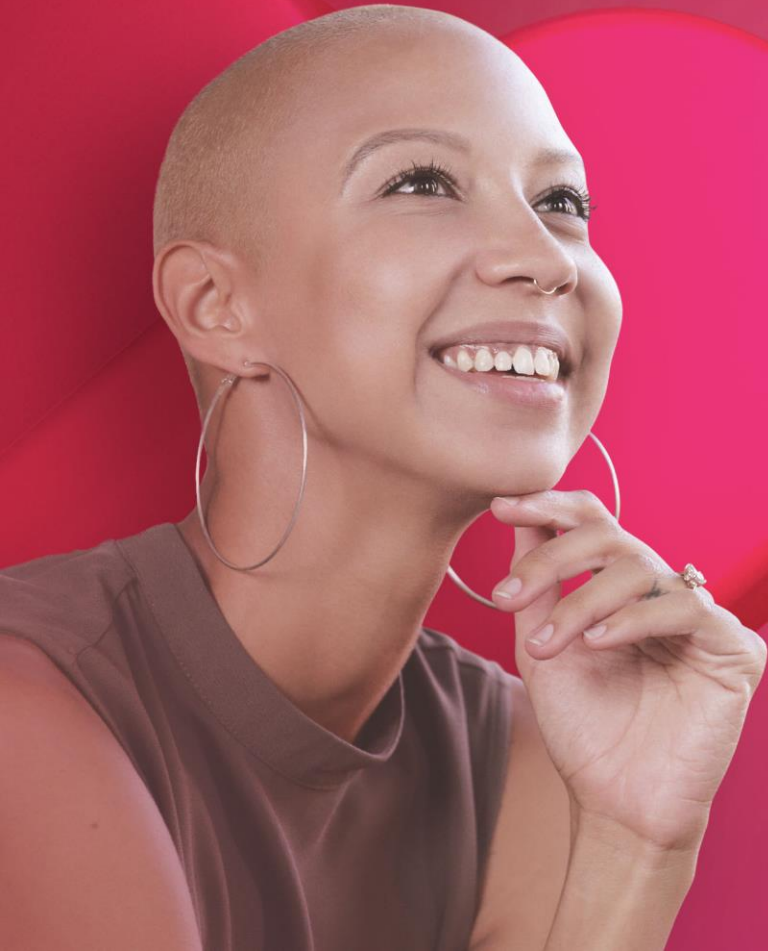


Belfius



## Beyond the hype: real impact through AI

Hannes Heylen  
Head of Data & AI Belfius Insurance



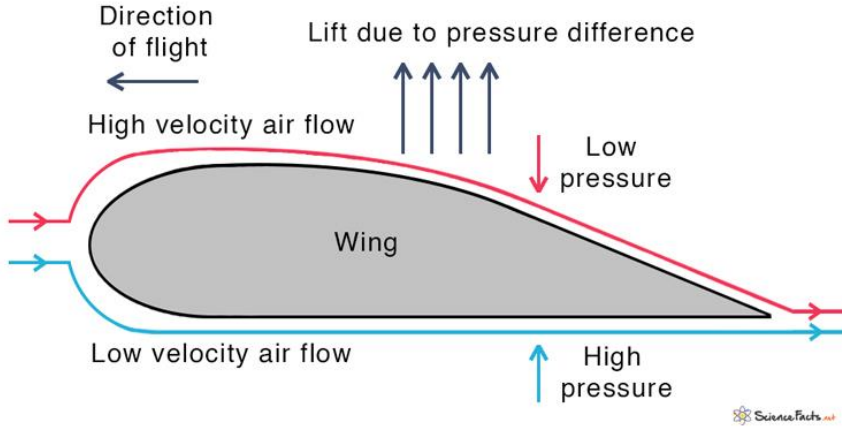


X  alan X



# Bernoulli's Principle Example

## Lift of an Aircraft



1738



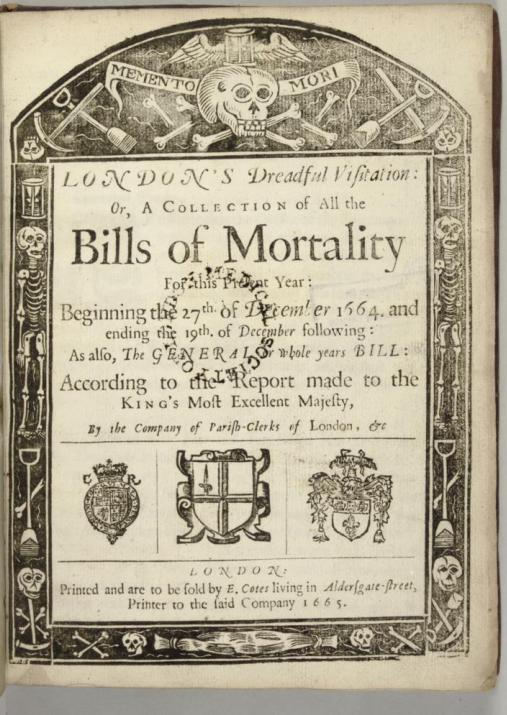
Adobe Stock | #334979082





1903





CAPTAIN JOHN GRAUNT

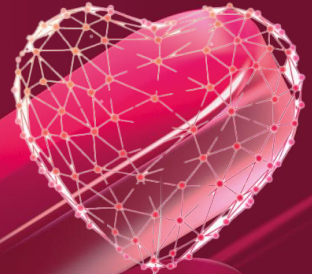




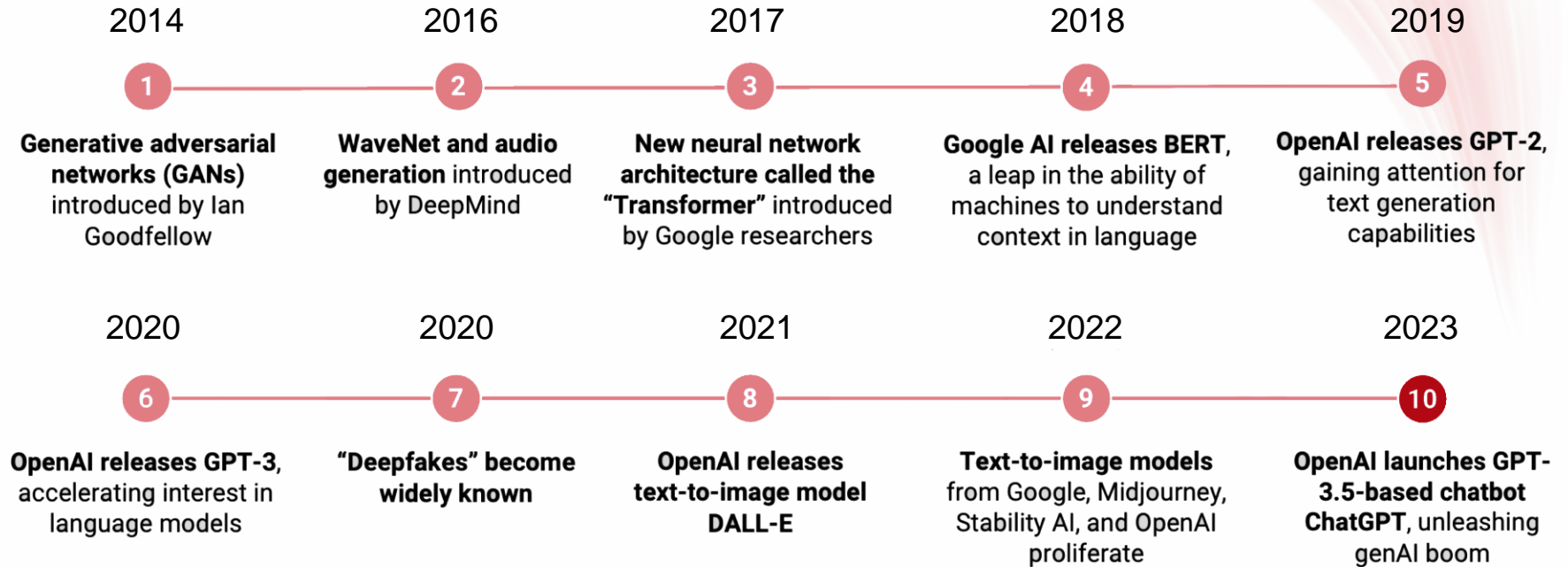
To quote ERNEST HEMINGWAY:

“How did you go bankrupt?”

“Two ways. Gradually, then suddenly.”

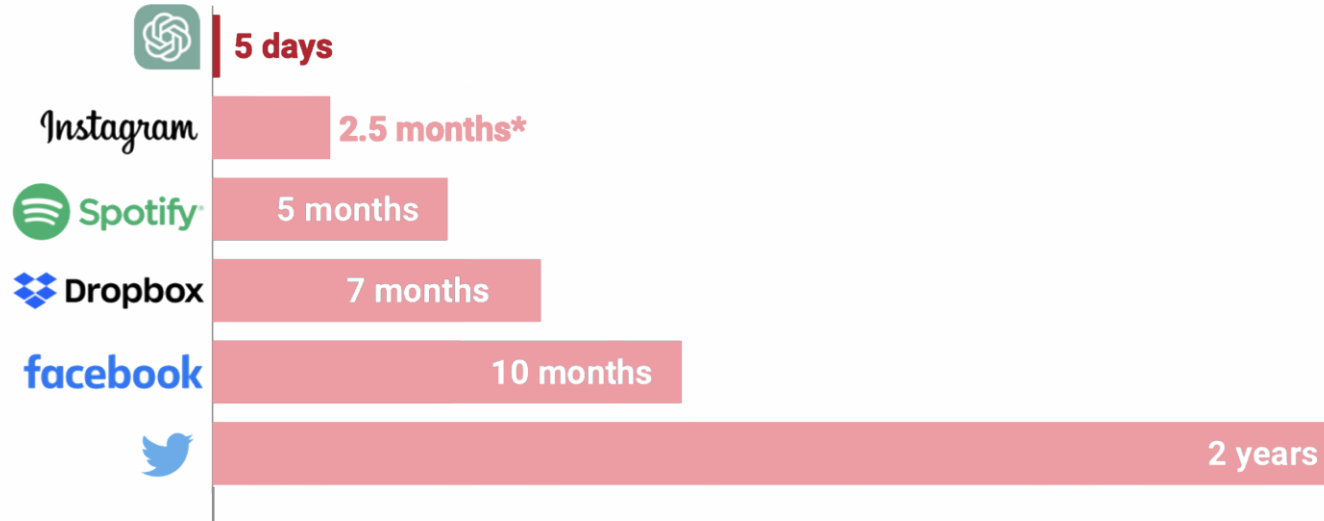


# Gradually...



# Then suddenly...

Time to 1M users for apps from launch



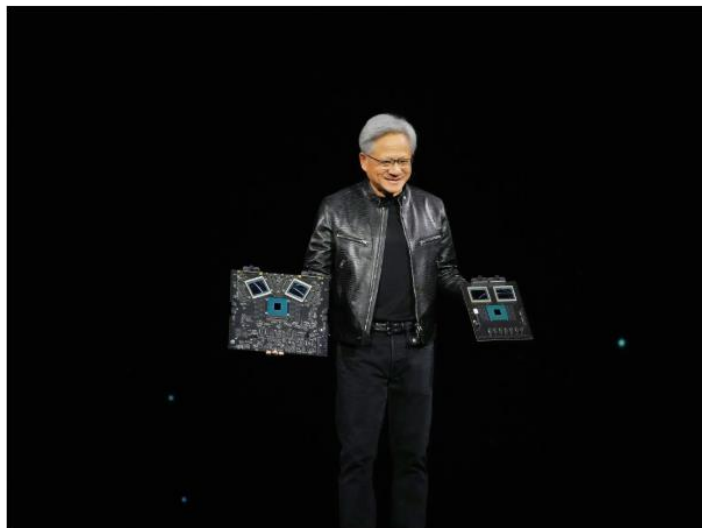


## *Nvidia Doubles Profit as A.I. Chip Sales Soar*

The company, which dominates the market for chips used to build artificial intelligence, expects another big jump in the current quarter.

▶ Listen to this article · 5:43 min [Learn more](#)

📄 Share full article



Nvidia gained a commanding position in artificial intelligence because its chief executive, Jensen Huang, bet that its semiconductors could be essential to building the technology. Jim Wilson/The New York Times

## *The A.I. Boom Has an Unlikely Early Winner: Wonky Consultants*

Rattled by tech's latest trend, businesses have turned to advisers at Boston Consulting Group, McKinsey and KPMG for guidance on adopting generative artificial intelligence.

IBM, which has [160,000 consultants](#), has secured more than \$1 billion in sales commitments related to generative A.I. for consulting work and its [watsonx](#) system, which can be used to build and maintain A.I. models. [Accenture](#), which provides consulting and technology services, booked \$300 million in sales last year. About 40 percent of McKinsey's business this year will be generative A.I. related.







Intelligence = Data x Compute





Intelligence = Data x Compute

The New York Times



WIKIPEDIA  
The Free Encyclopedia



# Compute: the € is the limit



Year	OOMs	H100s-equivalent	Cost	Power	Power reference class
2022	~GPT-4 cluster	~10k	~\$500M	~10 MW	~10,000 average homes
~2024	+1 OOM	~100k	\$billions	~100MW	~100,000 homes
~2026	+2 OOMs	~1M	\$10s of billions	~1 GW	The Hoover Dam, or a large nuclear reactor
~2028	+3 OOMs	~10M	\$100s of billions	~10 GW	A small/medium US state
~2030	+4 OOMs	~100M	\$1T+	~100GW	>20% of US electricity production

## Three Mile Island nuclear reactor to restart to power Microsoft AI operations



Pennsylvania plant was site of most serious nuclear meltdown and radiation leak in US history in 1979



📷 The Three Mile Island in 2011. Its owner, Constellation Energy, will restart Unit 1, the reactor it closed in 2019. Photograph: Bradley C Bower/AP



Data: 'original' text almost depleted



Synthetic data: blessing or curse?  
Voice/Video?



# 90% of the internet AI-generated by 2026?



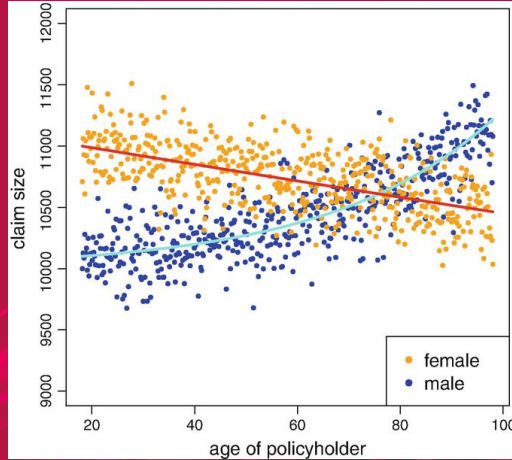
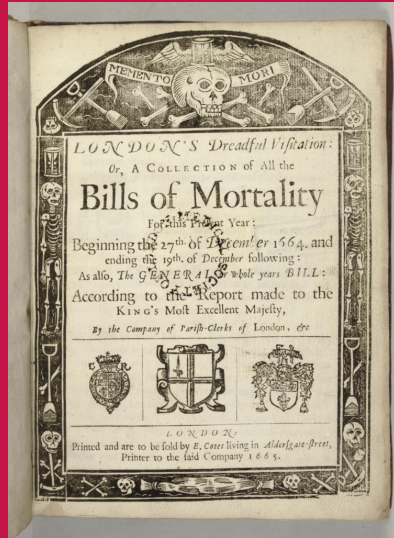
**T**egen 2026, waarschuwde Europees wetshandhavingsbureau Europol onlangs, zal 90 procent van alle online content synthetisch gegenereerd zijn, gemaakt dus door artificieel intelligente systemen als GPT-4. En zelfs als het niet dat soort vaart loopt lijkt het geen twijfel dat we in de toekomst meer en meer tekst op websites zullen lezen die werd geschreven door een machine. Taalmodellen worden met minder en minder schroom ingezet in velden als marketing, politieke communicatie en journalistiek.

[Fear of 'robot inbreeding': what if AI is trained on AI content? - Data News \(knack.be\)](#)



We will all have to develop our 'AI intuition' and learn to evaluate what we read online **with a critical mind.**

So where does that leave us, the insurance industry?





# The vast amounts of unstructured data have put the Insurance sector right in the crosshairs of (gen)AI disruption

From : [REDACTED]  
To : [REDACTED]  
Subject : [REDACTED] ontvangst + afspraak  
Date : 15/05/2023 12:01  
Attachment(s) : - Ontvangstbevestiging\_Mij.docx

Be aware | external email

Geachte,

Ons dossier: [REDACTED]  
Zie bijlage.

Met vriendelijke groeten,

## 4. Onderzoek naar schade.

Door verzekerde werden er een schadeclaims v  
incl. BTW.

Hierbij dient de plaatsing nog gerekend – dit wol

Navraag bij onze glasplaatser leert ons dat het g  
met de vraagprijs, dan een ruit in veiligheidsglas

Met verplaatsingskost en werkuren zaten zij ever

Wij gingen dan ook akkoord met het schadebedr  
voor afbraak en plaatsing door haar vader.

**MINNELIJKE SCHIKKING VAN SCHADEVASTSTELLING**

Verzekeringmaatschappij: [REDACTED] Ref. mij: [REDACTED]  
Verzekende: [REDACTED] Polis n°: [REDACTED]  
Bijzamen door: [REDACTED] Datum schade: [REDACTED]  
Plaats schade: [REDACTED] Oorzaak schade: [REDACTED]  
Dossier expert: [REDACTED]

De voormelde verzekeringmaatschappij vertegenwoordigd door Expertisebureau verzekerde hebben in gemeenschappelijk overleg de waarde van de verzekerde gebouwen en/of goederen op de dag van het schadegeval alsook de schade aan deze gebouwen en/of goederen geschat als volgt:

ARTIKEL	Verzekerd Kapitaal	Waarde op dag van de schade	Bedrag van de schade af te rekenen
Opbouw			899,00
			50,00
			849,00

Pag. 3

Polis vermeldt een half open bebouwing met een kapitaal van +/- 35.000,00 €. Voldoende voor waar ze nu woont maar beschrijving klopt niet.

Ik vermoed dat dit geen impact heeft op deze regeling.

Welnu, verzekerde werd geconfronteerd met het plots springen van één van glazen panelen in veiligheidsglas van haar douchecabine.

Het betreft glasbreuk.

**3. Onderzoek & Interpretatie**

a. Vaststellingen & Verklaringen

DATE: 2023-08-31 TYPE: usertaskdesc [REDACTED]  
Sdp.cxl

Un client demande si on sait déjà si une tempête a été reconnue officiellement. Il voudrait en effet commencer les réparations, parce qu'avec toutes ces branches éparpillées, c'est dangereux. Quand peut-il commencer à faire les réparations et évacuer l'arbre ? Il demande s'il peut aussi transmettre l'offre que le voisin a fait faire pour l'évacuation de l'arbre et la clôture. Le client demande qu'on se dépêche.

ONTVANGSTBEVESTIGING VAN OPDRA

U-Ref.: [REDACTED]  
Polis: [REDACTED]  
Betreft: [REDACTED]  
Ongeval: [REDACTED]  
O-Ref.: [REDACTED]

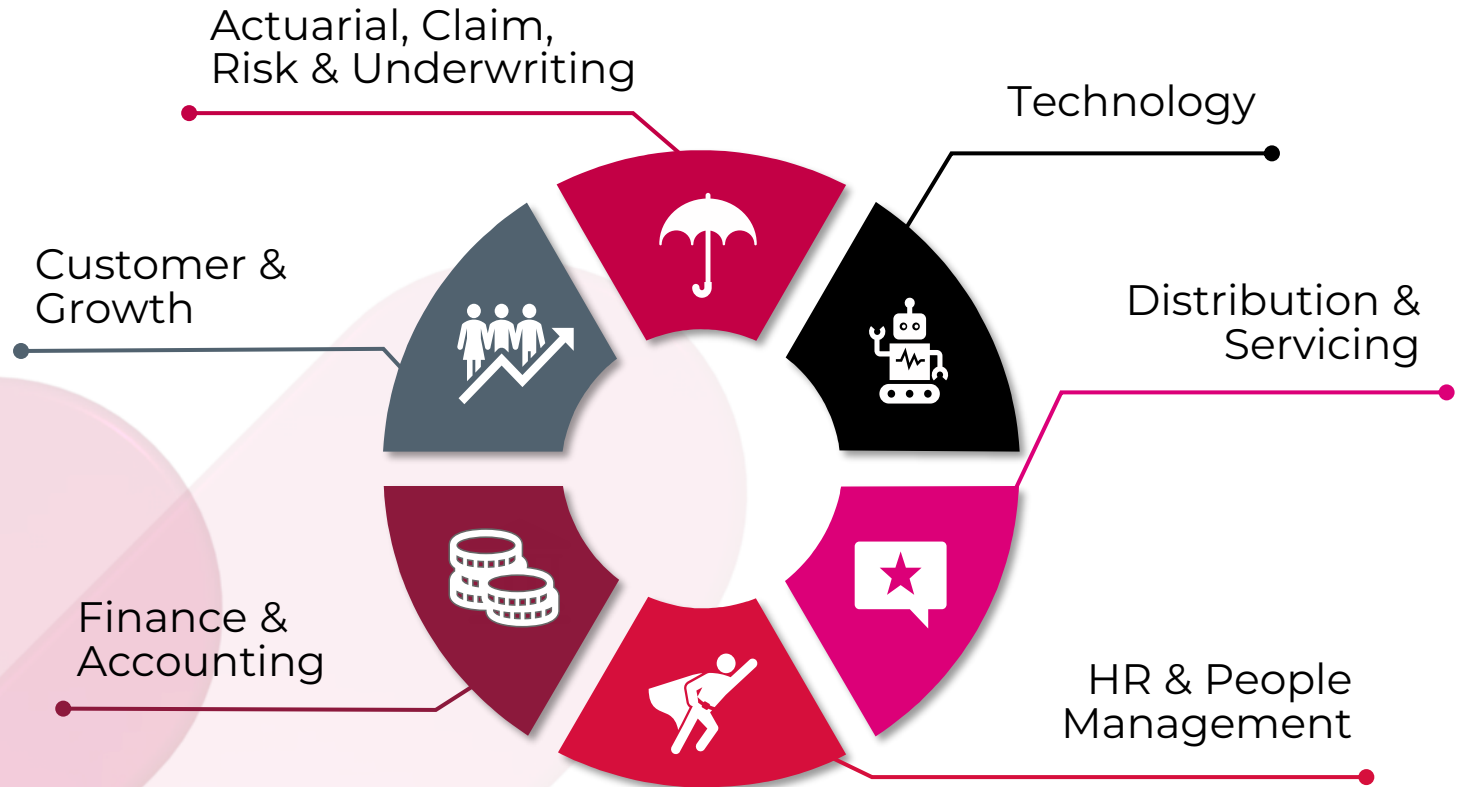
In goede orde ontvangten wij uw Insteping dd. 7/03/202 dank.

Er werd inmiddels met de betrokken partijen contact zodat tot expertise zal worden overgegaan.

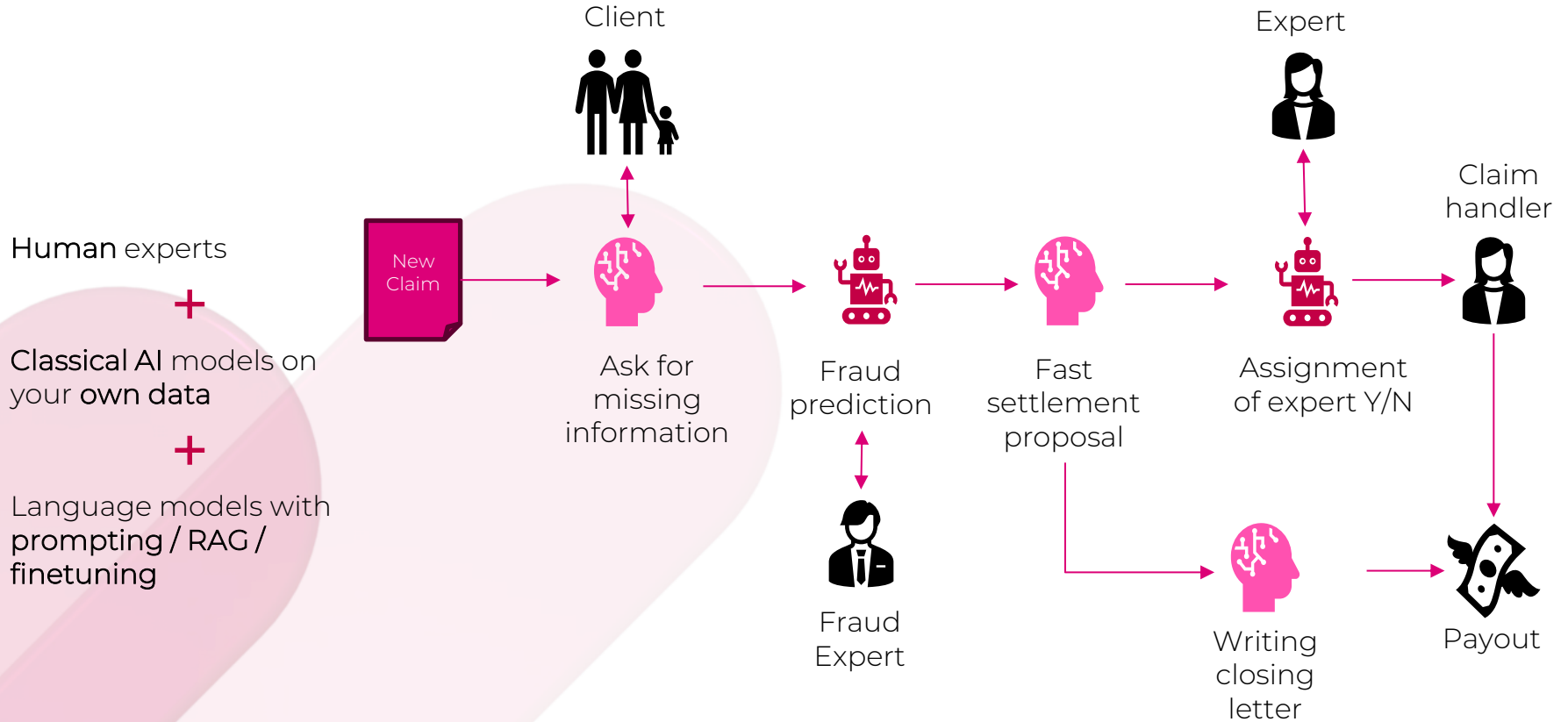
De expertise is bepaald voor 17/05/2023 14:30.

Hierna maken wij U zohand mogelijk ons rapport over. Met vriendelijke groeten.

# Potential for disruption throughout the value chain



# True value comes from collaboration of different human & AI 'agents'







Some cases that have proven  
successful for us...

# Claims Fraud

Beheer schadegeval  
Claim: [redacted] Auto

Feedback Type  
Bijkomende info tegenpartij

Feedback  
verklaring tegenpartij opgevraagd

33/250

Detail

Fraud cases

Start datum: 17/12/2023  
Eind datum: 17/01/2024  
Type van fraude: Alle  
Resultaat: Alle

Beheerder: Alle  
Status: Selectie (2)

Opzoeken Reset filters Clear all filters

Schadegevallen

Score range: 40 - 100  
Start datum: 1/11/2023  
Eind datum: 17/01/2024  
Beheerders: Alle

Opzoeken Reset filters Clear all filters

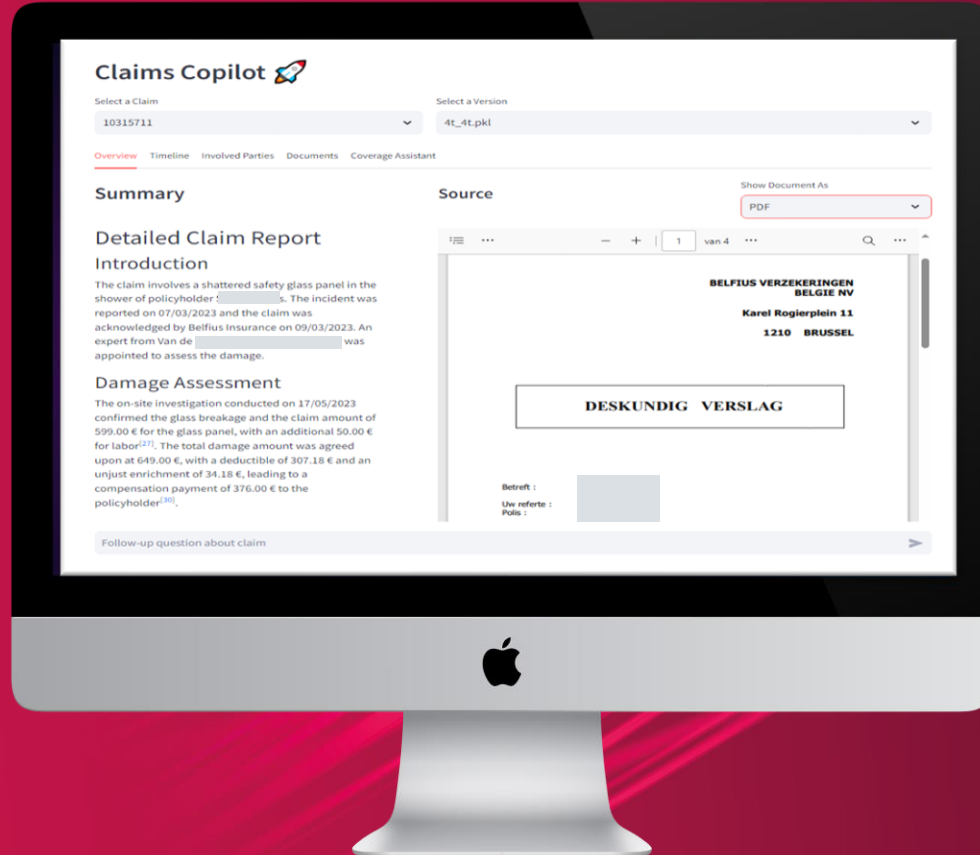
Schadegeval ID	Score	Screening	Type screening	Beheerder	Product	Status
[redacted]	- 100,00	21/11/2023	Nieuw	[redacted]	Auto	Nieuw <a href="#">Detail</a>
[redacted]	- 100,00	21/11/2023	Nieuw	[redacted]	Auto	Nieuw <a href="#">Detail</a>
[redacted]	- 100,00	21/11/2023	Nieuw	[redacted]	Auto	Nieuw <a href="#">Detail</a>
[redacted]	- 100,00	21/11/2023	Nieuw	[redacted]	Auto	Nieuw <a href="#">Detail</a>
[redacted]	- 100,00	21/11/2023	Nieuw	[redacted]	Auto	Nieuw <a href="#">Detail</a>

Claims Leakage

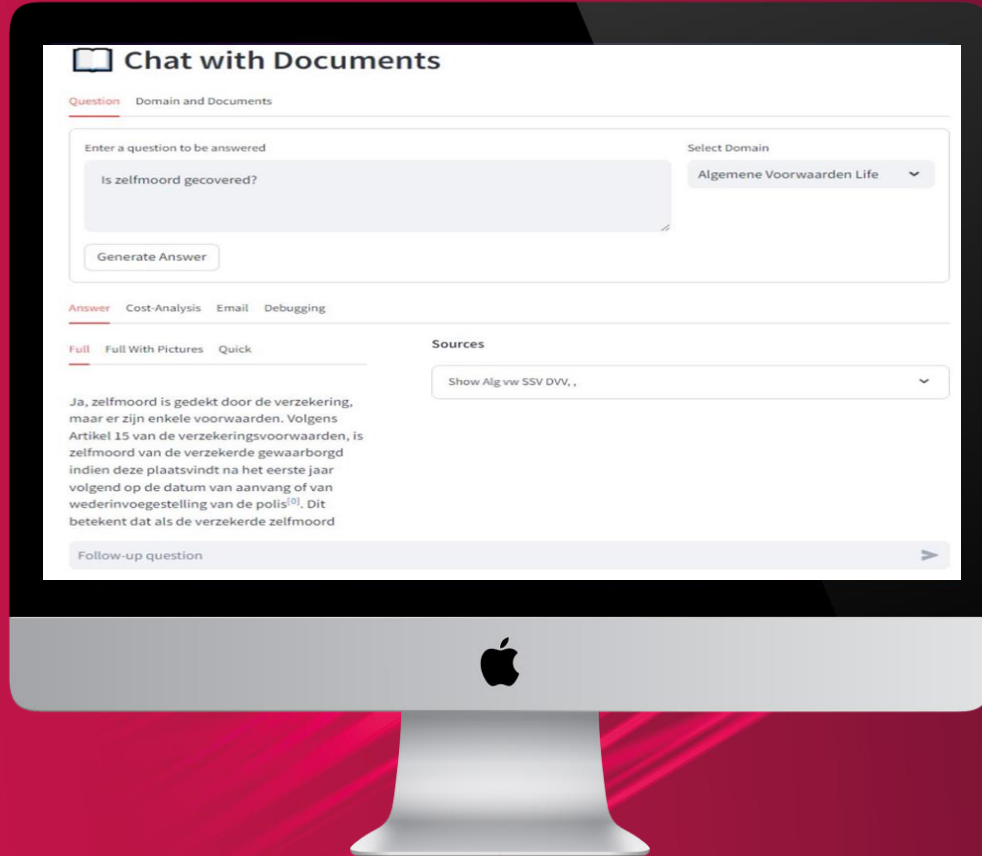




# Claims Copilot



# Knowledge Assistant



# Code Migration Tool

← j\_ddc\_pa\_producer\_30 Notebook Retranslate

Job Compare Visualization

Preprocess Version

Left Version: Latest

**Task(id=1,name=user-written-code)**

```
in { }
spark.sql("""
CREATE OR REPLACE TEMP VIEW extr_table AS
SELECT
  DUMMY_PRODUCER_ID,
  PRODUCER_TYPE_CD,
  AGI,
  DESCRIPTION
FROM DUMMY_PRODUCERS
""")
```

**Task(id=2,name=Extract)**

```
in { }
spark.sql("""
CREATE OR REPLACE TEMP VIEW USRQRP AS
SELECT
  PRODUCER_RK,
  PRODUCER_ID,
  X_AGI_ID,
  X_SOURCE_SYSTEM_CD
FROM PRODUCER
WHERE VALID_TO_DTH = to_timestamp('4747-12-31 23:59:59', 'yyyy-mm-dd HH:mm:ss') AND X_SOURCE
""")
```

**Task(id=3,name=Extract)**

```
proc sql noprint;

create table &extr_table, as
select DUMMY_PRODUCER_ID, PRODUCER_TYPE_CD, AGI, DESCRIPTION
from (SELECT DUMMY_PRODUCER_ID, PRODUCER_T
      FROM DDD.DUMMY_PRODUCERS T1
      );
quit;
```

**Task(id=2,name=Extract)**

```
in { }
proc sql;
create view work_USRQRP as
select
  PRODUCER_RK,
  PRODUCER_ID,
  X_AGI_ID,
  X_SOURCE_SYSTEM_CD
from PRODUCER
where VALID_TO_DTH = '3106C4747:23:59:59' DT and X_SOURCE_SYSTEM_CD = '30'
;
quit;
```

**Task(id=3,name=Extract)**

← SQL Rules

Rules	New Rule	Name
COMPRESS	COMPRESS	COMPRESS
COMPRESS	COMPRESS	COMPRESS
COMPRESS	COMPRESS	COMPRESS
DATE TIME_FORMAT	DATE TIME_FORMAT	DATE TIME_FORMAT
GREATEST	GREATEST	GREATEST
INSERT	INSERT	INSERT
LABEL_NOT_ALIAS	LABEL_NOT_ALIAS	LABEL_NOT_ALIAS
SELECT INTO	SELECT INTO	SELECT INTO
STRIP_PUT	STRIP_PUT	STRIP_PUT

**COMPRESS**  
COMPRESS

**DATE TIME\_FORMAT**  
DATE TIME\_FORMAT

**GREATEST**  
GREATEST

**INSERT**  
INSERT

**LABEL\_NOT\_ALIAS**  
LABEL\_NOT\_ALIAS

**SELECT INTO**  
SELECT INTO

**STRIP\_PUT**  
STRIP\_PUT

← Job Uploader

Overview

Jobs Available: 6 | Jobs Running: 1 | Jobs Completed: 5

Upload Choose Files

Upload new jobs

Available Jobs

Type	All	Job Name	Type	Status	Latest version	Select all	Translate
0		j_ddc_pa_changed_persons_27	SAS DI	Translating...	--/:	<input type="checkbox"/>	Delete
1		j_ddc_pa_tmp_change_tblc1_27	SAS DI	Done ✓	25-10-2024 16:38:30	<input type="checkbox"/>	Delete
2		j_ddc_pa_tmp_change_tblc45_27	SAS DI	Done ✓	25-10-2024 16:12:53	<input type="checkbox"/>	Delete
3		j_ddc_pa_tmp_change_tblc25_27	SAS DI	Done ✓	25-10-2024 16:13:12	<input type="checkbox"/>	Delete
4		j_ddc_pa_tmp_change_tblc1b_27	SAS DI	Done ✓	25-10-2024 16:15:31	<input type="checkbox"/>	Delete
5		j_ddc_pa_producer_30	SAS DI	Done ✓	28-10-2024 09:31:34	<input type="checkbox"/>	Delete





Some learnings that we picked up along the way...



1. Start with proven value & create a snowball effect





To quote Kent Beck:

2. Make it work, make it right,  
make it fast





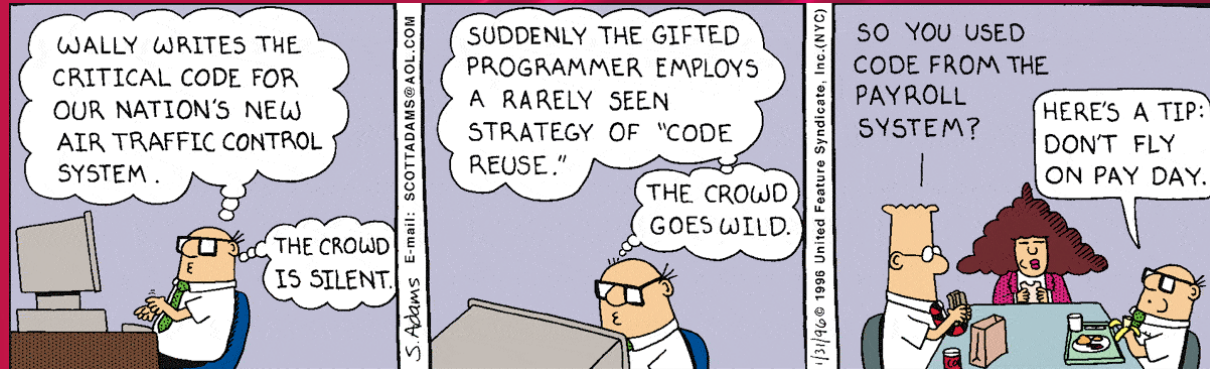
### 3. Create end-to-end teams: freedom & responsibility



4. What people think AI  
does well  $\neq$  what AI  
truly does well



## 5. Build smart : invest in reusable components & strong foundations





# Wrap up





Transform insurance, AI can.

Bold and wise, you must be.

Impact, it will bring.

YodaGPT



# Q&A