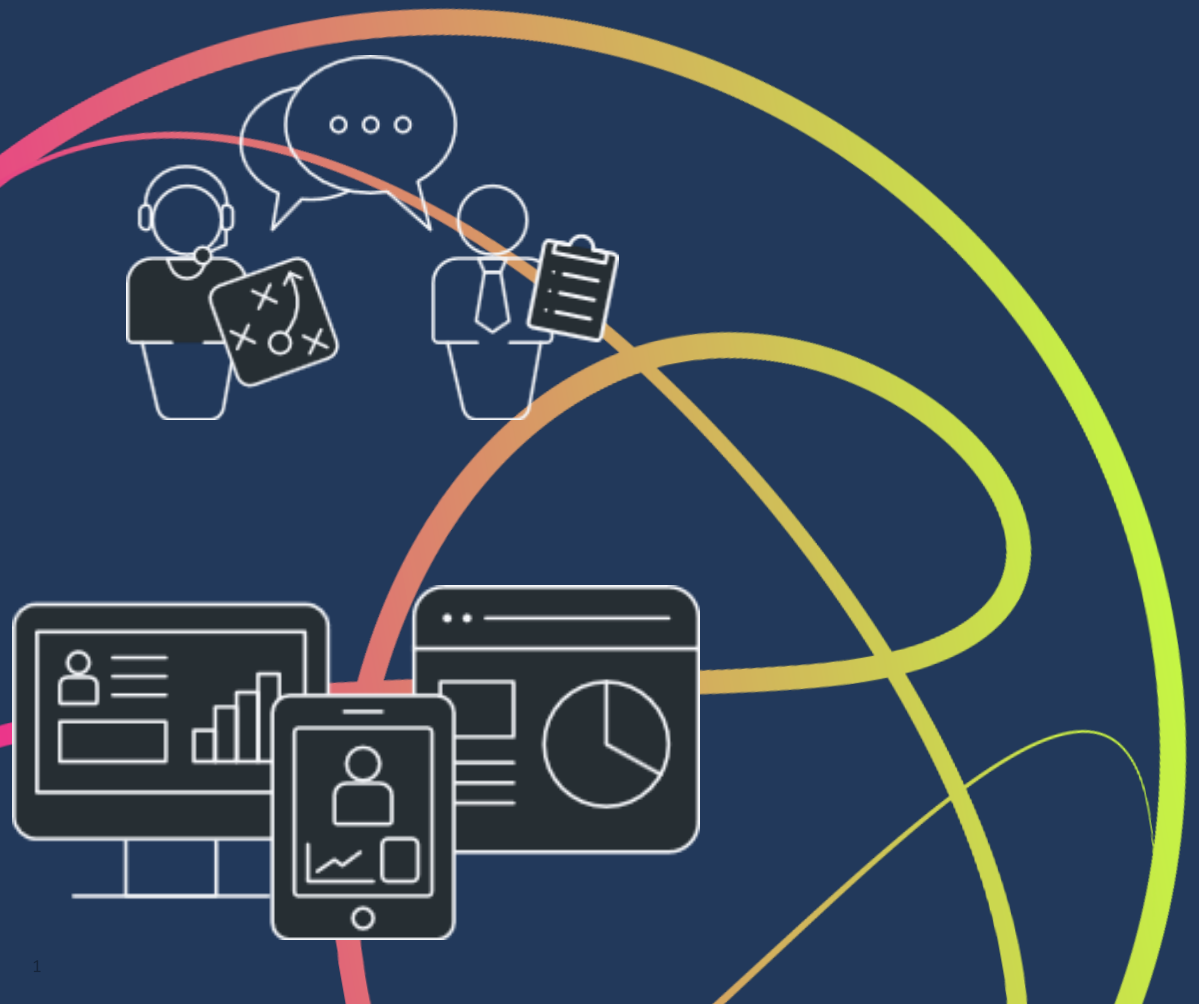
DIGITAL BUSINESS STRATEGY:

BUSINESS MODEL DESIGN BY DIGITAL ECO-SYSTEME



Discover Digital Capabilities

| 26.10.2022 | Dr. Paul Gromball| Paul.Gromball@tmg-muenchen.de

DIGITAL BUSINESS STRATEGY

1. The Big Shift
2. The Digital Traps
3. Business Model Design
4. Digital Eco-Systems
5. Digital Customers
6. Digital Competition
7. Digital Capability

1)THE BIG SHIFT

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TRADITIONAL COMPETITIVE STRATEGY

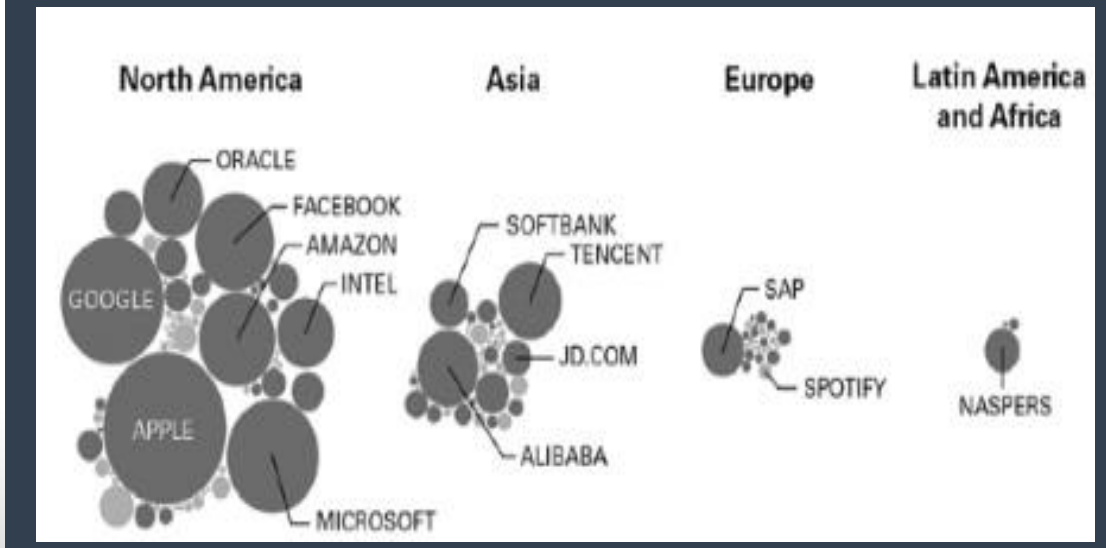
Traditional Assumptions of Competitive Strategy

Products drive revenues

Value chains shape product positioning and competitive strength

Industry structures amplify (or diminish) competitive advantage

SHIFTING COMPANIES....



OLD WAYS OF STRATEGY NO LONGER WORK

Old theories do not necessarily fit with the business models of the current economic powerhouses

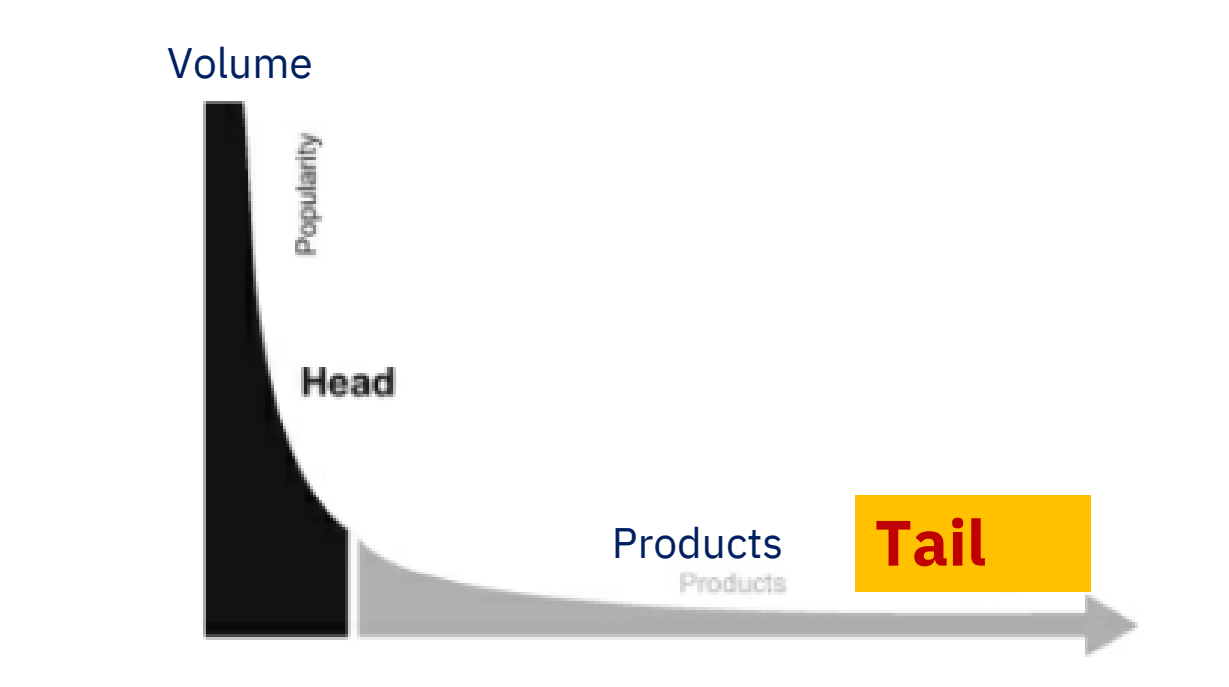
FROM PRODUCT TO DATA, FROM INDUSTRY TO ECO-SYSTEM

A shift of emphasis from products to data

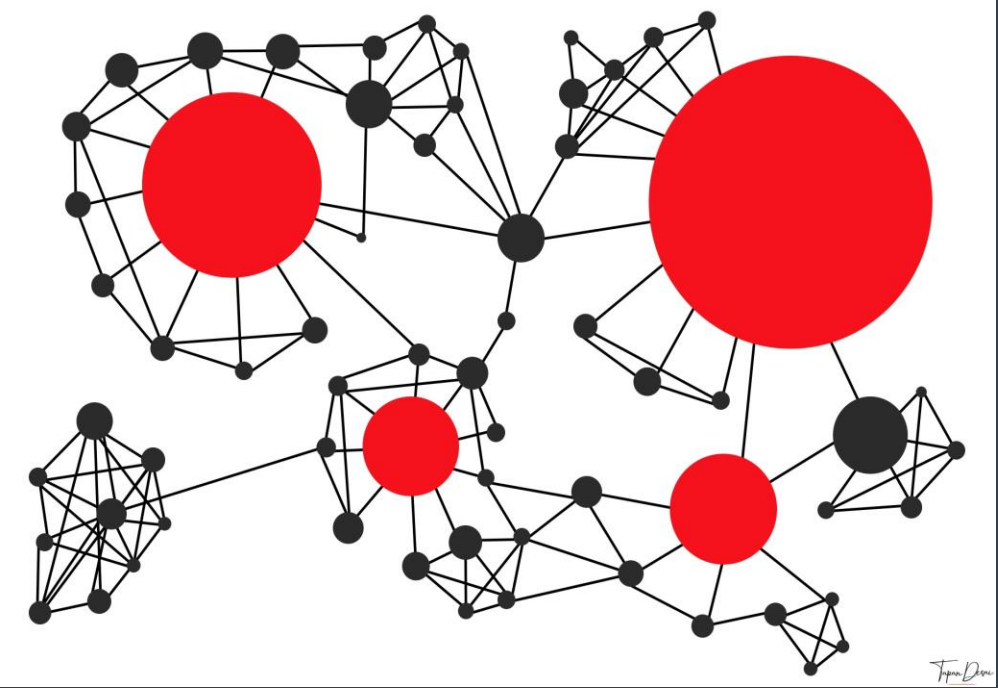
... and a shift of focus from industries to digital ecosystems

THE ENABLING ROLE OF DATA & ECO-SYSTEMS

The Long Tail Advantage



The Network Effect Advantage



The Interactive Data Advantage

- Insights
- Sharing
- Experience

THE EMERGENCE OF INTERACTIVE DATA

What is new about modern data?

Interactive Data (generated in continuous streams through user interactions - e.g., browsing on Amazon, or searching on Google)

Episodic Data (generated through discrete events such as the sale of a product)

SOURCES OF INTERACTIVE DATA

Interactive Data

Physical Sensors

Example: Miniaturized electronic chips in tennis rackets that track playing skills

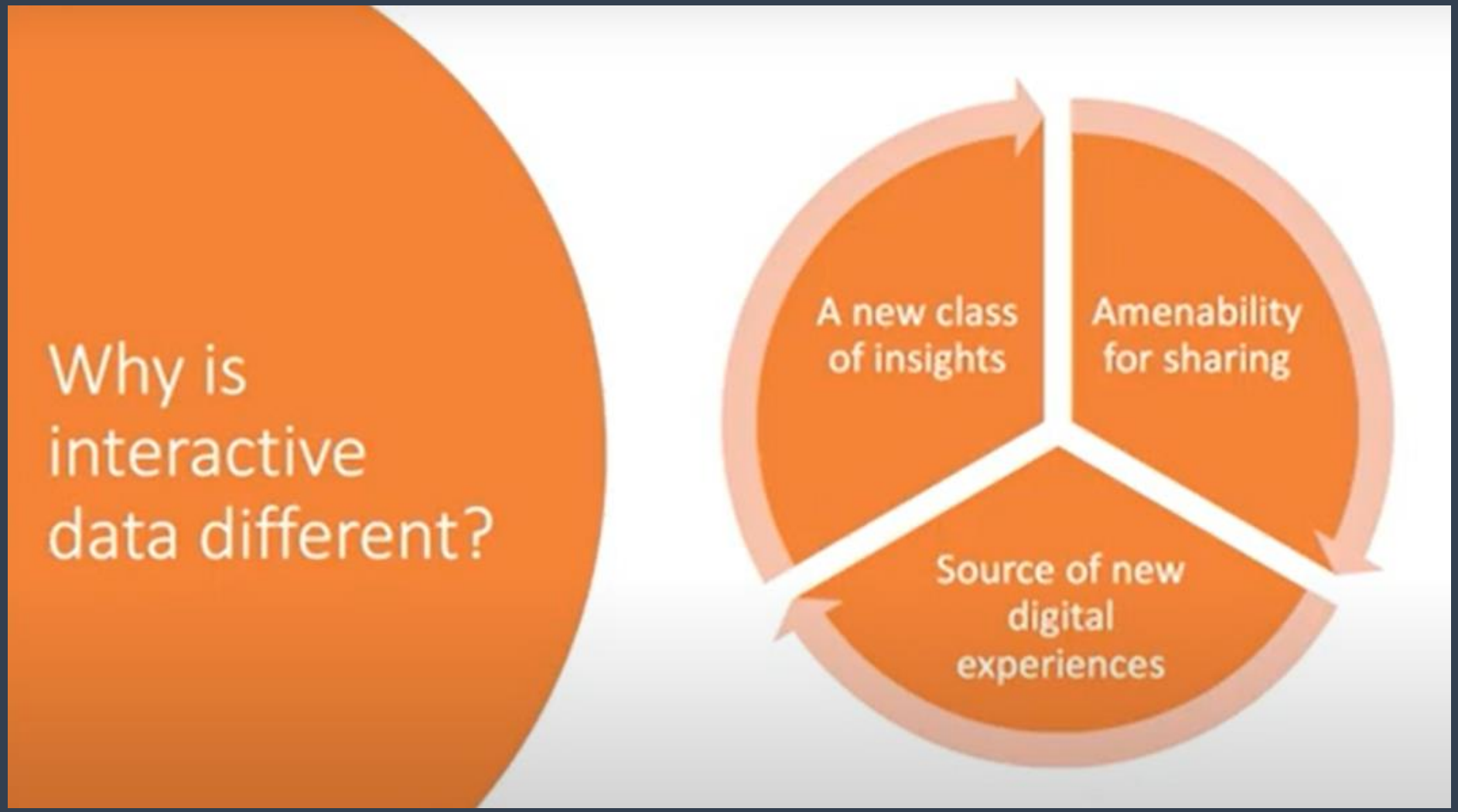
Web-based Sensors

Example: Websites of newspaper that track readers preferences and interests

App-Based Sensors

Example: Apps provided by banks that track spending habits and preferences

NEW DATA POSSIBILITIES



COMPARING DATA

Example: Insurance

Traditional Data	Interactive Data
• Assess risks in populations (such as populations of homes for home insurance) • Price profitable and competitive policies • Improve efficiencies in processing claims post-damage	• Monitor individual risks (such as of individual homes through sensors) • Predict damage (such as the likelihood of frozen pipes) • Avert damage through alerts (such as asking homeowners to run hot water through their pipes before they freeze) • Provide post-damage services (such as sending repair crews in case damage is not averted)

2)THE DIGITAL TRAPS

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THE FIVE DIGITAL TRAPS OF TRADITIONAL COMPANIES

Five Traps of Digital Myopia

- The Product Trap
- The Value Chain Trap
- The Operational Efficiency Trap
- The Customer Trap
- The Competitor Trap

OVERCOMING THE THE PRODUCT TRAP

The Product Trap

I WANT DEVELOP SMART, CONNECTED PRODUCTS & SYSTEMS

Legacy Belief	Handicaps	How to Avoid Digital Myopia Traps
Products are our revenues drivers	• Inability to perceive the new and expanded role of data • Inability to see products as conduits for interactive data that can drive new revenue streams	• Transcend beyond episodic data to interactive data • Transform products into conduits for interactive data • Envision new data-driven revenues from interactive data

OVERCOMING THE VALUE CHAIN TRAP

DIGITAL MARKETING & SALES LAB

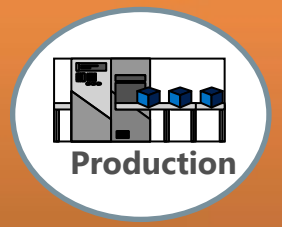
The Value Chain Trap

I WANT TO GROW MY BUSINESS

Legacy Belief	Handicaps	How to Avoid Digital Myopia Traps
Value chains determine our business scope	• Value chains determine our business scope	• Unfamiliarity with the emerging consumption ecosystems • Inability to generate value from consumption ecosystems

OVERCOMING OPERATIONAL EFFICIENCY TRAP

The Operational Efficiency Trap



I WANT TO INCREASE EFFICIENY

Legacy Belief	Handicaps	How to Avoid Digital Myopia Traps
New digital technologies are meant to further improve efficiencies	• Reluctance to use modern digital technologies for new purposes • Comfort with old risk-reward tradeoffs	• Use production ecosystems to drive new data-driven services

OVERCOMING THE CUSTOMER TRAP

The Customer Trap

I WANT TO CREATE VALUE FROM MY DATA

Legacy Belief	Handicaps	How to Avoid Digital Myopia Traps
The primary purpose of our customers is to buy our products	• Fail to see customers as key sources of interactive data • Stay satisfied with product revenues • Reliance on traditional industry entry barriers to sustain prevailing market positions	• Migrate legacy customers into digital customers

OVERCOMING THE COMPETITOR TRAP

The Competitor Trap

I WANT TO INCREASE THE PROFIT FOR MY COMPANY

Legacy Belief	Handicaps	How to Avoid Digital Myopia Traps
Our competitors are those who offer similar products	• Consider business environments as industries, not digital ecosystems • Fail to notice and confront competitors who compete with similar data • Fail to see competitors emerging from consumption ecosystems	• Track your digital competitors • Develop digital competitor intelligence

LESSONS LEARNED

- **First:** Sensors and the IoT can provide interactive data.
- **Second:** It’s essential to develop the means for sharing data internally and externally in real-time .
- **Third:** Using interactive data to build digital platforms creates new, profitable business models.

3) BUSINESS MODEL DESIGN

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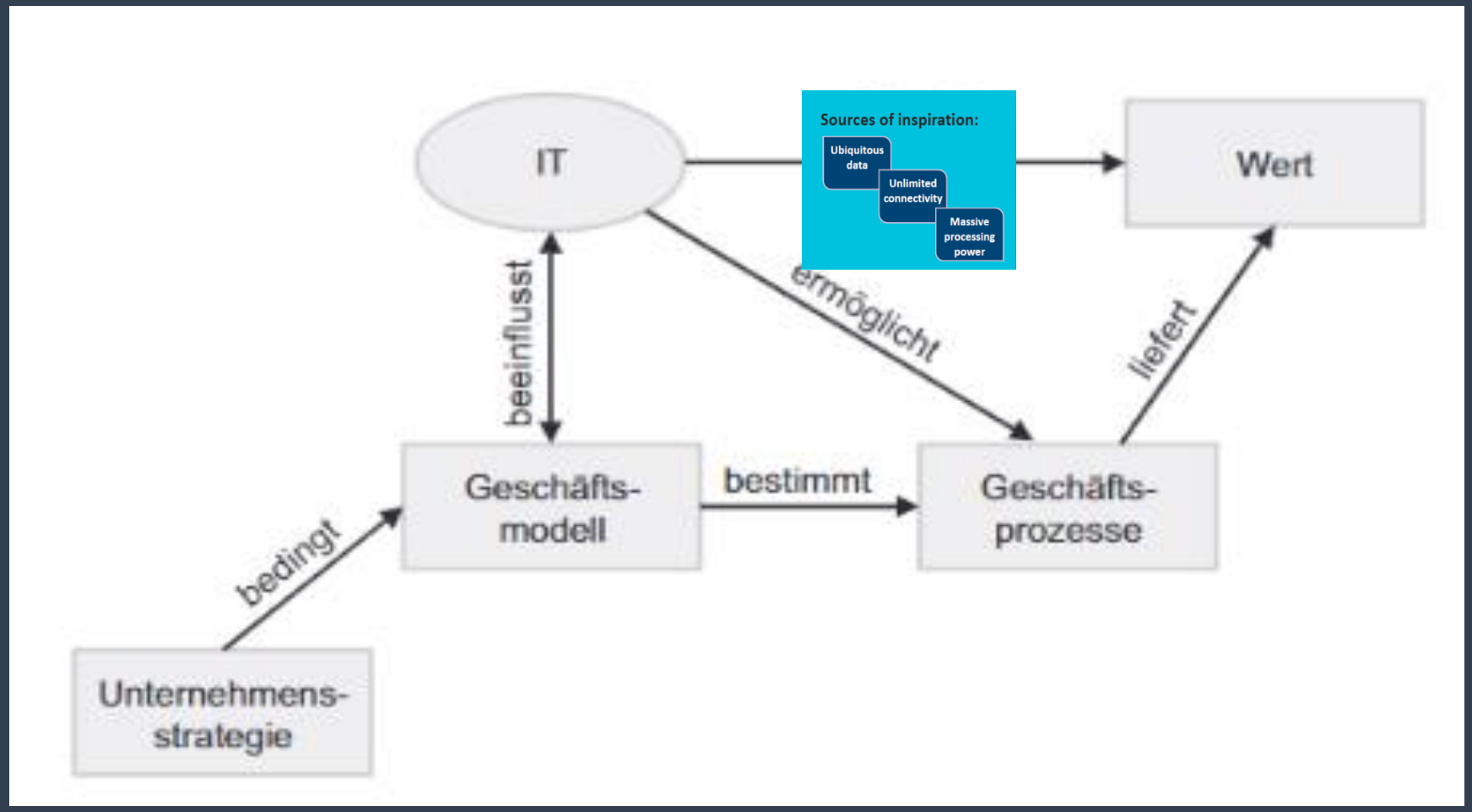
DEVELOPMENT OF DIGITAL BUSINESS STRATEGIES

Digital technologies change the role of technology in a company from *enabling* to ***inspiring*** business strategy

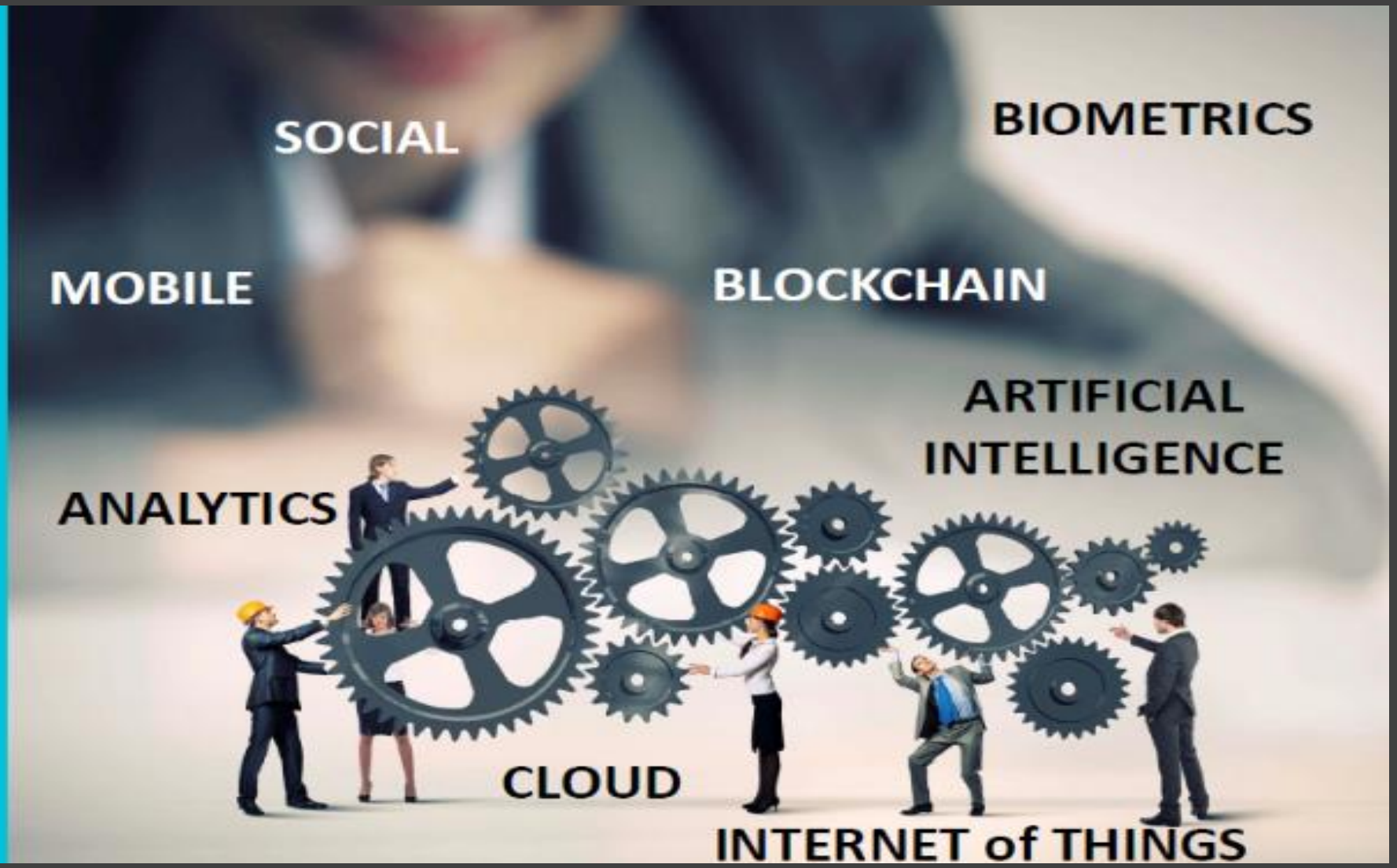
Sources of inspiration:

- Ubiquitous data
- Unlimited connectivity
- Massive processing power



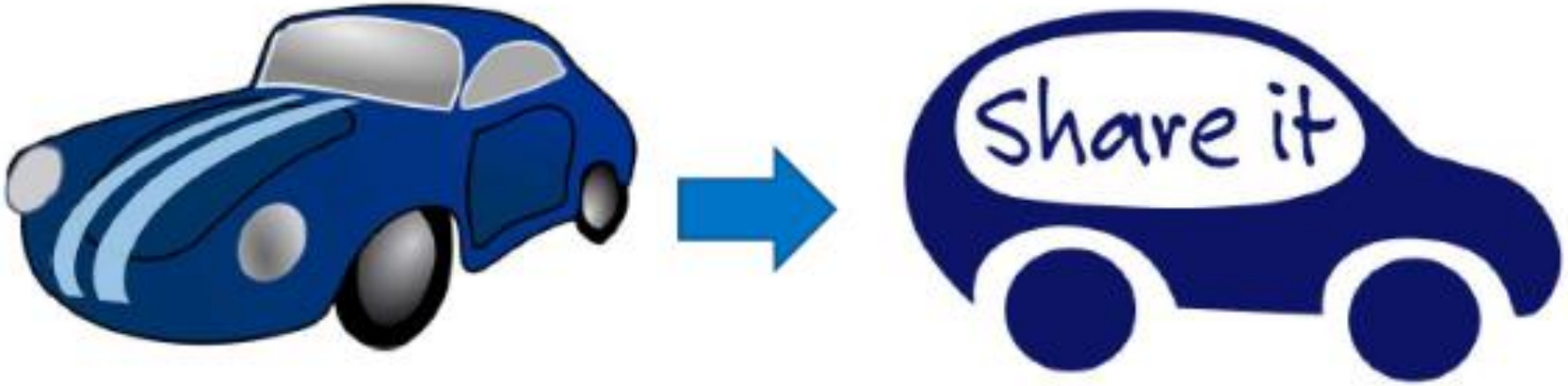
DIGITAL TECHNOLOGY DISRUPTING YOUR BUSINESS MODEL

SMACIT: Disrupting your business



DIGITAL REDEFINES CUSTOMER VALUE PROPOSITION

Automobile Manufacturing reimagined as *Mobility Services*



Pharmaceutical companies reimagined as *Disease Prevention and Treatment*

DIGITAL REDEFINES CUSTOMER VALUE PROPOSITION

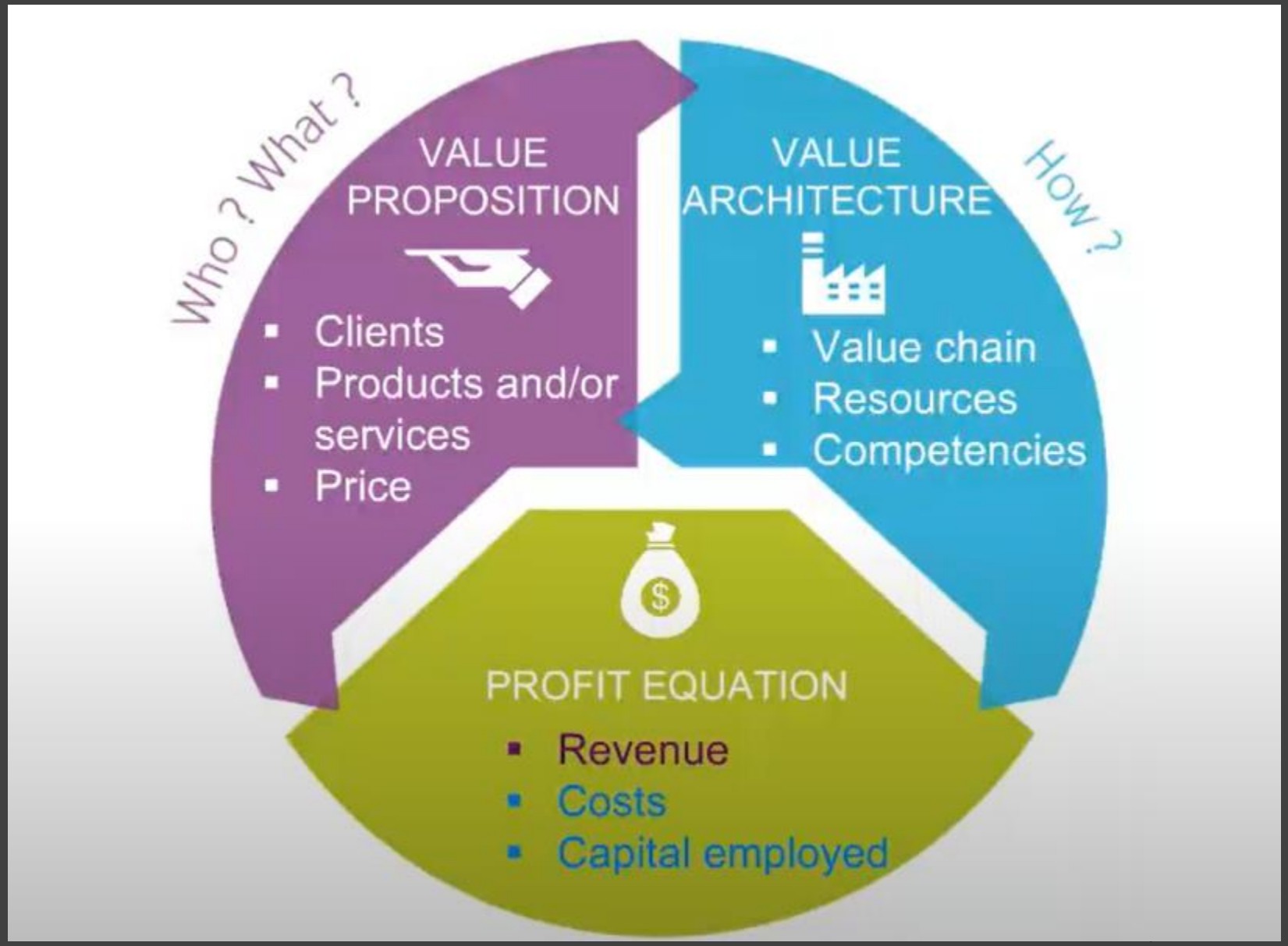
Successful as	Online book retailer	Electrical equipment manufacturer	Financial services company
Reimagined as	Provider of personal convenience	Intelligent energy management solutions	Provider of financial security
Representative offering	prime	EcoStruxure™ Innovation At Every Level	Auto Circle™

BUSINESS MODELL ALS AUSGANGSPUNKT DER STRATEGIEENTWICKLUNG

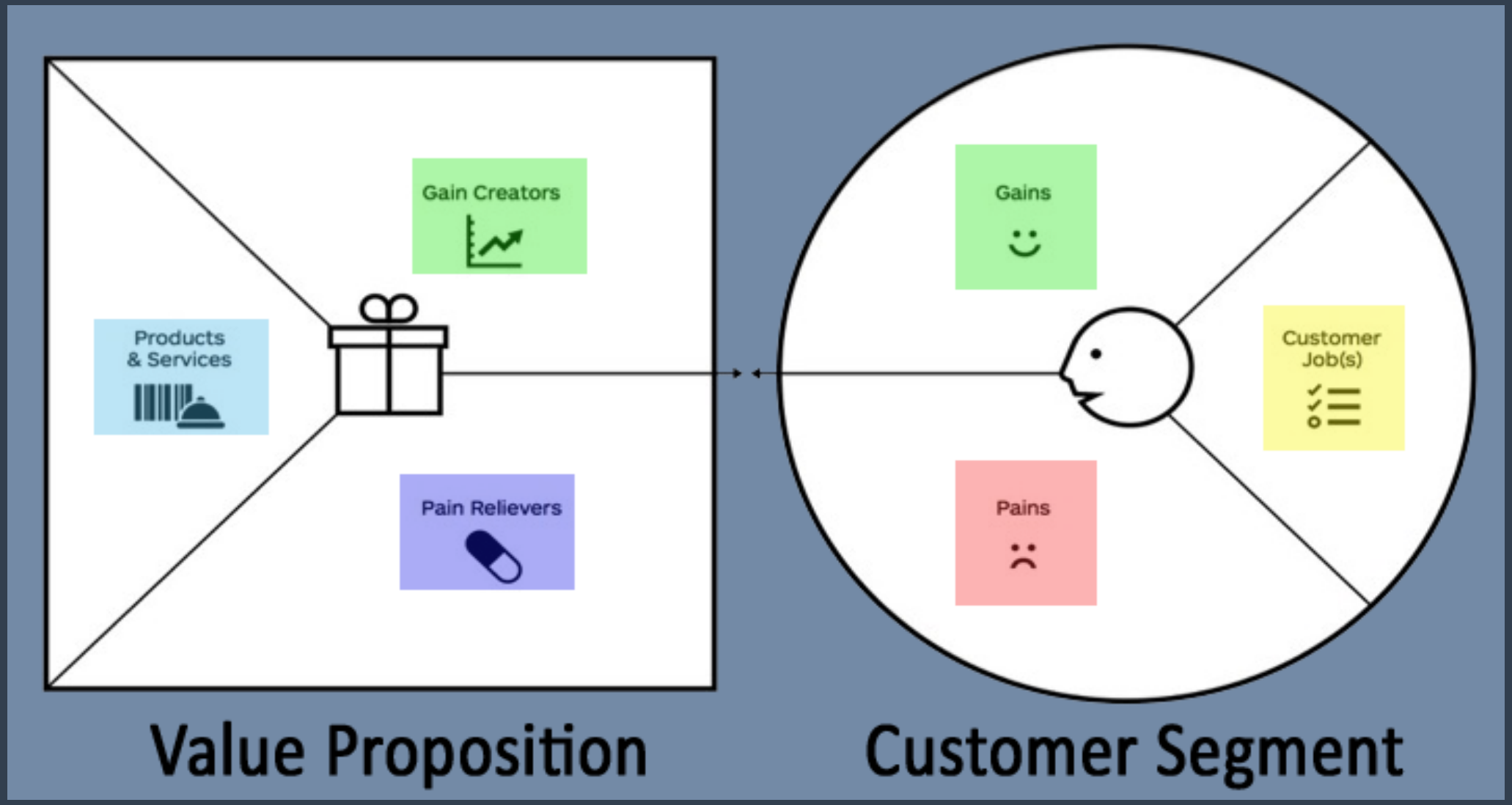
A BUSINESS MODEL IS

a description of how a company generates profit

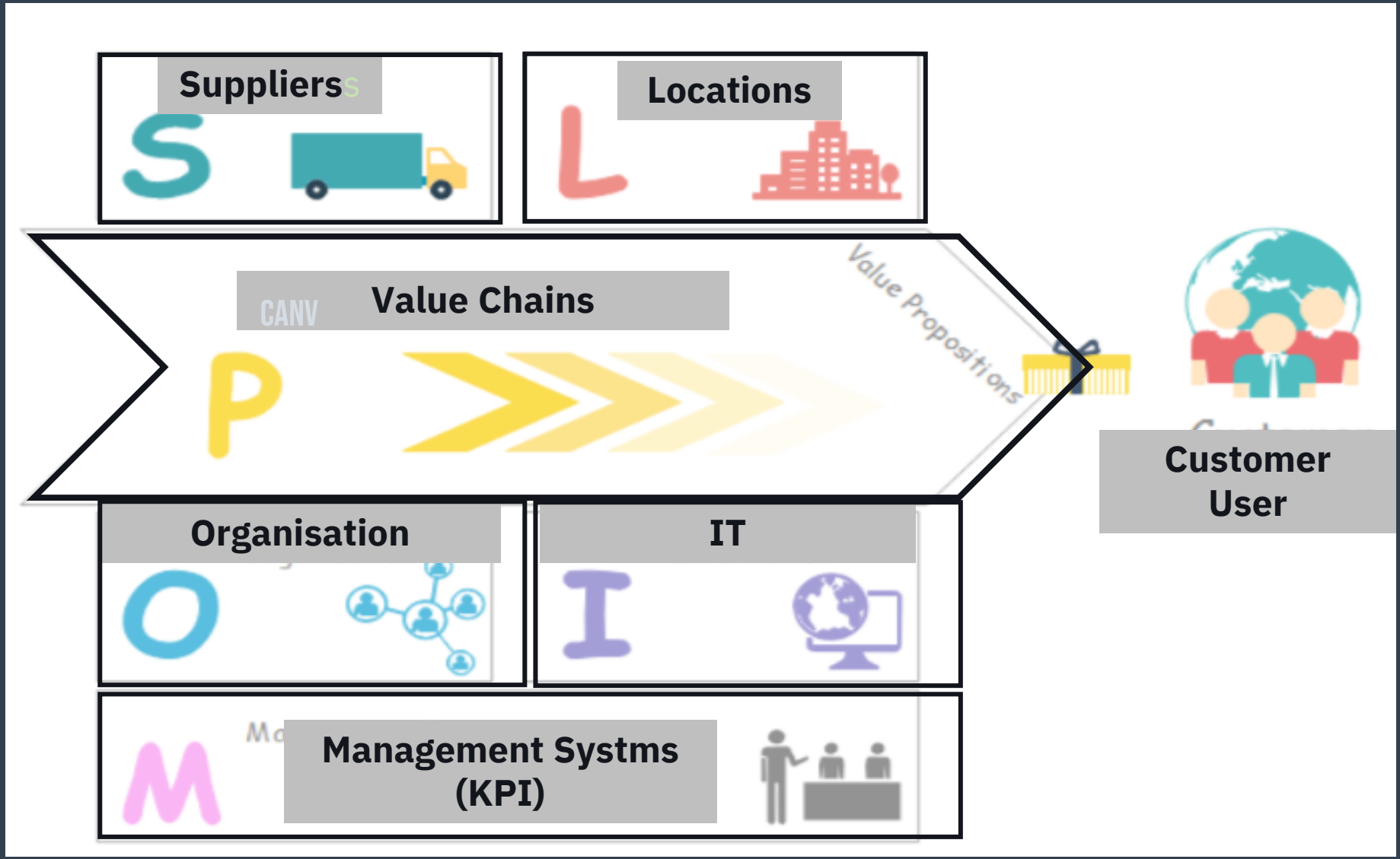
Bei einem Geschäftsmodell handelt es sich um ein konzeptionelles Werkzeug, welches die einzelnen Elemente der unternehmerischen Wertschöpfung sowie deren Beziehungen untereinander beschreibt und damit die Erlösströme eines Unternehmens nachvollziehbar macht. Es enthält die Beschreibung des Wertes, den ein Unternehmen seinen Kunden liefert, sowie das Wertschöpfungsnetzwerk, welches ein Unternehmen aufbaut, um diesen Wert zu schaffen, zu vermarkten und auszuliefern



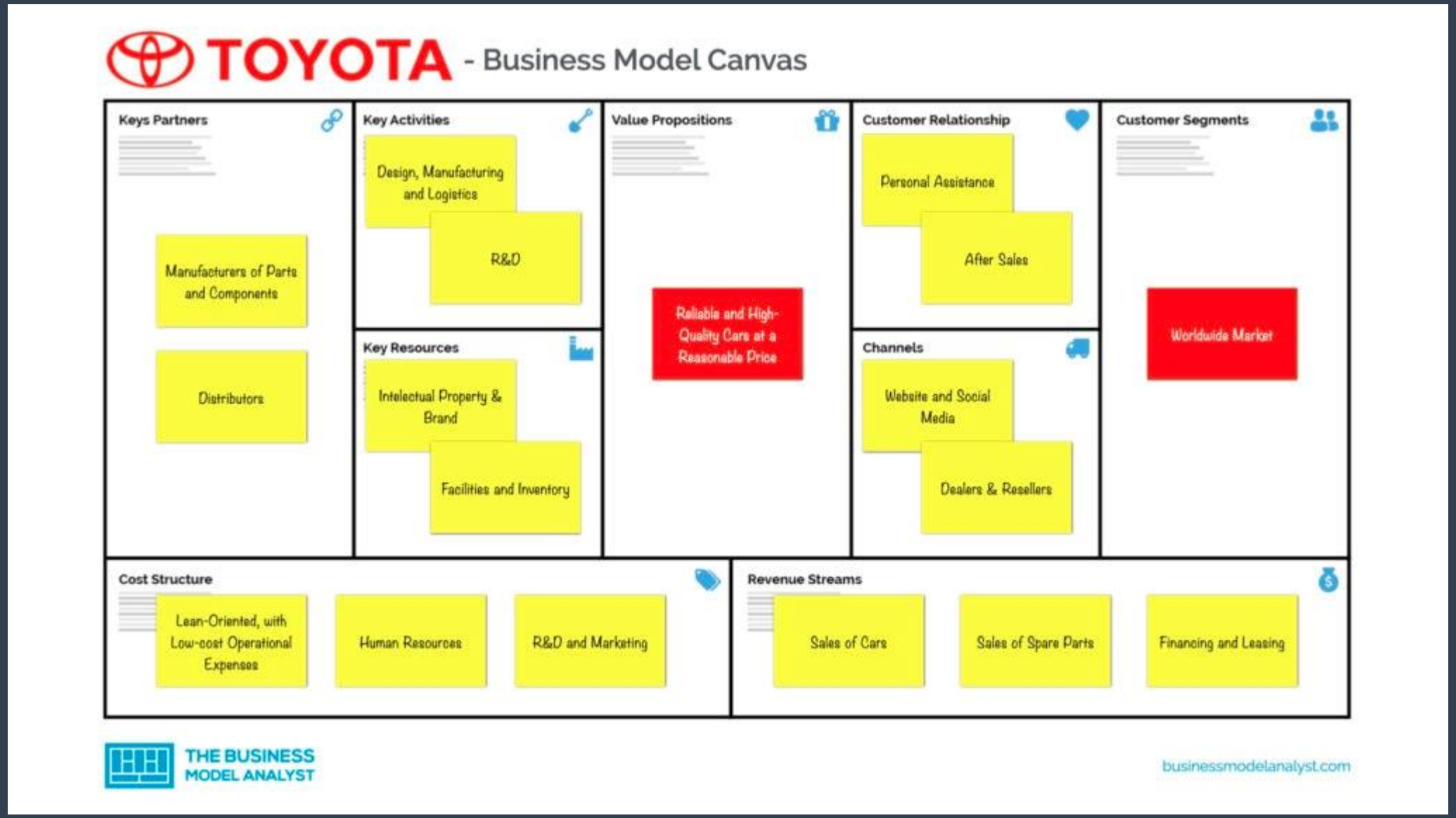
BUSINESS MODELL KOMPONENTEN: VALUE PROPOSITION



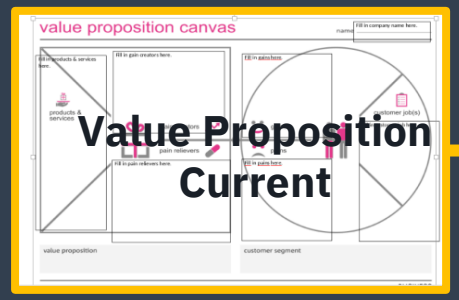
BUSINESS MODELL KOMPONENTEN: VALUE ARCHITECTURE

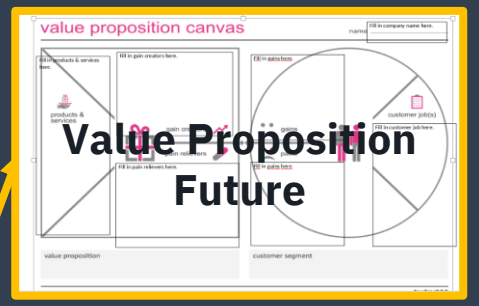


BUSINESS MODELL CANVAS

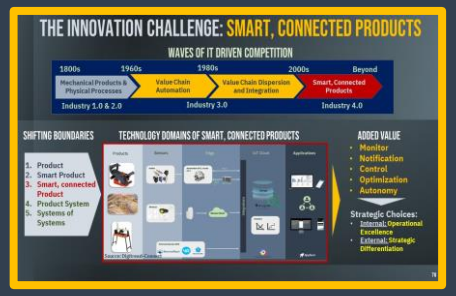


DIGITAL BUSINESS STRATEGY PROCESS

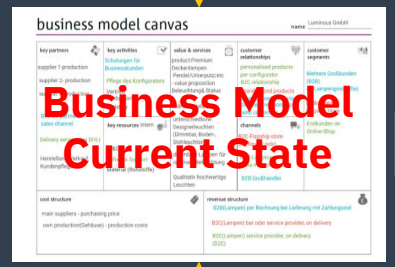


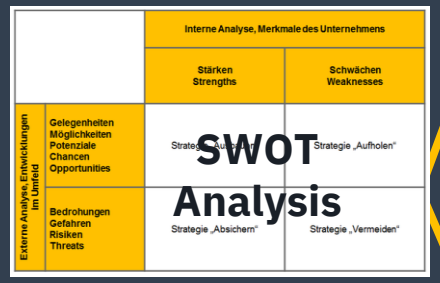


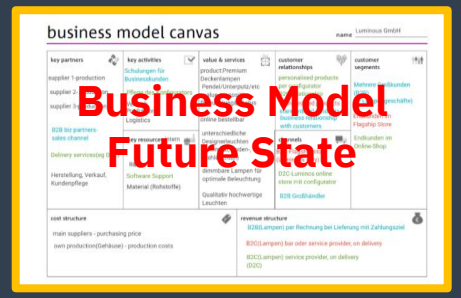
Digital Value Proposition



Positioning: Strategic Objective

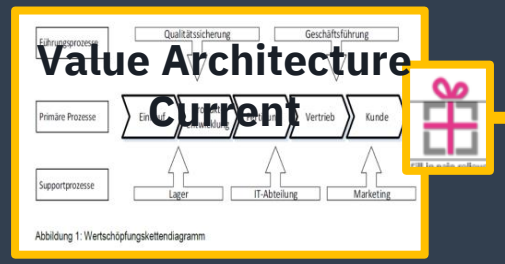


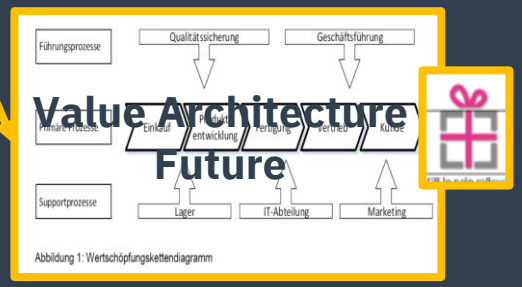




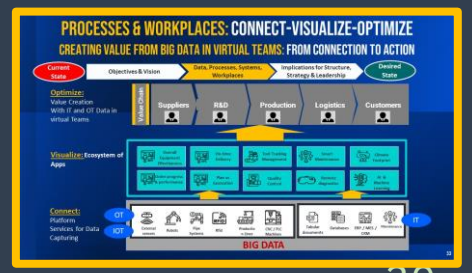
Positioning: Message-Market Fit

- **target** – actionable universe of buyers
- **segment** – key, predisposing attribute
- **brand** – a name you call yourself
- **category** – a competitive frame for the buyer
- **distinction** – what makes you unique
- **proof** – perceived evidence of truth

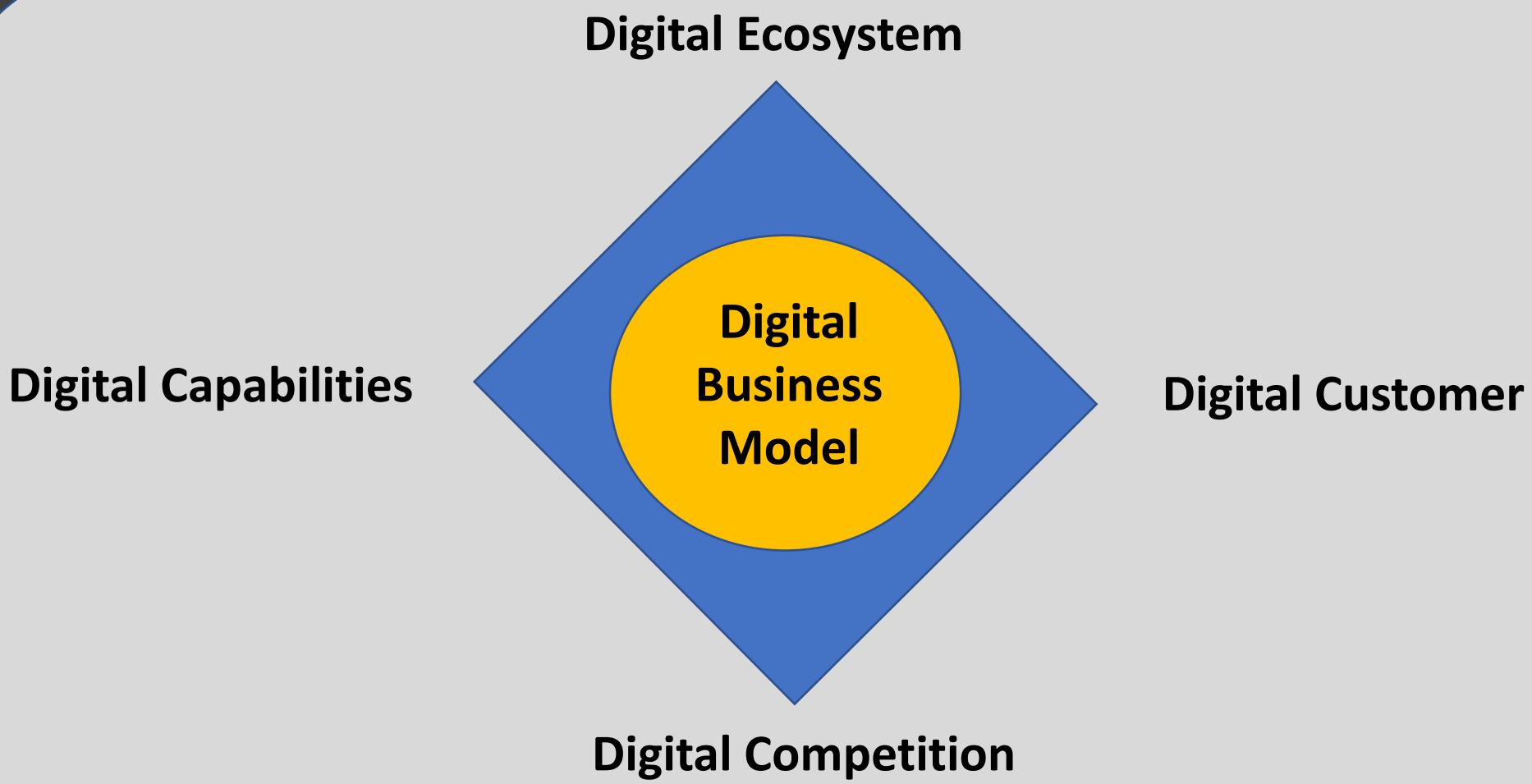




Digital Value Architecture



UMSETZUNG DES BUSINESS MODELLS



4) DIGITAL ECOSYSTEM

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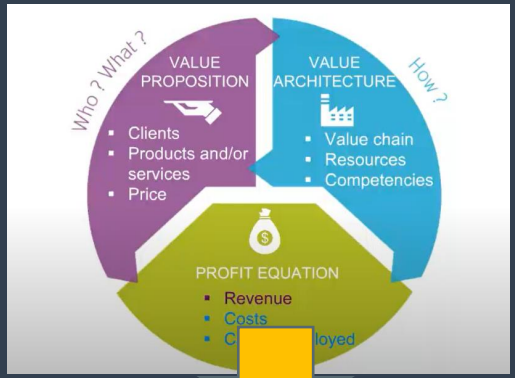
DEFINGING DIGITAL ECO-SYSTEMS

What are digital ecosystems?

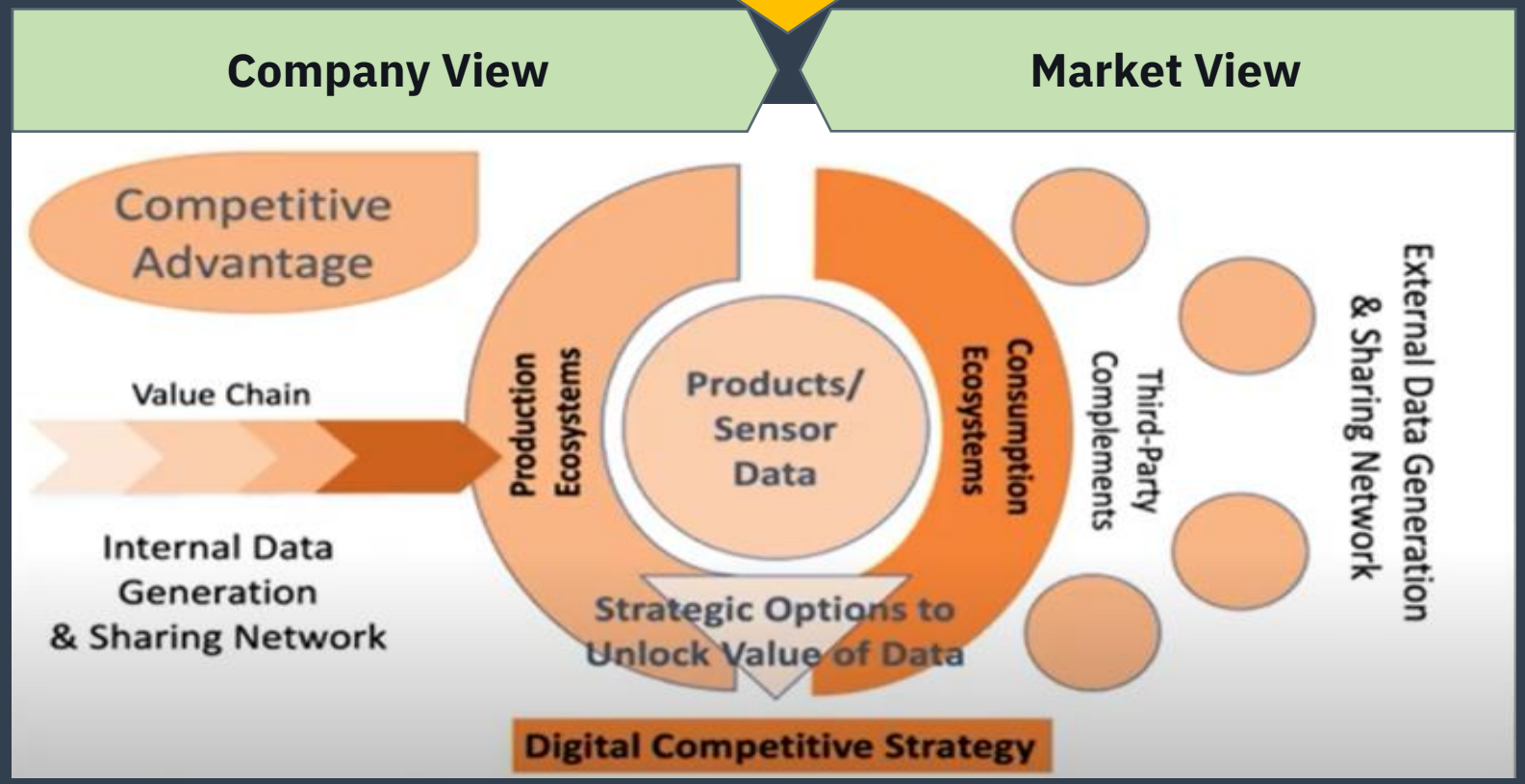
- Networks of data generators and data recepients
- Commonly understood in the context of digital platforms such as Uber and Airbnb
- For legacy firms, digital ecosystems are a combination of production and consumption ecosystems

TRANSFORMING THE BUSINESS MODELL INTO DIGITAL ECO-SYSTEMS

Business Modell



Digital Eco-Systems



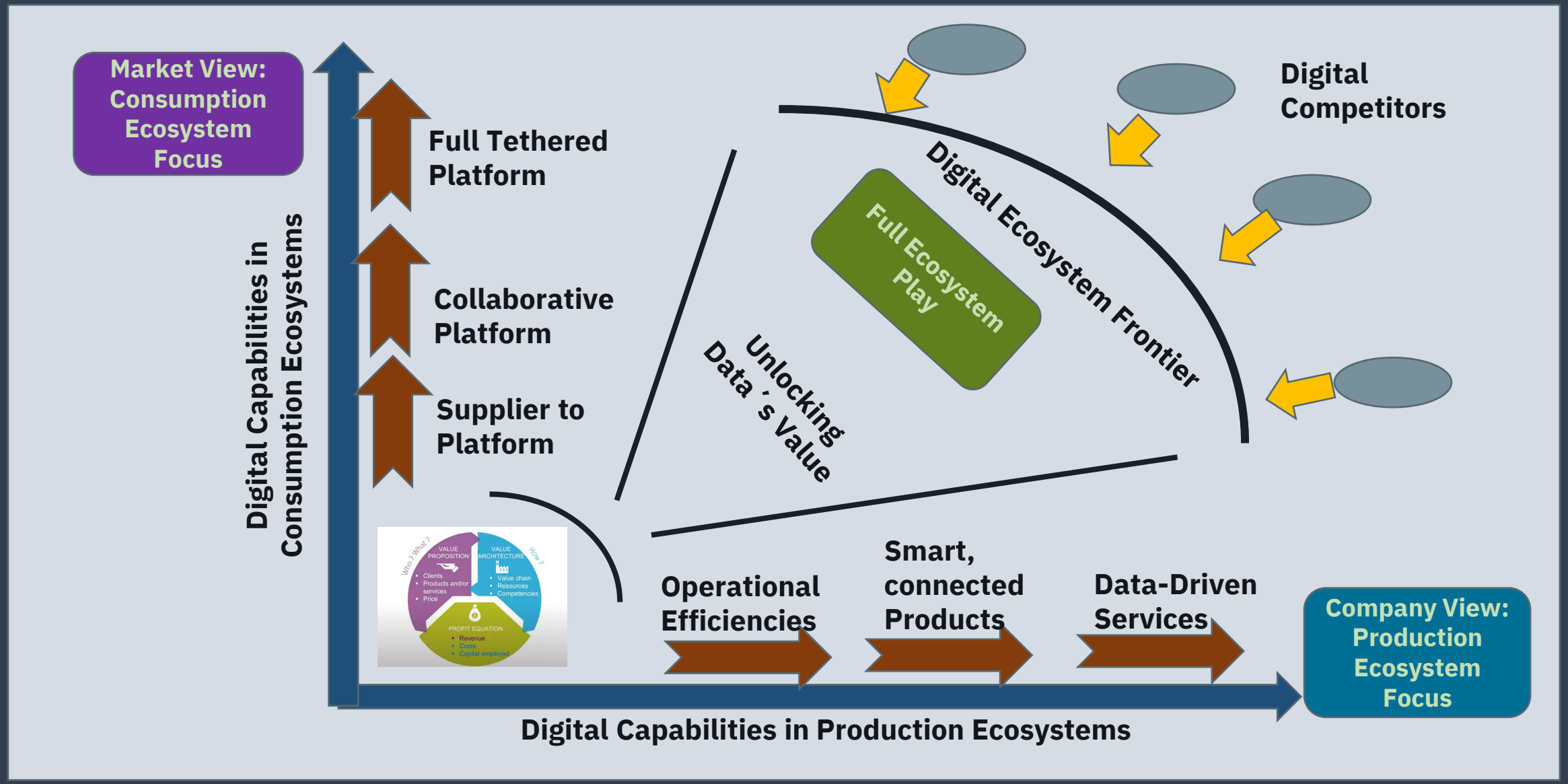
1) Company View: Productions-Ecosystem Design

- **Operationale Effizienz:** Interaktive Daten von Anlagen/Betriebsmittel
- **Smart, connected Produkte:** Interaktive Daten von Produkten/Nutzer
- **Daten-getriebene Services:** Ergebnisorientiertes Preismodell

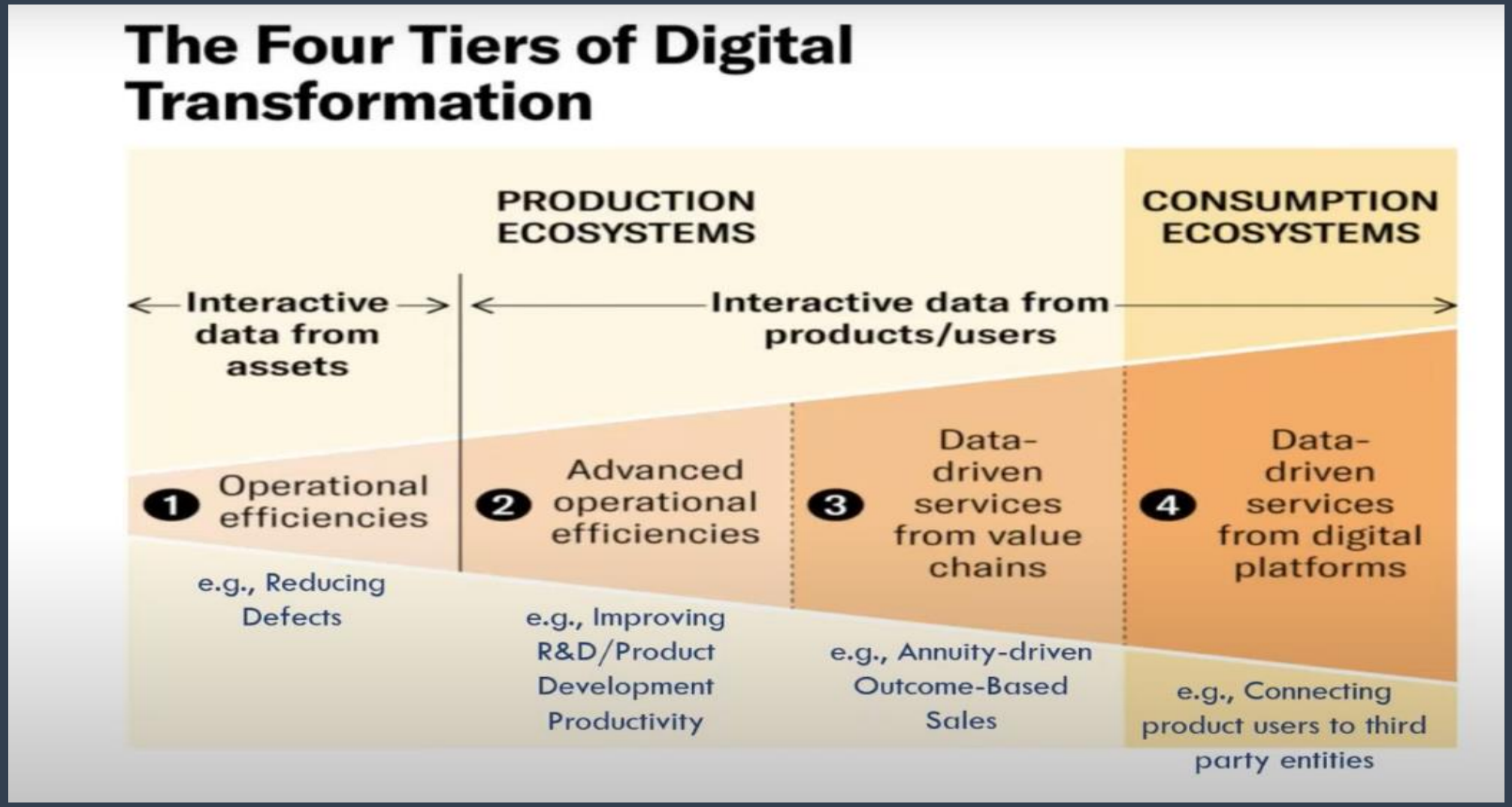
2) Market-View: Consumption-Ecosystem Design

- **Lieferant zu anderen Plattformen:** Teilnehmer/Komplementär
- **Kollaborative Plattformteilnahme:** Co-Creator von Angeboten
- **Plattform Manager:** Orchestration der Komplementär-Community

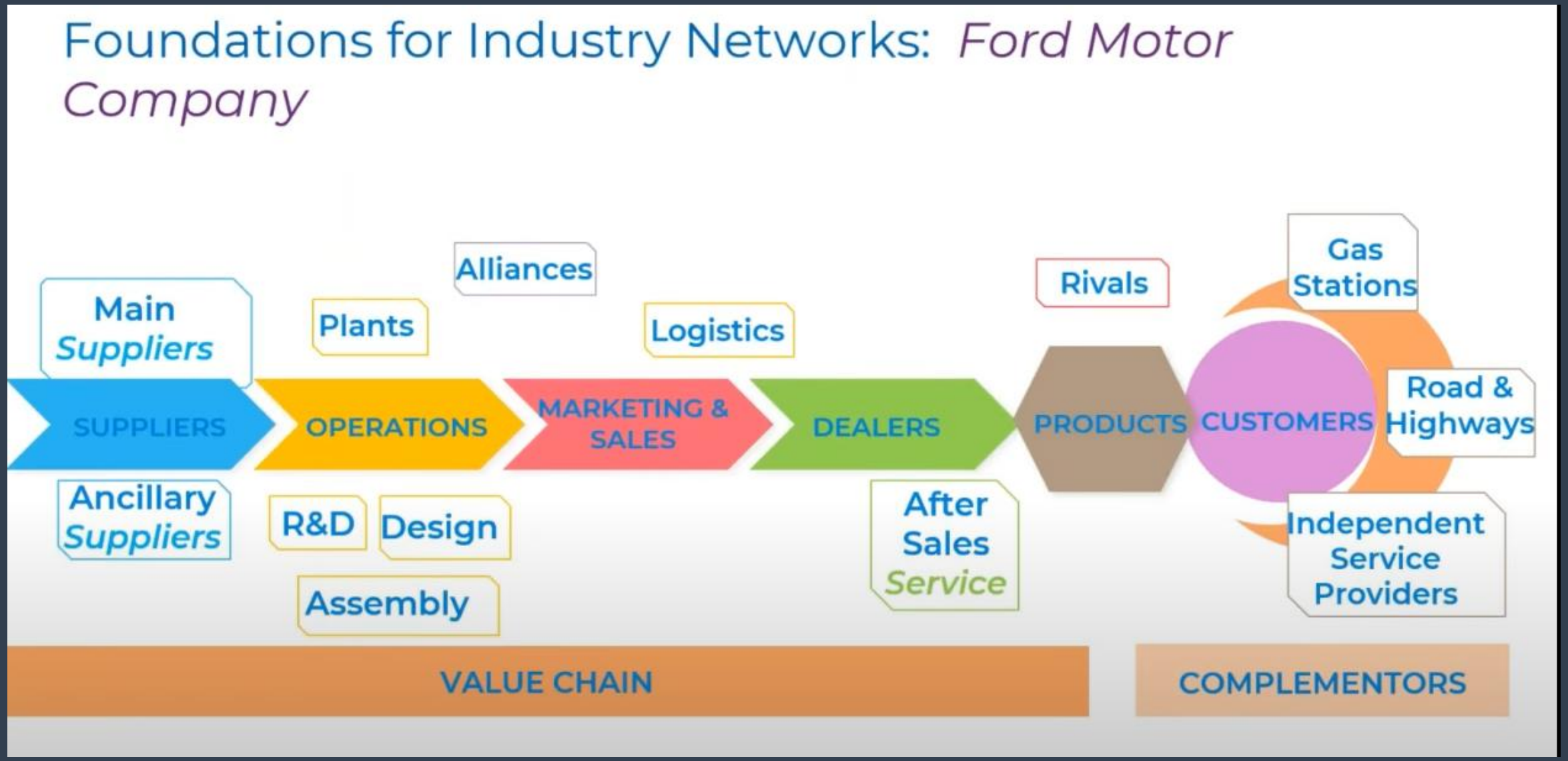
BUSINESS MODEL DESIGN FRAMEWORK



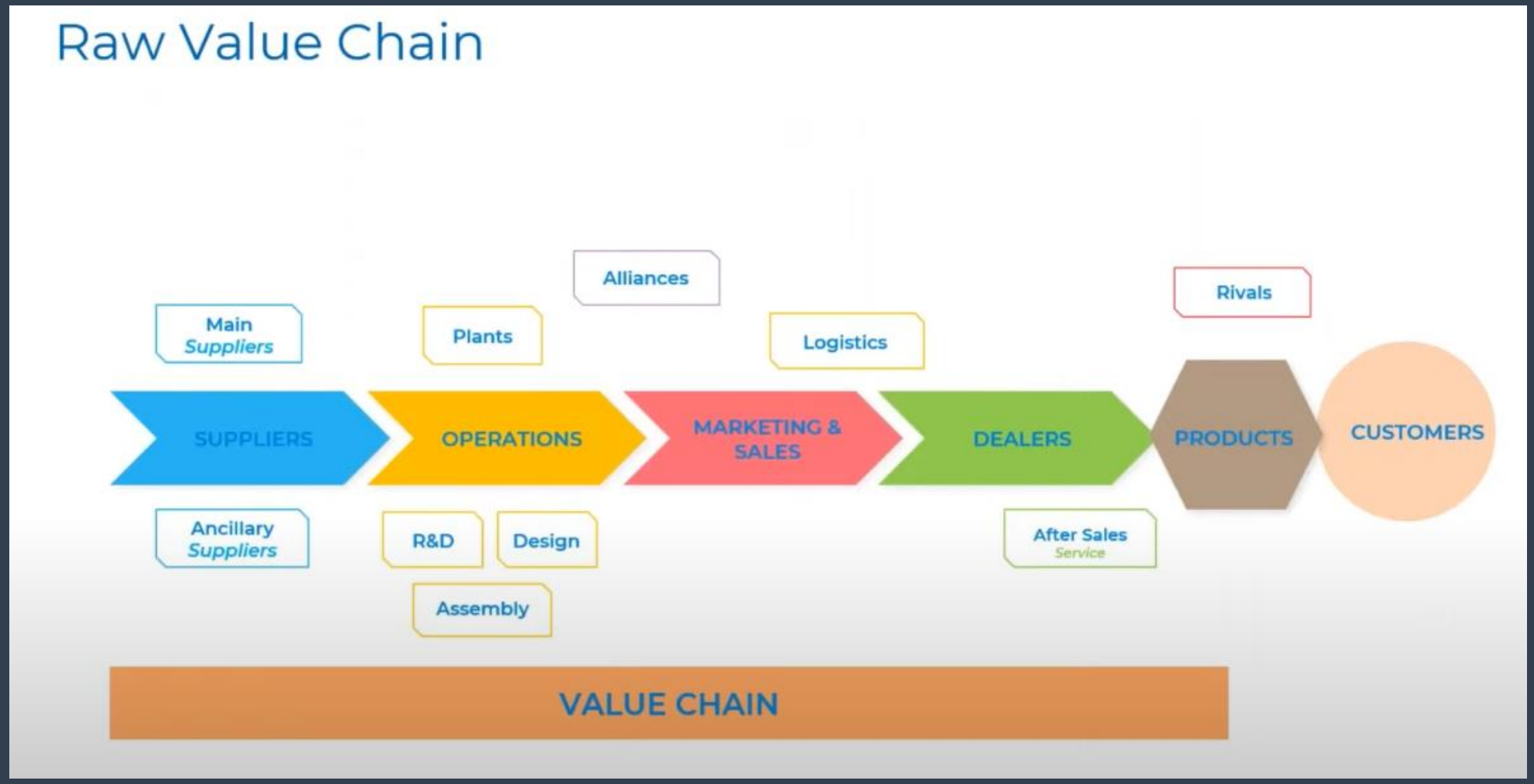
STRATEGY IMPLEMENTATION: DIGITAL TRANSFORMATION PHASES



AUSGANSPUNKT: VALUE CHAIN & COMPLEMENTORS



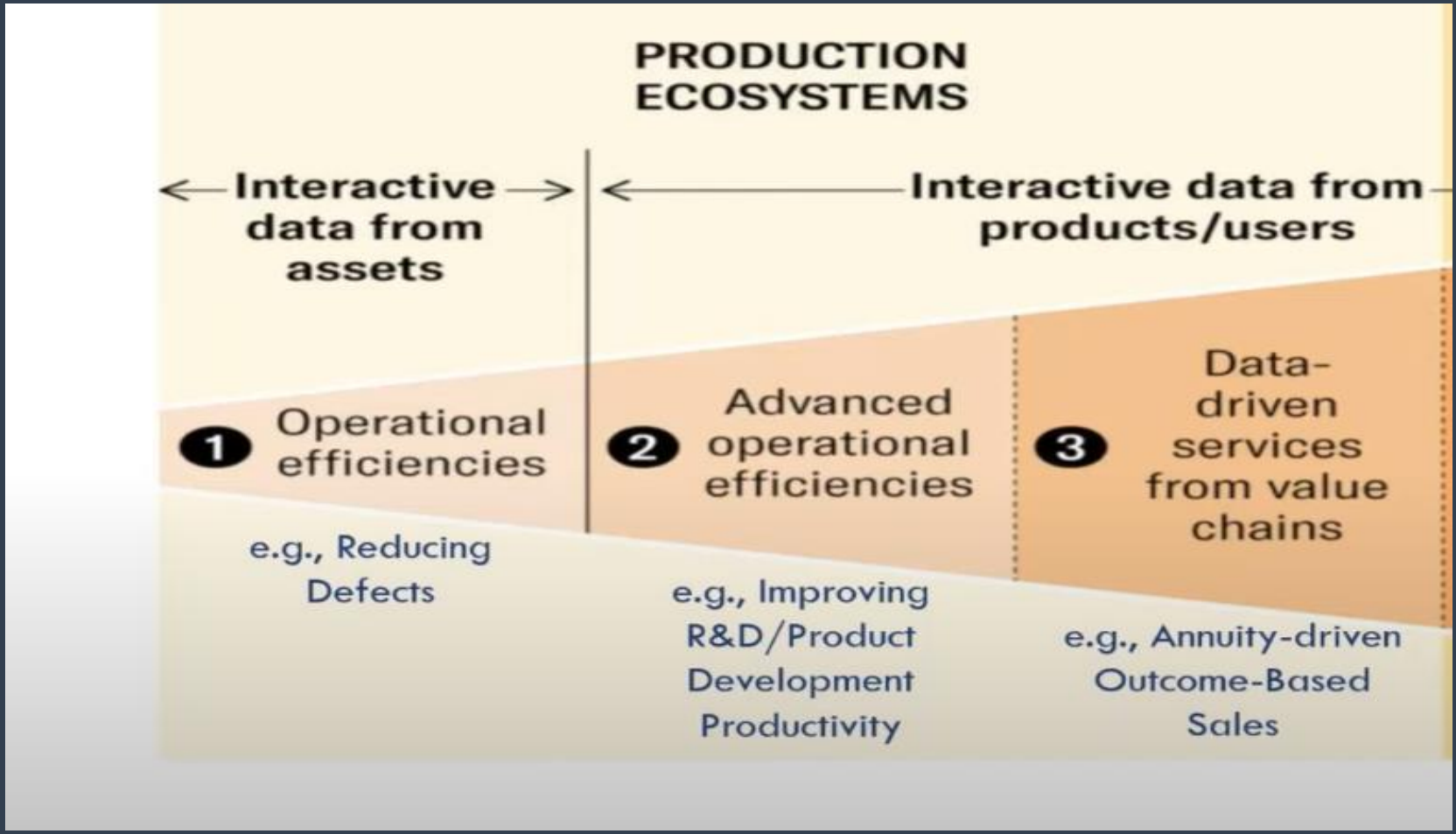
VALUE CHAIN BEFORE IT



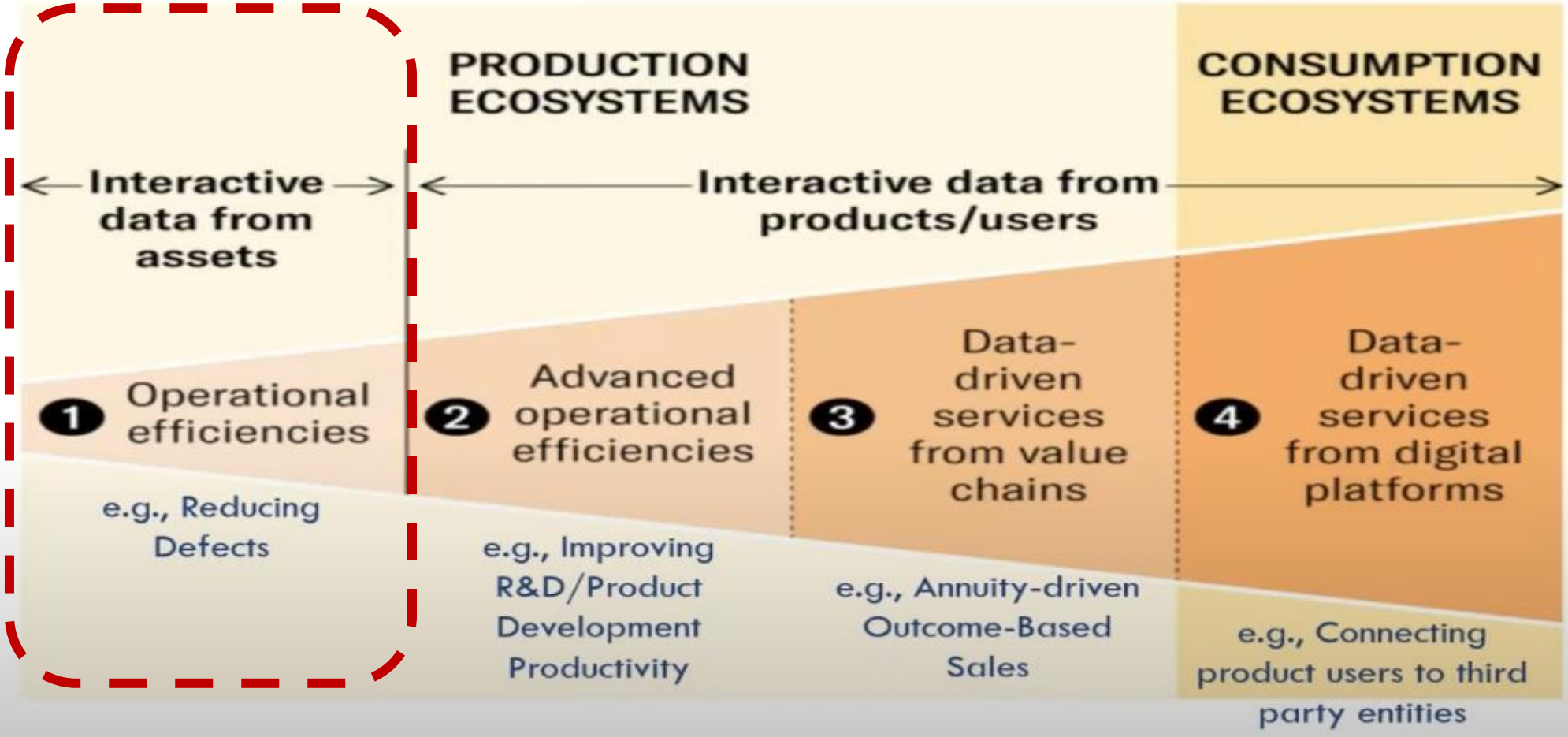
PRODUCTION ECO-SYSTEM PLATFORM: EFFICIENCY AND REVENUE

Productions-Ecosystem Design

- **Operationale Effizienz:** Interaktive Daten von Anlagen/Betriebsmittel
- **Smart, connected Produkte:** Interaktive Daten von Produkten/Nutzer
- **Daten-getriebene Services:** Ergebnisorientiertes Preismodell



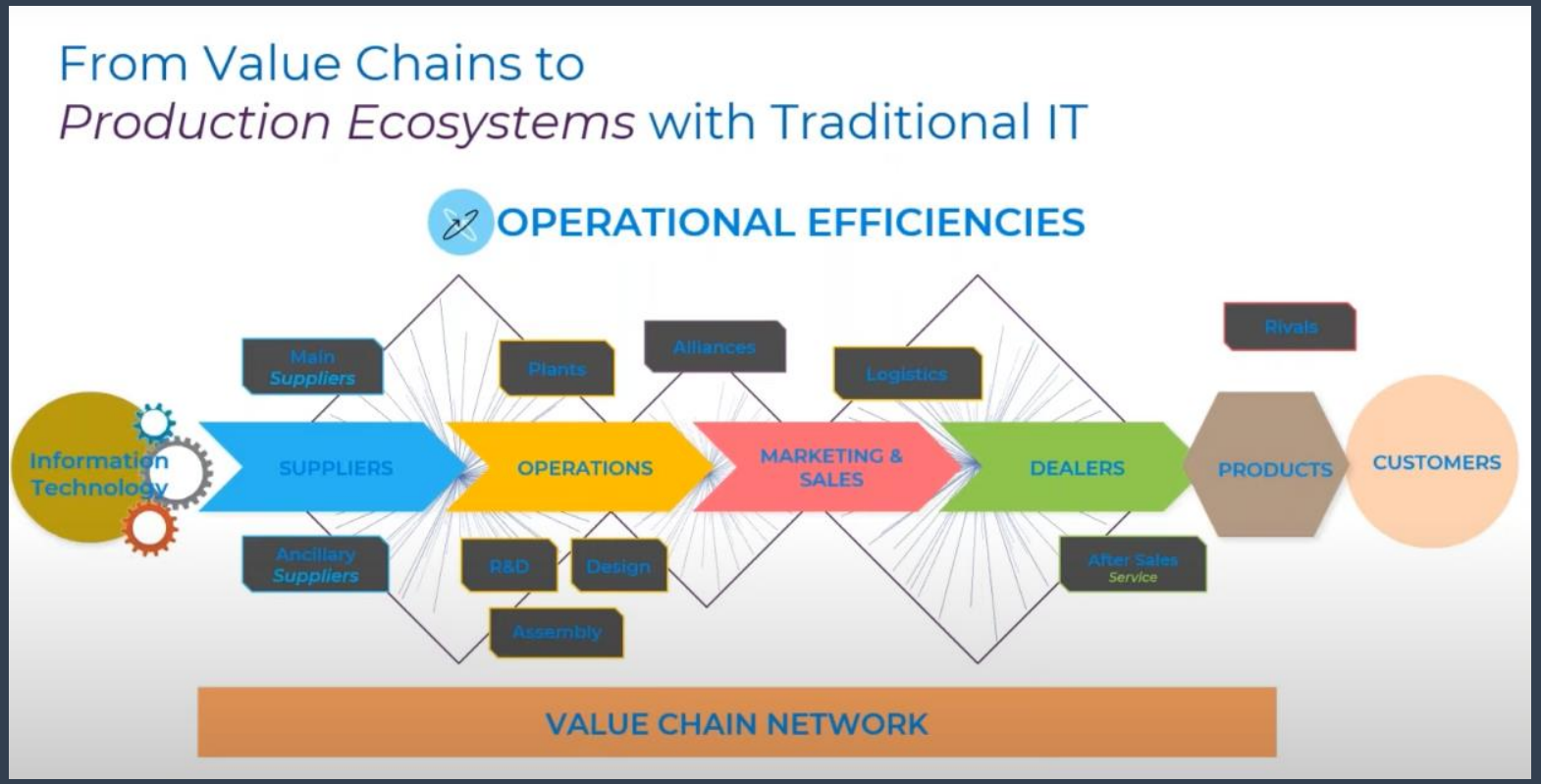
PHASE 1: INTERACTIVE DATA FROM ASSETS



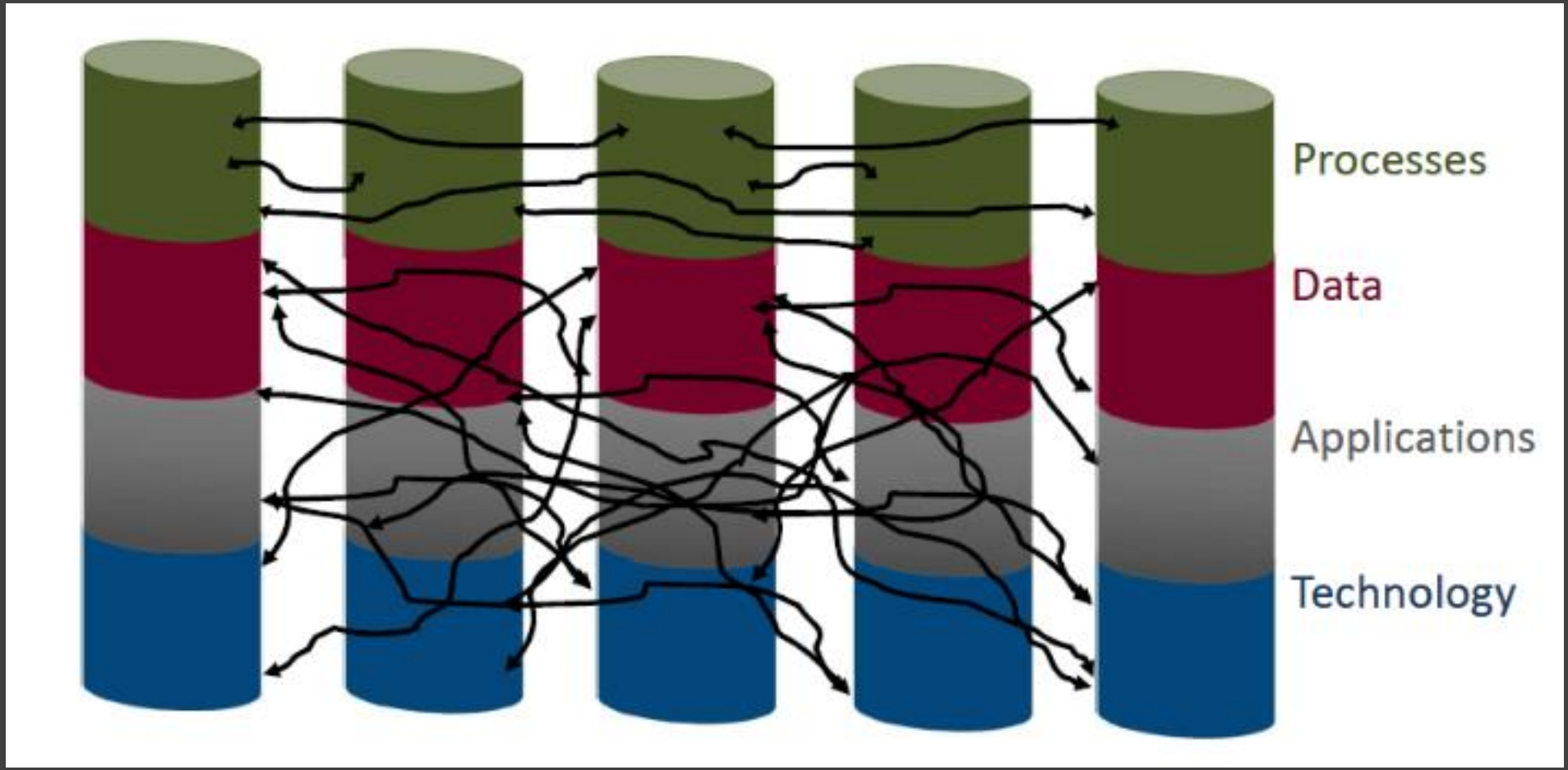
VALUE CHAIN WITH TRADITIONAL IT

Production ecosystems are value chain networks injected with greater data-generating and data-sharing capabilities through the use of modern digital technologies.

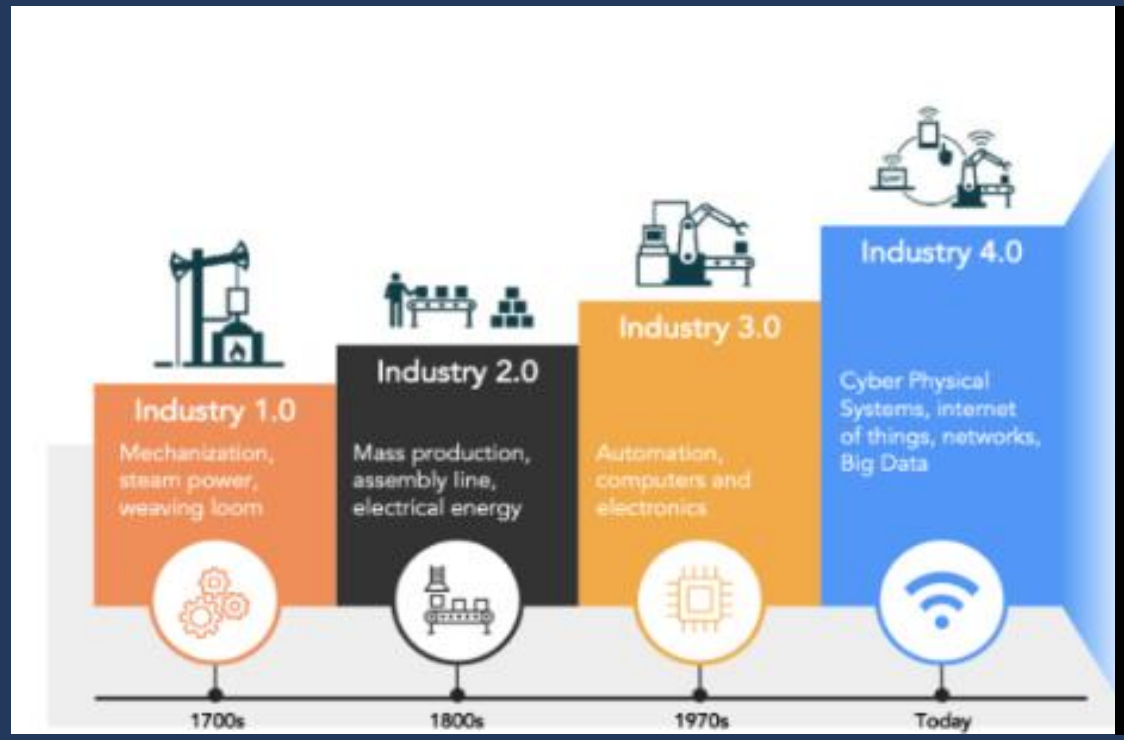
These modern technologies improve on the capabilities of older IT systems, which began the process of automating and integrating workflows within companies.
Production ecosystems enriched by these modern technologies enhance prevailing operational efficiencies.

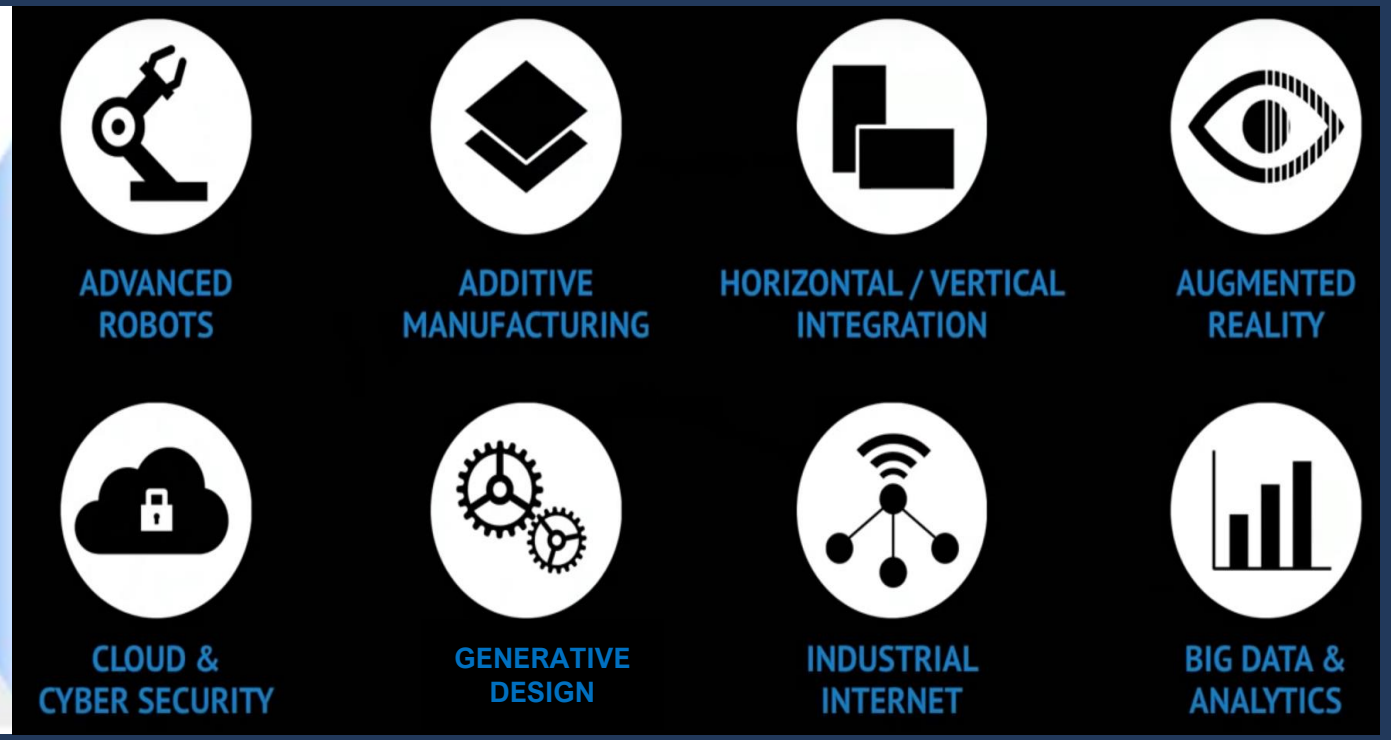


CHALLENGE OF TRADITIONAL IT: BUSINESS SILIOS

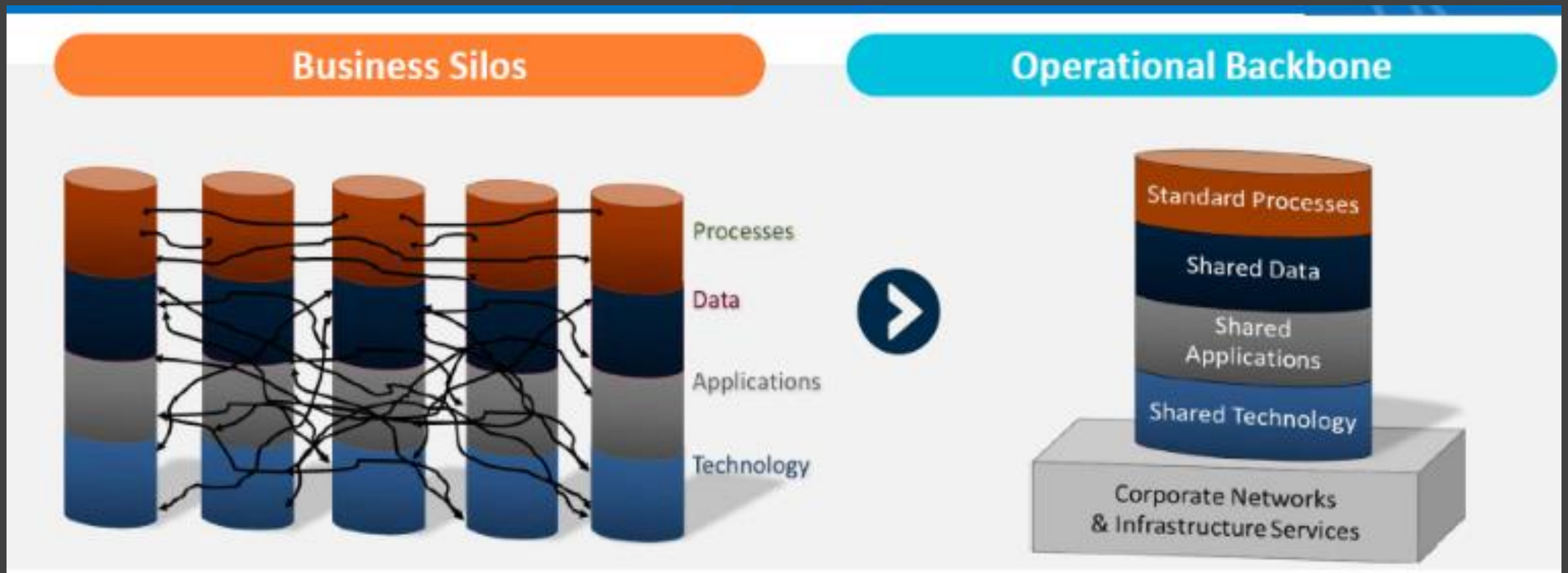


TECHNOLOGIES OF THE THE 4TH INDUSTRIAL REVOLUTION

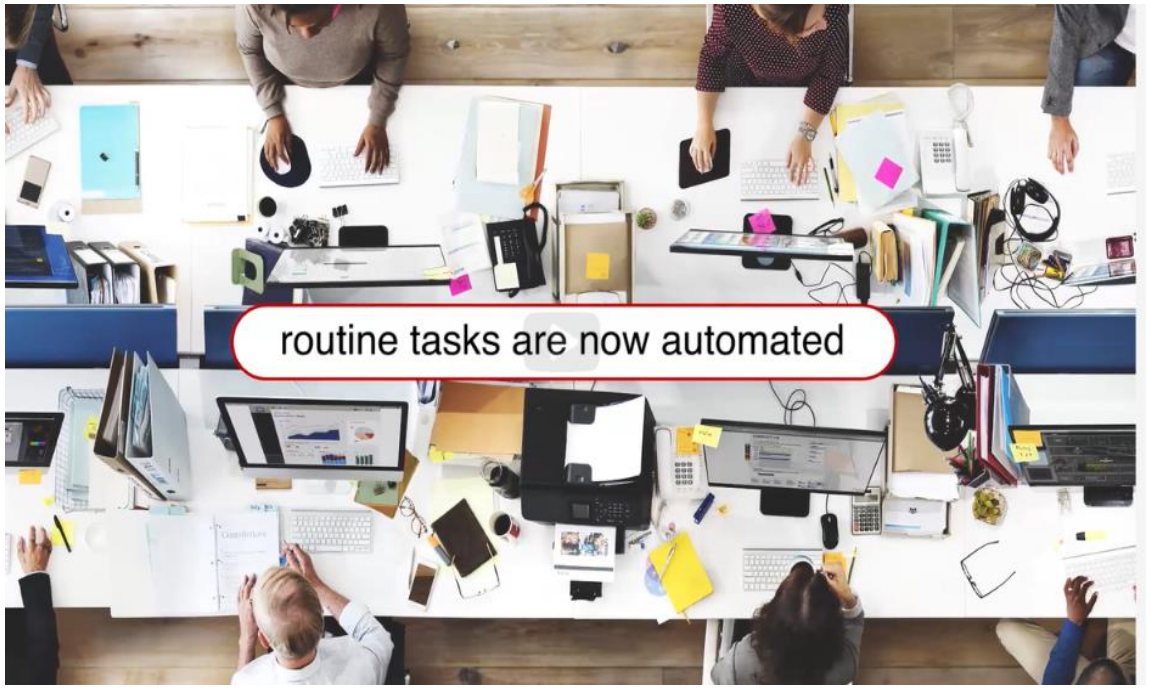




DIGITAL REDEFINES VALUE ARCHITECTURE

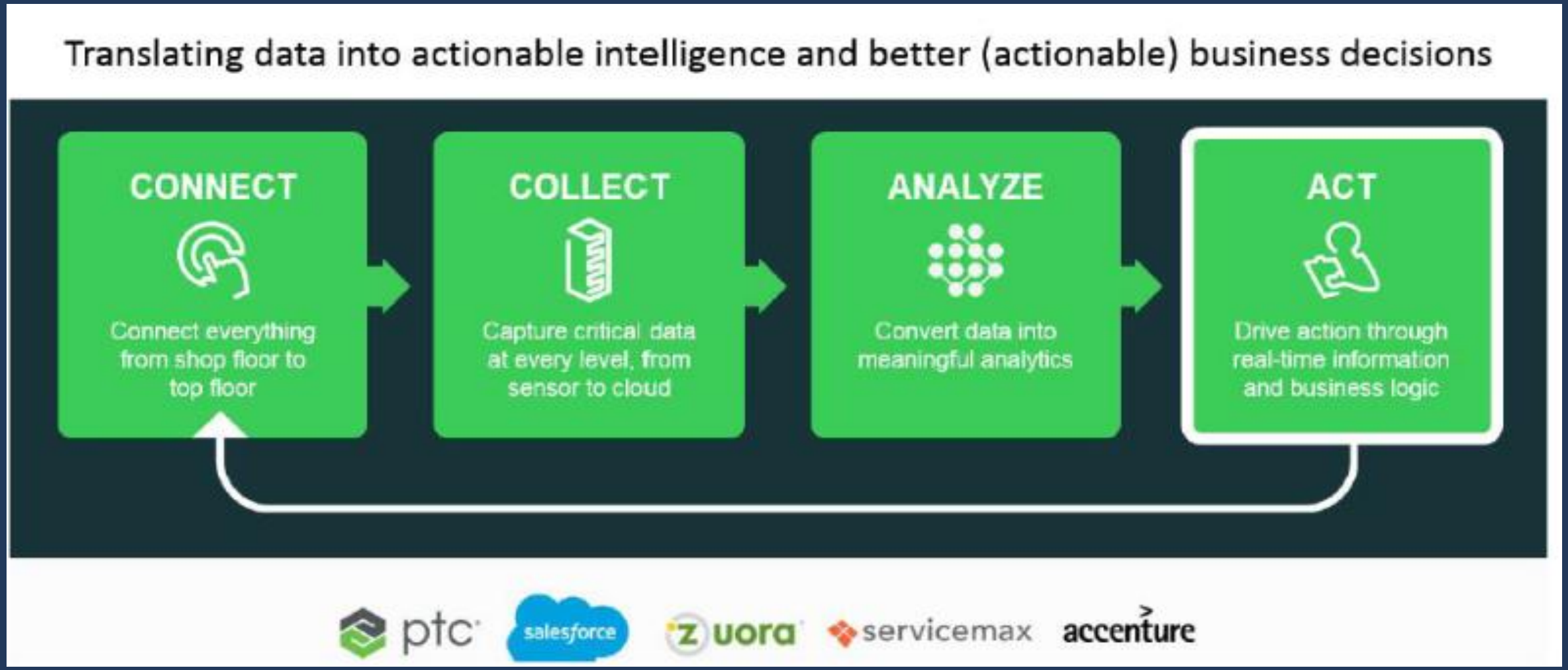


SMART PROCESSES



THE NEW VALUE CREATION WITH DATA & PRODUCTION ECOSYSTREMS

DATA DRIVEN OPERATIONS



THE NEW VALUE CREATION WITH DATA & PRODUCTION ECOSYSTREMS

DATA DRIVEN BUSINESS CANVAS

We create the data analytics solution …

Sales and Production Forecast

What is the name of our data product?

… for the following customers and users …

Bakery (Chain) with many shops in different geografic locations

For whom do we create our data analytics solution? Who is our customer?

Data Sources

What data sources do we need to create customer value?

- Mobile Payment System Data
- Sales History Data per shop
- Production History Data
- Promotional Activity Data
- Customer Satisfaction data
- Social Media Data
- Costumer Ratings (Yelp, Google)
- Weather Data (weather forecast)
- Geo Location Data (street maps)
- Calendar Data (public holidays, holiday seasons, school holidays)
- Demografic Data (income, population)
- Mobile phone motion data

Analytics

What data analytics methods do we need to apply to gain insights and benefits from the data?

- Factor Analyis (identification of relevant influencing factors)
- Designing, training and evaluation of a prediction model (e.g. regression, machine learning algorithms)

Data Product

In what form do we make the service available to our customers and users?

- Decision support tool for production and sals planning in form of:
- Dashboard for production forecast
- Dashboard for sales forecast per shop for upcoming days

Customer Benefit

What added value and what advantages does the data service generate for our users and customers?

- Weather dependend production and sales optmization leads to:
- Increase in customer satisfaction (meet customer needs)
- Cost reduction (OPEX) through better planning
- Increase of reputation (throw away less food)
- Transparency

Financial Implications

What types of revenue streams do we expect?

- Indirect monetization (increase in sales, cost savings)

What are the most important cost factors for our data solu-tion?

- development costs for forecasting model
- Software license costs

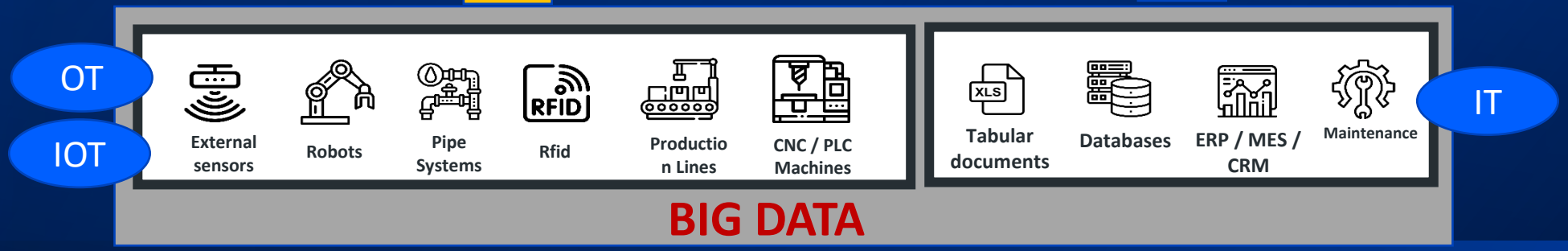
CREATING OPERATIONAL EFFICIENCY

CREATING VALUE FROM BIG DATA IN VIRTUAL TEAMS: FROM CONNECTION TO ACTION

Optimize:
Value Creation
With IT and OT Data in
virtual Teams

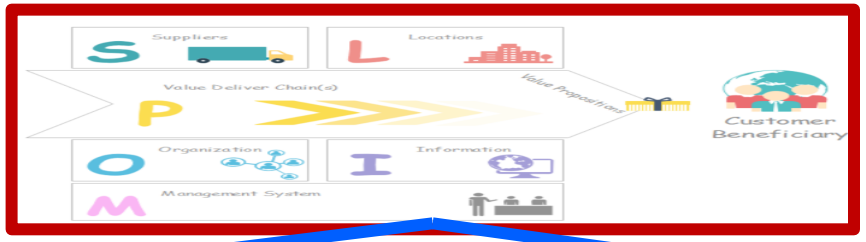
Visualize: Ecosystem of Apps

Connect:
Platform
Services for Data
Capturing



ENTERPRISE ARCHITECTURE MANAGEMENT: VALUE ARCHITECTURE

Value Architecture



Enterprise Architecture Ebene:
Business Modell

Service/Prozess/ Geschäfts-Architecture

Geschäftsprozess & Organisation

Fachkonzept Ebene:
eEPK

Information System - Architecture

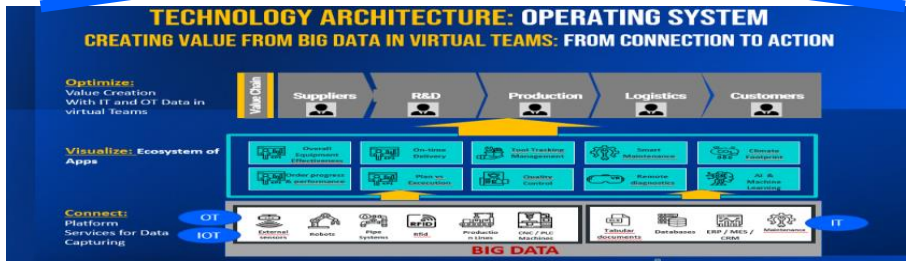
Systems of Engagement

Systems of Insight

Systems of Record

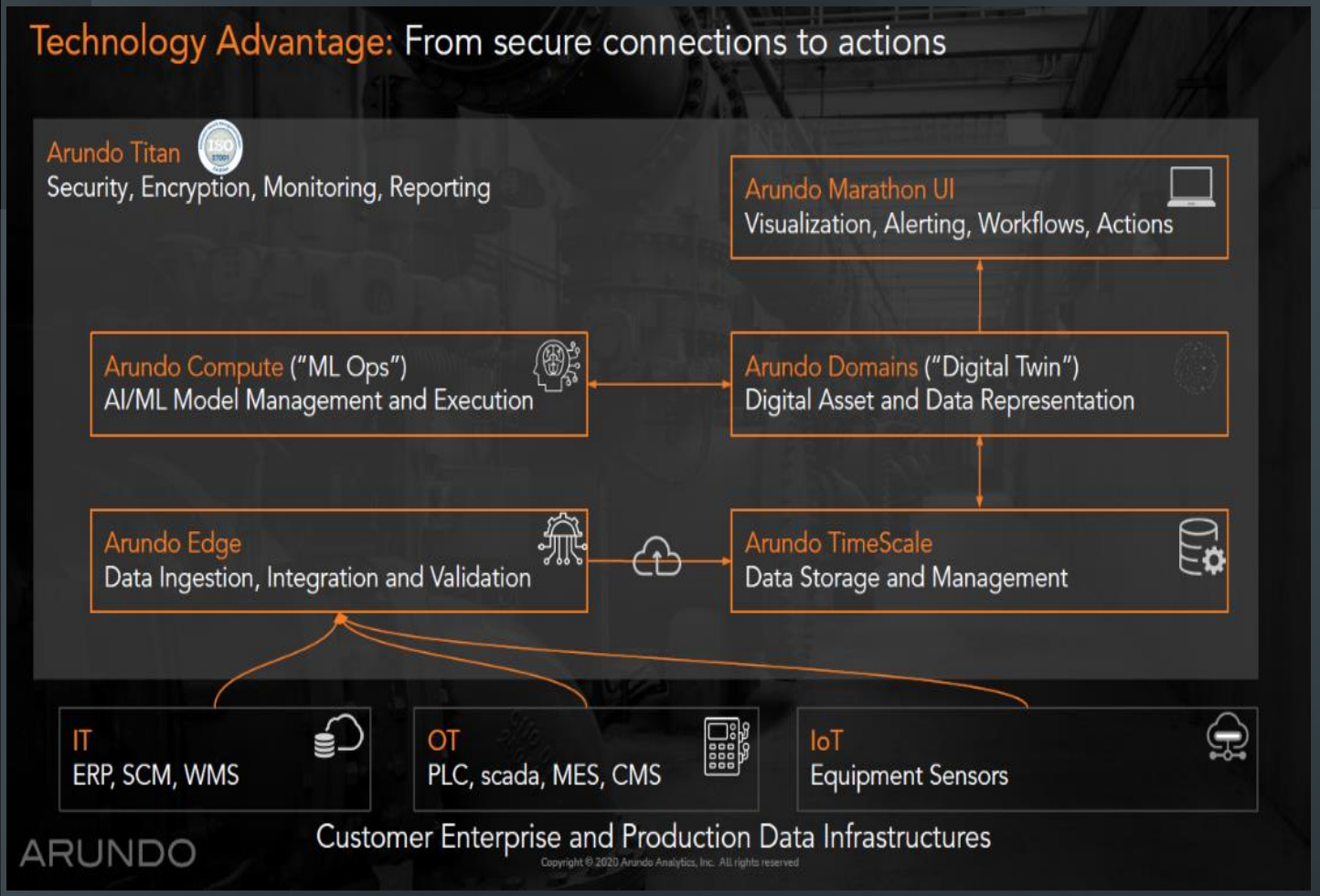
DV-Konzept:
Topologie

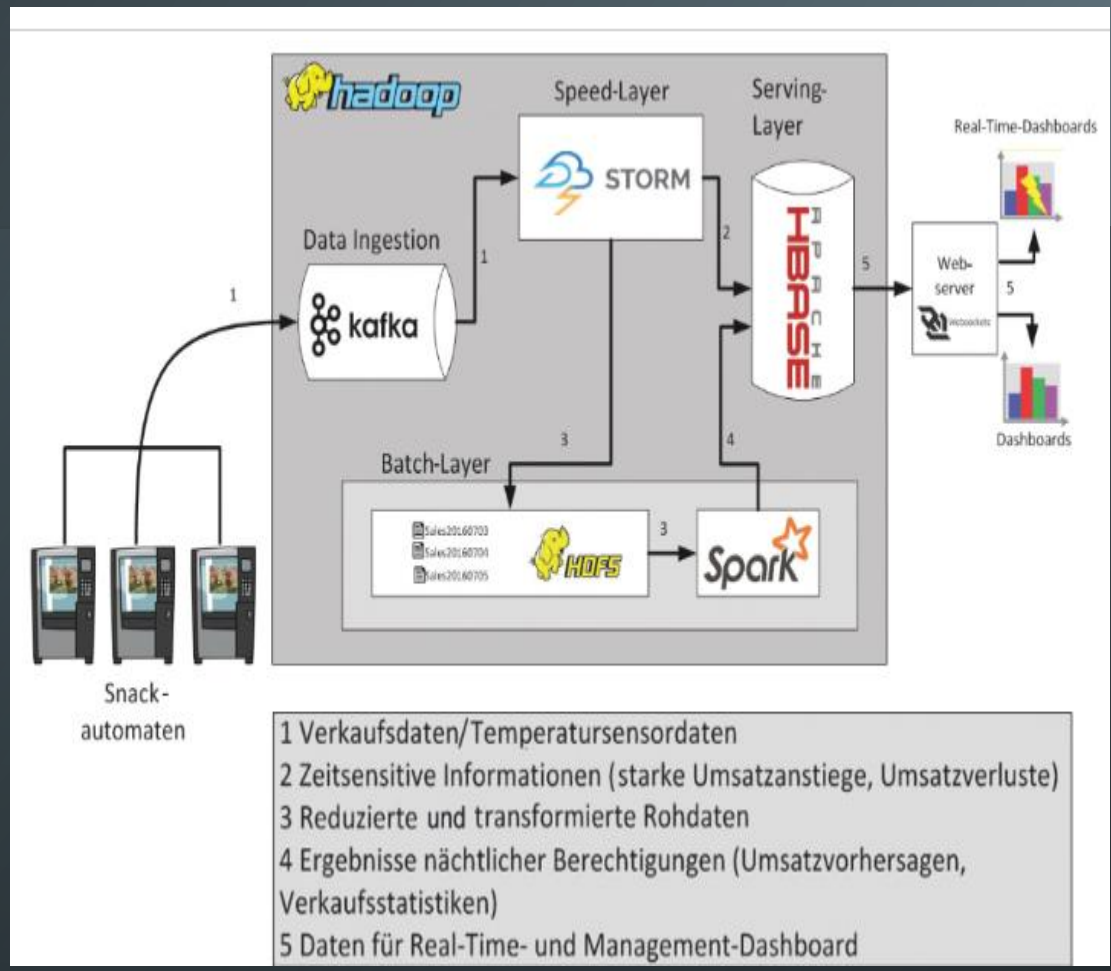
IT/OT Technology Architecture-



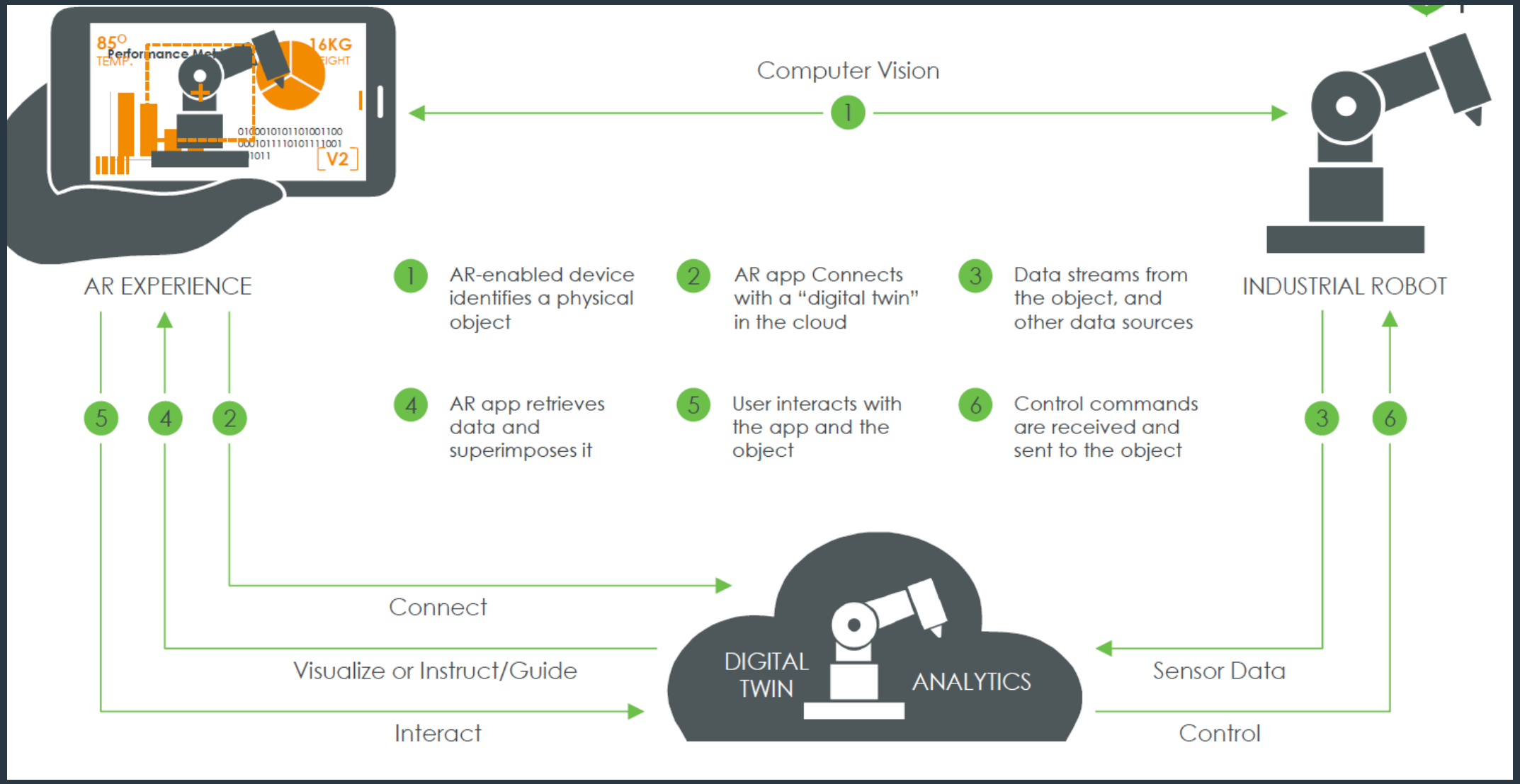
Implementierung:
Technik der Vernetzung

VALUE ARCHITECTURE IMPLEMENTATION EXAMPLE (1)





VALUE ARCHITECTURE IMPLEMENTATION EXAMPLE (2)



VISUALIZE INSIGHTS

Quality Control / SPC

Order Progress & Performance

Digital Twin

CO2 Emissions

THE CONNECTED, MOBILE WORKER

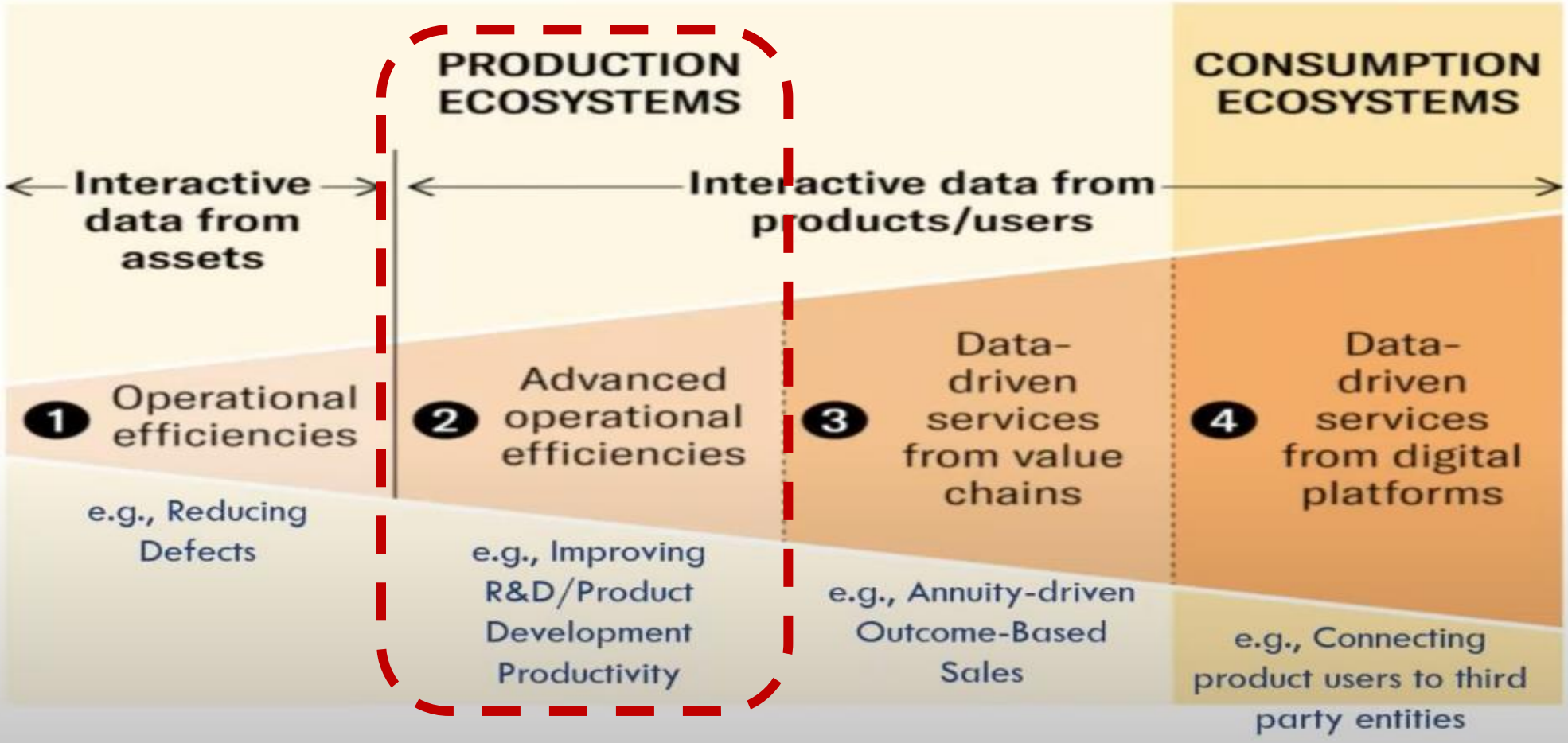
NEW WAY OF DATA-DRIVEN WORKING

Inspector : Augmented Operater

Shared Consciousness & Empowered Execution

- Less non-value-added effort – shorter turnaround time
- Closed loop, precise communication
- Process optimization – better supply quality
- Continuous improvement and innovation
- Ability to react agilely to unpredictability#
- “Air Traffic Control” – real-time situational awareness
- Coordination between roles and tasks
- Operational flexibility through more personal responsibility
- "Virtual walls" in the company

PHASE 2: ADVANCED OPERATIONAL EFFICIENCIES



ADVANCED OPERATIONAL EFFICIENCY

Operational efficiencies gained from product and user data are more advanced as they go beyond improving asset utilization and apply to broader processes such as R&D, product development, marketing, and advertising.

Operational efficiency improvements, though significant, are not the only benefits offered by production ecosystems.

Legacy firms can use their production ecosystems to generate new data-driven services as well.

In this way, production ecosystems can help legacy firms generate new revenues in addition to reducing costs,

Value Network

IT is embedded in products themselves, expanding the way products create value

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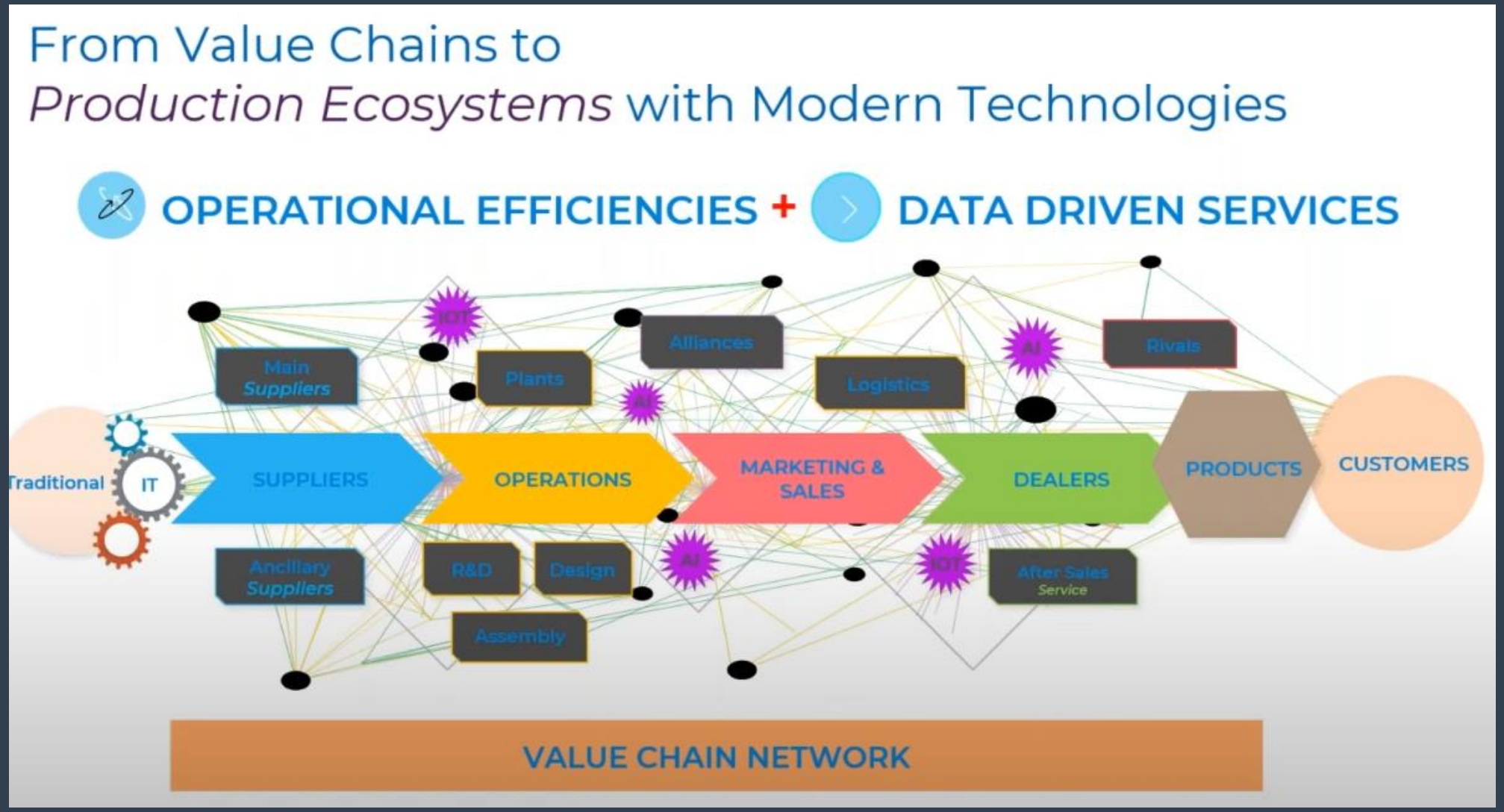
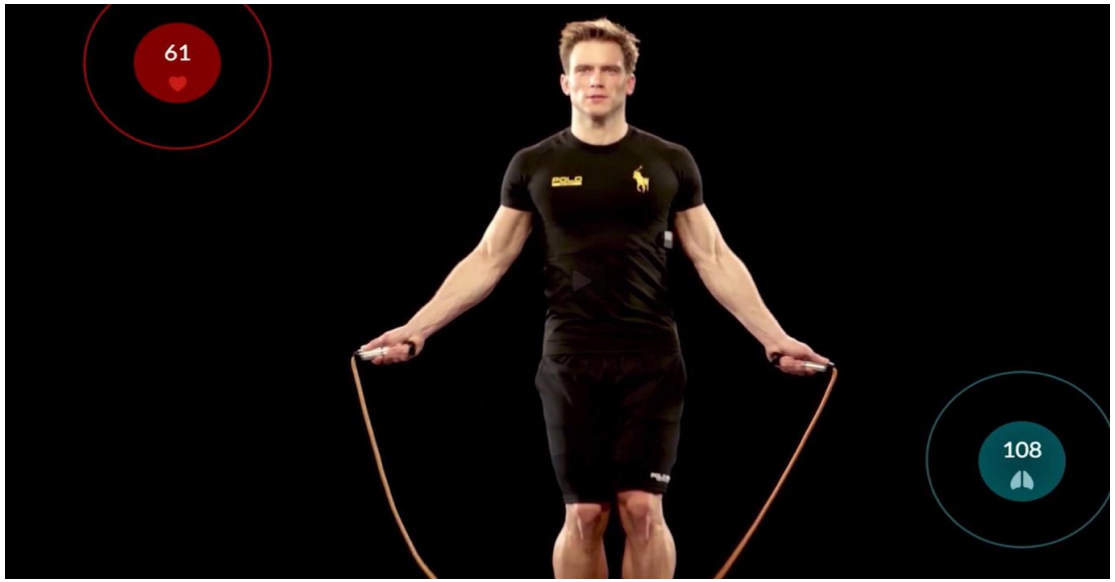
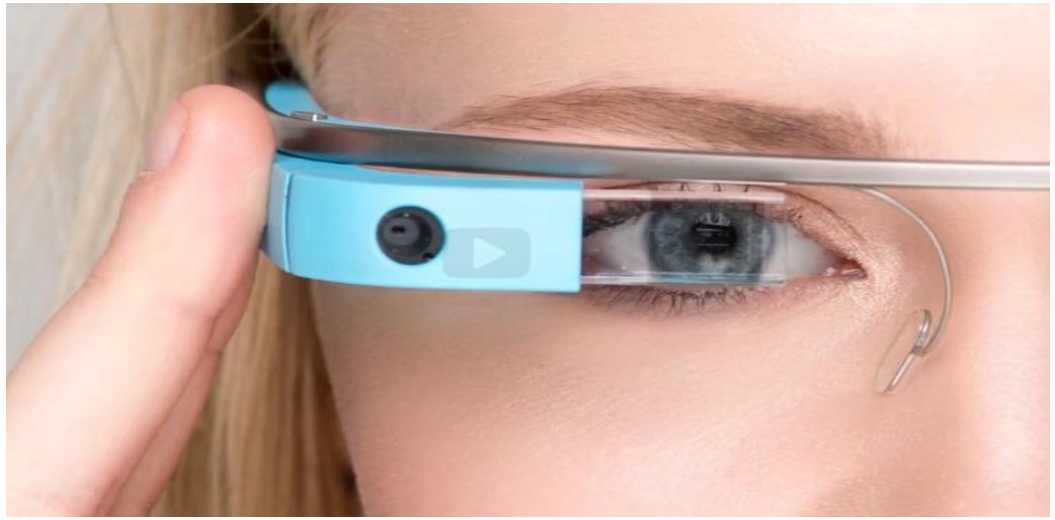
PRODUCTION ECO-SYSTEM/VALUE ARCHITECTURE WITH MODERN TECHNOLOGIES

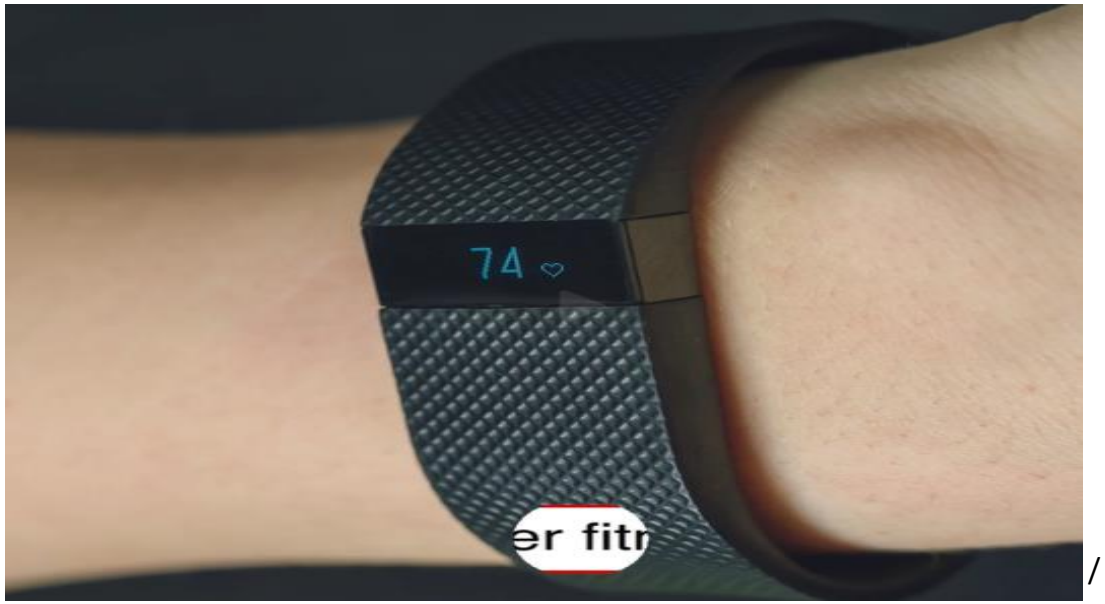


SMART PRODUCTS



SMART PRODUCTS





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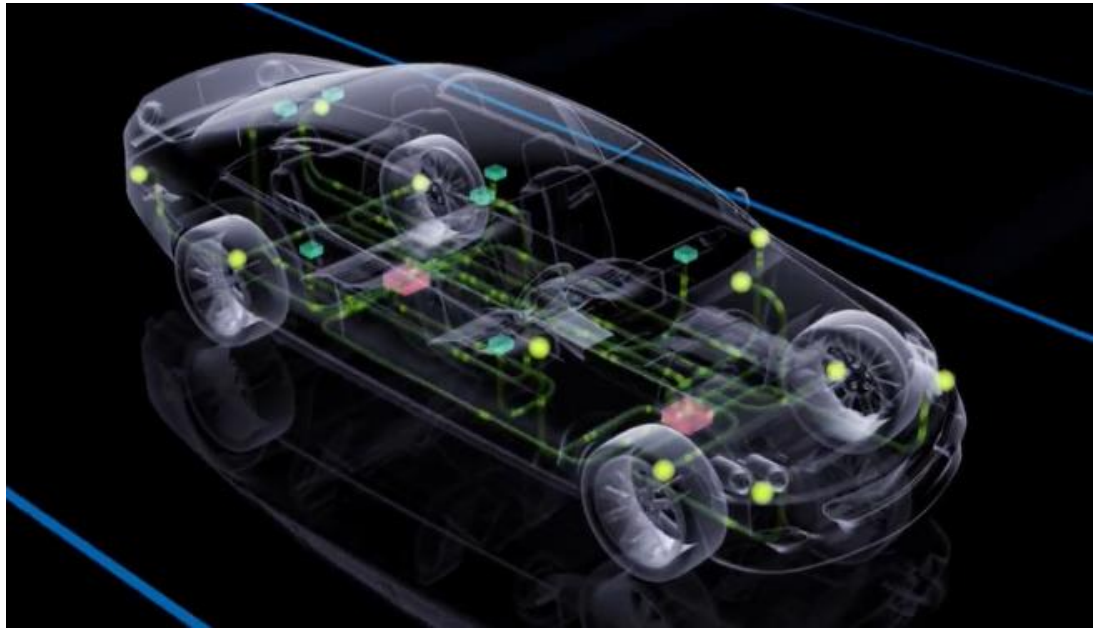
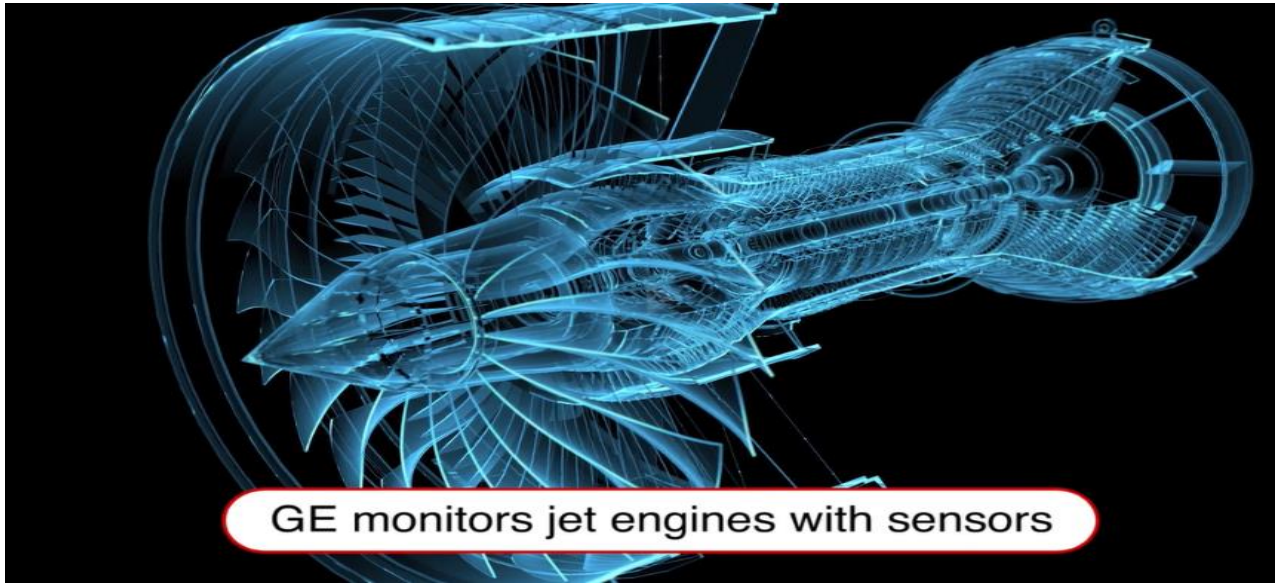
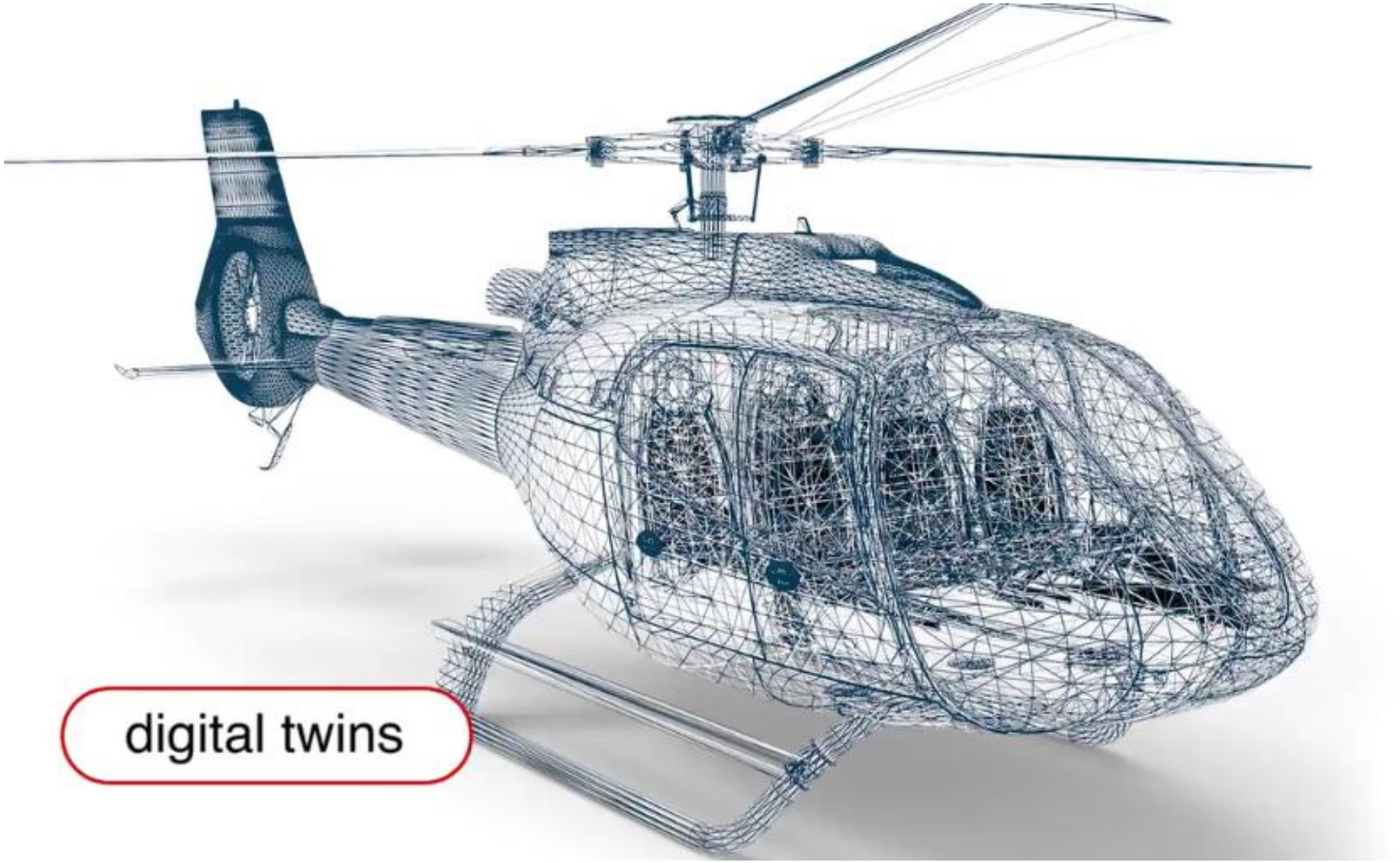
SMART PRODUCTS





SMART PRODUCTS: THE DIGITAL TWIN



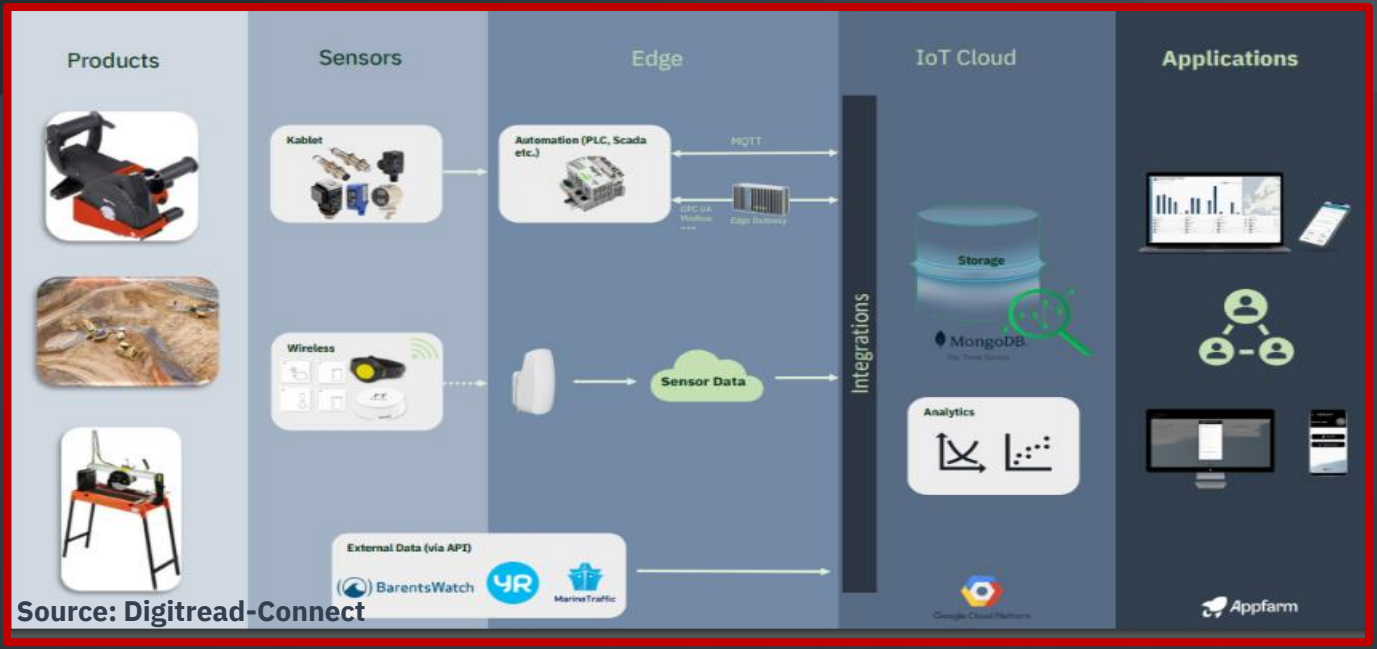
PHASE 2: DATA-DRVEN SERVICES FROM VALUE CHAIN

WAVES OF IT DRIVEN COMPETITION

SHIFTING BOUNDARIES

1. Product
2. Smart Product
3. Smart, connected Product
4. Product System
5. Systems of Systems

TECHNOLOGY DOMAINS OF SMART, CONNECTED PRODUCTS



Source: Digitread-Connect

ADDED VALUE

- Monitor
- Notification
- Control
- Optimization
- Autonomy

Strategic Choices:

- Internal: Operational Excellence
- External: Strategic Differentiation

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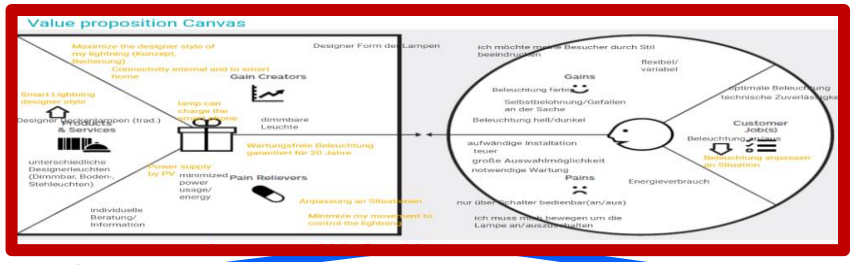
ENTERPRISE ARCHITECTURE MANAGEMENT: VALUE PROPOSITION

Value Proposition



Enterprise Architecture Ebene:
Business Modell

Service/Prozess/ Geschäfts-Architecture

Customer Journey

Fachkonzept Ebene:
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Systems of Engagement

Systems of Insight

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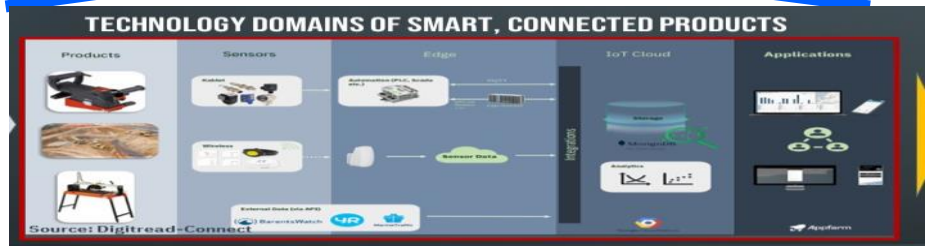
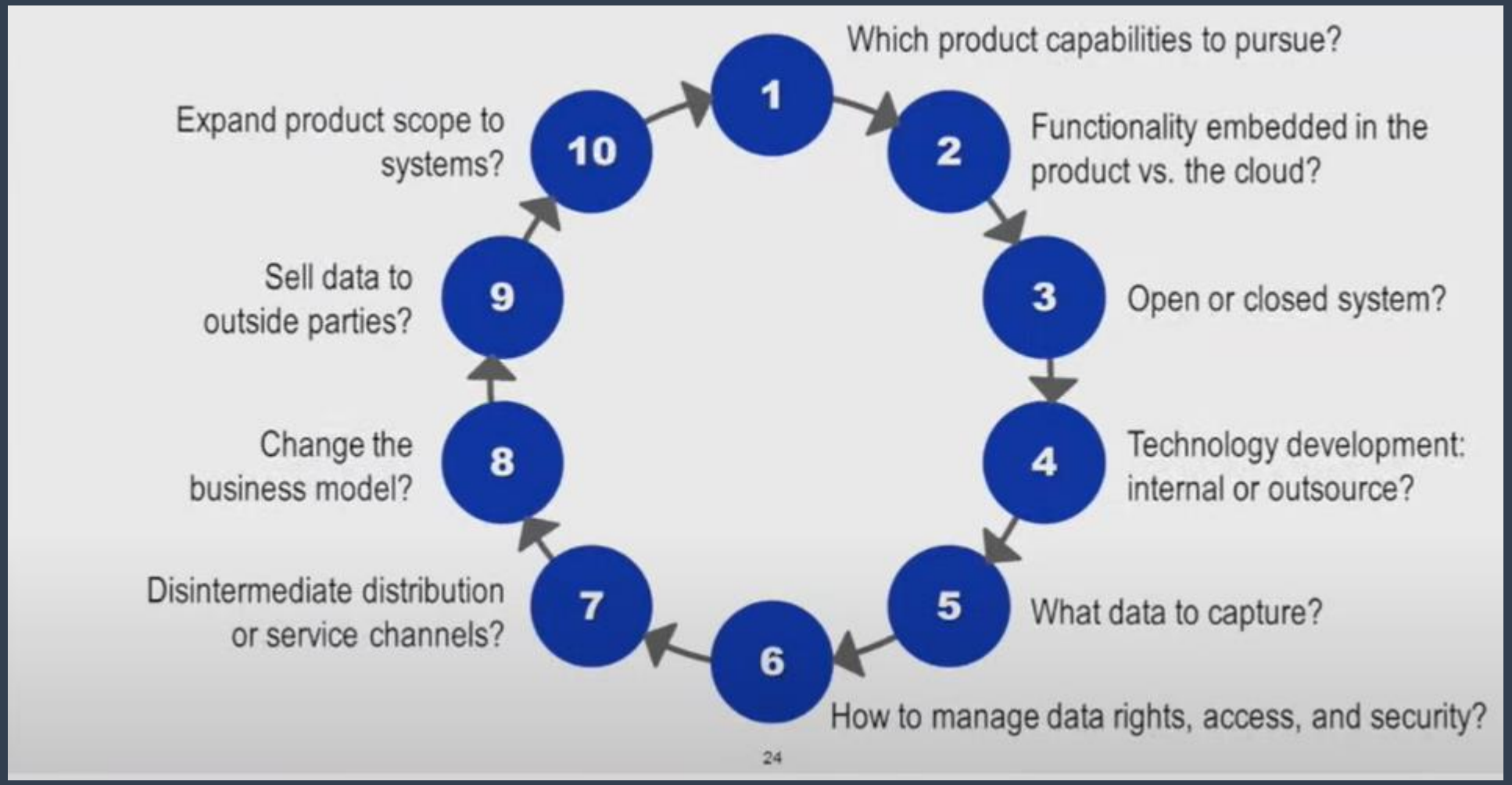
IOT Technology Architecture-



Implementierung:
Technik der Vernetzung

DATA-DRIVEN BUSINESS DESIGN THINKING

STRATEGIC QUESTIONS FOR SMART, CONNECTED PRODUCTS



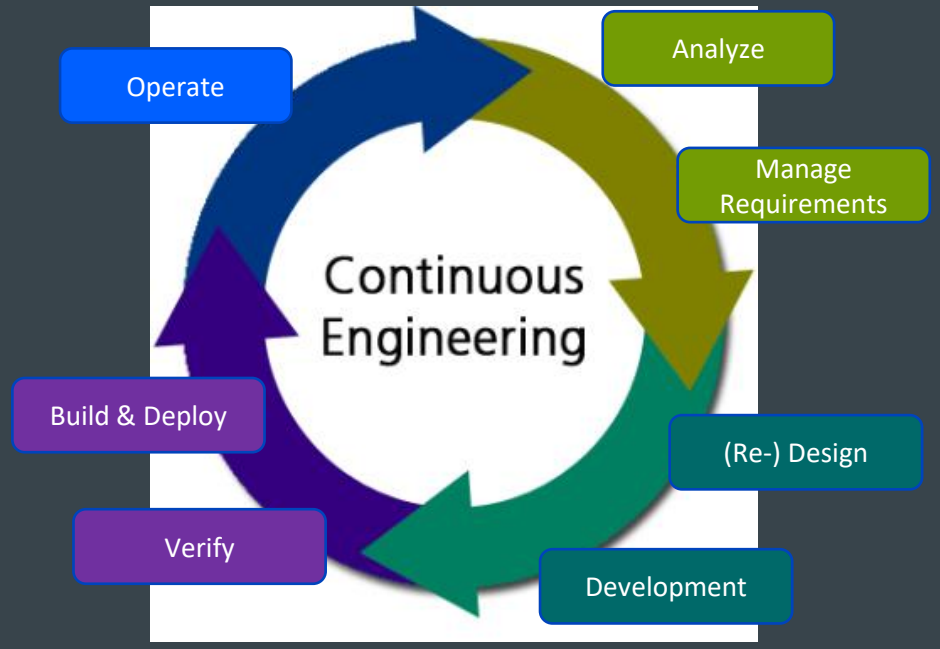
Source: Digitread-Connect

DATA-DRVEN SERVICES FROM VALUE CHAIN

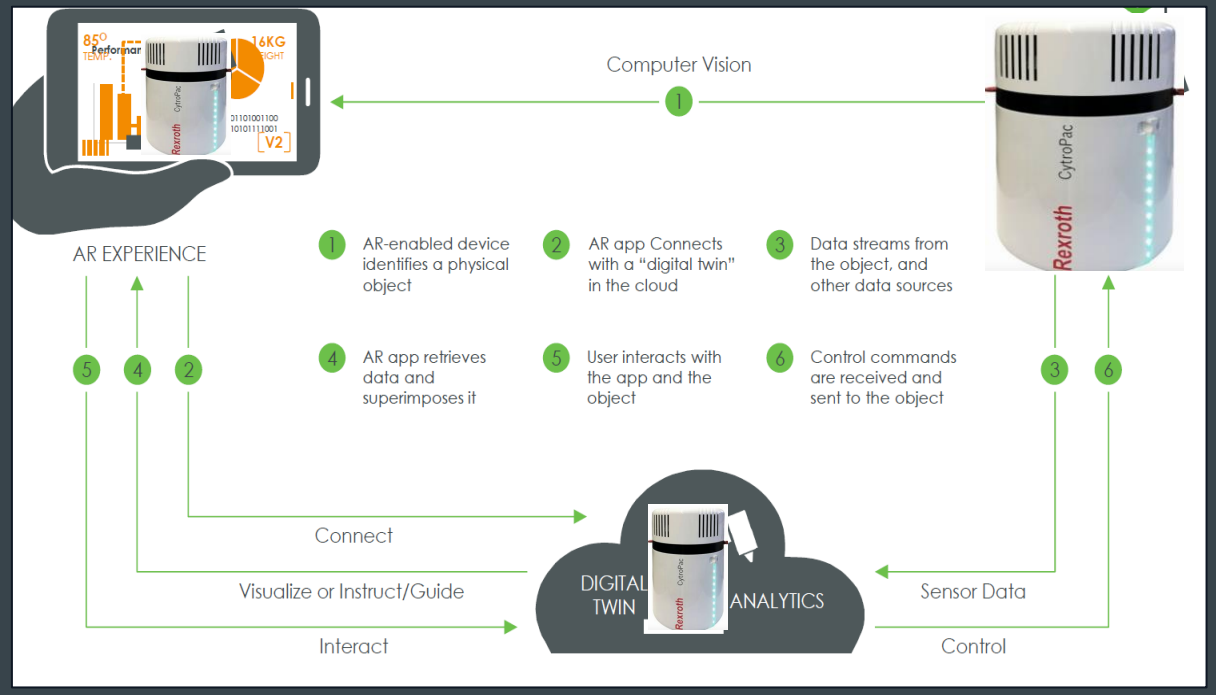
IOT INNOVATION OUTCOME: ENABLING THE CONTINUOUS ENGINEERING WORKFLOW WITH IOT

ENGINEERING

Engineers & Developers Workflow



IoT Architecture



DIGITAL PRODUCT DEVELOPMENT: TYPICAL WORK PROCESS

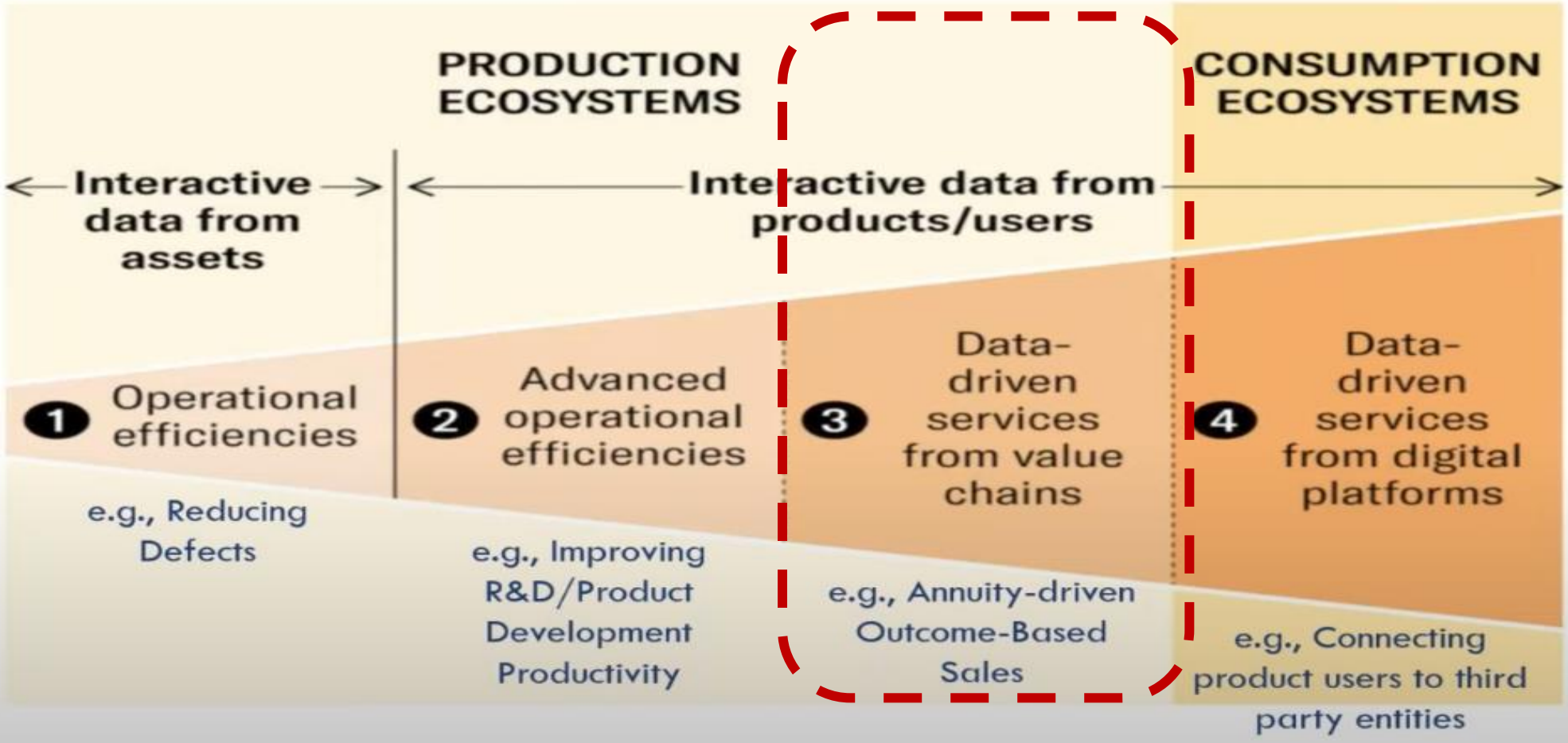
SIMPLE, LEAN AND FAST IMPLEMENTATION

We **deliver** a solution that fixes the biggest challenge of our customers **within two weeks**. The key to this is the way that we work. After only one workshop, we start to build the solution.

1. **Your product or challenge**
2. **Visual workshop:** Set Performance Goal Define Requirements
3. **Minimum-Viable -Product Development**
4. **Testing**
5. **One week release sprint**

Long term development partner
We work with our customers through agile development. We understand the need for a step-by-step approach and are known for our long-term collaborations with large industrial enterprises.

PHASE 3: DATA-DRIVEN SERVICES FOR CUSTOMERS



NEW VALUE PROPOSITION: THREE CRITICAL CHECKPOINTS

There are three critical checkpoints, for customers to derive value:

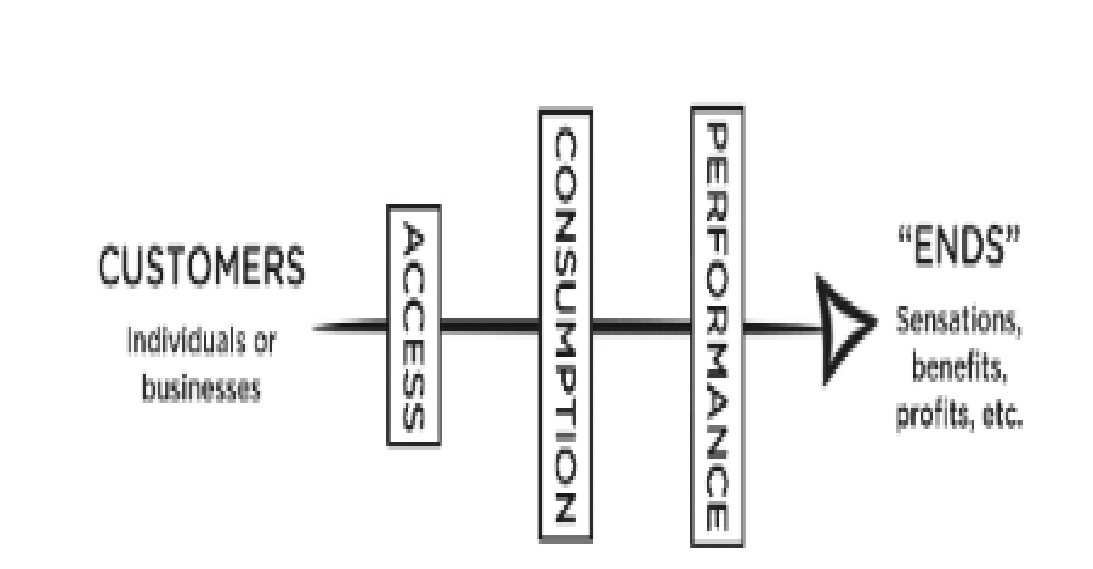
First, customers have to access the solutions that firms bring to market.
Customers cannot derive value if they are blocked, financially or physically, from reaching the products and services that are intended to address their needs and wants.

Second, conditional on access, customers have to consume these products and services. Customers cannot derive value unless they actually experience or make use of the solution offered by a firm.

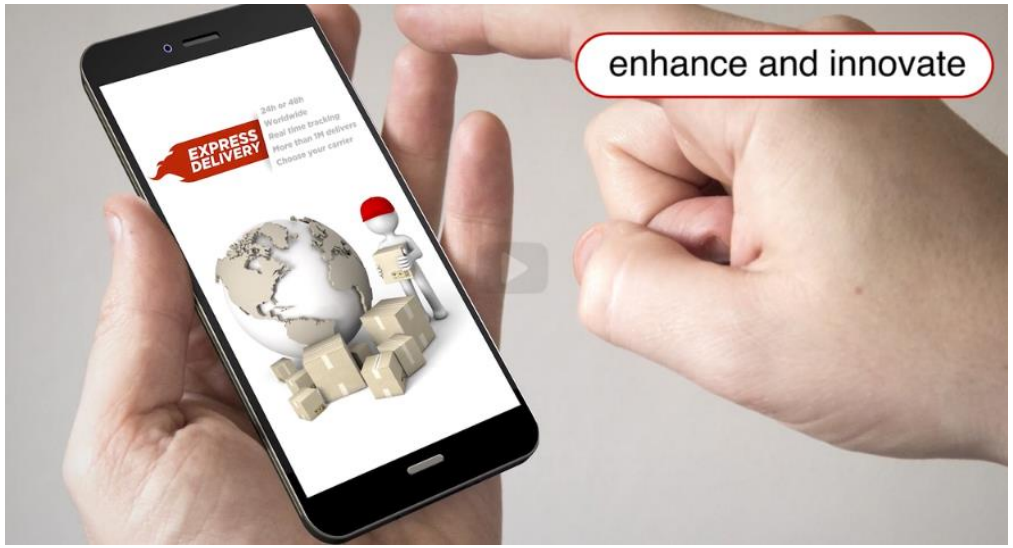
Third, conditional on access and consumption, the product or service has to perform as customers expect—that is, it has to solve the need or want satisfactorily.

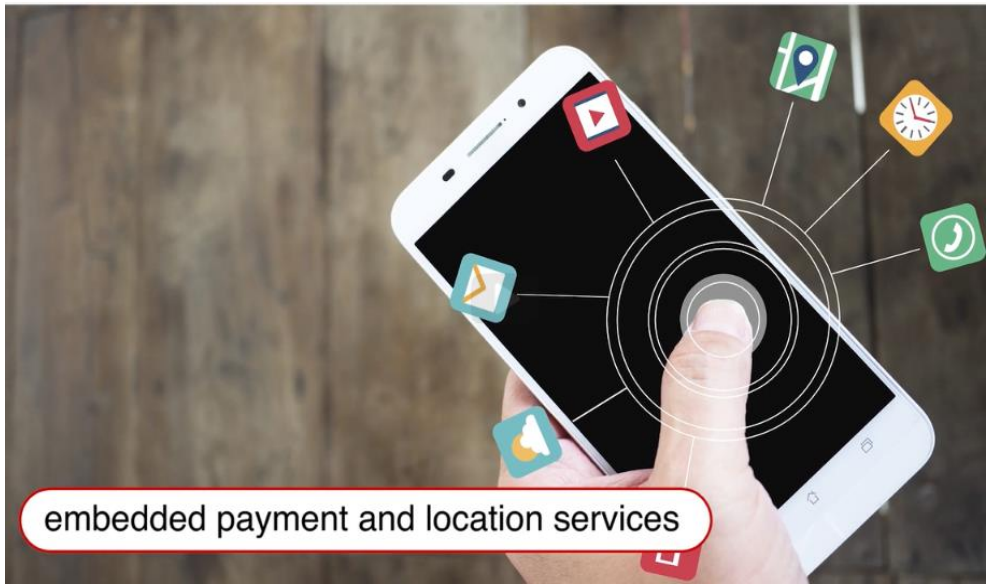
By lowering barriers to entry and shifting the risk burden away from customers, new revenue models help firms hold **themselves to account for access, consumption, and ultimately performance**.

Specifically, revenue models such as **subscriptions, memberships, and "anything-as-a-service"** anchor payment to **time /performance** rather than a physical good or service, opening up the market to profitable customers who may otherwise be out of reach.



SMART SERVICES



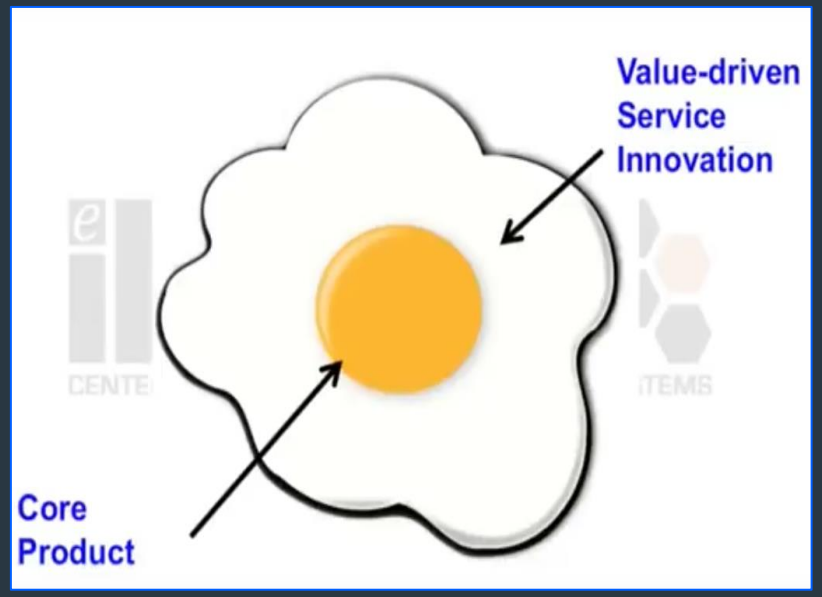


SMART SERVICE

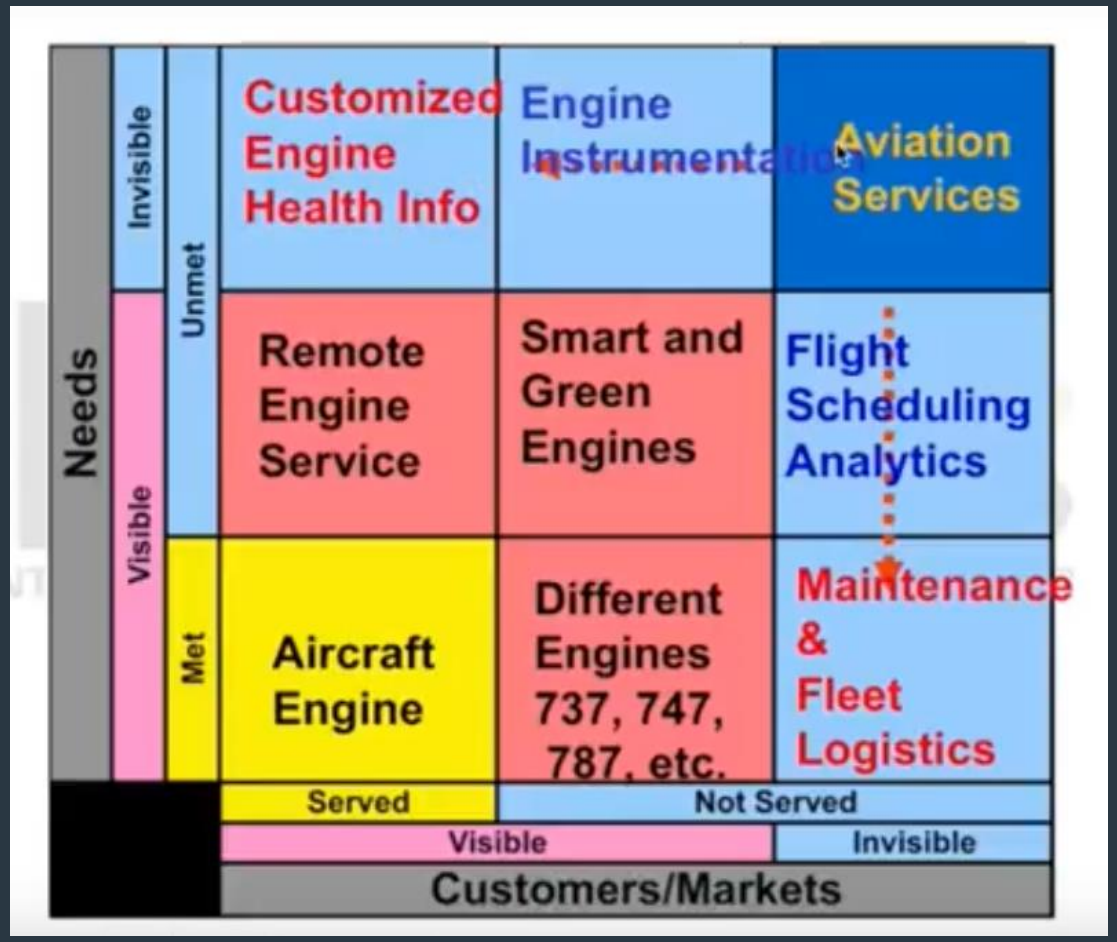
Ten Years Ago

VALUE PROPOSITION : SERVICE IMPLEMENTATION GE EXAMPLE (1)

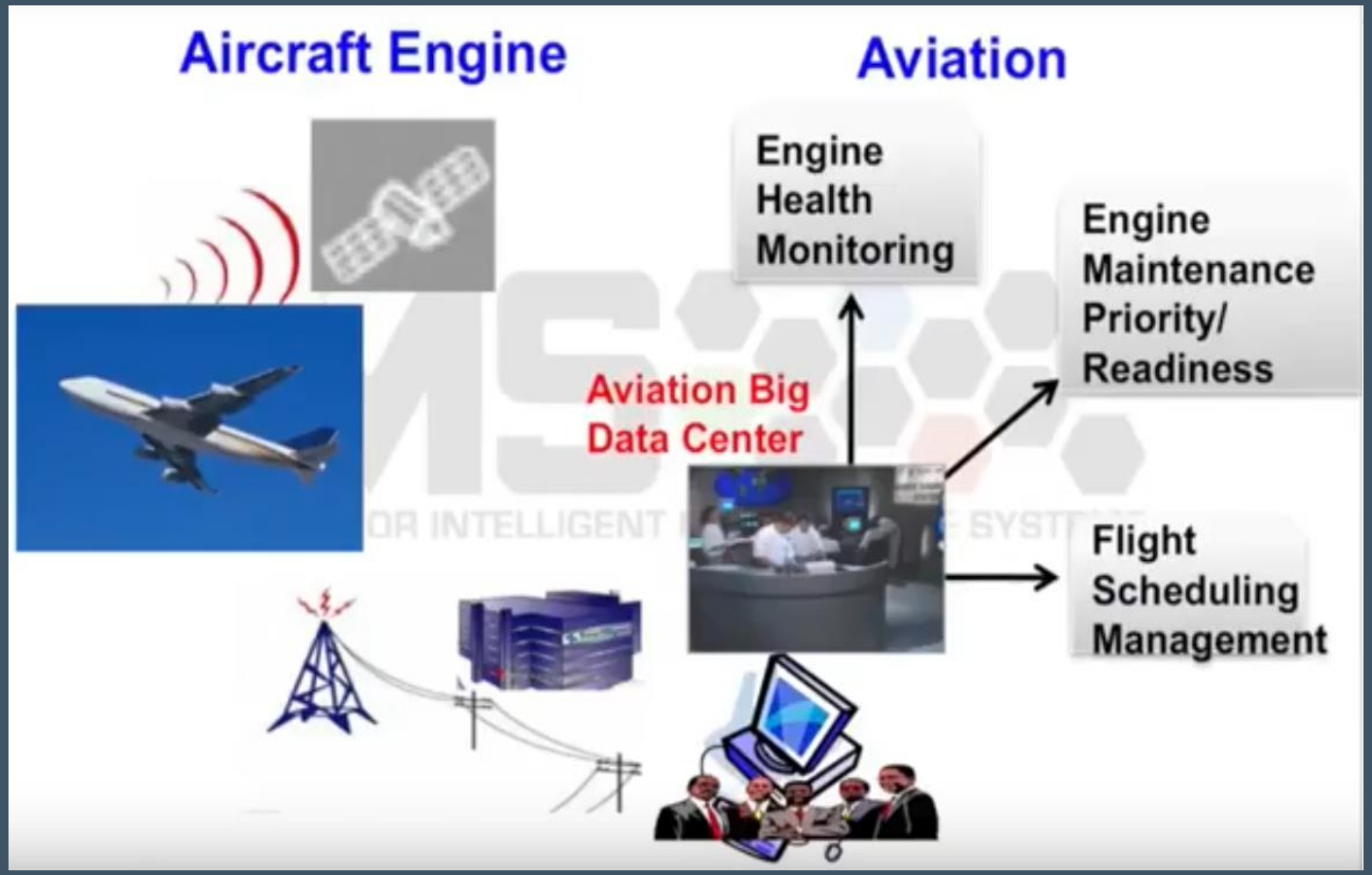
Value Innovation Model:
Fried Egg Model



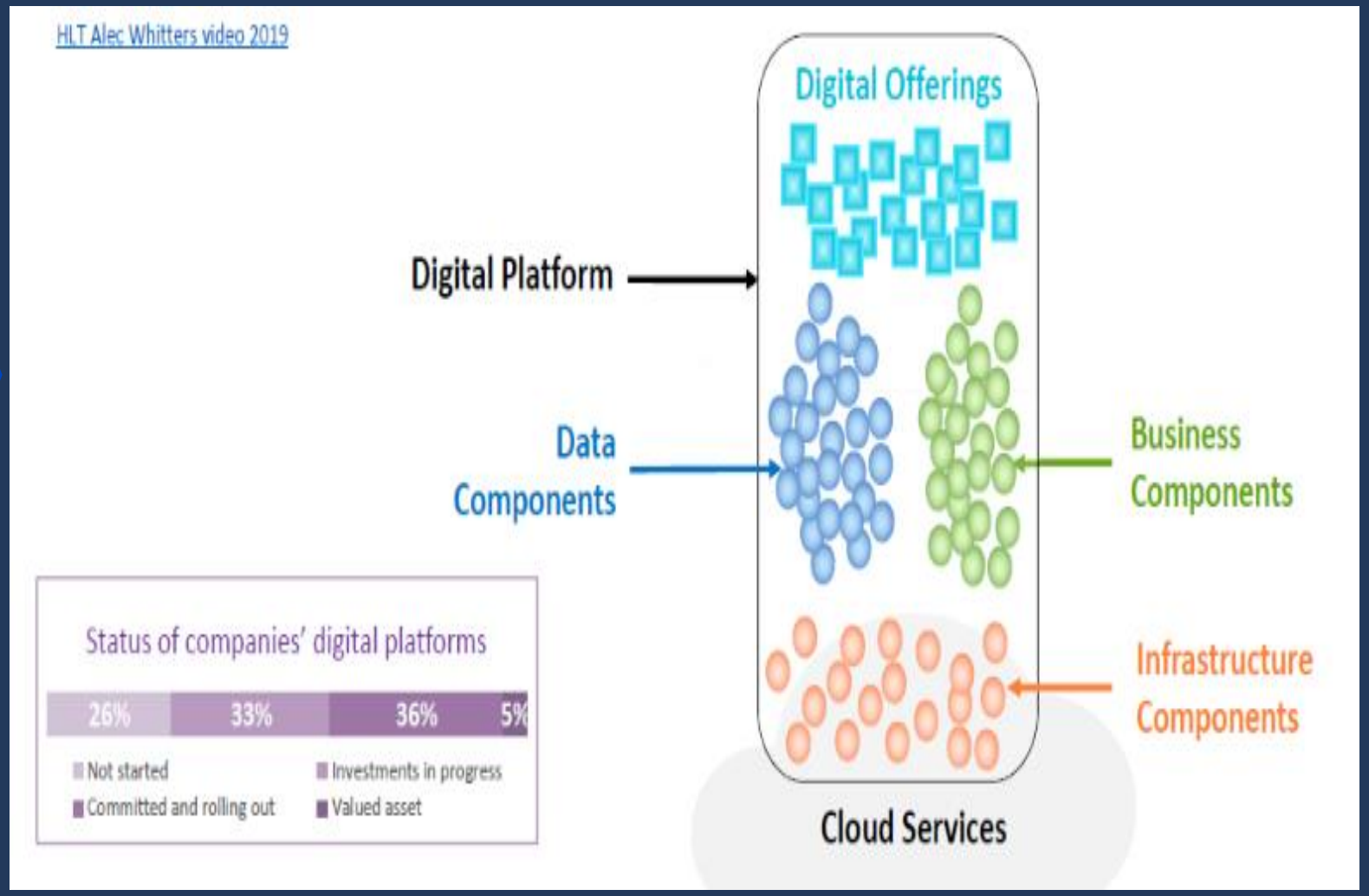
Service Innovation Framework



VALUE PROPOSITION : SERVICE IMPLEMENTATION GE EXAMPLE (2)



NEW VALUE PROPOSITION INVOLVES BUILDING A DIGITAL PLATFFORM



IMPACT: BECOMING DIGITIZED & DIGITAL

DIGITIZED =
Operational Excellence

Transformation involves instilling discipline around core transaction and back office processes

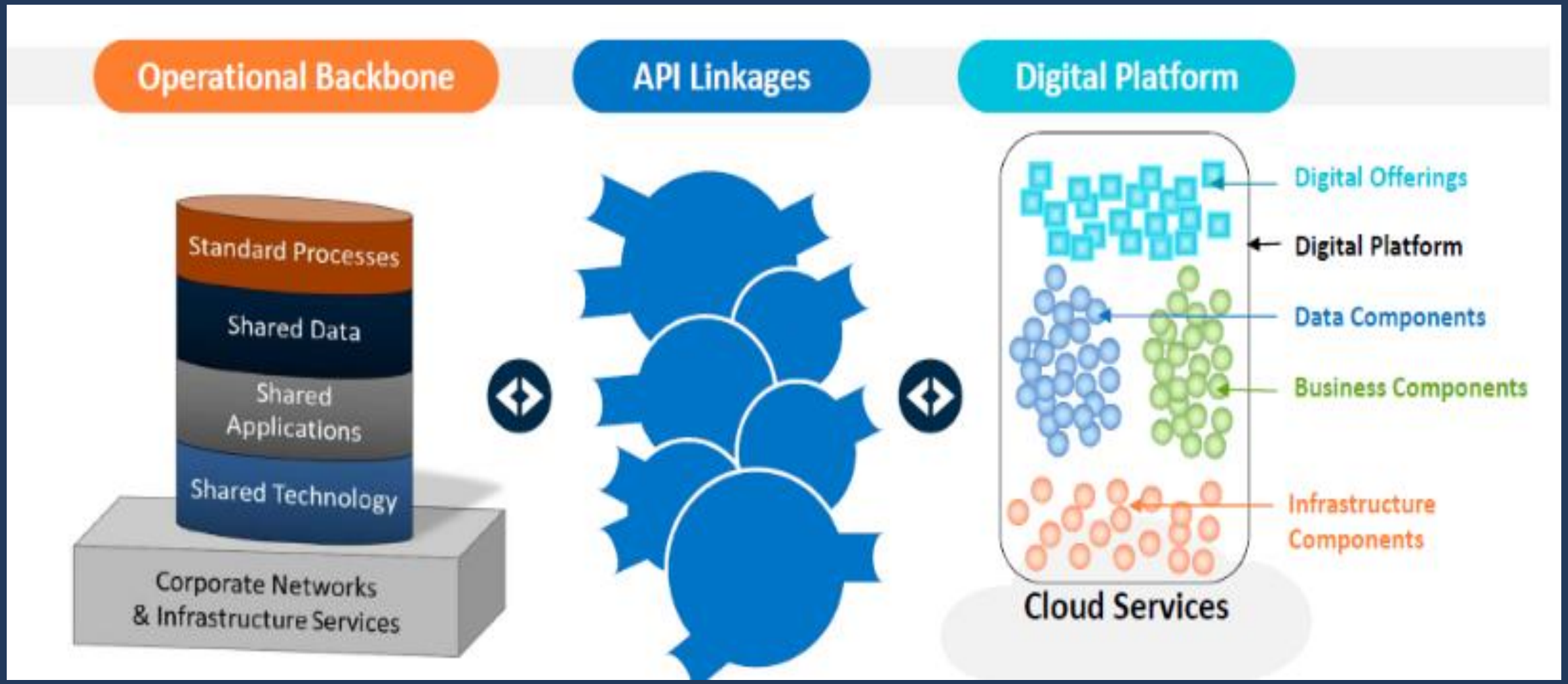
Source: Ross, Beath, Sebastian, "Digital≠Digitized," MIT CISR Research Briefing, Vol. XVII, No. 10, Oct. 2017.

DIGITAL =
New Customer Value Propositions

Transformation involves empowering people to experiment, release, and constantly enhance digital offerings

Source: Ross, Beath, Sebastian, "Digital≠Digitized," MIT CISR Research Briefing, Vol. XVII, No. 10, Oct. 2017.

A COMPANY THAT IS DIGITIZED AND DIGITAL HAS TWO LINKED TECHNOLOGY ASSETS

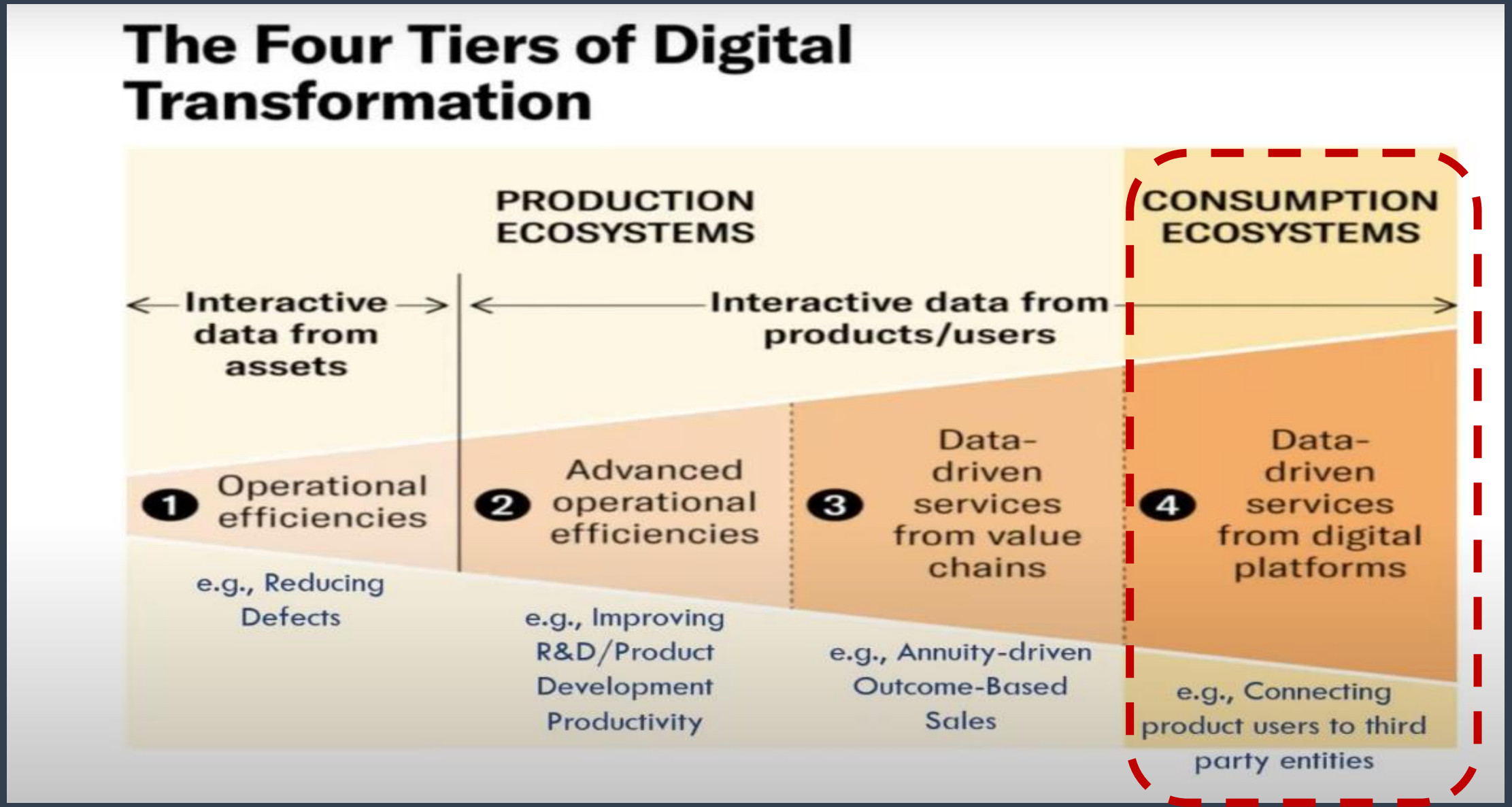


THE OPEATIONAL BACKBONE OF THE VALUE ARCHITECTURE ENHANCES EFFICIENCY; THE DIGITAL PLATFORM ENHANCES REVENUE BY NEW VALUE PROPOSITIONS

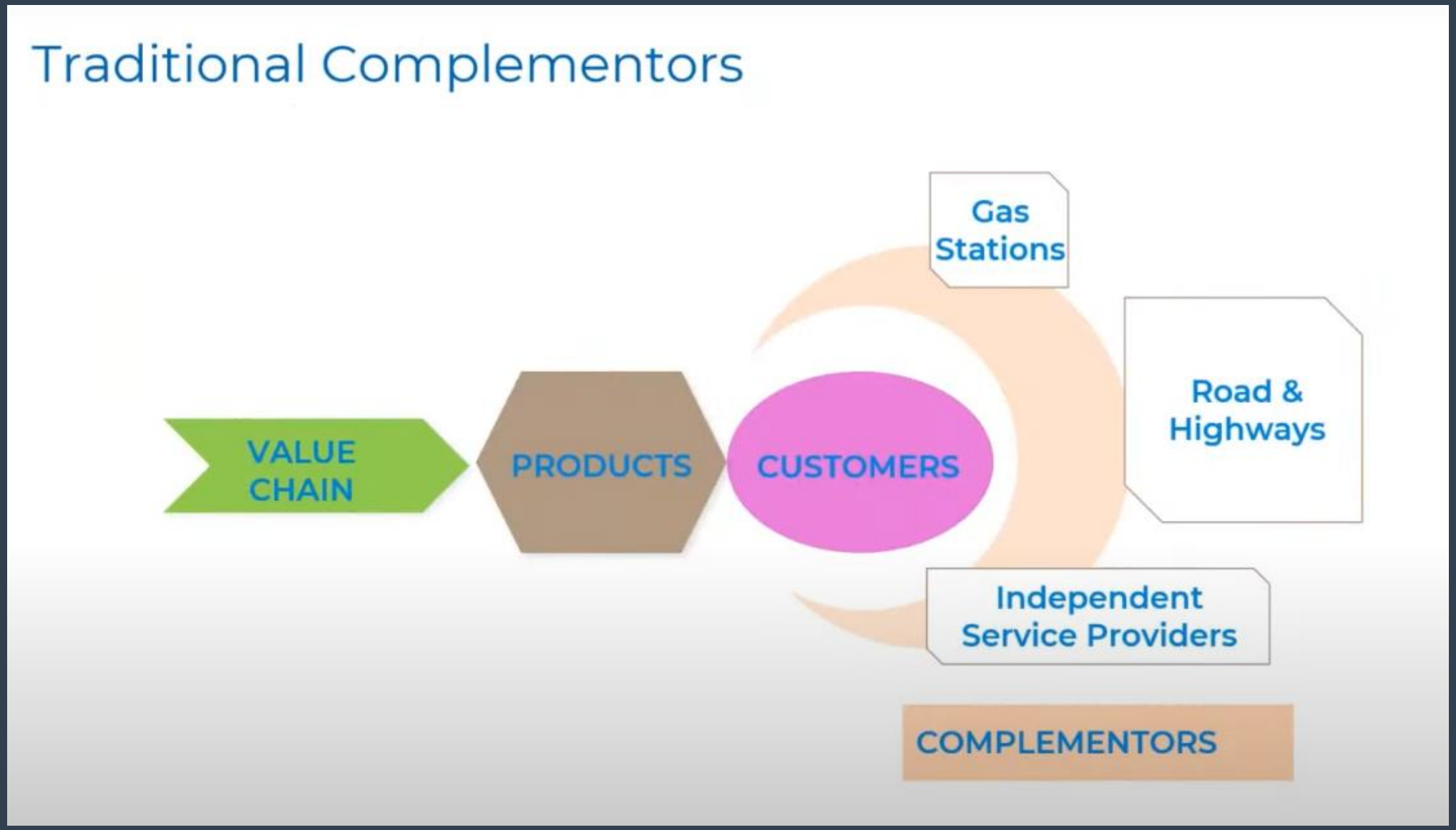
	Operational Backbone	Digital Platform
Desired Outcomes	Process efficiencies; predictability; reliability	New customer value propositions
Platform Requirements	Operational backbone for access to, and transparency of, transaction and master data	Digital Platform providing reusable components linking to core processes and data
Process Requirements	Seamless, end-to-end optimization of core and transaction processes	Iterative development and configuration of reusable components
People Requirements	Defining, measuring, optimizing business rules	Hypothesizing, experimenting, measuring, adapting offerings

Source: Ross, Sebastian, and Beath, "Digital Design: It's a Journey," MIT CISR Research Briefing," Vol. XVI, No. 4, April 2016.

PHASE 4 : CONSUMPTION ECOSYSTEMS



TRADITIONAL COMPLEMENTORS



DIGITAL VISION MANIFEST IN DIGITAL OFFERINGS

***Digital offerings*:**

Information-enriched solutions that engage customers in a seamless, personalized experience

A digital offering represents the intersection between what's possible and what customers want

CONSUMPTION ECOSYSTEM: CONNECTED COMPLEMENTS

Starbucks Announces In-Car Voice Ordering On Ford SYNC Via Amazon's Alexa

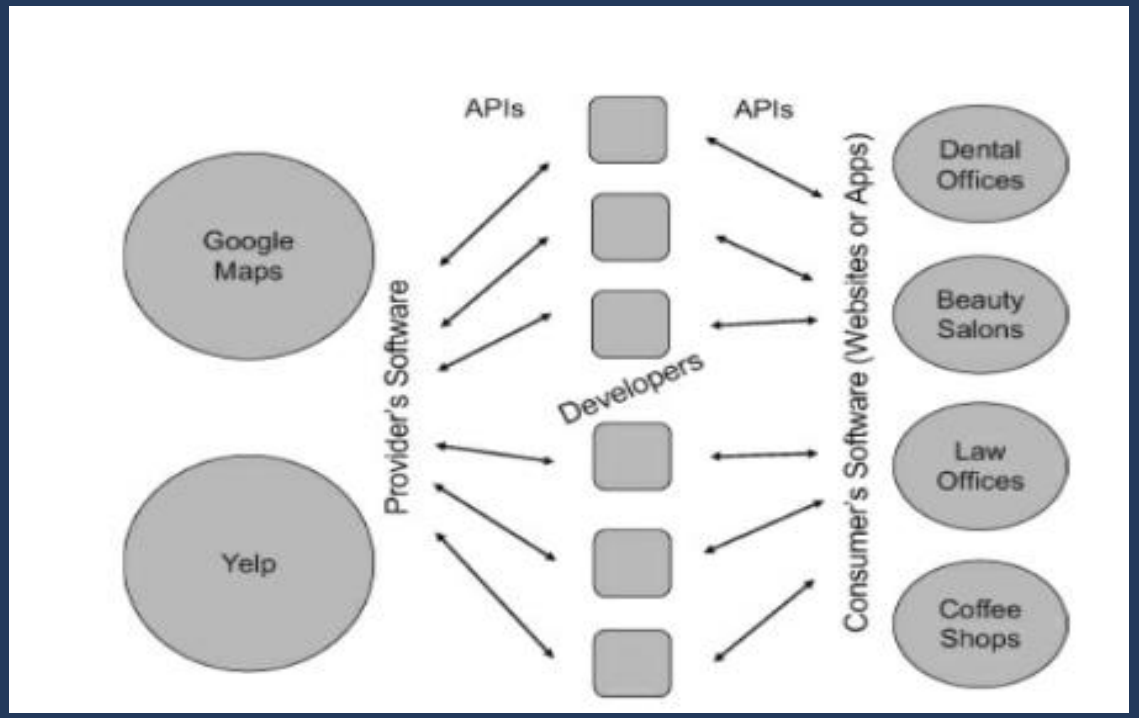
THE DESIGN FRAMEWORK FOR HUMAN-MACHINE ALGORITHMS

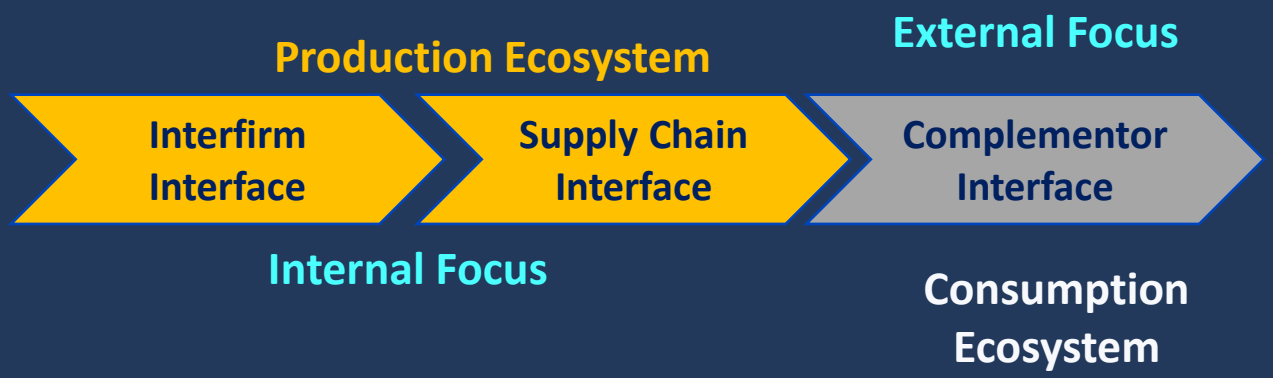
Periodic Table of Digital & Human Elements v.1

DATA	AI	REALITIES	COMMS	IoT	COMPUTE	CYBER	ANALYTICS
D Data	**Ml** Mach Learning	**Ar** Aug Reality	**Uc** Unified Comms	**Sp** Smart Products	**Cl** Cloud Computing	**Cp** Cyber Protection	**Bd** Big Data
Dc Data Collection	**Nlp** Nat Lang Proce	**Vr** Virtual Reality	**Xg** 3G, 4G, 5G...	**Sc** Smart City	**Cq** Quantum Comp	**Bc** Blockchain	**Ba** Business Analytics
Ds Data Storage	**Rb** Robotics	**Mr** Mixed Reality	**Mb** Mobility	**Sh** Smart Humans	**Cx** To uncover	**Cc** Cryptocurrency	**Ca** Cognitive Analytics
Dp Data Procesing	**Cv** Comp Vision	**Vw** Virtual Worlds	**Ui** User Interface	**Sx** To uncover		**Pr** Privacy	**Ax** To uncover
Do Data Output	**Dt** Digital Twins	**Rx** To uncover	**Cx** To uncover			**Cyx** To uncover	
Dx To uncover	**Aix** To uncover						

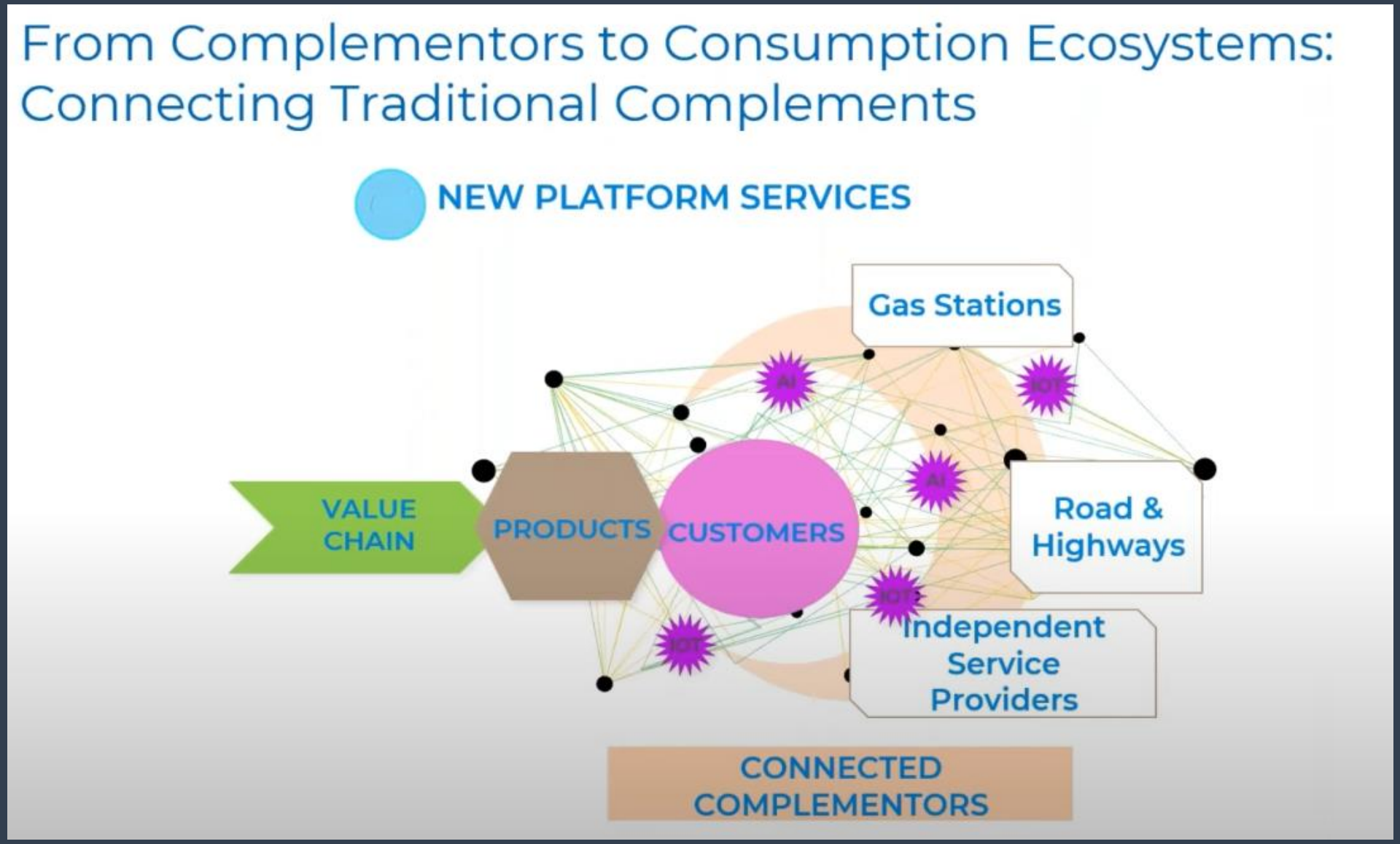
Creativity	Curiosity	Crit Thinking	Compassion	Collaboration	Communication
Community	Courage	Culture	Commitment	Celebration	Consilience

THE SIGNIFICANCE OF APPLICATION PROGRAM INTERFACES (API) NETWORKS FOR INTERACTIVE DATA

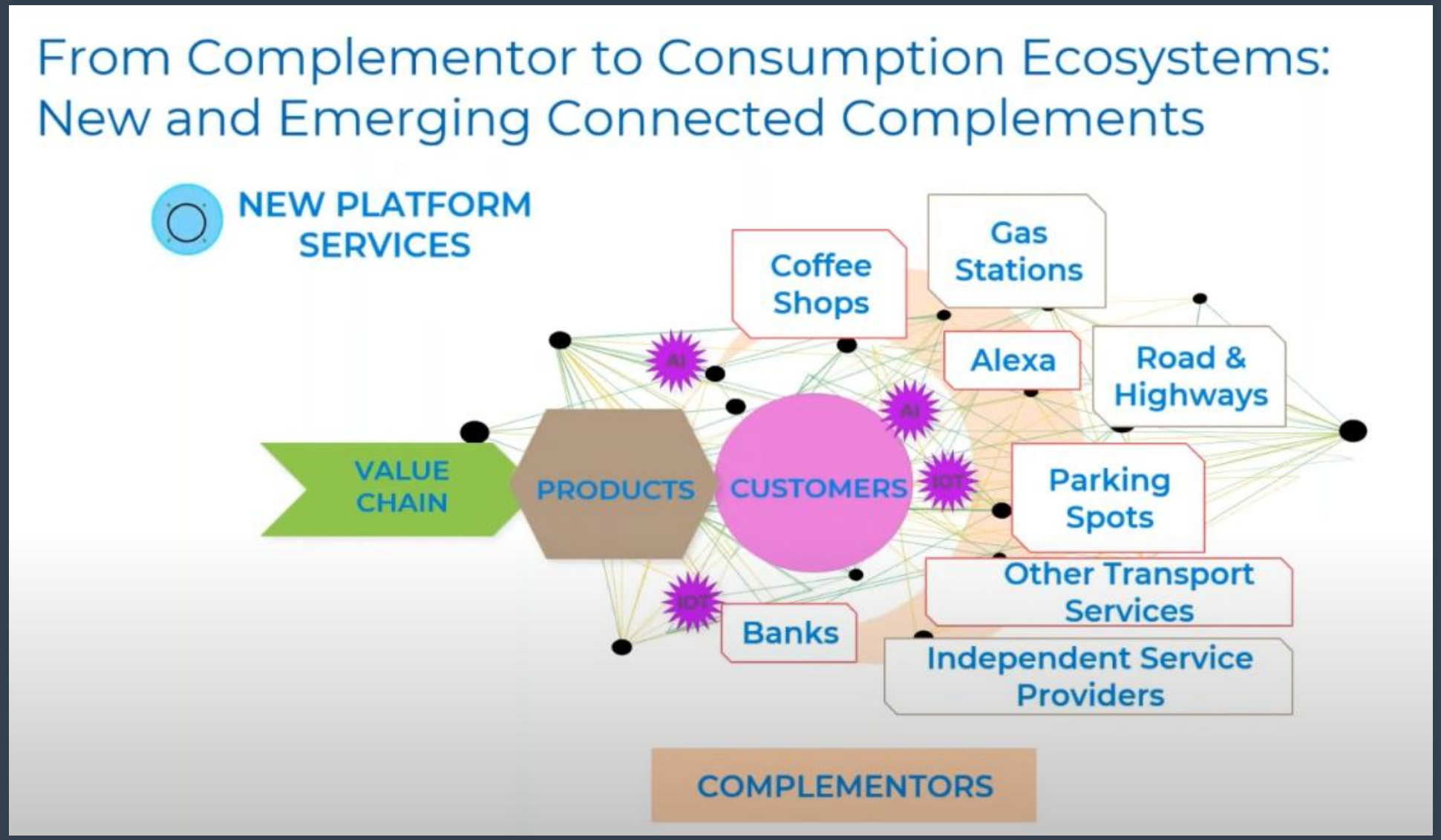




VALUE-PROPOSITION: CONSUMPTION ECO-SYSTEMS



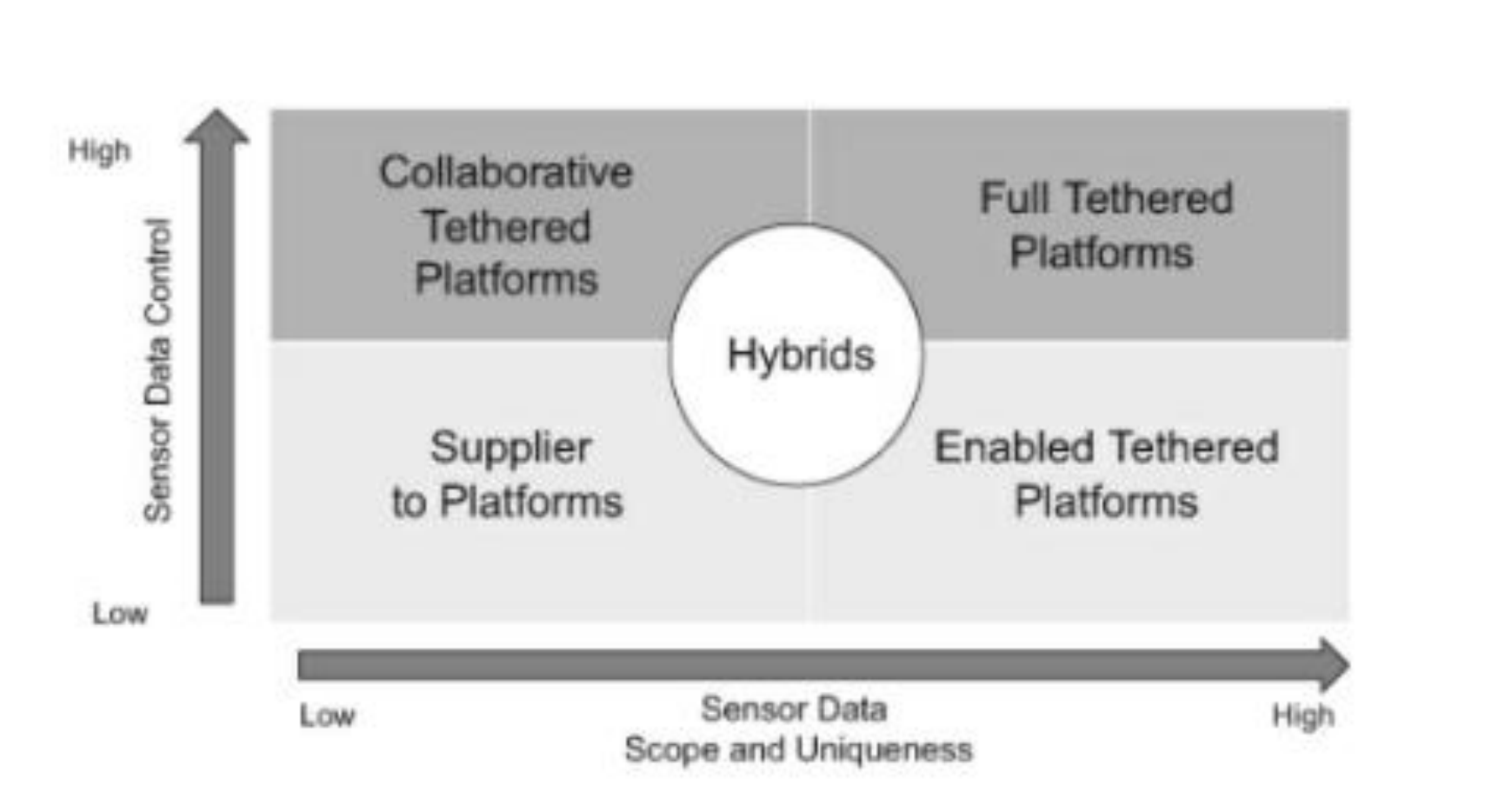
CONSUMPTION ECOSYSTEM: CONNECTED COMPLEMENTS



CONSUMPTION ECO-SYSTEM PLATFORM

Consumption-Ecosystem Design

- **Lieferant zu anderen Plattformen:** Teilnehmer/Komplementär
- **Kollaborative Plattformteilnahme:** Co-Creator von Angeboten
- **Plattform Manager:** Orchestration der Komplementär-Community



CONSUMPTION ECOSYSTEM: PARTNER VALUE MATRIX

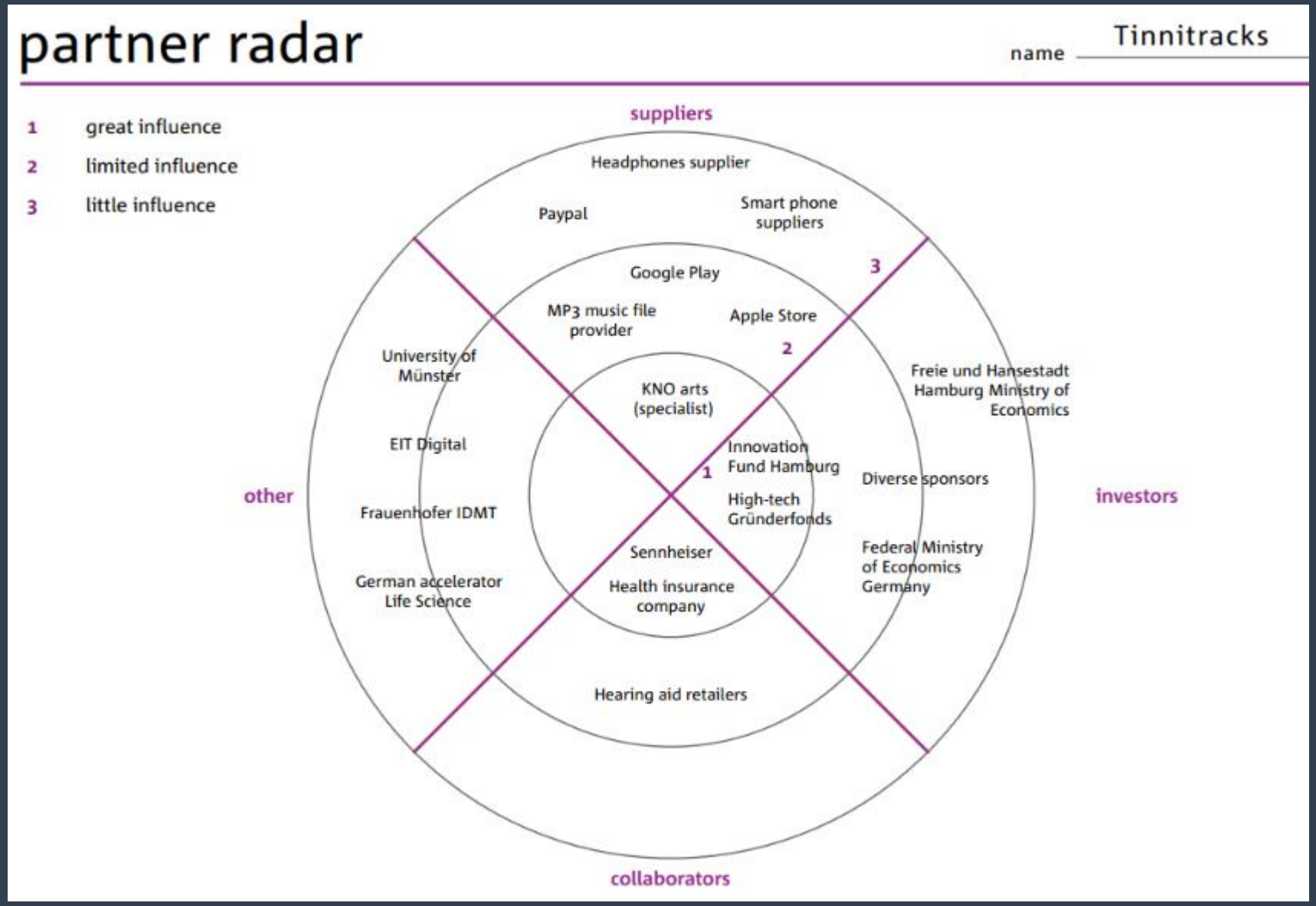
partner value matrix

name Tinnitracks

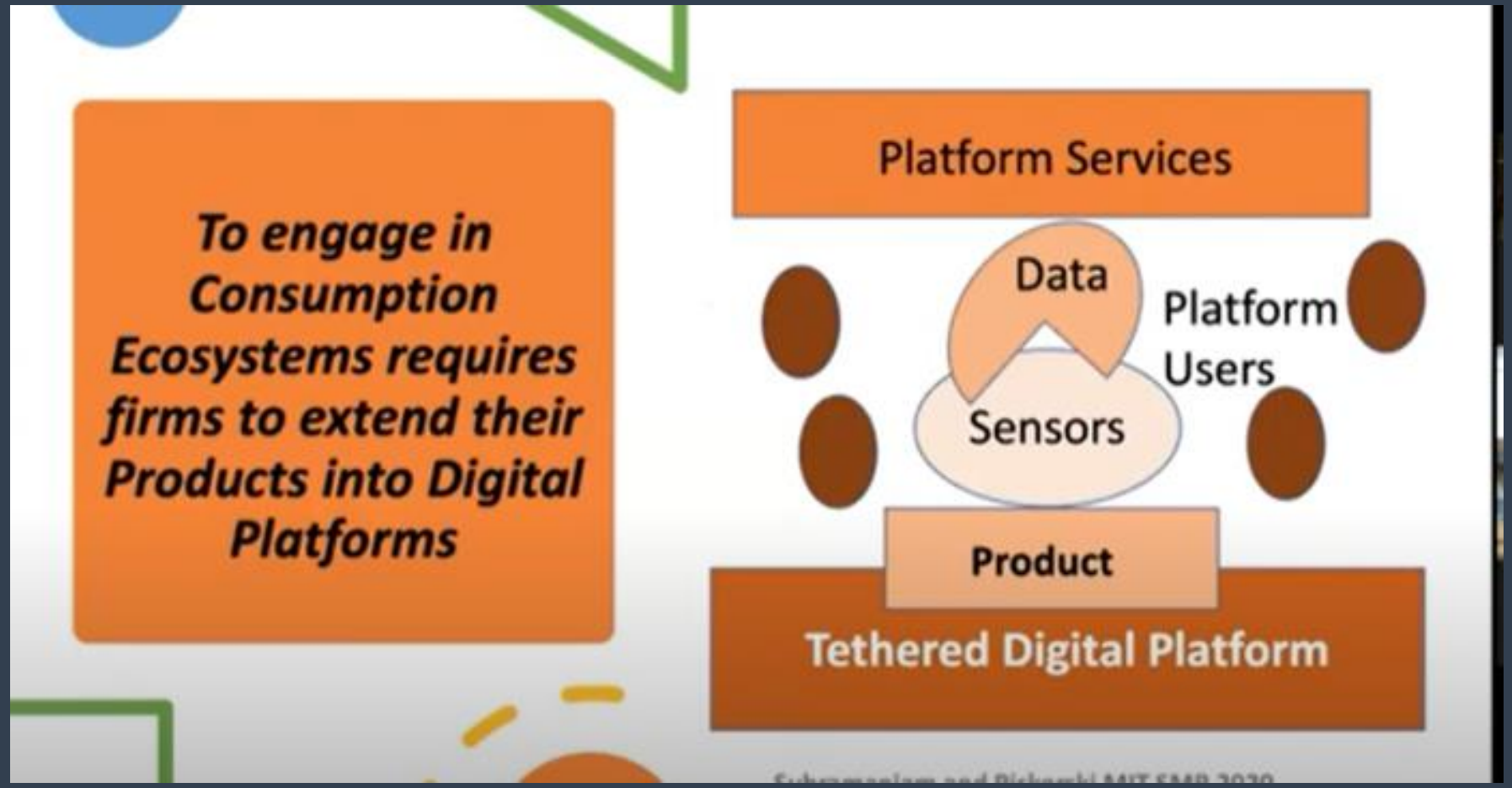
partner	what do they bring?				what is in it for them?			
	resources	sales channels	€	other	resources	sales channels	€	other
Sennheiser	Adapted sound technology and head phones	Sold as a package with customized head phone and music file service via Sennheiser channels				High margin sales of complementary head phones as part of medical solution via 'medical' channe	Others invest in optimising medical solution for which Sennheiser can provide the head phones	
Health insurance company	Knowledge on prevalence and cost of the disease (Tinnitus)		Tinnitracks is reimbursed for patients with an official Tinnitus diagnosis				Better treatment of Tinnitus with Tinnitracks may save insurers money	Patients get treated better by using Tinnitracks so insurers improve their care
Funding (innovation funds Hamburg & High tech Günderfonds)			Provides seed funding for further development of Tinnitracks services, apps and market entry	The fund may advice on business operations, and expanding abroad			Return on their investments	
ENT doctor (ear specialist)				Provides the official diagnosis of Tinnitus and monitors progress when using Tinnitracks				Alternative and possibly better care and treatment for the patient
Hearing aid retailers		Provide a sales channel via which the Tinnitracks solution is sold		Can provide support and monitors progress when using Tinnitracks			Commision fee on the sales of Tinnitracks	

date

CONSUMPTION ECOSYSTEM: PARTNER RADAR



EXTENSION OF PRODUCTS INTO DIGITAL PLATFORMS

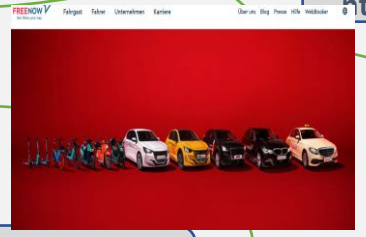


DATA-DRIVEN SERVICE FORM PLATFORMS

DATA

Connectivity provider
- communications
- Connectivity

Media&entertainment
- Car Entertainment platform
- Streaming services
- media



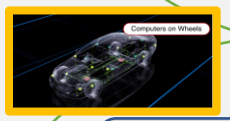
Payment platforms
- Insurance provider
- Visa..... PayPal

Public Transport
- Cities
- Railroads
- Airlines

Usage models
- Car Sharing Economy Platform
- Car pool and taxi services

Mobility CUSTOMER

Office environment
- MS office etc
- Data storage& compute
- Cloud computing



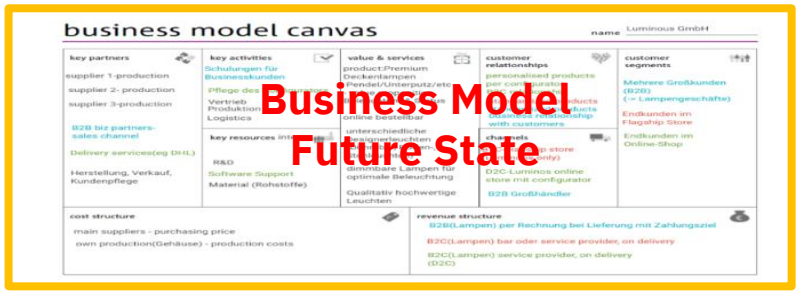
Mobility platform(car)
- Car Producer Daimler ecosystem
- Mobility OS
- Government

Traffic assistance
- Traffic Priority System
- traffic mgmt
- Parking Solutions
- Surveillance and control systems

Service & Energy
- Diagnostics
- Charging stations
- Service Stations
- Energy utility companies

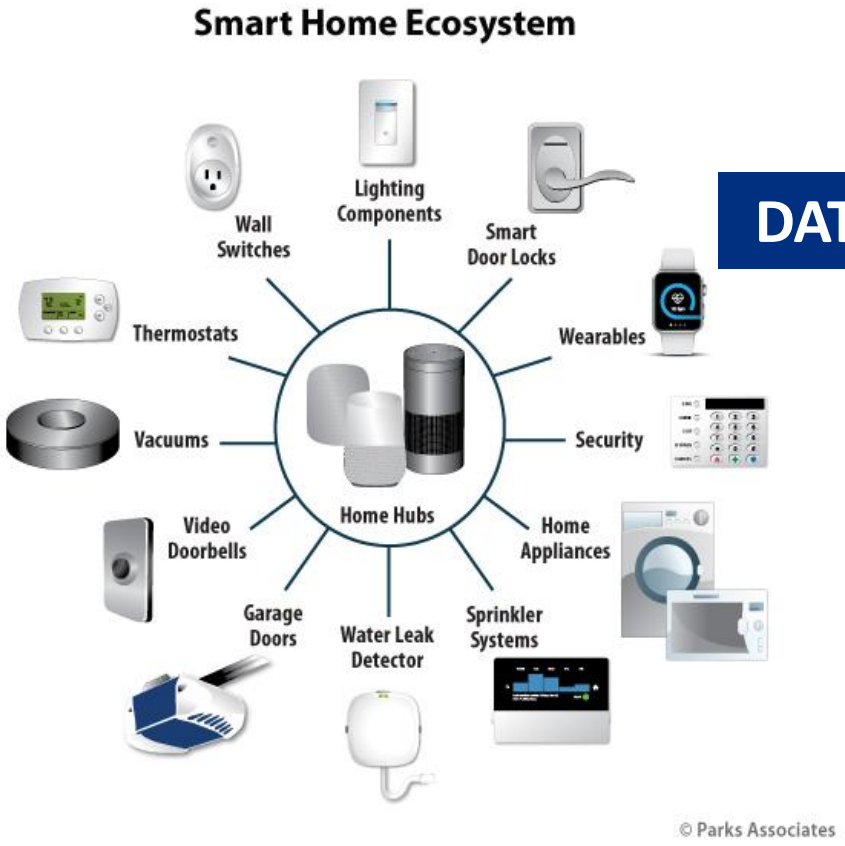
ENTERPRISE ARCHITECTURE MANAGEMENT: EXTERNES ECOSYSTEM

Business Modell



Enterprise Architecture Ebene:
Business Modell

Service/Prozess/ Geschäfts-Architecture



DATA

Fachkonzept Ebene:
eEPK/BPMN

Information System - Architecture

DV-Konzept:
Topologie

IOT Technology Architecture-

Implementierung:
Technik der Vernetzung

5) DIGITAL CUSTOMERS

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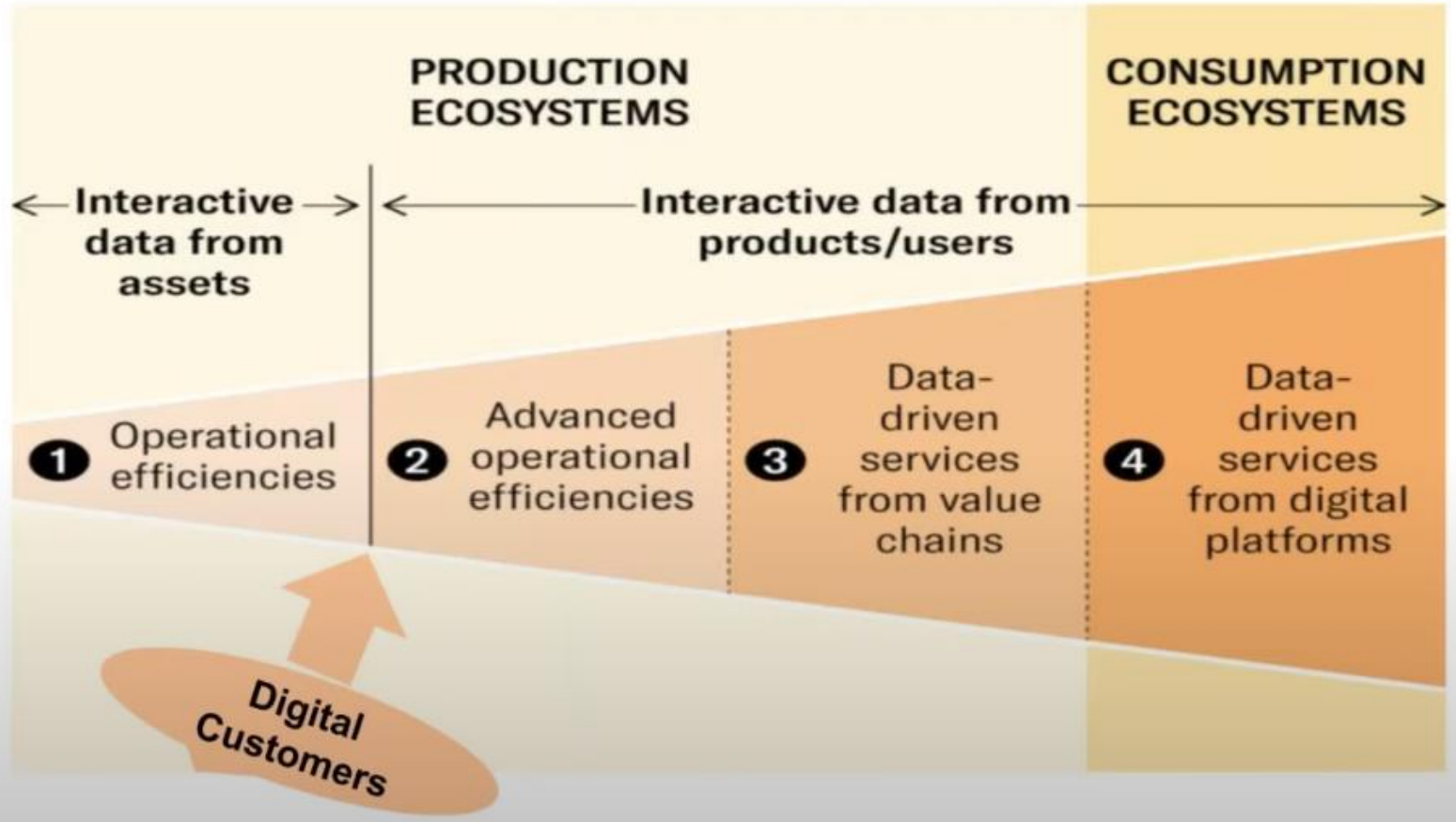
THE CONCEPT OF THE DIGITAL CUSTOMER

The Concept of Digital Customers:

Customers who provide interactive data

DIGITAL CUSTOMER. GATEWAY FOR REAL DIGITAL TRANSFORMATION

Yet they provide a Gateway for Real Digital Transformation



#4 STRATEGIC CHALLENGES FOR CUSTOMER ADOPTION

CHALLENGE #1

Strategic Challenge One

Expanding Strategic Mindsets

Recognizing the New Role of Customers

NEW CUSTOMER ROLE

New Customer Role

Customers buy and use smart products

Customers buy and use standard products

NEW STRATEGIC MINDSET

Expanded Strategic Mindsets

- New relationships between products and data
  - Data supported products … now products support data
- Data can broaden product's functionality
  - Robotic vaccum cleaners can connect to pest services; lightbulbs can detect gunshots and initiate police or ambulance services

CHALLENGE #2

Strategic Challenge Two

Developing new value propositions

Establishing credibility for future benefits

NEW MARKETING APPROACH

New approaches for Marketing

- Convincing customers of data-driven features before they exist
  - Envision what is possible with the right kind of data in adequate volumes and build strategies to execute
- Selling outcomes, not products
  - Having confidence in what data can deliver, and demonstrating that confidence

CHALLENGE #3

Strategic Challenge Three

Executing delivery of new value propositions

Turning value chains into digital ecosystems

CHALLENGE #4

Strategic Challenge Four

Revenue and Profit Generation

Developing new revenue and profit generating business models

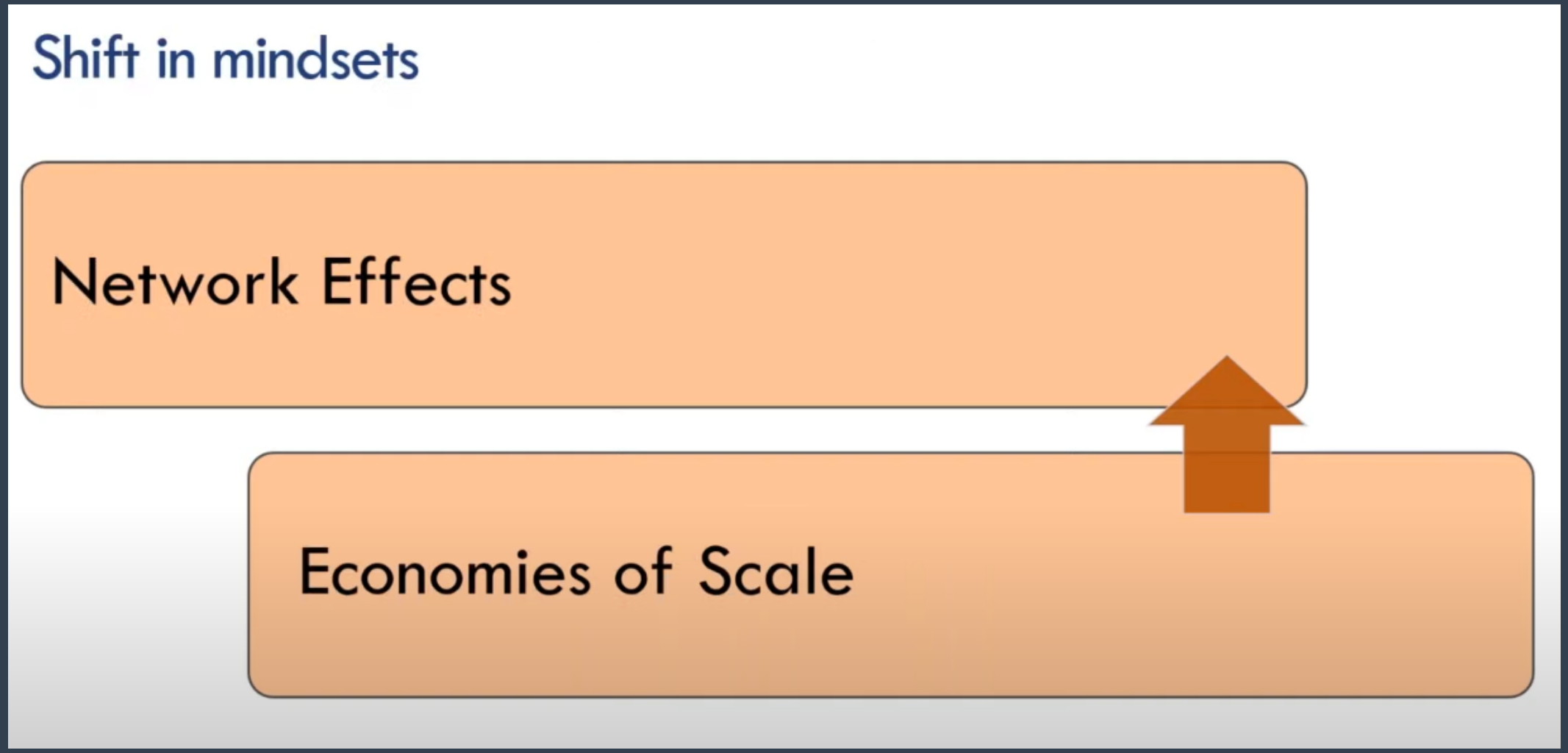
NEW REVENUE APPROACH

New Revenue and Profit Generation Approaches

Platform-based pricing models

Value chain-based pricing models

SHIFT IN MIDSET



6) DIGITAL COMPETITION

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PLATFORM STRATEGY

Only 7 Firms Controlled 99% of Handset Profits in 2007

Economies of Scale

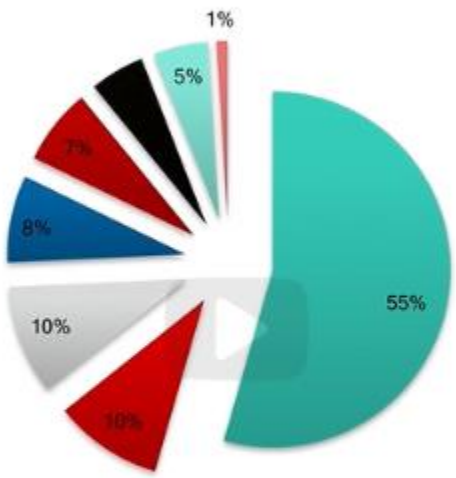
Famous Brands

Regulatory Protection

World Class Logistics

Global Sales Channels

≥ $40B twenty yr R&D by Nokia alone

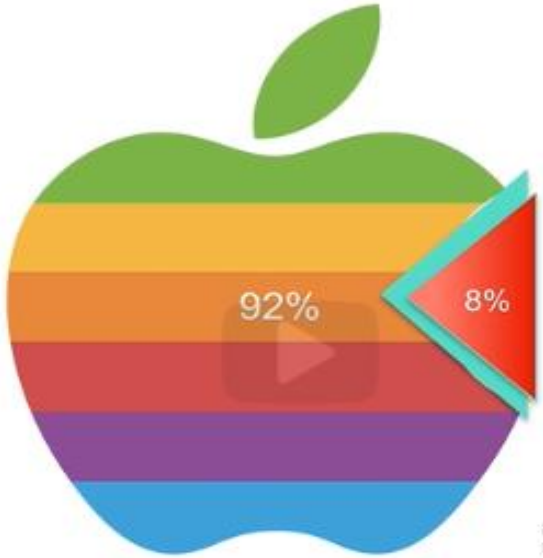


Source: Asymco

- Nokia
- Samsung
- Sony Ericsson
- Motorola
- LG
- RIM
- HTC
- Other

PLATFORM STRATEGY

In 6 years, all but one had ≤ 0 profit while 1 newcomer had 92%



Source: Rob Janoff (Apple) [Public domain or Public domain], via Wikimedia Commons. Modified
Insight: Henry Tirri, former CTO Nokia

Is it likely all 7 incumbents had failed strategies, run by clueless management, lacking execution capabilities?

Or was something more fundamental happening?

PLATFORM STRATEGY

Porter's Five Forces & Resource Based View

1. Goal is a protected market niche, emphasizing industry barriers
2. Categories are sharp
3. Weapon is cost leadership or product differentiation
4. Inimitable resources you own provide sustained advantage
5. Core competence: focus what you do best

PLATFORM STRATEGY

Platform Strategy Differs

1. Goal is interactions that yield NW effects - partner to partner value. NW effects provide sustainability

PLATFORM STRATEGY

Platform Strategy Differs

1. Goal is interactions that yield NW effects - partner to partner value. NW effects provide sustainability
2. Promote frictionless entry of partners (not barriers for competitors)

PLATFORM STRATEGY

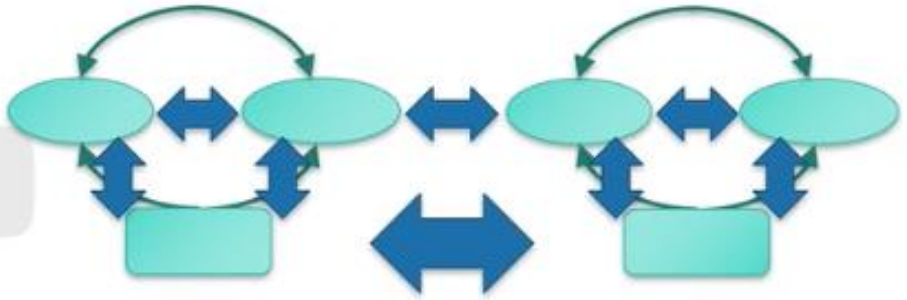
Platform Strategy Differs

1. Goal is interactions that yield NW effects - partner to partner value. NW effects provide sustainability
2. Boundaries can be altered as consumers can be producers

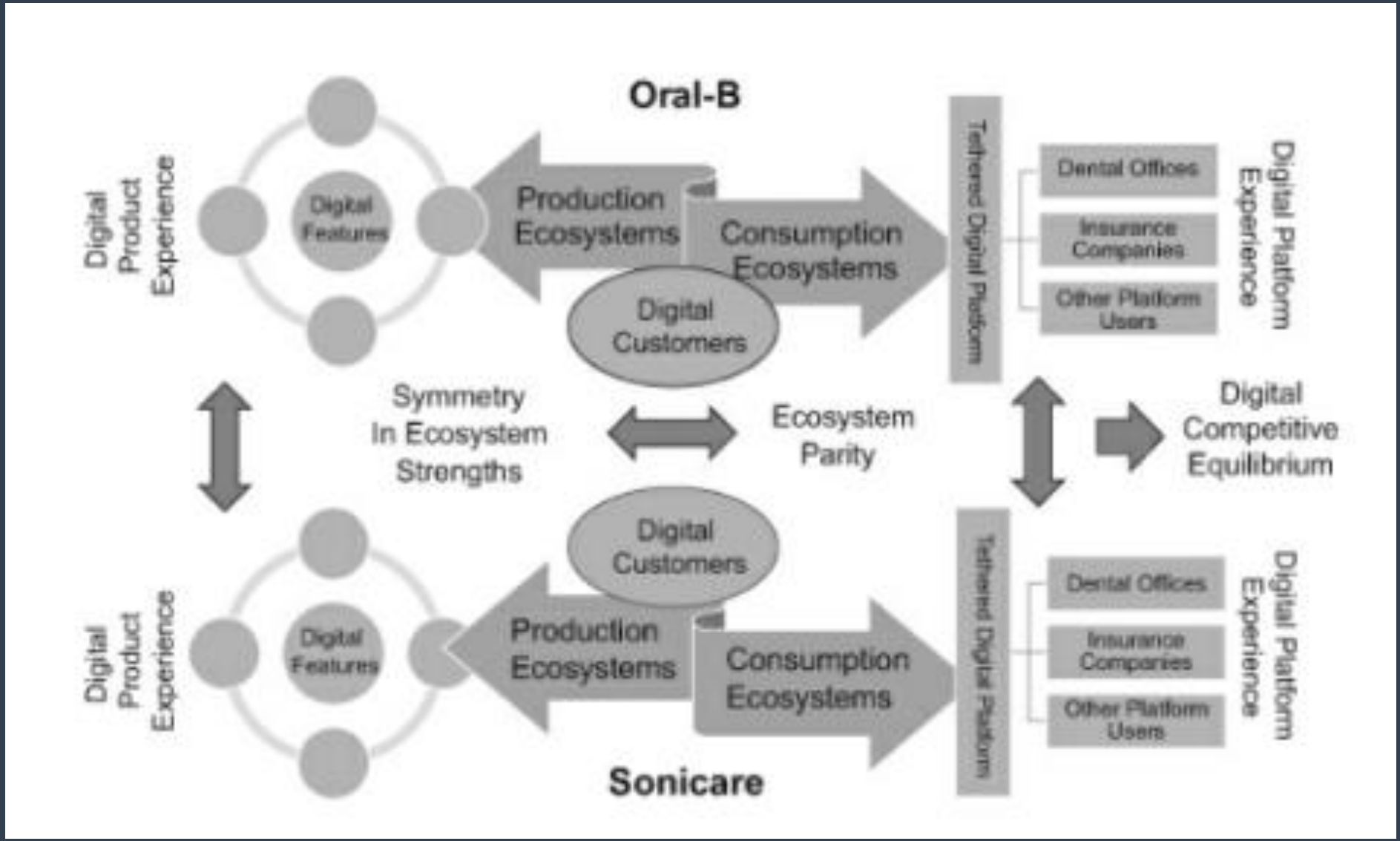
PLATFORM STRATEGY

Platform Strategy Differs

1. Goal is interactions that yield NW effects - partner to partner value. NW effects provide sustainability
2. Boundaries can be altered
3. Competition is multi-layered, like 3D chess. Movement *inside* industry can be as important as *outside*



ECO-SYSTEM COMPETITION



PLATFORM STRATEGY

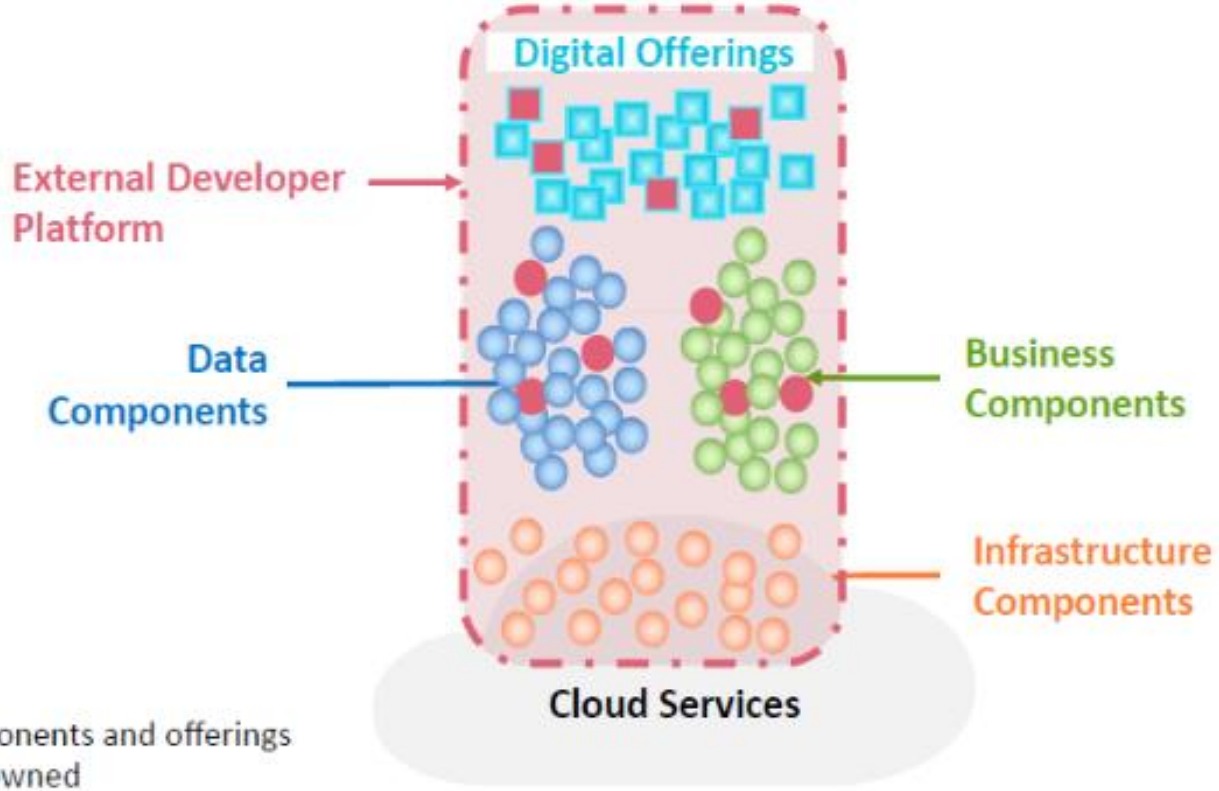
Platform Strategy Differs

1. Goal is interactions that yield NW effects - partner to partner value. NW effects provide sustainability
2. Boundaries can be altered
3. Competition is multi-layered, more like 3D chess.
4. *Don't* need to own inimitable resources. Have them join you!

PLATFORM STRATEGY: EXTERNAL DEVELOPER PLATFORM

1 **Some external developer platforms have a clear revenue proposition** (e.g., Amazon, Apple, Schneider, eBay charge a tax in exchange for access to customers and a solid infrastructure for transactions)

2 **Others provide additional services for a negotiated fee or for mutual benefits** (e.g., link to Google Maps or Uber; link to Kabbage algorithm to determine loan eligibility; DBS partnership with SoCash reimburses retailers for distributing cash to DBS customers)



Key: Pink components and offerings are externally owned

PLATFORM STRATEGY

Platform Strategy Differs

Product		Platform
Distinct: Buyers, Suppliers, Substitutes, Entrants, Rivals	Market Forces	Overlap: Consumers ~ producers, competitors ~ complementors
Core Competencies	Focus	Core Interactions
Supply Side	Scale Economies	Demand Side
Own Inimitable Resources	Assets	Community as Asset
Cost Leadership / Product Differentiation	Goal / Metric	Engagement, Positive Spillovers, Just Governance
Barriers to Entry, Boulevards for Exit	Access	Permissionless Entry, Open Around Key Control Points
By Firm	Innovation	By Firm and Ecosystem

PLATFORM STRATEGY

What Changes :: Strategy & Scope of Influence

The firm shifts from being an *actor in* a market to becoming an *orchestrator of* a market.

PLATFORM STRATEGY

Network Effects & Inverting the Firm Changes…

Finance

Records outside firm, Shareholder Value → Stakeholder Value, Incorporate network effects

Human Resources

Internal Employees → External communities

R&D

Experts & Specialized departments → Crowdsourcing & Open Innovation

Strategy

Entry Barriers & Inimitable Resources → Ecosystem husbandry & Long Tail

Marketing

Push → Pull, Outbound → Inbound

IT

Back Office (ERP) → Front Office (CRM) → Out-of-Office (Social & Big Data). Communication *among* users.

Operations & Logistics

Uber: no taxis, Airbnb: no real estate, Facebook: creates no content, Alibaba: no inventory.

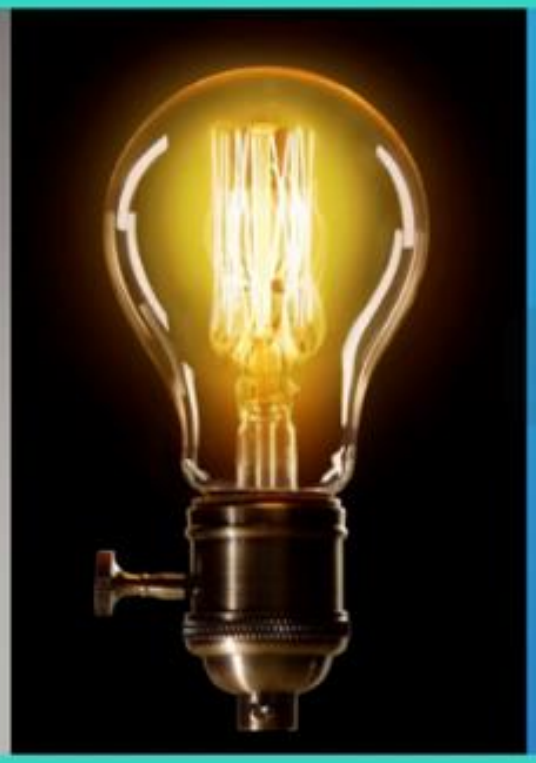
Shed variable costs

PLATFORM STRATEGY

Why are the old competitors *not* the new competitors?

Isn't afraid of …			but should fear …
HOUGHTON MIFFLIN HARCOURT	publishing	McGraw Hill	amazon
NBC	broadcast	CBS	NETFLIX
SIEMENS	electronics	Honeywell	Google
UNITED STATES POSTAL SERVICE	delivery	FedEx	facebook
TOYOTA	cars	Ford	UBER
swatch	watches	TIMEX	SAMSUNG

PLATFORM STRATEGY



- Incandescent light bulb, Joseph Swan
- Edison patent filed 1878
- Same bulb 137 years later
- Energy efficiency < 5%
- Retail price $0.40

PLATFORM STRATEGY

- Blue Ocean product strategy
- Compact fluorescent efficiency 11%
- LED luminous efficiency 15%
- Multicolor programmable
- Retail price $4 - $40

PLATFORM STRATEGY

IoT Platform Strategy: Data, Sensors, Open Ecosystem

- Offer WiFi, Bluetooth, or Cloud!
- Security alert – intruder or toddler wondering onto street
- Bundle energy demand, sell demand management to utility
- Time for grandma's medication
- Voice Commands:
  - "I've fallen and I can't get up"
  - Remind John to take out garbage

PLATFORM STRATEGY

The Intercept Strategy Opportunity

- Thermostats like Nest typically cover no more than each floor.
- Entertainment centers, like Apple TV, might cover a few devices.
- Lights cover every room, even garage, deck, and basement, etc.

7) DIGITAL CAPABILITY

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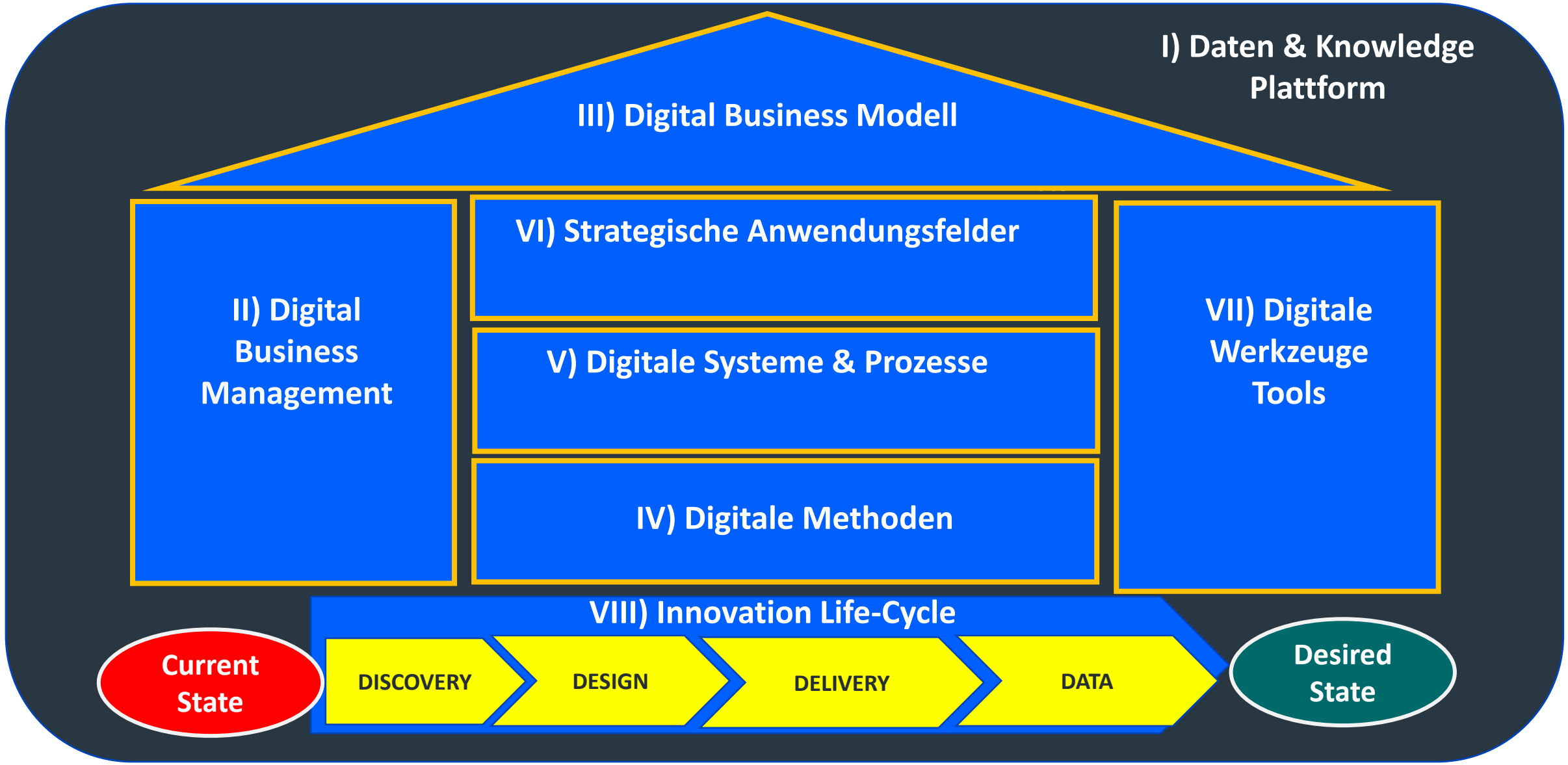
DAS DIGITAL BUSINESS DESIGN FRAMEWORK



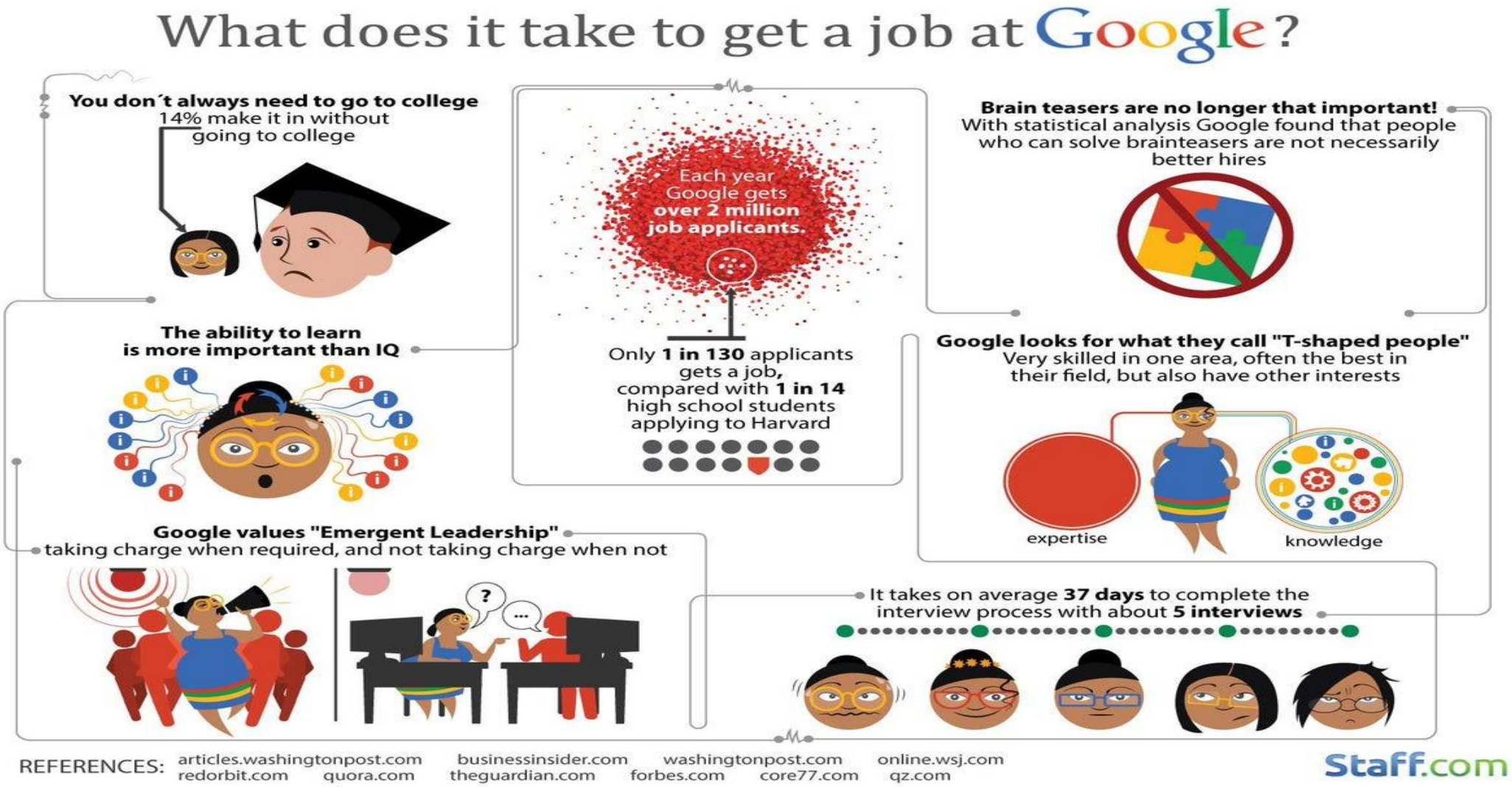
DAS DIGITAL BUSINESS ENGINEERING LAB:

DIGITALES LERN-SYSTEM FÜR DATEN-GETRIEBENE UNTERNEHMEN...

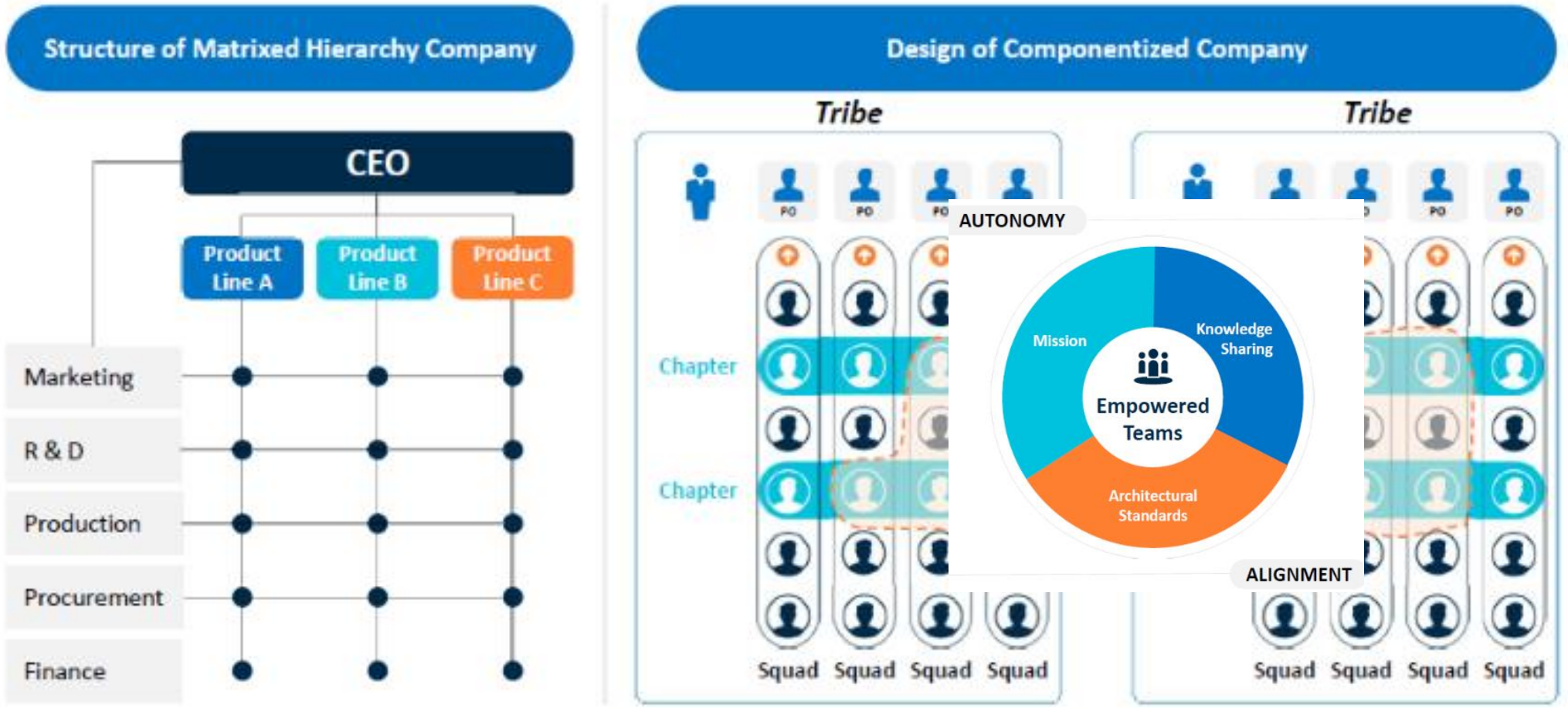
...ERMÖGLICHT EINE NEUE LERNKULTUR ...

Traditionelle Lernkultur: Fremdgesteuerter Unterricht Wissenserwerb/Know-how für die Industriegesellschaft	**Neue Lernkultur:** Selbstgesteuertes Lernen Kompetenzen/Kompetenzen für die digitale Wissensgesellschaft
Präsentation/Wissensaustausch	Wissen erfassen
Inhaltliche Ausrichtung	Ergebnisorientierung
Anweisung	Lernunterstützung, Gestaltung von Lernumgebungen
Empfangen von Informationen/Material	Kooperation, Zusammenarbeit, Co-Creation
Lernen im Gleichschritt	Individuelles, flexibles Lernen
Lernen in geschlossenen Wissenssystemen	Kontextuelle, multiple Perspektiven
Systematische Wiederholung von Konzepten/Informationen	Eigenverantwortung, Selbstkontrolle
Wissenserwerb	Kompetenzerwerb, Erwerb von Lernstrategien
Sachwissen (Fach- und Speicherwissen)	Reflexives Wissen (Methodenwissen, Reflexionswissen, Persönlichkeitswissen)

...UND ERMÖGLICHT EINE NEUE ARBEITSKULTUR ...



DIGITAL BUSINESS RELY ON DESIGN NOT STRUCTURE:
BALANCING AUTONOMY AND ALIGNMENT



Source: H. Kniberg and A. Ivarsson, Scaling Agile @ Spotify, October 2012

THE DIGITAL COMPETITIVE STRATEGY: KEY QUESTIONS

I WANT TO INCREASE EFFICIENY

I WANT TO GROW MY BUSINESS

I WANT TO INCREASE THE PROFIT FOR MY COMPANY

I WANT DEVELOP SMART, CONNECTED PRODUCTS & SYSTEMS

I WANT TO BECOME A ZERO-ENERGY OPERATION

I WANT TO CREATE VALUE FROM MY DATA

I WANT TO HELP TRANSFORM MY COMPANY

I WANT TO SECURE MY COMPANY FROM CYBER-ATTACKS

THE DIGITAL COMPETITIVE STRATEGY: CLICK ON PICTURE

I WANT TO INCREASE EFFICIENY

I WANT TO GROW MY BUSINESS

I WANT TO INCREASE THE PROFIT FOR MY COMPANY

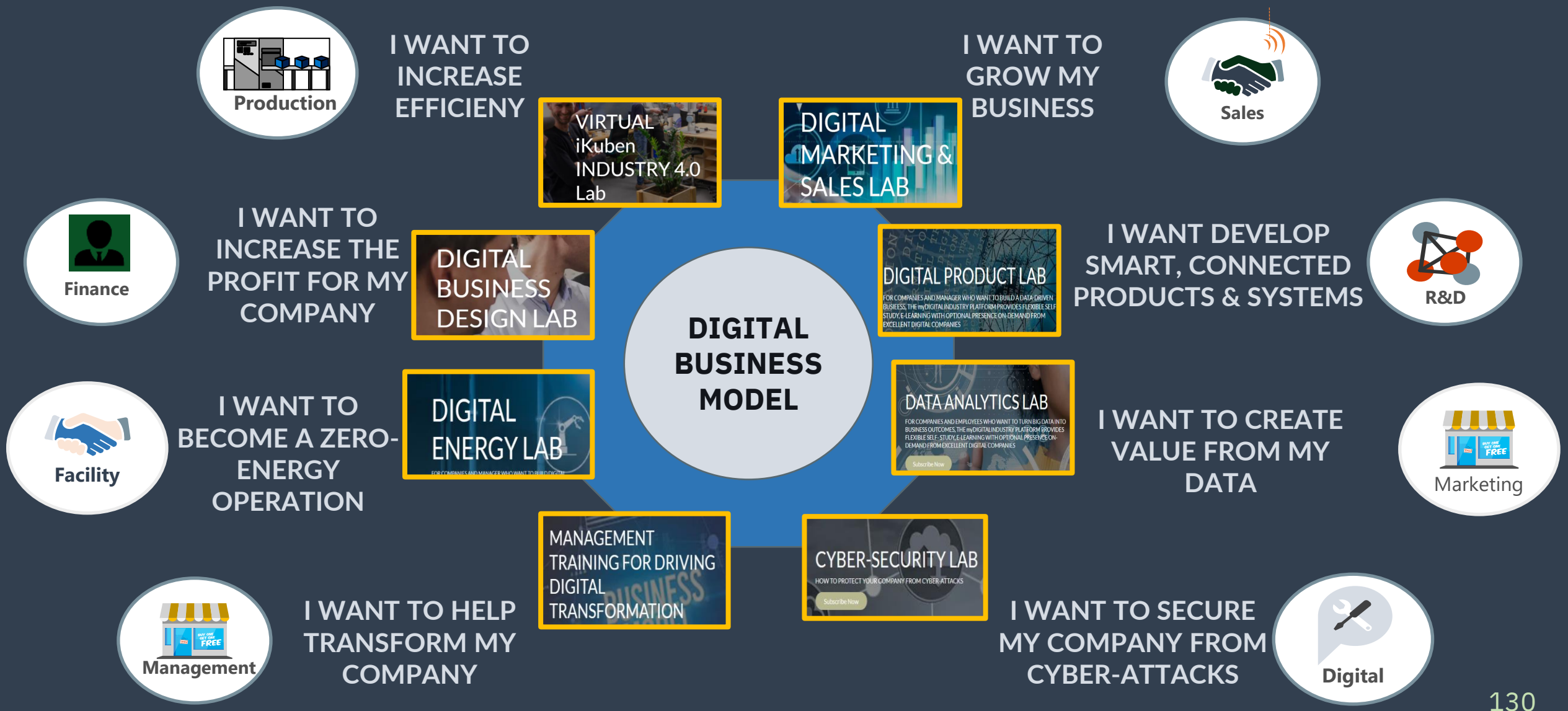
I WANT DEVELOP SMART, CONNECTED PRODUCTS & SYSTEMS

DIGITAL BUSINESS MODEL

I WANT TO BECOME A ZERO-ENERGY OPERATION

I WANT TO CREATE VALUE FROM MY DATA

I WANT TO HELP TRANSFORM MY COMPANY

I WANT TO SECURE MY COMPANY FROM CYBER-ATTACKS

THE DIGITAL CAPABILITIES: VALUE ECO-SYSTEM