

Groeien met Groen Staal Growing with Green Steel

How regional funding can play an important role in the development of decarbonisation know how

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OCTOBER 29
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voestalpine Stahl,
Linz, Austria



**ESTEP 2024
Annual Event**



European Steel Technology Platform

20 years together

voestalpine

ONE STEP AHEAD.



‘Groeien met Groen Staal’

- Introduction
- The GGS programme
- Five GGS Themes
- Regional & European funding



Addressing the issue

- 7% of total CO2 emissions of the NL
- Fine dust and other pollutants
- Extreme energy consumption
- Dependence on fossil fuels
- Depletion of resources
- Bad societal image
- Large amount of scrap and landfill

*Current method of steel production and use is not sustainable but demand increases, **this impact the whole supply chain***

Vision after 8 years

2032



Nationaal
Groeifonds

The Netherlands will be in all aspects at the forefront of sustainable and circular steel

Climate
Profit

Economic
Profit

Human
Capital

Resource
Autonomy

Program characteristics

8 years, 30 partners, not exclusively NL

45 projects organised along a circular supply chain

- Demonstration projects
- Knowledge development projects
- Education project (from technician to academic)



Budget 101

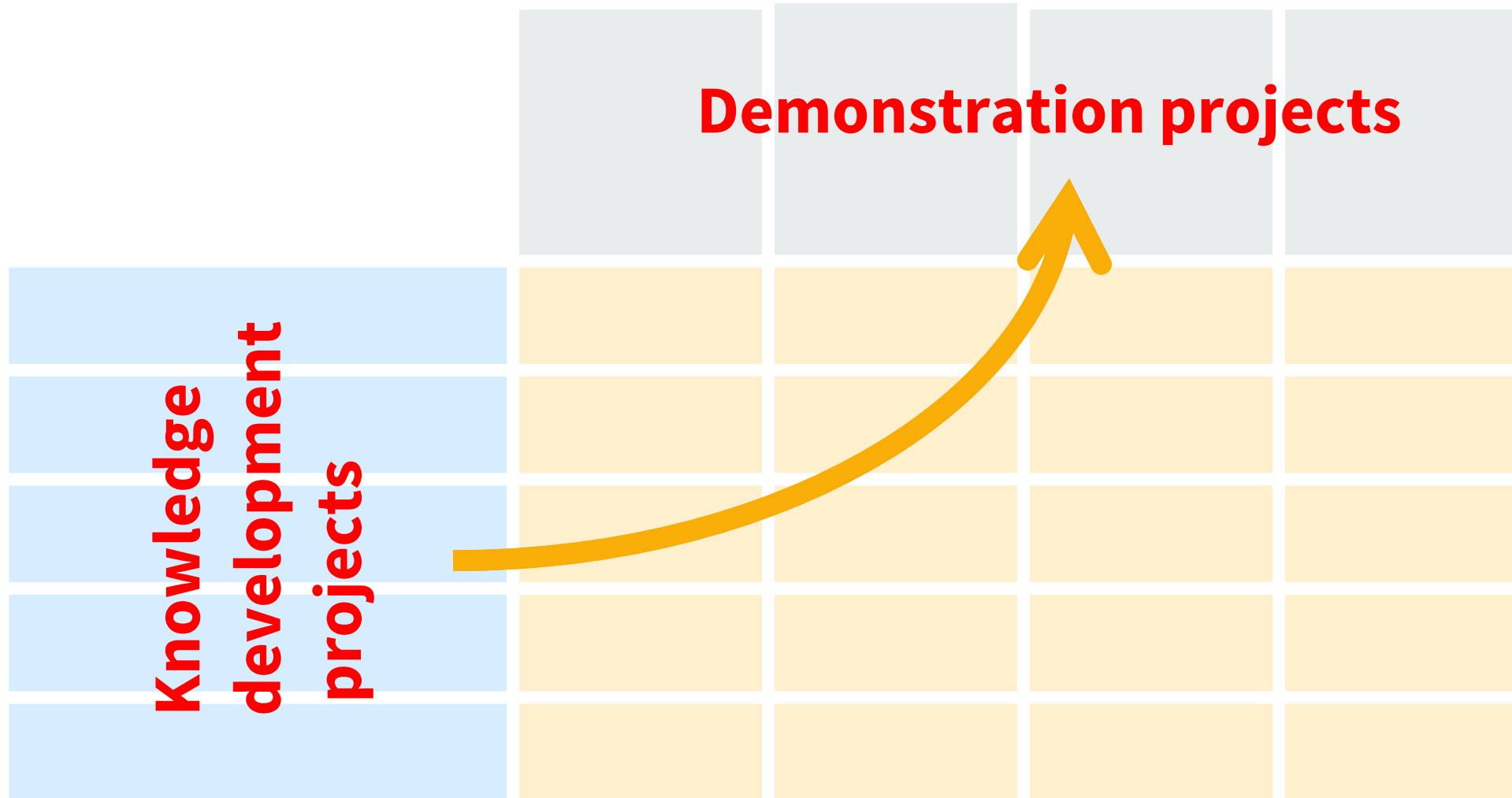
MEuro NGF subsidy

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Theme organization

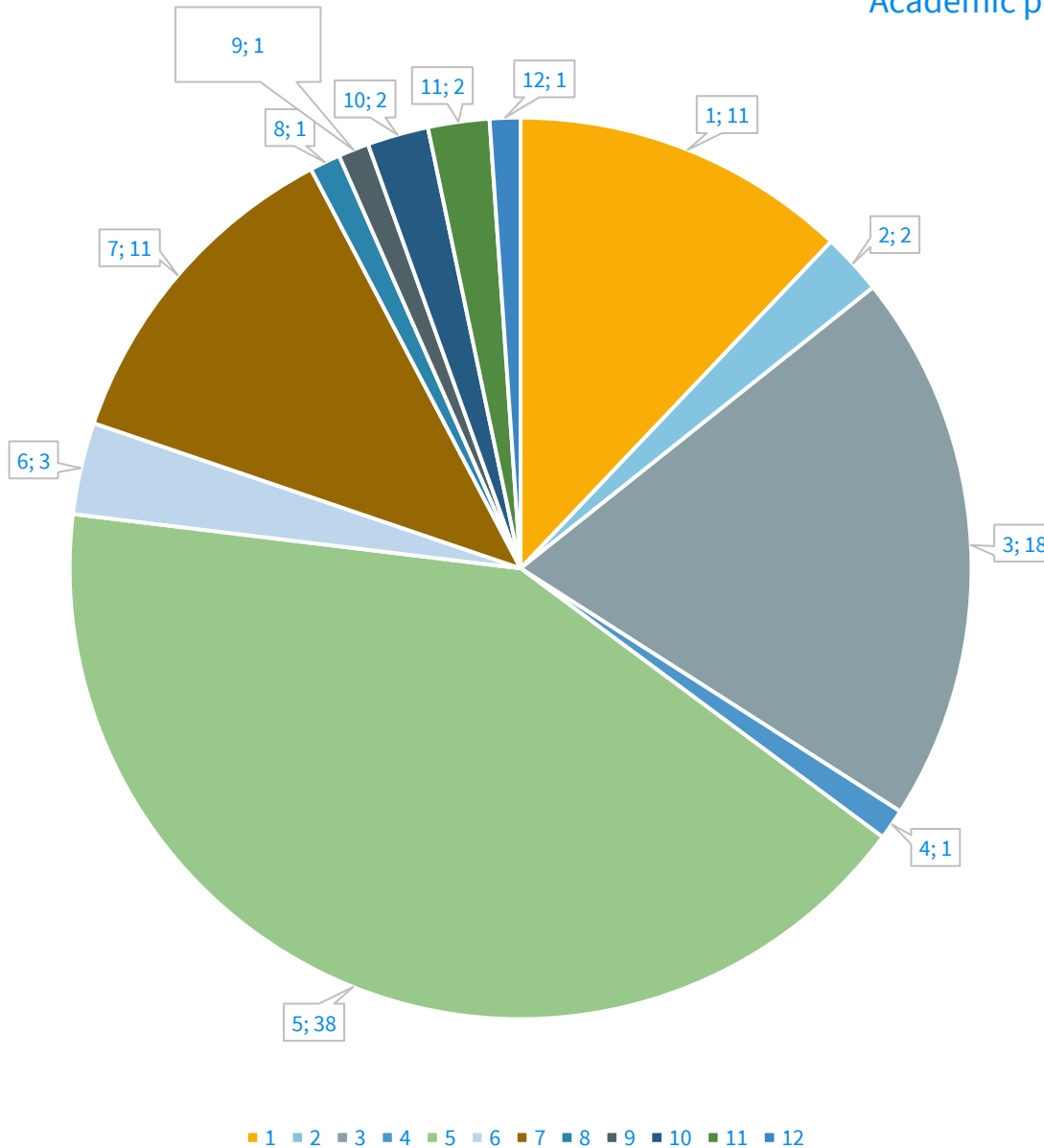
Theme lead



Academic portfolio

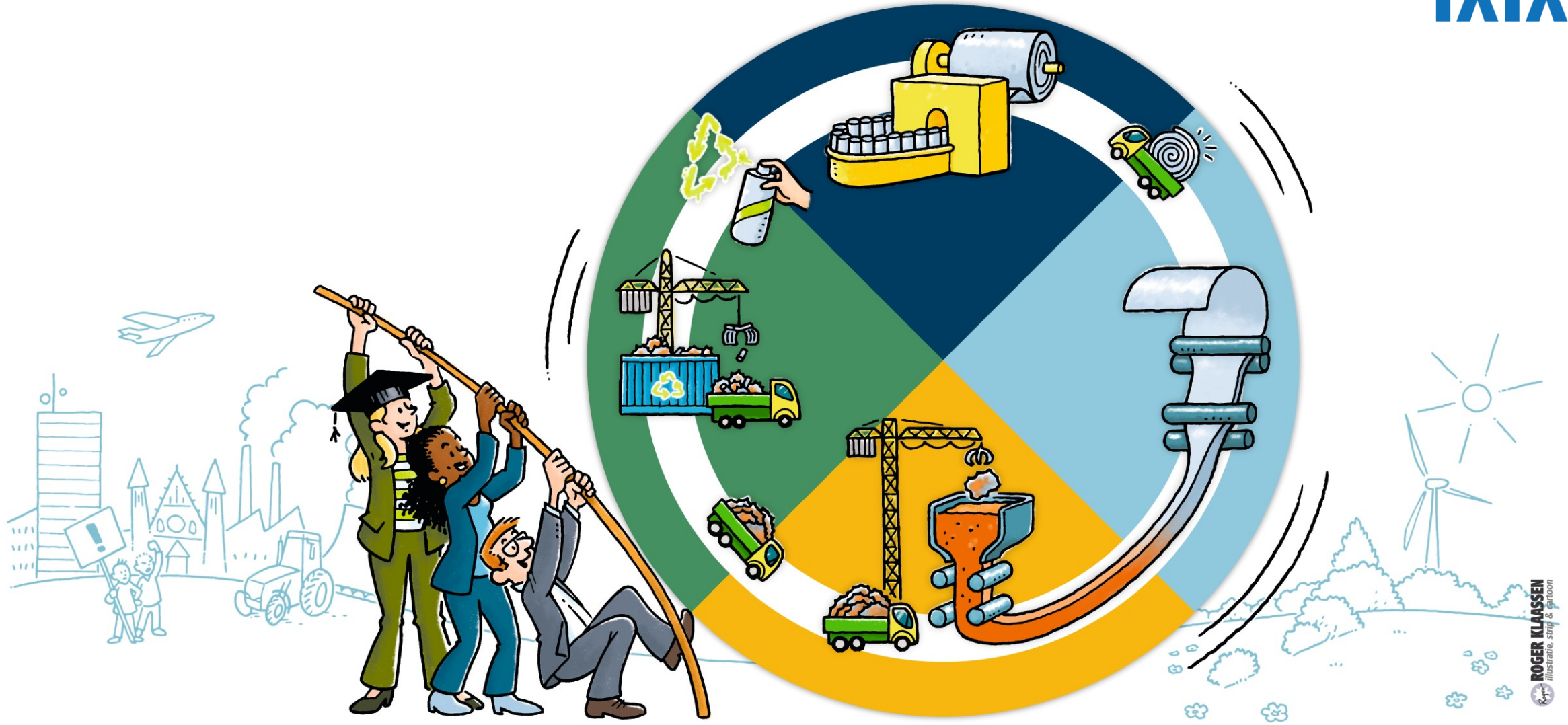


Academic positions in GGS (May 2024)



Academia 100% funded on
integral costs

Themes



Theme 1: System changes

Changes are needed all through the system

Theme 1 focusses on scenarios for the steel transition

- Factory level
- Value chain level
- Context incl. societal needs

The 100% academic funding gives a unique opportunity to also add programmes not directly addressing technical challenges



Thema 2: productie



Crucial research for the implementation of the Tata Steel Green Staal plan, e.g. topics on:

- Hydrogen for DRI
- Increased scrap use
- Reducing Electric Furnace
-

Incl spin-off to education



www.tatasteelnederland.com

Theme 3: processing

Green steel may require different processes

Processing of steel needs to be more energy efficient and green

- Heat treatment
- Digital twin/modelling processes
- Steel composition
- Coatings
- Etc

Aimed at wider steel supply chain



Theme 4: Use

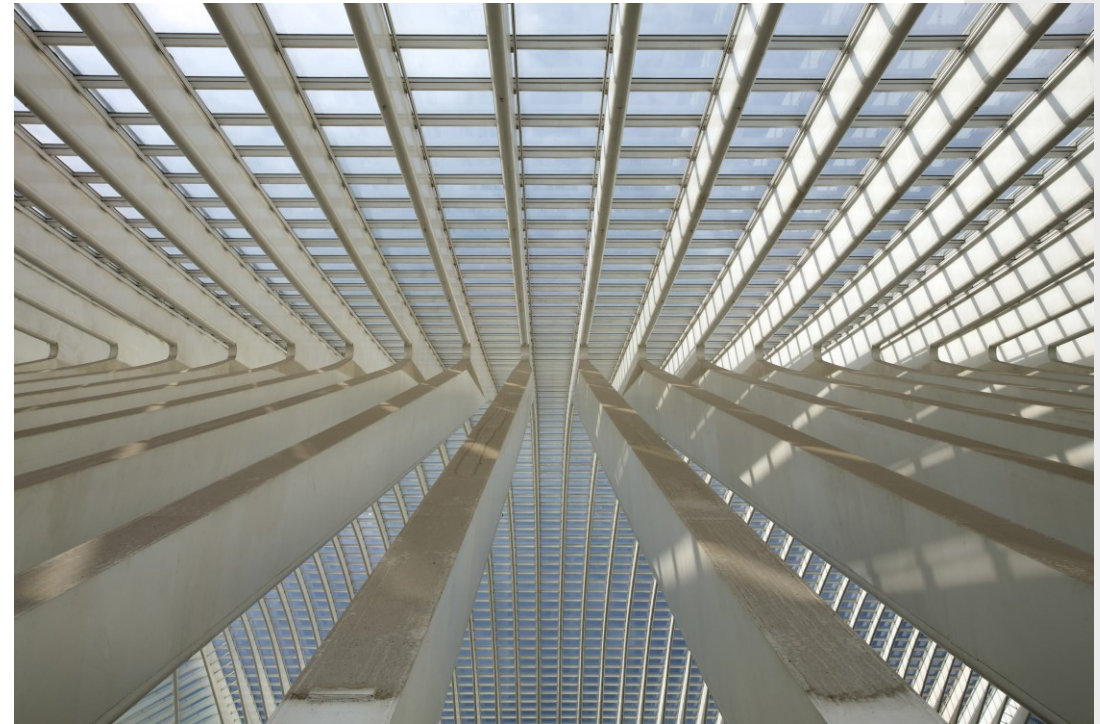


Green steel will be used in many sectors:

- Automotive
- Components
- Building materials

Important subjects

- Properties
- Digital twins
- Remanufacturing/re-use



Theme 5: Recovery

Scrap demand will rise. To cope with this projects are executed in the areas of:

- Scrap sorting
- Value chain modelling
- Scrap refinery
- Material passports/Data
- Novel recovery methods
 - E.g. from liquid steel



Regional & European funding



- Benefits for the national economy, not just one or more companies
- Opportunities for supply chain oriented approach
 - e.g. Philips as end user...
- Opportunity for wider academic involvement
 - funding rate really makes a difference
- Opportunity to include education up to technician level
- Judgement by high level expert committee supported by specialists, not based on prescriptive rules
- Application low in admin, effort put in quality, content, impact and consortium
 - So still a lot of work!
 - Supported during the process by the subsidy provider (staged process, checks during the final writing stages)

Regional and EU funding are complementary but also (too?) separate

Let's get the wheel move together



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ROGER KLASSEN
Illustratie, strip & cartoon