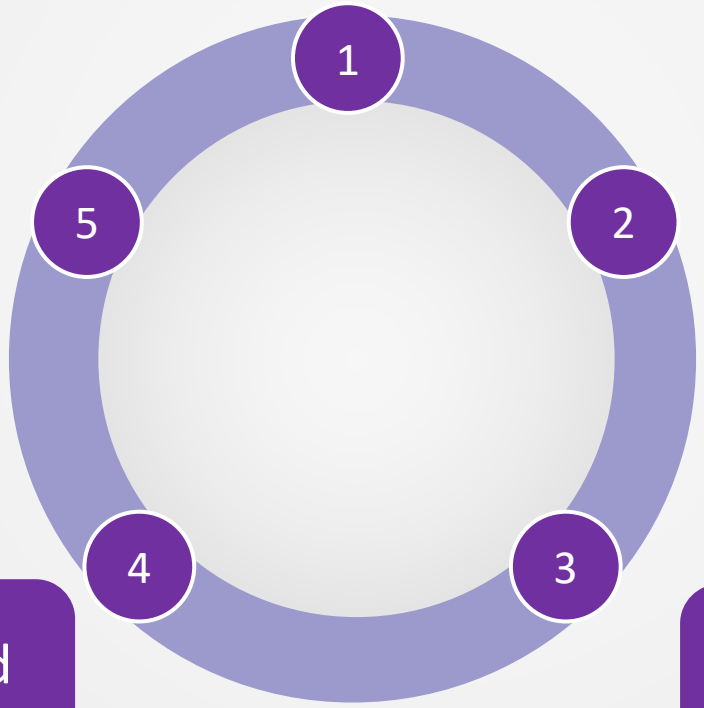
ROSI
return of silicon

A truly circular economy for the photovoltaic industry

January 2022

Key investment considerations



The key technology to make PV truly circular

A fast growing and predictable market

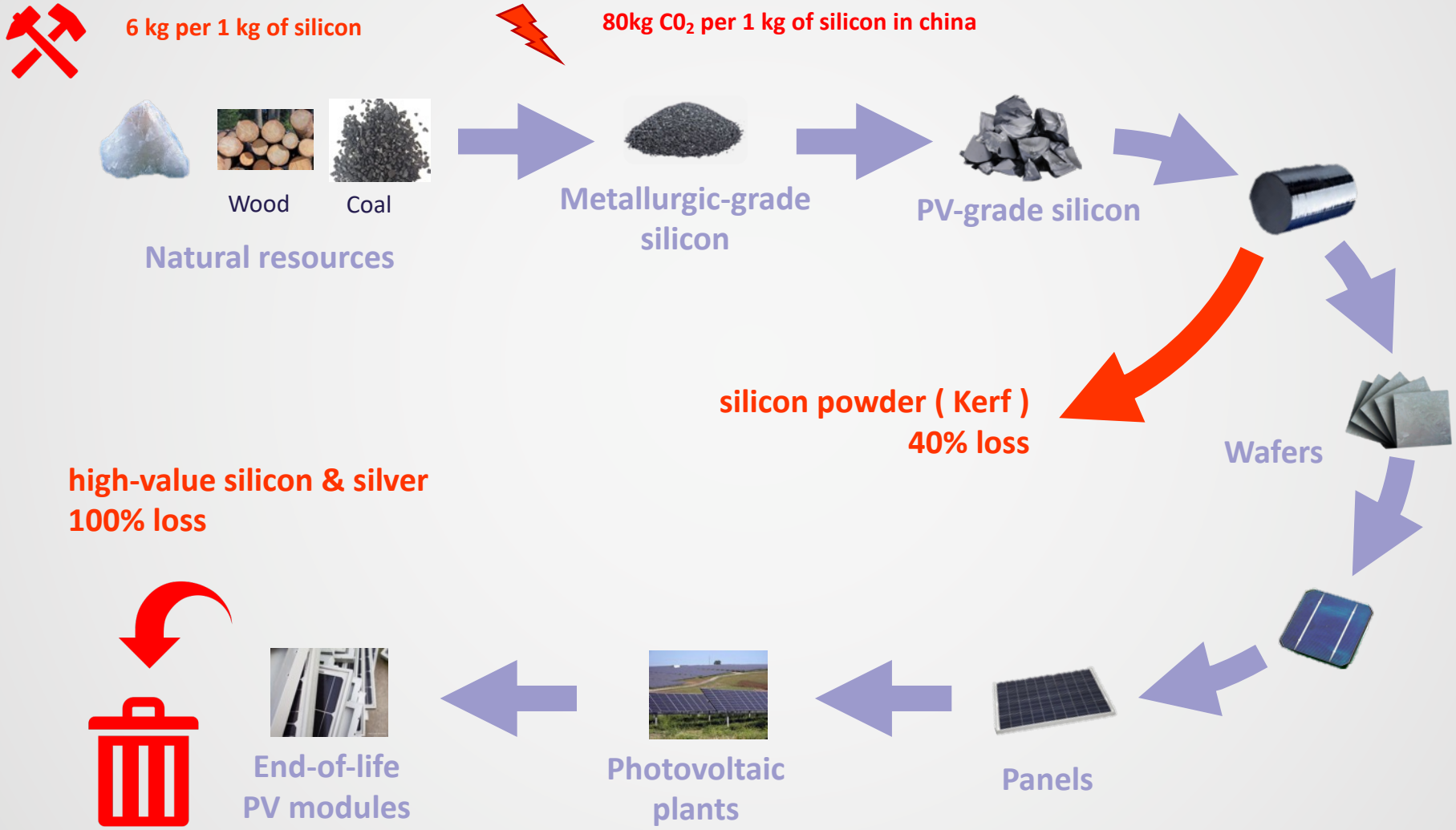
A scalable differenciated business model

A highly experienced management team

A sustainable business plan

1 The poor lifecycle of photovoltaics

The key technology to make PV truly circular

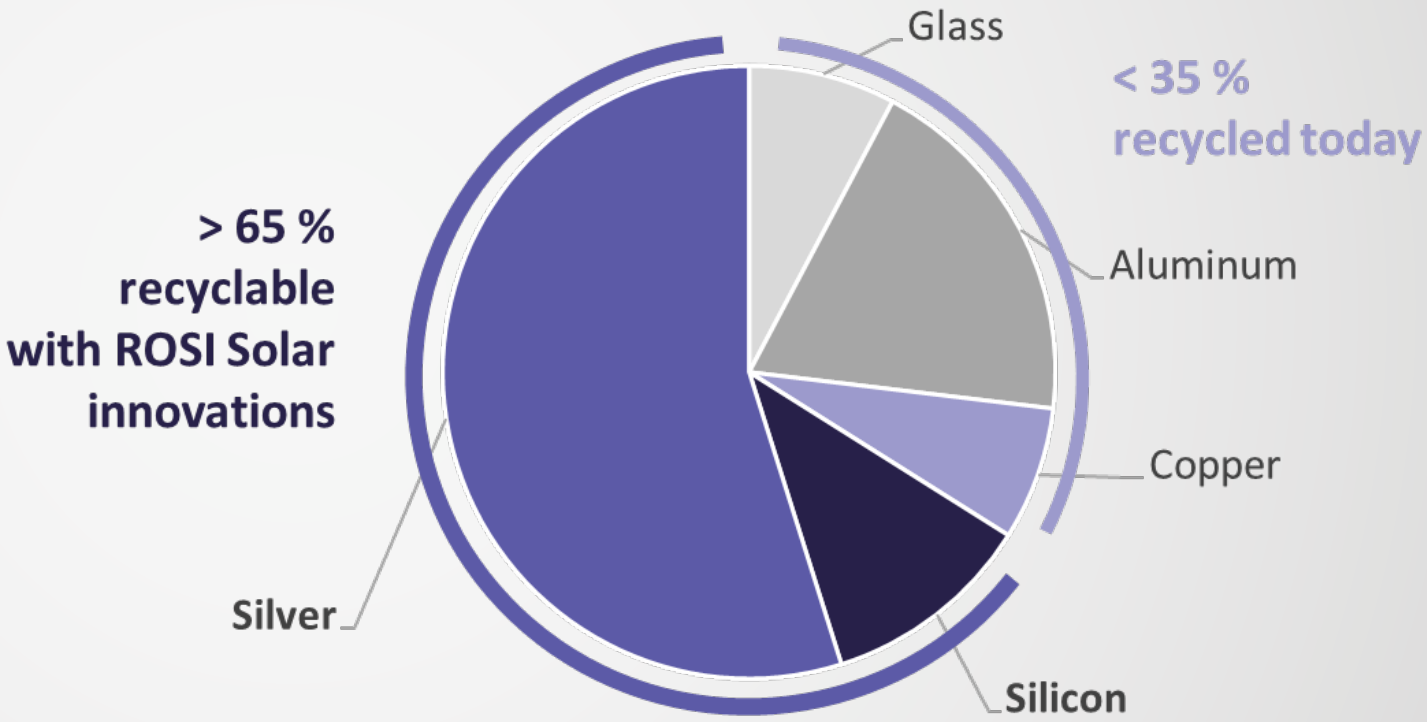


1 ROSI eliminates waste along the PV silicon value chain

The key technology to make PV truly circular

- Technology applicable to End-of-life PV modules and kerf recycling
- Making End-of-life recycling profitable
- Creating a new source of 5N pure silicon for Europe
- With proven industrial value chains compatibility
- Paving the way to a low carbon PV (2,5 kg CO_2 per 1 kg silicon or 1/10 of today)
- Allowing for huge natural resources savings
- 1 kg module recycled = 2 kg of CO_2 saved

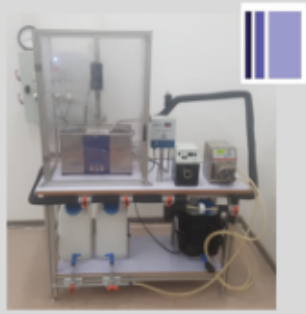
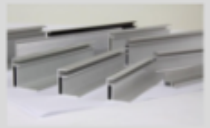
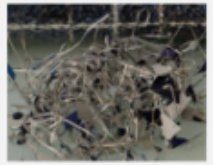
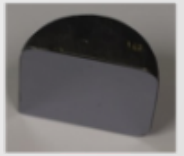
End-of-life modules recycling made profitable



Value recovery of recyclable materials in End-of-life modules

1 A proprietary End to End technology

The key technology to make PV truly circular

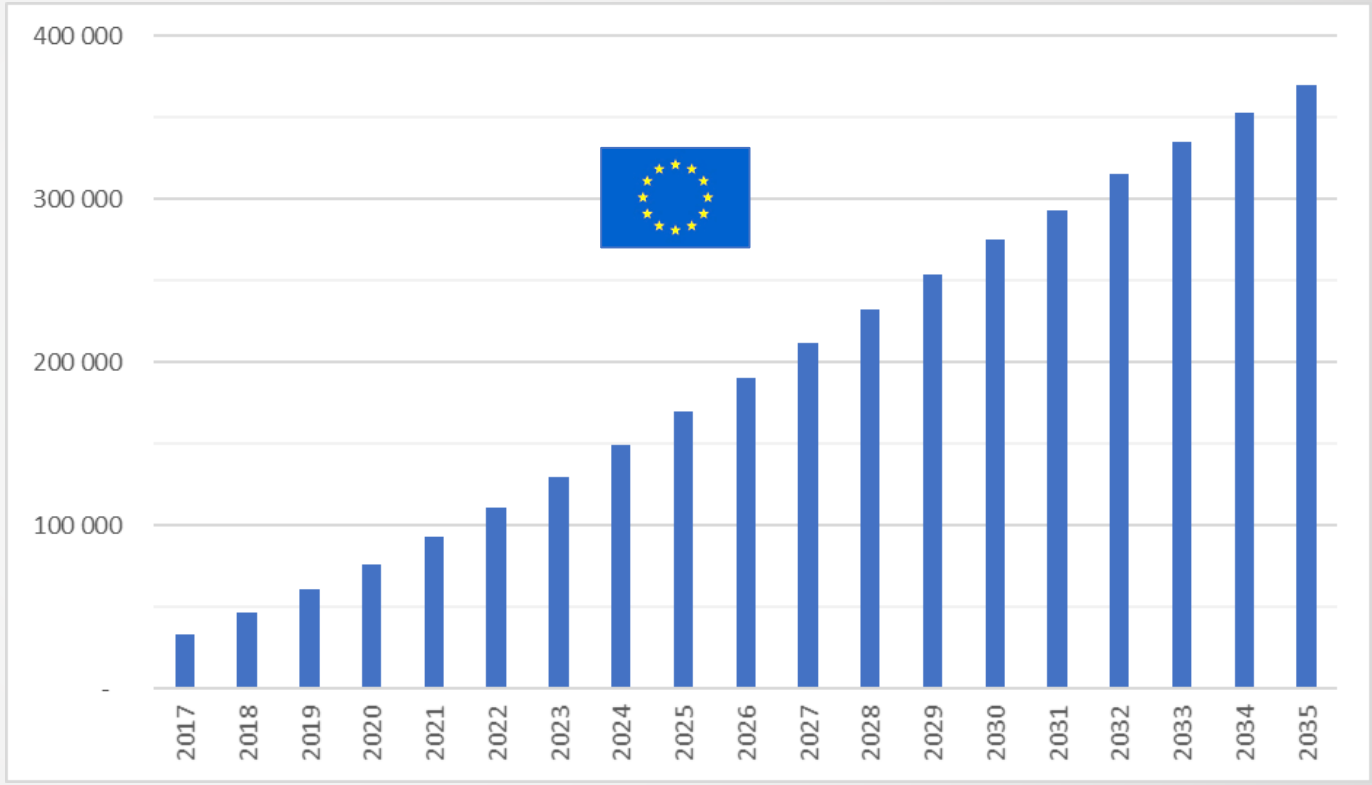
Principle steps	1	2	3	4	5
Process	Inspection	Deframing & J-box cutting	Pyrolysis + after-burner + scrubber	Chemical treatment and Ag/Si separation	Silicon reconditionning
Equipments	Standard 	Standard 			
Products	Second-life modules 	Aluminium frame  J-box 	Carbon-free glass  Ribbon (Cu) 	Silicon  Ag 	Silicon in different forms for different applications  

All PV modules compatible – Soft non agressive process – Covered by 3 patents and 2 exclusive licenses

2 First pillar: the challenge of end-of-life PV recycling

A fast growing and predictable market

- Market forecast based on PV modules already installed and that will inevitably reach their end-of-life
- From 1 million tons of accumulated PV modules to be collected and recycled across Europe by 2025… to 10 million tons by 2050
- Containing 300,000 tons of high purity silicon by 2050
- Allowing to produce > 75 GW of solar panels or 5 years of German silicon production

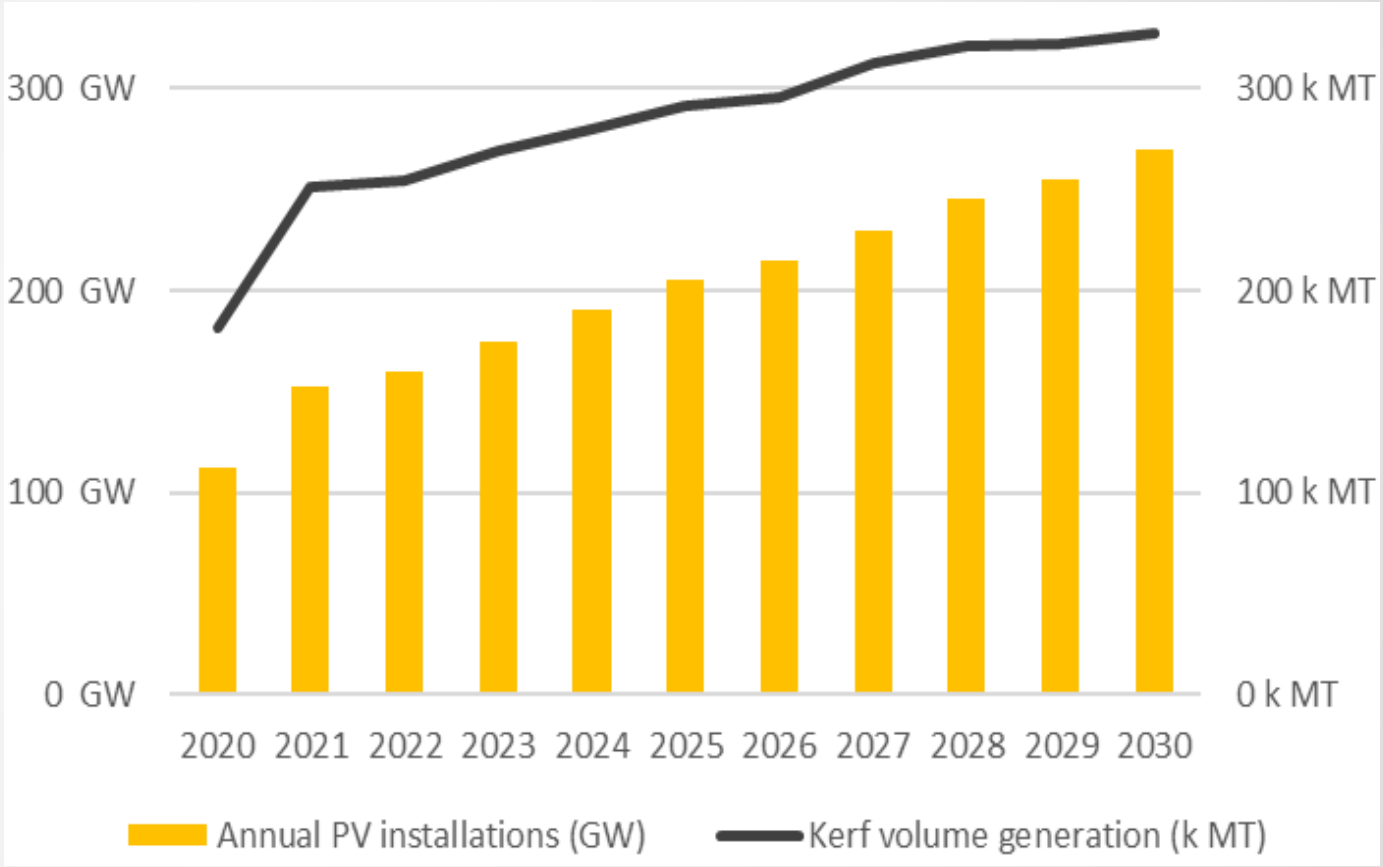


Annual end-of-life PV modules to be treated in Europe (tons/year)

2 Second pillar: recovery of lost value in wafer sawing

A fast growing and predictable market

- 200 000 tons of silicon (1.5 Bn € value) lost worldwide each year
- Increase to > 300 000 tons in 2030
- > 80% of wafer manufacturing activity is located in China
- ROSI technologies allow to recycle the wafer sawing liquid and to recondition the kerf as high-purity silicon to be reintegrated in the upstream value chain
- ROSI focuses its commercial efforts on China, the leading market
- Second priority in ROSI roadmap



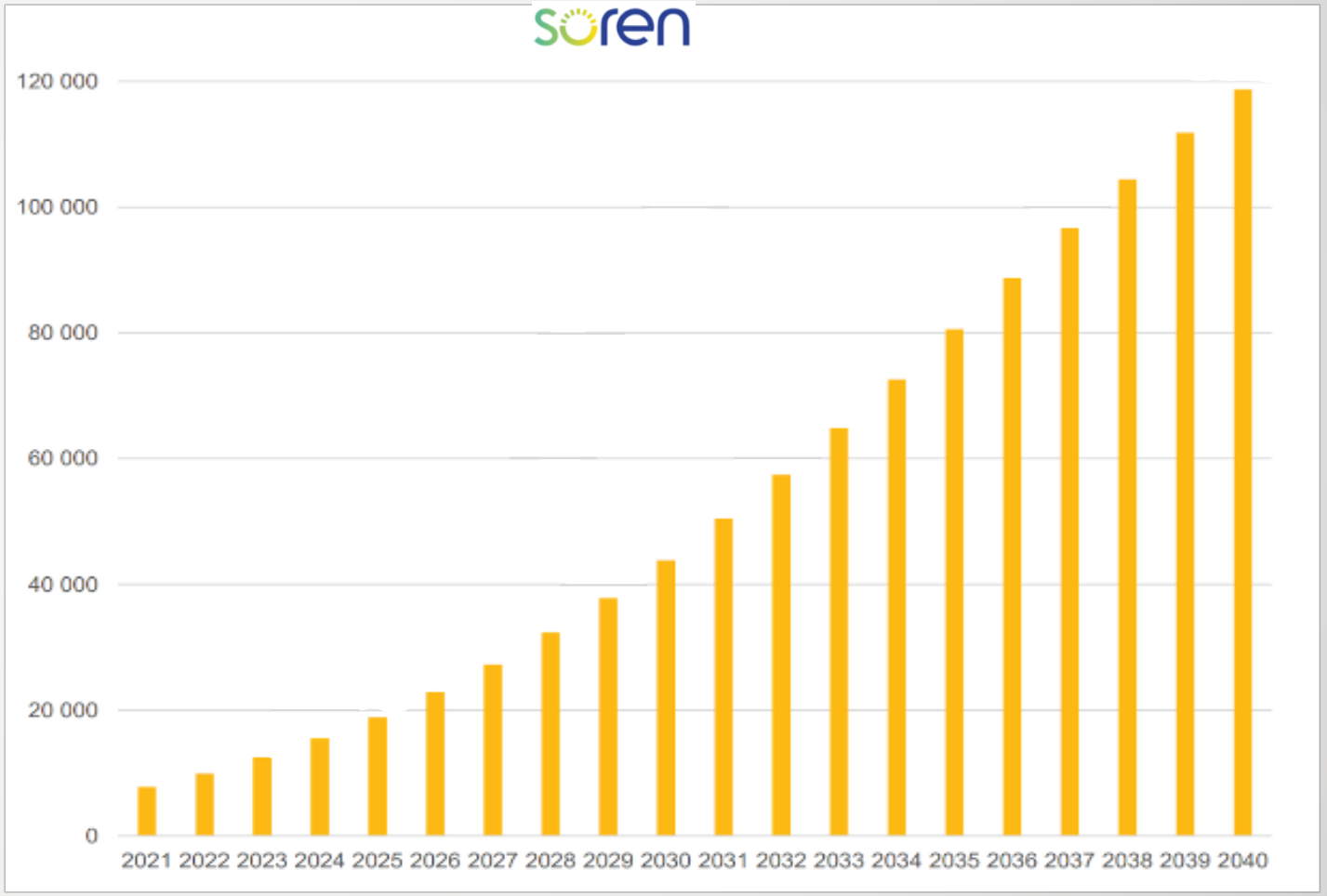
Outlook at silicon kerf generation from 2020 to 2030

2 First priority: PV modules from France and Germany

A fast growing and predictable market

- 27 Europe
  - ✓ The most regulated market
  - ✓ WEEE directive
- France
  - ✓ Established and monopolistic collection system by SOREN : a strongly regulated waste stream
  - ✓ Call for tender in 2021 secures an annual recycling volume to be treated.
  - ✓ 1/3+ already secured by ROSI with long term contract
- Germany
  - ✓ 50% of the European market
  - ✓ 4x the French market in size
  - ✓ Other rules and players

Outlook of end-of-life PV modules annual waste streams in France in tons per year



2 No industrial solution for high purity Si, Ag, Cu recycling

A fast growing and predictable market

Reiling Unternehmensgruppe

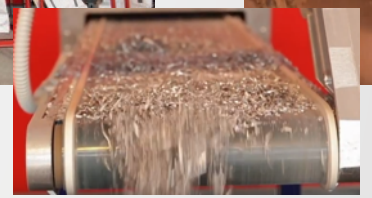
Shredding + mechanical separation

Focus on glass recycling

VEOLIA

LA MIA ENERGIA

Cutting + shredding + mechanical separation



Ending project / lost 2021 tender

Solarcycle

groupecomet

Recma GROUPE

Mechanical separation of metals.

Project with Liège University

2 ROSI: only high value recycling project among SOREN winners

A fast growing and predictable market

GALLOO let's recycle!

- Metal and WEEE recycling player
- PV collection in North of France
- Work on existing equipment for metal
- Mechanical separation

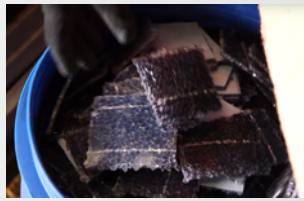
envie Nos valeurs redonnent de la valeur

groupe comet

La Région Occitanie Pyrénées - Méditerranée

Recma GROUPE

- PV collection in Toulouse
- Shipment from Toulouse to Belgium
- Mechanical separation
- No investment decision in France yet



envie Nos valeurs redonnent de la valeur

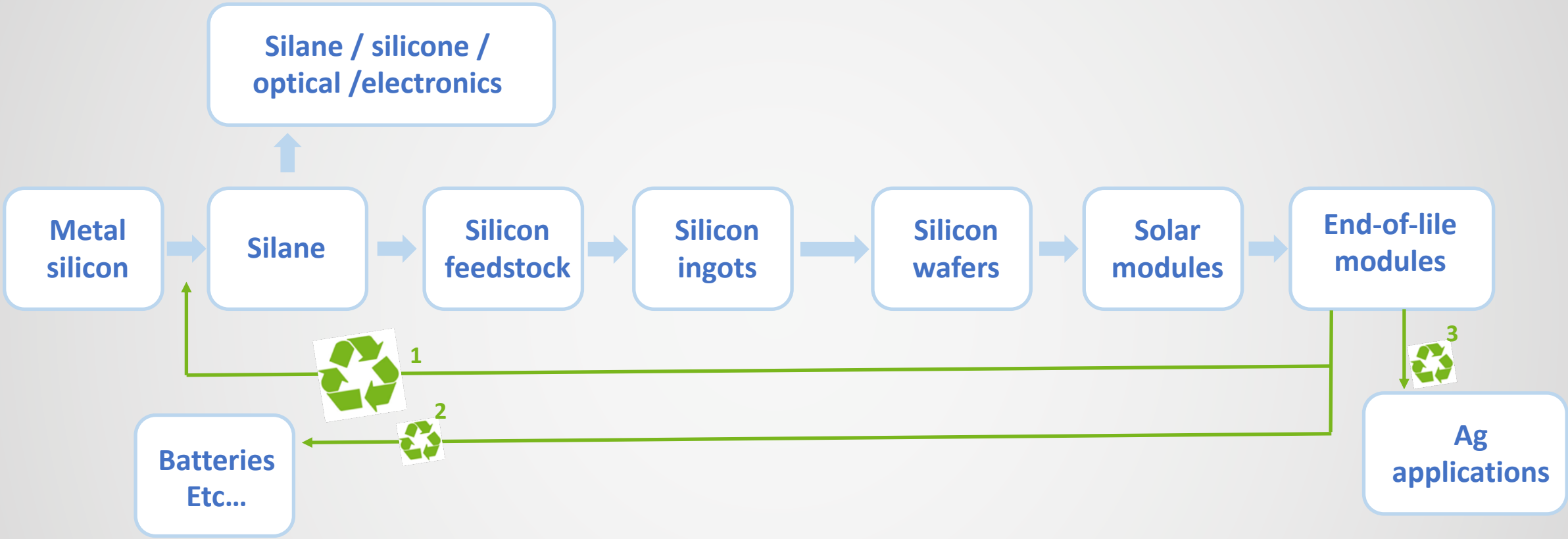
ROSI return of silicon

Région Nouvelle-Aquitaine

- PV Collection and re-use in Bordeaux
- Aluminium and glass recycling by Envie
- Recycling of high value metals by Rosi

2 Markets are OTC for Si and commodity for Ag

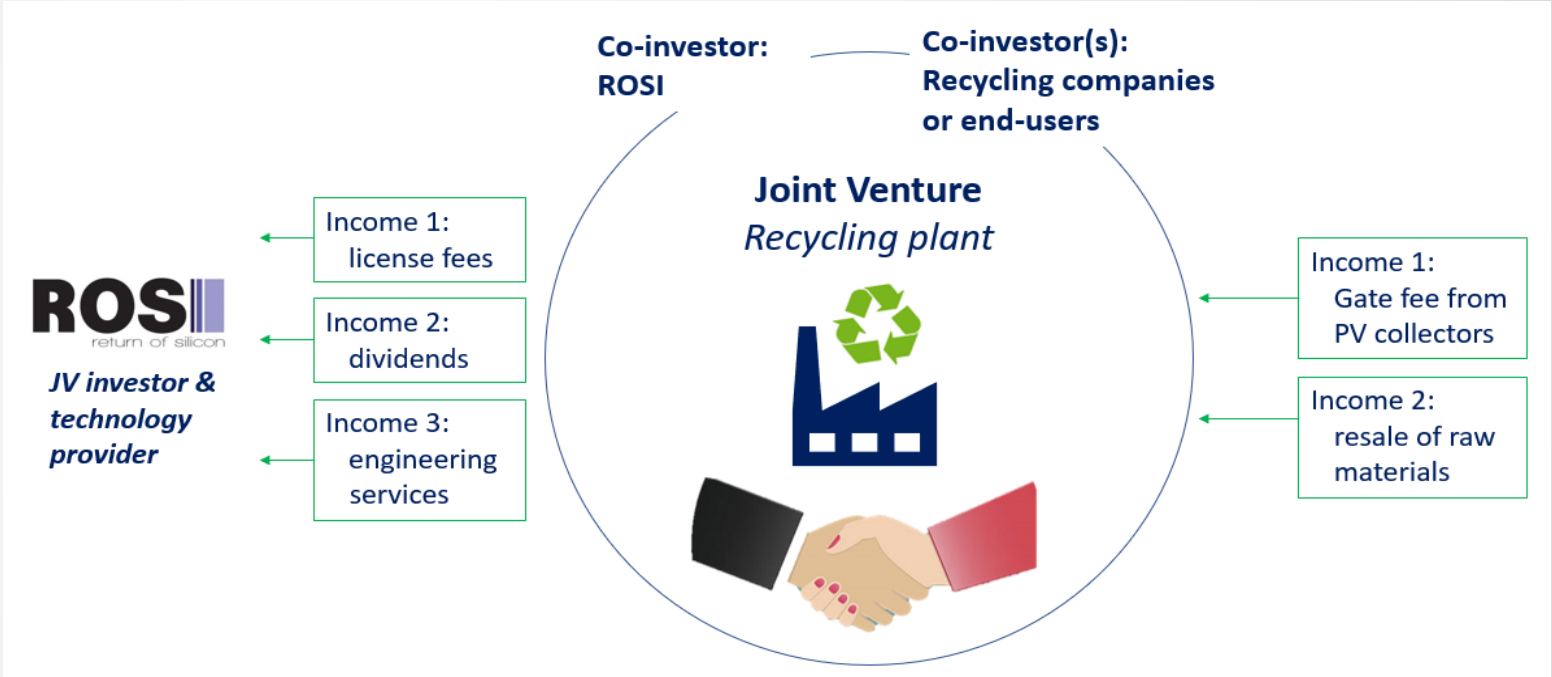
A fast growing and predictable market



Proprietary recycling routes backed by ROSI patents or know-how

3 A two-level implementation: ROSI & SPVs

- ROSI mission: process improvement through R&D, IP protection of technology, SPV ramp-up & operations
- ROSI shares investment, risk and created value by co-investing with waste recycling incumbents
- Scalability ensured by a “BOT“ (build/operate/transfer) model in order to address several geographical markets



The two levels of revenue streams

3 A roadmap validating operations at increasing capacities

A scalable differenciated business model

2020 2021 2022 2023

Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4

Pilot
200 tpa

Operational
(TRL6)

Industrialization – ReDesign project (Ademe)

Launch
(TRL 8)

2000 tpa

Full ramp-up
(TRL9)

10 000 tpa

Scale-up phase I – Grenoble Center of Excellence

20 000 tpa

Launch

Full
ramp-up

Scale-up phase II – Industrial line Germany

R&D: automation, integration, AI (upscaling to 30 000 tpa)

Ramp PV project (European Innovation Council)

APPI'SUP project (BPI France DeepTech)

4 A highly experienced team with comprehensive skills

A highly experienced management team

- Extended expertise in transforming deeptech innovation into a viable industrial line
- Realistic vision of business plan and practical knowledge of operations
- Ability to keep competitive advantage through continuous R&D
- Unique end-to-end know-how on the silicon value chain
- On-going recruitment plan

Executive management team

Yun Luo
CEO, cofounder

MEYER BURGER

Bruno Bernard
Strategy and Finance Director

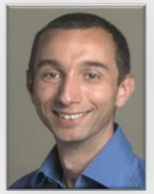
SAFRAN Engineering Services
AddUp

Karsten Wambach
Technical expert

SolarWorld
PV CYCLE

Damien Foucher
Operational Director France

GE
ESRF



Guy Chichignoud
CTO, cofounder

cnrs

Antoine Chalaux
Commercial Director

ceatech
INFINERGIA CONSULTING

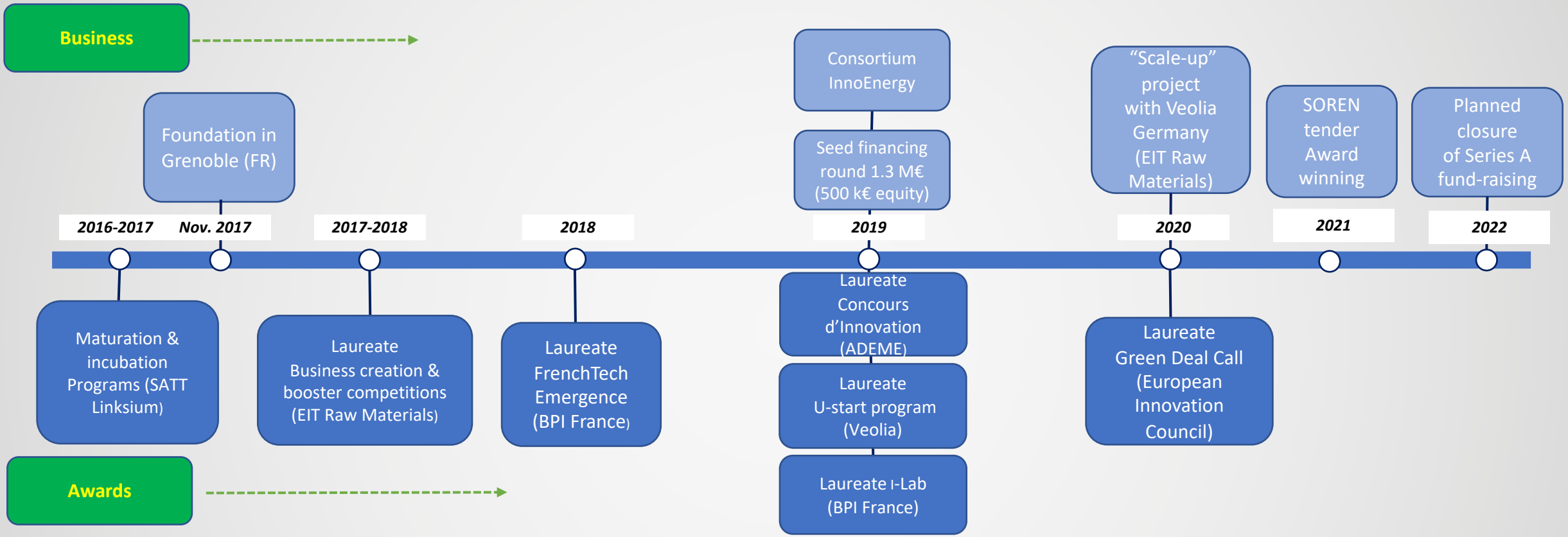
André Richter
Technical expert

MEYER BURGER

Extended team

4 A clear recognition by experts, institutions and industry

A highly experienced management team



Industrials

Energy specialists

Institutionals

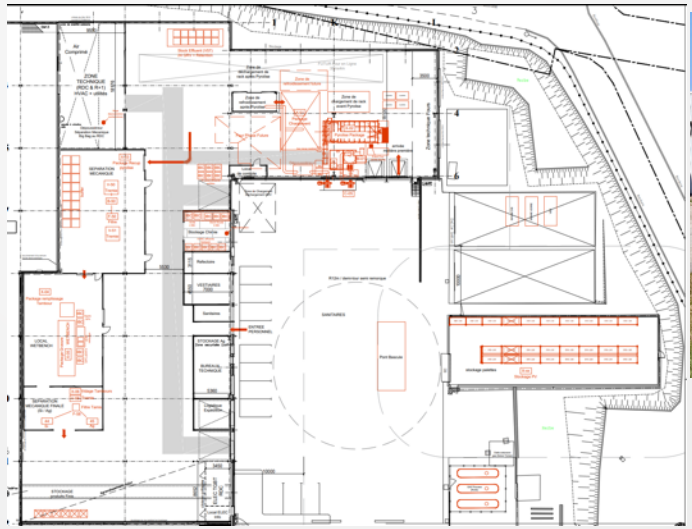
Tech Transfer Specialists

5 CEG business plan based on long term contracts

An attractive business plan

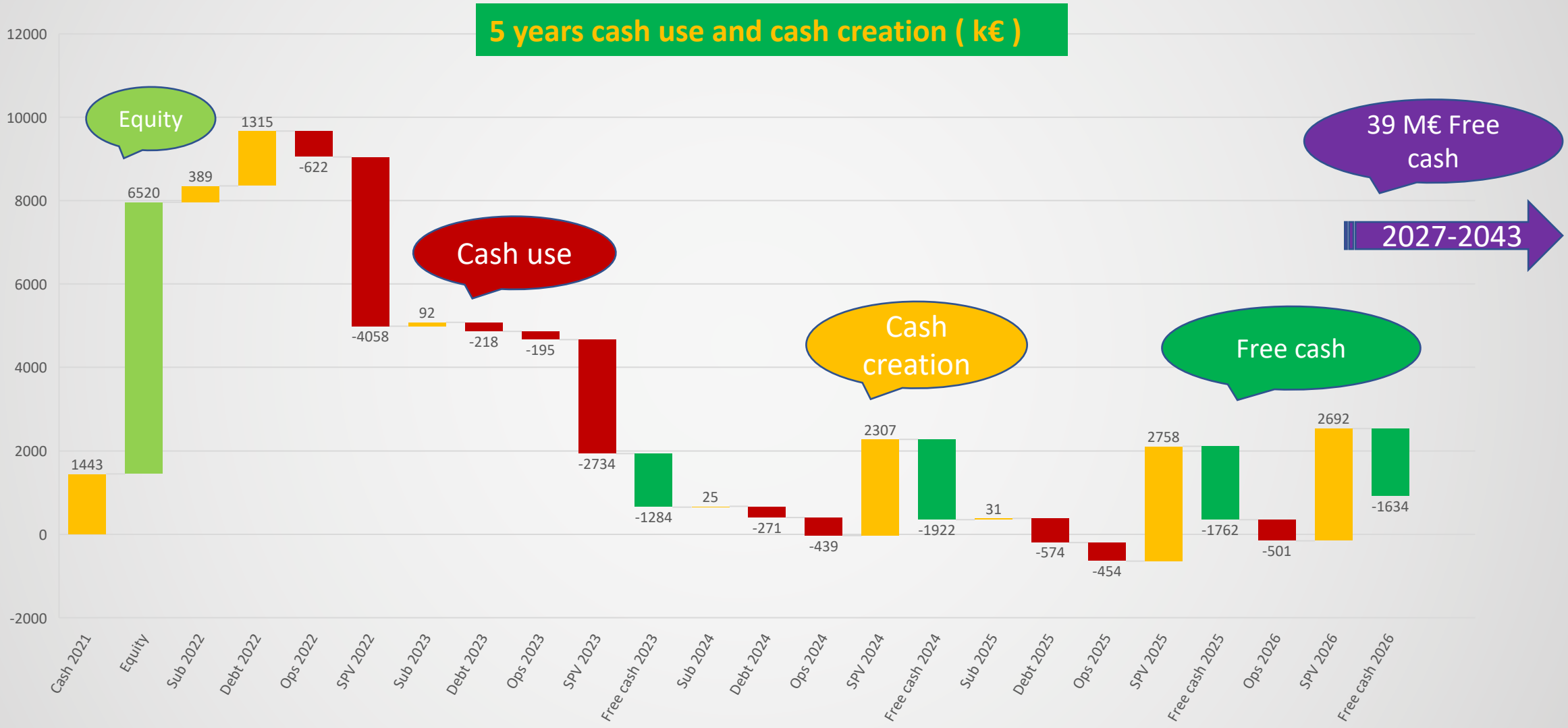
- Worldwide ”première”
- First industrial site showcasing ROSI technologies
- Operational starting Q4 2022
- Fully integrated as a key player of the French PV sector after 2021 tender decision by SOREN
- Launch decision and BP based on long term exclusive contract with ENVIE 2E Aquitaine
- Full support of local and national authorities and partner
- Offer of additional capacity to other industrial players in France and neighbouring European countries
- Up to 20 000t CO2 emission avoided per year at full capacity

K€	2022	2023	2024	2025	2026
CA	368	1106	4021	5637	6724
Ebitda	(217)	(10)	2266	3385	4324
Ebit	(331)	(349)	1605	3064	4003
%	NR	NR	31%	50%	58%



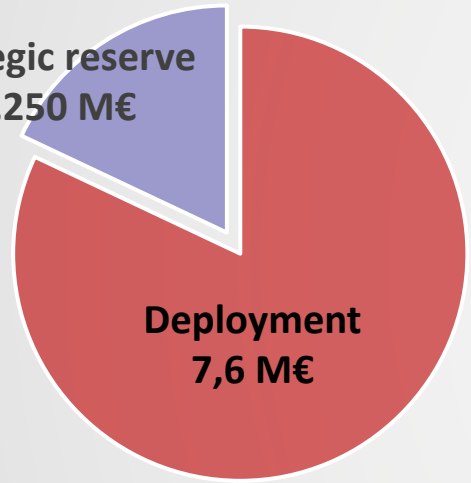
la Matheysine Communauté de communes

A fast value creation at ROSI level



5 A balanced use of funds and financing

ROSI corporate level : 9 M€ overall need



3,2 M€

4,4 M€

3,250 M€ fundraising

+ 3,250 M€ EIC equity secured

+ 1,5 M€ non-dilutive secured

JV Grenoble

Cash need
7,4 M€

2022

Ademe Investissement

3,1 M€

France relance

1,150 M€

JV Germany

Cash need
11,5 M€

2023

Ademe Investissement

Industrial partners

6.7 M€

Subsidies

0,4 M€

ROSI

return of silicon

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