



The era of A(G)

Jakob Ladekær
&
Søren Toft Joensen

AI follows your day



Spam or not: Algorithm scans content and addresses
Netflix recommendation suited for you



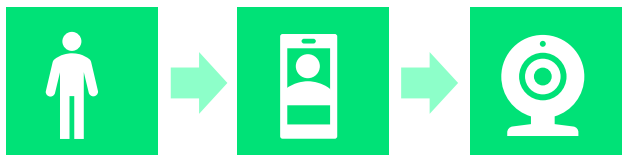
Spotify: Discover weekly list: 30 new tracks you'll love



Google spots patterns in your data and provides suggestions on where to go based on usual behavior



Shazam reduce an audio spectrogram (time, frequency, volume) to a musical fingerprint and compare against their database



Facial recognition: Lightning-fast map of the face with 30,000 infrared points



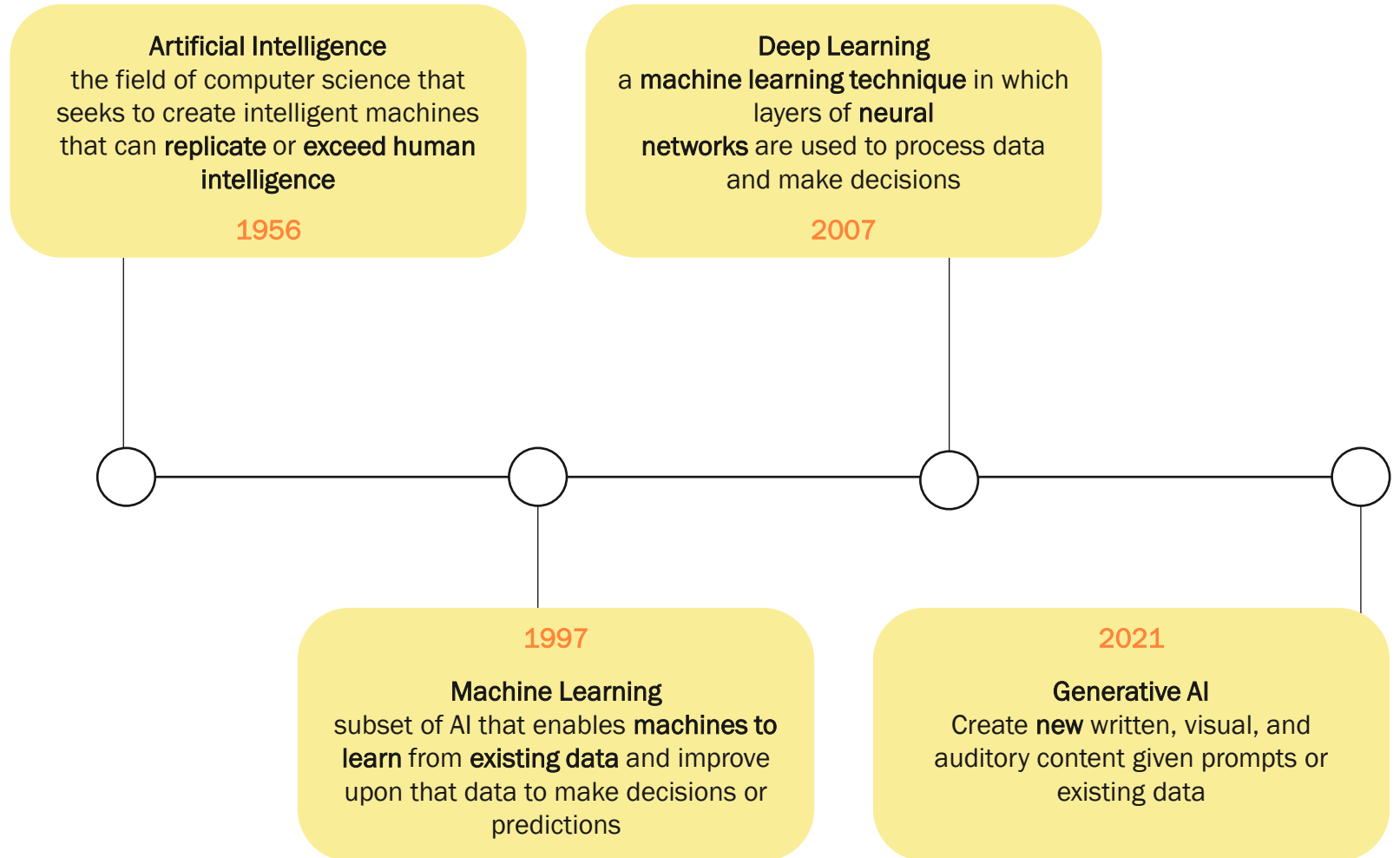
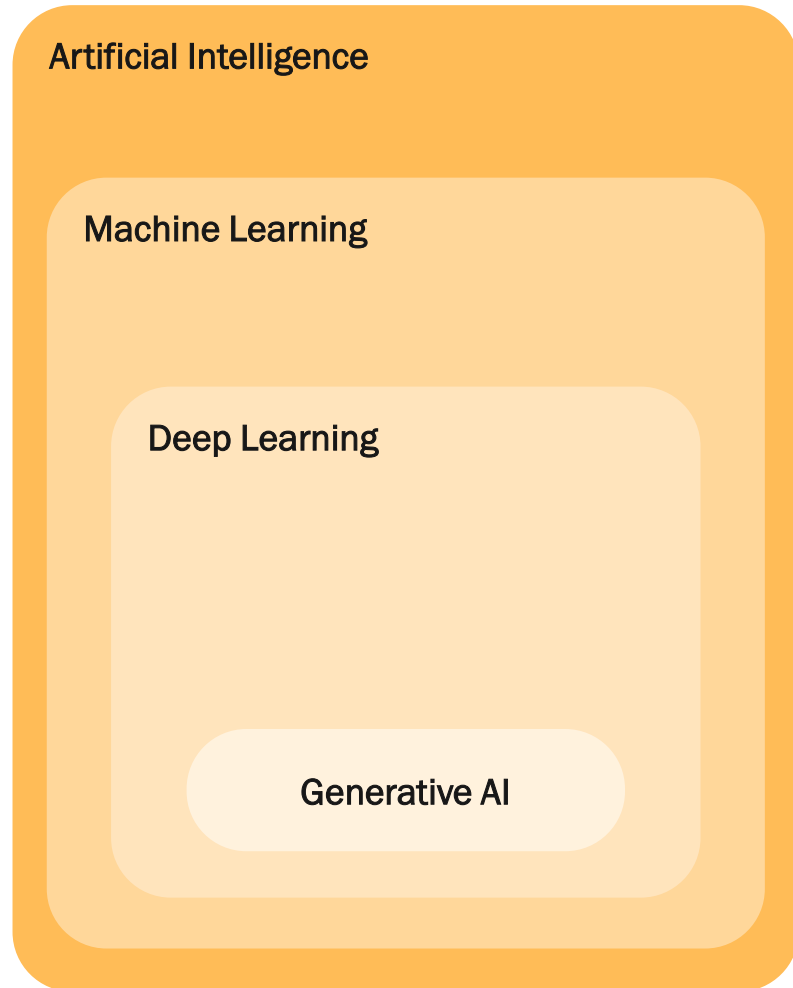
Agenda

- The era of A(G)I
- Where is the value?
- Generative AI
- Curiosity and reality checks
- How to get started



The era of A(G)I

To understand what we **really** are talking about





ChatGPT

1 million users

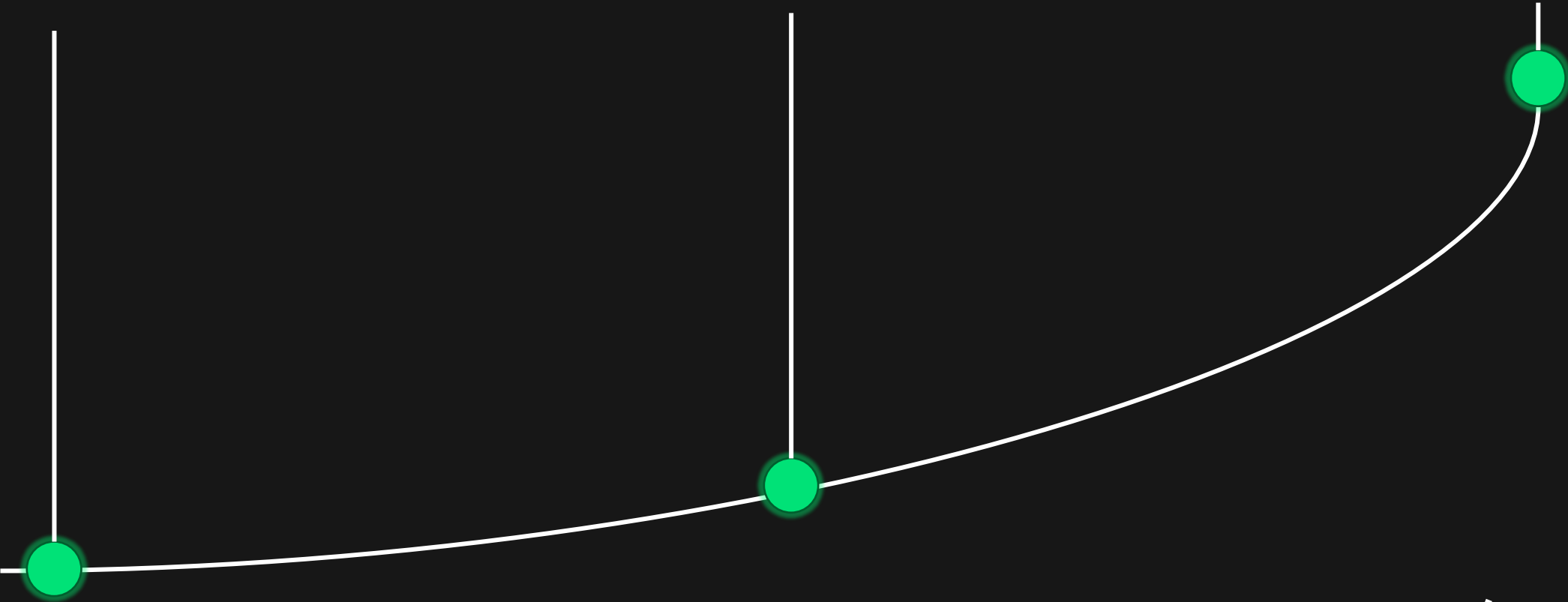
5 days

100 million users

2 months

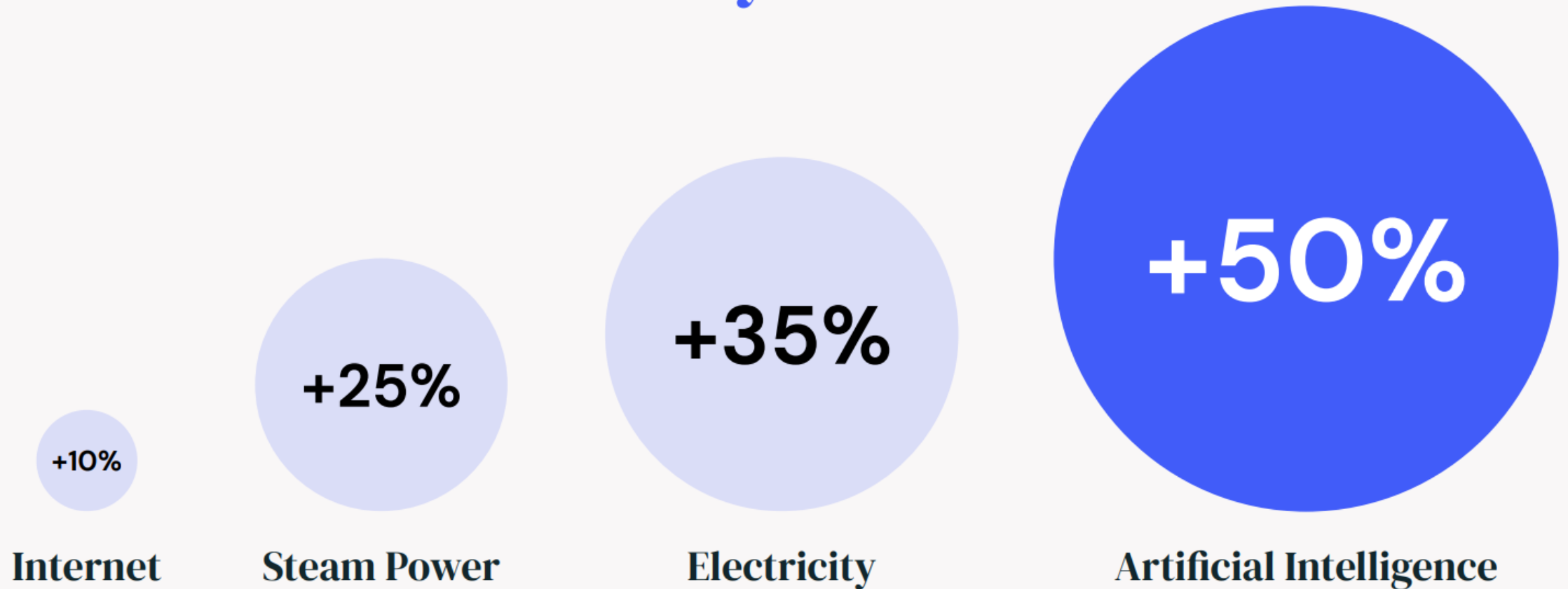
1 billion users

5 months



twoday

AI will result in the biggest productivity increase **ever in history**



AI's Productivity Promise





NOT READY
YET...



NOT READY
YET...



NOT READY
YET...



Where is the value?

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Computer Vision

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AI is more than ChatGPT

AI uses cases - without ChatGPT

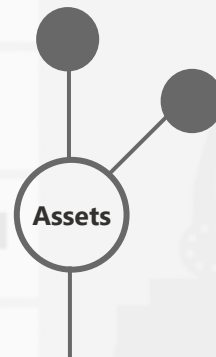
AI embedded in robotics

ABB, uses AI in robotics to determine optimal grasp points for each item on the assembly line



Exploring new recipes

BASF uses AI models to test and simulate large combinations of parameters to design new products.



Equipment Downtime Prevention

General Electrics uses AI and digital twins to foresee critical events

Enhance assets performance

Covestro, uses AI-powered models to reduce energy consumption across plants



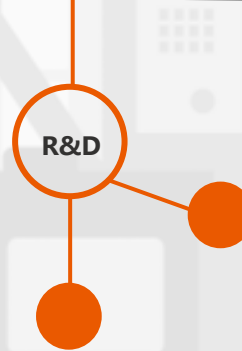
Support supply chain

Rolls Royce uses AI to strengthen the supply chain and optimize cost and service quality

Searchable financial contracts

Vestas uses AI to make financial contracts searchable

ChatGPT use cases



Knowledge Management

Categorize, summarize and search through internal R&D knowledge base

Hypothesis Generation

Generate new hypotheses and ideas based on existing research

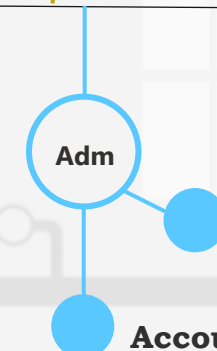


Quality Control

Automate inspections and identify defects, deviations from specifications by analyzing images, videos, and other data from the production line.

SOP

Use AI and vectorized Search to quickly identify the right SOP when needed on the production floor



Enhance customer support

AI-powered virtual assistants to provide instant, personalized assistance to customer

Accounting

AI and LLM can aid automation of financial accounting



The value of AI is more than just predictions

- Consistency in decision making
- Structured approach to data driven decision making
- Optimization of processes
- Explainability in decision support
- Employee satisfaction



**Remember to
transform the
processes.**

**Processes of
today is made for
humans!**

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Generative AI

Where do the field originate from



GPT-2 has
1.5 billion parameters



GPT-3

GPT-3 has
175 billion

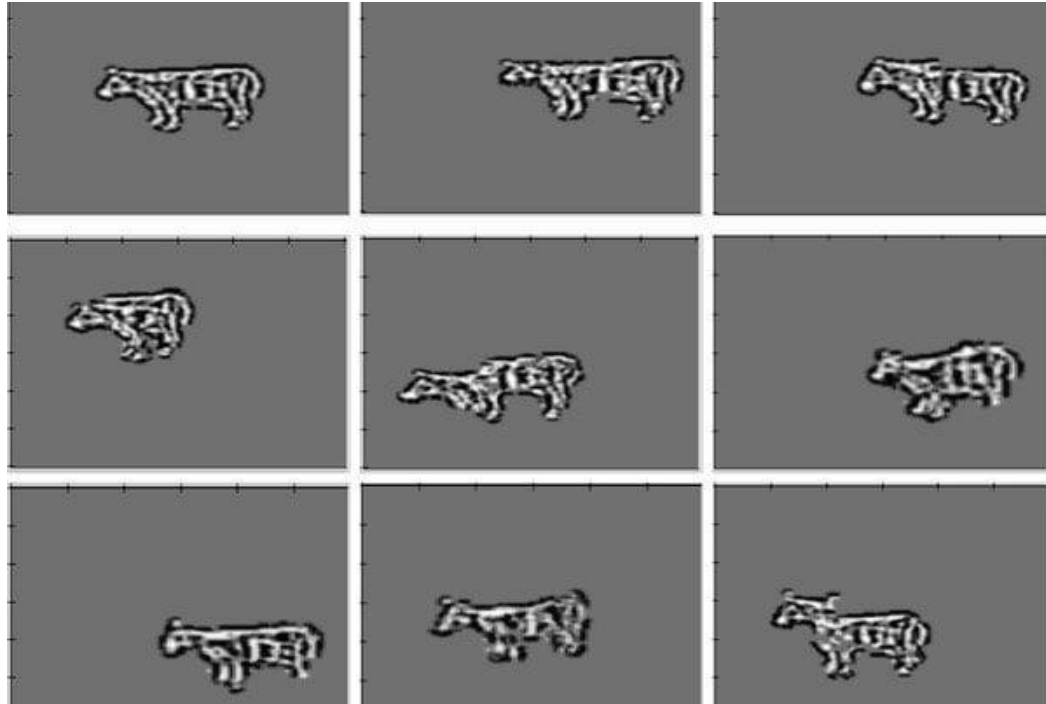


GPT-4 has
1 trillion to 10 trillion

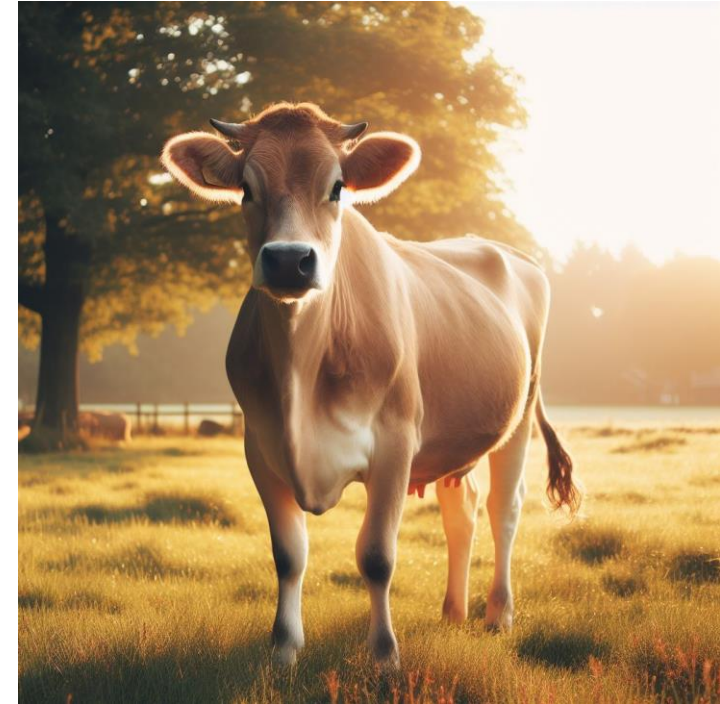
...which makes it over 116 times bigger than its predecessor

..... x 10 or more

The fundamental change is the output of the models

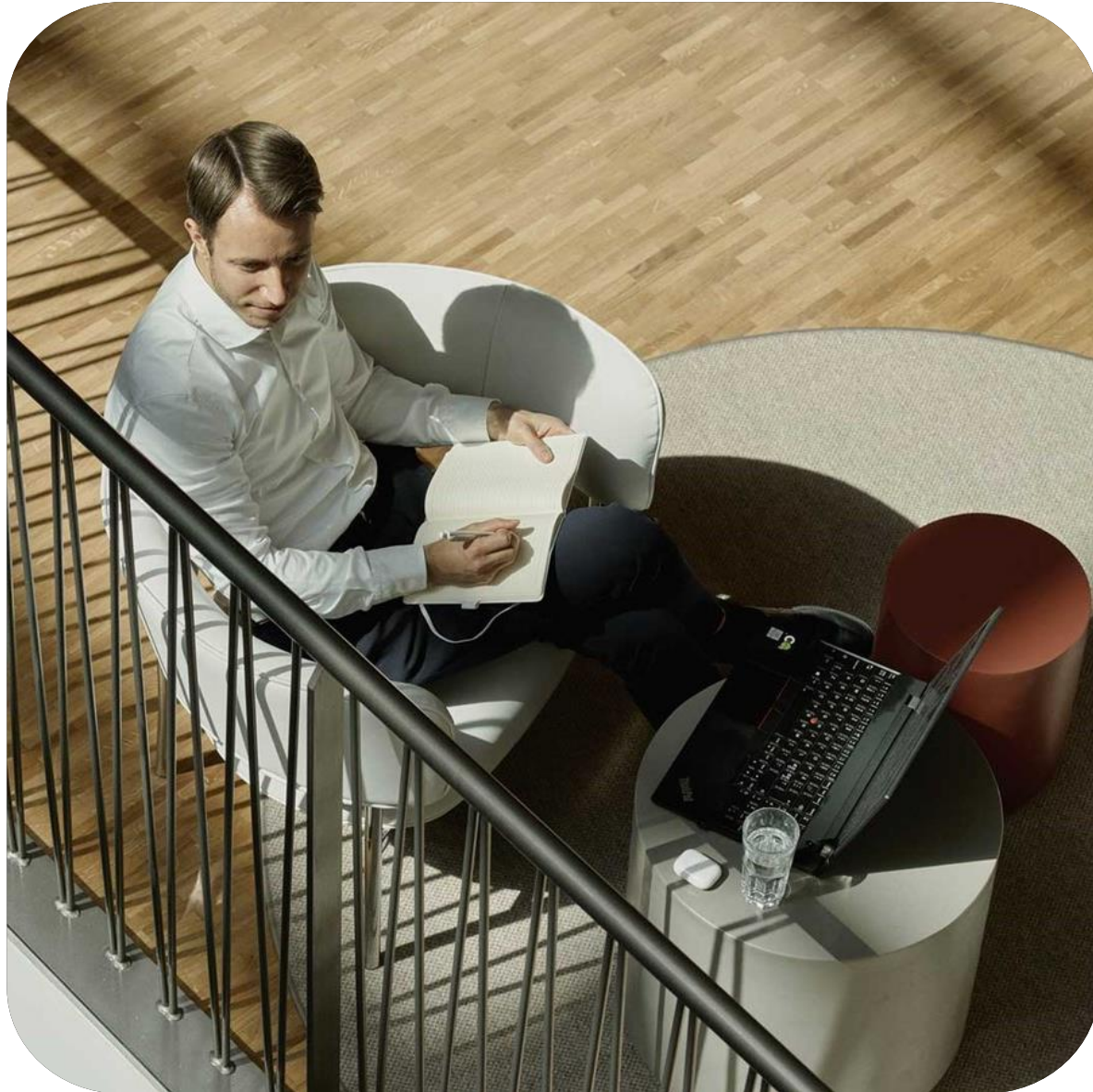


AI generated cow in 2014



AI generated cow in 2023 by OpenAI (DALL-E 3)

Prompt “give me a photo of a cow standing on a green field with trees in the background in sunshine”



Can it be controlled?

- You want the generative powers, but reduce the risk of hallucinations
- You can control the model outputs by:
 - Input parameters
 - How deterministic the model will be
 - Provide precise and relevant context
 - Make guidance of what to do when unsure
 - Keep a human in the loop

Examples

Research



You

Hvad er Propylen?



ChatGPT

Propylen, også kendt som propen, er en farveløs gas med den kemiske formel C_3H_6 . Det er en umættet kuldioxid, hvilket betyder, at den indeholder en dobbeltbinding mellem to af dens carbonatomer. Propylen er en vigtig råvare i den kemiske industri og bruges til at fremstille en række produkter, herunder plastikker, især polypropylen, samt en række andre kemikalier. Det er også en vigtig bestanddel i produktionen af forskellige opløsningsmidler og additiver. Propylen fremstilles hovedsageligt gennem krakning af råolie eller naturgas.



Summarize

ST

You

opsummer dette til én sætning

Propylen, også kendt som propen, er en farveløs gas med den kemiske formel C_3H_6 . Det er en umættet kulddioxid, hvilket betyder, at den indeholder en dobbeltbinding mellem to af dens carbonatomer. Propylen er en vigtig råvare i den kemiske industri og bruges til at fremstille en række produkter, herunder plastikker, især polypropylen, samt en række andre kemikalier. Det er også en vigtig bestanddel i produktionen af forskellige opløsningsmidler og additiver. Propylen fremstilles hovedsageligt gennem krakning af råolie eller naturgas.



ChatGPT

Propylen er en umættet, farveløs gas brugt i kemisk industri til fremstilling af plastikker og andre kemikalier, hovedsageligt fremstillet gennem krakning af råolie eller naturgas.



Categorize



You

Følgende er kunde feedback.

Din opgave er at kategorisere kundens feedback i én af tre kategorier; positiv, neutral eller negativ.

Jeg bruger Legos onlinebutik rigtig tit. Jeg har intet at klage over, som er alvorligt.

Leveringstiderne er lidt langsommere end lovet, og også i forhold til mange andre onlinebutikker, men det er okay. Deres VIP system er meget fint, dog kunne jeg godt tænke mig noget mere end farveark i deres VIP-medlemsbutik. Og kundeservicen har jeg heller aldrig haft problemer med.



ChatGPT

Denne kunde feedback kan kategoriseres som "positiv".



Real life use cases

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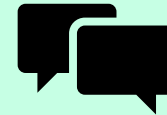
Job post Generation



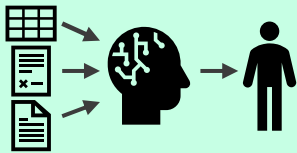
Science Assistant



HR and Website
Chatbot



Proposal Assistant



Contract Screener



Search and Answers
Over Documents



Navigation bar containing a search icon, a search input field, a page number '614', and a red button.

File Name Category

File Name	Category
<input type="checkbox"/> PDF 03.01.03 Lease Agreement F	Lease Agreement
<input type="checkbox"/> PDF Lease Agreement Rev: 133250E	Lease Agreement
<input type="checkbox"/> PDF Lessor: Blue Sky Rentals Lessee: ABC Industrials Co., Ltd. Address: c unit, 4th floor Vancouverstraße 215 Hamburg Industrial Park Postal code: 206173 Tel: +49(0)40 36 47 26 31 In accordance with related laws and regulations, both parties have reached agreement on the following:	Lease Agreement
<input checked="" type="checkbox"/> PDF 1. The premises to be leased The lessor leases a leasehold with a total area of about 30,165 square meters to the lessee, including a three-story building of mik powder and milk tablet workshops with an area of 13,365 square meters, a two-story building of liquid milk workshop, and a three-story building of warehouses.	Lease Agreement
<input type="checkbox"/> PDF 2. Lease term The lease term is 5 years, starting from September 1, 2019 untill August 31, 2024. The rental price is €30,000 per calendar month. Twelve months before the end of the term, with the lessee's proposal and the lessor's consent, both parties will sign a new lease contract about the leasehold. Only after the lessor has corrected its action according to the construction standard stated in the attachment of the contract, can the construction be resumed. The loss brought by the delay should be undertaken by the lessor. Party A should strictly follow the charts provided by party B to construct. The charts will be an	Lease Agreement
<input type="checkbox"/> PDF 03.04.28 Lease Agreement K	Lease Agreement
<input type="checkbox"/> PDF 04.02.01 Lease Agreement L	Lease Agreement

03.01.03 Lease Agreement F

Lease Agreement Rev: 133250E

Lessor: Blue Sky Rentals
Lessee: ABC Industrials Co., Ltd.
Address: c unit, 4th floor
 Vancouverstraße 215
 Hamburg Industrial Park
Postal code: 206173
Tel: +49(0)40 36 47 26 31

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Lessor ✓
AI Blue Sky Rentals

Lessee ✓
AI ABC Industrials Co.,Ltd.

Start Date ✓
AI September 1, 2019

End Date ✓
AI August 31, 2024

Address ✓
AI C unit, 4th Floor, Vancouverstraße 215, Hamburg Industrial Park 206173

Telephone No. ✓
AI +49(0)40 36 47 26 31

Area ✓
AI 30,165 Sq Metres

Price ✓
AI €30,000 PCM

Example: Kapacitys internal mail bot

Hej. I henhold til Funktionærloven kan en medarbejder opsige sin stilling med én måneds varsel til en måneds u

From: Jakob Ladekær <jml@kapacity.dk>
Sent: Tuesday, March 21, 2023 8:20:03 PM
To: Auto.Bot <Auto.Bot@kapacity.dk>
Subject: spørgsmål til opsigelse

Jeg vil gerne opsige min stilling. Hvad er min opsigelsesperiode?

Med venlig hilsen / best regards

Jakob Ladekær

Hej. På den første dag for ansættelse gennemgås følgende punkter: Velkommen til Kapacity og generel introduktion til huset, u mentor, der i den første tid kan hjælpe med netværk både fagligt og socialt. Desuden skal du være opmærksom på tavshedsregl teams, hvis du er i tvivl.

From: Jakob Ladekær <jml@kapacity.dk>
Sent: Tuesday, March 21, 2023 9:50:37 PM
To: Auto.Bot <Auto.Bot@kapacity.dk>
Subject: Særlig

Hvad skal jeg som ny medarbejder være særligt opmærksom på?

Med venlig hilsen
Jakob Ladekær

Hej. For at ændre dit password skal du følge disse trin: Gå til Visma's login side. Indtast dit brugernavn i formatet INTERNAL\ minimum 15 tegn, brug af store bogstaver, tal eller specialtegn er ikke nødvendigt, brug engelske bogstaver a-z (A-Z) og und teams, hvis du er i tvivl.

From: Jakob Ladekær <jml@kapacity.dk>
Sent: Tuesday, March 21, 2023 10:06:12 PM
To: Auto.Bot <Auto.Bot@kapacity.dk>
Subject: Passeord

Hvad gør jeg hvis jeg har glemt mit password

Med venlig hilsen
Jakob Ladekær

Hej. Du kan se hvor meget ferie du har tilbage ved at se på din tidsregistrering. Du kan også se det i

From: Jakob Ladekær <jml@kapacity.dk>
Sent: Tuesday, March 21, 2023 10:05:44 PM
To: Auto.Bot <Auto.Bot@kapacity.dk>
Subject: Ferie

Hvordan ved jeg hvor meget ferie jeg har tilbage?

Med venlig hilsen
Jakob Ladekær

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Go To Page

- Welcome
- View contracts
- Chat with contracts

twoday capacity

Contracts Chatbot

Hi! I'm ChatGPT with knowledge about your credit card contracts.

Instructions: There are generally two types of questions I can answer:

- Questions about specific contracts, e.g. What is the APR for cash Advances for Nordstrom?
- Questions that requires insights across all credit card contracts, e.g. Which cards have annual fees?

These are examples of questions you can ask me:

- Show me all card names and their APR for cash advance.
- What is the APR for cash advance for Nordstrom?
- what is the APR for purchases for Twinstar Credit Union?
- Show me all cards that has a penalty for late payments
- Which company and card have the highest transaction fees for foreign transactions?

you:

INSTRUÇÃO DE TRABALHO

OBJTIVO: REALIZAR A MONTAGEM COM SEGURANÇH, QUALIDADE E SEM DESPERDÍCIOS



EPI'S



PROTEÇÃO CEFÁLICA



PROTEÇÃO DE SEGURANÇA



PROTEÇÃO

01

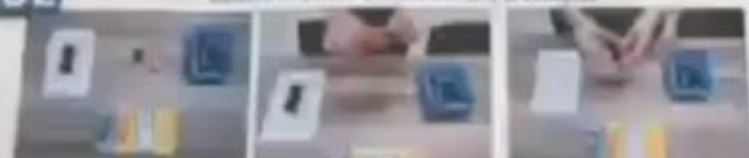
PREPARAR MATERIAIS



1. VERIFICAR SE OS MATERIAIS ESTÃO CORRETAMENTE IDENTIFICADOS E SE ESTÃO EM QUANTIDADE SUFICIENTE PARA A MONTAGEM.
2. SEPARAR OS MATERIAIS DE ACORDO COM O TIPO DE COMPONENTE E ORGANIZÁ-LOS EM SEUS RESPECTIVOS CONTÊINERES.
3. VERIFICAR SE OS MATERIAIS ESTÃO EM BOA CONDIÇÃO DE USO E SE NÃO HÁ DANOS OU DEFORMAÇÕES.

02

DESEMPENHAR O TRABALHO E MONTAR O APARELHO



1. SEGUIR O PROCEDIMENTO DE MONTAGEM DE ACORDO COM O MANUAL DE INSTRUÇÕES DO FABRICANTE.
2. VERIFICAR SE OS COMPONENTES ESTÃO CORRETAMENTE IDENTIFICADOS E SE ESTÃO EM BOA CONDIÇÃO DE USO.
3. REALIZAR A MONTAGEM DE ACORDO COM O PROCEDIMENTO DE MONTAGEM DE ACORDO COM O MANUAL DE INSTRUÇÕES DO FABRICANTE.

03

ENCERRAR



1. VERIFICAR SE O APARELHO ESTÁ CORRETAMENTE MONTADO E SE NÃO HÁ DANOS OU DEFORMAÇÕES.

Curiosity and reality checks



**IF YOU DON'T KNOW WHAT'S
POSSIBLE YOU CANNOT
THINK OF THESE
POSSIBILITIES
ENTER THE AGE OF CURIOSITY**

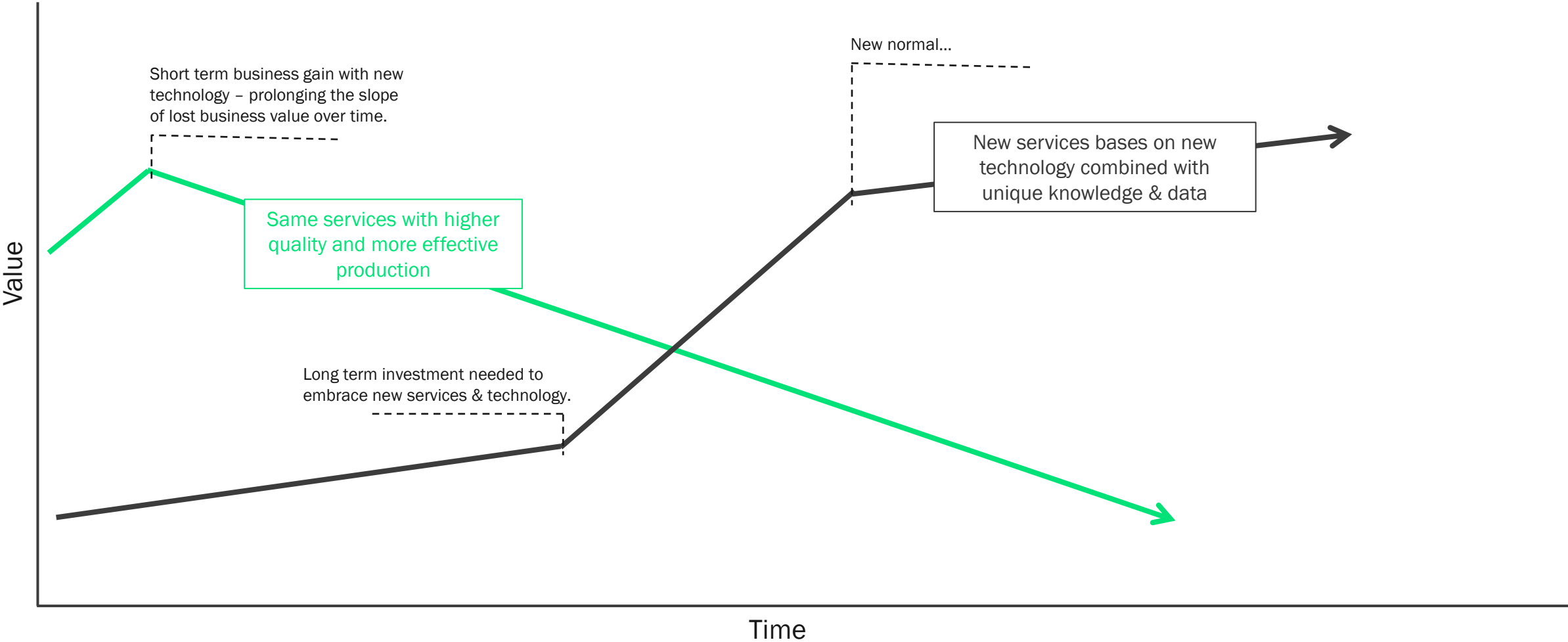


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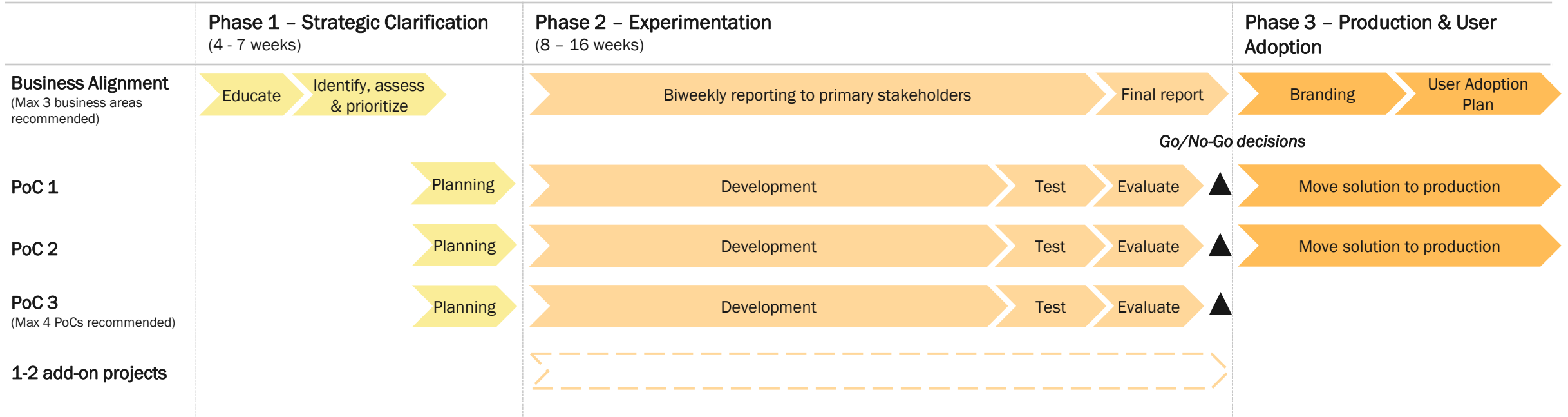
How to get started

A simple **guess** into the future

Follow 2 parallel tracks to strengthen the business going forward



How to structure an AI program



Resource Overview



AI development

- 1 tech lead (internal or external)
- Add 1-2 data scientist for PoC planning and development



Business commitment

- Workshop participants
- 1-2 resources per PoC for ongoing clarifications
- End users for test



Program Support

- Program Owner for Business Alignment supported by Digital Advisor (Kapacity)
- SCRUM master for coordination in phase 2-3



Architecture

- Add architect in phase 3 for cloud security set-up



Optional: UI

- 1 developer

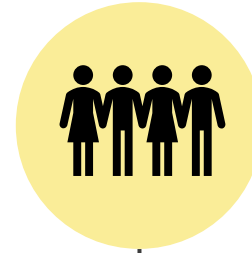
Invest now



Invest in discovery of use cases



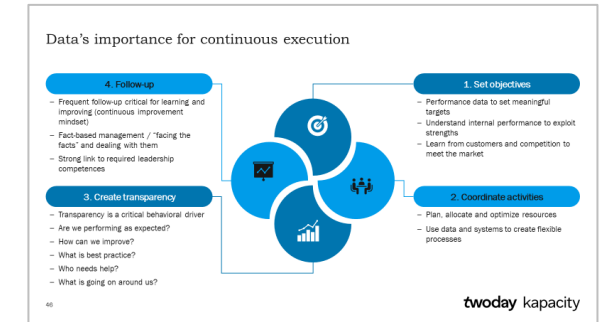
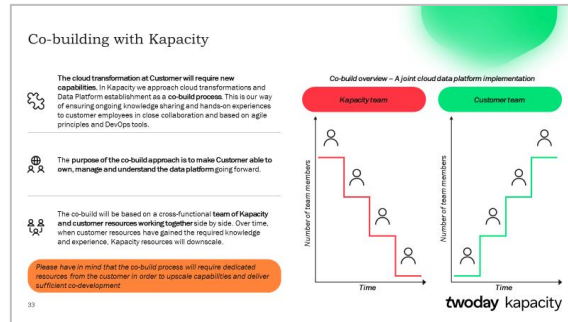
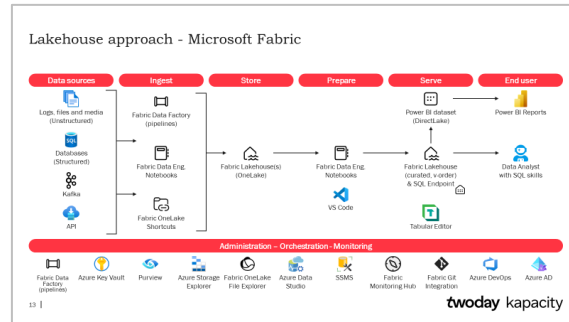
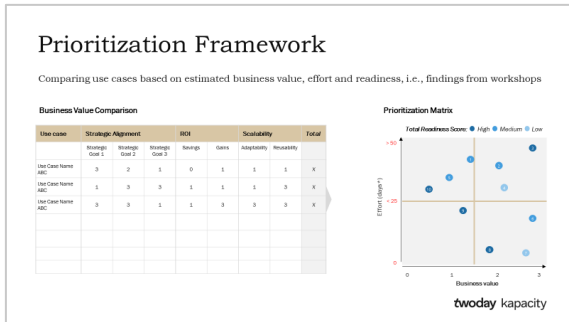
Invest in the right Platform



Invest in your people



Build Governance





About us



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Final note

