



Kunskapsdagen | 2023

AI och Business Technology

Ragnar Bergvik

Digital Architecture, Business Technology



Content

1 Introduction to AI

2 What to consider

3 When should we get started?





What's AI?



Definition of Artificial Intelligence (AI)

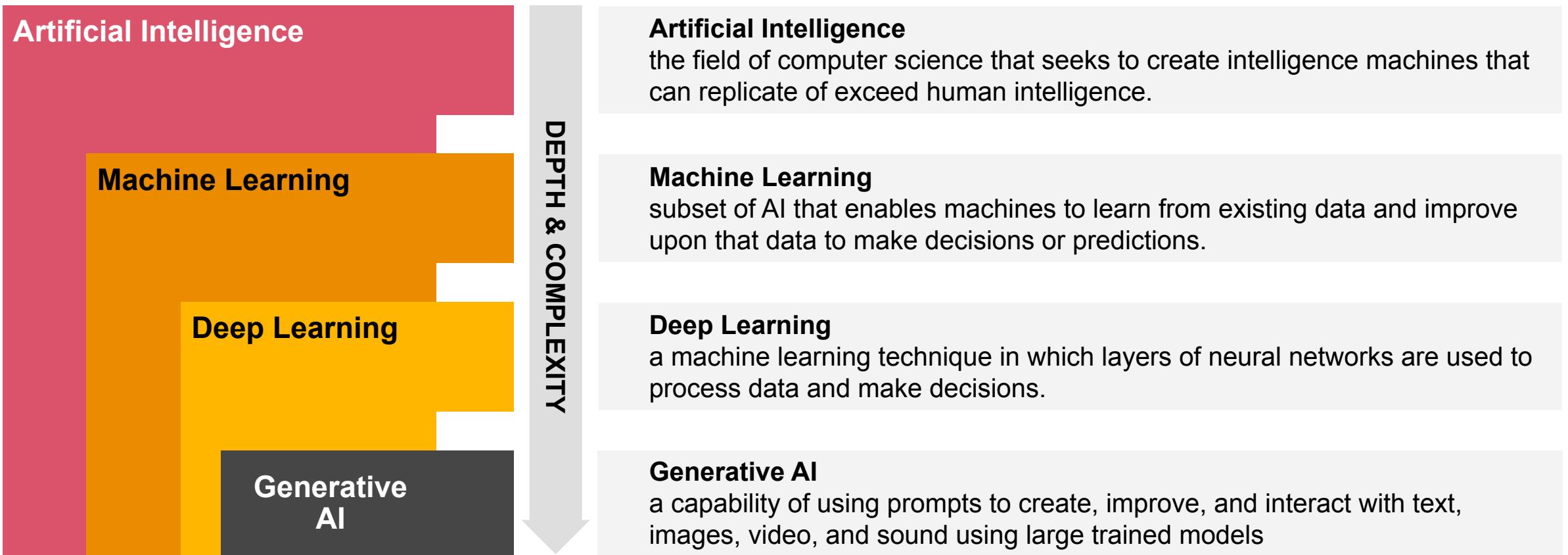
AI is typically known as a systems ability to mimic human cognitive functions...

...such as perceiving, learning, interacting with the environment, as well as problem solving and creativity*



4 NÖ G 7 d X ~

AI is a umbrella term that includes many sub components



Natural Language Processing (NLP) - *The study of enabling computers to understand and process human language.*

Neural Networks - *A type of machine learning model inspired by biological neurons*

Convolutional Neural Networks (CNN) - *A type of neural network used primarily in image recognition tasks.*

Generative Adversarial Networks (GAN) - *A pair of neural networks that generate new data resembling a given dataset.*

What is Generative AI?

Generative AI is a subset of Deep Learning that involves training a model to generate new data that is similar to the training data it was given. This type of AI can be used to create art, music, text and even entire virtual worlds, among other applications.



ChatGPT

Prompt
I'm having trouble getting my xbox to turn on.

Response
There are a few things you can try to troubleshoot the issue... ...

Prompt
Thanks! That worked. What games do you recommend for a 14-year-old?

Response
Here are a few games that you might consider :

Codex

Prompt
Table customers, columns = [CustomerId, FirstName, LastName, Company, Address, City, State, Country, PostalCode]

Create a SQL query for all customers in Texas named Jane query =

Response
`SELECT *
FROM customers
WHERE State ? 'TX' AND
FirstName = 'Jane'`

DALL E

Prompt
A ball of fire with vibrant colors to show the speed of innovation at our media and entertainment company

Response
A colorful, abstract logo resembling a stylized flame or a ball of fire, composed of red, orange, and yellow hues.

Midjourney

Prompt
Happy giraffe sits on toilet with newspaper black and white

Response
A black and white photograph of a giraffe sitting on a toilet bowl, reading a newspaper.

www.midjourneyai.ai



www.midjourneyai.ai

“

GPT

**Generative Pre-trained
Transformer**

ChatGPT is a Large Language Model (*LLM*)

Pitfalls of LLMs

Bias

LLMs are often biased towards generating stereotypical responses

No citing of Sources

LLMs for the most part cannot accurately cite sources.

Hallucinations

LLMs will frequently generate falsehoods when asked a question that they do not know the answer to. Most of the time they will confidently give a wrong answer.

Math

LLMs are often bad at math. They have difficulty solving simple math problems, and they are often unable to solve more complex math problems

Prompt Hacking

Users can often trick LLMs into generating any content they want.

Data is the key that unlocks the potential in Artificial Intelligence

Data management serves as the cornerstone for ensuring data accessibility, thereby facilitating the deployment of advanced analytics and artificial intelligence.

Process

Governance & ownership

With clear governance and ownership, data has to be well defined and integrated from multiple sources with validation rules to ensure quality from collection to visualization.

Technology

Data native platforms

The business is supported by modern platforms that support data sharing and collaboration with a high degree of automation.

People

Data culture

Upskill and empower people so they can work proactively and effectively with data to increase performance. A culture change from reporting on what has happened to predicting the future.

Data

A single source of truth

Successful organizations have standard definitions and have a defined data model, eliminating silos between business functions and data sources

Accessible & Trusted Data

Reliable, consistent, comprehensive, and reusable data optimizes value by allowing users to concentrate on deriving insights for present situational awareness, future forecasting, and the implementation of advanced analytics and artificial intelligence.

Advanced Analytics & AI

Accessible and high quality data provide our clients with the ability to apply advanced analytics and AI.



Considerations

With the use of Artificial Intelligence in your business, new risks follows that needs to be addressed

The use of AI in our business requires a Responsible AI adoption, making sure that you are complying with regulatory requirements and mitigating risks.

Not thoroughly reviewing your AI outputs can result in inaccuracies, compliance violations, breach of contract, copyright infringement, erroneous fraud alerts, faulty internal investigations, harmful communications with customers and reputational damage.

Examples of risks

Security



Privacy



Regulatory compliance



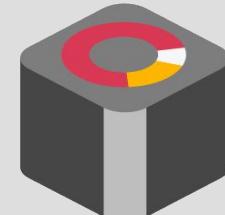
Fairness



Bias



Robustness



What is Responsible AI?

A framework to accelerate your organisation's AI innovation to deliver positive impact



Legal compliance

- A **proactive** approach
- Monitor the **global** legal landscape
- Regulation ≠ say NO to everything

DON'T DO BAD



Risk management

NIST AI RMF

- **Govern:** Risk management culture
- **Map:** Contextualize risks
- **Measure:** Assess and analyse risks
- **Manage:** Prioritize and acted upon

DON'T DO STUPID



Open the black box

- **Internal trust:** tech and business
- **External trust:** customer and brand
- How to build trust?

DON'T HIDE



Positive social impact

- Responsible AI as part of **ESG**
- Fulfill the **social responsibility**
- **Positive impact** to the planet and society with AI!

DO GOOD

AI regulation is coming

Is your business ready for the forthcoming EU AI regulation?

Regulation



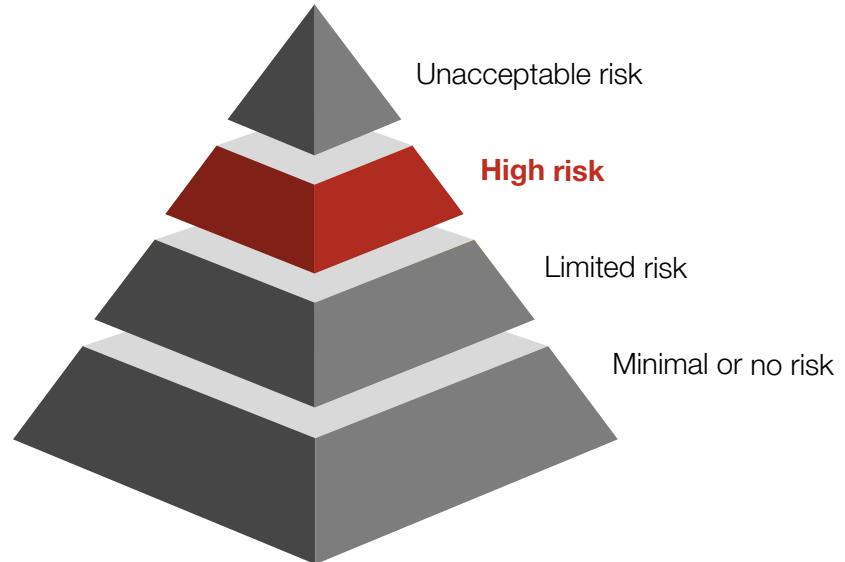
Risk management



Open the black box



Positive impact



The EU AI Act takes a risk based approach

Examples* of AI legislation

EU

- EU AI Act
- General Data Protection Regulation (GDPR)

USA

- California Consumer Privacy Act (CCPA)
- Algorithmic Accountability Act (AAA)
- AI Bill of Rights

*non exhaustive, there are many ongoing initiatives around the world



AI risk management

From use case risk assessment to lifecycle management



Regulation



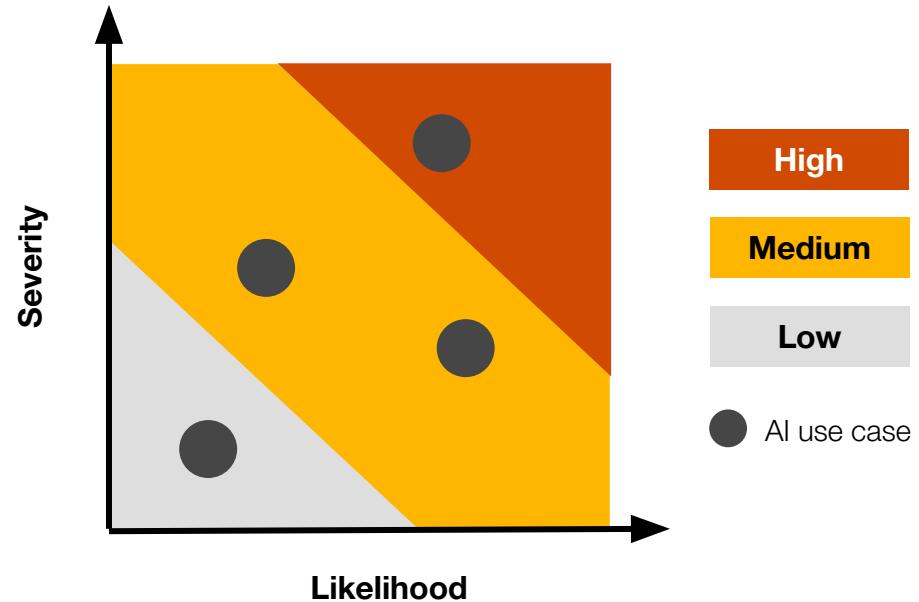
Risk management



Open the black box



Positive impact



Examples* of AI risk management frameworks

- NIST AI Risk Management Framework
- ISO/IEC 23894:2023
- EIOPA AI use case impact assessment

*non exhaustive, there are many ongoing initiatives around the world



Open the black box

From explainability to transparency



Regulation



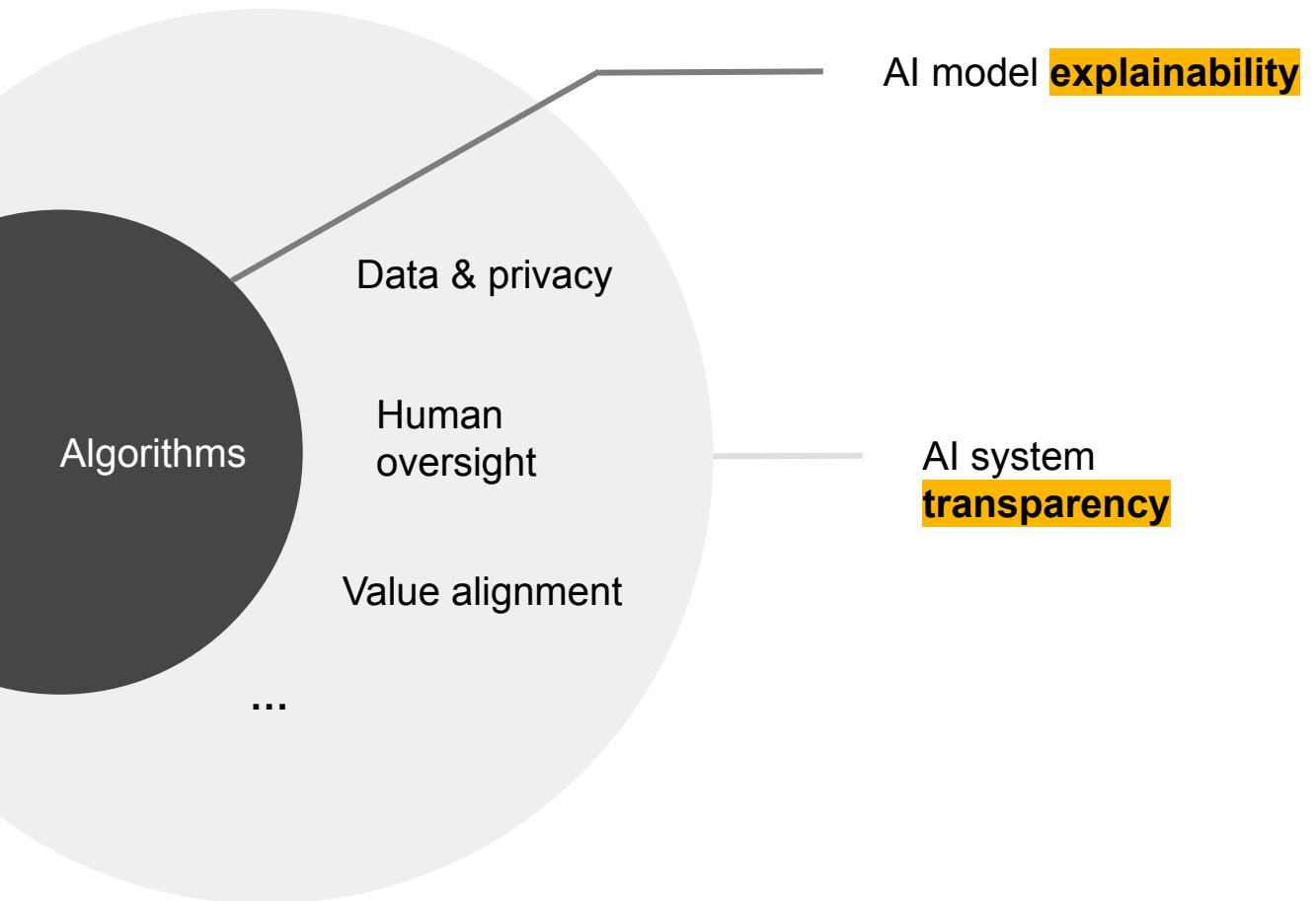
Risk management



Open the black box



Positive impact



Leverage AI to delivery positive impact at scale

Capability, business value, and social impact



Regulation



Risk management



Open the black box



Positive impact



Amplify positive impact through responsible AI

Achieve your strategic goals and social responsibility



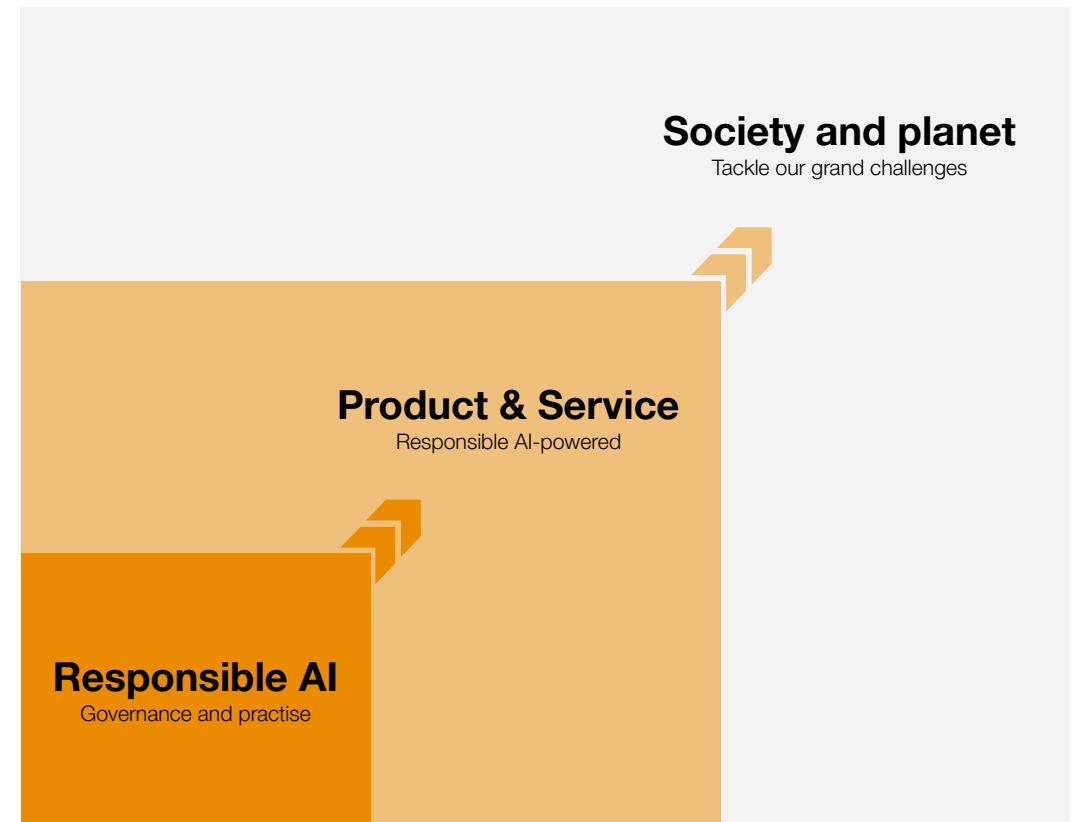
Empower product and service with responsible AI

Deliver business value to the customer



Responsible AI as a part of digital capabilities

Build responsible AI into your digital and AI transformation



An aerial photograph of a city at night, showing a dense grid of streets and illuminated buildings. A large, white, three-dimensional-style number '3' is overlaid on the bottom left corner of the image.

3

When to start with AI

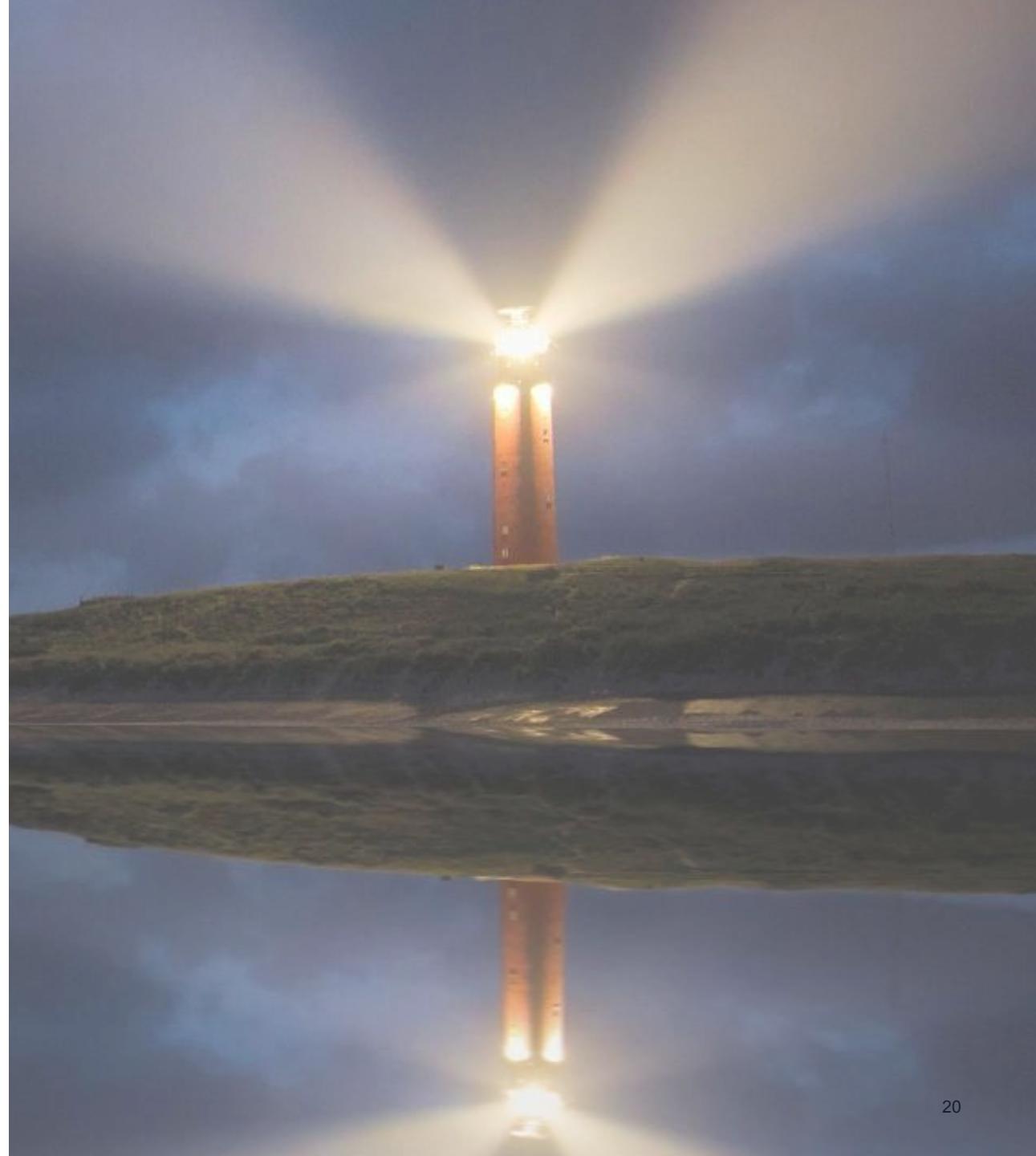
When should I consider AI?

When you have...

- Done your homework with IT & data basics
- Thought about legal and risk implications
- No simpler solution available

...and your opportunity is characterized by

- Repetitive Tasks
- Data-Intensive Processes
- Scalability
- Pattern Recognition
- Decision Support
- Automation of Routine Tasks



Tack!



Ragnar Bergvik
+46 70 176 46 47
ragnar.bergvik@pwc.com



Denna presentation har tagits fram endast som allmän information och/eller generell vägledning. Den utgör således inte någon professionell rådgivning. Du bör därför inte förlita dig på presentationen eller vidta några åtgärder på grundval av den utan att dessförinnan ha gjort avstämningar med en professionell rådgivare utifrån de förutsättningar som gäller i din situation. Med hänsyn härtill lämnar Öhrlings PricewaterhouseCoopers AB/PricewaterhouseCoopers AB ingen utfästelse eller garanti (uttrycklig eller underförstådd) för att informationen i presentationen är korrekt och/eller fullständig för dina syften och ändamål. Öhrlings PricewaterhouseCoopers AB/PricewaterhouseCoopers AB tar således inte något som helst ansvar för eventuella konsekvenser av att du väljer att förlita dig på eller agera utifrån informationen i denna presentation.

© 2023 PricewaterhouseCoopers i Sverige AB. All rights reserved. In this document, "PwC" refers to Öhrlings PricewaterhouseCoopers AB or PricewaterhouseCoopers AB which is a member firm of PricewaterhouseCoopers International Limited, each member firm of which is a separate legal entity.