eleXsys™

Electricity Export System from Planet Ark Power

PLANET ARK Power™

Cleaner energy. Lower cost.

Series A Capital Raise $20m (AUD)

Initial Market Focus

- C&I Rooftop Solar Farms to replace coal power stations
- Rural communities with 75% cheaper microgrid clean energy

eleXsys™ is an Ai based technology platform that radically speeds up global decarbonisation

1

Fix voltage issues from rooftop solar

Increases the DER the grid can host by up to 1,300% with no CAPEX costs to the grid

2

Up to 75% cheaper offgrid microgrid clean energy

Cheaper clean microgrid energy for rural communities and the developing world

Global scale with SaaS licensing model

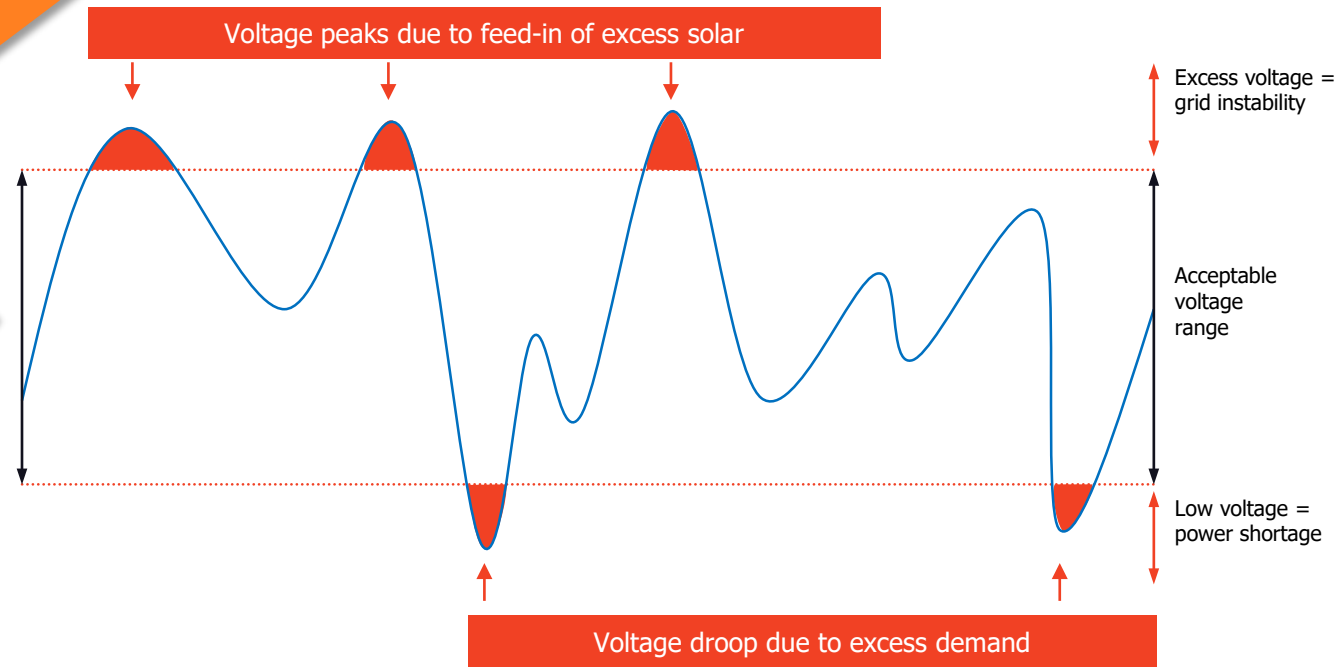
Become the *"Intel Inside®"* of the cleantech DER industry

DER = Distributed Energy Resources

Problem 1: Rooftop solar creates voltage problems on the distributed electricity grid, limiting the amount of rooftop solar that is economically viable to install

Solution: eleXsys™ - an independent, dynamic and distributed voltage management system

Excess solar fed into the distribution grid causes voltage instability so the grid imposes "Zero Export" or Solar Curtailment restrictions

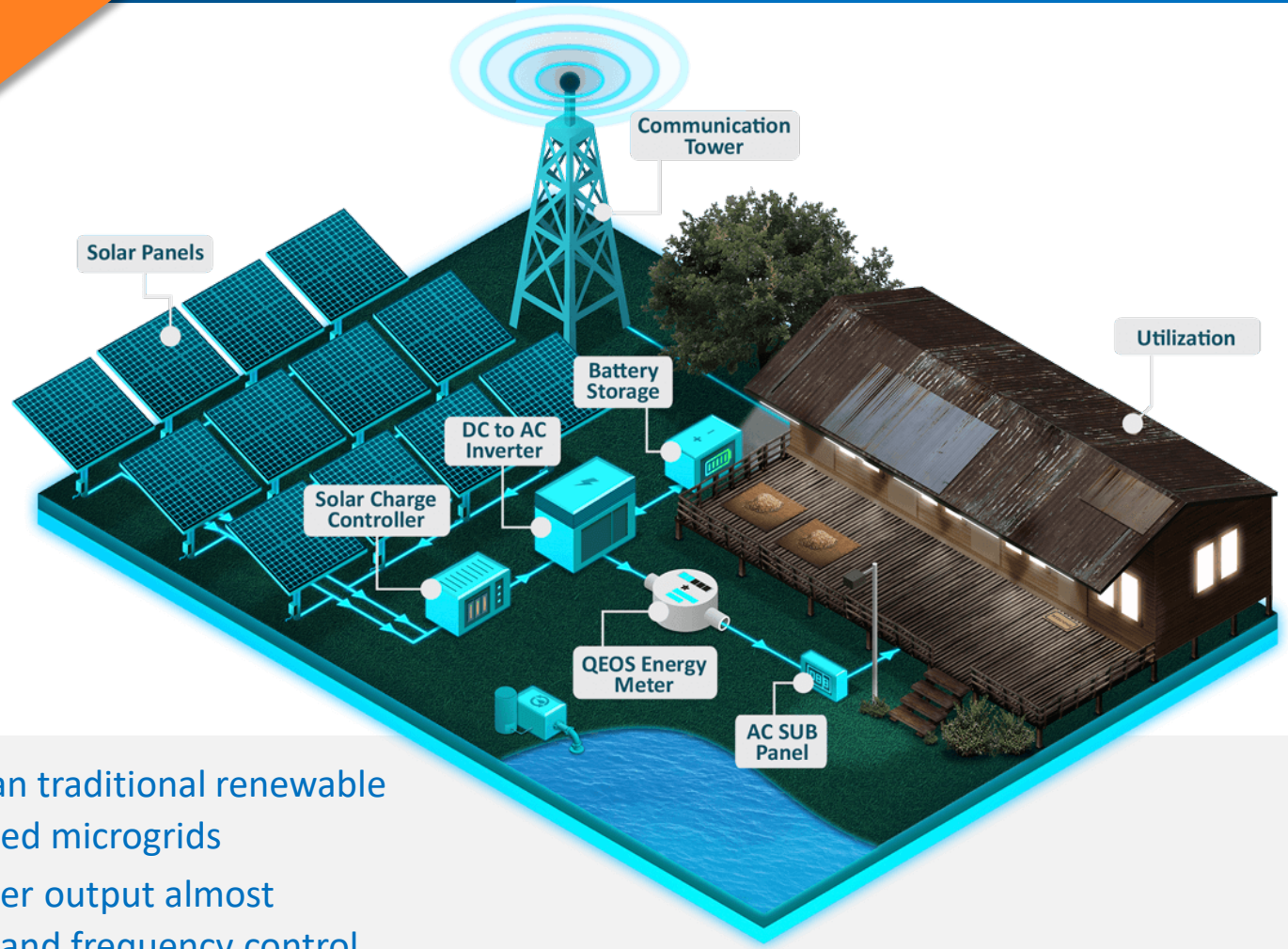


- eleXsys™ allows the roof to be filled with solar so excess energy can flow backwards unrestricted – a true two-way grid
- Increases the DER the grid can host by up to 1,300% with no CAPEX costs to the grid, paid by sites increased savings / ROI
- Plus an oversized battery is now viable for both site and grid support benefits

Problem 2: Offgrid microgrid clean energy is expensive as it requires large batteries to provide a “grid reference point” – to provide energy on demand and in keep grid in balance

Solution: eleXsys™
- Is a grid forming inverter reducing the size of batteries needed

Rural farms in the USA are still using expensive grid connected energy. Plus electrification of the developing world is going slow due to costs.



- eleXsys™ delivers clean energy up to 40% lower than traditional renewable microgrids and up to 75% cheaper than a diesel based microgrids
- Grid-forming inverter can increase or decrease power output almost instantaneously to balance loads, regulate voltages and frequency control

But How?

Patent pending technology we call eleXsys™

A + B = eleXsys™

Full Reactive Power + Grid Forming

A SiC Advanced Digital Device

More efficient plus 20 to 50 times smaller, less heat and cheaper due to SiC & high frequency. Plus multiple functions in 1 so eliminates multiple devices.

B Multiple Ai based Software & Income

a. Keeps DER voltage within legal limits at sites with Reactive Power

b. Makes batteries viable today for C&I sites without subsidies
   - b.1. Improved solar + battery architecture = less round trip losses
   - b.2. Discharge battery to eliminate demand peaks to save site $
   - b.3. Energy arbitrage earns automated wholesale trading income
   - b.4. Auxiliary services earns income supporting the grid
   - b.5. In some jurisdictions – extra income from demand reduction
   - b.6. In some jurisdictions – extra income from grid CAPEX deferral

c. Battery Extended Life - up to 15 years from a 10 year battery

d. Demand Reduction at night with no solar and without a battery

e. Power Factor Correction (PFC) & CVR (Conservation Voltage Reduction)

f. Small sites offgrid – cheaper than grid, diesel or current renewables

g. Microgrid District Coordination software: villages and suburbs offgrid

Digital "dSTATCOM" device is multifunctional and replaces multiple devices in 1 box

Globally Scalable SaaS Business Model

Become the *Intel Inside ®* of the cleantech DER industry

License eleXsys™ to the DER supply chain globally – Project Developers, Asset Funds, Engineering Companies, Utilities, Electricity Retailers, etc.

SaaS = Attain a % of the total annual solar and battery revenue the project generates for 10 to 20 years when using eleXsys™

Global Recognition

Receiving the 2019 Start-up Energy Transition Award from Andreas Kuhlmann, Chief Executive of the German Energy Agency

> This technology is game changing – you need to think **100 times bigger**

Christoph Frei,
Secretary General & CEO
World Energy Council

> eleXsys™ is **revolutionary** – it's as big as the original electrification of the USA 100 years ago. It will change the whole electrical industry.

Aurecon
A Global Engineering Consultancy

An Aurecon report validates that eleXsys™ can manage grid voltage and increase the distribution grid hosting capacity for DER (rooftop solar and VPP batteries) by up to 1,300%

Market Revolution Examples

eleXsys™ grid voltage related solution

Enables up to 1,300% increase in rooftop solar in a local suburb

01

1A

Turn Energy Cost into an Income Stream

Move solar farms to rooftops

school example

Turn $240,000 per year energy bill into a $380,000 per year income stream

Fig 1

Fig 2

Voltage issues = Export Restrictions/Curtailment

- Only 250 KW is an economically viable installation (e.g. "Net Metering" in California or ZERO Export in Hawaii)

Full Export with eleXsys™ fixing voltage issue

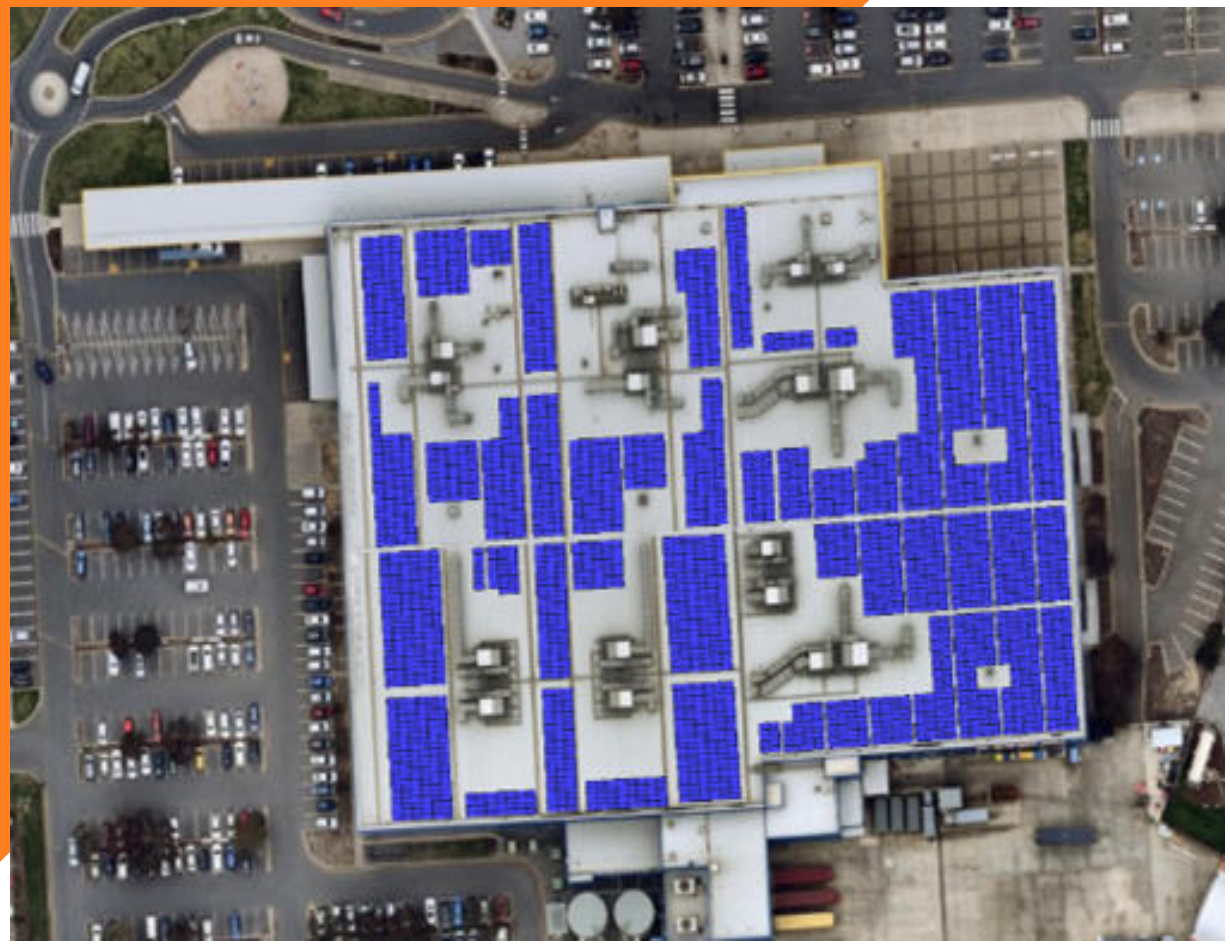
- 1,500 KW is economically viable + 3 MWh battery
- **With eleXsys™ C&I batteries are viable today without any subsidy**

1A

“IKEA” replace coal & gas

IKEA in Adelaide

Unique $7.5m (AUD) project not viable without eleXsys™



- 1.2 MW of rooftop solar plus 3 MWh of VPP batteries
- Largest C&I Virtual Power Plant (VPP) in the world
  - **With eleXsys™ C&I batteries are viable today without any subsidy**
- 10% of rooftop solar sold into wholesale grid daily
- Most battery energy sold into wholesale grid daily
- Owned by a large pension fund as the first of many
  - **eleXsys™ is creating a new $ Billion asset class**
  - **Voltage issues make income streams variable and DER non bankable**
  - **eleXsys™ fixes the voltage to deliver predicable income streams so investors can invest $B’s into DER**
- Pension fund to finance $200m of similar projects
- Planet Ark Power attains recurring annual license fees

Offgrid & Other Market Solutions

eleXsys™ is a platform with multiple markets

Offgrid Clean Energy up to 75% cheaper

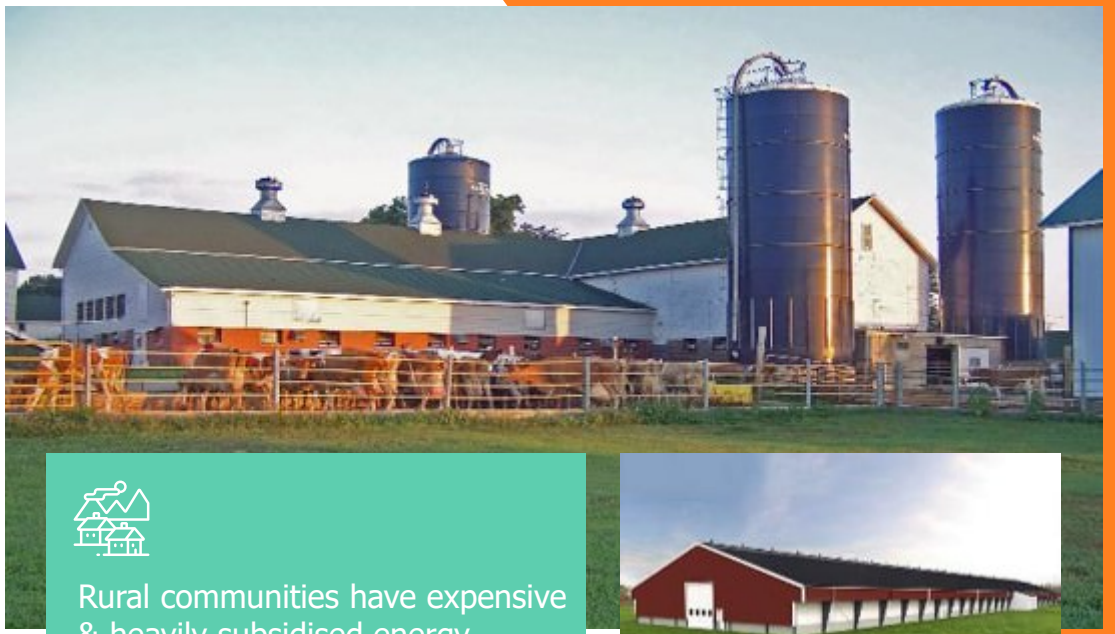
02

2A

Offgrid Clean Energy up to 75% cheaper

- Clean energy up to 40% lower than current grid and current renewable microgrid options
- Up to 75% cheaper than diesel
- Grid forming inverter eliminates need for a grid reference to keep local grid in balance
  - Eliminates large diesel Gensets to operate 24 x 7 or large batteries to provide the grid reference
- New eleXsys™ solution is:
  - solar + much smaller batteries + eleXsys™ + small biodiesel Genset to back up batteries
- Clean energy microgrids for villages and towns

Demo 5 large farm operations in 2020 - piggery, cattle feed lot, diary, etc



Rural communities have expensive & heavily subsidised energy

Farms want to expand with onsite micro processing but cannot due to grid issues

2B

Desalination with Greenhouses viable

- Solar Tower CAPEX & OPEX prices have remained high – so not replicable
- Current operations marginally profitable due to subsidy attained for solar tower
- eleXsys™ reduces energy costs by up to 75% making business model replicable on a global scale

Desalination turns barren desert land into food production

Cost of energy to do so is exorbitant

eleXsys™ should make it replicable globally so we can feed the world using clean energy

Growth Plans

Become the Intel Inside ® of the cleantech industry.

Strategic Growth

A clearly defined path to growth

Scale in Australia

- Speed up commercialisation
- "Use Cases" to scale globally - Port of Brisbane, IKEA, etc.
- Develop licensing model
  - Large pension fund – Licence signed
  - EPC licensing under negotiation

License Globally

- Demonstration beachheads e.g. France, U.K., Singapore, Taiwan and California

Competition

There are many voltage management partial solutions, but none with the value proposition offered by Planet Ark Power

	PLANET ARK Power (Cleaner energy. Lower cost.)	DERMS (grid software)	Smart Inverters	Battery Manufacturer	Grid Edge VAR Controls
Fixes the voltage problem	✓				
Very limited increase in grid feeder solar holding capacity		✓	✓	✓	✓
Grid solar hosting capacity up to 200% of equipment rating	✓				
Facilitates VMaaS	✓				
Ai-powered	✓				
Small energy losses with HV	✓			✓	
Small form factor	✓				
Limited voltage control		✓	✓		✓
100% voltage control	✓				
Export all the clean energy	✓				

eleXsys™ - $ Billion Global Potential

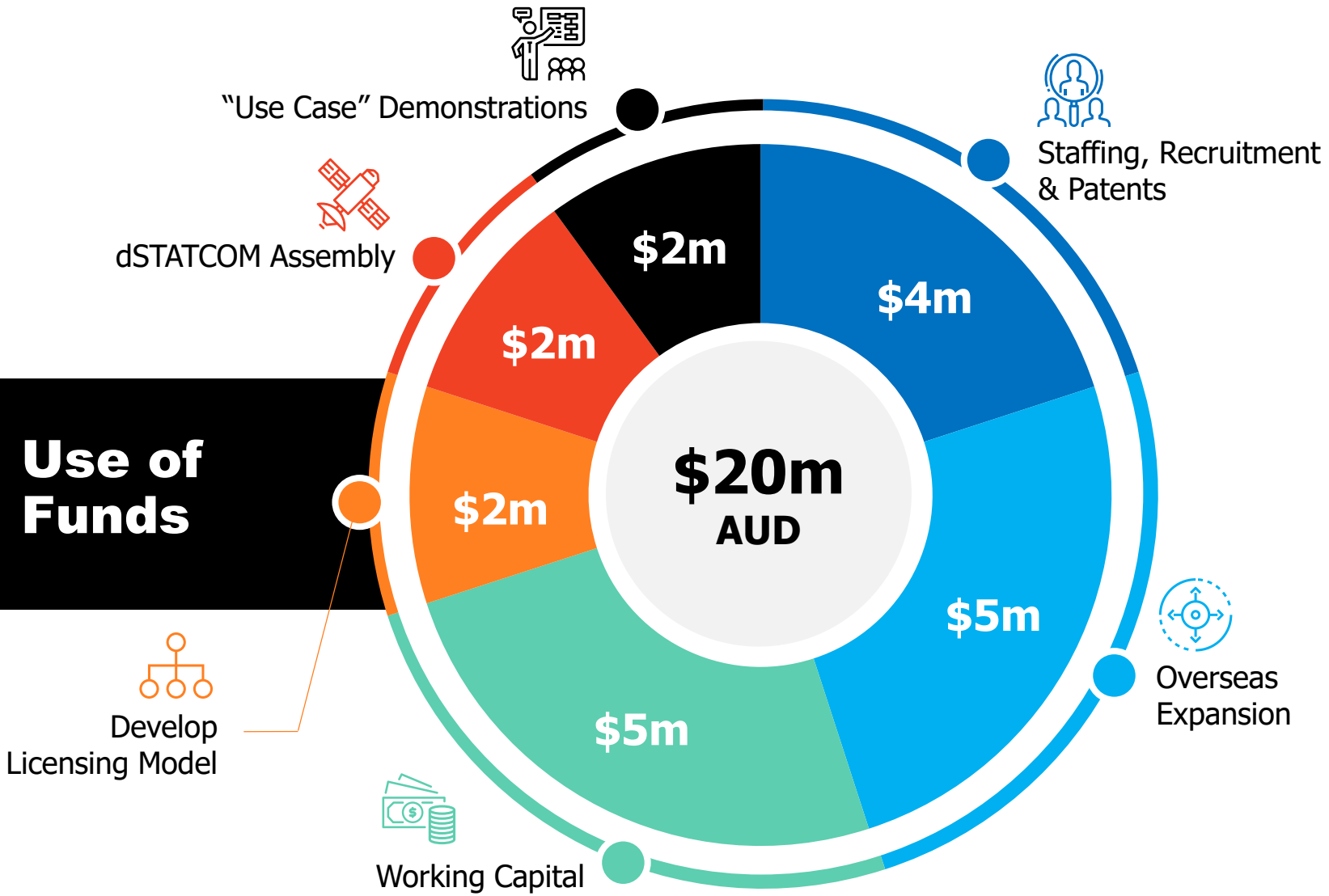
5- Year Financial Projection (Australia revenue only – global potential of $40 Billion)

$ USD	2020	2021	2022	2023	2024	2025
Revenue Millions (AU Only)	$22	$50	$83	$113	$149	$181
EBITDA %	8%	11%	14%	17%	19%	22%
% Recurring SaaS Income	1%	5%	10%	15%	20%	25%
Global potential revenue	**Australia = 0.5% of OECD population so 2025 revenues reflect $40 Billion global potential**					

Use of Funds

Funds will be used to speed up commercialisation in Australia & begin global expansion

Use of Funds



- Have MOU to demonstrate our technology in France with major research agency
- Market entry project in California worth up to $1b over 7 years using our tech
- Demo projects in Singapore and possibly Taiwan in conjunction with local players

Comparative Post $ Valuations (AUD)

$133 M

Planet Ark Power (PAP)

- PAP technology and business model delivers all the below, plus
- Cost effectively allows for the electrification of everything with multi directional flow of electricity flow in D Grid at no CAPEX cost to the D grid

$5.0 B

Faraday Grid*

- Replace distribution transformers in the D grid to increase D grid DER hosting capacity to around 50% as opposed to PAP at up to 200% and no cost to D grid

≈$500 M

STEM & Advanced Microgrid Systems

- Battery trading software for Demand Shaving, Energy Arbitrage & D grid support services

≈$150 M

VARANTEC

- Grid side pole mounted tech increases D grid DER hosting capacity to around 50% as opposed to PAP at up to 200% and at no cost to D grid

** Faraday Grid is in receivership as we understand the tech was more difficult to deliver than expected and they had a failed business plan*

Thank You

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