

How could the future of NDT look like?



Image source: AI generated

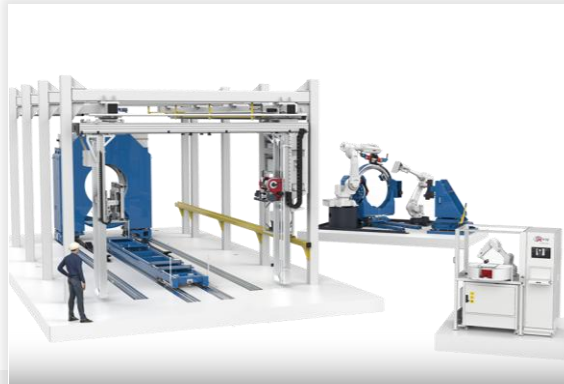
NDT Solutions – Portfolio.

The broadest industrial X-ray inspection portfolio in the market.



**Standard Cabinets
Solutions**

[More info](#)



**Custom
Solutions**

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**Software
Solutions**

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**Premium
Services**

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A truly global player.

Serving customers right where they are located.

VC AMERICAS
Atlanta - US

> 300 Employees
> 60 Channel Partners

Sao Paulo - Brasil

★ Local Offices

★ Branches

📍 Partners

VC EMEA
Stockelsdorf – Germany
INSPECTION SERVICES
Sinsheim - Germany
diondo
Hattingen - Germany

VC ASIA
Pune - India

★ Shanghai - China

The background of the slide is a dark, textured surface filled with numerous question marks of varying sizes and shades of brown and grey, creating a sense of depth and mystery.

What if ...

Stepping into the unknown

CONTROVERSIAL IDEAS AHEAD

Warning: Creative Ideation May Occur

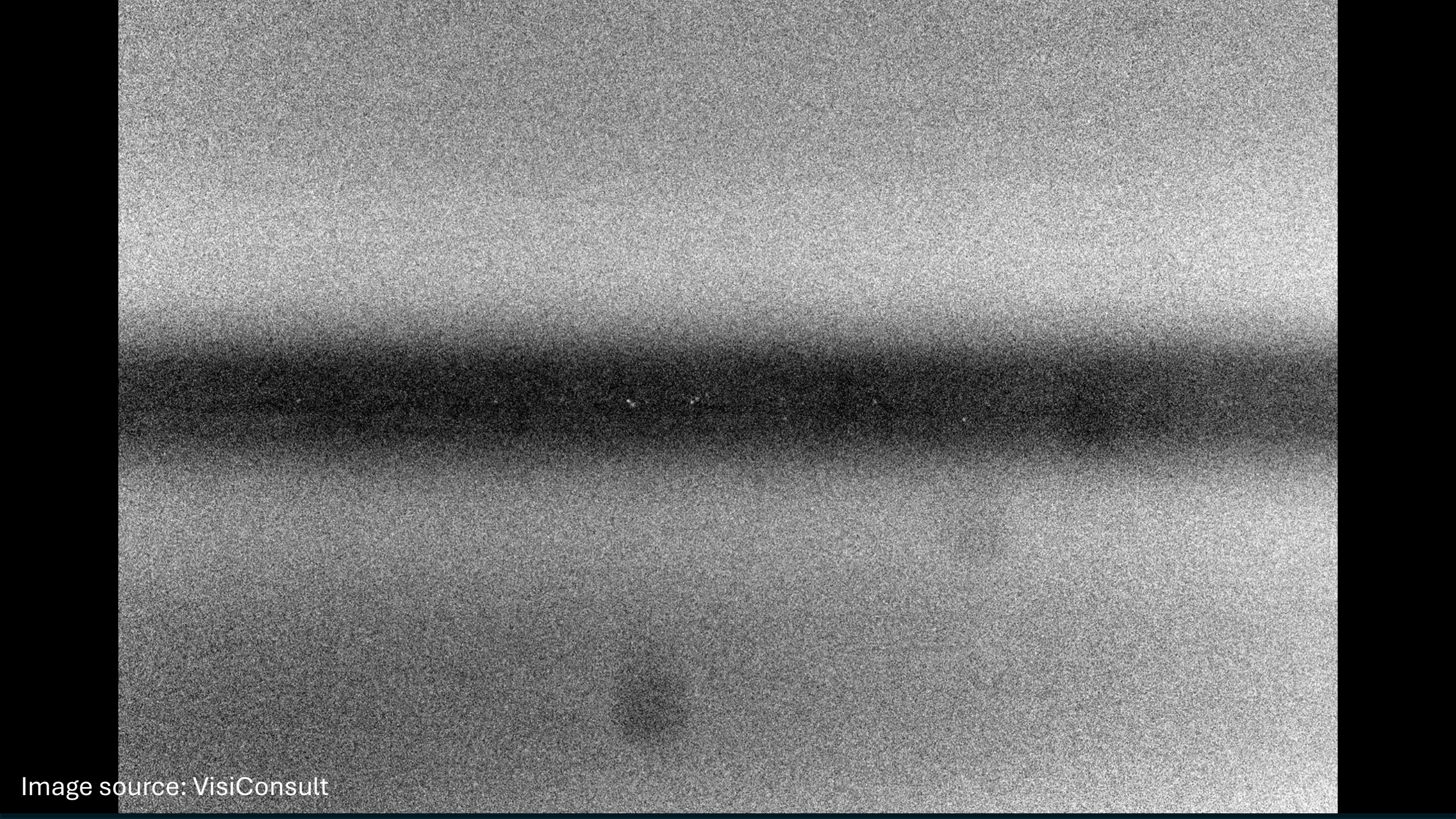


Image source: AI generated

What if ... AI outshines the human inspector?



Image source: AI generated





AI Toolbox

File Tree

202361495122970_0.TIFF

COMPASS

Model: ▼

Apply

Cancel

high dense indication (748)

gas hole (764) shrinkage (784)

surface defect (738)

foreign material (752)

Indication List

Load Indications List

Local Directory (C:\Spie)

Filter File Tree ✕ Apply Filter

7262059 op1000 746AK B 17-18

← →

Image Presentation Presets

Segmentation Toolbox

Layer

New Layer ▼ 🔍 + -

- ☒ high dense indication (748)
- ☒ gas hole (764)
- ☒ shrinkage (784)
- ☒ surface defect (738)
- ☒ foreign material (752)

Clear All Layer

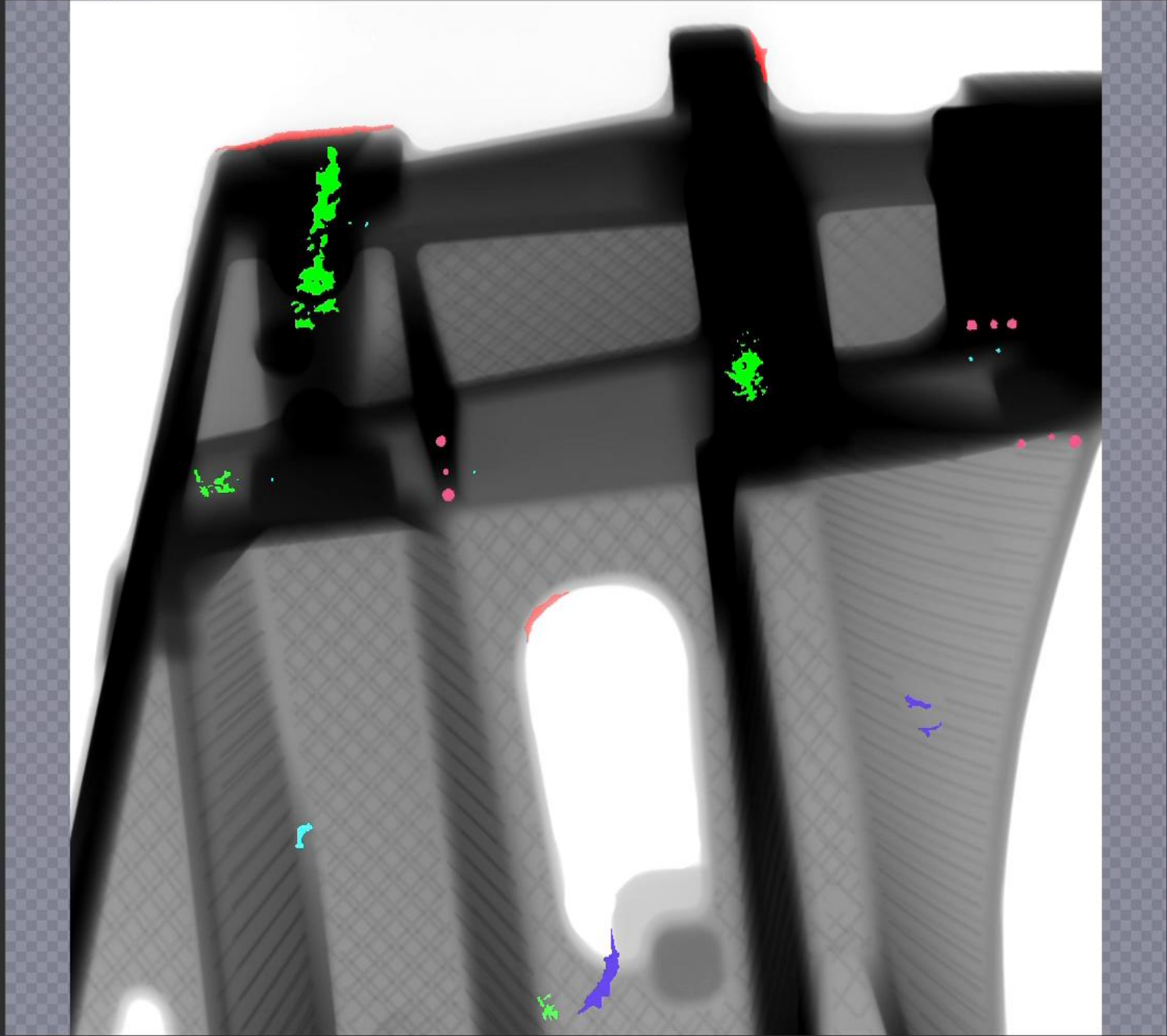
Save Segmentation

Segmentation Tools

🖋️ 📐 🔗

✂️ ✂️ ✂️

📄



Histogram

Window: 31880 Min: 5088

Level: 21028 Max: 36968

☐ Lock Window Width

Preset 1	Preset 2	Preset 3	Preset 4
W: 10000	W: 10000	W: 10000	W: 10000
L: 5000	L: 15000	L: 25000	L: 35000

Panel

Live

15 Averaging

Quick Enhancements

Unfilter Preset 1 Preset 2 Leon ⚙️

Quick Enhancements Sequences

Tags

Tags Effective Pixel Size: 0µm

Image_Inversion False

Image_ZoomFactor 0.65922581071466

Image_WindowLevel_Minimum 5088

Image_WindowLevel_Maximum 36968

VC.review

Image Edit Overlays Image Quality Display Sequences Windows Authentication Configuration Help

Username: Default User (Supervisor)

Image 3

AI Toolbox

COMPASS

Model:

Apply

Cancel

Indication List

Load Indications List

Zoom:

AI Toolbox Segmentation Toolbox

Decision Widget

Awaiting next review job

Image source: VisiConsult

Indication View Rows: 12

Major Axis Leng	Max Feret Diam	Max Thickness	Minor Axis Leng	Nearest Centroi
4.74	5.39	4.47	3.69	
11.49	11.4	4.47	4.95	
3.83	4.12	2.83	1.89	
11.7	12.08	7.21	6.8	
5.14	5.83	4.47	4.28	
5.33	5.83	6.0	3.29	

Result Board

Decision Service - Swagger UI

Nicht sicher 10.0.4.64:8008/result_board

Result Board

Received Parts (0)

Range All Part ID

Day Time Part ID Result

Results Distribution (0 labels)

POST Internal: http://result_board:80/publish

incoming TIFF RID

Dieser PC > drop (\\10.0.4.64) (A:) > incoming incoming durchsuchen

Neu Sortieren Anzeigen

Downloads Dokumente Bilder Musik Videos VC.review NightjarUploads incoming

Name Änderungsdatum Typ

Dieser Ordner ist leer.

0 Elemente



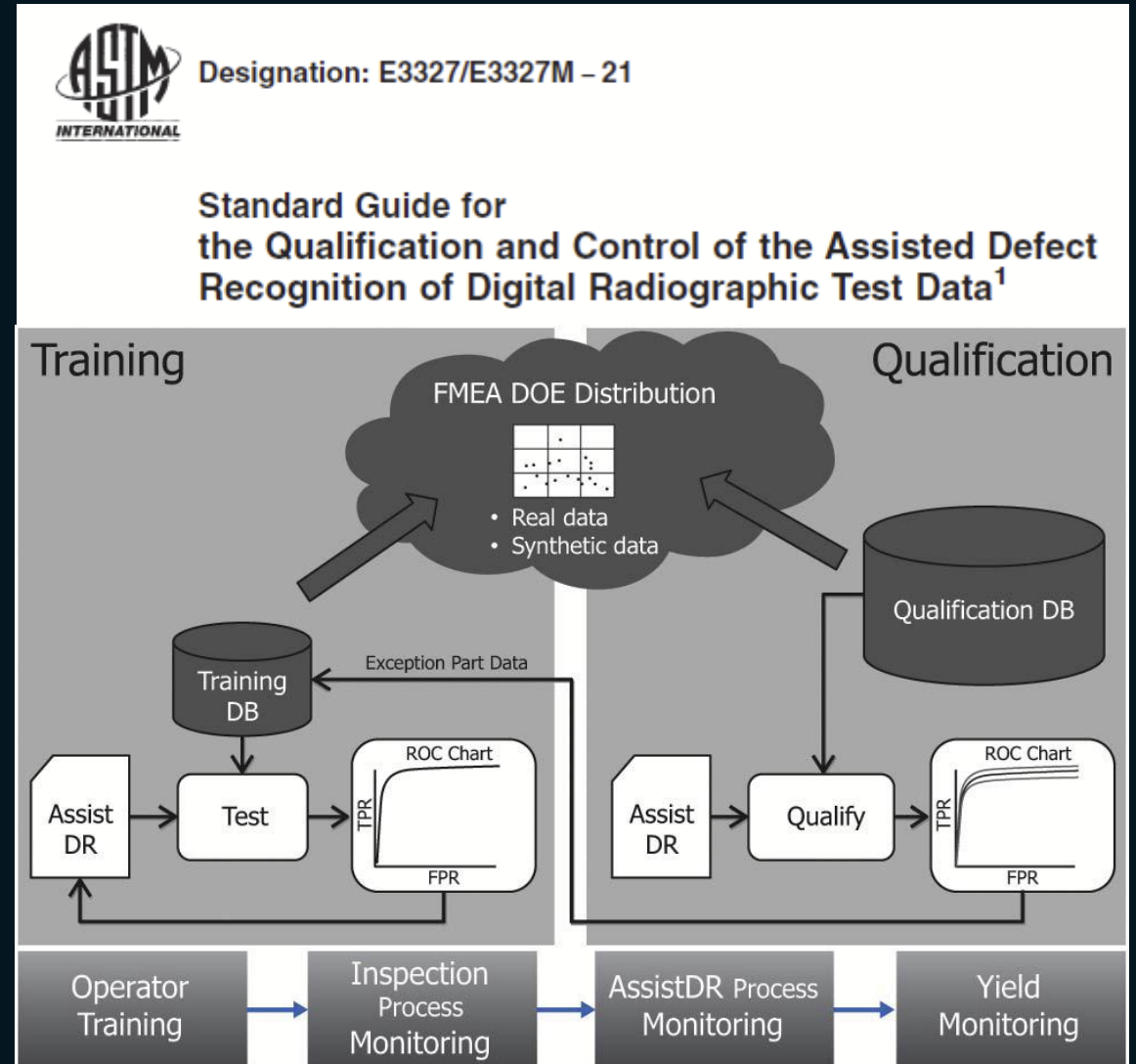
Artificial Intelligence – just another technology iteration



Image source: AI generated

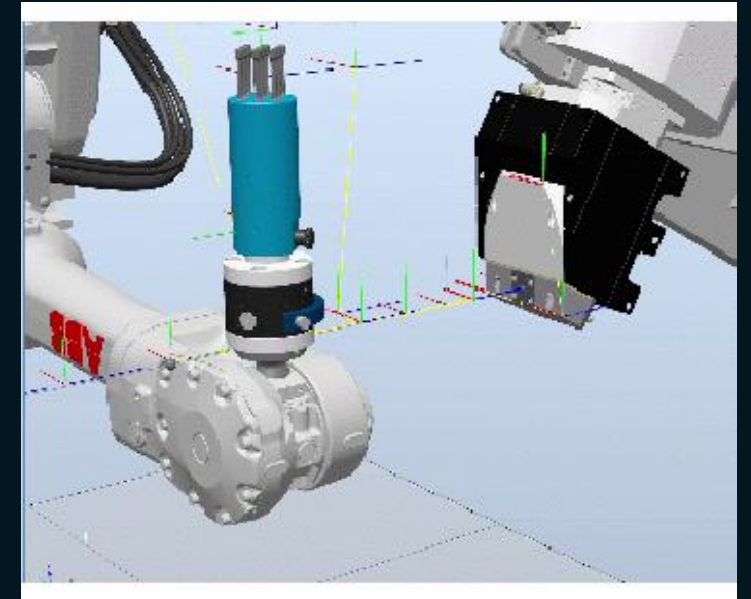
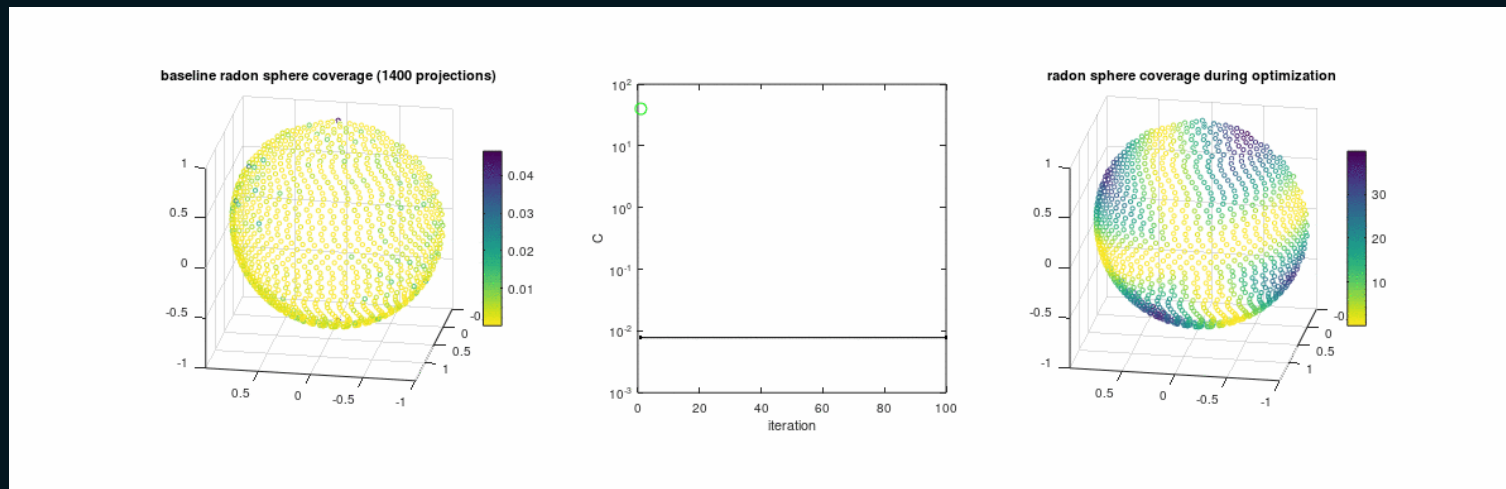
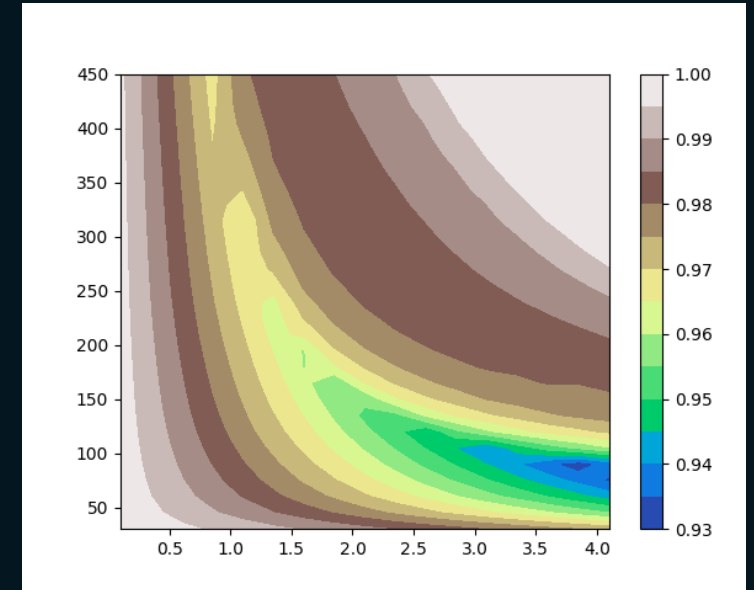
But what about standards and qualification?

- ASTM Guide already published
- EASA AI Guideline published
- ISO standard in progress
- ASME standard in progress
- DGZfP and ASNT Working Groups have published first standards
- Company-specific standards in progress (Airbus, Boeing, etc.)



Other uses of AI in NDT.

- Automatic creation of techniques
- Establishing the right parameters
- Increasing data quality (Super Resolution, reconstruction)
- Preventative maintenance
- Deriving information out of documentation



What if ... robots take over the tough jobs?



Image source: AI generated

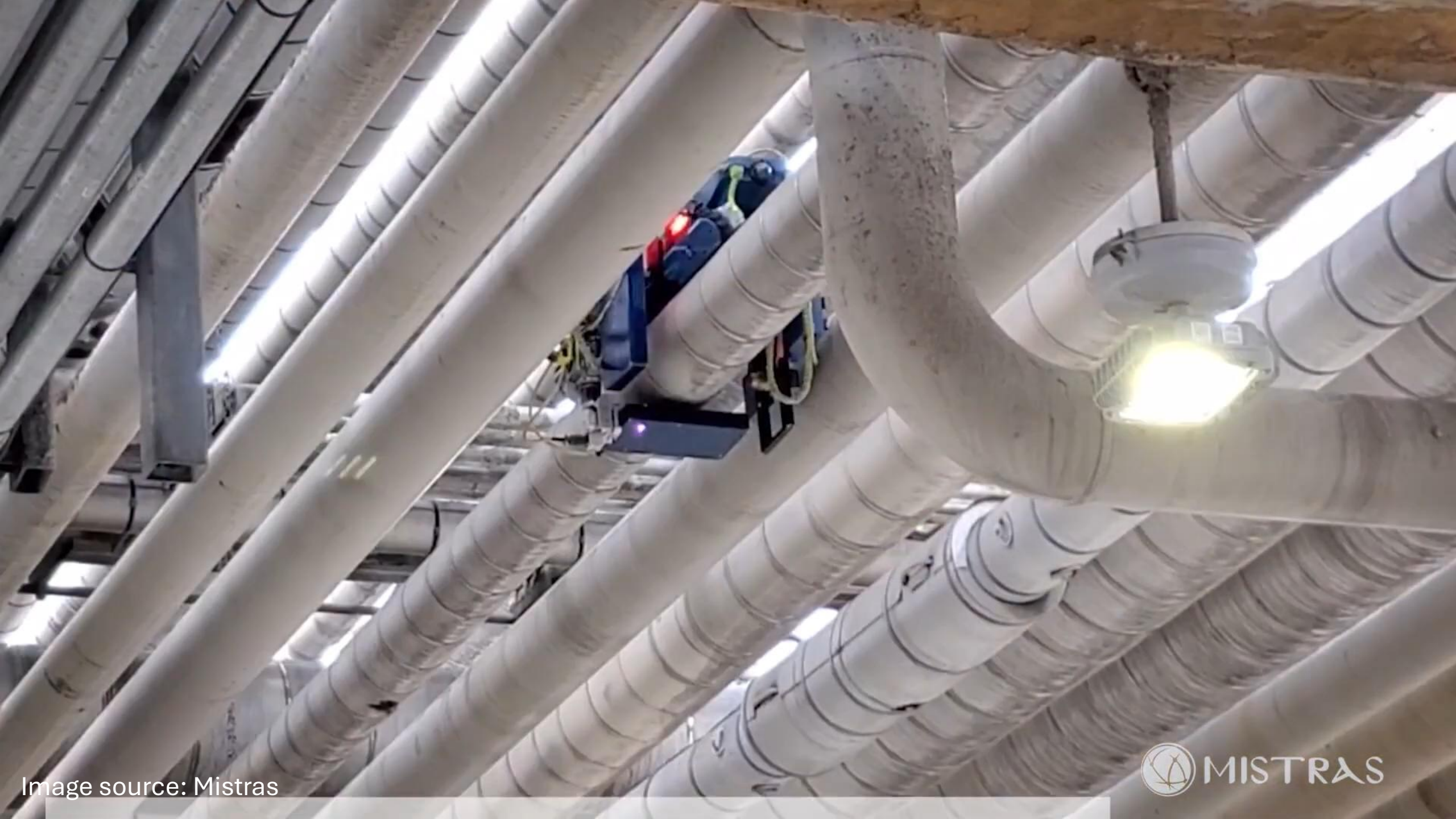
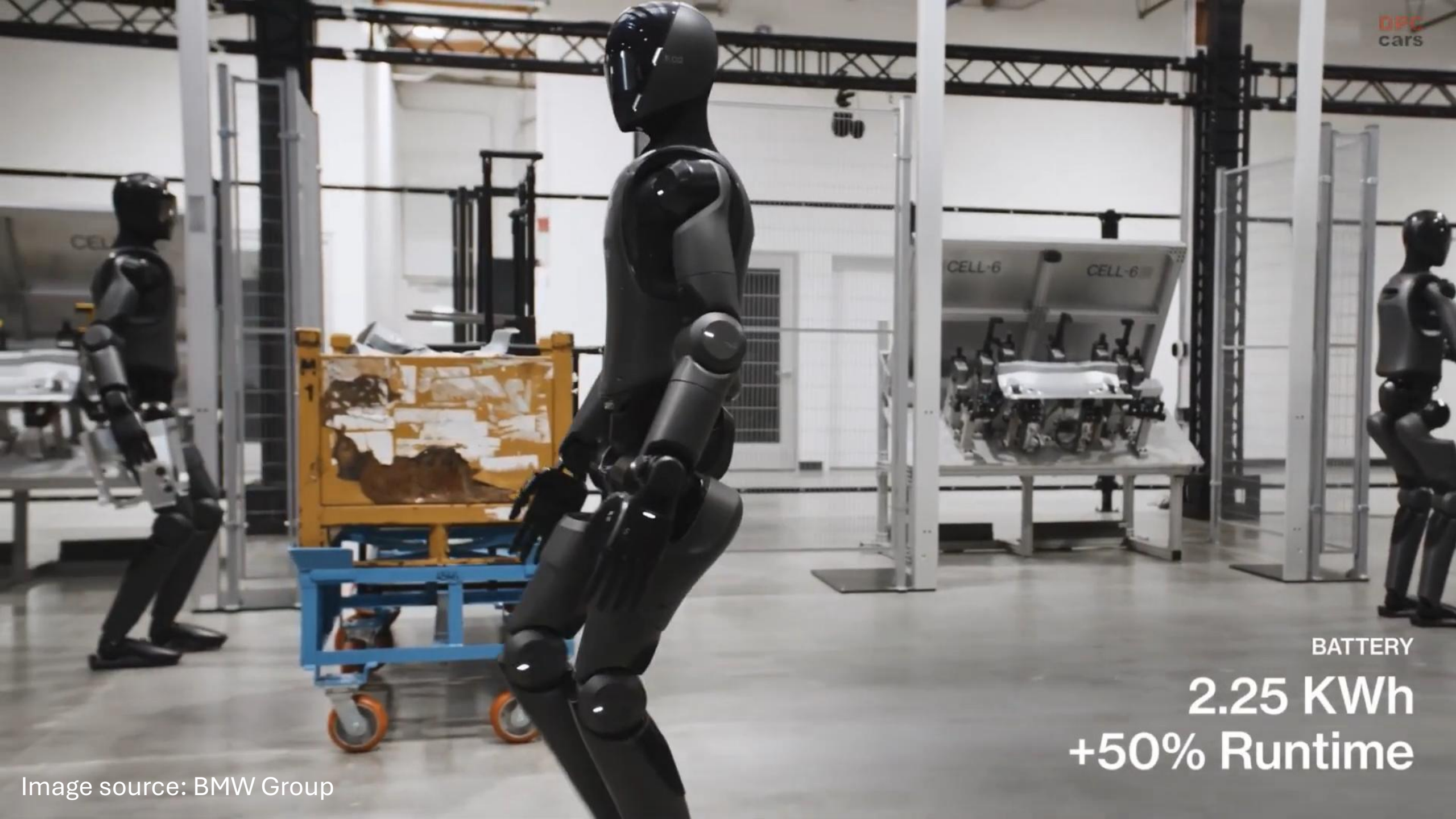
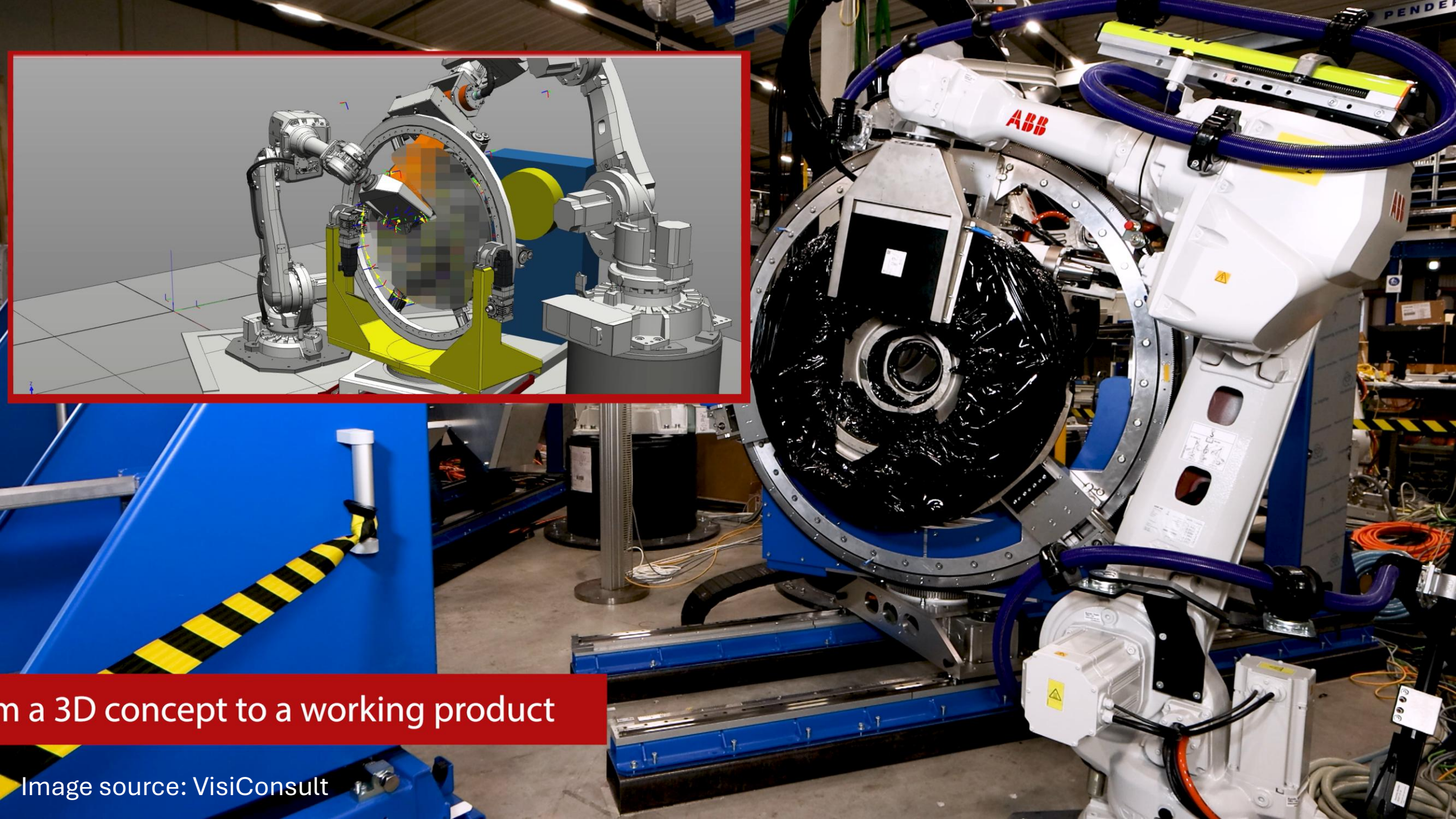


Image source: Mistras



BATTERY
2.25 KWh
+50% Runtime



from a 3D concept to a working product

Image source: VisiConsult



Image source: AI generated

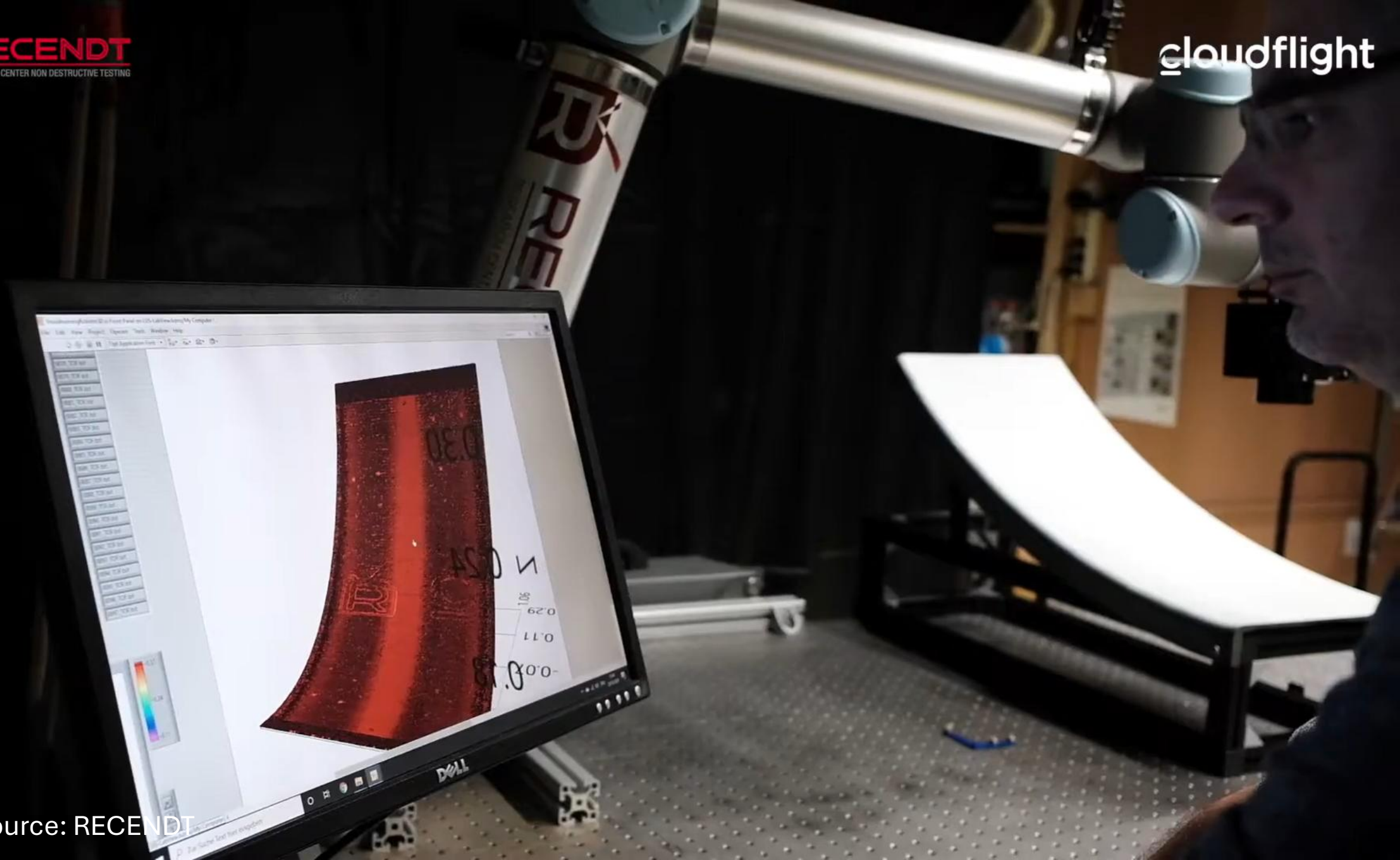
What if ... Inspectors had X-Ray vision?



Image source: AI generated



VisiConsult



Significant value-add through availability of quality data

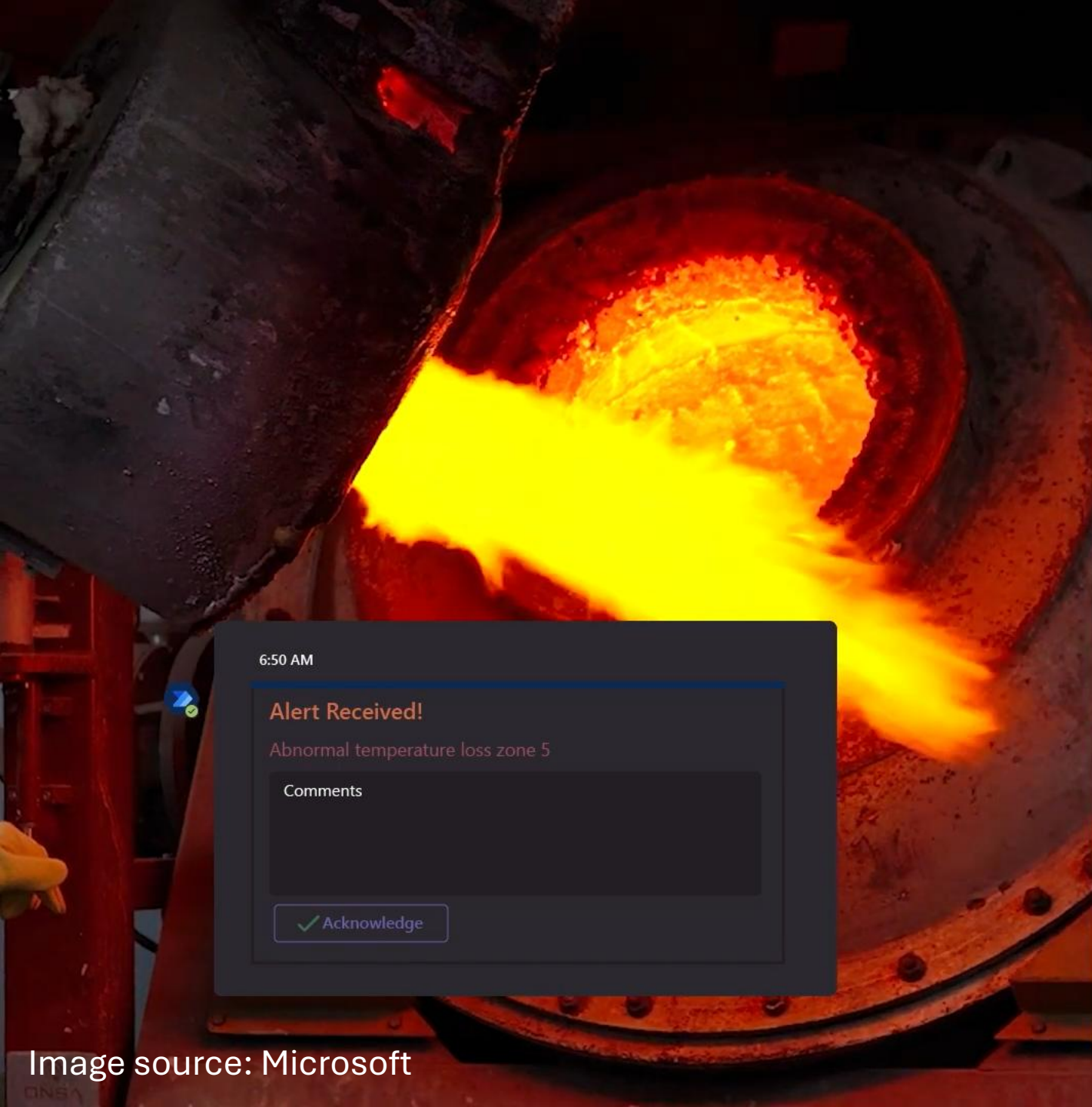


Image source: AI generated

What if ... All knowledge was just a question away?



Image source: AI generated



6:50 AM

Alert Received!

Abnormal temperature loss zone 5

Comments

✓ Acknowledge



@Antonio, Copilot has detected an abnormal temperature drop in zone 5 in the oven. This will create a quality concern causing the risk of increased scrap.

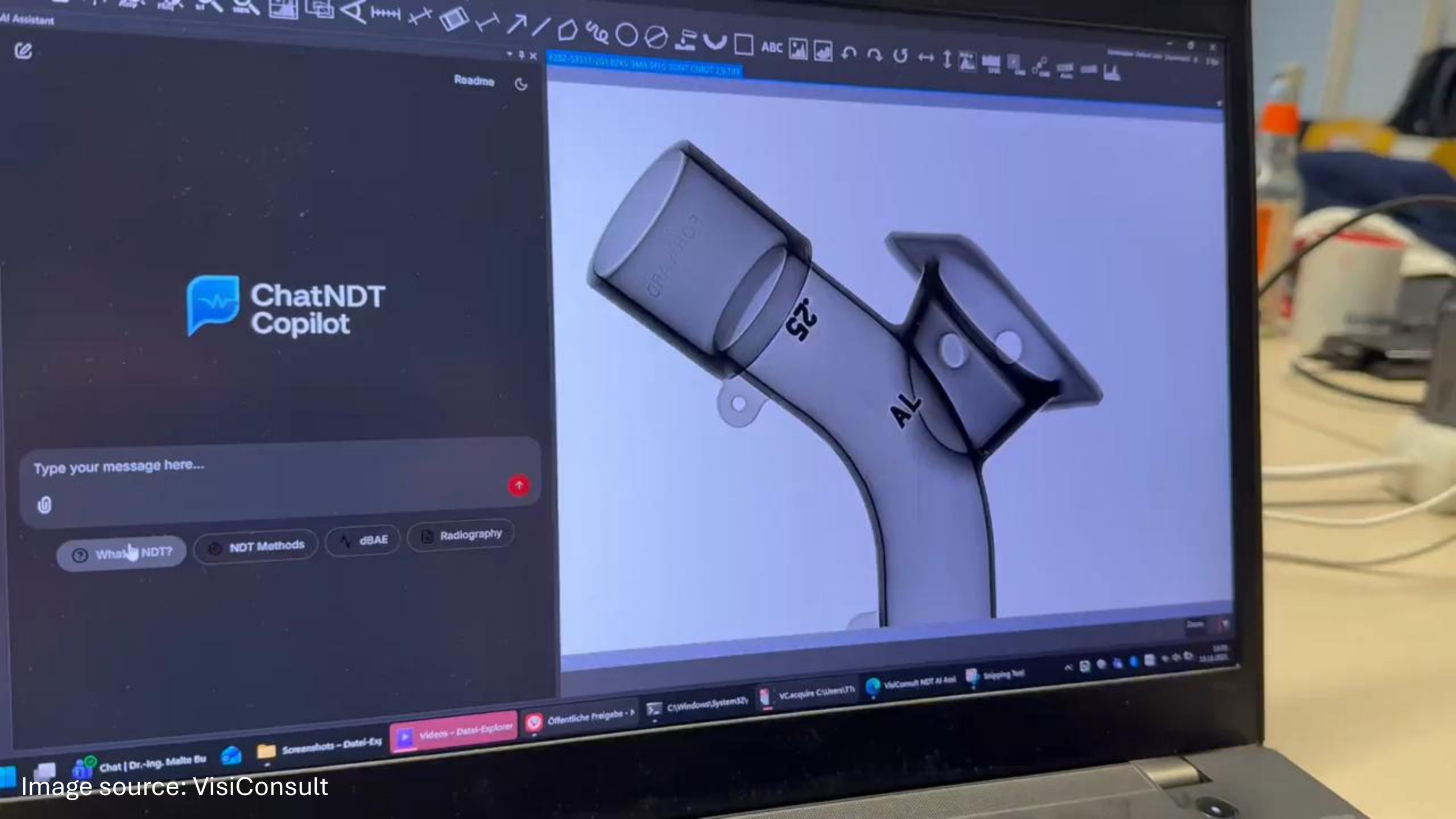


Image source: VisiConsult

Real-time support of inspectors through Co-Pilots

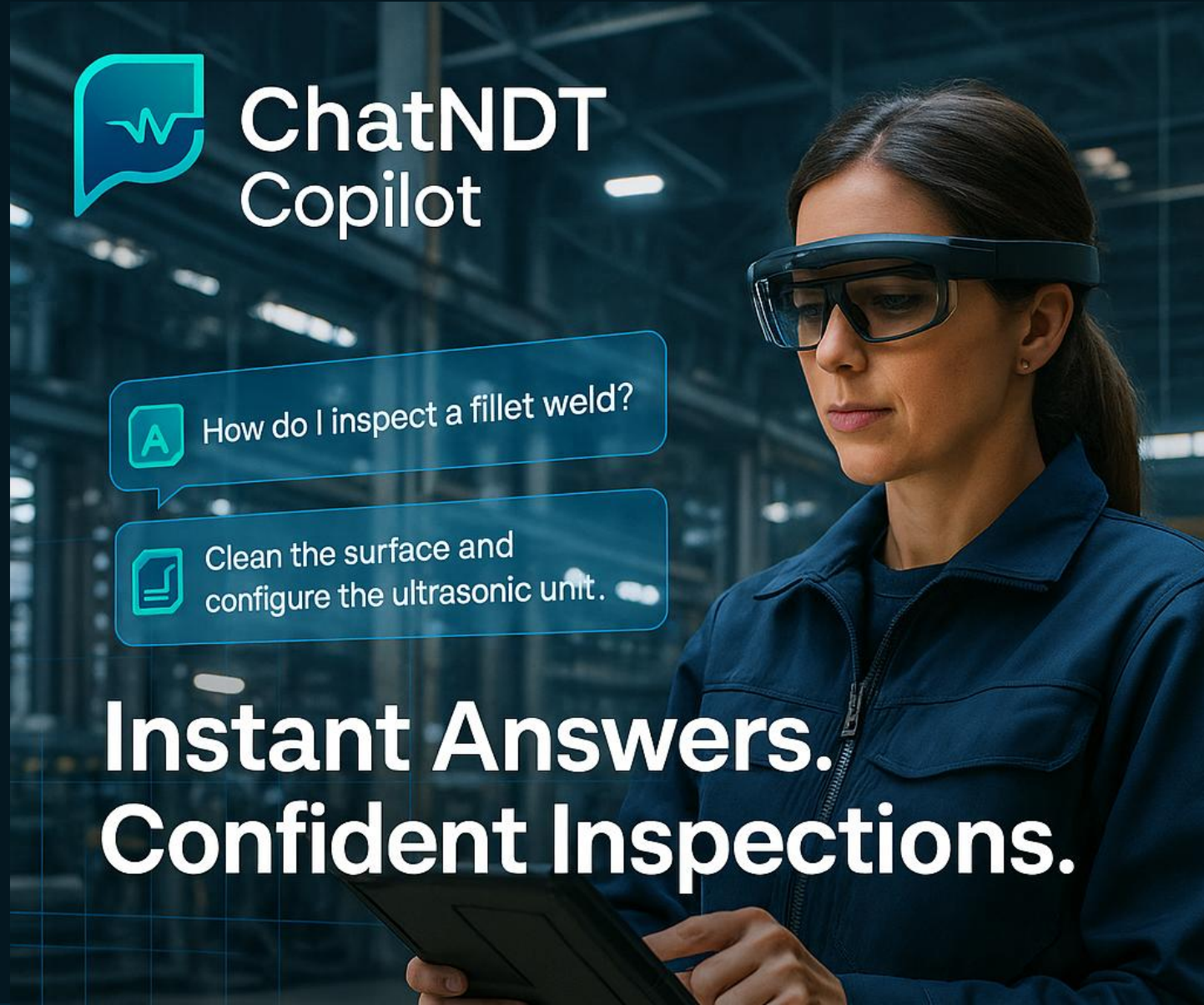


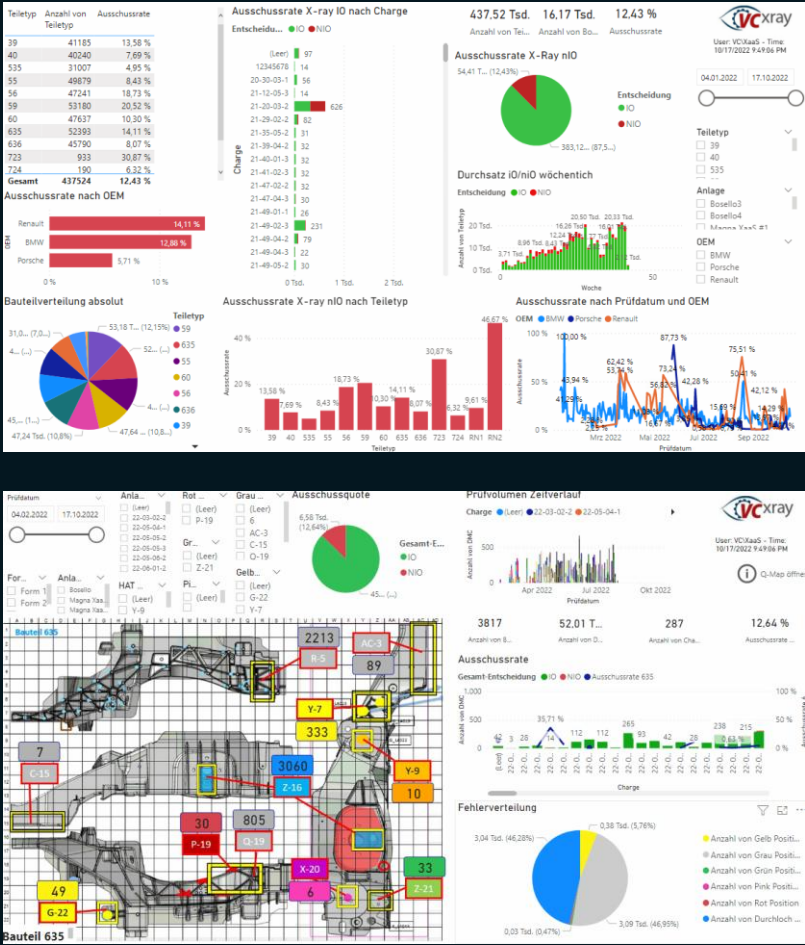
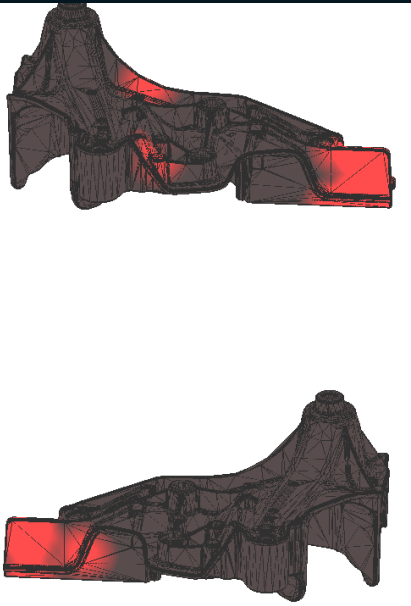
Image source: AI generated

What if ... NDT was the best industrial sensor?

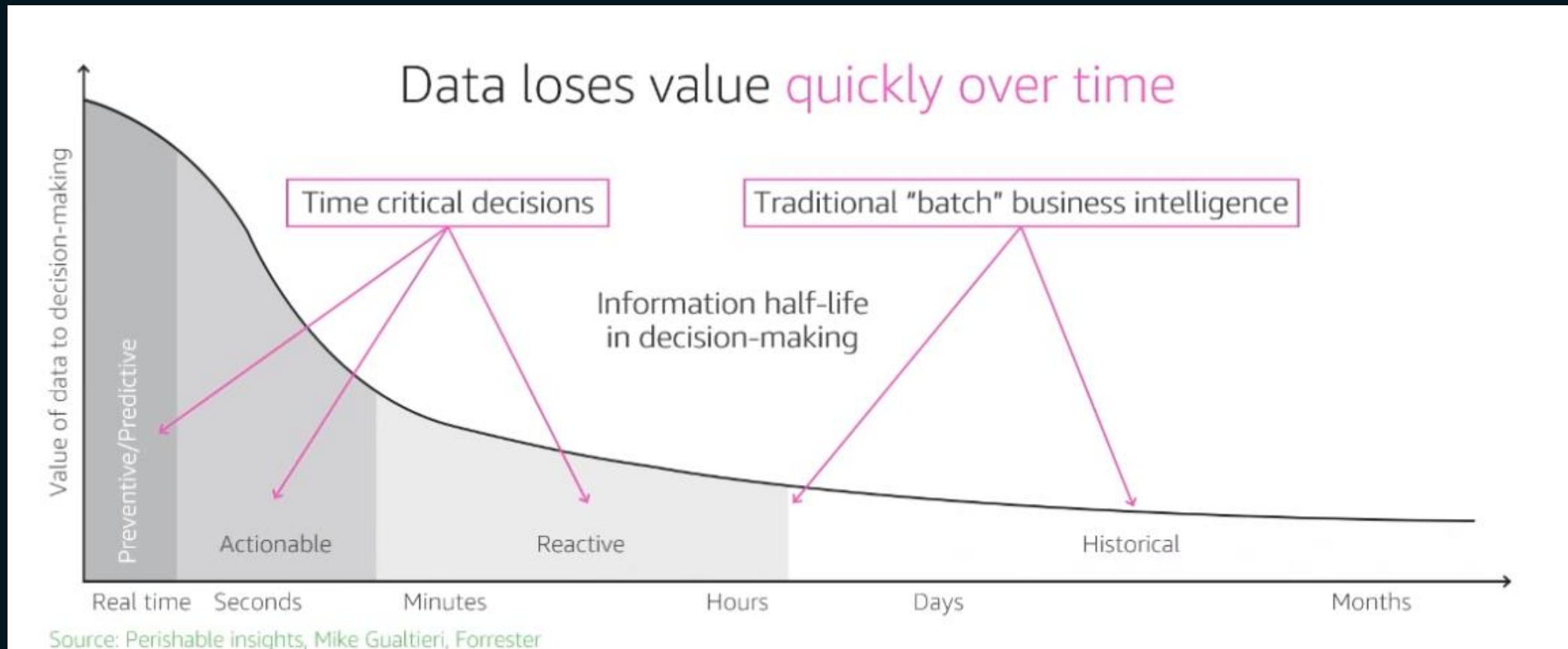


Image source: AI generated

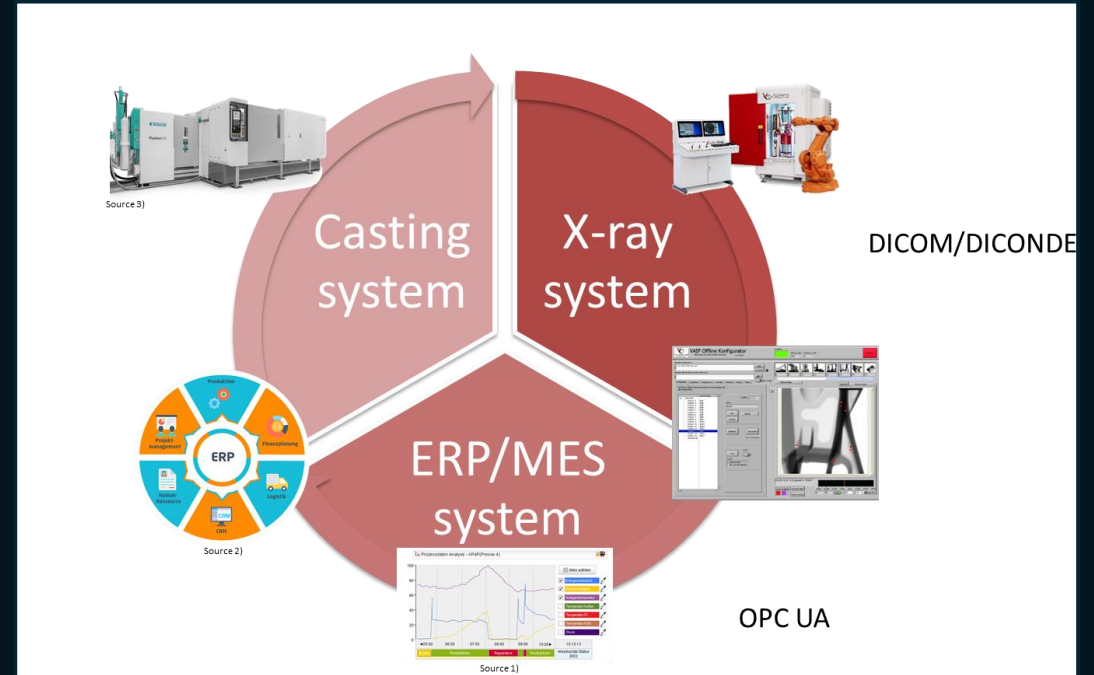
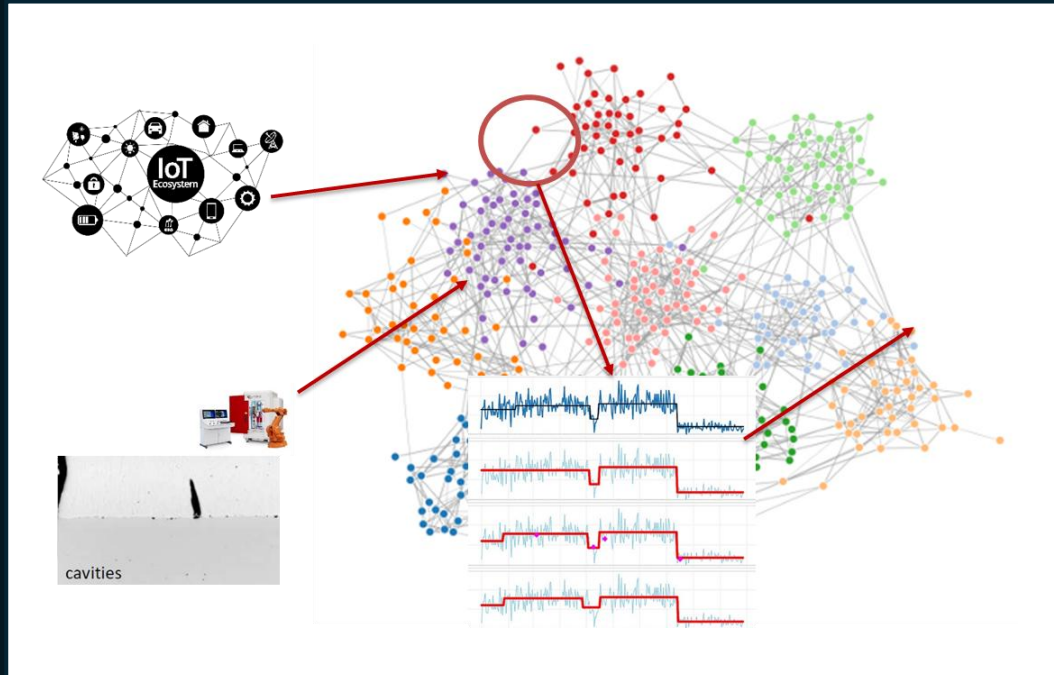
NDT as an industrial sensor



The value of data and its diminishing return



NDT as an industrial sensor



Big value potential for NDT as a data source

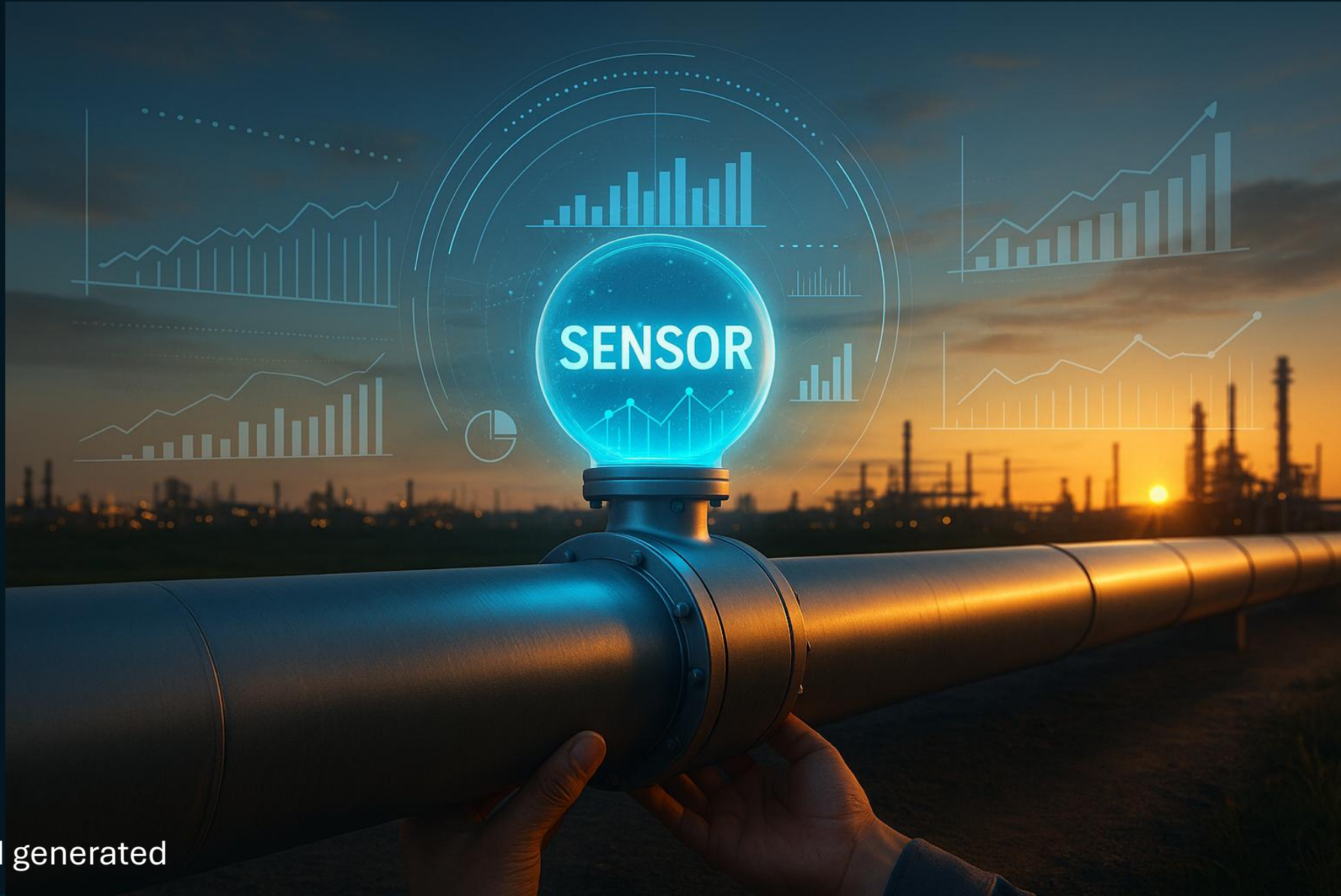
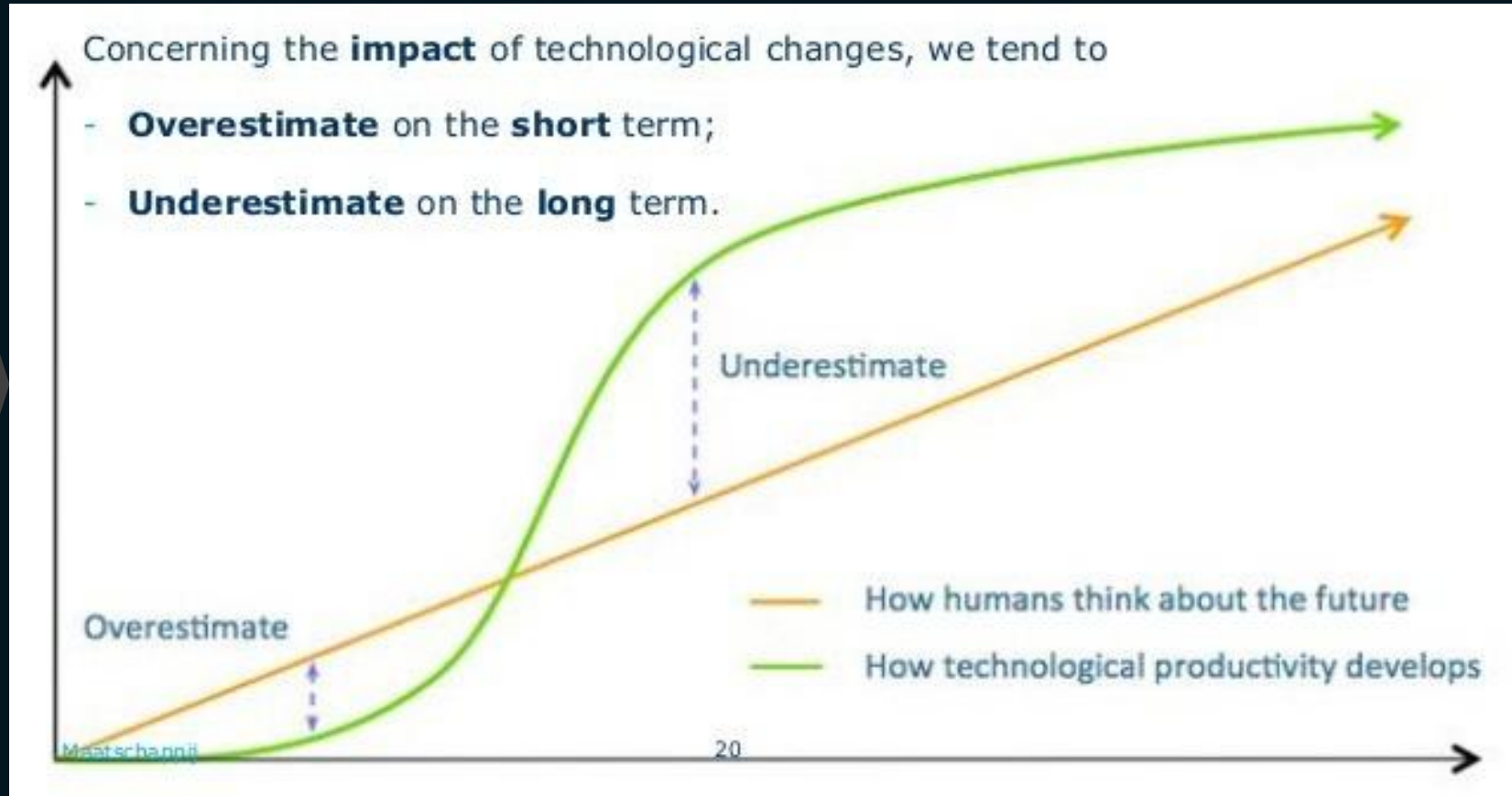
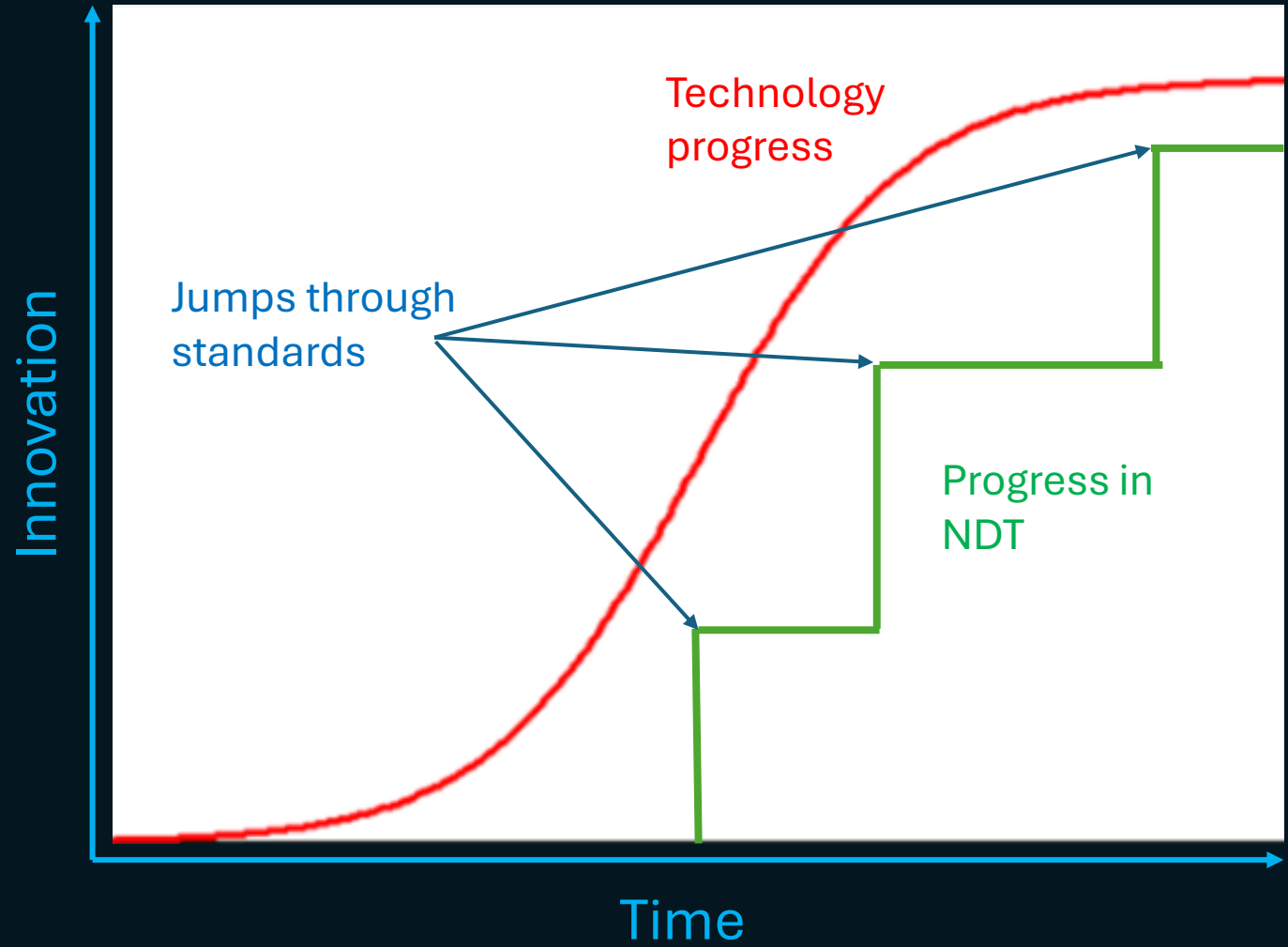


Image source: AI generated

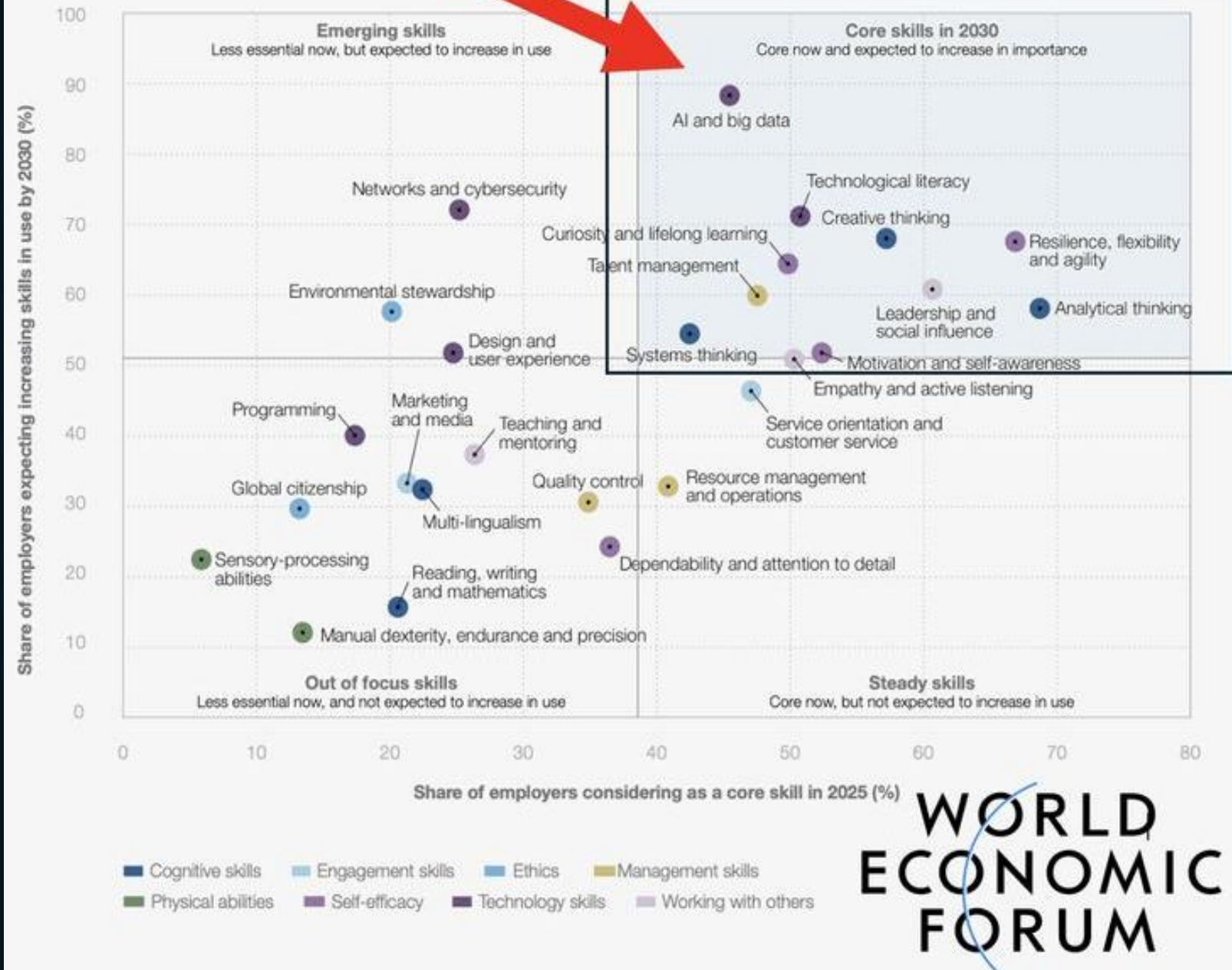
Technology
doesn't
progress
linearly



Progress in
NDT feels
static



Changing competencies



NDT heros of the future will be powered by technology



Image source: AI generated