Arthur D Little

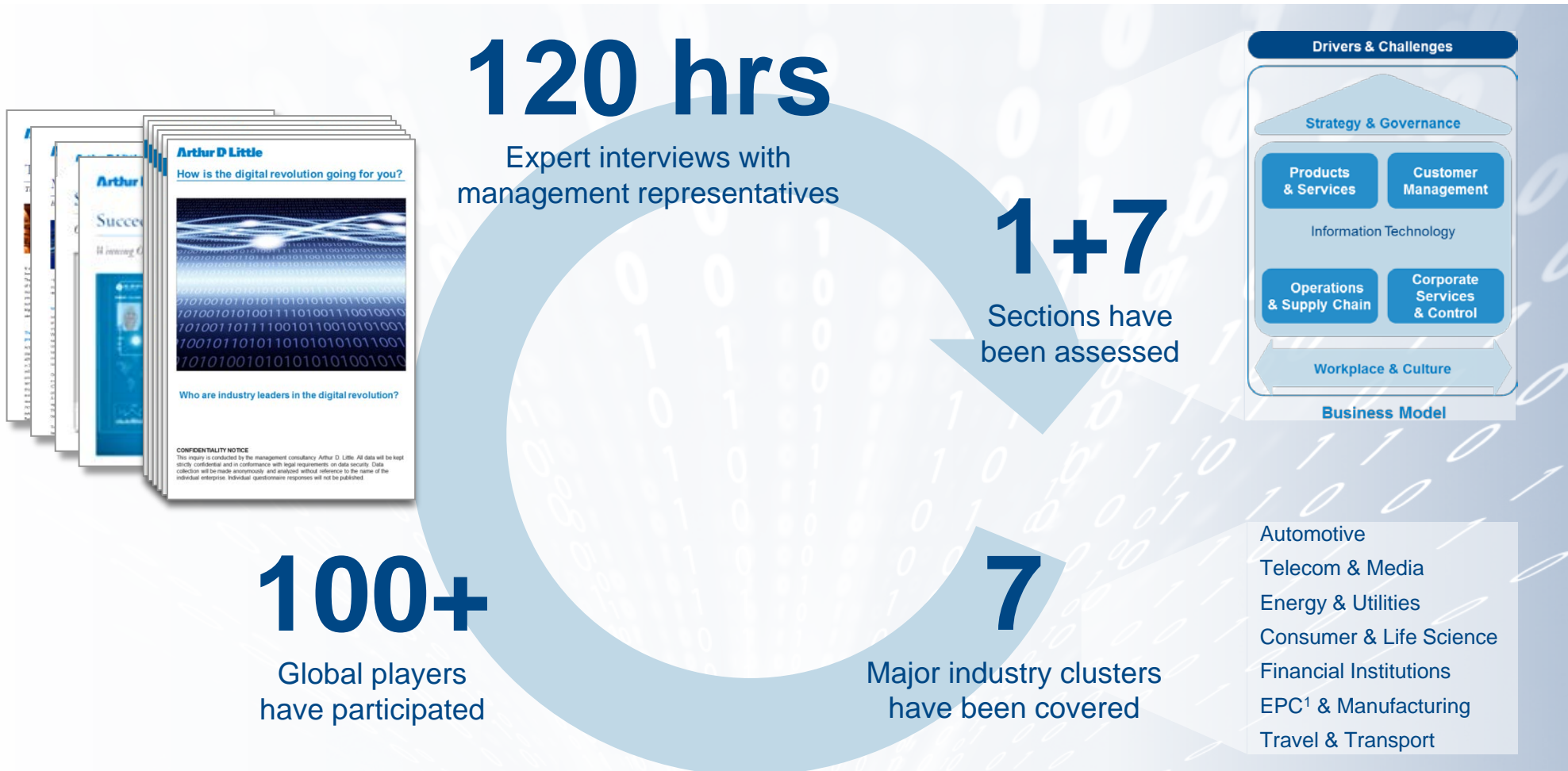# Digital Transformation –
How to Become Digital Leader

Study Results – Overview

August 2015

Arthur D. Little
www.adlittle.com

Arthur D. Little conducted the Digital Transformation Study globally and cross-industry. The key findings are summarized in this document.

120 hrs
Expert interviews with management representatives

1+7
Sections have been assessed

Drivers & Challenges

Strategy & Governance

| Products & Services | Customer Management |

Information Technology

| Operations & Supply Chain | Corporate Services & Control |

Workplace & Culture

Business Model

100+
Global players have participated

7
Major industry clusters have been covered

Automotive

Telecom & Media

Energy & Utilities

Consumer & Life Science

Financial Institutions

EPC[1] & Manufacturing

Travel & Transport

Source: Arthur D. Little Digital Transformation Study 2015
1) EPC = Engineering, Procurement & Construction

Turning Digital has become a well-understood imperative. Although Digital has commonly found its way into corporate strategies, the path to transforming adequately remains unspecified

60% *of surveyed companies are digital adaptive only*

Digital Strategies

are defined but not yet drilled down to implementable plans or implemented in the Product Portfolio, Operations and Supply Chain

Progress in Digital Transformation is measured via the Digital Transformation Index (DTI)[1] **3.92 DTI**

15% *have dedicated central units for Digital strategy development and implementation*

50% *perceive lack of digital knowledge across the value chain as their major challenge to overcome*

Source: Arthur D. Little Digital Transformation Study 2015
1   Logic: The higher, the better. Measured on a scale from 0 to 10

Some of the below key findings we anticipated beforehand, whereas others have been surprising and astonishing

1. Digitization will change the competitive environment **of all industries** significantly

2. Most industries are **already affected by digital disruption** or realize that they will be soon

3. Few companies yet follow a **consistent digitization approach** for their whole business model

4. Companies **underestimate opportunities** in Operations and in Business Model Redesign

5. A **huge backlog demand** for the majority of participating companies is observed

6. No industry can claim to be a **digital front-runner**; however, each industry has its outperformers

7. Most companies are **either not aware of or ignore potential threats** from digital disruptors[1]

8. Companies are **too slow in transformation,** though facing rapidly evolving digital competition

9. Third-party **integration is often underrated** as companies still try to solve problems on their own

10. The **usage of "smart data"**, and thus also **personalized offerings**, lag behind

Source: Arthur D. Little Digital Transformation Study 2015
1   Also too little imagination for a renewal resp. overhaul of their business model in a future digital world

Arthur D. Little conducted this cross-industry study with the ambition to identify the areas "where to transform" and to provide inspiration on "how to transform"

Digitalization has **arrived in all industries** and become a **high-priority topic** on almost every CxO's agenda

Thorough **analysis of business models** is required to **evaluate the chances and risks** throughout digital transformation

With our **interview-based cross-industry survey** we have gathered data and insight from **100+ participants**

We developed a **comprehensive framework** to **identify your position** against best practice with clear indications regarding your way forward

We do not only provide answers to the question **"where to transform"**, but also give inspiration on **"how to transform"**

Source: Arthur D. Little Digital Transformation Study 2015

Digital Transformation is everywhere and impacts everything and everyone

"

Our biggest challenge is to understand the customer and his **new behaviors**.

The market is changing: **partners are becoming competitors**.

Clients are **pushing** us towards digital transformation: If we don't transform they will move to our competitors.

Products and services need to undergo a digital transformation: we cannot just take **physical** products and put them **online**.
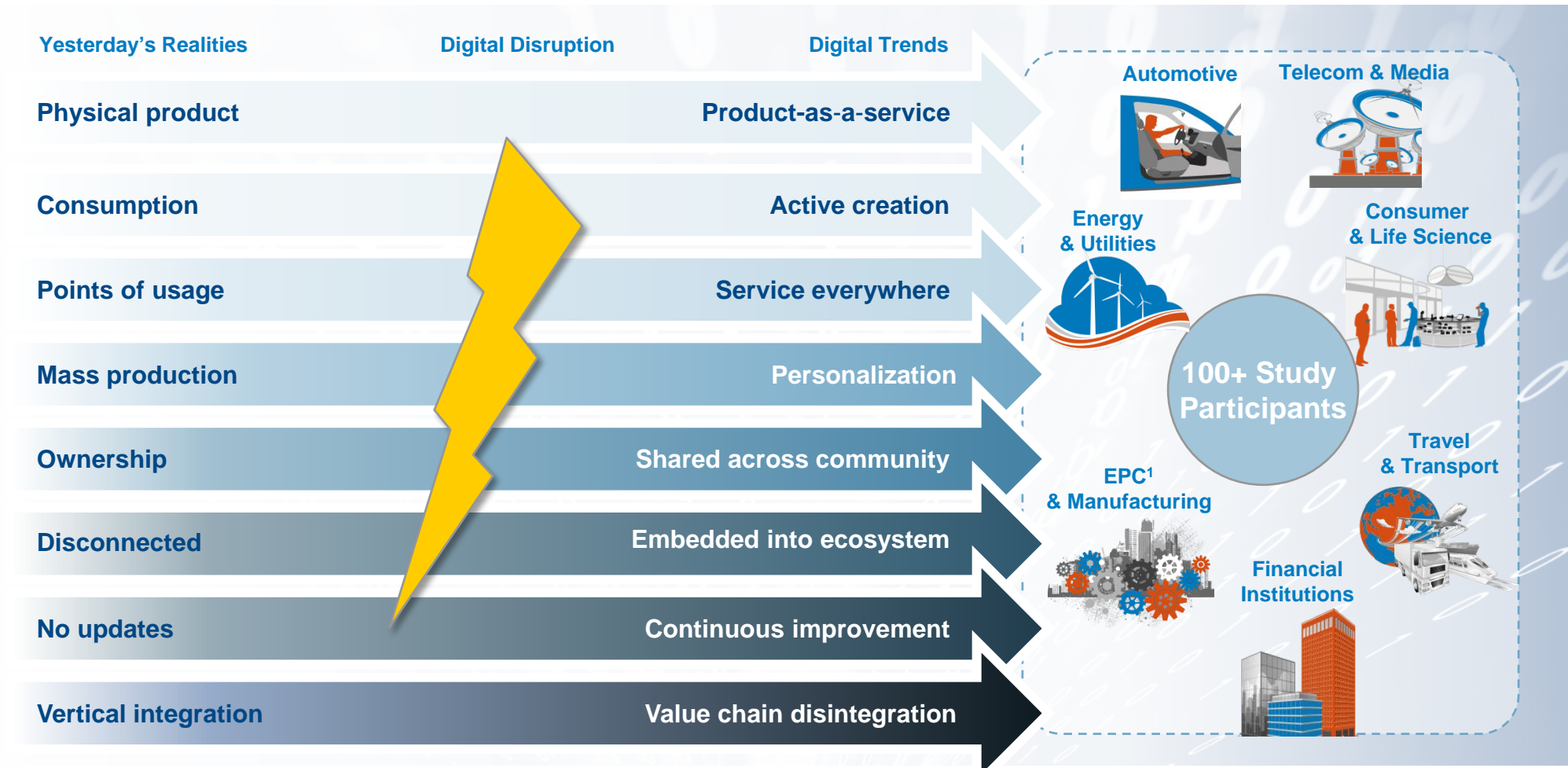
New entrants and fast-moving competitors increasingly capture **digital opportunities**, indicating the potential of "digital" in the market.

Productivity related to new technologies such as cobots, predictive analytics and additive manufacturing will increase by a factor of 100 over the next 5–8 years, while **costs** will be reduced by a factor of 100.

Our world has been changed by the expectations of our customers, while our basic service continues to be the same: **We need to transform** in order to maintain customer satisfaction.

"

Source: Arthur D. Little Digital Transformation Study 2015

Executive Summary – Trends

Some major digital trends change yesterday's realities – these "game changers" facilitate great opportunities and will inevitably generate some highly digitized champions
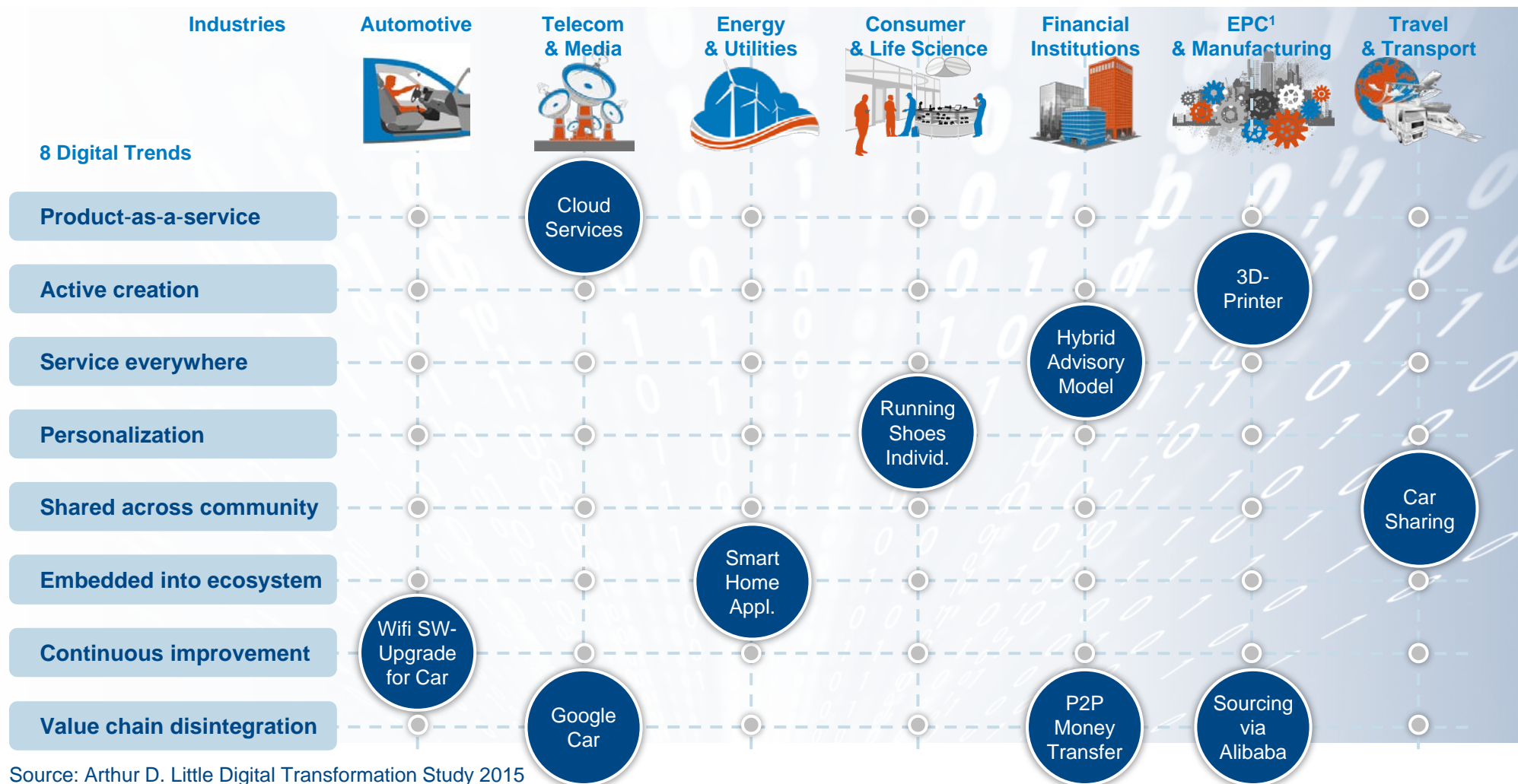
Yesterday's Realities	Digital Disruption	Digital Trends
Physical product		Product-as-a-service
Consumption		Active creation
Points of usage		Service everywhere
Mass production		Personalization
Ownership		Shared across community
Disconnected		Embedded into ecosystem
No updates		Continuous improvement
Vertical integration		Value chain disintegration

Automotive

Telecom & Media

Energy & Utilities

Consumer & Life Science

100+ Study Participants

EPC[1] & Manufacturing

Travel & Transport

Financial Institutions

Source: Arthur D. Little Digital Transformation Study 2015
1   EPC = Engineering, Procurement & Construction

The Arthur D. Little Digital Transformation study covers leading companies across all industry segments

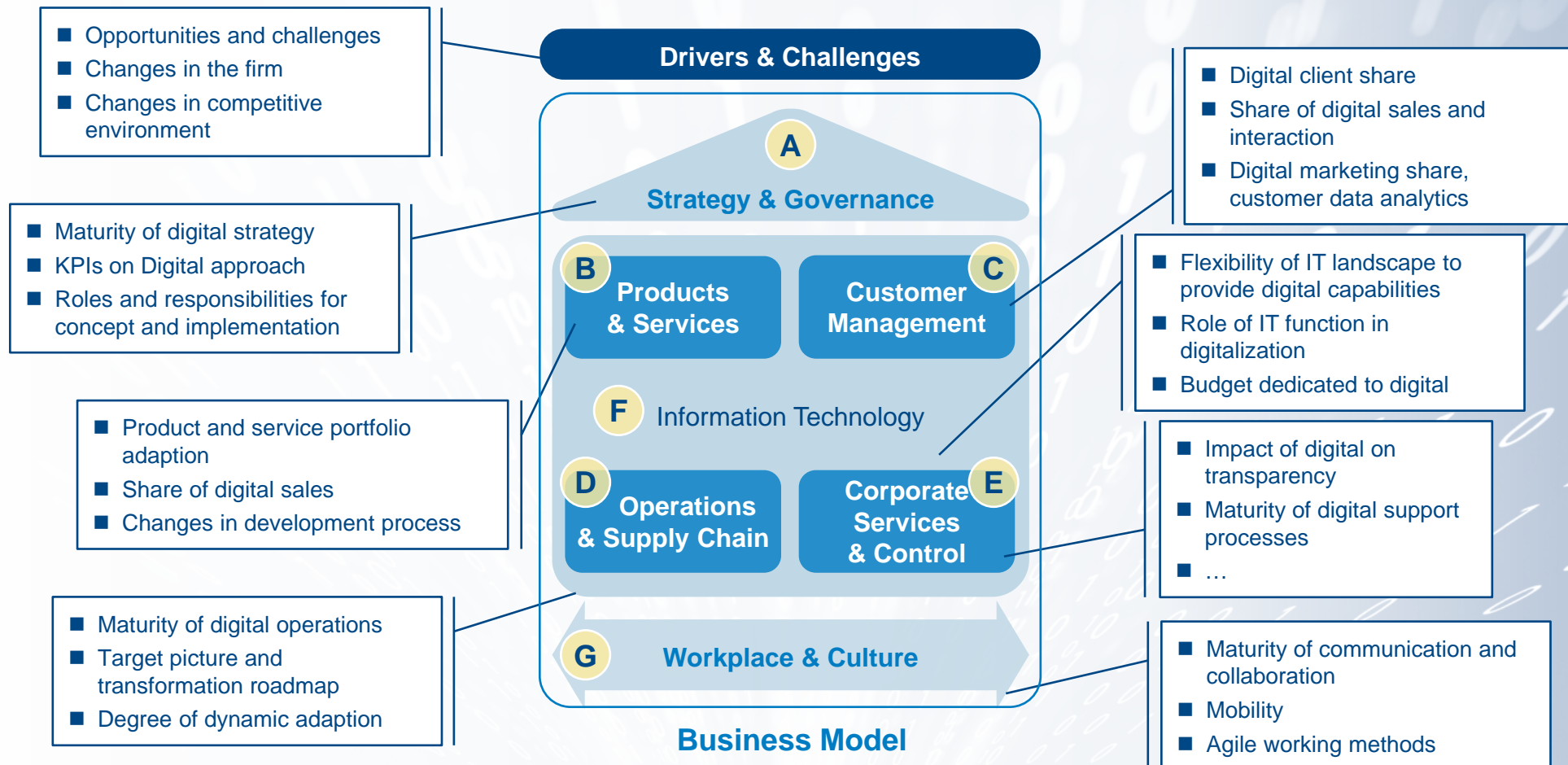Source: Arthur D. Little Digital Transformation Study 2015

Prominent examples of digitalization can be found in every industry. By nature, each trend's impact varies and so does the industry-specific progress on digital transformation
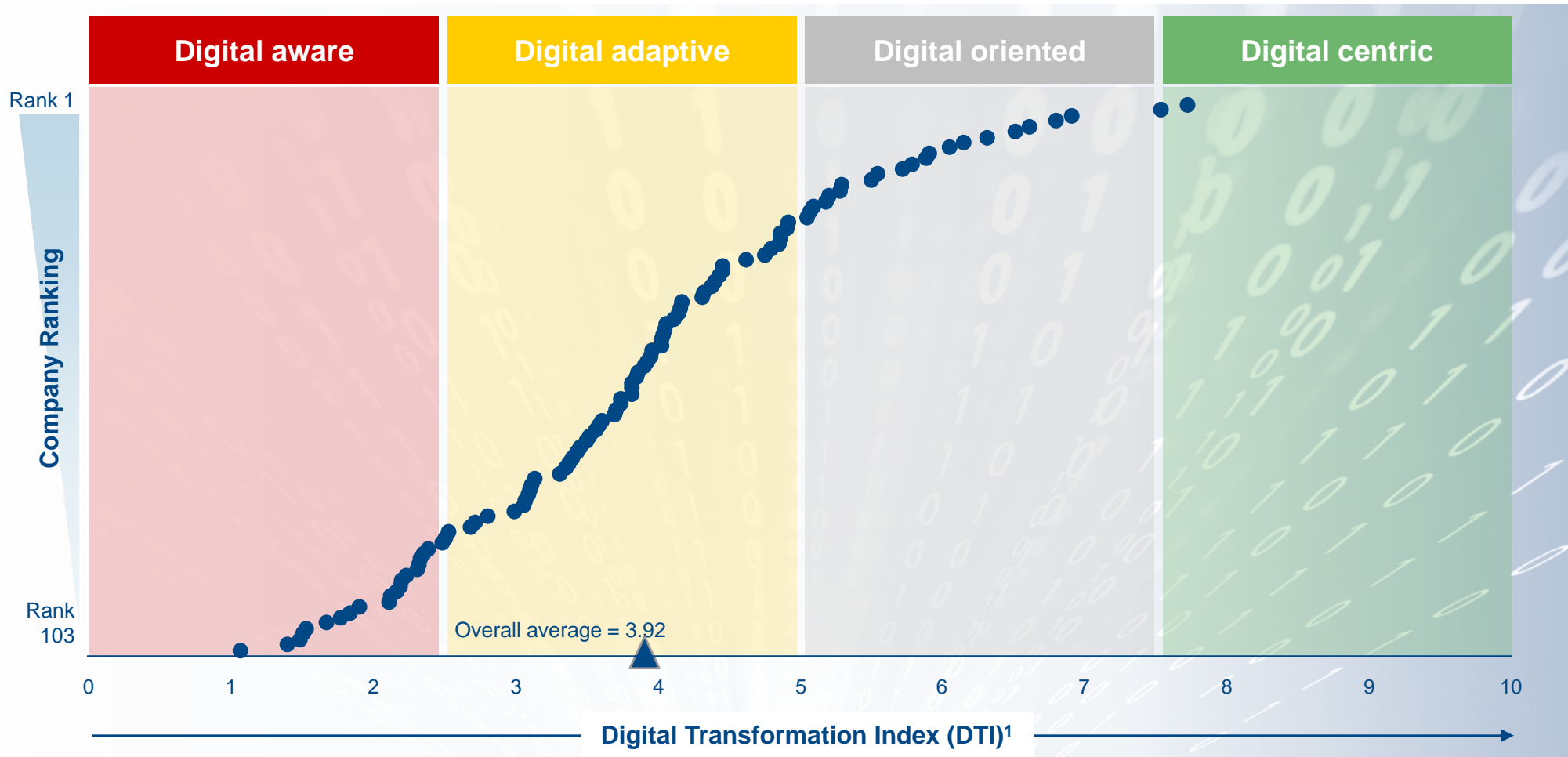
8 Digital Trends	Automotive	Telecom & Media	Energy & Utilities	Consumer & Life Science	Financial Institutions	EPC[1] & Manufacturing	Travel & Transport
Product-as-a-service		Cloud Services					
Active creation						3D-Printer	
Service everywhere					Hybrid Advisory Model		
Personalization				Running Shoes Individ.			
Shared across community							Car Sharing
Embedded into ecosystem			Smart Home Appl.				
Continuous improvement	Wifi SW-Upgrade for Car						
Value chain disintegration		Google Car			P2P Money Transfer	Sourcing via Alibaba	

Source: Arthur D. Little Digital Transformation Study 2015
1 EPC = Engineering, Procurement & Construction

The survey followed a holistic approach to analyze the relevant sections for digitalization; the questions raised have been mapped to these sections
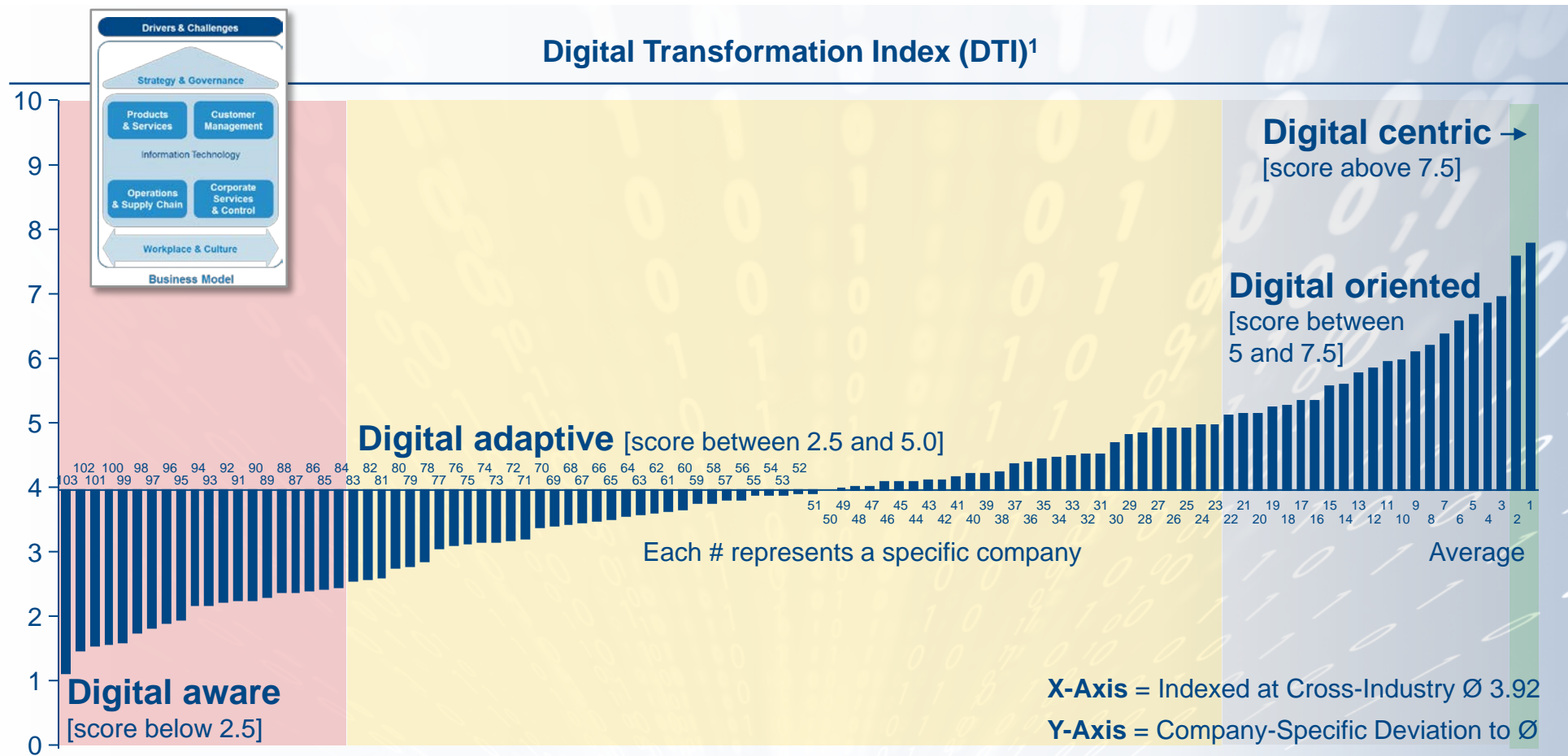
- Opportunities and challenges
- Changes in the firm
- Changes in competitive environment

- Maturity of digital strategy
- KPIs on Digital approach
- Roles and responsibilities for concept and implementation

- Product and service portfolio adaption
- Share of digital sales
- Changes in development process

- Maturity of digital operations
- Target picture and transformation roadmap
- Degree of dynamic adaption

Drivers & Challenges

A

Strategy & Governance

B **Products & Services**   **C** **Customer Management**

F Information Technology

D **Operations & Supply Chain**   **Corporate Services & Control** **E**

G **Workplace & Culture**

Business Model

- Digital client share
- Share of digital sales and interaction
- Digital marketing share, customer data analytics

- Flexibility of IT landscape to provide digital capabilities
- Role of IT function in digitalization
- Budget dedicated to digital

- Impact of digital on transparency
- Maturity of digital support processes
- …

- Maturity of communication and collaboration
- Mobility
- Agile working methods

Source: Arthur D. Little Digital Transformation Study 2015

Executive Summary – Overview "Digital Transformation Framework"

The majority of participating companies are digital adaptive only

Digital aware	Digital adaptive	Digital oriented	Digital centric

Rank 1

Company Ranking

Rank 103

Overall average = 3.92

Digital Transformation Index (DTI)[1]

0 1 2 3 4 5 6 7 8 9 10

Source: Arthur D. Little Digital Transformation Study 2015
1   DTI calculated as average of scores for each section

The Arthur D. Little Digital Transformation Index (DTI) shows that today few firms can be considered "digital oriented" or "digital centric"

Digital Transformation Index (DTI)[1]

Digital centric →
[score above 7.5]

Digital oriented
[score between 5 and 7.5]

Digital adaptive [score between 2.5 and 5.0]

Each # represents a specific company

Average

Digital aware
[score below 2.5]

X-Axis = Indexed at Cross-Industry Ø 3.92
Y-Axis = Company-Specific Deviation to Ø

Average DTI is most advanced in the section "Strategy & Governance" as well as "Information Technology", with a score of 5 – however, it still lags behind the virtual star performance
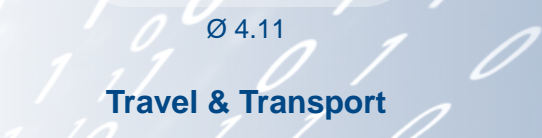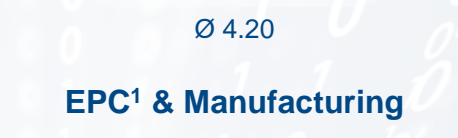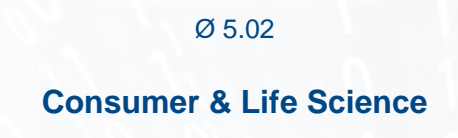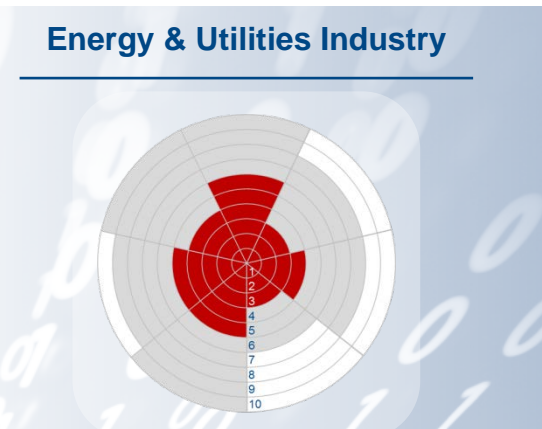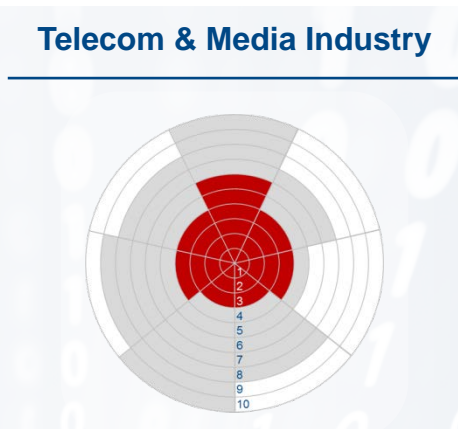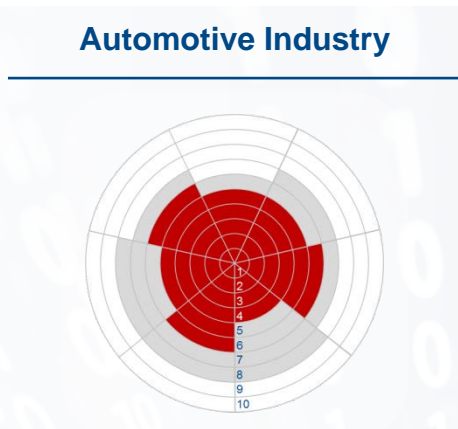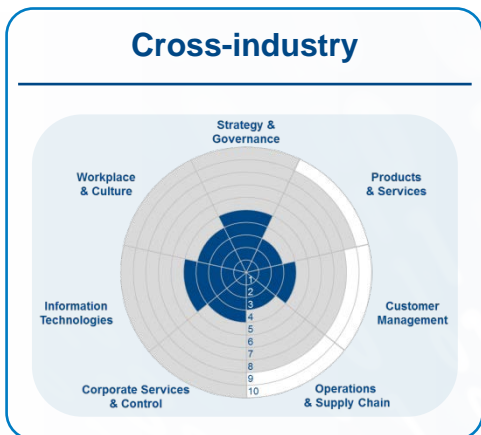
Digital Transformation Index (DTI) per Section
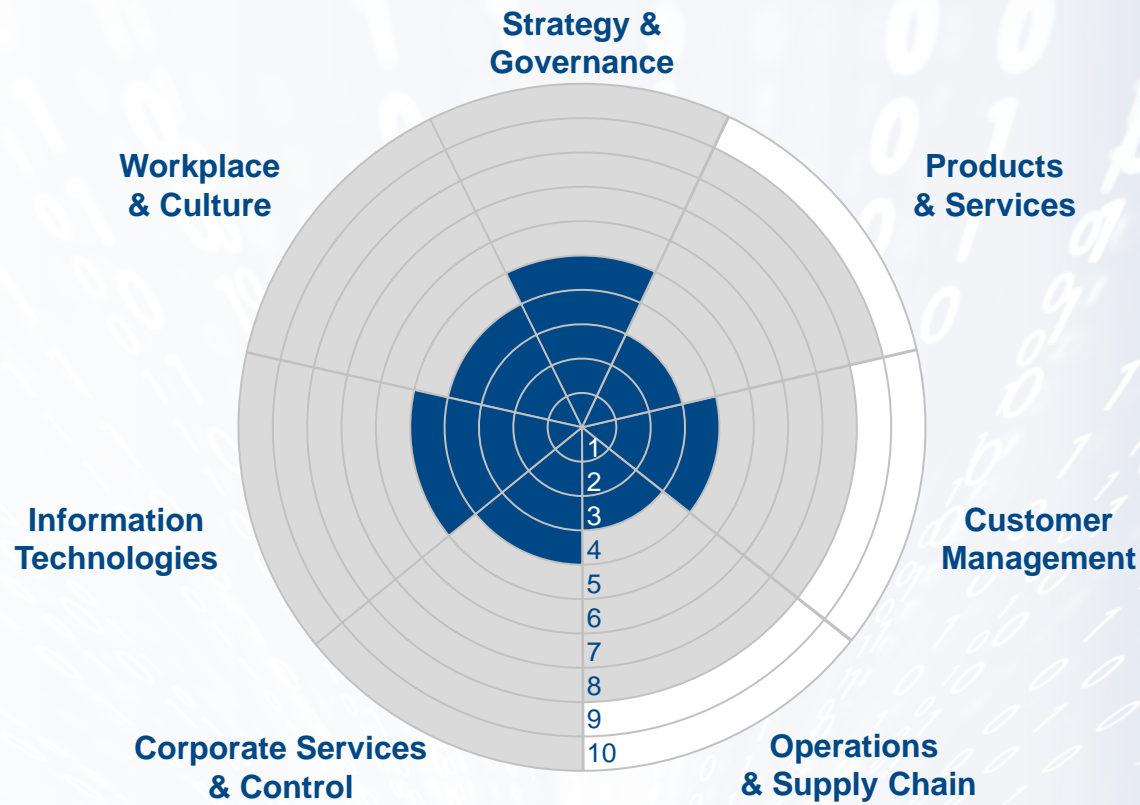
☐ = Cross-Industry Virtual Star   ■ = Cross-Industry Average

Source: Arthur D. Little Digital Transformation Study 2015

Executive Summary – DTI Views per Industry

The different progresses of industries in Digital Transformation can be investigated when looking at the radar charts, reflecting the 7 sections of the model

Cross-industry

Strategy & Governance
Products & Services
Workplace & Culture
Customer Management
Information Technologies
Corporate Services & Control
Operations & Supply Chain

Ø 3.92

Automotive Industry

Ø 5.02

Telecom & Media Industry

Ø 4.20

Energy & Utilities Industry

Ø 4.11

Financial Institutions

Ø 3.86

Consumer & Life Science

Ø 3.71

EPC[1] & Manufacturing

Ø 3.53

Travel & Transport

Ø 3.51

Source: Arthur D. Little Digital Transformation Study 2015
1) EPC = Engineering, Procurement & Construction

■ = (Cross-) Industry Virtual Star   ■ = Cross-industry average   ■ = Industry average

Executive Summary – Average DTI per Industry

On average, all industries are "digital adaptive" only; however, each industry contains "digital-oriented" companies, whereas two industries contain one "digital-centric" company

Average Industry-Specific DTI

Industry	min	max	DTI	σ
Automotive	4.06	6.52	5.02	0.92
Telecom & Media	1.54	6.62	4.20	1.18
Energy & Utilities	2.13	7.73	4.11	1.30
Overall average	1.07	7.73	3.92	1.38
Financial institutions	1.52	7.55	3.86	1.54
Consumer & Life science	1.84	6.16	3.71	1.24
EPC & Manufacturing	1.07	5.30	3.53	1.09
Travel & Transport	2.24	6.62	3.51	1.51

Ø 3.92
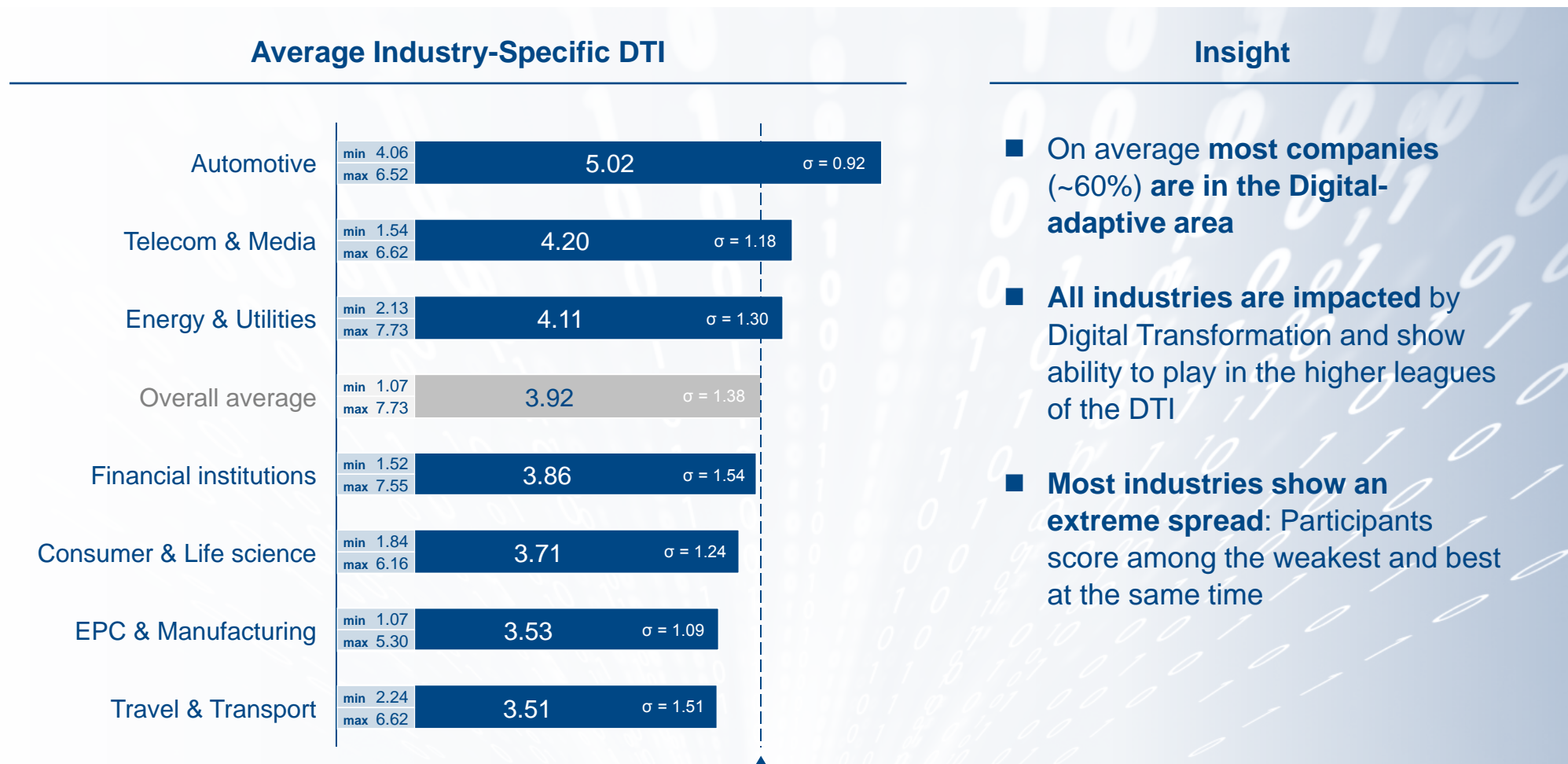
Insight

- On average **most companies (~60%) are in the Digital-adaptive area**

- **All industries are impacted** by Digital Transformation and show ability to play in the higher leagues of the DTI

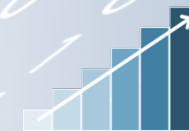- **Most industries show an extreme spread**: Participants score among the weakest and best at the same time

Source: Arthur D. Little Digital Transformation Study 2015
σ = Standard Deviation; Ø = Average

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Executive Summary – 5 Core Messages

Examples from failures as well as success stories show: Some key rules help to navigate through the digitalization journey

Five Core Messages to Benefit from Digital Disruption

1 **Today, Digitalization is a strategic imperative** for corporates: It cannot be avoided!

2 **Digitalization** is not the final goal, but a **capability** and a **way to achieve business objectives**

3 The **Digital Transformation** entails challenges and opportunities for **all parts of the company**

4 Every company needs to find its own ideal **Digital Transformation approach**

5 For **a proper Digital Transformation** a company has to be aware of its **own capabilities and competences**; new models of sourcing evolve

Source: Arthur D. Little Digital Transformation Study 2015

Arthur D Little

Please let us know which case examples you would like to learn more about

Business Model

A Strategy & Governance

B Products & Services

C Customer Management

F Information Technology

D Operations & Supply Chain

E Corporate Services & Control

G Workplace & Culture

A Strategy & Governance
- NIKE — Nike x-functional Digital Sports Division
- Coca Cola "Co-Founders" Network

B Products & Services
- TESLA — Cyber-Physical Product
- friendsurance — Service with Peer-to-Peer Component
- SBB — SBB GoodBox Rail-Transport Smartization

C Customer Management
- BURBERRY — Burberry Integrated Customer Experience
- Walmart — Real-Time Dynamic Pricing for Profit Maximization
- Quicksilver Personal Pricing & Rewards

D Operations & Supply Chain
- adidas GROUP — adidas Speedfactory In-Store Production
- DHL — Vision Picking using Augmented Reality
- Dyzle — Cold Chain Quality Management

E Corporate Services & Control
- Coca Cola — Coca Cola Brand Dashboard
- ROCKET INTERNET — Digital Business Launch Factory
- IBM — Cloud-Based Project Staffing

F Information Technology
- European Telco — Layered IT Architecture for Quick Process Implementation
- CLAAS — ICT to Support Industry 4.0

G Workplace & Culture
- mindvalley — Gamification in Project-based/ Knowledge Environment