



Financing the Circular Economy in Flanders



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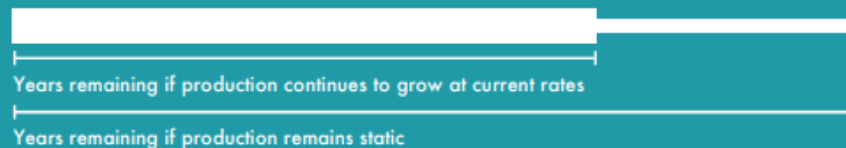
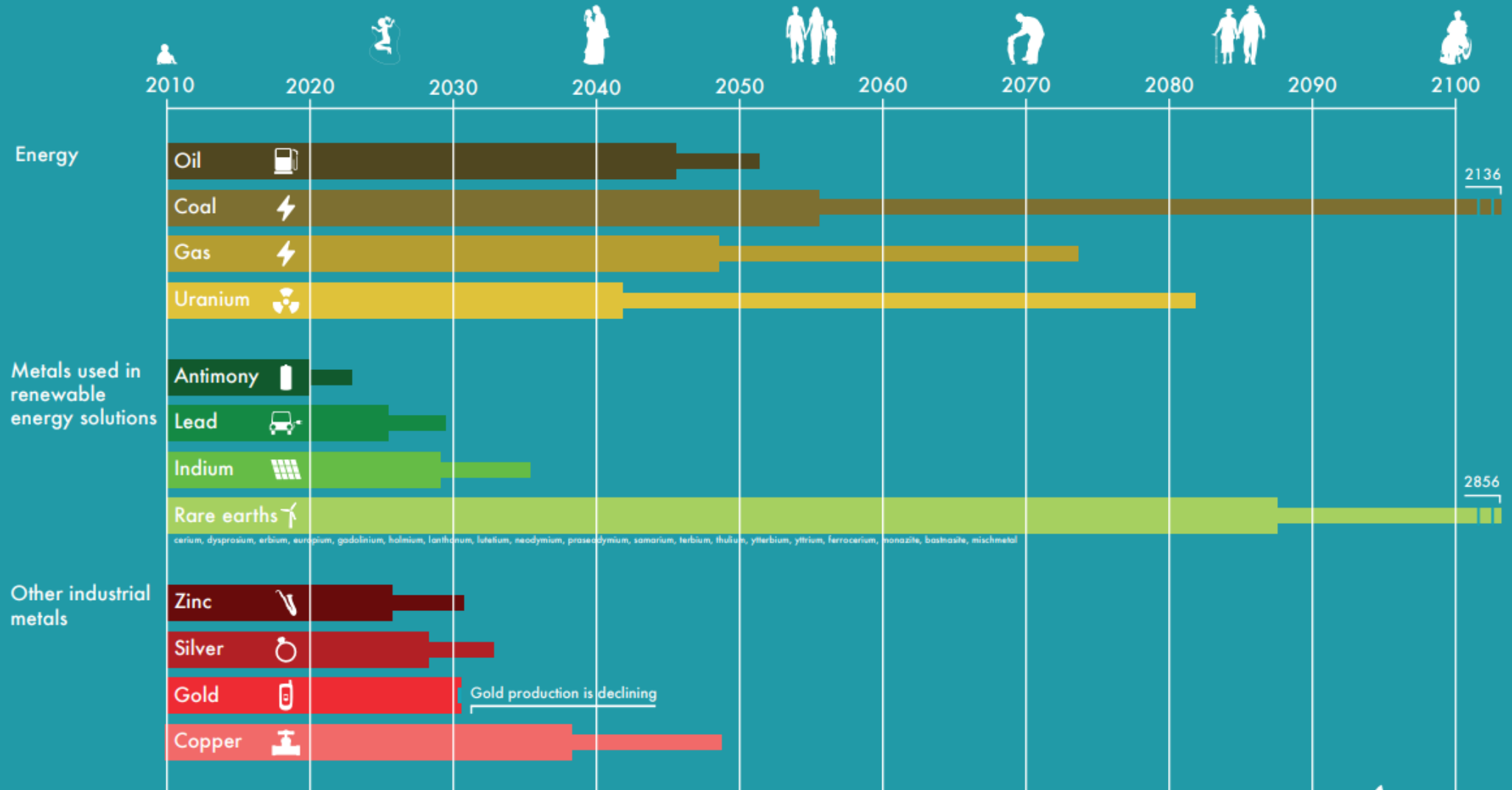


Steven Peleman

CEO, Triple Helix



Born in 2010: How much is left for me?



Calculations based on known reserves:

Reserves

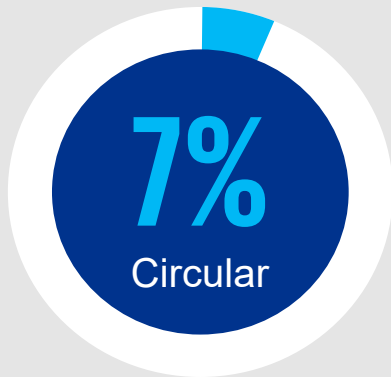
Resources (undiscovered)

Resource base (to energy intensive to extract)

Sources: US Geological Survey, Adroit Resources, World Bureau of Metal Statistics, International Copper Study Group, World Gold Council, Mincometals.com, Riskfi Nickel Report, Cordell et al (2009), Seal (2000), Silver Institute, World Nuclear Association, International Lead and Zinc Study Group, Wikipedia. Source (fossil fuels): BP Statistical Review of World Energy 2010.

The linear economy is hitting planetary boundaries

Today the world
is only



93% of materials flow
through the economy only
once

The circular economy directly addresses the planetary pressures created by our linear take-make-waste system by:



Combatting Climate Change

While the energy transition can address **55%** of global GHG emissions, the remaining **45%** comes from how we make, use, and discard products.



Addressing resource scarcity and geopolitical tensions

Global material extraction has **tripled** in 50 years and now exceeds **100 billion tonnes** annually. Yet only around **20%** of globally extracted materials are reused or recycled, while the rest becomes waste.



Countering biodiversity loss

More than **90%** of biodiversity loss is linked to the extraction and processing of natural resources.



Creating social & economic opportunities

The circular economy can unlock **€600B** in annual savings, create **2 million EU jobs**, and generate **+€1.8Md** additional EU growth potential by 2030.

Going circular can mitigate risks & leverage opportunities at micro level too

For businesses linear risks are imminent and can materialise in various forms, such as:

Market risks

e.g. scarcity of raw materials due to increasing demand and limited supply, which results in price volatility



Business risks

e.g. changing customer demands where there is an increased attention on waste generation and sustainability



Operational risks

e.g. supply chain failures which threaten the internal operations of the company



Legal risks

e.g. failure to comply with increasing regulations on circularity and sustainability



These linear risks can arise in the full value chain. After all, circularity is a value-chain effort:



Raw materials sourcing



Manufacturing



Usage by clients



End-of-life treatment/ recovery

A circular approach helps companies reduce their exposure to linear risks and capture new strategic opportunities:



Lower material dependency & price volatility



New revenue streams & stronger customer alignment



More resilient & efficient supply chains

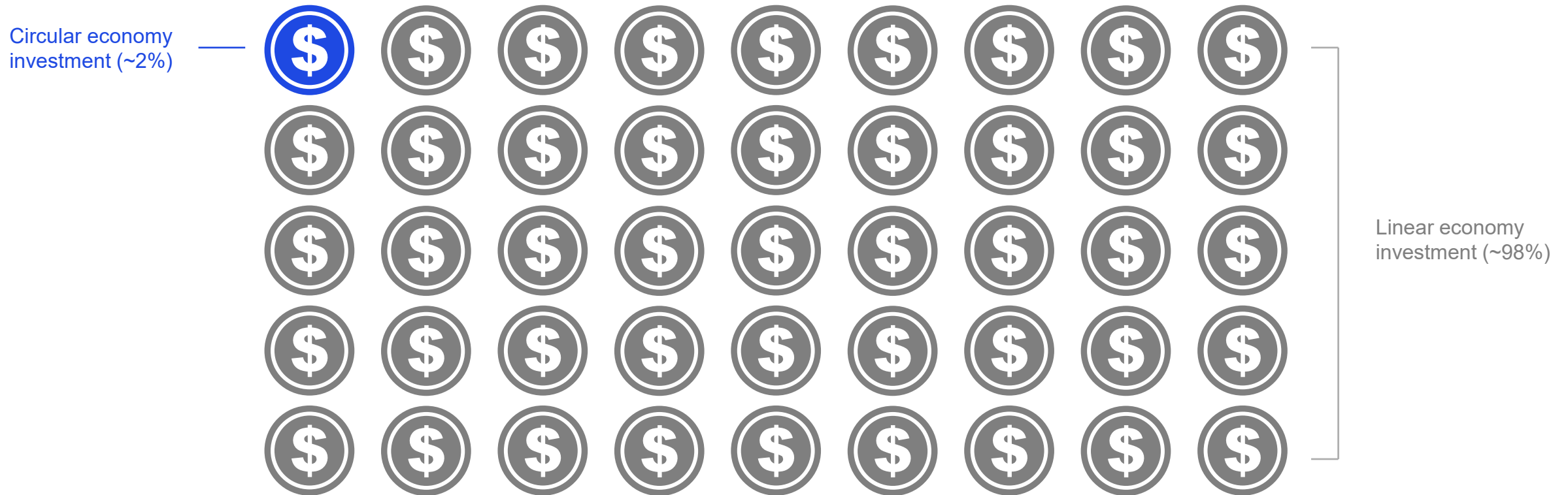


Better compliance & reduced regulatory exposure

**... But despite clear benefits, investments in
circular economy ventures remain low**

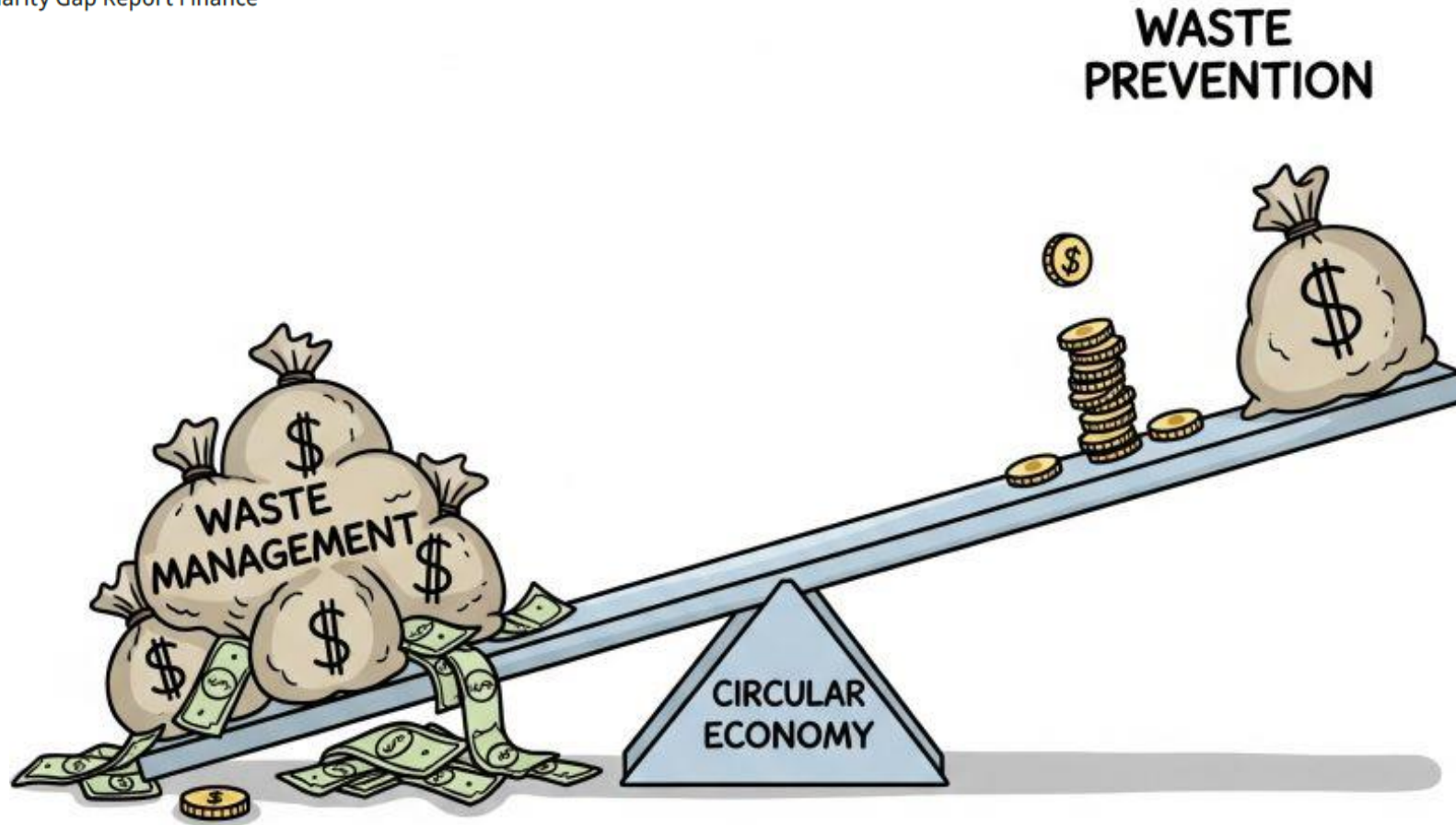
Only ~2% of total global investments goes to circular economy businesses

 The Circularity Gap Report Finance



A large share of funding goes to conventional, “business-as-usual” recovery-based models

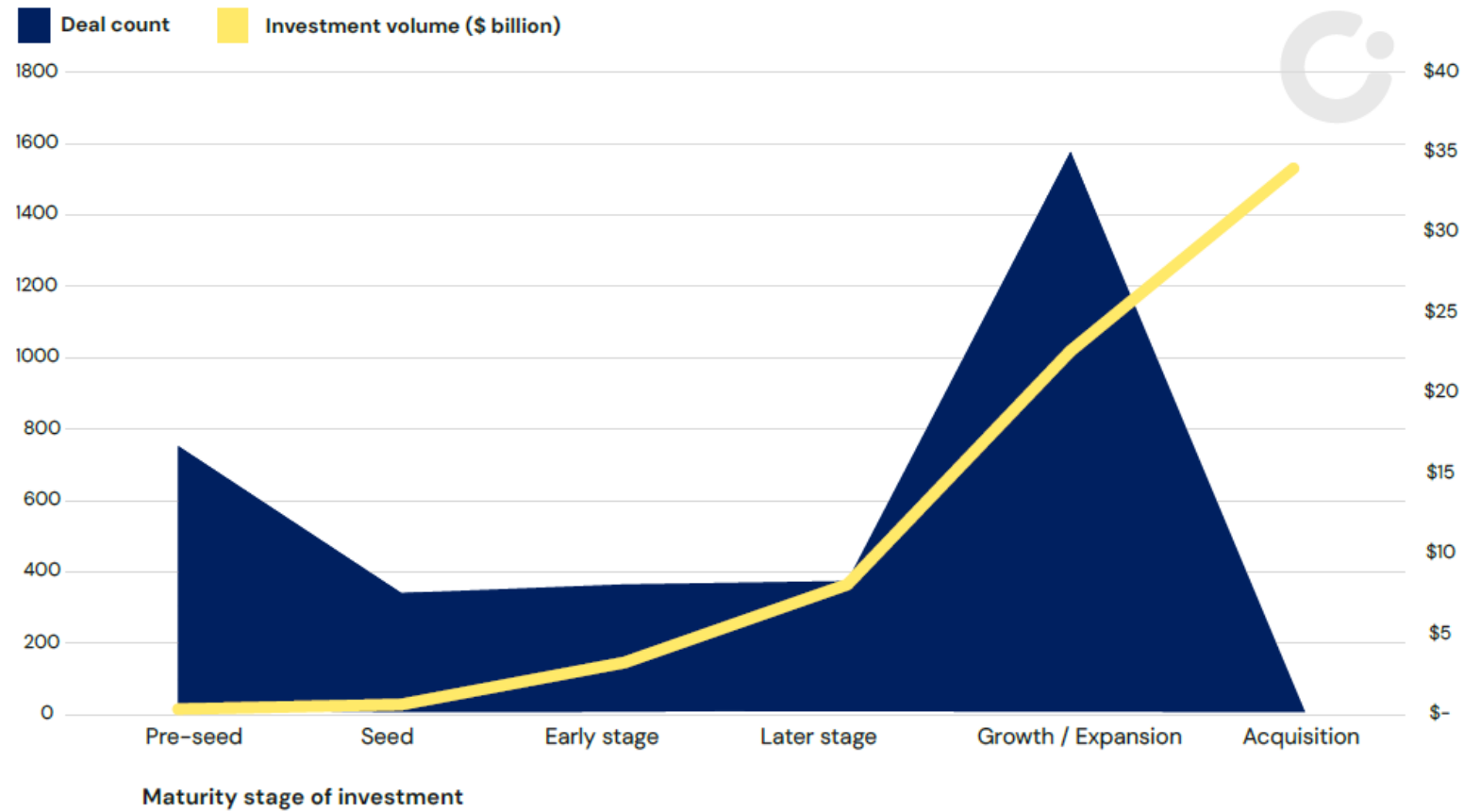
 The Circularity Gap Report Finance



Source: Sreepriya Sridharan (LinkedIn)

Early-stage, high-impact circular innovations face a deep “valley of death”

 The Circularity Gap Report Finance



... So why are circular economy ventures difficult to finance?

Key barriers that limit financing for circular ventures



1. Misfit with traditional finance logic

- **PaaS** and ownership-retaining models face **higher capital and guarantee requirements**
- **Short-term cashflow** and **return expectations** misalign with longer circular timelines
- Circular products appear costlier because **externalities** are not priced

2. Higher perceived risk & limited track record

- Lack of validated **performance data** for circular business models
- Harder risk scoring due to **unfamiliar models**
- Few comparable cases make **benchmarking** difficult

3. Circular value not captured in risk models

- **Linear risks** (e.g., resource scarcity) not integrated
- **Circular advantages** (e.g., durability, reuse, secondary value) not valued
- Longer **lifetimes** and **resource efficiency** not monetised

4. Regulatory, accounting & knowledge barriers

- VAT, liability and depreciation rules are still **designed around linear product lifecycles**
- **Basel/Solvency** capital requirements reinforce linear assumptions
- Bank front-office **lacks CE expertise**

How do we tackle these challenges in Flanders?



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Transversale beleidsprioriteit Vlaamse regering

VLAANDEREN ALS KOPLOPER IN CIRCULAIRE ECONOMIE

1

ONTKOPPELEN (RELATIEF)

materiaalvoetafdruk ontkoppelen van welvaart

2

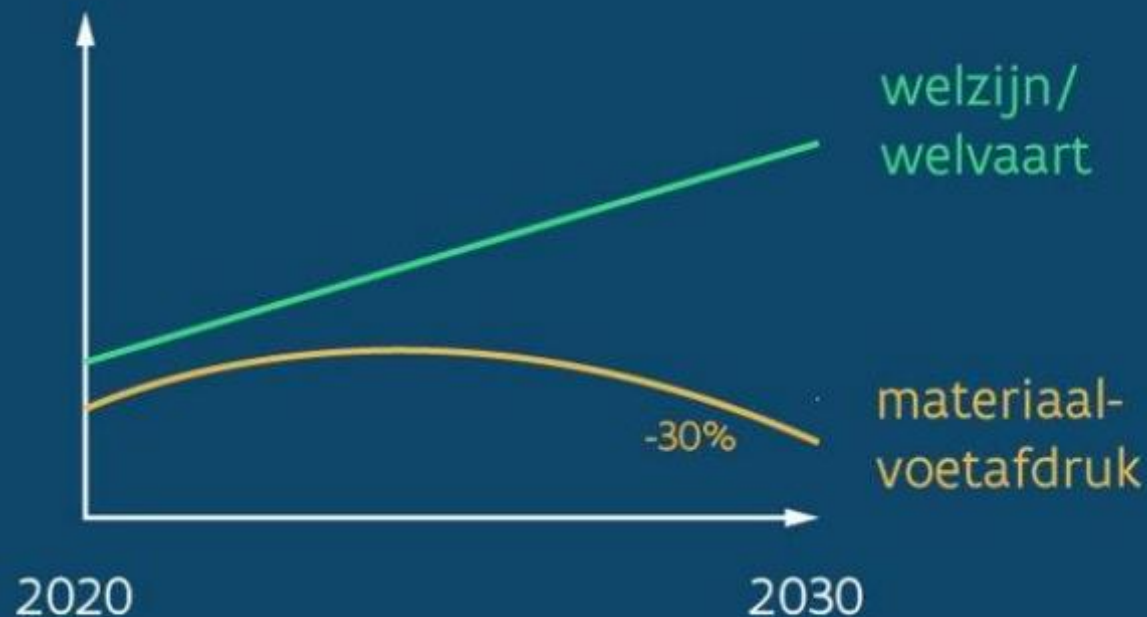
REDUCTIE (ABSOLUUT)

materiaalvoetafdruk -30% tegen 2030

3

EEN PUBLIEK-PRIVAAT PROJECT

dit realiseren in een partnerschap



INHOUDELIJK

Januari 2021: start van de opmaak van de inhoudelijke werkagenda per thema
Eerste helft 2021: inhoudelijke afstemming van en beslissing over de werkagenda's

6 werkagenda's

Publiek-private partnerschappen
met eigen dynamiek, doelen,
trekkers en acties



circulair
bouwen



chemie en
kunststoffen



water-
kringlopen



bio-economie



voedselketen



maakindustrie

Roadmap Circulaire Economie

7 hefboomen

Versnellers om drempels te over-
winnen en goede praktijken
ingang te doen vinden

Beleidsinstrumenten

Lokaal beleid
Vlaams Beleid
Intra-Belgisch Platform
Federaal
Europese agenda

Circulair aankopen

ProCirc
Voorbeeldrol overheid
Innovatieve overheids-
opdrachten

Communicatie

Sensibilisering , co-creatie
Kennisdeling &
best practices
Monitoring, rapportering

Onderzoek

Strategische onder-
zoeksagenda's
Monitor CE
Steunpunt CE-Center

Innoveren & ondernemen

VLAIO-steun & diensten
VC Partnerschap en be-
geleiding
Experimenten, projecten

Financiering

Stimulerings- en investe-
ringsbeleid
Vlaams fonds CE?
rol PMV?

Jobs & vaardigheden

Onderwijs
Starters en bedrijven
Werkgelegenheid/ sociale
economie

samenwerking van
30 organisaties
100 medewerkers

THE LEVER FINANCING

The lever financing aims to remove systemic barriers that limit financing for circular innovation and business models in Flanders by:

- 1 **Strengthening the enabling conditions for circular financing**
- 2 **Supporting the development of circular-proof risk models**
- 3 **Broadening the financing offer for circular business models**
- 4 **Improving knowledge, tools and collaboration between financiers & entrepreneurs**

Co-led by

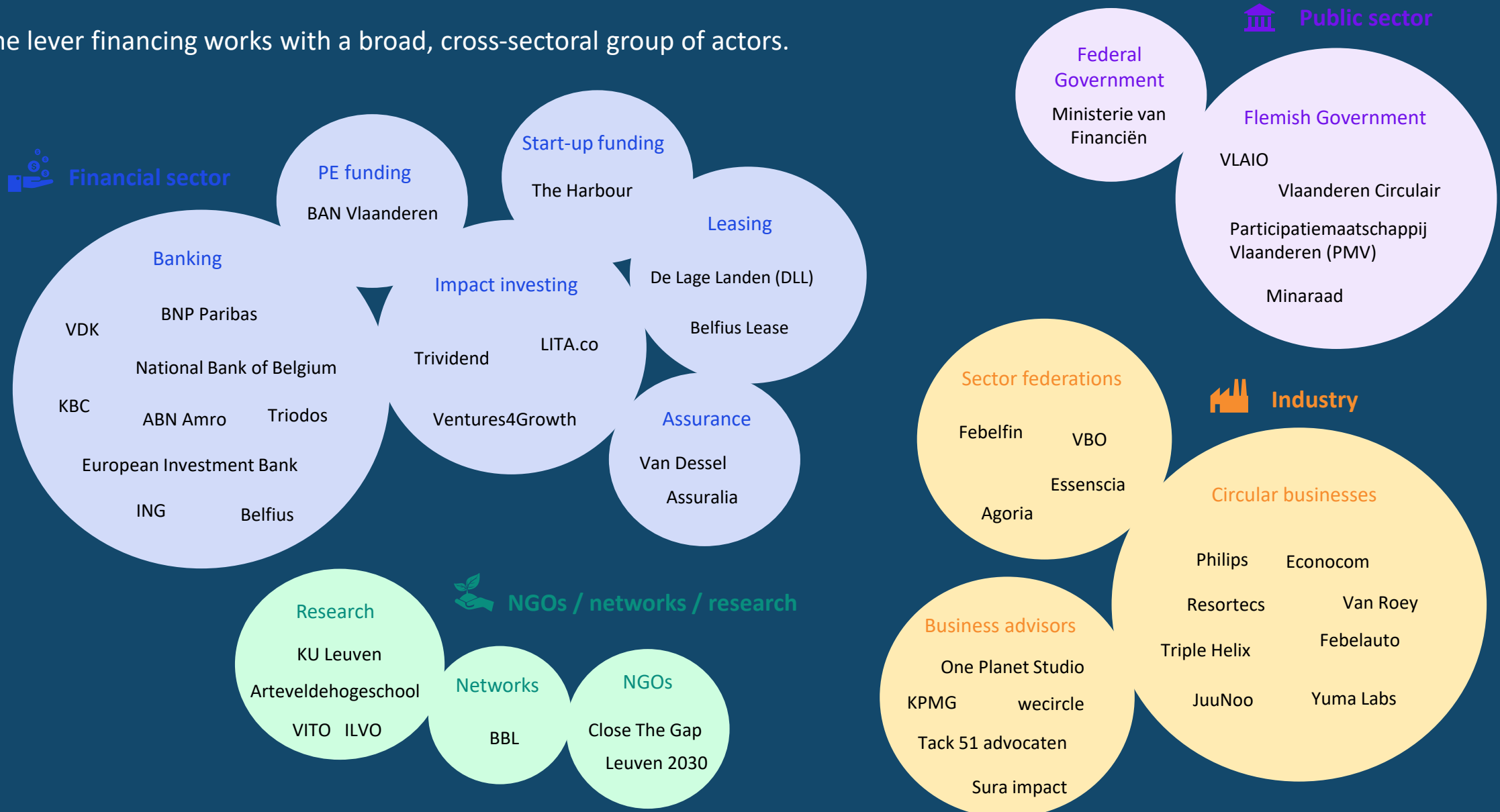


With support of



A WIDE ACTION GROUP

The lever financing works with a broad, cross-sectoral group of actors.



CONCRETE ACHIEVEMENTS

01 TOOLS DEVELOPED

CE Evaluator



Mapping of financing needs & instruments as part of the e-training



02 KNOWLEDGE & CAPACITY BUILDING

E-training on circular economy for the financial sector (launch: January 2026)

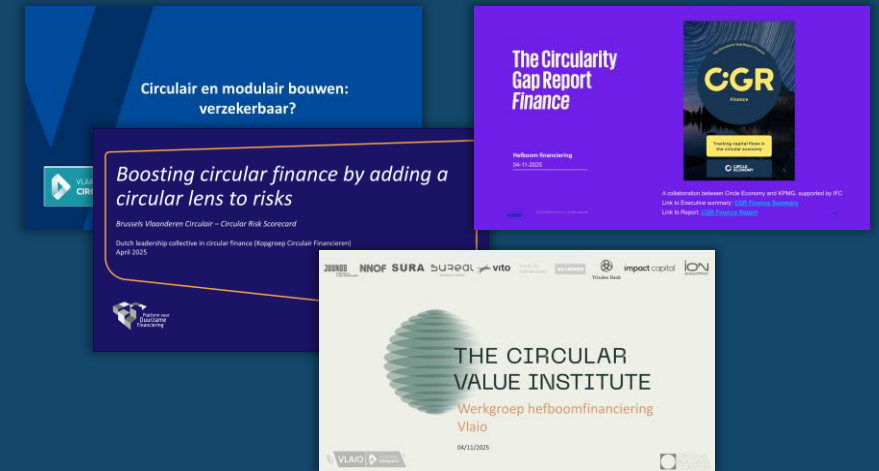


Publications on financing the circular economy



03 COLLABORATION & SYSTEM-BUILDING

Working group sessions to exchange insights



Analysis of concrete circular cases to uncover and tackle financing obstacles



A real case: How Triple Helix tackled financing barriers in practice





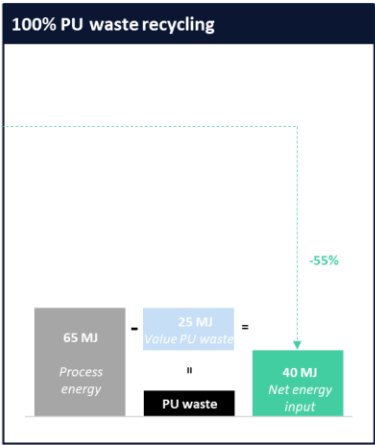
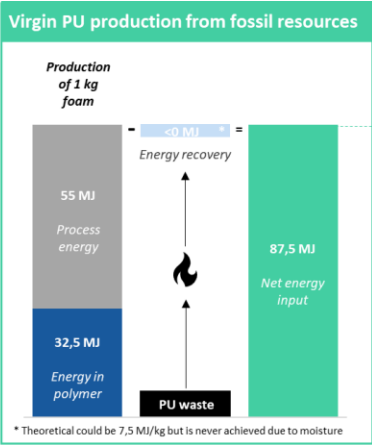
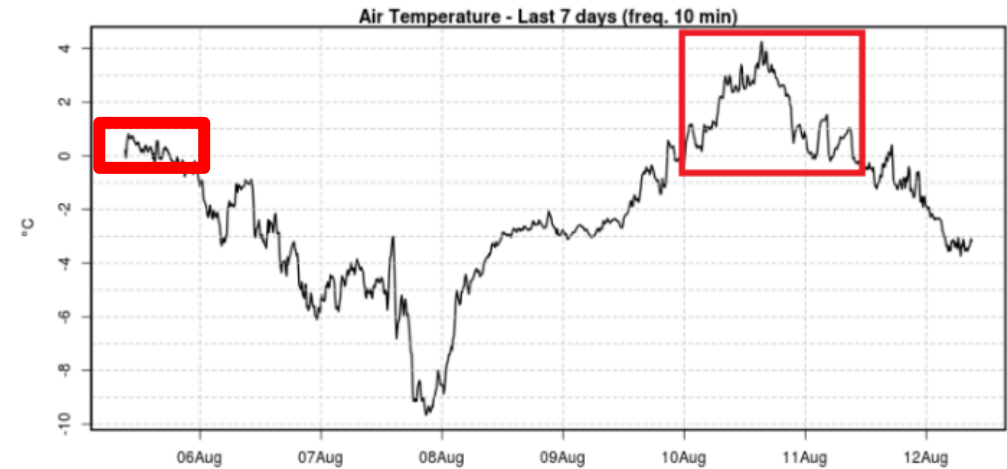
Triple Helix – PU Recycling

November 2025

Funding Circular Projects – Tales from the Grave

Triple Helix – Triple Use 1

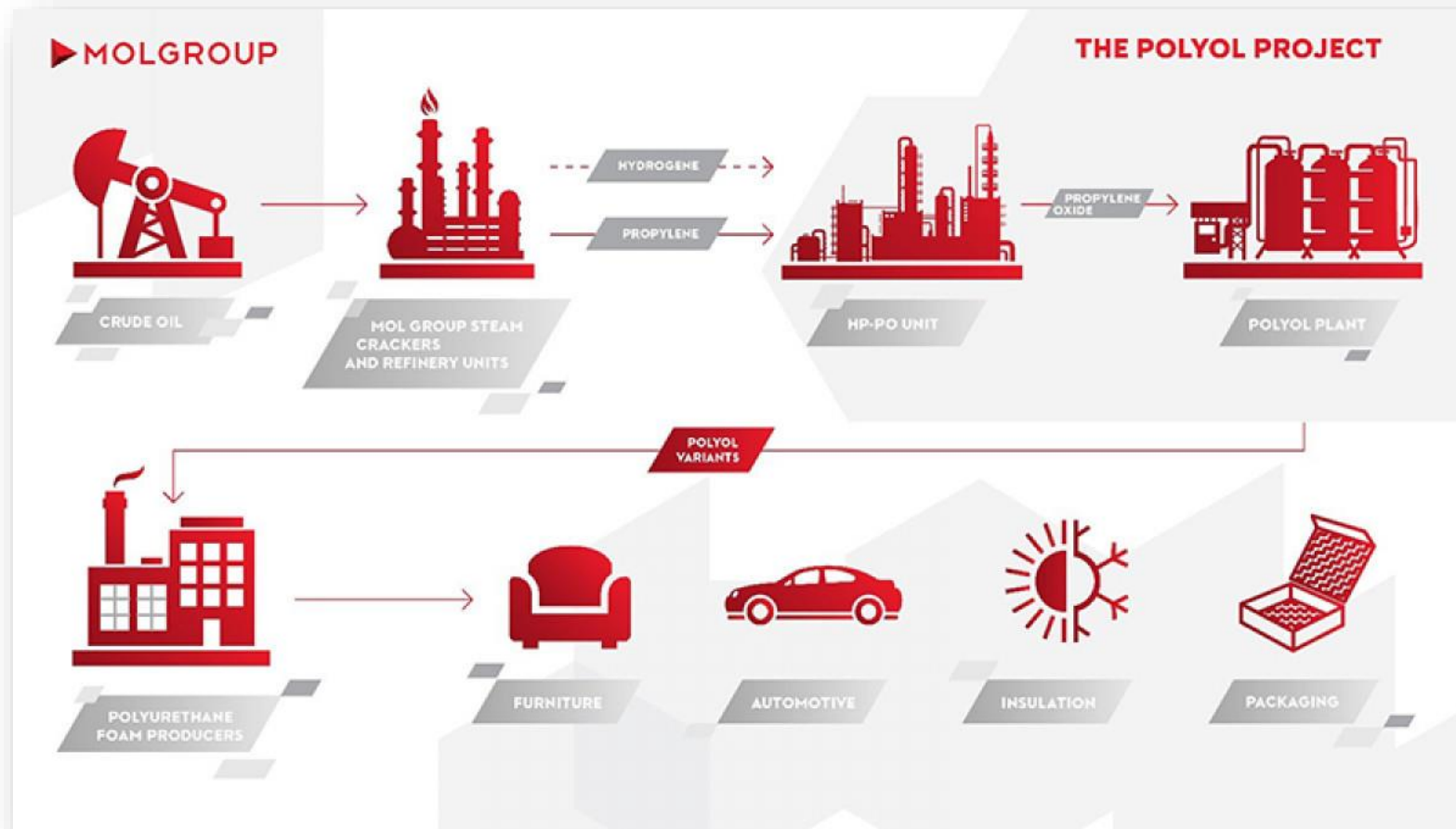
Countering the effects of climate change, but...



- Comparison and conclusions
- Reduction of 55% life cycle energy when recycling
 - Also, recycling represents a reduction of 25% in energy input
 - In addition, incineration of PU is more for sanitization. Thermal energy content of PU is about 1/3 that of other polymers, even less if wet. Waste incineration is inefficient because incinerators are designed to minimize pollution.
 - Finally, the only obstacle is transportation cost and impact, hence our strategy of building a replicable pilot plant treating local waste streams and serving local off-take

Triple Helix – Triple Use 2

Offense is the best defense, but...



Source: Mol Group

Drivers

- **Slow demand in Asia, US and EU**
- **Tariff war** between US and the rest of the world, including China
- **Keep the crackers going...**to produce at (below) variable cost
- Short-term market dynamics **BUT long-term ambitions at play**

Triple Helix – Triple Use 3

Re-industrialization at high returns, but...

Description

The first scenario has a total funding need of €85M to be able to finance a building and two recycling lines, spread out over time to reach full capacity in 2031

- ✓ Strong exit value
- ✓ Strategic project
- ✓ Repayment capacity
- ✓ Unique technology

Project scope

The project CAPEX scope of the first scenario consists of

- 1x Building for operations 2027
- 1x Split-Phase flex recycling line 2028
- 1x Split-Phase flex/rigid recycling line 2029

Specifics

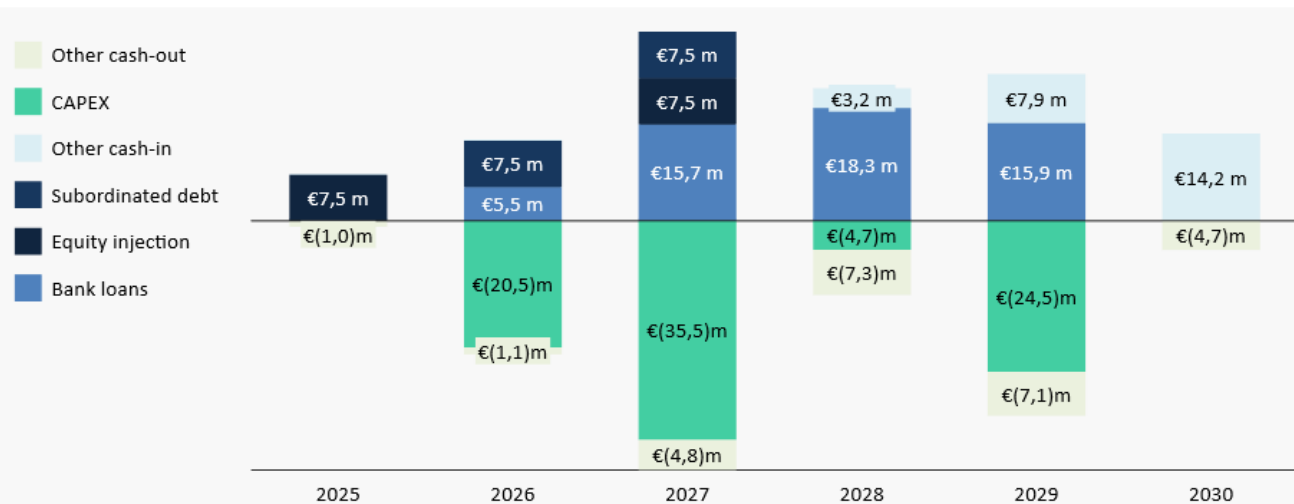
€ 85M total scenario 1 CAPEX

€ 30M equity financing

€ 55M bank financing

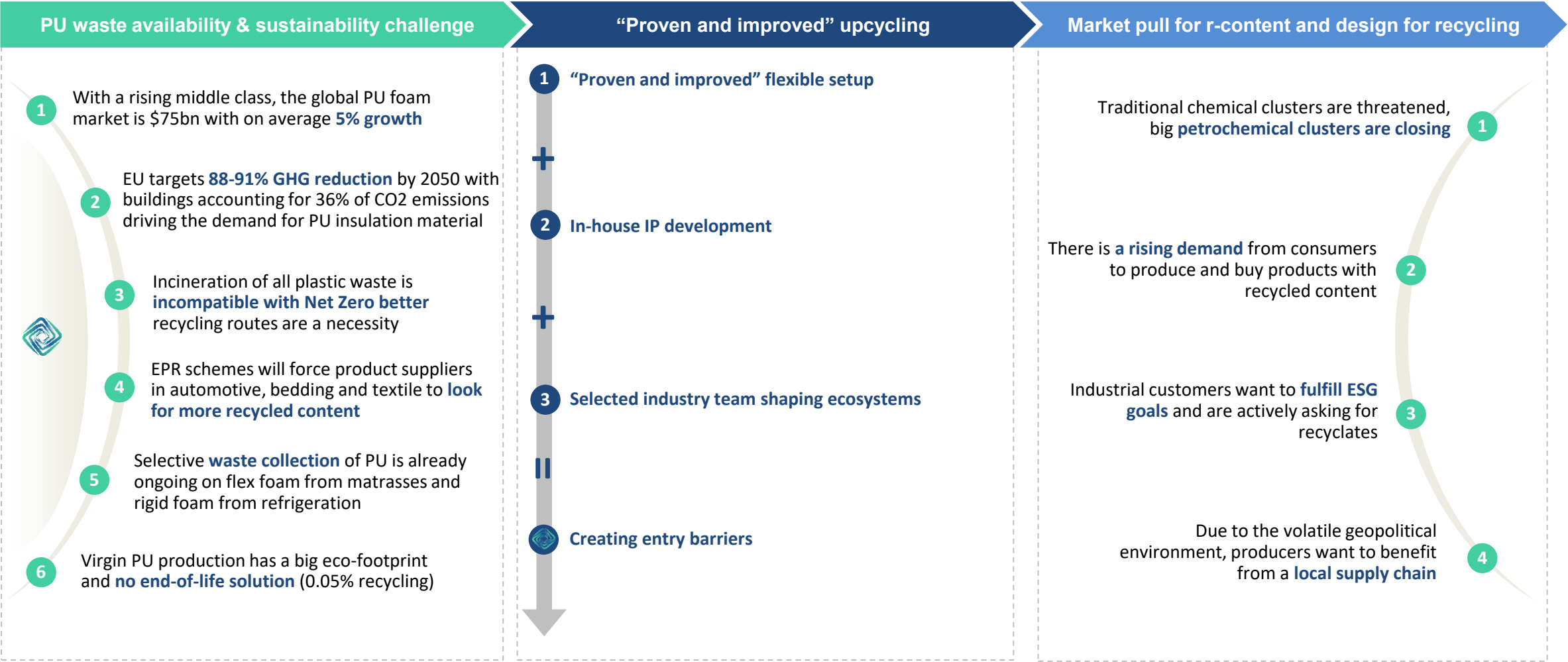
€ 24M sustainable EBITDA

65% avg leasing %



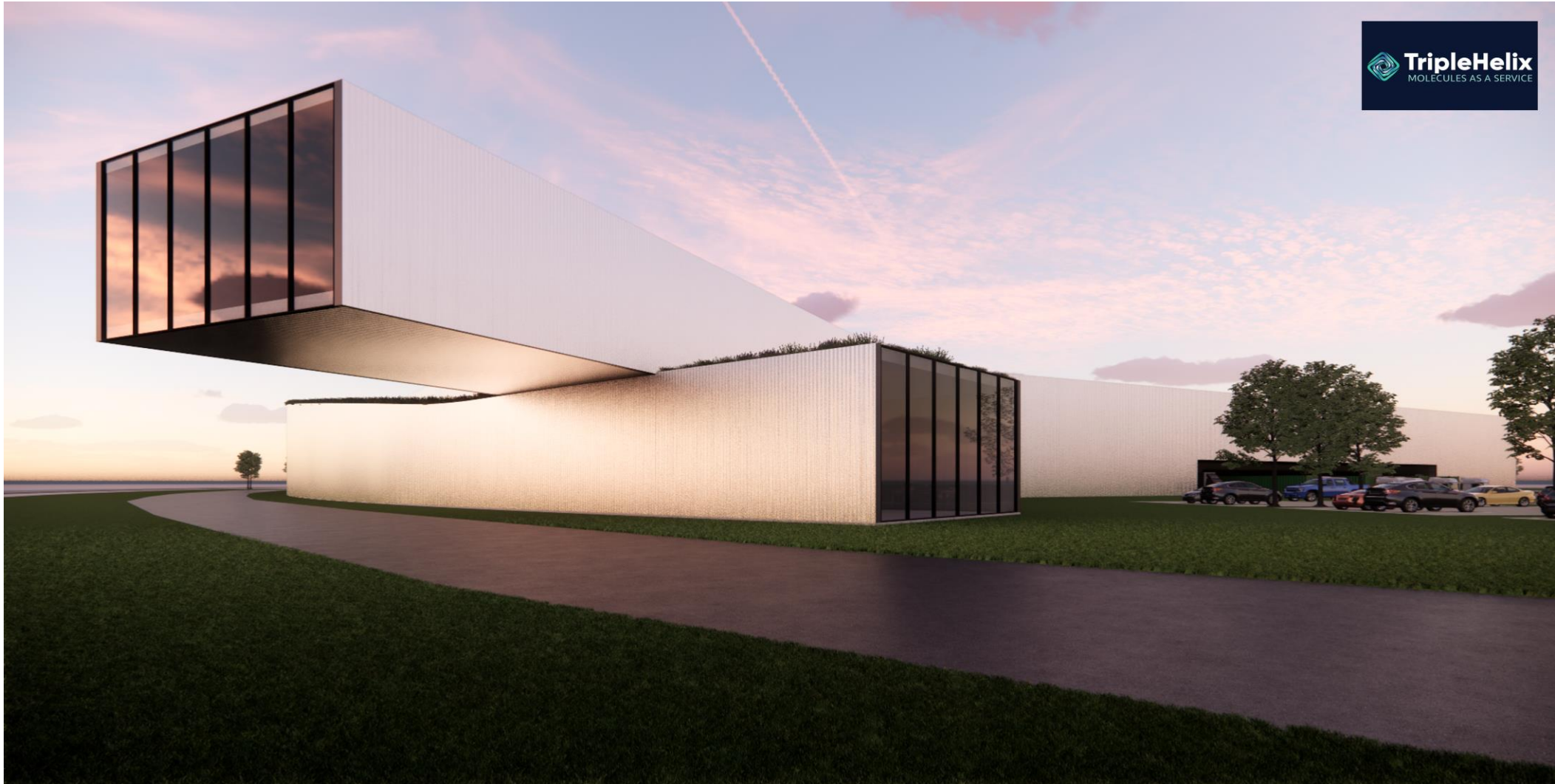
Business Essentials

Capturing value by converting waste back into raw materials



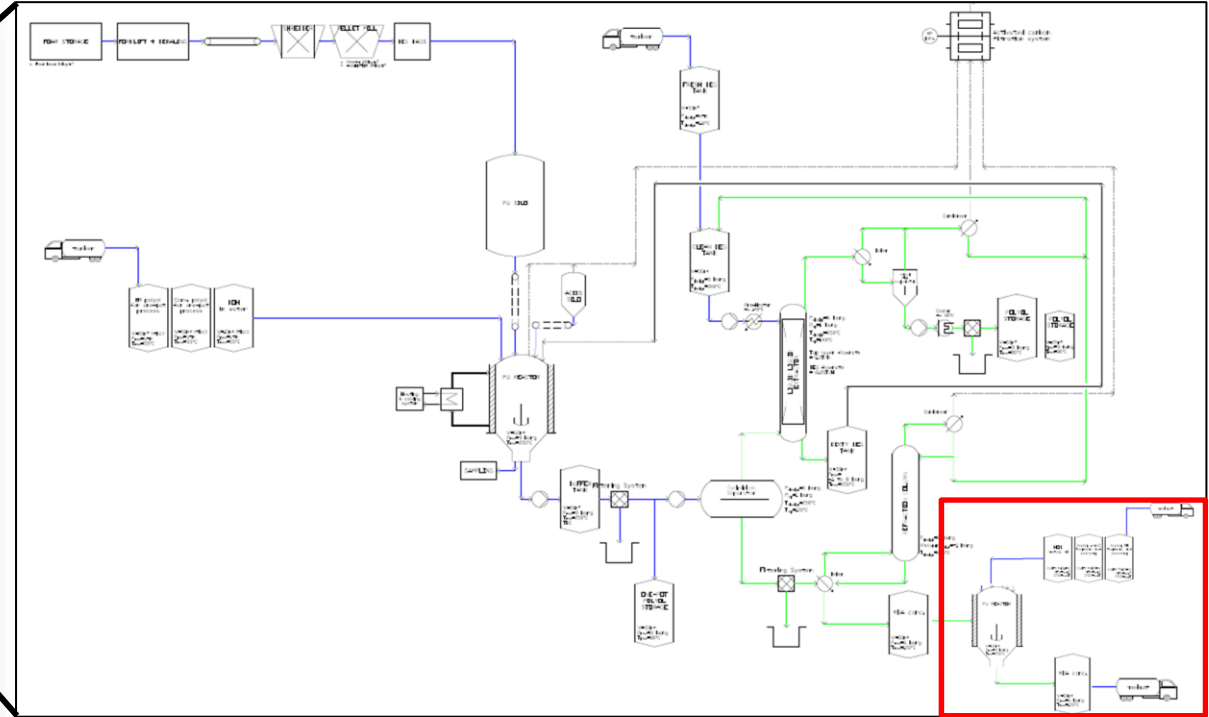
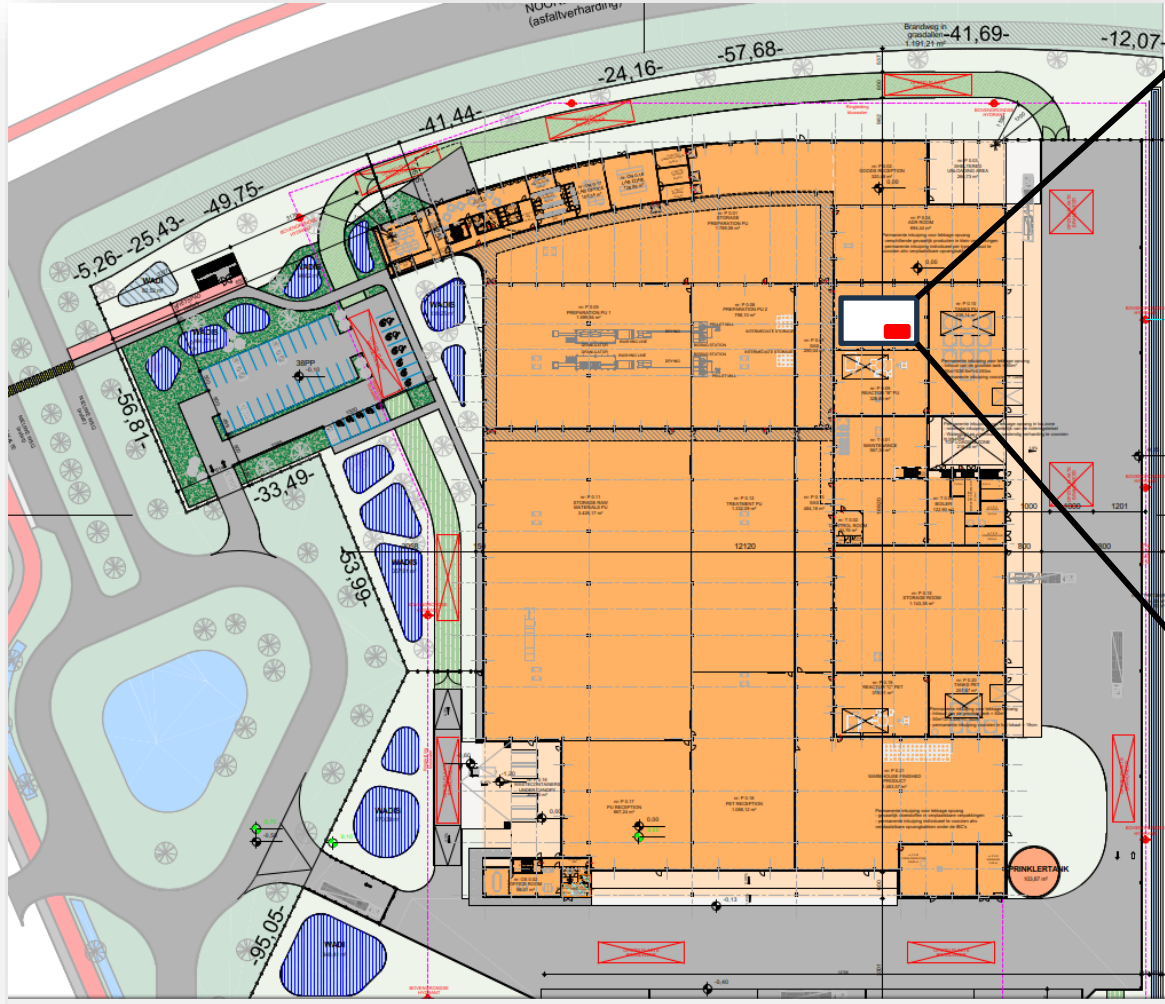
A Positive Signal and Recipe for Recovery

A €100m investment in Antwerp in triple use: industrialization, sustainability, strategic resources



Predictable Success through Proven Expertise

Derisking to the max leaving almost nothing to 'chance'



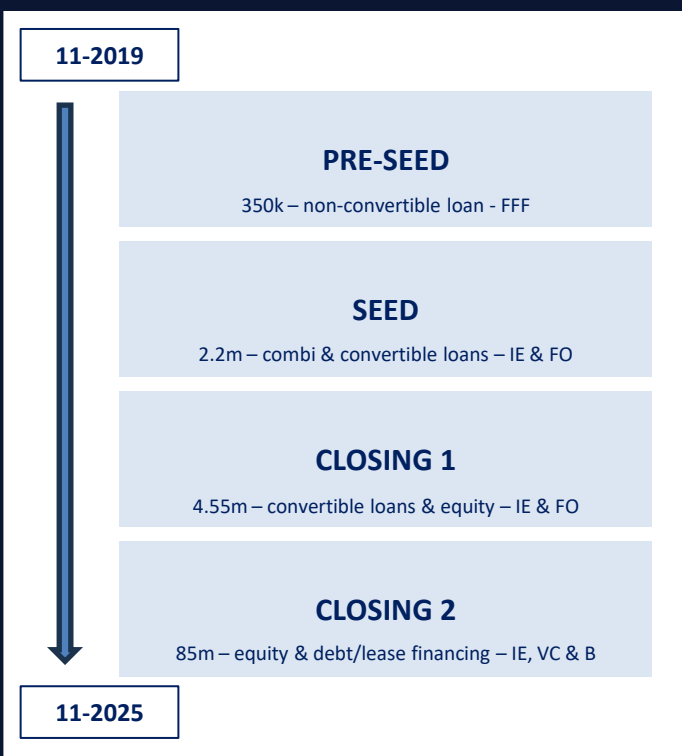
Timeline

A sequence of compelling events and funding milestones

The World



The Start-up Track



The Corresponding Structure

- **Bootstrapping with loans**
- Squeezing the lemon with **loans and convertibles**
- **Surviving or dying** with the finish in sight
- **Diluting** to get by, extending loans, interest deals
- **Blended finance mix** with:
 - Equity (chased by exit horizons)
 - Bank lease(yes but...)
 - Commercial credits (not yet but...)
 - Subsidies (but please pre-finance them...)
 - Commercial deals (KEY maar CAPEX nodig om product te maken...)

The Choice of Choices for Government, Investors and Financial Institutions

Risk vs Reward - What type of economy do we wish to become...?



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INCUBATOR FOR SUSTAINABLE CHEMISTRY



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