How could 5G answer the upcoming needs of cities worldwide?

The future of Smart Cities



Deloitte.com/5G

5G is expected to bring significant economic and social benefits in the coming years, proving to be an area of great interest for cities to explore in order to become "Smarter"...



>2.5 trillion US dollars of global smart cities market by 2026



104.8 billion US **dollars** enabled by 5G in smart cities by 2026



40.2 billion US dollars of global 5G IoT market size by 2026

Sources: Business Wire; Markets and Markets.

Boosting cities' transformation through 5G's capabilities

Smart Cities need to engage in a transformational process which demands the exploitation of the revolutionary capabilities of 5G technology in order to maximize its potential



5G's high data throughput and easy scalability will be a key component when addressing the data speed and scale demands

5G enhances the quantity of available monitored and



5G compromises an end-to-end security platform that allows to avoid data misuse and improve reliability on service utilization

controlled devices answering to the Unlimited "Things" Scenario





5G supports network slicing and provisioning flexibility allowing a



massive diversification and multiple new vertical industries

Cities' use cases leveraged by 5G

5G will play a major role in empowering societies to transform global services through high uplink capabilities and reduced latency connections, among others

Smart energy

Smart meters & billing to allow real-time fault management and direct load control

Smart places

Leverage from **IoT** technologies and augmented reality to improve users' experience

Smart Cities

Diagnose and mitigate effects of malicious sources in a highly densified Internet of Things (IoT) scenario

Smart environment

Smart living & health

Monitor and diagnose liable patients regarding anomalies on their day-to-day life

Smart mobility

Consistently monitoring and analysis of traffic with video capturing and signalling information **Smart safety & security** Video surveillance and unmanned aerial vehicles (drones) to identify dangerous

situations



In an evolution to a incredibly urbanised world, the only way of providing top of the class services and ensure quality of life is through 5G

How can Deloitte help?

Deloitte translate business and industry needs into technical requirements delivering value added end-



IDEATE AND PRIORITIZE



DEVELOP THE BUSINESS CASE



REQUIREMENTS

DESIGN TECH



BUILD AND EVALUATE



OPERATE AND MAINTAIN

identifying and prioritizing the top 5G use case opportunities Formulate the operational benefits of the 5G use case(s)

Select the areas to be improved with 5G use cases, ideating,

defined and associated business case value proposition Define and design use case technical solution architecture and requirements,

considering deployment strategies and application requirements

Start with a point of contact (PoC) first to monitor and evaluate the 5G use

Define overall governance, operating model and

procedures to ensure the sustainability in business as usual (BAU)

case(s) performance and then proceed with rollout

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

to-end 5G solutions that lead to meaningful business outcomes.

Contacts



5G Industry Leader **Deloitte Global** cwigginton@deloitte.com



Deloitte Global petavares@deloitte.pt



Sector Leader **Deloitte Global** meantunes@deloitte.com

Global5G@deloitte.com Deloitte.com/5G

General enquiries:

5G Experts

Acknowledgements



Pedro Sanguinho Senior Manager gTEE Associate Partner gTEE

Sector Experts





Synergy Solutions Director



Deloitte Portugal Deloitte Portugal Deloitte Portugal Deloitte Global **Deloitte Global** ricardofmartins@deloitte.pt hupinto@deloitte.pt psanguinho@deloitte.pt jbarroca@deloitte.pt sercarvaino@deioitte.pt

Special thanks to the Deloitte team who contributed to this publication in terms of researching, providing expertise, and coordinating: Henrique Piedade – Tech Senior gTEE

Deloitte refers to one or more of Deloitte Touche Tohmatsu Limited ("DTTL"), its global network of member firms, and their related entities (collectively, the "Deloitte organization"). DTTL (also referred to as "Deloitte Global") and each of its member firms and related entities are legally separate and independent entities, which cannot obligate or bind each other in respect of third parties. DTTL and each DTTL member firm and related entity is liable only for its own acts and omissions, and not those of each other. DTTL does not provide services to clients. Please see www.deloitte.com/about to learn more.

Deloitte is a leading global provider of audit and assurance, consulting, financial advisory, risk advisory, tax and related services. Our global network of member firms and related entities in more than 150 countries and territories (collectively, the "Deloitte organization") serves four out of five Fortune Global 500® companies. Learn how Deloitte's more than 345,000 people make an impact that matters at www.deloitte.com. This communication contains general information only, and none of Deloitte Touche Tohmatsu Limited ("DTTL"), its global network of member firms or their related entities (collectively, the "Deloitte organization")

is, by means of this communication, rendering professional advice or services. Before making any decision or taking any action that may affect your finances or your business, you should consult a qualified professional adviser. No representations, warranties or undertakings (express or implied) are given as to the accuracy or completeness of the information in this communication, and none of DTTL, its member firms, related entities, employees or agents shall be liable or responsible for any loss or damage whatsoever arising directly or indirectly in connection with any person relying on this communication. DTTL and each of its

member firms, and their related entities, are legally separate and independent entities. ©2023. For information, contact Deloitte Technology, S.A.