VIKTOR KAZNOV, R&D DIGITAL OFFICER

DIGITALISATION @ SCANIA

SCANIA

AUTONOMOUS
CONNECTED
ELECTRIFIED
SCANIA

WHAT MAKES A DIGITAL COMPANY?

- Using email?
- Have a website?
- Use social media?
- Video conferencing?
- Chatbot?

- Data-driven decision making
- Relentless experimentation (e.g. A/B testing)
- Short feedback cycles
- Decision making pushed down in organisation
- Strategic data collection
- Unified data warehouse
- Pervasive use of AI and automation
- New job descriptions

DIGITAL, AUTOMATED AND SIMULATION BASED R&D PROCESS

WORKING TOGETHER GLOBALLY ON ONE SET OF RELEVANT DIGITAL DATA

FROM TESTING BASED TO SIMULATION BASED DECISIONS

REALISTIC SIMULATION OF PHYSICAL AND FUNCTIONAL PROPERTIES

SEAMLESS DIGITAL INTERACTION AMONG ALL R&D PARTNERS
BOTH INTERNAL AND EXTERNAL

WHY AUTOMATION? THE REALITY

A changed but expanded workforce

14% of jobs are at high risk of automation

32% of jobs could be radically transformed

Job Skill Categories	2002-2016	2016-2030*
Physical + Manual Skills	▲ 3%	▼ 11%
Basic Cognitive Skills	▲ 1%	▼ 14%
Higher Cognitive Skills	▲ 9%	▲ 9%
Social + Emotional Skills	▲ 13%	▲ 26%
Technological Skills	▲ 27%	▲ 60%

McKinsey: Global Institute: Skill shift automation and the future of the workforce, May 2018

WHY AUTOMATION? OPPORTUNITY

JOB SATISFACTION INCREASES

50%

mundane work becomes automated

Deloitte: Automation is here to stay

PRODUCTIVITY IMPROVES

52%

of future global productivity growth made possible by automation

McKinsey: A Future That Works: Automation, Employment and Productivity

THE WORKFORCE EXPANDS

60M

net new jobs created by automation

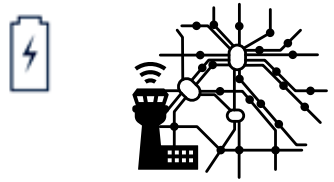
World Economic Forum: Future of Jobs Report

CAPACITY INCREASES

2.3B

Robots add the equivalent of full time workers to the workforce

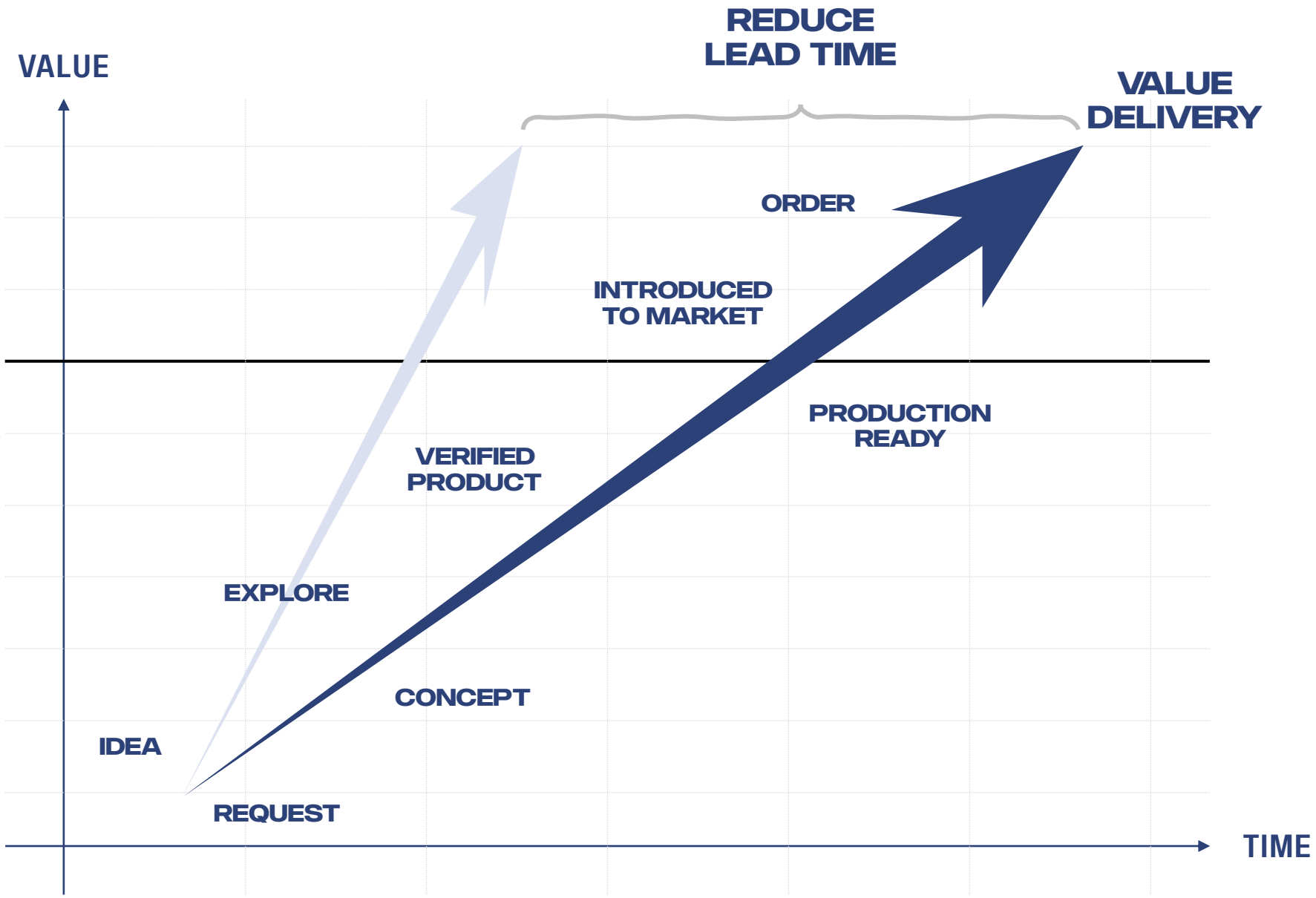
McKinsey: A Future That Works: Automation, Employment and Productivity

	4-Series	5-Series	6-Series	?-Series
Development Level				
Product Composition	Mechanic Data	Mechanic + ECU's + Data +Connectivity	Mechanic + more ECUs + more Data + Connectivity	Mechanic + more ECUs + more Data + Connectivity + Electrification + Autonomous + More electrical platforms
Lifecycle Maturity	Limited customer operation Spare Parts	Regular customer operation	Current offering	Future offering
IT Toolchain and Data Management	Computer tools and data 	More computer tools and more data 	More computer tools and huge amount data 	Even more computer tools Astronomic amount of data

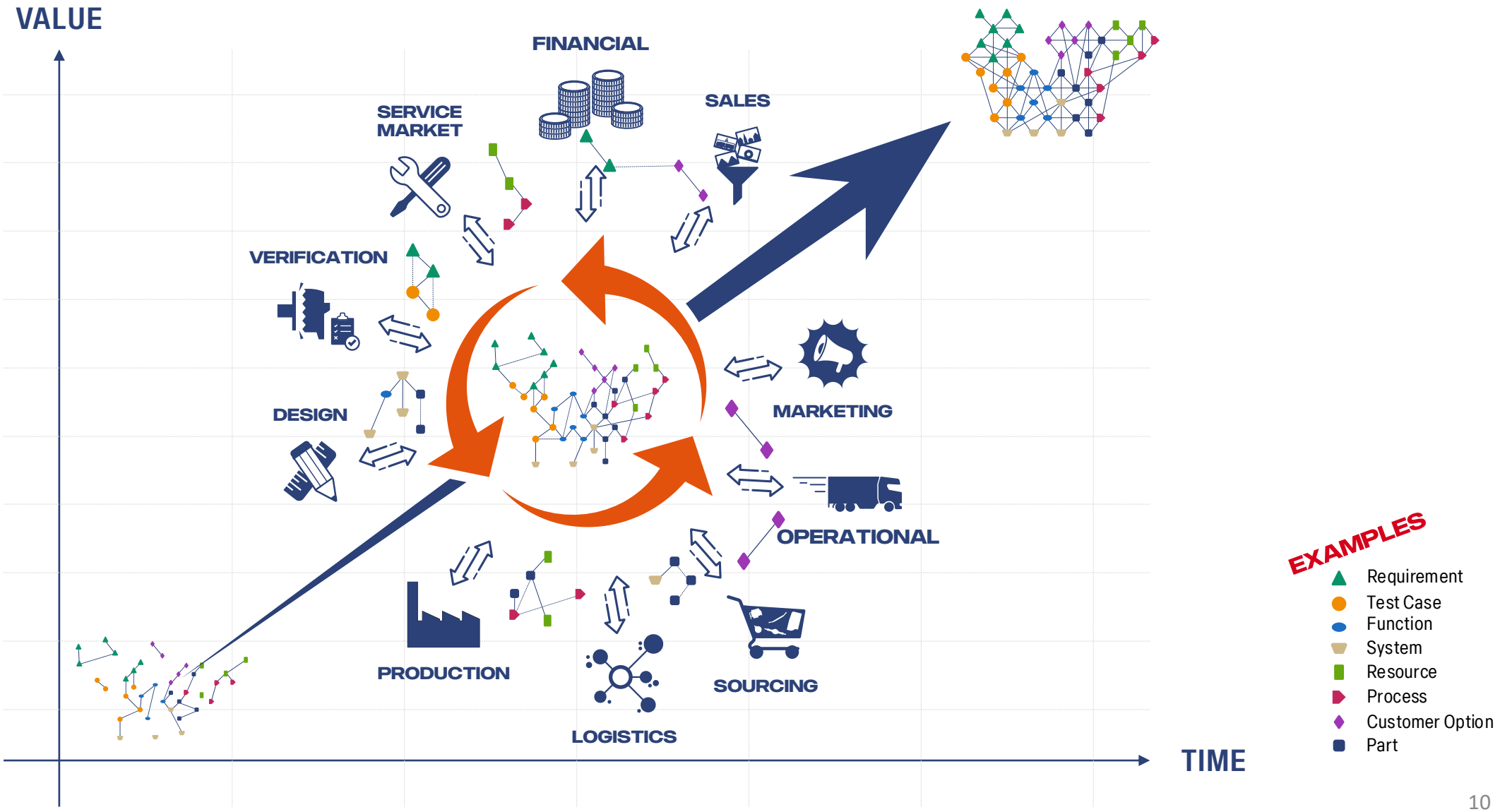
LEVEL OF COMPLEXITY

Info class Internal Department / Name / Subject

WHAT WE WANT TO ENABLE



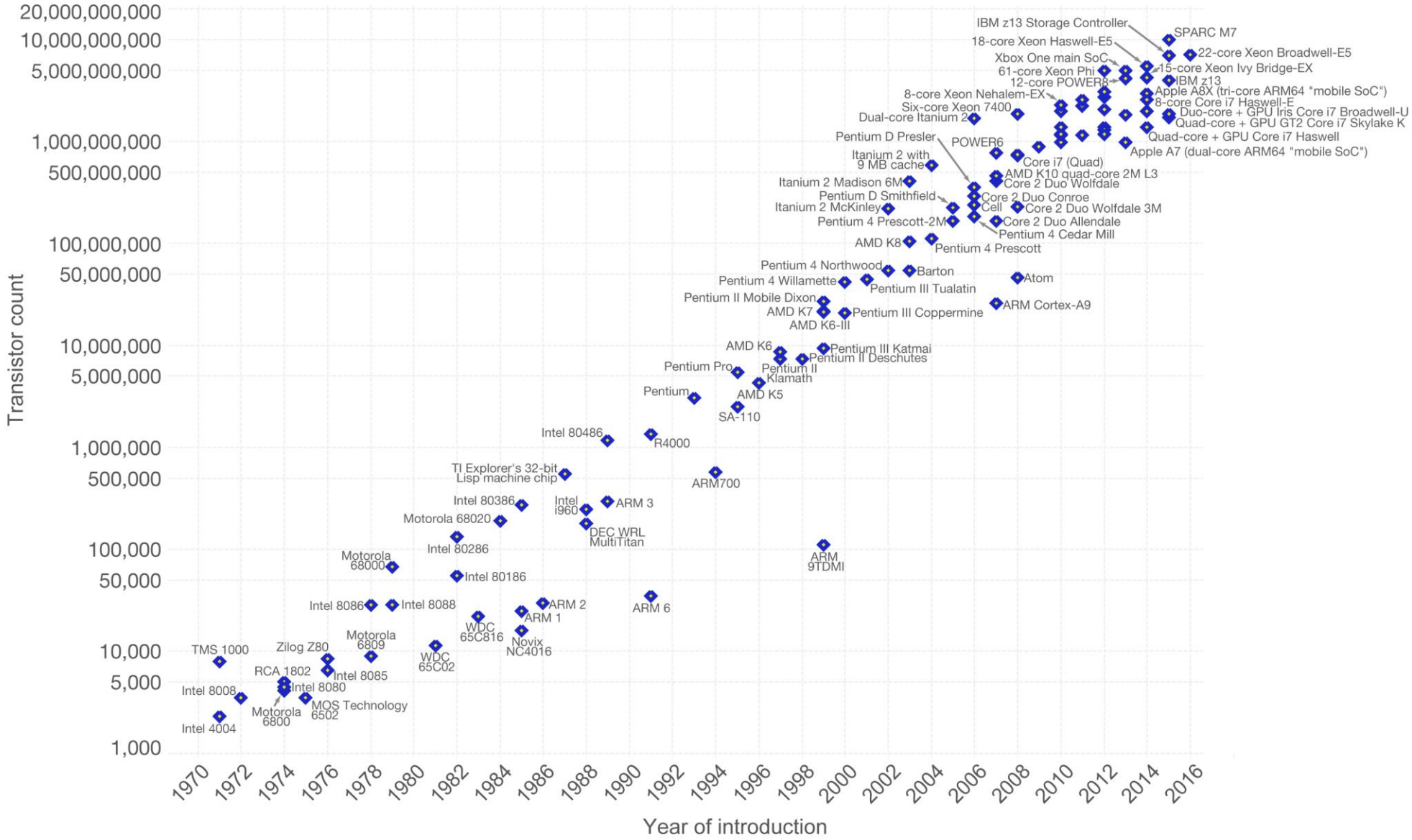
OUR ABILITY TO MANAGE INFORMATION AND KNOWLEDGE RESULTS IN OUR SPEED AND EFFECTIVITY



Moore's Law – The number of transistors on integrated circuit chips (1971-2016)

Our World in Data

Moore's law describes the empirical regularity that the number of transistors on integrated circuits doubles approximately every two years. This advancement is important as other aspects of technological progress – such as processing speed or the price of electronic products – are strongly linked to Moore's law.



Data source: Wikipedia (https://en.wikipedia.org/wiki/Transistor_count)

The data visualization is available at OurWorldinData.org. There you find more visualizations and research on this topic.

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SCANIA