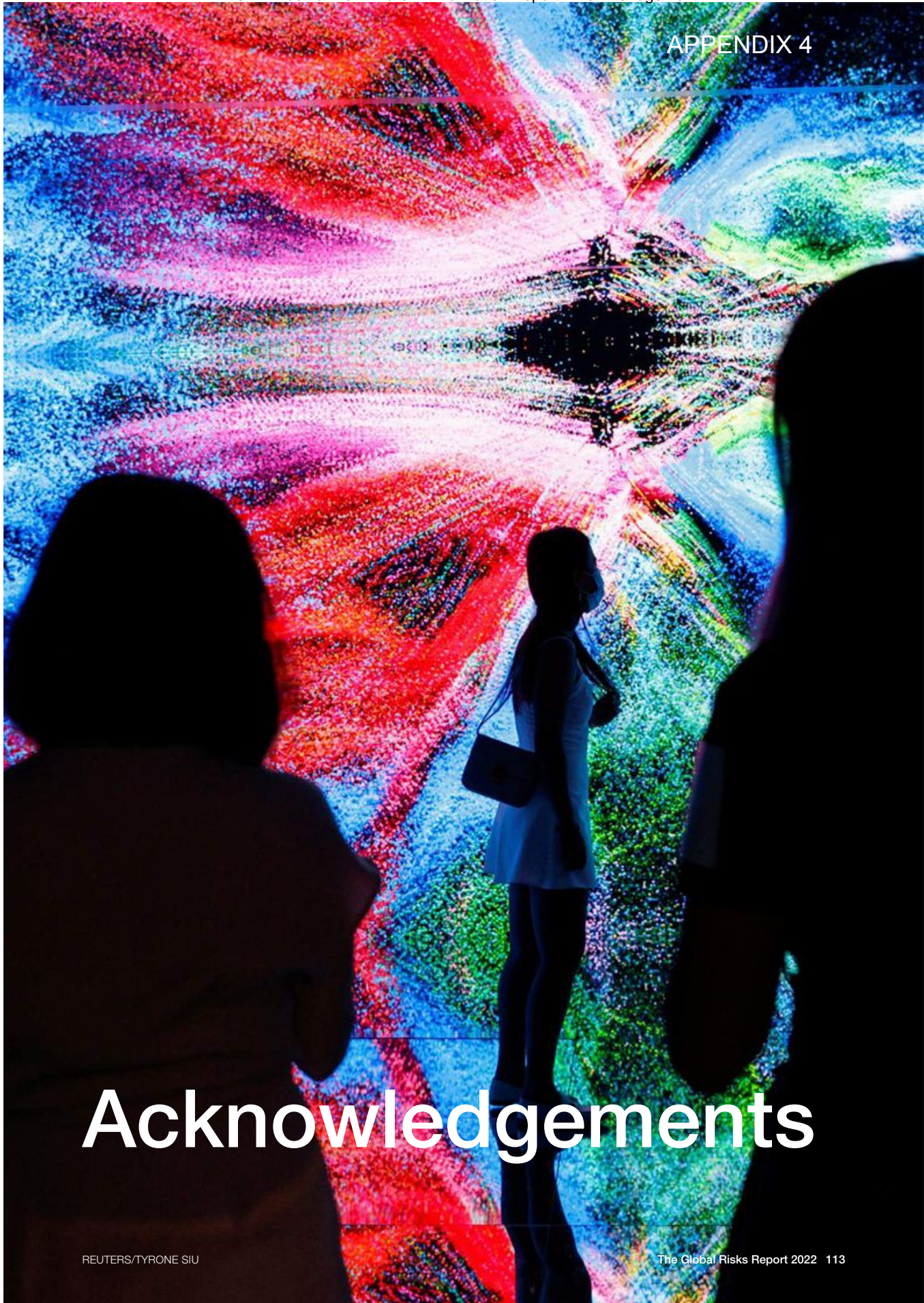
APPENDIX 4

TABLE C.1

Survey Sample Composition



Source: World Economic Forum Global Risks Perception Survey 2021-2022



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Refugees), Michael Sparrow (World Meteorological Organization), Jacob Van der Blij (GAVI), Lisa Walker (Ecosphere+), Gail Whiteman (University of Exeter Business School) and Susan Wilding (CIVICUS).

Latin America: 13 July 2021

Asdrubal Aguiar Aranguren (Democratic Initiative of Spain and the Americas), Cynthia Arnson (Woodrow Wilson International Center for Scholars), Ricardo Ávila (Portafolio/El Tiempo), Tiago Berriel (Banco BTG Pactual), Luis Bravo (Breca), Antonio de Aguiar Patriota (Government of Brazil), Paula Escobar (La Tercera), Marcela Escobari (Brookings Institution), Luis Fernando Mejía (Fedesarrollo), Mónica Forero (Zurich Insurance), Henrique Fragelli (Nubank), Rafaela Guedes Monteiro (Petroleo Brasileiro), Gerardo Herrera (Marsh McLennan), Enrique Iglesias (AstUr Foundation), Joaquim Levy (Banco Safra), Valeria Moy (Mexican Institute for Competitiveness), Alvin Ortega (Banco Nacional de Panamá), Rafael Palacios Prado (Sociedad de Fomento Fabril), Eric Parrado (InterAmerican Development Bank), Luis Adrián Salazar (University of Costa Rica) and Arturo Sarukhan (Sarukhan + Associates LLC),

North America: 13 July 2021

Tegan Blaine (United States Institute of Peace), David Bloom (Harvard T.H. Chan School of Public Health), Brenda Boulton (International Monetary Fund), David Bray (Atlantic Council), Jasmina Byrne (UNICEF), Alexis Crow (PwC), Daniel Drezner (The Fletcher School at Tufts University), Jean-Marie Guehenno (Columbia University), Sherri Goodman (Wilson Center), Maha Hosain Aziz (New York University), Aaron Karczmer (PayPal), Carolyn Kousky (Wharton Risk Center), Sonia Kundi (Zurich Insurance Group), Robert Litwak (Wilson Center), Robert Muggah (Igarapé Institute), Lakshmi Shyam-Sunder (World Bank), Adam Tooze (Columbia University), Olivia White (McKinsey & Company) and Michele Wucker (Gray Rhino & Company).

Asia: 21 September 2021

Mushtak Al-Atabi (Heriot-Watt University), Kanti Bajpai (Lee Kuan Yew School of Public Policy, National University of Singapore), Adila Binte Shahrin (Lee Kuan Yew School of Public Policy, National University of Singapore), Tek Yew Chia (Oliver Wyman), Lee Geun (Korea Foundation), Ziad Haider (McKinsey), Yee-Kuang Heng (University of Tokyo), Debora Ianuzzi (Zurich Insurance Group), Peter Jennings (Australian Strategic Policy Institute), Olivia Jensen (Lloyd's Register Foundation Institute for the Public Understanding of Risk), Prakash Kannan (Government of Singapore Investment Corporation), Lynn Kuok (Shangri-La Dialogue), Huong Le Thu (Australian Strategic Policy Institute), Meng Liu (UN Global Compact China),

Anita Prakash (Economic Research Institute for ASEAN), Danny Quah (Lee Kuan Yew School of Public Policy, National University of Singapore), Steve Rhee (Ford Foundation), Hersh Shah (Institute of Risk Management, India Affiliate), Lutfey Siddiqi (National University of Singapore, Risk Management Institute), Anjhula Mya Singh Bais (Amnesty International), Louise Tang (Lee Kuan Yew School of Public Policy, National University of Singapore), Chathuni Uduwela (TikTok), Catherine Wong (Lloyd's Register Foundation Institute for the Public Understanding of Risk), Eden Woon (Asian Institute of Technology) and Janson Yap (National University of Singapore).

In addition to those mentioned above, we extend our thanks to the following colleagues for their time and help: Marisol Argueta, Sophie Brown, Diego Bustamante, Eoin Ó Cathasaigh, Arnaud Colin, Roberto Crotti, Ana del Barrio, Attilio di Battista, Beatrice Di Caro, Mirek Dušek, Jaci Eisenberg, Harry Gray Calvo, Kateryna Gordiychuk, Nikhil Kamath, Patrice Kreidi, Gayle Markovitz, Adrian Monck, Nikolai Ozan, Jennifer Perez, Robin Pomeroy, Eduardo Rezende, Katja Rouru, Kirsten Salyer, Miriam Schive, Paul Smyke, Pierre Saouter, Olga Spirina, Jackson Spivey and Vessalina Stefanova Ratcheva.

Design and Production: Thank you to all those involved in the design and production of this year's report. At the World Economic Forum: Sakshi Bhatnagar, Javier Gesto, Floris Landi, Jordynn McKnight, Liam Ó Cathasaigh and Jean-Philippe Stanway. And our external collaborators: Hope Steele (editing) and Andrew Wright (writing and editing). Special thanks to Patrik Svensson for his artistic contributions.

APPENDIX 4
WORLD
ECONOMIC
FORUM

COMMITTED TO
IMPROVING THE STATE
OF THE WORLD

The World Economic Forum, committed to improving the state of the world, is the International Organization for Public-Private Cooperation.

The Forum engages the foremost political, business and other leaders of society to shape global, regional and industry agendas.

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INFORMATION REPORT



F19/13/04 – D22/7505

To: Audit and Risk Committee
From: Director – Corporate Services
Date: 15 March 2022
Subject: Audit NZ Matters Outstanding

Recommendation

THAT the report be received.

Recommended Reason

This report informs the Committee of the issues identified in the final Audit New Zealand Management Report for the 2020/21 Annual Report and Long Term Plan 2021-31, summarising the actions that have or intend to be taken by Council officers to respond to audit recommendations with respect to each issue raised.

 Moved/Seconded

1. Purpose of Report

- 1.1 To provide an update to the Committee of Audit New Zealand recommendations, that were identified as new or ongoing issues in the most recent Annual Report and Long Term Plan audits, and Council officer progress with each of these.

2. Executive Summary

- 2.1 The purpose of this report is to inform the Committee of the issues identified in the final Audit New Zealand Management Report for the most recent external audit/s, and summarises the actions that have or are to be taken by Council officers to respond to audit recommendations.
- 2.2 This is in line with the Audit and Risk Committee’s Terms of Reference which includes a responsibility *“To review the external audit findings and the annual financial statements and report back to the Council”*.

3. Local Government Act 2002

Under section 10 of the Local Government Act 2002, the Council’s purpose is to “enable democratic local decision making by and on behalf of communities; as well as promoting the social, economic, environmental, and cultural well-being of communities now and into the future”			
Does the recommended option meet the purpose of the Local Government 4 well-beings? And which:		Affects all four wellbeings in some way.	
Social	Economic	Environmental	Cultural
✓	✓	✓	✓

4. Background

- 4.1 Audit New Zealand issued an unmodified audit opinion for the year ended 30 June 2021 on 14 December 2021. As a follow up, Audit New Zealand issued a Management Report setting out the findings from the audit, highlighting areas where Council is doing well, and making recommendations for improvement. The finalised Management Report is attached to this information report at Appendix 2.
- 4.2 With regards to the Long Term Plan, the audit management report was finalised in June 2021, with the findings presented to the Audit and Risk Committee at the June 2021 meeting.
- 4.3 The auditor recommendations from these two audit reports have been summarised in Appendix 1, with an update on current status and timeframe for resolution where relevant.
- 4.4 Note – the recommendations that have been closed or completed (and accepted by Audit New Zealand as such) prior to receipt of the Management Report for the year ended 30 June 2021 have been removed from Appendix 1.

5. Information Summary

- 5.1 Refer to Appendix 1.

6. Strategic Alignment

6.1 Direction

The Annual Report is a statutory requirement and must include an independent audit report. It is largely reporting historical information, whereas the Annual Plan and Long Term Plan are forward looking and direction setting.

6.2 Annual Plan and Long Term Plan

Direct alignment with both of these documents.

6.3 District Plan

Not applicable.

6.4 Legal Implications

Not applicable.

6.5 Policy Implications

There are no policy implications to consider directly. However, some of the audit recommendations may involve Council having to review particular policies.

Attachments:

Appendix 1 - Schedule of Audit NZ Recommendations

Appendix 2 - Final Audit Report for year ended 30 June 2021 – Audit New Zealand



Tiffany Radich
Director – Corporate Services



[Approved by]
Sven Hanne
Chief Executive

Date: 7 March 2022

APPENDIX 1

Schedule of Audit NZ Recommendations

Recommendation	Current status	Comments	Timeframe
<p>Revaluation processes Process the roading revaluation in the roading asset register and perform the appropriate input review and reconciliations to the general ledger.</p> <p>Ensure the future fair value assessments are done early enough to identify any significant movements.</p>	Scheduled	<p>The valuation was scheduled for September 2021 completion, with an effective date of 1 July 2022. However, as the audit of the year ended 30 June 2021 didn't commence until October, and draft results were received in September, which indicated significant unit price increases, this meant the revalued figures had to be reflected in the earlier year due to the materiality of the revaluation increase and its effect on asset values and depreciation.</p> <p>To avoid issues in future, Council staff will revisit the next roading revaluation date and arrange for early in the calendar year, with an effective date of 1 January 2024, to be applied for the year ended 30 June 2024.</p>	N/A
<p>Capital Expenditure do-ability The LTP forecasts \$127 million of capital expenditure over the 10 years of the LTP, with 40% of the forecasted projects to be delivered in the first three years. The assumption made is that the capital expenditure programme will be achieved.</p>	In progress	<p>Council has recognised that there is a medium to high level of uncertainty around delivering 100% of its capital works programme over the next 10 years, and the LTP specifically discusses skill shortages, contractor availability, and cost certainty as factors that may impact on this. We will continue to monitor Council's progress on planned capital works on a monthly basis over the LTP.</p>	Ongoing

Recommendation	Current status	Comments	Timeframe
<p>Financial Budget Model The District Council's current financial model is entirely spreadsheet based with numerous formulas throughout. There is therefore an increased risk of error as spreadsheets can be easily changed and may lack certain control features.</p>	In progress	Council has committed to undertake a review of its ERP system by year 4 of the Long Term Plan and the RFP will also cater for an all-inclusive enterprise budgeting software. Access to the Master Version is limited to Director – Corporate Services and the Corporate Accountant. The spreadsheet financial model is reviewed annually, including integrity checks and fit for purpose testing. A report is to be brought to the May 2022 Audit and Risk Committee on alternative solutions for budget modelling.	Year 4 of LTP 2021-31
<p>Reconciliation between the general ledger and the asset management system Management should ensure that capital additions in the general ledger are reconciled to those capitalised in Asset-Finda on a monthly basis. This reconciliation should include a report on the depreciation charged.</p>	In progress	<i>Due to existing processes, the only time the two systems are reconciled is at asset revaluation dates. The Accountant and GIS Officer are continuing to work on a solution that enables monthly reconciliation of asset values between AssetFinda and Authority. The GIS officer has a work program relating to this area which is currently focusing on updating Assetfinda with Authority work order projects, and monthly meetings have been established with asset managers to ensure projects are capitalised on a timely basis.</i>	<i>Fully implemented by 30 June 2021.</i>
<p>Assessment of asset condition be carried out at valuation cycles Having appropriate information over the condition of assets and taking this into account when revaluing will give the District Council a better picture of their assets. This will also mean the District Council will have better information for asset management planning.</p>	To consider for next infrastructure valuation.	<i>Asset condition is reviewed regularly to inform the programme of works. However, in terms of the three yearly asset valuations asset condition was not an essential consideration, due to the significant cost of adding this component and data already being held, collected by contractors, in relation to asset condition.</i>	<i>Infrastructure asset valuation occurred in October 2021 – asset condition was a minor part of this valuation.</i>

Recommendation	Current status	Comments	Timeframe
<p>Impairment of Receivables</p> <p>Given the increased economic uncertainty caused by the impact of Covid-19, we recommend that the District Council prepare a detailed impairment assessment of receivables going forward.</p>	<p>Ongoing</p>	<p><i>Council actively monitors all receivables on a monthly basis and keeps Council informed of any pending issues.</i></p>	<p>N/A</p>
<p>Contract management register</p> <p>Consider improvements to the contract management register and processes to include a whole-of-Council contract management system.</p>	<p>In progress</p>	<p><i>The new contracts register module in Authority is now being used by staff. However, work is being undertaken by IT to link work orders to contracts and set up workflows to enable more effective contract management.</i></p>	<p>TBC</p>

**Report to the Council
on the audit of**

Stratford District Council

For the year ended 30 June 2021

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Key messages

We have completed the audit for the year ended 30 June 2021. This report sets out our findings from the audit and draws attention to areas where the Stratford District Council (District Council) is doing well and where we have made recommendations for improvement.

Audit opinion

We have issued an unmodified audit opinion dated 14 December 2021. This means we were satisfied that the financial statements and statement of service performance present fairly the District Council's activity for the year and its financial position at the end of the year.

Without modifying our audit opinion, we also included an emphasis of matter paragraph to draw attention to the disclosure in the financial statements which outlines that subsequent to year-end, the Government announced it will introduce legislation to establish four publicly owned water services entities to take over responsibilities for service delivery and infrastructure from local authorities from 1 July 2024. The impact of these reforms, once legislated, will mean that the District Council will no longer deliver three waters services.

Matters identified during the audit

The following key matters were considered as part of the audit:

- Revaluation of roading - the District Council revalued its roading assets at 30 June 2021. This is a significant portion of the District Council's asset base. The work we performed over these revaluations is included in section 3 of this report. We are satisfied that the revaluation was appropriate when assessed against the requirements of PBE IPSAS 17 and that the valuation results have been reflected in the District Council's financial statements.
- Accounting for Shovel Ready Funding – we reviewed the District Council's accounting treatment against the relevant accounting standard and against technical accounting advice. Our work has provided us with assurance that the District Council has correctly accounted for shovel ready funding for the financial year.
- Impact of three waters reform (stimulus funding) – we reviewed the District Council's accounting treatment against the relevant accounting standard and against technical accounting advice. Our work has provided us with assurance that the District Council has correctly accounted for three waters stimulus funding for the financial year.
- Impact of three waters reform (three waters reform disclosure) – We are satisfied that the three waters reform announcement was appropriately disclosed in the Annual Report as a subsequent event.

Thank you

We would like to thank the Council, management, and staff for the assistance received throughout the audit process.

A handwritten signature in blue ink that reads "Chris Webby". The signature is written in a cursive, flowing style.

Chris Webby
Appointed Auditor
16 February 2022

1 Recommendations



Our recommendations for improvement and their priority are based on our assessment of how far short current practice is from a standard that is appropriate for the size, nature, and complexity of your business. We use the following priority ratings for our recommended improvements.

Priority	Explanation
Urgent	<p>Needs to be addressed <i>urgently</i></p> <p>These recommendations relate to a significant deficiency that exposes the District Council to significant risk or for any other reason need to be addressed without delay.</p>
Necessary	<p>Address at the earliest reasonable opportunity, <i>generally within six months</i></p> <p>These recommendations relate to deficiencies that need to be addressed to meet expected standards of best practice. These include any control weakness that could undermine the system of internal control.</p>
Beneficial	<p>Address, <i>generally within six to 12 months</i></p> <p>These recommendations relate to areas where the District Council is falling short of best practice. In our view it is beneficial for management to address these, provided the benefits outweigh the costs.</p>

1.1 New recommendations

The following table summarises our recommendations and their priority.

Recommendation	Reference	Priority
<p>Revaluation processes</p> <p>Process the roading revaluation in the roading asset register and perform the appropriate input review and reconciliations to the general ledger.</p> <p>Ensure the future fair value assessments are done early enough to identify any significant movements.</p>	4.1	Necessary

1.2 Status of previous recommendations

Set out below is a summary of the action taken against previous recommendations. Appendix 1 sets out the status of previous recommendations in detail.

Priority	Priority			
	Urgent	Necessary	Beneficial	Total
Open	-	4	1	5
Implemented or closed	-	4	-	4
Total	-	8	1	9

2 Our audit report

2.1 We issued an unmodified audit report



We issued an unmodified audit report on 14 December 2021. This means we were satisfied that the financial statements and statement of service performance present fairly the District Council's activity for the year and its financial position at the end of the year.

Without modifying our audit opinion, we also included an emphasis of matter paragraph to draw attention to the disclosure in the financial statements which outlines that subsequent to year-end, the Government announced it will introduce legislation to establish four publicly owned water services entities to take over responsibilities for service delivery and infrastructure from local authorities from 1 July 2024. The impact of these reforms, once legislated, will mean that the District Council will no longer deliver three waters services.

2.2 Uncorrected misstatements

The financial statements are free from material misstatements, including omissions. During the audit, we have discussed with management any misstatements that we found, other than those which were clearly trivial. The misstatements that have not been corrected are listed below along with management's reasons for not adjusting these misstatements. We are satisfied that these misstatements are individually and collectively immaterial.

Current year uncorrected misstatements	Reference	Assets	Liabilities	Equity	Financial performance
		Dr (Cr)	Dr (Cr)	Dr (Cr)	Dr (Cr)
		'000	'000	'000	'000
Other financial assets	1	192	-	-	-
Reserve		-	-	(192)	-
Total group		192	-	(192)	-

Explanation of uncorrected misstatements

- The District Council has accounted for the Percy Thomson Trust's (the Trust's) other financial assets at cost in the group figures per the Trust's accounting policy, instead of accounting for these assets at fair value as required by the District Council's accounting policy.

The group figures for other financial assets and revaluation reserve for held for sale assets are understated by \$192,000.

2.3 Corrected misstatements

We also identified misstatements that were corrected by management.

Current year corrected misstatements	Reference	Assets	Liabilities	Equity	Financial performance
		Dr (Cr) '000	Dr (Cr) '000	Dr (Cr) '000	Dr (Cr) '000
Cash and cash equivalents	1	1,000			
Short term deposits		(1,000)			
Total		-	-	-	-

Explanation of corrected misstatements

- 1 To correctly classify a term deposit of 91 days under cash and not short-term investments. This has a flow on impact to the cash flow statement.

2.4 Corrected disclosure deficiencies

Detail of disclosure deficiency
Correction of the employee remuneration band disclosure and staff count.
Split out the income in advance for three waters funding - \$1,195k.
Section 90B disclosure for accounts receivable note.
Correction of employer contributions.
Correction of the contingency note for the LGFA guarantor details.
Correction of budget numbers and some prior year figures to agree to the annual plan and signed prior year Annual Report.
Correction of the Funding Impact Statement – fees and charges.
Correction of the maturity analysis for the outer years - \$1.5 million.
Related parties note – inclusion of admin charges.
Benchmarks – correction of presentation to be in line with the regulations.
Correction of the debt control benchmark.
Correction to include community loans in the financial instruments note.
Correction of the accounting policies notes to reflect that the Council has not yet adopted PBE IPSAS 41.

Detail of disclosure deficiency
Correction of the capital commitments note for the bike park and pool - \$15.6 million.
Inclusion of the roading valuers details on the property, plant and equipment note.
Insurance disclosure corrections.
Cash flow statement – correction for the classification error corrected between short term deposits and cash and cash equivalents.

2.5 Corrected performance reporting misstatements

Detail of misstatement
Correction of the Road Accident measure to the change from the previous year.

2.6 Quality and timeliness of information provided for audit



Management needs to provide information for audit relating to the annual report of the District Council. This includes the draft annual report with supporting working papers.

AuditDashboard was used during the 2020/21 audit for the first time. This worked well and we will continue to use the tool going forward.

The finance team provided us with most documents and information requested on a timely basis and by the due dates set. This allowed the resourced phase of those parts of the audit to proceed more efficiently and reduced the level of interruption of the finance team.

3 Matters raised in the Audit Plan



In our Audit Plan we identified the following matters as the main audit risks and issues:

Audit risk/issue	Outcome
Subdivision accounting treatment	
<p>The District Council subdivided land for resale during the 2019 financial year. Some of these properties were sold in the 2020 financial year with more expected to be sold in the 2021 financial year.</p> <p>The District Council have recognised the costs associated with the subdivision as inventory in the previous financial years, in terms of PBE IPSAS 12 – Inventories and the Council infrastructure.</p> <p>For the 2021 financial year, the District Council will need to ensure they calculate the costs associated with the properties sold and recognise these as cost of sales (Expenditure - Cost of sales residential development). The remaining costs associated with properties not yet sold, should be recognised as inventory. The Council infrastructure that is completed at year end should be capitalised and incomplete work should be recognised as work in progress.</p> <p>The District Council should ensure there are accurate records of costs per plot and details of any assumptions made in calculating the amounts.</p>	<p>For the 2021 financial year, the District Council had to calculate the costs associated with properties sold and recognise these as cost of sales (Expenditure - Cost of sales residential development). No inventory was recognised this year as sales were completed by year end.</p> <p>We reviewed the calculations and support for costs and sales.</p> <p>Overall conclusion</p> <p>Based on the work performed we are satisfied that cost of sales, sales and inventory are fairly stated at 30 June 2021.</p>
Fair value/impairment assessment of assets	
<p>PBE NZ IPSAS 17, Property, Plant and Equipment, requires that valuations are carried out with enough regularity to ensure that the carrying amount does not differ materially from fair value.</p>	<p>The District Council completed a fair value assessment as at 30 June 2021 which considered whether a revaluation was required. This assessment identified there was a material difference between the roading carrying amount and fair value which resulted in a revaluation over roading to be performed. For all the other</p>

Audit risk/issue	Outcome
<p>PBE IPSAS 21 Impairment of Non-Cash-Generating Assets and PBE IPSAS 26 Impairment of Cash Generating Assets require assets held at cost to be assessed for indicators of impairment on an annual basis.</p> <p>The District Council revalues its property, plant and equipment on a three yearly cycle.</p> <p>Non-revaluation year and impairment assessment</p> <p>In a non-revaluation year the District Council must consider whether there has been any significant movement in the fair value of the assets.</p> <p>On a yearly basis the District Council must review its property, plant and equipment for impairment indicators.</p> <p>The last full revaluation of infrastructure was 1 July 2018 and for land and buildings was 1 January 2020.</p> <p>We expect that:</p> <ul style="list-style-type: none"> • the District Council will have done a comprehensive analysis to determine whether there is a significant variance between the fair value as at 30 June 2021 and the carrying value that would trigger the need for the District Council to revalue or impair the assets; and • the value of work in progress (WIP) on projects that span an extended period of time to be assessed for impairment regularly over the period of the project. 	<p>revalued assets fair value assessment's, we agreed with management's assessment and are satisfied that no revaluation was required for the District Council's operational and infrastructure assets (excluding roads).</p> <p>We reviewed the District Council's impairment assessment and agreed that no impairment indicators exist which required the District Council to impair any of its property, plant and equipment.</p> <p>Conclusion</p> <p>We are satisfied the District Council property, plant and equipment is fairly stated in the financial statements.</p> <p><u>Roading revaluation</u></p> <p>To gain assurance over the roading revaluation we:</p> <ul style="list-style-type: none"> • reviewed how the District Council ensured completeness over the asset data; • reviewed the District Council's explanations of variances between the latest and prior years' valuations for reasonableness; • obtained a confirmation from the independent valuer; • confirmed our understanding of the valuation methodology and key assumptions. We assessed these for compliance with PBE IPSAS 17 and evaluated their reasonableness based on our experience and knowledge of other valuations; • determined how the age and condition of the assets had been determined, and how this had been reflected in the determination of the remaining useful life of the assets and the valuation calculation for those assets; • determined how unit rates for replacement costs have been determined. We confirmed the reasonableness of a sample of unit costs by reference to recent capital works undertaken by the District Council; and

Audit risk/issue	Outcome
	<ul style="list-style-type: none"> reviewed how changes in the value of revalued assets are accounted for and disclosed in the financial statements. <p>Conclusion</p> <p>We are satisfied that the roading revaluation was appropriate when assessed against the requirements of PBE IPSAS 17 and that the valuation results have been reflected in the District Council’s financial statements.</p>
Accounting for Shovel Ready Funding	
<p>We understand that the District Council has received Shovel Ready funding from central government.</p> <p>It is important that this funding is clearly and appropriately accounted for in accordance with the PBE accounting standards, and that the District Council is transparent with its community and meeting any obligations.</p>	<p>To gain assurance over the accounting treatment we:</p> <ul style="list-style-type: none"> reviewed the contracts for projects which received shovel ready funding; took into account technical opinions over similar contracts; and reviewed the accounting treatment against the accounting standards and identified the key milestones/conditions that the District Council had to achieve before being entitled to the funding. <p>Conclusion</p> <p>Our work has provided us with assurance that the District Council has correctly accounted for their shovel ready funding for the financial year.</p>
Impact of three waters reform	
<p>During 2020/21, the District Council signed a non-binding Memorandum of Understanding (MOU) with Crown. By signing this MOU, the District Council agreed to participate in the exploration of future service delivery options for the three waters services and to collaborate with agencies involved in the reform.</p> <p>On signing of the MOU, the District Council subsequently received \$2.39 million of the share of \$761 million Crown stimulus funding. It is important that the District Council is appropriately accounting for its share of the funding</p>	<p>Stimulus funding</p> <p>To gain assurance over the accounting treatment we received a technical opinion on how the three waters stimulus funding should be accounted for. We used this opinion and then considered the District Council’s situation. From this review we identified that the District Council should be recognising revenue in advance as at 30 June 2021 as the District Council had spent less than the initial \$1.195 million payment on the agreed projects and there is a return clause, requiring any unspent funds at the end of a project to be returned. The District Council financial statements appropriately reflected the revenue in advance.</p>

Audit risk/issue	Outcome
<p>and is meeting the obligations of the funding agreement.</p> <p>The Government is proposing to establish four publicly owned entities to take responsibility of drinking water, wastewater and stormwater infrastructure across New Zealand.</p> <p>The District Council will need to decide whether to opt out of the proposed new service delivery model. There is still considerable information to come as to what these reforms may mean for the District Council before this decision will be made.</p> <p>We would expect the District Council has taken steps to:</p> <ul style="list-style-type: none"> consider the implications of any government announcements about three waters reform up to the date of authorisation of the financial statements. This includes the impact on financial statements and disclosures, including subsequent events disclosures; and ensure any crown stimulus funding resulting from the three waters reform programme received by the District Council has been appropriately accounted for in accordance with PBE accounting standards and the terms of the agreement. 	<p>Conclusion</p> <p>Our work has provided us with assurance that the District Council has correctly accounted for the three waters stimulus funding for the financial year.</p> <p>Three waters reform disclosure</p> <p>The Minister of Local Government announced on 27 October 2021 that the Government is making the three waters reform mandatory. This means the Government will introduce legislation to establish four publicly owned water services entities to take over responsibilities for service delivery and infrastructure from local authorities from 1 July 2024. The impact of these reforms, once legislated, will mean that the District Council will no longer deliver three waters services.</p> <p>As this announcement was made before the District Council adopted the Annual Report, a subsequent event disclosure note was required. The District Council included a subsequent event note disclosure.</p> <p>Given the significance of the announcement and impact on local authorities with three waters assets going forward, it was agreed by the Office of Auditor-General to include an emphasis of matter paragraph in all impacted local authorities audit reports. This applied to all local authorities that adopted their Annual Report after the announcement.</p> <p>Conclusion</p> <p>We are satisfied that the three waters reform announcement was appropriately disclosed in the Annual Report as a subsequent event.</p>
Ongoing impact of Covid-19 pandemic	
<p>The long-term impact of Covid-19 in New Zealand, and how it might affect public entities, is unknown. However, it is likely that the uncertainties in the economic environment will increase the risk of material misstatement in financial statements. These effects might include uncertainties relating to revenue and asset valuations.</p>	<p>The continuing effect of Covid-19 on local government entities is uncertain. To cover off our audit risk we have:</p> <ul style="list-style-type: none"> gained an updated understanding of the impact of Covid-19 on the District Council's operations, financial statements, and performance story; determined that management has not identified or recorded any significant

Audit risk/issue	Outcome
<p>We would expect the District Council has taken steps to:</p> <ul style="list-style-type: none"> reconsider the risks that the District Council faces; and reconfirm that reporting and internal control systems are in place and functioning effectively. 	<p>additional Covid-19 related revenue, receivables, or costs, other than Shovel Ready funding. Shovel Ready funding has been recognised in line with PBE accounting standards; and</p> <ul style="list-style-type: none"> assessed the completeness and reasonableness of disclosures contained within the Annual Report relating to the impact of Covid-19. <p>Conclusion</p> <p>We are satisfied that the impact of the Covid-19 pandemic is fairly reflected in the financial statements and performance information.</p>
The risk of management override of internal controls	
<p>There is an inherent risk in every organisation of fraud resulting from management override of internal controls. Management are in a unique position to perpetrate fraud because of their ability to manipulate accounting records and prepare fraudulent financial statements by overriding controls that otherwise appear to be operating effectively. Auditing standards require us to treat this as a risk on every audit.</p>	<p>To address the risk of material misstatement due to fraud to an acceptable level we completed the following audit work:</p> <ul style="list-style-type: none"> tested the appropriateness of journal entries recorded in the general ledger and other adjustments made in the preparation of the financial statements; reviewed accounting estimates for biases and evaluated whether the circumstances producing the bias, if any, represent a risk of material misstatement due to fraud; and maintained awareness of any significant transactions that were outside the normal course of business, or that otherwise appear to be unusual given our understanding of the District Council and its environment, and other information obtained during the audit. <p>Conclusion</p> <p>From our testing we did not identify any issues that indicated management override.</p>

4 Issues identified during the audit



During our audit, we identified the following item which we wish to bring to your attention. Other matters which we identified but were not significant have been discussed with management.

4.1 Revaluation processes

As detailed in section 3 above, the District Council was not scheduled to perform a full revaluation of roading assets this financial year. A fair value assessment was performed, which identified a material difference between the carrying value and fair value of the roading assets. This meant a full valuation was required in line with PBE IPSAS 17 *Property, Plant and Equipment*.

The District Council completed and accounted for the roading revaluation as at 30 June 2021. As a result of time constraints due to when the roading revaluation was performed, the District Council was not able to process the valuation in the roading asset register. There is a risk that this is not processed appropriately against the relevant individual assets, leading to differences to the general ledger.

We **recommend** that management process the roading revaluation in the roading asset register and perform the appropriate input review and reconciliations to the general ledger, to ensure there are no opening balance differences in the future.

We **recommend** the District Council should ensure future fair value assessments are performed early enough to identify any significant movements, to allow for timely completion of a full valuation exercise if required.

Management comment

The valuation was scheduled for September 2021 completion, with an effective date of 1 July 2022. The intention was that the outcome of the valuation would be reflected in the 2022/23 annual results. However, as the audit of the year ended 30 June 2021 didn't commence until October, and draft results were received in September, which indicated significant unit price increases, this meant the revalued figures had to be reflected in the earlier year due to the materiality of the revaluation increase and its effect on asset values and depreciation.

Part of the re-valuation was for Beca to check the Replacement Unit Costs held in the RAMM database and adjust them accordingly, including the current maintenance contract rates where these are applicable. The general ledger was then updated at a summary level as at 30 June 2021, due to time constraints, the full adjustments that normally occur weren't carried out, however that didn't impact on the figures reported in the Annual Report.

To avoid issues in future, Council staff will revisit the next roading revaluation date and arrange for early in the calendar year, with an effective date of 1 January 2024, to be applied for the year ended 30 June 2024.

5 Public sector audit



The District Council is accountable to Parliament, their local community and to the public for its use of public resources. Everyone who pays taxes or rates has a right to know that the money is being spent wisely and in the way the District Council said it would be spent.

As such, public sector audits have a broader scope than private sector audits. As part of our audit, we have considered if the District Council has fairly reflected the results of its activities in its financial statements and non-financial information.

We also consider if there is any indication of issues relevant to the audit with:

- compliance with its statutory obligations that are relevant to the annual report;
- the District Council carrying out its activities effectively and efficiently;
- the District Council incurring waste as a result of any act or failure to act by a public entity;
- any sign or appearance of a lack of probity as a result of any act or omission, either by the District Council or by one or more of its members, office holders, or employees; and
- any sign or appearance of a lack of financial prudence as a result of any act or omission by a public entity or by one or more of its members, office holders, or employees.

6 Group audit



The group comprises:

- Stratford District Council (District Council)
- Percy Thomson Trust

We have not identified any of the following during our audit for the year ended 30 June 2021:

- Instances where our review of the work of component auditors gave rise to a concern about the quality of that auditor's work.
- Limitations on the group audit.
- Fraud or suspected fraud involving group management, component management, employees with significant roles in group-wide controls, or others where the fraud resulted in a material misstatement of the group financial statements.

7 Useful publications



Based on our knowledge of the District Council, we have included some publications that the Council and management may find useful.

Description	Where to find it
Performance reporting	
Public organisations are responsible for reporting their performance to Parliament and the public in a way that meaningfully reflects their organisation's aspirations and achievements. The Auditor-General published a discussion paper that explores five areas for improvement in performance reporting.	On the Office of the Auditor-General's website under publications. Link: The problems, progress, and potential of performance reporting
Local government risk management practices	
The Covid-19 pandemic is a stark reminder for all organisations about the need for appropriate risk management practices. In our audit work, we often see instances where councils do not have effective risk management. This report discusses the current state of local government risk management practices and what councils should be doing to improve their risk management.	On the Office of the Auditor-General's website under publications. Link: Observations on local government risk management practices
Public accountability	
Public accountability is about public organisations demonstrating to Parliament and the public their competence, reliability, and honesty in their use of public money and other public resources. This discussion paper explores how well New Zealand's public accountability system is working in practice.	On the Office of the Auditor-General's website under publications. Link: Building a stronger public accountability system for New Zealanders
Managing conflicts of interest involving council employees	
This article discusses findings across four councils on how conflicts of interest of council employees, including the chief executive and staff, are managed.	On the Office of the Auditor-General's website under publications. Link: Getting it right: Managing conflicts of interest involving council employees

Description	Where to find it
Establishing a new “public entity”	
This document is for people making policy decisions about establishing a new public entity. It sets out questions to help you consider what accountability requirements a new public entity should have.	On the Office of the Auditor-General’s website under publications. Link: Accountability requirements to consider when establishing a new “public entity”
Covid-19 implications for financial reporting and audit in the public sector	
Audit New Zealand Executive Director Steve Walker and Head of Accounting Robert Cox joined an online panel hosted by Victoria University of Wellington and the External Reporting Board. They discuss the effects of Covid-19 and the economic recovery on financial reporting and audit in the public sector.	On our website under good practice. Link: Covid-19 page Link: Webinar
Model financial statements	
Our model financial statements reflect best practice we have seen. They are a resource to assist in improving financial reporting. This includes: <ul style="list-style-type: none"> • significant accounting policies are alongside the notes to which they relate; • simplifying accounting policy language; • enhancing estimates and judgement disclosures; and • including colour, contents pages and subheadings to assist the reader in navigating the financial statements. 	Link: Model Financial Statements
Sensitive expenditure	
The Auditor-General’s good practice guide on sensitive expenditure provides practical guidance on specific types of sensitive expenditure, outlines the principles for making decisions about sensitive expenditure, and emphasises the importance of senior leaders “setting the tone from the top”. It also describes how organisations can take a good-practice approach to policies and procedures for managing sensitive expenditure.	On the Office of the Auditor-General’s website under good practice. Link: Sensitive expenditure

Description	Where to find it
Conflicts of interest	
<p>The Auditor-General has published guidance on conflicts of interest. A conflict of interest is when your duties or responsibilities to a public organisation could be affected by some other interest or duty that you have.</p> <p>The material includes a printable A3 poster, an animated video on predetermination and bias, gifts and hospitality, and personal dealings with a tenderer. There is also an interactive quiz.</p> <p>These can all be used as training resources for your own employees.</p>	<p>On the Office of the Auditor-General's website under 2019 publications.</p> <p>Link: Conflicts of interest</p>
Severance payments	
<p>Because severance payments are discretionary and sometimes large, they are likely to come under scrutiny. The Auditor-General has released updated good practice guidance on severance payments. The guide is intended to help public sector employers when considering making a severance payment to a departing employee. It encourages public organisations to take a principled and practical approach to these situations. The update to the 2012 good practice guidance reflects recent case law and changes in accounting standards.</p>	<p>On the OAG's website under 2019 publications.</p> <p>Link: Severance payments</p>
The Auditor-General's report on the results of recent audits	
<p>The OAG publishes a report on the results of each cycle of annual audits for the sector.</p>	<p>On the OAG's website under publications.</p> <p>Links: Local government 2019/20 audits</p>
Good practice	
<p>The OAG's website contains a range of good practice guidance. This includes resources on:</p> <ul style="list-style-type: none"> • audit committees; • conflicts of interest; • discouraging fraud; • good governance; • service performance reporting; • procurement; • sensitive expenditure; and • severance payments. 	<p>On the OAG's website under good practice.</p> <p>Link: Good practice</p>

Description	Where to find it
Procurement	
<p>The OAG are continuing their multi-year work programme on procurement.</p> <p>They have published an article encouraging reflection on a series of questions about procurement practices and how processes and procedures can be strengthened.</p> <p>Whilst this is focused on local government, many of the questions are relevant to all types of public sector entities.</p>	<p>On the OAG’s website under publications.</p> <p>Links: Strategic suppliers: Understanding and managing the risks of service disruption</p> <p>Getting the best from panels of suppliers</p> <p>Local government procurement</p>

Appendix 1: Status of previous recommendations

Open recommendations

Recommendation	First raised	Status
Necessary		
Assessment of asset condition		
Asset condition is assessed by the District Council in future revaluations.	2018/19	In progress As detailed in the valuation report, for the roading valuation performed in 2021, asset condition was not taken in to account.
RAMM database accuracy		
Complete the required cleanse of the RAMM database to ensure the asset data is accurate and appropriate for the 2018-28 Long Term Plan.	2016/17	In progress See section 4.1 above regarding the reconciliation between the system and general ledger.
Reconciliation between RAMM and fixed asset register		
<p>We continue to recommend that the District Council review the current processes and consider implementing systems and controls:</p> <ul style="list-style-type: none"> to reconcile the assets/Work-in-progress (WIP) between the fixed asset register and RAMM/projects not yet captured into RAMM. to ensure that information provided for valuation is complete and fairly reflects Council's asset base at the time of valuation. 	2019/20 final report	In progress Refer to section 4.1 above.
Impairment of receivables		
Given the increased economic uncertainty caused by the impact of Covid-19, we recommend that the District Council prepare a detailed impairment assessment of receivables going forward.	2019/20 final report	In progress This will become more relevant when the District Council adopts PBE IPSAS 41.

Recommendation	First raised	Status
Necessary		
Beneficial		
Contract management register		
Consider improvements to the contract management register and processes to include a whole of Council contract management system.	2015/16	In progress Work is being undertaken by IT to link work orders to contracts and set up workflows to enable more effective contract management. Currently awaiting patch from Civica to resolve integration issues.

Implemented or closed recommendations

Recommendation	First raised	Status
Reconciliation of the trial balance to the financial statements		
We recommend the District Council maintain the correct trial balance reporting format in excel and report parameters. The mapped trial balance submitted for audit, should be checked against the financials, using a pivot table.	2019/20 final report	Closed We did not identify significant issues with this during the audit.
Sensitive expenditure policies and processes		
Consider incorporating further guidance into their next update of its sensitive expenditure policies.	2019/20 interim report	Closed Updated sensitive expenditure policy was adopted May 2021.
Sensitive expenditure review		
We recommend that the Mayor’s expenditure be reviewed by the Deputy Mayor or Chair of the Audit and Risk Committee.	2018/19 interim report	Closed Council is comfortable with the current process being in line with the procurement policy which is that two directors sign off, and quarterly review of all transactions by the chair of the audit and risk committee.

Recommendation	First raised	Status
Three Waters infrastructure additions		
<p><i>Reconciliation between the general ledger and the asset management system</i></p> <p>Management should ensure that capital additions in the general ledger are reconciled to those capitalised in Asset Finda on a monthly basis. This reconciliation should include a report on the depreciation charged.</p> <p><i>Support for status of completed assets</i></p> <p>Improve the documentation and processes confirming the status of work-in-progress as complete.</p>	<p>2018/19</p>	<p>Closed</p> <p>We obtained a reconciliation as part of our final audit.</p> <p>No issues noted from testing completed assets.</p>

Appendix 2: Disclosures

Area	Key messages
Our responsibilities in conducting the audit	<p>We carried out this audit on behalf of the Controller and Auditor-General. We are responsible for expressing an independent opinion on the financial statements and performance information and reporting that opinion to you. This responsibility arises from section 15 of the Public Audit Act 2001.</p> <p>The audit of the financial statements does not relieve management or the Council of their responsibilities.</p> <p>Our Audit Engagement Letter contains a detailed explanation of the respective responsibilities of the auditor and the Council.</p>
Auditing standards	<p>We carried out our audit in accordance with the Auditor-General’s Auditing Standards. The audit cannot and should not be relied upon to detect all instances of misstatement, fraud, irregularity or inefficiency that are immaterial to your financial statements. The Council and management are responsible for implementing and maintaining your systems of controls for detecting these matters.</p>
Auditor independence	<p>We are independent of the District Council in accordance with the independence requirements of the Auditor-General’s Auditing Standards, which incorporate the independence requirements of Professional and Ethical Standard 1: <i>International Code of Ethics for Assurance Practitioners</i>, issued by New Zealand Auditing and Assurance Standards Board.</p> <p>In addition to the audit we have carried out a limited assurance engagement related to the District Council’s Debenture Trust Deed and audited the District Council’s 2021-2031 Long-term Plan. These engagements are compatible with those independence requirements. Other than these engagements, we have no relationship with, or interests in, the District Council or its subsidiary.</p>
Fees	<p>The audit fee for the year is \$102,769, as detailed in our Audit Proposal Letter.</p> <p>Other fees charged in the period are \$66,900 for the audit of the 2021-2031 Long-term Plan, and \$4,650 for the limited assurance engagement related to the District Council’s Debenture Trust Deed.</p>

Area	Key messages
Other relationships	<p>We are not aware of any situations where a spouse or close relative of a staff member involved in the audit occupies a position with the District Council or its subsidiary that is significant to the audit.</p> <p>We are not aware of any situations where a staff member of Audit New Zealand has accepted a position of employment with the District Council or its subsidiary during or since the end of the financial year.</p>

APPENDIX 2

AUDIT NEW ZEALAND
Mana Arotake Aotearoa

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INFORMATION REPORT



F19/13/04 – D22/7023

To: Audit and Risk Committee
From: Director- Assets
Date: 15 March 2022
Subject: Capital Works Programme – Key Projects Update

Recommendation

THAT the report be received.

Recommended Reason

To present an update on the progress of our key capital projects in the 2021/22 financial year, as requested in the September 2021 Audit and Risk Committee meeting.

/
 Moved/Seconded

1. Purpose of Report

- 1.1 The purpose of this report is to provide the Audit and Risk Committee with an update on the progress of key capital projects in the 2021/22 financial year.
- 1.2 The intent is to track these projects and provide confidence both to the Council and our ratepayers that capital works programme will be delivered as indicated in the 2021-31 Long Term Plan (LTP).

2. Executive Summary

- 2.1 The Council, in the 2021-31 Long Term Plan, approved a total of \$28,534,970 for the delivery of capital expenditure for the 2021/22 financial year and in total LTP (over 10 years) \$125,463,814, with 40% of this to be delivered in the first three years of the LTP.
- 2.2 These projects are spread among Council departments, the majority of which are to be delivered through the Assets, Environmental Services and the Community Development departments.
- 2.3 This report provides information to the Committee to enable the achievement of Section 2 of the Audit and Risk Committee Terms of Reference, specifically to allow the Committee *“To proactively assess, monitor and provide governance oversight of risks, and the internal controls instituted, including finance ... Contract Management, ... Quality Management ..”*
- 2.4 Council officers are proactively managing all aspects of risks being identified in the delivery of these capital projects, which mainly are:
 - Cost overruns;
 - Not delivering to timeframe; and
 - Not delivering what was expected.
- 2.5 As a result, Council officers are monitoring and mitigating the identified risks by:
 - Regular tracking of the project;
 - Tracking and reporting on the budget; and
 - Regular supervision through communication and meetings with contractor oversight by the respective project manager.
- 2.6 This Capital Works Programme report will be brought before the committee quarterly.

3. Local Government Act 2002

Under section 10 of the Local Government Act 2002, the Council's purpose is to "enable democratic local decision making by and on behalf of communities; as well as promoting the social, economic, environmental, and cultural well-being of communities now and into the future"			
Does the recommended option meet the purpose of the Local Government 4 well-beings? And which:			
Social	Economic	Environmental	Cultural
✓	✓	✓	✓

3.1 Good risk management and regular monitoring supports the Council's social, economic, environmental and cultural outcomes.

4. Background

4.1 This report is directly as a result of the request made by this Committee in the September Audit and Risk Meeting, to present an update on the progress of our key capital projects in the 2021/22 financial year.

5. Information Summary

5.1 Please refer to the Executive Summary and the Appendix, which shows that all year 1 projects have either commenced or are in the process of commencing.

5.2 All capital projects are now being vetted and/or are under the supervision of Council's Projects Engineer (and Special Projects Manager), who has also produced a number of documents and tracking tools to support the successful project planning, procurement and management. These tools should satisfy Audit New Zealand's requirements in terms of action plans identified at their recent audit exercise.

5.3 Updates on key projects are provided below.

5.3.1 Stratford Bike Park and Pump Track

The Stratford Bike Park in Victoria Park was opened in October 2021. Work is completed with the addition of two picnic tables and extra rubbish bins to be installed in April due to supply delivery times. The Stratford Pump Track was completed and opened in February 2022.

5.3.2 Stratford Aquatic Centre

Construction of the Stratford Aquatic Centre is approximately 40% complete. Cladding is close to completing panel installation. Membrane install will be completed in March 2022. The floor to the plant room is complete. March / April 2022 will see backfilling to the pool structure and LTS pools underway. The construction of the Aquatic Centre is on track to the updated timeframes that were originally affected by the Covid-19 pandemic lockdowns and supply of materials.

5.3.3 Stratford Duplicate Trunkmain

This is one of the shovel ready projects funded largely by central government. It is being completed in 3 stages due to the complexity of the project and the delays inherent in landowner negotiations.

Stage 1 - Hunt Road to Pembroke Road/Brecon Road intersection - is in progress. Expected completion date is to be at the end of March 2022. Stage 2 negotiations are ongoing and expected to commence in mid-March. Stage 3 – the Patea River bridge section - is expected to commence in April. We still anticipate a completion deadline of June 2022, subject to contractor agreement and fine weather.

This project has been delayed due to Covid-19 lockdown restrictions, resulting in delays in negotiations with landowners regarding easements over their properties and supply of materials due to the international supply chain network. Project cost estimates have increased due to increase and availability of materials and contractor market demand during the Covid-19 pandemic. Original estimates completed in 2017-2018 financial year are proving to be a hard target to meet. Costs for materials and labour have increased significantly since March 2017 as a result of inflation and intensified with Covid-19 restrictions and supply shortages.

5.3.4 Stratford 2035 Town Centre Plans

Business Economic Research Limited (BERL) and Design Group Stapleton Elliot (DGSE) have been contracted to support the community development team to refresh and develop a series of plans and strategies which includes the town centre plans for Stratford and Whangamomona. The first round of stakeholder engagement discussions was completed at the end of February. BERL and DGSE are now working on the draft plans that will come to Council for an internal review at the end of March/early April.

6. Strategic Alignment

6.1 Direction

This report is consistent with our Long Term Plan Outcomes and directly relevant to supporting the work of the Audit and Risk Committee.

6.2 Annual Plan and Long-Term Plan

This report is consistent with the Annual and Long Term Plan outcomes.

6.3 District Plan

There is no direct relationship with the District Plan.


6.4 Legal Implications

There are no legal implications.

6.5 Policy Implications

The report is consistent with Council policies relating to service delivery.

Attachment:
Appendix 1 - Capital Work Projects Update



Victoria Araba
Director – Assets



[Approved by]
Sven Hanne
Chief Executive

Date: 7 March 2022

2022 - Audit & Risk - March - Information Report – Capital Works Programme – Key Projects Update

	Budget - Y1	Actual Spent	Budget LTP	Project Status	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22
Recreation and Facilities																
Stratford 2035 Projects	482,500	-	4,664,082													
* LED Screen (southern entrance)	75,000			<i>The Property Officer will be leading with support from the wider team. If additional funds are required it will come from the overall 2035 budget.</i>				35,000				40,000				
* Installation of giant photoframes (Victoria and King Edward Park)	12,000					12,000										
* Discovery Trail (signage, glockenspiel upgrades, new features)	15,000			<i>Our Open Space Maintenance Contractors are installing these over the next two weeks. Updated quote for works to be received</i>								15,000				
* Purchase of land - Prospero Place	385,500			<i>Elements of Project commenced</i>								385,500				
Demolish Bell Tower	30,000	-	30,000	<i>Officers to prepare an Options Assessment report to Council for a decision to progress the preferred option</i>				30,000								
Replace Storage Shed	70,000	-	70,000	<i>Quotes being sought</i>					50,000	20,000						
Upgrade Broadway Roundabout	60,000	-	60,000	<i>Quotes being sought</i>												
				<i>Working in conjunction with Community Development Team/Broadway 2035. Awaiting the development of the Town Centre Plan before implementing the action plan identified</i>												
Whangamomona Camp - septic tank	47,000	-	47,000	<i>Concept Design stage</i>				47,000								
Trees of significance - access	35,000		35,000	<i>Liaising with key Stakeholders</i>					20,000	15,000						
New Swimming Pool	16,700,000	3,450,458	17,212,500	<i>Construction underway and progressing in accordance with agreed timeline</i>												
Victoria Park Bike Park	484,168	210,173	484,168	<i>Bike track and basketball court completed and open to the public. Pump Track formed but asphalting delayed due to Covid 19 Alert level in Auckland from whence contractors are due.</i>		273,995	Official Opening									
Community Development																
Council Subdivision	1,200,000	6,025	3,274,000	<i>Location of site and land purchase under consideration</i>	6,025							1,193,975				
Install in-shed Feed system - farm	53,000	1,521	53,000	<i>System installed but yet to be invoiced</i>	51,479											
Environmental Services																
Review District Plan	-	-	1,500,000	<i>Not required in this financial year, while the Government decides what the future of District Plan is.</i>												
Roading																

2022 - Audit & Risk - March - Information Report – Capital Works Programme – Key Projects Update

	Budget - Y1	Actual Spent	Budget LTP	Project Status	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22
Walking and Cycling improvements	350,000	-	3,823,700	The Council share will be used to construct a shared cycleway/footpath on the northern side of Fenton Street as part of the Stratford High School Safety project. This is a key route that has been identified in the draft Walking and Cycling Strategy.					50,000	50,000	36,000					
Brecon Road Bridge	-	-	13,022,683	Engaging a consultant as well as the development of the business case to Waka Kotahi									30,000	30,000	30,000	30,000
Whangamomona Rd Upgrade	-	-	530,900	Upgrade works are programmed for 2023/24 year (year 3)												
Wastewater																
Diatomix to enhance algae growth	500,000	29,803	500,000	Final program design being completed. Initial sampling events scheduled for November, seeding of ponds due to begin in January.	10,000	10,000	30,000	30,000	30,000	30,000	15,000	15,000	15,000	10,000	10,000	10,000
Modelling	-	-	51,700	Year 2 of LTP; Researching suitable suppliers to carry out this work									20,000	20,000	10,000	
Inflow and Infiltration programme	150,000	-	1,187,000	Contract being written before procurement process begins		5,000	5,000	50,000	50,000	40,000						
Water Supply																
Universal water metering implement	349,500	-	2,195,000	Electronic meters being procured in conjunction with NPDC.			100,000	240,000								
Second water trunk main	1,400,000	54,902	2,911,100	First stage contact has been awarded, final designs for stages 2 and 3 are being completed. Resource consent has been obtained for the pipe bridge construction project. Landowner consultation ongoing.	50,000	50,000	330,000	409,000	260,000	260,000	260,000	255,000				
Midhirst Resource Consent	100,000		309,700	Ongoing, Ecological Assessment and Hydrological Assessment Reports produced; Iwi Liaison continues; Awaiting Iwi to commission a Cultural Impact Assessment (CIA). Application lodged with the TRC, with processing pending the completion of the CIA.	15,000			35,000				50,000				
Toko Bore	-	-	134,500	Not required this year, Year 2 of LTP												
Membranes	150,000	-	150,000	Replacement membranes have been ordered from Australia.				110,000								

2022 - Audit & Risk - March - Information Report – Capital Works Programme – Key Projects Update

		Budget - Y1	Actual Spent	Budget LTP	Project Status	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23
Wastewater																						
John C	Diatomix to enhance algae growth	500,000	30,735	500,000	Wastewater sampling has commenced, chemical and algal compositions supplied to consultants as the results are received. Seeding of pond to begin by 1 June 2022.	15,000	30,000	30,000	30,000	15,000	10,000	10,000	10,000	30,000	30,000	30,000	30,000	30,000	30,000	10,000	10,000	10,000
John C	Modelling	-	-	51,700	Year 2 of LTP: Researching suitable suppliers to carry out this work					20,000	20,000	10,000										
John C	Inflow and Infiltration programme	150,000	-	1,187,000	Areas of infiltration identified, further camera assessments of wastewater network to occur during March. Specialist contractor unable to commence sleeving of wastewater pipes until 1 July 2022 due to prior commitments. Contract being drafted and is due to be tendered in June 2022.	20,000	30,000	30,000	70,000													
Water Supply																						
John C	Universal water metering implement	349,500	40,421	2,195,000	Electronic meters procured in conjunction with NPDC. 200 existing mechanical meters to be replaced by 30 June 2022.	40,000	100,000	100,000	69,079													
John C/Steve Taylor	Second water trunk main	1,400,000	873,798	2,911,100	First stage contract is in progress - expected to be completed end of March. Stage Two and Three contract likely to be awarded directly to Fulton Hogan due to time constraints. Delay in Landowner consultation due to Covid-19 restrictions. Cost likely to increase due to shortage in supplies and contractor demand after Covid-19.	226,202	100,000	100,000	100,000													
John C	Midhirst Resource Consent	100,000	6,460	309,700	Ongoing. Ecological Assessment and Hydrological Assessment Reports produced; Iwi Liaison continues; Awaiting Iwi to commission a Cultural Impact Assessment (CIA). Application lodged with the TRC, with processing pending the completion of the CIA.	23,540	20,000	20,000	30,000													
John C	Toko Bore	-	-	134,500	Not required this year, Year 2 of LTP																	
John C	Membranes	150,000	86,000	150,000	Replacement membranes have been delivered and are being installed as required. Further membranes are being procured.	86,000		64,000														

INFORMATION REPORT



F19/13/04 – D22/7772

To: Audit and Risk Committee
From: Director – Corporate Services
Date: 15 March 2022
Subject: Risk Management of Local Elections 2022

Recommendation

THAT the report be received.

Recommended Reason

To give assurance to the Audit and Risk Committee that the Council is undertaking all necessary steps to manage the local elections for 2022 and the associated risks.

/
Moved/Seconded

1. Purpose of Report

- 1.1 This report is being provided to the Audit and Risk Committee as per its Terms of Reference to ensure that the Council complies with its statutory and regulatory requirements and for risk management purposes in general. The intention is to provide assurance to the Committee that the Council is adequately planning for the local elections.

2. Executive Summary

- 2.1 The triennial local elections are due to occur on 8 October 2022 across New Zealand. Elections for residents in the Stratford District will be required for the following positions:

- Mayor (elected 'at large')
- Councillors:
 - Urban General Ward (6)
 - Rural General Ward (4)
 - Stratford Māori Ward (1)
- Taranaki Regional Council member (1) or Horizons Regional Council member (1) – depending on location of resident.
- There are no longer elections held for district health board members.

- 2.2 This report relates to the following risks from the Council Risk Register:

Risk 3: Statutory Reporting Commitment
 Risk 53: Release of Incorrect or Confidential Information
 Risk 60: Elected Members Communication

Council does not have any specific risk on its Risk Register directly in relation to local government elections.

- 2.3 The pre-election readiness checklist (Taituarā/SOLGM template) has been completed to enable Council officers to manage the upcoming local election and associated processes. The updated checklist is attached to this report at Appendix 1.

3. Local Government Act 2002

Under section 10 of the Local Government Act 2002, the Council's purpose is to "enable democratic local decision making by and on behalf of communities; as well as promoting the social, economic, environmental, and cultural well-being of communities now and into the future"			
Does the recommended option meet the purpose of the Local Government 4 well-beings? And which:		Indirectly, all four wellbeings are covered. Section 10 is addressed in this report by "enabling democratic local decision making".	
Social	Economic	Environmental	Cultural
✓	✓	✓	✓

- 3.1 Section 10 of the LGA 2002 is adequately fulfilled by the subject of this report, being local elections. The Council cannot pursue the objectives within Section 10 of the Local Government Act 2002 without elected members duly appointed at a local government election.

4. Background

- 4.1 In 2021, Council undertook a representation review as a consequence of introducing a Māori Ward. The final proposal was determined by Council in October 2021 and resulted in one additional councillor, and minor extensions to the Urban Ward boundary. The proposal received no appeals or objections and Stratford District Council's final representation arrangements were publicly notified in a public notice on 14 December 2021.
- 4.2 Local government elections are governed by the Local Electoral Act 2001. The risks of not complying with the regulations prescribed in this Act include a judicial enquiry of the election process and worst case scenario, a requirement to hold a re-election – which would result in significant reputational damage, and additional cost.
- 4.3 The election process has specific timelines that must be met, and there is also the fair and transparency factor in the treatment of candidates. It is the Council's responsibility to ensure that the local government election process is fair and doesn't unfairly favour incumbent elected members over new candidates. There will be additional scrutiny of Council's social media and elected member's use of Council IT resources by the Council's Communications and IT Manager's during the campaign period. Council's draft Elected Member Protocols for the 2022 Local Elections is attached for the Committee's review as Appendix 2.
- 4.4 In the previous local elections, Council has opted to list candidate surnames on voting papers in alphabetical order, which is the default position if Council does not make a specific decision on name order. Currently, 33% of Councils use alphabetical order, and this is a good approach where there is a general awareness in the community of the candidates. This approach makes it easier for voters to identify candidates. Unless elected members specifically request a formal decision be made on candidate name ordering on voting documents, Council officers suggest that Council remains with alphabetical order.

5. Information Summary

- 5.1 A summary report of the 2022 Local Elections has been prepared by Election Services Ltd and is attached to this report for the Committee's review as Appendix 1.
- 5.2 The number of electors for the 2022 elections is expected to be 6,900. This compares to 6,545 electors for the 2019 election. The voter percentage in the 2019 election was 51%, this compared to the 2016 election voter percentage of 45.6%. The intention is to continue with the upward trend in voter turnout for the 2022 elections.

- 5.3 The Council must appoint an Electoral Officer (Dale Ofsoske, Election Services Ltd) and a Deputy Electoral (Tiffany Radich) to manage the electoral processes on behalf of Stratford District Council.
- 5.4 The Council recognises that under Section 42(2)(da) of the Local Government Act 2002, the Chief Executive is responsible for “facilitating and fostering representative and substantial elector participation in elections and polls held under the Local Electoral Act 2001”. The Communications Manager is preparing an internal Communications Plan which will outline the activities that the Council will be undertaking to encourage voter participation in the 2022 local government election.
- 5.5 Appropriate training will be provided to all Election Officials on receiving Nomination Papers and Votes. The national training date has been set for 11 July 2022.

6. Strategic Alignment

6.1 Direction

Strong electoral processes support the Democracy Activity which in turn supports all four of Council’s Community Outcomes.

6.2 Annual Plan and Long Term Plan

The cost of the election has been budgeted for in the Long Term Plan 2021-31 under the Democracy Activity. The budget has recently been increased during the preparation of the Annual Plan 2022/23 as Council will no longer share costs with the Taranaki District Health Board as in previous elections.

6.3 District Plan

There is no direct connection with the District Plan. Note - Ward Boundaries for the electoral wards do not align with the District Plan.

6.4 Legal Implications

There may be legal implications if Council does not follow proper processes. To avoid this, Council has appointed a highly experienced Electoral Officer from Election Services Ltd to guide Council in the Local Election 2022.

6.5 Policy Implications

There are no policy implications, however Council will put out guidance on elected member and staff protocols during the election period.

Attachments:

Appendix 1 - Local Electoral Readiness Checklist (Taituara 2019)

Appendix 2 - Summary Local Elections 2022 Report for Council from Election Services Ltd

Appendix 3 - Draft Elected Member Protocols for 2022 Local Elections



Tiffany Radich
Director – Corporate Services



[Approved by]
Sven Hanne
Chief Executive

Date: 7 March 2022

APPENDIX 1

Local Electoral Readiness Checklist

Introduction

Attached is a checklist prepared by the SOLGM Electoral Subcommittee to help Electoral Officers to ensure nothing is missed in the lead-up to the first of the milestones in the triennial electoral process.

As Electoral Officers your accountability is to your Chief Executive. The checklist is intended to help you identify any “risk factors”, assist as an aide-memoire and is designed as a tool for you to provide your Chief Executive with assurance that your election process is on track.

Kind regards

Section One: Appointment of Officers

1. Has your local authority appointed an Electoral Officer? **Yes / No**

Dale Ofsoske, Managing Director, Election Services Ltd

2. Have you, as the Electoral Officer, appointed a Deputy Electoral Officer? **Yes / No**

Tiffany Radich, Director – Corporate Services, Stratford District Council

3. Are current declarations under section 14(2) of the LEA in place for:
The Electoral Officer? **Yes / No**

The Deputy Electoral Officer ? **Yes / No**

Tiffany Radich

Electoral Officials? **Yes / No**

Rhonda Vanstone

Gemma Gibson

Erin Bishop

Dixie Farley

Jayne Schumacher

Erin Murphy

Heather Ellis

Linda-Lee Kohinga Nahi

Donna Woodmass

4. If you answered 'No' to any of questions 1 - 3 please describe the steps you are taking to ensure officers are in place and have made the necessary declarations, and by when.

.....

Section Two: Training and Professional Development

5. Have you, or any of the staff involved in local elections, attended the SOLGM Electoral Officers Training (held 18-22nd February 2022)? **Yes / No**

Rhonda Vanstone / Tiffany Radich

6. If NZ Post is your printer and mail house for the elections, have you and/or electoral staff had VOTEXT training? Yes / **No**
7. If you are using VOTEXT directly (i.e. not via NZ Post or contracted services, have you had VOTEXT training, etc.?
8. Will there be a regional Electoral Officers Forum? Yes / No
9. If you answered “No” to any of questions 5 - 8 then please describe the steps you are taking to ensure that staff involved in local elections have the information necessary to fulfill their responsibilities, and by when.

.....
Election Services Ltd enter details into Votext so no training required by Council staff.

Section Three: Memoranda of Understanding

10. Is there a signed Memorandum of Understanding in place, which clearly sets out delegations and responsibilities, between your local authority and:
- | | | |
|-----|-------------------------------|----------------------|
| (a) | Other Territorial Authorities | Yes / No / NA |
| (b) | Regional Councils | Yes / No / NA |
| (c) | District Health Boards | Yes / No / NA |
| (d) | Licensing/ Community Trusts | Yes / No / NA |
11. If you answered ‘No’ to any part of question 10, then please describe the steps you are taking to ensure Memoranda are in place, and by when.

The MOU between Stratford District Council and Taranaki Regional Council is being worked on by Election Services Ltd and should be available by the end of March 2022.

.....

Section Four: Project Planning and Budgetting

12. Have you developed a detailed project plan, or other document that sets out the key administration and organisational tasks and milestones necessary to effectively conduct local elections? Yes / No
12. Are you familiar with the *Electoral timetables* guidance in Part 2, Code of good Practice for the management of local authority elections and polls 2019 Yes / No

14. If you answered "No" to question 12 please describe the steps you are taking to develop a project plan for your local elections, and when you expect these will be completed.

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15. Have you reviewed budgets to ensure they cover all issues and contingencies for the forthcoming elections?

Yes / No

.....
.....

Section Five: Pre-Election Reports

16. Has your Council put in place arrangements to ensure the completion of a pre-Election Report in accordance with clause 36 of Schedule 10 of the Local Government Act 2002?

Yes / No

(Finance/Policy) Christine Craig / Gemma Gibson

Signed off by Chief Executive

Yes / No

Section Six: Resolutions and Nominations

17. Have the various local authorities passed a resolution setting the order of candidate names?
Yes / No
18. Have you modified the model nomination paper (Appendix A of Part 9 of the Code of Good Practice for the management of local authority elections and polls 2019: *Candidacy and nominations*) to suit your local authority's requirements for the calling of nominations in July?
Yes / No
19. Have you planned for the management of receipt of nominations on the morning of the day nominations close eg. appropriate premises, procedures and staffing levels?
Yes / No
20. Have you reported to your Council on proposals for the 2022 elections?
Yes / No

(proposed Council meeting to report) **Audit and Risk Committee – 15 March 2022**

21. If you answered 'No' to any of questions 17 - 20 then please set out the steps you are taking to complete the actions, and by when.

Question 17: The Deputy Electoral Officer has recommended that Council remain with alphabetical order unless there is a strong desire by elected members to make a Council decision on the order of candidate names on voting papers.

Questions 18 and 19: This will all be planned in due course.

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Section Seven: Communication and Information Resources

22. Are you and your Electoral staff applying, where appropriate, the 'good practice' recommendations in the 'Code of Good Practice for the Management of Local Authority Elections and Polls 2019'?
- Yes / No /Partially Adapting**
23. Have you put arrangements in place for staff to answer or refer election enquiries received at public offices, service centres, call centres, libraries, etc.?
- Yes / No**
24. Are you adapting for use by Electoral staff, service/call centre staff, etc., the model 'Frequently Asked Questions Relating to Local Authority and District Health Board Elections'?
- Yes / No / Partially Adapting**
25. Have you created a key contact list of neighbouring council's electoral officers, election contractor and registrar of electors?
- Yes / No**
26. Have you set a date/venue for an information session for potentially interested candidates (lead by Chief Executive and Electoral Officer?)
- Yes / No**
27. Are you or the Council's communications staff adapting for use the media assistance kit sent out by Local Government New Zealand?
- Yes / No / Partially Adapting / **NA**
28. Has your local authority adopted a communications policy embracing the Controller and Auditor General's guidelines on '*Good Practice of Managing Public Communications by Local Authorities*' as referred to in Part 1 of Code of Good Practice for the management of local authority elections and polls 2019: *Overview of the management of local elections and polls?*
- for staff **Yes / No**
 - for Elected members **Yes / No**
29. Have you adapted the model 'Candidate Information Handbook' (Part 8 of the Code of Good Practice for the management of local authority elections and polls 2019: *Candidate information*) for provision to candidates and potential candidates?
- Yes / No**
30. Have you adapted the model 'Handbook for Scrutineers at Local Authority Elections and Polls' (Part 14 of Code of Good Practice for the management of local authority elections and polls 2019: *Scrutineers*) for the information of candidates and scrutineers?
- Yes / **NA**
31. Have you discussed publicity / processes with the Communications Team?
- Yes / No**
32. Have you updated this information on your website?
- Key dates (nominations open/close, voting open/close) **Yes / No**
 - Ward maps/boundaries **Yes / No**
 - Signage/Political Hoarding Policy/Bylaws **Yes / No**
 - Social Media Policy **Yes / No**
 - Vote Enrolment Info **Yes / No**
 - Ratepayer Enrolment **Yes / No**

33. If you answered 'No' to any of questions 22 - 32, then please describe what alternative communication plans are in place.

Question 29 – The Candidate Handbook is still being worked on by Election Services Ltd. Council is considering the use of Te Reo Maori in the updated Candidate Information Handbook.

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Question 32 – The Social Media Policy is intended to be an internal policy only.

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Section Eight: Ratepayer Enrolment

34. Have you sent enrolment confirmation forms by 30 April 2022 to person(s) listed as ratepayers on the 2021 ratepayer roll?

Yes / **No**

35. Have you sent the ratepayer qualification explanatory brochure with the rates assessment or a rates invoice as required by section 39(1) (b) LEA?

Yes / **No**

36. If you answered 'No' to either of questions 34 or 35 then please describe what steps you are taking to meet your obligations to advise potential ratepayer electors of their rights to enroll as a ratepayer elector?

.....
Ratepayer enrolment forms are on the Council's election website. Information on ratepayer enrolment applications will be sent out in May to all ratepayers.
.....

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.....

Section Nine: Administrative and Logistical Enrolment

37. Have you signed a contract or service agreement with NZ Post or your provider for printing and collation of voting packs?

Yes / No

38. If you are outsourcing all or part of the conduct of the local elections, then have you agreed a contract with your election services provider?

Yes / No

.....

39. On last day of voting (Saturday), have you:

- arranged appropriate security Yes / No
- arranged collection of votes from remote locations Yes / No
- arranged who is phoning candidates with result news Yes / No

Election Services have already signed a contract with Datam for mailing of voting packs – this is incorporated into the agreed contract price with Election Services Ltd.

.....

We do not propose to collect votes from remote locations while there is a postal service available.....

Security will be organised closer to the day, if considered necessary.

.....

(If you are contracting out the majority of the election process only some of Questions 40 to 48 will be relevant)

40. Have you scoped and made the arrangements necessary for the overall efficient management and conduct of the elections (or part thereof particularly as outlined in Part 15 of the Code of Good Practice for the management of local authority elections and polls 2019: *Vote processing and counting*), such as securing:

- adequate accommodation, furniture, storage, stationery, etc. Yes / No
- necessary IT equipment, standalone capacity, wand/scanning/data entry equipment, checking system, etc. Yes / No
- suitable premises for special voting Yes / No
- necessary electoral staff, ensuring they are adequately trained, have instruction manuals, etc. Yes / No

41. Have you developed or received from your service provider a risk management plan for the elections?

Yes / No

42. Have you obtained a list of recommended JPs for the processing and counting of voting documents?

Yes / No

43. Has your election provider sent you a certificate of assurance for their software and processes?

Yes / No

44. Have you developed training for JPs relating to the processing of voting documents?
Yes / **No**

45. Have you established a point of contact with your local police office and agreed necessary procedures in the event of an electoral offence or complaint under Part 7, LEA occurring?
Yes / **No**

46. Have you established contact with your local Registrar of Electors and with the Electoral Commission in relation to electoral roll compilation, special vote processing, etc.?
Yes / **No**

47. If you answered 'No' to any part of questions 40 - 46 then please describe the steps you are taking to complete the administrative and logistical arrangements for the elections, and by when.

.....

Many of the questions are the responsibility of the Electoral Officer, who will be carrying out the physical check and count of voting documents.

.....

.....

This completes the checklist.

Our strong recommendation is that you use the information in this checklist as the basis for a report to your Chief Executive that provides the necessary assurance that the electoral process is "on track" or advises of action yet to be taken.

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Election Services
Level 2, 198 Federal Street, Auckland
PO Box 5135, Victoria Street West
Auckland 1142
Phone: 64 9 973 5212
Email: info@electionservices.co.nz

Report to the
Stratford District Council
regarding the

2022 Triennial Election

From the
Electoral Officer

2 March 2022



TE KAUNIHERA Ā ROHE O
WHAKAAHURANGI
STRATFORD
DISTRICT COUNCIL

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Outline

The 2022 triennial local government elections will occur on Saturday 8 October 2022. An update on preliminary matters relating to the election is provided to Council, including consideration of the order of candidate names to appear on the voting documents.

Background

The 2022 triennial elections for local authorities are due to occur on Saturday 8 October 2022 and are required to be undertaken according to the Local Electoral Act 2001, the Local Electoral Regulations 2001, and to a limited extent, the Local Government Act 2002.

Certain pre-election information and tasks are outlined in this report for Council's information and attention.

The Local Electoral Regulations 2001 provides for Council to resolve the order of candidate names to appear on the voting documents (alphabetical, pseudo-random or random order). If no decision is made, the order of names defaults to alphabetical.

Narrative

2022 Elections

Elections will be required for the following positions:

- mayor (elected 'at large')
- councillors (11)
 - Urban General Ward (6)
 - Rural General Ward (4)
 - Stratford Māori Ward (1)
- either Taranaki Regional Council member (1) elected either from the Stratford General Constituency or the Taranaki Māori Constituency*
- or Horizons Regional Council member (1) elected either from the Ruapehu General Constituency or the Raki Māori Constituency

*subject to determination by the Local Government Commission, expected by 10 April 2022.

There are no longer elections held for district health board members.

2022 Election Timetable

With an election date of **Saturday 8 October 2022**, the following key functions and dates will apply:

Nominations open/roll open

Friday 15 July 2022

Nominations close/roll closes (noon)

Friday 12 August 2022

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	<p>Delivery of voting mailers From Friday 16 September 2022</p> <p>Close of voting Noon Saturday 8 October 2022</p> <p>A more detailed timetable is attached Appendix 1.</p>
2022 Election Fact Sheet	A 2022 Election Fact Sheet summarising the key functions of the election (Appendix 2) is also attached.
Representation Review	<p>Following the decision to establish a Māori ward in 2021, Stratford District Council undertook a representation arrangements review (review of wards, boundaries, numbers of elected members etc).</p> <p>As a result of this there will be 11 councillors being elected from the following three wards:</p> <ul style="list-style-type: none"> • Urban General Ward (6) • Rural General Ward (4) • Stratford Māori Ward (1)
Compilation of non-resident Ratepayer Roll	<p>The compilation of the 2022 non-resident Ratepayer Roll is required to commence in early-mid 2022. This will include:</p> <ul style="list-style-type: none"> • an insert detailing the qualifications and procedures for enrolment as a non-resident ratepayer elector to be included with a 2022 rates instalment notice by the end of August 2022 (Appendix 3); • a national Ratepayer Roll inquiry hotline operating between 1 February and 30 August 2022; • a confirmation letter issued to all current non-resident ratepayer electors in March/April 2022; • a national advertising campaign on the qualifications and procedures for enrolment as a non-resident ratepayer elector during May 2022. <p>Council can undertake additional promotion of the ratepayer roll if it wishes - such as contacting (letter/email etc) all current or potential non-resident ratepayer electors encouraging their enrolment and participation in the electoral process.</p>
Order of Candidate Names	Regulation 31 of the Local Electoral Regulations 2001 provides the opportunity for Council to choose the order of candidate names appearing on the voting documents from three options – alphabetical, pseudo-random (names drawn randomly with all voting documents printed in this

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order) or random order (names randomly drawn by computer with each voting document different).

Council may determine which order the names of candidates are to appear on the voting documents, but if no decision is made, the order of names defaults to alphabetical.

Council has resolved to adopt the alphabetical order for the 2019 triennial election.

For Council's information, following a recent analysis undertaken by Auckland Council, research showed no observable effect of candidate order on actual election outcomes.

For the 2019 local government elections:

- 22 territorial authorities used alphabetical order (32.84%)
- 7 territorial authorities used pseudo-random order (10.44%)
- 38 territorial authorities used random order (56.72%)

Alphabetical Order

Alphabetical order is simply listing candidate surnames alphabetically and is the order traditionally used in local and Parliamentary elections.

Comments regarding alphabetical order are:

- voters are easily able to find names of candidates for whom they wish to vote. Some candidates and voters over the years have argued that alphabetical order may tend to favour candidates with names in the first part of the alphabet, but in practice this is generally not the case – most voters tend to look for name recognition, regardless of where in the alphabet the surname lies;
- the order of candidate names on the voting document matches the order listed in the candidate directory (candidate profile statements).

Pseudo-Random Order

Pseudo-random order is where candidate surnames are randomly selected, and the same order is used on all voting documents for that position. The names are randomly selected by a method such as drawing names

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out of a container.

Comments regarding pseudo-random order are:

- the candidate names appear in mixed order (not alphabetical) on the voting document;
- possible voter criticism/confusion as specific candidate names are not easily found, particularly where there may be many candidates;
- the order of candidate names on the voting document does not match the order listed in the candidate directory (candidate profile statements).

Random Order

Random order is where all candidate surnames are randomly selected and are listed in a different order on every voting document. The names are randomly selected by computer so that the order is different.

Random order enables names to be listed in a completely unique order on each voting document.

Comments regarding random order are:

- the candidate names appear in mixed order (not alphabetical) on the voting document;
- possible voter criticism/confusion as specific candidate names are not easily found, particularly where there are many candidates;
- the order of candidate names on the voting document does not match the order listed in the candidate directory (candidate profile statements).

There is no price differential in printing costs between the three orders of candidate names.

Number of Electors

The number of electors for the 2022 triennial elections is expected to be 6,900 (as at 31 January 2022 this was 6,921). This compares to 6,545 electors for the 2019 triennial election or +5.4% growth.

Pre-Election Report

Section 99A of the Local Government Act 2002 requires each local authority to prepare a pre-election report, whose purpose is to provide information to promote public discussion about the issues facing the local authority. The pre-election report is prepared by the Chief Executive, must contain financial and major project information, and should be completed by the end of June 2022 (two weeks before the opening of nominations).

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Recommendation

It is recommended that:

Council resolves for the 2022 triennial election, to adopt *either*:

- (i) the alphabetical order of candidate names; *or*
- (ii) the pseudo-random order of candidate names; *or*
- (iii) the random order of candidate names

as permitted under regulation 31 of the Local Electoral Regulations 2001.

Author:



Dale Ofoske
Electoral Officer // Stratford District Council
Election Services

APPENDIX 2

APPENDIX 1



Wednesday 2 March - Saturday 30 April 2022	Ratepayer roll enrolment confirmation forms sent [Reg 16, LER]
Wednesday 2 March - Wednesday 6 July 2022	Preparation of ratepayer roll [Reg 10, LER]
May 2022	National ratepayer roll qualifications and procedures campaign [Sec 39, LEA]
Friday 1 July 2022	Electoral Commission's enrolment update campaign commences
Wednesday 13 July 2022	Public notice of election, calling for nominations, rolls open for inspection [Sec 42, 52, 53, LEA]
Friday 15 July 2022	Nominations open / roll open for inspection [Sec 42, LEA]
Friday 12 August 2022	Nominations close (12 noon) / roll closes [Sec 5, 42, 55 LEA, Reg 21, LER]
Wednesday 17 August 2022	Public notice of day of election, candidates' names [Sec 65, LEA]
by Monday 12 September 2022	Electoral officer certifies final electoral roll [Sec 51, LEA, Reg 22, LER]
Friday 16 September - Wednesday 21 September 2022	Delivery of voting documents [Reg 51, LER]
Friday 16 September - Saturday 8 October 2022	Progressive roll scrutiny [Sec 83, LEA] Special voting period [Sec 5 LEA, Reg 35, LER] Early processing period [Sec 80, LEA]
by Friday 7 October 2022	Appointment of scrutineers (12 noon) [Sec 68, LEA]
Saturday 8 October 2022	Election day [Sec 10, LEA] Close of voting (12 noon) [Sec 84, LEA] Progress and preliminary results available as soon as practicable after close of voting [Sec 85, LEA]
Saturday 8 October (pm) - Thursday 13 October 2022	Official count [Sec 84, LEA]
Friday 14 October - Wednesday 19 October 2022	Declaration of result/public notice of declaration [Sec 86, LEA]
by 9 December 2022	Return of electoral donations & expenses form [Sec 112A, LEA]

LEA - Local Electoral Act 2001
LER - Local Electoral Regulations 2001



// Dale Ofoske, Electoral Officer
Stratford District Council
December 2021

APPENDIX 2

APPENDIX 2

FACT SHEET

2022 election

8 OCTOBER 2022



TE KAUNIHERA A ROHE O
WHAKAAHURANGI
STRATFORD
DISTRICT COUNCIL

What does Council do?

The District Council meets regularly to make many decisions that impact the day-to-day lives of people in the Stratford District. The Council governs a wide range of local services including roads, water systems, rubbish collection, libraries, parks, community centres, dog registration, community and economic development and district planning.

Background

Local government triennial elections are being held by postal vote on Saturday 8 October 2022 and will be undertaken by Election Services, under contract to Stratford District Council.

The first past the post (FPP) electoral system will be used for the Stratford District Council, the Taranaki Regional Council and the Horizons Regional Council elections.

2022 Key Dates

Nominations open	Friday 15 July
Nominations close	Noon, Friday 12 August
Delivery of voting packs	from Friday 16 September
Close of voting	Noon, Saturday 8 October
Official results announced	Thursday 13 October

Who is being elected?

Following the decision to establish a Māori ward in 2021, Stratford District Council undertook a representation arrangements review (review of wards, boundaries, numbers of elected members etc).

As a result of this, elections will be required for the following positions:

- Mayor (elected 'at large')
- Councillors (11)
 - Stratford Urban General Ward (6)
 - Stratford Rural General Ward (4)
 - Stratford Māori Ward (1)
- Taranaki Regional Council Member* - either:
 - 1 member from the Stratford General Constituency, or
 - 1 member from the Taranaki Māori Constituency, OR
- Horizons Regional Council Member - either:
 - 1 member from the Ruapehu General Constituency, or
 - 1 member from the Raki Māori Constituency

* subject to determination by the Local Government Commission, expected by 10 April 2022.

There will be no district health board elections in 2022.

How can I be nominated?

Nominations for these positions will open on **Friday 15 July 2022** and close at noon on **Friday 12 August 2022**.

- Nomination papers will be available during this period from:
- Stratford District Council, 63 Miranda Street, Stratford
 - by accessing www.stratford.govt.nz
 - by telephoning the electoral office on 0800 922 822.

To be eligible to stand for election, a candidate **must** be:

- a New Zealand citizen (by birth or naturalisation ceremony); **and**
- enrolled as a Parliamentary elector (anywhere in New Zealand) on either the general or Māori electoral roll, irrespective of the ward being nominated for; **and**
- nominated by two electors whose names appear on the electoral roll within the respective area that a candidate is standing for.

A detailed candidate information handbook will be available in April 2022.

Who can vote?

Those eligible to vote are all resident electors and non-resident ratepayer electors whose names appear on the electoral roll when it closes on Friday 12 August 2022. The Preliminary Electoral Roll will be available for public inspection from **Friday 15 July 2022** to **Friday 12 August 2022** at the above location.

Resident Roll: All parliamentary electors, including those on the Māori Electoral Roll, are automatically enrolled on the Resident Roll, at the address where they live.

Any alterations to the Resident Roll (e.g. change of address details, including new postal addresses) should be made by:

- completing the appropriate form at any postal agency;
- phoning 0800 ENROLNOW (0800 36 76 56)
- accessing the Electoral Commission website on: www.vote.nz

Ratepayer Roll: If a person is on the parliamentary roll in one area and pays rates on a property in another area, this person may be eligible to be enrolled on the non-resident ratepayer roll. A firm, company, corporation or society paying rates on a property may nominate one of its members or officers as a ratepayer elector (provided the nominated person resides outside the area). Ratepayer Roll enrolment forms are available at www.stratford.govt.nz, or by phoning 0800 922 822.

All electors will be able to vote for the Mayor. Those electors on the general electoral roll will be able to vote for the respective general ward councillors and those on the Māori electoral roll will be able to vote for the Māori ward councillor.

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How to vote?

Voting packs will be sent out in the mail to all those who have enrolled from **Friday 16 September 2022**.

The voting period is three weeks (**Friday 16 September 2022 to noon Saturday 8 October 2022**). Electors may post their completed voting documents back to the electoral officer using the orange pre-paid envelope sent with their voting document.

Polling places for the issuing of special voting documents and for the receiving of completed voting documents will be available from Friday 16 September 2022 to noon, Saturday 8 October 2022 at:

- Stratford District Council, 63 Miranda Street, Stratford

To be counted, all completed voting documents must be in the hands of the electoral officer or an electoral official by **noon Saturday 8 October 2022**.

Progress results will be announced early afternoon on election day. Preliminary results will be announced early on Sunday morning, 9 October 2022, and final results will be known on Thursday 13 October 2022. All results will be accessible on Council's website: www.stratford.govt.nz

2022 STRATFORD DISTRICT COUNCIL WARDS MAP



* Stratford Māori Ward covers the whole district

Contact us



Dale Ofoske, Electoral Officer
Independent Election Services Ltd
Level 2, 198 Federal Street, Auckland
PO Box 5135, Victoria Street West, Auckland 1142
Email: info@electionservices.co.nz
Phone: 0800 922 822

Tiffany Radich, Deputy Electoral Officer
Stratford District Council
63 Miranda Street, Stratford
PO Box 320, Stratford 4352
Email: tradich@stratford.govt.nz
Phone: (06) 765 6099

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An organisation can nominate one of its members or officers to vote on its behalf

If a firm, company, trust, corporation, society partners, joint tenants and tenants in common collectively pay rates on a property in a council district, one of the group may be nominated to be the ratepayer elector. The person nominating and the nominated person must be registered as Parliamentary electors at addresses outside the council district where the property is located.

You can only enrol once

You can only enrol, or be nominated to enrol, once in a council district, no matter how many properties you own in that council district. Council district includes: a city, district and regional council area; a community board area if established; the area of Auckland Council and the local boards.

New Ratepayer Electors

If you think you may be eligible to enrol or to nominate someone as a ratepayer elector, get an Enrolment Form for Ratepayer Electors from the local council where you pay your rates. The Electoral Officer will be able to help you with your application.

If you want further information please phone toll free

0800 54 8683 0800 LG VOTE

(phone number is available from 7 February 2022 to 30 August 2022)



**Enrol now – the
Ratepayer Electoral
Roll closes on
12 August 2022**



**Wherever you pay
rates you can vote**

Do you live in one area and pay rates on a property in another area?

You may qualify to vote in both areas at the local authority elections in October 2022

You may like to vote in this election. Voting is a way to have your say on what happens in your local community. This information is designed to help you. It notes who you can contact to enrol, and ways you might qualify to vote.

There are two types of electors...

Residential Electors – If you are registered to vote on the electoral roll, you are automatically enrolled to vote in local authority elections. You will receive a voting document so that you can vote by post.

Ratepayer Electors – You may also be eligible to enrol as a non-resident ratepayer elector in a council district if both of these apply:

- you are on the district valuation roll and pay rates in the council district
- the address where you are registered as a Parliamentary elector is outside that council district.

Your eligibility to enrol or be nominated as a ratepayer elector may also depend on your individual circumstances as determined by criteria in the Local Electoral Act 2001 and its regulations.

APPENDIX 3

ELECTION PROTOCOLS FOR ELECTED MEMBERS

Updated for the 2022 Local Election

Context

Local government elections are held every three years. In 2022, the elections will be held on Saturday 8 October. The period leading up to an election is a time of high interest from parties including the media, members of the public, and electoral candidates.

As an incumbent elected member seeking re-election, you have two roles. You will continue to make the decisions as elected members of the Stratford District Council, while at the same time campaigning for re-election as a candidate.

These protocols provide guidance for you to balance your dual role as elected members and candidates seeking re-election. For further guidance or for clarification, please contact the Director – Corporate Services in the first instance.

Summary

1. If you are standing for re-election, you must clearly and transparently differentiate between activities conducted as an incumbent elected member (e.g., business-as-usual activities) and activities conducted while campaigning for re-election.
2. Resources owned by the Council and made available to you should only be used for Council purposes. The use of Council resources for election purposes is unfair to other candidates who do not have the same access to Council resources. This includes Council-owned computers, mobile phones, social media channels, email addresses and other Council publications.
3. Council-run social media accounts are considered Council resources and must remain politically neutral during the election. You must comply with any social media guidelines for candidates at all times.
4. You will continue to have access to the information you need to do your job as an incumbent. Council officers will not provide assistance with electioneering activities.
5. These protocols have general application at all times, but are especially relevant in the three months before the local election (Friday 8 July – Saturday 8 October). It is your responsibility to ensure your behaviour falls within these guidelines.

PROTOCOL 1: CONTINUATION OF COUNCIL BUSINESS

The normal business of Council continues during the pre-election period. Incumbents seeking re-election must balance and differentiate between these two roles.

Leading up to the election, elected members continue to have the right and responsibility to govern and to make decisions.

However, you should be mindful of an increased level of media and public scrutiny during this period and make a clear and transparent distinction between your activities as an **elected member** and your activities as a **candidate**.

PROTOCOL 2: USE OF COUNCIL RESOURCES

A local authority must not promote, nor be perceived to promote, the re-election prospects of a sitting member. The use of Council resources for re-election purposes is unacceptable.

Council would be directly promoting a member's re-election prospects if it allows incumbent elected members to use Council resources explicitly for campaign purposes. Council resources include, but are not limited to, Council-owned or controlled property and other resources including the Council logo and branding, all Council marketing and communication channels (including social media), Council-supplied business cards, stationery, computers, email, mobile phones, photocopiers, cars, Council

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venues (other than those available for hire to the general public), Council funds, and Council's human resources.

Council communications will be restricted during the pre-election period, to remove any perception that the Council is helping incumbents to promote their re-election prospects over other candidates. Therefore, during the pre-election period:

- Council resources must not be used for campaigning purposes (including for positions not at your Council). This includes Council-supplied computers, social media channels, email addresses, mobile phones and telephone numbers.
- Elected members' columns in Council publications will be suspended.
- Elected members' radio slots will be suspended.
- Elected members will be required to comply with any Council social media guidelines for candidates in all aspects of their role.
- Access to Council resources for members to issue media releases will be limited to what is strictly necessary to communicate current Council business. Comments or quotations from the Mayor, chairpersons, and portfolio leaders will continue to be used in media releases setting out the Council's position on an issue (for example, where a decision has been made at a committee meeting). Officers will comment on or issue media releases as required. Journalistic use of information that may raise the profile of a member will be discontinued.

Your Council contact information will still be available (for example, on the Council website or in the Annual Report) so your constituents can contact you about Council business. However, you should not be using your Council-supplied email address or mobile phone for electioneering purposes. If someone contacts you regarding the election on either of these channels, **you should reply from your personal email address or mobile phone.**

PROTOCOL 3: SOCIAL MEDIA

Council's social media channels are Council resources and must remain politically neutral during the election. Elected members seeking re-election must follow any Council social media guidelines for candidates at all times, and not comment on, share, or otherwise use Council social media channels for electioneering.

Council's Social Media policy includes guidelines for elected members. Advice on how to effectively and safely use social media during the election period is in the example attached as Appendix 1 to this protocol. You should comply with these guidelines at all times.

Council's social media channels must remain politically neutral at all times. Council will promote elections and the importance of voting as part of its obligations under the Local Government Act 2002, but will not associate these posts with any candidates.

Please note that for the period of the election:

- Council's social media channels must not be used by anyone for campaigning purposes. Any campaign-related material (including posts related to nominations and candidacy) will be removed.
- Council social media accounts will not follow any candidates. This may result in your account being unfollowed.
- You may not reply to comments or posts on Council's social media channels encouraging people to like or follow your social media accounts.
- You may not rate, review, check-in or tag the Council's social media channels in your own posts or comments.

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PROTOCOL 4: AVAILABILITY OF INFORMATION

Elected members will have access to the information they need to discharge their roles as incumbents and their Council contact information will still be publicly available. However, Council officers will not provide assistance with electioneering activities.

You will continue to be supported in your role as an incumbent elected member. However, information requests should be clearly related to Council business and not for re-election purposes.

Information requests for election purposes are welcome. These should be made to the Communications Manager in the first instance, and will be carried out in accordance with the Local Government Official Information and Meetings Act 1987.

Where the Council supplies information that is not already in the public domain to a candidate, the Council may consider any broader interest in this information alongside the requirement that Council resources are not used to give an electoral advantage to any candidate, and at its discretion make this information available to all other candidates.

PROTOCOL 5: USE OF MAYORAL RESOURCES

Council resources provided for mayoral use should not be used for any electioneering activities associated with any candidate.

If an incumbent mayor is seeking re-election, a clear and transparent distinction will be made between that mayor's business-as-usual activities and the mayor's campaigning activities. An incumbent mayor seeking re-election will establish a separate office, with separate staff, for any campaigning activities at their own expense.

The incumbent mayor's office will establish systems and protocols to ensure that any information or other requests from the public, media, other elected members or council employees during the pre-election period are identified as either business as usual or campaign related and to ensure that these are kept separate and responded to appropriately.

Application of protocols

As an elected member seeking re-election, it is ultimately your responsibility to ensure that your behaviour falls within these guidelines.

If you are unsure as to whether a particular action or request is in breach of these protocols, you should seek advice from your Electoral Officer (Dale Ofoske – (09) 973 5212 – dale@electionservices.co.nz) or your Deputy Electoral Officer (Tiffany Radich – (06) 765 0651 – tradich@stratford.govt.nz) as soon as possible.

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APPENDIX 1

Social Media Guidelines for Candidates

Candidates must comply with the following guidelines for social media use and presence related to campaigning.

Things to be aware of:

- Election advertising, using any media, including social media, must identify the person under whose authority they have been produced, as per sections 113-115 of the Local Electoral Act 2001. This means in your profile photo/bio, you must have a statement saying that all content/images on your social media channel are authorised by you or your agent. You must include a physical address in the authorisation statement.
- The Council's social media accounts (listed in *Appendix 2*), including but not limited to Facebook, Twitter, Instagram, LinkedIn and Neighbourly, are not permitted to be used as a communications channel by anyone (candidates or members of the public) for promotion, electioneering or campaigning. This also applies to all social media accounts owned by Council-controlled organisations.
- The Council's social media accounts are constantly monitored and any campaign related or electioneering content will be removed immediately.
- If Council already follows your public social media accounts, please note you will be unfollowed 3 months prior to the election date. This protocol is in line with the Local Electoral Act 2001.
- Any social media post – positive or negative – made by any individual specifically relating to their own – or someone else's – nomination, intention to run for Council, or election campaign, will be removed immediately.
- Candidates cannot reply to the Council's social media posts or share with a comment encouraging people to like or follow their own social media accounts or any other electioneering tool. Any posts that do this will be removed immediately.
- Candidates must not link their own social media accounts (if they are used for campaigning purposes) to the Council's social media accounts.
- Candidates cannot rate, review, check-in or tag the Council's social media channels.
- The Council's social media accounts will remain neutral. Council will promote elections and the importance of voting but will not associate these posts with any candidates.

Council's social media accounts are listed in *Appendix 2*.

Some things you can do:

It's a good idea to encourage people to follow your social media accounts while campaigning - include it in any promotional material. It's a great way to engage with the public – you can ask questions, run polls, encourage people to register to vote and then actually vote! Remind them of important dates, etc.

Great images are important on social media – post pics from your campaign trail, or post videos of yourself explaining who you are and what you stand for. You may have people who are happy to be filmed sharing why they will be voting for you – seeing other members of their community may encourage people to vote.

Facebook

- It's a good idea to have a public figure Facebook Page with a clear profile picture to help your election campaign. It's best to have a new photo.
- Set-aside budget for Facebook advertising to reach voters. You need to become authorised to run ads with political content. Facebook has helpful info on this.
- Facebook has a helpful guide about using Facebook to engage with voters and build your online community.

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Twitter

- Create a Twitter account. New Zealander's can be very active on Twitter especially when it comes to political discussions. See what hashtags are trending for the election. Follow prominent locals, and if people follow you, follow them back.
- Think of Twitter more like a newsfeed or forum to release information about everything you are doing.
- Twitter is a great platform to get involved in conversation and engage the public in the issues you are passionate about. Let people know what you stand for/what you want to change, give people the chance to share their views and explain the reasons for the changes you want to make.

Neighbourly

- Set up a personal profile on Neighbourly if you don't have one already and then you can add a special candidate pin to your profile picture so the community knows you are a candidate. On this platform you can speak directly to your ward and let the community get to know you and see what upsets them/what they care about. Neighbourly often runs special groups for local elections that you can be part of. Visit neighbourly.co.nz/help for more info.

Instagram

- Instagram is all about photos. You can feature a single photo or a collage of photos that will show up on your follower's feeds. You want to drive engagement, not just reach. So remember to focus on quality rather than quantity. Instagram is most successful when you tell personal stories and pictures that give the public greater insight into your campaign, rather than promotional images.
- Stories are a great way to group photos into albums. You might use them to share behind the scenes, promote an event, or focus on a specific issue you care about. You can also customise your Stories by adding music, text, emoji or even polls so you can make them more interactive and add a bit of your own personality.

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APPENDIX 2

Stratford District Council's Social Media Channel List

Facebook

- Stratford District Council
- Stratford District Council Animal Control
- TSB Pool Complex
- Stratford Library
- Stratford District Youth Council

Instagram

- Stratford District Youth Council
- TSB Pool Complex
- Stratford_NZ

LinkedIn

- Stratford District Council LinkedIn

INFORMATION REPORT



F19/13/04 – D22/7129

To: Audit and Risk Committee
From: Corporate Accountant
Date: 15 March 2022
Subject: Internal Audit Report 2020/21 - Update

Recommendation

THAT the report be received.

Recommended Reason

The Audit and Risk Committee is tasked with reviewing and monitoring the internal audit activities of Council on behalf of elected members.

/_____
Moved/Seconded

1. Purpose of Report

The purpose of this report is to update the Audit and Risk Committee on the subsequent actions taken, as a result of the findings arising from the internal audit that was carried out in 2021 by Stratford District Council staff.

2. Executive Summary

2.1 The Audit and Risk Committee have, in its Terms of Reference adopted in February 2020, an obligation to:

1. Agree the internal audit programme, review the findings of internal audits, and to monitor management response and implementation of their recommendations.
2. To ensure that recommendations highlighted in internal audit reports are actioned by management.
3. To review the internal auditors and their activities.

This report provides the Committee with the opportunity to action the obligations above.

2.2 Key findings from the audit – based on the four risk categories were:

- Compliance and Legislation
 - all consents selected complied with the relevant conditions;
 - can improve the recording of waters complaints required; and
 - all necessary liquor and health license documentation for the samples selected were fully compliant, depending on the nature of the application.
- Financial
 - issue invoices for resource consents in a timelier manner, potentially charging upfront (which would require a change in Council's fees and charges) and charging for withdrawn applications;
 - more awareness of the local tolerance allowable for procurement; and
 - more staff awareness needed of the gift register.
- Health and Safety Wellbeing
 - recommendation to have a designated assembly area in case of an emergency evacuation at the Prospero Market;
 - recommendation to ensure no other swimmers or instructors are in the respective lanes/s while spin bike classes are in progress at the pool;
 - storage of chemicals at the water treatment plant is good; and
 - recommendations for safety of authorised personnel at the water treatment plant.

- Operational
 - access to the archives room is well controlled; and
 - requests for entry and other documentation could go digital.

3. Local Government Act 2002

Under section 10 of the Local Government Act 2002, the Council’s purpose is to “enable democratic local decision making by and on behalf of communities; as well as promoting the social, economic, environmental, and cultural well-being of communities now and into the future”			
Does the recommended option meet the purpose of the Local Government 4 well-beings? And which:			Yes
Social	Economic	Environmental	Cultural
	✓		

3.1 A local authority must manage its revenues, expenses, assets, liabilities, investments, and general financial dealings prudently and in a manner that promotes the current and future interests of the community (Section 101 of the Local Government Act 2002 “the Act”). The internal audit process is a mechanism by which senior management and elected members can get some form of assurance that the Council is managing its assets prudently.

4. Background

4.1 The purpose of carrying out an annual internal audit is to provide additional assurance to the Audit and Risk Committee that the Council is managing its risks effectively. It fulfils the Council’s responsibilities in the Risk Management Policy approved in September 2017. The following is an excerpt from the Council’s Risk Management Policy:

*“**FRAME** - Risk management practices are framed in the context of the Council’s risk appetite; The Stratford District Council’s strategic and business objectives; and the strategic, environmental and organisational context within which the Stratford District Council operates and from which risks arise.*

***ASSESS** - what, why and how events may arise are identified, existing controls determined, and risks are analysed in terms of their likelihood and impact in the context of those controls.*

***RESPOND** – Stratford District Council develops and implements specific risk management plans - with controls and treatments for high impact risks, or monitoring measures for lower or accepted risks – in response to risks.*

***MONITOR** - Monitoring and review occurs throughout the risk management process, with oversight and review of Risk Registers and any changes that might affect them; this includes communication, consultation and reporting at all stages that enables the Stratford District Council to minimise losses and capitalise on opportunities.”*

4.2 This audit report relates to the second in-house internal audit undertaken since the inception of the Audit and Risk Committee, the first one being in July 2020. Unlike the previous internal audits which were undertaken by external consultants, these audits were done by council staff, however still focused primarily on risks contained in Council’s Risk Register.

4.3 A wider risk-based audit is considered to be a more effective use of an internal auditor, rather than focusing purely on a financial based audit. At year end, external auditors undertake a significant review of the Council’s financial processes, testing of asset and liability balances, and substantive transactional testing. In addition, the auditors review the effectiveness of internal controls in the finance function. Council officers are actively

identifying ways to minimise and reduce the incidence of errors, or deliberate acts of fraud, on an ongoing basis.

- 4.4 It was once again considered good practice to undertake this year's internal audit by council staff. In addition to cost savings, this also gave the audit participants a better understanding of processes within other departments, assisting with individual personal development and cross department collaboration. The staff responsible for the function being audited also directly benefited from the audit as it was an opportunity for them to revisit their current processes and procedures.
- 4.5 The internal audit was carried out in line with an Internal Audit Plan that was approved by the Audit and Risk Committee at the June 2021 meeting. The intention was to start the audit in May 2021, however due to the postponement of the Committee's May meeting, the audit did not commence until June 2021. A report was presented to the Audit and Risk Committee in September 2021 with the results, and as expected, the audit identified areas for improvement and these are commented on in the next section.

5. Information Summary

- 5.1 Attached as Appendix 1 is a summary of the risks identified, the resulting recommendations, and what actions have been taken to reduce and/or control each risk. Where no action was required, the risk has not been included. These are summarised below:

a) Risk 2 – Incorrect Planning Advice – Review current resource consent processes

- i. Process to be reviewed and promapped, to ensure consistency,
- ii. In order to monitor progress on resource consents, create a report direct from Authority, which will present the information.

b) Risk 3 – Statutory Reporting Commitment – Recording of water complaints

- i. Duplicate data is held in Assetfinda software and in other documents by the Asset Services staff, so now have this data all held in the one place,
- ii. As the Department of Internal Affairs and Council measures require both the response and completion times to be recorded, together with both justified and non-justified complaints, this has now been updated so correct data can be obtained,
- iii. Not all after hours calls were logged correctly, which meant that performance measure reporting may not have been be correct, this has now been improved, and staff trained where necessary.
- iv. All 3 findings above are to be promapped.

c) Risk 5 – Issue Regulatory (health or liquor) Licence or Decision – Review decision for issuing alcohol and food licences

- i. There was one inconsistency between the promapp process and the actual legislation, which has now been corrected.

d) Risk 14 – Uncontrolled access to Physical and Digital Records in the Archives Room

- i. There is a good record of who accesses the archives room, and for what purpose, and the requests for either access or to store records, are now all electronic.

e) Risk 23 – Debt Collection – Resource consent revenue is charged timely and collection is managed appropriately

- i. All resource consent application fees are charged after the decision is released. To ensure there is no delay in collecting revenue, these will now be invoiced prior to the decision being released. This also enables any debt collection to commence earlier when necessary.
- ii. Council is proposing some changes to the Fees and Charges next year, which will give the ability to recover some costs incurred.
- iii. The resource consent process is documented, and will be refined as time permits.

f) Risk 25 – Procurement Contracts

- i. Information regarding the 5% tolerance for local suppliers has been provided to all staff in a regular staff newsletter.

- ii. All new staff will receive ongoing training, where appropriate for their role, regarding the procurement process.

g) Risk 29 – Health and Safety at Council Events – Public Events at Prospero Market and a pool fitness class

- i. A sign indicating where the public are to assemble in the event of an emergency or an evacuation will be erected in Prospero Place advising the public of where the assembly point is in the event of an emergency.
- ii. The lane that is used at the pool for spin bike classes is now fully blocked off to casual /other swimmers.

h) Risk 32 – Lone worker safety at the water treatment plant and pool

- i. Looked at the water treatment plant for safety, and have now got a new standard operating procedure for lone staff at the water treatment plant. The compound gate will be locked after entry, and all visitors must contact the staff prior to arrival
- ii. In case of emergency a padlock key will be stored in a coded lock box outside of the compound gates.
- iii. In the event of a medical emergency FENZ, as first responder, will cut the padlock.
- iv. Staff investigating the cost of a key pad locking system for the gate, with a buzzer / warning light system in two areas of the water treatment plant, to alert staff of someone else's presence.

i) Risk 79 – Bribery and Corruption – Existence of Gift Register

- i. The existence of a gift register will now form part of the induction process for new staff,
- ii. Information reminding staff of the gift register was provided in a staff newsletter in October 2021, as a timely reminder with Christmas approaching.

6. Strategic Alignment

6.1 Direction

This does not link directly to Council's strategic direction or the Long Term Plan, however direction was taken from Council's Risk Register which identifies and evaluates the risks of all Council's activities and responsibilities. This register was adopted by the Audit and Risk Committee and regularly reviewed to ensure it meets the needs of Council.

6.2 Annual Plan and Long Term Plan

There are no implications on the Annual Plan or Long Term Plan as a result of the internal audit.

6.3 District Plan

There is no direct connection with the District Plan.

6.4 Legal Implications

Potential legal implications if recommendations are not considered:

- Council could be subject to a judicial review or dispute if resource consents are granted incorrectly.
- Council could be subject to scrutiny and being legally challenged by the Department of Internal Affairs if reporting of water complaints is not correct.
- Potential liability could be imposed on Council if regulatory decisions are made incorrectly.
- Possibility of death or serious injury at a public event, or from incorrect chemical handling, could lead to litigations.

6.5 Policy Implications

Potential policy implications if recommendations not considered:

- Polices and Bylaws may become unenforceable, and Council could be acting illegally.

- If the Procurement Policy is not followed then Council could be subject to industry, media and legal scrutiny.

Attachment:

Appendix 1 - Summary of the initial recommendations, and the resulting actions



Christine Craig
Corporate Accountant



[Endorsed by]
Tiffany Radich
Director – Corporate Services



[Approved by]
Sven Hanne
Chief Executive

Date: 7 March 2022

APPENDIX 1

INTERNAL AUDIT - ACTIONS REQUIRED

Risk No.	Risk details	Recommendation	Position responsible	Brief description of what has happened to date	Complete, or expected date of completion
2 & 23	Resource consent process	Promapp process	Planner	The resource consent process is already documented as a series of Word documents.	COMPLETE
2	Resource consents	Create a report in Authority to record all outstanding consents with current status at any given date	IT Manager	There is a report in Authority named Outstanding DA listing which achieves this. Have also requested we add-in the Applicant and Current Status to the report which will be looked into.	Partially complete, target resolution April 2022
3	Recording of water complaints	Look at Assetfinda, to see how data held in a separate spreadsheet can all be entered in the one place, in Assetfinda, so that both response and completion times are recorded, then promap process	GIS Officer	Data can all be held in AssetFinda, and jobs merged. Training has been given to front counter staff. Process to be promapped by GIS Officer.	25 March 2022
3	Recording of water complaints	Look at Assetfinda, to see how data held in a separate spreadsheet can all be entered in the one place in AF, so complaints can be split in to either justified or non-justified, then promap process	GIS Officer	Data can all be held in AssetFinda, and jobs merged. Training has been given to front counter staff. Process to be promapped by GIS Officer.	25 March 2022
3	Recording of water complaints	Follow up training for service centre staff on the recording of calls, and taking multiple calls for the one incident, then promap process	GIS Officer and Customer Services Team Leader	Data can all be held in AssetFinda, and jobs merged. Training has been given to front counter staff. Process to be promapped by GIS Officer.	25 March 2022
5	Issue of alcohol and food licences	Ensure the Promapp process correctly reflects the relevant legislation	Environmental Health Manager	incorrect number of persons specified to evaluate large scale event. 200 persons, changed to 400.	COMPLETE
14	Access to archives room and records within	All requests to either enter the archives room, or to search for records, are electronic	IM Specialist	Requests are either received electronically, or entered into Track-it by IM Officer if received otherwise.	COMPLETE
23	Resource consent revenue charging	Ensure all revenue is charged to the client immediately after the consent has been approved and released. Map the process from start to end, and ensure it is followed.	Planner and QA Officer	Resource consents are now being invoiced in a timely manner. Processes are already mapped.	COMPLETE
23	Resource consent revenue charging	Ensure all expenditure relating to resource consents is on-charged for full recovery of costs, including withdrawn or declined consents	Planner and QA Officer	We are proposing some changes to the fees and charges schedule which will increase our ability to recover costs.	Partially complete, target resolution 30 June 2022
25	Procurement	Training for new staff, giving a brief overview of what is required, including reference to the Procurement Policy	Corporate Accountant and Finance Officer	Training provided to new staff where applicable, and will be ongoing.	COMPLETE
25	Procurement	Awareness of 5% local tolerance	Corporate Accountant and Finance Officer	Information to all staff in the Staff Newsletter of 3 December 2021.	COMPLETE
29	Public events	Erect a sign at Prospero Place advising the public of where the assembly point is in case of emergency	Parks and Reserves Officer	Working with Community Development Team, who are coming up with a signage plan within Prospero Place. Once this is finalised an Assembly Point sign will be erected.	30 June 2022
29	Public events	Ensure lane/s in pool are blocked off from all other users when a spin bike class in progress	Aquatic Services Team Leader	The NOP has been updated to include a snippet to ensure lane/s in pool are blocked off from all other users when a spin bike class in progress.	COMPLETE
32	Lone worker	Install a buzzer on the main entry door at the water treatment plant	Plant Technician Team Leader and Services Asset Manager	New standard operating procedure for lone staff working at the water treatment plant is to lock the compound gate after entry, all visitors required to contact water treatment staff prior to arrival. In case of an emergency and access is needed a padlock key will be stored in a coded lock box outside of the compound gates. In the event of a medical emergency FENZ will cut the padlock. Council staff investigating the cost of a key pad locking system for the compound gate with a buzzer/warning light system in two areas of the water treatment plant to alert water treatment plant staff of someone's presence.	Standard operating procedure implemented. Coded lock box to be installed by 1 April 2022. Key pad lock and buzzer/warning light system quotes to be obtained by 1 June 2022.
32	Lone worker	Investigate whether Smartrak is the right product for the purpose at all sites, and look at a more universal product e.g. talk to STDC re their product	Health and Safety Advisor	In the process of getting Direct Safety on board as the lone worker solution for council and removing Smartrak altogether.	Expected to be complete by April 2022, waiting for 4G devices
32	Lone worker	Include a section on working alone in the health and safety documentation	Health and Safety Advisor	Entire Health and Safety Manual needs updating along with lone working procedure that is already there - this will be based heavily on what the directives are from Direct Safety when the devices are in operation.	April / May 2022
79	Gift register	Include the existence of a register in the induction process	Committee Advisor and Executive Assistant	Included the Sensitive Expenditure Policy in draft induction programme for the Finance team to cover in first week of new employees commencing.	Implement by 30 June 2022 once approved by SLT.
79	Gift register	Continue with regular updates in the staff newsletter	Finance Officer	Details provided in the Staff Newsletter dated 21 October 2021, and will do reminders on an annual basis.	COMPLETE



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Website: www.oag.parliament.nz

2 February 2022

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Mr Sven Hanne
Chief Executive
Stratford District Council

By email: shanne@stratford.govt.nz

For the attention of the Chief Executive and/or the Chairperson

Tēnā koe Mr Hanne

PROPOSED CHANGE OF AUDITOR

I am writing to confirm the information I left for your EA in a brief voicemail on 1 February.

As you may be aware, an industry-wide auditor shortage and subsequent Covid-related lockdowns have been disruptive for many audit firms. There are also many changes taking place from the Government reforms of various sectors. We have been carefully considering the short-term and longer-term options for the Auditor-General's audit portfolio and are reallocating some audits amongst his audit service providers.

Your audit is one that we propose reallocating, from Audit New Zealand to a partner from the firm of Deloitte Limited.

Auditors are appointed in keeping with a set of allocation principles that include auditor independence, auditor knowledge about public organisations and public sector audits, the particular audit skills required, the auditor's audit quality and cost, and the need for the Auditor-General to have access to enough audit capacity and capability. The Auditor-General has taken those principles into account when making this decision.

New Audit Proposal, and audit fees

Deloitte Limited need to prepare a draft Audit Proposal for discussion with you. The proposal will cover the statutory basis for the audit, key staff assigned to the audit, and the audit hours and fees for each year of the audit. The new proposal will be for an initial term commencing with 2022.

If audit fees have already been agreed for your audit, those audit fees will be honoured.

If audit fees have not been agreed for an audit, the new auditor will need to work with you to determine reasonable audit fees for your audit. Under the Public Audit Act 2001, audit fees must be reasonable, which means fair to the entity and providing a fair return (but not more than that) to the auditor.

We provide audit firms with guidance that they must follow when setting audit fees. You and the audit firm need to agree a way to understand the real costs of the audit and agree future audit fees that are reasonable. We expect the audit firm to use the first year to understand and properly scope future audits, and propose audit fees for future years based on that initial year's understanding (excluding, as always, any first-year investment in understanding your entity).

The first year might need to have an estimated fee with an agreed means of confirming that during and after the audit. For example, a helpful process we have used has the audit provider and entity having a short debrief at the end of each week to understand that week's work and costs (including time the auditor invested in understanding the entity, which won't be charged for).

The Audit Proposal will contain the appointed auditor's expectations of your organisation in relation to the audit. You'll need to work together and take the opportunity to discuss factors your control to make the audit less time-consuming and more efficient. As we always do, we will review the proposed audit fees to ensure that they are reasonable.

Auditor independence

The Auditor-General sets independence standards for auditors acting on his behalf, which include the standards set by the External Reporting Board. He limits the nature and amount of work an auditor can carry out for an organisation to the audit and other assurance work. If you have any concerns that some work your organisation expects your auditor to carry out, or may ask your auditor to carry out, is not assurance work, you are welcome to seek our views.

If you wish to discuss any aspect of this letter, or, after discussion with your auditor, require our analysis of the proposed audit fee, please contact me at Murray.Powell@oag.parliament.nz

Nāku noa, nā

A handwritten signature in blue ink, appearing to read 'Murray Powell', is positioned above the printed name.

Murray Powell
Director, Audit Projects



TE KAUNIHERA Ā ROHE O
WHAKAAHURANGI
STRATFORD
DISTRICT COUNCIL

Our reference
F19/13/03-D21/40748

Karakia

Kia uruuru mai
Ā hauora
Ā haukaha
Ā haumāia
Ki runga, Ki raro
Ki roto, Ki waho
Rire rire hau Paimārire

I draw in (to my being)
The reviving essence
The strengthening essence
The essence of courage
Above, Below
Within, Around
Let there be peace.