

# Artificial Intelligence and Marketing

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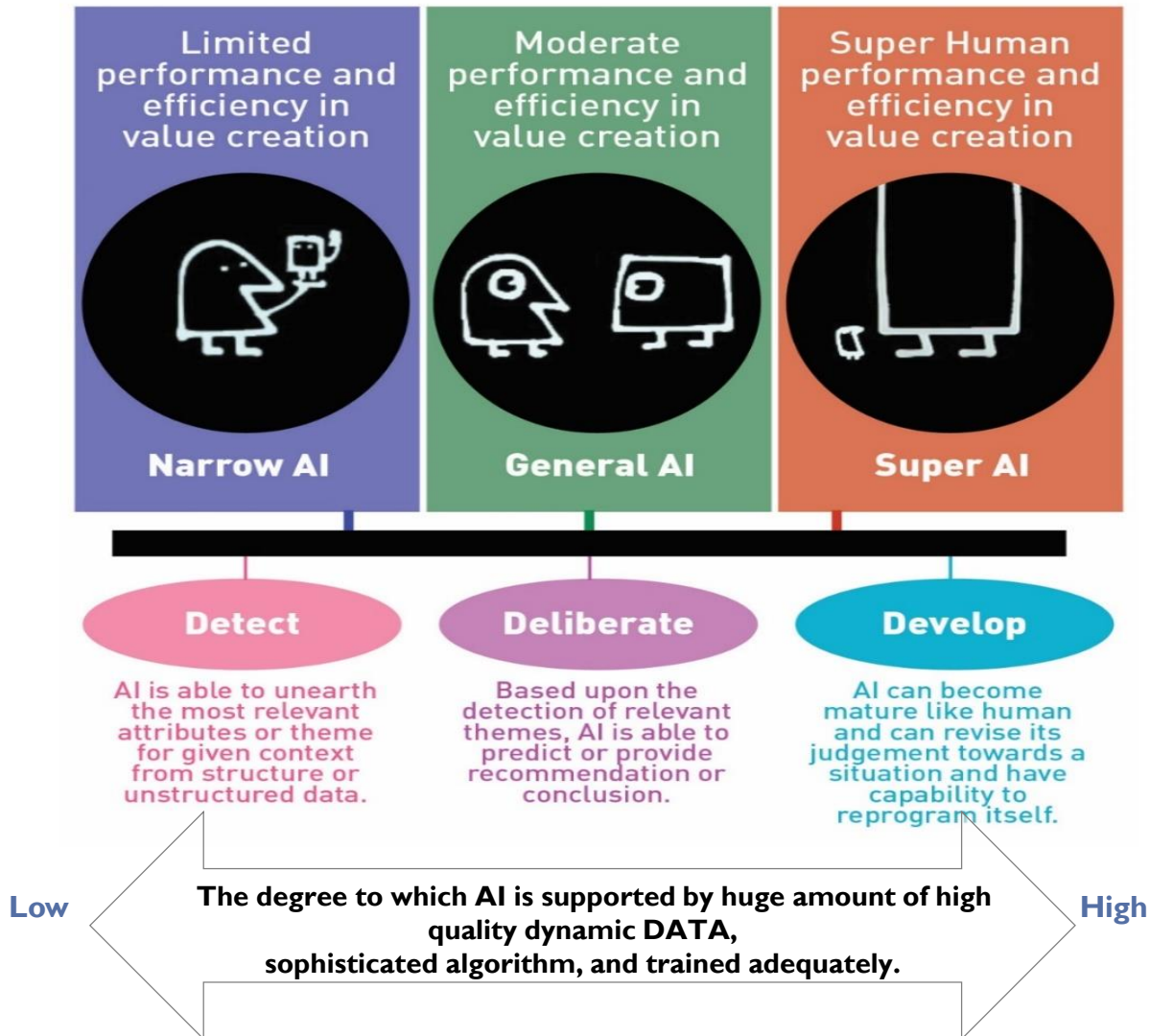
## OUTLINE

1. Background AND understanding of AI and the technological variations in it.
2. Use of AI in different areas of business and marketing, with examples.
2. Progress of AI in the World and especially in EUROPE
4. Value creation by AI
5. Challenges and opportunities of AI

## BACKGROUND OF AI

- AI is founded on machine learning (+deep learning) and connectionist systems that performs as an autonomous system instead of a static human supported program.
- This complements human's ability and limitations in gathering information, processing, presenting, decision-making, reacting, and interacting.
- Not only solving the given problem or illustrate the current trends/patterns or respond to requests and enquiries by customers but also draw futuristic inferences and act upon them with higher efficiency like a long-term vision and system that would mimic human works, thoughts, behavior and take actions.

## TYPES OF ARTIFICIAL INTELLIGENCE

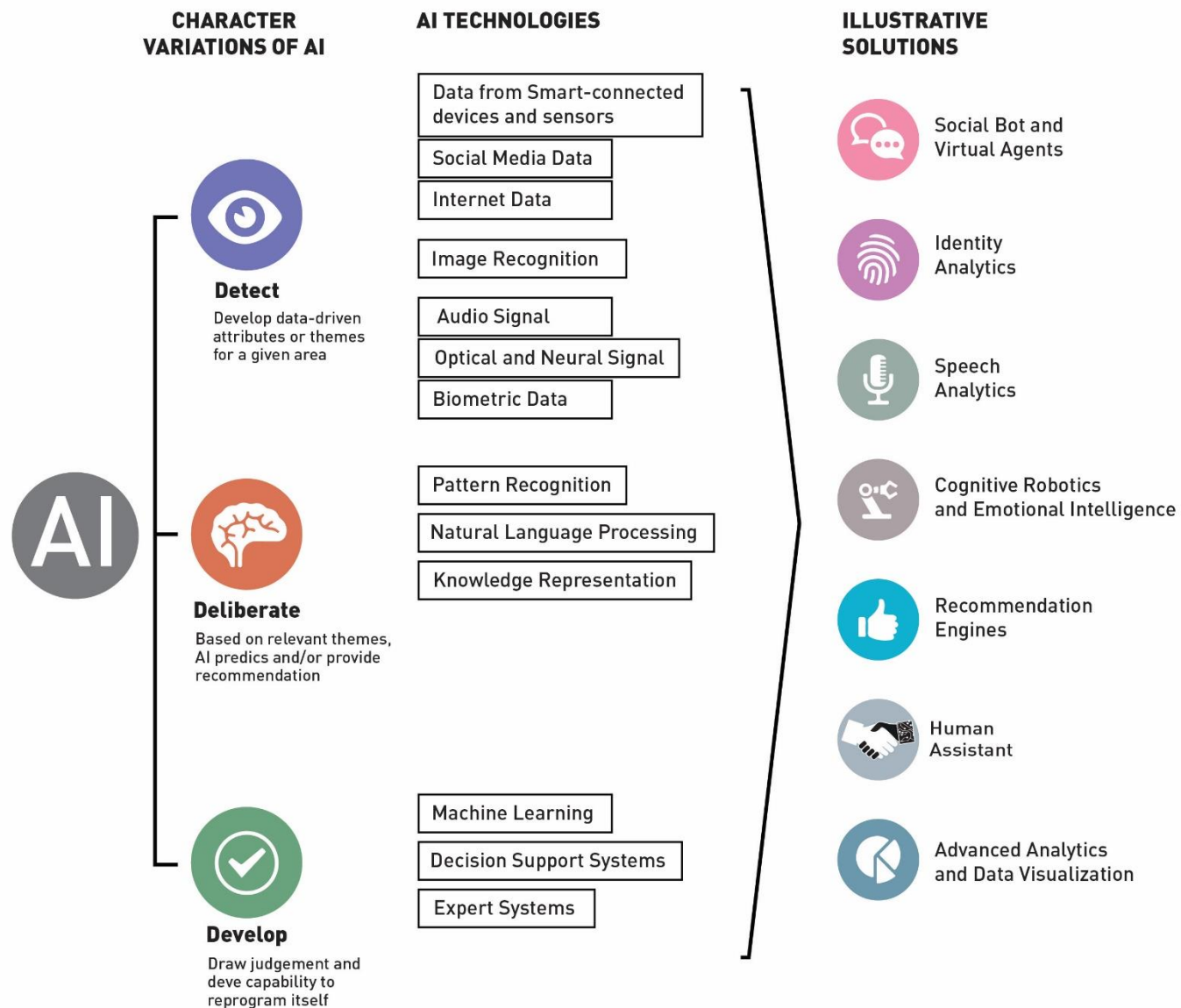


# USE OF AI IN DIFFERENT AREAS OF BUSINESS AND MARKETING

SECTORS	USE CASES	APPLICATIONS	EXAMPLES
<b>Financial Management</b>	Stock trading	An intelligent agent predicts the performance of a given stock based on the current and past stock movement.	Kavout; Merrill Lynch
	Fraud detection	Based on large volumes of customer data, together with transactional data that is updated as transactions occur, AI can be used to effectively identify credit card behavior patterns that are irregular for specific customers.	Danske Bank with Teradata
	Credit risk assessment	This is more of a classification type problem well suited to machine learning techniques.	Ping An Puhui
<b>Human Resource Management</b>	Recruitment	AI-enabled systems can scan vast amount of applications far more quickly than humans and work out whether candidates are a good fit.	Johnson & Johnson with HiredScore
<b>Marketing and Sales</b>	Personalized pricing	AI can automatically change prices in real time based on supply and demand. Also, it can offer personalized price by analysis based on how much the users are willing to pay.	UBER, Lyft, Amazon
	Customer Service	AI can assist customer service agents by enabling intelligence auto reply, answering fewer complex queries, sorting and organizing email inquiries etc. Automated call centers often request the ability for an intelligent system to be able to understand a user's request and make every effort to fulfil that request.	KLM Nordea Bank with Amazon Alexa
	Product recommendation	Many people shop online each day, and retailers are able to preserve the history of purchases for each shopper and use AI to make recommendations of products that may also be of interest to them.	Amazon; Netflix, Spotify
<b>Manufacturing and operation</b>	Defect identification	It is possible to determine manufacturing flaws using machine vision and machine learning techniques.	Siemens; NVIDIA
	Energy Management	Comprising IoT sensors collecting data in real time, big data analytics and artificial intelligence, the solution can identify energy savings opportunities and reduced energy consumption.	AI Thuraya Tower I

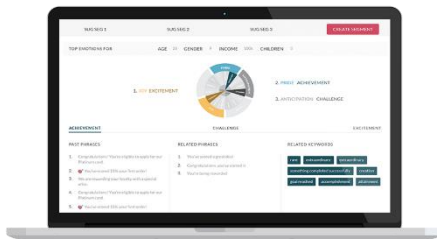


# Technological Combinations of AI-based solutions



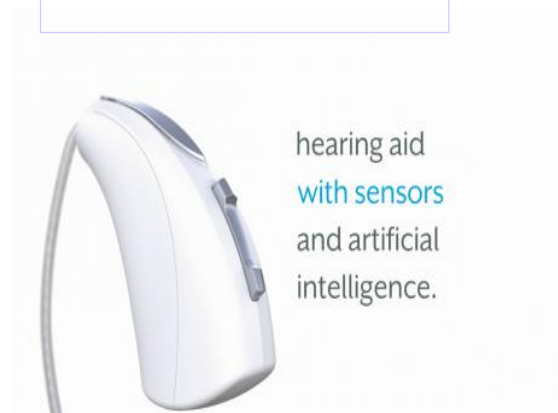
## DIFFERENCES IN TACHNOLOGICAL INPUTS- In Big Data

### Number + Text Data



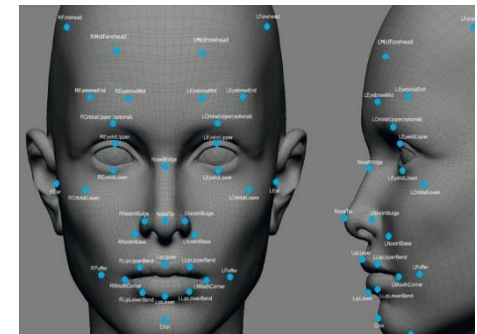
Persado Enterprise uses custom language per brand including style, structure, vocabulary, and descriptions. You control, adjust and fine-tune the language generated to adhere to your brand ethos.

### Nonvisual Signals



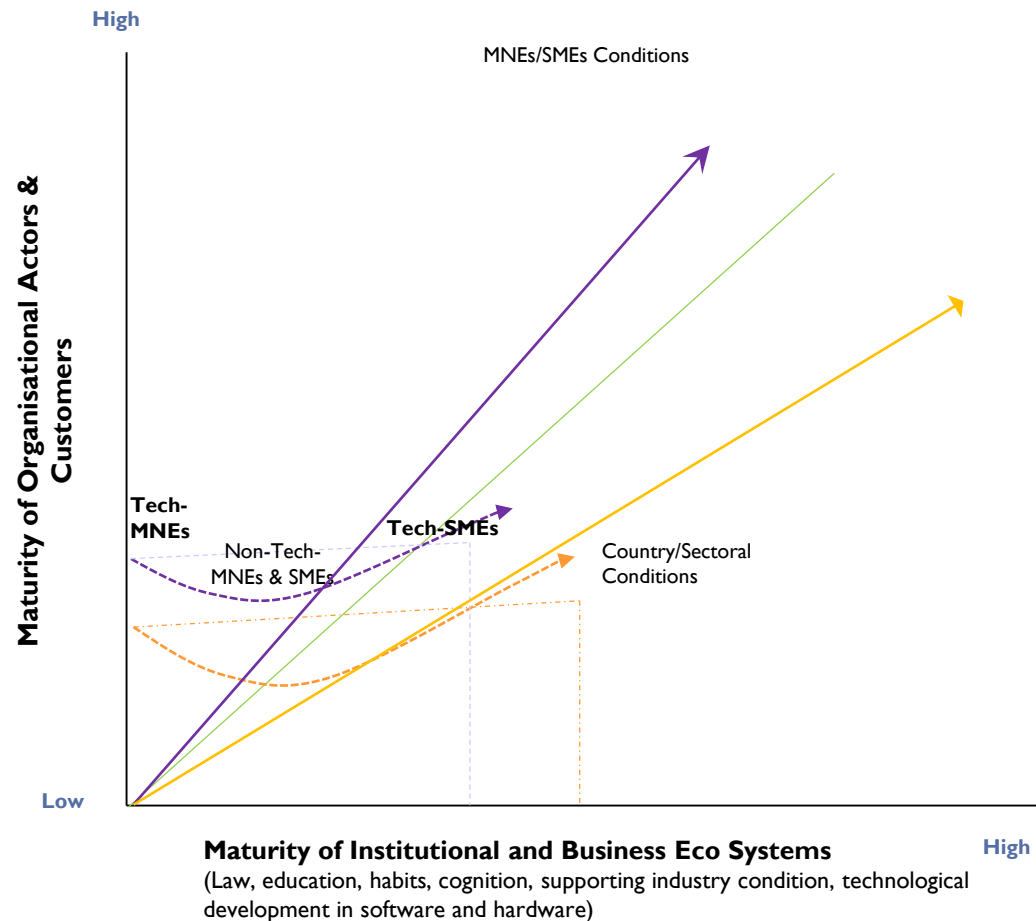
Auto volume and noise adjustment. Based on inertial sensors and biometric signals, real time health monitoring, control what you hear, auto-care from fall, automatic reporting to medical centre/loving ones, natural language translation, blood sugar check etc.

### Visual Signals



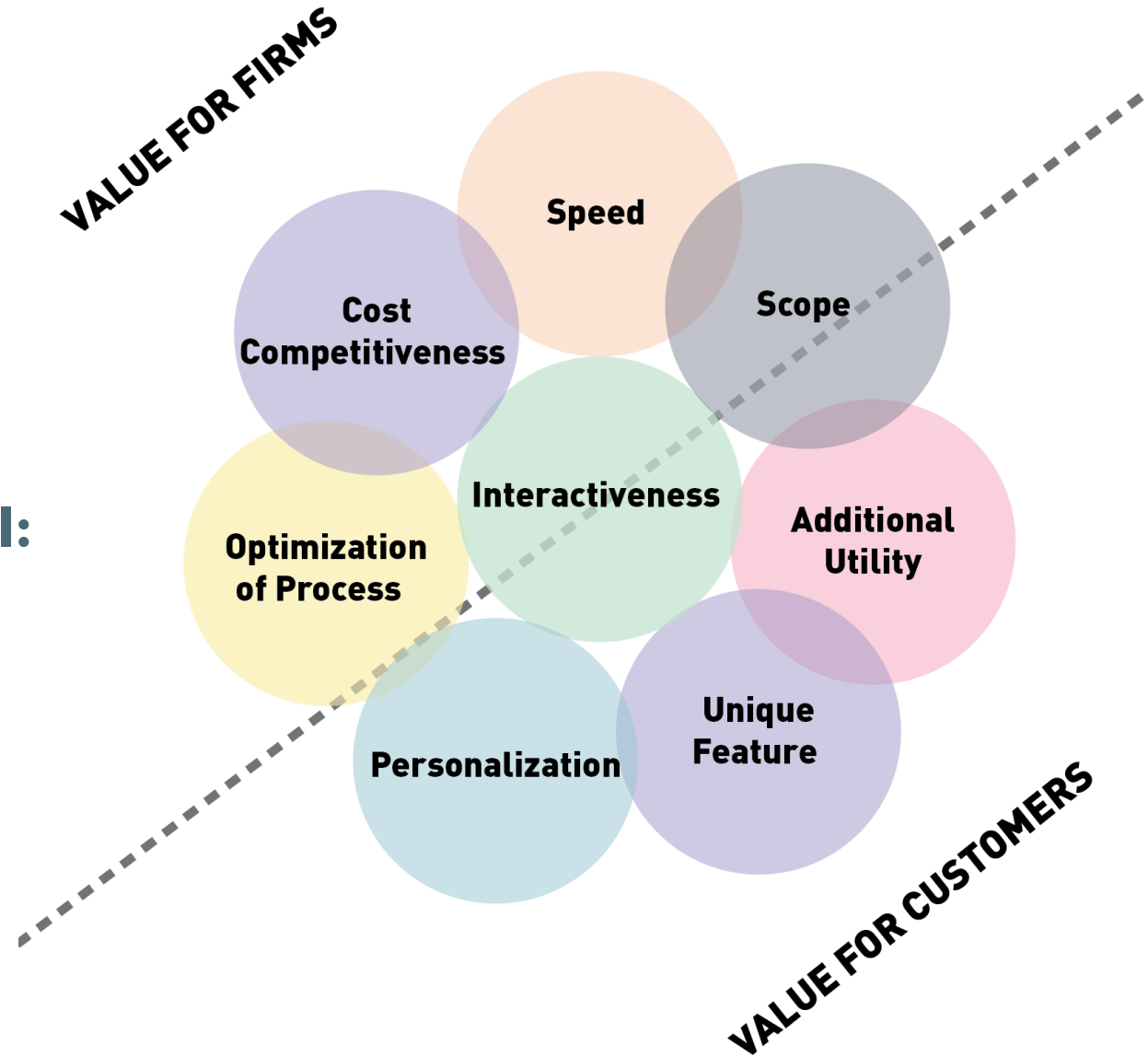
Ping An Puhui, a Chinese insurance company, is using similar AI to evaluate creditworthiness of their customers through video application, AI customer service, AI Good doctor, AI Auto Insurance payment etc.

# DIFFERENCES IN ORGANISATIONAL, MARKET, TECHNOLOGICAL AND INSTITUTINAL CONDITIONS



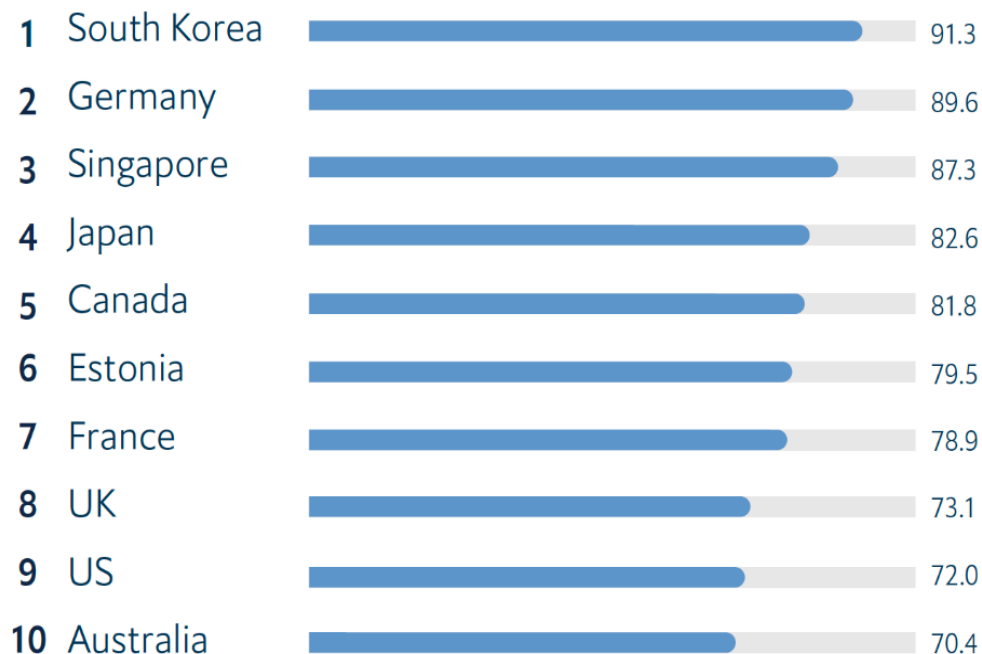


# VALUE CREATION BY AI: SCOUPIAS



## AI WORLD OVER

### TOP 10 COUNTRIES THOSE WHO ARE READY FOR AI AND AUTOMATION

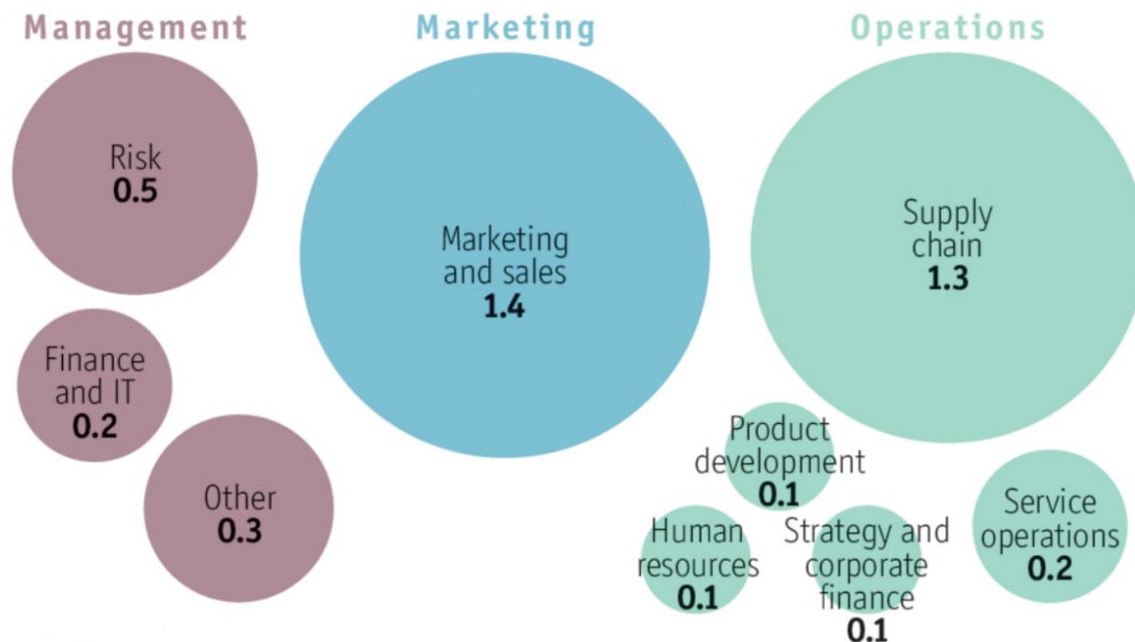


SOURCE: THE ECONOMIST INTELLIGENCE UNIT 2018

**Note:** The research conducted in three main dimensions: innovation environment (money spent on research and development, and investment in the space), school policies (early education and lifelong curricula), and public workforce development (government-led programs, re-training of workers).

## POTENTIAL ECONOMIC VALUE CREATION AREAS BY 2037

POTENTIAL ECONOMIC-VALUE CREATION FROM AI IN THE NEXT 20 YEARS (USD IN TRILLION)



SOURCE: MCKINSEY 2017

## How much is invested in AI in Europe?

### A few big AI transactions influencing the overall picture

Company AI investments in mUSD and transaction volume per market (accumulated 2008-2018)

## FOLLOW THE MONEY- HOW MUCH INVESTED IN AI IN EUROPE

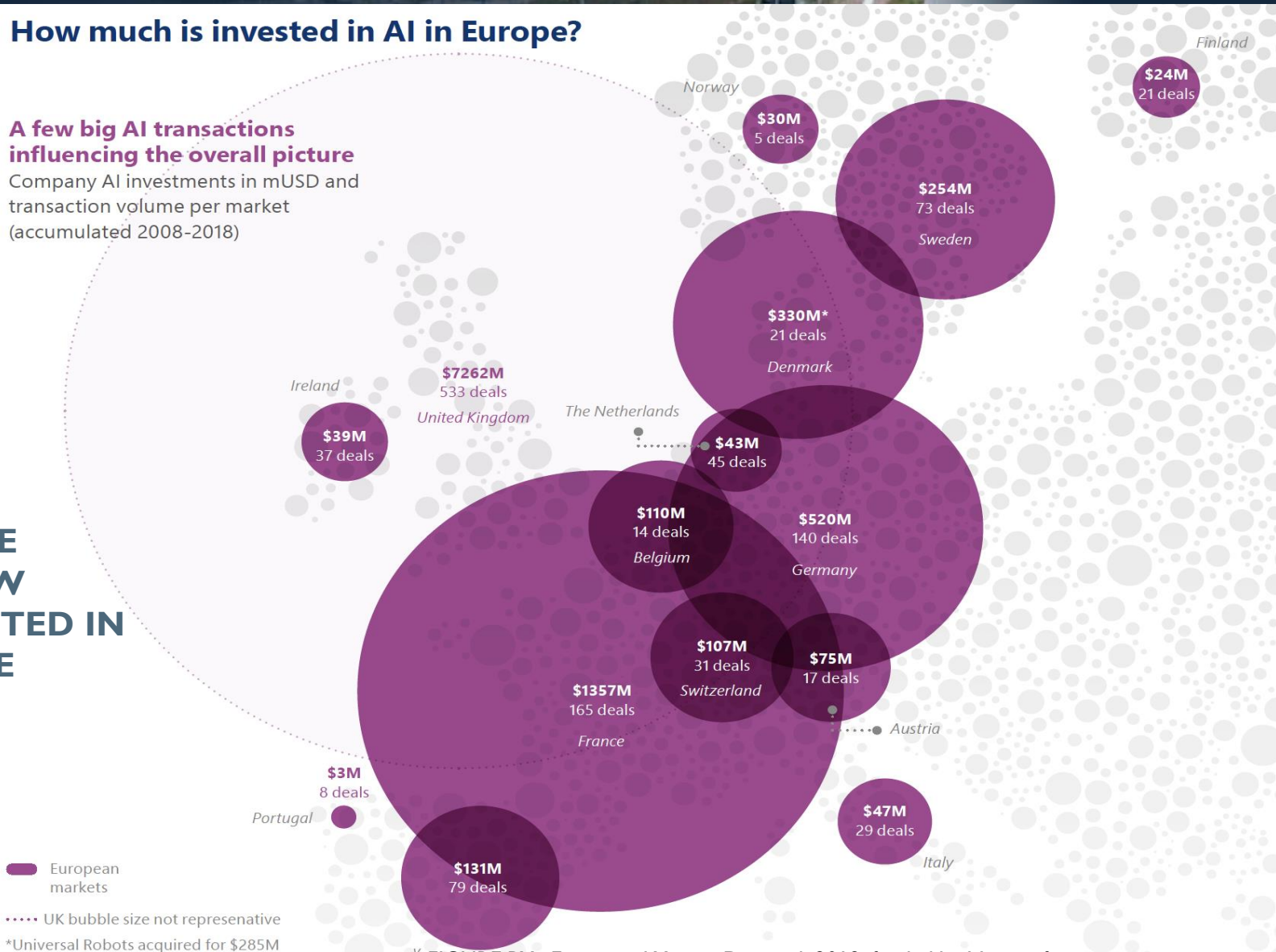


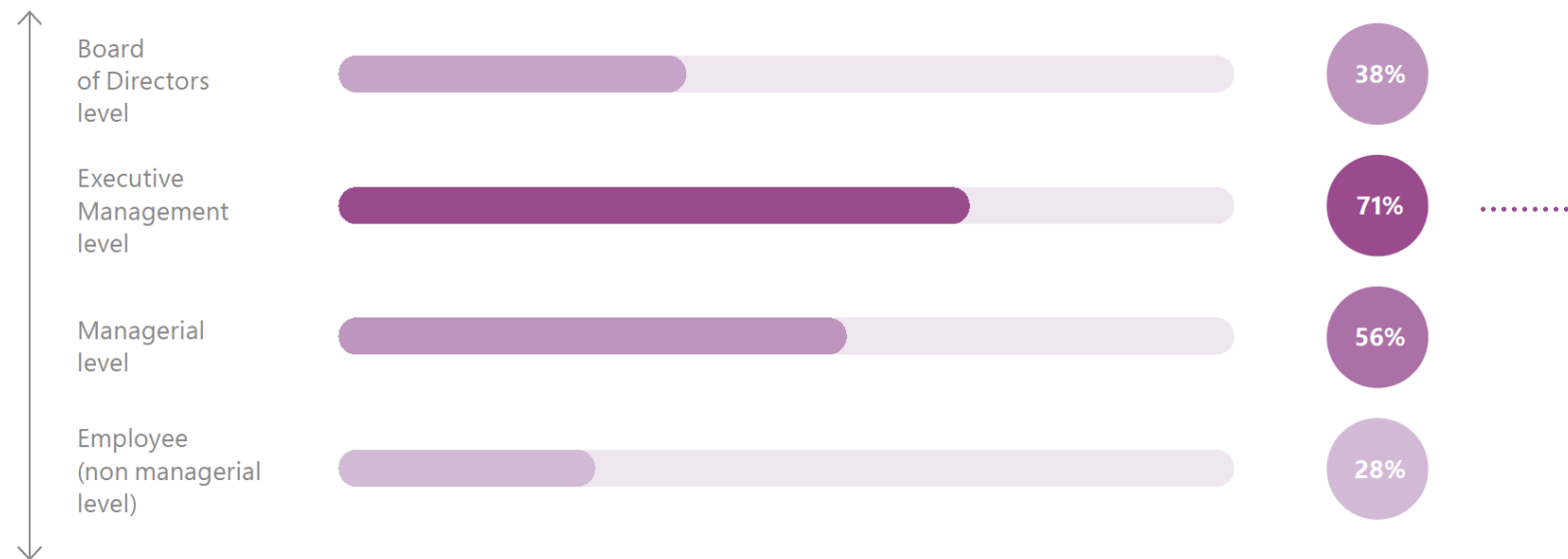
FIGURE BY : Ernest and Young, Denmark 2018, funded by Microsoft.

# HOW AI IS PERCEIVED BY COMPANY STAKEHOLDERS IN EU

## AI is an important topic on the C-suite level in particular

On what hierarchical levels in your company is AI an important topic?

### STRATEGIC LEVEL



AI is in particular an important topic at the Executive Management level

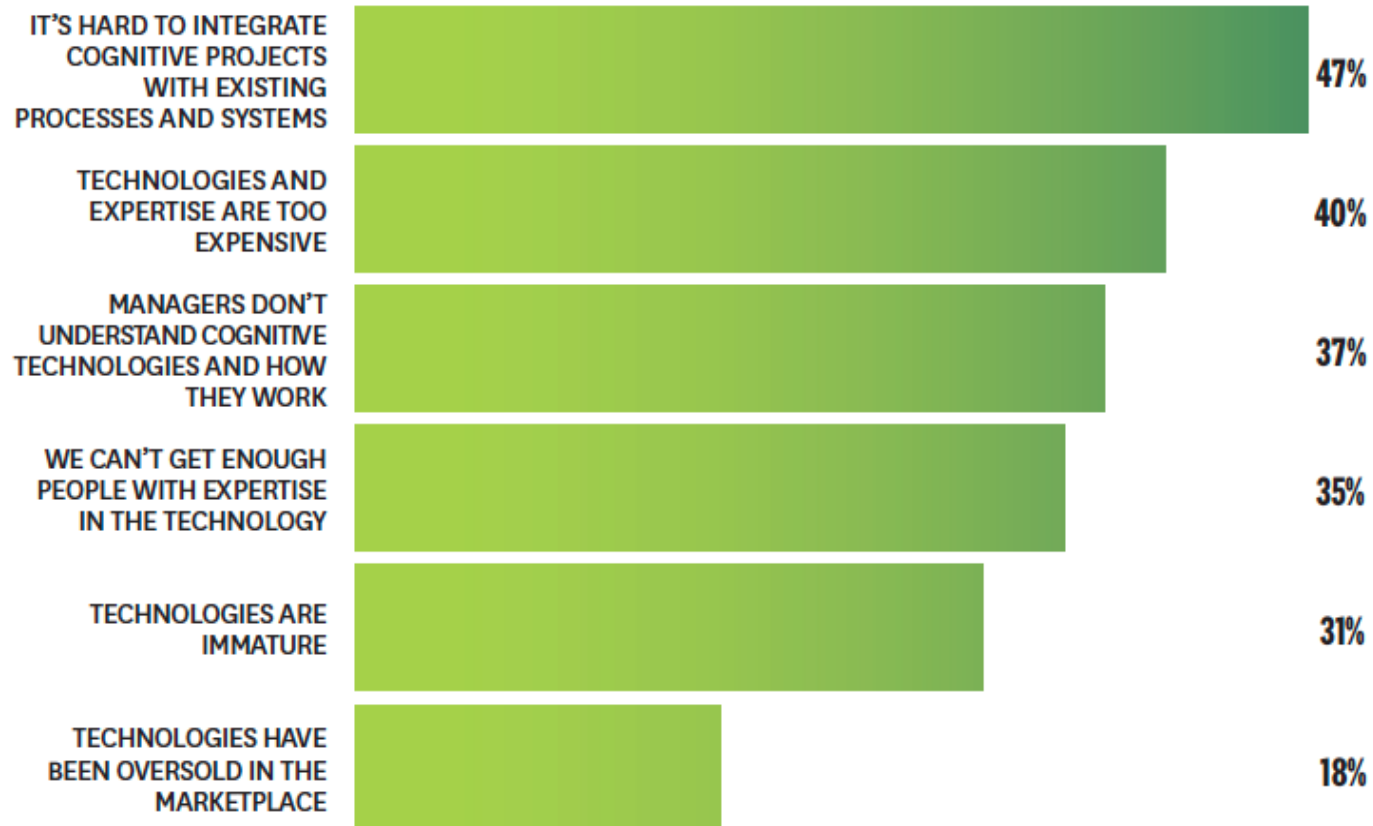
### OPERATIONAL LEVEL

Affirmative responses, 15 European markets

Note: Survey on 277 major companies in EU

FIGURE BY : Ernest and Young, Denmark 2018, funded by Microsoft.

## AGGREGATE CHALLENGES OF AI IN BUSINESS



SOURCE: DELOITTE 2017



## CASE I: OFFICE-FIT. DK

*AI could serve the customers with regular customers health progress data and strengthen CRM:*

Over 20000 Uses, Over 200 institutional customers

Having problem on how to retain them after three years of contract period.

Biomatrics data from the users were not collected and processed.

Dont know how to use them for Customer Relationship Development.



## CASE 2: ALFA LAVAL, DENMARK

### *AI can assist in such a complex case:*

When Boiler is out of order, ship informs to its subsidiary office, subsidiary procurement dept. sends an order to HQ procurement, and HQ procurement sends an invitation to THREE suppliers including ALFA LAVAL.

Whoever accepts the invitation first receives the order.



# CHALLENGES AND OPPOTUNITIES IN MARKETING WITH AI





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