



IHS Markit™

# 5G: the next leap forward in connectivity

Are you prepared?



# The 5G story is evolving rapidly

5G is a story in the making. The path to full 5G adoption is complicated and still evolving. While preliminary 5G standard specifications are expected in 2018, standards development and deployment is expected to reach into 2022 and beyond.

Expectations for 5G are sky-high, with a wide range of features and capabilities being promised. Still, from infrastructure and spectrum to devices and use cases, there are many opportunities, challenges and questions surrounding 5G development.

Operators, content providers and infrastructure across the globe are moving at varying speeds when it comes to testing and deployment. And despite many challenges, the hype around 5G is already building — similar to what was seen for 3G and 4G. It's crucial to be able to identify the relevant issues for 5G planning.



# 1G to 5G: continuous extension of capabilities beyond voice

Connectivity has come a long way since the first generation of the 1980s, but we still have far to go before our path to 5G is defined and the industry has a collective understanding of how to overcome future obstacles.

## 1G 1980s



Analog phone

## 2G 1990s



Digital phone with text messaging

## 3G - 3.5G 2000s



Digital calls, messaging + data, 3.5G with mobile broadband

## 4G 2010s



All IP-based mobile broadband



## 5G 2020s

Enhanced broadband + industry



# You have questions about the fast-developing 5G market, and we can help you get the most reliable answers

Whether you're wondering when you should start investing in 5G, where you should focus first or what the spectrum environment will look like, we can assist.

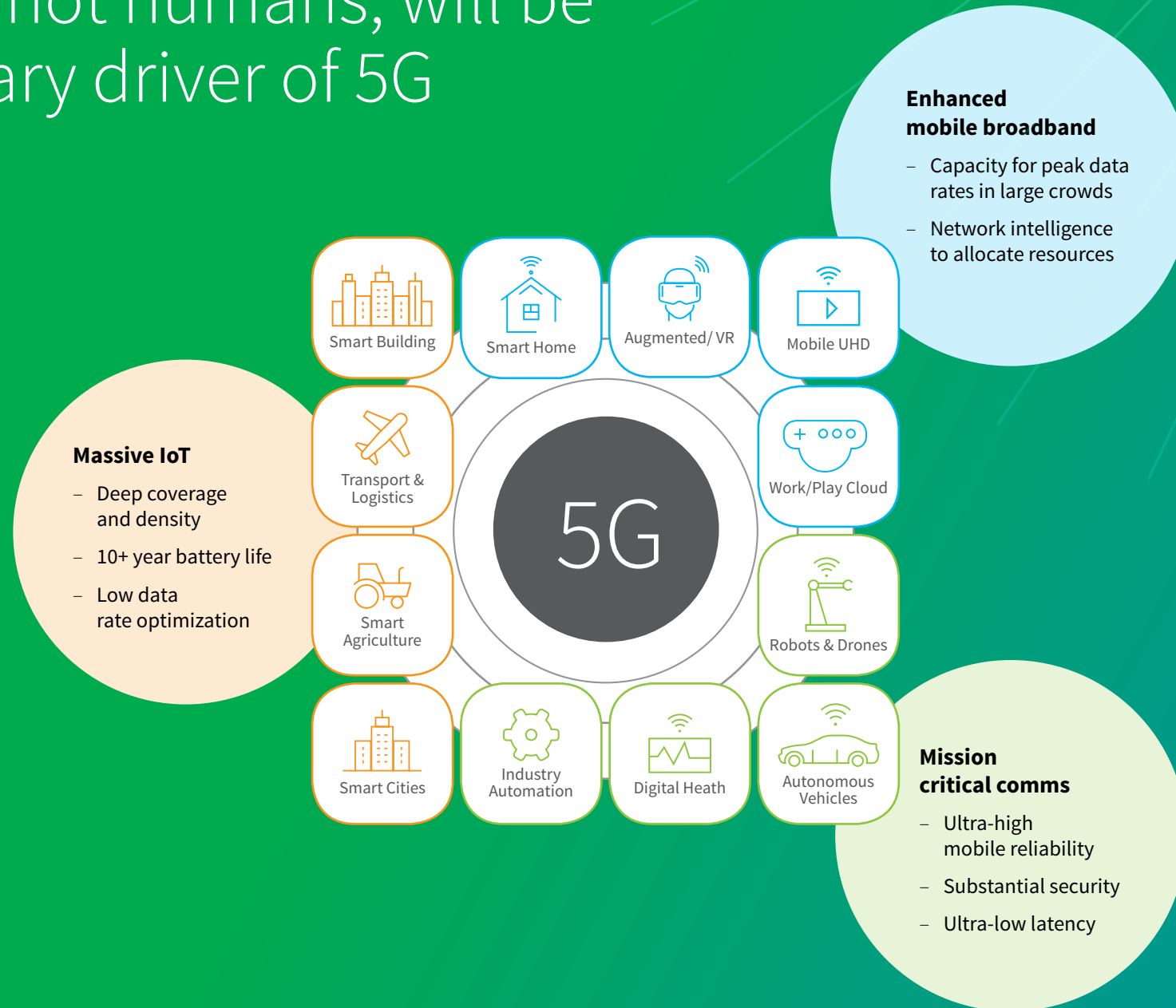
## Trust the world leader in 5G research

IHS Markit was the first research firm to cover the nascent 5G market extensively. Since 2012, we've been providing the most comprehensive quantitative and qualitative 5G research on wide range of subjects including:

- **The impact on the Internet of Things (IoT):** 5G use cases, vertical market opportunities and competing wireless technologies
- **Operators:** market share, revenue, capital expenditures and trends
- **Infrastructure:** network architecture and spectrum assets
- **Device ecosystem:** semiconductors, mobile devices and fixed wireless customer premises equipment (CPE)
- **Key applications** such as autonomous vehicles



# Industry, not humans, will be the primary driver of 5G





# Unmatched global 5G analysis and insights

Our 5G team of senior researchers come from the key industries of 5G and are supported by over 300 industry analysts in technology sectors spanning IT, telecom, media, industrial, automotive, electronics, solar and more — to bring you the most accurate and complete picture of the 5G landscape available anywhere.

IHS Markit Intelligence Services covering 5G include Mobile Infrastructure, Smartphone Premium and Semiconductors. Here's just a small sampling of the reports, studies, insights and webinars we've published on 5G:

- 5G development report
- 5G strategies service provider survey
- Evolution from 4G to 5G service provider survey
- 5G node forecast
- Country-level 5G capex forecast
- 5G in IoT market report
- From 4G to 5G, the need for antennas as never been greater
- The Brooklyn 5G Summit: industry, not humans, will be chief 5G driver
- Is 5G doomed already?
- The economy's 5G problem
- The rise of 5G: rethinking the cellular network
- 5G transport: challenges and new architectures



# Custom research and consulting

## Uniquely positioned to solve your custom research needs

In addition to our syndicated 5G research, we offer **custom research, consulting** and **executive advisory** services to help you address your greatest strategic and operational challenges.

An example is the custom study The 5G economy: *How 5G technology will contribute to the global economy*, which examines the expected economic impact of 5G. This study, which was a collaboration of the IHS Markit Technology and Economics & Country Risk divisions, required extensive research across a wide swath of possible 5G use cases to determine the potential effect on various economic industry sectors, as well as the anticipated timing of these impacts.

**Whatever your 5G pain points may be, IHS Markit is here to help.**



# Our 5G team



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IHS Markit (Nasdaq: INFO) is a world leader in critical information, analytics and solutions for the major industries and markets that drive economies worldwide. The company delivers next-generation information, analytics and solutions to customers in business, finance and government, improving their operational efficiency and providing deep insights that lead to well-informed, confident decisions. IHS Markit has more than 50,000 key business and government customers, including 85 percent of the Fortune Global 500 and the world's leading financial institutions. Headquartered in London, IHS Markit is committed to sustainable, profitable growth.

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