

Monetising Decarbonization Data

The Journey of an Energy AI Startup to Success

Prepared for *Singapore International Energy Week (SIEW) 2020*



Helping organizations(s) and government(s) to *identify, achieve and scale* available technologies and transit towards *net-zero operations*.

- Leveraging Big Data IoT & AI for Asset Performance Management
- Founded in 2013, incubated and invested by Nanyang Technological University (NTU Singapore)
- Accredited by Singapore Government, recognized as one of the digital pioneers by Singapore Committee on the Future Economy (CFE) and cited by various ministers in Singapore
- Recognized as Top 10 Renewable Energy Solution Provider in APAC by Energy CIO Insights, Top 25 Cleantech company in APAC by Cleantech Group, and Singapore Energy Award Recipient

Accelerator Program Selected:

2017



2018



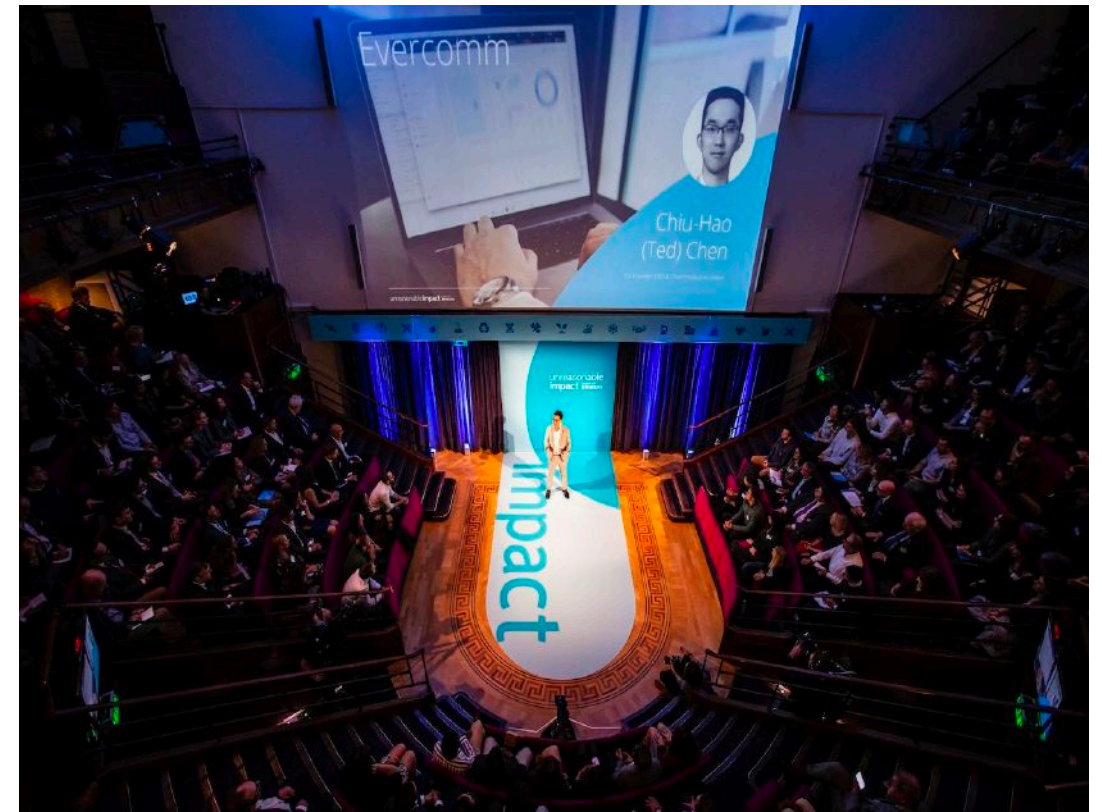
2020



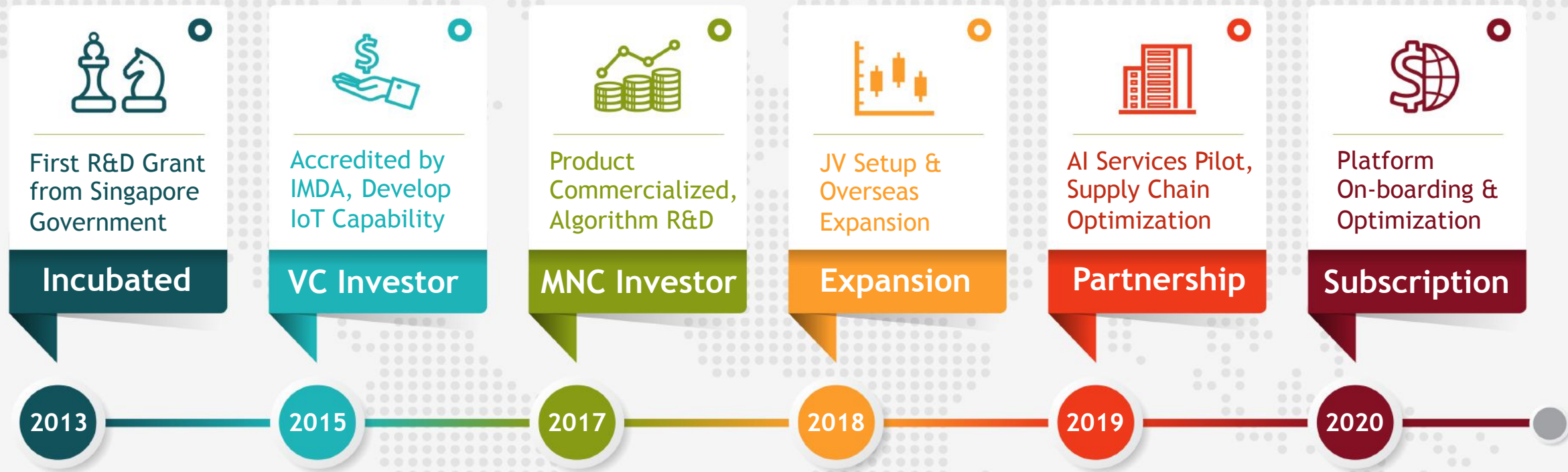
هيئة كهرباء ومياه دبي
Dubai Electricity & Water Authority



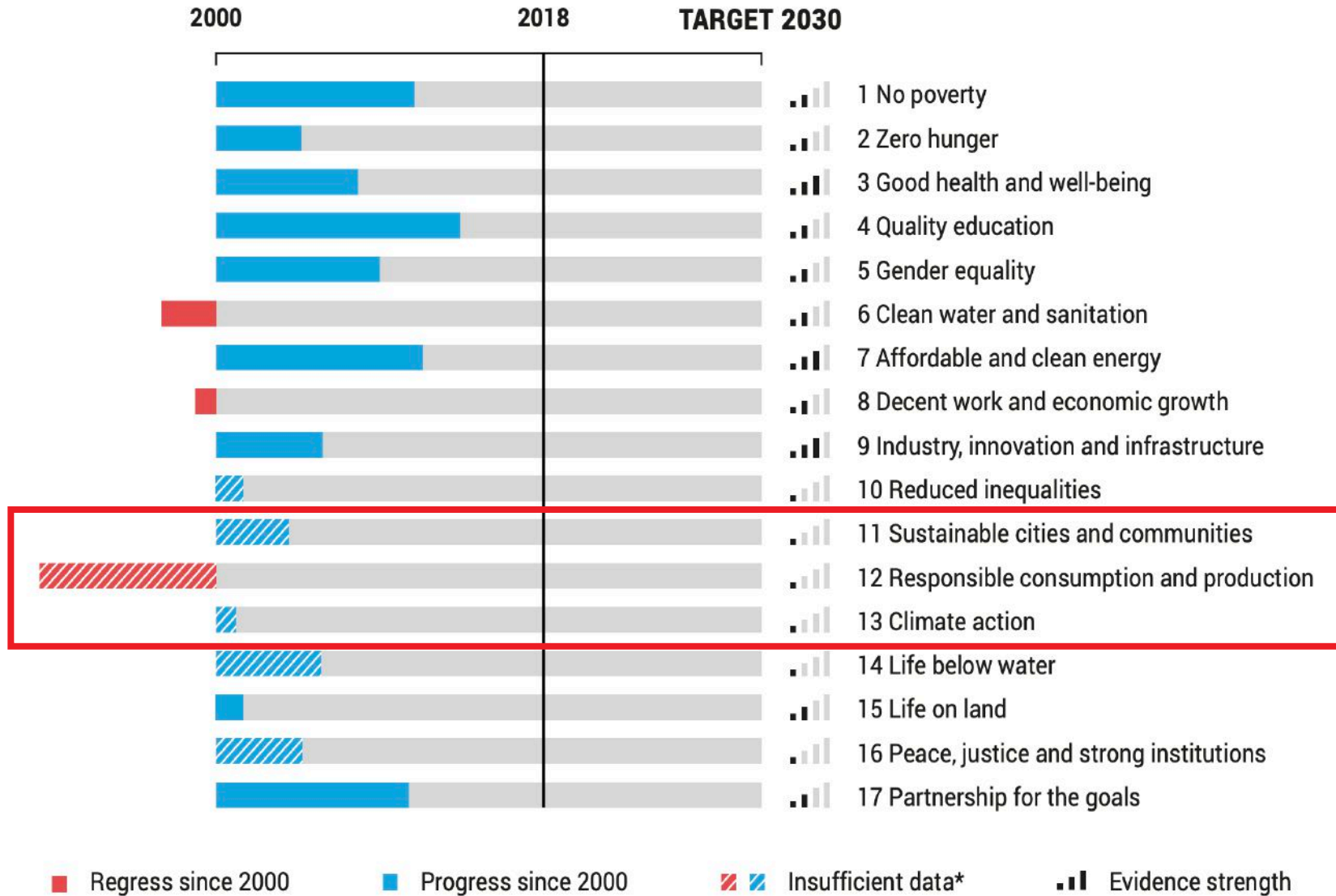
unreasonable**impact** Created with BARCLAYS



Our Innovation Journey



Global Challenges



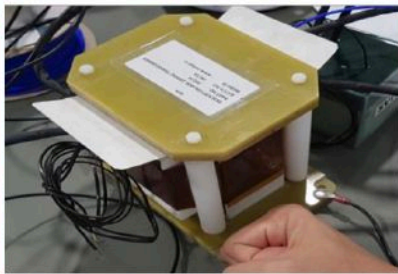
Energy Complexity

Urban Mobility



Carbon Capture/Storage
District Design
Urban Dynamics
District Cooling Network
Low Carbon
Data Centers
Transport System Design

Digital Grids



Zero Energy Buildings
Virtual Power Plant
AC/MV / System Optimizer
EMS/BMS
Low Carbon Campus
Energy Harvesting
Low Power Devices

Renewables Integration



Waste to Energy
Resource Recovery-Metals
E Waste
Low Energy Grade Waste
Building Materials
Municipal Solid Waste
Polymer Recycling



Carbon Reduction

EV Charging Infrastructure
Flash Power Transfer
Power Trains For Traction
Range Extender Solutions
Vehicle To Grid Interaction
AI & Perception Systems
Comms & Control Systems
V2X Systems

High Frequency Transformer
Multigrid Controller /Systems
Microgrid Power Devices
Modelling & AI
DAC Systems
DER's, Smart Metering
Fault Prediction Tools
Interoperability Systems

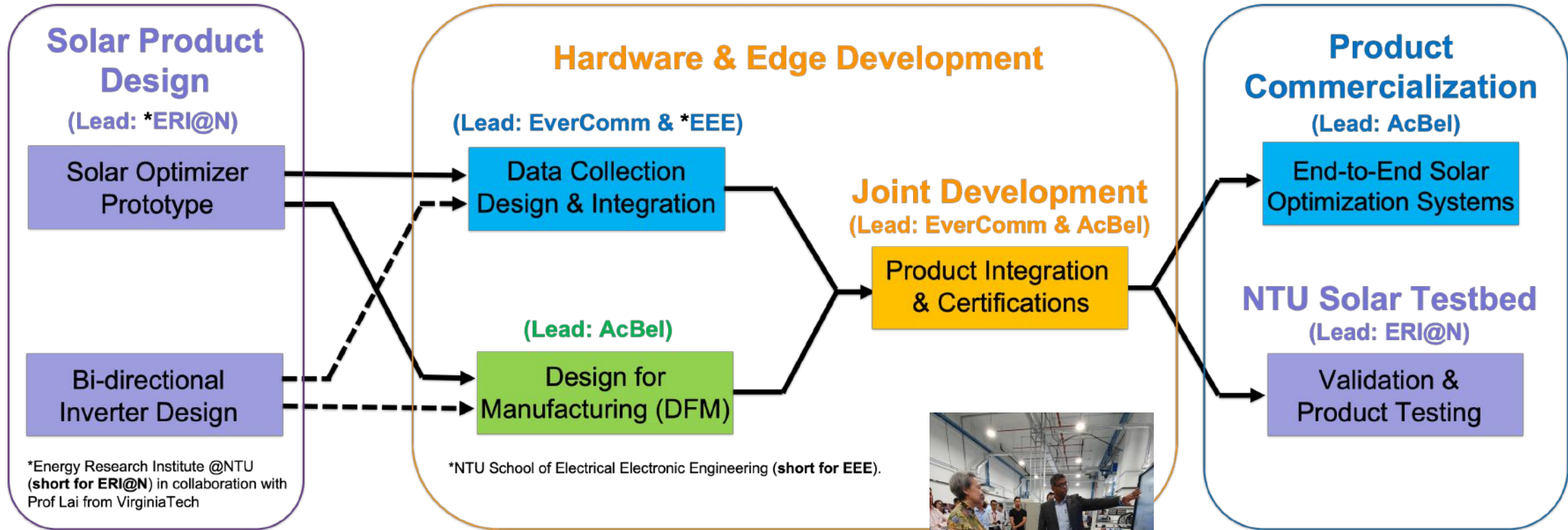
Energy Efficiency



Multi Energy RE Systems
Solar, Wind, & Tidal
Advance Energy Storage
Hybrid Energy storage
DC Grid Systems
Power Devices

Circular Economy

Open Innovation Methodology



Ho Ching,
CEO of Temasek Holding



Energy Research Institute @ NTU



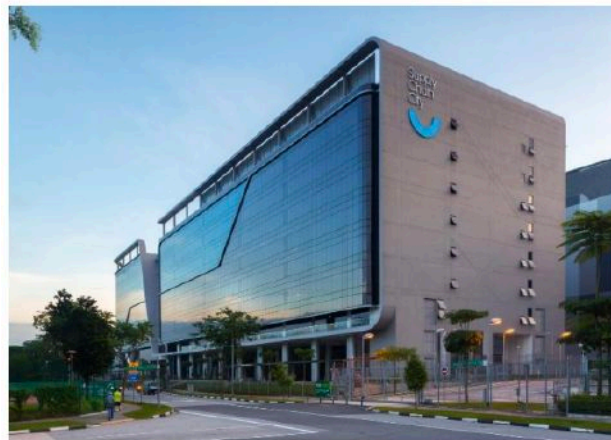
Singapore Testbeds



Renewable Energy Integration Demonstrator (REIDS) Singapore

5 microgrids for core electrical/ICT infrastructure operation / testing

RE Integration, Carbon Reduction, Green Building & Energy Efficiency, IoT.



Supply Chain City Singapore

Sustainable Design, IoT , Big data and AI, E-mobility

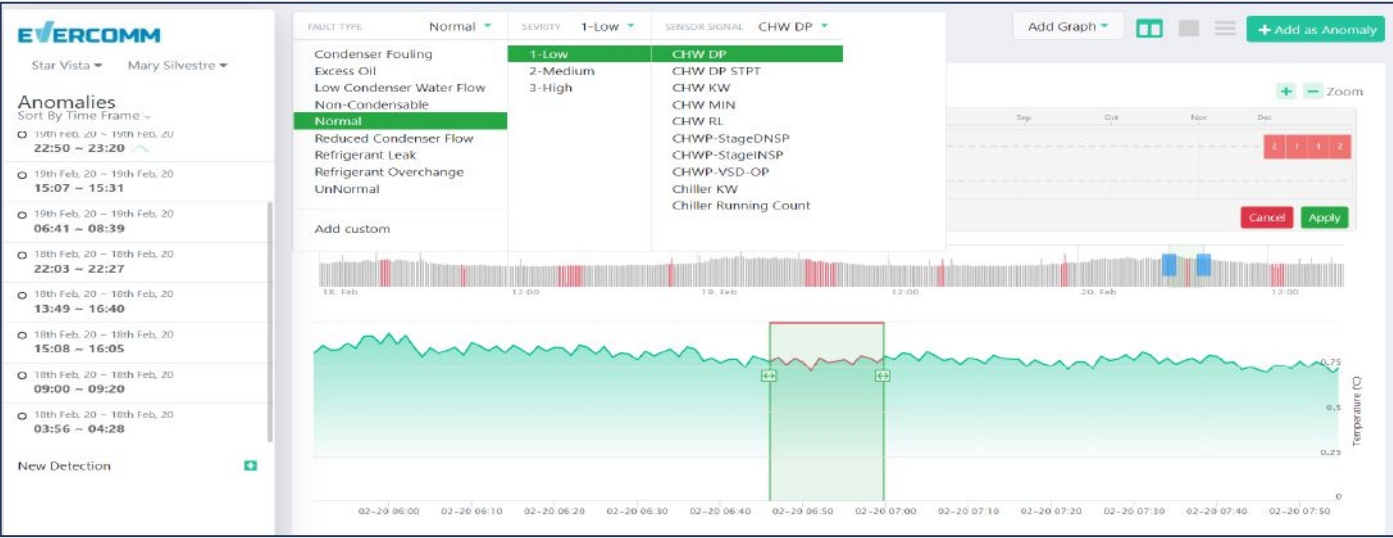
Experimental Power Grid Center (EPGC) Singapore

40 Million \$

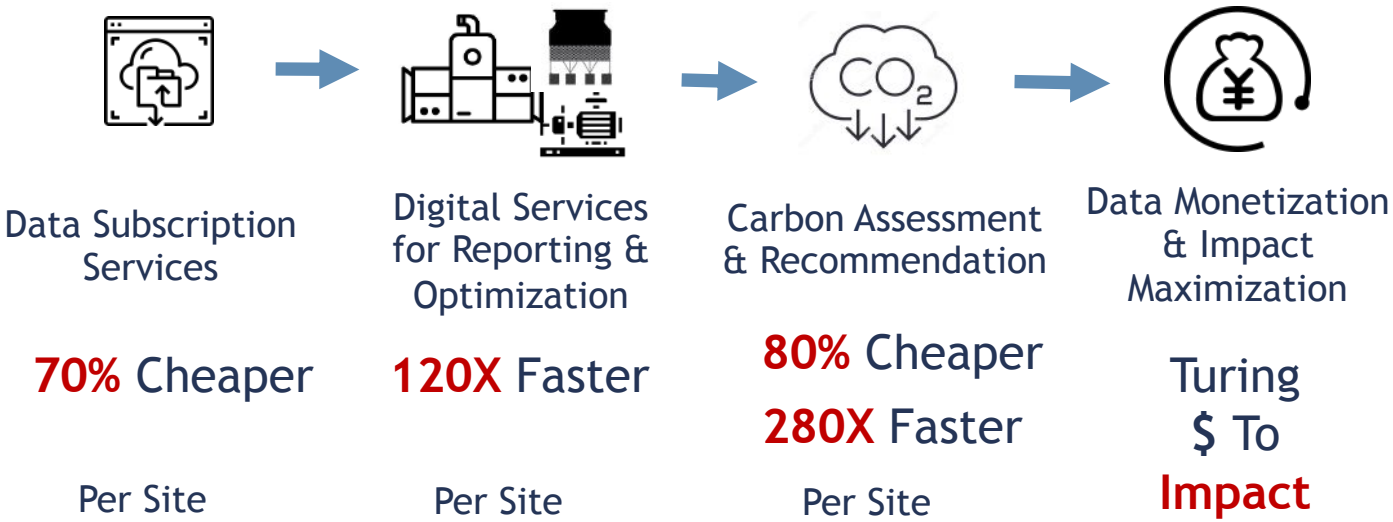
RE Integration, Green Building & Energy Efficiency, Sustainable Design, Digital Twin, IoT, big data & AI.



New Business Model: Subscription



Value Proposition



End-use	Technical Potential (%)	
	BAT	Emerging/NG Technologies
Steam boilers and steam systems	9.7%	0.4%
Hot water systems	7.0%	-
Furnaces / kilns / ovens / dryers	12.5%	5.2%
Cooling and refrigeration	17.9%	1.0%
Pumps	11.7%	0.1%
Fans/blowers	8.5%	0.1%
Other machine drives	5.1%	0.1%
Compressed air systems	17.3%	-
Process specific	9.4%	14.1%
ACMV	32.0%	0.1%
Lighting	29.4%	-
Other	-	-
System	1.2%	2.5%
Overall reduction in sectoral energy use	13.1%	5.7%

Singapore Industrial Energy Efficiency Technology Roadmap, Singapore National Research Foundation. *BAT stands for Best Available Technology

Decarbonization Platform

Partners:



United Nations Development
Programme



NANYANG
TECHNOLOGICAL
UNIVERSITY
SINGAPORE

Aggregating Decarbonization Opportunity

Commercial
Buildings



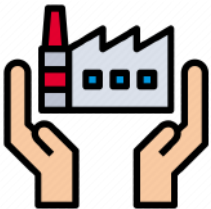
Equipment Data

Industrial
Factories

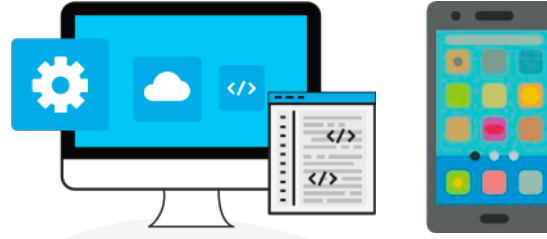


Equipment Data

Power Plants
& Utilities



Equipment Data



EVERCOMM

**Decarbonization
Platform**
Equipment AI

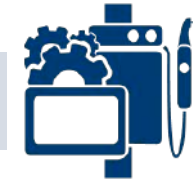
Enabling &
Maximizing
Impact



Capital Provider

Matching Decarbonization Solutions

New Technology



Equipment
Vendors

Maintenance



Real Estate
Operators

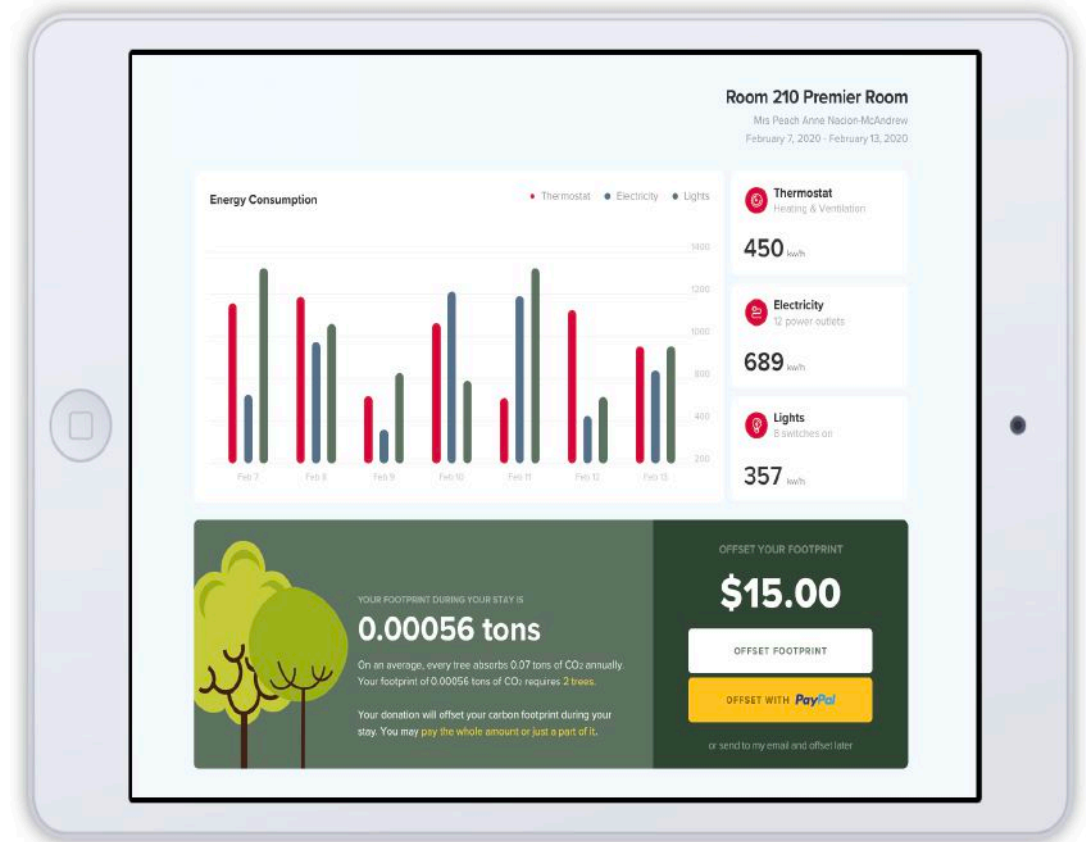
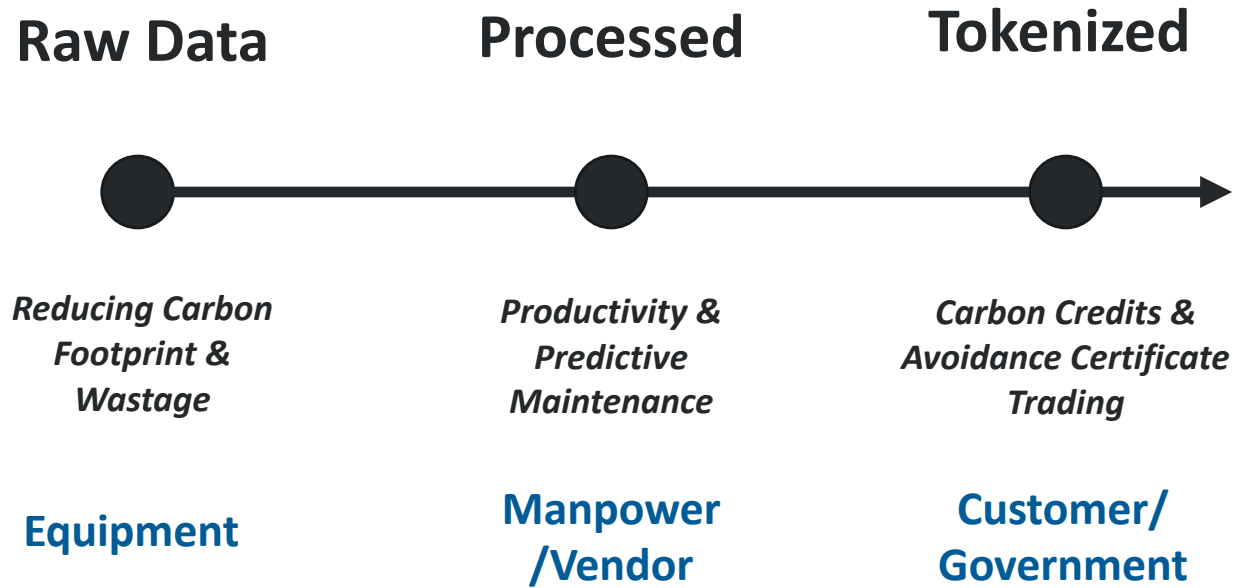
Know-how



Domain
Consultants

EVERCOMM

Data Life Cycle & Monetization

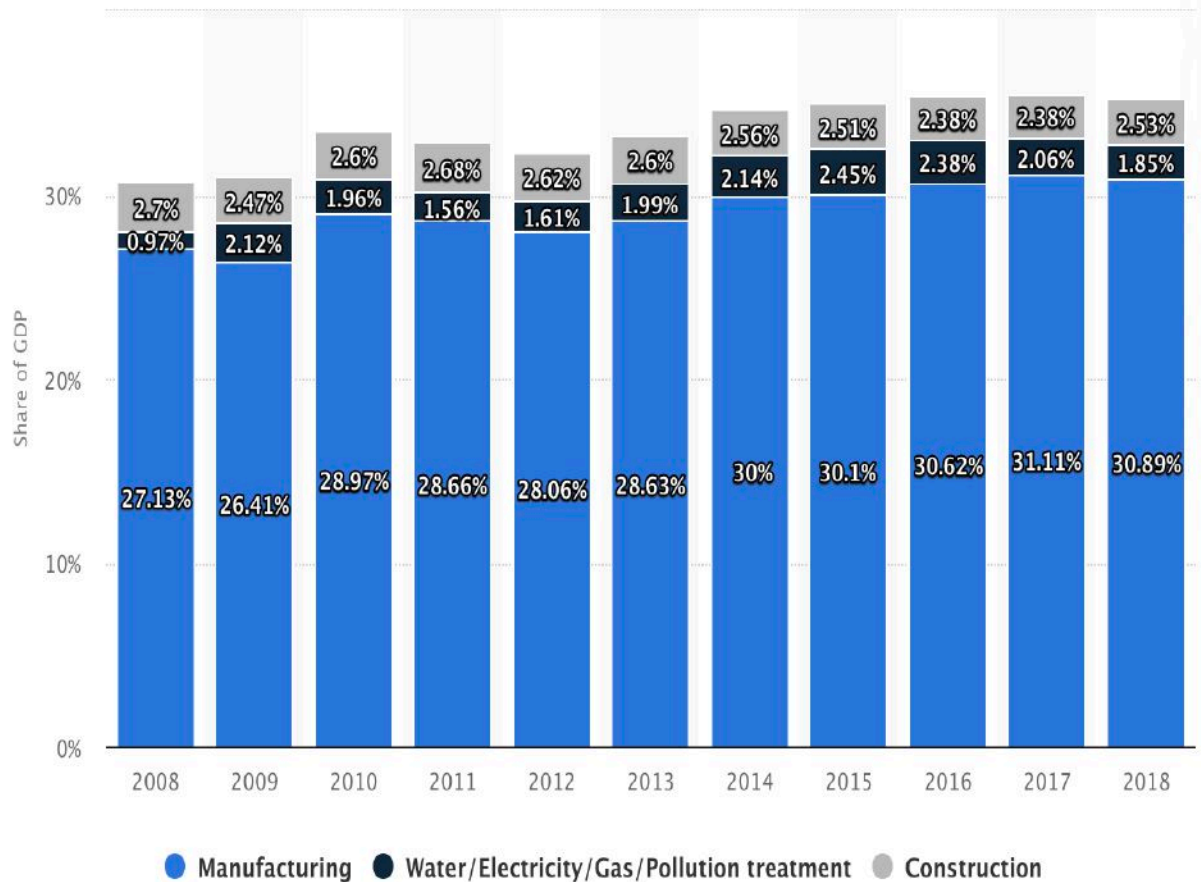


Singapore Ecosystem Support



Green Manufacturing in Taiwan

Taiwan Manufacturing Revenue To GDP



Source: Department of Statistics, Taiwan

Partnership with **New Taipei City Government** to aggregate 20,000 factories' energy demand

EVERCOMM



Mr. Hou You Yi, New Taipei City Mayor, Visit EverComm in Singapore

USING AI TO SIMPLIFY COMPLEX ENERGY USE PROBLEMS



Evercomm Singapore provides Asset Performance Management (APM) solutions for energy-intensive enterprises. The core focus of their product is to harness IoT and machine learning technologies to simplify energy complexity and daily operations. The AI-driven APM dramatically reduces integration cost and time, enables real-time analytics correlating sensor data and equipment profiles, and extracts critical operation insights along with indexing equipment performance at scale. The company's holistic energy management approach (combining both energy supply and demand) is co-developed with the Energy Research Institute at Nanyang Technological

University under the Smart Multi-Energy System (SMES) initiative. Evercomm also works with United Nations, country leaders, and large conglomerates to build and train the pipeline of human resources that is needed in order to fill the necessary roles that sustainability and industry digitization require.

THANK YOU!

TED CHEN

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The logo for Evercomm, featuring the word "EVERCOMM" in a bold, sans-serif font. The letter "V" is stylized with a diagonal line through it.

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