Teaser

January 2021





SYLFEN – Hydrogen for buildings and eco-districts

A turnkey modular hardware and software solution enabling real estate managers to achieve their energy transition targets



Sylfen - An experienced and ambitious company ready to scale-up

An all-in-one hydrogen solution for real estate owners

- Created in 2015 in Grenoble, Sylfen develops an innovative hydrogen-based energy storage solution - the Smart Energy Hub - addressing the needs of buildings and eco-districts markets:
 - Ability to develop and promote green buildings with smart integration of any intermittent energy sources
 - Energy costs control and reduction, with energy bills cut by 50% or more
 - CO₂ emissions reduction
 - Easy addition of other energy services for **mobility** or **smart-grid** applications
 - Patrimonial value creation on the real estate
- In addition to competitive performances, Sylfen's solution is delivered as a turnkey, easy to integrate equipment along with a disruptive real-time and predictive multi-energy management system. This results in reduced CAPEX and engineering costs compared to existing options



Local renewable energy production

Low/passive energy building



- A software suite to optimize the supply of energy from local sources
- An energy processor to produce
 H₂ and restore electricity and heat
- **Li-ion batteries** for highly reactive responses
- **Hydrogen storage** to store energy on the longer term

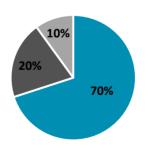
Key data

- 2.7 M€ of signed subsidized projects to field-test pilot units in:
 - Le Cheylas (2020)
 - Torino (2021)
 - Procida (2021)
- 1.0 M€ of signed commercial orders for 2 projects in:
 - Hauts-de France (2021)
 - Monaco (2022)
- > 2 M€ of commercial projects under proposal

- 5 years of R&D for the development of the Smart Energy Hub
- EBITDA 2020: 460 k€ (estimated)
- 260m² of office space and 460m² of workshop for manufacturing. Sylfen assembling infrastructure is compatible with a production rate of 1-2 Smart Energy Hub per week
- 18 employees: top management (3), business development and sales (4), software (4) and operations (7) + outsourced FTEs

Contemplated fundraising

Shareholding structure



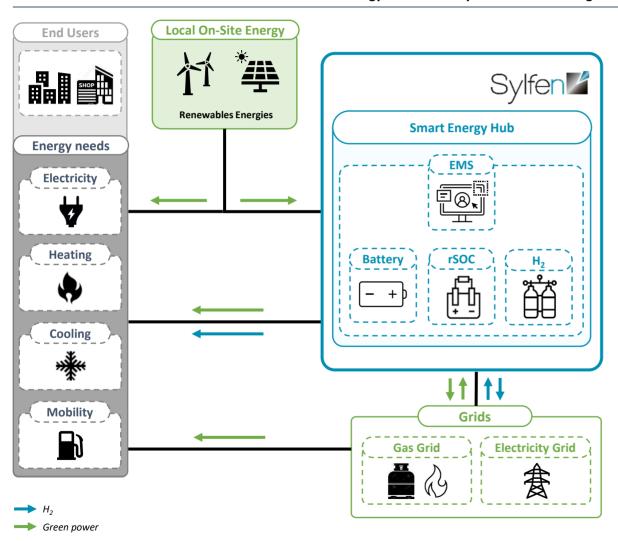
- Management
- CEA Investment
- InnoEnergy

- The contemplated transaction consists in a 3 M€ to 5 M€ Series A financing (equity and/or quasi-equity) to be made during S1 2021
- Use of proceeds:
 - Develop sales in 5 selected European countries and in France
 - Improve the product to full industrial status and prepare for scaling-up
 - Prepare industrialization through the optimization of the supply-chain and investment in the assembling process
 - Improve the pre-sale software tools and prototype Sylfen's customer app and AI based tools
 - Accelerate the recruitment



A fully packaged and innovative solution for real estate owners

The Smart Energy Hub: a turnkey solution for buildings and eco-districts



- Sylfen's 4-in-1 fully packaged solution is providing electricity, heat, cold and hydrogen. The Smart Energy Hub includes:
 - A reversible electrolyser / fuel-cell: the rSOC technology, alternatively supplying at highest efficiency
 (i) green hydrogen from local electricity or (ii) combined heat & power from hydrogen, methane or a mix of both
 - A hydrogen compression and long-term storage unit
 - Li-ion batteries
 - A multi-energy EMS
- It allows both:
 - Storing excess energy generated by solar panels (or other renewable power sources) for several days to months
 - Covering local electricity and heating needs even in periods of low renewable energy availability
- The Smart Energy Hub can also be configurated to provide hydrogen for a fueling station, or power flexibility as a grid service
- Sylfen's innovative EMS, developed in-house, enables to perform the global supervision of the Smart Energy Hub, with plug-in smart forecasting and optimization tools. The fully automated on-site energy management software offers:
 - Dynamic analysis of all buildings' energy needs and optimized real-time energy management
 - Predictive analysis of building's energy behavior and predictive maintenance (AI & big data-based tools)
 - Reporting through the customer interface



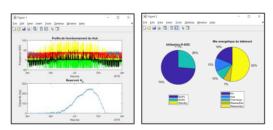
A turnkey modular hardware and software solution

Two tailor-made software solutions to closely assess customers' needs

- Sylfen has developed two pre-sales tools:
 - The first one develops the dynamic profiles of power and heat demand for new and existing buildings



 The second one is a multi-criteria simulation software to define the best system configuration for each customer's site and specific goals



An innovative and modular hardware tailormade for buildings and eco-districts

 The Smart Energy Hub is a fully integrated modular product suitable for any type of building that can be customized to meet customers' needs



Standard design of the Hub



Example of another possible design

A real-time EMS for real estate managers to manage their energy consumption

 Sylfen has developed an innovative and userfriendly EMS architecture for the global supervision of the Smart Energy Hub, with plugin smart forecasting and optimization tools





A strong team of experts to deploy the solution

An experienced management team



Nicolas BARDI

Co-Founder & CEO

- Focus on financing, key partnerships and development
- Contributed in the rSOC systems design and operation
- Experiences at CEA in strategic positions (head of European Affairs, member of the CEO's team)
- Managed CEA's fuel cells program, a R&D department with more than 100 staff and 16M€ turnover
- Ecole des Mines de Paris and Sciences Po Paris graduate



Caroline ROZAIN

Co-Founder & CCO

- Leads business development and manages the commercial and studies team
- Established the value proposition, sales strategy and managed the pre-sale software development
- Institut National Polytechnique de Grenoble graduate PhD in electrochemistry on hydrogen production at CEA-Liten and University Paris-Orsay



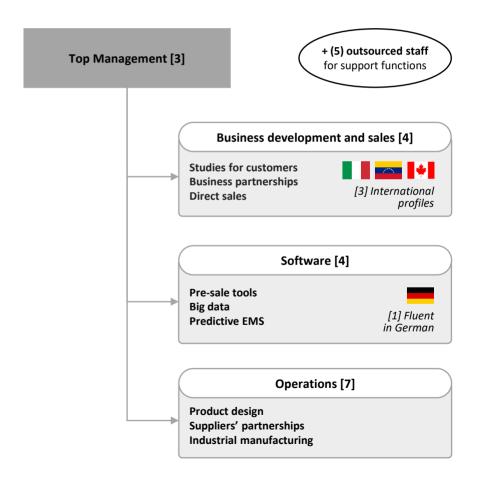
Marc POTRON

coo

- Leads the products (hardware and software) design and delivery, and defines the industrialization roadmap
- 30-year-experience in the industrial design of high performance and high requirement systems in the aeronautics and defense industry
- Managed business units at Thales, Assystem, Nexeya
- Expert in automation, software development
- Ecole des Arts et Métiers graduate

A strong international core-team with complementary expertise

 A team comprised of eighteen engineers, software designers, salesmen and product developers gathering strong expertise in hydrogen, system integration and business development





Key investment highlights

1	A turnkey solution enhancing the environmental performance of buildings and ecodistricts	 The solution developed by Sylfen meets real estate owners' need and regulatory obligations to implement energy transition in their real estate with the best possible cost-benefit ratio: Reduction and control of energy costs Reduction of CO₂ emissions Creation of a patrimonial value on the real estate Easy addition of other energy services for mobility (i.e. H₂ refueling stations) or smart-grid applications Sylfen takes over the whole process of enhancing the environmental performance of the site, delivering clear KPIs on the expected performances and costs, making the whole process simple and reliable The potential market of energy supply of buildings and eco-districts in Europe only is estimated at 4.5 billion euros
2	An all-in-one and proven energy storage & supply solution	 Sylfen's technology is the central piece of a multi-energy system. It is a hydrogen based integrated solution enabling heat, cold, hydrogen and electricity production from renewable sources The solution offers great flexibility in production and consumption with a local hydrogen storage system tailored to the needs of the site. It is a proven and constantly improving solution with a prototype delivered in 2018 and operated both at the CEA in Grenoble and at Engie in Paris and a field-test pilot unit installed in Le Cheylas in 2020
3	A disruptive real- time EMS developed in-house	 Sylfen has developed a modular and evolutive software for the global supervision of the Smart Energy Hub, with plug-in smart forecasting and optimization tools enabling a smart and real- time energy management of power and heat fluxes for the customer's buildings
4	An experienced team ready to deploy its solution	 A company focused on innovation, with a 5-year R&D and product development track record A team comprised of talented engineers and software designers gathering leading expertise in hydrogen, system integration and business development An operational efficient, responsible and flexible industrial infrastructure ready to produce and deliver the Smart Energy Hub in large quantities





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