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# CORPORATE PRESENTATION



January 2022

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# GSS ENERGY OVERVIEW

Established in 1979, GSS Energy has 2 main business segments:



Precision  
Engineering



Oil &  
Gas



**~S\$40m**

Market Cap



**~65%**

Free Float



**9**

Manufacturing  
Facilities



**>40**

Years of operational  
track record



**~2,200**

Employees



**S\$58.5m**

1HFY2021 Revenue

36%



**S\$1.7m**

1HFY2021 Net Profit

20%



**S\$1.8m**

1HFY2021 Net Profit to owners

10%



**14.6%**

Healthy Net Debt/Equity\*  
As at 30 June 2021

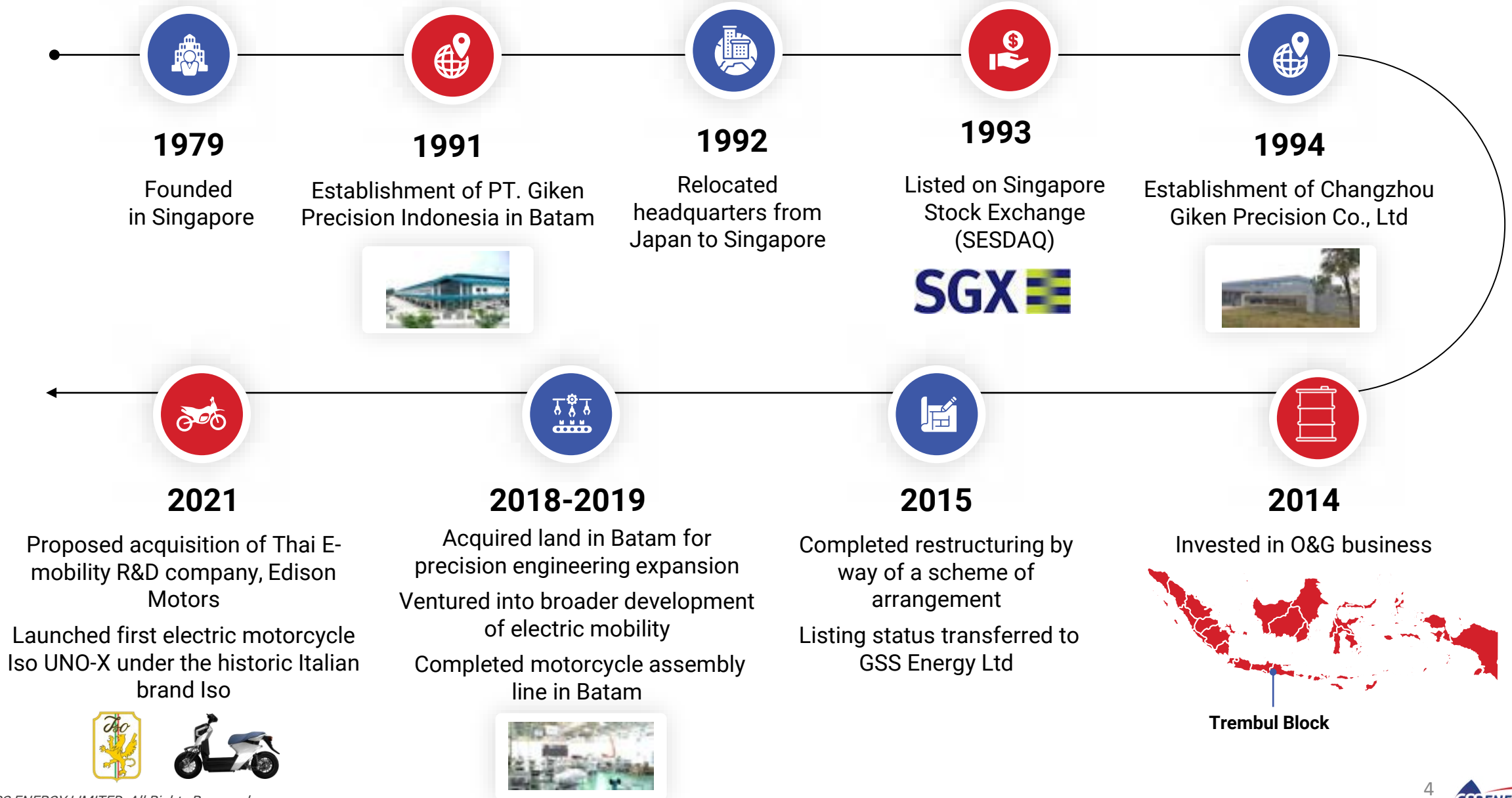
\*Net Debt = Cash & Cash equivalents + short term investments – Loan and borrowings



**~S\$57m**

Total Equity As at 30 June 2021

# KEY MILESTONES





# GROUP STRUCTURE



Oil & Gas  
(20%)



Giken Sakata (S) Limited

PT Giken Precision  
Indonesia (GPI)



Batam, Indonesia

PT Giken Technology  
Indonesia (GTI)



Batam, Indonesia

Giken Precision  
Engineering (GPE)



Singapore

Changzhou Giken  
Precision Co., Ltd. (CGP)



Changzhou, China

Changzhou Giken  
IMPORT & EXPORT Co.,  
Ltd. (CGIE)



Changzhou, China

Assembly

PCB  
Assembly

Plastic  
Moulding

EV bike  
assembly

Shafts  
Factory

Shafts  
Factory

Assembly

PCB  
Assembly

Plastic  
Moulding

Precision Engineering



(GM)



Singapore



Pending  
completion

Electric Mobility



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# PRECISION ENGINEERING



**9 MANUFACTURING FACILITIES**  
In 3 countries – China, Singapore and Indonesia



Environmental Management



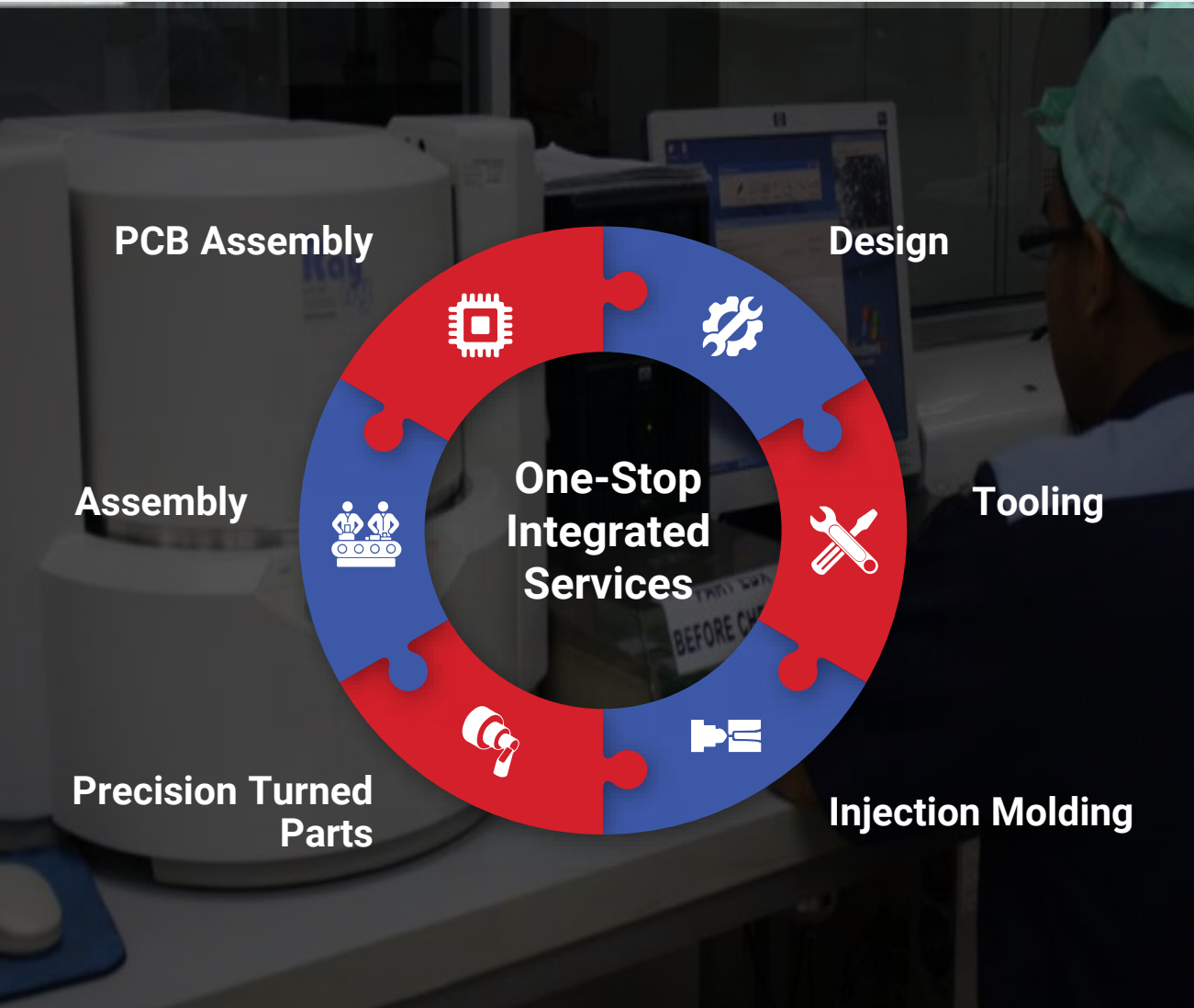
General Quality Management



Medical Quality Management



Automotive Quality Management



### Electronic Manufacturing Services - Batam (Indonesia)

*Manufactures high precision components such as plastic injection moulding parts, Printed Circuit Board (PCB) Assembly and Class 100k Cleanroom and complete box assembly*



### Precision Shafts and machining - Changzhou (China) and Singapore

*Manufactures precision turned parts such as motor shafts, customized turned components for various industries and high precision machining parts*







**9 MANUFACTURING FACILITIES**  
In 3 countries – China, Singapore and Indonesia



Environmental Management



General Quality Management



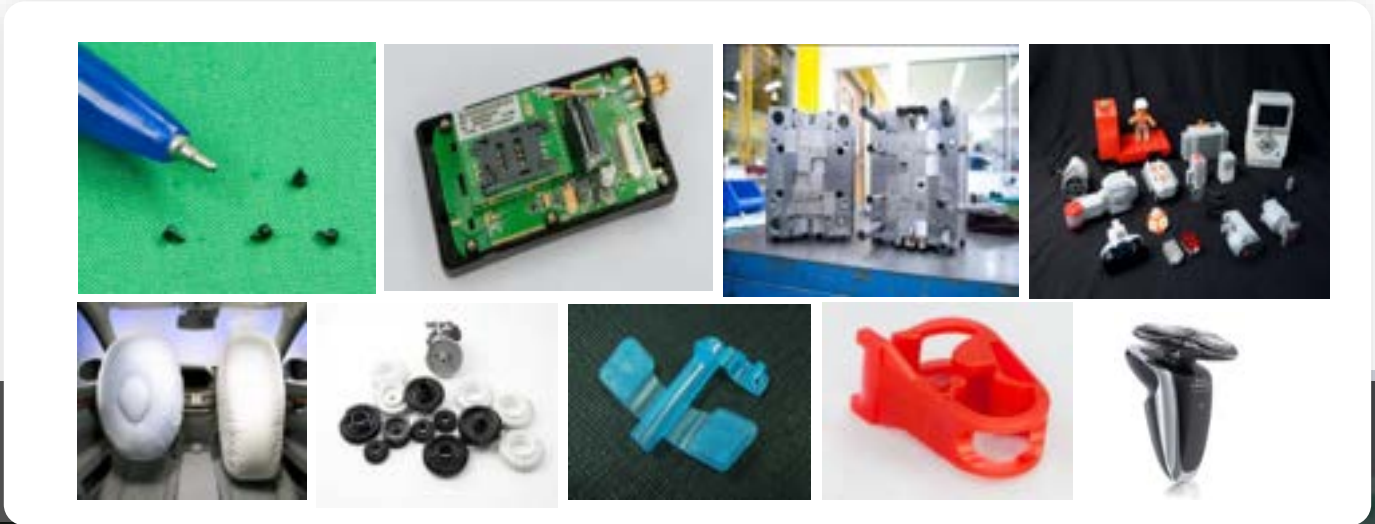
Medical Quality Management



Automotive Quality Management

# ELECTRONIC MANUFACTURING SERVICES – 2021 Utilisation: >90%

Batam, Indonesia



Factory area: 28,000 sqm

\*Based on FY2020 Financials



**Plastic Injection Moulding & Class 100k Cleanroom (ISO 13485 certified)**

~ 20% Revenue\*  
56 units of machine 7T-530T  
27 electric injection machines



**Printed Circuit Board Assembly (PCBA)**

>50% of Precision Engineering revenue\*  
25 SMT lines for PCBA



**Product Assembly**

~ 5% Revenue\*







**9 MANUFACTURING FACILITIES**  
In 3 countries – China, Singapore and Indonesia



Environmental Management



General Quality Management



Medical Quality Management



Automotive Quality Management

## PRECISION SHAFTS AND MACHINING - 2021 Utilisation: >90%

### Singapore



### Changzhou, China



**Factory area:** 1,080 sqm



**Specialize:** Manufacture precision turning parts & grinding parts



**Factory area:** 14,057 sqm









**Specialize:** Precision turning parts, plastic injection, PCBA and assembly









# PRODUCT PORTFOLIO

## Original Design Manufacturer (ODM)

 Coffee maker	 Smart Cooker	 Window Cleaner
 Rechargeable Electric Toothbrush	 Handheld Blender	
 Electric Motorcycle		

## Original Equipment Manufacturer (OEM)

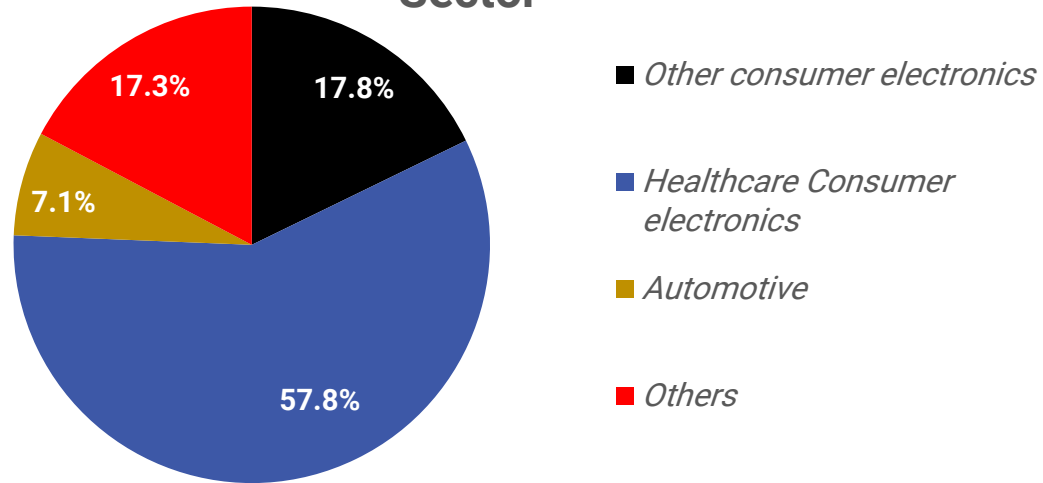
 Icemaker	 Device Charger
 Game Console	 Endoscope
 Circuit Breaker	 Thermostat

ODM tends to have higher margins vs OEM by 5 to 10 ppt

**We intend to grow our ODM sales contribution by 20% by 2023**

# DIVERSIFIED CUSTOMER BASE

Precision Engineering FY2020 Revenue by Sector



 We are a top tier supplier to **PHILIPS** in Asia

 Beneficiary of the trend by top brands to diversify manufacturing facilities out of China; Expects to persist for next 12-18 months

 Expansion into defense segment, with new Fortune 500 major US defense customer





# Room For Expansion

## 2 Available Buildings

**1 Building** – Designed for production capacity of up to 5,000 Electric Motorcycles/ month

**1 Building** – Potential to expand production capacity for precision engineering by up to 30%



## ROOM FOR EXPANSION



**Additional Land Space To increase production capacity by up to 120%**



**Batam, Indonesia**

*Land Size : 70,000 m<sup>2</sup>*

*Build up : 20,800 m<sup>2</sup>*



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# OIL AND GAS

# A RISK FREE CARRY FROM O&G

## Past Happenings

- After initial discovery of oil in 2018, the Group decided to farm out the project due to the outlook of O&G, and the decision to focus its resources on precision engineering
- Entered into agreement with Oakhurst Investment, which has committed investment for the CAPEX and OPEX for the development of the project
- The project has received all regulatory permits, and is in the midst of establishing the wellhead to connect to the prospective gas buyer



Oakhurst has a defined schedule to drill 5 wells in the Trembul Operation Area

## Phase 1 – Till GSS recovers US\$7m from 50% of revenue generated

	Oakhurst	GSS	Comments
<b>Revenue</b>	50%	50%	GSS is entitled to 50% of revenue generated till it recovers its sunk cost in the project (i.e. <b>US\$7m</b> )
<b>Cost</b>	100%	0%	Oakhurst will commit the CAPEX and OPEX for the development of the project and production of oil

## Phase 2 – GSS has a free carry on 16% of the profits after recovering its cost

	Oakhurst	GSS	Comments
<b>Revenue</b>	100%	0%	
<b>Cost</b>	100%	0%	Oakhurst will commit the CAPEX and OPEX for the project development and production of oil
<b>Profit</b>	64%	16%	<b>GSS has a free carry on 16% of the profits.</b> The provincial government will be entitled to the remaining 20% of the profits generated

Est production cost ~**US\$15-18/barrel**,  
WTI Crude (as at 11 Jan 2022):~**US\$80/barrel**

<b>Status</b>	Production expected to <b>commence in 2022</b>
<b>Area</b>	47.6 sq km
<b>Location</b>	Bloral Regency in Central Java Province, Indonesia
<b>2P Reserves</b>	24.3m barrels (up to 800m)
<b>Off-Taker</b>	PT Pertamina EP
<b>Interest</b>	Crude 23.5%, natural gas 31.4%
<b>Contract validity</b>	<b>Till 2031</b>
<b>GSS Energy's stake</b>	20%





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# ELECTRIC MOBILITY

# End-to-end development and manufacturing capabilities

of electric motorcycles and related necessary peripherals.



**Obtained World manufacturer Identifier (WMI)** in November 2020



**Launch of first electric motorcycle UNO-X** under historic Italian brand Iso, in partnership with Ferruccio Lamborghini (The Lamborghini Family)



**To complete production of first 20 UNO-X by 1Q2022**

2019

Started

5,100

sq.ft. sample lot  
assembly line  
At Batam, Indonesia

Up to

500

electric motorcycles  
production capacity/month

15

Patents\*  
(\*Approved and pending approval)

# PARTNERSHIPS

## Battery Cell Manufacturing Partners



## Product Partners

## Government Partners



## Brand Partner



## Testing & Certification Partners



2019

- Electric bike under design.
- Completed motorcycle assembly line in Batam

2020

- Engaged Edison Motors for the design of UNO-X.
- Assembly Factory Audited by MOI, Indonesia.
- World Manufacturer Identifier obtained

2021

- Completed 15,000 km Ride Testing;
- Proposed acquisition of Edison Motors
- Showcase of Iso UNO-X at EICMA, Milan

# End-to-end development and production of electric motorcycles and related necessary peripherals



## Research

*Guide projects down new and fascinating paths*  
*In-depth R&D as needed*



## Ideation

*Risk evaluation*  
*Design plan*  
*Refine and test the look and function*



## Engineering

*Create 2D/3D CAD*  
*Model simulations*  
*Validate and refine primary design features*



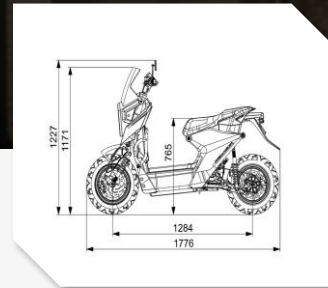
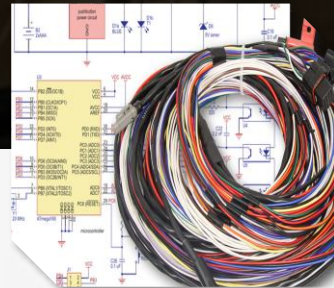
## Prototyping

*Validate product requirements*  
*Confirm design*  
*Functionality Test*



## Manufacturing

*In-house manufacturing facilities*  
*Quality Control*  
*Packing & Deliver*



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## End-to-end development of electric motorcycles and related necessary peripherals



### Proposed Acquisition of Edison Motors

*A Thai company specializing in design of electric motorcycles, EV batteries, powertrains and related engineering.*



#### MOTORCYCLE

An electric motorcycle with the same riding experience as 150cc petrol bike.



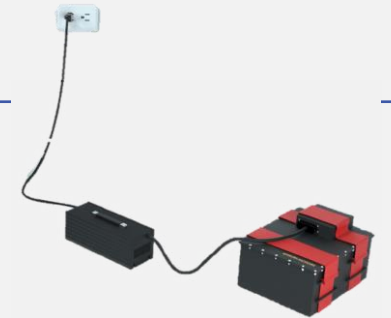
#### BATTERY PACK

High power battery pack with a state-of-the-art BMS.



#### SOFTWARE

On-device firmware to software and management & customer apps (iPhone and Android) developed in-house.



#### INFRASTRUCTURE

Home charger provided and charging / swapping stations being researched.

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# End-to-end development of electric motorcycles and related necessary peripherals

## Complete motorcycle Assembly

Designed & implemented assembly process  
World Manufacturer Identifier (WMI) secured  
(PT. GTI WMI no.: M.F. Y)

### Located in Batam, Indonesia



**5,100**

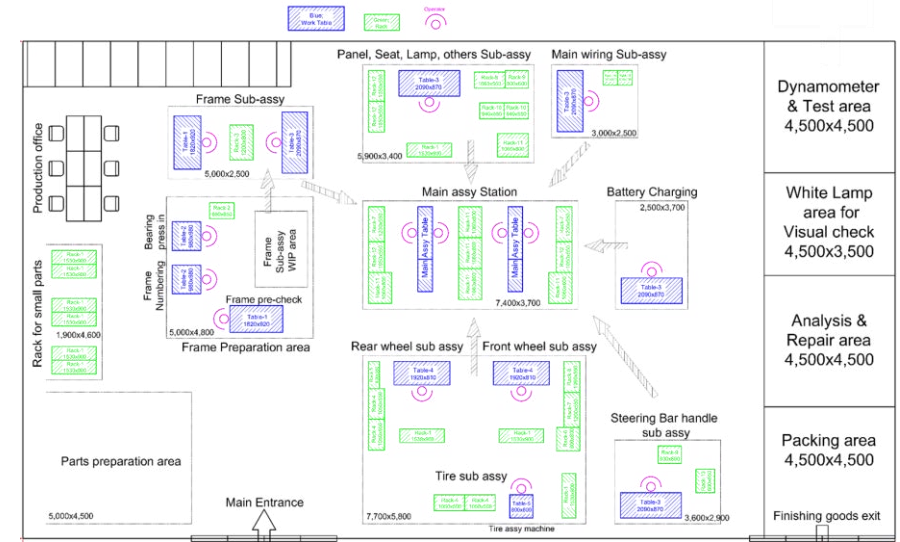
sq.ft. sample lot assembly line



**~500**

motorcycles per month

## Existing Electric Motorcycle Assembly line floorplan



Available building to expand production capacity to up to 5,000 Electric motorcycles/month





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## End-to-end development of electric motorcycles and related necessary peripherals



**ROOM FOR EXPANSION**



**Up to 5,000 electric motorcycles/month**



**Batam, Indonesia**

*Land Size : 70,000 m<sup>2</sup>*

*Build up : 20,800 m<sup>2</sup>*

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## Isomoto

Mr. Ferruccio Lamborghini (*The Lamborghini Family*) has licensed his family iconic brand Isomoto to Giken Mobility until **2044**.



Top Speed	115 Km/H	Range	130 Km
Trunk	25 L	Carry	250 Kg
Power	5 Kw	Fast Charge	1.5 Hours
Ingress	IP67 Battery & Motor		



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## Body Swapping Design

### PATENTS PENDING



4 design patents on the motor & suspension,



5 patents on the bike designs



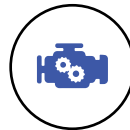
1 invention patent pending approval.



Modular part design, allows for easy maintenance and lower design turnaround times.



Each part of the bike can be easily replaced in less than 5 steps.



The centre mount motor with a belt drive offers better performance, smoother ride, and easy maintenance



Lesser overall components = lesser maintenance for the customers.



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## 2021

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- Removable battery pack – 77V, 42Ah, 27kg in weight.
- Over Voltage, Under Voltage, Internal & External Short Circuit, Over Charge, Over Discharge, Over Current, Over Heating, Thermal Runway protections in-built with BMS control.
- 30 internal sensors, 8 of which are used for data transfer on the CAN Bus. (same communication like a 4-wheeler such as Tesla)
- 5 design patents pending approval on the battery designs.



7" Color LCD Touch Screen  
3G/4G, Bluetooth, Wifi, CAN bus  
GPS, Accelerometer



Overall, 30 internal sensors collecting critical data.



### Bike

- Connected by CAN bus
- Over 5 sensors from CBS brake, speed, temperature, etc.



### Motor

- Connected by CAN bus
- Over 5 sensors from RPM, temperature, humidity, etc.



### Battery BMS

- Connected by CAN bus
- Over 8 sensors to collect data on temperature, voltage, current, etc.

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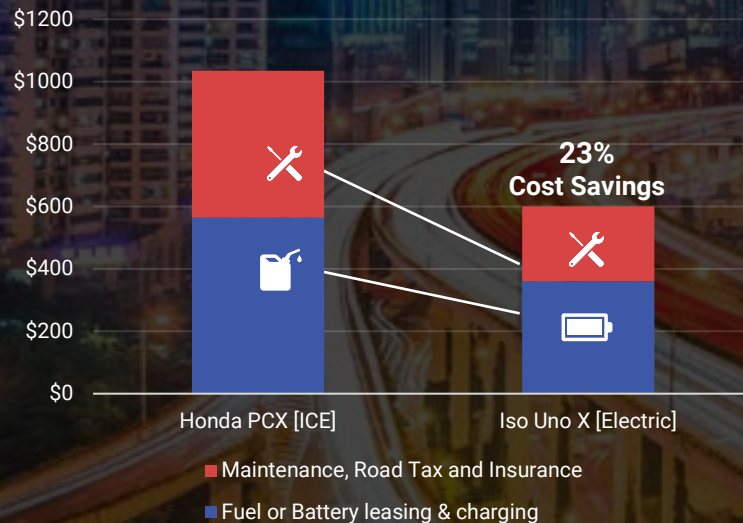


## Cost Effective & Environmental Friendlier

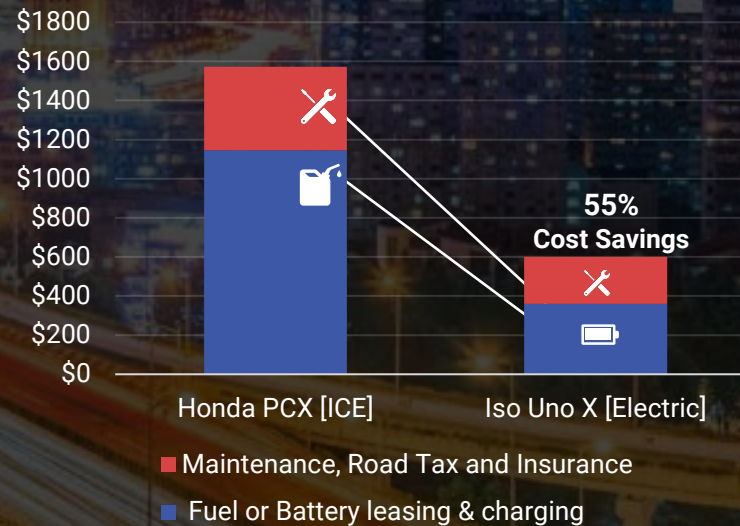
Vs traditional fuel bike



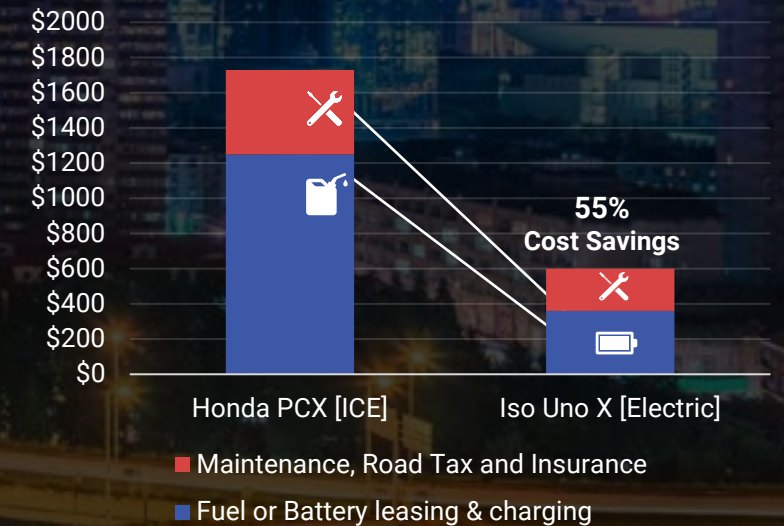
Total Cost of Ownership over 1 year(s)  
Driving 100 km/day in Malaysia



Total Cost of Ownership over 1 year(s)  
Driving 100 km/day in Vietnam



Total Cost of Ownership over 1 year(s)  
Driving 100 km/day in Cambodia





# Recent Event

## EICMA 2021- Milan

EICMA 2021 is an important international show dedicated to motorbikes and the world of 2- wheelers and is a reference point for motorbike aficionados to learn about the developments in biking. It involves the participation of the leading brands in the motorbike sector.







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# **ELECTRIC MOBILITY PEER COMPARISON**

# VS. PEERS [Gasoline]



Brand Model Name Brand Origin	Iso UNO-X Italy	Honda PCX Japan	Yamaha Nmax Japan
Max. Speed [kmph] Modes	115 Eco, Sport	118	110
Motor Power [kW]	5.0	-	-
Max. Range at low, constant speed [km]	150	320	270
Battery Type, IP rating	Removable, IP67	-	-
Charging Type Fast Charging Time [h]	Wall Plug 1.5	- -	- -
Trunk Space [L]	25	27	25
Modularity & Scalability	High	Low	Low
Design Timeline	6 months to new design	>1 year	>1 year
Maintenance	Low and easy	High	High
Price [USD]	TBC	2,850	2,150

# VS. PEERS



Electric motorcycles				
Brand Model Name Brand Origin	Iso Uno X Italy	Niu NQi GT/S China	Piaggio Vespa Elettrica Italy	Gogoro 3 Premium Taiwan
Max. Speed <sub>[kmph]</sub> Modes	115 Eco, Sport	70 E-Save, Dynamic, Sport	70 -	97 -
Motor Power <sub>[kW]</sub>	5.0	3.0	3.6	5.0
Max. Range at low, constant speed <sub>[km]</sub>	150	155	100	170
Battery Type, IP rating	Removable, IP67	Swappable, IP67	Fixed	Swappable, IP67
Charging Type Fast Charging Time <sub>[h]</sub>	Wall Plug 1.5	Wall Plug 2.0	Type 2 1.5	Swapping only -
Trunk Space <sub>[L]</sub>	25	0	20	26.5
Modularity & Scalability	High	Low	Low	Medium
Design Timeline	6 months to new design	>1 year to new design	5 years to new design	6 mos to new design
Maintenance	Low and easy	Low	Low	Low
Price <sub>[USD]</sub>	TBC	5,500	7,300	3,555



# VS. PEERS [MY & VN]



Electric motorcycles				
Brand Model Name Brand Origin	Iso UNO-X Italy	Vinfast Klara S Vietnam	Treeletrik T90 Malaysia	Treeletrik T70 Malaysia
Max. Speed [kmph] Modes	115 Eco, Sport	48 -	90	65
Motor Power [kW]	5.0	1.2	5.0	1.5
Max. Range at low, constant speed [km]	150	120	85	100
Battery Type, IP rating	Removable, IP67	Removable, IP67	Fixed	Fixed
Charging Type Fast Charging Time [h]	Wall Plug 1.5	Wall Plug -	Wall Plug -	Wall Plug -
Trunk Space [L]	25	<10	-	-
Modularity & Scalability	High	Low	Low	Low
Design Timeline	6 months to new design	-	-	-
Maintenance	Low and easy	Low	Low	Low
Price [USD]	TBC	1,700	3,600	2,000

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Looking Ahead

### Target Milestones

- Launch in **Thailand**, first target market, by 1Q2022
- Expand to **3** countries across **Asia** by end of 2022, and **3 continents** by end of 2024
- Target sales and production of **20,000** electric motorcycles by 2024
- Launch of **2-3** new models within the next 36 months

### Expansion Strategy

- In talks with **dealers/distributors across 6 markets** for B2C distributorships
- **B2B sales-** in talks with companies involved in food delivery, motorcycle taxis, vehicle rental, and government agencies
- Expansion into **white label design and manufacturing**
- **Licensing of EV technology**



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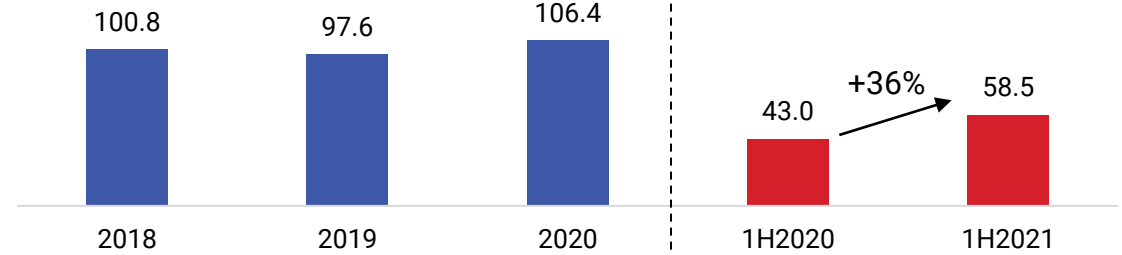
# FINANCIAL REVIEW



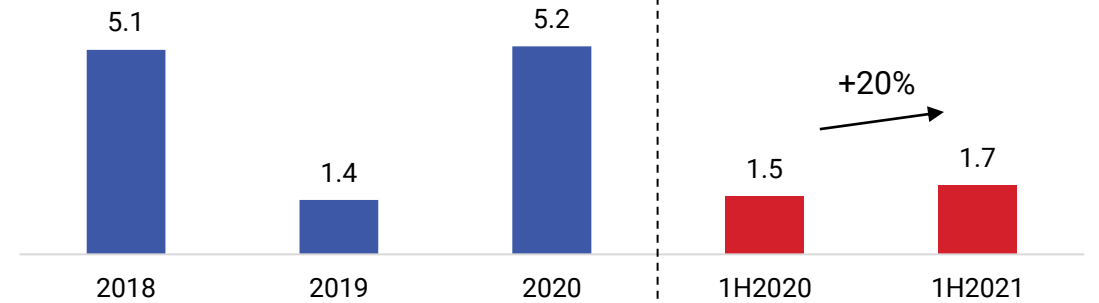
# FINANCIAL HIGHLIGHTS

## 1H2021

### Sales S\$m



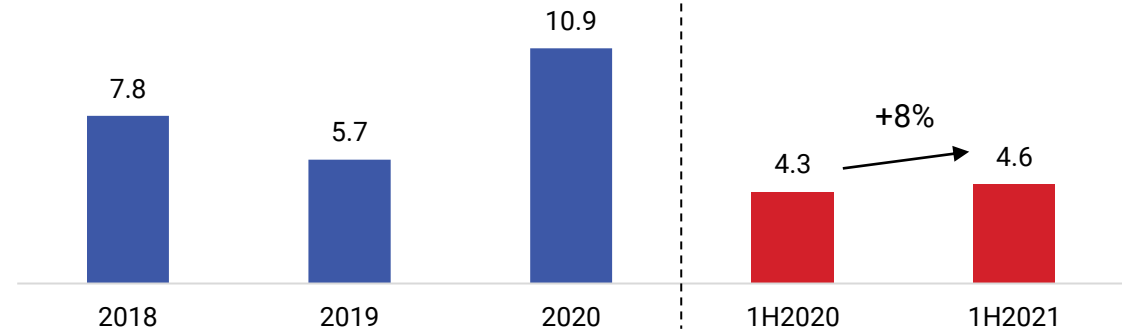
### Adjusted Net Profit S\$m



*\*2018 Net profit adjusted for impairment allowances for exploration assets*

*2020 Net profit adjusted for other income from jobs support scheme and cost recovery for termination of contract with customers*

### EBITDA S\$m



*\*2020 EBITDA excludes other income from jobs support scheme and cost recovery for termination of contract with customers*

*\*Financial figures presented has been rounded up to 1 decimal place.  
Y-o-y comparison may differ due to rounding figures.*

# FINANCIAL HIGHLIGHTS 1H2021

FINANCIAL HIGHLIGHTS	1HFY2021	1HFY2020	Change	Comments
<b>Revenue (S\$m)</b>	58.5	43.0	36.3%	Increase in demand by end customers due to accelerated use of electronics and electric consumer goods at home
<b>Gross Profit (S\$m)</b>	9.3	8.6	8.0%	
<b>Gross Profit Margin</b>	15.8%	20.0%		Higher inputs and materials costs associated with supply chain disruptions affecting deliveries and causing supply shortages
<b>EBITDA (S\$m)</b>	4.6	4.3	8.1%	
<b>EBITDA Margin</b>	7.9%	9.9%		
<b>Net Profit (S\$m)</b>	1.7	1.5	19.8%	
<b>Net Profit Margin</b>	3.0%	3.4%		
<b>Net Profit To Owners (S\$m)</b>	1.8	1.6	9.6%	

**Contribution From Precision Engineering forms 100% of Revenue in 1H2021**

*\*Financial figures presented has been rounded up to 1 decimal place.  
Y-o-y comparison may differ due to rounding figures.*

# BALANCE SHEET HIGHLIGHTS 1H2021

BALANCE SHEET HIGHLIGHTS	As at 30 June 2021	As at 31 Dec 2020	Comments
Cash and cash equivalents (S\$m)	6.3	7.1	
Short-term investments (S\$m)	2.5	0.6	Interest bearing short-term deposits placed with financial institutions with credit rating of AA to A, for average period of 3 months.
Loan and borrowings (S\$m)	17.1	13.2	
Net Debt* (S\$m)	8.3	5.5	
Net Debt/Equity	14.6%	10.2%	Healthy net gearing
Total assets (S\$m)	111.0	103.8	
Total liabilities (S\$m)	54.4	49.8	
Total equity (S\$m)	56.7	54.0	

*\*Net Debt = Cash & Cash equivalents + short term investments – Loan and borrowings*

*\*Financial figures presented has been rounded up to 1 decimal place.  
Y-o-y comparison may differ due to rounding figures.*

## Post 30 June 2021,

*The Group has issued ~83.3m new shares at S\$0.06 per share, raising net proceeds of ~S\$4.8m  
Proposed acquisition of Edison Motors for ~S\$7.5m via cash consideration of S\$4m and issuance of 50m new shares at S\$0.07054 per share  
Proposed issuance of 40.5m new warrants to founders of Edison Motors with exercise price of S\$0.07054*





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# KEY INVESTMENT MERITS

# OUR KEY INVESTMENT MERITS

## Significant upside potential from Electric Motorcycle Development

Expected revenue contribution from 2022 with production capacity of ~500 electric motorcycles/month

B2B sales and B2C distributorships to drive sales volume going forward

## Potential risk free upside from O&G business from 2022

With no additional contribution to the OPEX or CAPEX, GSS is entitled to the revenue and profit generated from the O&G project once production commences



## Precision Engineering to underpin stable profit base

The Group is a top tier supplier to PHILIPS in Asia.

Expected to benefit from the global trend of diversifying manufacturing facilities out of China as well as an expansion in customer base into the defense segment.

## Focus on ODM products to further drive sales and margin expansion for Precision Engineering

The Group intends to grow its ODM revenue contribution by 20% by 2023. ODM tends to have higher margins vs OEM by 5 to 10 ppt

*Powering Growth Through Multiple Business Engines*



**THANK YOU**

For investor and media queries on  
**GSS Energy Ltd**



[emily@gem-comm.com](mailto:emily@gem-comm.com)



Tel: (65) 9734 6565