



How could 5G potentiate automation in manufacturing? 5G impacts in manufacturing

5G networks could potentiate automation and improve monitoring capabilities in the manufacturing industry, which can result in cost and efficiency optimisation. **Manufacturing is expected to capture the highest share of 5G-enabled output by 2035.**



€4.7 trillion enabled output in the industry due to 5G by 2035



5.5% 5G-enabled output as a % of total manufacturing output by 2035

How might 5G bring these outputs?

Video analytics and immersion



Massive sensing and analytics



Edge computing and real-time



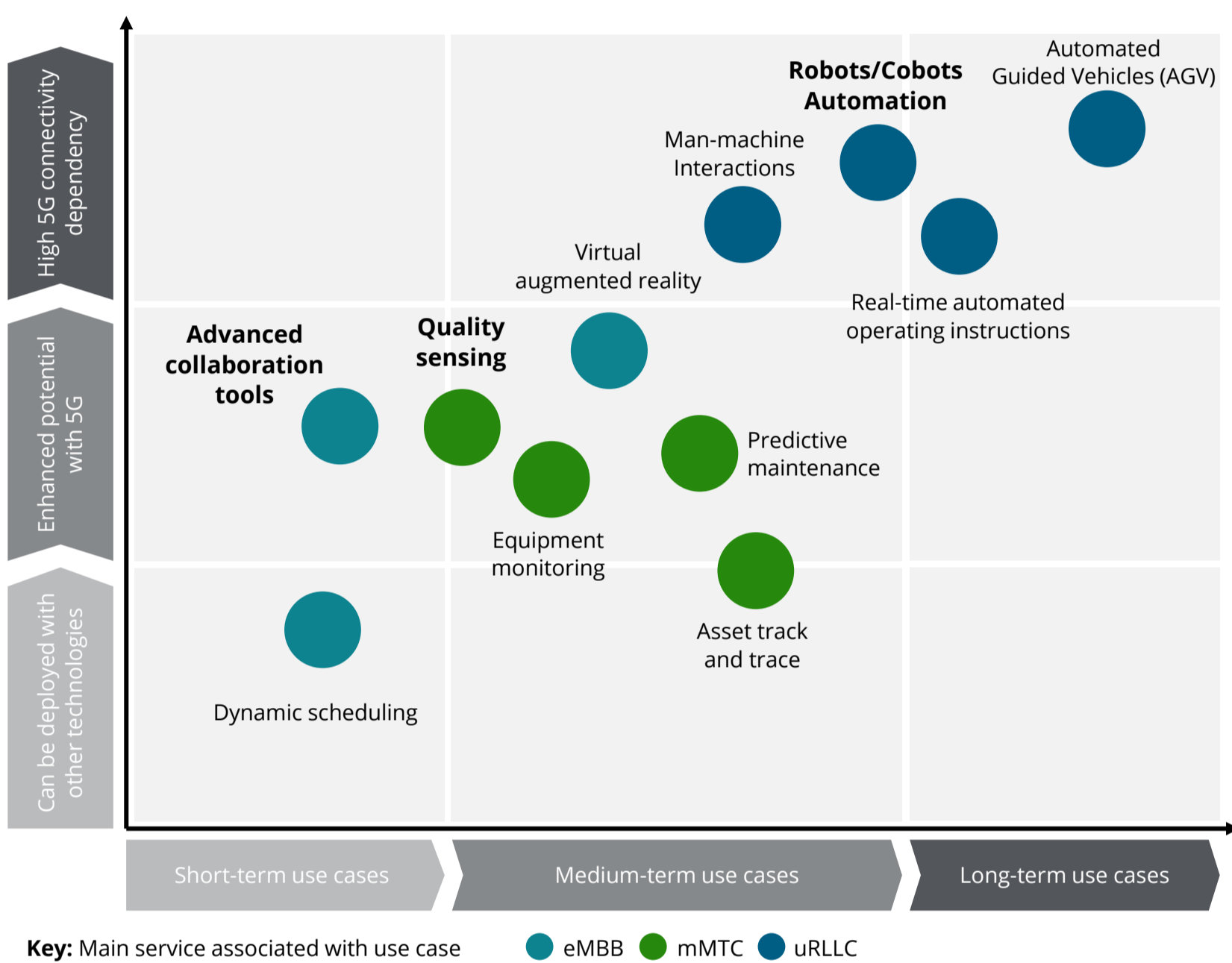
Wireless ultra-high reliability



And when might this evolution take place?

In a short-term, use cases that require lower investment, due to lower demand for 5G capabilities, are expected to be adopted. In the mid-term, it is expected that most of the adopted use cases are associated with the 5G mMTC service. Use cases such as autonomous vehicles are expected to be adopted later, requiring higher investments in 5G equipment and greater maturity of the technology.

Use cases adoption roadmap



Advanced collaboration tools

Enable seamless connection and communication between workforce regardless of their location (home/office) ensuring real-time communication and collaboration.



Quality sensing

Artificial Intelligence (AI)/Machine Learning (ML) algorithms that can proactively sense and detect quality degradation issues with the goal of identifying quality deficits earlier in the process.



Robots/cobots automation

Use of robotics brings a range of business benefits, not least improved build quality, that help costs to be saved elsewhere from reducing factory lighting to reducing defect rates or improving worker safety.

How can Deloitte help?

Deloitte translate business and industry needs into technical requirements delivering value added end-to-end 5G solutions that lead to **meaningful business outcomes.**



IDEATE AND PRIORITIZE

Select the areas to be improved with 5G use cases, ideating, identifying and prioritizing the top 5G use case opportunities



DEVELOP THE BUSINESS CASE

Formulate the operational benefits of the 5G use case(s) defined and associated business case value proposition



DESIGN TECH REQUIREMENTS

Define and design use case technical solution architecture and requirements, considering deployment strategies and application requirements



BUILD AND EVALUATE

Start with a point of contact (PoC) first to monitor and evaluate the 5G use case(s) performance and then proceed with rollout



OPERATE AND MAINTAIN

Define overall governance, operating model and procedures to ensure the sustainability in business as usual (BAU)

Sources: Deloitte TMT Predictions 2021, Huawei, IDC, Gartner, The business research Company

Contacts



Craig Wigginton
5G Industry Leader
Deloitte Global
cwigginton@deloitte.com



Pedro Tavares
5G Offering Leader
Deloitte Global
petavares@deloitte.pt



Vincent Rutgers
Sector Leader
Deloitte Global
vrutgers@deloitte.nl

General enquiries:
Global5G@deloitte.com
[Deloitte.com/5G](https://deloitte.com/5G)

5G Experts



Hugo Pinto
Associate Partner gTEE
Deloitte Portugal
hupinto@deloitte.pt



Pedro Sanguinho
Senior Manager gTEE
Deloitte Portugal
psanguinho@deloitte.pt

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