

Berlin | 26. September 2019

Künstliche Intelligenz für die Energiewirtschaft

- Hype oder neue Basistechnologie










Was ist die Hauptstadt von Montenegro?



Künstliche Intelligenz ist überall und
hat bereits heute Einzug in unseren Alltag gehalten!

Öffentliche Wahrnehmung schwankt zwischen Enthusiasmus und Ablehnung

Answers in total (first + second)

%	BREAKDOWN BY COUNTRY							
	TOTAL	 France	 Germany	 Spain	 United Kingdom	 United States	 Canada	 China
Curiosity	60	60	61	71	55	56	56	62
Concern	40	54	48	46	39	38	38	18
Optimism	35	25	29	35	29	35	31	62
Indifference	21	14	18	12	28	26	28	19
Confidence	17	14	9	18	15	17	16	31
Anxiety	15	18	16	7	21	18	19	8
Rejection	12	14	20	12	12	10	11	2
Cites at least one positive feeling	78	71	71	85	73	78	76	94
Cites at least one negative feeling	52	65	61	53	55	51	53	24

When considering the consequences that AI will have for your work in the coming years, what feelings do you have?

Base: All respondents. Percentage totals exceed 100 because they reflect two answers from each respondent.

7

AI Hype

Informations- und
Aufklärungsbedarf

exponentielle
Entwicklung der
Technologie

Potentiale in der
Energiewirtschaft

**Der BDEW hat Anfang 2019 ein Projekt zu künstlicher Intelligenz
in der Energiewirtschaft gestartet**

BDEW Projekt „KI in der Energiewirtschaft“





Lifting Germany to the AI Age

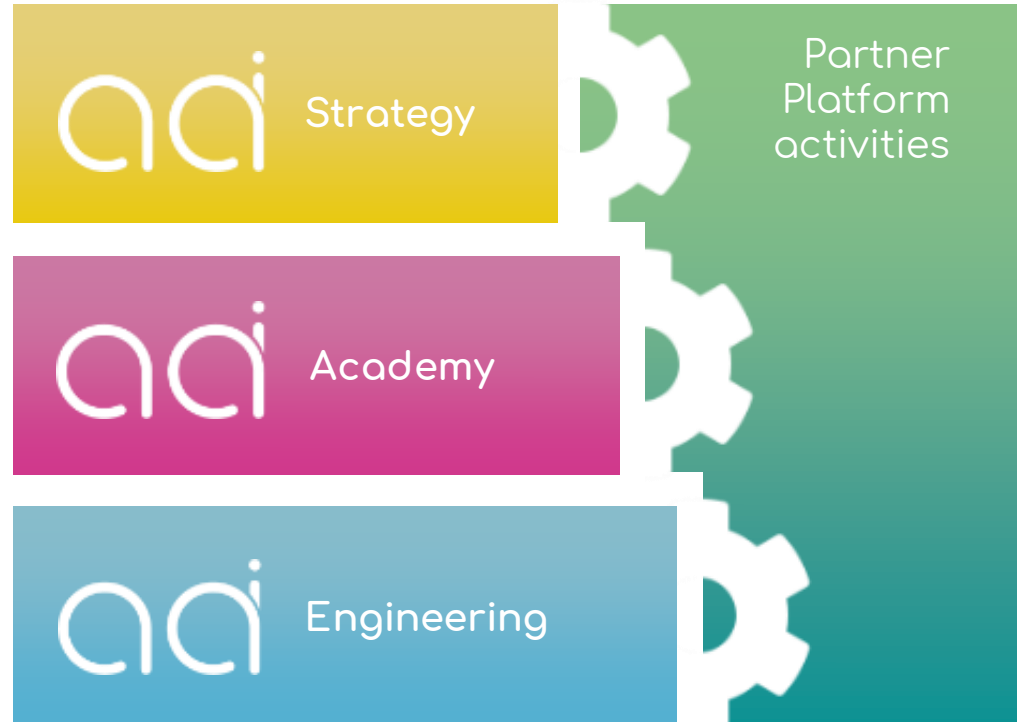
The appliedAI Initiative serves as unique, central point of contact to guide Germany and Europe to the AI age

With our product portfolio, we tackle the key challenges Germany and Europe face while transitioning to the age of AI



We target three key challenges in at appliedAI:

1. Difficult translation from AI to business
2. Lack of AI know-how and talent
3. Challenging implementation



AI - a new set of machine capabilities

1

Computer Vision

2

Computer Audition

3

Computer Linguistics

4

System control & Robotics

Machine capabilities

Forecasting

Discovery

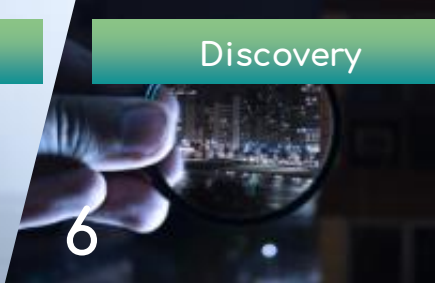
Planning, Scheduling and Search

Generate and Create

5



6



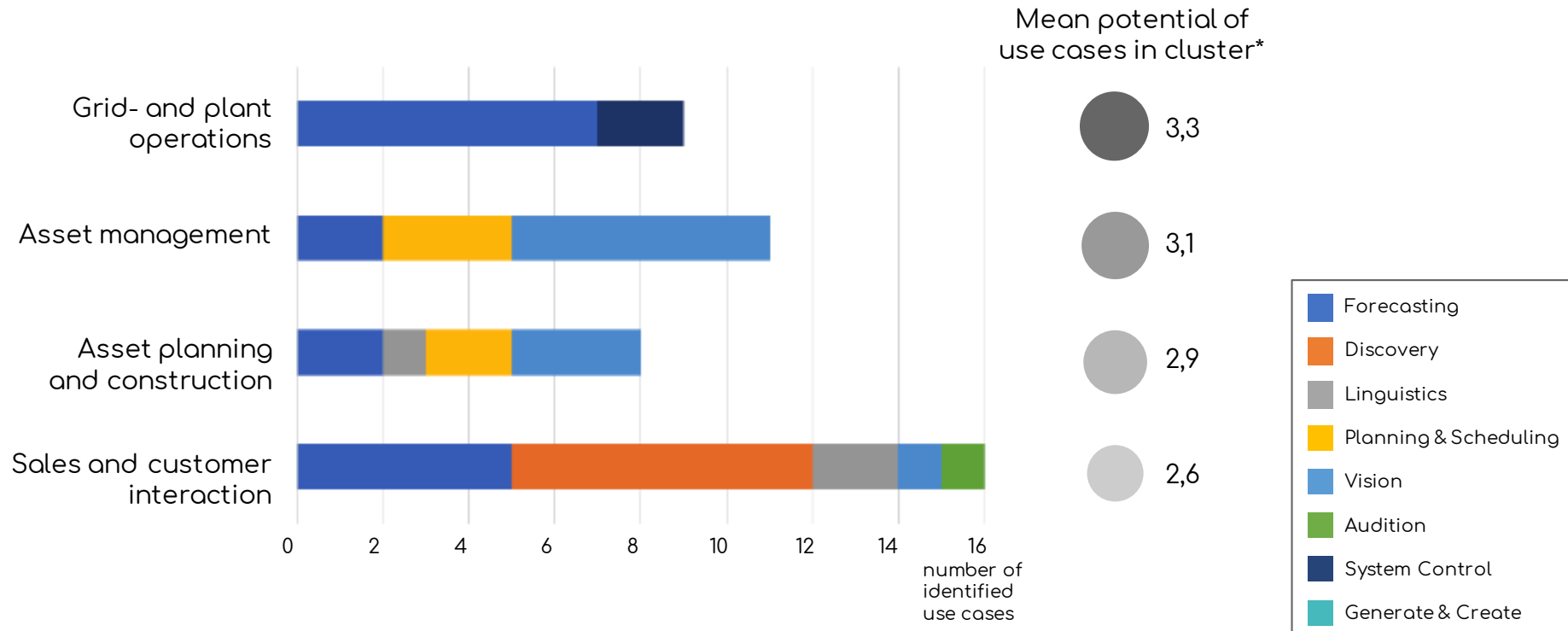
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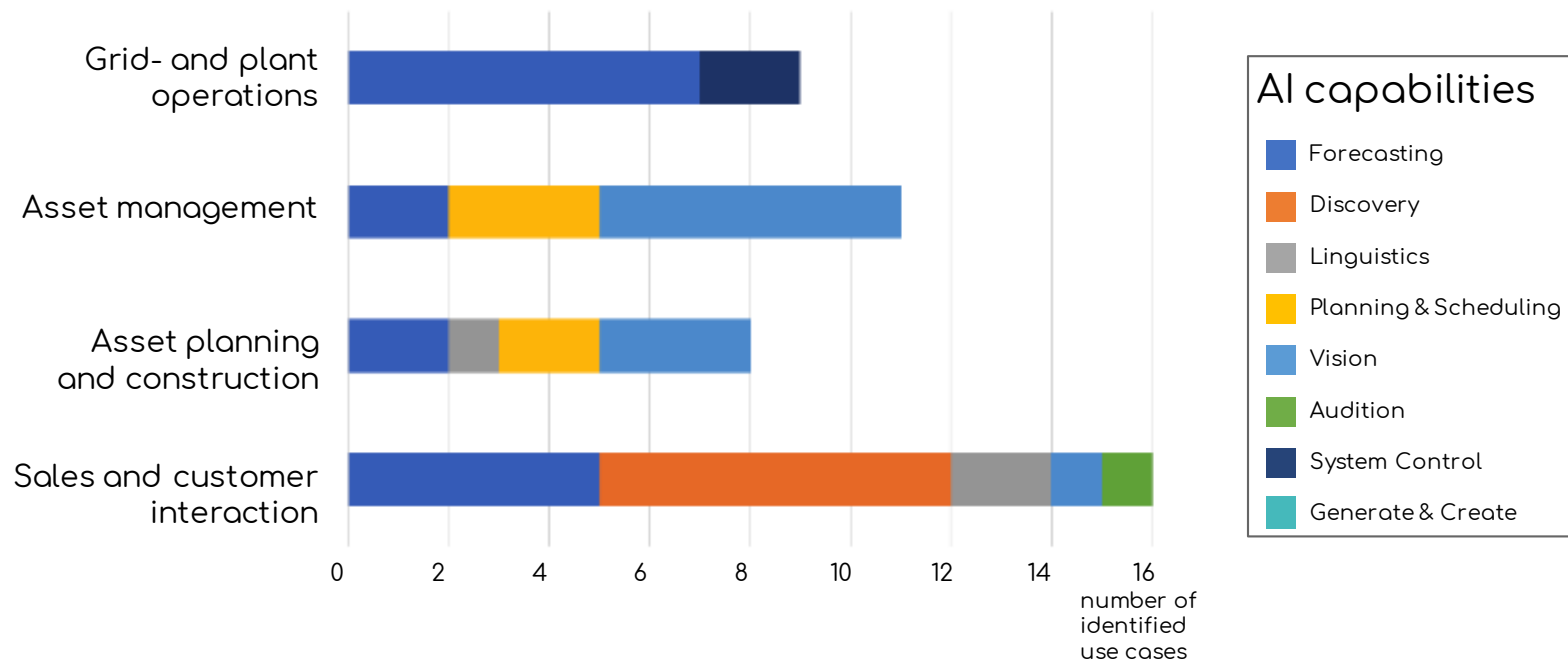


More than 40 use cases across four clusters have been identified in the energy sector



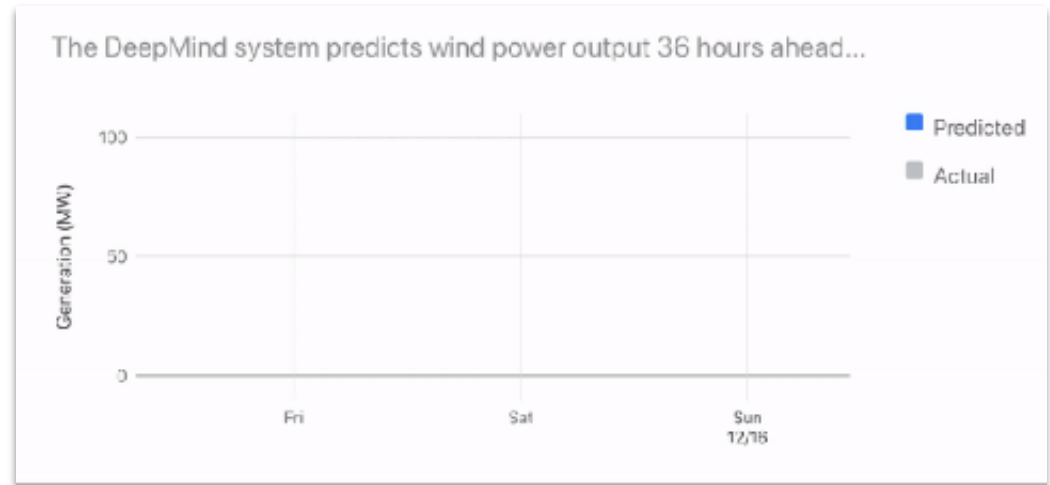
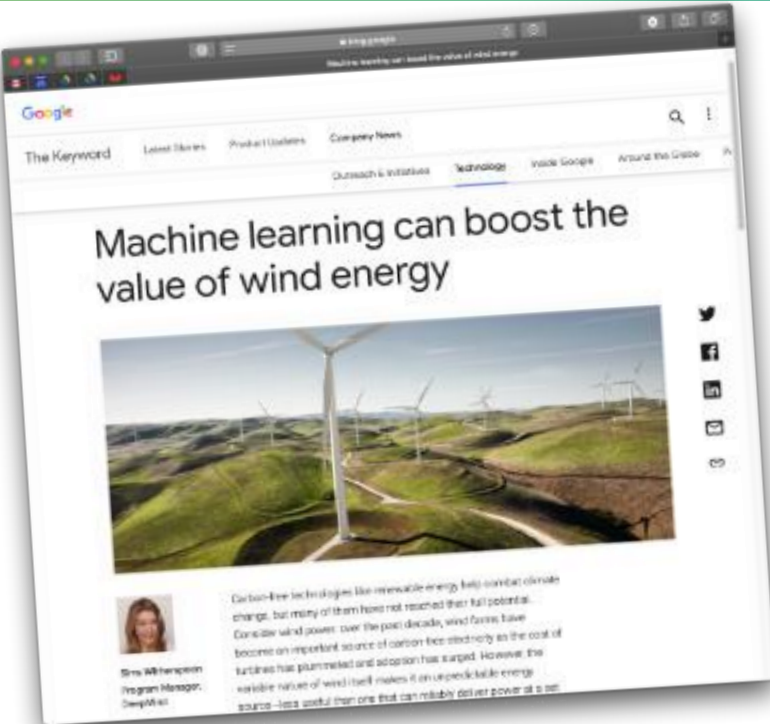
Source: BDEW/appliedAI Studie zu KI in der Energiewirtschaft | * evaluation on a 1-5 rating scale

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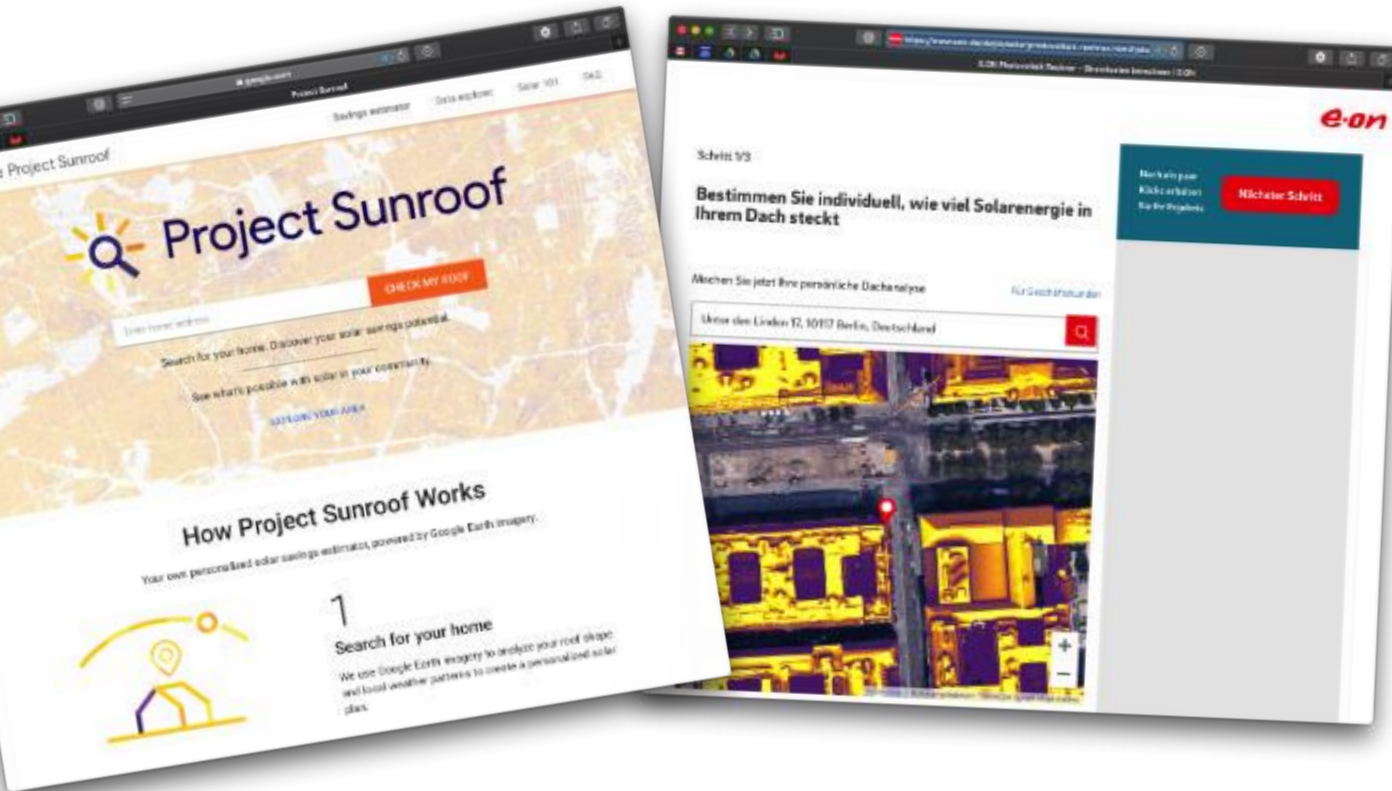
Source: BDEW/appliedAI Studie zu KI in der Energiewirtschaft

AI is opening opportunities for new players in the energy market



The two Alphabet divisions worked together to train a neural network on weather forecasts and historical turbine data. A DeepMind system was then able to predict wind power output 36 hours ahead of actual generation.

Google project sunroof - automatic evaluation of the potential of photovoltaic panels



- Aerial imagery is used to estimate usable roof surface
- Detects trees or obstacles that would result in shadow on roof surface
- Integration of weather and climate information

You have to position yourself appropriately to build up a competitive edge

Differentiation by ...

... speed

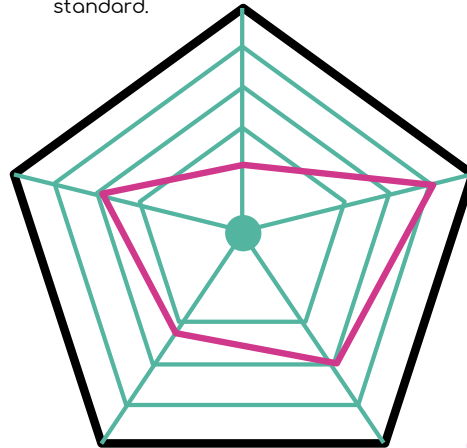
You are the fastest in bringing solutions into applications. Strategic advantage lies in adaptability, flexibility and agility of organization and culture. Try to stay ahead as over time your competitive advantage may become industry standard.

... scale

You have the scale in which application or training of an AI algorithm is beneficial or has advantages regarding the sheer amount of data available. Strategic advantage lies in scale. Be aware of digital companies entering your industry.

... algorithm

Developing the most sophisticated algorithms. Strategic advantage lies in AI talent and probably also specific domain know-how. Difficult to defend as prone to digital disruptors or being copied by tech-giants.



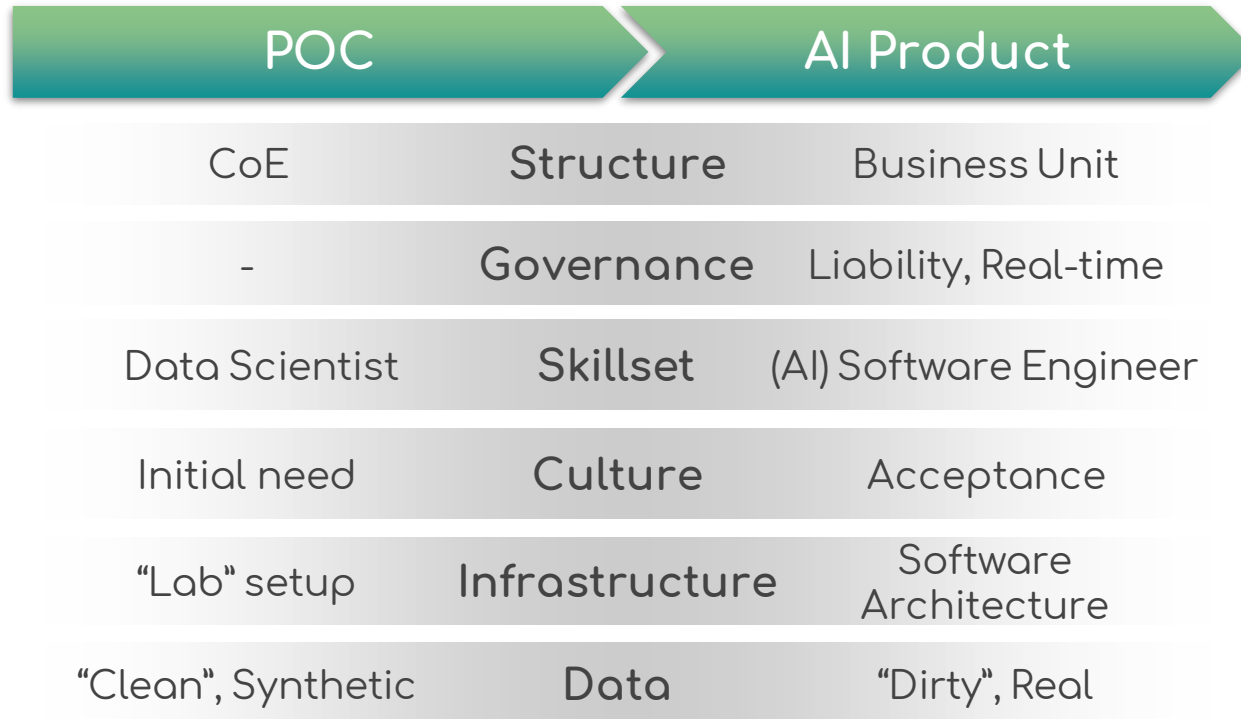
... data access

It is difficult for others to copy your algorithms if they do not have access to the same data. Data is core strategic asset of your company. Value often lies in very industry or even company-specific niche cases. You have to make sure no competitor is moving into your market gaining access to similar data (or gets access by cooperating with others)

... data quality

You can obtain data in better quality compared to others. Closely investigate whether this actually bears a competitive advantage (how much better can your algorithms probably be?). Strategic advantage lies in best-in-class data strategy, governance and management

Challenges faced during PoCs and in developed AI products must be considered at an early stage.



AI needs to be addressed comprehensively

