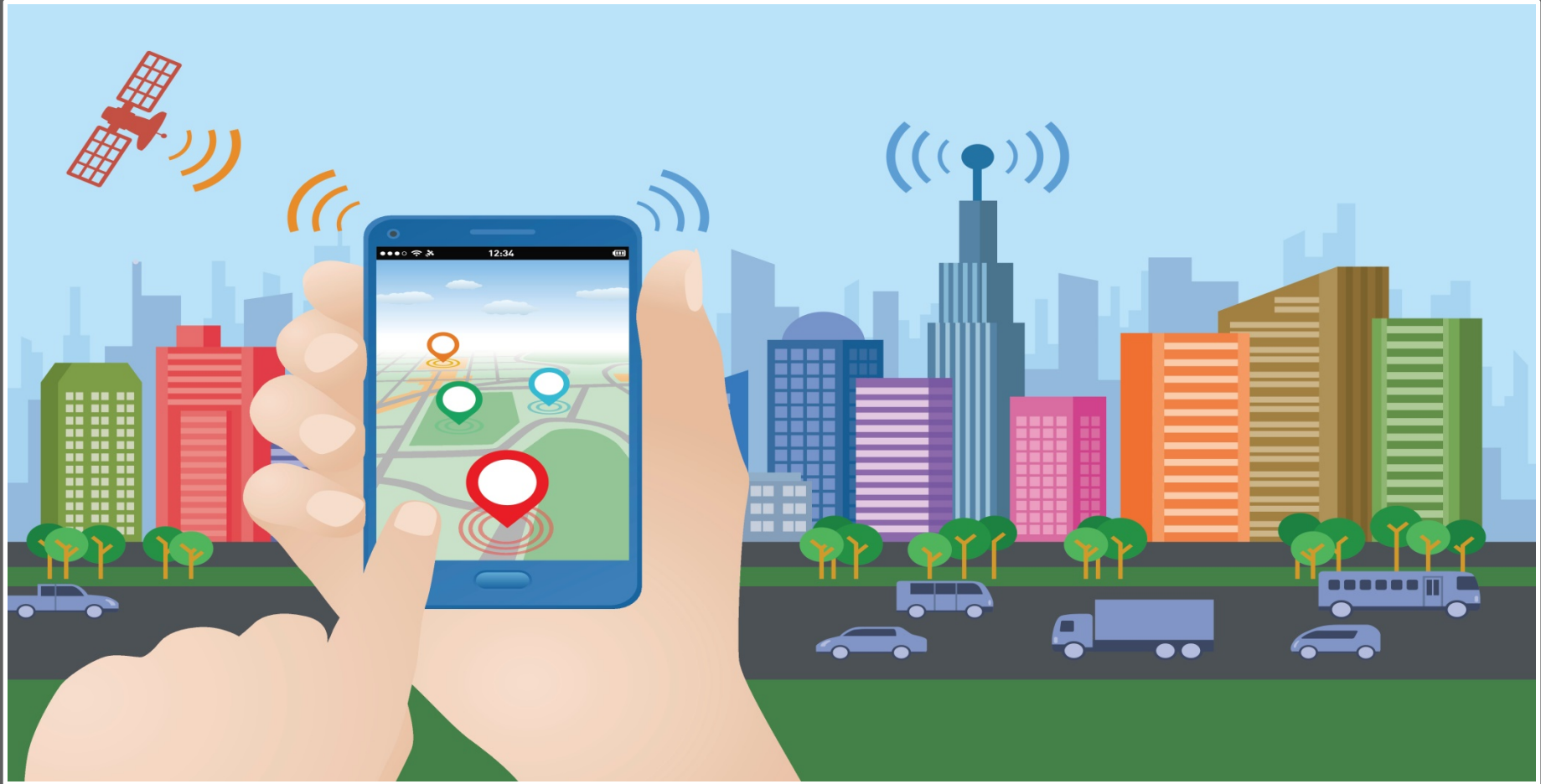


Satellites Role in 5G



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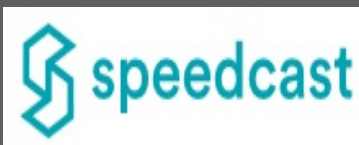
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About The Besen Group

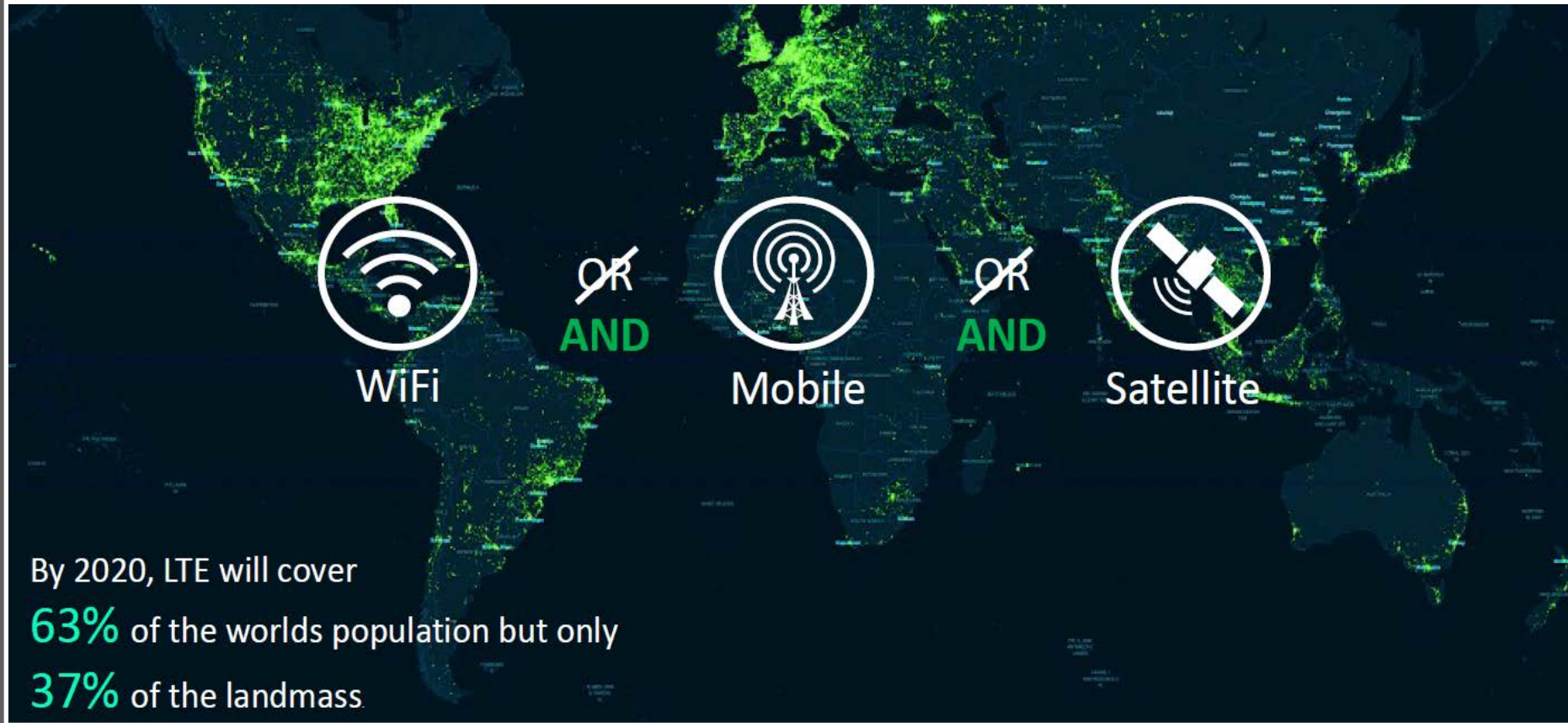
- Specialists in the mobile data industry with subject matter expertise in the mobile wholesale.
- 127 years of cumulative hands-on experience in the telecom industry in the US, Europe and Asia.
- Mission is to provide mobile data players with knowledge, services and tools enabling them to perform optimally in their mobile environment.
- We offer strategic consultancy, training and market research services.
- Consultancy service portfolios include: Mobile Data, MVNO, MVNE, HNO.
- Training services include: Private LTE, CBRS, Mobile Wholesale, US IoT, MVNO, Cable MVNO, US MVNO and MVNE seminars.
- Market research services include: case studies and business case tools.
- Clients include mobile operators, enterprises, MVNOs, MVNEs, mobile vendors, investment banks, hedge funds and private equity firms.
- Founded in 2004 in the State of Virginia as Limited Liability Corporation.



References

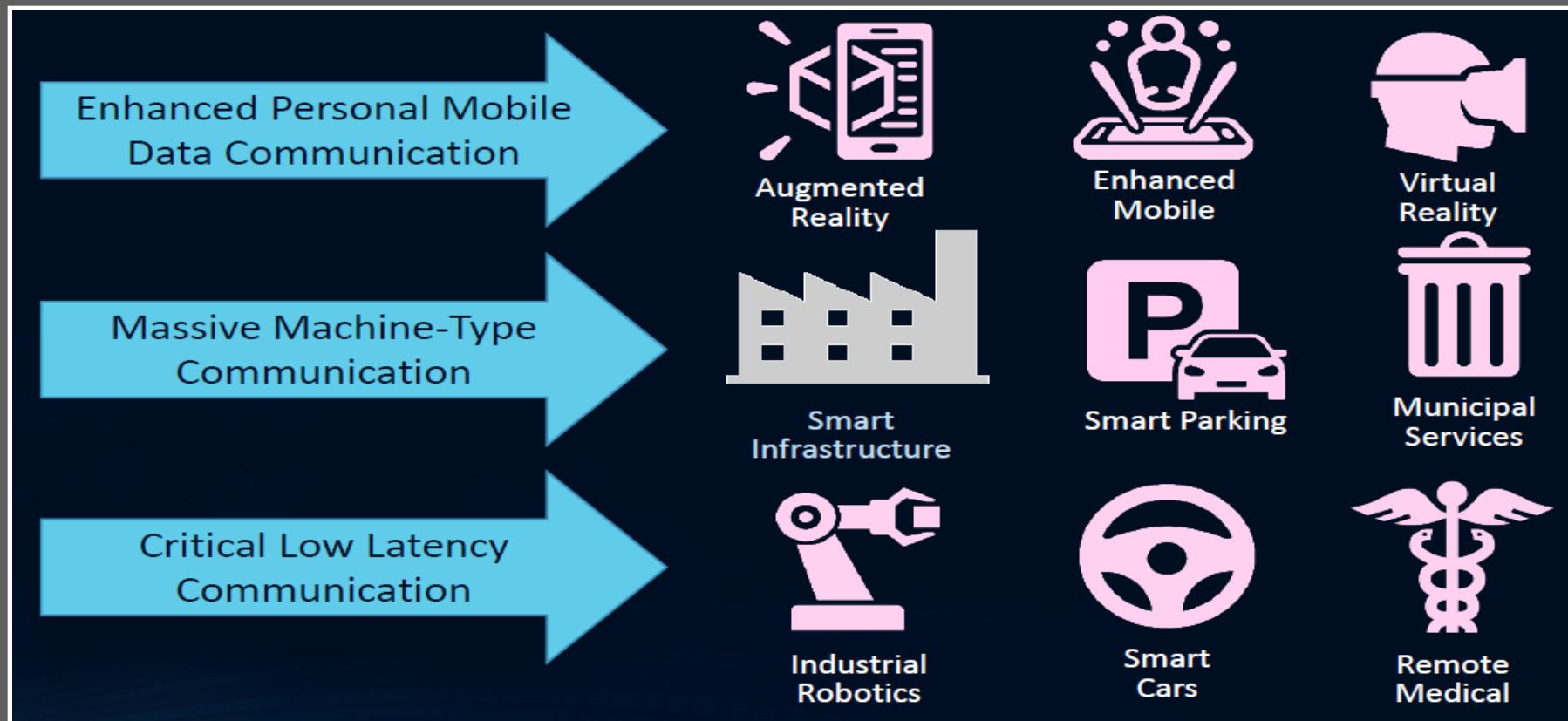


Global LTE Coverage



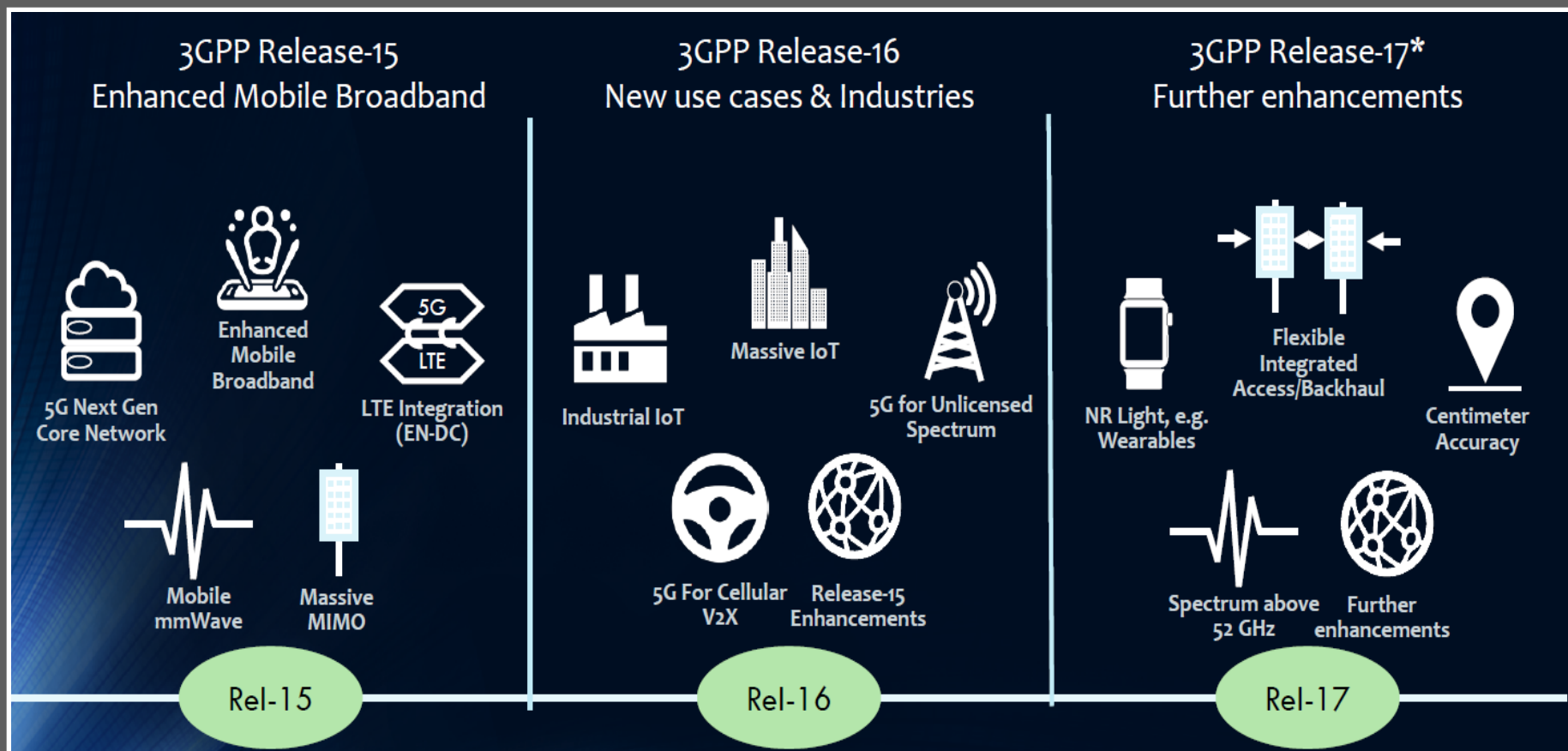
Source: Open Signal

What is 5G?



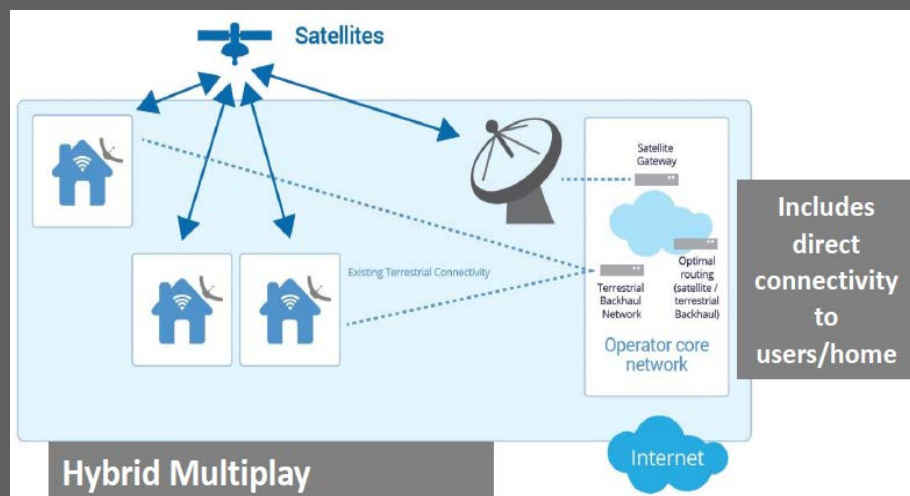
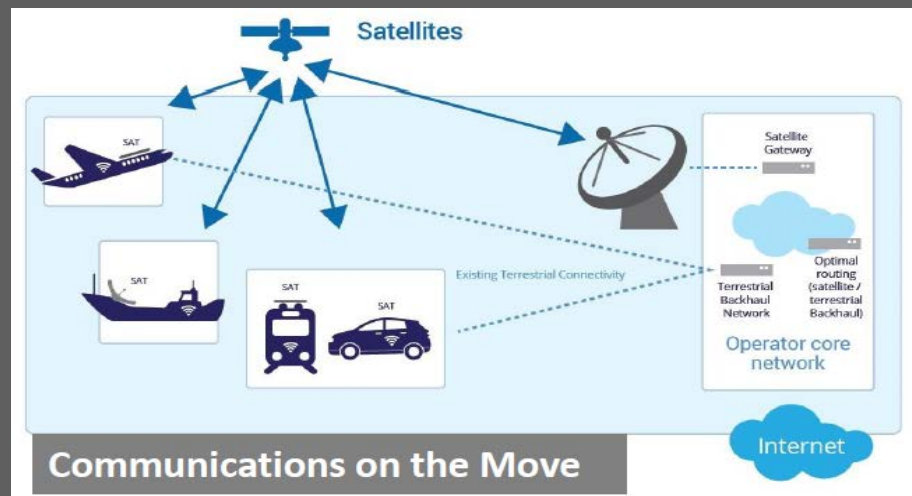
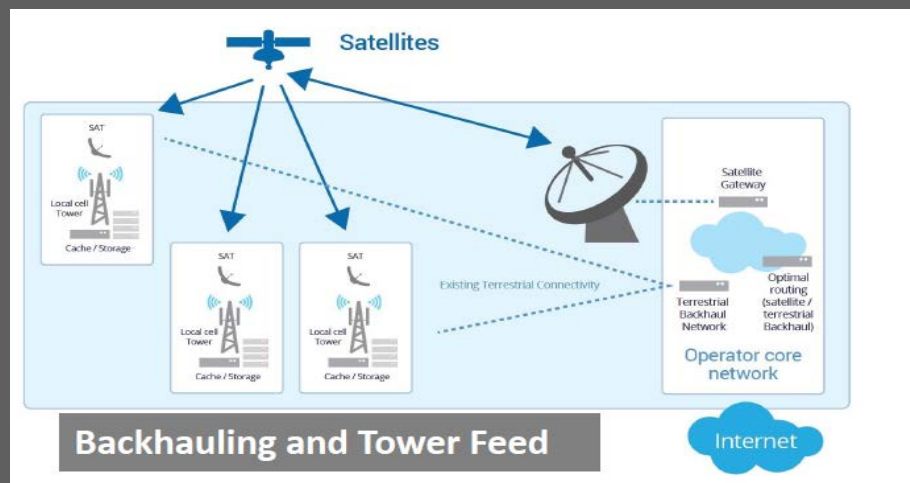
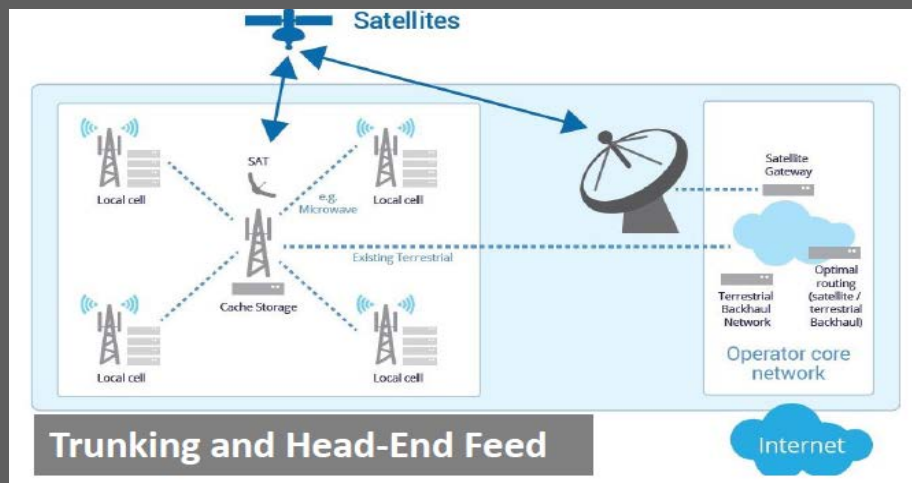
Source: 5G Americas

5G Evolution to Deliver 5G Vision



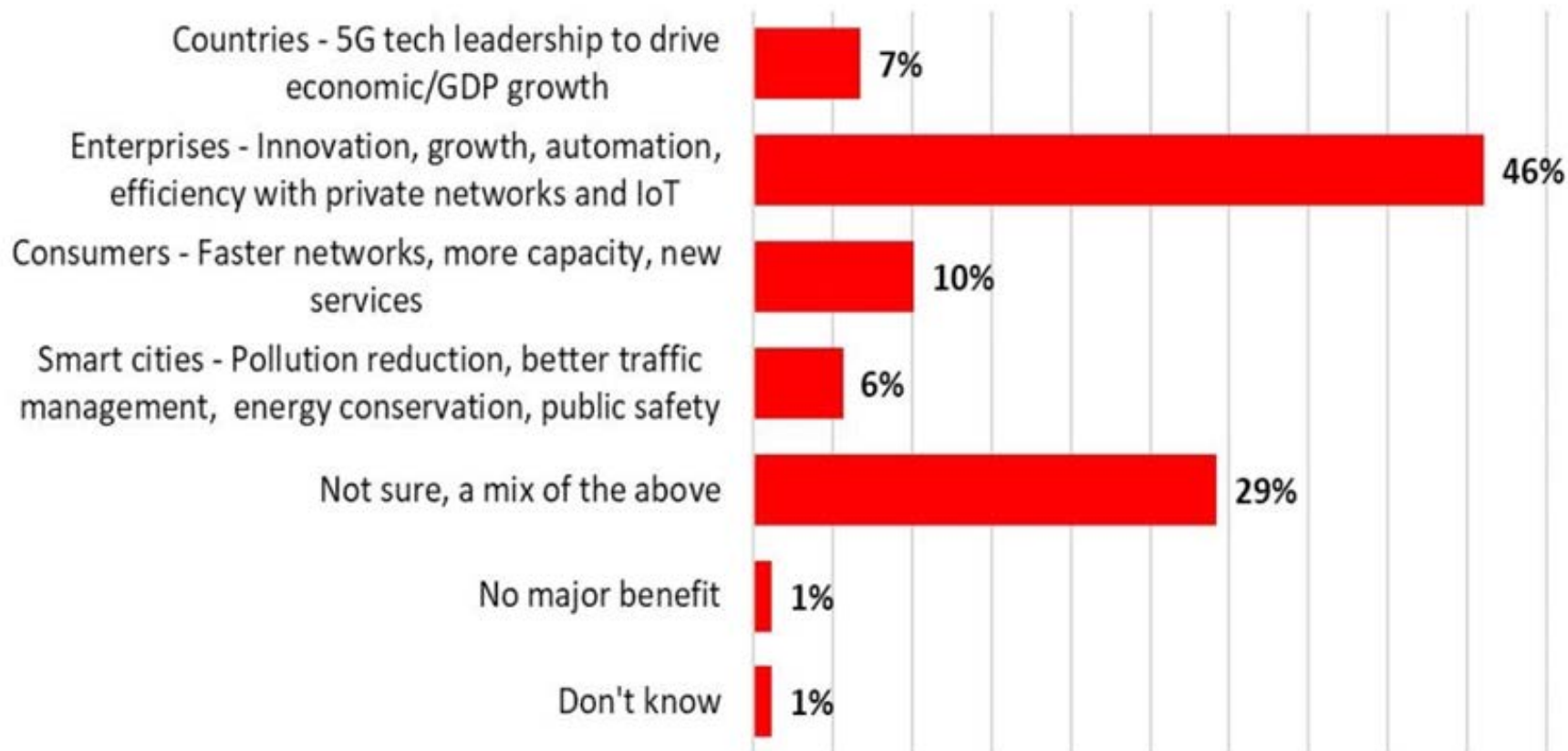
Source: 5G Americas

Satellite 5G Use Cases



Source: www.gscoalition.org

Who Benefits the Most from 5G?



Source: Media Article (TBD)

Private Network Definition & Market Size

Private Network is a dedicated network for consumers, businesses and Internet of Things.

Private Network can be based on licensed, unlicensed or shared spectrum.

Global Private Network market will grow at a compounded annual growth rate of 27% between 2021 – 2025 due to the availability of new spectrum bands as well as the maturity of the LTE ecosystem. This growth accounts for more than \$8.5 Billion by the end of 2025.

Source: The Besen Group



Key Private Network Characteristics

- Mobility
- Security
- Reliability
- Coverage
- Low Latency



Source: The Besen Group

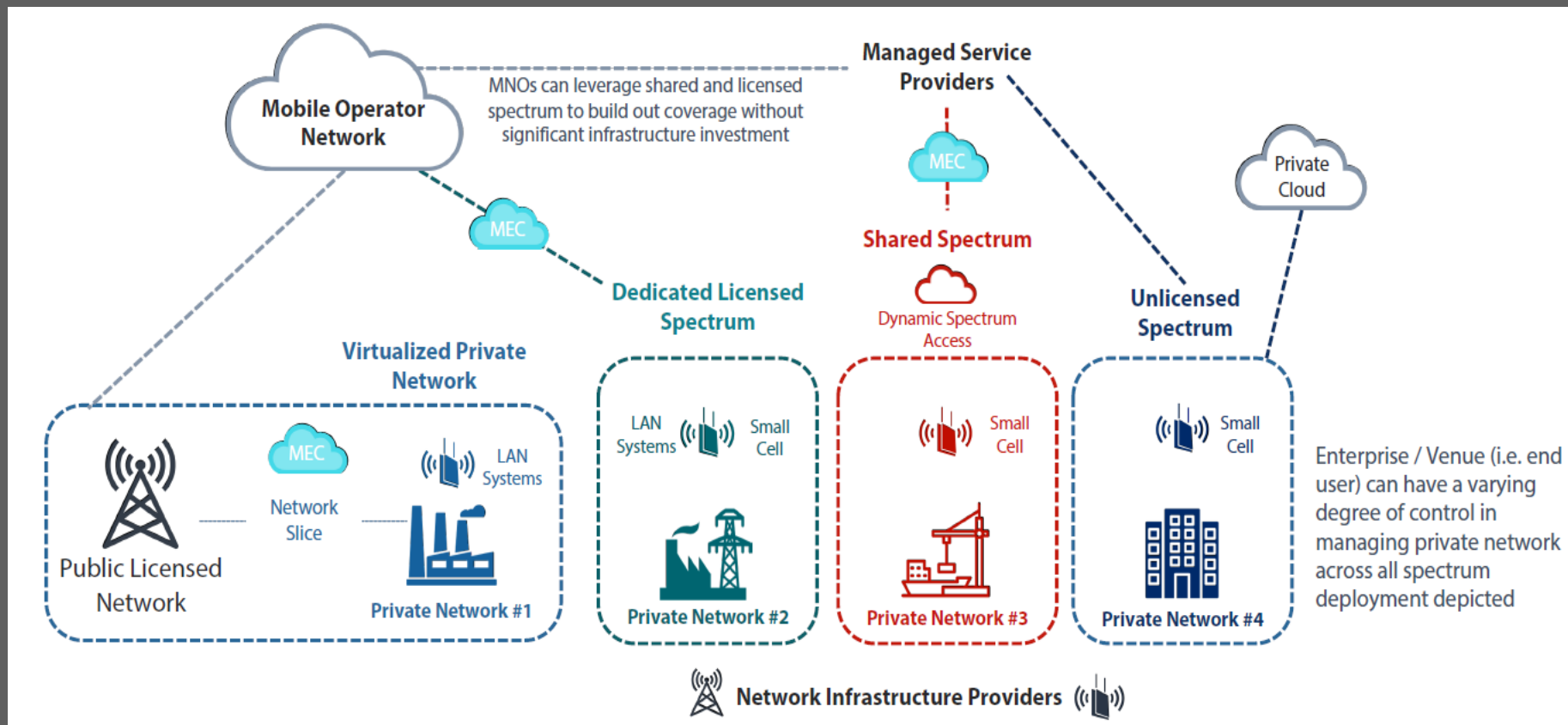
Private Network Market Segments

| Industry | Sites |
|----------------------------|-------------------|
| Transport Venues & Ports | 50,000 |
| Military Bases | 10,000 |
| Warehouses | 3,300,000 |
| Industrial & Manufacturing | 10,710,000 |
| Oil & Gas | 8,000 |
| Water Utility Players | 140,000 |
| Mining | 54,000 |
| Hospitals & Labs | 263,000 |
| Total | 14,582,600 |



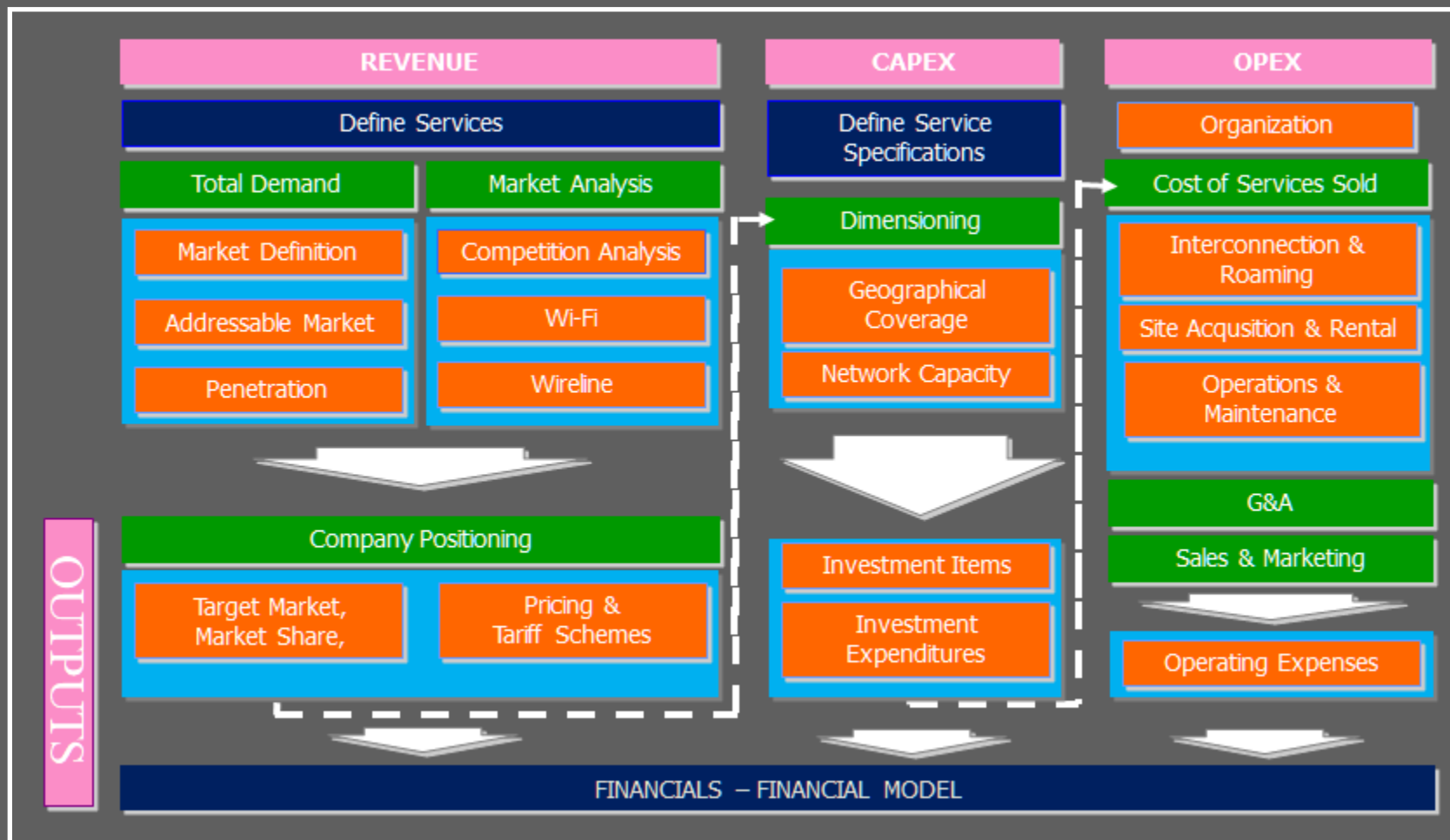
Source: Nokia from Enterprise IoT Insights 2019

Private Network Business Models



Source: Harbor Research

Private Network Business Case Modeling



Source: The Besen Group

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