Future of Devices: Trends shaping the device ecosystem in the 5G era

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Future of Devices
Trends shaping the device ecosystem in the 5G era

Proliferation of connected devices
- A growing and diverse range of devices
- For consumer and enterprise use cases
- Spurring new services and business models

New device technologies and network requirements
- 5G
- eSIM and iSIM
- AI capabilities
- VoLTE
- Security
- Identity
- Data analytics

Changing customer behaviour
- Shift to digital
- Always connected
- Multi-device access
- Multi-subscription
- Bundling
- Convergence of digital & real worlds

Device information is more important (and complex) than ever before

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Still room for mobile connections growth
5G is now a global trend. Five billion 5G connections by 2030

Global mobile connections
Billion, excluding IoT

- **20% growth**: 1.6 billion new mobile connections through to 2030
- **All eyes on 5G**: 184 operators have launched 5G commercial services across 72 countries (end of 2021)
- **5G road to mainstream**: in the 5G pioneer markets 5G adoption will surpass 4G adoption in 2023-2024. Globally in 2029
5G dominates smartphones launches

Consumer intent to upgrade to 5G soars

5G-capable smartphone launches

- 5G is mainstream in new phones: attention now turns from device availability to prices
- Cost barrier should become less relevant in 2022: today, the cost of 5G (device rather than service) is the second-largest barrier to 5G adoption

Source: GSMA Intelligence
5G brings higher consumer interest in bundling
Customer segmentation is crucial to driving higher uptake of 5G bundles

Non-connectivity offerings consumers want packaged with their mobile subscription contracts

<table>
<thead>
<tr>
<th>Content</th>
<th>5G users</th>
<th>Difference compared to 4G users (pp)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video streaming</td>
<td>62%</td>
<td>+14</td>
</tr>
<tr>
<td>Music streaming</td>
<td>56%</td>
<td>+11</td>
</tr>
<tr>
<td>Live sports</td>
<td>36%</td>
<td>+11</td>
</tr>
<tr>
<td>Gaming</td>
<td>36%</td>
<td>+13</td>
</tr>
<tr>
<td>Cloud storage</td>
<td>55%</td>
<td>+9</td>
</tr>
<tr>
<td>Digital security</td>
<td>57%</td>
<td>+10</td>
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<tr>
<td>Wearables</td>
<td>55%</td>
<td>+14</td>
</tr>
<tr>
<td>Smart home</td>
<td>44%</td>
<td>+10</td>
</tr>
<tr>
<td>Entertainment</td>
<td>45%</td>
<td>+14</td>
</tr>
</tbody>
</table>

5G effect. 5G users are more interested than 4G users in adding services/content to their mobile contracts

Source: GSMA Intelligence Consumers in Focus Survey 2021. Percentage of contract mobile subscribers who have added or are interested in adding the above to their contract subscriptions (aggregate, 10 countries). Base: Smartphone users who are most frequently connected to 5G or 4G networks

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Beyond mobile phones: a growing/dynamic ecosystem
Operators are a key distribution channel and enabler of device integration

Strategic reasons for the sale of non-phone devices
Operators speak – ranking

- Reduce customer churn
- Grow non-phone subscriptions
- Grow service revenue
- Grow device revenue

- **75:25 split**: phones vs. non-phones operator sales (volumes)
- **A churn factor**...but also new revenues
- **The role of 5G and eSIM**: helping drive adoption of non-phone devices
- **Customer needs**: easy set up, integration, multi-device access and multi-subscription

Source: GSMA Intelligence Operators in Focus Survey 2021. 100 operators globally.

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Global IoT connections
Billion, globally

- **Enterprise driving IoT growth:** ~70% of IoT connections growth will come from enterprise use cases in 2022
- **Consumer trends:** smart home drives growth. Smartwatches overtaking fitness trackers
- **Cellular on the rise:** more than 5 billion licensed cellular IoT connections in 2030

Source: GSMA Intelligence
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Looking for more insights? Check out our Reports

- Digital consumer: five trends to watch in 2022
- Analysing the behaviour of early 5G users: 10 things to know when planning consumer 5G strategies
- IoT market update: assessing disruption and opportunities, forecasting connections to 2030

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About GSMA Intelligence

Serves 800 organisations

40,000 users worldwide

Data

1,400 Mobile operators
80 Operators groups
5,000 Networks
30M Data points updated daily

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130+ Reports annually
1M Report downloads in 2019
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Pinpoint accuracy

Five-year forecast consistently accurate within +/- 2.5% of reported data, updated quarterly

50+ Analysts & industry experts

Supporting the business strategy of our subscribers and the wider ecosystem

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2022 Research Themes
Topics shaping the industry and driving our focus

- The changing telco
  Reshaping connectivity to accelerate growth in digital services

- Building a sustainable industry
  Green networks, energy efficiency, devices and beyond

- Scaling and monetising 5G
  What success looks like across consumer, household and enterprise use cases

- Fixed, TV & Convergence
  Tackling the internet usage gap, driving social and economic development

- Reshaping telco networks
  How networks will look at the end of 2022, and how to balance priorities versus investments

- Mobile Operators & Networks
  Maximising the impact of mobile

- IoT & Enterprise
  Spectrum in the digital era
  Maximising resources and impact, navigating new assignment models

- Digital Consumer
  The digital consumer post Covid-19
  Resetting B2C strategies for customer engagement, distribution, devices and content

- Spectrum
  Monetising the digital transformation of industries
  The interplay of IoT, 5G, edge, private networks and security