Nokia 5G Readiness Report

Data breakdown - regional findings and methodology
Contents

• Global data
• Australia
• Finland
• Germany
• Japan
• Saudi Arabia
• South Korea
• United Kingdom
• United States
• Survey methodology and demographics
Global findings
43% of technology decision makers have increased their overall investment in their strategic technology planning. This represents a 27% net increase in the number of budgets that have increased.

### Net change in those investing more

<table>
<thead>
<tr>
<th>Market</th>
<th>Net change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>+27%</td>
</tr>
<tr>
<td>UK</td>
<td>+35%</td>
</tr>
<tr>
<td>Germany</td>
<td>+31%</td>
</tr>
<tr>
<td>South Korea</td>
<td>+29%</td>
</tr>
<tr>
<td>Finland</td>
<td>+29%</td>
</tr>
<tr>
<td>US</td>
<td>+28%</td>
</tr>
<tr>
<td>Australia</td>
<td>+25%</td>
</tr>
<tr>
<td>Japan</td>
<td>+23%</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>+17%</td>
</tr>
</tbody>
</table>

### Sector

<table>
<thead>
<tr>
<th>Sector</th>
<th>Net change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthcare</td>
<td>+39%</td>
</tr>
<tr>
<td>Mining</td>
<td>+38%</td>
</tr>
<tr>
<td>Energy &amp; Utilities</td>
<td>+31%</td>
</tr>
<tr>
<td>Public Sector</td>
<td>+25%</td>
</tr>
<tr>
<td>Transportation</td>
<td>+20%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>+14%</td>
</tr>
</tbody>
</table>

Q. Has the pandemic impacted your investment in strategic technology planning?

Base: 1628
The extent to which the pandemic has impacted business technology requirements

95% of technology purchasers have had their technology requirements impacted by COVID-19

Q. To what extent has the pandemic impacted your business' technology requirements?

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Global</th>
<th>UK</th>
<th>US</th>
<th>Finland</th>
<th>Germany</th>
<th>Saudi Arabia</th>
<th>South Korea</th>
<th>Japan</th>
<th>Australia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greater provision for remote working for staff</td>
<td>47%</td>
<td>47%</td>
<td>50%</td>
<td>43%</td>
<td>45%</td>
<td>48%</td>
<td>42%</td>
<td>47%</td>
<td>50%</td>
</tr>
<tr>
<td>Digitally transform business operations</td>
<td>40%</td>
<td>38%</td>
<td>35%</td>
<td>39%</td>
<td>23%</td>
<td>46%</td>
<td>50%</td>
<td>44%</td>
<td>48%</td>
</tr>
<tr>
<td>More investment in cyber security</td>
<td>39%</td>
<td>33%</td>
<td>40%</td>
<td>25%</td>
<td>47%</td>
<td>43%</td>
<td>50%</td>
<td>38%</td>
<td>39%</td>
</tr>
<tr>
<td>Automation of operations</td>
<td>38%</td>
<td>29%</td>
<td>39%</td>
<td>28%</td>
<td>35%</td>
<td>42%</td>
<td>49%</td>
<td>40%</td>
<td>41%</td>
</tr>
<tr>
<td>Investment in cyber security</td>
<td>37%</td>
<td>32%</td>
<td>40%</td>
<td>23%</td>
<td>30%</td>
<td>42%</td>
<td>40%</td>
<td>41%</td>
<td>45%</td>
</tr>
<tr>
<td>Digitise customer or client-facing operations</td>
<td>36%</td>
<td>33%</td>
<td>32%</td>
<td>33%</td>
<td>30%</td>
<td>35%</td>
<td>38%</td>
<td>38%</td>
<td>42%</td>
</tr>
<tr>
<td>Hasn't impacted</td>
<td>5%</td>
<td>3%</td>
<td>5%</td>
<td>7%</td>
<td>9%</td>
<td>3%</td>
<td>4%</td>
<td>7%</td>
<td>4%</td>
</tr>
</tbody>
</table>

Base: 1628
The COVID impact

Additional costs (44%), disrupted timelines (41%) and the emergence of new technology gaps (39%) have been the most prevalent impacts of COVID-19 on technology road maps.

Q. Has COVID-19 highlighted any of the following deficiencies in your technology road map? Base: 1628

- Additional costs: 44%
- Disrupted timelines: 41%
- New technology gaps have emerged: 39%
- Our strategic priorities have changed and our IT projects no longer align: 32%
- Our tech investments are not flexible enough: 30%
- None of the above: 7%
Q. To what extent has the COVID-19 crisis accelerated your organization's digital transformation program?

Base: 1628

45% have expediated their digital transformation program due to COVID-19.
Levels of understanding are still mixed

Only half of technology decision makers (52%) think there is a good understanding of 5G in their organization.

Q. How would you describe the understanding of 5G in your business?

- 5 = Very good understanding: 21%
- 4: 31%
- 3: 34%
- 2: 9%
- 1 = Very poor understanding: 4%

Base: 1628
Q. Have you invested/or do you plan to invest in 5G?

15% are currently investing in 5G; with 71% planning investment in the next 5 years.
A short or long-term approach?

45% of technology decision makers have a long term 5G strategy
Just over 1 in 10 have no strategy whatsoever (13%)

We have a clear multi-year strategy: 23%
We have an incomplete multi-year strategy: 22%
We have a clear short-term strategy: 27%
We have an incomplete, short-term strategy: 14%
We have no strategy: 13%
The risks of standing still
A third of organizations fear being outpaced by the competition should they not invest in 5G.

- We will be outpaced by the competition: 34%
- We will be more successful: 28%
- We will fail to grow: 26%
- We will shrink in size (revenue): 22%
- Not sure: 13%
- It will have no impact: 10%

Q. What will happen to your business if you don't invest in 5G in the next three years? Base: 1628
Q. Which of the following will your organization invest in over the next 2-3 years?

- Cybersecurity
- End-user hardware
- Systems and process automation
- Cloud services / cloud migration
- Analytics
- Predictive or real-time operations
- WAN/SD-WAN
- IoT (Internet of Things)
- AI (artificial intelligence) / machine learning
- M2M (machine-to-machine)
- Robotics
- AR / VR (augmented reality / virtual reality)

Total planning to invest:

- No plans for future investment: 93%
- Plans to make some investment by 2021: 93%
- Plans to make significant investment by 2021: 92%
- Plans to make some investment by 2023: 90%
- Plans to make significant investment by 2023: 88%
- Don’t know: 86%
- Total planning to invest: 86%
- Plans to make some investment by 2021: 82%
- Plans to make significant investment by 2021: 81%
- Plans to make some investment by 2023: 77%
- Plans to make significant investment by 2023: 75%
Leading from the top?
40% of organizations have a C-level sponsor for 5G implementation but a quarter don’t have any 5G champion within management (24%)

Q. Does your business have a C-level sponsor for 5G implementation?

- 24% We don't have a sponsor
- 11% We have a champion outside the C-suite but don’t have a senior sponsor willing to invest
- 25% We have senior sponsor (not C-level) who is currently working to get C-level engagement
- 20% We have a C-level sponsor who doesn't yet have 5G objective(s) and/or a willingness to invest
- 19% We have an engaged C-level sponsor who has 5G objectives and a willingness to invest

39% have a C-level sponsor

Base: 1628
5G: Few are resting on their laurels
Businesses aren’t overstating their place: they are most likely to feel that their industry is middling in terms of 5G adoption.

Q. Do you believe your industry is leading, or falling behind, in 5G adoption?

- As an industry we are setting a high benchmark for 5G adoption: 15%
- Some players in our industry are leading the way, but this is not consistent: 24%
- We are performing no better or worse than other sectors: 29%
- Some players in our industry are falling behind, but this is not consistent: 16%
- As an industry, we are falling behind: 10%
- I don’t know: 6%

Base: 1628
5G: Where next, post-COVID?

1 in 10 are not implementing a clearer 5G investment plan due to COVID-19
Just over a third (36%) are still on hold

Q. What impact has the coronavirus pandemic had on your 5G investment and / or implementation plans?

- 9% All plans have been put on hold until there is more certainty about the future
- 14% Plans were put on hold at the start of the pandemic and we are now re-evaluating them for the future
- 13% Plans were put on hold at the start of the pandemic; having reviewed them, they are no longer fit for purpose
- 23% We have a clearer view of how we need to evolve but are unable to make any firm planning commitments until we have more certainty about the future
- 19% We have a clearer view of how we need to evolve and are in the process of developing this plan
- 10% We have a clearer view of how we need to evolve and are in the process of implementing this plan
- 6% Coronavirus has not made any impact on our plans for 5G investment and / or implementation
- 7% We have no plans for 5G investment or implementation

Base: 1628
5G: The benefits of the unknown

The unknown potential of 5G being fully introduced is an influence on those who are the most ready for 5G in their organization.

Q. A comprehensive list of what 5G can do is impossible to put together because it’s not possible to predict every disruptive technology, app or unintended consequence of the network being introduced. To what extent does / will this prospect influence your decision to invest?

Base: 1628
Q. What do you see as barriers to 5G investment and implementation for your business?

Base: 1628

- Availability of 5G-enabled products: 28%
- The costs are too high: 26%
- It is not a priority right now: 22%
- Security risks: 22%
- Lack of coverage: 19%
- I’m worried about the political debate surrounding it: 18%
- The decision makers within the business do not understand it: 17%
- I am not confident that we would be able to implement the associated technologies: 15%
- I don’t know enough about it: 14%
- It is unproven: 14%
- I don’t understand the true benefits: 13%
- There are concerns within the business about its links to health: 13%
- I can’t identify a provider: 11%
- I don’t believe it will bring benefits to the business: 11%
- It won’t benefit my business: 11%
- I don’t understand it: 7%
- None of the above: 6%
<table>
<thead>
<tr>
<th>Option</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased number of 5G providers for more buying options</td>
<td>38%</td>
</tr>
<tr>
<td>A better understanding of what it is / the benefits it can bring</td>
<td>36%</td>
</tr>
<tr>
<td>A set of international specifications to be agreed</td>
<td>35%</td>
</tr>
<tr>
<td>Government investment in infrastructure</td>
<td>33%</td>
</tr>
<tr>
<td>Government subsidies to drive down costs</td>
<td>32%</td>
</tr>
<tr>
<td>A better understanding of who the best providers are</td>
<td>28%</td>
</tr>
<tr>
<td>None of the above</td>
<td>4%</td>
</tr>
<tr>
<td>I don’t know</td>
<td>4%</td>
</tr>
</tbody>
</table>
5G maturity – the current picture

Globally, a third of organizations are at the top end of 5G maturity (33%), with 7% at the highest level; just under 1 in 5 (17%) have lower 5G maturity; and half occupy a middle ground.
Australia
The COVID impact
Disrupted timelines (44%), additional costs (42%) and the emergence of new technology gaps (38%) have been the most prevalent impacts of COVID-19 on technology road maps.
Q. To what extent has the COVID-19 crisis accelerated your organization's digital transformation program? Base: 203
Levels of understanding are still mixed
50% think there is a good understanding of 5G in their organization

Q. How would you describe the understanding of 5G in your business?

1 = Very poor understanding  2 = Poor understanding  3 = Average understanding  4 = Good understanding  5 = Very good understanding

Base: 203
Planning for 5G

17% are currently investing in 5G; with 79% planning investment in the next 5 years

Q. Have you invested/or do you plan to invest in 5G?

- Currently investing in 5G: 17%
- Plan to invest in the next 12 months: 21%
- Plan to invest in the next 1 to 5 years: 41%
- Plan to invest in the next 6 to 10 years: 15%
- Do not have plans to invest in the next 10 years: 6%

Base: 203
A short or long-term approach?

49% of technology decision makers have a long term 5G strategy.
Just under 1 in 10 have no strategy whatsoever (8%).

- 28% have a clear short-term strategy.
- 22% have an incomplete multi-year strategy.
- 27% have a clear multi-year strategy.
- 15% have an incomplete, short-term strategy.
- 8% have no strategy.
The risks of standing still

Over a third fear being outpaced by the competition should they not invest in 5G (36%), however 32% feel whatever their 5G investment they will still be successful.

- **36%** We will be outpaced by the competition
- **32%** We will be more successful
- **25%** We will fail to grow
- **24%** We will shrink in size (revenue)
- **13%** Not sure
- **9%** It will have no impact

Q. What will happen to your business if you don’t invest in 5G in the next three years?  

Base: 203
### 5G: the technology enabler

69% of technology buyers are planning investment in cybersecurity in 2021. Another 69% are planning to invest in cloud-services in 2021.

<table>
<thead>
<tr>
<th>Technology Area</th>
<th>Plans to make some investment by 2021</th>
<th>Plans to make significant investment by 2021</th>
<th>Plans to make some investment by 2023</th>
<th>Plans to make significant investment by 2023</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analytics</td>
<td>5%</td>
<td>33%</td>
<td>33%</td>
<td>23%</td>
<td>5%</td>
</tr>
<tr>
<td>Cybersecurity</td>
<td>6%</td>
<td>26%</td>
<td>43%</td>
<td>15%</td>
<td>10%</td>
</tr>
<tr>
<td>Cloud services / cloud migration</td>
<td>6%</td>
<td>31%</td>
<td>38%</td>
<td>14%</td>
<td>9%</td>
</tr>
<tr>
<td>Systems and process automation</td>
<td>5%</td>
<td>33%</td>
<td>35%</td>
<td>16%</td>
<td>6%</td>
</tr>
<tr>
<td>End-user hardware (computers, mobile...)</td>
<td>5%</td>
<td>31%</td>
<td>36%</td>
<td>17%</td>
<td>8%</td>
</tr>
<tr>
<td>Predictive or real-time operations</td>
<td>7%</td>
<td>34%</td>
<td>33%</td>
<td>15%</td>
<td>9%</td>
</tr>
<tr>
<td>WAN/SD-WAN</td>
<td>10%</td>
<td>33%</td>
<td>29%</td>
<td>18%</td>
<td>5%</td>
</tr>
<tr>
<td>IoT (Internet of Things)</td>
<td>10%</td>
<td>32%</td>
<td>25%</td>
<td>19%</td>
<td>8%</td>
</tr>
<tr>
<td>AI (artificial intelligence) / machine learning</td>
<td>15%</td>
<td>32%</td>
<td>29%</td>
<td>14%</td>
<td>9%</td>
</tr>
<tr>
<td>M2M (machine-to-machine)</td>
<td>18%</td>
<td>30%</td>
<td>22%</td>
<td>20%</td>
<td>7%</td>
</tr>
<tr>
<td>AR / VR (augmented reality / virtual reality)</td>
<td>21%</td>
<td>26%</td>
<td>24%</td>
<td>20%</td>
<td>8%</td>
</tr>
<tr>
<td>Robotics</td>
<td>20%</td>
<td>33%</td>
<td>21%</td>
<td>14%</td>
<td>9%</td>
</tr>
</tbody>
</table>

Total planning to invest

- Analytics: 94%
- Cybersecurity: 94%
- Cloud services / cloud migration: 93%
- Systems and process automation: 92%
- End-user hardware (computers, mobile...): 92%
- Predictive or real-time operations: 91%
- WAN/SD-WAN: 85%
- IoT (Internet of Things): 84%
- AI (artificial intelligence) / machine learning: 83%
- M2M (machine-to-machine): 79%
- AR / VR (augmented reality / virtual reality): 78%
- Robotics: 78%

Q. Which of the following will your organization invest in over the next 2-3 years?

Base: 203
Leading from the top?

41% have C-Level sponsor for 5G implementation in their organization
Almost a quarter don’t have any 5G championing from management (22%)

<table>
<thead>
<tr>
<th>Description</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>We have an engaged C-Level sponsor who has 5G objectives and a willingness to invest</td>
<td>17%</td>
</tr>
<tr>
<td>We have a C-Level sponsor who doesn't yet have 5G objective(s) and/or a willingness to invest</td>
<td>24%</td>
</tr>
<tr>
<td>We have senior sponsor (not C-Level) who is currently working to get C-Level engagement</td>
<td>29%</td>
</tr>
<tr>
<td>We have a champion outside the C-suite but don’t have a senior sponsor willing to invest</td>
<td>9%</td>
</tr>
<tr>
<td>We don't have a sponsor</td>
<td>22%</td>
</tr>
</tbody>
</table>
5G: Few are resting on their laurels

Businesses are more likely to feel that their industry is middling in terms of 5G adoption, with only 11% setting a high benchmark.

- As an industry we are setting a high benchmark for 5G adoption: 11%
- Some players in our industry are leading the way, but this is not consistent: 24%
- We are performing no better or worse than other sectors: 30%
- Some players in our industry are falling behind, but this is not consistent: 20%
- As an industry, we are falling behind: 10%
- I don’t know: 6%

Q. Do you believe your industry is leading, or falling behind, in 5G adoption? Base: 203
5G: Where next, post-COVID?

Just over 1 in 10 (13%) are now implementing a clearer 5G investment plan due to COVID-19. 43% are still on hold.
Q. A comprehensive list of what 5G can do is impossible to put together because it’s not possible to predict every disruptive technology, app or unintended consequence of the network being introduced. To what extent does / will this prospect influence your decision to invest?

5G: The benefits of the unknown

The unknown potential of 5G being fully introduced is an influence on 47% of decision makers.
## 5G: What's stopping organizations?
Availability of 5G enabled products, costs and security risks are the biggest barriers to 5G investment

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability of 5G-enabled products</td>
<td>33%</td>
</tr>
<tr>
<td>The costs are too high</td>
<td>27%</td>
</tr>
<tr>
<td>Security risks</td>
<td>27%</td>
</tr>
<tr>
<td>Lack of coverage</td>
<td>25%</td>
</tr>
<tr>
<td>It is not a priority right now</td>
<td>23%</td>
</tr>
<tr>
<td>I am not confident that we would be able to implement the associated</td>
<td>20%</td>
</tr>
<tr>
<td>technologies</td>
<td></td>
</tr>
<tr>
<td>I don't know enough about it</td>
<td>18%</td>
</tr>
<tr>
<td>It is unproven</td>
<td>18%</td>
</tr>
<tr>
<td>The decision makers within the business do not understand it</td>
<td>17%</td>
</tr>
<tr>
<td>I'm worried about the political debate surrounding it (nationally /</td>
<td>14%</td>
</tr>
<tr>
<td>internationally)</td>
<td></td>
</tr>
<tr>
<td>There are concerns within the business about its links to health</td>
<td>14%</td>
</tr>
<tr>
<td>I can't identify a provider</td>
<td>14%</td>
</tr>
<tr>
<td>I don't understand the true benefits</td>
<td>13%</td>
</tr>
<tr>
<td>It won't benefit my business</td>
<td>12%</td>
</tr>
<tr>
<td>I don't understand it</td>
<td>9%</td>
</tr>
<tr>
<td>I don't believe it will bring benefits to the business</td>
<td>8%</td>
</tr>
<tr>
<td>None of the above</td>
<td>3%</td>
</tr>
</tbody>
</table>

**Q27. What do you see as barriers to 5G investment and implementation for your business?**  
**Base: 203**
How can they get there?
A lack of international specifications for 5G networks is holding back greater investment and implementation.

A set of international specifications to be agreed: 39%
Government investment in infrastructure: 38%
A better understanding of what it is / the benefits it can bring: 37%
Government subsidies to drive down costs: 36%
Increased number of 5G providers to ensure more buying options: 32%
A better understanding of who the best providers are: 31%
I don’t know: 2%
None of the above: 5%
5G maturity – the current picture

Over a third of Australian organizations are at the top end of 5G maturity (36%), with 5% at the highest level; 12% have lower 5G maturity; and 51% occupy a middle ground.
Finland
The COVID impact

Additional costs (40%), disrupted timelines (39%) and the emergence of new technology gaps (36%) have been the most prevalent impacts of COVID-19 on technology road maps.
Q. To what extent has the COVID-19 crisis accelerated your organization's digital transformation program?

- 5 = Significantly accelerated: 11%
- 4: 25%
- 3: 39%
- 2: 14%
- 1 = Not accelerated at all: 13%

36% have expedited their digital transformation program due to COVID-19.
Levels of understanding are still mixed
49% think there is a good understanding of 5G in their organization

Q. How would you describe the understanding of 5G in your business?

Base: 200
Q. Have you invested/or do you plan to invest in 5G?

Planning for 5G
11% are currently investing in 5G; with 67% planning investment in the next 5 years

- Currently investing in 5G: 11%
- Plan to invest in the next 12 months: 18%
- Plan to invest in the next 6 to 10 years: 18%
- Plan to invest in the next 1 to 5 years: 37%
- Do not have plans to invest in the next 10 years: 16%

Base: 200
A short or long-term approach?

43% of technology decision makers have a long term 5G strategy
Just under 1 in 5 have no strategy whatsoever (18%)

- We have a clear multi-year strategy: 17%
- We have an incomplete multi-year strategy: 26%
- We have a clear short-term strategy: 21%
- We have an incomplete, short-term strategy: 19%
- We have no strategy: 18%

43% have a long-term strategy
The risks of standing still

A quarter fear being outpaced by the competition should they not invest in 5G (27%), however 21% feel whatever their 5G investment they will still be successful.
Q5. Which of the following will your organization invest in over the next 2-3 years?

<table>
<thead>
<tr>
<th>Technology</th>
<th>No plans for future investment</th>
<th>Plans to make some investment by 2021</th>
<th>Plans to make significant investment by 2021</th>
<th>Plans to make some investment by 2023</th>
<th>Plans to make significant investment by 2023</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cybersecurity</td>
<td>11%</td>
<td>31%</td>
<td>32%</td>
<td>10%</td>
<td>14%</td>
<td>4%</td>
</tr>
<tr>
<td>End-user hardware (computers, mobile devices)</td>
<td>12%</td>
<td>21%</td>
<td>34%</td>
<td>19%</td>
<td>11%</td>
<td>4%</td>
</tr>
<tr>
<td>Predictive or real-time operations</td>
<td>13%</td>
<td>29%</td>
<td>24%</td>
<td>21%</td>
<td>11%</td>
<td>5%</td>
</tr>
<tr>
<td>Systems and process automation</td>
<td>10%</td>
<td>28%</td>
<td>25%</td>
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</tbody>
</table>

Total planning to invest:

- Cybersecurity: 11% (85% planned), 31% (84%), 32% (82%), 10% (81%), 14% (80%), 4% (78%)
- End-user hardware: 12% (84%), 21% (84%), 34% (82%), 19% (81%), 11% (80%), 4% (78%)
- Predictive or real-time operations: 13% (84%), 29% (82%), 24% (81%), 21% (80%), 11% (78%), 5% (78%)
- Systems and process automation: 10% (84%), 28% (82%), 25% (81%), 18% (80%), 12% (78%), 9% (78%)
- Cloud services / cloud migration: 10% (84%), 28% (82%), 32% (81%), 15% (80%), 7% (78%), 10% (78%)
- Analytics: 16% (84%), 28% (82%), 24% (81%), 15% (80%), 13% (78%), 6% (78%)
- AI (artificial intelligence) / machine learning: 20% (84%), 27% (82%), 23% (81%), 17% (80%), 9% (78%), 6% (78%)
- WAN/SD-WAN: 19% (84%), 28% (82%), 21% (81%), 17% (80%), 9% (78%), 8% (78%)
- Robotics: 23% (84%), 24% (82%), 19% (81%), 20% (80%), 10% (78%), 6% (78%)
- M2M (machine-to-machine): 25% (84%), 23% (82%), 22% (81%), 17% (80%), 9% (78%), 6% (78%)
- IoT (Internet of Things): 24% (84%), 24% (82%), 20% (81%), 18% (80%), 8% (78%), 8% (78%)
- AR / VR (augmented reality / virtual reality): 33% (84%), 19% (82%), 18% (81%), 19% (80%), 7% (78%), 6% (78%)

Base: 200

63% of technology buyers are planning to investment in cybersecurity in 2021
55% are planning to invest in end-user hardware in 2021
Q. Does your business have a C-level sponsor for 5G implementation?

35% have a C-level sponsor for 5G implementation in their organization.

A third (33%) don’t have any 5G championing from management.

- We have an engaged C-Level sponsor who has 5G objectives and a willingness to invest: 17%
- We have a C-Level sponsor who doesn't yet have 5G objective(s) and/or a willingness to invest: 18%
- We have senior sponsor (not C-Level) who is currently working to get C-Level engagement: 19%
- We have a champion outside the C-suite but don't have a senior sponsor willing to invest: 14%
- We don't have a sponsor: 33%

Base: 200
5G: Few are resting on their laurels
Businesses are more likely to feel that their industry is middling in terms of 5G adoption, with 14% setting a high benchmark.

As an industry we are setting a high benchmark for 5G adoption: 14%

Some players in our industry are leading the way, but this is not consistent: 23%

We are performing no better or worse than other sectors: 29%

Some players in our industry are falling behind, but this is not consistent: 13%

As an industry, we are falling behind: 15%

I don’t know: 9%
5G: Where next, post-COVID?

Only 4% are now implementing a clearer 5G investment plan due to COVID-19. 31% are still on hold.
Q. A comprehensive list of what 5G can do is impossible to put together because it’s not possible to predict every disruptive technology, app or unintended consequence of the network being introduced. To what extent does / will this prospect influence your decision to invest?

**5G: The benefits of the unknown**

The unknown potential of 5G being fully introduced is an influence on 34% of decision makers.
5G: What's stopping organizations?
Availability of 5G enabled products and lack of priority are the biggest barriers to 5G investment

Q. What do you see as barriers to 5G investment and implementation for your business?

- Availability of 5G-enabled products: 31%
- It is not a priority right now: 25%
- The costs are too high: 23%
- The decision makers within the business do not understand it: 19%
- I don't know enough about it: 18%
- Security risks: 17%
- Lack of coverage: 16%
- I don’t understand the true benefits: 12%
- I am not confident that we would be able to implement the associated technologies: 12%
- I don’t believe it will bring benefits to the business: 11%
- There are concerns within the business about its links to health: 11%
- I’m worried about the political debate surrounding it (nationally / internationally): 10%
- It is unproven: 9%
- It won’t benefit my business: 9%
- I can’t identify a provider: 8%
- I don’t understand it: 4%
- None of the above: 3%

Base: 200
How can they get there?
A lack of understanding of 5G and its benefits, and a lack of agreed international specifications are holding back greater investment and implementation.

Q. Which of the following would encourage you to invest more in 5G?

- A better understanding of what it is and the benefits it can bring: 33%
- A set of international specifications to be agreed for 5G networks: 33%
- Increased number of 5G providers to ensure more buying options: 30%
- Government subsidies to drive down costs: 26%
- Government investment in infrastructure: 24%
- A better understanding of who the best providers are: 21%
- I don’t know: 7%
- None of the above: 4%

Base: 200
5G maturity – the current picture

Over a fifth of Finnish organizations are at the top end of 5G maturity (22%), with 2% at the highest level; 21% have lower 5G maturity and 58% occupy a middle ground.
Germany
The COVID impact

Additional costs (40%), disrupted timelines (39%) and the emergence of new technology gaps (32%) have been the most prevalent impacts of COVID-19 on technology road maps.
Digital transformation - the COVID effect
35% have expediated their digital transformation program due to COVID-19

Q. To what extent has the COVID-19 crisis accelerated your organization's digital transformation program?

Base: 203
Levels of understanding are still mixed
53% think there is a good understanding of 5G in their organization

Q. How would you describe the understanding of 5G in your business?

Base: 203
Q. Have you invested/or do you plan to invest in 5G?

- Currently investing in 5G: 7%
- Plan to invest in the next 12 months: 22%
- Plan to invest in the next 6 to 10 years: 26%
- Plan to invest in the next 1 to 5 years: 29%
- Do not have plans to invest in the next 10 years: 16%

7% are currently investing in 5G; with 84% planning investment in the next 10 years.
A short or long-term approach?
43% of technology decision makers have a long term 5G strategy
Just under 1 in 5 have no strategy whatsoever (19%)

Q. What strategy do you have for 5G in your business?

- We have a clear multi-year strategy: 23%
- We have an incomplete multi-year strategy: 20%
- We have a clear short-term strategy: 25%
- We have an incomplete, short-term strategy: 12%
- We have no strategy: 19%

Base: 203
The risks of standing still

28% fear being outpaced by the competition should they not invest in 5G, however 29% feel whatever their 5G investment they will still be successful

Q. What will happen to your business if you don't invest in 5G in the next three years?

- 29% We will be more successful
- 28% We will be outpaced by the competition
- 20% We will fail to grow
- 13% We will shrink in size (revenue)
- 17% It will have no impact
- 14% Not sure

Base: 203
Q. Which of the following will your organization invest in over the next 2-3 years?

<table>
<thead>
<tr>
<th>Category</th>
<th>No plans for future investment</th>
<th>Plans to make some investment by 2021</th>
<th>Plans to make significant investment by 2021</th>
<th>Plans to make some investment by 2023</th>
<th>Plans to make significant investment by 2023</th>
<th>Don't know</th>
</tr>
</thead>
<tbody>
<tr>
<td>End-user hardware (computers, mobile…</td>
<td>4%</td>
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<td>35%</td>
<td>24%</td>
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<tr>
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<td>36%</td>
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<tr>
<td>Systems and process automation</td>
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<td>Predictive or real-time operations</td>
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<td>Cloud services / cloud migration</td>
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<td>IoT (Internet of Things)</td>
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<td>WAN/SD-WAN</td>
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<tr>
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<tr>
<td>Robotics</td>
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<td>AR / VR (augmented reality / virtual reality)</td>
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</tbody>
</table>

5G: the technology enabler

58% of technology buyers are planning to invest in cybersecurity in 2021
61% are planning to invest in end-user hardware in 2021

58% of technology buyers are planning to investment in cybersecurity in 2021
61% are planning to invest in end-user hardware in 2021

Base: 203
Q. Does your business have a C-level sponsor for 5G implementation?

Leading from the top?

45% don’t have a sponsor at all for 5G implementation in their organization.
Just over a quarter have a C-level sponsor (28%).

- 10% have an engaged C-Level sponsor who has 5G objectives and a willingness to invest.
- 18% have a C-Level sponsor who doesn't yet have 5G objective(s) and/or a willingness to invest.
- 21% have senior sponsor (not C-Level) who is currently working to get C-Level engagement.
- 6% have a champion outside the C-suite but don’t have a senior sponsor willing to invest.
- 45% don’t have a sponsor.

Base: 203
5G: Few are resting on their laurels
Businesses are more likely to feel that their industry is middling in terms of 5G adoption, with 6% setting a high benchmark.

- **As an industry we are setting a high benchmark for 5G adoption**: 6%
- **Some players in our industry are leading the way, but this is not consistent**: 24%
- **We are performing no better or worse than other sectors**: 32%
- **Some players in our industry are falling behind, but this is not consistent**: 14%
- **As an industry, we are falling behind**: 15%
- **I don’t know**: 9%

Q. Do you believe your industry is leading, or falling behind, in 5G adoption?  

Base: 203
Q. What impact has the coronavirus pandemic had on your 5G investment and / or implementation plans?  

<table>
<thead>
<tr>
<th>Impact Description</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>All plans have been put on hold until there is more certainty about the future.</td>
<td>4%</td>
</tr>
<tr>
<td>Plans were put on hold at the start of the pandemic and are now re-evaluating them for the future.</td>
<td>15%</td>
</tr>
<tr>
<td>Plans were put on hold at the start of the pandemic; having reviewed them, they are no longer fit for purpose.</td>
<td>11%</td>
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<tr>
<td>We have a clearer view of how we need to evolve but are unable to make any firm planning commitments until we have more certainty about the future.</td>
<td>22%</td>
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<td>We have a clearer view of how we need to evolve and are in the process of developing this plan.</td>
<td>18%</td>
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<tr>
<td>We have a clearer view of how we need to evolve and are in the process of implementing this plan.</td>
<td>10%</td>
</tr>
<tr>
<td>Coronavirus has not made any impact on our plans for 5G investment and / or implementation.</td>
<td>9%</td>
</tr>
<tr>
<td>We have no plans for 5G investment or implementation.</td>
<td>11%</td>
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</tbody>
</table>
Just under a third (29%) say the unknown potential of 5G is an influence on their decision to invest.
Q. What do you see as barriers to 5G investment and implementation for your business?

- The costs are too high: 24%
- It is not a priority right now: 21%
- Availability of 5G-enabled products: 20%
- Security risks: 14%
- Lack of coverage: 13%
- I’m worried about the political debate surrounding it (nationally / internationally): 13%
- None of the above: 12%
- It won’t benefit my business: 12%
- It is unproven: 11%
- I am not confident that we would be able to implement the associated technologies: 11%
- I don’t believe it will bring benefits to the business: 11%
- The decision makers within the business do not understand it: 10%
- I don’t understand the true benefits: 8%
- There are concerns within the business about its links to health: 8%
- I don’t know enough about it: 8%
- I can’t identify a provider: 6%
- I don’t understand it: 2%

Costs and a lack of priority are the biggest barriers to 5G investment.
How can they get there?
A lack of 5G providers in the marketplace is holding back greater investment and implementation.

Q. Which of the following would encourage you to invest more in 5G?

- Increased number of 5G providers to ensure more buying options: 35%
- Government subsidies to drive down costs: 31%
- Government investment in infrastructure: 31%
- A better understanding of what it is and the benefits it can bring: 26%
- A set of international specifications to be agreed for 5G networks: 23%
- A better understanding of who the best providers are: 22%
- None of the above: 8%
- I don’t know: 3%

Base: 203
5G maturity – the current picture

Over half of German organizations occupy a 5G middle-ground of readiness; 23% have lower 5G maturity; and are at the top end of 5G maturity (23%), with 3% at the highest level.
The COVID impact
Disrupted timelines (49%), changing strategic priorities (41%) and additional costs (41%) have been the most prevalent impacts of COVID-19 on technology road maps.

Q. Has COVID-19 highlighted any of the following deficiencies in your technology road map?

- Disrupted timelines: 49%
- Our strategic priorities have changed and our IT projects no longer align: 41%
- Additional costs: 41%
- Our tech investments are not flexible enough: 39%
- New technology gaps have emerged: 39%
- Other: 0%
- None of the above: 7%

Base: 203
Q. To what extent has the COVID-19 crisis accelerated your organization's digital transformation program?

- 5 = Significantly accelerated: 18%
- 4 = Significantly accelerated: 31%
- 3 = Significantly accelerated: 33%
- 2 = Not accelerated at all: 9%
- 1 = Not accelerated at all: 9%

Base: 203

49% have expedited their digital transformation program due to COVID-19
Levels of understanding are still mixed

45% think there is a good understanding of 5G in their organization

Q. How would you describe the understanding of 5G in your business?

Base: 203
Q. Have you invested/or do you plan to invest in 5G?

Planning for 5G
18% are currently investing in 5G; with 70% planning investment in the next 5 years

- Currently investing in 5G: 18%
- Do not have plans to invest in the next 10 years: 15%
- Plan to invest in the next 6 to 10 years: 14%
- Plan to invest in the next 1 to 5 years: 37%
- Plan to invest in the next 12 months: 16%
A short or long-term approach?
53% of technology decision makers have a long term 5G strategy
1 in 5 have no strategy whatsoever (19%)

Q. What strategy do you have for 5G in your business?

- **We have a clear multi-year strategy**: 24%
- **We have an incomplete multi-year strategy**: 29%
- **We have a clear short-term strategy**: 17%
- **We have an incomplete, short-term strategy**: 11%
- **We have no strategy**: 19%

Base: 203
Q. What will happen to your business if you don't invest in 5G in the next three years?

2 in 5 fear being outpaced by the competition should they not invest in 5G, however 32% feel whatever their 5G investment they will still be successful.
5G: the technology enabler

53% of technology buyers are planning to invest in cybersecurity in 2021; 50% are planning to invest in end-user hardware in 2021, and another 50% in systems and process automation.

<table>
<thead>
<tr>
<th>Total planning to invest</th>
<th>No plans for future investment</th>
<th>Plans to make some investment by 2021</th>
<th>Plans to make significant investment by 2021</th>
<th>Plans to make some investment by 2023</th>
<th>Plans to make significant investment by 2023</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cybersecurity</strong></td>
<td>9%</td>
<td>26%</td>
<td>27%</td>
<td>18%</td>
<td>16%</td>
<td>4%</td>
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<tr>
<td><strong>Systems and process automation</strong></td>
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<td>25%</td>
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<tr>
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<td>26%</td>
<td>16%</td>
<td>18%</td>
<td>19%</td>
<td>11%</td>
<td>9%</td>
</tr>
</tbody>
</table>

Q. Which of the following will your organization invest in over the next 2-3 years?

Base: 203
Q. Does your business have a C-level sponsor for 5G implementation?

- 42% have a C-level sponsor for 5G implementation in their organization.
- 24% don’t have any 5G championing from management.

- 21% have an engaged C-Level sponsor who has 5G objectives and a willingness to invest.
- 21% have a C-Level sponsor who doesn't yet have 5G objective(s) and/or a willingness to invest.
- 19% have a senior sponsor (not C-Level) who is currently working to get C-Level engagement.
- 15% have a champion outside the C-suite but don't have a senior sponsor willing to invest.
- 24% don't have a sponsor.
Q. Do you believe your industry is leading, or falling behind, in 5G adoption?

As an industry we are setting a high benchmark for 5G adoption: 18%

Some players in our industry are leading the way, but this is not consistent: 21%

We are performing no better or worse than other sectors: 24%

Some players in our industry are falling behind, but this is not consistent: 15%

As an industry, we are falling behind: 12%

I don’t know: 9%

Base: 203
Q. What impact has the coronavirus pandemic had on your 5G investment and/or implementation plans?

- All plans have been put on hold until there is more certainty about the future: 7%
- Plans were put on hold at the start of the pandemic and we are now re-evaluating them for the future: 16%
- Plans were put on hold at the start of the pandemic; having reviewed them, they are no longer fit for purpose: 14%
- We have a clearer view of how we need to evolve but are unable to make any firm planning commitments until we have more certainty about the future: 14%
- We have a clearer view of how we need to evolve and are in the process of developing this plan: 19%
- We have a clearer view of how we need to evolve and are in the process of implementing this plan: 11%
- Coronavirus has not made any impact on our plans for 5G investment and/or implementation: 5%
- We have no plans for 5G investment or implementation: 13%

Base: 203

1 in 10 (11%) are now implementing a clearer 5G investment plan due to COVID-19. 37% are still on hold.
Q. A comprehensive list of what 5G can do is impossible to put together because it’s not possible to predict every disruptive technology, app or unintended consequence of the network being introduced. To what extent does / will this prospect influence your decision to invest?

Base: 203

5G: The benefits of the unknown

The unknown potential of 5G being fully introduced is an influence on 45% of decision makers.
Q. What do you see as barriers to 5G investment and implementation for your business?

Lack of 5G priority and costs are the biggest barriers to 5G investment.
How can they get there?
A lack of understanding of 5G is holding back greater investment and implementation.

Q. Which of the following would encourage you to invest more in 5G?

- A better understanding of what it is and the benefits it can bring: 46%
- Increased number of 5G providers to ensure more buying options: 38%
- Government subsidies to drive down costs: 37%
- A set of international specifications to be agreed for 5G networks: 34%
- Government investment in infrastructure: 33%
- A better understanding of who the best providers are: 25%
- I don’t know: 5%
- None of the above: 4%

Base: 203
5G maturity – the current picture

Over a third of Japanese organizations are at the top end of 5G maturity (37%), with 7% at the highest level; 22% have lower 5G maturity; and 41% occupy a middle ground.
Saudi Arabia
The COVID impact

Additional costs (49%), the emergence of new technology gaps (42%), and misaligned IT projects due to different strategic priorities (41%) have been the most prevalent impacts of COVID-19 on technology road maps.

- Additional costs: 49%
- New technology gaps have emerged: 42%
- Our strategic priorities have changed and our IT projects no longer align: 41%
- Disrupted timelines: 30%
- Our tech investments are not flexible enough: 29%
- None of the above: 4%
- Other: 0%
Q. To what extent has the COVID-19 crisis accelerated your organization's digital transformation program?

Base: 202
Levels of understanding are still mixed
62% think there is a good understanding of 5G in their organization
Planning for 5G

15% are currently investing in 5G; with 71% planning investment in the next 5 years

Q. Have you invested/or do you plan to invest in 5G?

- Currently investing in 5G: 15%
- Do not have plans to invest in the next 10 years: 10%
- Plan to invest in the next 1 to 5 years: 25%
- Plan to invest in the next 6 to 10 years: 18%
- Plan to invest in the next 12 months: 32%
A short or long-term approach?

47% of technology decision makers have a long term 5G strategy
Just under 1 in 10 have no strategy whatsoever (8%)

- We have a clear multi-year strategy: 30%
- We have an incomplete multi-year strategy: 17%
- We have a clear short-term strategy: 33%
- We have an incomplete, short-term strategy: 11%
- We have no strategy: 8%

Q. What strategy do you have for 5G in your business?

Base: 202
The risks of standing still
Over a quarter fear they will fail to grow should they not invest in 5G (28%), however 26% feel whatever their 5G investment they will still be successful.

Q. What will happen to your business if you don’t invest in 5G in the next three years?

- We will fail to grow: 28%
- We will be more successful: 26%
- We will be outpaced by the competition: 25%
- We will shrink in size (revenue): 20%
- Not sure: 13%
- It will have no impact: 6%

Base: 202
5G: the technology enabler

68% of technology buyers are planning to invest in cybersecurity in 2021
65% are planning to invest in end-user hardware in 2021

Q. Which of the following will your organization invest in over the next 2–3 years?

- End-user hardware (computers, mobile devices, …)
- Cybersecurity
- WAN/SD-WAN
- Cloud services / cloud migration
- M2M (machine-to-machine)
- Analytics
- IoT (Internet of Things)
- Systems and process automation
- Predictive or real-time operations
- AI (artificial intelligence) / machine learning
- AR / VR (augmented reality / virtual reality)
- Robotics

Total planning to invest (2021 or 2023)

- No plans for future investment: 97%
- Plans to make some investment by 2021: 95%
- Plans to make a significant investment by 2021: 93%
- Plans to make some investment by 2023: 93%
- Plans to make a significant investment by 2023: 92%
- Don’t know: 91%

- Plans to make some investment by 2021: 91%
- Plans to make a significant investment by 2021: 90%
- Plans to make some investment by 2023: 90%
- Plans to make a significant investment by 2023: 86%
- Don’t know: 85%

- Plans to make some investment by 2021: 78%
- Plans to make a significant investment by 2021: 78%

68% of technology buyers are planning to invest in cybersecurity in 2021
65% are planning to invest in end-user hardware in 2021
Q. Does your business have a C-level sponsor for 5G implementation?

- We don't have a sponsor (11%)
- We have a champion outside the C-suite but don’t have a senior sponsor willing to invest (7%)
- We have senior sponsor (not C-Level) who is currently working to get C-Level engagement (28%)
- We have a C-Level sponsor who doesn’t yet have 5G objective(s) and/or a willingness to invest (19%)
- We have an engaged C-Level sponsor who has 5G objectives and a willingness to invest (35%)

54% have a C-level sponsor for 5G implementation in their organization.
Only 1 in 10 don’t have any 5G championing from management (11%).
5G: Few are resting on their laurels

Businesses are more likely to feel that only some players in their industry are leading the way in terms of 5G adoption (30%), while 25% believe they themselves are setting a high benchmark.
### 5G: Where next, post-COVID?

Over 1 in 10 (13%) are now implementing a clearer 5G investment plan due to COVID-19. 31% are still on hold.

<table>
<thead>
<tr>
<th>31%</th>
<th>24%</th>
<th>22%</th>
<th>13%</th>
<th>5%</th>
<th>5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>All plans have been put on hold until there is more certainty about the future</td>
<td>Plans were put on hold at the start of the pandemic and we are now re-evaluating them for the future</td>
<td>Plans were put on hold at the start of the pandemic; having reviewed them, they are no longer fit for purpose</td>
<td>We have a clearer view of how we need to evolve but are unable to make any firm planning commitments until we have more certainty about the future</td>
<td>We have a clearer view of how we need to evolve and are in the process of developing this plan</td>
<td>We have a clearer view of how we need to evolve and are in the process of implementing this plan</td>
</tr>
</tbody>
</table>

Q. What impact has the coronavirus pandemic had on your 5G investment and/or implementation plans?  

Base: 202
Q. A comprehensive list of what 5G can do is impossible to put together because it’s not possible to predict every disruptive technology, app or unintended consequence of the network being introduced. To what extent does / will this prospect influence your decision to invest?

Base: 202
Q. What do you see as barriers to 5G investment and implementation for your business?

Base: 202

- Availability of 5G-enabled products: 35%
- The costs are too high: 31%
- Lack of coverage: 28%
- Security risks: 27%
- I'm worried about the political debate surrounding it (nationally / internationally): 25%
- There are concerns within the business about its links to health: 20%
- The decision makers within the business do not understand it: 17%
- It is unproven: 16%
- It is not a priority right now: 16%
- I can't identify a provider: 15%
- I am not confident that we would be able to implement the associated technologies: 15%
- It won't benefit my business: 11%
- I don't believe it will bring benefits to the business: 10%
- I don't know enough about it: 10%
- I don't understand the true benefits: 9%
- None of the above: 6%
- I don't understand it: 5%
How can they get there?

A lack of international specifications agreed for 5G networks is holding back greater investment and implementation.

A set of international specifications to be agreed for 5G networks - 52%
Increased number of 5G providers to ensure more buying options - 48%
Government investment in infrastructure - 44%
A better understanding of who the best providers are - 42%
A better understanding of what it is and the benefits it can bring - 40%
Government subsidies to drive down costs - 32%
I don’t know - 3%
None of the above - 0%

Q. Which of the following would encourage you to invest more in 5G?

Base: 202
5G maturity – the current picture

Nearly half of Saudi Arabian organizations are at the top end of 5G maturity (47%), with 13% at the highest level; 10% have lower 5G maturity; and 43% occupy a middle ground.
South Korea
The COVID impact
Additional costs (51%), the emergence of new technology gaps (46%) and disrupted timelines (45%) have been the most prevalent impacts of COVID-19 on technology road maps.

Q. Has COVID-19 highlighted any of the following deficiencies in your technology road map?

- Additional costs: 51%
- New technology gaps have emerged: 46%
- Disrupted timelines: 45%
- Our tech investments are not flexible enough: 40%
- Our strategic priorities have changed and our IT projects no longer align: 35%
- Other: 5%
- None of the above: 5%

Base: 200
Digital transformation - the COVID effect

47% have expediated their digital transformation program due to COVID-19

Q. To what extent has the COVID-19 crisis accelerated your organization's digital transformation program?

Base: 200
Levels of understanding are still mixed
49% think there is a good understanding of 5G in their organization

Q. How would you describe the understanding of 5G in your business?

Base: 200
Planning for 5G
21% are currently investing in 5G; with 94% planning investment in the next 10 years

Q. Have you invested/or do you plan to invest in 5G?

- Currently investing in 5G: 21%
- Plan to invest in the next 1 to 5 years: 42%
- Plan to invest in the next 6 to 10 years: 10%
- Plan to invest in the next 12 months: 20%
- Do not have plans to invest in the next 10 years: 7%

Base: 200
A short or long-term approach?

48% of technology decision makers have a long term 5G strategy
Just under 1 in 10 have no strategy whatsoever (8%)

- We have a clear multi-year strategy: 28%
- We have an incomplete multi-year strategy: 20%
- We have a clear short-term strategy: 28%
- We have an incomplete, short-term strategy: 17%
- We have no strategy: 8%

48% have a long-term strategy

Q. What strategy do you have for 5G in your business?

Base: 200
The risks of standing still

Almost half fear being outpaced by the competition should they not invest in 5G (46%), however 37% feel whatever their 5G investment they will still be successful

- We will be outpaced by the competition: 46%
- We will be more successful: 37%
- We will shrink in size (revenue): 36%
- We will fail to grow: 34%
- Not sure: 5%
- It will have no impact: 5%

Q. What will happen to your business if you don’t invest in 5G in the next three years? Base: 200
5G: the technology enabler

51% of technology buyers are planning to invest in predictive or real-time operations in 2021.
50% are planning to invest in end-user hardware in 2021.

Q. Which of the following will your organization invest in over the next 2-3 years?

- **Robotics**
- **AR / VR (augmented reality / virtual reality)**
- **AI (artificial intelligence) / machine learning**
- **M2M (machine-to-machine)**
- **WAN/SD-WAN**
- **Predicative or real-time operations**
- **IoT (Internet of Things)**
- **Analytics**
- **Cloud services / cloud migration**
- **Cybersecurity**
- **End-user hardware (computers, mobile...)**
- **Systems and process automation**

<table>
<thead>
<tr>
<th>Category</th>
<th>No plans for future investment</th>
<th>Plans to make some investment by 2021</th>
<th>Plans to make significant investment by 2021</th>
<th>Plans to make some investment by 2023</th>
<th>Plans to make significant investment by 2023</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Systems and process automation</td>
<td>5%</td>
<td>20%</td>
<td>29%</td>
<td>19%</td>
<td>2%</td>
<td></td>
</tr>
<tr>
<td>Cybersecurity</td>
<td>8%</td>
<td>16%</td>
<td>26%</td>
<td>24%</td>
<td>26%</td>
<td>1%</td>
</tr>
<tr>
<td>End-user hardware (computers, mobile…)</td>
<td>6%</td>
<td>20%</td>
<td>30%</td>
<td>24%</td>
<td>18%</td>
<td>3%</td>
</tr>
<tr>
<td>Cloud services / cloud migration</td>
<td>9%</td>
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<td>23%</td>
<td>33%</td>
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<td>2%</td>
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<tr>
<td>Analytics</td>
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<td>29%</td>
<td>27%</td>
<td>20%</td>
<td>3%</td>
</tr>
<tr>
<td>IoT (Internet of Things)</td>
<td>10%</td>
<td>18%</td>
<td>27%</td>
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<td>32%</td>
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<td>16%</td>
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<tr>
<td>WAN/SD-WAN</td>
<td>11%</td>
<td>23%</td>
<td>26%</td>
<td>25%</td>
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<td>3%</td>
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<tr>
<td>M2M (machine-to-machine)</td>
<td>13%</td>
<td>19%</td>
<td>27%</td>
<td>27%</td>
<td>13%</td>
<td>3%</td>
</tr>
<tr>
<td>AI (artificial intelligence) / machine learning</td>
<td>15%</td>
<td>12%</td>
<td>25%</td>
<td>24%</td>
<td>23%</td>
<td>2%</td>
</tr>
<tr>
<td>AR / VR (augmented reality / virtual reality)</td>
<td>15%</td>
<td>18%</td>
<td>25%</td>
<td>26%</td>
<td>15%</td>
<td>3%</td>
</tr>
<tr>
<td>Robotics</td>
<td>15%</td>
<td>21%</td>
<td>21%</td>
<td>25%</td>
<td>16%</td>
<td>4%</td>
</tr>
</tbody>
</table>

Total planning to invest:
- 93%
- 91%
- 91%
- 89%
- 88%
- 88%
- 87%
- 86%
- 84%
- 83%
- 82%
- 81%

Base: 200
Q. Does your business have a C-level sponsor for 5G implementation?

43% have a C-level sponsor for 5G implementation in their organization
Only 1 in 10 don’t have any 5G championing from management (8%)

<table>
<thead>
<tr>
<th>Response</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>We have an engaged C-Level sponsor who has 5G objectives and a willingness to invest</td>
<td>20%</td>
</tr>
<tr>
<td>We have a C-Level sponsor who doesn't yet have 5G objective(s) and/or a willingness to invest</td>
<td>23%</td>
</tr>
<tr>
<td>We have senior sponsor (not C-Level) who is currently working to get C-Level engagement</td>
<td>27%</td>
</tr>
<tr>
<td>We have a champion outside the C-suite but don't have a senior sponsor willing to invest</td>
<td>23%</td>
</tr>
<tr>
<td>We don't have a sponsor</td>
<td>8%</td>
</tr>
</tbody>
</table>

Base: 200
Do you believe your industry is leading, or falling behind, in 5G adoption?

- As an industry we are setting a high benchmark for 5G adoption: 14%
- Some players in our industry are leading the way, but this is not consistent: 30%
- We are performing no better or worse than other sectors: 30%
- Some players in our industry are falling behind, but this is not consistent: 18%
- As an industry, we are falling behind: 8%
- I don’t know: 2%

Base: 200
Q. What impact has the coronavirus pandemic had on your 5G investment and/or implementation plans?

Over 1 in 10 (14%) are now implementing a clearer 5G investment plan due to COVID-19. 29% are still on hold.

- 5% of respondents have put all plans on hold until there is more certainty about the future.
- 11% have put plans on hold at the start of the pandemic and are now re-evaluating them for the future.
- 13% have put plans on hold at the start of the pandemic; having reviewed them, they are no longer fit for purpose.
- 24% have a clearer view of how they need to evolve but are unable to make any firm planning commitments until they have more certainty about the future.
- 27% have a clearer view of how they need to evolve and are in the process of developing this plan.
- 14% have a clearer view of how they need to evolve and are in the process of implementing this plan.
- 6% have a clearer view of how they need to evolve and are in the process of implementing this plan.
- 3% have made any impact on their plans for 5G investment and/or implementation.
- 3% have no plans for 5G investment or implementation.

Base: 200
Q. A comprehensive list of what 5G can do is impossible to put together because it’s not possible to predict every disruptive technology, app or unintended consequence of the network being introduced. To what extent does / will this prospect influence your decision to invest? Base: 200

- **2%** 1 = No influence at all
- **11%** 2
- **28%** 3
- **43%** 4
- **17%** 5 = Significant influence

**5G: The benefits of the unknown**

The unknown potential of 5G being fully introduced is an influence on 45% of decision makers.
Q. What do you see as barriers to 5G investment and implementation for your business?

Base: 200

The costs are too high: 32%
Availability of 5G-enabled products: 29%
I’m worried about the political debate surrounding it (nationally / internationally): 26%
Security risks: 25%
It is not a priority right now: 24%
The decision makers within the business do not understand it: 24%
I am not confident that we would be able to implement the associated technologies: 20%
I don’t believe it will bring benefits to the business: 18%
It is unproven: 18%
I don’t know enough about it: 18%
It won’t benefit my business: 18%
Lack of coverage: 18%
I can’t identify a provider: 17%
There are concerns within the business about its links to health: 17%
I don’t understand the true benefits: 15%
I don’t understand it: 11%
None of the above: 3%
How can they get there?
A lack of understanding of 5G and its benefits, and a lack of 5G providers are holding back greater investment and implementation.

Q. Which of the following would encourage you to invest more in 5G?

- A better understanding of what it is and the benefits it can bring: 46%
- Increased number of 5G providers to ensure more buying options: 46%
- A set of international specifications to be agreed for 5G networks: 44%
- Government subsidies to drive down costs: 39%
- Government investment in infrastructure: 32%
- A better understanding of who the best providers are: 27%
- I don’t know: 1%
- None of the above: 3%

Base: 200
Two in five South Korean organizations are at the top end of 5G maturity (40%), with 10% at the highest level; 13% have lower 5G maturity; and 48% occupy a middle ground.
The COVID impact

Additional costs (44%), disrupted timelines (42%) and the emergence of new technology gaps (38%) have been the most prevalent impacts of COVID-19 on technology road maps.
Q. To what extent has the COVID-19 crisis accelerated your organization's digital transformation program?

<table>
<thead>
<tr>
<th>Response</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 = Significantly accelerated</td>
<td>12%</td>
</tr>
<tr>
<td>4</td>
<td>31%</td>
</tr>
<tr>
<td>3</td>
<td>36%</td>
</tr>
<tr>
<td>2</td>
<td>13%</td>
</tr>
<tr>
<td>1 = Not accelerated at all</td>
<td>9%</td>
</tr>
</tbody>
</table>

43% have expedited their digital transformation program due to COVID-19.

Base: 207
Levels of understanding are still mixed

48% think there is a good understanding of 5G in their organization

Q. How would you describe the understanding of 5G in your business?

1 = Very poor understanding
2 = Poor understanding
3 = Average understanding
4 = Good understanding
5 = Very good understanding

- 5 = Very good understanding: 17%
- 4 = Good understanding: 31%
- 3 = Average understanding: 38%
- 2 = Poor understanding: 8%
- 1 = Very poor understanding: 5%

Base: 207
Q. Have you invested/or do you plan to invest in 5G?

Planning for 5G
10% are currently investing in 5G; with 65% planning investment in the next 5 years

- Currently investing in 5G: 10%
- Plan to invest in the next 12 months: 14%
- Plan to invest in the next 1 to 5 years: 42%
- Plan to invest in the next 6 to 10 years: 20%
- Do not have plans to invest in the next 10 years: 14%

Base: 207
A short or long-term approach?

33% of technology decision makers have a long term 5G strategy
Just over 1 in 7 have no strategy whatsoever (15%)

- We have a clear multi-year strategy: 12%
- We have an incomplete multi-year strategy: 21%
- We have a clear short-term strategy: 36%
- We have an incomplete, short-term strategy: 15%
- We have no strategy: 15%

Q. What strategy do you have for 5G in your business?

Base: 207
The risks of standing still

Nearly 1 in 3 fear being outpaced by the competition should they not invest in 5G, however 23% feel whatever their 5G investment they will still be successful.

- We will be outpaced by the competition: 30%
- We will be more successful: 23%
- We will fail to grow: 21%
- We will shrink in size (revenue): 19%
- Not sure: 14%
- It will have no impact: 13%

Q. What will happen to your business if you don't invest in 5G in the next three years? Base: 207
Q. Which of the following will your organization invest in over the next 2-3 years?

5G: the technology enabler

73% of technology buyers are planning to investment in cybersecurity in 2021
67% are planning to invest in end-user hardware in 2021

<table>
<thead>
<tr>
<th>Area</th>
<th>No plans for future investment</th>
<th>Plans to make some investment by 2021</th>
<th>Plans to make significant investment by 2021</th>
<th>Plans to make some investment by 2023</th>
<th>Plans to make significant investment by 2023</th>
<th>Don't know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cybersecurity</td>
<td>4%</td>
<td>36%</td>
<td>37%</td>
<td>11%</td>
<td>9%</td>
<td>3%</td>
</tr>
<tr>
<td>End-user hardware (computers, mobile...)</td>
<td>6%</td>
<td>32%</td>
<td>35%</td>
<td>17%</td>
<td>7%</td>
<td>3%</td>
</tr>
<tr>
<td>Cloud services / cloud migration</td>
<td>7%</td>
<td>39%</td>
<td>31%</td>
<td>14%</td>
<td>6%</td>
<td>2%</td>
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<tr>
<td>Analytics</td>
<td>12%</td>
<td>36%</td>
<td>29%</td>
<td>13%</td>
<td>8%</td>
<td>2%</td>
</tr>
<tr>
<td>Systems and process automation</td>
<td>12%</td>
<td>34%</td>
<td>30%</td>
<td>14%</td>
<td>6%</td>
<td>3%</td>
</tr>
<tr>
<td>Predictive or real-time operations</td>
<td>17%</td>
<td>34%</td>
<td>22%</td>
<td>17%</td>
<td>5%</td>
<td>4%</td>
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<tr>
<td>IoT (Internet of Things)</td>
<td>17%</td>
<td>32%</td>
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<td>14%</td>
<td>7%</td>
<td>4%</td>
</tr>
<tr>
<td>WAN/SD-WAN</td>
<td>19%</td>
<td>33%</td>
<td>24%</td>
<td>16%</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>AI (artificial intelligence) / machine learning</td>
<td>21%</td>
<td>30%</td>
<td>23%</td>
<td>16%</td>
<td>7%</td>
<td>2%</td>
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<tr>
<td>M2M (machine-to-machine)</td>
<td>24%</td>
<td>34%</td>
<td>23%</td>
<td>16%</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Robotics</td>
<td>30%</td>
<td>26%</td>
<td>19%</td>
<td>14%</td>
<td>6%</td>
<td>5%</td>
</tr>
<tr>
<td>AR / VR (augmented reality / virtual reality)</td>
<td>34%</td>
<td>24%</td>
<td>19%</td>
<td>15%</td>
<td>5%</td>
<td>3%</td>
</tr>
</tbody>
</table>

Base: 207

73% of technology buyers are planning to investment in cybersecurity in 2021
67% are planning to invest in end-user hardware in 2021

73% of technology buyers are planning to investment in cybersecurity in 2021
67% are planning to invest in end-user hardware in 2021
Q. Does your business have a C-level sponsor for 5G implementation?

Base: 207

37% have a C-level sponsor for 5G implementation in their organization.

A quarter don't have any 5G championing from management (25%).

- We have an engaged C-Level sponsor who has 5G objectives and a willingness to invest: 14%
- We have a C-Level sponsor who doesn't yet have 5G objective(s) and/or a willingness to invest: 23%
- We have senior sponsor (not C-Level) who is currently working to get C-Level engagement: 30%
- We have a champion outside the C-suite but don't have a senior sponsor willing to invest: 8%
- We don't have a sponsor: 25%
5G: Few are resting on their laurels

Businesses are more likely to feel that their industry is middling in terms of 5G adoption, with 10% setting a high benchmark.

- As an industry we are setting a high benchmark for 5G adoption: 10%
- Some players in our industry are leading the way, but this is not consistent: 22%
- We are performing no better or worse than other sectors: 42%
- Some players in our industry are falling behind, but this is not consistent: 16%
- As an industry, we are falling behind: 7%
- I don’t know: 3%

Q. Do you believe your industry is leading, or falling behind, in 5G adoption? Base: 207
5G: Where next, post-COVID?

Just 4% are now implementing a clearer 5G investment plan due to COVID-19. 38% are still on hold.
5G: The benefits of the unknown
42% are influenced by the unknown potential of 5G in their investment decision

Q. A comprehensive list of what 5G can do is impossible to put together because it’s not possible to predict every disruptive technology, app or unintended consequence of the network being introduced. To what extent does / will this prospect influence your decision to invest?

Base: 207
5G: What's stopping organizations?

Availability of 5G enabled products and security risks are the biggest barriers to 5G investment

<table>
<thead>
<tr>
<th>Barrier</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability of 5G-enabled products</td>
<td>29%</td>
</tr>
<tr>
<td>Security risks</td>
<td>23%</td>
</tr>
<tr>
<td>It is not a priority right now</td>
<td>20%</td>
</tr>
<tr>
<td>Lack of coverage</td>
<td>18%</td>
</tr>
<tr>
<td>I’m worried about the political debate surrounding it (nationally / internationally)</td>
<td>17%</td>
</tr>
<tr>
<td>The costs are too high</td>
<td>17%</td>
</tr>
<tr>
<td>The decision makers within the business do not understand it</td>
<td>14%</td>
</tr>
<tr>
<td>I don’t know enough about it</td>
<td>12%</td>
</tr>
<tr>
<td>It is unproven</td>
<td>12%</td>
</tr>
<tr>
<td>I am not confident that we would be able to implement the associated technologies</td>
<td>12%</td>
</tr>
<tr>
<td>There are concerns within the business about its links to health</td>
<td>11%</td>
</tr>
<tr>
<td>I don’t understand the true benefits</td>
<td>9%</td>
</tr>
<tr>
<td>It won’t benefit my business</td>
<td>8%</td>
</tr>
<tr>
<td>I can’t identify a provider</td>
<td>7%</td>
</tr>
<tr>
<td>I don’t believe it will bring benefits to the business</td>
<td>7%</td>
</tr>
<tr>
<td>I don’t understand it</td>
<td>6%</td>
</tr>
<tr>
<td>None of the above</td>
<td>5%</td>
</tr>
</tbody>
</table>

Q. What do you see as barriers to 5G investment and implementation for your business?

Base: 207
How can they get there?

More Government support in terms of both investment in infrastructure and subsidies to drive down costs would boost investment in 5G, as well as an increased number of providers.

- Government investment in infrastructure: 38%
- Increased number of 5G providers to ensure more buying options: 32%
- Government subsidies to drive down costs: 32%
- A better understanding of what it is and the benefits it can bring: 29%
- A set of international specifications to be agreed for 5G networks: 27%
- A better understanding of who the best providers are: 27%
- None of the above: 4%
- I don’t know: 3%

Q. Which of the following would encourage you to invest more in 5G?

Base: 207
A fifth of British organizations are at the top end of 5G maturity (20%), with 4% at the highest level; 22% have lower 5G maturity; and 58% occupy a middle ground.
United States
The COVID impact

Additional costs (44%), disrupted timelines (42%) and the emergence of new technology gaps (38%) have been the most prevalent impacts of COVID-19 on technology road maps.

- Additional costs: 42%
- New technology gaps have emerged: 38%
- Disrupted timelines: 37%
- Our strategic priorities have changed and our IT projects no longer align: 30%
- Our tech investments are not flexible enough: 26%
- None of the above: 6%
- Other: 0%
Q. To what extent has the COVID-19 crisis accelerated your organization's digital transformation program?

Base: 210
Q. How would you describe the understanding of 5G in your business?

Levels of understanding are still mixed

62% think there is a good understanding of 5G in their organization

1 = Very poor understanding
2 = 10%
3 = Good understanding
4 = 30%
5 = Very good understanding
3 = 33%

11% have a poor understanding
62% have a good understanding

Base: 210
Planning for 5G

20% are currently investing in 5G; with 79% planning investment in the next 5 years.
A short or long-term approach?

43% of technology decision makers have a long term 5G strategy

Just over 1 in 10 have no strategy whatsoever (11%)

Q. What strategy do you have for 5G in your business?

- We have a clear multi-year strategy: 23%
- We have an incomplete multi-year strategy: 20%
- We have a clear short-term strategy: 31%
- We have an incomplete, short-term strategy: 15%
- We have no strategy: 11%

Base: 210
The risks of standing still
Over a third fear being outpaced by the competition should they not invest in 5G, however 27% feel whatever their 5G investment they will still be successful.
Q. Which of the following will your organization invest in over the next 2-3 years?

<table>
<thead>
<tr>
<th>Technology</th>
<th>No plans for future investment</th>
<th>Plans to make some investment by 2021</th>
<th>Plans to make significant investment by 2021</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>End-user hardware (computers, mobile...)</td>
<td>6%</td>
<td>35%</td>
<td>34%</td>
<td>16%</td>
</tr>
<tr>
<td>Systems and process automation</td>
<td>6%</td>
<td>40%</td>
<td>30%</td>
<td>12%</td>
</tr>
<tr>
<td>Predictive or real-time operations</td>
<td>7%</td>
<td>35%</td>
<td>26%</td>
<td>16%</td>
</tr>
<tr>
<td>Cybersecurity</td>
<td>8%</td>
<td>33%</td>
<td>37%</td>
<td>13%</td>
</tr>
<tr>
<td>Cloud services / cloud migration</td>
<td>8%</td>
<td>34%</td>
<td>35%</td>
<td>15%</td>
</tr>
<tr>
<td>Analytics</td>
<td>9%</td>
<td>28%</td>
<td>32%</td>
<td>20%</td>
</tr>
<tr>
<td>IoT (Internet of Things)</td>
<td>15%</td>
<td>33%</td>
<td>27%</td>
<td>13%</td>
</tr>
<tr>
<td>WAN/SD-WAN</td>
<td>16%</td>
<td>34%</td>
<td>24%</td>
<td>13%</td>
</tr>
<tr>
<td>M2M (machine-to-machine)</td>
<td>21%</td>
<td>30%</td>
<td>24%</td>
<td>14%</td>
</tr>
<tr>
<td>AI (artificial intelligence) / machine learning</td>
<td>23%</td>
<td>30%</td>
<td>20%</td>
<td>13%</td>
</tr>
<tr>
<td>Robotics</td>
<td>24%</td>
<td>23%</td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td>AR / VR (augmented reality / virtual reality)</td>
<td>27%</td>
<td>24%</td>
<td>20%</td>
<td>17%</td>
</tr>
</tbody>
</table>

Base: 210
Leading from the top?

- 41% have a C-level sponsor for 5G implementation in their organization
- A quarter don't have any 5G championing from management (23%)

We have an engaged C-Level sponsor who has 5G objectives and a willingness to invest: 23%

We have a C-Level sponsor who doesn't yet have 5G objective(s) and/or a willingness to invest: 18%

We have a senior sponsor (not C-Level) who is currently working to get C-Level engagement: 29%

We have a champion outside the C-suite but don't have a senior sponsor willing to invest: 8%

We don't have a sponsor: 23%
5G: Few are resting on their laurels

Businesses are more likely to feel that their industry is middling in terms of 5G adoption, with 20% setting a high benchmark.

Q. Do you believe your industry is leading, or falling behind, in 5G adoption?

- As an industry we are setting a high benchmark for 5G adoption: 20%
- Some players in our industry are leading the way, but this is not consistent: 23%
- We are performing no better or worse than other sectors: 29%
- Some players in our industry are falling behind, but this is not consistent: 14%
- As an industry, we are falling behind: 10%
- I don’t know: 4%

Base: 210
Q. What impact has the coronavirus pandemic had on your 5G investment and / or implementation plans?

Base: 210

1 in 10 (9%) are now implementing a clearer 5G investment plan due to COVID-19
49% are still on hold

- 16% All plans have been put on hold until there is more certainty about the future
- 18% Plans were put on hold at the start of the pandemic and we are now re-evaluating them for the future
- 15% Plans were put on hold at the start of the pandemic; having reviewed them, they are no longer fit for purpose
- 19% We have a clearer view of how we need to evolve but are unable to make any firm planning commitments until we have more certainty about the future
- 16% We have a clearer view of how we need to evolve and are in the process of developing this plan
- 9% We have a clearer view of how we need to evolve and are in the process of implementing this plan
- 5% Coronavirus has not made any impact on our plans for 5G investment and / or implementation
- 3% We have no plans for 5G investment or implementation
A comprehensive list of what 5G can do is impossible to put together because it’s not possible to predict every disruptive technology, app or unintended consequence of the network being introduced. To what extent does / will this prospect influence your decision to invest?
What do you see as barriers to 5G investment and implementation for your business?

- Availability of 5G-enabled products: 27%
- The costs are too high: 26%
- Security risks: 21%
- It is not a priority right now: 19%
- The decision makers within the business do not understand it: 18%
- I don’t understand the true benefits: 16%
- Lack of coverage: 15%
- I’m worried about the political debate surrounding it (nationally / internationally): 15%
- There are concerns within the business about its links to health: 14%
- I am not confident that we would be able to implement the associated technologies: 12%
- It is unproven: 11%
- I don’t know enough about it: 11%
- It won’t benefit my business: 8%
- I don’t believe it will bring benefits to the business: 8%
- I can’t identify a provider: 7%
- I don’t understand it: 4%
- None of the above: 10%

Q. What do you see as barriers to 5G investment and implementation for your business?

Base: 210
How can they get there?
A lack of 5G providers in the marketplace is holding back greater investment and implementation.

<table>
<thead>
<tr>
<th>Option</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased number of 5G providers to ensure more buying options</td>
<td>41%</td>
</tr>
<tr>
<td>A set of international specifications to be agreed for 5G networks</td>
<td>32%</td>
</tr>
<tr>
<td>A better understanding of what it is and the benefits it can bring</td>
<td>32%</td>
</tr>
<tr>
<td>A better understanding of who the best providers are</td>
<td>30%</td>
</tr>
<tr>
<td>Government subsidies to drive down costs</td>
<td>25%</td>
</tr>
<tr>
<td>Government investment in infrastructure</td>
<td>24%</td>
</tr>
<tr>
<td>None of the above</td>
<td>4%</td>
</tr>
<tr>
<td>I don’t know</td>
<td>4%</td>
</tr>
</tbody>
</table>

Q. Which of the following would encourage you to invest more in 5G?
Base: 210
Nearly two in five American organizations are at the top end of 5G maturity (38%), with 12% at the highest level; 15% have lower 5G maturity; and 47% occupy a middle ground.
Survey methodology and demographics

We surveyed 1,628 technology purchasing decision makers in eight markets and across six industry sectors in July and August 2020. This fieldwork was carried out during the COVID-19 pandemic.

### Demographics

**Total respondents: 1,628**

#### Market

![Flags of various countries]

<table>
<thead>
<tr>
<th>Country</th>
<th>Number of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK</td>
<td>207</td>
</tr>
<tr>
<td>US</td>
<td>210</td>
</tr>
<tr>
<td>Germany</td>
<td>203</td>
</tr>
<tr>
<td>Finland</td>
<td>200</td>
</tr>
<tr>
<td>Japan</td>
<td>200</td>
</tr>
<tr>
<td>Australia</td>
<td>202</td>
</tr>
<tr>
<td>France</td>
<td>203</td>
</tr>
<tr>
<td>China</td>
<td>203</td>
</tr>
</tbody>
</table>

#### Business sector

- **Manufacturing:** 28%
- **Healthcare:** 27%
- **Public sector:** 17%
- **Energy & Utilities:** 13%
- **Transportation:** 8%
- **Mining:** 7%

#### Role type

- 5% business owners
- 33% C-level
- 24% director level
- 38% managerial / other decision maker

#### Size of company

<table>
<thead>
<tr>
<th># of employees</th>
<th>1 to 249</th>
<th>250 to 499</th>
<th>500 to 999</th>
<th>1,000 – 4,999</th>
<th>5,000+</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of respondents</td>
<td>3%</td>
<td>17%</td>
<td>25%</td>
<td>32%</td>
<td>24%</td>
</tr>
</tbody>
</table>
About Nokia

We create the technology to connect the world. Only Nokia offers a comprehensive portfolio of network equipment, software, services and licensing opportunities across the globe. With our commitment to innovation, driven by the award-winning Nokia Bell Labs, we are a leader in the development and deployment of 5G networks.

Our communications service provider customers support more than 6.4 billion subscriptions with our radio networks, and our enterprise customers have deployed over 1,300 industrial networks worldwide. Adhering to the highest ethical standards, we transform how people live, work and communicate. For our latest updates, please visit us online www.nokia.com and follow us on Twitter @nokia.

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