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High Tech
Global Challenges,
Smart Solutions
Let's talk about
CIRCULAR ECONOMY
IN HIGH TECH
NETWORKING EVENT 2026

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Holland
High Tech

Global Challenges,
Smart Solutions

HANS VAN DER WEIJDE

DIRECTOR STRATEGY, TATA STEEL
PROGRAMME COUNCIL MEMBER | HOLLAND HIGH TECH

PROGRAMME

- **Circular Economy**
  Hans van der Weijde, Director Strategy, Programmes and external Collaborations, Tata Steel & Programme council member, Holland High Tech
- **Cases in Circular Economy**
  Tim Maaskant, Project Manager Manufacturing Services & Logistic Automation, Prodrive Technologies & Esther Kersten, Founder and CEO, ImpactX & Board member, Holland High Tech
- **Panel discussion**
  Based on questions from the audience
- **Round-up**

Holland High Tech

Holland High Tech is the Sector High Tech Systems and Materials (HTSM). We offer structural solutions to societal challenges and create economic growth. Teams of experts develop (key) enabling technologies focussed on the National Technology Strategy. Our overall aim is to stimulate impact in international innovation via public-private partnerships.

INNOVATION DOMAINS

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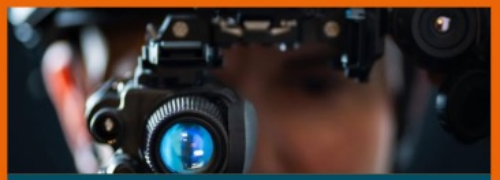
CIRCULAR
ECONOMY

ENERGY
MATERIALS

HIGHTECH
SECURITY



IMAGING
TECHNOLOGIES

MECHATRONICS
& OPTOMECHATRONICS

OPTICAL SYSTEMS
& INTEGRATED PHOTONICS

QUANTUM
TECHNOLOGIES

SEMICONDUCTOR
TECHNOLOGIES

SMART
INDUSTRY

SUSTAINABLE
MOBILITY

SYSTEMS
ENGINEERING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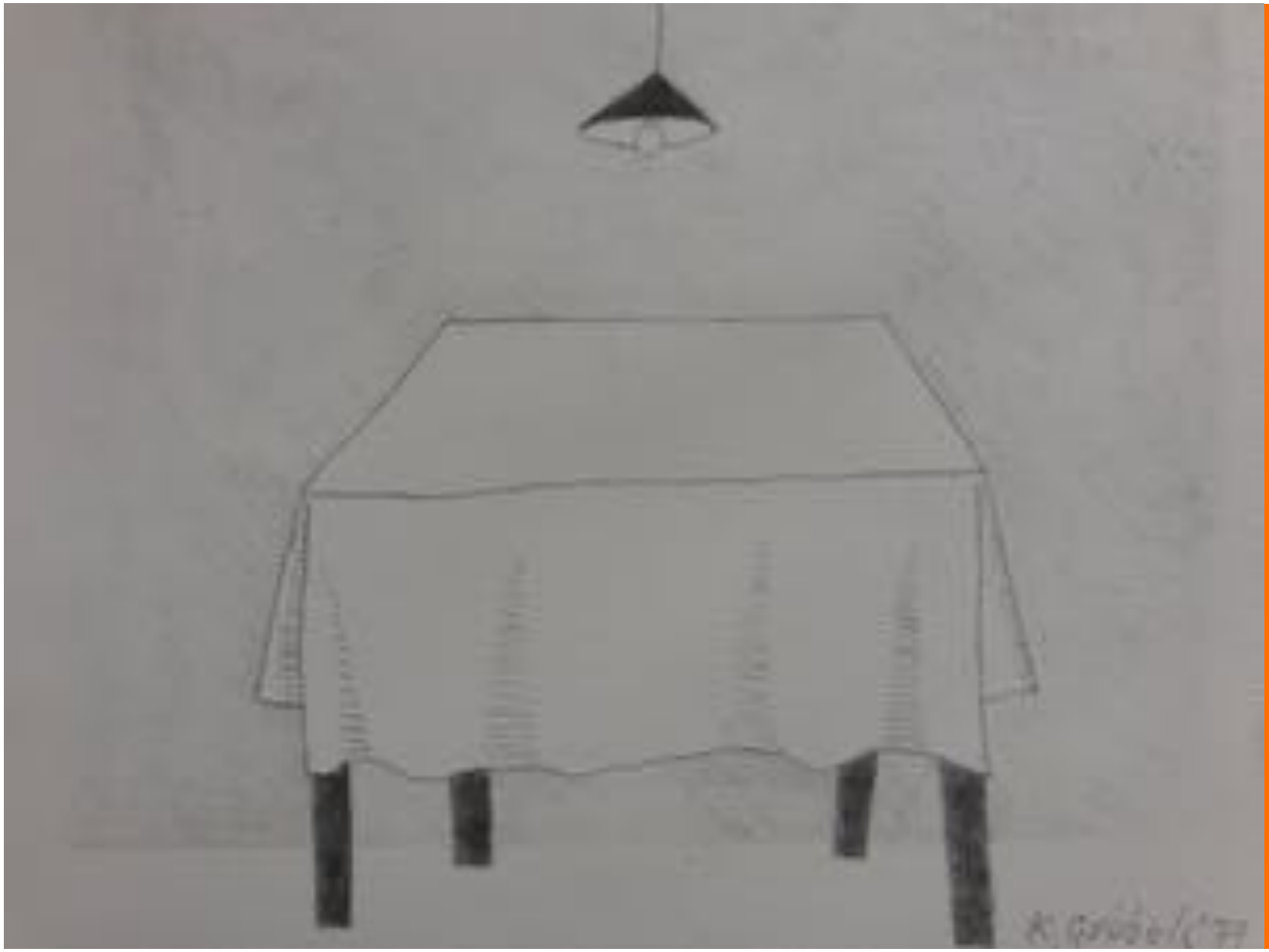

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Prodrive Technologies – Case

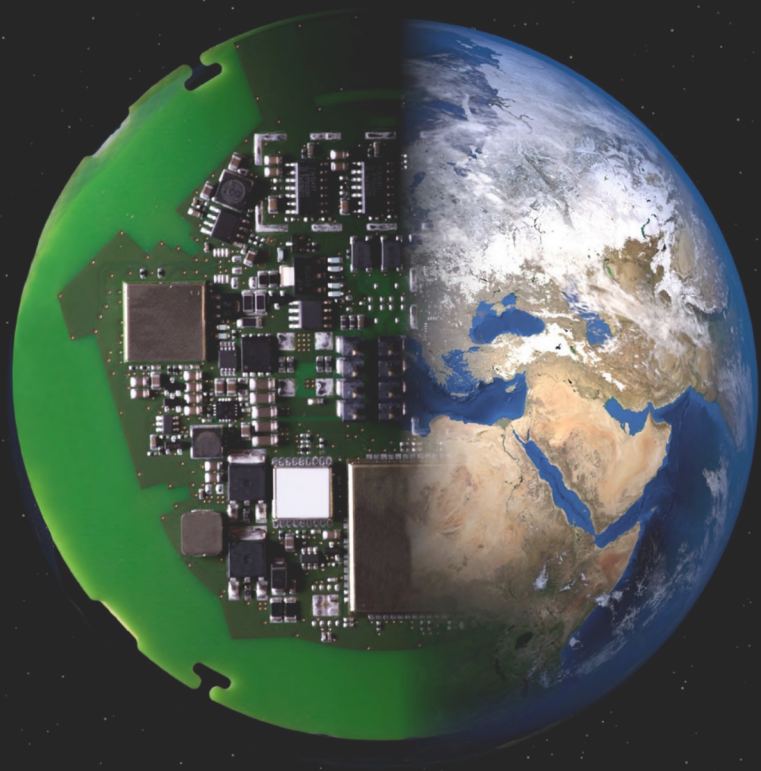
Holland High Tech
Network event 2026 | June 17th

Reference:

Date: 2026-06-10

Author(s): Tim Maaskant, Joana Moreira

Distribution:

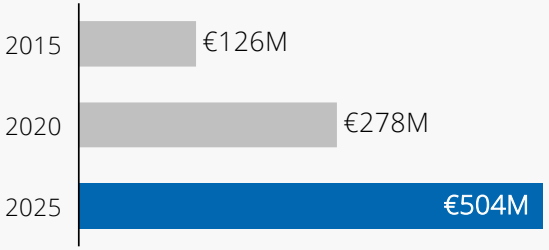


R- strategies

Prodrive has a 30+ year track record of developing mission-critical products for top-tier customers pioneering in their markets

Dutch based organically grown

- Founded in 1993 and privately Dutch owned
- ~2100 FTE employed globally
- Target to grow >€1B revenue in next 3-5 years
- 4 manufacturing facilities globally



...through different business models

TECHNOLOGY SOLUTIONS

Design & manufacturing based on dedicated customer requirements

MANUFACTURING SERVICES

Contract manufacturing based on customer Technical Product Documentation (TPD)

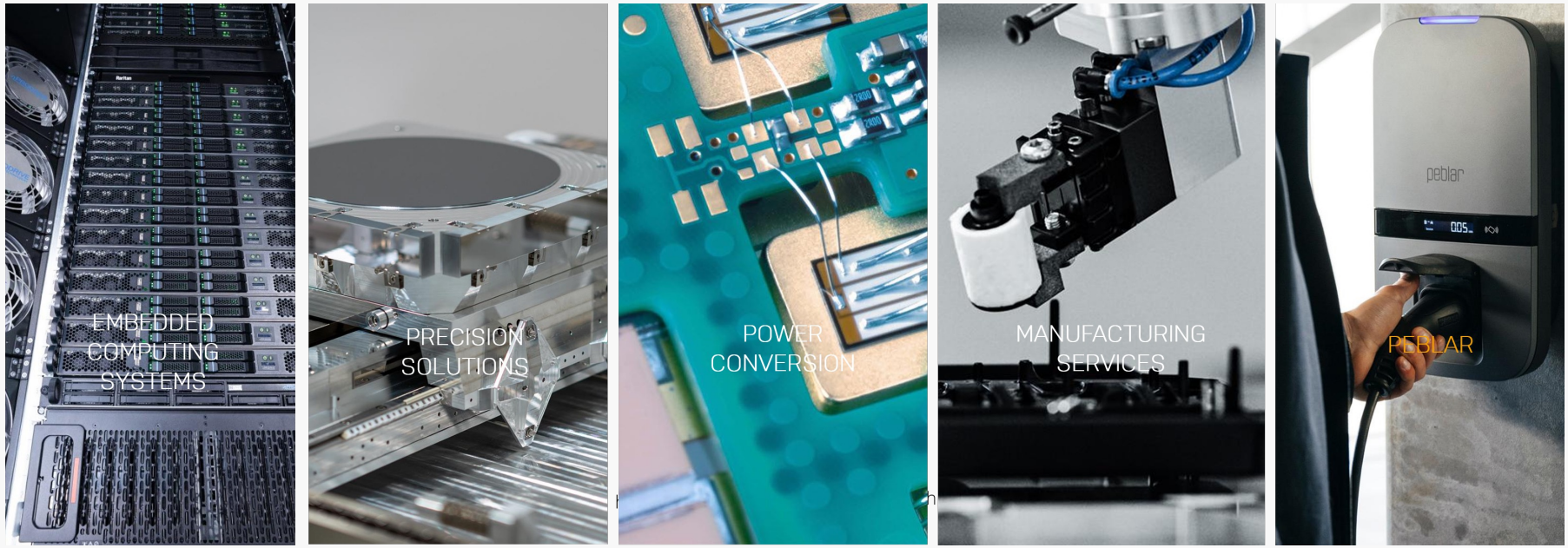
OFF-THE-SHELF PRODUCTS

Prodrive standardized design and manufacturing

...by focusing on key markets

Why circular growth is difficult to scale?

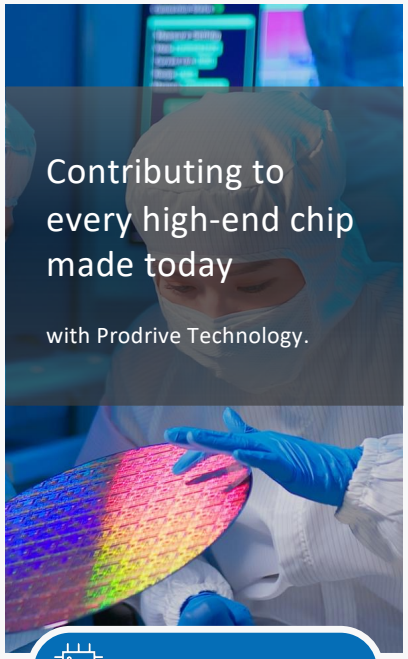
SEMICONDUCTOR	MEDICAL & LIFE SCIENCE	ENERGY & INFRASTRUCTURE	INDUSTRIAL	MOBILITY SOLUTIONS
Material criticality	**Guaranteed lifecycle safety**	**System integration complexity**	**Scalable complexity**	**Rapid innovation cycles**



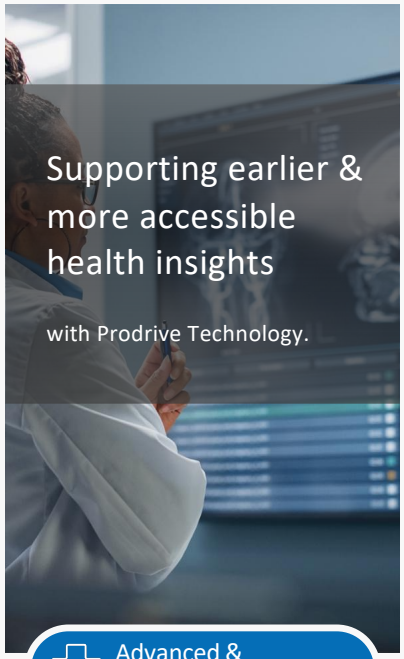
Across industries, different challenges lead to the same barrier: limited scalability of circular models

Global technology megatrends that we accelerate

Megatrends are accelerating the need for circular models



Drives need for modular design



Requires standardize approach

Drives need for material reuse and recovery

Requires upgrade, reuse, and lifecycle extension

Drives need for lifecycle control

Prodrive and partners: mutual growth through collaboration

Remanufacturing is about learning from past experiences

01. Opportunity exploration

As the process grows, new opportunities open up

02. Process alignment

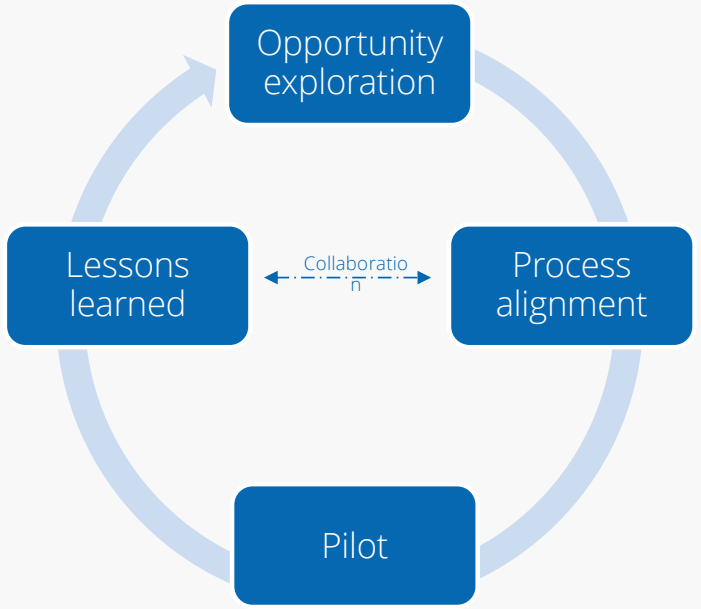
Processes are discussed and adjusted to fit case-specific needs

03. Piloting

Each case is treated as a pilot, gathering input from all involved competences

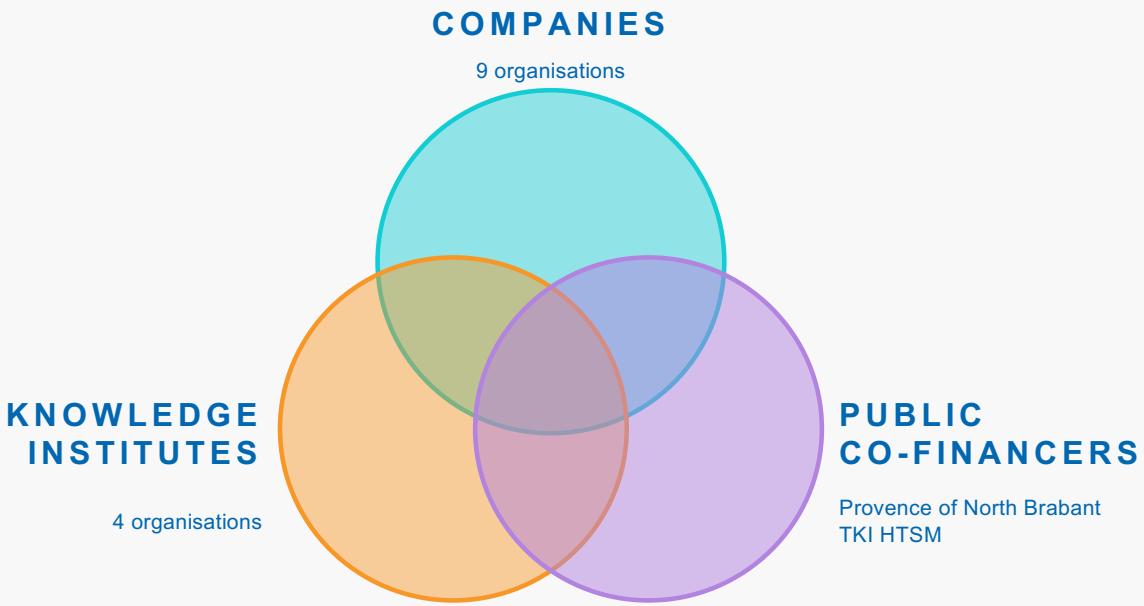
04. Lessons learned

Lessons learned are shared and discussed, improving the process from A to Z



The collaboration, transparency and trust between Prodrive and Partners improves process growth, enabling more opportunities.

Collaboration on the next level – Circular Business Program Semicon



Business models

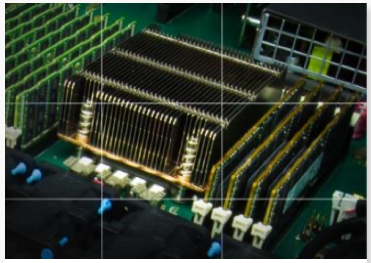
Data modeling

Physical triage

Individual follow-up

Business models

Who is responsible for what , and why would we prefer r-strategies over new buys?



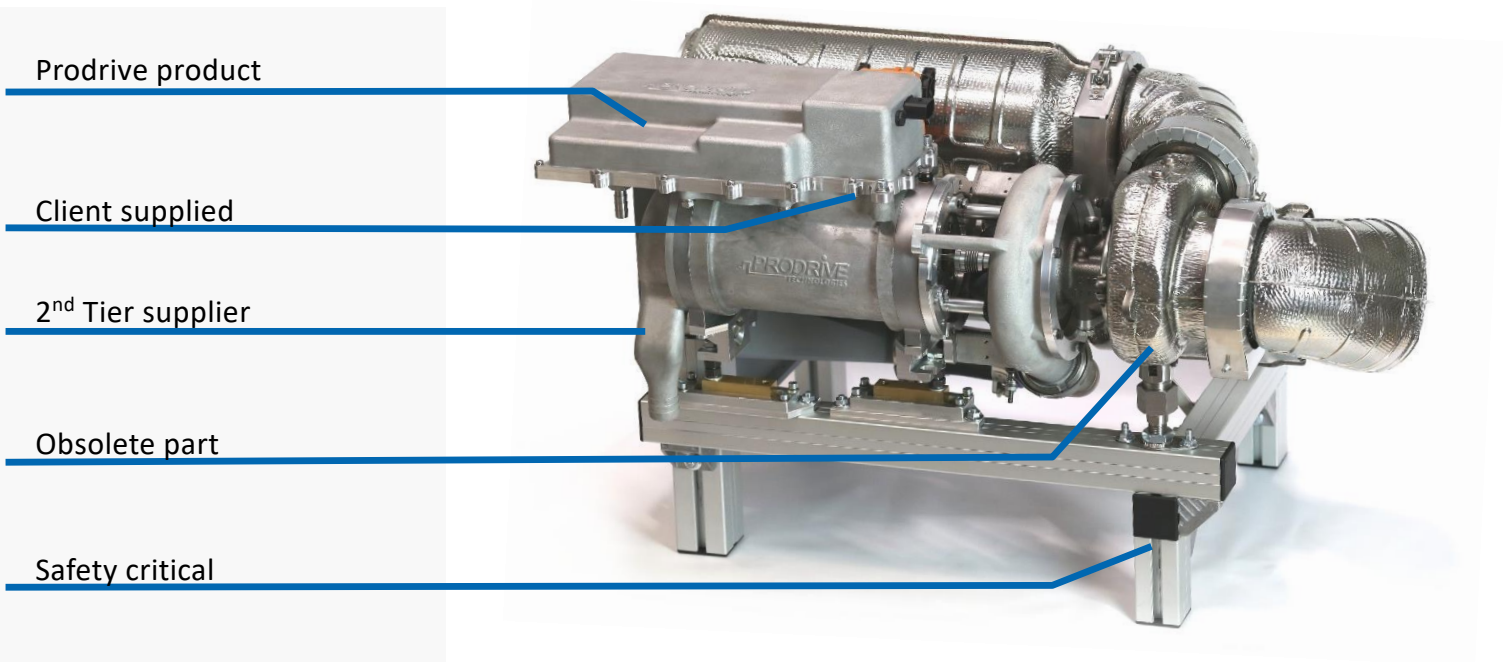
Product status and ownership

Margins and costs

Quality and warranty

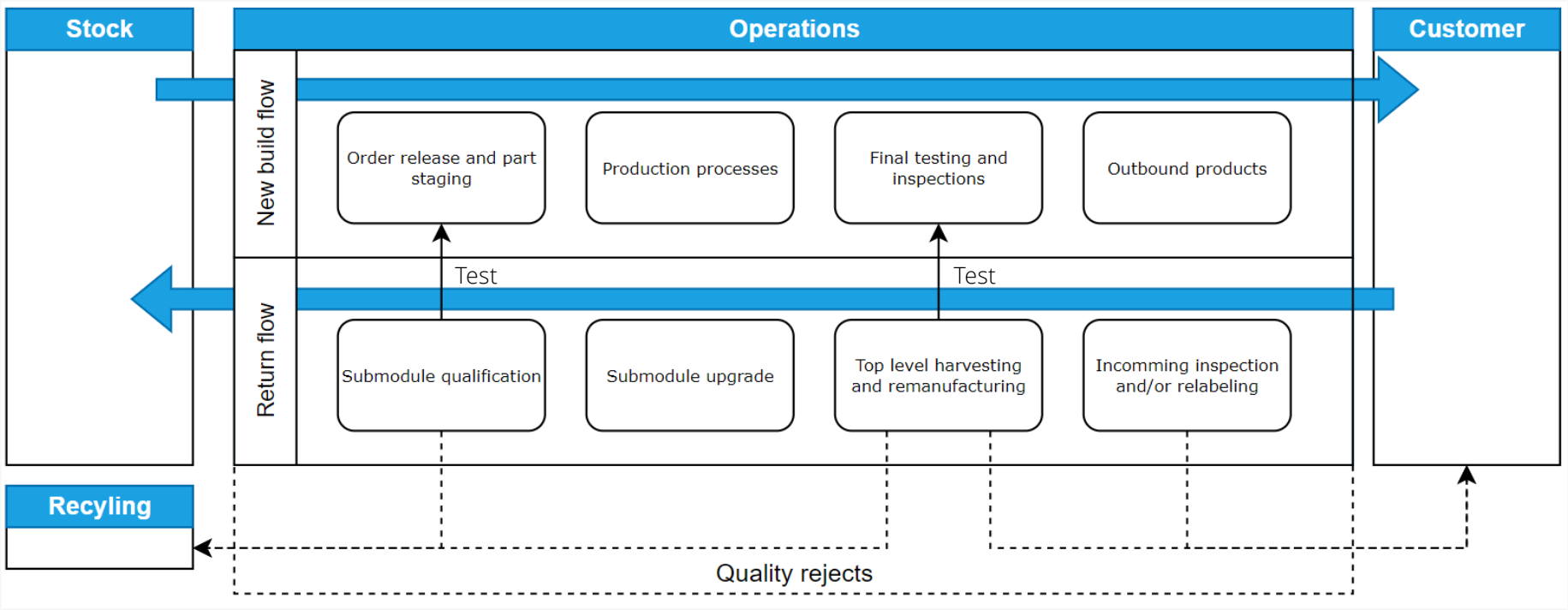
Safety and liability

Data modeling and Physical triage



Would you buy back this product?

Individual follow-up

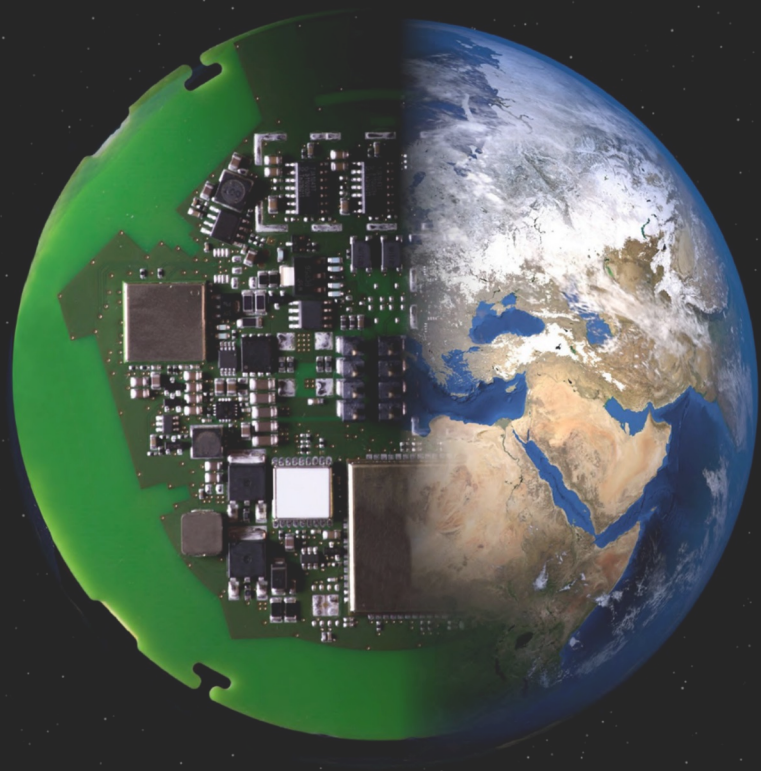


Prodrive and R-strategies

Collaborate

Do

Improve



PRODRIVE TECHNOLOGIES

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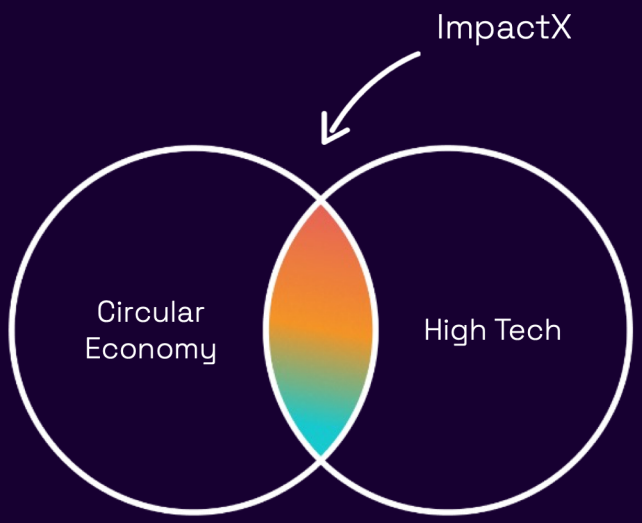
CIRCULAR INNOVATION IN HIGH-TECH

CASES – CIRCULAR INNOVATION PROGRAM

Esther Kersten, CEO
IMPACT X

IMPACTX MISSION



We're impact builders

On a mission to drive circular business in the high-tech sector towards industrial scale

KNOWLEDGE

We empower people by providing the right knowledge at the right time.

VALUE CHAIN

We help companies in the value chain to co-innovate and scale their circular activities.

ECOSYSTEM

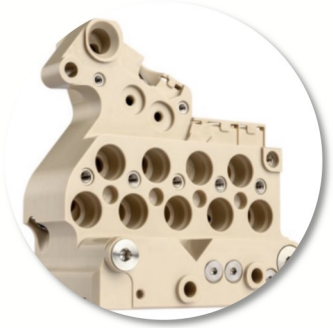
We grow learning and collaboration networks to accelerate circularity in the high-tech industries.

BKB PRECISION x VINK

PROOF OF CONCEPT ON USING RECYCLED PEEK FOR HIGH-TECH PRODUCT

BKB precision and VINK teamed up for a transition from virgin PEEK to recycled PEEK in ASML machines through a closed-loop recycling system. The potential impact is to reduce CO_2 emissions by 5.9% and minimize production waste of PEEK.

From virgin material



To non-virgin material from a closed loop

- ✓ Testing recycled PEEK as a viable alternative.
- ✓ Develop return flow for material collection.
- ✓ Scaling pilot through further validation.

FROM (RESIDUAL) METAL TO RAW MATERIAL FOR ADDITIVE MANUFACTURING

High-value alloys used in AM are expensive, scarce, and reliant on centralized recycling and global supply chains. Current metal waste is underutilized or discarded.

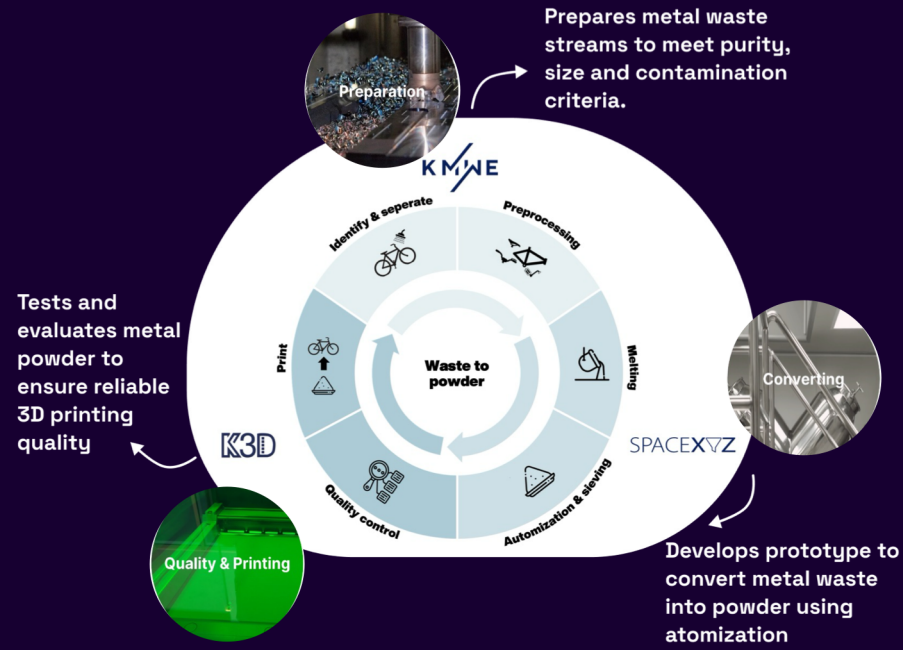
The initiative has moved from concept to prototype.

Together, the chain has co-created the impact on:

- Lower material costs and CO_2 footprint, supporting sustainable manufacturing
- Strengthens supply chain resilience through localized feedstock
- Cuts waste & efficiently recovers (critical) metals by 90%

Circular Chain Project:

- ✓ Formed a circular consortium with a signed Letter of Intent to scale the initiative
- ✓ Concept ready and execution plan set - focusing on creating a unique new value proposition
- ✓ Defined a 3-year roadmap



ROYAL meilink | Securing Value

PROTOTYPE A SUSTAINABLE DESIGN FOR HIGH-VOLUME SINGLE-USE CRATES

By providing a sustainable (lighter, cheaper, more compact, and recyclable) packaging design for high-volume single-use crate, Meilink demonstrated a significant yearly reduction in CO2 (~27%), waste (~23%) and costs compared to the current design.

From single-use & non-recyclable packaging

To sustainable-designed packaging

- ✓ Green recyclable materials
- ✓ Technical feasibility
- ✓ Valid business case

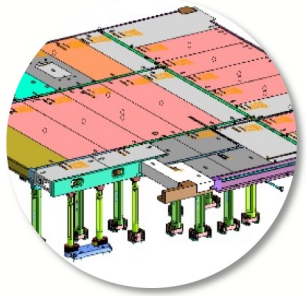
PROOF OF CONCEPT ON REUSING AUXILIARY & PACKAGING RETURN PARTS FOR NEW BUILDS

From concepts for Reuse to actual operational product return flows to be used in new builds auxiliary & transport tooling, Wilvo demonstrated waste reductions (~27T) and capturing value (~430K); achieving a reuse value of 1.4 million per year at scale.

From wasting value

To capturing value

- ✓ Identified desired reuse products
- ✓ Piloted new process including ERP system
- ✓ Actions for optimisation & scaling



THANK YOU

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THANK YOU

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IGNITE INNOVATION

ACCELERATING DUTCH HIGH TECH

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