

Managing new satellite connectivity models in 5G

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CGI: A Systems Integrator perspective on 5G

BANKING	COMMUNICATIONS	GOVERNMENT	HEALTH AND LIFE SCIENCES	INSURANCE
<ul style="list-style-type: none"> Working with 15 of the top 20 banks globally Sectors include retail banking, capital markets, corporate and transaction 	<ul style="list-style-type: none"> Partnering with 6 of the world's top CSPs Services include billing, order orchestration, revenue assurance or customer care transformation 	<ul style="list-style-type: none"> Partnered with 2,000 government clients in 15 countries Sectors include provincial, state and local, central, federal, defense, intelligence and <u>space</u> 	<ul style="list-style-type: none"> 1,000+ health facilities; health plans serving 195 million people; 50+ life sciences firms Sectors include payers, providers, pharma, biotech, regulators 	<ul style="list-style-type: none"> Working with 7 of the top 10 global insurers Sectors include property and casualty and life insurance
MANUFACTURING	OIL AND GAS	RETAIL & CONSUMER SERVICES	TRANSPORT & LOGISTICS	UTILITIES
<ul style="list-style-type: none"> 700+ manufacturing clients Sectors include natural resources, commercial and industrial goods, and automotive 	<ul style="list-style-type: none"> Partnering with all oil & gas majors globally Services in production; refining; supply & distribution and B2B / B2C retail 	<ul style="list-style-type: none"> 800+ clients globally Sectors include retail, wholesale, consumer packaged goods and consumer services 	<ul style="list-style-type: none"> 200+ clients globally Sectors include post and logistics, aviation, rail, maritime, road and regional transit sectors 	<ul style="list-style-type: none"> 450+ electric, water and gas clients Sectors include retail, grid operators, and all others

Satellite Communications

- Network management software solutions and systems integration (GEO & LEO)
- MilSatCom
- GovSatCom
- SatCom applications (incl. 5G)

Earth Observation & Geospatial

- Data platforms
- Geospatial applications

GNSS

- EGNOS (& Galileo)
- UKGNSS

Secure space operations

Cyber-security

Key challenges in 5G

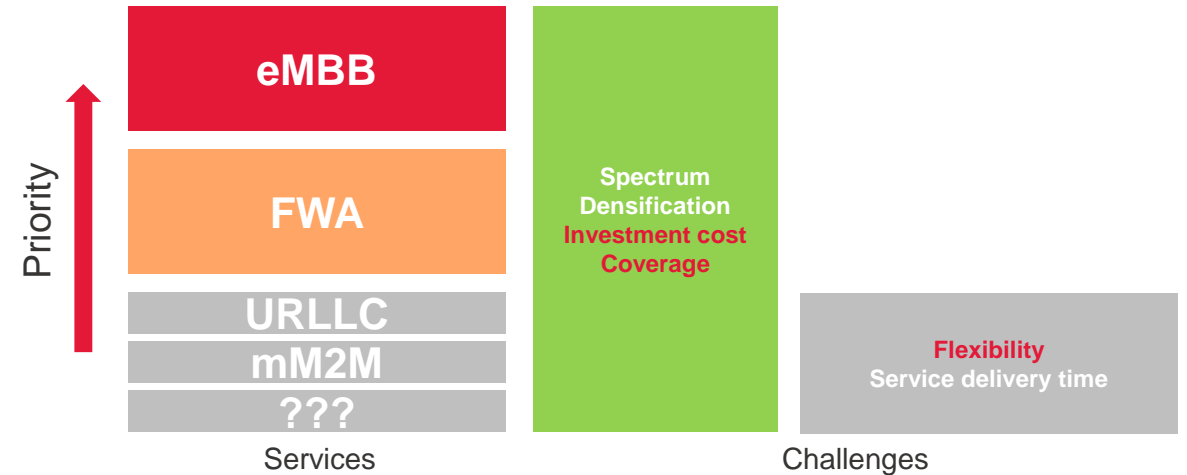
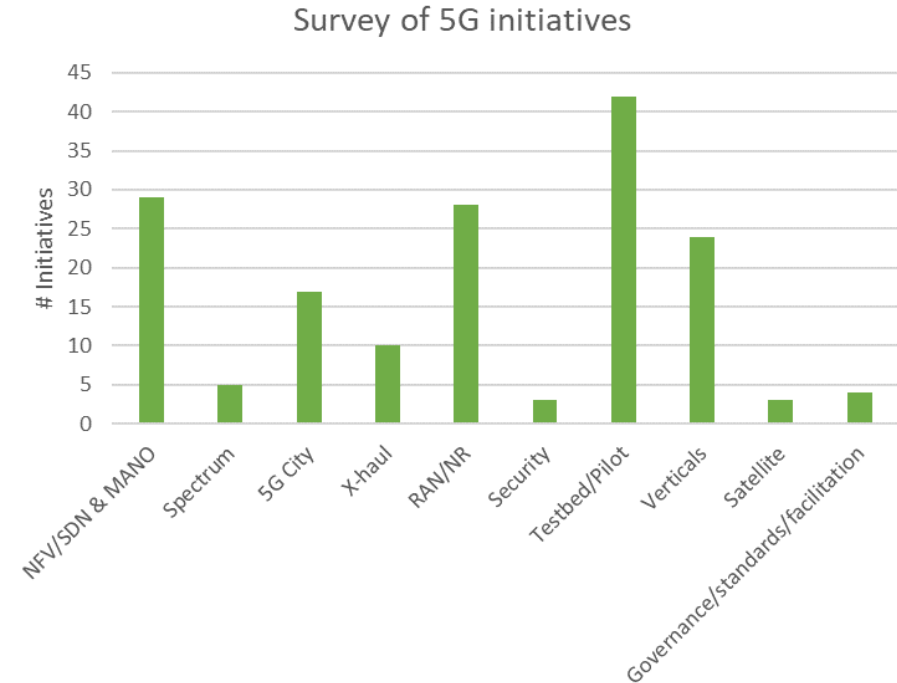
44% of CSPs intend to launch 5G by 2020 – despite 58% saying lack of use cases is a “significant barrier”

CSPs prioritize improved mobile coverage (#1), FWA (#2) and UHD video (#3)

84% of CSPs said virtualization is important

Only 16% of CSPs said they *don't* intend to use network slicing

Source: TM Forum





CSPs

Looking to understand satellites' role in 5G more but many problems on the horizon – can satellites reduce their costs and increase flexibility?

Satellites need to integrate with them – want to avoid proprietary options (major goal of 5G is to move to 'white box' architectures)

Impact of 'full-fibre'?



Space

Need to continue to reduce costs and performance – 5G bandwidth → 100Mbps/user

Change of business models (move to marketplace?) – satcom as a commodity?

Multi-network terminals & increase in standardization (satellite 3GPP implementation compliant networks)

Seamless interface towards CSP BSS supporting rapid / flexible service fulfilment



Verticals

Yet to reap the benefits of 4G, let alone 5G

Enthusiasm for IoT but ability to pay? WiFi continues to be dominant?

Look for business cases which can be delivered today where satellite/terrestrial integration is an enabler

CGI work on Space & 5G



CSPs

Helping to deliver trials with CSPs and support transformation (e.g. ENCOR)

Developing CARNOT tool-kit to support the cost effective deployment of large scale heterogeneous networks exploiting geospatial platform

Support the integration of satcom into terrestrial networks for our CSP customers



Space

Developing orchestration concepts for supporting seamless integration of satcom through virtualization & SDN

Extend CARNOT to include satellite connectivity, including use case exploration

Deliver the next generation of NMS and leverage AI/ML for our SatCom customers

Support cyber-security implementation



Verticals

Deliver pilot concepts with customers as part of their Digital Transformation

Focus on applications which can deliver business benefit in the short term and support the transformation to 5G

Exploring opportunities for satellite to support these applications with our customers



Contact us to continue the conversation.



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