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Enabling a Digital India

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26 June 2015

Agenda

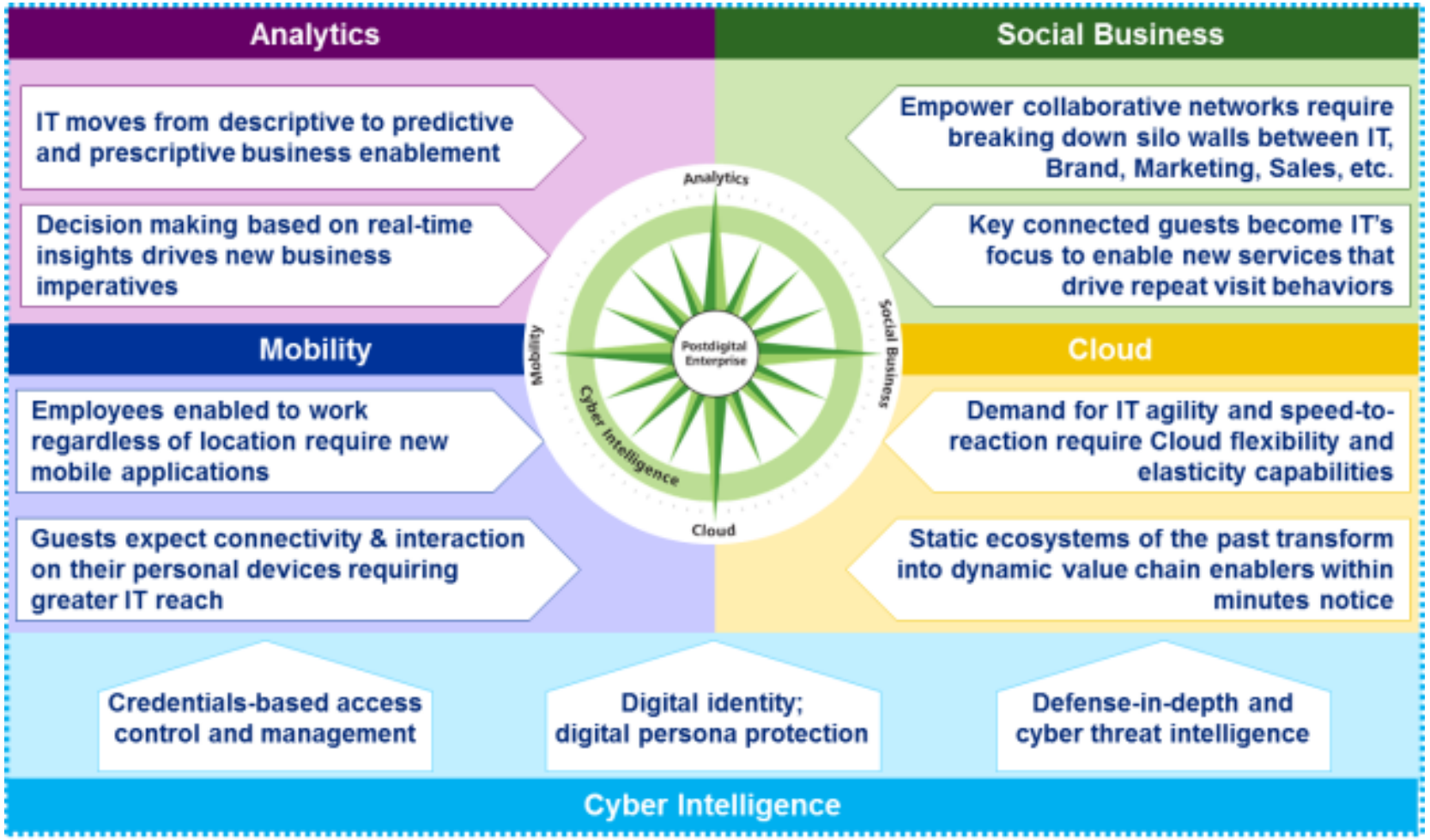
Defining Digital and its impact

Digital in the Public Sector

Digital Architecture Paradigms

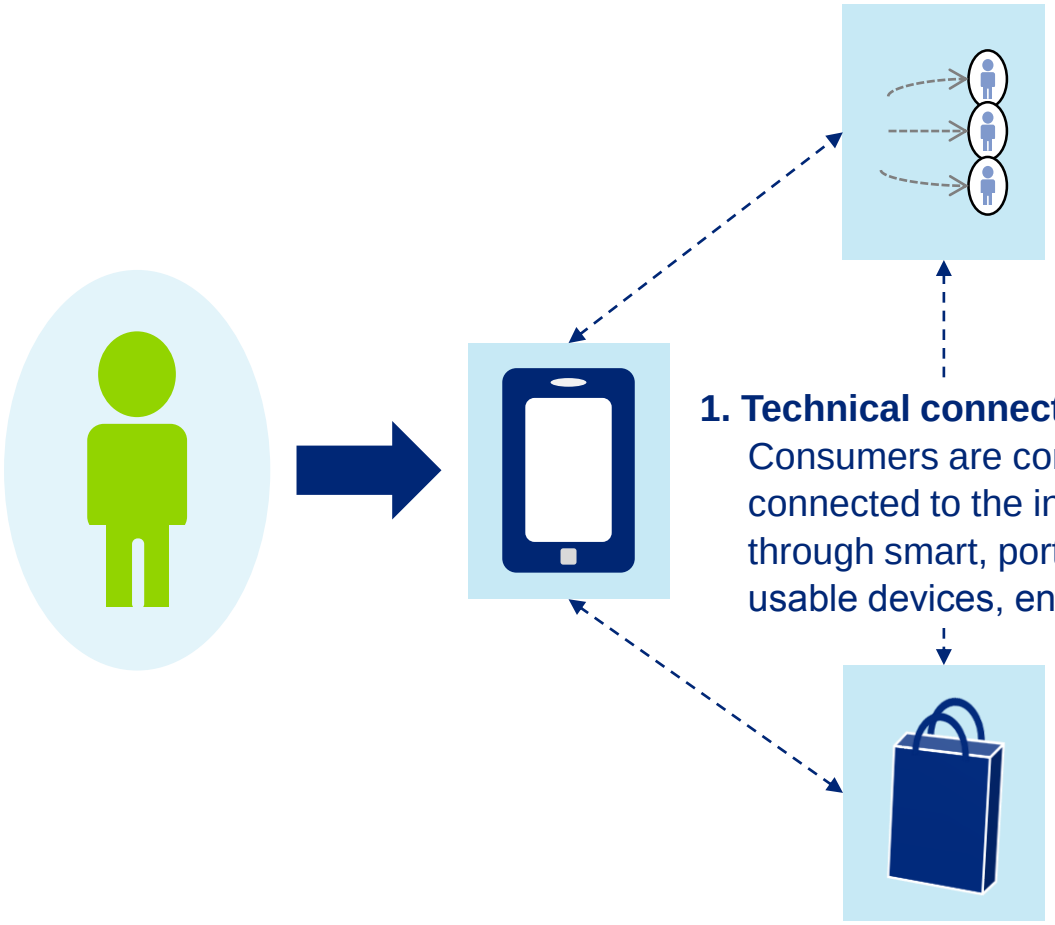
What is Digital ?

The Digital Paradigms – exponential connections



The Connected Consumer / Citizen

The evolution and humanization of technology is developing three major trends that define the newly ‘connected consumer’:



2. Social connectivity: Consumers are constantly connected to their social networks, resulting in increasingly collaborative shopping experiences, in which customers are influenced by and influencers of their peers

1. Technical connectivity: Consumers are constantly connected to the internet through smart, portable, and highly usable devices, enabling…

3: Behavioral connectivity: Companies are gaining more detailed information about individuals, enabling more compelling consumer engagement through marketing and product/service offerings that are tightly linked to past patterns of behavior

Recognizing and reaching consumers / citizens at an individual level

The new service provider

Knowing the consumer / citizen

Recognition: Use analytics on the new data sources to recognize new consumers and unmet needs of existing consumers

Reach: Use digital, social and mobile media to reach the recognized consumers

Relevance: Connect with consumers by offering relevant personalized experiences

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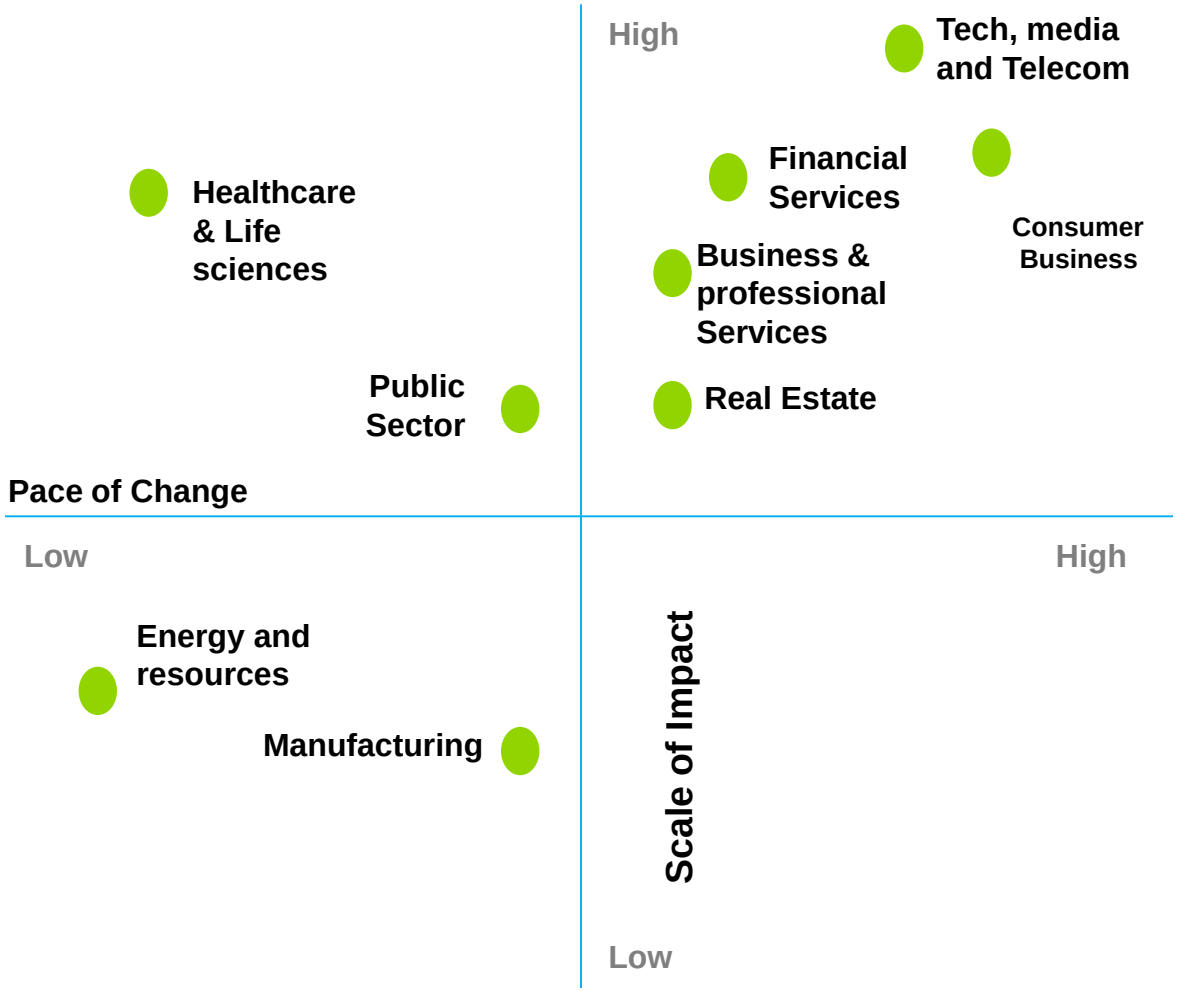
Digital Disruption in Industry

Industry Trends

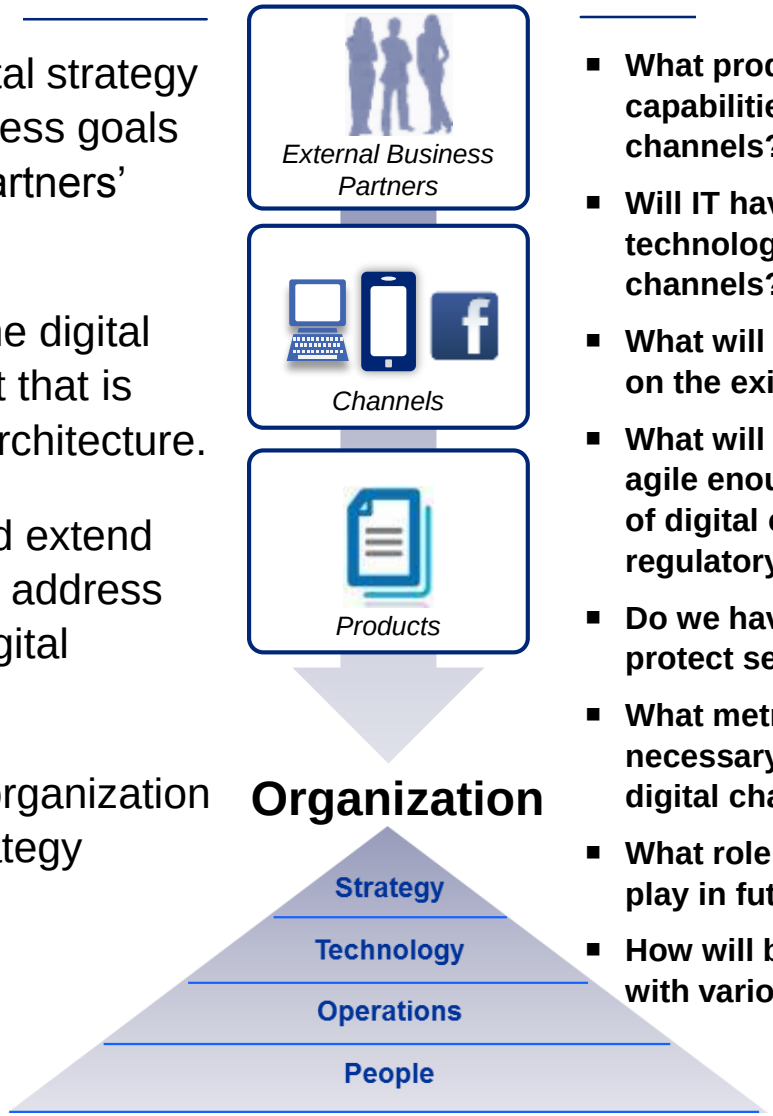
All industries will experience disruption of some form although the pace of change and likely impact varies depending upon sector



Getting ready for Digital Disruption

Tenets of Digital

- **Strategy** – Define a digital strategy that is aligned with business goals and external business partners' needs.
- **Technology** – Identify the digital media technology toolset that is aligned with enterprise architecture.
- **Operations** – Define and extend operational processes to address the dynamic nature of digital channels
- **People** – Structure the organization to support the digital strategy definition, execution and governance.



Key Questions to Address

- **What products are aligned to the capabilities and demands of digital channels?**
- **Will IT have the skills with the required technologies to best utilize digital channels?**
- **What will be the impact of digital channels on the existing distribution network?**
- **What will be the governance model that is agile enough to meet the fast moving nature of digital channels, while being mindful of regulatory requirements?**
- **Do we have the right controls in place to protect sensitive information?**
- **What metrics and monitoring will be necessary to measure the benefits from digital channels?**
- **What role will externally facing employees play in future communication?**
- **How will business partners want to interact with various customer segments?**

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Digital in Public Sector

Social

Location data used in conjunction with social networks create hyper-local social platforms. Social media provides a vital stream of data used by governments for advanced analytics and sentiment analysis which can be used for education, public policy, healthcare, and other government services

Mobile

Mobile devices of all shapes and sizes, including wearable revolutionize health care and education while mobile payments via NFC can revolutionize the way public services are consumed. Citizen self service will also help in participatory governance and ease of service delivery

Exponentials

Governments focus on exponential technology will transform governance. Developments in “additive” manufacturing, or 3D-printing will spur a second industrial revolution. Robots paired with AI can perform complex actions and are capable of learning from humans, driving the intelligent automation phenomenon. Cyber Physical Systems like Drones, Augmented Reality, and sensor technology will redefine security and surveillance mechanism for citizen protection

Digital in Public Sector

Cloud

Remote computing services allow mass collaboration around huge data sets, bringing affordable scale to computationally intensive problem-solving. Governments can use hybrid clouds to share information. It can also be extended to increase government workforce productivity through virtual staffing cloud, predict cybercrime

Analytics

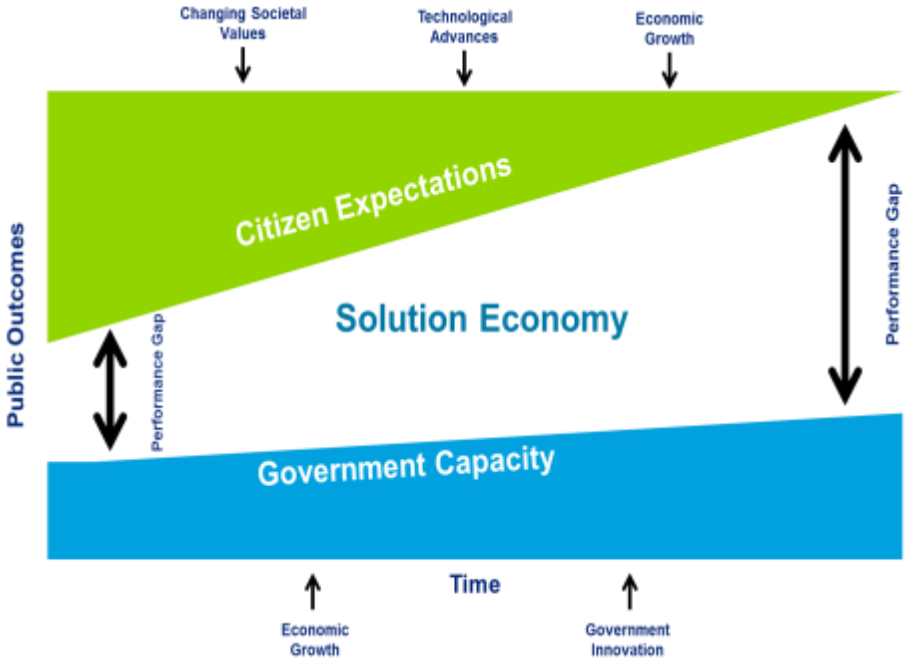
Predictive models, as well as other types of data analysis and visualization, allow the public sector to focus more efforts on prevention rather than reaction and remediation. Data-driven public policies help governments shift resources to where they are needed most..

The “Internet of Things”

In 2020, more than 30 billion devices are connected to the Internet. Governments can integrate this evolving technology, to improve delivery models in health care, transportation, security and defense, infrastructure management and many other areas.

Digital Inclusive Society- G2C

Empowering Citizen	
Digitizing Governance	Government will further use data analytics for processing ideas generated by various e-governance portals and meaningfully use it for better governance.
Digitally Green Agriculture	Social media can be helpful for connecting farmers sellers directly removing the middleman. M2M can help in optimizing productivity. GIS and GPS for agriculture monitor and control
Rise of Digital Banking	The physical availability of banking can be replaced by digital platform of mobile banking and cashless transactions.
The Smart Way of Education	The government has allotted ₹1 billion for building virtual class rooms and online courses. The m-education is going to be a $70 billion market globally by 2020
Transforming Healthcare	With the current market size of $7.5 million and growth rate at CAGR of 20%, telemedicine is going to be the next alternative for rural and remote people



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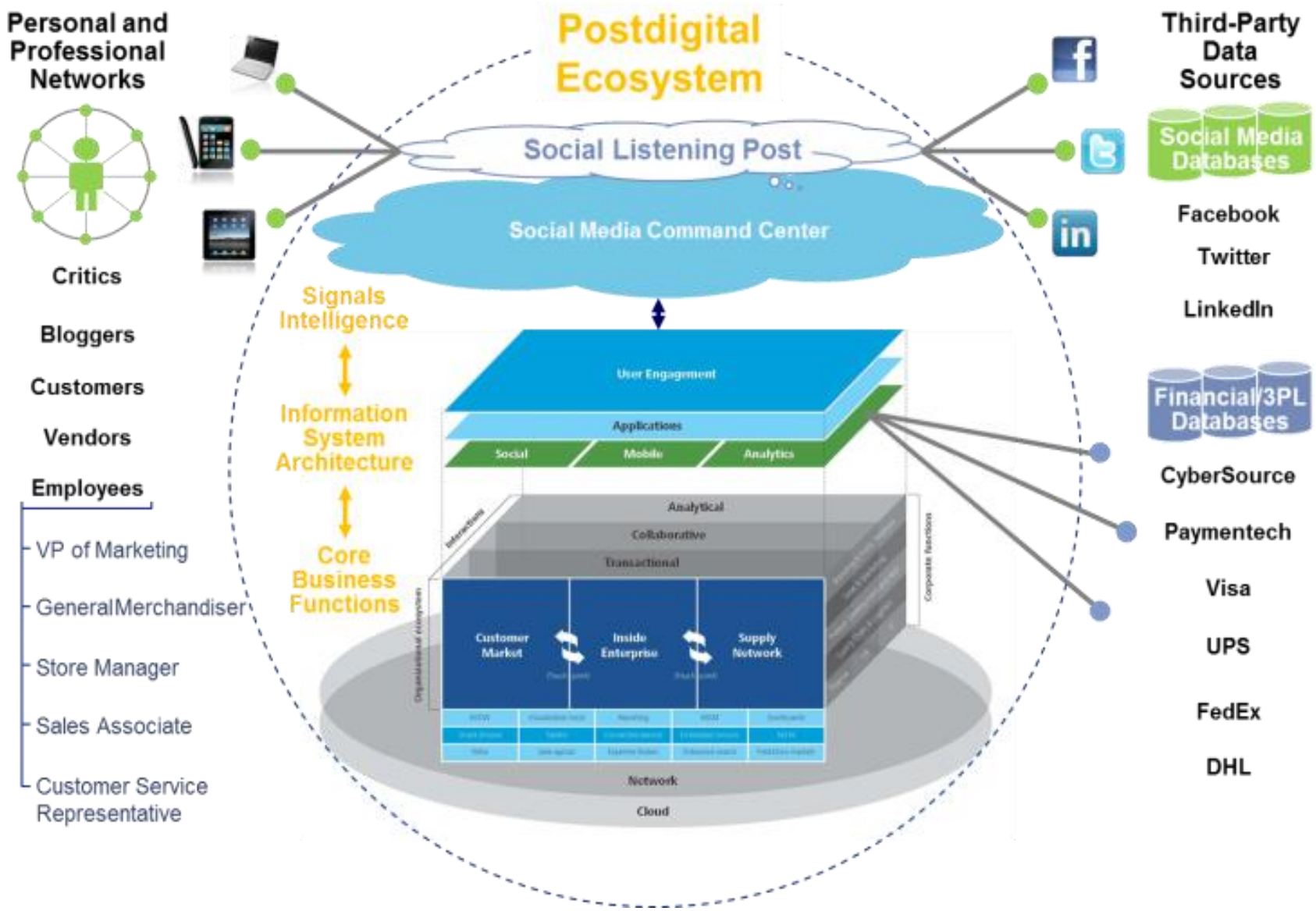
Outside In Architecture



Exponentials

Additive manufacturing

3D printing is democratizing the manufacturing process and changing what we can physically create. The simplicity of the support tools means that companies can digitize existing objects, tailor open-source designs, or create new designs based on structural and industrial engineering know-how. Advances in materials science are unlocking the potential for new manufacturing techniques, including the printing of electrical circuits, composite structures, and biological matter.

Robotics

Robotics is fundamentally changing the nature of work and virtually every job could be affected—it's just a matter of when. The next robotics frontier is machines which can perform tasks that involve gathering and interpreting data in real time. From multi-purpose manufacturing automation, to remote surgical equipment, to drones, to self-driving vehicles—the rules of how work gets done may be rewritten in the next decade.

Quantum computing

Advances in raw computing power and connectivity have guided us through the Internet revolution and are enabling investments in areas such as the Internet of Things and industrial biology. Quantum computing raises the stakes even further through the potential expansion of what is computationally possible.

Artificial intelligence

Artificial Intelligence (AI) is about simulating reasoning, developing knowledge, and allowing computers to set and achieve goals through a wide range of techniques such as machine learning, deep learning, probabilistic inference, neural network simulation, pattern analysis, decision trees, and random forests. And while today's leading AI approaches represent supervised learning with narrow focus, it appears the goal is to push, for general purpose, intelligence that can be self-taught and self-learning.

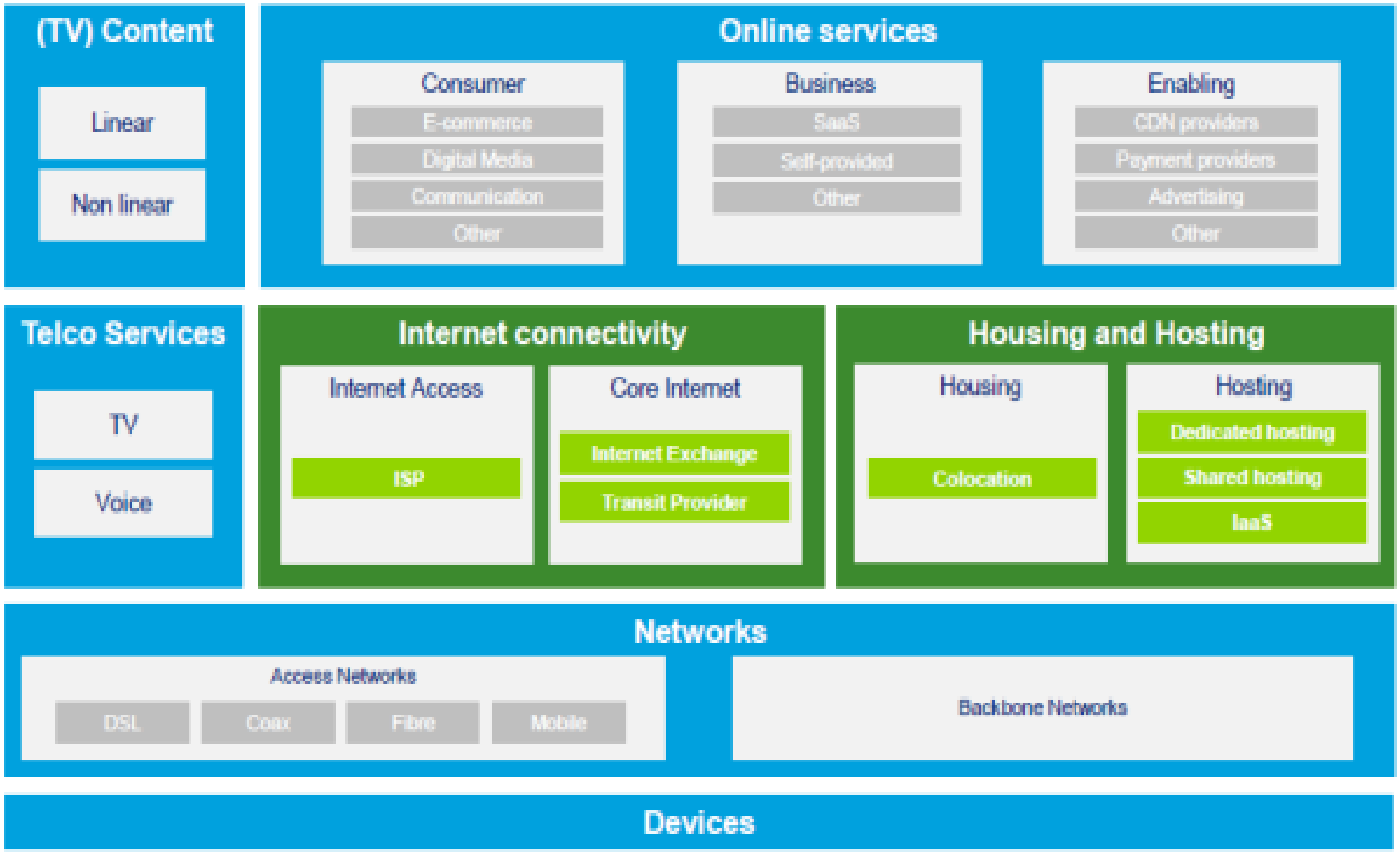
Industrial biology

Information technology is fueling a seismic shift in medical science. Life sciences are becoming digitized, allowing for genetic engineering: manipulation of DNA, gene splicing, and digital control of genomes. And, ultimately, to genetic mapping—understanding and creating custom solutions designed for an individual's specific genome, targeting a specific ailment (or propensity for an ailment).

Cyber security

Companies should be prepared to survive in an environment where threats by cyber criminals are commonplace. They should focus on building resilience: the ability to handle critical incidents, quickly return to normal operations, and repair damage.

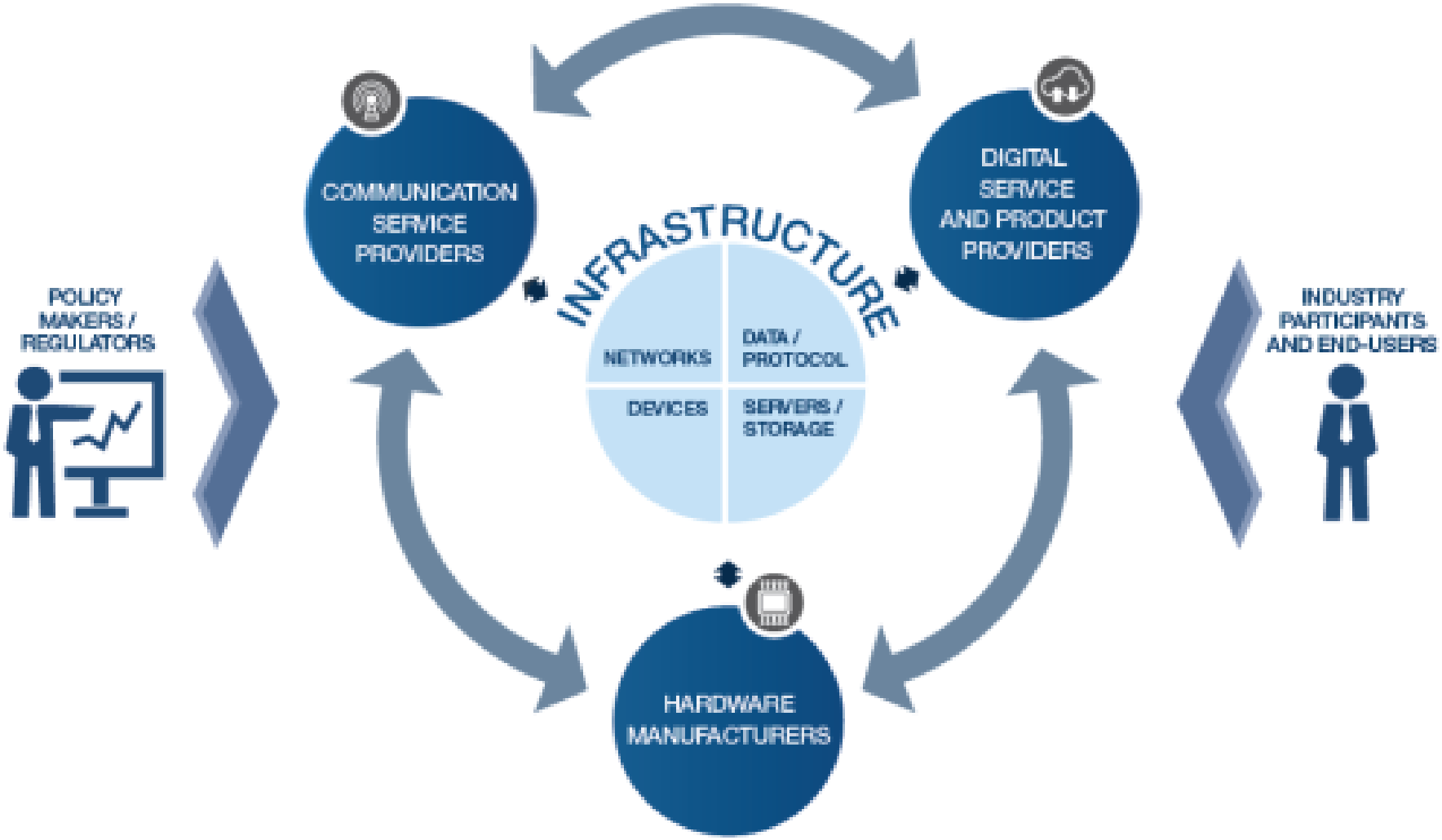
Digital Infrastructure



Source: Analysys, AT Kearney, Deloitte analysis

Source: Delivering Digital Infrastructure: Advancing the Internet Economy, World Economic Forum, BCG

Digital Infrastructure



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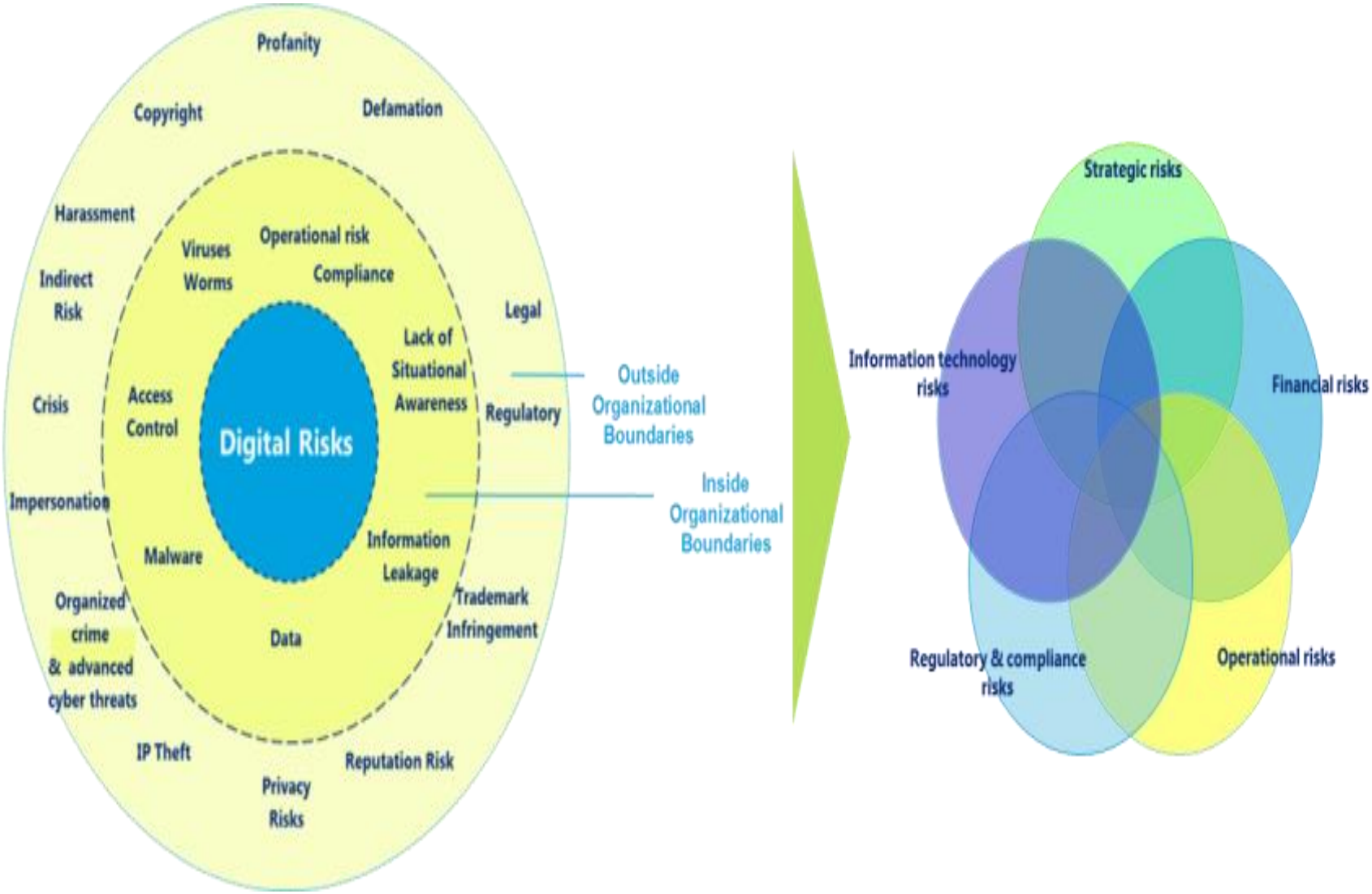
Digital Risks



Digital Governance Considerations

Thank you

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INDIA HAS MORE MOBILES THAN TOILETS!

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