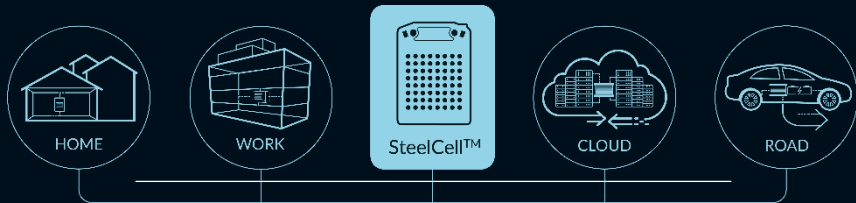


Our next generation
SteelCell™

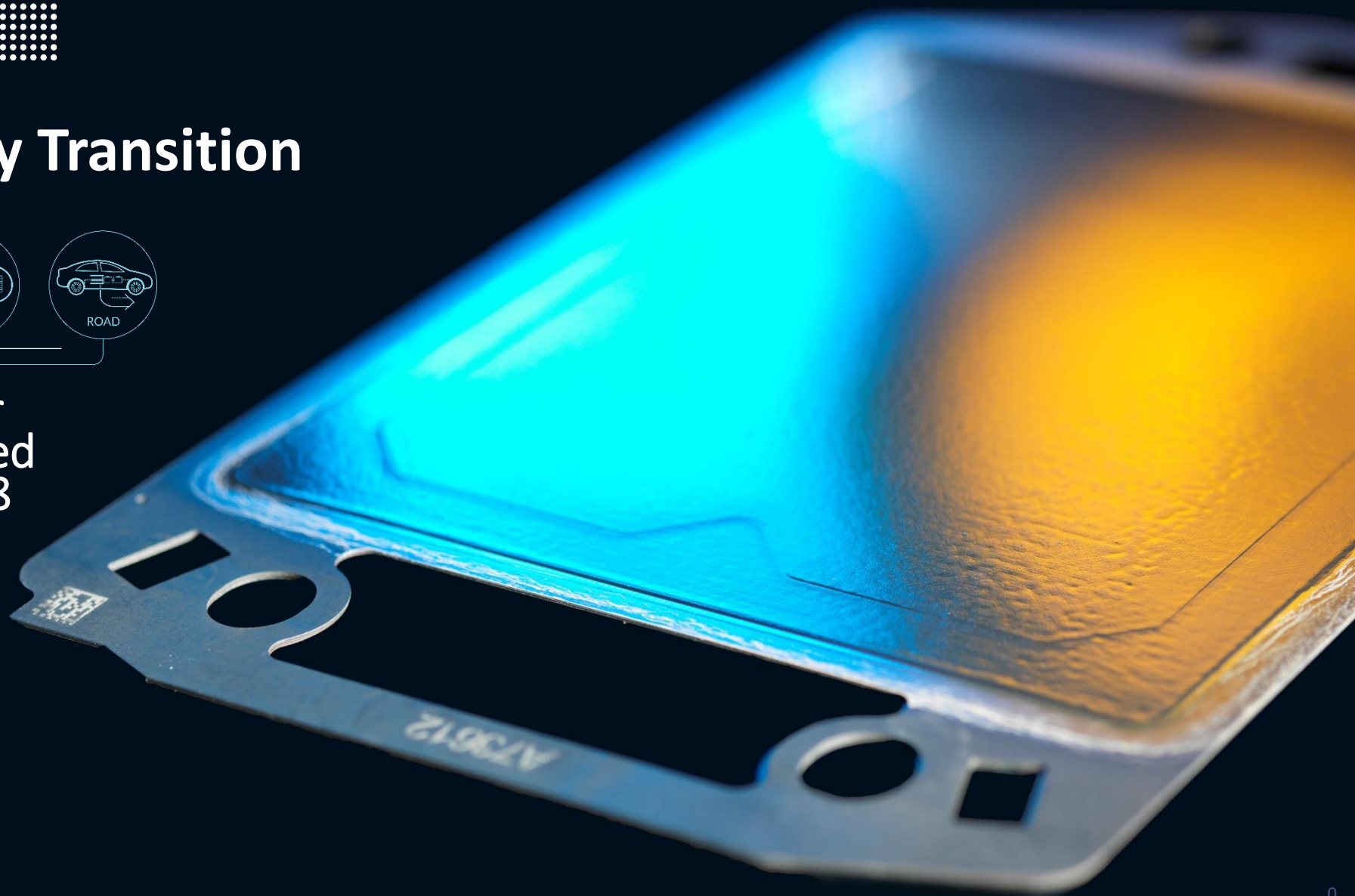


Power for the Energy Transition



Interim Results for
the six months ended
31 December 2018

Phil Caldwell CEO
Richard Preston CFO





**Interim results
6 months to 31 December 2018**

INTERIM HIGHLIGHTS

Commercial

- Strategic partnerships signed with Bosch and Weichai including equity Investment and License deals
- Revenue growth 168 % driven by high margin licenses

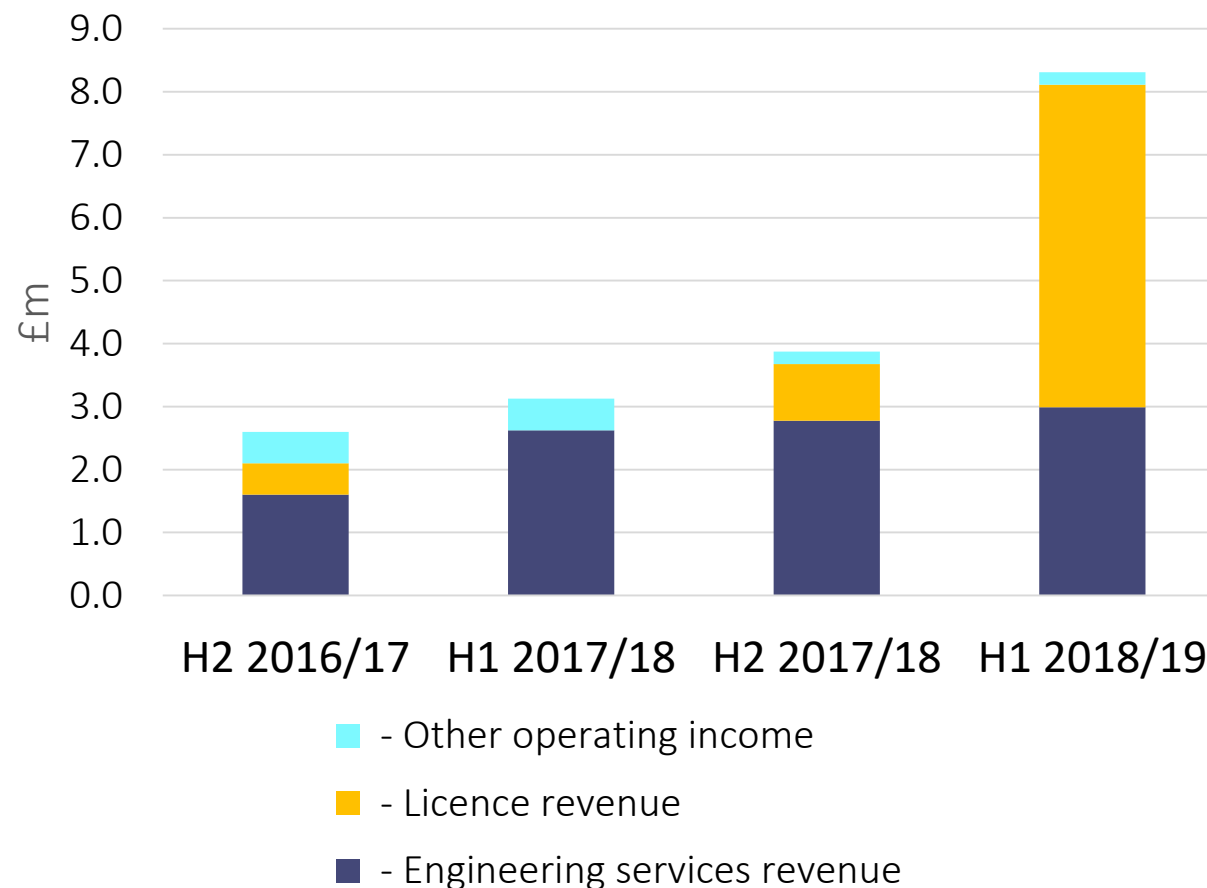
Financial

- Operating loss halved from £6.2 m to 3.0m
- Underlying equity free cash outflow reduced by 29%
- £78.4m in cash at 31 December 2018
- Fully funded to execute business plan

Technology and Operations

- £7.5 m UK reference manufacturing facility on track
- V5 Cell technology released enabling key milestone of 60 % net efficiency, ~2 x conventional combustion engines and competing with grid power

Licence revenue drives revenue growth

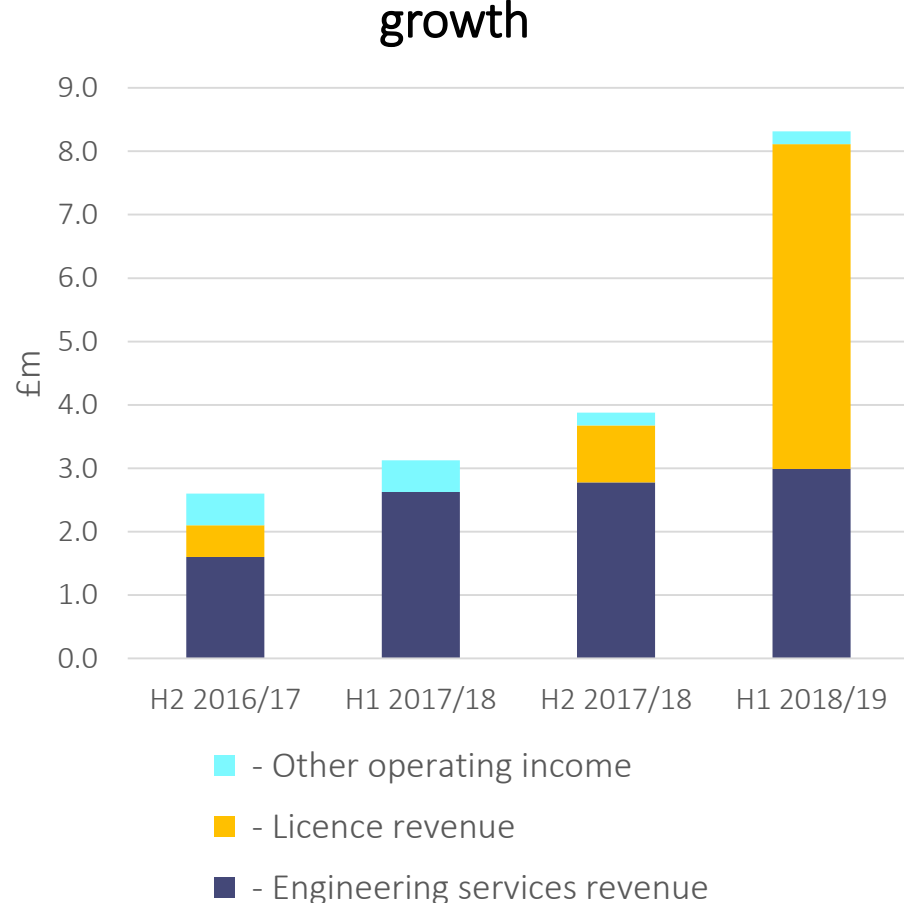


OUTLOOK

- Strong revenue growth with strategic partners
 - Revenue to double for fourth consecutive year to £15 m 2019 @ > 50% gross margin
 - Order book >£30m Engineering services and license revenue
 - Healthy pipeline with new partners at evaluation stage
 - Target an additional strategic partner in 2019
- Field trials with OEM partners 2019
 - Development of world first SOFC hybrid electric bus in mid 2019
 - Leading to small fleet trial and China JV in 2020
 - Other significant partner milestones due in 2019 on different applications from 5 to 30 kW
- Investment in UK manufacturing site – 2 MW reference plant and short-term capacity
 - Operational in the UK and with Bosch in Germany in 2020
- Potential to grow manufacturing with partners e.g. Weichai and Bosch in the future

Financial highlights – income and margin

Licence revenue drives revenue growth



£m	HY 2018	HY 2017	Change £m	Change %
Revenue and other operating income	8.3	3.1	5.2	168%
- Licence revenue	5.1	0.0	5.1	
- Engineering services revenue	3.0	2.6	0.4	14%
- Other operating income	0.2	0.5	(0.3)	(60%)
Margin on revenue %	82%	46%		
Order book at period end	30.5	4.1	26.4	644%

- Order book increase due to Bosch and Weichai

Financial highlights – income statement

£m	HY 2018	HY 2017	Change £m	Change %
Gross margin	6.7	1.2	+5.5	458%
Operating costs	9.8	7.9	(1.9)	(24%)
<i>Underlying operating costs ¹</i>	<i>9.1</i>	<i>7.9</i>	<i>(1.2)</i>	<i>(15%)</i>
Operating loss	(3.0)	(6.2)	(3.2)	52%
Income tax credit	0.9	1.0	(0.1)	(10%)
Loss for the financial period	(1.9)	(5.2)	(3.3)	63%

- Operating loss improved 52%
- Underlying operating costs 15% increase due to investment in people, capability and infrastructure to enable deliver of customer contracts.

¹ Underlying operating costs is operating costs less one off legal fees to complete the two strategic deals with Weichai and Bosch (2018: £0.5m, 2017: nil) and unrealised losses on FX contracts (2018: £0.2m, 2017: £0.1m)

Financial highlights – cash flow

£m	HY 2018	HY 2017	Change £m	Change %
Operating cash flows	(2.0)	(5.1)	3.1	(61%)
Changes in working capital	(1.2)	(0.2)	(1.0)	500%
Cash used in operations	(3.2)	(5.3)	2.1	(40%)
Capital expenditure	(1.4)	(0.7)	(0.7)	100%
Tax received in the period	-	1.9	(1.9)	(100%)
Underlying equity free cash flow²	(2.9)	(4.1)	1.2	(29%)
Net cash & financial assets	78.4	13.2	65.2	494%

- £76m cash in from Placing and strategic investments
- New manufacturing site investment cash outflows of £1.5m
- Underlying cashflow improved 29%

² Change in net cash and cash equivalents and short-term investments, excluding cash flows from financing activities and investment cost for property, fit out costs and the equipment for the new manufacturing site

FINANCIAL SUMMARY

New revenue streams and investment in the business and the new facility

- New licence revenue drives increase in revenue and gross margin
- Underlying opex increased 15% to build the business for new customers
- Operating losses halved
- Capex increased as invest in new facility
- Underlying equity free cash outflow reduced by 29%

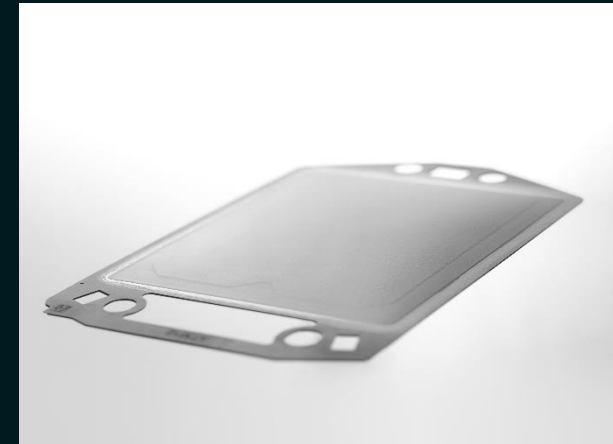
£78m in cash at 31 December 2018. Fully funded to execute business plan



Business update

Who we are and what we do

- Unique Fuel Cell Technology - Imperial College
- High growth UK tech company ~200 employees
- High margin asset light license model
- ~£220 m Mkt cap AIM
- Fully funded £78 m cash and £30 m order book
- 50 patent families



World leading developer of SteelCell® low cost, non combustion power generation technology

- Lowers CO2 emissions
- Improves Air Quality
- Provides energy security
- Enables EV's and balances renewables



Global power system and engine customers

WEICHAI

- JV 2020 Electric Bus and stationary power market

 **BOSCH**

- Manufacturing scale up/ Data centre and commercial



- Power systems for Data Centre

**CONFIDENTIAL COMMERCIAL
SCALE PARTNER**

- Commercial Scale CHP

NISSAN

- Electric Vehicle Range Extender

HONDA

- Stationary power applications

Global drive for electrification and clean distributed energy

Air Quality

- Rise of Mega Cities
- Pollution from combustion engine vehicles



Climate Change

- Challenge to decarbonise energy system
- Power, heat and transport

Balancing renewables

- Renewable energy cheapest form of power generation
- Balancing intermittency key challenge
- Disrupting centralised generation model



Electric vehicles

- Increasing adoption of EVs in both consumer and commercial markets
- Fuel cells and batteries are key technologies
- Pressure on charging infrastructure

Why is SteelCell® the solution?

- Affordable Solid Oxide Fuel Cell for mass adoption
- Made from conventional steel with small amounts of ceramic
- Uses conventional high volume manufacturing equipment from Solar PV industry
- Fuel flexible: operates on Natural Gas/Liquid fuels/Bio fuels/Hydrogen
- Robust for use in both stationary power and transportation applications



PEM cell



SOFC cell

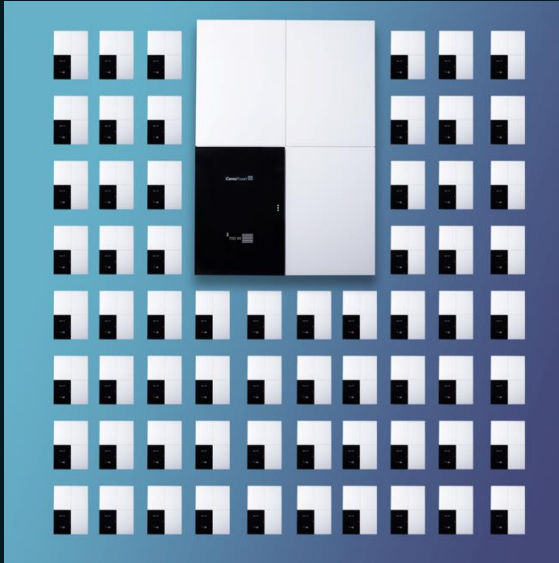


SteelCell®

	PEM cell	SOFC cell	SteelCell®
Robustness	●		●
Efficiency		●	●
Fuel flexibility		●	●
Cost			●
Markets	Transport	Stationary	Both
Leading players	Ballard Toyota etc	Bloom Energy	Ceres + OEM partners

Ceres enables transition from combustion to electrification

De-centralised Power



- Balance renewables
- Higher efficiency than centralised grid 30 % less energy and carbon
- Distributed power generation at home or Business

Electric vehicles



- Addresses air quality
- Low to zero emission SOx / NOx
- Range extender for EVs in commercial vehicle markets
- Grid reinforcement for vehicle charging

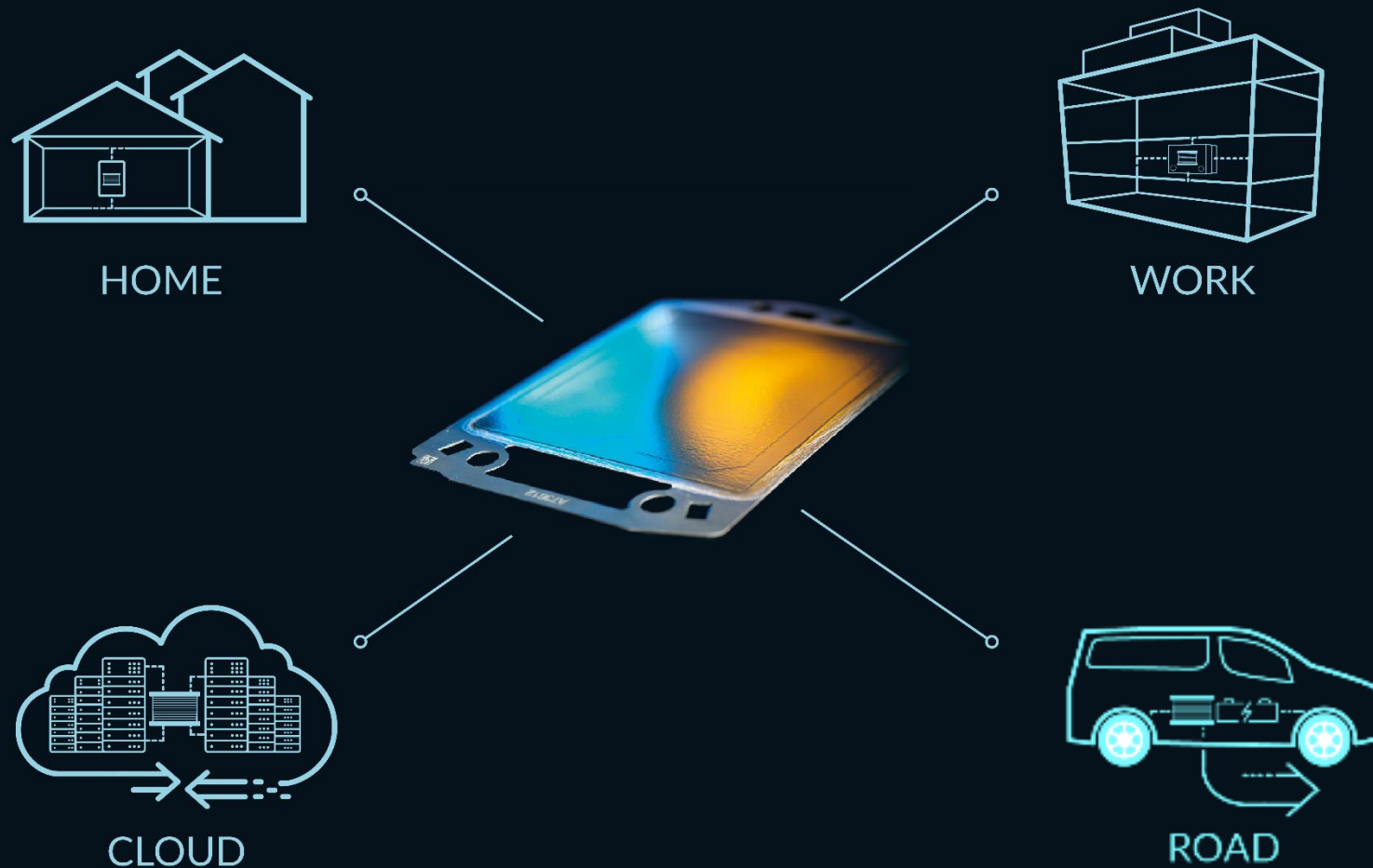
Clean power for data



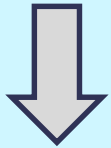
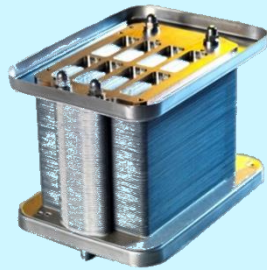
- Data centres use > 2 % global power
- Fuel cells offer cleaner distributed power
- Saving energy and CapEx
- Reliable on site generation

Rapidly growing Fuel Cell market predicted to reach \$25Bn by 2025

Applications for the SteelCell®



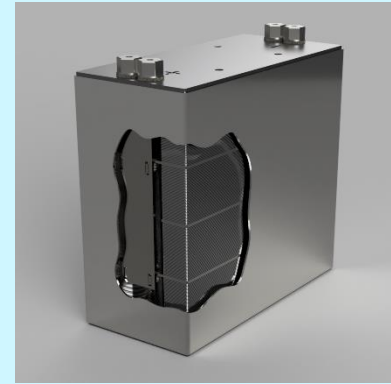
1kW Stack



**1kW home
system**



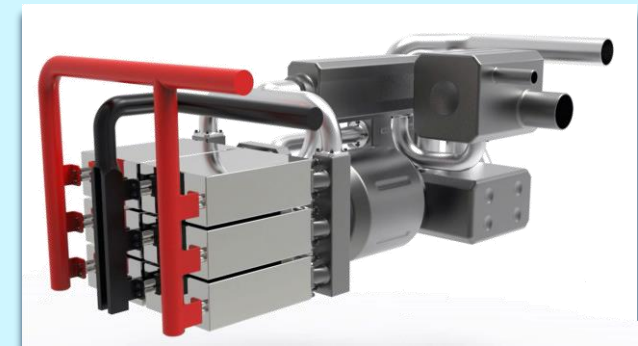
5 kW Stack



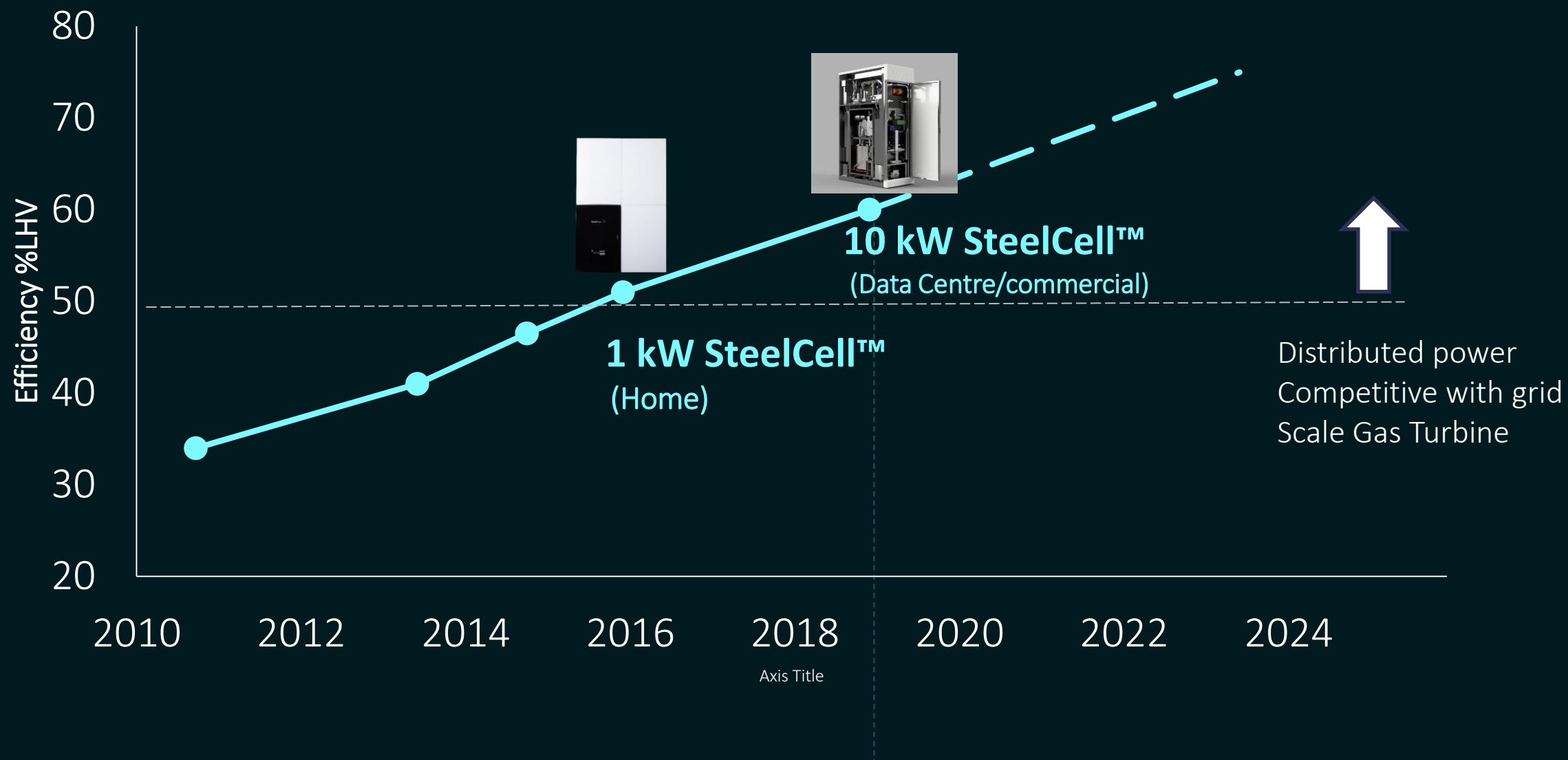
**5 & 10kW Commercial/ Data
Centres**



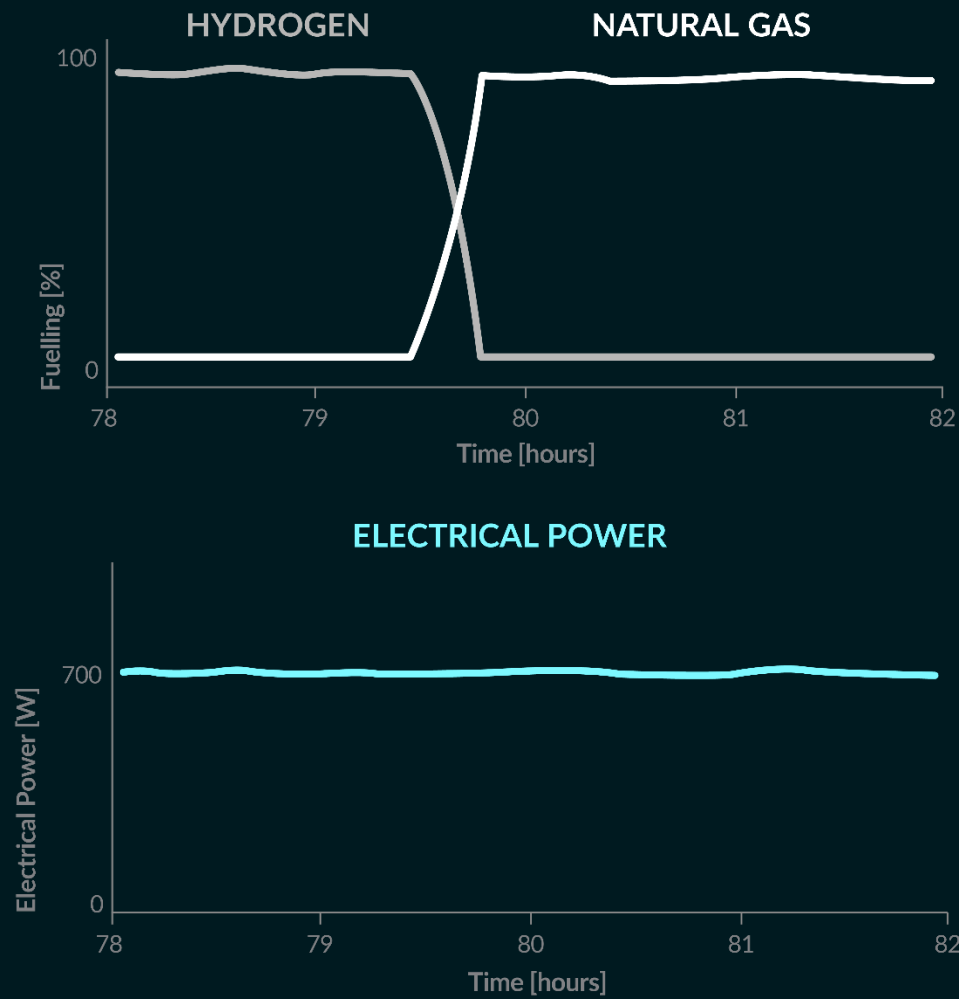
**30kW + for Hybrid EV Buses
100kW + Power generation**



High efficiency distributed power competitive with grid....



...and ready for a Hydrogen Future tomorrow



Real experimental data with OEM partner



COMMERCIAL PROGRESS



Fuel cell for Data Centres with US DoE

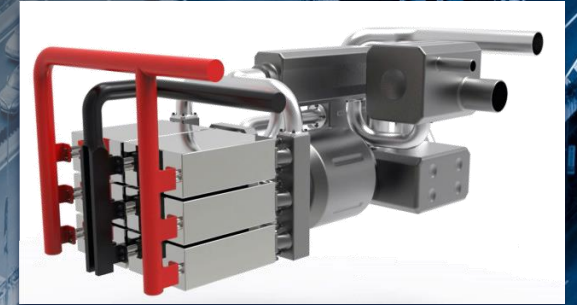
- Fuel Cells provide Primary Power
- “Off power grid” using natural gas
- Diesel Eliminated, lowering emissions
- Saves 20% of Cap Ex cost of data centre



**Power
Generation**



U.S. DEPARTMENT OF
ENERGY



Range Extension & Potential Charging for EVs

- On-Board charging using CNG/Biofuel for long range Hybrid EV buses and commercial vehicles
- Charging points for EVs
- China fastest growing market

WEICHAI NISSAN



Home System Field Trial

- Generates ~80% of home power
+ sufficient power to charge Electric Vehicle
- ~30% Lower Energy Costs
- ~30% Lower Carbon



Commercial Scale Development

- 5 to 10s kW power modules for offices, convenience stores etc.
- ~30% Lower Energy Costs
- ~30% Lower Carbon
- Zero SOx and Zero NOx



Strategic collaboration

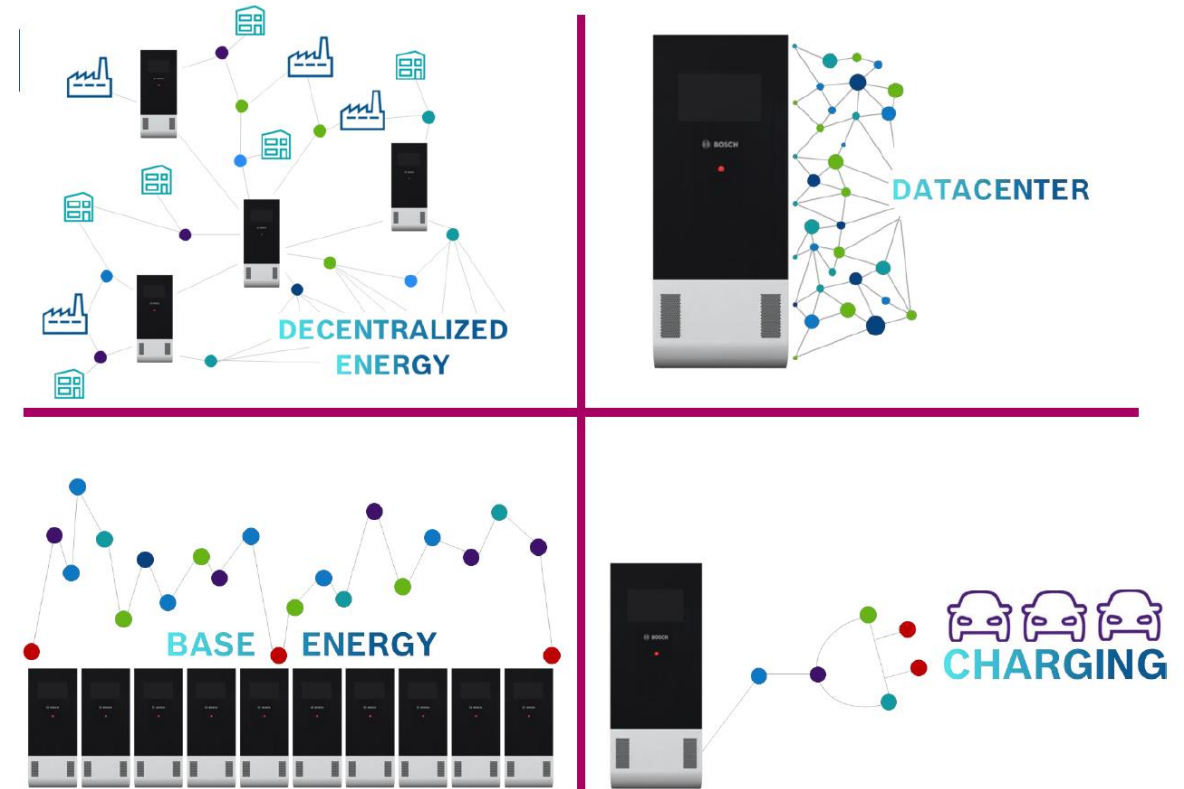
- Expertise in manufacturing and product development
- Bosch Invested £9m in Ceres for 4 % stake
+ £20m license and JDA revenues to 2020

Multiple market applications

- Small power stations for cities, factories, datacentres and EV charge points

Manufacturing capability

- Industrialise 5 kW stack for scale up and manufacture
- World leader in ceramics manufacture
- Support manufacturing scale up in UK
- Parallel low volume manufacture at Bosch in Germany



tribution, as well as in the event of applications for industrial property rights.

Weichai Power

Strategic collaboration

- Invested £48m in Ceres for 20% of ISC
- Licence Agreement and JDA for up to £39m
- Establish manufacturing 49:51 JV in China 2020

Market opportunity

Access to China - the fastest growing fuel cell market

- One of the world's largest automobile and equipment manufacturing groups
 - Produces 600k engines per year, c.30k buses and 150k heavy duty trucks
 - Significant stationary power business
-
- Initially 30 kW power systems for EV scaleable to higher power applications

International track record

Track record of high growth Hong Kong and Shenzhen exchanges with a market cap of c.US\$10bn

- Kion Group AG (MDAX-listed in Germany), Ferretti in Italy

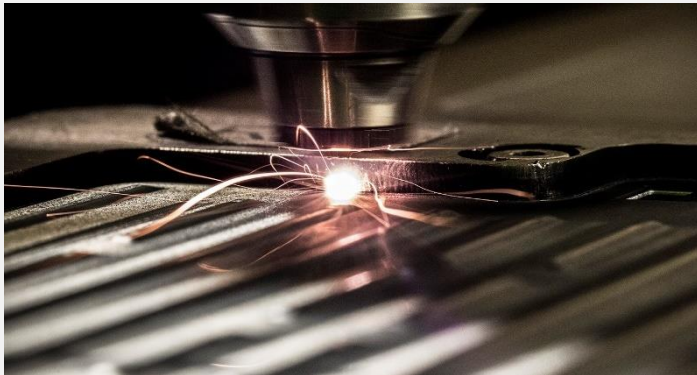




BUSINESS MODEL

How we work with Partners

1. Joint Product development



Engineering Services
(2 – 3 years)
\$

6 JDA partners

2. Technology Transfer License



Up Front License Fees
(~3 years)
\$\$

3 Tech Transfer License
partners

3. Multiple applications across range of markets

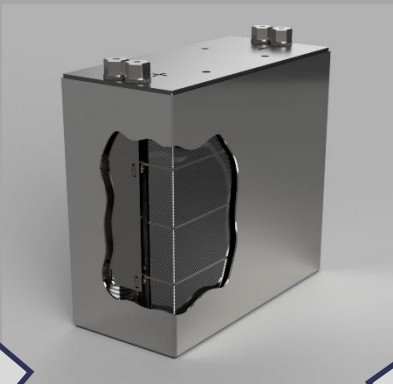


Future Royalties per kW
At start of production
\$\$ Recurring revenues

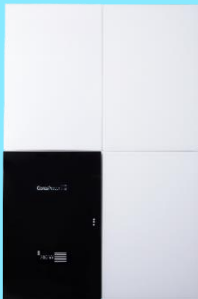
1kW Stack



5 kW Stack



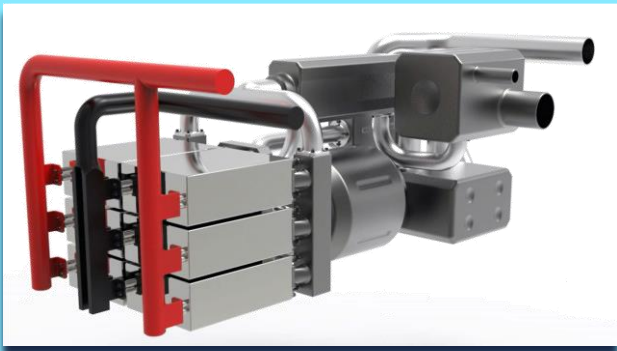
1kW home system



5 & 10kW Commercial/ Data Centres



30kW + for Hybrid EV Buses
100kW+ Power generation



UK Manufacturing enables global licensees

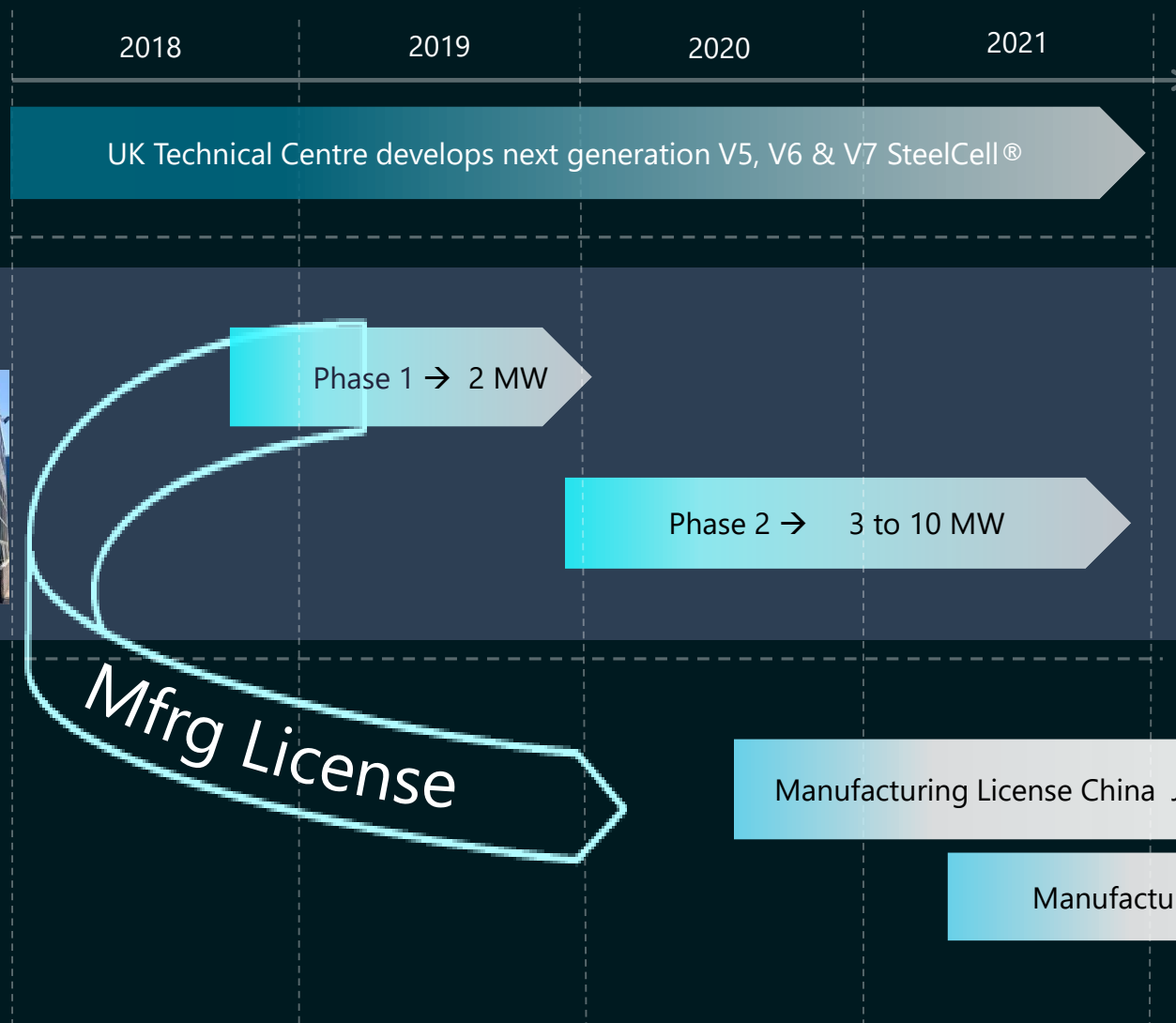
R&D in Horsham UK



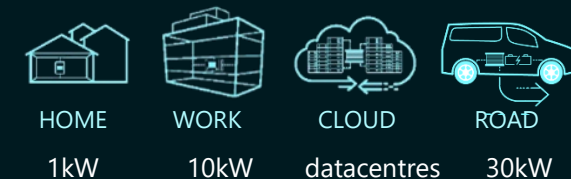
CP2 Reference plant



Potential 100 MW
plants
Europe
China JV & ROW



Annual capacity equivalent in units:



2,000	200	-	60*
10,000	1,000	0.25	300
100,000	10,000	2-5	3,000

UK's first SOFC Fab: CP2 Reference plant



- £7.5 m Investment creating ~60 skilled jobs in UK
- Will provide near term capacity for customers
- Manufacturing tech transfer to partners eg Bosch
- ✓ Fitout completion Q1 2019
- Equipment installed Q2 2019
- Site training and validation H2 2019
- Phase 1 Launch 2020 at 2MW per year



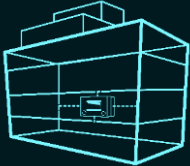



Located nr Redhill – M23/M25 Junction

Global Multi Billion \$ Opportunity

- Highly scalable business - OEM partner & licensing technology
- Replaces conventional engine and power generation
- Enabler for EV roll out and supports increase in renewable energy

Possible annual gross margin

Up to 5% market share at up to
\$140 gross margin / kW

APPLICATION	 >70 GW COMMERCIAL	 >300 GW RANGE EXTENDER/ APU	 >100 GW DATA CENTRE / BACK UP	 >10 GW RESIDENTIAL
TOTAL	\$200m	\$270m	\$380m	\$75m

- Strong revenue growth with strategic partners
 - Revenue to double for fourth consecutive year to £15m 2019 @ > 50% gross margin
 - Order book >£30m Engineering services and license revenue
 - Healthy pipeline with new partners at evaluation stage
 - Target additional strategic partner in 2019
- Field trials with OEM partners 2019
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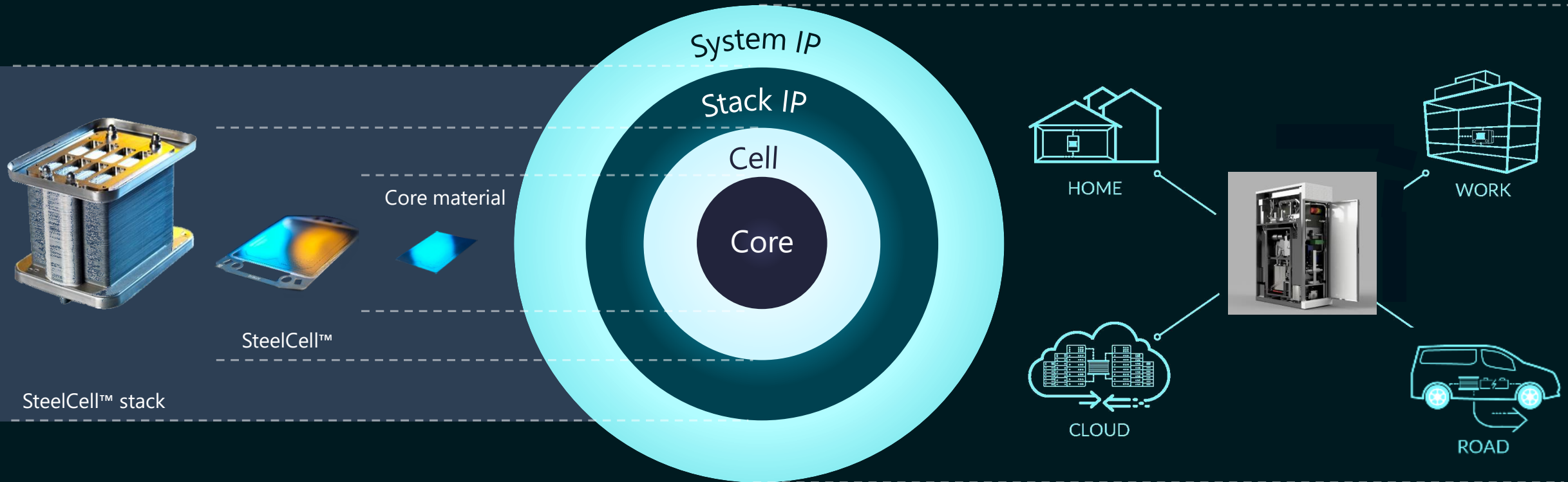


Appendix

Licensing strategy

Manufacturing License / JV

System License by market application



BOSCH
China JV

WEICHAI

+
Confidential Partner