

TRADE SECRETS IN BUSINESS ECOSYSTEMS



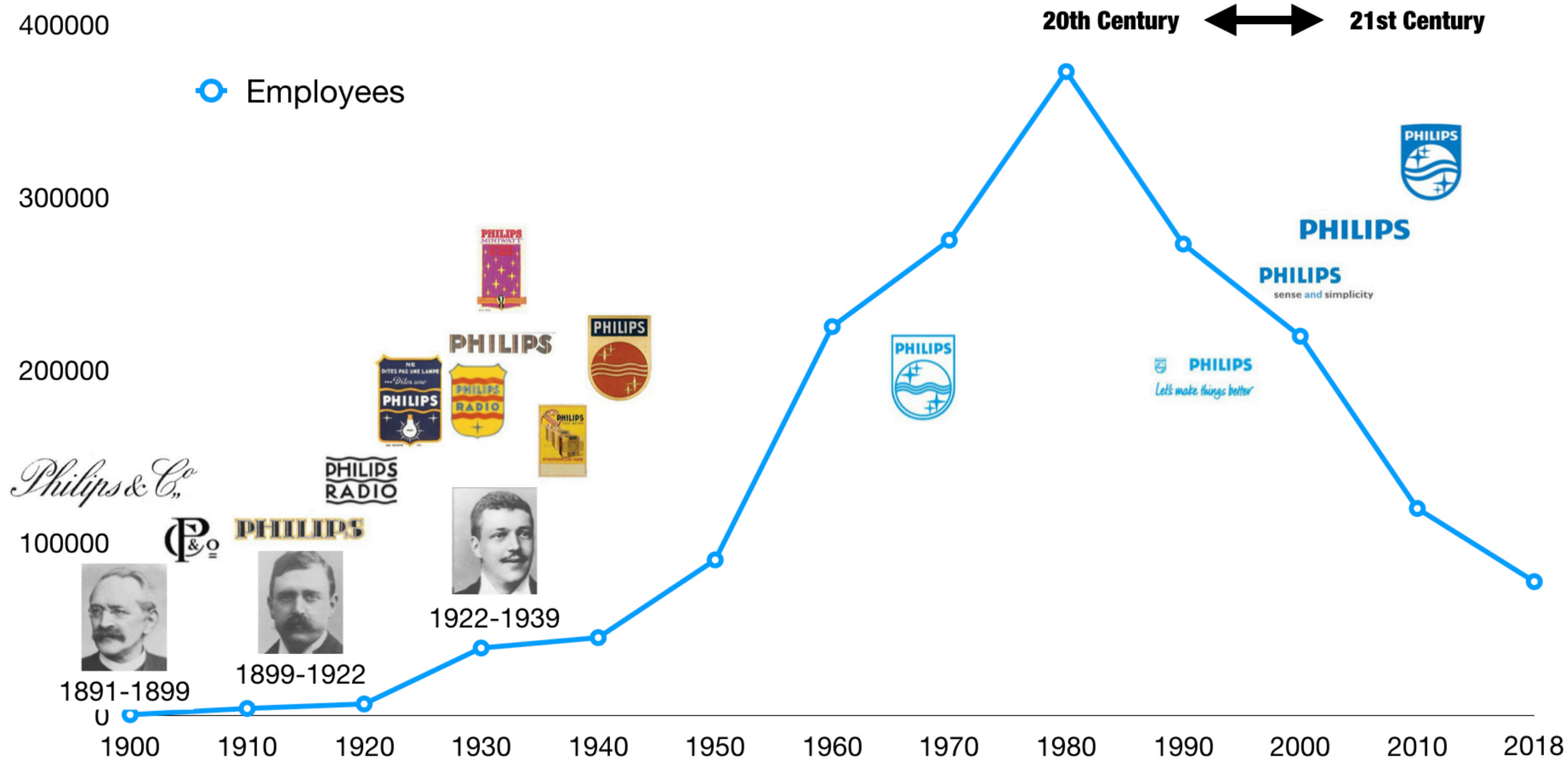
ERIK P.M. VERMEULEN

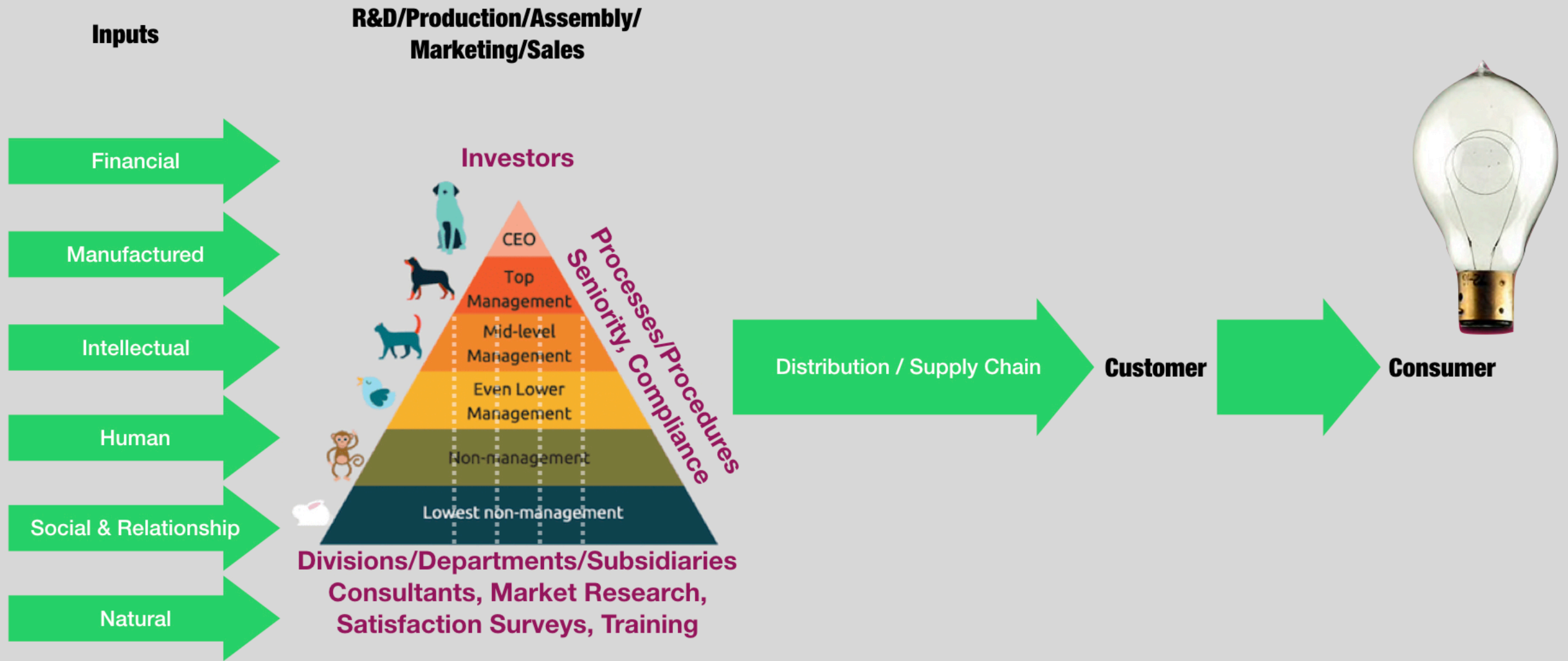
**INFORMATION THAT
PROVIDES A COMPETITIVE
ADVANTAGE BECAUSE IT IS
NOT KNOWN TO OTHERS, AND
FOR WHICH REASONABLE
SAFEGUARDS ARE
MAINTAINED TO PROTECT ITS
SECRECY**





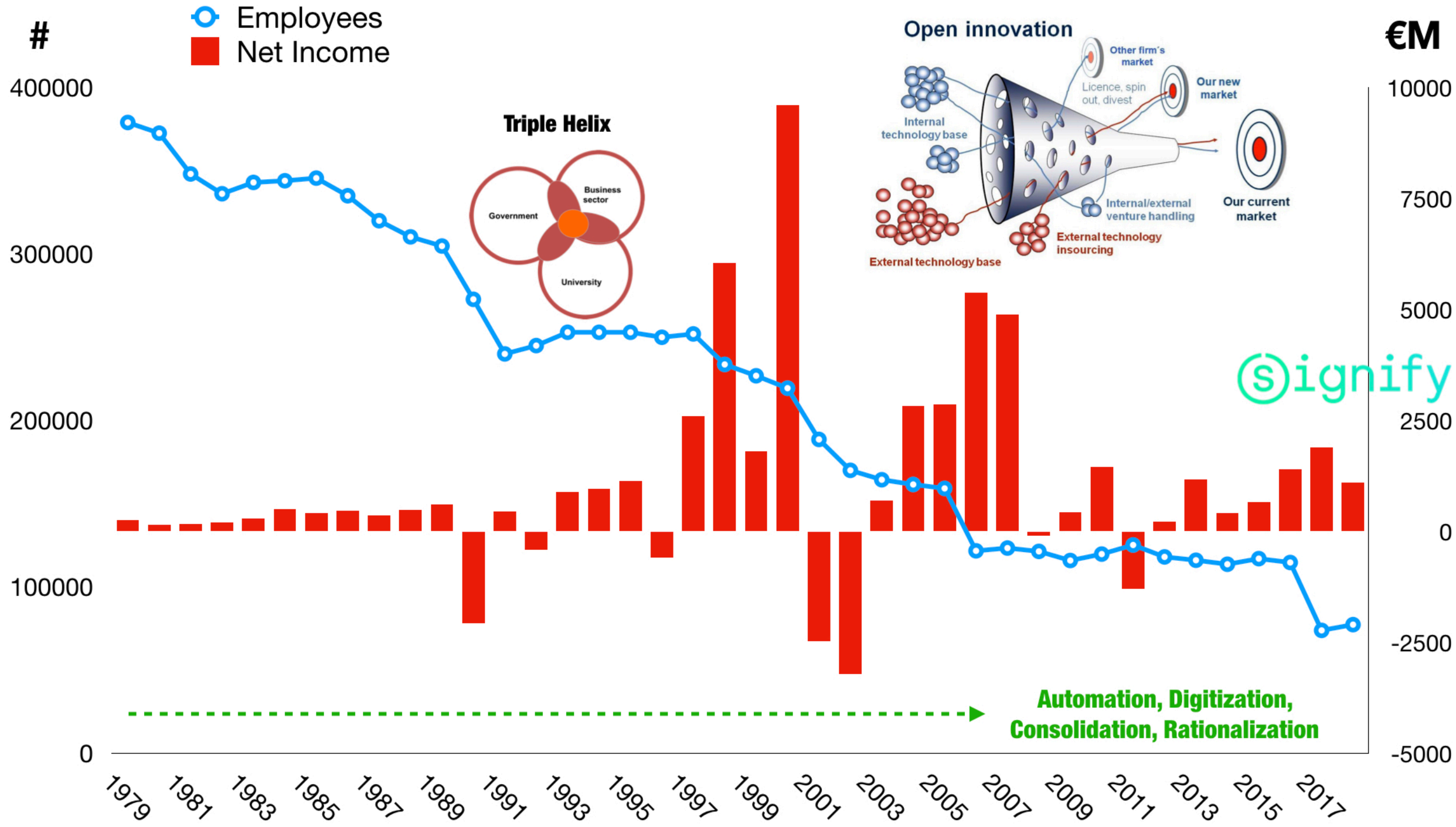
DIFFERENCES?





LINEAR PIPE/PRODUCT THINKING

“value creation” by controlling a linear series of activities

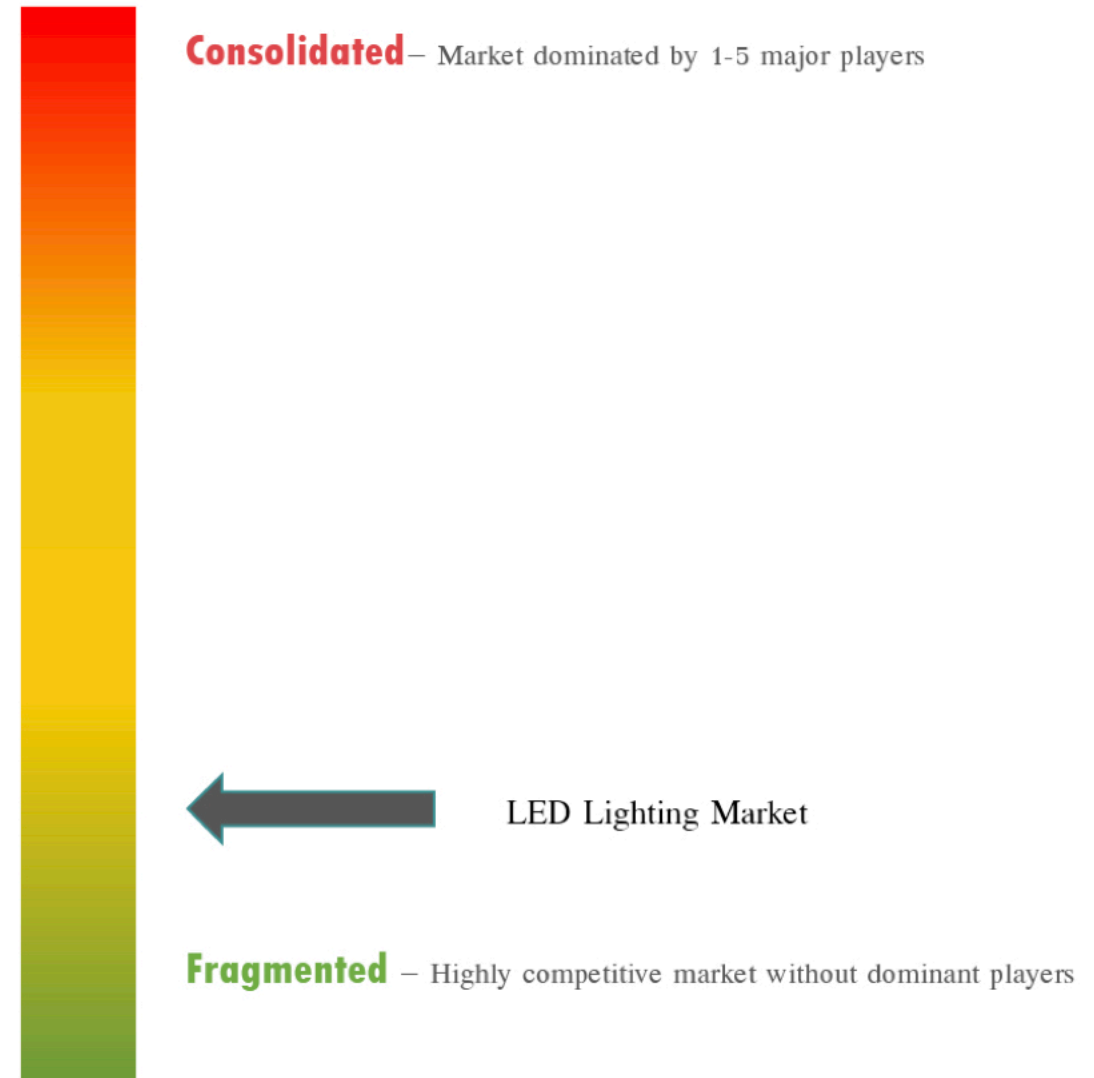


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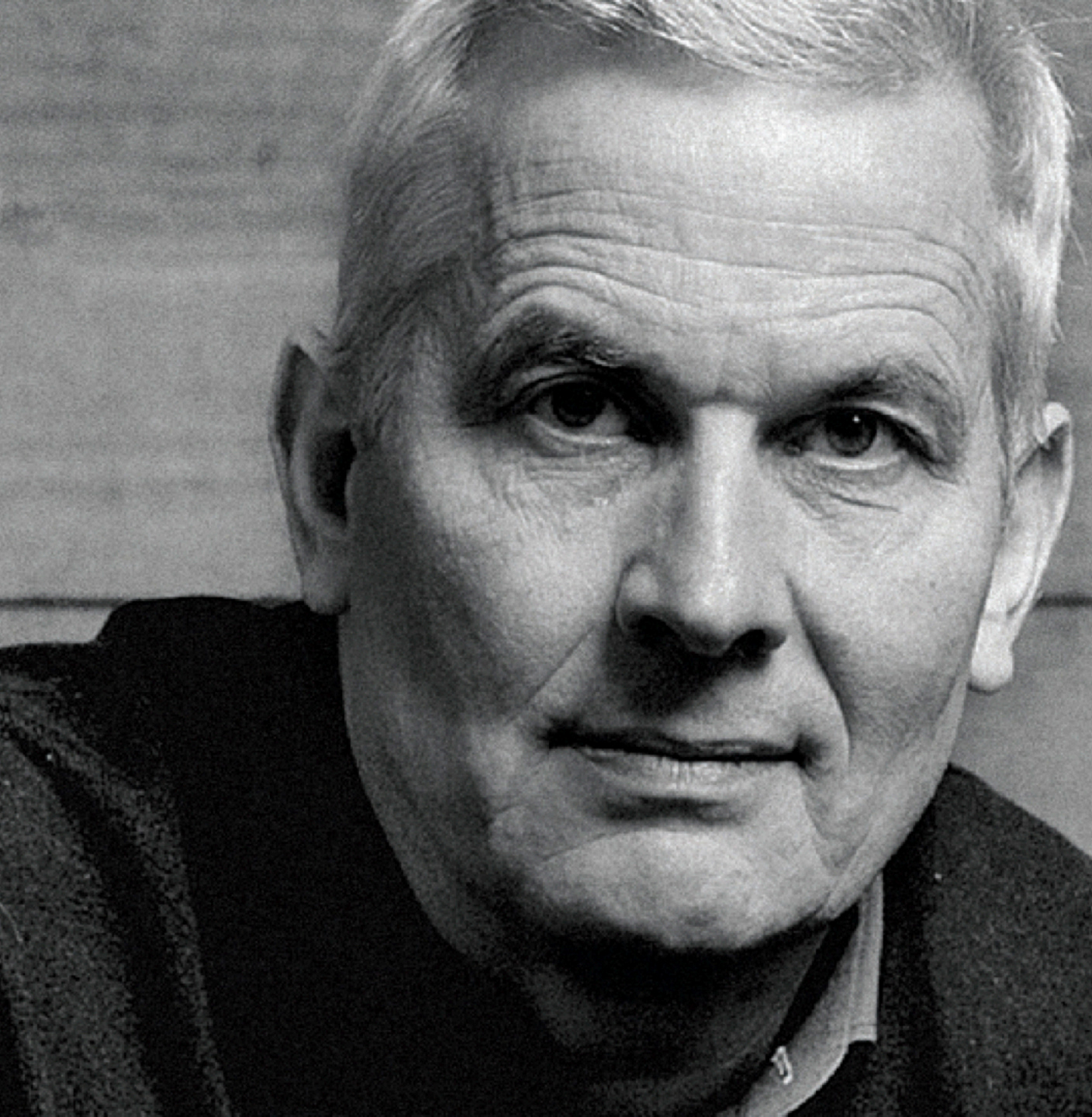
“From 4 competitors to 500 in just four years”

Market Concentration



Source: Mordor Intelligence

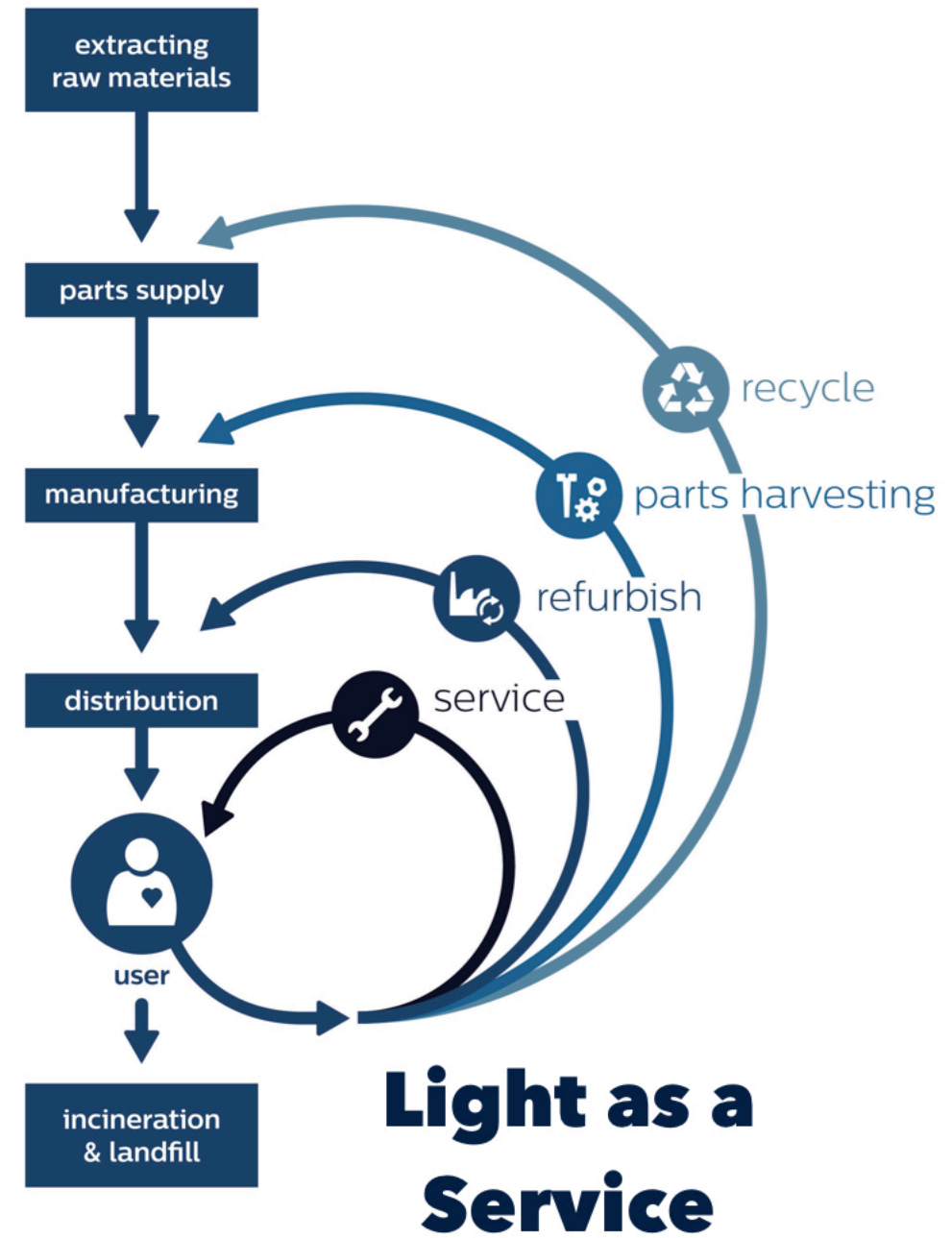
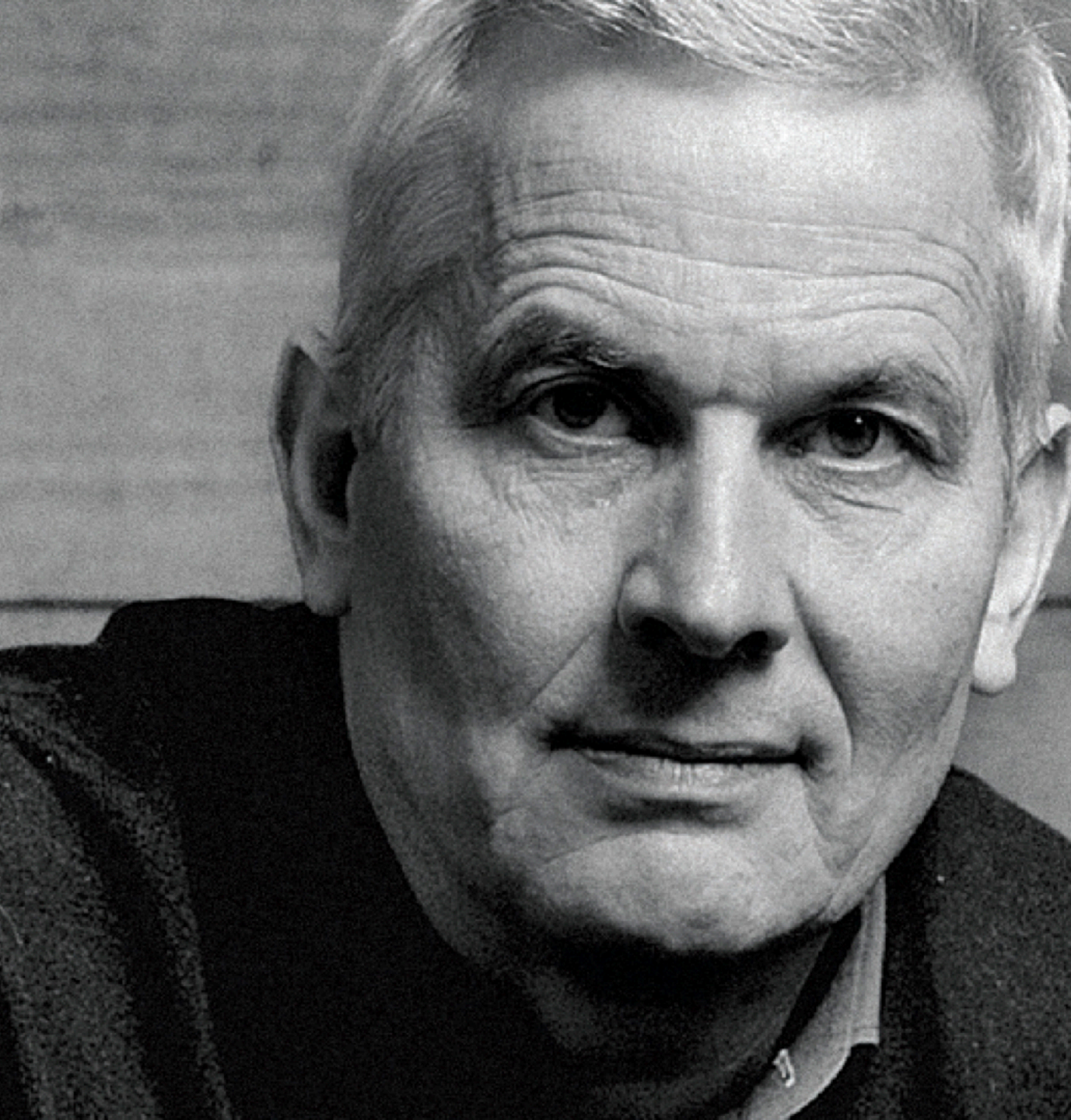




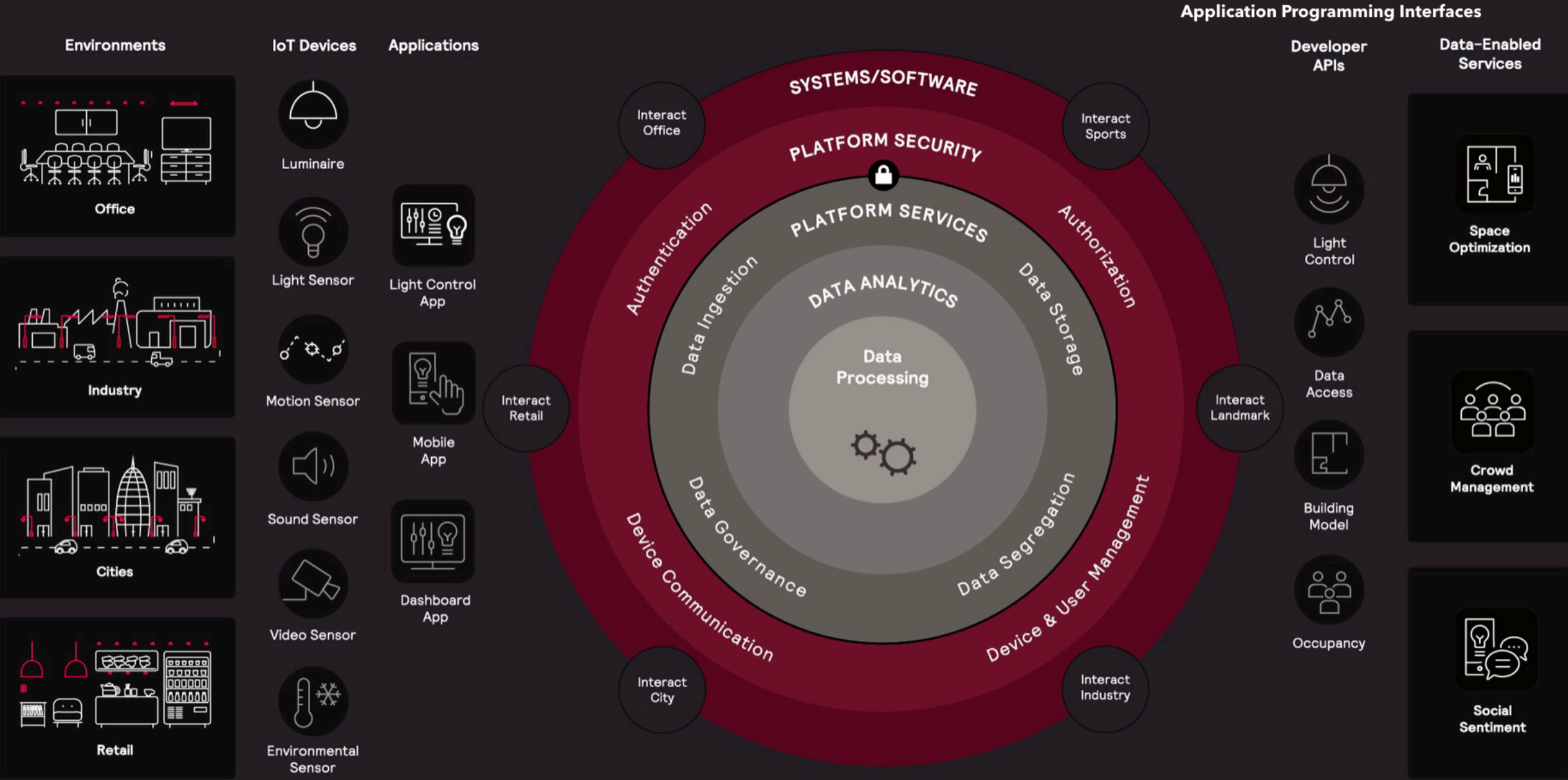
“

I told Philips, ‘Listen, I need so many hours of light in my premises every year. If you think you need a lamp, or electricity, or whatever – that’s fine. But I want nothing to do with it. I’m not interested in the product, just the performance. I want to buy light, and nothing else.

- Thomas Rau

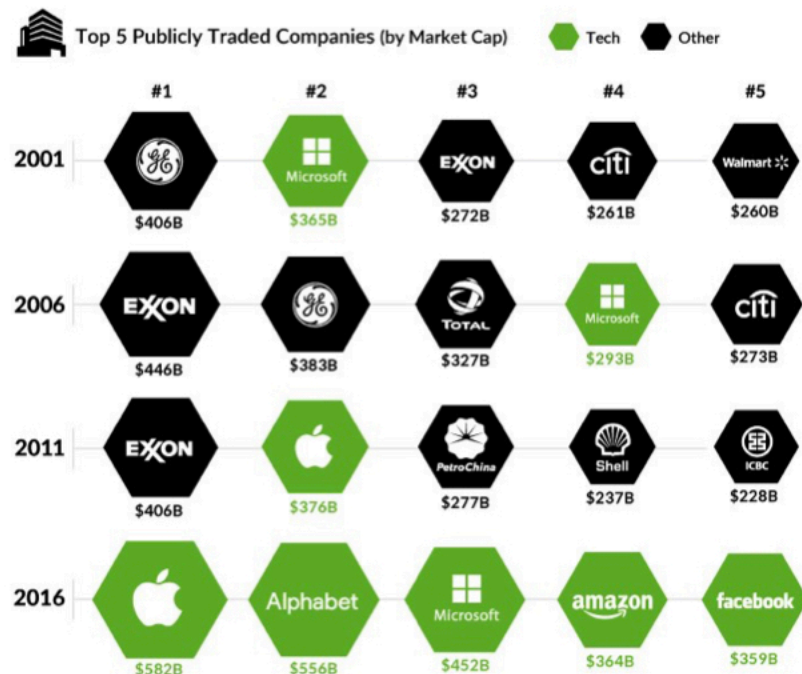


CONNECTION > COLLECTION > INGESTION > PROCESSING > INSIGHTS > INTERFACE > CONSUMPTION



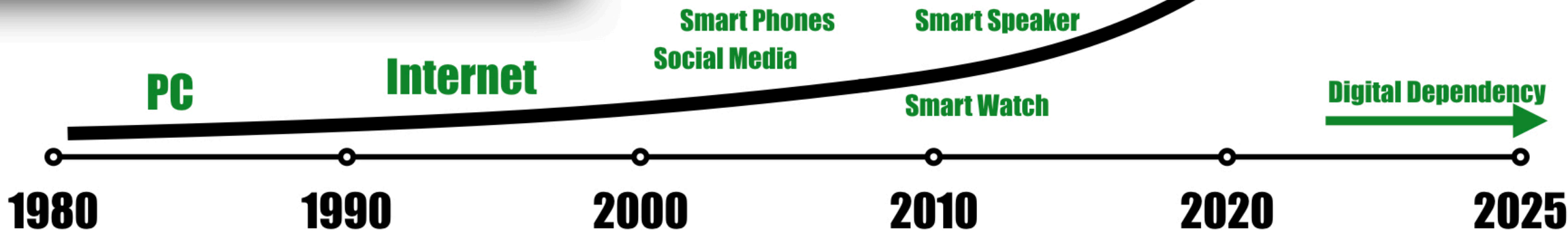
THE LARGEST COMPANIES BY MARKET CAP

The oil barons have been replaced by the whiz kids of Silicon Valley



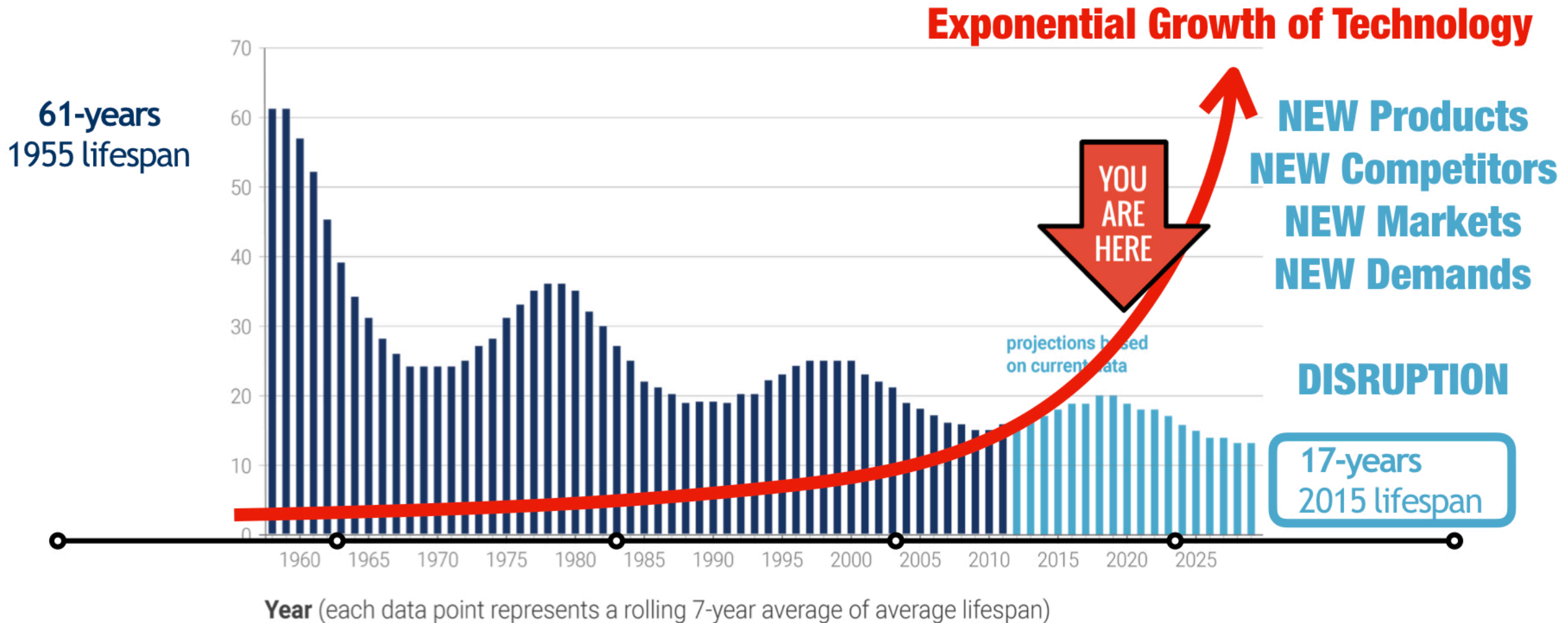
visualcapitalist.com

DISRUPTION HAS ALREADY HAPPENED
DATA IS THE NEW OIL AND
INTELLIGENT INFORMATION
IS THE NEW CURRENCY!



IN THE LAST 15 YEARS

52% of S&P 500 companies have disappeared



GLOBAL TOP 100 COMPANIES

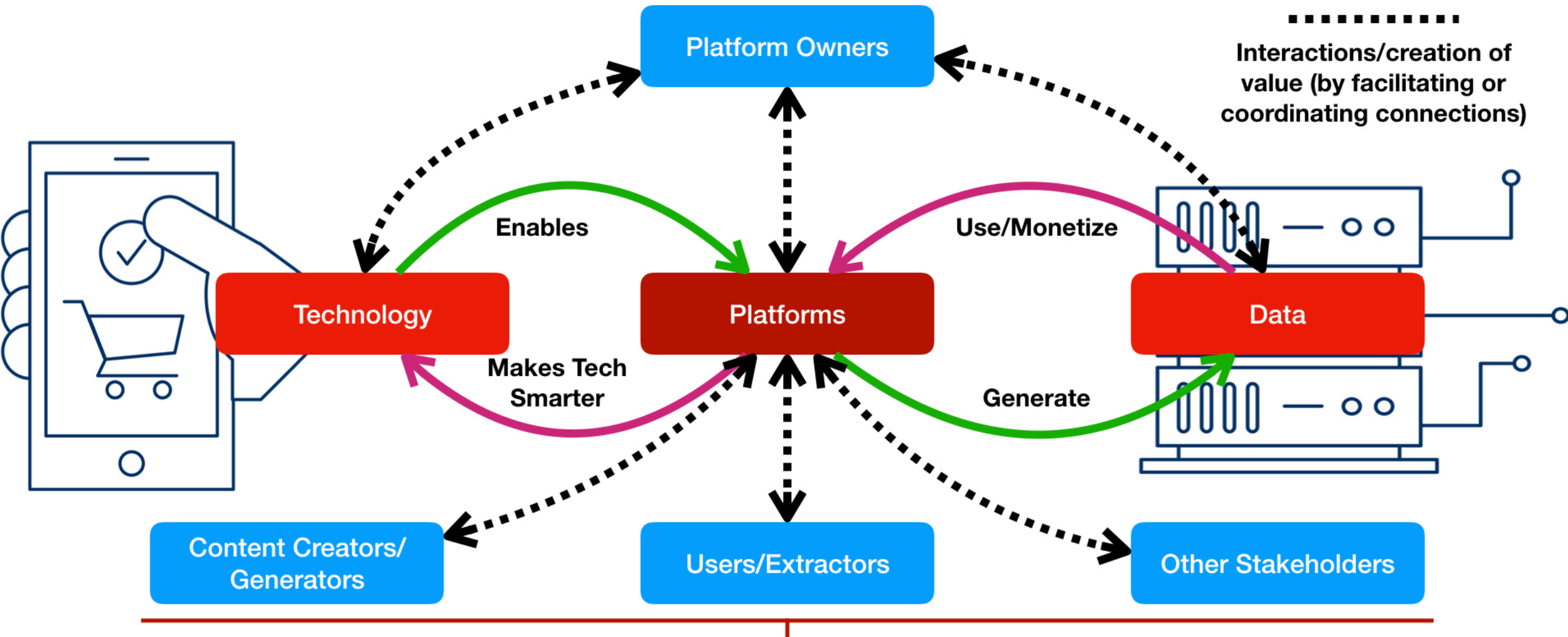
Highlights

- The **US** and **Greater China** saw no change from last year in the number of companies in the Global Top 100.
- The **UK** held its position in 3rd place, with six companies, helped by the return of **Rio Tinto** and **AstraZeneca**.
- **Germany** saw the biggest loss with three companies dropping out, including **Siemens** (having spun off its medical equipment unit, Siemens Healthineers AG), **Volkswagen** and **Allianz**.
- **India** rejoined the Global Top 100 for the first time since 2009, with the return of **Reliance Industries**, as well as a new entry, **Tata Consultancy**, reflective of strong domestic market performance.
- **Spain** dropped out of the Global Top 100 entirely after losing two companies since 2018: **Santander**, affected by softness in the financials sector, and **Inditex**, replaced by new entrants.
- **Saudi Arabia** joined the Global Top 100 this year for the first time with **Saudi Basic Industries Corp**, boosted by Saudi Aramco's \$69bn investment in March 2019 to acquire a 70% stake in the company.

Global Top 100 2019				Global Top 100 2018		
Location	# companies	Market capitalisation (\$bn)	Rank by market capitalisation	# companies*	Market capitalisation (\$bn)	Rank by market capitalisation
United States	54	13,292	1	54	12,187	1
Greater China	15	3,197	2	15	3,332	2
UK	6	870	3	5	814	3
France	5	696	5	4	532	5
Switzerland	3	774	4	3	655	4
Japan	2	298	6	1	210	11
Ireland	2	235	7	2	212	10
India	2	233	9	N/A	N/A	N/A
Canada	2	208	10	2	216	9
South Korea	1	234	8	1	298	7
Belgium	1	169	11	1	222	11
Netherlands	1	166	12	1	165	14
Germany	1	142	13	4	437	6
Australia	1	131	14	2	209	12
Denmark	1	128	15	1	123	15
South Africa	1	102	16	1	107	17
Brazil	1	100	18	1	114	16
Saudi Arabia	1	100	17	N/A	N/A	N/A
Spain	0	0	N/A	2	202	13

*2018 figures do not add to 100 due to two companies in the 2018 Global Top 100 being in locations that are no longer in the Global Top 100
Source: Bloomberg with PwC analysis

THE RISE OF IOT & AI



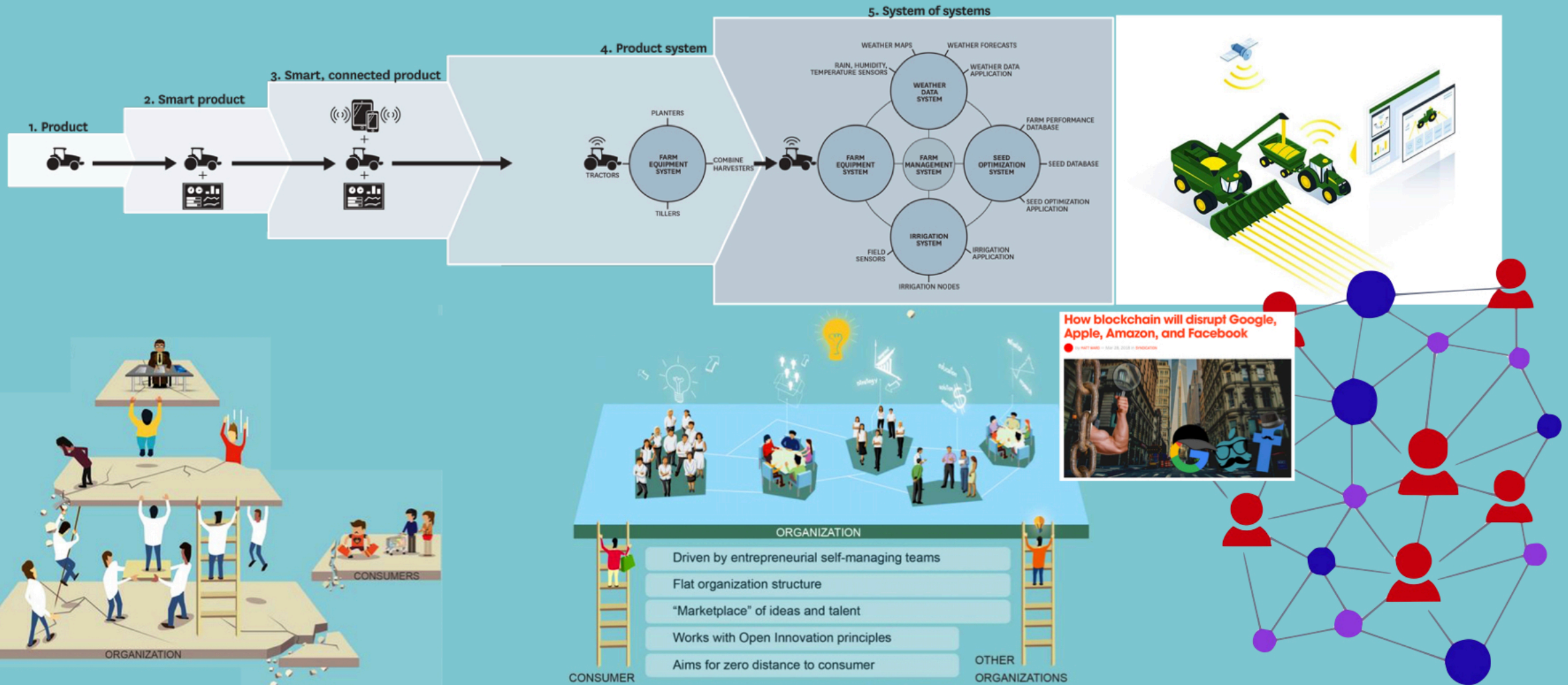
TRADE SECRETS ARE AT "RISK"!

AGE OF PRODUCTION

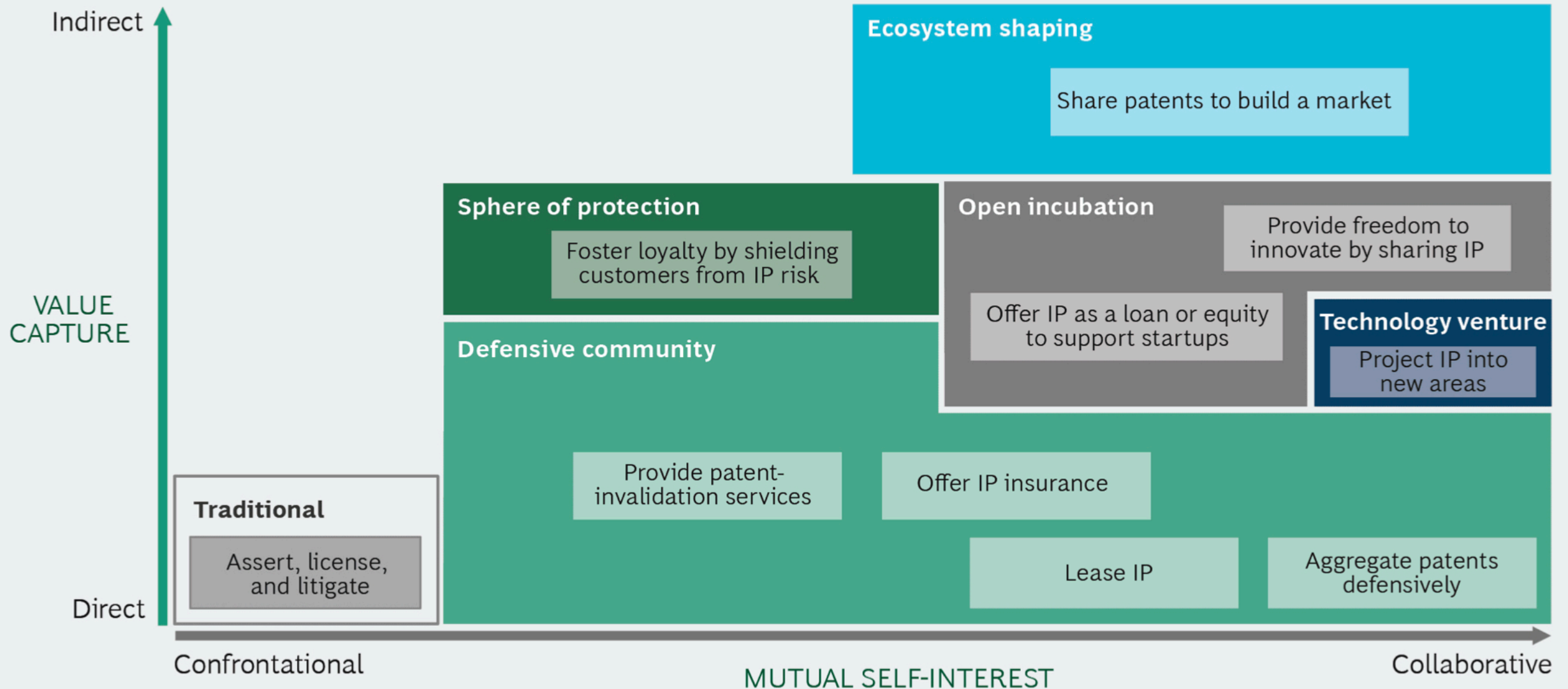
AGE OF MARKETING & SALES

AGE OF DATA & LEARNING

PRODUCTS → SERVICES → PLATFORMS → ECOSYSTEMS

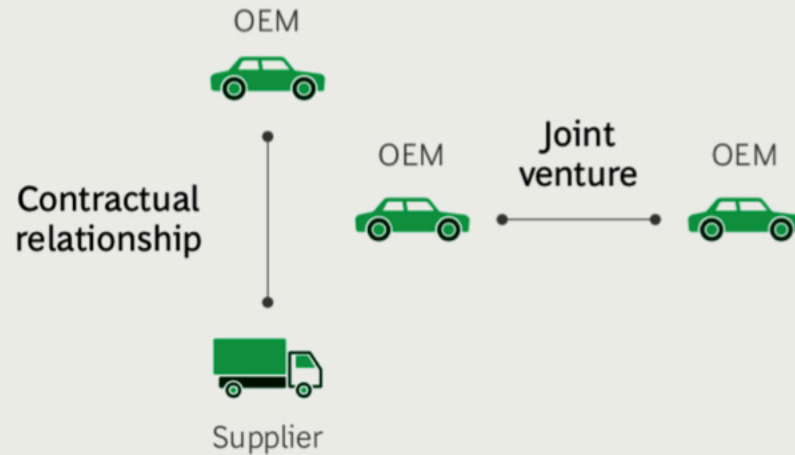


The IP Strategy Playbook Has Dramatically Expanded



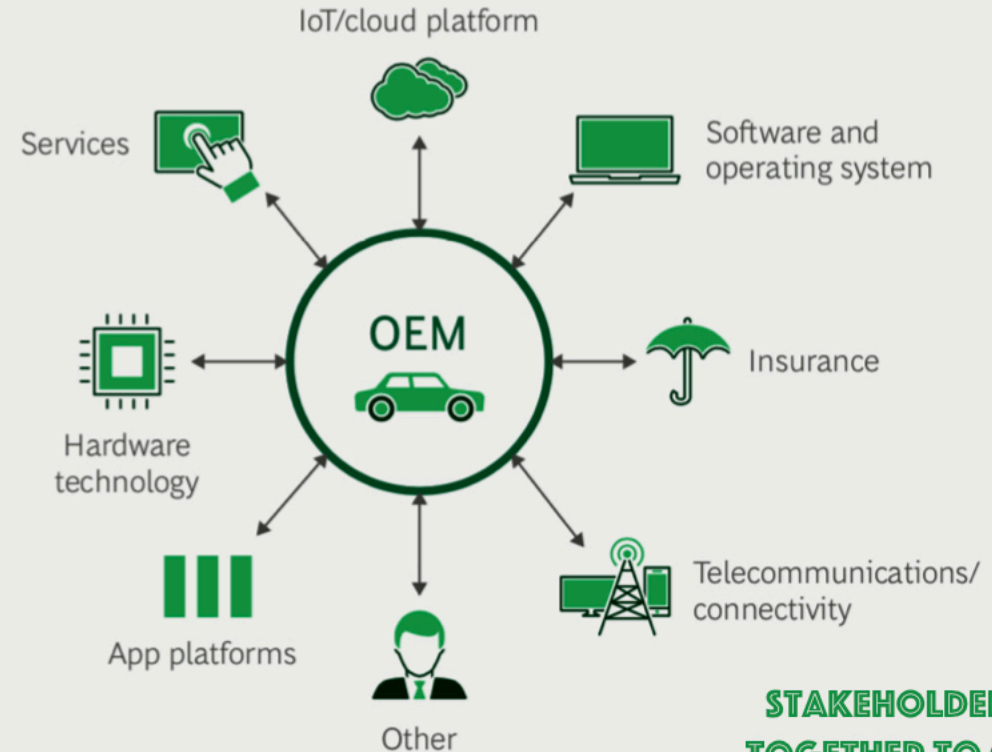
THE RISE OF THE ECOSYSTEM

Bilateral intra-industry partnership



Number of partners:	2
Number of industries:	1
Number of deal types:	1
Number of countries:	1

Multilateral cross-industry partnerships



**STAKEHOLDERS WORKING
TOGETHER TO CREATE VALUE**

Number of partners:	>30
Number of industries:	>5
Number of deal types:	~5
Number of countries:	>5

NEW TYPE OF TRADE SECRETS

"IN SHORT, DEVELOPERS WILL BE AT THE CENTER OF SOLVING THE WORLD'S MOST PRESSING CHALLENGES. HOWEVER, THE REAL POWER COMES WHEN EVERY DEVELOPER CAN CREATE TOGETHER, COLLABORATE, SHARE CODE AND BUILD ON EACH OTHER'S WORK. IN ALL WALKS OF LIFE, WE SEE THE POWER OF COMMUNITIES, AND THIS IS TRUE FOR SOFTWARE DEVELOPMENT AND DEVELOPERS."

SATYA NADELLA
(CEO MICROSOFT)

THE INTERNET OF THINGS

PUBLIC TRANSPORT

- Autonomous buses with autonomous routes.
- Car-sharing.

SMART MOBILITY

- Traffic flow analysis, programmable signalling, car park sensors, etc.

WASTE MANAGEMENT

- Optimisation of collection routes, comprehensive control of all waste.

AGRICULTURE

- Programmed watering based on weather forecasts.
- Driverless tractors.

ROBOTICS

- Robots will occupy 45% of current jobs.

ELECTRICAL GRIDS

- Smart energy generation and transmission.
- Smart meters.
- Reduction of CO₂ emissions.

HEALTH

- Personal monitoring devices connected to the health care system.
- Telemedicine.
- Management of health resources by data.

DOMOTICS/SMART HOME

- Connected appliances, voice assistants, remote surveillance via mobile, remote HVAC management, etc.

RETAIL

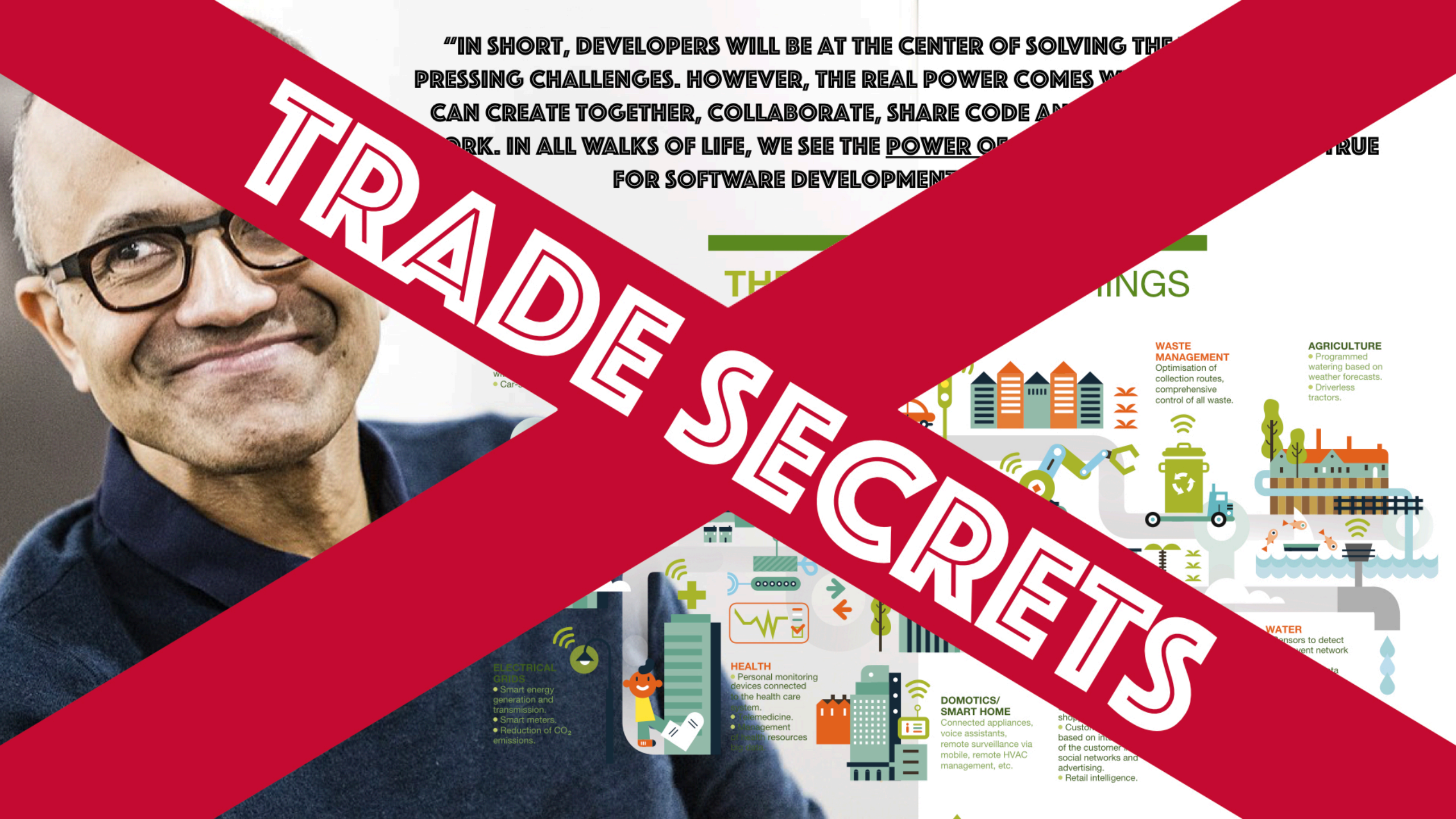
- Enhancement of customer's shopping experience.
- Customised offers based on interactions of the customer in social networks and advertising.
- Retail intelligence.

WATER

- Sensors to detect and prevent network leakage.
- Centralised data for end-to-end management.

INDUSTRY

- Cyber-physical systems (CPS), which combine physical infrastructure with software sensors, communications and process control.



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FOR SOFTWARE DEVELOPMENT

THE THINGS

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GRIDS**

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**WASTE
MANAGEMENT**

Optimisation of collection routes, comprehensive control of all waste.

AGRICULTURE

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WATER

Sensors to detect the water network



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**PUBLIC
TRANSPORT**

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GRIDS**

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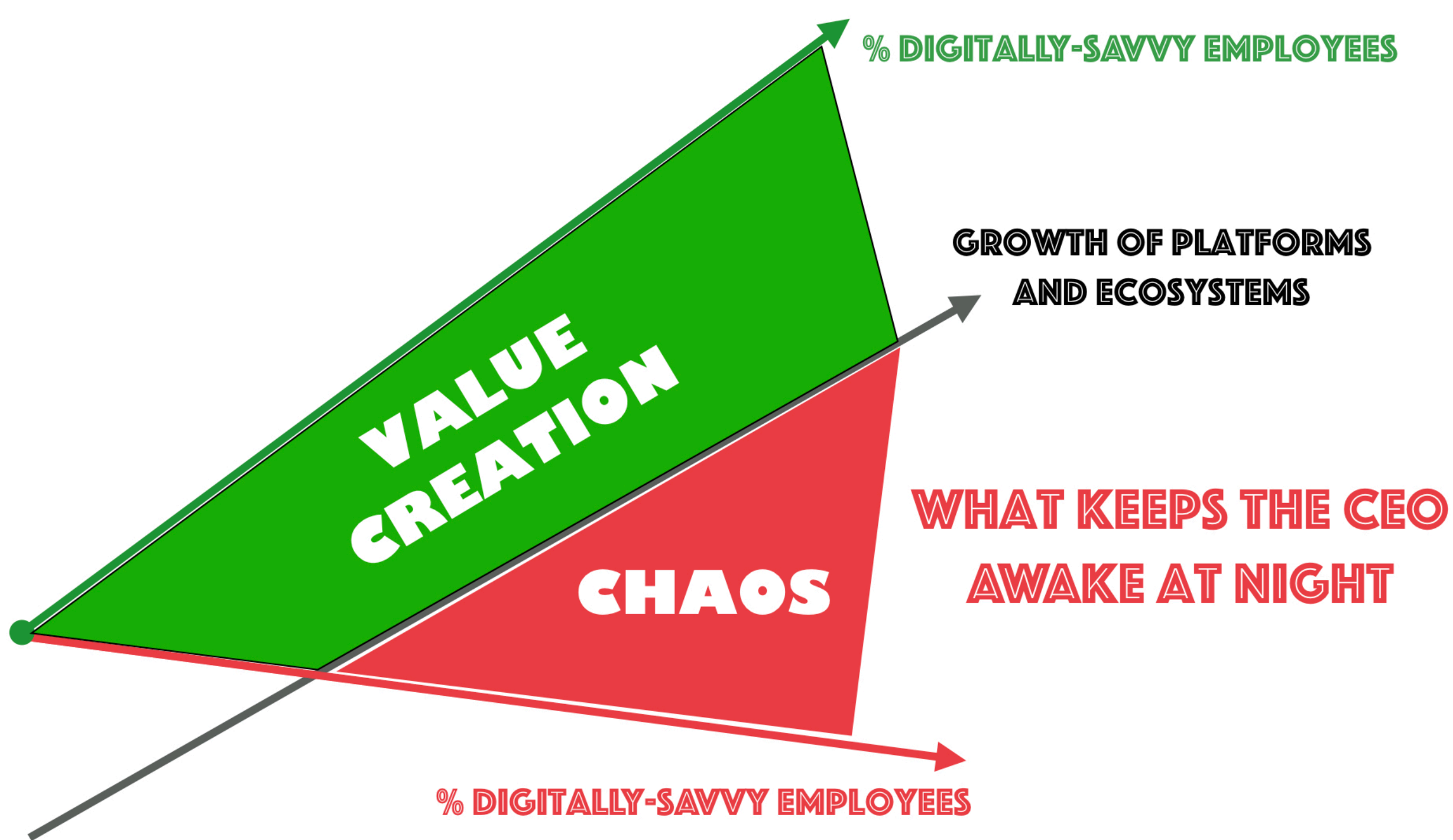
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Geneva, 25 November 2019

WIPO SYMPOSIUM ON TRADE SECRETS AND INNOVATION

Topic II Trade Secrets Systems in Innovation, IP Policies and Development

Davide FOLLADOR

EUROPEAN COMMISSION
DG for Internal Market, Industry, Entrepreneurship and SMEs
F3 - Intellectual property and Fight against Counterfeiting

Trade Secrets and innovation-IP policies

Large and small businesses:

- use confidentiality as a business & research innovation management tool
- rely on trade secrets for competitiveness
- value trade secrets as much as patents

Trade Secrets protection:

- is conducive to investments in innovation
- facilitate sharing among partners by enabling recovery should a third party misappropriate
- improves legal certainty of collaborative R&D

Use of trade secrets in R&D projects [7th EU Research Framework Programme - 2015]

- 64% of the projects (185 out of 290) report no patenting activities
- 60% of the projects opted for 'secrecy' as form of protection

Misappropriation of Trade Secrets is increasing

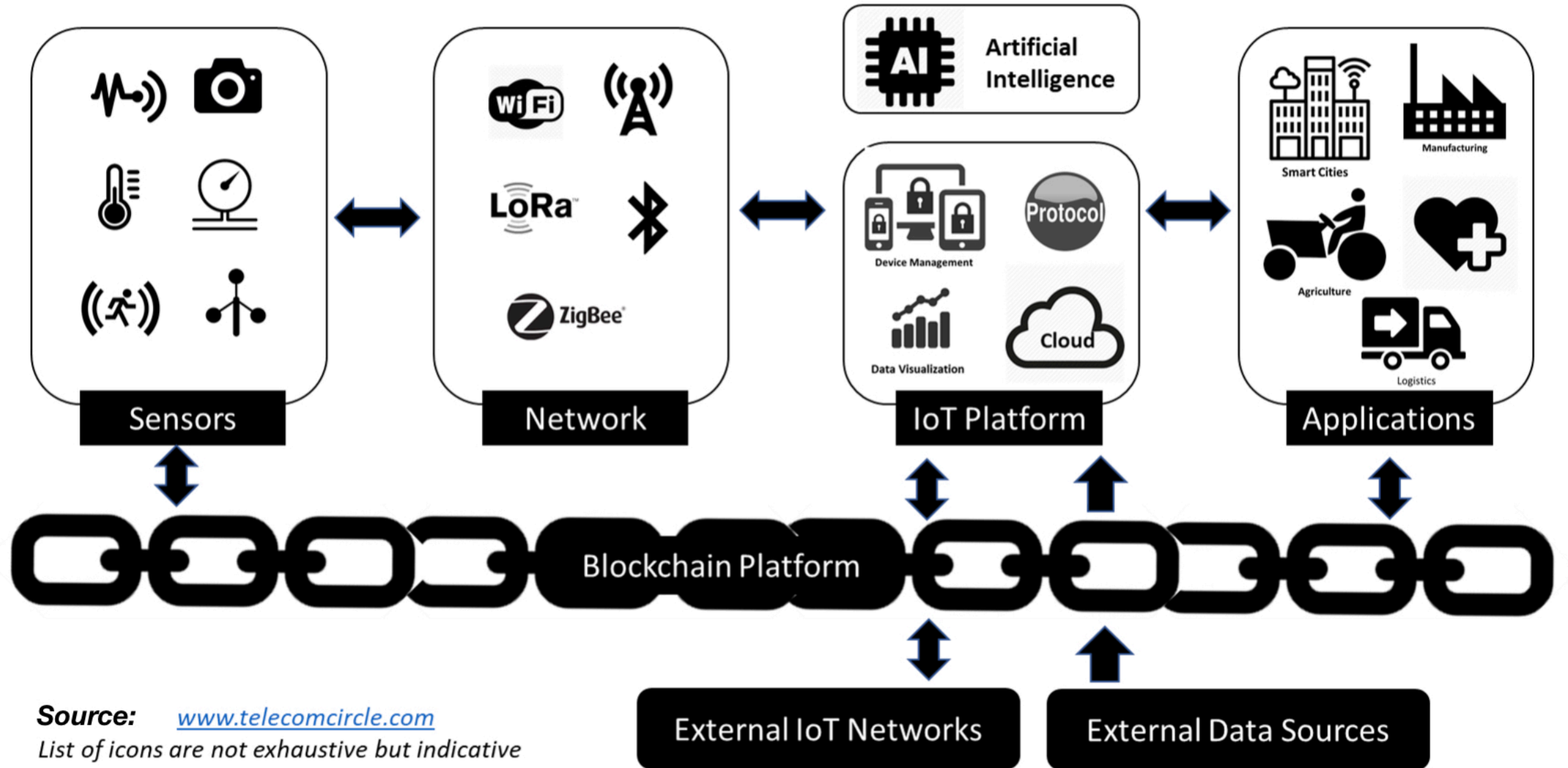
2012 industry survey: 18% of companies reported theft of information, in 2013 this increased to 25% (2013/2014 Global Fraud Report, Kroll)

2018 Study on cyber-theft of trade secrets: 60 bl Eur losses and potential 1 ml jobs in the EU





CONTINUOUS WORK IN PROGRESS



CHALLENGES

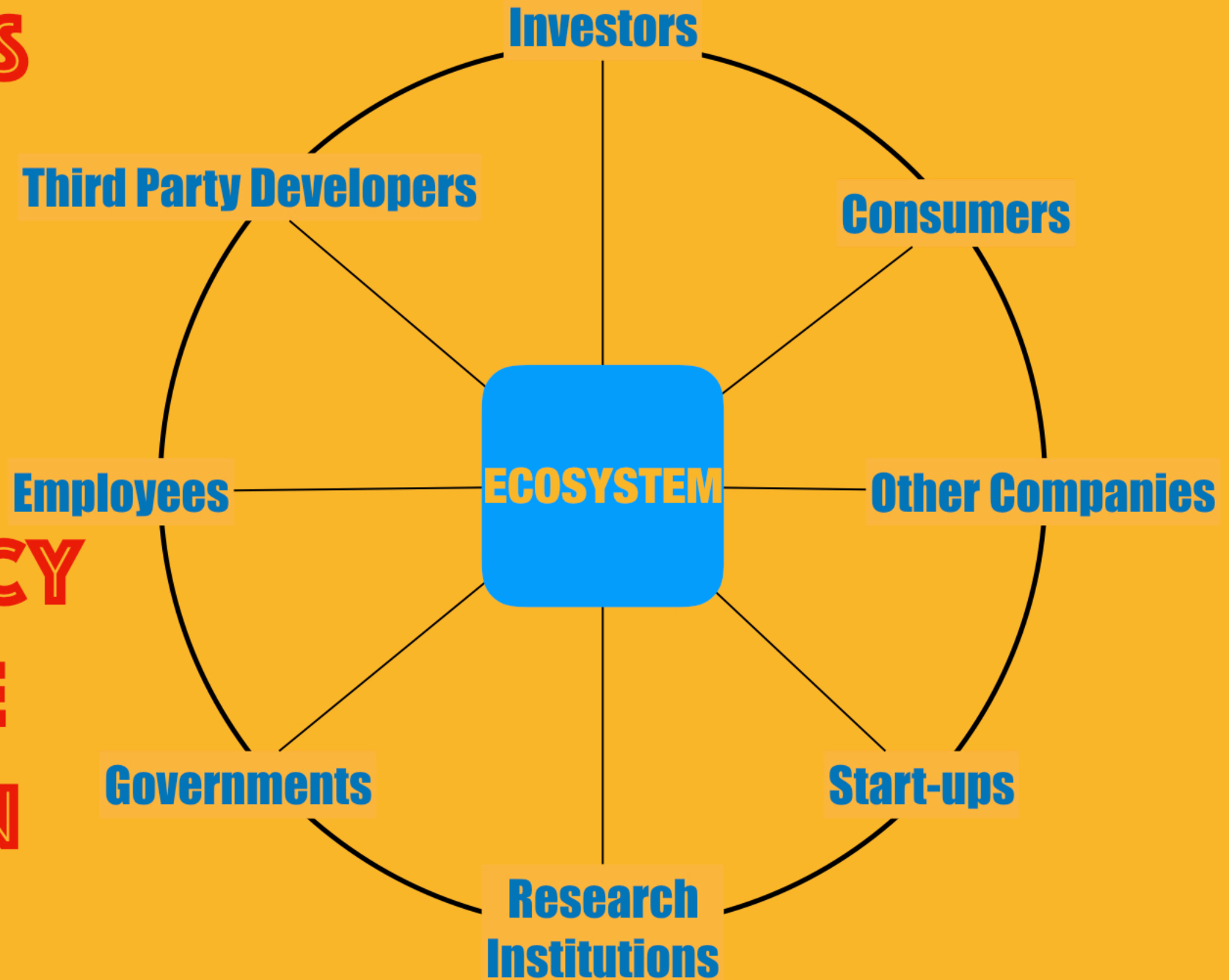
SHARING

OPEN

TRANSPARENCY

DISCLOSURE

REGULATION



**WELCOME TO 2030. I OWN
NOTHING, HAVE NO PRIVACY, AND
LIFE HAS NEVER BEEN BETTER**



Ida Auken

Minister for the Environment of Denmark (2011-2014)

JOIN THE CONVERSATION!



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