

The 4th Industrial Revolution Business & Management Implications

Rey Lugtu
CEO, Hungry Workhorse

I. Introduction

A. Drivers of 4IR

B. Opportunities and challenges

II. Industry level

A. Supply side

B. Demand side

III. Organization-level

A. Digital Transformation Framework

B. Operating models

C. Product platform

D. Customer engagement

E. Culture and people

F. Four Types of Transformations

IV. Leadership and management level

A. Leadership

B. Strategic planning

C. Decision-making

D. Ethics and governance

V. Conclusions

A. Implications to local industries and businesses

Toys R Us is closing all its US stores



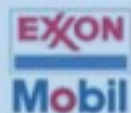
Hayley Peterson

Mar. 15, 2018, 9:29 AM 91,853



FORBES MOST VALUABLE BRANDS

2007



Exxon Mobil



PetroChina



General Electric



China Mobile



ICBC



Microsoft

Microsoft



Royal Dutch



GazProm



AT&T

OIL &
UTILITIES

2017



Apple



Google



Microsoft

Microsoft



Facebook



Coca Cola



Amazon



Disney



Toyota



McDonalds



Samsung

DATA

Artificial intelligence speeds-up disruption in retail

 CBINSIGHTS

How Blockchain Could Disrupt Insurance

March 21, 2018



[Bitcoin & Blockchain](#)

Disruption on its way, are banks ready?

Written by [FinTech Futures](#) 30 May 2018

accountantsdaily

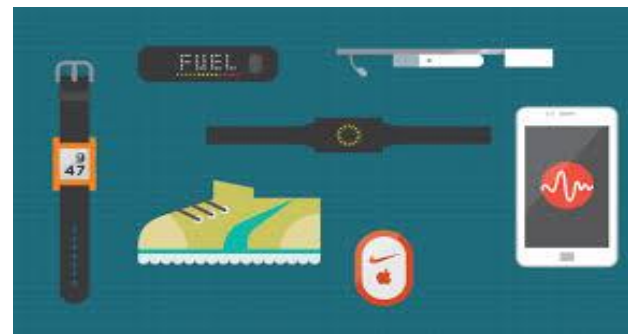
How the IoT will impact the accounting sector

COLUMNS | 27 MAY 2017

By: **Andrew Tucker**, ITonCloud



CLOUD COMPUTING



Internet-of-Things

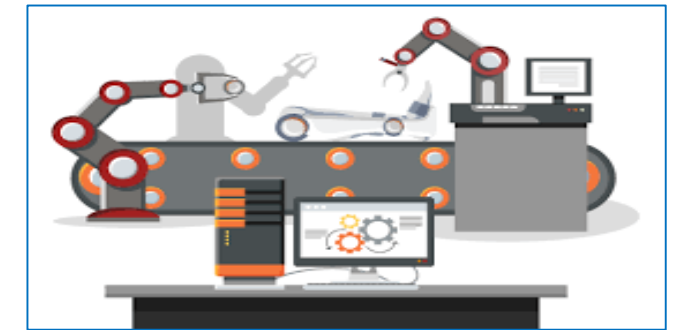


AUGMENTED/VIRTUAL
REALITY

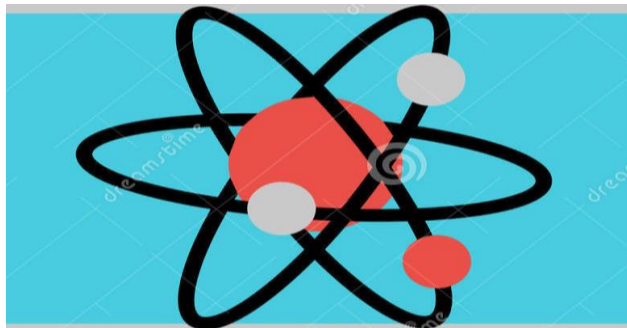


ANALYTICS

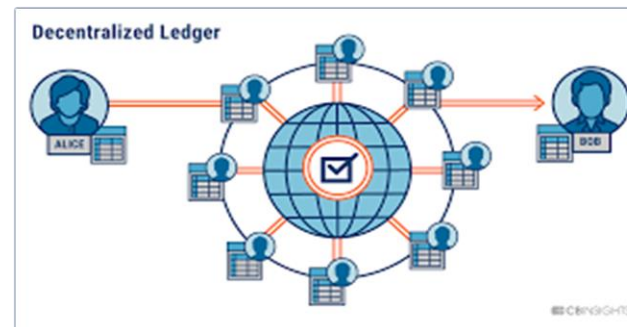
4TH Industrial Revolution Technologies



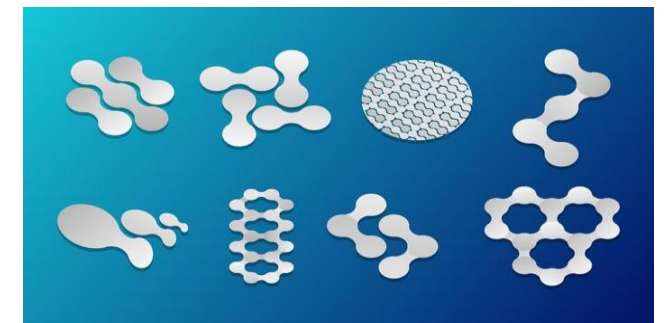
ROBOTIC PROCESS
AUTOMATION



QUANTUM COMPUTING



BLOCKCHAIN



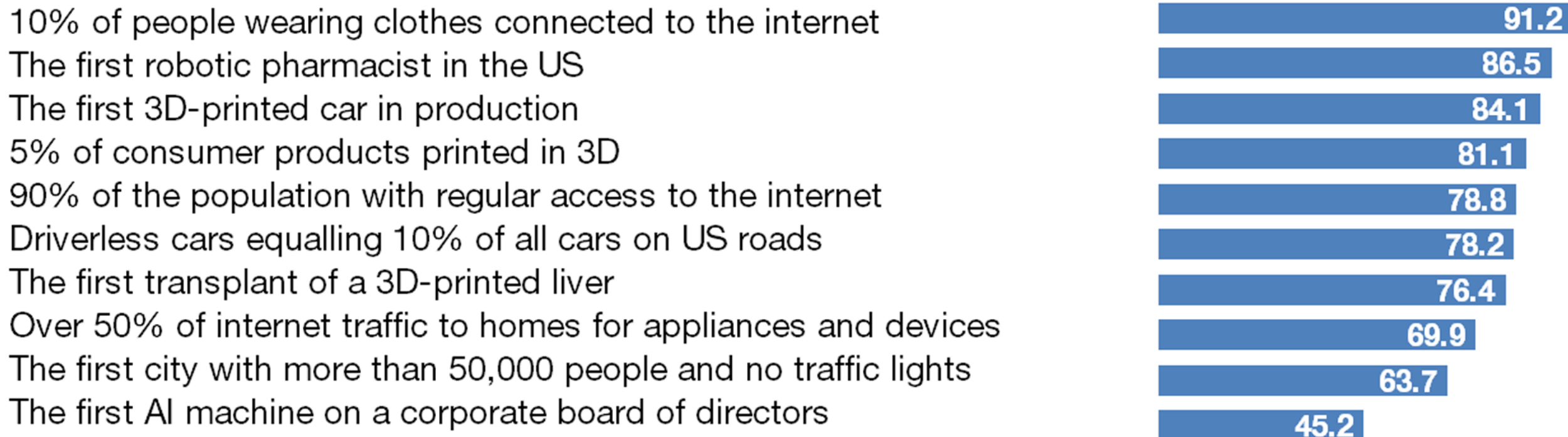
NANOTECHNOLOGY

When will the future arrive?

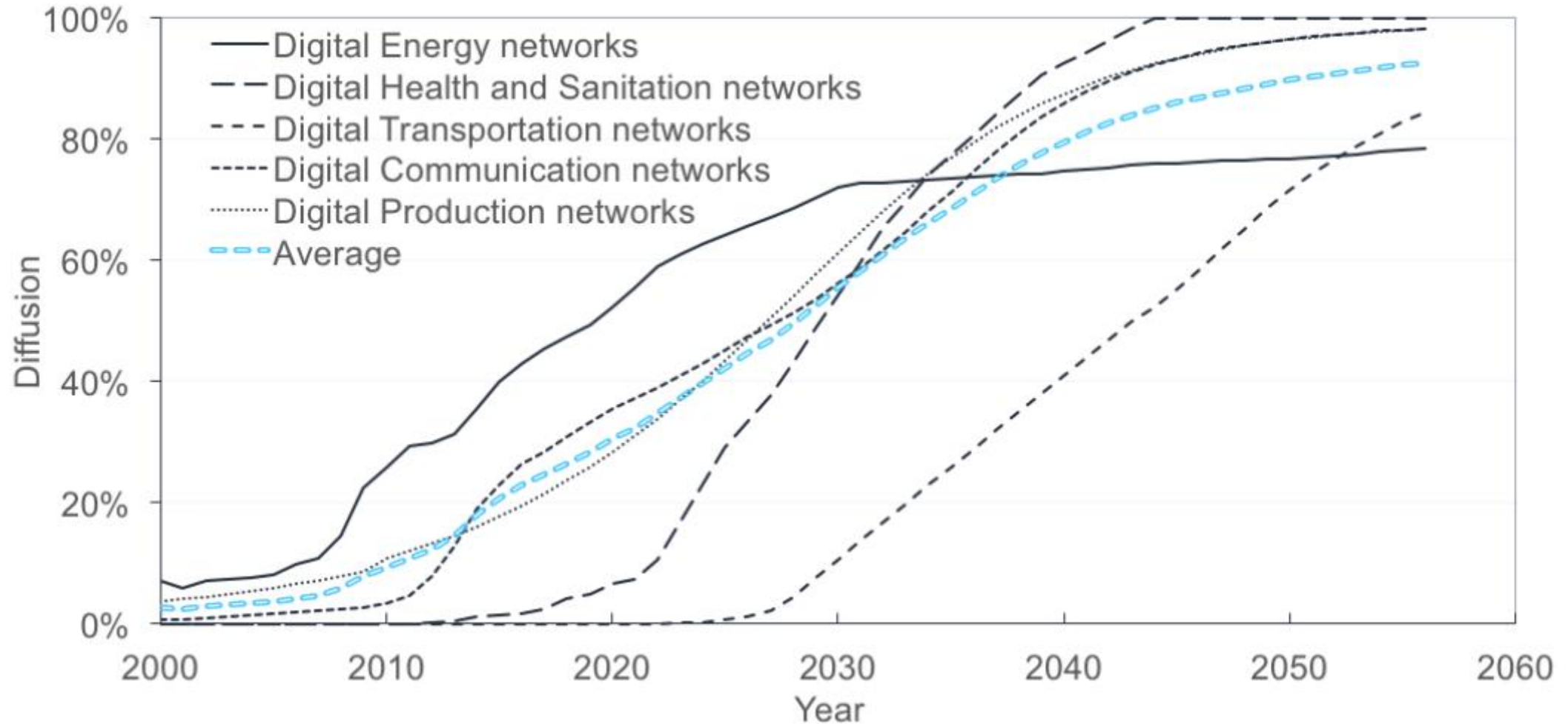
800 technology executives and experts from the information and communications technology sector were surveyed as part of our *Technology Tipping Points and Societal Impact* report

Technology tipping points expected to occur by 2025

Percentage of respondents



Projected diffusion of key enabling digital infrastructure network technologies





- Massive jumps in productivity
- Lower barriers between inventors and markets
- Improved quality of our lives
- Innovative technologies will integrate different scientific and technical disciplines



- The revolution could yield greater inequality, particularly in its potential to disrupt labor market
- Cybersecurity, hacking, risk assessment
- New ethical concerns emerging

Implications in Business & Management

SYSTEM APPROACH

4TH INDUSTRIAL REVOLUTION

INDUSTRY LEVEL

ORGANIZATION LEVEL

LEADERSHIP &
MANAGEMENT
LEVEL

Industry Level

- Creation of entirely new ways of serving existing needs
- Improvement on quality, speed, or price of value delivered
- Entry of agile, innovative competitors

SUPPLY SIDE

DEMAND SIDE

- Growing transparency,
- Consumer engagement
- New patterns of consumer behavior

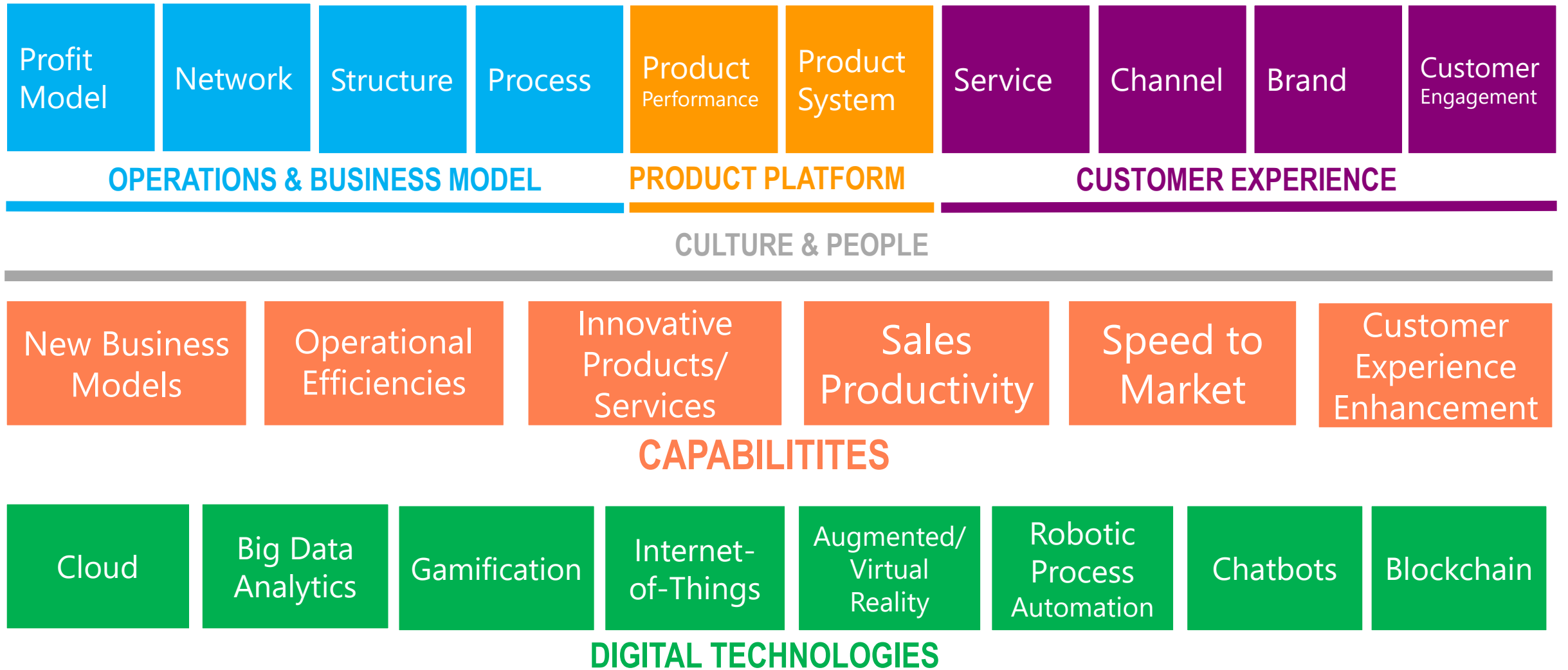
Organization Level

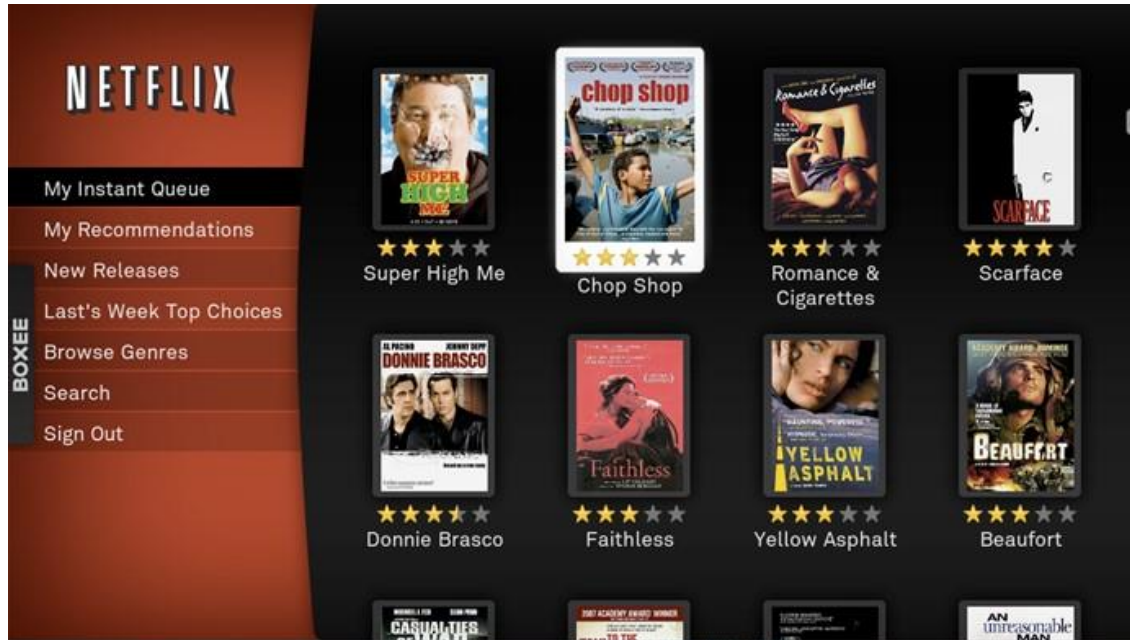


DIGITAL TRANSFORMATION

"the acceleration of business activities, processes, competencies and models to fully leverage the changes & opportunities of digital technologies and their impact in a strategic and prioritized way."

Digital Transformation Framework: Ten Types of Innovation

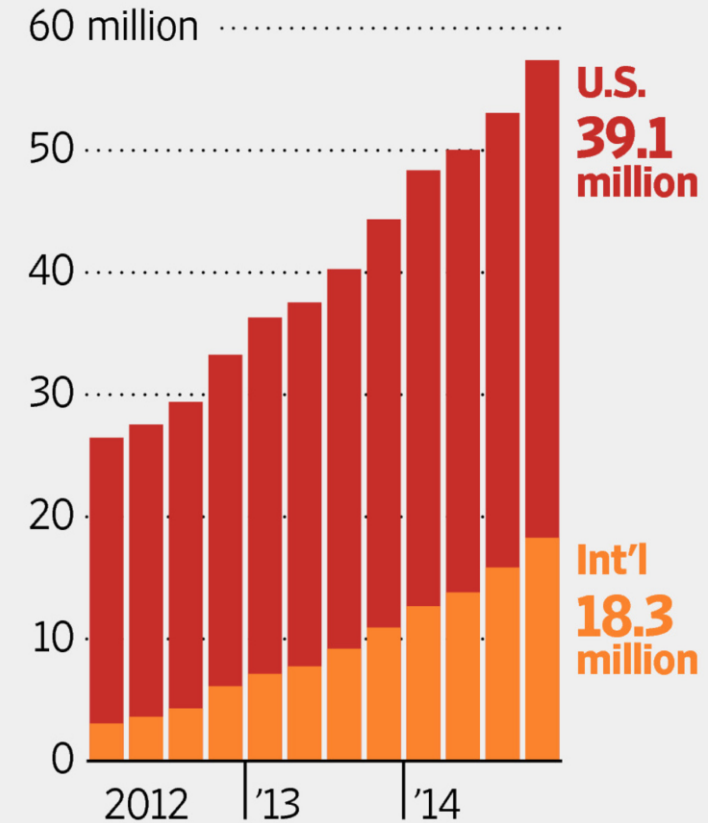




From video rental to subscription

Loading Up

Netflix's streaming subscribers



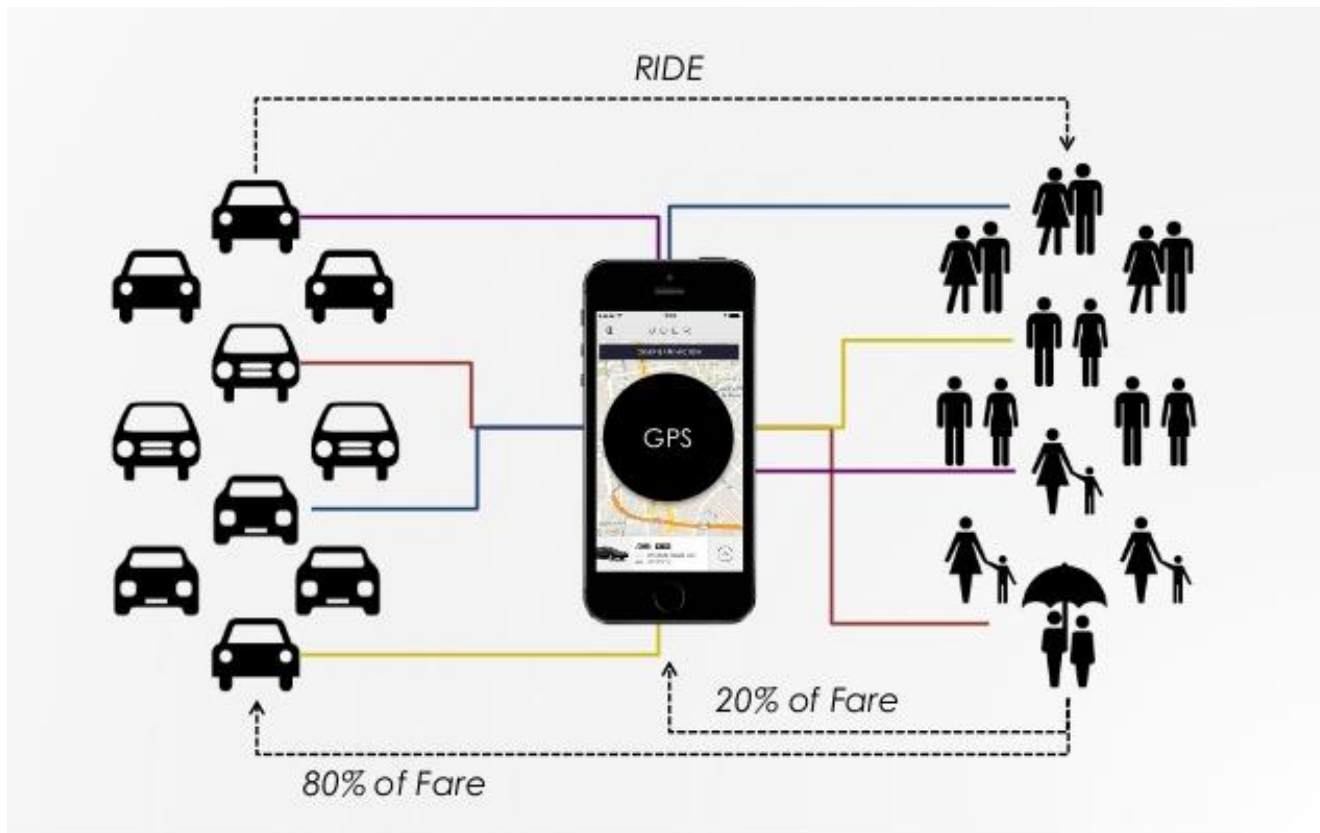
Source: the company
The Wall Street Journal

Profit Model

The way in which you make money



UBER



Network

Connections with others to create value



EMPOWER YOUR EMPLOYEES

Japanese company replaces office workers with artificial intelligence

Insurance firm Fukoku Mutual Life Insurance is making 34 employees redundant and replacing them with IBM's Watson Explorer AI



▲ Fukoku Mutual Life Insurance believes it will increase productivity by 30% Photograph: Toru Hanai/REUTERS



“it will increase productivity by 30% and see a return on its investment in less than two years.

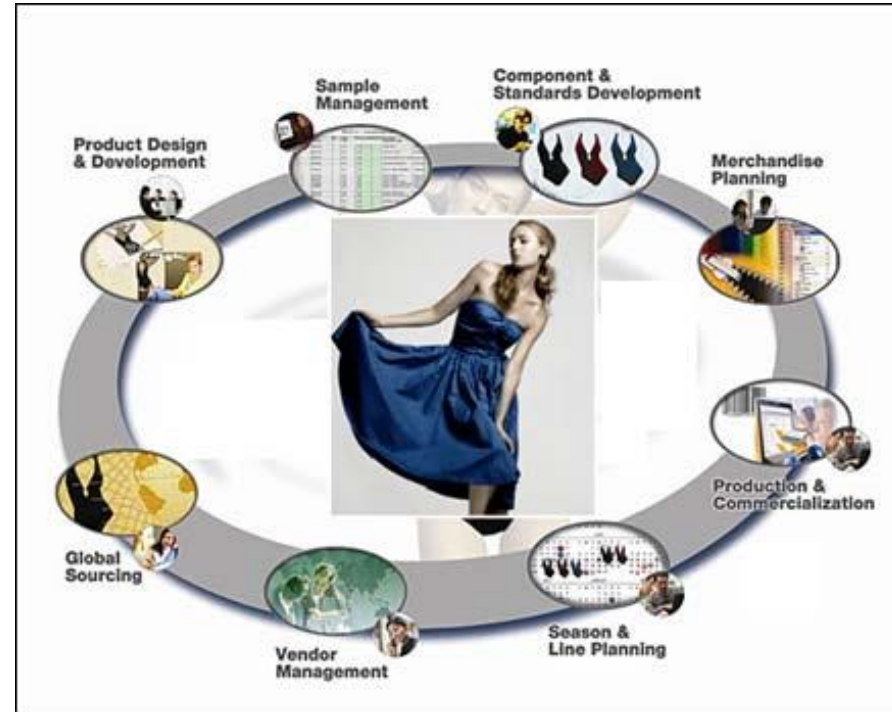
Structure

Alignment of your talent and assets



EMPOWER YOUR EMPLOYEES

Zara's "fast fashion" strategy moves its clothing from sketch to shelf in record time



Process

Signature or superior methods for doing your work



EMPOWER YOUR EMPLOYEES



SAMSUNG
FAMILY HUB

SAMSUNG

Product
Performance

Distinguishing features and functionality

Profit
Model

OP

Product
System

Service

Channel

Brand

Customer
Engagement

OUR PRODUCTS

ENGAGE YOUR CUSTOMERS

EMPOWER YOUR EMPLOYEES

UPS Expands 3D Printing to Stay Ahead of a Threat

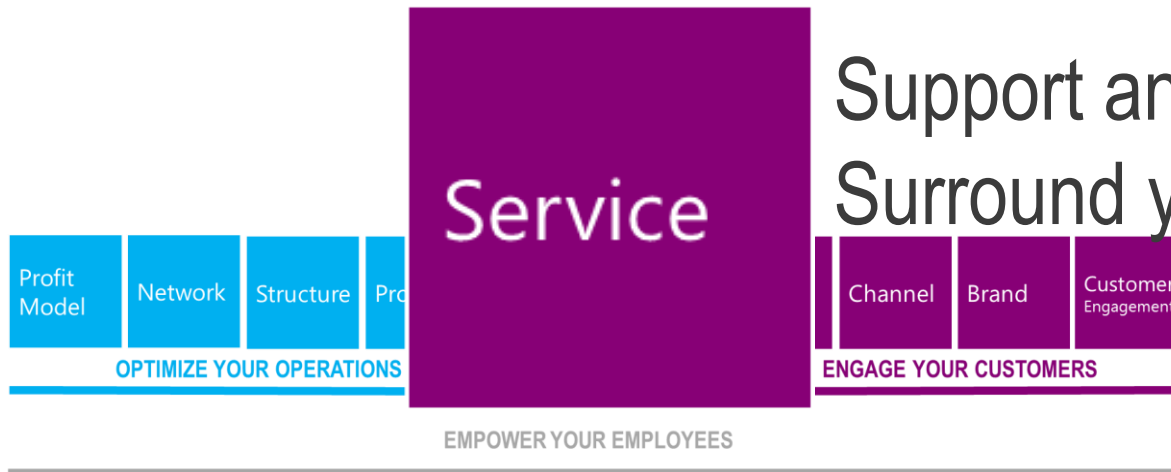


UPS seeks to disrupt logistics with 3D ... and loom bands?



Complementary products and services

Starwood Introduces Robotic Butlers At Aloft Hotel In Cupertino



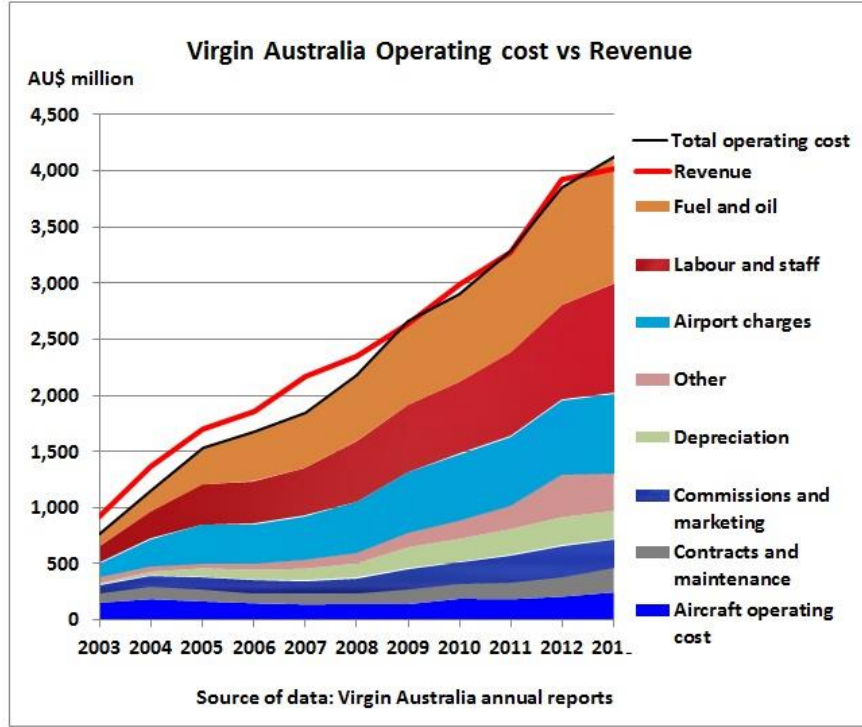
Support and enhancements that
Surround your offerings



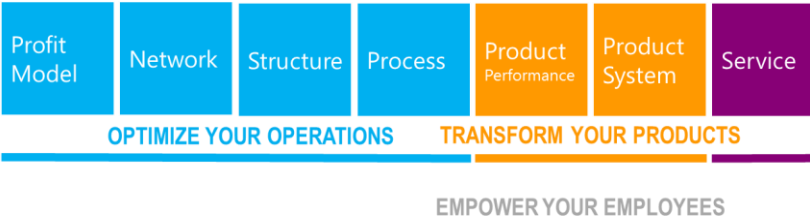
How your offerings are delivered to customers and users



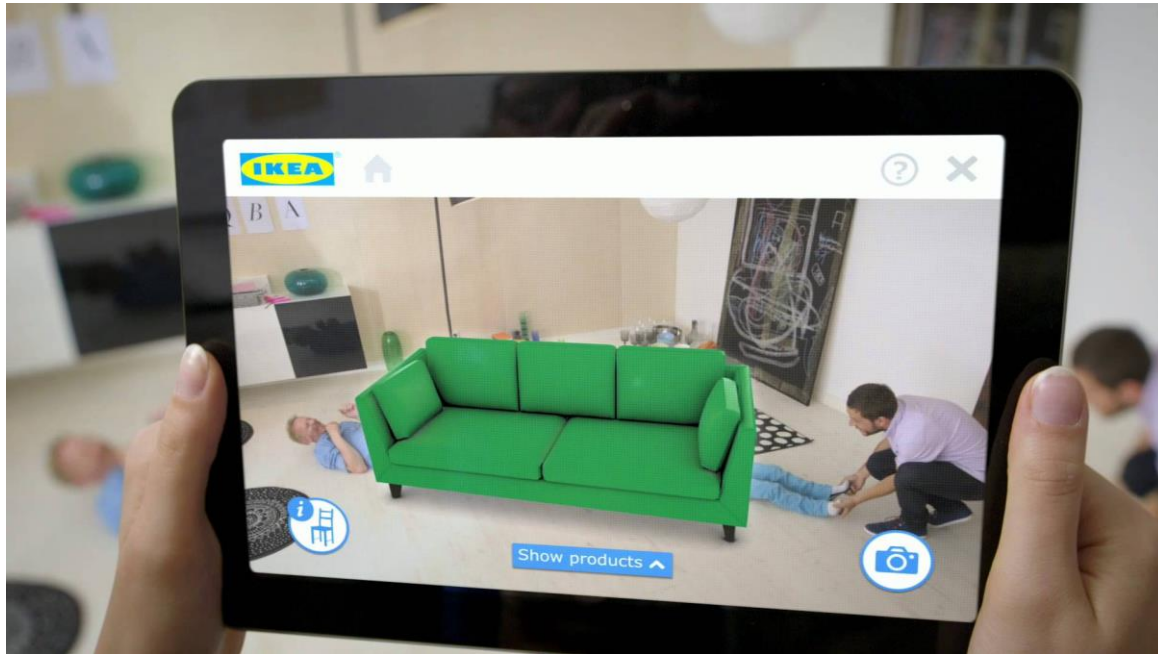
Virgin extends its brand into sectors ranging from soft drinks to space travel



Representation of your offerings and business



Brand



Ikea drives sales through augmented reality

Distinctive interactions you foster



EMPOWER YOUR EMPLOYEES

Customer Engagement



Use AI to align culture with hiring and employee engagement

EMPOWER YOUR EMPLOYEES



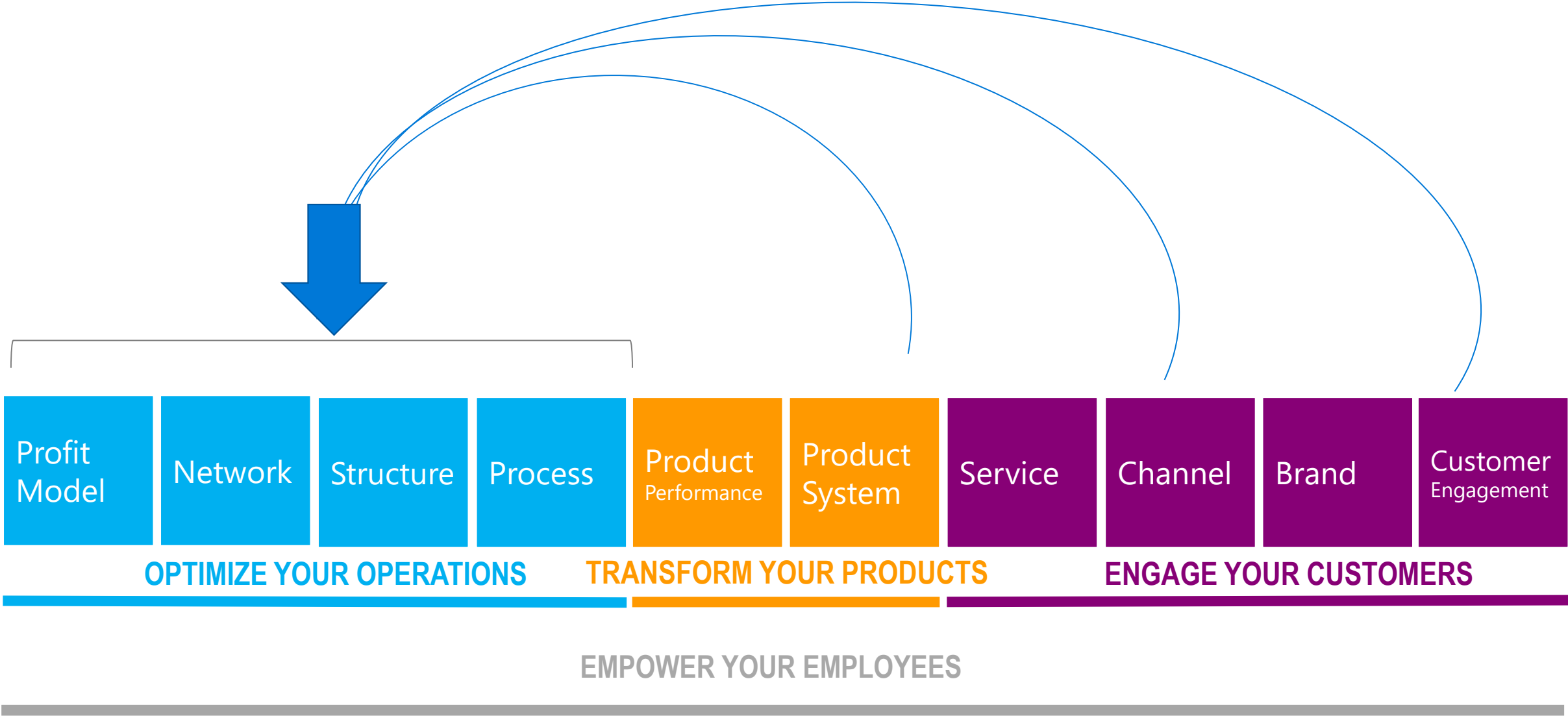
Areas Where to Transform/Disrupt



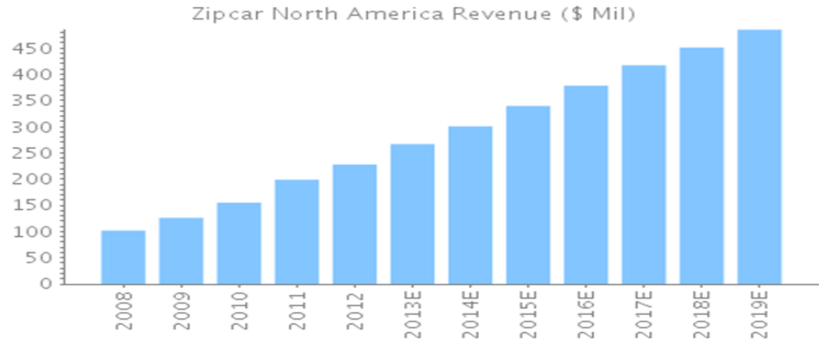
Four Types of Transformations



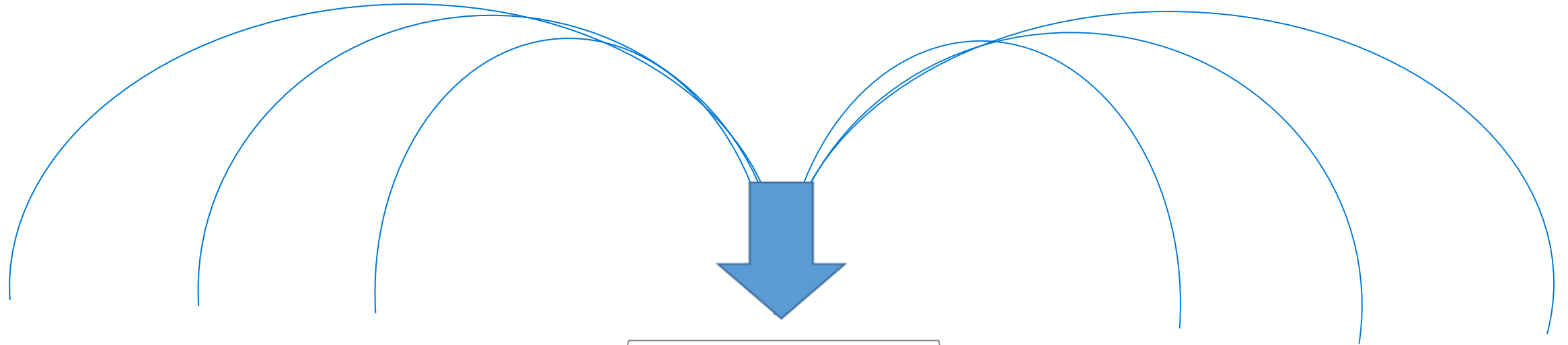
Business Model Transformation



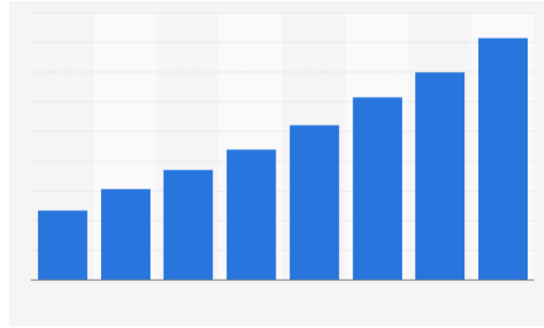
Business Model Transformation – Car Rental



Platform Transformation



Platform Transformation – IT Infrastructure



Profit Model

Network

Structure

Process

Product Performance

Product System

Service

Channel

Brand

Customer Engagement

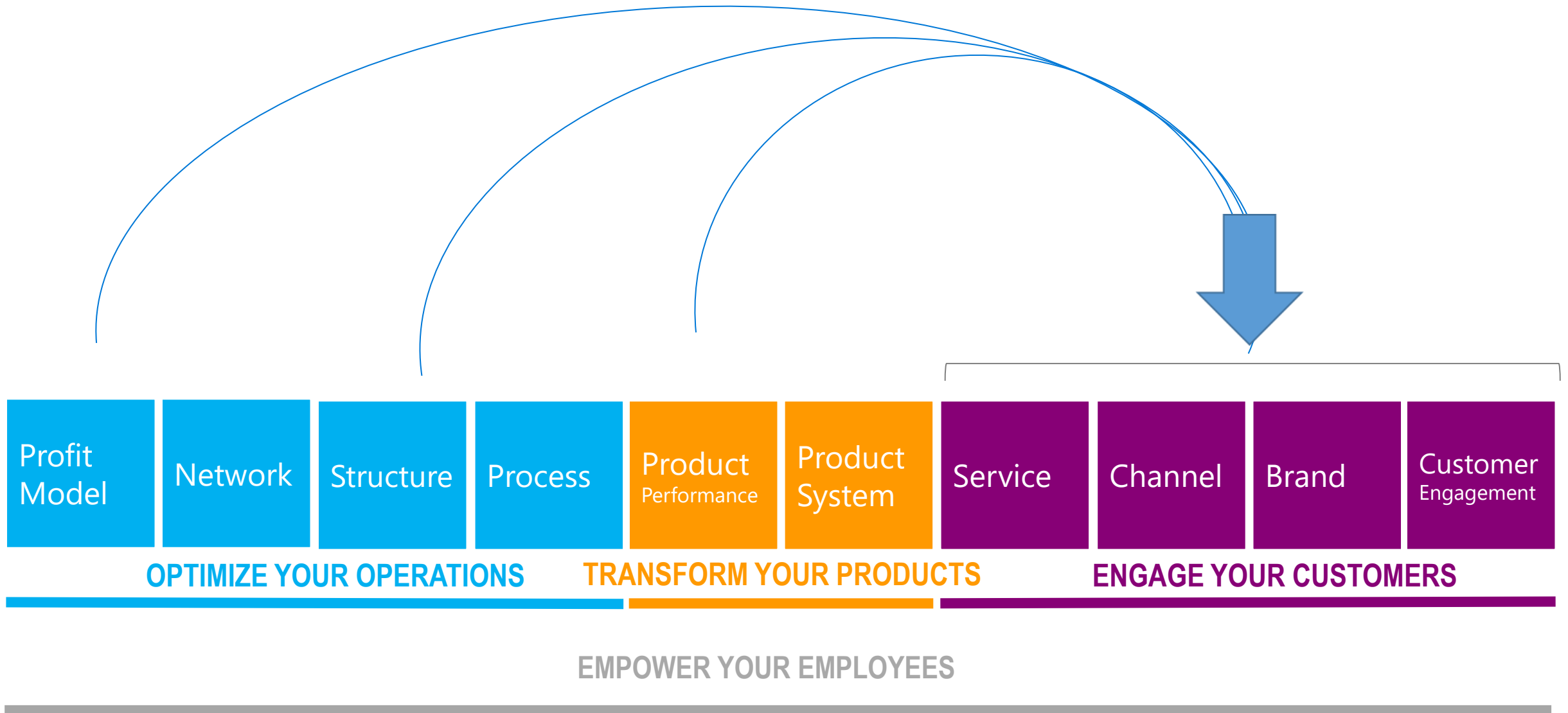
OPTIMIZE YOUR OPERATIONS

TRANSFORM YOUR PRODUCTS

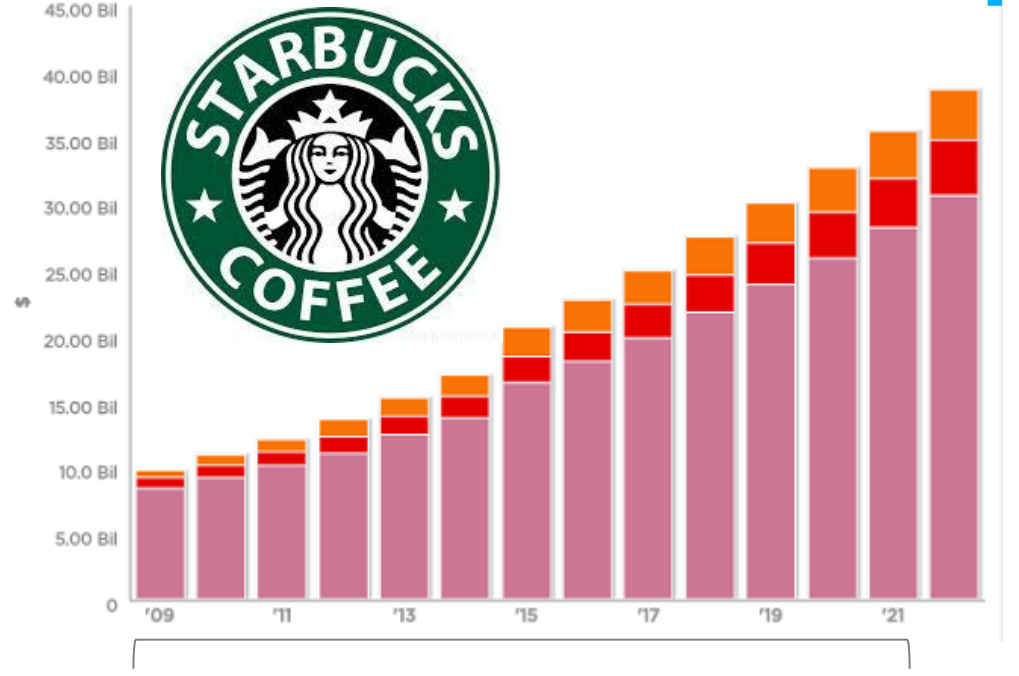
ENGAGE YOUR CUSTOMERS

EMPOWER YOUR EMPLOYEES

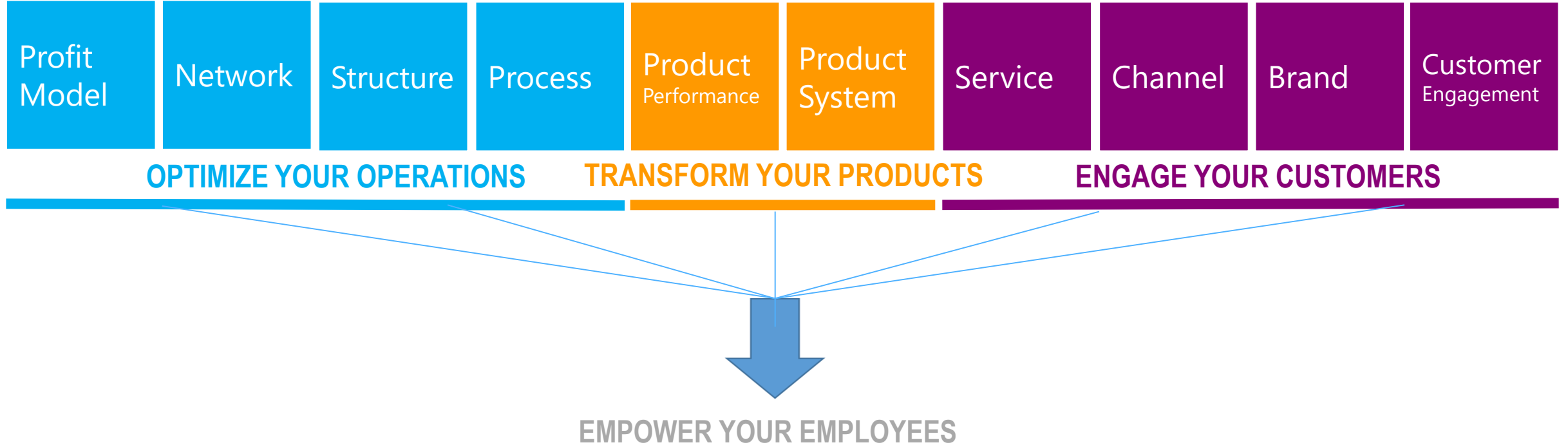
Customer Experience Transformation



Customer Experience Transformation – Coffee Shops



Culture & People Transformation



Culture & People Transformation - Telecom

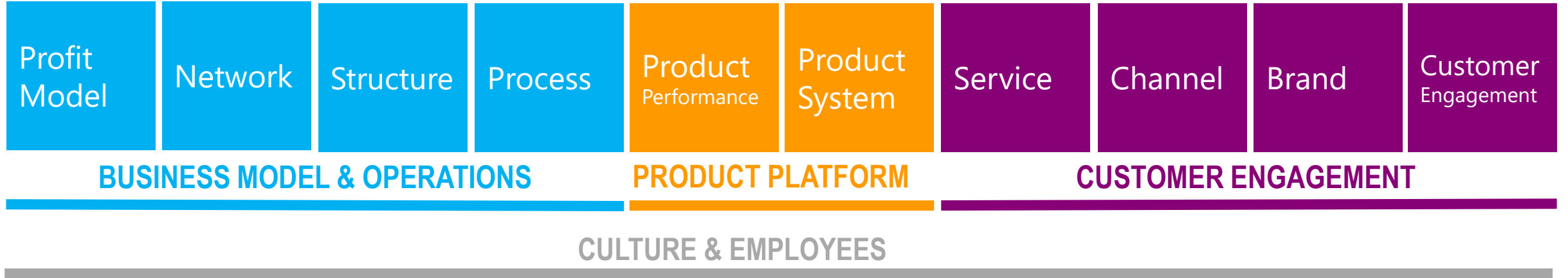


EMPOWER YOUR EMPLOYEES

“We believe that the Globe culture is the company's distinct competitive advantage”

**- Ernest Cu
CEO, Globe**

Digital Transformation Framework: Ten Types of Innovation



Culture and people biggest barriers to digital transformation, according to Gartner's 2018 CIO Agenda

≡ CIO
FROM IDG

By Edward Qualtrough November 13, 2017 CIO UK



SMOOTHING ACTIVITIES / INTEGRATION

FLEXIBILITY / SPONTANEITY

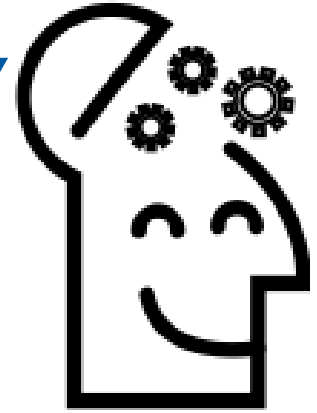


CLAN

Cohesiveness
Teamwork
Sense of Family

ADHOCRACY

Entrepreneurship
Creativity
Risk Taking



HIERARCHY



Order
Rules
Uniformity

MARKET

Competitiveness
Goal Achievement



CONTROL / ORDER / STABILITY

COMPETITION / DIFFERENTIATION

Strong shared sense of purpose
Freedom to experiment
Distributed decision-making
Open to the influence of the external world

(McConnel, 2015)



HIERARCHY

MARKET

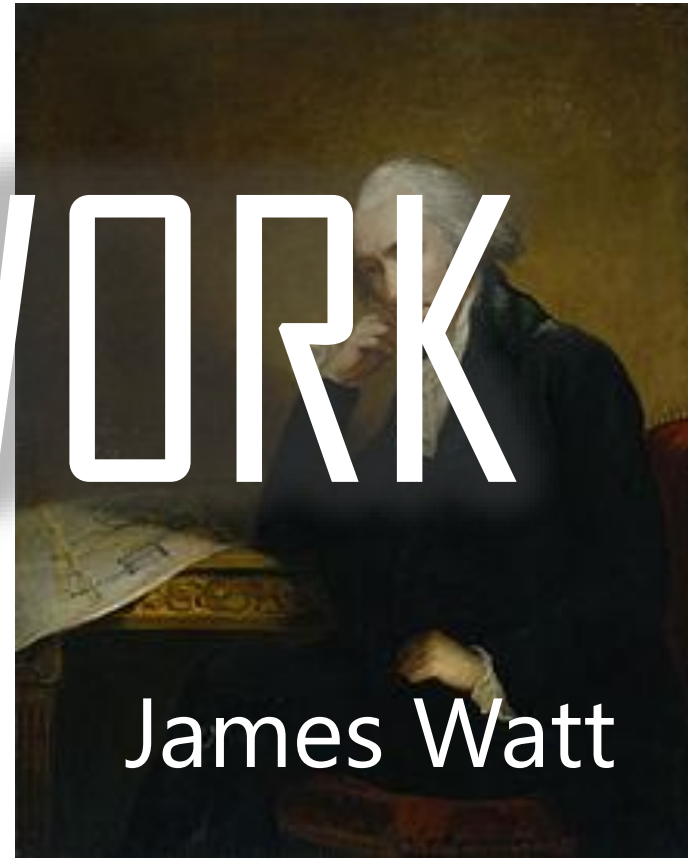
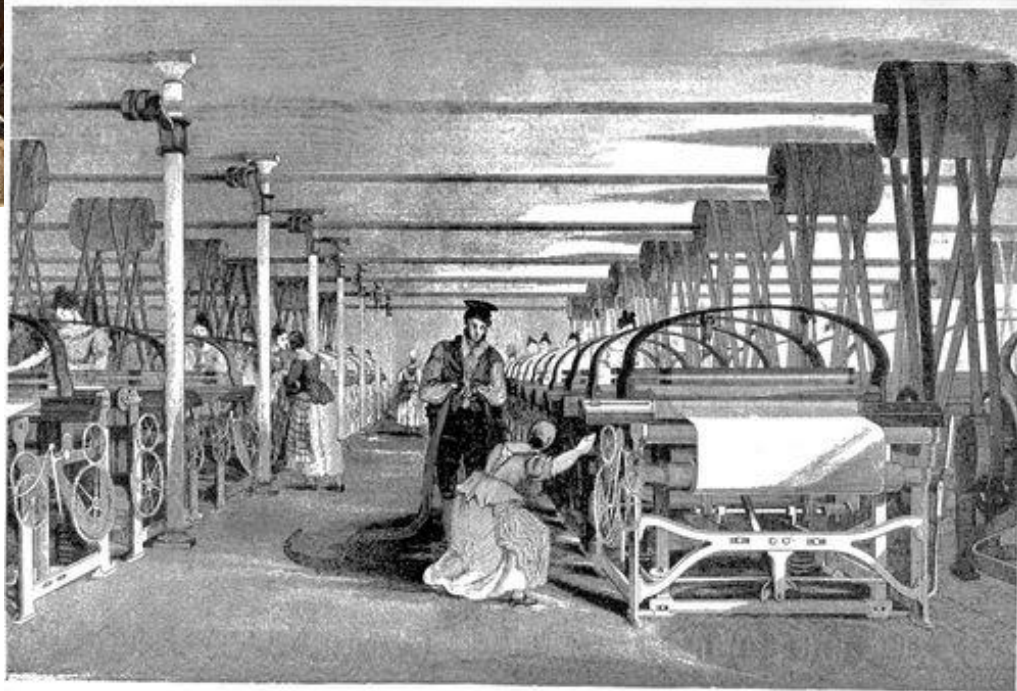


What are the skills required?

The First Industrial Revolution, 18th to 19th Century



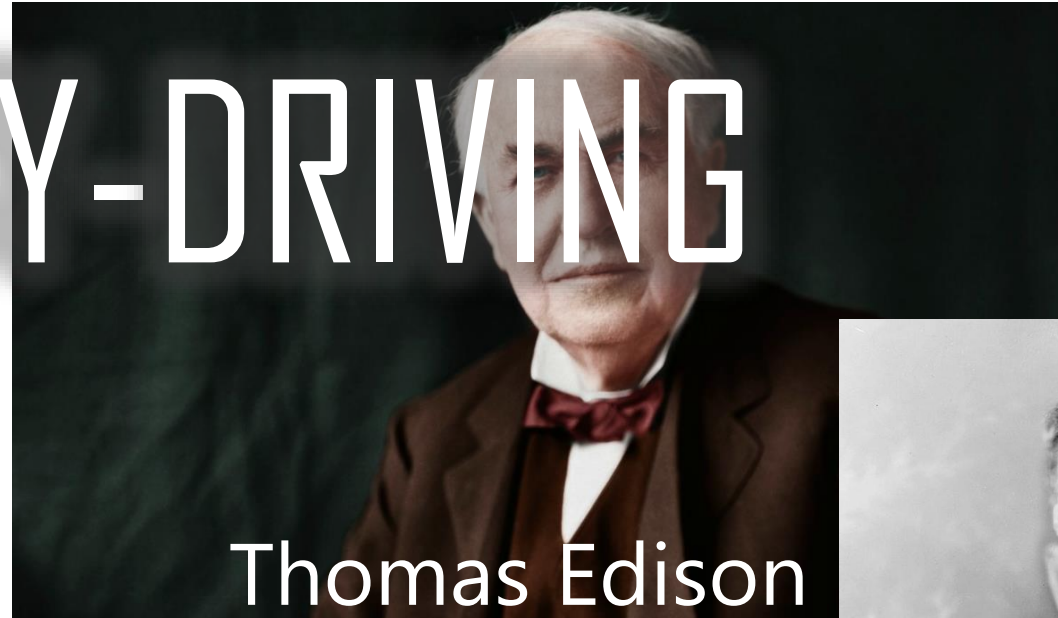
HARDWORK



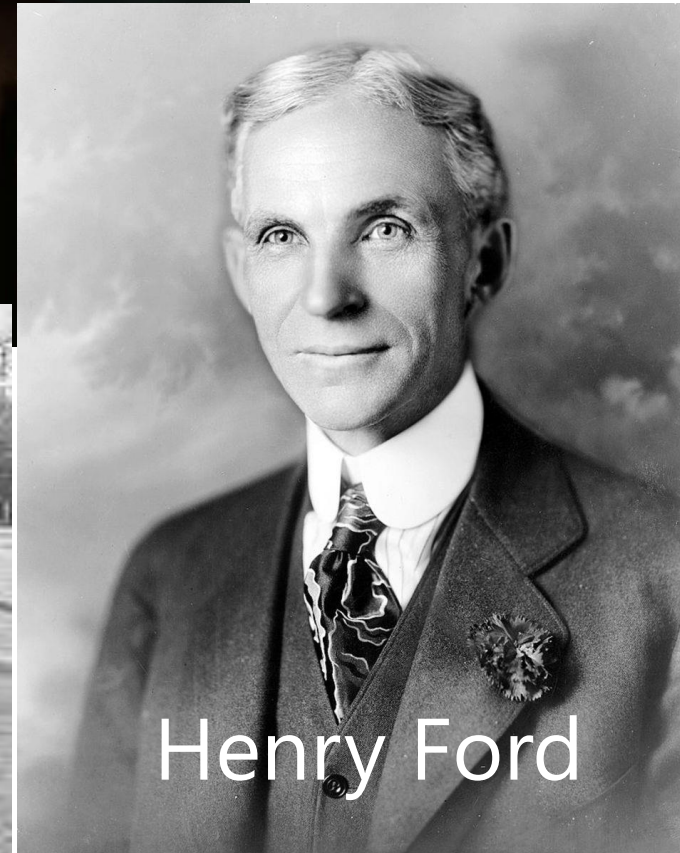
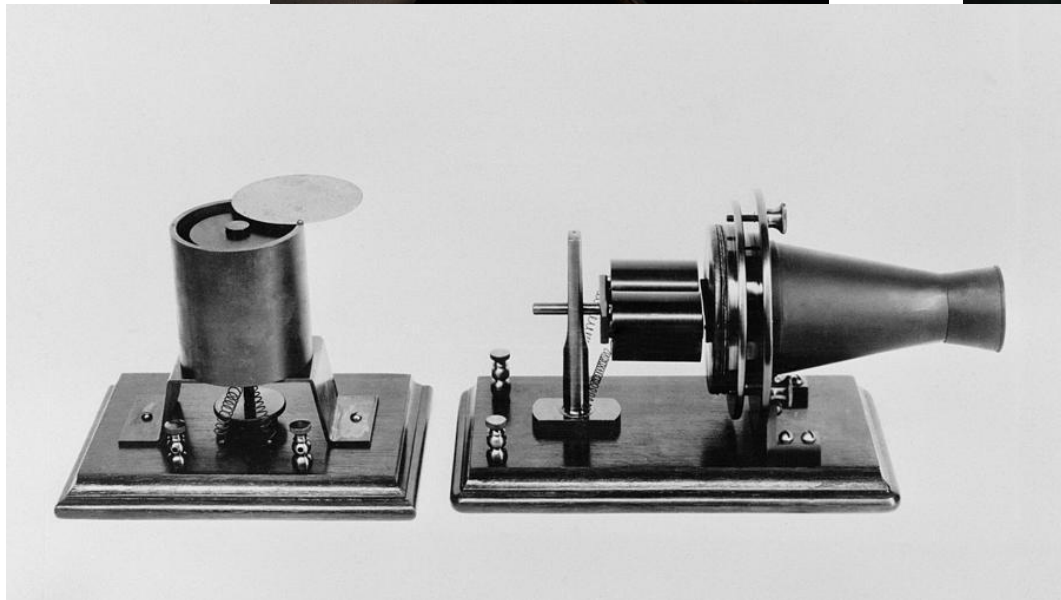
James Watt

The Second Industrial Revolution, 1870 -1914

EFFICIENCY-DRIVING



Thomas Edison

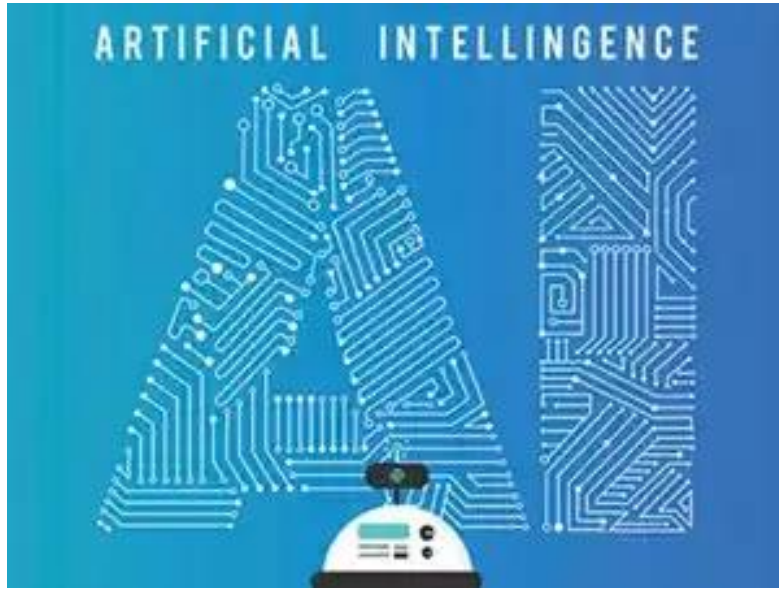


Henry Ford

Third Industrial Revolution, or the Digital Revolution, 1980s - ongoing



The Fourth Industrial Revolution, 2015 - ongoing





Satya Nadella, CEO
Microsoft

At the core, Hit Refresh is about us humans and the unique quality we call **empathy**, which will become ever more valuable in a world where the torrent of technology will disrupt the status quo like never before.”—
Satya Nadella from Hit



Sundar Pichai, CEO
Google

He believes it is important
to build an organization
where people want to
work together and set up
collaborative cultures

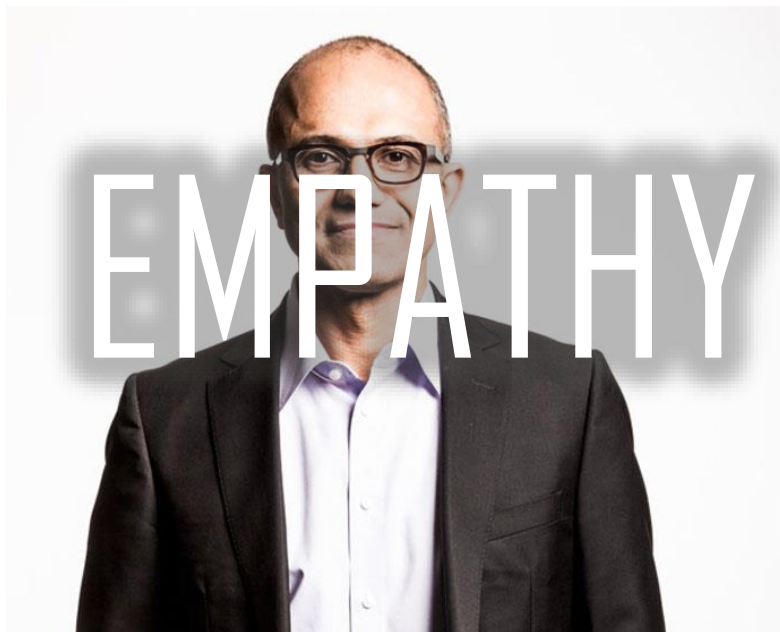


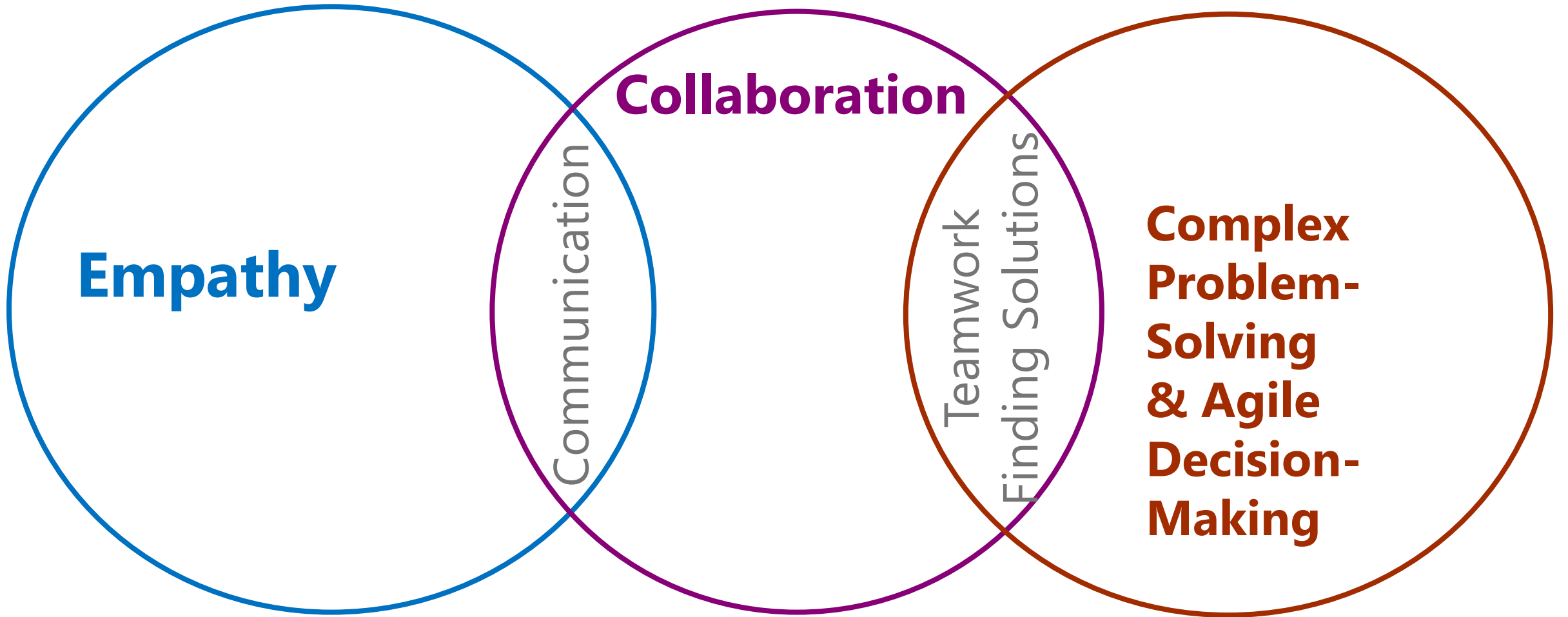
Elon Musk, CEO
Tesla/SpaceX

For me it was never
about money, but
solving problems
for the future of
humanity"

- Elon Musk

Fourth Industrial Revolution, 2015 - ongoing







Google finds STEM skills aren't the most important skills

The seven top soft skills: **being a good coach**; **communicating** and **listening** well; **possessing insights into others** (including others different values and points of view); having **empathy** toward and being supportive of one's colleagues; being a good **critical thinker** and **problem solver**; and being able to **make connections** across complex ideas.

Leadership & Management Level



- Focus on systems rather than technologies
- Empower our societies to master technologies and act to counter a fatalistic and deterministic view of progress
- Need to prioritize futures by design rather than default
- Focus on key values as a feature of new technologies, rather than as a bug.

Ethics and Governance

Technology Ethical Design Framework

STEP 1

Understand the desired outcome of the use of the technology and clearly define the approach to achieve the outcome.

STEP 2

Design and simulate implementation of the technology in multiple scenarios to reveal the impacts of design alternatives on the defined outcomes and on the people affected by the design.

STEP 3

Maintenance phase that involves periodically revisiting the first two steps to ensure that the technology is still achieving its objectives and desired outcomes.

Conclusions

- We must embrace the 4IR
- All sectors of society should prepare
- Businesses should capitalize on 4IR
- A need for Digital Leadership
- Build a culture that embrace 4IR

Thank you

rey.lugtu@hungryworkhorse.com