

# **CORPORATE**PRESENTATION



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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



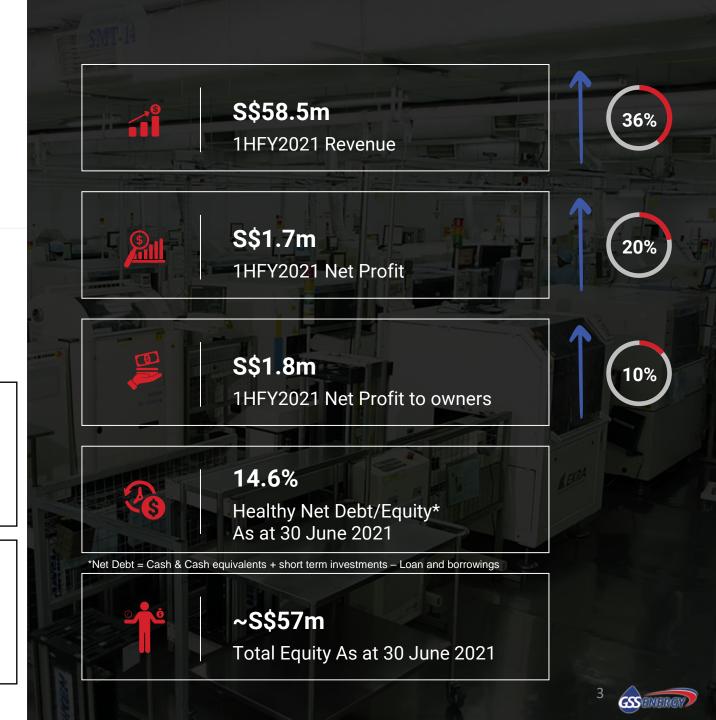
>40

Years of operational track record



~2,200

**Employees** 



## **KEY MILESTONES**











1979

Founded in Singapore 1991

Establishment of PT. Giken Precision Indonesia in Batam 1992

Relocated headquarters from Japan to Singapore 1993

Listed on Singapore Stock Exchange (SESDAQ)

1994

Establishment of Changzhou Giken Precision Co., Ltd





2021

Proposed acquisition of Thai Emobility R&D company, Edison Motors

Launched first electric motorcycle Iso UNO-X under the historic Italian brand Iso







2018-2019

Acquired land in Batam for precision engineering expansion

Ventured into broader development of electric mobility

Completed motorcycle assembly line in Batam





2015

Completed restructuring by way of a scheme of arrangement

Listing status transferred to **GSS Energy Ltd** 

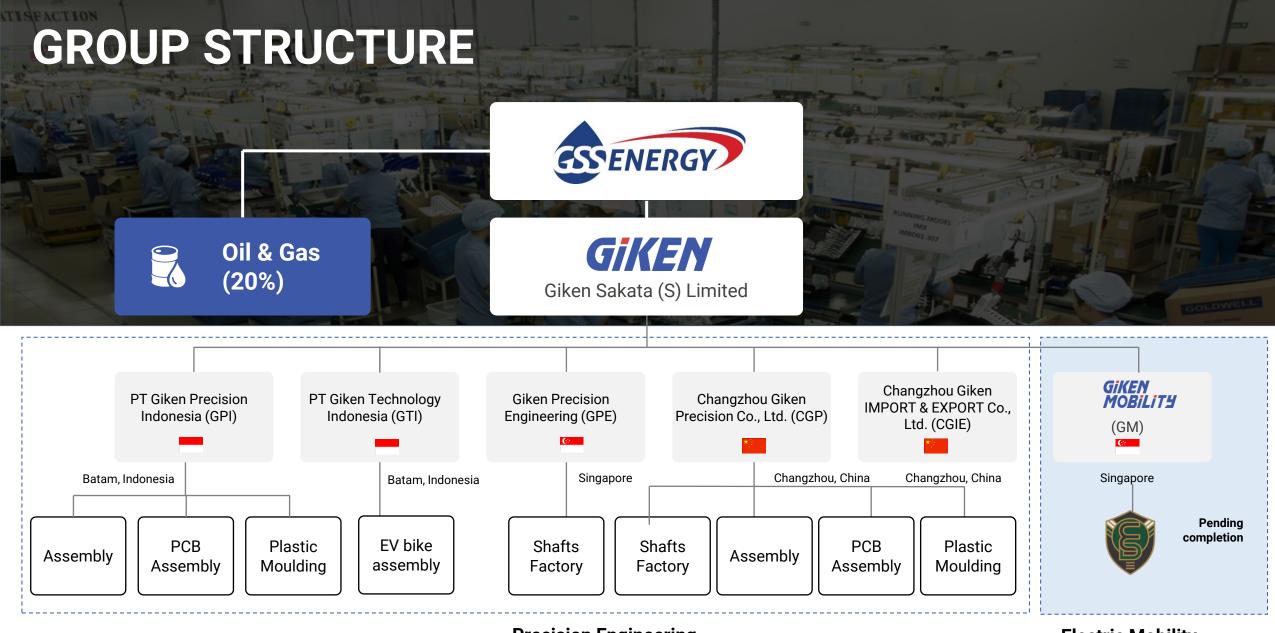


2014

Invested in O&G business



**Trembul Block** 



**Precision Engineering** 

**Electric Mobility** 





# PRECISION ENGINEERING



#### 9 MANUFACTURING FACILITIES

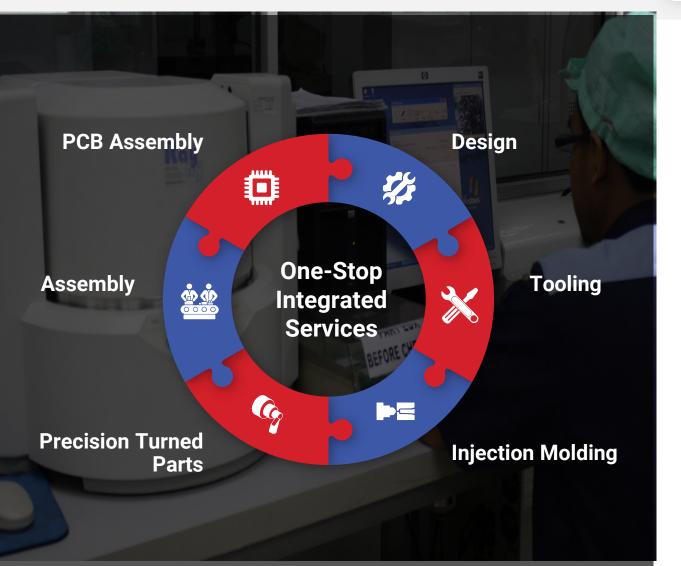
In 3 countries – China, Singapore and Indonesia











#### 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





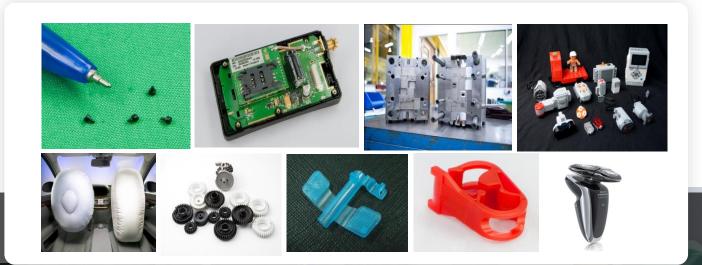




#### **ELECTRONIC MANUFACTURING SERVICES – 2021 Utilisation: >90%**

#### 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









#### 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

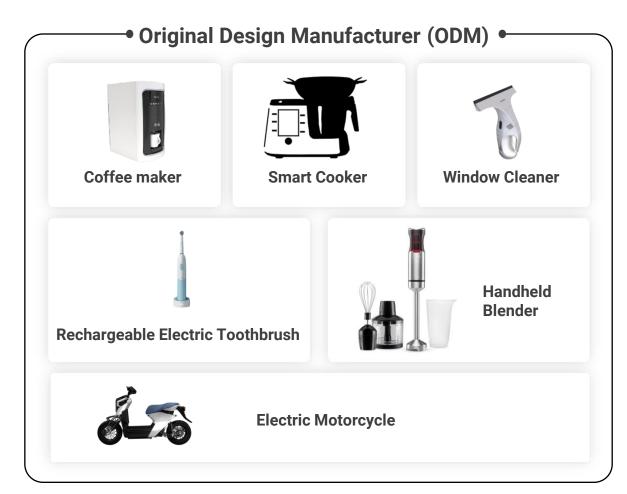


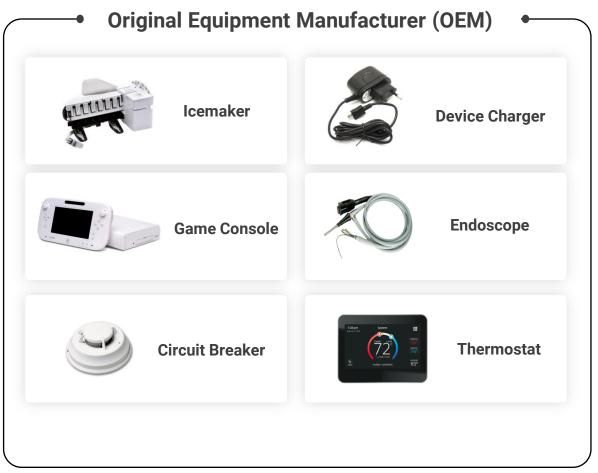




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## PRODUCT PORTFOLIO

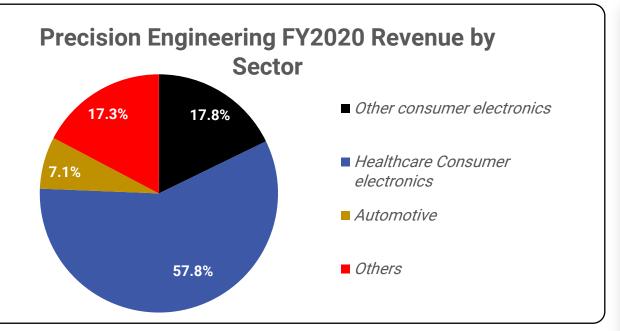




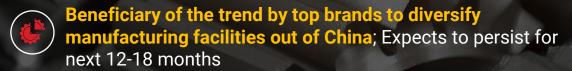
ODM tends to have higher margins vs OEM by 5 to 10 ppt

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

# **DIVERSIFIED CUSTOMER BASE**







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





















































































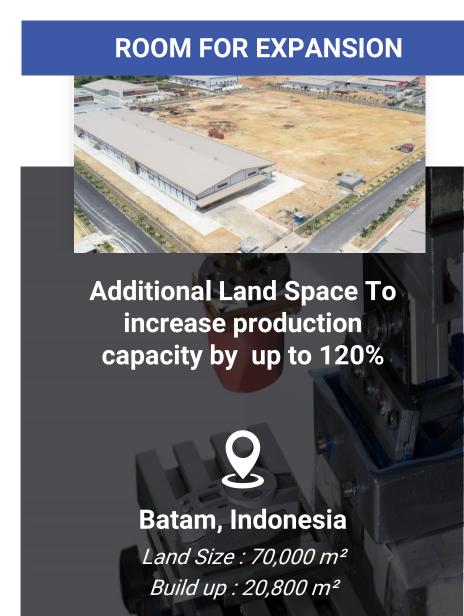


# **Room For Expansion**

# 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%











# **OIL AND GAS**

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# A RISK FREE CARRY FROM 0&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
Revenue	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>
Cost	100%	0%	Oakhurst will commit the CAPEX and OPEX for the development of the project and production of oil

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

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

	Oakhurst	GSS	Comments
Revenue	100%	0%	
Cost	100%	0%	Oakhurst will commit the CAPEX and OPEX for the project development and production of oil
Profit	64%	16%	GSS has a free carry on 16% of the profits. 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

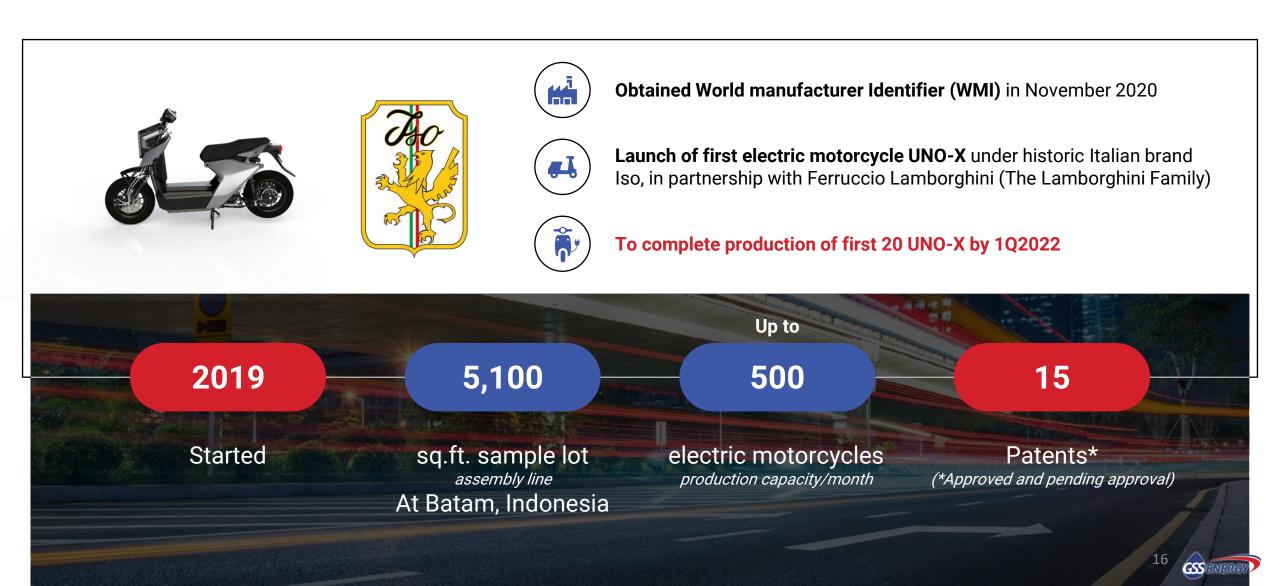




# **ELECTRIC MOBILITY**

# End-to-end development and manufacturing capabilities

of electric motorcycles and related necessary peripherals.



# **PARTNERSHIPS**









**Product Partners** 

#### **Government Partners**





**Brand Partner** 



**Testing & Certification Partners** 



 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

Posting and toot th

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

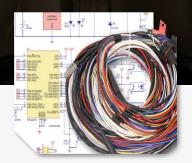


#### Manufacturing

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

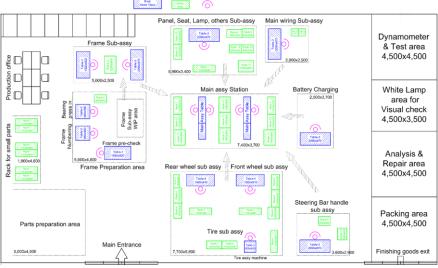
sq.ft. sample lot assembly line



~500

motorcycles per month

#### Existing Electric Motorcycle Assembly line floorplan



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





Electric bike under design.

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





- Electric bike under design.
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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**<sub>4</sub>

Carry

**250**<sub>Kg</sub>

Power

**5** KW

Fast Charge

**1.5** *Hours* 

Ingress

IP67 Battery & Motor

Electric bike under design.

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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.

Electric bike under design.

in Batam

Completed motorcycle assembly line

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





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



#### Motor

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



#### **Battery BMS**

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



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# **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.







# **ELECTRIC MOBILITY PEER COMPARISON**

# VS. PEERS [Gasoline]







Brand Model Name Brand Origin	lso 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 <sub>[km]</sub>	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	lso 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 [kW]	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 [USD]	TBC	5,500	7,300	3,555

# VS. PEERS [MY & VN]

		A STATE OF THE STA		
Electric motorcycles				
Brand Model Name Brand Origin	lso 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 <sub>[km]</sub>	150	120	85	100
Battery Type, IP rating	Removable, IP67	Removable, IP67	Fixed	Fixed
Charging Type Fast Charging Time <sub>[h]</sub>	Wall Plug 1.5	Wall Plug -	Wall Plug -	Wall Plug -
Trunk Space <sub>[L]</sub>	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

Electric bike under design.

in Batam

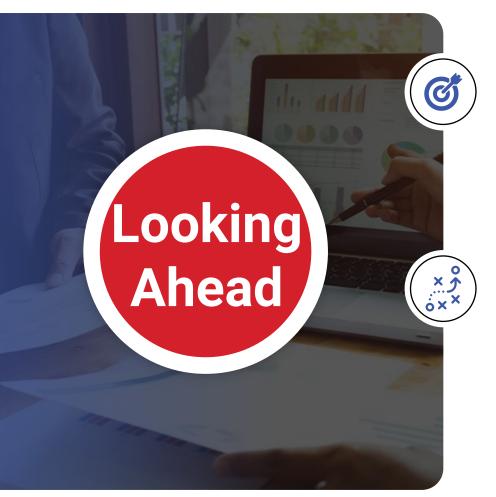
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#### **Target Milestones**

- 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

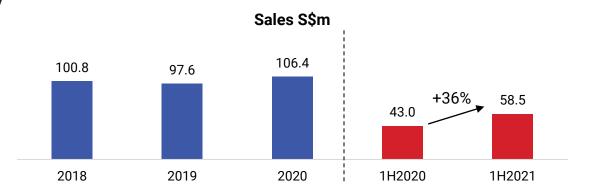






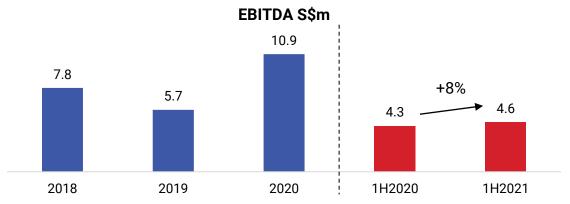
# FINANCIAL REVIEW

# FINANCIAL HIGHLIGHTS 1H2021





\*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



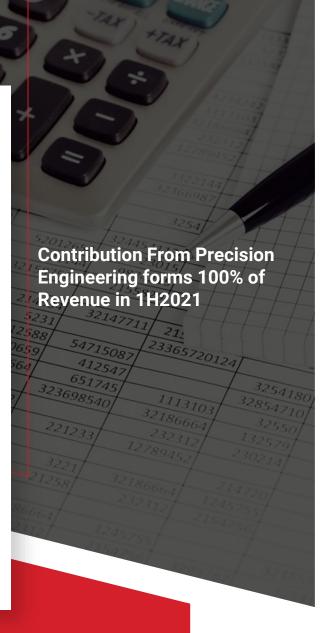
\*2020 EBITDA excludes other income from jobs support scheme and cost recovery for termination of contract with customers



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



<sup>\*</sup>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	

<sup>\*</sup>Net Debt = Cash & Cash equivalents + short term investments - Loan and borrowings

#### 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

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





# KEY INVESTMENT MERITS

## **OUR KEY INVESTMENT MERITS**

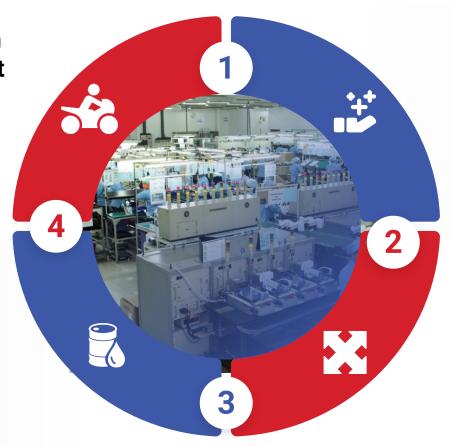
# **Significant upside potential from Electric Motorcycle Development**

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 0&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



# For investor and media queries on GSS Energy Ltd



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