AI Clearing

How is AI revolutionizing the pipeline construction world?

Quality Control
ISO
9001

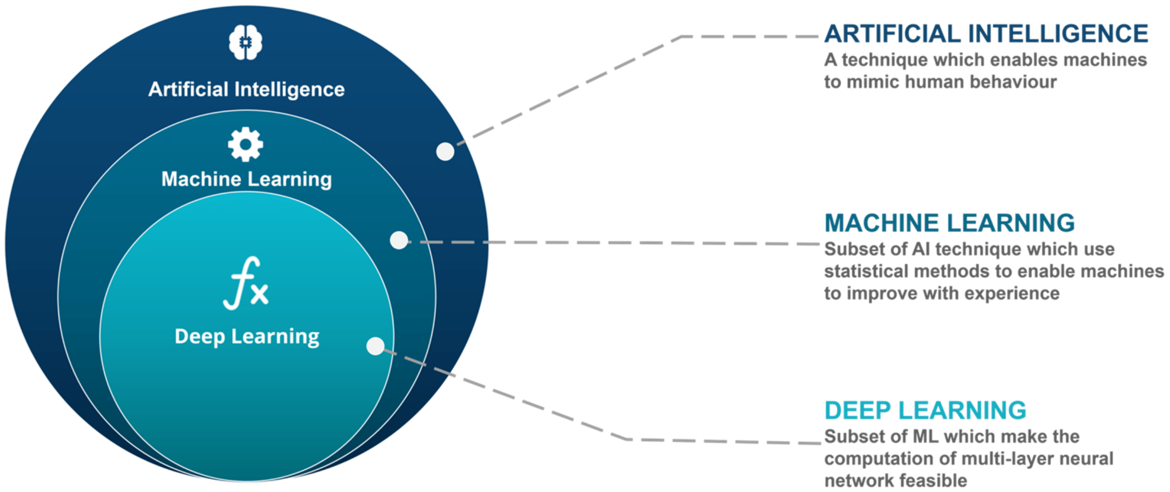
Health & Safety
ISO
45001

Artificial Intelligence
ISO
42001

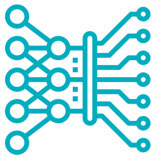
Cybersecurity
ISO
27001

Introduction to AI

AI and its major components



Deep Learning



Complex neural networks mimicking the human brain to process large datasets

Computer Vision

Enables machines to interpret and understand visual data (e.g., images, videos)

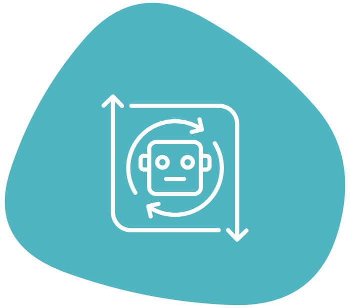
Artificial Intelligence vs Human Intelligence

	Human	AI
Nature	Evolved, with emotions and consciousness	Man-made, based on data and algorithms
Learning	Learns through experience and adapts to new situations	Learns from data, task-specific, needs retraining
Creativity	Imaginative, driven by intuition	Mimics patterns, no true innovation

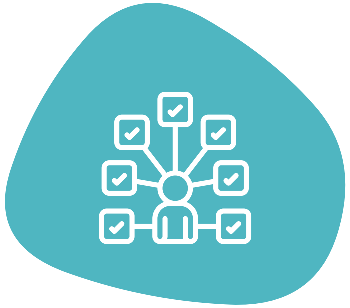
What can AI do better than human?

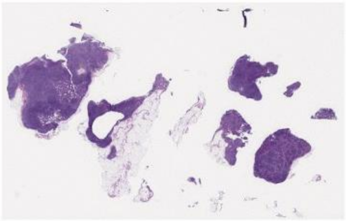
Analyze vast and complex data

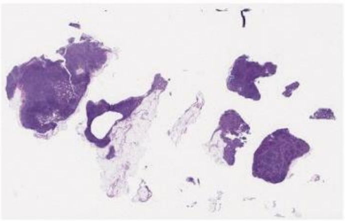
Handle repetitive tasks without exhaustion



Work in parallel at flexible scale







Google’s LYmph Node Assistant can help detect cancer

AI can process vast amount of data faster and more accurately

Objects detection and recognition

But it also comes at the cost...

Finding information based on specific keywords or phrases	Functionality	Assists users in generating content by expanding on given topic or query
~$ 0,01 0.3Wh	Query cost	~ $ 0,1 2.9Wh (For ChatGPT, depending on prompt’s length)

Source: Goldman Sachs

What AI can't do?

Unconventional, highly contextual situations

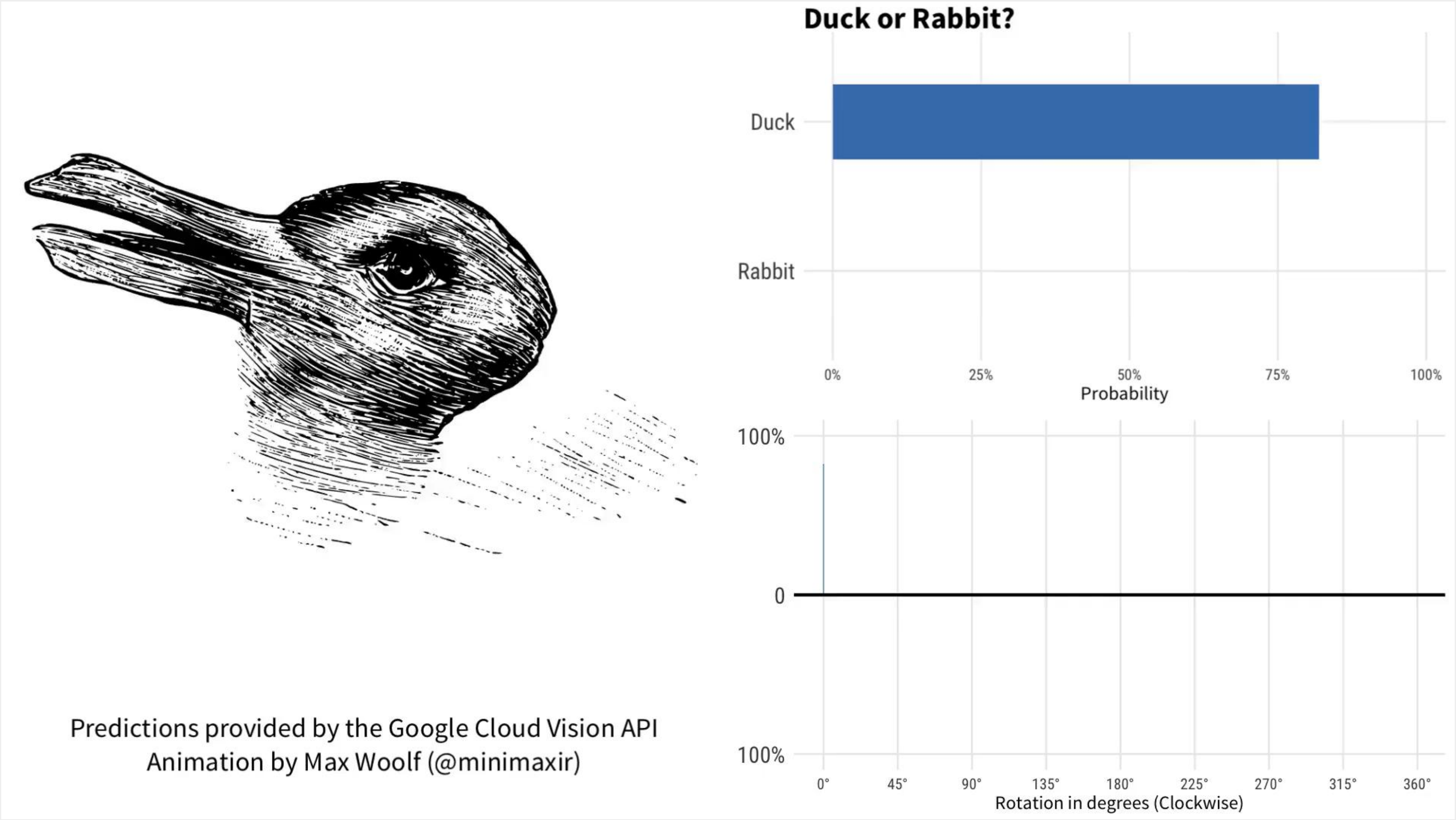
Difficulty handling edge cases

Lack of real-world context understanding

Inflexible decision-making

What AI can’t do?

Rational patterns recognition



How are AI models developed?

Principles of supervised training

01 Training a computer is very similar to teaching a human

02 Artificial neural networks play a key role

03 They consist of millions of artificial neurons

04 They are presented with an example and told what is the expected output

05 It is performed on a large scale with millions of iterations in short time

Data requirements

Depending on the task we may need hundreds, thousands or millions of samples

Collected data should be adequate for the task we are going to do, a sample of what we can encounter in the real world

It’s important to keep the data clean or models will learn the human errors

Tracking model’s quality

01 Split available data into training and testing sets (typically 4:1 ratio)

02 Compare model predictions with ground truth using testing set samples

03 Count the errors and calculate metrics:

- Accuracy
- Precision
- Recall

How expensive is to train a foundation model?

	2012	2018	2023
Architecture	AlexNet	GPT-1	GPT-4
Parameters	60 million	117 billion	1.8 trillion
Training time	6 days	30 days	90 days
GPUs	2 x Nvidia GTX 580	8 x GPU P600	25,000 x Nvidia A100
Training cost*	5$	50 thousand $	63 million $

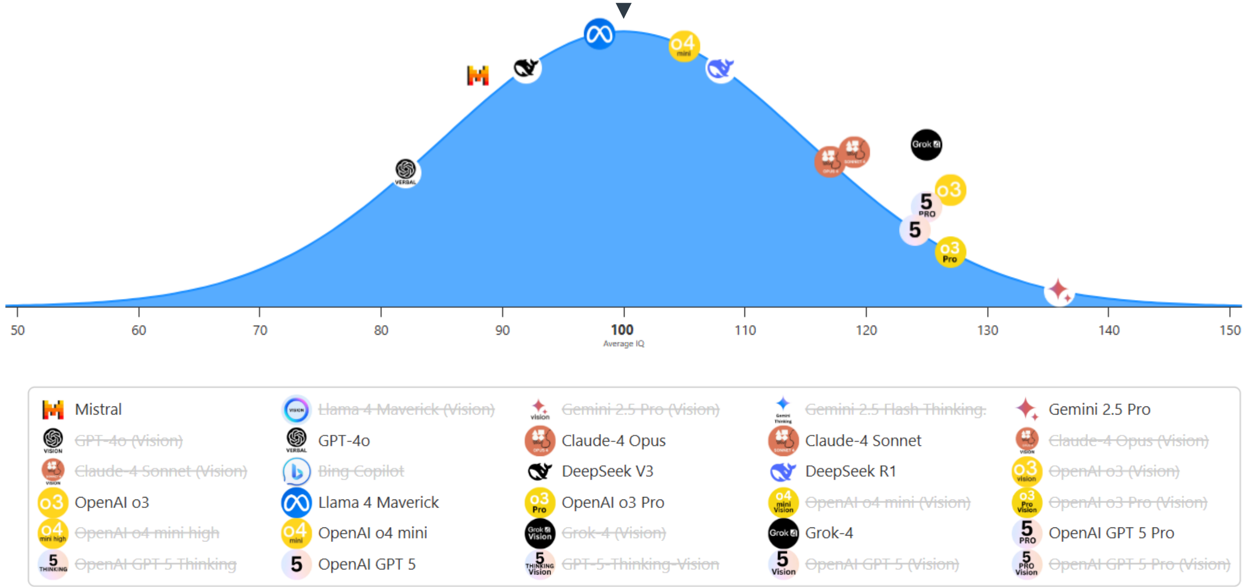
*only the cost of single model training (doesn't account research expenses)

How intelligent is Artificial Intelligence?

Performance of AI Models on MENSA IQ test

4 months ago...

The average human score is 100



August 2025

To put this in a perspective…

Human
(through the lifetime)

X 700

AI
(during the month of training)

X 1200

AI Clearing’s foundational model for infrastructure construction

Our foundational AI model, custom built for construction industry, identifies site gradient and objects with unparalleled accuracy and speed

Objects' recognition and analysis with outstanding speed and accuracy repeatedly reaching 100%

21x

Our solution enabled inspections across an area exceeding 21 times the size of Paris

ISO 42001

AI Clearing is the first technology company in the world to attain ISO 42001 certification

15M

New gigantic dataset consisting of 15 million unique objects

Our AI Research quoted by

META

In **IEEE Access**

Specialized data annotation

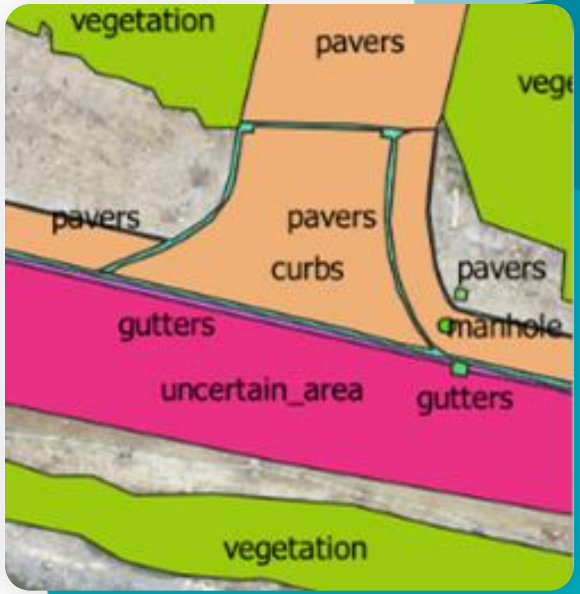
Centimetre/inch accuracy

Daily/ weekly data gathering throughout project's duration

In-house GIS experts

Versioned annotation manuals

Drone inspection annotation



The task of pile spotting

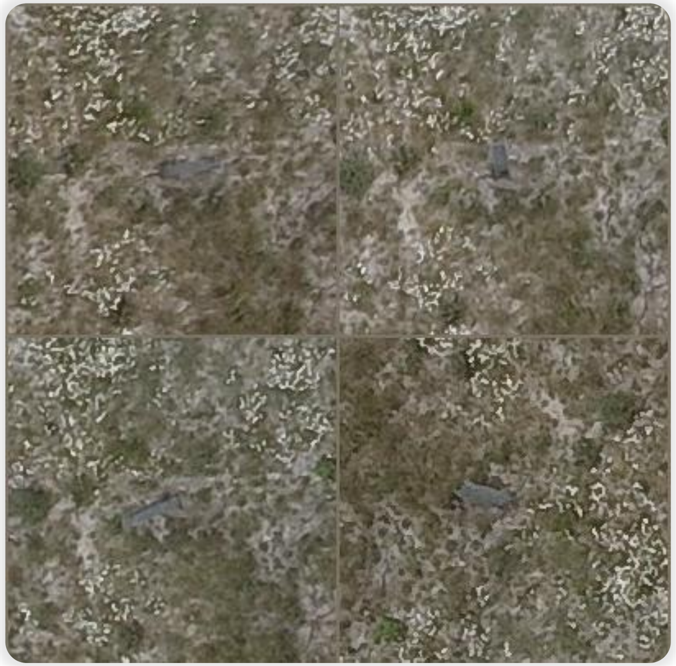
Humans

Human flow: check for pile existence on orthophoto (only nadir view)

Around 33% accuracy

vs.

AI

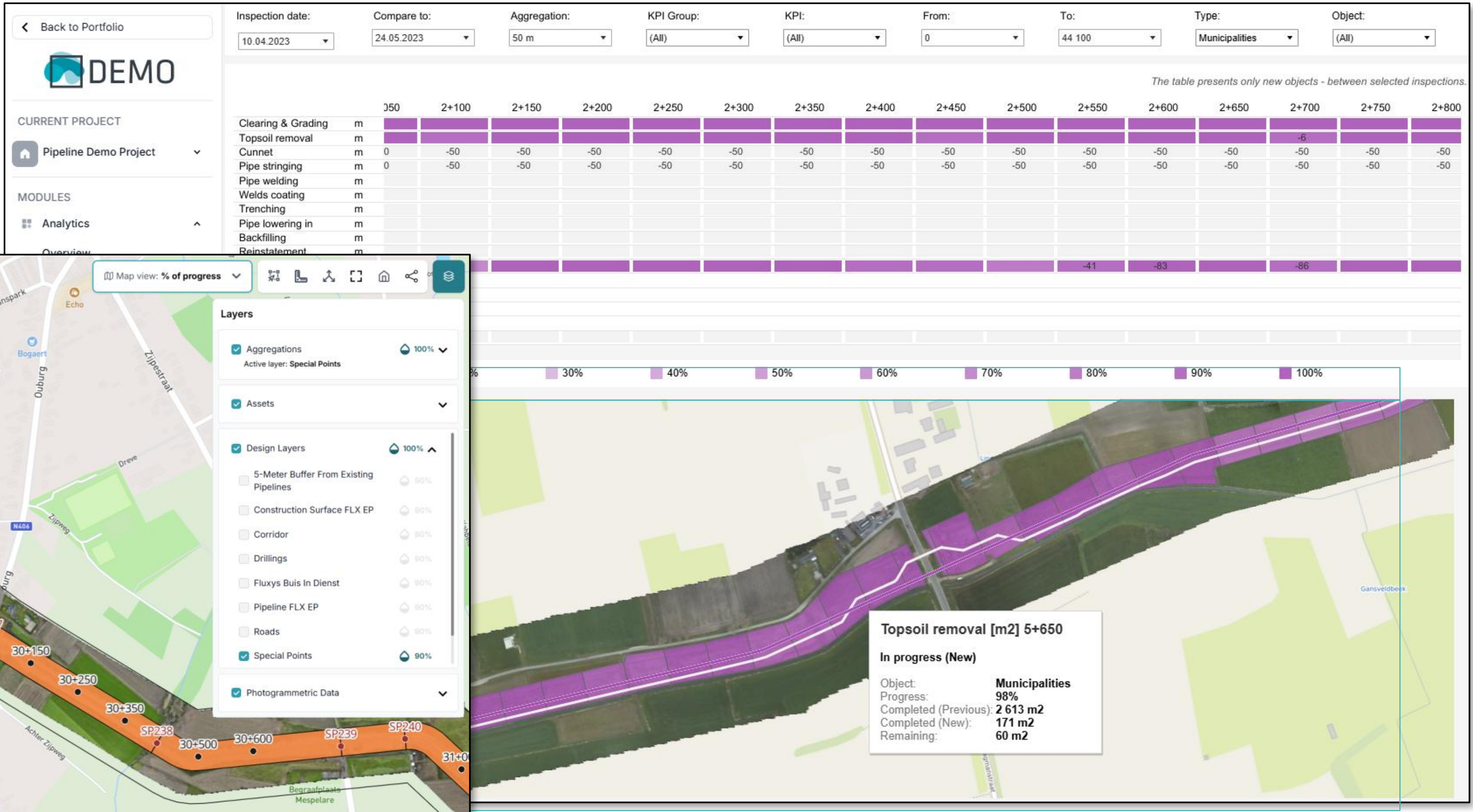


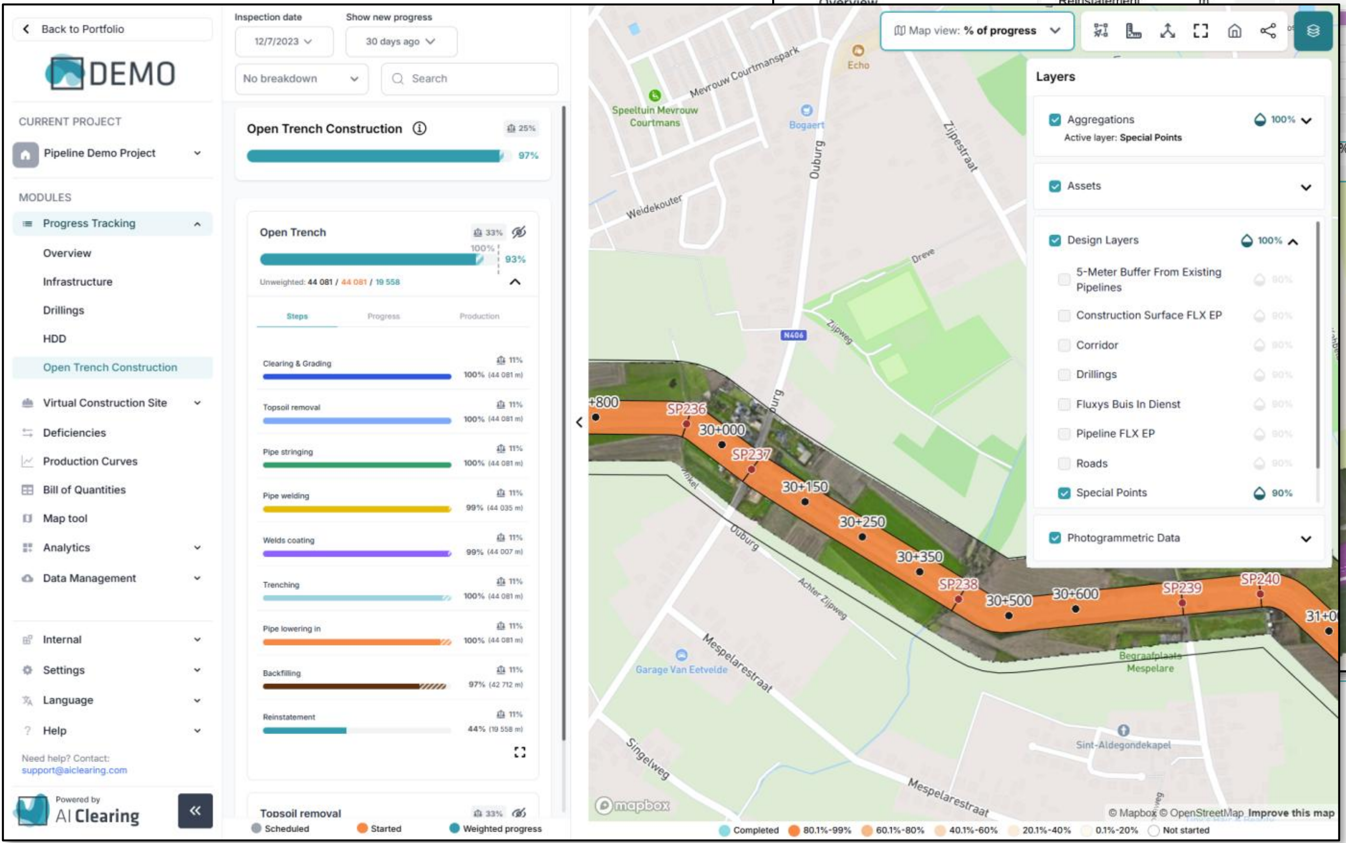
AI flow: Find the design location of the pile on all images taken from drone and check if it’s visible (multiple angles view)

Close to 100% accuracy

AI Clearing for Pipeline Construction

Capture of detailed progress data for all tracked construction activities aggregated into sections



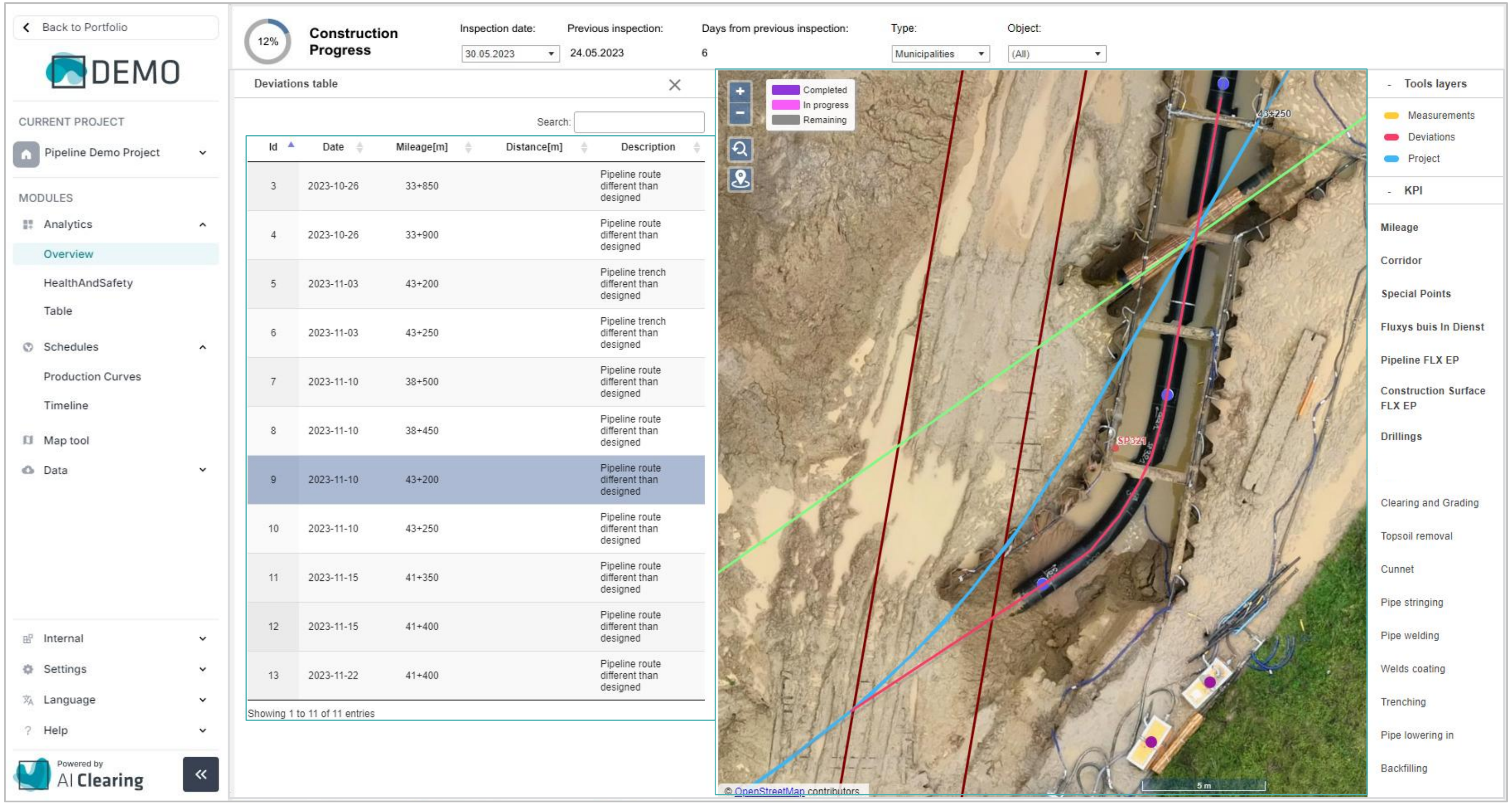


Sample of pipeline construction activities tracked & monitored using AI Clearing

CATEGORY	CONSTRUCTION ACTIVITY/KPI	UNITS
Trench Construction	Clearing & grading	m/m²
	Stringing	m
	Welding	m
	Coating	m
	Opening	m
	Lowering in	m
	Backfilling	m
	Reinstatement	m
Topsoil Removal	Topsoil removal	m²
Chamber Installation	-	#
Safety and Compliance	Safety barriers(White and red)	#
	Assembly Zone violations	#
	Proximity to existing pipeline	#
	People without helmets	#
	Machines	#
	Pumps	#

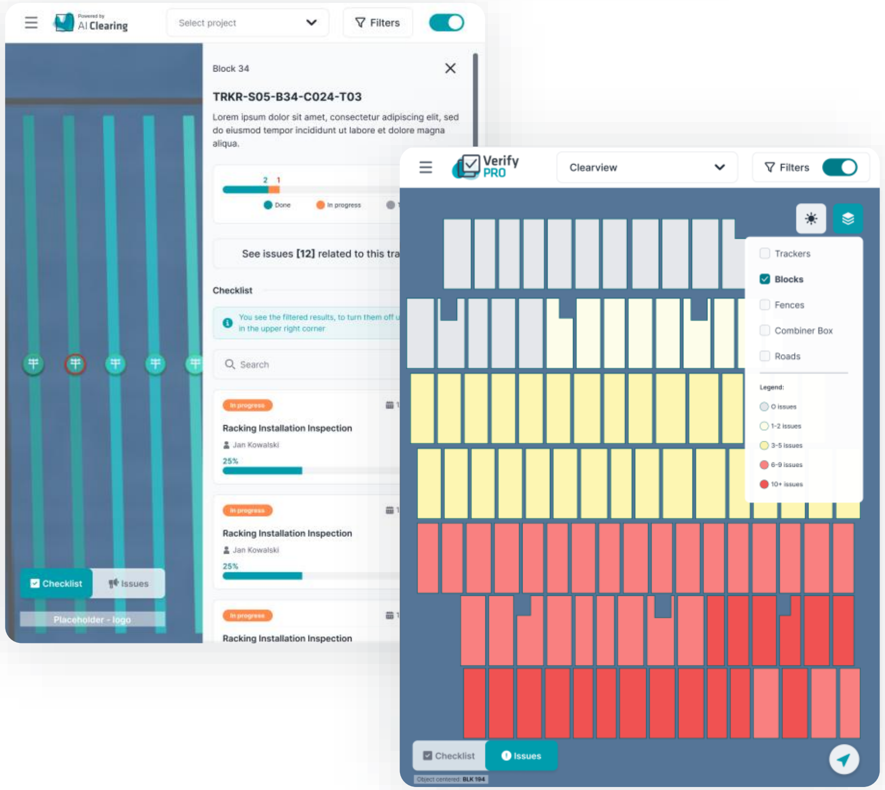
CATEGORY	CONSTRUCTION ACTIVITY/KPI	UNITS
Drilling	Drainage installation	m
	Drilling and installation	m
	Pipeline installation	m
	Sheet pile removing and backfilling	m
HDD Mechanical	String zone	m
	Welding	m
	Testing	m
	Coating	m
	Installation	m
HDD Drilling	Pilot drilling	m
	Reaming	m
	Pulling back	m

Detect construction deficiencies and deviations from the design



Enhance Quality Control trough streamlining quality checks, delegating tasks and avoiding rework

ISSUE HANDLING

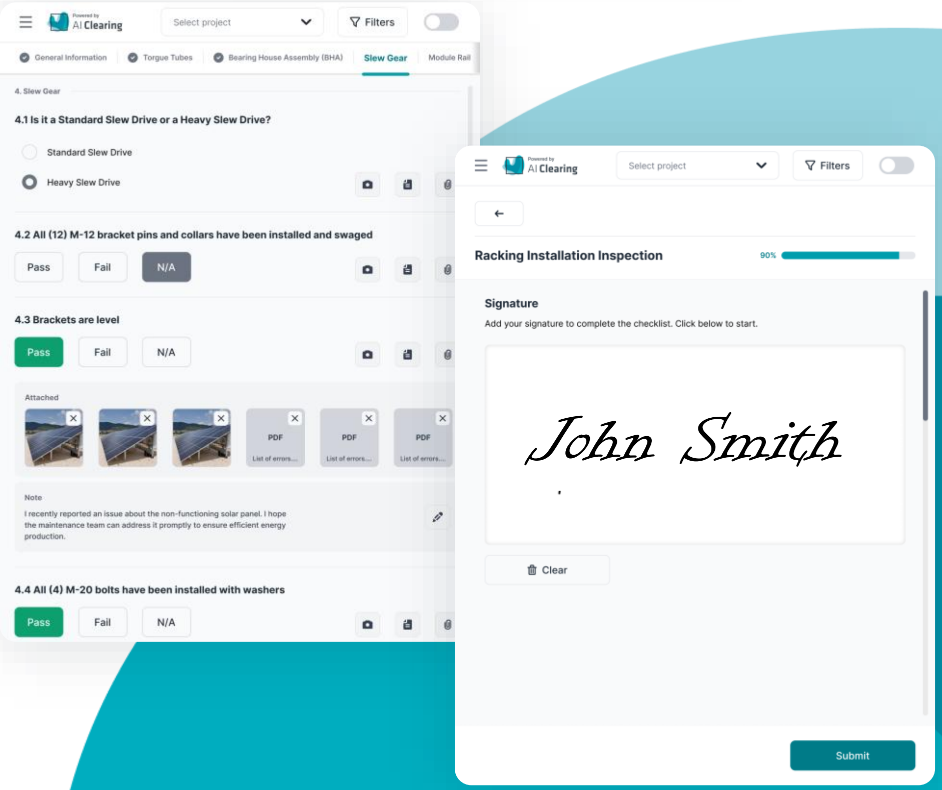


Integrated Quality Control Platform including geolocated assets view, clients-defined checklists, and issue handling.

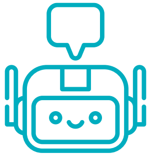
Full Support of Issue Lifecycle from identification through analysis and assignment to resolution.

Visualization of testing or commissioning plan to manage and control quality control progress and status.

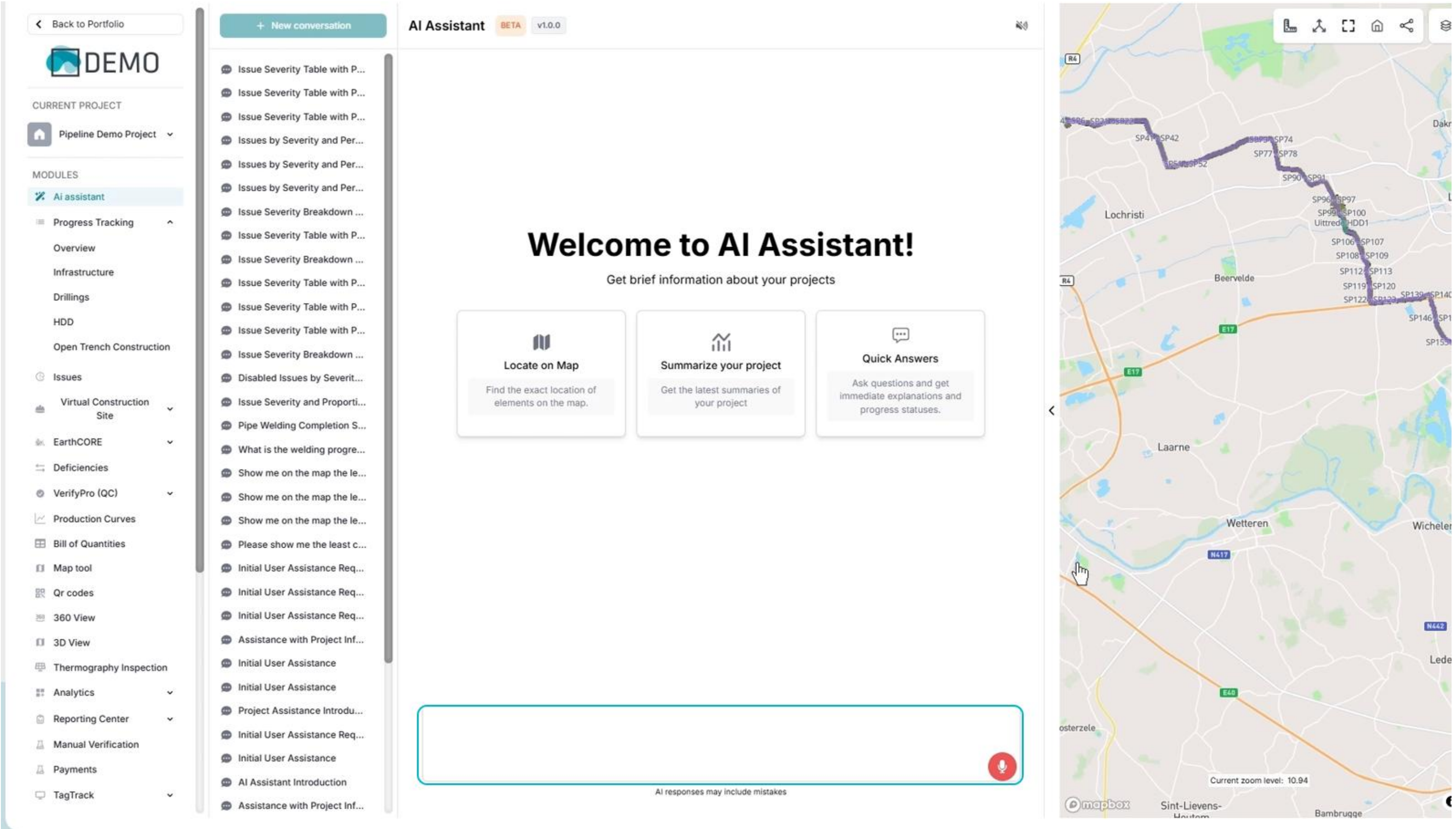
CHECKLISTS



Looking into 2026: meet Clara



Ask me anything...



Thank You!