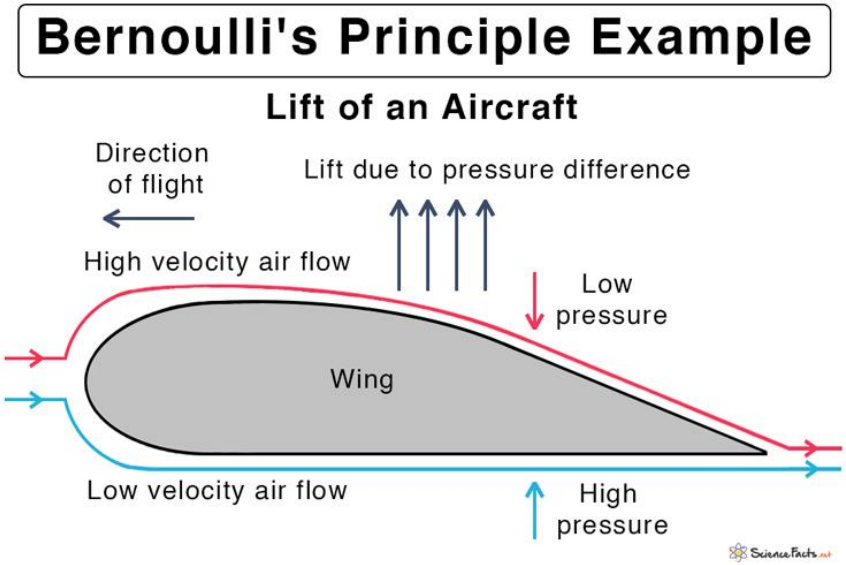
Belfius

Beyond the hype: real impact through AI

Hannes Heylen
Head of Data & AI Belfius Insurance

alan



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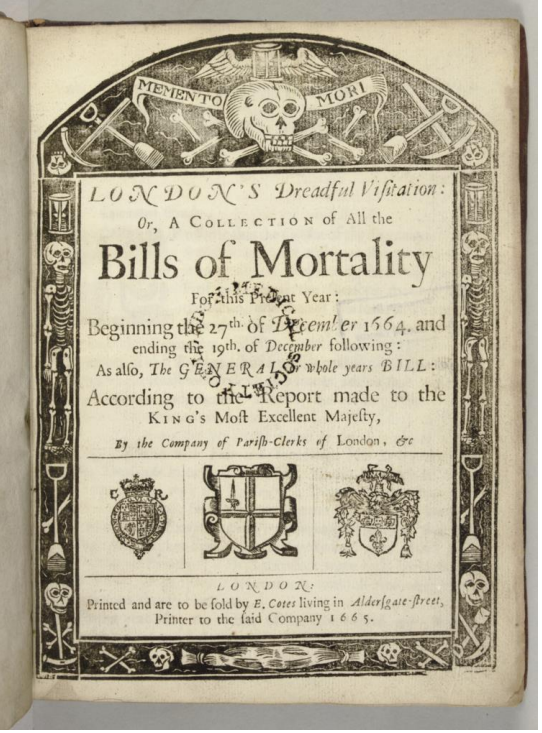
Adobe Stock | #334979082

1903



MEMENTO MORI

LONDON'S Dreadful Visitation:
Or, A COLLECTION of All the

Bills of Mortality

For this Present Year:

Beginning the 27th. of December 1664. and ending the 19th. of December following:
As also, The GENERAL or whole years BILL:
According to the Report made to the KING's Most Excellent Majesty,

By the Company of Parish-Clerks of London, &c

LONDON:
Printed and are to be sold by E. Cotes living in Aldersgate-street, Printer to the said Company 1665.

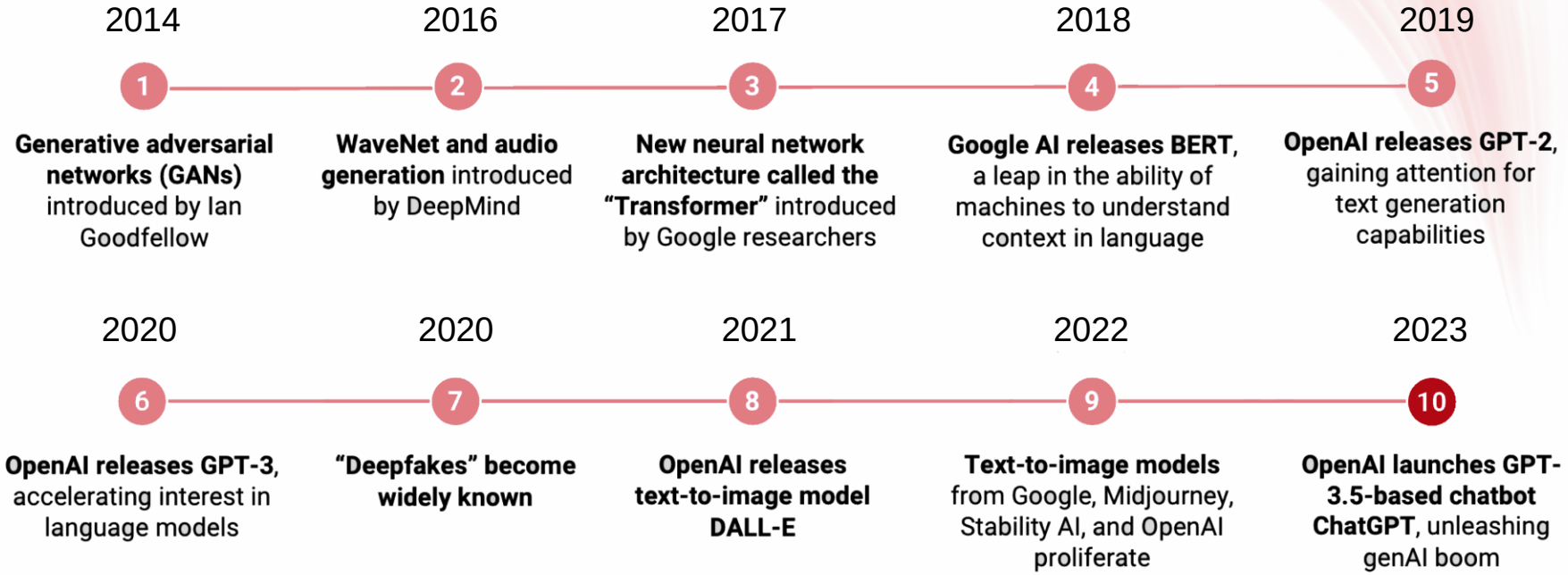
CAPTAIN JOHN GRAUNT

To quote ERNEST HEMINGWAY:

“How did you go bankrupt?”

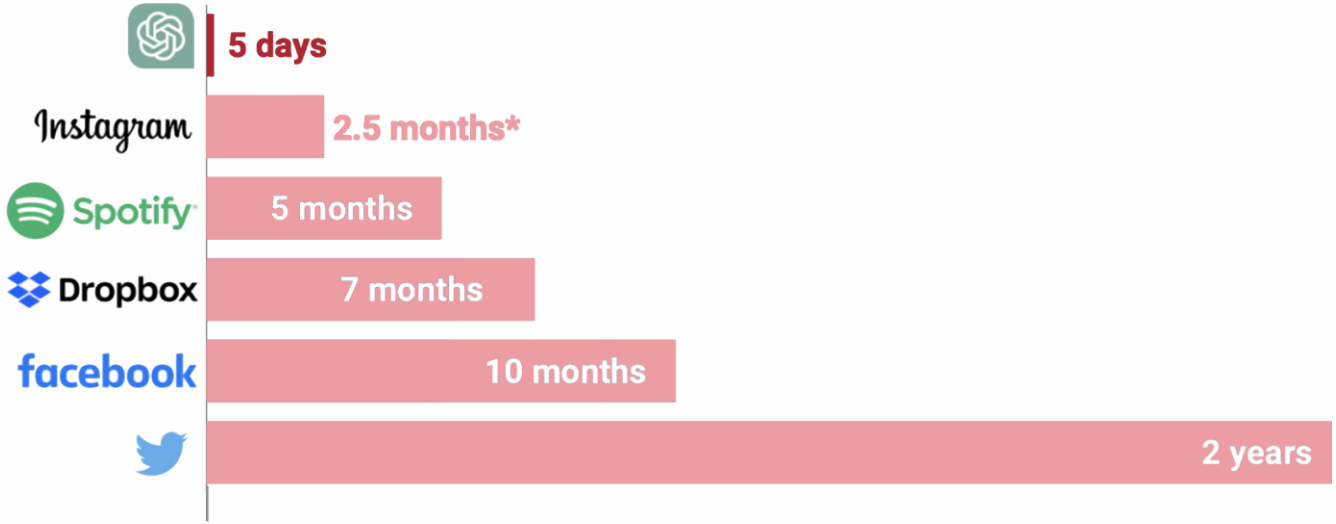
“Two ways. Gradually, then suddenly.”

Gradually...


2014
1
Generative adversarial networks (GANs) introduced by Ian Goodfellow
2016
2
WaveNet and audio generation introduced by DeepMind
2017
3
New neural network architecture called the "Transformer" introduced by Google researchers
2018
4
Google AI releases BERT, a leap in the ability of machines to understand context in language
2019
5
OpenAI releases GPT-2, gaining attention for text generation capabilities
2020
6
OpenAI releases GPT-3, accelerating interest in language models
2020
7
"Deepfakes" become widely known
2021
8
OpenAI releases text-to-image model DALL-E
2022
9
Text-to-image models from Google, Midjourney, Stability AI, and OpenAI proliferate
2023
10
OpenAI launches GPT-3.5-based chatbot ChatGPT, unleashing genAI boom

Then suddenly...

Time to 1M users for apps from launch



The New York Times

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.

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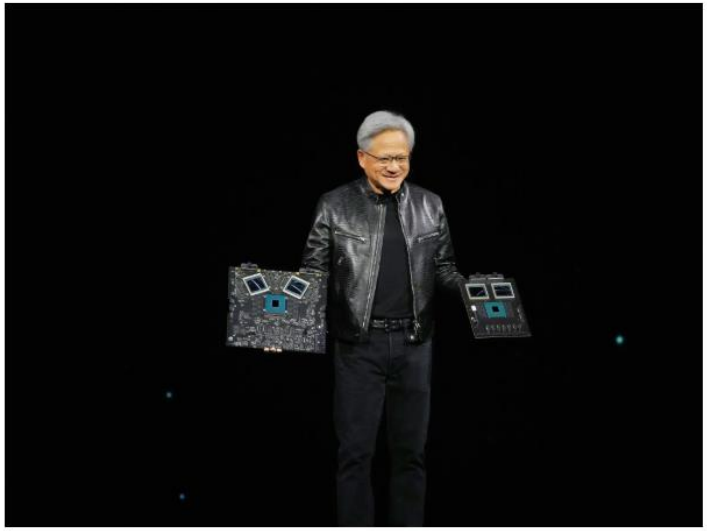


Nvidia gained a commanding position in artificial intelligence because its chief executive, Jensen Huang, bet that its semiconductors could be essential to building the technology. Jim Wilson/The New York Times

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

GitHub

WIKIPEDIA
The Free Encyclopedia

reddit

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

The Guardian
Eur

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 cur
Voice/Video?

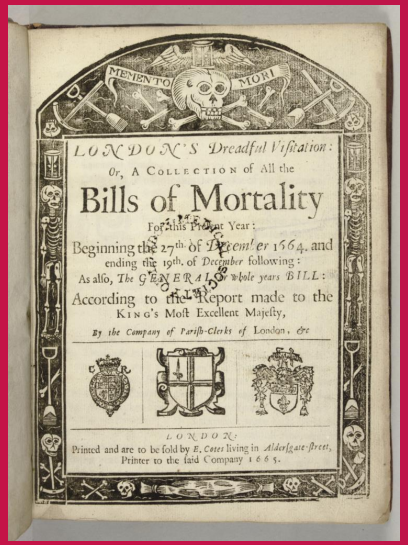
90% of the internet AI-generated by 2026?

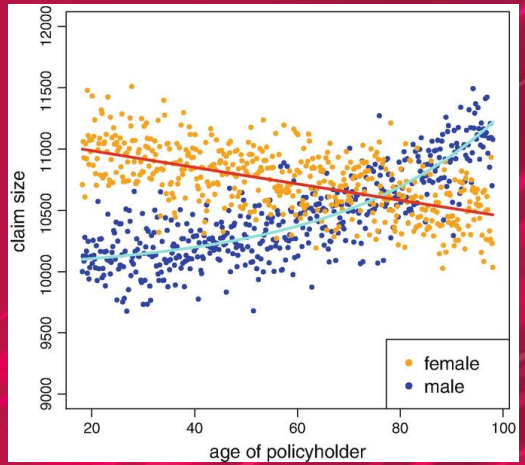
Tegen 2026, waarschuwde Europees wetshandhavingsbureau Europol onlangs, zal 90 procent van alle online content synthetisch gegenereerd zijn, gemaakt dus door artificieel intelligente systemen als GPT-4. En zelfs als het niet dat soort vaart loopt lijdt het geen twijfel dat we in de toekomst meer en meer 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?





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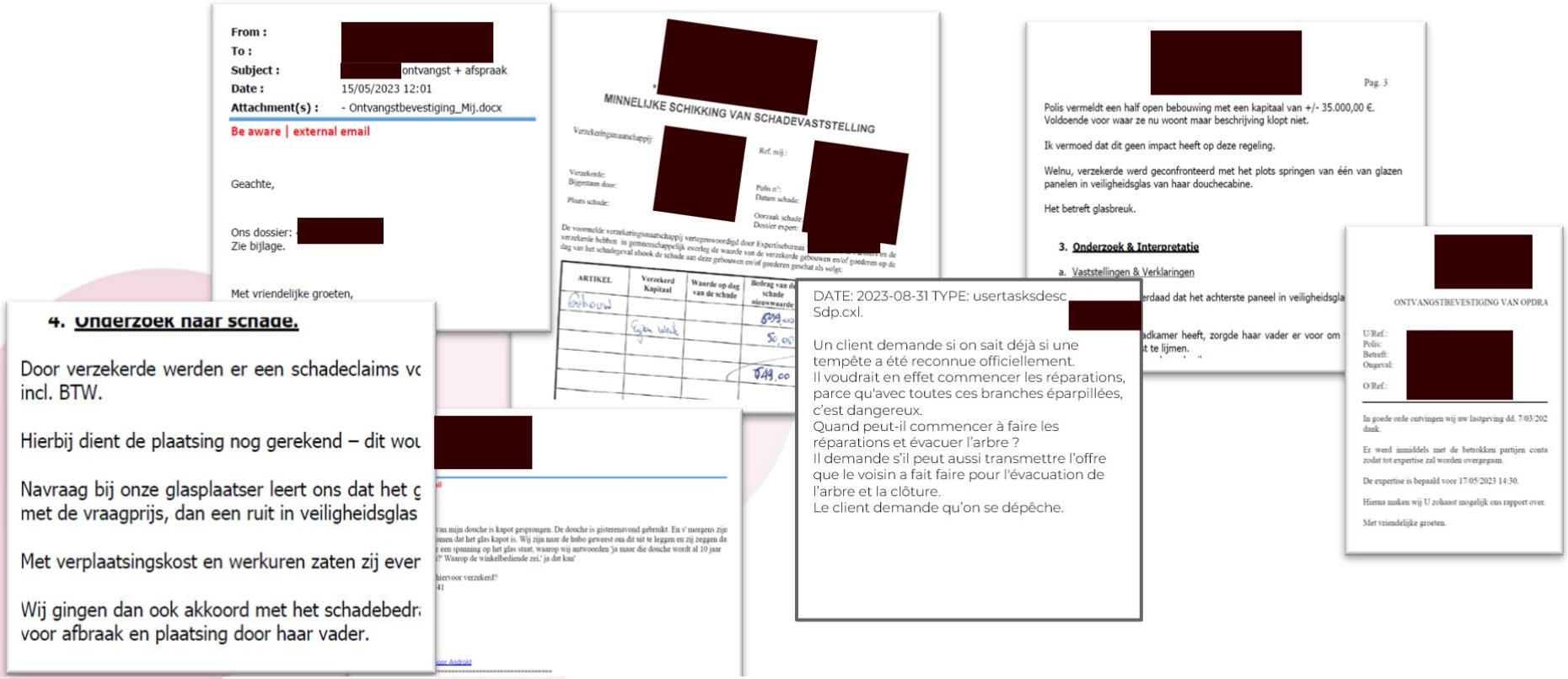
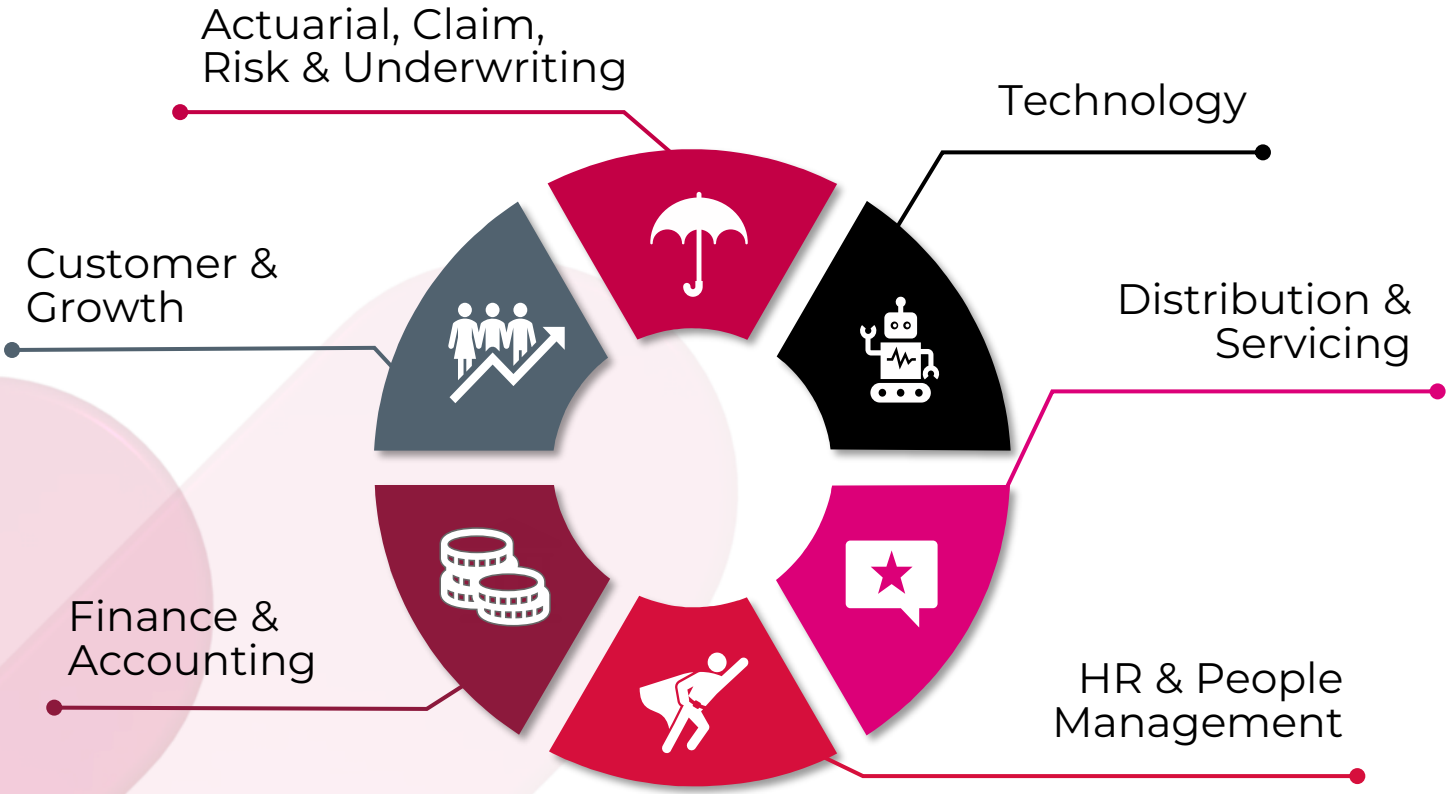
The vast amounts of unstructured data have put the Insurance sector right in the crosshairs of (gen)AI disruption



Potential for disruption throughout the value chain



True value comes from collaboration of different human & AI ‘agents’

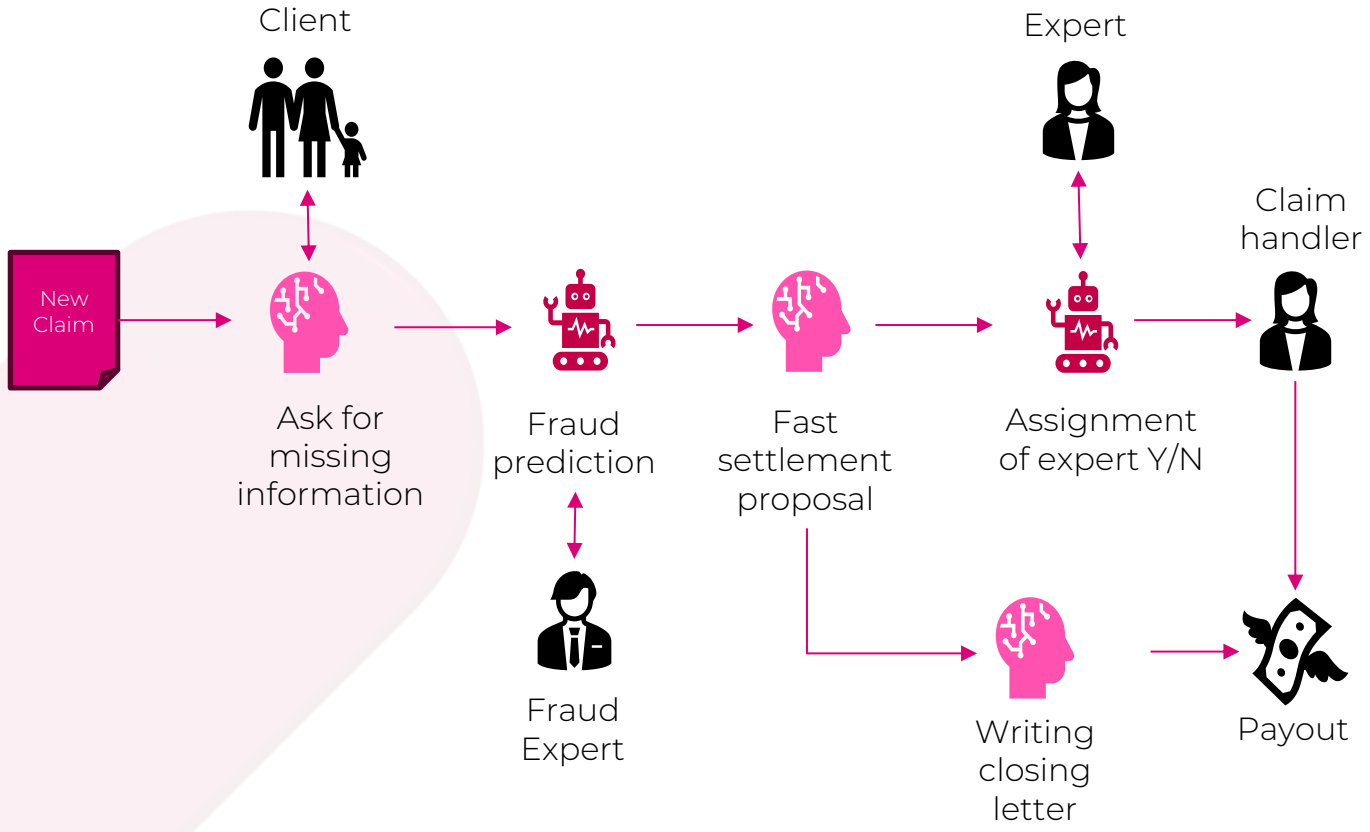
Human experts

+

Classical AI models on your **own data**

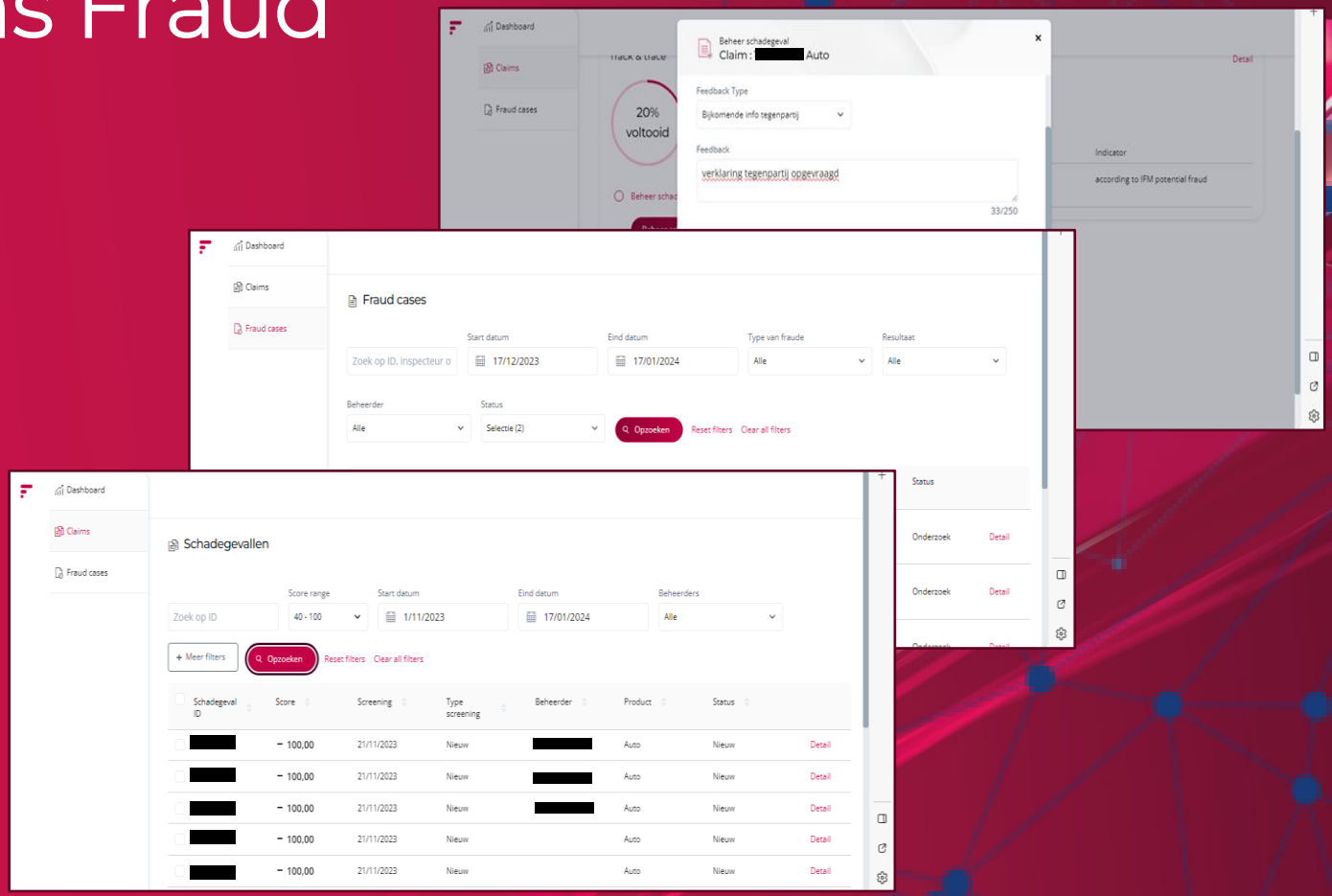
+

Language models with **prompting / RAG / finetuning**



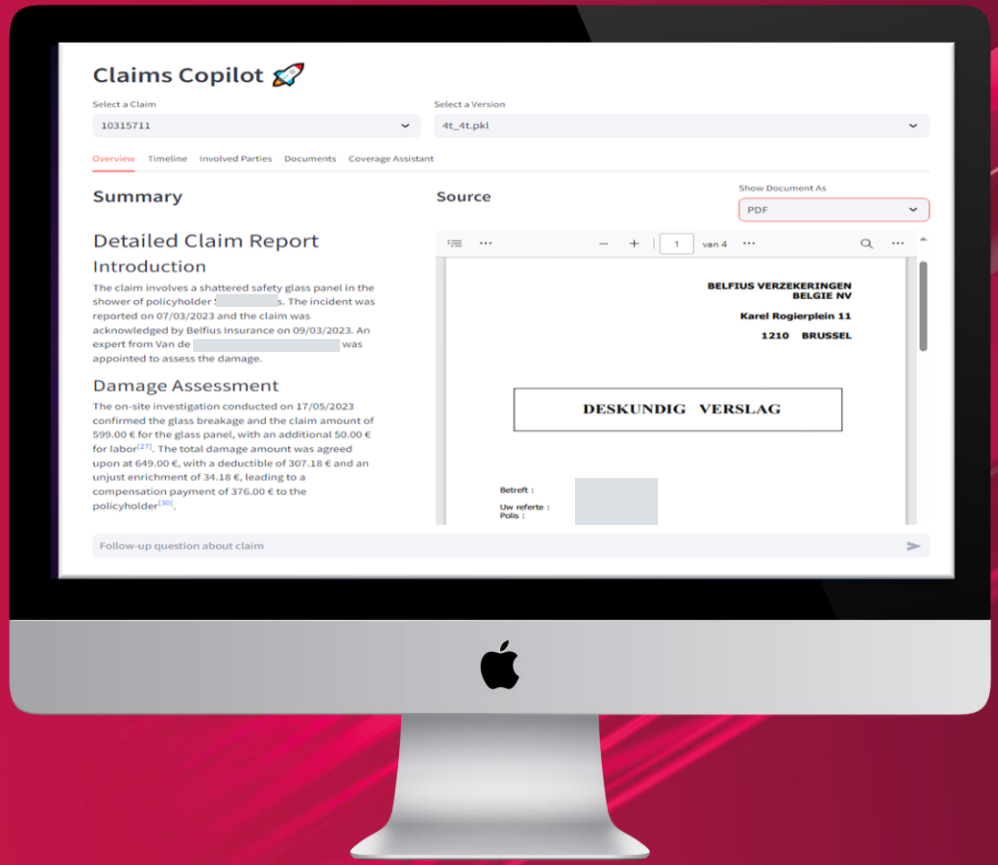
Some cases that have proven successful for us...

Claims Fraud

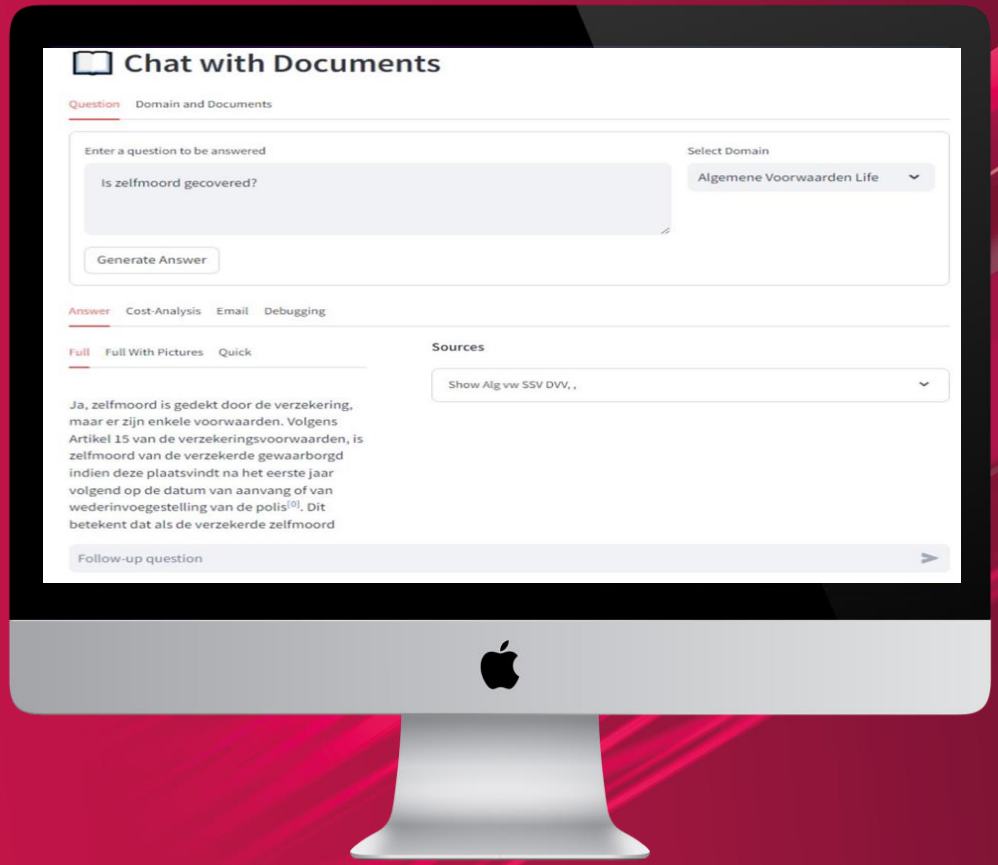


Claims Leakage

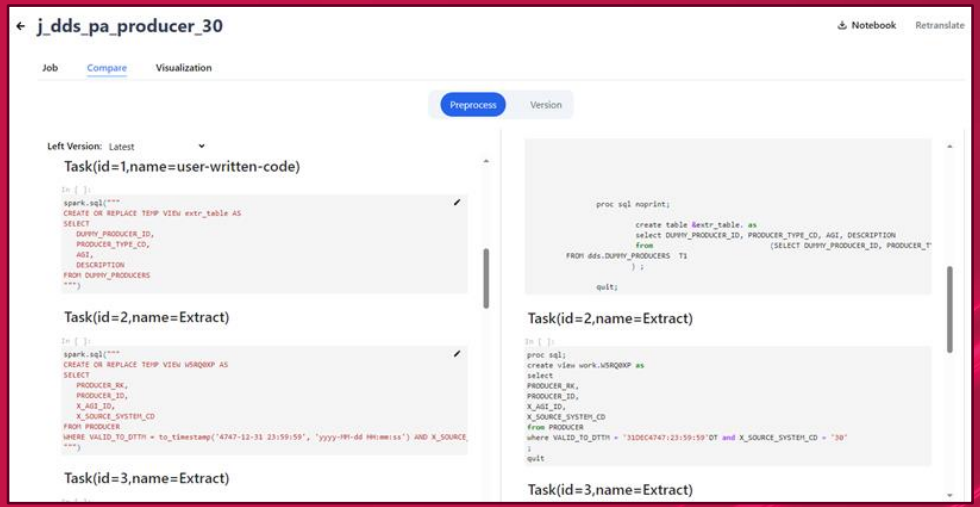
Claims Copilot

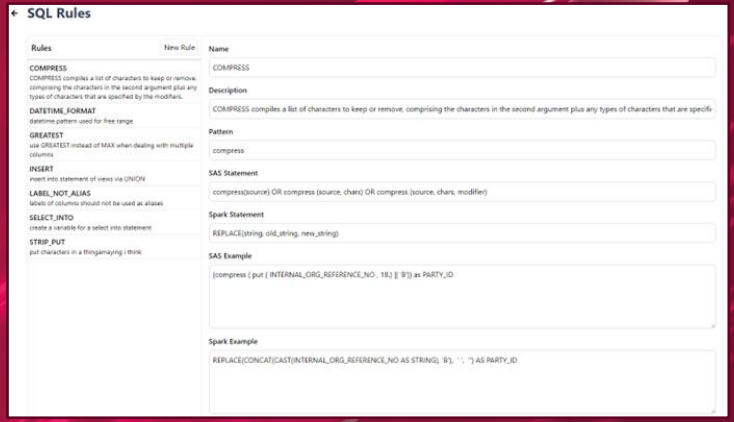


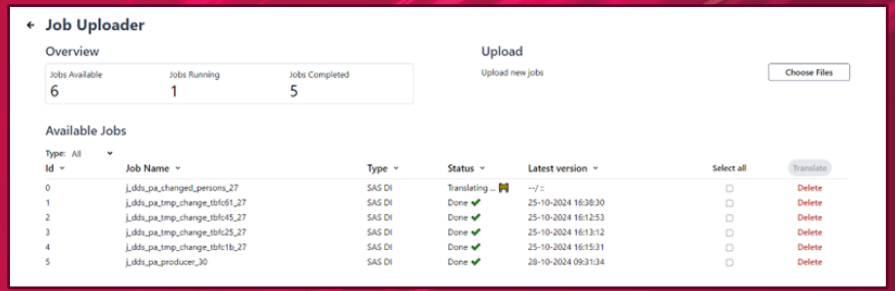
Knowledge Assistant



Code Migration Tool





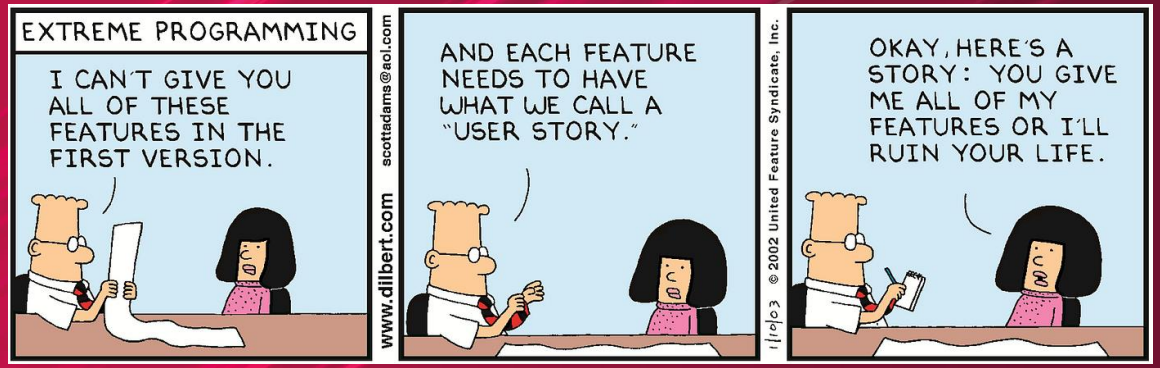


Some learnings that we picked up along the way...

1. Start with proven value & create a snowball effect

To quote Kent Beck:

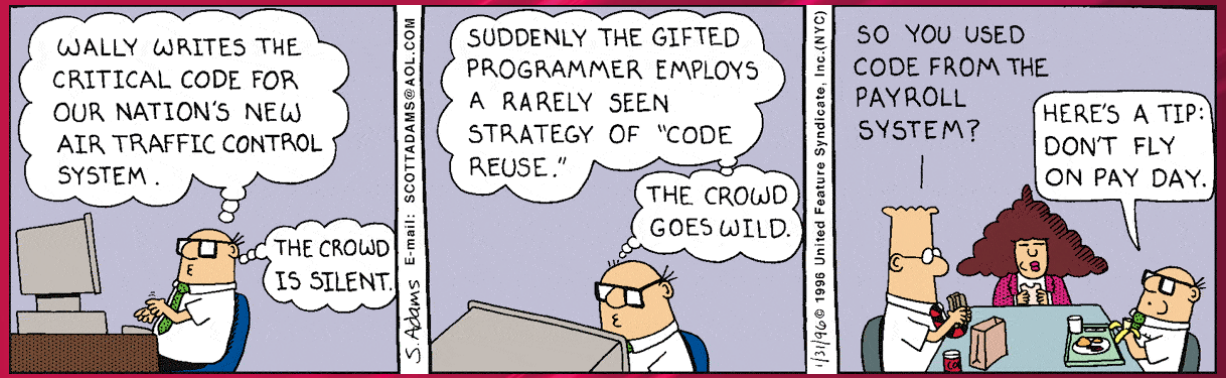
2. Make it work, make it right, make it fast



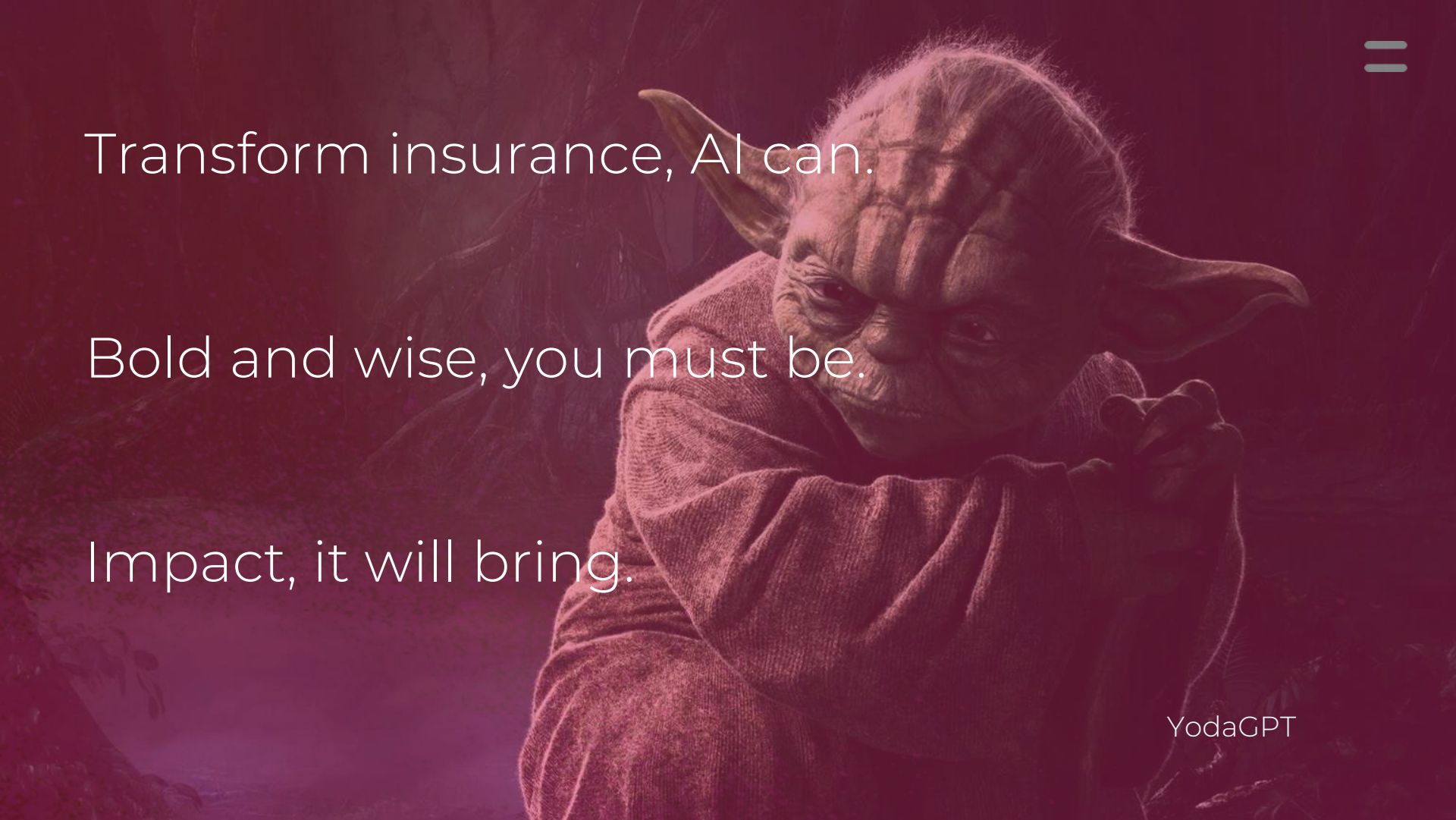
3. Create end-to-end teams: freedom & responsibility

4. What people think AI does well ≠ 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