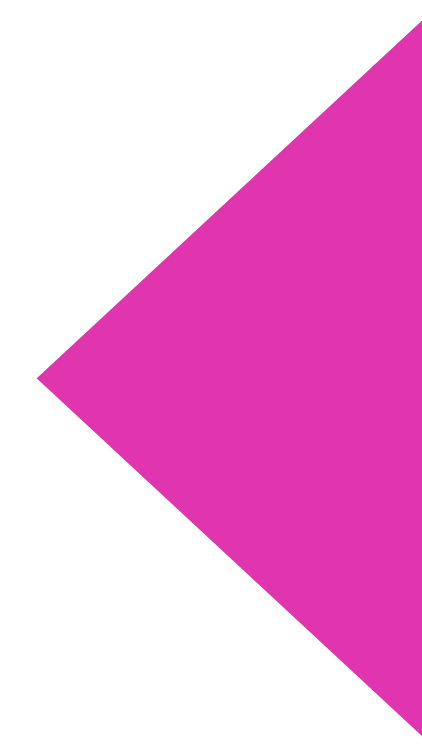# Redefining quality control

Requirements for a Digital Quality Manager

FHGR Chur, 09.09.24
Patrick Albrecht

15%

costs linked to quality issues*
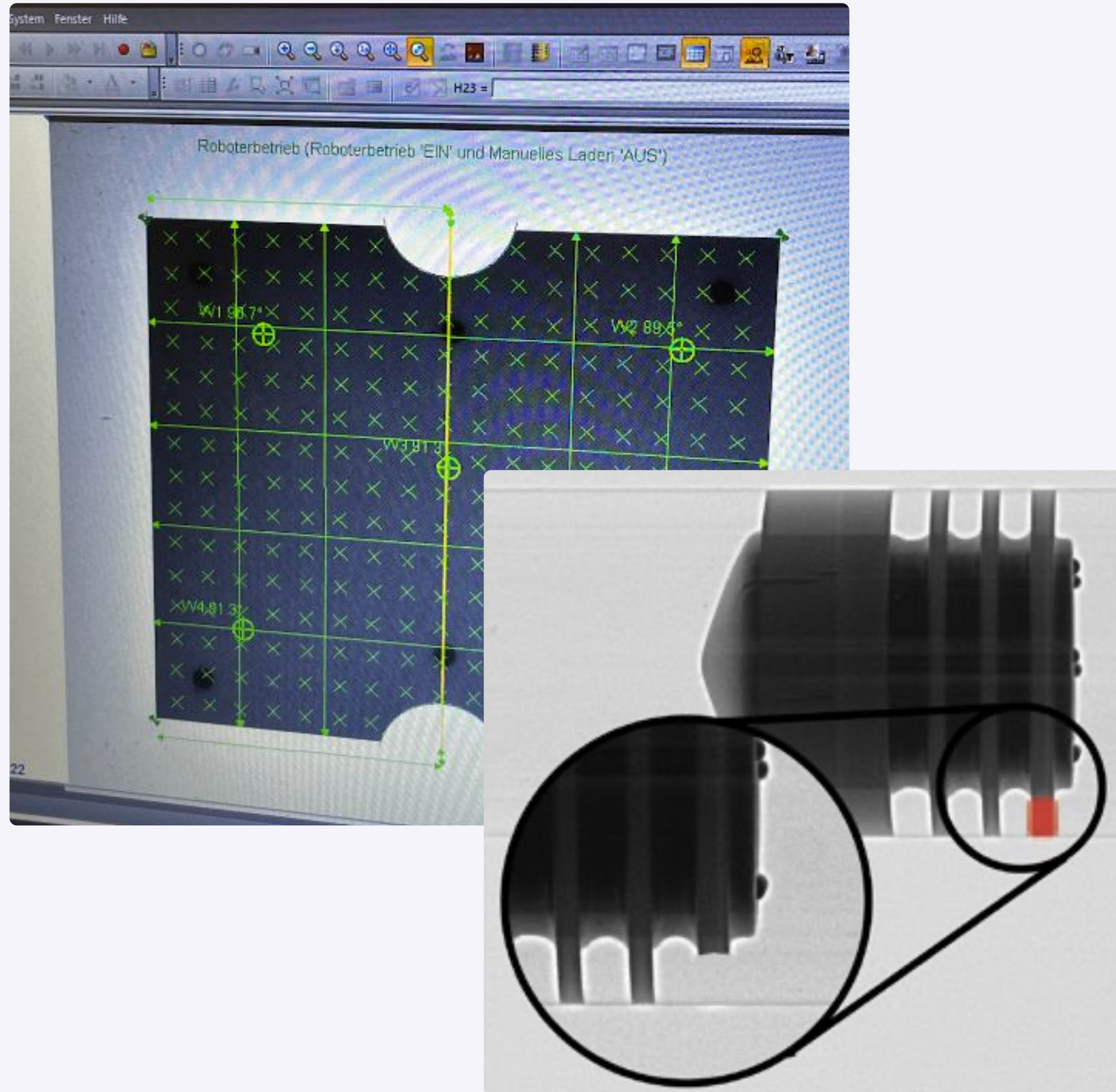
Fruitful AI

Unmet need: GenAI's take

The **real-time detection** of **complex and subtle defects** in variable environments.

Fruitful AI

Unmet need: GenAI's enhanced

The **real-time detection** of **complex and subtle defects** in variable environments **and products.**

Fruitful AI

Status quo falls short

Static models

Fixed setup

Binary assessments

Fruitful AI

Aesthetic Matching

Main label

Exp date

*

Found	Expected	Result:
		NOT OK

Found	Expected	Result:
20CL GENTS SWISS ROOTS BITTER LE	GENTS SWISS ROOTS BITTER LEMON	**97% Match**

Found	Expected	Result:
21.6.2024 12:50	TODAY + 6 Months +- 20 min	**OK**

Overall:
NOT OK

Fruitful AI

Subtle defect detection

Fruitful AI
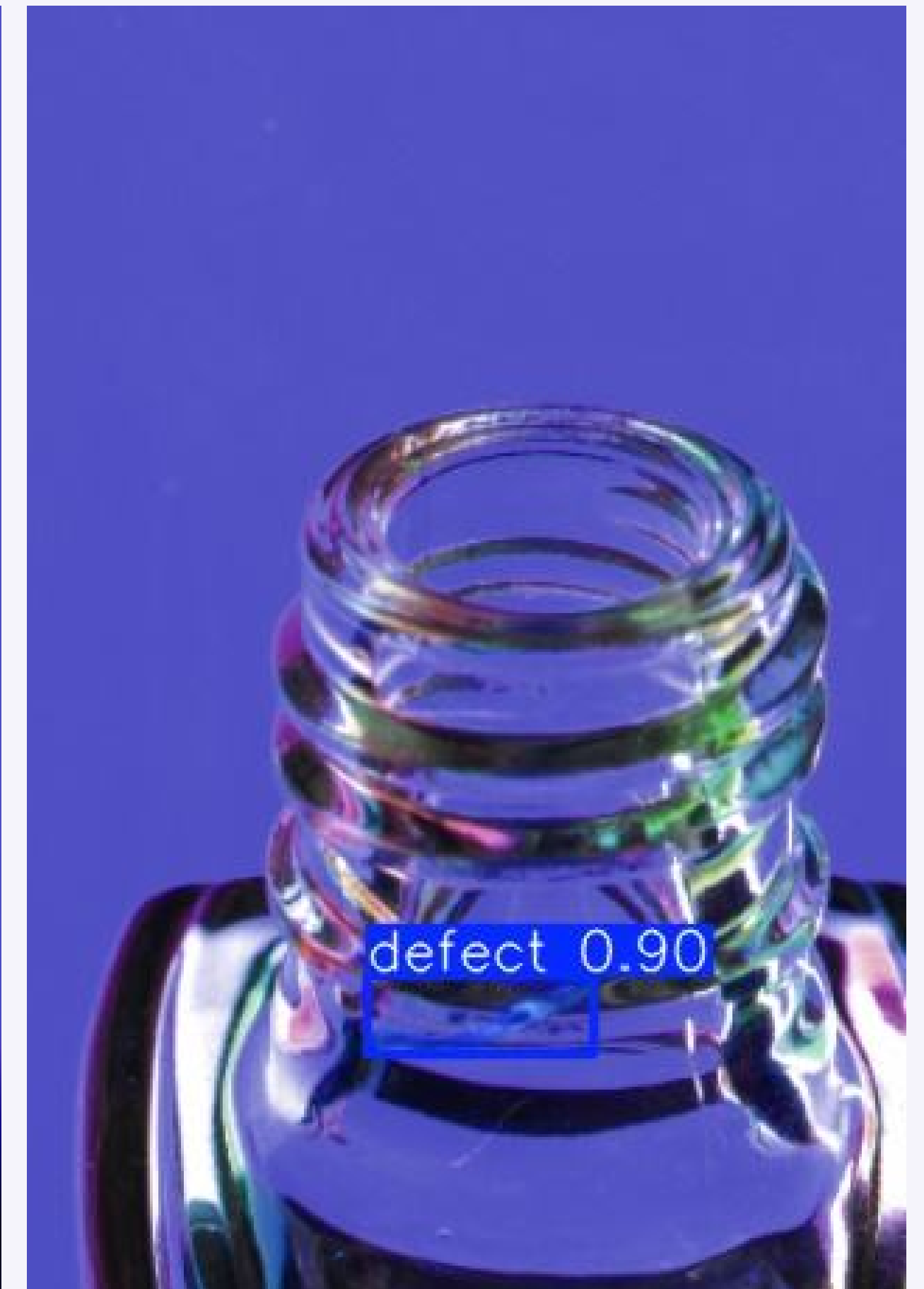
Foreign object inspection

Fruitful AI
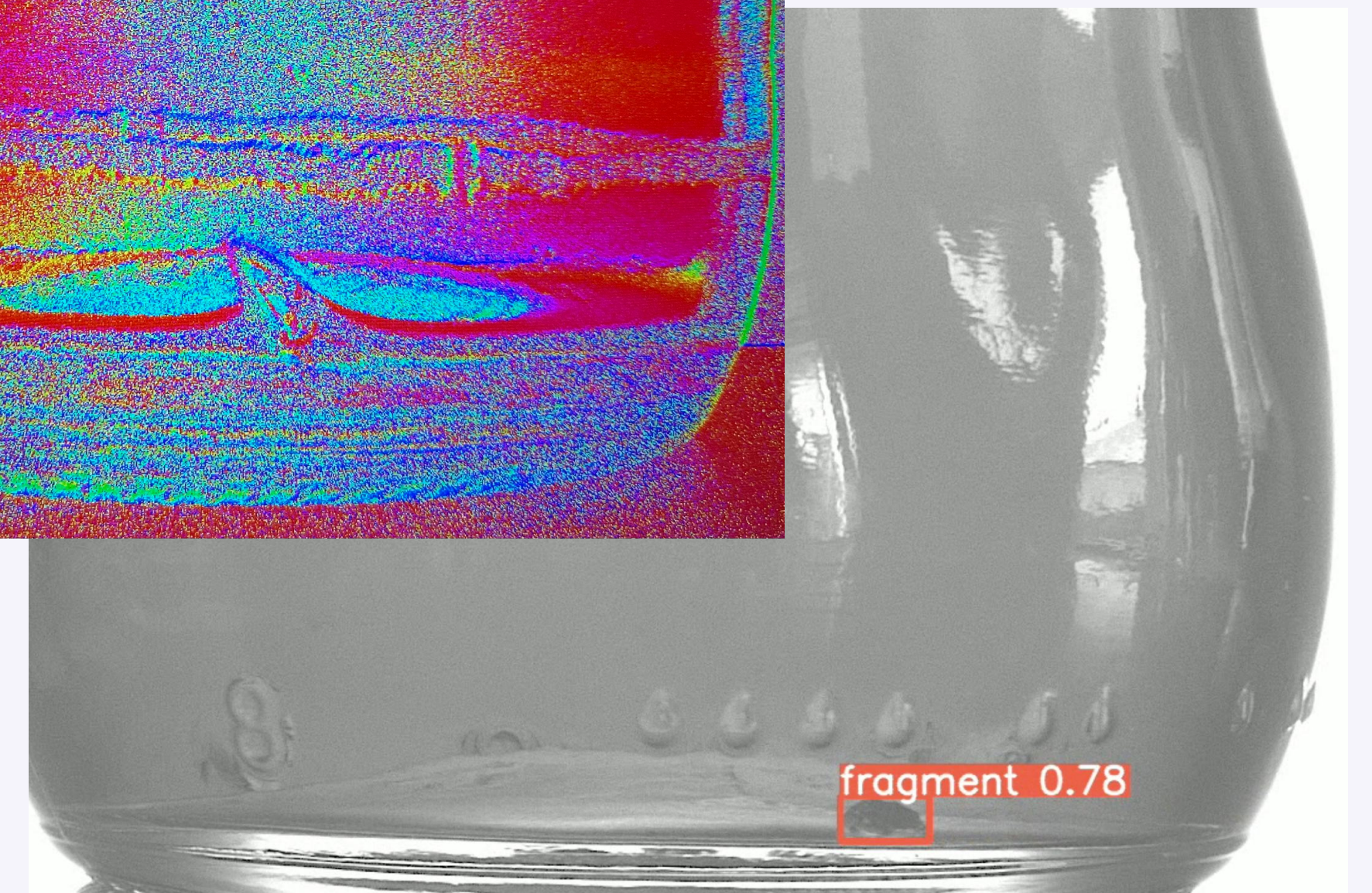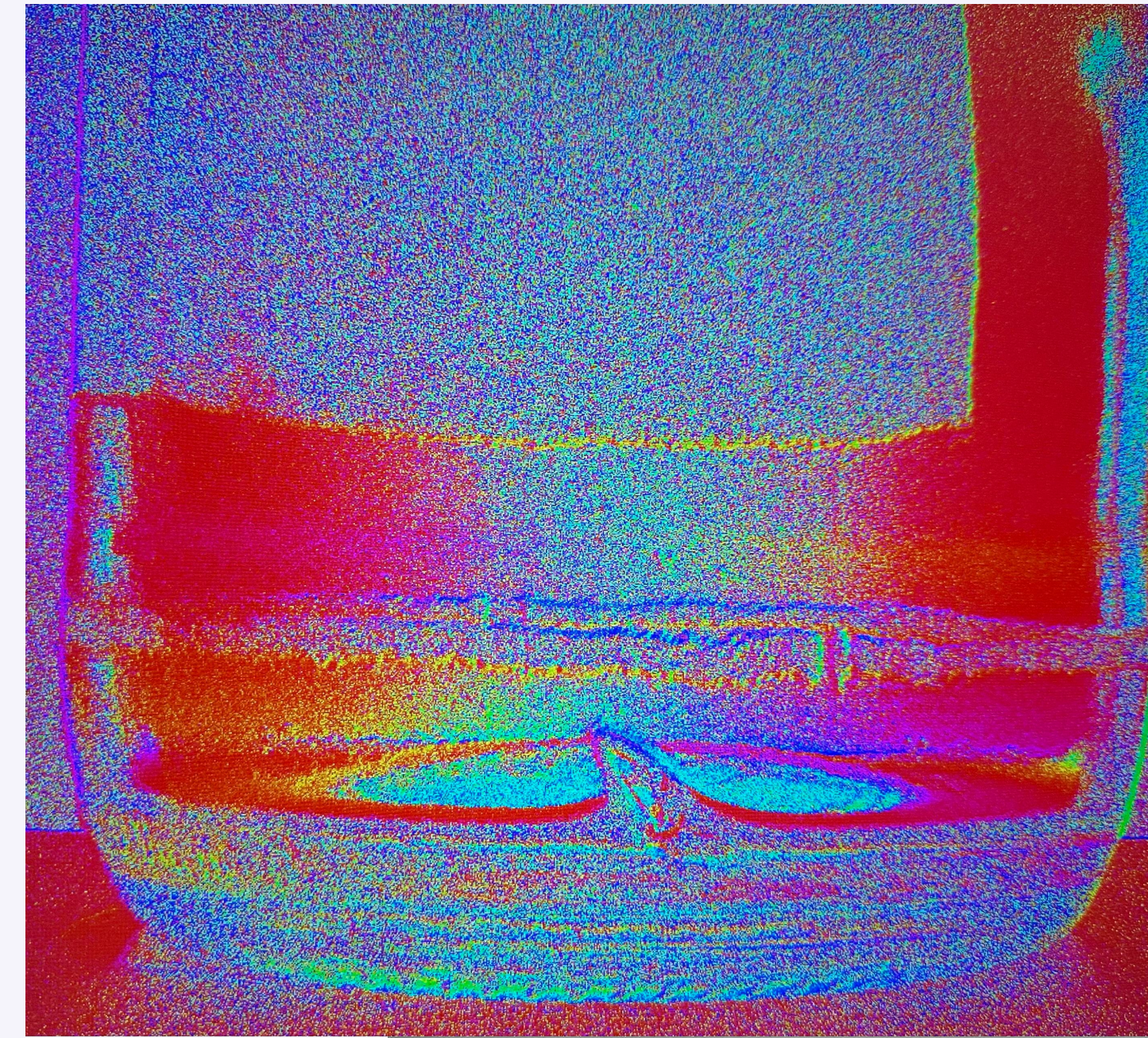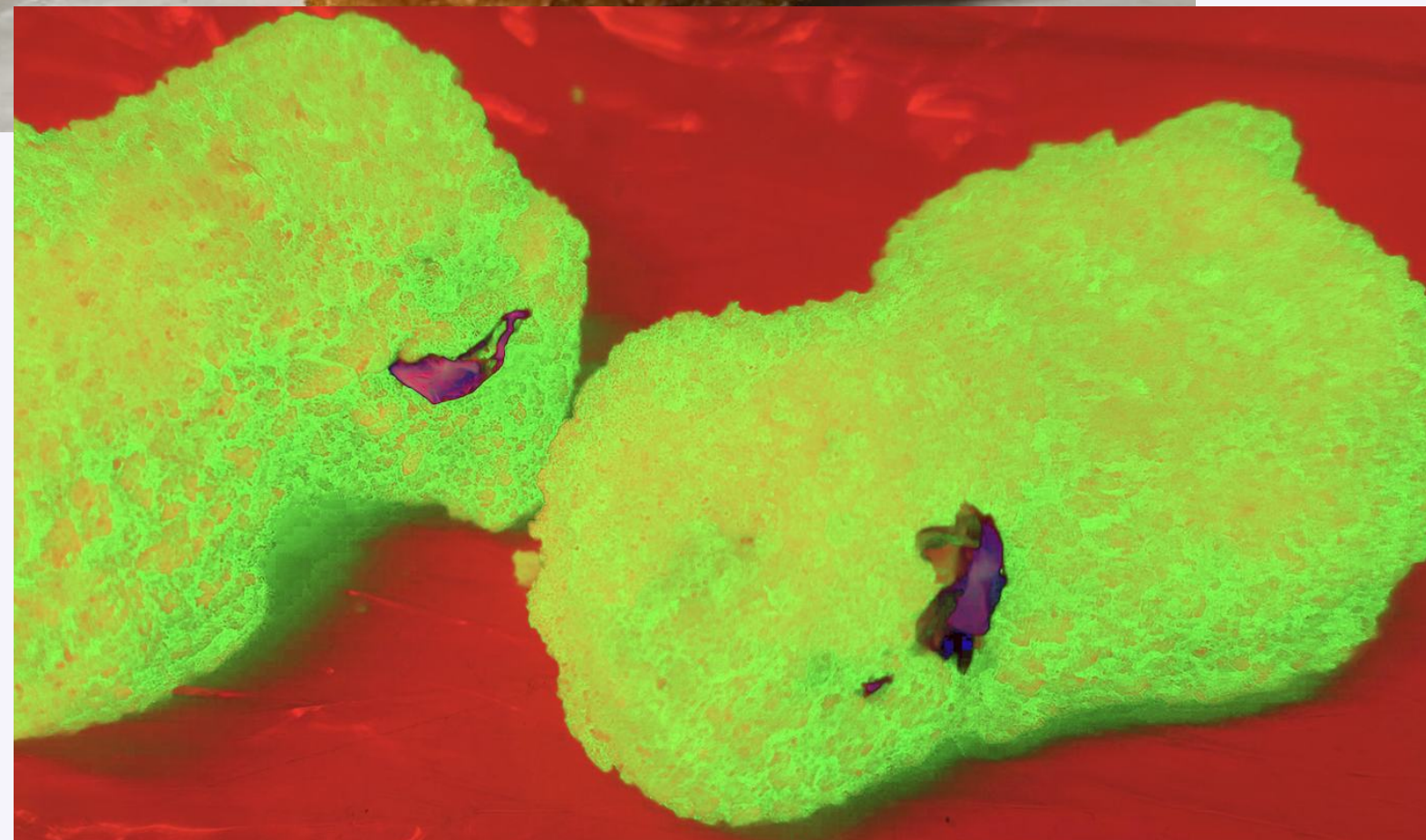
Sensors are improving

Thermal imaging
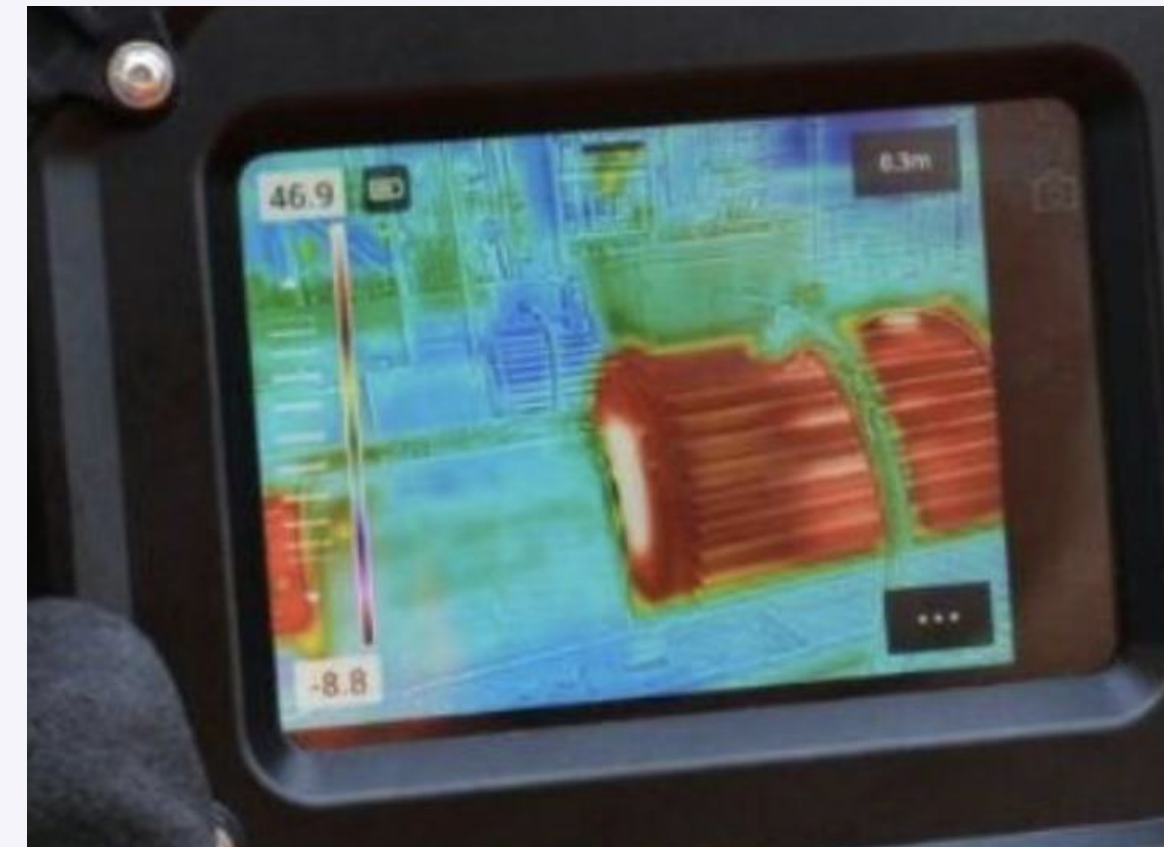
Polarized sensor arrays

Prism cameras

Fruitful AI
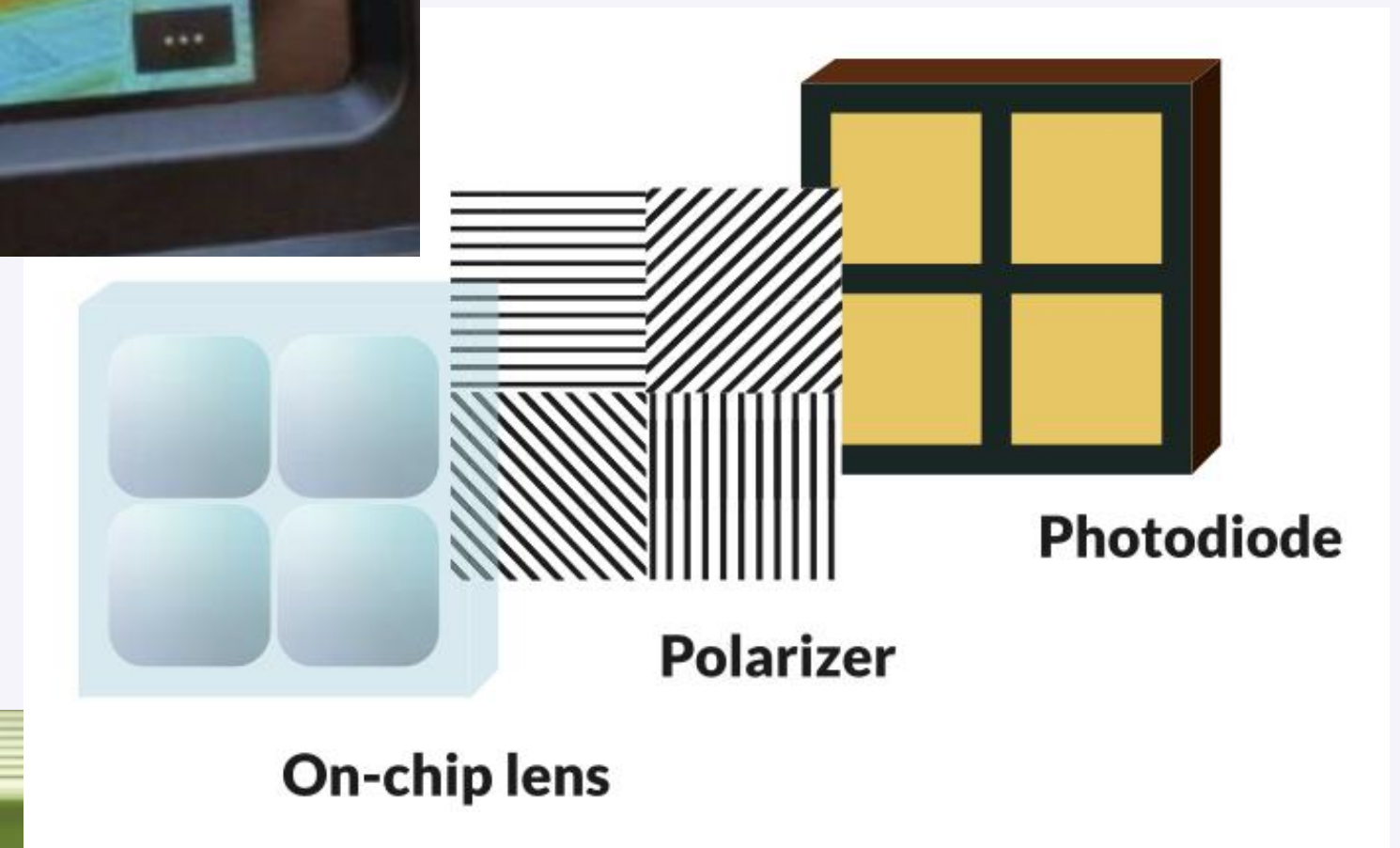
Keeping the right balance
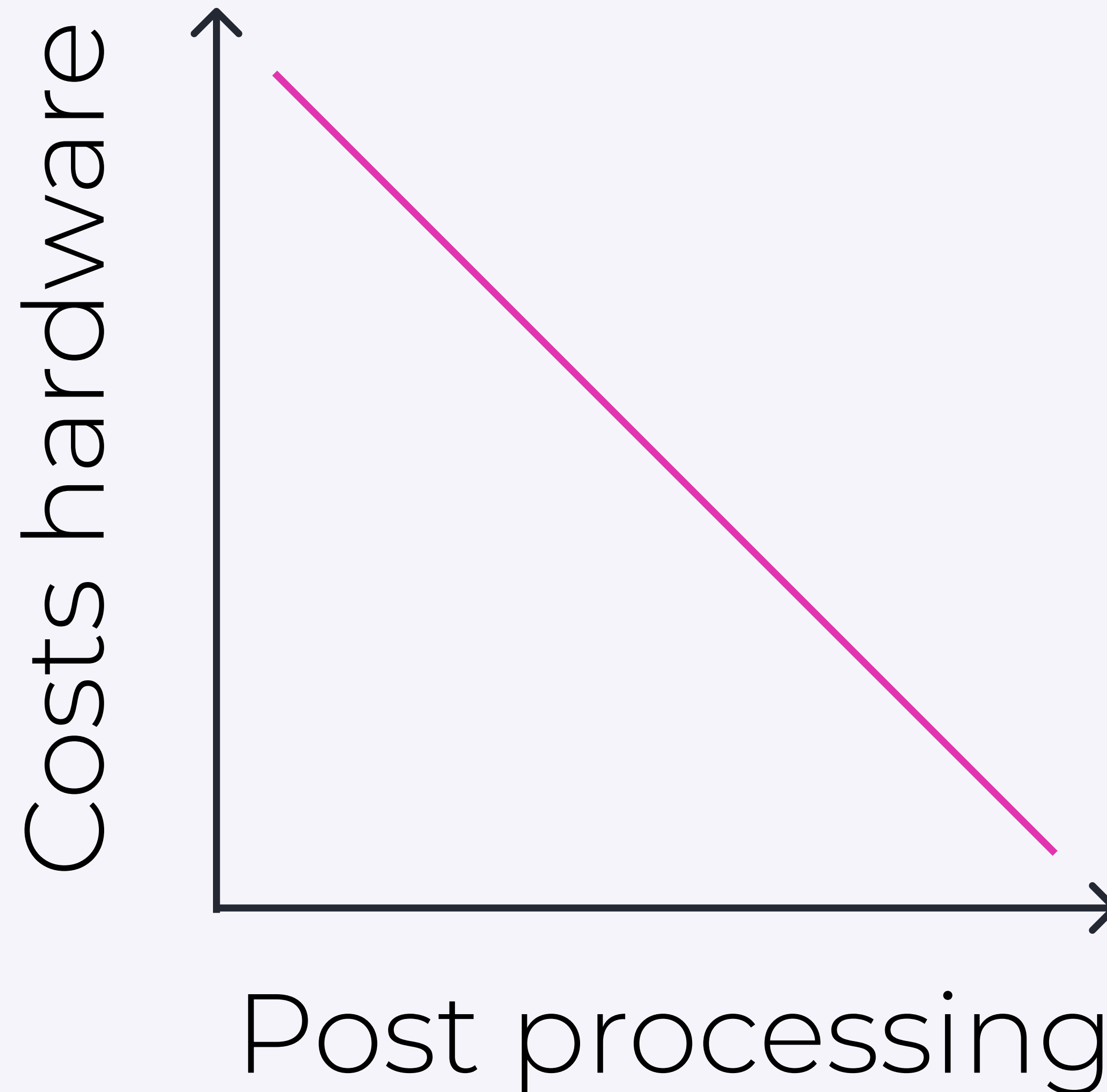
Fruitful AI

Research to production

How to move a specialised and costly hardware setup into a dynamic production environment?

Fruitful AI

Research to production

How to move a specialised and costly hardware setup into a dynamic production environment?

By moving away from static, rigid setups and allowing for **adaptability** and **easy communication** between devices, controllers and encoders.

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Improving communication

```python
try:
    handle =        .generic_camera()
    handle.acquire = True

    while True:
        ptr :        .buffer_ptr = handle.get_raw_data_ptr(sync=True)
        frame = ptr.as_numpy_array(copy=False)
```

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Status quo

Hardware
supplier
& prop. software

→

Industrial
client

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Complex defect detection

Hardware
supplier

&

Software
supplier

$\longrightarrow$

Industrial
client

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What is needed

Dynamic system

Simple communication

Modular technology

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Questions? Reach out

At Fruitful we apply cutting edge technology to make every-day operations simpler and better.

Patrick Albrecht
Co-founder and CEO

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