



Strategy | Digital | Technology | Operations

The Growth Game-Changer: How the Internet of Things can drive progress and prosperity

June 2015

A large, solid red arrow pointing downwards and to the right, positioned behind the text.

High performance. Delivered.

What is the Internet of Things (IoT)?

The IoT is a network of physical objects that contain embedded technology to sense and communicate or interact with their internal states or the external environment.



Business Impact

Greater efficiency in business processes

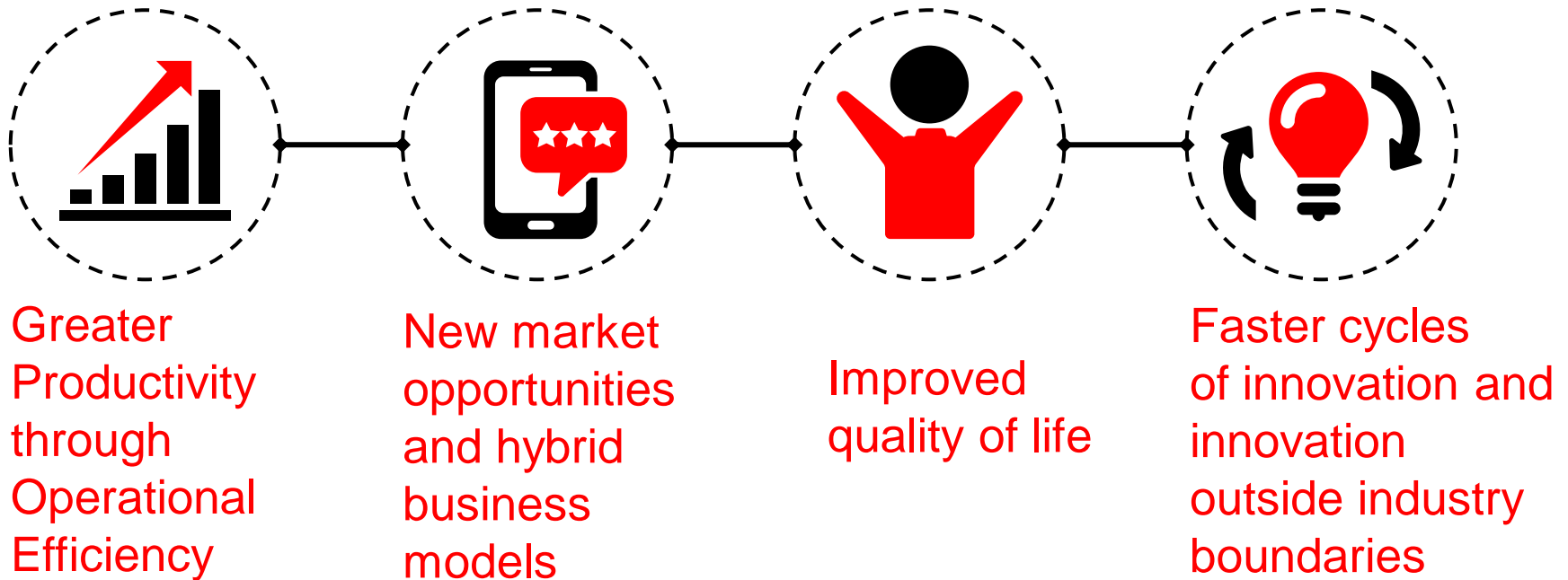
Consumer Impact

More control over life, leisure, and health

Public Sector Impact

Productivity and innovation in public delivery systems

How can the IoT deliver faster growth?



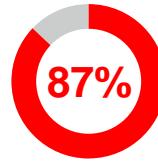
In the shift from an industrial to a digital economy, countries are targeting the Industrial Internet of Things as a means to deliver faster growth

2/3



business leaders said the IloT would offer emerging markets the ability to leapfrog developed economies.

Accenture survey, 2014



business leaders believe the IloT will lead to long-term job growth.

Accenture survey, 2014



US\$800M

Chinese government investment into IloT by 2015.

CNN, 2012



IoT has the potential to enhance Europe's competitiveness and will be an important driver for the development of an information based economy and society.”



European Research Cluster on the IoT, 2013



The UK and Germany could find themselves on the forefront of a new industrial revolution.”



David Cameron, 2014



The Internet of Things can lead to a rebirth of manufacturing in the US.”

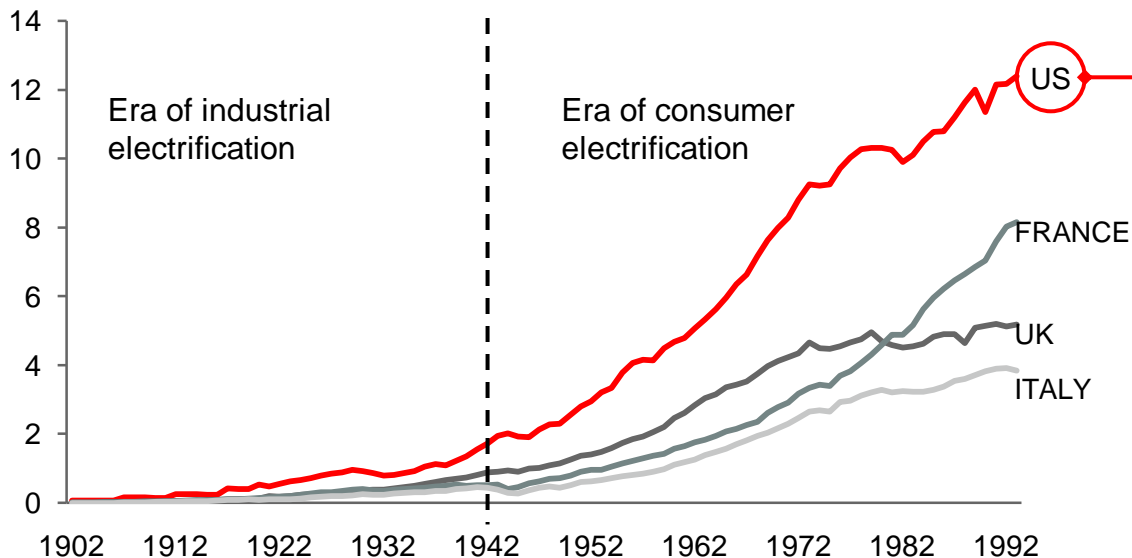
Michael Mandel,
Progressive Policy Institute, 2013

Without the right enabling conditions for the economic diffusion of IoT, countries may not reap the rewards it promises

Technology diffusion describes a relatively limited process of technology adoption—economic diffusion carries broader implications. It begins with technology diffusion, but also reflects growth, innovation, and financial reward spread across multiple sectors and industries.

Gross output of electricity energy per capita

KwHr (thousand)



As the story of electrification teaches us, rolling out a new technology is only the first step—capitalizing on its economic potential is the next.

Source: The Cross-country Historical Adoption of Technology (CHAT) dataset, Accenture analysis

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Leaders can assess a nation's economic diffusion of the IoT from the National Absorptive Capacity (NAC) Index

To assess the economic diffusion of the IoT, countries must understand the factors that underpin this process—which we call “national absorptive capacity”. We identified four pillars that underlie a country's NAC.

NAC INDEX



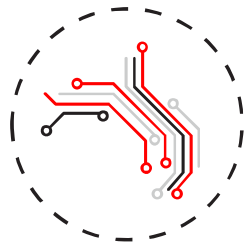
Business Commons

How technological and institutional foundations are facilitating the IIoT



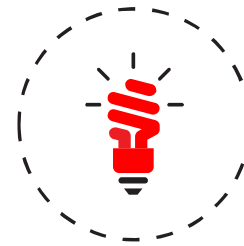
Take-off Factors

How rapidly IIoT technologies are being scaled and spread across the wider society



Transfer Factors

How firms, consumers and society are embracing IIoT technologies



Innovation Dynamo

How the IIoT is creating self-sustaining innovation and development

Accenture research identifies 4 new work practices to embrace IoT in the next 5 years

Case study



- At 7-Eleven Inc., sales associates are now trained to place "sales forecasts" as opposed to "sales orders"
- Sales associates have been given access to information about their stores such as customer habits and weather forecasts.
- By empowering sales associates with data, they can use this and their knowledge of local markets to make better-informed forecasts rather than just repeating last week's order



WORK PRACTICES RE-DEFINED

Edge Centric Decision Making

Push decision making to the part of the organization where knowledge exists

Real Time Adaptation

Respond to changing business conditions in real time

Case study



- The locomotive manufacturer is using sensor-based analytics for efficiency gains
- Hundreds of sensors monitor and report in real-time the operational conditions of each locomotive
- GE personnel use this data to improve maintenance operations, support dynamic routing decisions and do predictive types of activities



Case study

RioTinto

- Rio Tinto has employed autonomous vehicles, including autonomous trucks, excavators and drills, to build a workerless iron ore mine in Western Australia
- Operators control autonomous vehicles in a remote operations centre located 100s of kilometers from the mine
- Data scientists mine data collected from sensors on the vehicles to plan and optimise future operations



Human-Digital Collaboration

Humans working in concert with intelligent machines

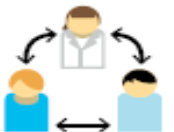
Experiment-Driven Design

Iterative approach to work and collaboration

Case study



- Audi's Virtual Labs use advanced data management technology to accelerate prototyping
- Consumers can choose product features which are still in the labs and therefore only existing virtually
- The automated system analyses customer responses in real-time and guides the product development team even before the prototype phase
- Entire process requires more immediate and intense cooperation among marketing, engineering and R&D



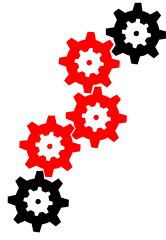
Five ways to win



1

Play to the country's strengths

Make IIoT investments that work with the grain of the economy



2

Create a chain reaction across industries

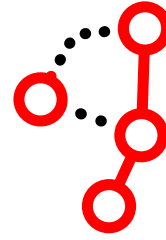
Create new ecosystems that cut across traditional industry boundaries and value chains—look to product-service hybrids



3

Combat resource deficiencies

Decide whether to “make-or-buy” resources including skills, capital and technology



4

Join the dots to connect and collaborate

Connect various stakeholders together



5

Shorten the investment lag

Turn strategy into reality by promoting experimental, pilot and demonstration projects in IIoT applications