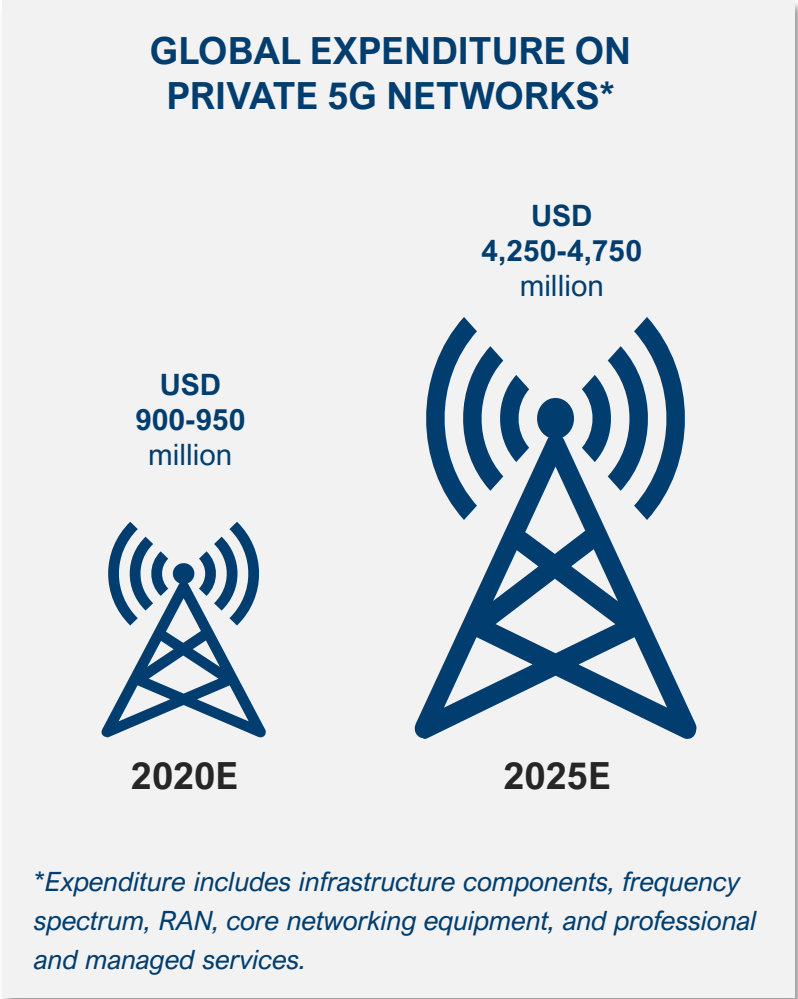


Special Report

Unlocking Private 5G Network Opportunities – Where is the Money?



Spending on 5G private networks expected to rise, driven by growing need for high-speed reliable networks and increasing ecosystem support



- Transition to 5G networks to be driven by focus on applications requiring high-capacity, high-reliability, low-latency communication



- Interest across business ecosystems and supportive approach from governments to help create better opportunities



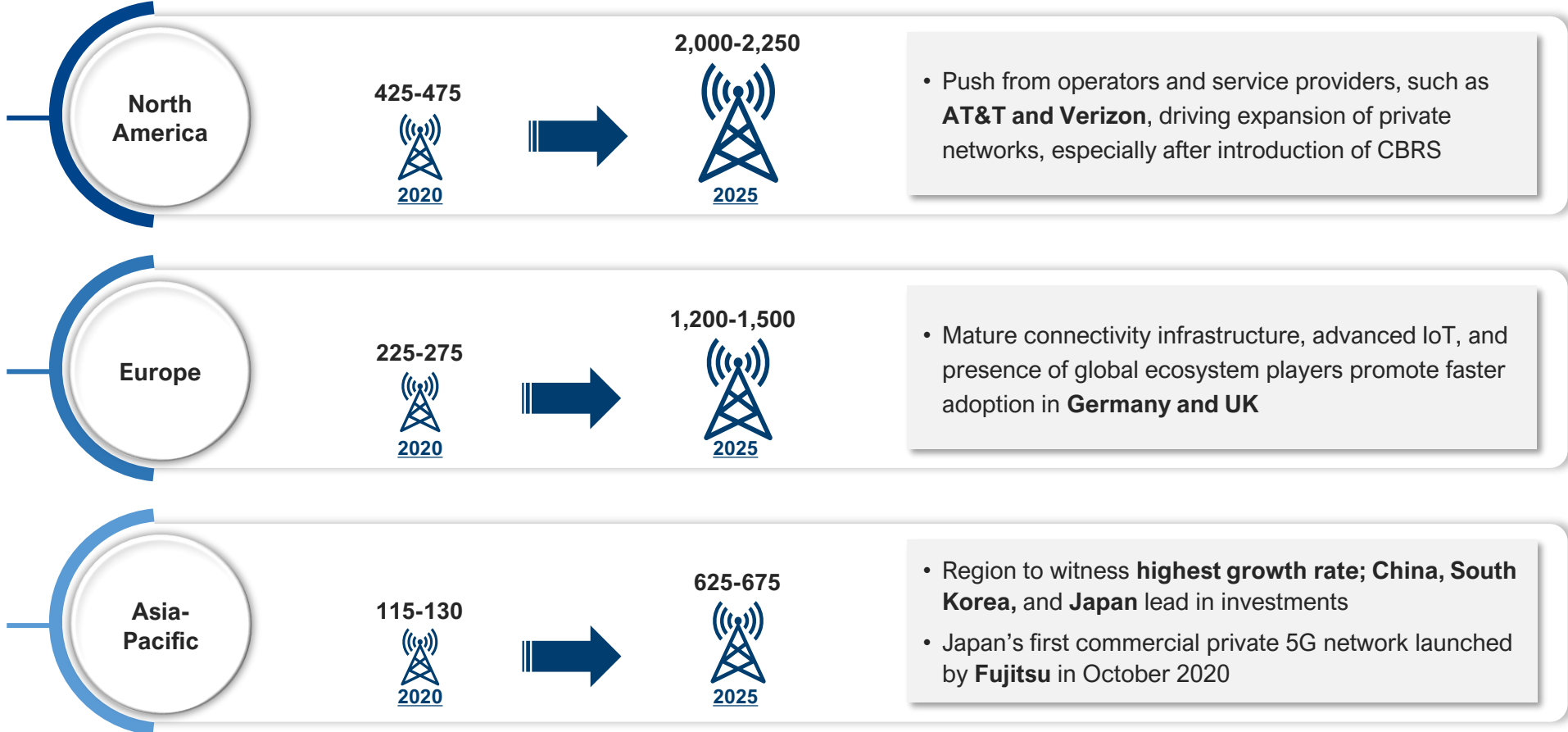
- Release of sub-6 GHz and mmWave frequencies across licensed and unlicensed bands to aid growth of private networks

Source: Grand View Research, Desk Research, Aranca Analysis

North America, Europe account for over 75% of 5G private network-related expenditure globally; APAC to demonstrate highest growth rate during 2020–25

Advanced economies with mature connectivity and industrial infrastructure in North America and Western Europe lead in 5G expenditure, whereas China is the dominant player across Asia-Pacific.

Expenditure on Private 5G Networks* (in USD Mn)

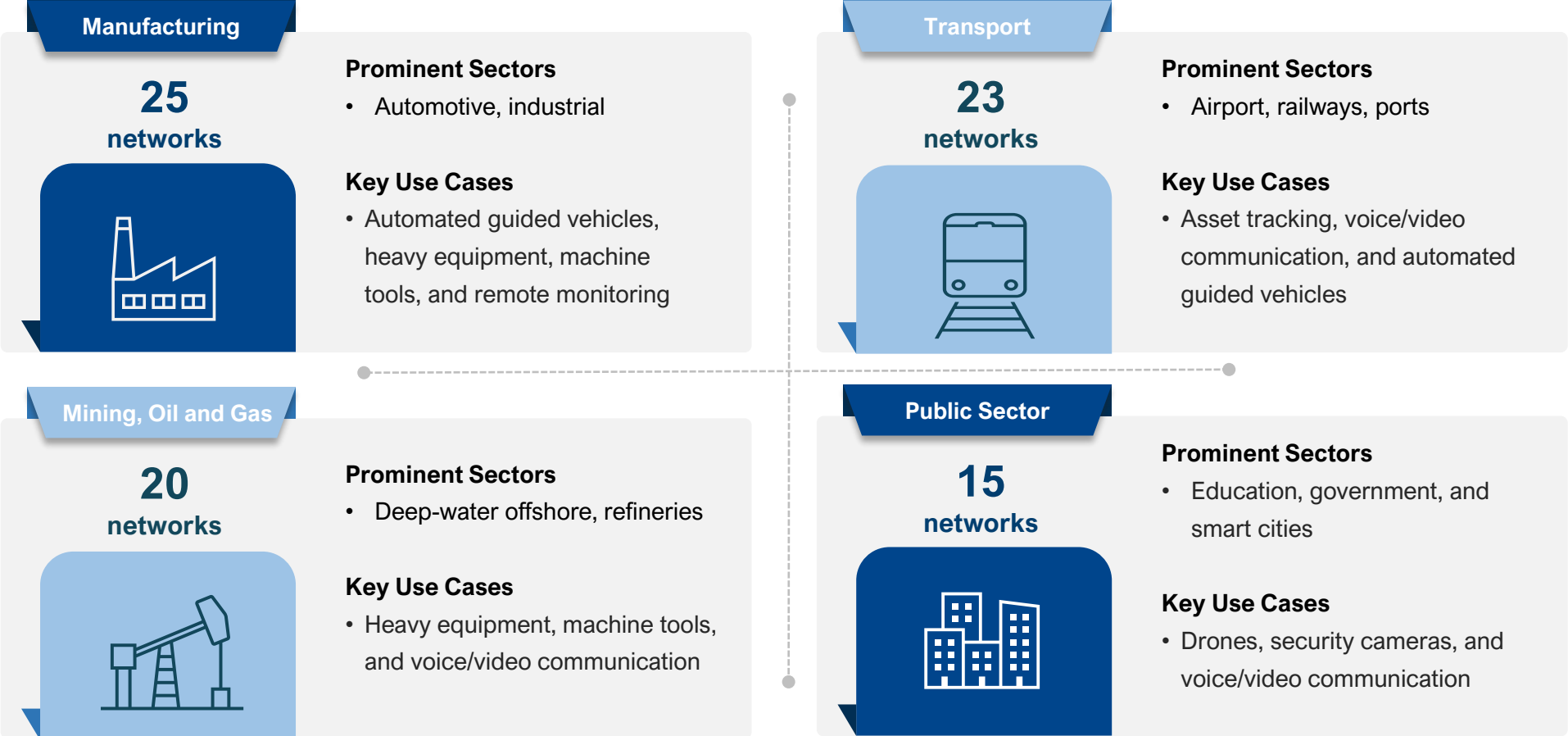


Source: Grand View Research, Desk Research, Aranca Analysis

*Note: LatAM and MEA account for the balance ~USD 100 Mn in 2020 and ~USD 450 Mn in 2025.

Various industry segments better served by private networks across use cases, with manufacturing, transport emerging as leaders in private network deployment for IoT

PRIVATE NETWORK DEPLOYMENT (Until Q3 2020*)

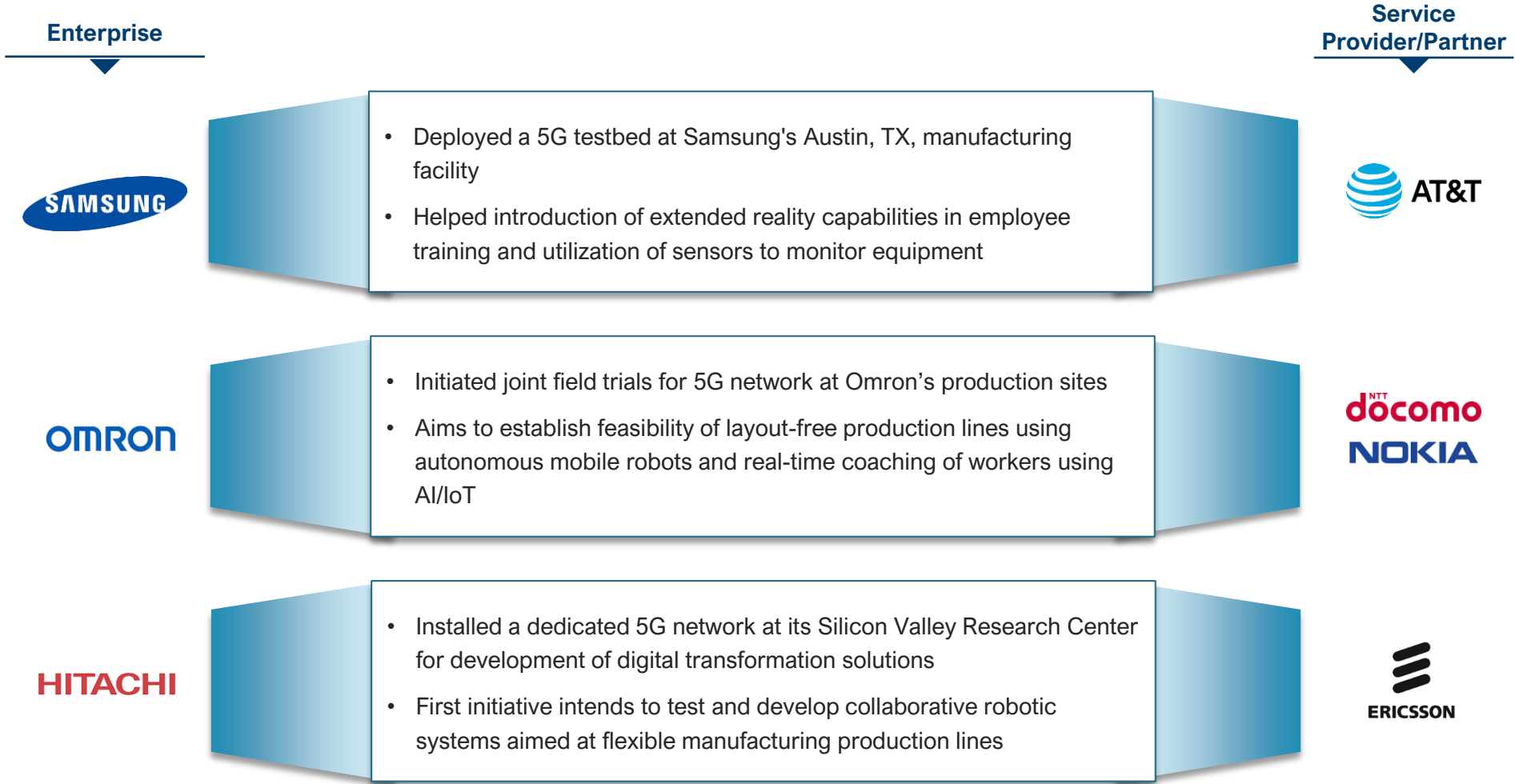


*Analysis is based on a sample of 100 global private networks. The remaining 18 networks accounted for by utilities, healthcare, agriculture, retail, etc.

Source: Analysys Mason, Desk Research, Aranca Analysis

Various players across the ecosystem have already come together to deploy and gain benefits of 5G private networks ... (1/2)

SELECT USE CASES



Source: Desk Research, Aranca Analysis

Various players across the ecosystem have already come together to deploy and gain benefits of 5G private networks ... (2/2)

SELECT USE CASES

Enterprise

Service Provider/Partner



- Deployed a 5G private network at Ford's electric vehicle production site in UK to improve connectivity across the campus
- Aims to speed up electric battery production, reduce operational delays, and improve productivity



- Set up a 5G private network at Mercedes-Benz's Factory 56 site
- Helps data linking or product tracking on assembly line, quicker adaptation of process-to-market requirements



- Deployed private 5G campus network at Lufthansa's base at Hamburg Airport
- Network being utilized to pilot solutions such as AR-/VR-based inspection of aircraft fuselage, virtual inspection by customers



Source: Desk Research, Aranca Analysis

Fujitsu aiming at crime prevention via private 5G network at its office and manufacturing facility

CASE STUDY

What has Fujitsu done?

- Fujitsu received its first commercial private 5G radio station license from the Kanto Bureau of Telecommunications.
- This would help the company operate a private 5G network at its Shin-Kawasaki Technology Square office.
- To obtain its license, Fujitsu has been verifying the registration and connectivity of base stations and land mobile stations (Data Communication Terminal) as well as the coverage area in accordance with the radio law.

How is it going to help Fujitsu?

- Fujitsu's goal is to strengthen crime prevention measures within the building by leveraging its private 5G technology to:
 - Transmit high-definition images collected from multiple cameras
 - Create an AI-powered security system that quickly detects suspicious behavior through motion analysis
 - Offer customers and partners the chance to workshop various use cases for private 5G to deliver business innovation and help resolve regional issues (through its newly established 5G co-creation space)

What does Fujitsu plan to do next?

- Create a smart factory by obtaining license for a private 5G network at its Oyama plant in Tochigi Prefecture
- Explore additional applications of a private 5G network

Ford partners with Vodafone to deploy private 5G network for its electric vehicle production sites

CASE STUDY

What has Ford Motors done?

- Ford Motor Company and Vodafone Business are installing a 5G private mobile network at the carmaker's new electric vehicle production site in Essex, the UK, to expedite the manufacturing of electric batteries.
- Ford is leading a UK consortium of companies to check out the manufacturing process and production improvements by linking various manufacturing sites.

How is it going to help Ford?

- Ford's facilities in Essex and Cambridge aim to enable close cooperation between the two sites for the welding of batteries by addressing the following aspects:
 - Reduce delays in manufacturing and increase productivity
 - Increase bandwidth across the campus
 - Improve security and reliability

How has the UK government supported?

- The UK government has provided USD 43.5 Million to fund 5G trials within the country.
- A joint venture between the UK government and the automotive industry, called Advanced Propulsion Centre (APC), has funded 50% of the USD 30 Million initiative for electrified powertrain in manufacturing engineering (E:PrIME), which explores capabilities to enable ultra-high volumes in manufacturing.

Aranca can help solution vendors and service providers take advantage of the market's growth potential by answering critical questions

Critical Questions

What are enterprise customers' needs, priorities, and pain points?

How are competitors placed? What is their value proposition?

What is the market potential? Where are the attractive opportunities?

Which capabilities are needed? How can they be achieved?

Insights that Aranca Can Help Obtain

- Customers' connectivity-related objectives, spending priorities, deployment roadmaps
- Concerns about deployment costs, timelines, integration with legacy networks, maintenance
- Purchase journey, decision-making process, key stakeholders, vendor/offering selection criteria

- Competitors' value proposition, key strengths and shortcomings
- Benchmarking competitors' offerings and pricing strategies
- Business strategies for strengthening ecosystem and addressing gaps in capabilities

- Existing market opportunity, short- to long-term growth rate, segmentation by verticals/use cases, SMEs versus large enterprises
- Industry verticals suited to adopt 5G private networks in short and long terms
- Market prioritization based on size and growth of opportunity, entry barriers, ecosystem maturity

- Capability gaps required to be addressed
- Optimal/preferred strategies to build capabilities, e.g., build versus buy versus partner
- Key aspects to be considered for evaluating ecosystem partners and/or acquisition targets

***Please reach out to us if you are looking for answers to the above questions
(Please refer to slide 11 for contact details)***



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120+

sectors and sub-sectors
researched by our analysts

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countries where we have delivered
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Aranca is a trusted research and advisory partner to global companies from the hottest start-ups to the Fortune 500.

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Connect with our subject matter experts for further assistance



Tulika Saxena

Vice President | Technology, Media & Telecom
Business Research & Advisory

+91.22.3937 9999 (Extn: 388)
tulika.saxena@aranca.com



Sunil Chauhan

Assistant Manager | Technology, Media & Telecom
Business Research & Advisory

+91.22.3937 9999 (Extn: 250)
sunil.chauhan@aranca.com

For more details: www.aranca.com | <https://www.linkedin.com/company/aranca> | <https://www.aranca.com/knowledge-library>

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