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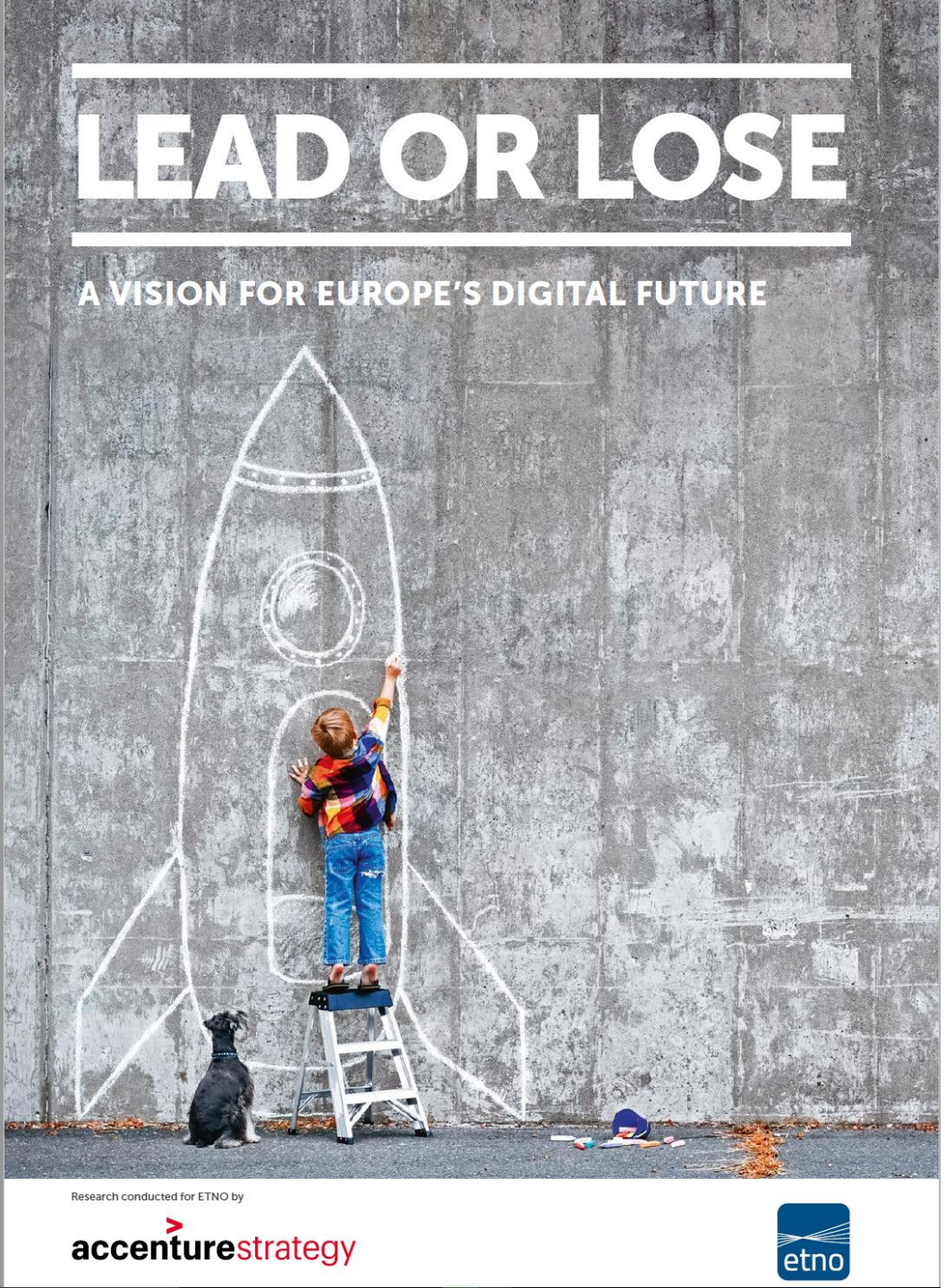
Your Digital Network. Your Future

The Value Driven Network for 5G: How to Succeed

Vangelis Karelis
Thessaloniki, December, 15th 2017

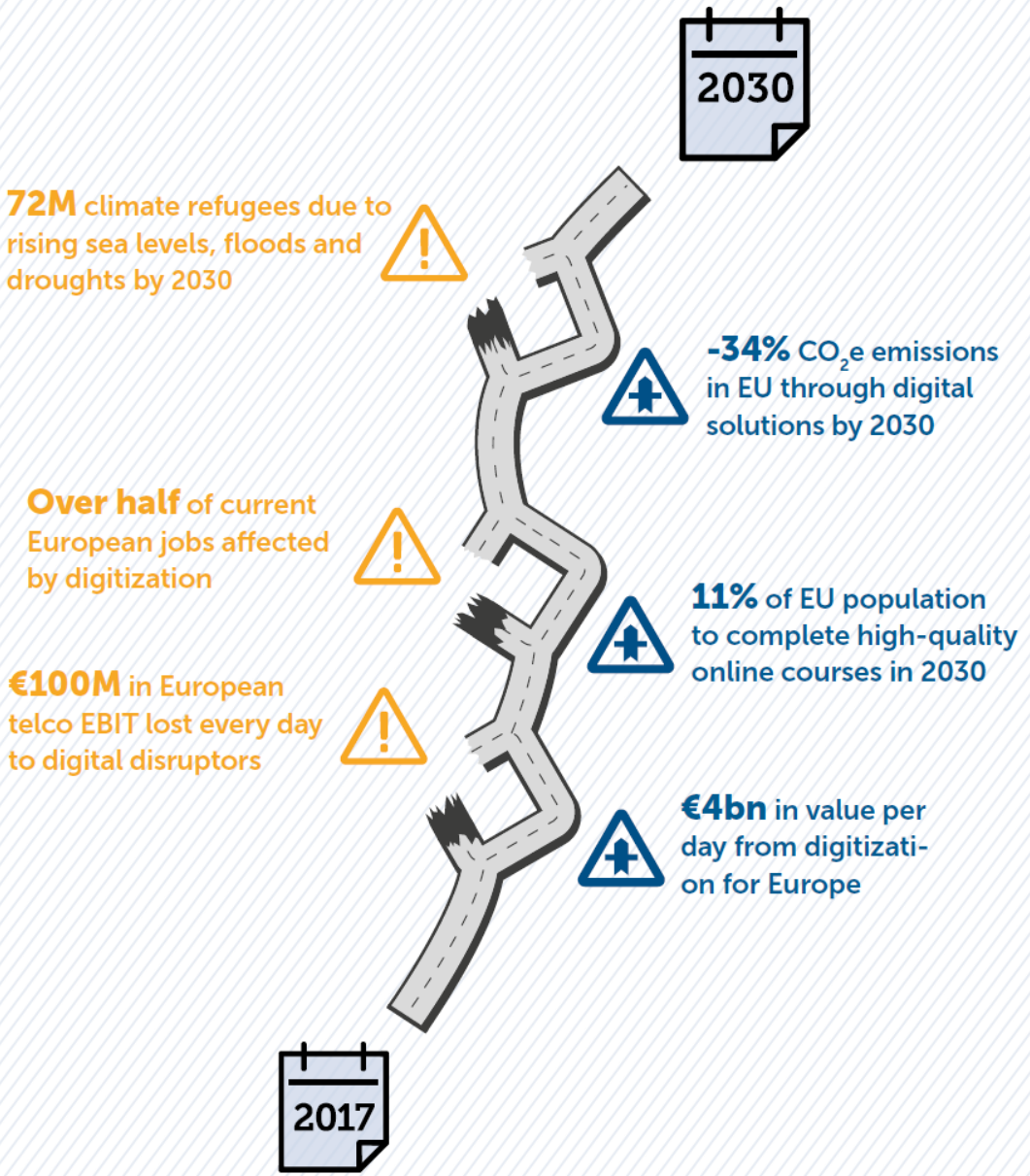


LEAD OR LOSE
A VISION FOR EUROPE'S DIGITAL FUTURE

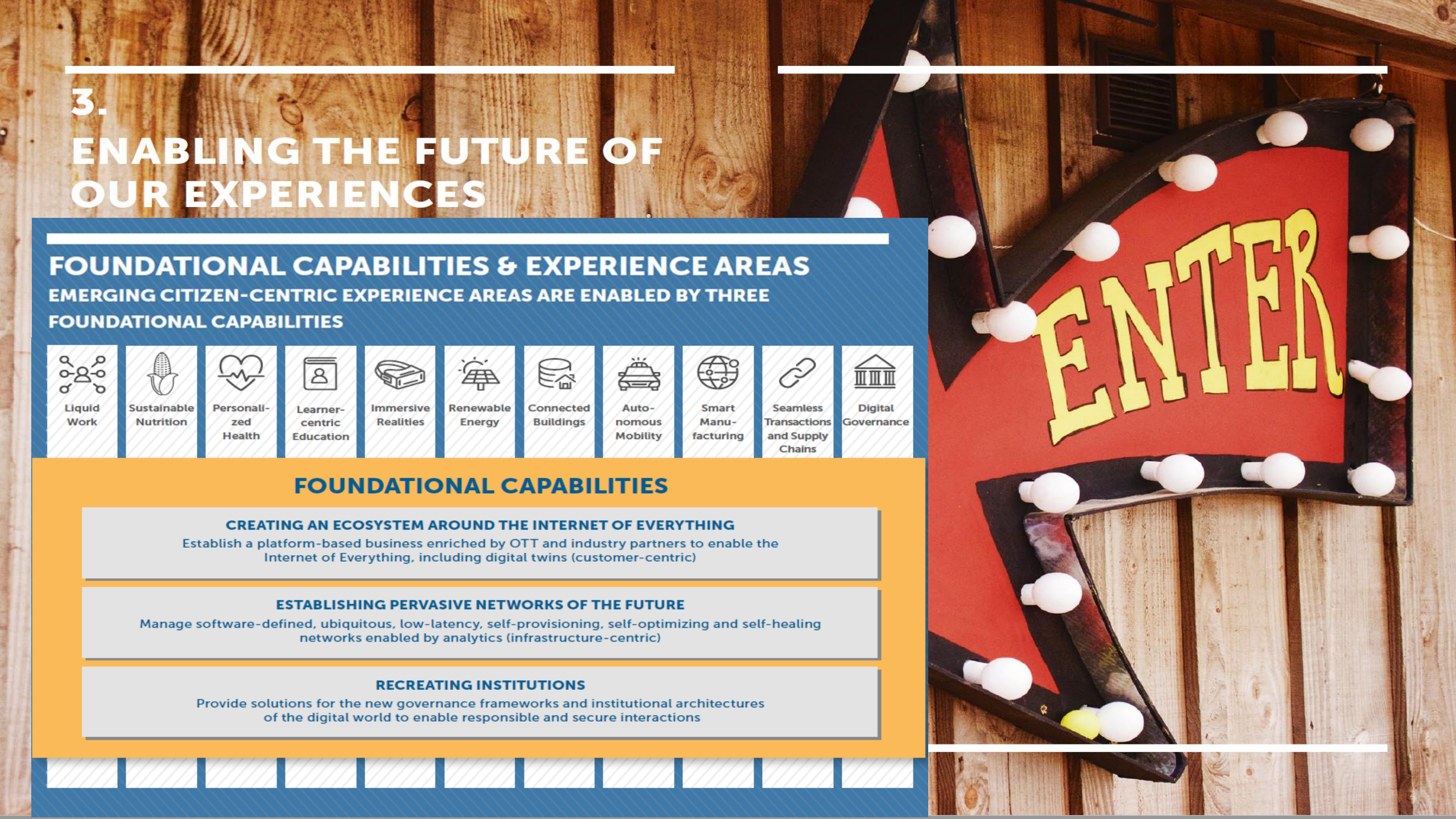
2.

SHAPING THE DIGITAL FUTURE OF EUROPE

EUROPE AT A CROSSROADS – OPPORTUNITIES AND THREATS ON THE WAY TO THE DIGITAL AGE



3.
ENABLING THE FUTURE OF OUR EXPERIENCES



FOUNDATIONAL CAPABILITIES & EXPERIENCE AREAS

EMERGING CITIZEN-CENTRIC EXPERIENCE AREAS ARE ENABLED BY THREE FOUNDATIONAL CAPABILITIES

- Liquid Work
- Sustainable Nutrition
- Personalized Health
- Learner-centric Education
- Immersive Realities
- Renewable Energy
- Connected Buildings
- Autonomous Mobility
- Smart Manufacturing
- Seamless Transactions and Supply Chains
- Digital Governance

FOUNDATIONAL CAPABILITIES

CREATING AN ECOSYSTEM AROUND THE INTERNET OF EVERYTHING

Establish a platform-based business enriched by OTT and industry partners to enable the Internet of Everything, including digital twins (customer-centric)

ESTABLISHING PERVASIVE NETWORKS OF THE FUTURE

Manage software-defined, ubiquitous, low-latency, self-provisioning, self-optimizing and self-healing networks enabled by analytics (infrastructure-centric)

RECREATING INSTITUTIONS

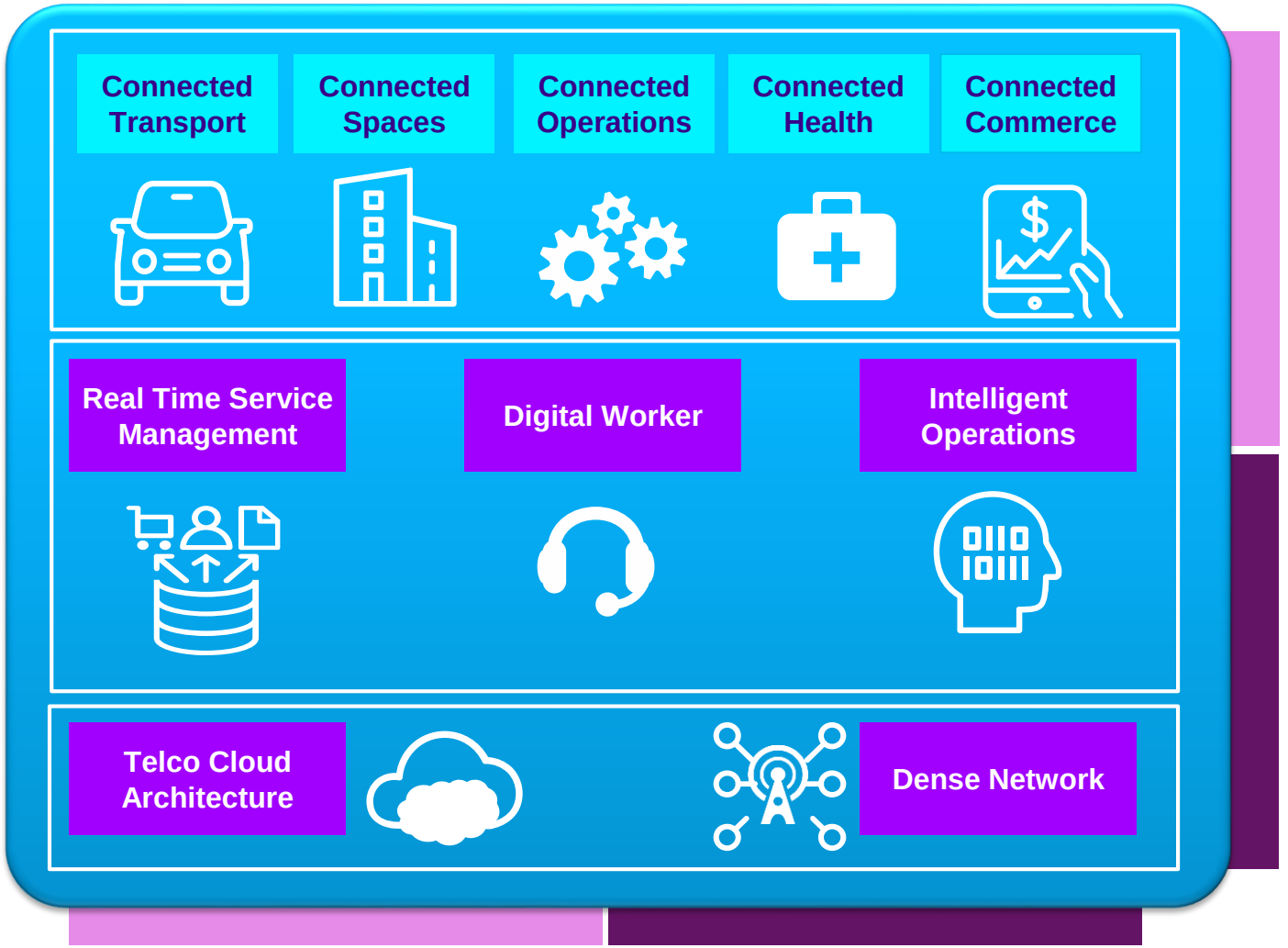
Provide solutions for the new governance frameworks and institutional architectures of the digital world to enable responsible and secure interactions

4.

FOUNDATIONAL CAPABILITIES FOR THE DIGITAL AGE

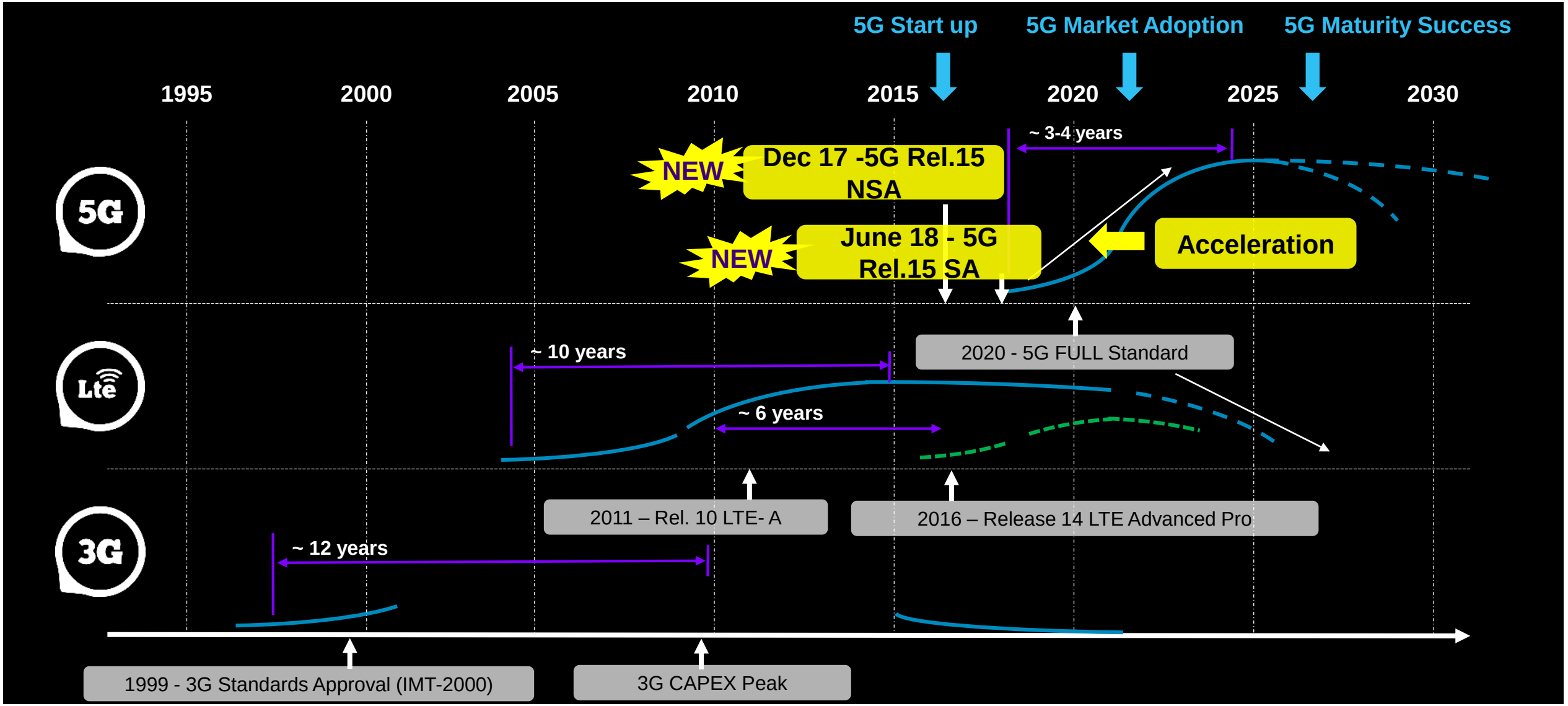
PERVASIVE NETWORK

Network led transformation to exploit core capabilities



Multispeed Technology Stack

INVESTMENT WAVES AND 5G



5G PREDICTIONS (UPDATE@DEC17)

#1 5G NSA Rel.15 will be used in 3,4 – 3,8 GHz for capacity (eMBB) with carrier aggregation. Operators will have to fight for licenses. In some cases also sub 700MHz is an option (analogue TV). Fiber to the site is a MUST

#2 5G New Radio in 28GHz band will be used for Fixed Wireless Access – in some cases in pre-standard scenario (Qualcomm snapdragon).

#3 LTE rel 13, rel 14 are making available new features for V2V and NB-IOT that will make 5G not mandatory to launch innovative services (Connected Cars, IoT)

#4 5G SA and full 5G specs will address mostly reliability (eight 9s) and latency requirements (1ms) for distributed mobile edge computing, and require 1. ecosystem plan and 2. devices

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MOBILE INDUSTRY CHALLENGES

Re-think how to steer investment on infrastructure

- Profitable roll out
- Consolidation of core sites
- Introduce Cloud-RAN

Be ready for X2X Communication

- Allocate Network Capacity in a smart way,
- Densify the network
- Provide Service Management Capabilities for future X2X Services

Evolve towards lean operation

- Implementation of DevOps
- Define core /no-core capabilities
- Adopt Robotics workforce and AI/ML tools in Operating model

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WHAT WE BELIEVE WILL HAPPEN

#1 Telcos have the opportunity to regain value by addressing Vertical Industry markets, providing specialized dedicated networks for each use case

#2 New connectivity products, with stringent service requirements, will be developed and managed through Digital Operations with cybernetic capabilities

#3 Network will be dense, with "small cell" based architecture. Construction / Installation costs will decrease dramatically with lower skilled (crowd) workforce.

#4 Ownership models will change: Rights of Way, renting space will happen in a marketplace and Smart Grid solution will support energy management

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THANK YOU

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