

UNLIMITED HYDROGEN

**CLEAN FACTORY
REVOLUTION**

**CLEAN MOBILITY
REVOLUTION**

BY McPhy



Investor Presentation

July 2019

Agenda

- 1 Introduction
- 2 McPhy's strategy | Focusing on building tomorrow's profitable growth
- 3 H1 2019 Key Highlights
- 4 2020: market outlook

McPhy

Driving
clean energy
forward

Introduction

July 2019



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Our “raison d’être”: DRIVING CLEAN ENERGY FORWARD



As a pioneer of hydrogen technologies in the service of energy transition, McPhy has in ten years positioned itself among the leaders in clean hydrogen.

Our ambition: designing innovative clean hydrogen solutions that are “Fit for purpose. Ready for the future.”

Pascal MAUBERGER | Chairman & CEO

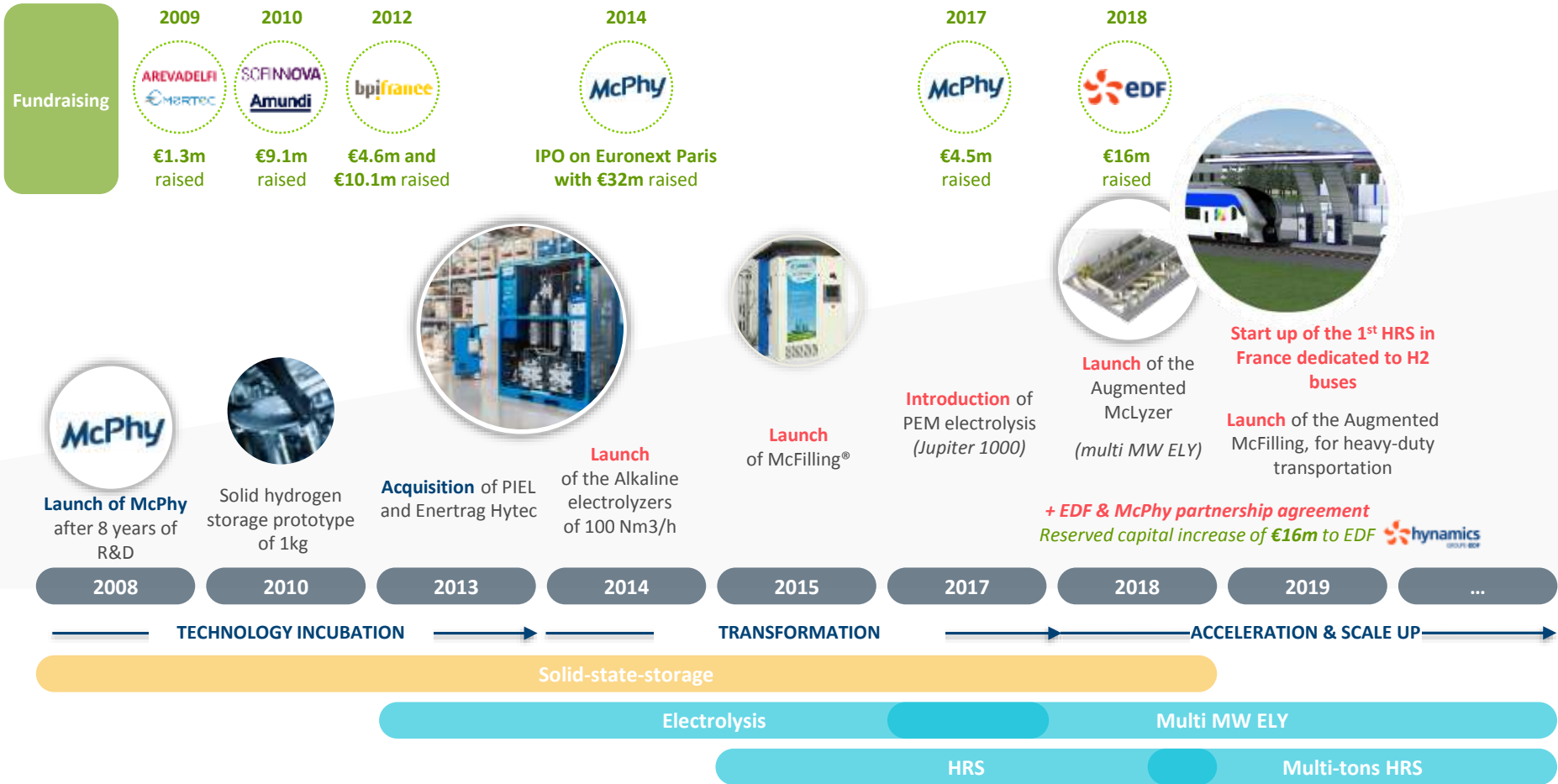
Being a global innovative player
committed to helping our Customers transition
to a low-carbon society

⇒ *friendly to the planet / environment
& friendlier to the people*

Thanks to hydrogen, used as a #CleanEnergy vector
in the energy, industry and mobility markets

Born from innovation, driven by ambition

A PIONEER AT THE FOREFRONT OF INNOVATION





CONSOLIDATED
EXPERIENCE

23 HRS
A DAILY POTENTIAL OF
69,000
ZERO-EMISSION KILOMETERS
#CLEANMOBILITY

MCPHY WILL HAVE INSTALLED
16 MW
OF HIGH CAPACITY ELECTROLYZERS
= **MORE THAN**
7 TONS OF CLEAN HYDROGEN
PRODUCED PER DAY

A premier industrial infrastructure 3 CENTERS OF EXCELLENCE IN EUROPE



FRANCE

Innovation platform, test bench and industrial manufacturing site dedicated to Hydrogen Refueling Stations



ITALY

Best in class workshop for stack manufacturing and the assembly of PIEL & McLyzer electrolyzers (up to 0,5MW)



GERMANY

Development and EPC for multi MW electrolysis systems

← INTEGRATED APPROACH | GLOBAL REACH →



Piel, McLyzer and McFilling A MATURE PRODUCT PORTFOLIO CAPABLE OF ADDRESSING ALL THE NEEDS



Piel Electrolyzers
From 0,4 to 12 Nm³/h
1 to 8 bar



McLyzer Electrolyzers
From 10 to 800 Nm³/h
30 bar

Augmented McLyzer
Multi MW concepts:
20 to +100 MW (30 bar)



McFilling Hydrogen stations
Small, medium and large capacities
350 and/or 700 bar

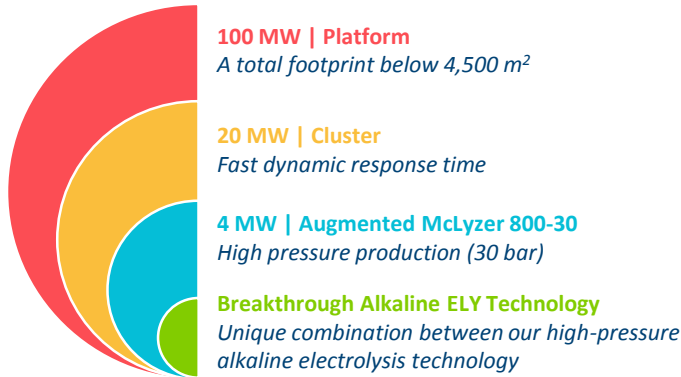
Augmented McFilling
2,000 to +10,000 kg / day



Services
A wide array of services:
remote supervision,
preventive maintenance,
training of your staff, ...

McPhy, READY FOR THE SCALE UP of hydrogen market

| Electrolyzer



| Refueling Station





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MCPHY'S STRATEGY

Focusing on building tomorrow's profitable growth

July 2019



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“

Three key pillars to build tomorrow's growth ”

1

Stay at the **cutting edge** of hydrogen technology

2

Build **key references** in the new markets

3

Build **partnerships** to leverage sales efforts and accelerate development

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1

Stay at the **cutting edge** of hydrogen technology



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Launching disruptive products matching our clients' needs

Electrolyzers



ZERO
EMISSION
MOBILITY



LOW CARBON
INDUSTRY

- Systems ranging from few MW up to 100 MW and over
- High energy efficiency, and high dynamic response
- Reduced foot print
- Improvement of competitiveness

Refueling stations



ZERO
EMISSION
MOBILITY

- Deploying hydrogen mobility solutions on a large scale
- A strategy to support the development of infrastructure for increasingly heavy vehicles and large rollers (fleet of vehicles, buses, trucks and trains)



Augmented McLyzer
Our new generation of electrolyzers



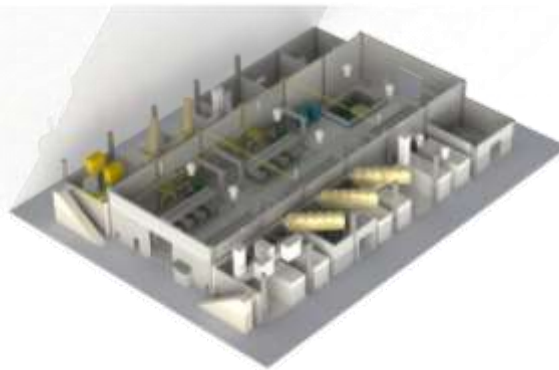
Augmented McFilling
Large-scale clean mobility solutions

2018, a year full of innovation

AUGMENTED McLyzer



- A techno. breakthrough, 2 years of R&D
- Modular architecture with capacities of 4, 20, 100 MW and more
- Doubling the amount of hydrogen produced, while combining high energy efficiency, reduced footprint and drastic improvement of competitiveness
- Value added recognized by the industrial players



McFilling 700 bar



- Positive tests conducted alongside Toyota on a 700 bar testing platform
- First delivery: 2019, in Germany for Shell



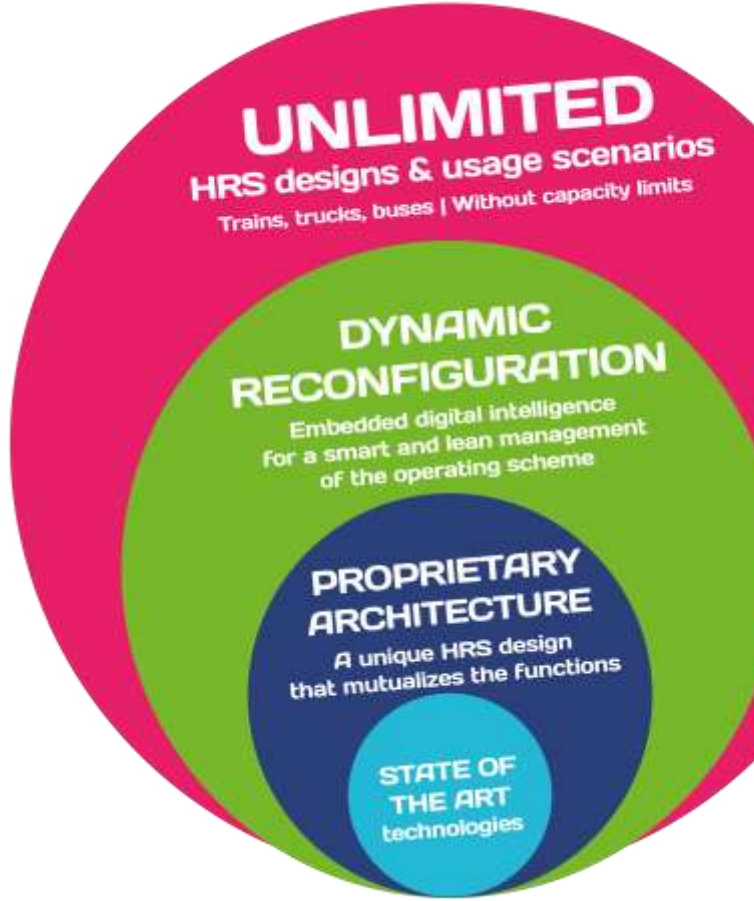
**NEW
2019!**

2019: accelerating the pace of change

Launch of Augmented McFilling + Patent deposit



- A HRS dedicated to heavy-duty transportation (trains, trucks, buses)
- An innovative combination of shared functions and dynamic reconfiguration of the station's operating scheme
- The software intelligence that makes the hydrogen station dynamically reconfigurable is a proprietary and patented technology





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2

Build **key references** in the new markets



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MCPHY WILL HAVE INSTALLED
16 MW
OF HIGH CAPACITY ELECTROLYZERS
= MORE THAN
7 TONS OF CLEAN HYDROGEN
PRODUCED PER DAY

Audi | 6 MW | 2013

Prenzlau | 0.5 MW | 2013

H2Ber | 0.5 MW | 2014

Hebei | 4 MW | 2017

EnergieDienst | 1 MW | 2017

Jupiter 1000 | 1 MW | 2018

RAG | 0.5 MW | 2018

SMT-AG | 0.5 MW | 2019

Confid. | 2 MW HCD | 2019

Installing high capacity electrolyzers FOR LEADING PLAYERS

MCPHY WILL HAVE INSTALLED
16 MW
OF HIGH CAPACITY ELECTROLYZERS
= MORE THAN
7 TONS OF CLEAN HYDROGEN
PRODUCED PER DAY

- **Werlte** (Germany)
6 MW
- **Prenzlau** (Germany)
0.5 MW



- **Project H2Ber**
Berlin (Germany)
0.5 MW



- **EnergieDienst and ZSW**
(Germany) 1 MW



- **Hebei** (China)
4-10 MW platform



Zero Emission
Mobility

Low carbon
Industry

Renewable
Energy

EnergieDienst
ZSW
2017

- **Jupiter 1000** | Fos-sur-Mer (FR)
1 MW (PEM + Alkaline)
- **RAG Austria**
0.5 MW



RAG
RAG.AUSTRIA.ENERGIE
2018



- **SMT-AG Artois-Gohelle** (France)
0.5 MW



23 HRS
A DAILY POTENTIAL OF
69,000
ZERO-EMISSION KILOMETERS
#CLEANMOBILITY

Symbio Grenoble | 2015

McPhy LMF | 2015

City of Paris | 2015

ENGIE GNVert Lyon | 2015

Valence Romans Agglo | 2015

City of Rouen | 2017

Sarreguemines | HRS + ELY | 2017

ENGIE Lab Singapour | 2018

RiverSimple UK | 2018

Semitan Nantes | 2018

Rungis | 2018

SMT-AG (buses) | HRS + ELY | 2019

H2 Mobility Deutschland | 2019

CC Touraine Vallée de l'Indre (Sorigny) | 2019

EAS-Hymob (x7) | 2019

ENGIE GNVert Lyon | HRS + ELY | 2019

Confid. | HRS + ELY | 2019

Offering a full range of hydrogen stations TO ACHIEVE THE CLEAN MOBILITY REVOLUTION

23 HRS
A DAILY POTENTIAL OF
69,000
ZERO-EMISSION KILOMETERS
#CLEANMOBILITY

- **City of Paris (France)**
1st HRS McFilling 20-350, inaugurated during the COP 21 (Climate Conference)



- **ENGIE Lab Singapour**
1st HRS adapted to a tropical area



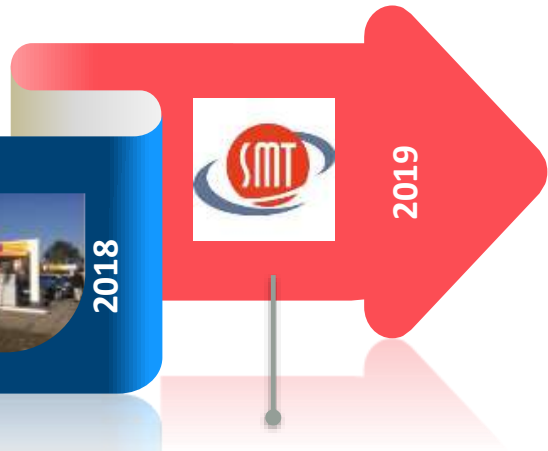
- **CASC | FaHyence (France)**
First HRS in France connected to an electrolyzer for a true chain of clean mobility



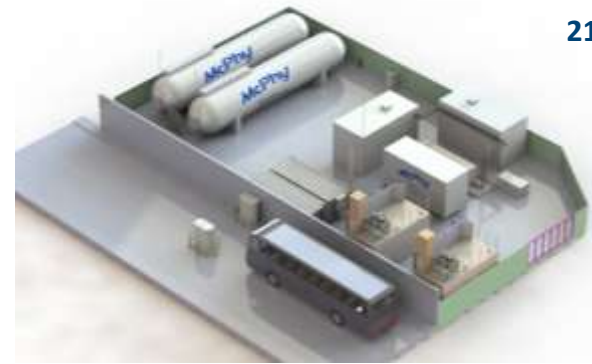
- **H2 Mobility Germany**
Development of the 700 bar offer. First contract signed in Germany.



- **SMT-AG Artois-Gohelle (France)**
First HRS in France dedicated to a 100% hydrogen-powered bus line (0.5 MW ELY)



The first station in France dedicated to hydrogen buses



McFilling
200-350
+
McLyzer
0,5 MW





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3

Build **partnerships** to leverage sales efforts
and accelerate development



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CONTINUING TO POWER AHEAD



- *Developing proprietary technologies*

**Techno.
partnership**

Hydrogen Council

- *Increasing our visibility within the hydrogen ecosystem*
 - *Working with our pairs to develop the market*

**Public
partnership**

**Industrial
and
commercial
partnership**



- *Reinforcing R&D*
- *Accelerating the pace of business development*
- *2 core markets: industry & mobility*

EDF & McPhy: common core targets



Large industry

- Clean Industry Revolution
- Oil and gas refineries, chemical processing, steel mills, thermal power stations, ...
- Supplying industrial companies with low carbon hydrogen
- Reconciling productivity, competitiveness and social responsibility
- Security of supply, control over the costs, reliability, continuity of service, security



Heavy Transportation

- Clean Mobility Revolution
- Decarbonized hydrogen production equipment + hydrogen refueling stations
- Scaling-up the zero emission mobility solutions: large fleets, buses, trains, boats, ...
- Ensuring a high-quality service all while contributing to improve air quality and public health

April 2019

EDF launches **Hynamics**, a subsidiary responsible for offering effective low-carbon hydrogen for industry and mobility with the ambition to become a **key player in the hydrogen sector in France and around the world**



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H1 2019 Key Highlights

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2018 key achievements

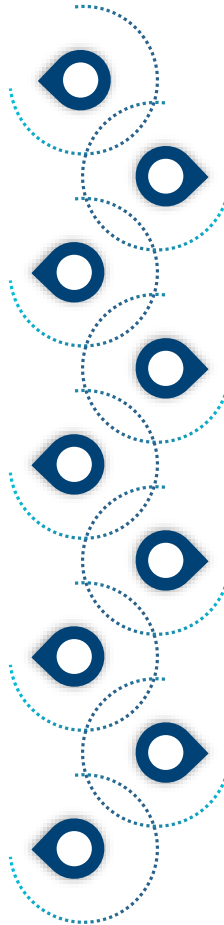
Long-term **supply agreement with De Nora** to integrate its advanced electrodes in McPhy's electrolyzers

Collaboration with Toyota to conduct tests on McPhy's prototyping and testing platform for **700 bar stations**

Signature of a 1st contract for large refueling stations : SMT-AG (Lens-Bethune city) for a **1st HRS for buses**

Development of the **new PIEL line**

Reserved capital increase of €16m to EDF with a 21.7% stake in the capital



Launch of the **Augmented McLyzer technology**

Signature of a **1st station at 700 bar in Germany**: H2Mobility Germany

Successful commissioning: PUS, Rungis, RiverSimple, Hebei, Jupiter 1000, RAG, EnergieDienst

Industrial and commercial partnership with EDF to develop a carbon-free hydrogen in France and around the world

H1 2019: an excellent commercial momentum

IFRS (in €m)	H1 2019	H1 2018
Sales revenue	4.3	3.5
Other ordinary income	0.4	0.5
Income from ordinary operations	4.7	4.0
Purchases	(1.8)	(1.9)
Staff costs	(3.5)	(3.1)
External charges	(3.0)	(2.5)
Allowance for depreciation, amortization & reserves	(0.4)	(0.5)
Current Operating Income (EBIT)	(4.1)	(4.0)
Non-current expenses and income	(0.0)	(0.1)
Operating Income	(4.2)	(4.1)
Net financial income (expense)	(0.0)	(0.0)
Income tax expense	(0.0)	(0.0)
Net income (loss)	(4.2)	(4.1)

- **23% increase in H1 2019 revenue** compared to H1 2018, driven by the launch of the refueling station for the first 100% hydrogen bus line in France
- **Personnel costs** increase (+€0.4m) is due to the strengthening of the staff
- **External charges** increase is due to purchases and subcontracting linked with increase in revenues

Balance sheet

- Main variances on other assets and financial debt (link to IFRS 16 for €1.2m in assets and in debt) and Receivables increasing link to the activity End of the semester

Assets (in €m)	30/06/19	31/12/2018
Non current assets		
Goodwill	2.5	2.5
Other assets	3.5	2.6
Other non current assets	0.4	0.4
Total non current assets	6.5	5.5
Current assets		
Inventories	2.2	2.2
Trade and other receivables	9.3	6.6
Current tax assets	0.4	0.7
Financial assets	-	-
Cash and cash equivalents	8.6	14.9
Total current assets	20.3	24.4
Total assets	26.8	29.9

Equity and liabilities (in €m)	30/06/19	31/12/2018
Shareholders' equity		
Share capital	1.8	1.8
Additional paid-in capital	24.2	31.2
Treasury stock	(0.2)	(0.1)
Retained earnings	(14.2)	(17.2)
Total Shareholders' equity	11.7	15.7
Non-current liabilities		
Provisions – over 1 year	0.6	0.6
Financial debt – over 1 year ⁽¹⁾	5.7	5.2
Other non-current liabilities	0.5	0.5
Total non-current liabilities	6.8	6.2
Current liabilities		
Provisions – under 1 year	0.5	0.8
Financial debt – under 1 year	1.1	0.8
Trade and other payables	3.6	4.2
Other current liabilities	3.2	2.3
Total current liabilities	8.4	8.0
Total equity and liabilities	26.8	29.9

Note: (1) In July, waiver of the repayment of €3.1m loan from BPIfrance Financement

Cash-Flows

- Operating cash-flow : -€5.7m
- Net cash position of €8.6m at June 30, 2019

In €m	H1 2019	H1 2018
Cash-Flow	(3.7)	(3.4)
Working capital requirement ⁽¹⁾	(2.0)	(0.4)
Operating Cash-Flow	(5.7)	(3.8)
Capex	(0.2)	(0.3)
Projects pre-financing	-	(1.8)
Change in other loans	(0.6)	0.6
Capital increase	0.1	18.8
Change in cash	(6.3)	13.4
Opening cash	14.9	5.0
Closing cash	8.6	18.4

Note: (1) Mainly due to increasing of customer End of the semester

H1 2019 key highlights

Over €5m in orders received

- **EAS-HyMob project in Normandy:** a 6-station order in Eure and Calvados
- **Zero Emission Valley project:** order for a next-generation 40kg/day 30-bar electrolyzer
- **Germany:** order of 2 MW additional electrolysis capacity for the energy market
- **Bangladesh:** order from the Bangladesh Meteorological Department for 11 electrolyzers from the PIEL line

Launch of “Augmented McFilling”

- New **smart, patented, proprietary hydrogen station architecture** for heavy duty vehicles
- For an **infinite number of usage scenarios** and **real-time adaptation** to customer needs
- **Dynamically reconfigurable**
- **No capacity limits**



Inauguration of France’s first refueling station for hydrogen buses

- **First 100% hydrogen bus line in France** inaugurated by the Artois-Gohelle transport authority (SMT-AG)
- Project equipped with **McLyzer and McFilling** technologies
- **Production of clean hydrogen** on site by **electrolysis**
- 15 min of refueling gives the buses over **300 km of autonomy**
- Delivery, by the McPhy station, of **200+ kg of clean hydrogen a day**



Post-closing key highlights

2 new orders for a total amount of €2m

McFilling station in Germany



- Order of a McFilling 200-350 station for a similar project to the one achieved with the SMT-AG
- Order from the same client of a **McLyzer 400-30 electrolyzer** early this year

McFilling station in Normandy



- An additional order of a McFilling station for the EAS-HyMob project in Cherbourg
- This order increases to **23 the number of McFilling stations installed or currently being installed**



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2020: market outlook

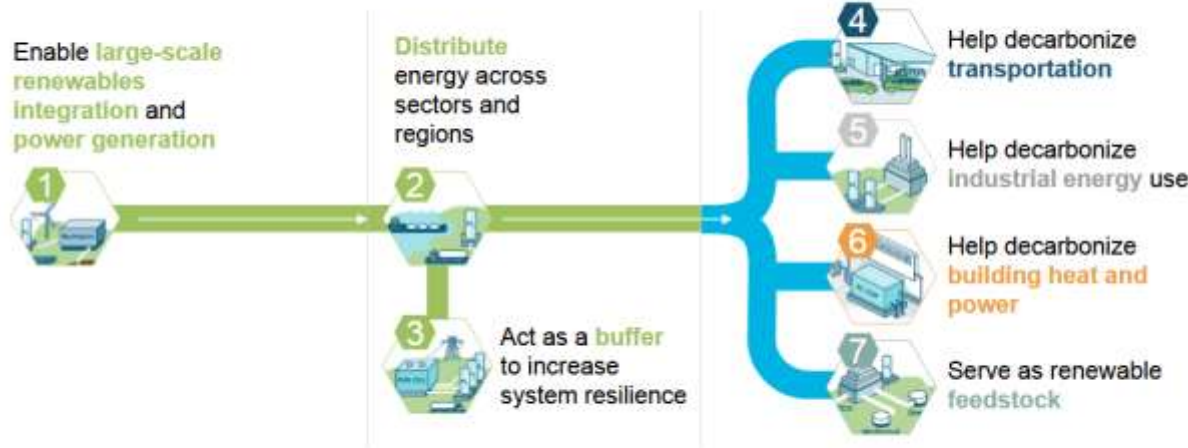
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Towards a clean and secure energy future: THE 7 ROLES HYDROGEN PLAYS IN THE ENERGY TRANSITION

Enable the renewable energy system → Decarbonize end uses



There is a global consensus: **hydrogen makes a positive contribution to the world around us**, by providing a solution for energy, environmental, societal and economic challenges.

The future of hydrogen A VISION FOR 2050



18%
of final energy
demand

6 Gt
annual CO₂
abatement

\$2.5 tr
annual sales
(hydrogen and
equipment)

30 m
jobs created

The pace of growth is accelerating | MOBILITY



Alstom win world's largest order for hydrogen-powered trains

Market Business News - 10 juin 2019

By winning the world's largest tender for **hydrogen-powered trains**, Alstom is on track to help Germany green its **rail industry**. Fahme ...

Fuel cell bus @Fuelcellbus · 4 juin

The **H2Bus Consortium** aims to deploy 1000 #fuelcell buses in Europe 🇪🇺 - Biggest deployment to date! 🚌

Read more here: fuelcellbuses.eu/public-transpo...

#CEFTtransport #Hydrogen #CleanTransport #FutureOfTransport

Traduire le Tweet



Railcolor @railcolor · 2 juil.

[FR] French Auvergne-Rhône-Alpes region orders three hydrogen-electric multiple units from Alstom for its Lyon – Clermont-Ferrand line 🇫🇷



[FR] Auvergne-Rhône-Alpes orders three hydrogen Régiois trains

We have already talked about a hydrogen-powered Coradia Polyvalent multiple-unit and the possibility of experimenting this technology in France ...

railcolornews.com

The pace of growth is accelerating | INDUSTRY

\$50m green hydrogen project confirm New Zealand

By Molly Burgess | 24 June 2019



Ballance Agri-Nutrients and Hirlinga Energy have confirmed a joint development agreement for a \$50m clean-tech project in Taranaki to produce green hydrogen using renewable energy.

The project will be based at Ballance's Kapuni ammonia-urea plant and is seen as a catalyst for the development of a sustainable green hydrogen market in New Zealand to fuel heavy transport.

NOURYON AND GASUNIE TO SUPPLY GREEN HYDROGEN FOR BIOMCN RENEWABLE METHANOL PRODUCTION

By Mary Page Bailey | February 28, 2019



Nouryon (formerly AkzoNobel Specialty Chemicals; Amsterdam; www.nouryon.com) and Gasunie have agreed to supply green hydrogen to BioMCN for the production of renewable methanol from CO2. The companies say it marks the next step in the sustainability of processes in the industry.

Nouryon and Gasunie are currently investigating the possible conversion of sustainable electricity into green hydrogen using a 20- megawatt water electrolysis unit in Delfzijl, the Netherlands. A final decision on the project is expected later this year.

World first for steel: ArcelorMittal investigating use of hydrogen

By Ioanna Sampson | 1 April 2019



ArcelorMittal is investigating the use of industrial-scale hydrogen in the steel production process for the first time.

As part of the steel manufacturing giant's strategy to reduce CO2, ArcelorMittal plans to use hydrogen for the direct reduction of iron ore at its plant in Hamburg, Germany.

According to the company, the aim of the new hydrogen-based process to be able to produce steel with the lowest CO2 emissions.

SHELL TO BUILD WORLD'S LARGEST HYDROGEN ELECTROLYSIS PLANT AT RHEINLAND REFINERY

By Mary Page Bailey | January 19, 2018



Royal Dutch Shell plc (The Hague, the Netherlands; www.shell.com) and ITM Power will build the world's largest hydrogen electrolysis plant at Rheinland refinery, Germany. With a peak capacity of 10 megawatts, the hydrogen will be used for the processing and upgrading of products at the refinery's Wesseling site as well as testing the technology and exploring application in other sectors.

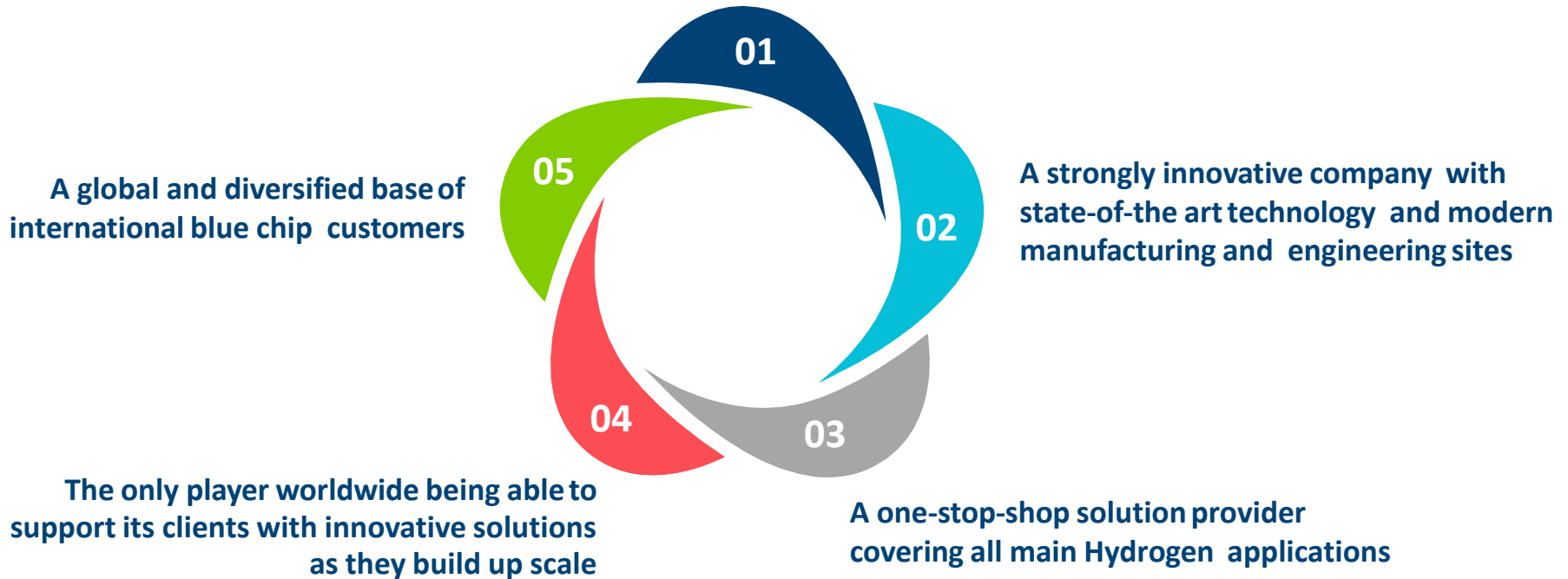


The only French player worldwide being able to address the whole value chain of Hydrogen

COMPANY	COUNTRY	CREATION	SHAREHOLDING	TECHNOLOGY			
				Electrolyzer		Storage	Distribution
				Alk.(1)	PEM		
1		1927	• Listed on Oslo Stock Exchange	✓	✓	✓	✓
2		1995	• Listed on NASDAQ and Toronto Stock Exchange	✓	✓	✓	✓
3		2008	• Listed on Euronext (Bpifrance, Emertec, Sofinnova)	✓	✓	✗	✓
4		2001	• Listed on Euronext	✓	✗	✓	✗
5		2001	• Listed on LSE	✗	✓	✓	✓
6		1968	• Listed on NASDAQ	✓	✗	✓	✓
7		2014	• Areva, ADEME, Smart Energies	✗	✓	✗	✗
8		1995	• Siemens	✗	✓	✗	✗
9		2015	• JV (De Nora & Thyssen Industrial Solutions)	✓	✗	✗	✗
10		1996	• CSHIC ⁽³⁾	✓	✗	✗	✗
11		2000	• n.a.	✓	✗	✗	✗
12		1987	• n.a.	✓	✗	✗	✗

McPhy, a leader in Hydrogen uniquely positioned to benefit from the strong market momentum of the energy transition

An unrivalled know-how in Hydrogen's core markets



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Thank you



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