



Pioneering decarbonisation solutions

2022–2023 Half-Year Results

December 2022



Key facts for the first-half of 2022-2023



First contract signed for SYNOCA® with CARBONLOOP:

- 30 September 2022: signing of a contract with CarbonLoop (Kouros SA), within the framework of the Commercial Agreement signed in October 2021



Continued structuring for future growth in the first half of 2022/2023

- Pursuit of the deployment of the R-Hynoca contract in Strasbourg
- Ongoing recruitment policy, with 26 hires during the first half of the year, bringing the total number of employees to 48 by September 30, 2022.



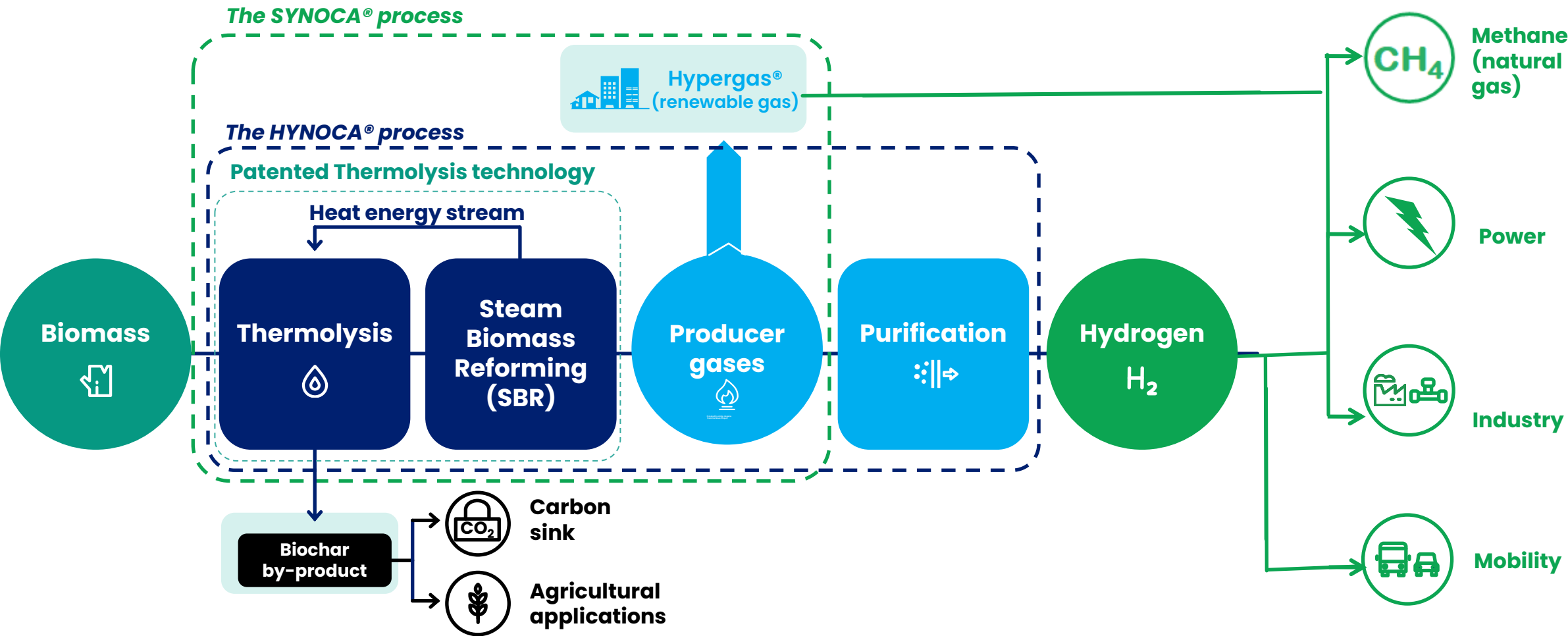
Backlog of 54 million euros and pipeline of 235 million euros, in progression since the IPO (respectively 33 and 183 million euros)



Delays in delivery from an important supplier and customer wait-and-see attitude with regard to public subsidies impacting the 2022/2023 revenue target.



HYNOCA[®], a unique decarbonization processes



For every KG of hydrogen produced, 12kg of CO₂ are sequestered via the biochar production

First order for the production of renewable gas

The goal is to produce renewable gas by thermolysis of biomass, for a CARBONLOOP customer site located in the Paris region

The renewable gas will be converted into renewable electricity and heat, which will ensure the self-consumption of the site, an innovative regenerative agriculture pole.

- Signing of a purchase order for the **supply, installation and commissioning** by HAFFNER ENERGY of a **SYNOCA® unit**
 - **A project, developed, financed and operated by CARBONLOOP, which will enable the local production of "carbon negative" energy**
 - A first order signed within the framework of the **Commercial Agreement signed in October 2021** between the two companies
 - The order includes a **"Thermolyzer" Skid and a "Reformer" Skid, the two skids together constituting a SYNOCA® module**
- 
- A targeted **Hypergaz® (renewable gas) production up to 500 kW**
 - A targeted **production of approximately 400 tons of biochar per year**, which will be marketed **for soil improvement and compost enrichment**
 - A contribution to the sequestration of approximately **1,000 tons of CO₂ equivalent per year, certified by carbon credits**

First project in line with the strategy of both partners to decarbonize industry and heavy mobility

R-Hynoca contract amendment of 31 May 2022

Contract with R-Hynoca, a joint venture with ENR (Réseau Energies Renouvelables), itself a subsidiary of the Strasbourg-based energy company R-GDS

Initial contract of 20 July 2020

- **Phase 1:** €1,536K
 - 1 demonstration module with Syngas production
 - Go/no go on 21 December 2021 and €700K buy-back of the demonstrator if no go
- **Phase 2:** €2,854K
 - 2 additional modules and hydrogen production of the whole
- **Total contract:** €4,120K
 - **3 modules** installed for a **hydrogen production of 33 kg/h**

Amendment of 31 May 2022

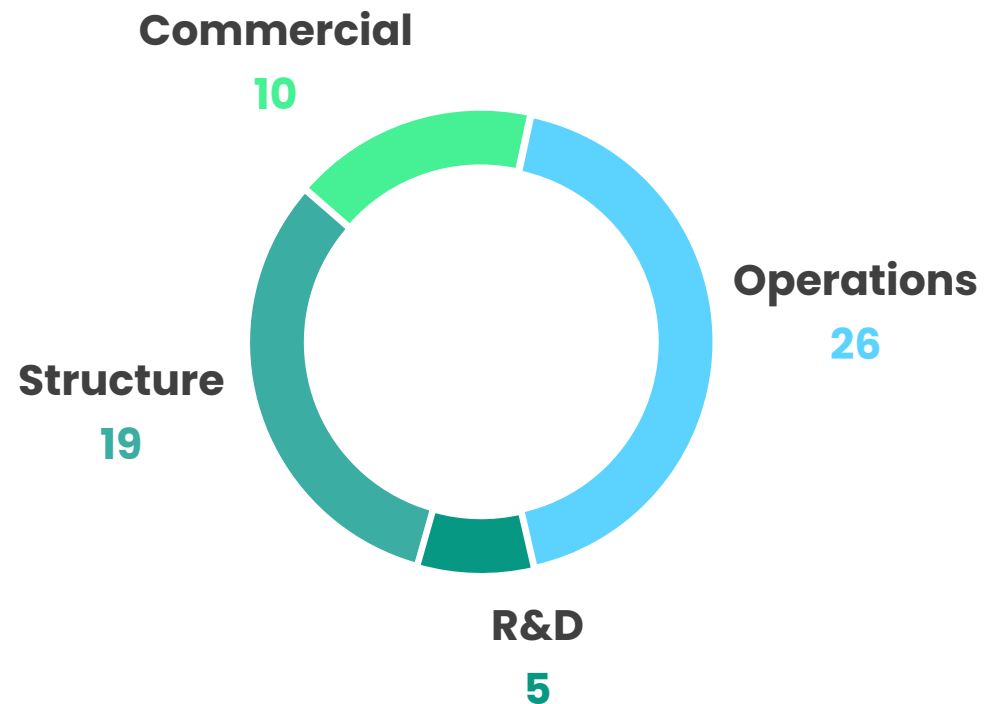
- **Phase 1:** €1,536K
 - Demonstrator purchased for €700K
- **Intermediate phase:** €0K
 - Installation of a new demonstrator owned by Haffner Energy
- **Phase 2:** €2,854K
 - 2 modules with hydrogen production of 30 Kg/h
- **Total contract:** €4,120K
 - **2 modules** installed for a **hydrogen production of 30 kg/h**

New demonstrator being developed, to be installed in Q1 2023
Final module delivered end 2023



Acceleration of the Company's structuring

Employee breakdown as of today



- Recruitment of **26 people** during the first half of the year
- **48 employees** as of September 2022 and **60 as of today**
- **+100 employees expected** mid-2023, notably to strengthen operations and sales



Anticipation of **supplier orders**

1- Anticipation of supplier orders

- To guarantee reasonable delivery times and benefit from volume effects
- On components and sub-assemblies with long lead times: compressors, PSA, furnaces
- Total down payments of €6.8 million, representing half of the €12.6 million cash burn for the period

2- Xebec's situation

- 8 PSAs ordered in June 2022, down payments of €2.4 million as of September 30, 2022
- Supplier placed under the Canadian Creditor Protection Regime (CCAA) on September 29, 2022; recovery process underway
- Negotiations are underway to secure the down payments by providing, as soon as possible, the plans and main components of the PSAs, which will allow their assembly by already identified subcontractors.



Key figures Half-Year 2022 – 2023 (IFRS)

Key Figures			
In €k	30 September 2022	30 September 2021	Comments
Turnover	-	316	Ongoing transition towards the development and supply of HYNOCA® and SYNOCA® solutions
EBITDA	(4,204)	(1,535)	Structuring of activity, with new employees (26 hires) and more external charges
Operating Result	(5,241)	(1,614)	Termination loss on contracts of €922k
Net Result	(5,274)	(1,656)	
In €k	30 September 2022	31 March 2022	Comments
Equity	49,170	54,253	
Available Cash	48,814	61,429	Cash flow partly used to make anticipated supply of key components
Net Cash Position	43,043	55,277	

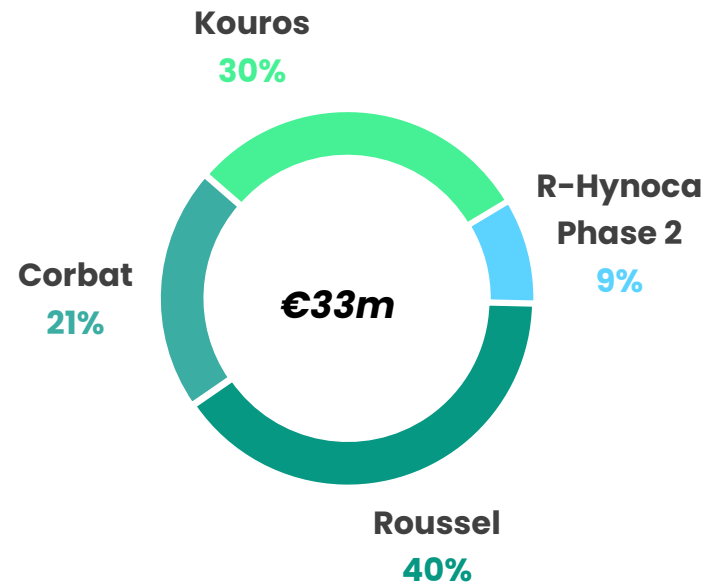


Backlog evolution

IPO's Backlog : €33m

Backlog as of 30.09.2022: €54m

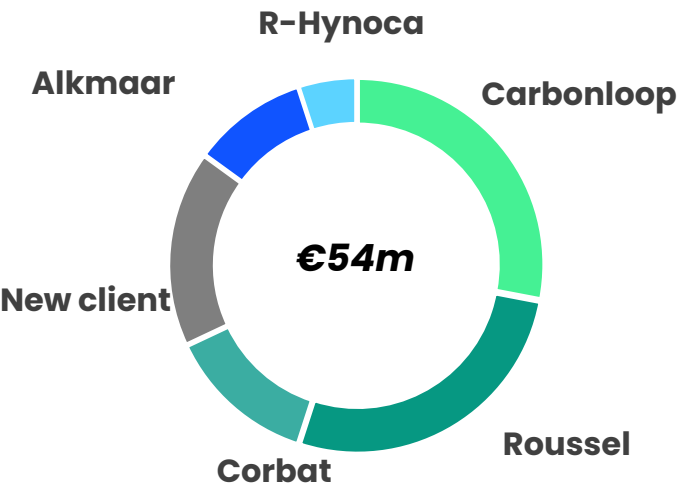
Backlog = signed purchase contract or purchase order / signed letter of intent or specifications / specifically created project company with financial commitment / advance payment received



+

Alkmaar: client in pipeline at IPO, SPV created

New client, not in pipeline at IPO: LOI signed, hydrogen mobility project





Pipeline evolution

IPO's Pipeline* : €183m

Pipeline as of 30.09.2022: €235m

**Pipeline = preliminary feasibility study completed / budget offer or preliminary business plan / letter of intent sent / participation in tender*



Customers' wait-and-see attitude expecting finalization of public policies



- Inclusion of biomass thermolysis in the ADEME "Hydrogen Territorial Ecosystems" calls for projects will allow public financing of Haffner Energy's customers' investments.
- Haffner Energy and France Hydrogène working together to simplify the ICPE 3420 heading applicable to hydrogen production in order to shorten the administrative procedures necessary to start the projects.



- Ongoing inter-institutional discussions about the legislation applicable to renewable and low-carbon hydrogen.
- Proposal for a directive on the certification of negative emissions. This proposal should allow biochar, a co-product of our sustainable biomass thermolysis process, to benefit from a regulatory environment at the European level that will help accelerate the ramp-up of Haffner Energy's business model.

Developers want a clear regulatory framework which should be in place by early 2023.



Outlook 2022–2023: Turnover



Revenue registered on a percentage of completion basis



Wait and see attitude of customers with regards to the release of government fundings



Delay in the delivery of certain components

Impact on 2022/23 revenue target



Medium-term outlook reinforced by the climate emergency, soaring energy prices and the geopolitical context



Extension of the addressable market to syngas (SYNOCA® solution):

- Haffner Energy's biomass thermolysis technology produces Hypergas®, a precursor of hydrogen, which is an advantageous replacement for natural gas for industry



Improvement of the price competitiveness of HYNOCA® and SYNOCA® solutions

- Haffner Energy's solutions are not related to the energy cost because of their low gas and/or electricity consumption



Small increase in the price of biomass and the increase in the price of biochar co-product



Drastic shift in the United States

- The Inflation Reduction Act is a major opportunity for Haffner Energy. Support for hydrogen production is tied to carbon footprint in life cycle analysis, which strongly favors carbon-negative solutions.

Perspectives



Strong structural trends supporting the deployment of the technology, accelerated by the strategic issues of Europe's **energy independence** and **decarbonisation**



Carbon negative technology contributing to global Net Zero targets



A technology allowing continuous production throughout the year for more than 8,000 hours with no impact on the electricity grids



Flexible, versatile technology for mobility and industry and **reduced dependence** on electricity sources



Cost competitive and decoupled from electricity prices, weather conditions and natural gas prices



Contribution to the **circular economy** with positive impact on local communities, production at the place of consumption. Support to local agro-forestry chains, local jobs that cannot be relocated



Multiplication of **regulations and support** for decarbonization and hydrogen in the EU and United States

Confirmation of €250m revenue target for the 2025-26 financial year