Top 10 Tech & Telco Trends for 2022

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Agenda

1. Introduction
2. What We Said Last Year
3. The Top 10 Trends for 2022
4. Questions and Answers
Juniper Research Overview & Insight Areas

• Formed in February 2002, Juniper Research are mobile and digital market specialists with a worldwide client base.

• We are a trusted research partner of many of the world’s leading organisations.

• We provide both off the shelf research and bespoke content across more than 90 research topics in the digital technology ecosystem.
Webinar Overview

- 12th set of End of Year predictions
- Focus on
  - Product launches
  - Planned legislation
  - Showcase events
- Predictions will be covered in reverse ranking
- Webinar to be followed by a Q&A
  - Send questions via chat box
What we said last year...

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<th>Trends</th>
<th>Result?</th>
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<td>Blockchain to Escape the Hype, but Only in Certain Areas</td>
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<td>Concept of Sexual Wellness to Drive Sextech Adoption</td>
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<td><strong>Development of Intelligent Connectivity Solutions to Increase Network &amp; Service Resilience</strong></td>
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<td>Increasing Development of Private Network Capabilities</td>
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<td>Standalone 5G to Drive Further Core Network Virtualisation</td>
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<td>Confidential Computing to Ease IoT Security Concerns</td>
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5G Capabilities to Drive Adoption of Private Networks
5G Capabilities to Drive Adoption of Private Networks

• **What is the Trend?**
  - Private Network deployments are accelerating, driven by 5G technology and its network capabilities.
  - The features of 5G beyond network speed are the main driver of this.

• **Why 2022?**
  - More regulators are opening up spectrum for private network use and 5G in 2022, particularly in emerging economies.
  - Following initial roll-outs of private networks, the benefits are visible to a wider variety of stakeholders.

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**Key Private Network Benefits**

- Low Latency
- Security
- Extended Coverage
- Customisable Network
- Consistent Service Level

Source: Juniper Research
5G Capabilities to Drive Adoption of Private Networks

• Who will Benefit?
  - Private network users will be able to leverage more flexible networks, combined with 5G’s lower latency and higher device capacity. Key industries will be manufacturing, mining and the energy sector.
  - Network vendors can take a leading role in deployments of 5G private networks.

• Juniper Research Prediction
  - A new class of network service provider will emerge, based on systems integrators and independent of large telcos.
  - Many private network operators will be limited to specific geographies, thanks to spectrum restrictions.

Related Research: Private Cellular Networks: Spectrum Assessment, Business Models & Forecasts 2021-2026

Number of Private Networks Operational Globally in 2022: 48,300

Source: Juniper Research
Video Games
Subscriptions to Consolidate - Focusing on Content
Video Games Subscriptions to Consolidate - Focusing on Content

• What is the Trend?
  - Video games publishers are acquiring developers in order to have an exclusive content library.
  - These acquisitions feed directly into publisher-exclusive content platforms to increase the value proposition for users.

• Why 2022?
  - The success of Xbox Game Pass and PlayStation Now is driving publishers towards the platform model, which requires constant new content.
  - Publishers need to make their libraries varied and attractive in order to retain users as the world opens up again.
Video Games Subscriptions to Consolidate - Focusing on Content

• Who will Benefit?
  - Smaller developers who get acquired can benefit from large parent company backing, both as a financial resource and as part of a service that prizes variety of content.
  - Publishers with their own hardware outlets will derive the most benefit, as they can maintain a closed ecosystem.

• Juniper Research Prediction
  - The video game industry services will move towards siloed subscriptions, in a similar way to the digital video streaming market.
  - Increased exclusivity will lead to more subscriber churn as consumers flip based on significant game launches.

Related Research: Video Games: Industry Trends, Monetisation Strategies & Market Size 2020-2025

Source: Juniper Research
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Streaming Platforms to Capitalise on Rise of eSports
Streaming Platforms to Capitalise on Rise of eSports

• What is the Trend?
  - eSports is gaining a cultural foothold, with broadcasters and consumers primed to explore new avenues of competition and sporting.
  - Streaming platforms stand to gain a high amount of revenues as eSports broadcasting goes mainstream, making it a vital part of streaming platforms’ businesses.

• Why 2022?
  - High status eSports events are scheduled for next year, such as the ePremier League, the fourth season of Formula 1 Esports Series and the inclusion of eSports at the 2022 Asian Games.
  - Virtual leagues are being created in tandem with existing sports leagues, such as German professional football and the virtual Bundesliga.

Total Unique Viewers of eSports & Games Streaming Services (m), 2019-2021

Source: Juniper Research
Streaming Platforms to Capitalise on Rise of eSports

• Who will Benefit?
  - eSports competitors will attract more lucrative sponsorships through greater brand awareness of eSports and its following.
  - Streaming platforms will benefit from a new revenue stream, as high-profile eSports events attract greater volumes of traffic.

• Juniper Research Prediction
  - Emerging social media platforms with a strong influencer marketing ethos, such as TikTok, will be used to promote eSports events in order to engage with younger audiences.
  - Conversations surrounding content rights and ownership will become increasingly important as market value grows.

Related Research:
eSports & Games Streaming: Emerging Opportunities & Market Forecasts 2021-2026
Smart Grid Deployments to be Accelerated by Environmental Concerns
Smart Grid Deployments to be Accelerated by Environmental Concerns

• What is the Trend?
  - Smart grid is where analytics are used to make a utility grid more efficient and effective, reducing cost and energy usage.
  - Investment into smart grid platforms is accelerating, with utility companies and governments seeking more efficient systems.

• Why 2022?
  - Investments into smart grid platforms is expanding rapidly in the wake of COP26 and the massive publicity around sustainability.
  - Over next year, we expect this trend to accelerate. However, this will require significant regulatory pressure to increase the rate of adoption.
Smart Grid Deployments to be Accelerated by Environmental Concerns

• **Who will Benefit?**
  
  – Utility companies will see increased margins, which is important, particularly given current difficulties around wholesale energy costs in Europe.
  
  – Consumers will benefit from more data around energy usage and reduced environmental impacts.

• **Juniper Research Prediction**
  
  – Smart grid deployments will accelerate, as utility companies seek to build networks fit for the fundamentally different, low-carbon future.
  
  – Analytics, demand-responsiveness and storage will be critical, as the nature of networks changes.

Related Research:
Smart Grid: Industry Trends, Competitor Leaderboard and Market Forecasts 2021-2026
Edge Computing to Drive New Healthcare Applications
Edge Computing to Drive New Healthcare Applications

• What is the Trend?
  - Edge computing is a form of distributed computing wherein data-heavy tasks are undertaken at network locations positioned close to the end user
  - Allows for significant reductions in lag and latency, which is vital to the success of real-time applications such as connected vehicles and healthcare

• Why 2022?
  - New focus in healthcare sector on remote services, buoyed by pandemic and advent of smart hospitals
  - Many services will continue to be remote, and edge computing will be vital to ensuring that critical data transmissions are not disrupted by network conditions

Source: CMR Surgical

Versius Unit Performing Surgery
Edge Computing to Drive New Healthcare Applications

• **Who will Benefit?**
  - Healthcare providers benefit from innovative services that expand provision of vital services
  - Consumers benefit from improved healthcare services, newfound focus on preventative healthcare
  - Network operators benefit from being a central feature of the emerging digital healthcare value chain, complete with new revenue opportunities

• **Juniper Research Prediction**
  - Increased deployment of edge computing in healthcare settings, which will require partnerships between healthcare vendors and operators
  - However, the need for pre-existing digital infrastructure will limit adoption to developed regions where devices and connectivity is plentiful

**Related Research:**
- Smart Hospitals: Technologies, Global Adoption & Market Forecasts 2021-2026
- Edge Computing: Use Cases, Innovation Opportunities & Market Forecasts 2020-2025

**Smart Hospital Market Value in 2026, Split by 8 Key Regions: $59.1 Billion**

Source: Juniper Research
Electric Vehicle Charging Networks to Increase Interoperability
Electric Vehicle Charging Network Interoperability to Improve Accessibility

• What is the Trend?
  - EVs are beginning to become popular with end users, as government incentives increase adoption, but they still face challenges around how to charge their vehicles.
  - Public EV charging networks generally have a low level of interoperability, requiring different access methods, payment types and accounts. This year this will begin to break down.

• Why 2022?
  - EV adoption is now getting to a level whereby public charging must improve, or it will fail to meet the needs of the growing EV user base.
  - Tesla is already opening up its Supercharger network, and this is a move we expect to be matched by other large charging networks.
Electric Vehicle Charging Network Interoperability to Improve Accessibility

• Who will Benefit?
  - End users will gain significantly – they will have better, more comprehensive charging network options, making EV ownership more viable.
  - Vehicle manufacturers will gain a greater role in charging, providing additional revenue & loyalty benefits.

• Juniper Research Prediction
  - More EV charging networks will enable interoperability and work to develop common ways to access and pay.
  - Vehicle manufacturers will offer aggregator apps that enable easier charging options.

Related Research:
EV Charging: Key Opportunities, Challenges & Market Forecasts 2021-2026

Source: Juniper Research
Flash Calling to Disrupt Operators’ Business Messaging Revenue
Flash Calling to Disrupt Operators’ Business Messaging Revenue

• What is the Trend?
  - Identity authentication will necessitate two-factor authentication, which requires a mobile channel.
  - Whilst the operator business messaging market is well established, flash calling offers notable benefits.
  - Flash calling services offer a cheaper alternative to traditional operator business messaging.

• Why 2022?
  - Early market stages but notable service providers, including Sinch and Vox Carrier, have already launched flash calling services.
  - In addition, OTT application players, such as imo and WhatsApp, are launching OTT-based flash calling services.

Benefits of A2P SMS & Flash Calling for 2FA Services

1) Validation request from the brand or enterprise

2) The flash calling service provider places a call using the number provided, leveraging operators gateways. The MSISDN is used to identify the user and the A number is used to authenticate the call.

3) A short call is placed from the operator to the mobile subscriber. A specific A number is used in order to authenticate the call. This call is hung up before the user can answer.

4) This call log is checked. For Android devices, the last four digits of the A number are used for authentication and are sent to the service provider automatically. For iOS devices, the number must be entered manually.

5) The successful authentication confirmation is sent back to the brand or enterprise.

Source: Juniper Research
Flash Calling to Disrupt Operators’ Business Messaging Revenue

• Who will Benefit?
  - Brands and enterprises can reduce the costs associated with user authentication, as non-terminated voice calls are currently unmonetized by operators.
  - Consumers will benefit from a more passive user authentication process.

• Juniper Research Prediction
  - The simplicity of the flash calling process will disrupt established A2P SMS markets in 2022, threatening operator business messaging revenue.
  - As operators look to monetise flash calling services, enterprise adoption will depend on additional factors, such as reducing user input.

Related Research:
Flash Calling Authentication: Impact Analysis & Market Forecasts 2021-2026
5G & IoT to Drive Mobile Roaming Market Disruption
5G & IoT to Drive Mobile Roaming Market Disruption

• **What is the Trend?**
  - The rapid growth in IoT roaming data is necessitating new stakeholders called CSPs (communications service providers). These CSPs are more focused on cloud-based services that enable far greater scalability.
  - The deliver greater flexibility for billing and industry-specific solutions.

• **Why 2022?**
  - Rising 5G connectivity and an increasing number of agreements for permanent roaming connections have increased market awareness of CSPs.
  - Acquisitions, such as Cisco acquiring Jasper, was a key indicator of this market movement.
5G & IoT to Drive Mobile Roaming Market Disruption

• Who will Benefit?
  - Roaming vendors who capitalise on the rise of IoT roaming connections will benefit from the increased revenue this market will provide
  - Operators who are able to identify and monetise IoT roaming traffic efficiently and minimize time disputing clearing for IoT roaming.

• Juniper Research Prediction
  - As the number of roaming IoT connections increases, the prevalence of permanent roaming will also increase. New stakeholders better equipped to handle the large amounts of roaming data will emerge and compete with established roaming vendors.

Global Data Generated by 5G-enabled Roaming Connections in 2022: 64.5 PB

Source: Juniper Research

Related Research:
Mobile Roaming: Emerging Opportunities, Regional Analysis & Market Forecasts 2021-2025
5G Roaming Strategies: Future Outlook, Opportunities & Market Forecasts 2021-2026
Supply Chains to Utilise Advanced Technologies to Increase Resilience
Supply Chains to Utilise Advanced Technologies to Increase Resilience

• What is the Trend?
  - Disruption of supply chains by COVID-19 and supply chain-based cyberattacks have driven up awareness of supply chain vulnerabilities
  - Third party contributions to organisations have been a key element in these vulnerabilities

• Why 2022?
  - Legislative pressure, particularly from the US, is driving cybersecurity reform for the software supply chain
  - Increased availability of AI, blockchain and other digital technologies will be leveraged for increased security following several high profile data breaches in 2021.

Source: Juniper Research
Supply Chains to Utilise Advanced Technologies to Increase Resilience

• Who will Benefit?
  - SaaS platform providers that can offer enhanced resilience or compliance with emerging guidelines
  - Companies already utilising blockchain tracking, who have a track record in this area

• Juniper Research Prediction
  - Supply chain cybersecurity will become a concern for all industries, not just those who deal with software directly
  - Supply chain predictive and alternative source modelling and adaptation will become more common

Related Research:
Fleet Tracking & Logistics: Key Challenges & Strategic Recommendations 2020-2025

Global Assets Tracked in 2022, Split by 8 Key Regions: 3.7 Billion

North America
Latin America
West Europe
Far East & China
Rest of Asia Pacific
Central & East Europe
Africa & Middle East

Source: Juniper Research
Consumer Data Platforms to Increase Customer Satisfaction
Consumer Data Platforms to Increase Customer Satisfaction

• What is the Trend?
  - Consumer data platforms provide brands and enterprises with greater insight into customer behaviour.
  - Investment into these platforms is accelerating, providing information on contract preferences, preferred mobile channels and upselling opportunities.

• Why 2022?
  - Investments into these platforms is expanding rapidly with many platforms integrating these services into their solutions now.
  - Over the next year, we expect this trend to accelerate. However, issues with data security and sharing will require strict regulatory adherence.
Consumer Data Platforms to Increase Customer Satisfaction

• Who will Benefit?
  - Brands and enterprises gain better insight into consumer behaviour. As mobile channels become increasingly profitable, the ability to increase customer satisfaction will be greatly desired.
  - Consumers will benefit from more convenient mobile communications.

• Juniper Research Prediction
  - More CPaaS (Communications Platform-as-a-Service) players will invest in CDPs or develop this functionality in-house.
  - As rich media messaging and conversational commerce develop next year, the value of these CDPs will become very evident.

Related Research:
CPaaS: Market Outlook, Emerging Opportunities & Forecasts 2021-2026
To recap...

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9. Video Games Subscriptions to Consolidate to Focus on Content

8. Streaming Platforms to Capitalise on Rise of eSports

7. Smart Grid Deployments to be Accelerated by Environmental Concerns

6. Edge Computing to Drive New Healthcare Applications

5. Electric Vehicle Charging Network Interoperability to Improve Accessibility

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3. 5G & IoT to Drive Mobile Roaming Market Disruption

2. Supply Chains to Utilise Advanced Technologies to Increase Resilience

1. Customer Data Platforms to Increase Customer Satisfaction
Questions & Answers
Thank you

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