PensionsEurope Annual Conference 2025

Accelerating digital transformation by scaling AI initiatives

Tom van den Bos
10-04-2025

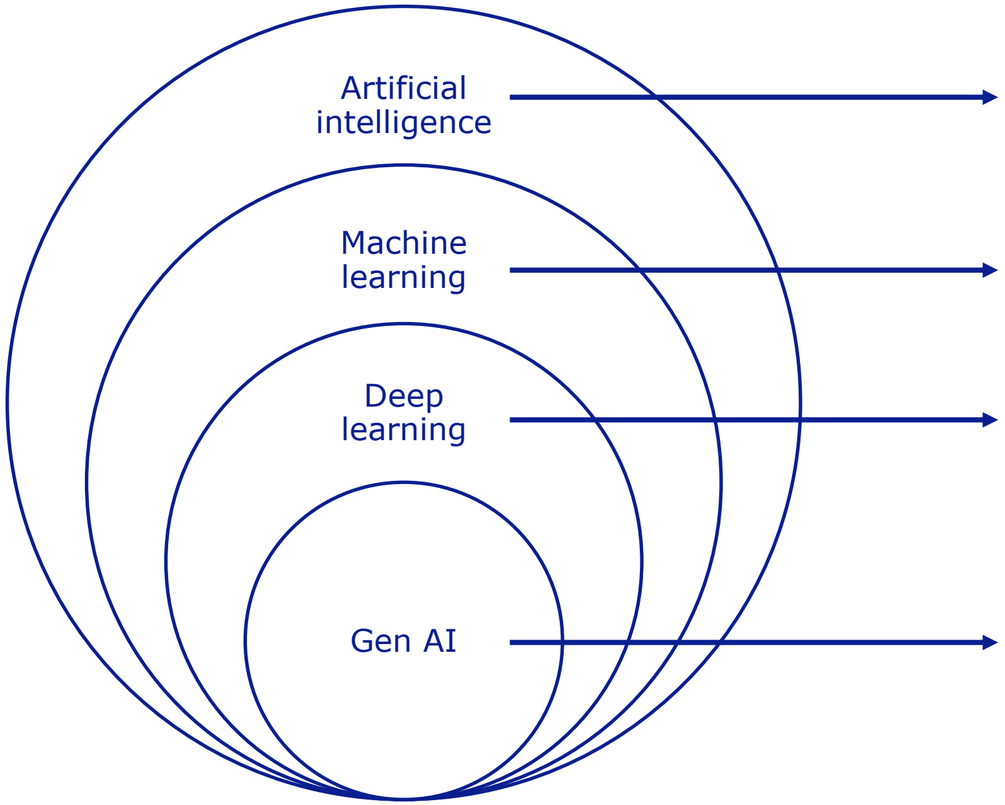
PGGM

Definition of AI (AI act)

‘AI system’ means a machine-based system that is designed to operate with varying levels of autonomy and that may exhibit adaptiveness after deployment, and that, for explicit or implicit objectives, infers, from the input it receives, how to generate outputs such as predictions, content, recommendations, or decisions that can influence physical or virtual environments.

Zooming in on AI

An AI is a computer program for a **specific task** that has **learned** from examples



Mimic human behavior, can learn, make decisions, recognizes patterns and solves problems at a level of human intelligence.

Advanced algorithms that are used to recognize patterns and learn from them. Supervised or unsupervised.

Neural networks that are used to perform data analysis or solve complex analytical tasks. Multiple neural networks work together to mimic the human brain.

Generative AI generates content such as texts, images, or code. These models are trained on large datasets and create content without explicit instructions.

PGGM
Voor een waardevolle toekomst

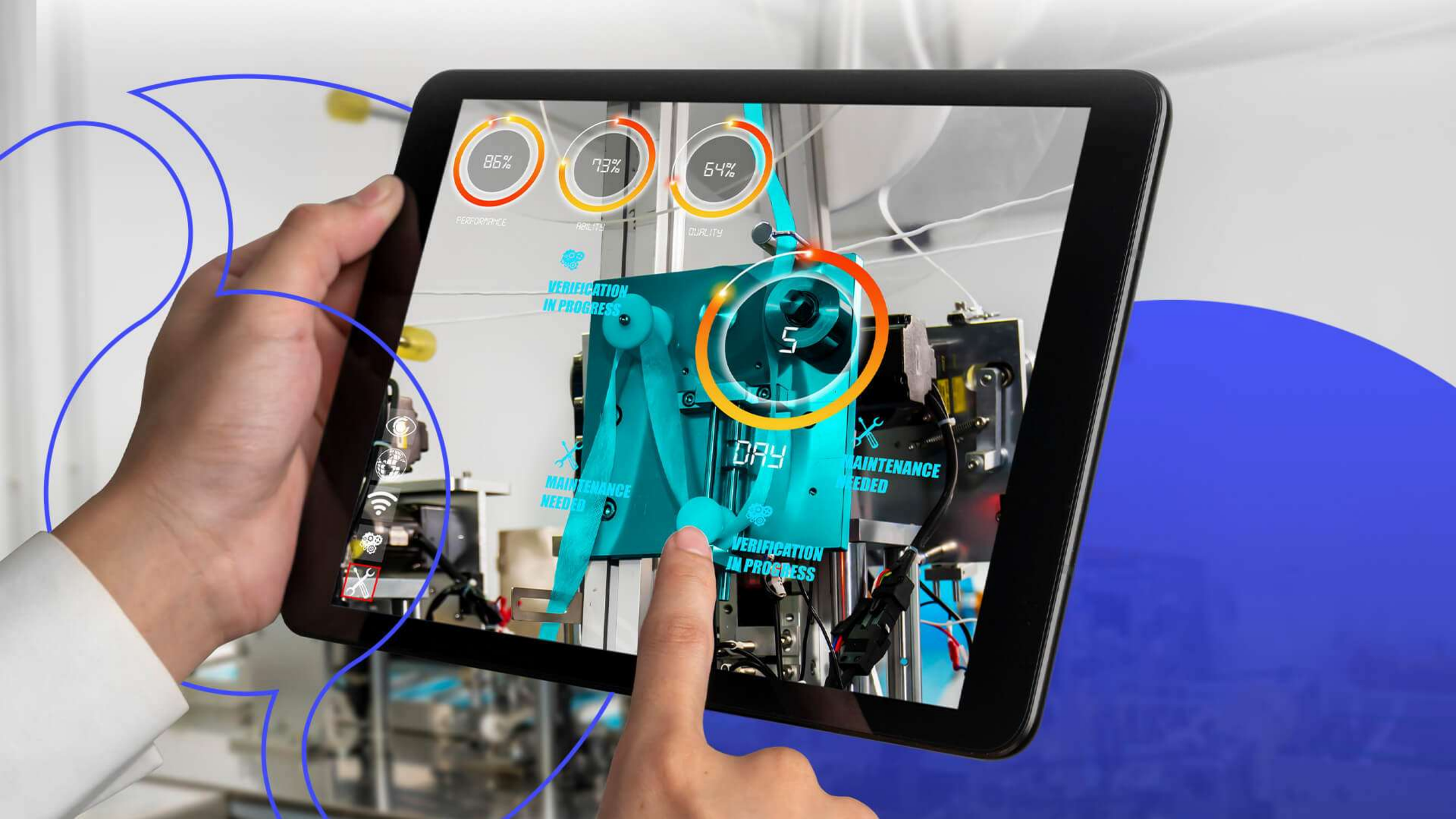

Google
INTRODUCING
Text-To-Music

DEBUT INFOTECH

2024

SORA

OpenAI's Text-to-Video Breakthrough


86%
73%
64%
PERFORMANCE
ABILITY
QUALITY
VERIFICATION
IN PROGRESS
5
DAY
MAINTENANCE
NEEDED
MAINTENANCE
NEEDED
VERIFICATION
IN PROGRESS


1
2
7
1
NAT WEST SHARES
2P
RELEVANT AR
HISTORY OF THE BANK
MUSEUM OF LO
KNOW YOUR ECONO
AAT ONLINE
BUS ROUTE 11: ARRIVES FULHAM BROADWAY
15.58
TAXI OCCUPIED
ROADWORKS UNTIL 12 AUGUST
JACK IS SINGLE AND WOULD LIKE TO CHAT
14.49 BST
MEETING AT KPMG AT 16.00
SUNNY
25C
5% RAIN RISK
LOCATION
THREADNEEDLE STREET, EC2
SEARCH LOCAL AREA

Open AI & Azure

Azure

PGGM
Voor een waardevolle toekomst


deepseek

Objective AI program 2019-2024

PGGM has successfully run the AI program for the past 5 years, achieving the objective, namely:

- **AI has been implemented to achieve PGGM's strategic goals.**
- Program has enabled PGGM to be a fast follower in the field of AI and focuses on AI competence development.
- Emphasis has been placed on the use of AI in collaboration with third parties.
- Three core components developed:

Identifying and applying AI cases

Building AI competencies

Setting up, maintaining and expanding the AI ecosystem.

- After completing the AI program, PGGM will be in the scaling phase. The next challenge is scaling AI and thereby make it a core competence of the company.

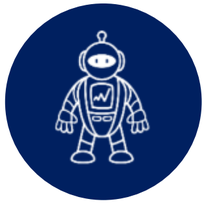
PGGM
Voor een waardevolle toekomst

AI program: achieving strategic goals

Each strategic goal has its own dots on the horizon (moonshots)

PGGM's strategic objectives

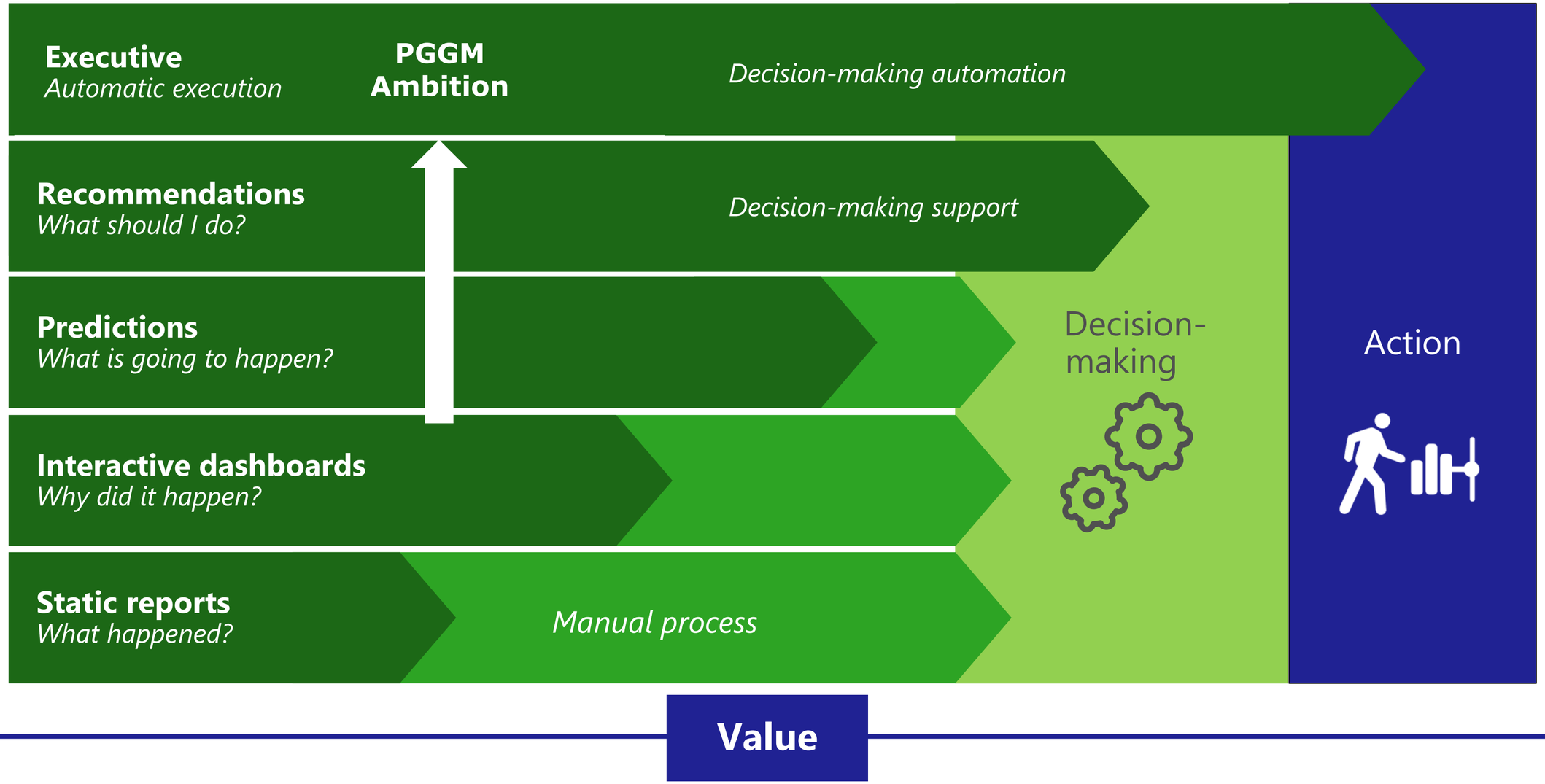
PGGM wants to be optimally and strategically prepared for the **new pension contract**, making the investment policy of **asset management more sustainable** and making / keeping the **healthcare sector vital** and thus closing the healthcare gap.

Domain	**Pension management** New pension contract		**Asset management** Making investment portfolio's more sustainable		**Healthcare & welfare** Vital sector
Added value	*AI as a new interface*	*Smart administration and cost savings with AI*	*AI as a governance advisor*	*3D investing through the use of AI*	*Use of AI for vital sector*
Dot on the horizon (moonshot)					
	Digital financial coach	**Smartest pension administrator of the Netherlands**	**AI-driven trust advisor**	**Best 3D investor**	**Authority in the field of HR data services**

AI is deployed within each moonshot

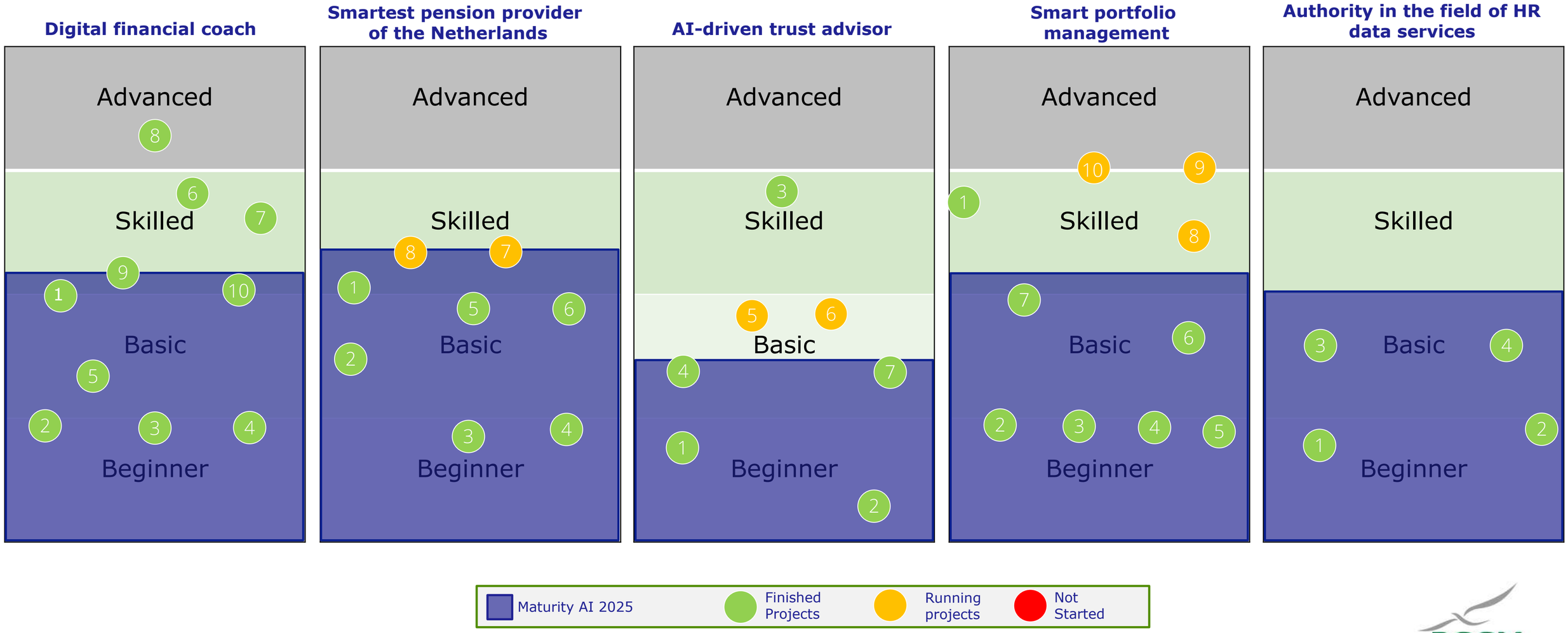
PGGM
Voor een waardevolle toekomst

Ambition for AI maturity within PGGM



Developing skills by executing cases

An overview of AI initiatives



PGGM
Voor een waardevolle toekomst

Measurable results

Significant savings in euros

7 introduced programming skills for AI

13 introduced IT infrastructure capabilities that contribute to maturity

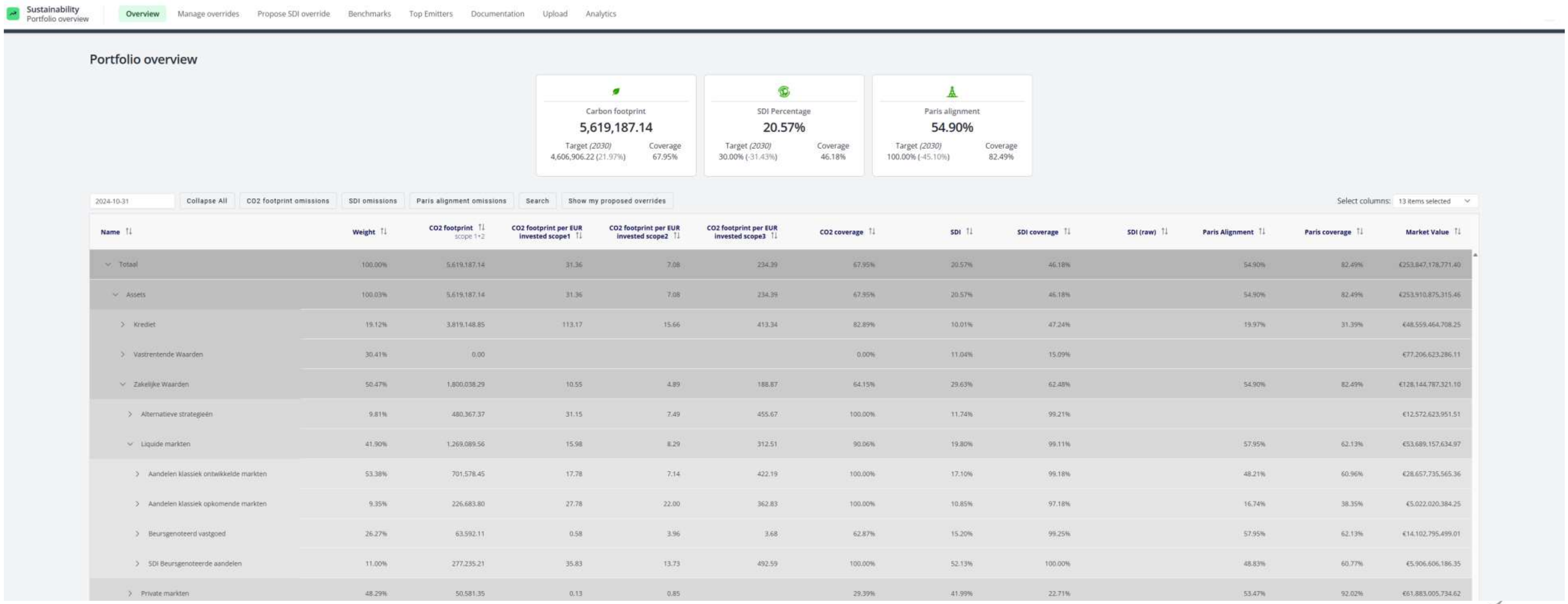
26 AI applications in production

1300 Private Copilot users (500 unique users per week)

9 asset management teams powered by AI

PGGM
Voor een waardevolle toekomst

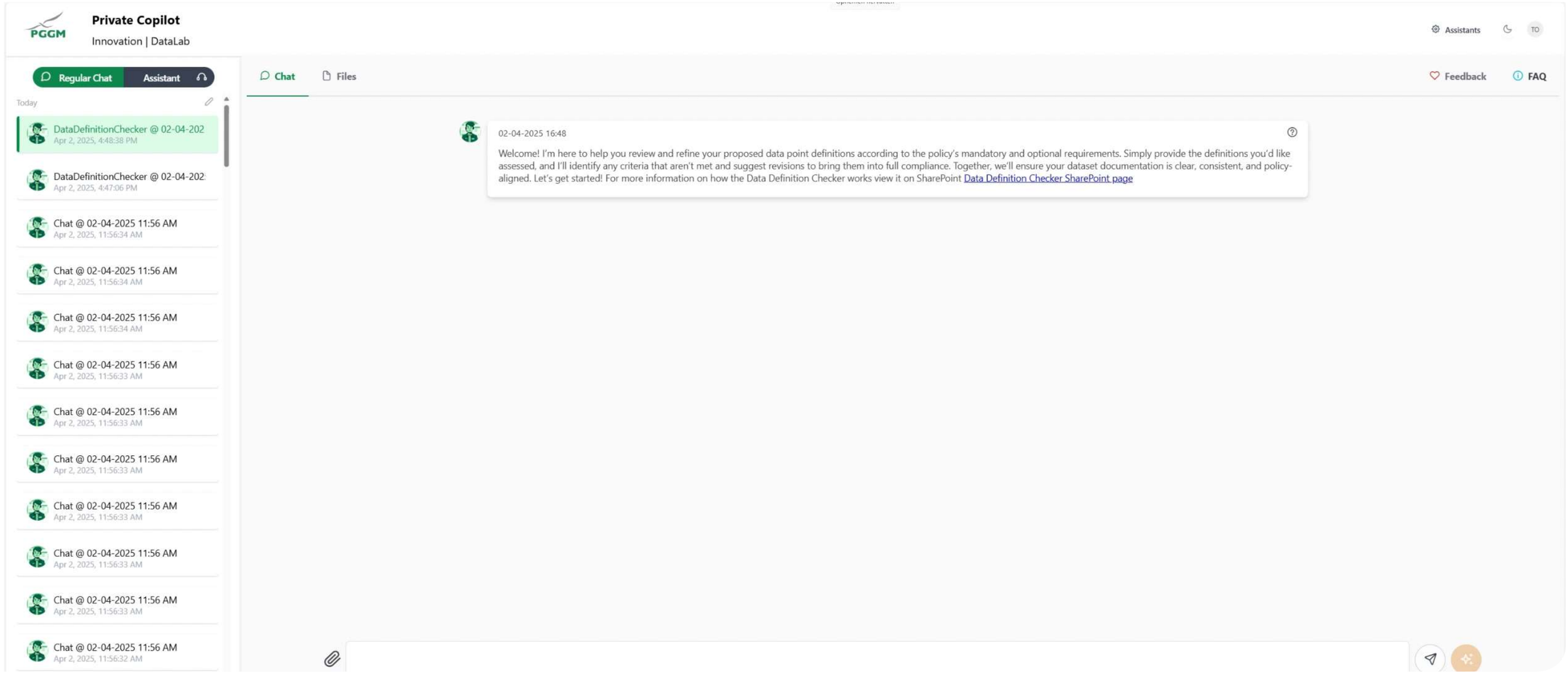
The basics: data is indispensable



Name	Weight	CO2 footprint scope 1+2	CO2 footprint per EUR invested scope1	CO2 footprint per EUR invested scope2	CO2 footprint per EUR invested scope3	CO2 coverage	SDI	SDI coverage	SDI (raw)	Paris Alignment	Paris coverage	Market Value
Totaal	100.00%	5,619,187.14	31.36	7.08	234.39	67.95%	20.57%	46.18%		54.90%	82.49%	€253,847,178,771.40
Assets	100.03%	5,619,187.14	31.36	7.08	234.39	67.95%	20.57%	46.18%		54.90%	82.49%	€253,910,875,315.46
Krediet	19.12%	3,819,148.85	113.17	15.66	413.34	82.89%	10.01%	47.24%		19.97%	31.39%	€48,559,464,708.25
Vastrentende Waarden	30.41%	0.00				0.00%	11.04%	15.09%				€77,206,623,286.11
Zakelijke Waarden	50.47%	1,800,038.29	10.55	4.89	188.87	64.15%	29.63%	62.48%		54.90%	82.49%	€128,144,787,321.10
Alternatieve strategieën	9.81%	480,367.37	31.15	7.49	455.67	100.00%	11.74%	99.21%				€12,572,623,951.51
Liquide markten	41.90%	1,269,089.56	15.98	8.29	312.51	90.06%	19.80%	99.11%		57.95%	62.13%	€53,689,157,634.97
Aandelen klassiek ontwikkelde markten	53.38%	701,578.45	17.78	7.14	422.19	100.00%	17.10%	99.18%		48.21%	60.96%	€28,657,735,565.36
Aandelen klassiek opkomende markten	9.35%	226,683.80	27.78	22.00	362.83	100.00%	10.85%	97.18%		16.74%	38.35%	€5,022,020,384.25
Beursgenoteerd vastgoed	26.27%	63,592.11	0.58	3.96	3.68	62.87%	15.20%	99.25%		57.95%	62.13%	€14,102,795,499.01
SDI Beursgenoteerde aandelen	11.00%	277,235.21	35.83	13.73	492.59	100.00%	52.13%	100.00%		48.83%	60.77%	€5,906,606,186.35
Private markten	48.29%	50,581.35	0.13	0.85		29.39%	41.99%	22.71%		53.47%	92.02%	€61,883,005,734.62

PGGM
Voor een waardevolle toekomst

Usecase: data definition checker



Usecase: 3D Mandate Management

Use Case Example

Purpose: Ensure a well-rounded and robust assessment of external managers across financial and non-financial dimensions.

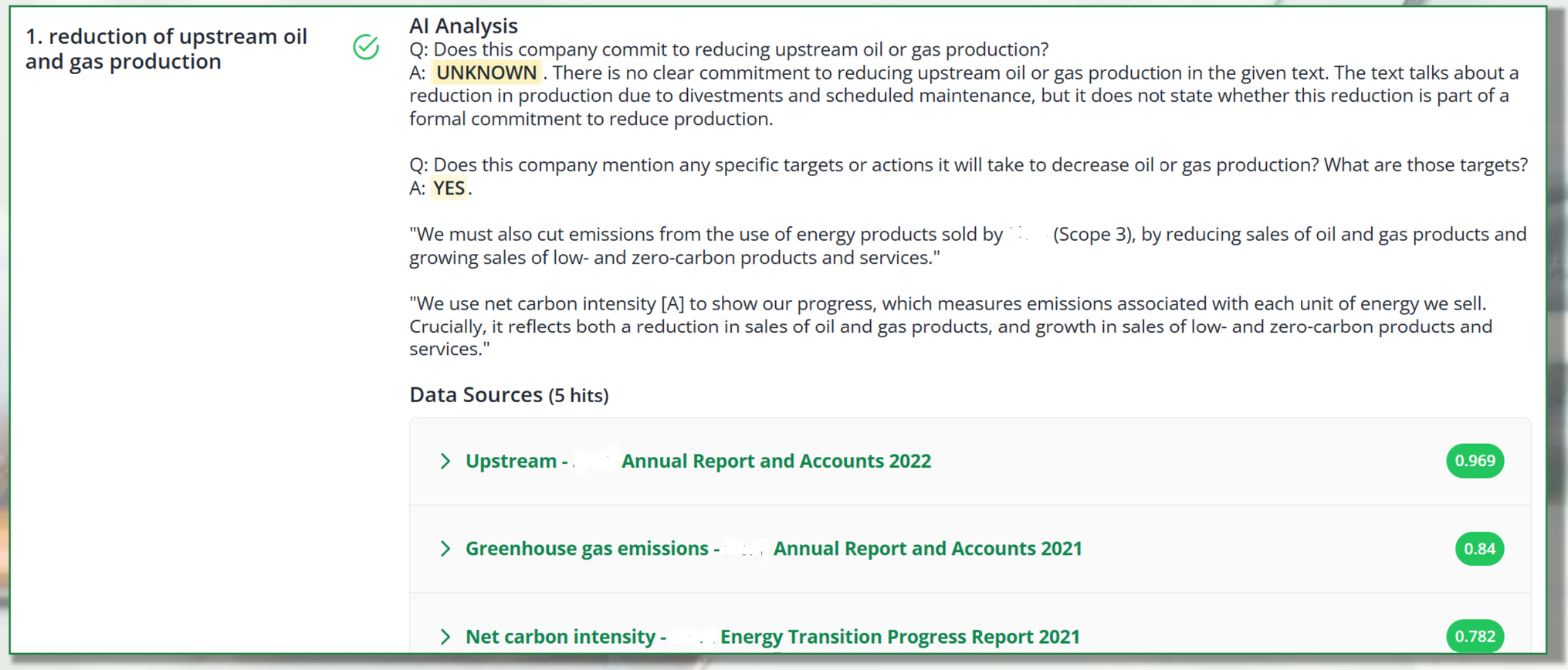
What objective does the asset manager set for itself?

PGGM

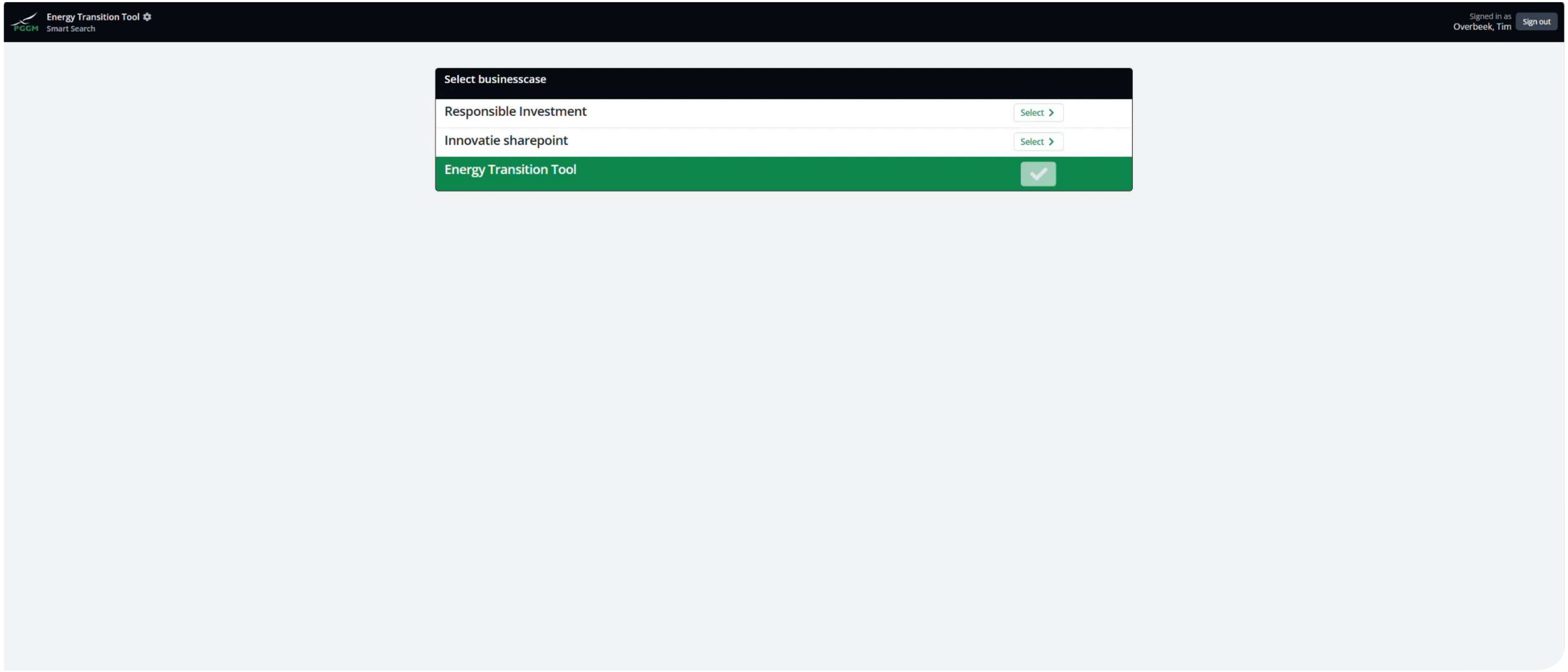
Usecase: determining where to invest?

Use Case Example

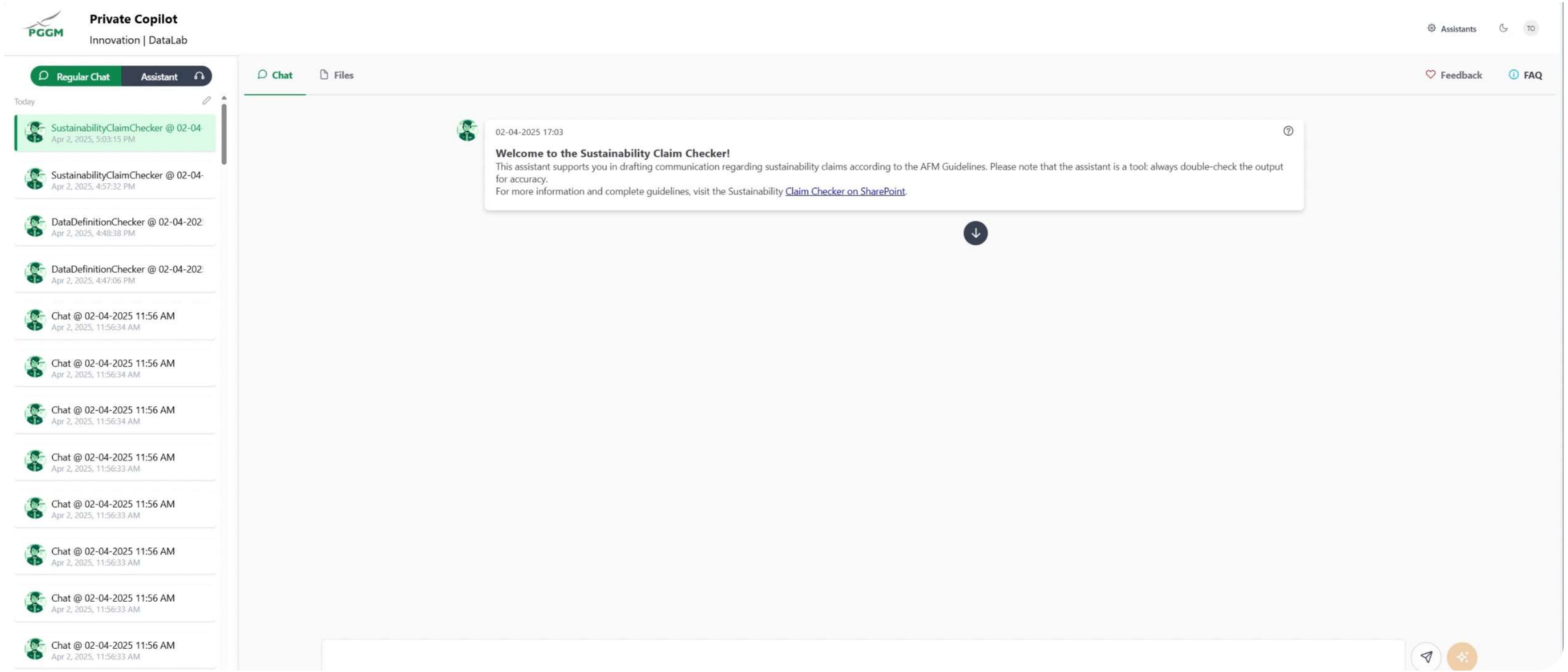
Purpose: The Energy Transition Tool provides insight into how well companies are prepared for the energy transition and whether we investor or divest.



Usecase: energy transition tool

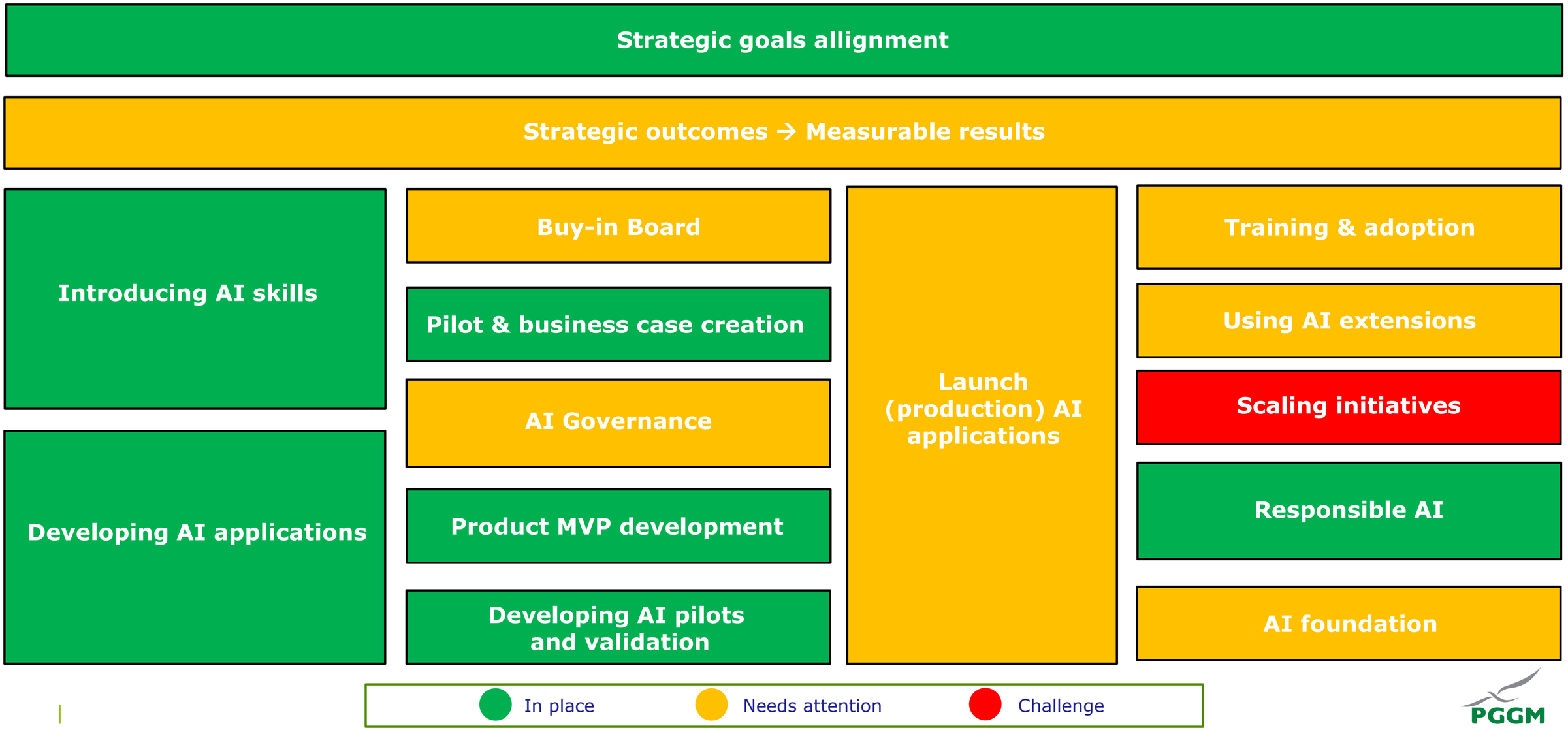


Usecase: sustainability claim checker



Building blocks of upscaling

From AI program to AI accelerator



From AI program to AI accelerator

AI building competencies

Identifying and applying AI cases

Building AI competencies

Setting up, maintaining and expanding the AI ecosystem

AI as a core competence of a company

Realized use cases have been managed by units and are being scaled up

Units are themselves able to integrate AI solutions into business processes

Developing new AI applications and competencies is a continuous process

Overview AI accelerator activities

AI accelerator

AI accelerator steering committee & EC

AI back bone (innovation & other required departments)

PB | VB | IB | HRZW | Funds

People	Proces	Technology
AI steering committee: BU leaders	AI use case prioritization	
Business domein experts, data scientists + developers + architecten	Drawing up a governance framework	Establishing a secure, managed AI platform
Business domein experts + data scientists + developers + opleiding	Development. management and further development of AI applications	Use of managed AI platform (with various components)

What you can use today

ChatGPT

Excellent at generating creative content, analyzing information, and providing support with complex tasks.

✅Widely available
✅Image generation possible
⛔NOT compliant in data security

ChatGPT

Copilot 365

Summarize information on a page, dive deeper into citations, and start writing drafts.

✅Available in our office package
✅Dall-E 3 usable
✅Secure and compliant
⛔No complete control of data and functionalities in the back-end

Copilot 365

PGGM Private Copilot

With the familiar look and feel of ChatGPT, but with total control of data and functionalities.

✅Safe within PGGM
✅Latest models
✅Integration with applications
✅Control over data
⛔Slower and less extensive than ChatGPT

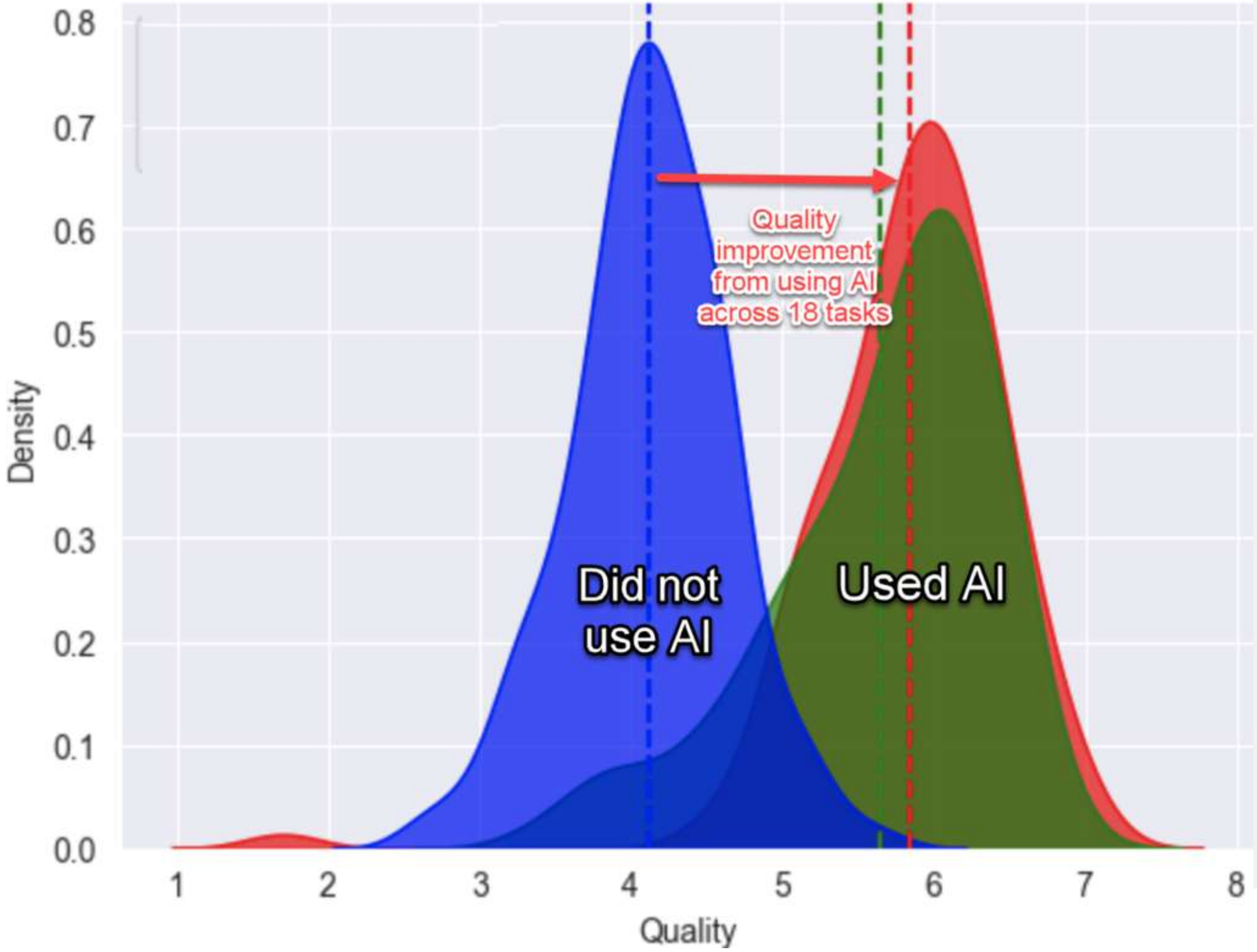
PGGM Private Copilot

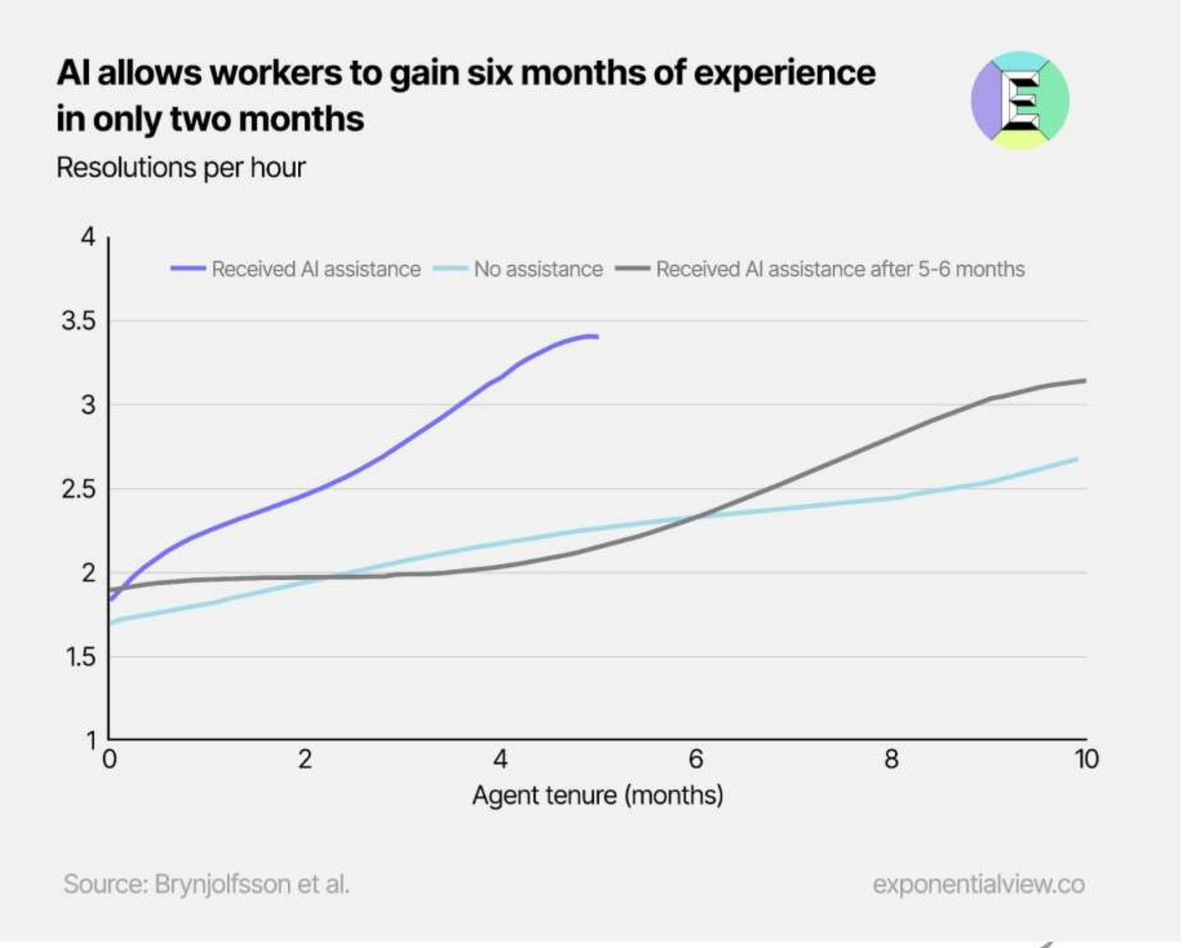
Teams premium

Integrated within Microsoft's teams environment.

✅Speech to text
✅Summarizing meetings
✅Is within our own environment
⛔Unable to identify speakers

Less complex than you think...





PGGM
Voor een waardevolle toekomst

Consider the risks

Consumer protection

Security and privacy

Ethical considerations

Accountability and transparency

Promoting innovation within safe frameworks

PGGM
Voor een waardevolle toekomst

Ethics & risk regarding AI

AI policies

How to deal with AI

- Based on:
  - PGGM principles & directives
  - Policies on model validationModel
  - AI act

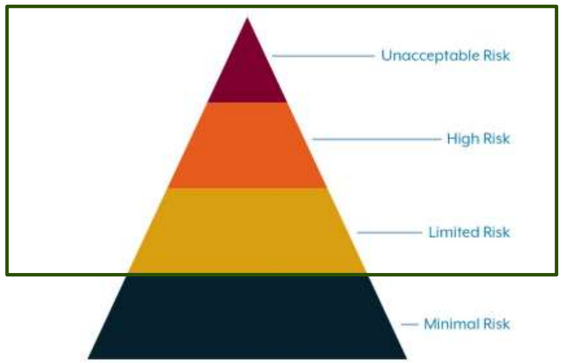
1. Quickscan AI

Risk classification

- Model passport
- Risk classification based on 4 risk levels AI act:
  - Business risks
  - GDPR & Security
  - SAFEST+ principles, AI Act and human rights
  - Other risks

2. Threshold check

Whether or not to carry out an extensive risk analysis



3. Comprehensive risk analysis AI

Full risk analysis

- All risks identified in the quick scan will be further investigated and logged. Mitigative measures (if possible) will be identified.
- AI models, which applies to purchasing, further development and self-build, that do not comply with the principles or guidelines may not be developed or used.

4. Log AI applications in AI management system

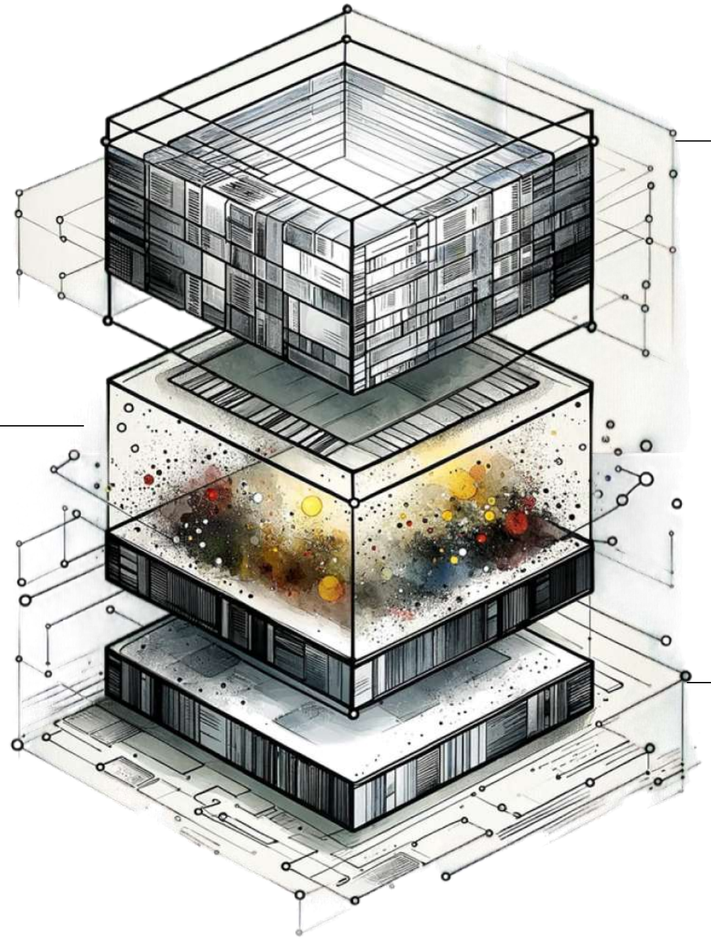
- Short-term: models (both purchasing, further development and self-build) and associated quick scans or extensive analyses are recorded in the model register of model validation.
- Long term: models (both purchasing, further development and self-build) and everything that is added is processed in an **AI management system.**

PGGM
Voor een waardevolle toekomst

AI management system

Transparent - open black box

- Explainability for any AI model
- Extensive feedback loops
- Monitoring & development
- Supporting all major AI frameworks



Managing AI compliance risks

- AI Governance & Ownership
- Technical documentation
- EU AI Act compliant
- Audit trail, traceability and reproducibility

EU AI Act

ISO/IEC 27001 Information Security Management CERTIFIED

In control of AI models

- Support on all AI & XAI frameworks
- Cloud agnostic
- Integrations with major MLOps tools

PGGM
Voor een waardevolle toekomst

Last but not least: **AI is no magic**

- Concrete problem needed; AI is a tool, not a goal
- Data is indispensable
- AI makes mistakes

Start without AI

- According to Google's machine learning rules[1]
- According to AI engineers from Spotify, Tumblr, Github, etc.[2]
- Academia[3]
- Matches with own PGGM experience

1. https://developers.google.com/machine-learning/guides/rules-of-ml
2. https://eugeneyan.com/writing/first-rule-of-ml/
3. Makridakis, Spyros & Spiliotis, Evangelos & Assimakopoulos, Vassilis. (2020). The M5 Accuracy competition: Results, findings and conclusions.

Questions?

Tom.van.den.bos@pggm.nl