

INITIATE COVERAGE

Singapore Technologies Engineering (STE SP)

A Fine Balance Of Defence And Growth

Strategically integrated into the defence and security structure of Singapore and a leading player in several major growth areas (smart city, satcom, commercial aerospace), STE is a fine balance of defence and growth. Its medium-term growth outlook is underpinned by a record orderbook of S\$21.3b. Re-initiate coverage with BUY and target price of S\$4.60.

- Defence portfolio offers stability and growth.** As an anchor supplier to Singapore's Ministry of Defence and an integrated solutions provider to a number of Singapore governmental agencies, Singapore Technologies Engineering (STE) is a strategic cornerstone of the country's defence and security structure. Having demonstrated good resilience during the pandemic, STE's defence and public security portfolio is set to grow in tandem with Singapore's defence spending and benefit from the growing demand of international customers amid a volatile global security climate and geopolitical landscape.
- Commercial aerospace portfolio likely to recover fully by end-23.** We expect revenue of STE's commercial aerospace segment – comprising mainly aerospace maintenance repair and overhaul (MRO), freighter conversion, nacelle original equipment manufacturing (OEM) businesses, etc – to recover to pre-pandemic levels by end-23. Promising signs include: a) the high utilisation of STE's existing airframe MRO capacity, b) its slots for several freighter conversion programmes having been fully booked till 2024/25, c) Airbus ramping up aircraft production (benefitting STE's nacelle OEM business), and d) STE investing in new freighter conversion and MRO capacities.
- Geared to other fast-growth areas.** With a comprehensive suite of solutions addressing the connectivity, mobility, security, infrastructure and environmental needs of cities, STE is proactively pursuing growth in the global smart city market and is well poised to ride the rising demand. In addition, as the world's leading satcom ground segment technology provider, STE is at the forefront of the satcom sector's revolution and is well-positioned to capture business opportunities unlocked by the Low Earth Orbit satellite technology.
- Medium-term growth underpinned by record orderbook.** STE's record orderbook of S\$21.3b at end-1Q22, contributed by all three business segments, provides good revenue visibility and underpins our revenue CAGR projection of 10.9% for 2022-24. We conservatively forecast a flat core net profit (excluding one-off gains/losses but including COVID-19-related government grants) in 2022, as we expect the positive impact from the improving business performance to be offset by the drop in grants. We expect net profit to rise 16.7%/6.1% in 2023/24 on organic business growth and higher contract deliveries.
- Re-initiate coverage with BUY.** Our 2022 DCF-based target price of S\$4.60 implies 2023F PE of 23.5x, 1.3SD above its historical average of 21.3x. Catalysts include a strong contract win momentum and stronger-than-expected earnings growth. Risks include any event that disrupts the aviation sector recovery, negative margin surprises due to project cost overruns or failure to pass down cost pressure from inflation.

KEY FINANCIALS

| Year to 31 Dec (S\$m) | 2020 | 2021 | 2022F | 2023F | 2024F |
|-------------------------------|-------|-------|-------|--------|--------|
| Net turnover | 7,158 | 7,693 | 9,557 | 10,141 | 10,500 |
| EBITDA | 949 | 1,044 | 1,245 | 1,420 | 1,484 |
| Operating profit | 570 | 646 | 729 | 866 | 920 |
| Net profit (rep./act.) | 522 | 571 | 526 | 614 | 651 |
| Core net profit | 535 | 526 | 526 | 614 | 651 |
| EPS (S\$ cent) | 17.1 | 16.8 | 16.8 | 19.6 | 20.8 |
| PE (x) | 24.3 | 24.7 | 24.6 | 21.1 | 19.9 |
| P/B (x) | 5.6 | 5.3 | 5.7 | 5.4 | 5.1 |
| EV/EBITDA (x) | 14.8 | 13.3 | 14.3 | 12.6 | 12.0 |
| Dividend yield (%) | 3.6 | 3.6 | 3.9 | 3.9 | 3.9 |
| Net margin (%) | 7.3 | 7.4 | 5.5 | 6.1 | 6.2 |
| Net debt/(cash) to equity (%) | 29.7 | 26.8 | 182.1 | 179.2 | 163.1 |
| Interest cover (x) | 15.3 | 29.0 | 11.5 | 10.0 | 9.7 |
| ROE (%) | 23.1 | 24.3 | 22.5 | 26.6 | 26.6 |
| Consensus net profit | - | - | 587 | 661 | 719 |
| UOBKH/Consensus (x) | - | - | 0.90 | 0.93 | 0.91 |

Source: STE, Bloomberg, UOB Kay Hian

BUY

| | |
|--------------|---------|
| Share Price | S\$4.14 |
| Target Price | S\$4.60 |
| Upside | +11.1% |

COMPANY DESCRIPTION

A global technology, defence and engineering group with a diverse portfolio of businesses across the aerospace, smart city, defence and public security segments.

STOCK DATA

| | |
|---------------------------------|-------------|
| GICS sector | Industrials |
| Bloomberg ticker: | STE SP |
| Shares issued (m): | 3,117.4 |
| Market cap (S\$ m): | 12,906.0 |
| Market cap (US\$m): | 9,383.5 |
| 3-mth avg daily t'over (US\$m): | 16.5 |

Price Performance (%)

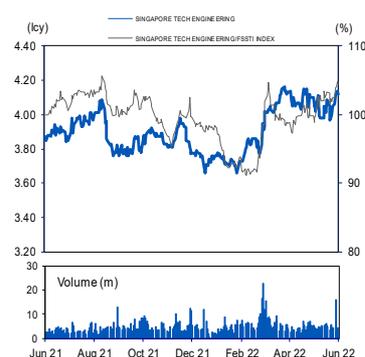
52-week high/low S\$ 4.16/S\$ 3.66

| 1mth | 3mth | 6mth | 1yr | YTD |
|------|------|------|-----|------|
| 1.0 | 5.9 | 9.8 | 7.0 | 10.1 |

Major Shareholders

| | % |
|----------------------------|------|
| Temasek Hldgs | 51.7 |
| FY22 NAV/Share (S\$) | 0.72 |
| FY22 Net Debt/Share (S\$) | 1.64 |

PRICE CHART



Source: Bloomberg

ANALYST(S)

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This report uses the closing prices of 2 June 2022

Investment Highlights

Defence business offers stability and growth. As an anchor supplier to the Ministry of Defence of Singapore (MINDEF) and an integrated solutions provider to a number of Singapore governmental agencies, STE is a strategic cornerstone of Singapore's defence and security structure. Having demonstrated good resilience during the pandemic, STE's defence and public security (DPS) portfolio is set to grow in tandem with the country's defence spending (defence budget grew at a CAGR of 3.0% in 2010-22) and growing public security needs.

Having been proactively pursuing growth in the global defence market, STE is also expected to benefit from international customers' growing demand amid a volatile global security climate and geopolitical landscape. Its defence business has made good progress in the global market. Some of the international defence contracts clinched in recent years include naval ship building contracts for the US Navy and UAE Navy, as well as specialty vehicle contracts for the German Federal Armed Forces. Together with its partner Oshkosh Defense, STE is bidding for the supply of 200 units of Cold Weather All-Terrain Vehicles (gross contract value of about US\$300m) to the US Army. Two prototypes have been delivered to the US Army and the outcome of the bidding is expected to be known in 2H22.

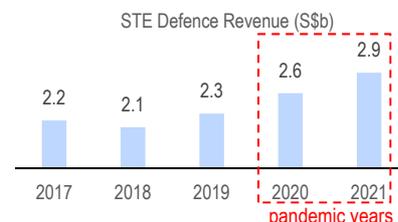
Commercial aerospace portfolio likely to recover fully by end-23. In a recent media interview, Director General of International Air Transport Association (IATA) shared that IATA now sees a chance for global air travel volume to recover to pre-pandemic levels in 2023, a year earlier than its previous forecast, though the Asia-Pacific region is expected to lag due to the COVID-19 restrictions in some major Asian markets (particularly China). We expect revenue of STE's commercial aerospace (CA) segment (comprising aerospace MRO, passenger-to-freighter conversion, nacelle OEM businesses, etc) to largely follow the global recovery timeline and to reach pre-pandemic levels by end-23 thanks to its global exposure (strong presence in the faster-recovering North America and Europe markets). Promising signs underpinning the recovery of STE's CA business include:

- High utilisation of STE's existing airframe MRO capacity.** STE's airframe MRO capacity is close to full utilisation while utilisation of STE's engine & component MRO capacity is also improving and had recovered to 80% by end-1Q22.
- Strong bookings of STE's passenger-aircraft-to-freighter (P2F) conversion slots.** Driven by the upbeat e-commerce and air cargo volume growth, there has been heightened interest in dedicated freighters, leading to strong demand for STE's freighter conversion services. According to STE, its existing A330P2F slots are fully booked through 2025, while its A321P2F slots are booked through mid-24. In order to meet the strong demand, STE is proactively expanding its Airbus P2F programme and raising the capacity to over 60 conversions p.a. by 2024 compared to a capacity of just under 20 slots p.a. in 2021.
- Airbus ramping up aircraft production, benefiting STE's nacelle and composite panel OEM businesses.** STE's 100%-owned subsidiary Middle River Aerostructure Systems (MRAS) is the sole supplier of engine nacelles for the Airbus A320neo family aircraft that use CFM International's LEAP-1A engines (LEAP-1A is the leading one of only two engine options for the A320neo family, which in turn has the lion's share of about 60% of global narrowbody aircraft orders today). Before the pandemic, Airbus had a target production rate of 60 units of A320 family aircraft per month but this was lowered to 40 at the height of the pandemic. Now that global air travel is recovering and demand is coming back, Airbus has been gradually ramping up A320neo production, with its monthly production rate at about 50 today.

According to Airbus in a press release on 4 May 22, Airbus is seeing continuing strong growth in commercial aircraft demand driven by the A320 family and hence it intends to raise the A320 family production rate to 75 units per month in 2025, a further increase beyond the previous target of 64 per month by mid-23.

Apart from MRAS, STE's 55%-owned subsidiary Elbe Flugzeugwerke (EFW), a tier-1 supplier of composite panels to Airbus, would also benefit from Airbus' production ramp-up.

FIGURE 1: STE'S RESILIENT DEFENCE PORTFOLIO ACHIEVED GROWTH EVEN DURING PANDEMIC



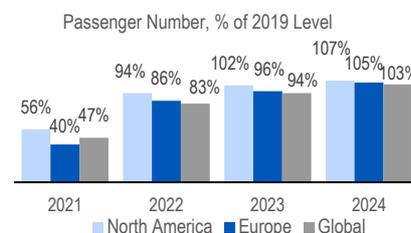
Source: STE

FIGURE 2: SINGAPORE DEFENCE BUDGET IN LONG-TERM GROWTH TREND (3% CAGR IN 2010-22)



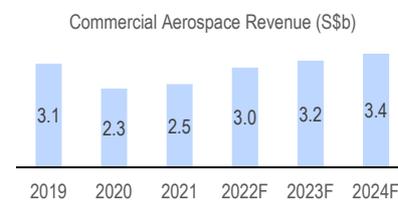
Source: Singapore Ministry of Finance

FIGURE 3: STE BENEFITS FROM FASTER-RECOVERING NORTH AMERICA AND EUROPE MARKETS



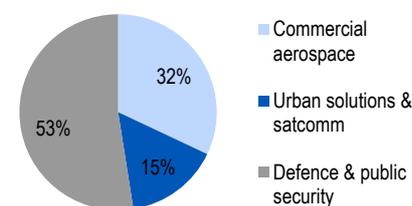
Source: IATA (Mar 22 Forecast)

FIGURE 4: STE'S COMMERCIAL AEROSPACE REVENUE TO FULLY RECOVER TO PRE-PANDEMIC LEVEL BY END-23



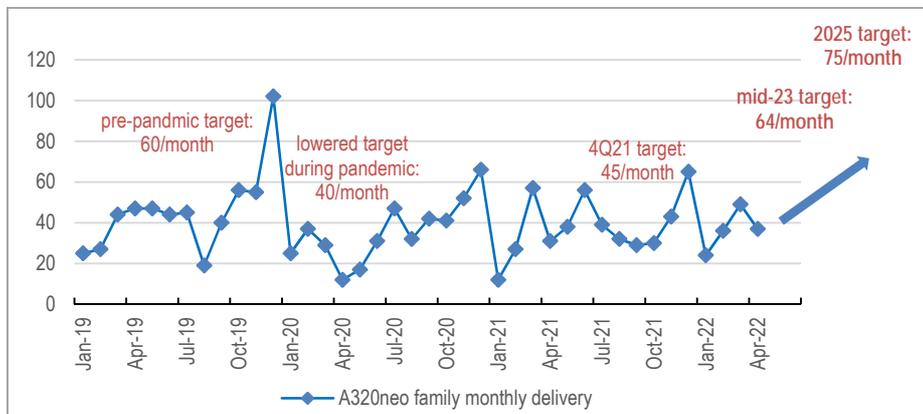
Source: STE, UOB Kay Hian

FIGURE 5: REVENUE BY BUSINESS SEGMENT (2021)



Source: STE

FIGURE 9: AIRBUS RAMPING UP PRODUCTION OF A320NEO FAMILY AIRCRAFT, TARGETING A MONTHLY PRODUCTION RATE OF 64 BY MID-23 AND 75 BY 2025



Source: Airbus

Geared to other fast-growth areas (smart city, satcom). With a comprehensive suite of solutions addressing the connectivity, mobility, security, infrastructure and environmental needs of cities, STE has built a track record (having undertaken more than 700 smart city projects in over 130 cities globally) and has been cementing its leading position in the smart city market. According to independent research from various sources, the global smart city market is expected to grow by a CAGR of 10-15% in the next 5-10 years. Compared with other players (mostly large MNCs like ABB, Siemens and Hitachi) in this area, one key strength of STE is its close relationship with the Singapore government, a key stakeholder with whom STE can co-develop and test its solutions in Singapore (consistently ranked the smartest city globally) and leverage the Singapore track record for overseas success.

As the world's leading satcom ground segment technology provider (with leading global market shares across key customer segments including maritime, aviation, military, etc), STE is at the forefront of the satcom sector's revolution and is well-positioned to capture business opportunities unlocked by Low Earth Orbit (LEO) satellite technology. According to satellite and space market research and consulting company Northern Sky Research (NSR), the development of LEO satellite technology is transforming the satellite industry and there has been a transition from the traditional Geosynchronous Equatorial Orbit (GEO) satellites to multi-orbit deployment of GEO, LEO and Medium Earth Orbit (MEO) constellations. As a result, the number of active satellites in orbit jumped from below 2,000 to close to 5,000 over the past five years and is growing rapidly with about another 24,700 satellites to be launched by 2030 (NSR's estimate). This will increase bandwidth capacity and reduce operating costs, thereby creating new demand for satellite communications. According to NSR's Global Satellite Ground Segment Report, 6th Edition, Dec 21, the satellite ground segment is expected to grow by a double-digit CAGR through to 2030.

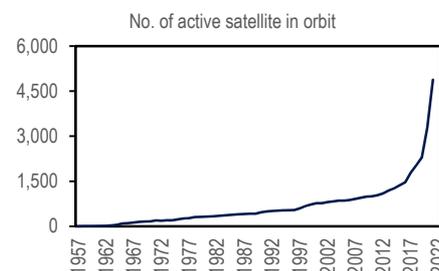
STE is also proactively investing in other future growth areas such as autonomous vehicle, robotics and drone technologies. We expect investment in these new areas and the associated R&D costs, despite their near-term negative effects on STE's earnings, to put STE in a good position to capture opportunities from the potential commercialisation of these technologies in future.

Medium-term growth underpinned by record orderbook. STE had a record orderbook of S\$21.3b at end-1Q22, contributed by all three business segments – CA, urban solutions & satcom (USS), and DPS. The strong orderbook provides good revenue visibility and underpins our revenue projection with a CAGR of 10.9% over 2022-24. Bottom line-wise, we conservatively forecast a flat core net profit (excluding one-off gains/losses but including COVID-19-related government grants) in 2022, as we expect the positive impact from the improving business performance to be largely offset by the estimated S\$205m reduction in government grants in 2022. Excluding the impact of government grants, STE's core net profit would have grown 63.7% yoy. We forecast net profit to grow 16.7%/6.1% in 2023/24 on organic business growth and higher contract deliveries.

STE's nacelle and composite panel OEM businesses are set to benefit from Airbus' planned ramp-up of A320neo production.

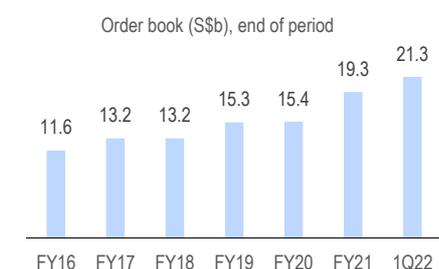
STE is a leading player in some high-growth areas including smart city and satcom, whose markets are expected to grow by a double-digit CAGR in 2020-30.

FIGURE 6: EXPONENTIAL GROWTH OF THE NUMBER OF ACTIVE SATELLITES IN SPACE



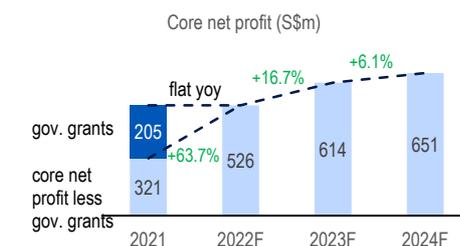
Source: Statista

FIGURE 7: STE ORDERBOOK AT RECORD HIGH



Source: STE

FIGURE 8: CORE NET PROFIT FORECAST



Source: UOB Kay Hian

Valuation

Re-initiate coverage with BUY and DCF-based target price of S\$4.60. We have applied a WACC of 7.0% and terminal growth of 2.5%. In Figure 9, we have included a sensitivity analysis of our target price for a range of WACC and terminal growth assumptions. Other key assumptions incorporated in the DCF include:

- STE is on track to achieve its 2026 revenue target of S\$11b.
- Group EBIT margin normalises to the pre-pandemic level by 2023/24, primarily driven by CA segment recovery, and subsequently stabilises at a slightly higher level of 9.0% by 2026 as the group benefits from productivity gains, cost efficiencies and operating leverage.
- Yearly capex provision is more than sufficient to cover the replacement needs and provides headroom to fuel longer-term growth.

FIGURE 10: DCF VALUATION

| Year to 31 Dec (S\$m) | 2021 | 2022F | 2023F | 2024F | 2025F | 2026F | 2027F | 2028F |
|---|----------------|-------|--------|--------|--------|--------|--------|--------|
| Revenue | 7,693 | 9,557 | 10,141 | 10,500 | 10,750 | 11,000 | 11,275 | 11,557 |
| <i>growth yoy</i> | 7.5% | 24.2% | 6.1% | 3.5% | 2.4% | 2.3% | 2.5% | 2.5% |
| EBIT | 618 | 729 | 866 | 920 | 953 | 987 | 1,011 | 1,037 |
| <i>EBIT margin</i> | 8.0% | 7.6% | 8.5% | 8.8% | 8.9% | 9.0% | 9.0% | 9.0% |
| EBIT*(1-tax rate) | 548 | 605 | 719 | 764 | 791 | 819 | 840 | 861 |
| <i>Effective tax rate</i> | 11.4% | 17.0% | 17.0% | 17.0% | 17.0% | 17.0% | 17.0% | 17.0% |
| Add: depreciation & amortisation charge | 398 | 517 | 554 | 564 | 572 | 579 | 588 | 596 |
| less: operating lease | -73 | -73 | -73 | -73 | -73 | -73 | -73 | -73 |
| less: capex for PPE & intangible assets | -429 | -461 | -482 | -495 | -521 | -531 | -542 | -552 |
| less: net increase in working capital | 137 | 0 | -245 | 0 | 0 | 0 | 0 | 0 |
| Dividend income from JVs/associates | 24 | 16 | 27 | 39 | 45 | 46 | 47 | 48 |
| Free cash flow to firm (FCF) | | | 500 | 799 | 814 | 842 | 860 | 880 |
| PV of FCF | | | 467 | 698 | 665 | 642 | 613 | 586 |
| Valuation as at end-22F | | | | | | | | |
| WACC applied | 7.0% | | | | | | | |
| Terminal growth assumption | 2.5% | | | | | | | |
| Terminal value | 23,171 | | | | | | | |
| PV of terminal value | 15,440 | | | | | | | |
| Sum of PV of FCF in forecast period | 3,672 | | | | | | | |
| Enterprise value | 19,112 | | | | | | | |
| Net cash/(debt) | -4,548 | | | | | | | |
| Equity value (100% stake) | 14,564 | | | | | | | |
| Less: NCI | -244 | | | | | | | |
| Fair value attributable to shareholders | 14,320 | | | | | | | |
| Outstanding share base (m) | 3,114 | | | | | | | |
| Target price | S\$4.60 | | | | | | | |

| Sensitivity Analysis for TP | | | | | | |
|-----------------------------|-----------------|---------|---------|---------|---------|--|
| WACC | Terminal growth | | | | | |
| | 1.5% | 2.0% | 2.5% | 3.0% | 3.5% | |
| 6.0% | S\$4.58 | S\$5.39 | S\$6.43 | S\$7.82 | S\$9.79 | |
| 6.5% | S\$3.95 | S\$4.59 | S\$5.40 | S\$6.44 | S\$7.85 | |
| 7.0% | S\$3.43 | S\$3.95 | S\$4.60 | S\$5.41 | S\$6.46 | |
| 7.5% | S\$3.00 | S\$3.43 | S\$3.96 | S\$4.61 | S\$5.43 | |
| 8.0% | S\$2.64 | S\$3.00 | S\$3.44 | S\$3.97 | S\$4.62 | |

Source: UOB Kay Hian

STE is trading at 21.1x 2023F PE, 0.1SD below its historical average forward PE of 21.3x. Our target price implies 23.5x 2023F PE, or 1.3SD above its historical average. This is plausible as STE's strong orderbook provides good visibility for growth in the medium term.

FIGURE 12: FORWARD PE IMPLIED BY TARGET PRICE AND CURRENT PRICE

| | 2021 | 2022F | 2023F | 2024F |
|--------------------------|-------|-------|-------|-------|
| EPS (Scents) | 18.2 | 16.8 | 19.6 | 20.8 |
| Current price implied PE | 22.8x | 24.6x | 21.1x | 19.9x |
| Target price implied PE | 25.3x | 27.4x | 23.5x | 22.1x |

Source: UOB Kay Hian

FIGURE 11: HISTORICAL PE BAND



Source: Bloomberg, UOB Kay Hian

Peer comparison. Due to the diversity of STE's portfolio of businesses (across the CA, smart city, satcom and DPS sectors), there is no clear-cut direct comparable for STE.

A number of companies share some common theme(s) with STE (Figure 12), but we caution that many of them also have other businesses that do not overlap with those of STE. Even for those that do share more common themes with STE (eg Honeywell also has businesses in the CA, smart city and defence sectors), they could be focused on different sub-segments (in aviation, Honeywell is famous for avionics and actuation systems while STE is more focused on aircraft MRO and engine nacelle) or occupy different parts of the industry value chain as compared with STE.

Nevertheless, we believe Figure 12 still provides a good high-level overview of the valuation levels at which companies of respective themes are trading. Trading at 2023F PE of 21.1x and EV/EBITDA of 12.6x, STE does not look cheaper than these peers.

FIGURE 13: PEER COMPARISON

| Company | Ticker | Trading Curr (lcy) | Rec | Price @ 2-Jun-22 (lcy) | Market Cap (US\$m) | PE | | | EV/EBITDA | | | P/B 22F (x) | Yield 22F (%) | ROE 22F (%) | Net Gearing* 22F (%) |
|---|---------|--------------------------|-----|------------------------------|--------------------------|-----------|------------|------------|-----------|------------|------------|-------------------|---------------------|-------------------|----------------------------|
| | | | | | | 21 (x) | 22F (x) | 23F (x) | 21 (x) | 22F (x) | 23F (x) | | | | |
| STE | STE SP | SGD | BUY | 4.14 | 9,420 | 24.7 | 24.6 | 21.1 | 13.3 | 14.3 | 12.6 | 5.7 | 3.9 | 22.5 | 205.6 |
| Aerospace MRO, Aerostructure & Systems | | | | | | | | | | | | | | | |
| SIA Engrg | SIE SP | SGD | BUY | 2.52 | 2,065 | 42.0 | 30.8 | 19.8 | 39.4 | 19.9 | 13.2 | 1.7 | 2.4 | 5.6 | (33.2) |
| AAR | AIR US | USD | NR | 50.13 | 1,764 | 20.8 | 15.3 | n.a. | 11.7 | 9.0 | n.a. | n.a. | n.a. | n.a. | |
| Spirit Aero | SPR US | USD | NR | 33.77 | 3,546 | n.a. | n.a. | 16.3 | n.a. | 16.7 | 8.6 | 13.4 | 0.1 | (20.2) | 782.0 |
| Triumph | TGI US | USD | NR | 16.00 | 1,035 | n.a. | 21.3 | 12.9 | 14.7 | 12.2 | 10.2 | n.a. | 0.0 | n.a. | n.a. |
| Magellan Aerospace | MAL CN | CAD | NR | 7.99 | 367 | n.a. | 31.3 | 8.8 | 9.0 | 7.1 | 4.3 | n.a. | 4.4 | n.a. | n.a. |
| Ducommun | DCO US | USD | NR | 46.12 | 555 | 4.0 | 13.3 | 11.5 | 10.2 | 8.9 | 7.8 | n.a. | n.a. | n.a. | n.a. |
| Astronics | ATRO US | USD | NR | 10.80 | 343 | n.a. | n.a. | 17.7 | 95.6 | 20.4 | 7.3 | n.a. | n.a. | n.a. | n.a. |
| Hexcel | HXL US | USD | NR | 58.72 | 4,935 | 309 | 47.7 | 29.4 | 27.7 | 18.8 | 14.4 | 3.2 | 0.7 | 6.6 | 37.1 |
| Heico | HEI US | USD | NR | 146.59 | 17,707 | 65.2 | 55.9 | 48.5 | 36.1 | 31.4 | 27.9 | 7.7 | 0.1 | 14.7 | (5.9) |
| Transdigm | TDG US | USD | NR | 616.28 | 33,652 | 59.2 | 38.3 | 28.4 | 25.1 | 19.2 | 16.6 | n.a. | 0.0 | n.a. | n.a. |
| Honeywell | HON US | USD | NR | 197.04 | 134,132 | 24.6 | 22.6 | 20.1 | 19.0 | 16.2 | 14.8 | 7.2 | 2.0 | 31.5 | 52.3 |
| Average | | | | | | 75.0 | 30.7 | 21.3 | 28.9 | 16.3 | 12.5 | 6.6 | 1.2 | 7.6 | 166.5 |
| Smart City | | | | | | | | | | | | | | | |
| ABB | ABB SS | SEK | NR | 307.60 | 65,108 | n.a. | 20.9 | 17.9 | 10.5 | 14.7 | 12.3 | 4.4 | 2.8 | 18.7 | 11.0 |
| Schneider Electric | SU FP | EUR | NR | 130.80 | 79,989 | 22.7 | 19.0 | 17.1 | 14.8 | 13.4 | 12.2 | 2.9 | 2.4 | 15.1 | 26.7 |
| Siemens | SIE GY | EUR | NR | 125.24 | 114,406 | 16.3 | 14.8 | 13.9 | 15.4 | 12.2 | 11.5 | 2.1 | 3.3 | 14.6 | 81.6 |
| Hitachi | 6501 JP | JPY | NR | 6797.00 | 50,674 | 11.3 | 10.8 | 11.4 | 7.1 | 7.9 | 7.7 | 1.4 | 1.9 | 13.9 | 0.2 |
| Toshiba | 6502 JP | JPY | NR | 5922.00 | 19,751 | 13.4 | 13.4 | 14.2 | 12.3 | 10.3 | 9.7 | 2.0 | 2.4 | 14.8 | 0.1 |
| Honeywell | HON US | USD | NR | 197.04 | 134,132 | 24.6 | 22.6 | 20.1 | 19.0 | 16.2 | 14.8 | 7.2 | 2.0 | 31.5 | 52.3 |
| Average | | | | | | 17.7 | 16.9 | 15.8 | 13.2 | 12.4 | 11.4 | 3.3 | 2.5 | 18.1 | 28.6 |
| Satellite Communication (Ground Segment) | | | | | | | | | | | | | | | |
| Maxar Tech | MAXR US | USD | NR | 30.54 | 2,251 | 47.0 | 85.1 | 19.5 | 8.8 | 9.6 | 8.2 | 1.5 | 0.1 | 1.0 | 122.6 |
| Viasat | VSAT US | USD | NR | 39.23 | 2,920 | n.a. | 26.4 | 34.9 | 9.6 | 7.8 | 7.2 | 1.1 | 0.0 | 4.0 | n.a. |
| Gilat Satellite | GILT US | USD | NR | 6.70 | 379 | n.a. | 95.7 | 31.9 | 20.0 | 13.3 | 9.9 | 1.5 | n.a. | n.a. | n.a. |
| Average | | | | | | 47.0 | 69.1 | 28.8 | 12.8 | 10.2 | 8.4 | 1.4 | 0.1 | 2.5 | 122.6 |
| Defence | | | | | | | | | | | | | | | |
| Lockheed Martin | LMT US | USD | NR | 441.11 | 117,382 | 19.3 | 16.5 | 15.6 | 11.8 | 12.8 | 12.2 | 11.1 | 2.6 | 66.4 | 82.6 |
| Raytheon Tech | RTX US | USD | NR | 96.24 | 143,130 | 37.4 | 20.4 | 16.7 | 17.1 | 14.8 | 12.5 | 1.9 | 2.2 | 9.6 | 33.1 |
| Northrop Grumman | NOC US | USD | NR | 462.87 | 71,951 | 10.6 | 18.6 | 17.0 | 12.2 | 17.2 | 16.0 | 5.2 | 1.4 | 29.0 | 70.8 |
| General Dynamics | GD US | USD | NR | 229.44 | 63,717 | 19.8 | 18.9 | 16.3 | 13.8 | 14.3 | 12.8 | 3.4 | 2.2 | 18.8 | 47.7 |
| L3Harris Tech | LHX US | USD | NR | 240.69 | 46,423 | 26.2 | 17.7 | 16.6 | 16.6 | 14.5 | 13.8 | 2.4 | 1.9 | 12.7 | 29.5 |
| General Electric | GE US | USD | NR | 78.00 | 85,852 | n.a. | 27.0 | 15.9 | 9.4 | 7.7 | 6.0 | 2.1 | 0.4 | 7.1 | 26.1 |
| Boeing | BA US | USD | NR | 140.50 | 83,125 | n.a. | n.a. | 23.4 | n.a. | 24.5 | 13.7 | n.a. | 0.0 | n.a. | n.a. |
| Honeywell | HON US | USD | NR | 197.04 | 134,132 | 24.6 | 22.6 | 20.1 | 19.0 | 16.2 | 14.8 | 7.2 | 2.0 | 31.5 | 52.3 |
| Airbus | AIR FP | EUR | NR | 108.96 | 92,290 | 20.3 | 21.4 | 16.0 | 10.7 | 9.9 | 8.0 | 6.9 | 1.6 | 35.8 | (69.6) |
| Safran | SAF FP | EUR | NR | 98.08 | 45,034 | n.a. | 25.8 | 19.4 | 20.0 | 12.5 | 10.2 | 3.1 | 1.6 | 11.7 | 5.2 |
| Thales | HO FP | EUR | NR | 114.30 | 26,215 | 22.3 | 17.1 | 15.1 | 11.3 | 9.6 | 8.6 | 3.4 | 2.4 | 20.6 | (3.8) |
| Bae Systems | BA/ LN | Gbp | NR | 778.20 | 30,896 | 14.1 | 15.3 | 14.3 | 9.5 | 9.7 | 9.1 | 3.2 | 3.4 | 20.5 | 31.8 |
| Rolls-Royce | RR/ LN | Gbp | NR | 88.73 | 9,339 | 60.0 | 37.0 | 17.4 | 8.5 | 8.4 | 6.8 | n.a. | 0.0 | n.a. | n.a. |
| Average | | | | | | 25.5 | 21.5 | 17.2 | 13.3 | 13.2 | 11.1 | 4.5 | 1.7 | 24.0 | 27.8 |

* Net gearing calculation here treats lease liabilities as debt

If FY before June, figures is shown in the previous year

Source: Bloomberg, UOB Kay Hian

Earnings Outlook

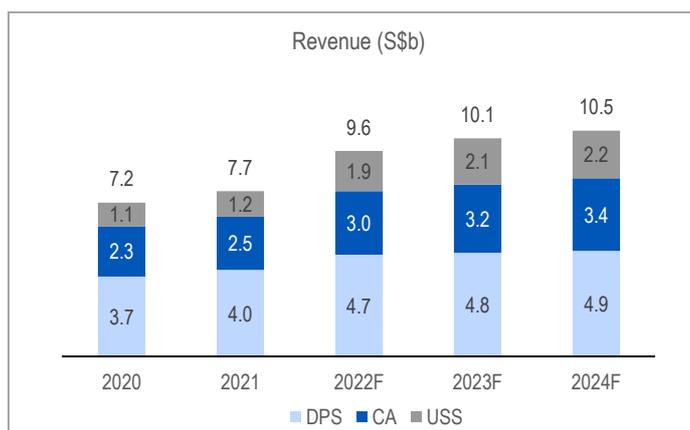
Revenue CAGR of 10.9% in 2022-24. We forecast STE's revenue to grow by a CAGR of 10.9% in 2022-24. We expect 2022 revenue to reach S\$9.6b, a remarkable growth of 24.2% yoy, driven by both organic business growth across all three business segments – DPS, CA and USS¹ – and fresh contribution from TransCore (acquisition completed on 18 Mar 22; 2022 revenue contribution estimated at S\$564m, consolidated under USS). Thereafter, revenue is expected to grow 6.1% and 3.5% in 2023 and 2024 respectively, mainly due to organic business growth and higher project deliveries.

We expect revenue to rise 24.2% in 2022, driven by organic growth across all three business segments and contribution from TransCore.

Expect core net profit to be flat yoy in 2022 and grow 16.7%/6.1% in 2023/24. We conservatively project core net profit to be flat yoy at S\$526m in 2022, as we expect the positive impact from the improving operating performance to be largely offset by the S\$205m reduction in government grants (with the majority impacting the CA segment) in the year. In addition, the operating profit contribution from newly-acquired TransCore is expected to be offset by the rise in finance cost related to the acquisition. Excluding the effect of government grants, STE's core net profit would have risen 64% yoy in 2022 by our estimate. We expect STE's core net profit to grow 16.7% and 6.1% in 2023 and 2024 respectively, driven by revenue growth and margin improvement helped by operating leverage.

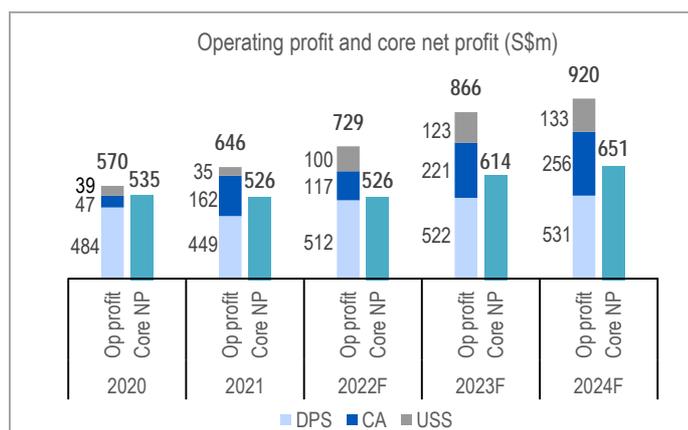
Excluding the impact of government grants, core net profit would have risen 64% yoy in 2022.

FIGURE 14: STE REVENUE TO GROW BY A CAGR OF 10.9% IN 2022-24



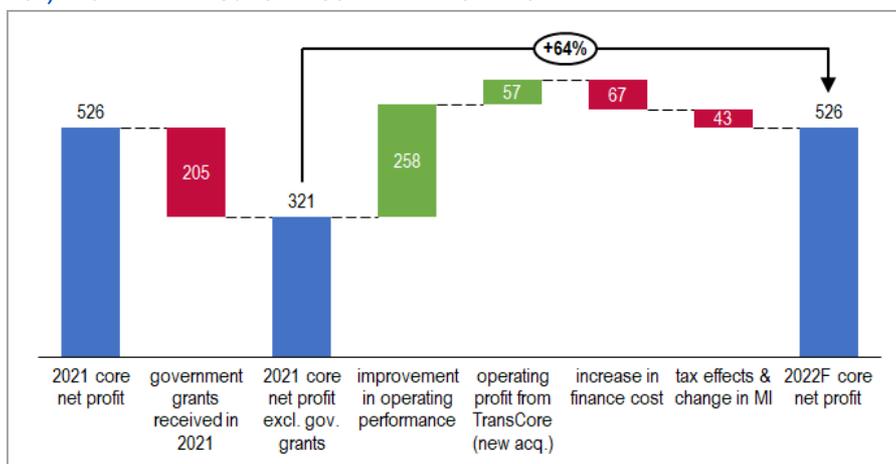
Source: STE, UOB Kay Hian

FIGURE 15: OPERATING PROFIT (BY SEGMENT) AND CORE NET PROFIT



Source: STE, UOB Kay Hian

FIGURE 16: YOY FLAT CORE NET PROFIT IN 2022 – IMPROVING OPERATING PERFORMANCE (+64% YOY) MASKED BY REDUCTION IN GOVERNMENT GRANTS



Source: STE, UOB Kay Hian

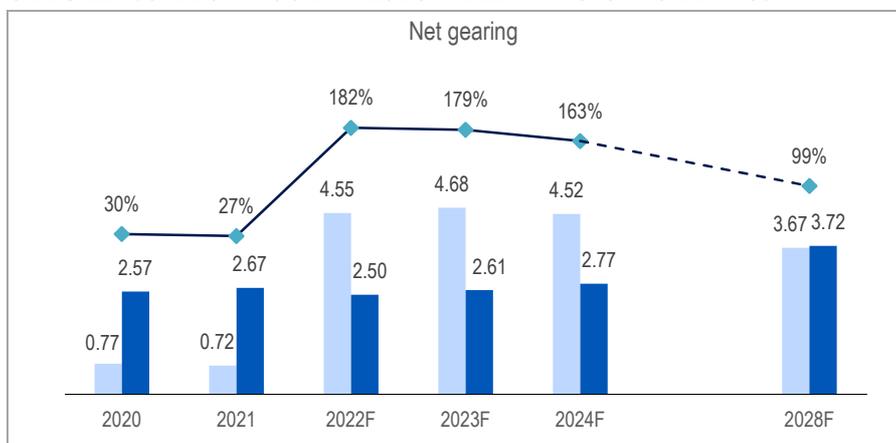
¹ DPS: Defence and Public Security; CA: Commercial Aerospace; USS: Urban Solutions & Satcom

Financials

Net gearing rose to over 180% post acquisition of TransCore, stretched but still manageable. STE completed the acquisition of TransCore, the largest acquisition in STE's history, on 18 Mar 22. The total cash consideration of US\$2.7b (S\$3.7b) was fully financed by STE's internal cash as well as external debt financing. After the acquisition, we estimate that STE's net gearing had increased to over 180% from 27% as at end-21. While the over 180% net gearing level appears quite elevated, we deem it still manageable, considering STE's diversified business portfolio and stable earnings across economic cycles and through the pandemic. In addition, given STE's earnings growth profile and strong cash-generating capabilities, STE should be able to gradually pare down the debt with its cash flow surplus (operating cash netting off capex and dividend payment). Assuming no equity raising, we expect net gearing to fall to below 100%, a more comfortable level, by 2028.

We expect STE to be able to gradually pare down its debt with surplus cash flow from earnings growth.

FIGURE 17: NET GEARING RISES TO OVER 180% POST ACQUISITION OF TRANSCORE, BUT WOULD GRADUALLY COME DOWN AS STE PARES DOWN DEBT WITH GROWING EARNINGS

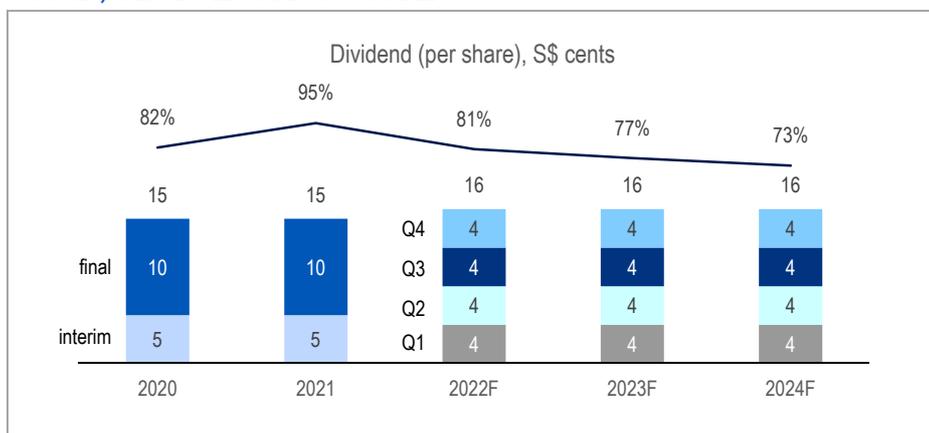


* Net debt calculation here excludes lease liabilities
Source: STE, UOB Kay Hian

New dividend policy. Since 2022, STE has adopted a new dividend policy to pay dividends quarterly, at 4 S cents per share per quarter, totalling 16 S cents per share per year; this is compared to the previous dividend policy of paying twice a year – 5 S cents for interim and 10 S cents for final dividends, totalling 15 S cents per share per year. We expect the dividend of 16 S cents per share per year to be sustainable. It translates to a dividend yield of 3.9% based on STE's current share price of S\$4.14.

We expect dividend of 16 S cents per share per year to be sustainable.

FIGURE 18: DIVIDEND OF 16 S CENTS PER SHARE (QUARTERLY PAYMENT, 4 S CENTS PER QUARTER) IS EXPECTED TO BE SUSTAINABLE



Source: STE, UOB Kay Hian

Risk Factors

Upward cost pressure from inflation and project cost overrun. A significant portion of STE's businesses are project-based. We understand that while STE would generally prefer to have some inflation adjustment mechanism in its contract pricing, there are still contracts on STE's orderbook (percentage not disclosed) that do not have such adjustment terms. While there were cases where STE was able to go back to the customers for a pricing renegotiation and also take other pre-emptive measures (eg by factoring in some inflation assumptions in the project bidding or immediately locking in the prices of key components/materials with suppliers after project wins), the risk of upward cost pressure may not be fully mitigated in a high inflation environment. In addition, possible project delays may lead to cost overruns and adversely impact STE's financial performance.

Supply chain disruption. STE is vulnerable to global supply chain disruptions. Its smart city project and satcom product deliveries are recently affected by the global chip shortages caused by supply chain disruptions. Though STE has managed to mitigate the acute impact through product redesign (reducing the reliance on shortage-hit components) and supply chain diversification (securing alternative suppliers with long-term partnership potential), prolonged supply chain disruptions and chip shortages may impede STE's growth outlook.

COVID-19-related risks. While many parts of the world have already treated COVID-19 as endemic and largely removed all restrictions for international travel, some countries remain very cautious in opening up their borders. In particular, China has maintained a zero-COVID policy, leading to significant uncertainties for its domestic aviation sector and the regional recovery. STE has direct exposure to the Chinese aviation sector through some of its MRO entities, including 80%-owned subsidiary ST Aerospace Technologies (Xiamen) Company, 49%-owned JV Shanghai Technologies Aerospace Company and 44%-owned JV ST Aerospace (Guangzhou) Aviation Services Company. These entities collectively contributed S\$13.4m in net profit to STE in 2019 (the pre-pandemic year), forming less than 3% of STE's net profit. While our base case is that the expected weakness in the Chinese MRO entities would be more than offset by the strong recovery of the MRO volume in other parts of the world, a prolonged lockdown in China would still impede STE from realising its full earnings potential. In addition, a possibly more infectious and/or fatal virus mutant may disrupt the global aviation sector recovery.

Failure to realise growth and synergies from acquired entities. In the past five years, STE has made a number of strategic acquisitions, with a total consideration of close to S\$5b (the TransCore acquisition is a S\$3.7b deal). As the acquisition targets are mostly in the technology space, STE has generally paid premia over the targets' net asset value, leading its intangible assets (including goodwill) on the balance sheet to have ballooned to over S\$5.5b today by our estimate, compared to only S\$1.0b as at end-16. We believe the premia and resultant increase in intangible assets were justified by the growth and synergies incorporated by STE into the acquisition valuation assumptions. Failure to realise the planned growth and synergies may lead to impairment charges on intangible assets (including goodwill) in the future.

Evolution of technology. As a technology and engineering company, STE has to continuously invest in R&D to stay relevant as technology evolves and such investment may not necessarily always bear fruits. Taking STE's satcom ground segment equipment business for example, the development of LEO satellite technology and the associated satcom industry transformation are revolutionising the industry, presenting opportunities and risks for existing technology solution providers. To protect its leading market share and mitigate the risk of losing relevance, STE has to invest in R&D, acquire new capabilities and work with other ecosystem players to make sure its technology solutions are adopted in the new era of non-geosynchronous equatorial orbit (NGEO) satellite constellations.

Rising interest rates. Although a major portion of its borrowings are based on fixed interest rates, STE, being a high-PE (over 20x) growth stock, would still undergo downward valuation pressure in a rising interest rate environment. Our sensitivity analysis shows that, without touching other assumptions, a 0.5% increase in WACC would lower our target price by 13.9% from S\$4.60 to S\$3.96 (Figure 9).

FIGURE 19: PROFIT & LOSS

| Year to 31 Dec (\$m) | 2020 | 2021 | 2022F | 2023F | 2024F |
|---------------------------------|------------|--------------|--------------|--------------|--------------|
| Revenue, net | 7,158 | 7,693 | 9,557 | 10,141 | 10,500 |
| Operating expenses | (6,588) | (7,047) | (8,828) | (9,274) | (9,580) |
| EBIT | 570 | 646 | 729 | 866 | 920 |
| Other non-operating income | (4) | 12 | 0 | 0 | 0 |
| Associate contributions | 30 | 16 | 16 | 27 | 39 |
| Net interest income/(expense) | (62) | (36) | (108) | (141) | (153) |
| Pre-tax profit | 534 | 638 | 636 | 752 | 806 |
| Tax | (9) | (71) | (105) | (123) | (130) |
| Minorities | (4) | 4 | (5) | (15) | (25) |
| Net profit(rep./act.) | 522 | 571 | 526 | 614 | 651 |
| Core net profit | 535 | 526 | 526 | 614 | 651 |
| | | | | | |
| Deprec. & amort. | 379 | 398 | 517 | 554 | 564 |
| EBITDA | 949 | 1,044 | 1,245 | 1,420 | 1,484 |
| | | | | | |
| Per share data (\$ cent) | | | | | |
| EPS - diluted | 17.1 | 16.8 | 16.8 | 19.6 | 20.8 |
| Reported EPS - diluted | 16.6 | 18.2 | 16.8 | 19.6 | 20.8 |
| Book value per shares (BVPS) | 73.6 | 77.5 | 72.4 | 76.1 | 81.0 |
| Dividend per share (DPS) | 15.0 | 15.0 | 16.0 | 16.0 | 16.0 |

Source: STE, UOB Kay Hian

FIGURE 20: BALANCE SHEET

| Year to 31 Dec (\$m) | 2020 | 2021 | 2022F | 2023F | 2024F |
|--|--------------|---------------|---------------|---------------|---------------|
| Cash/Near cash equiv. | 416 | 454 | 731 | 816 | 660 |
| Accounts receivable/debtors | 1,366 | 1,412 | 1,497 | 1,689 | 1,736 |
| Stocks | 1,269 | 1,261 | 1,311 | 1,582 | 1,638 |
| Other current assets | 1,940 | 2,230 | 2,010 | 1,763 | 1,877 |
| Current assets | 4,991 | 5,356 | 5,548 | 5,849 | 5,911 |
| Fixed assets | 2,296 | 2,352 | 2,464 | 2,524 | 2,587 |
| Investments | 23 | 36 | 36 | 36 | 36 |
| Intangible assets | 1,946 | 1,993 | 5,606 | 5,546 | 5,486 |
| Other non-current tangible assets | 708 | 778 | 804 | 804 | 804 |
| Total non-current assets | 4,973 | 5,159 | 8,910 | 8,911 | 8,914 |
| Total assets | 9,964 | 10,516 | 14,458 | 14,760 | 14,824 |
| Accounts payable/creditors | 2,218 | 2,613 | 2,702 | 2,920 | 3,024 |
| Short-term debt/borrowings | 496 | 560 | 574 | 574 | 574 |
| Other current liabilities | 1,574 | 1,507 | 1,517 | 1,517 | 1,517 |
| Current liabilities | 4,289 | 4,680 | 4,793 | 5,012 | 5,115 |
| Long-term debt | 1,551 | 1,555 | 5,256 | 5,226 | 5,026 |
| Deferred tax liability | 167 | 175 | 466 | 466 | 466 |
| Other non-current liabilities | 1,383 | 1,438 | 1,445 | 1,445 | 1,445 |
| Total non-current liabilities | 3,100 | 3,168 | 7,167 | 7,137 | 6,937 |
| Total liabilities | 7,389 | 7,847 | 11,961 | 12,149 | 12,052 |
| Minority interest - accumulated | 282 | 255 | 244 | 242 | 250 |
| Shareholders' equity | 2,293 | 2,413 | 2,254 | 2,369 | 2,522 |
| Liabilities and shareholders' funds | 9,964 | 10,516 | 14,458 | 14,760 | 14,824 |

Source: STE, UOB Kay Hian

FIGURE 21: CASH FLOW

| Year to 31 Dec (S\$m) | 2020 | 2021 | 2022F | 2023F | 2024F |
|---------------------------------------|--------------|--------------|----------------|--------------|--------------|
| Operating cashflows | 1,533 | 1,114 | 1,144 | 1,056 | 1,358 |
| Pre-tax profit | 534 | 638 | 636 | 752 | 806 |
| Tax | (78) | (112) | (105) | (123) | (130) |
| Deprec. & amort. | 379 | 398 | 517 | 554 | 564 |
| Associates | (30) | (16) | (16) | (27) | (39) |
| Working capital changes | 598 | 137 | 0 | (245) | 0 |
| Others | 131 | 70 | 112 | 145 | 157 |
| Cash from investing activities | (295) | (414) | (4,079) | (455) | (456) |
| Capex (maintenance) | (287) | (429) | (461) | (482) | (495) |
| Investments | 0 | (7) | (3,634) | 0 | 0 |
| Others | (8) | 22 | 16 | 27 | 39 |
| Cash from financing activities | (959) | (615) | 2,778 | (763) | (944) |
| Dividend payments | (468) | (468) | (685) | (498) | (498) |
| Proceeds from borrowings | 1,975 | 901 | 3,665 | 0 | 0 |
| Loan repayment | (2,313) | (877) | 0 | (30) | (200) |
| Others/interest paid | (153) | (171) | (201) | (235) | (246) |
| Net increase/(decrease) in cash | 279 | 86 | (156) | (162) | (42) |
| Beginning cash | 452 | 729 | 816 | 660 | 497 |
| Changes due to forex impact | (2) | 1 | 0 | 0 | 0 |
| End cash | 729 | 816 | 660 | 497 | 455 |

Source: STE, UOB Kay Hian

FIGURE 22: KEY METRICS

| Year to 31 Dec (S\$m) | 2020 | 2021 | 2022F | 2023F | 2024F |
|---------------------------|--------|-------|-------|-------|-------|
| Growth | | | | | |
| Turnover | (9.0) | 7.5 | 24.2 | 6.1 | 3.5 |
| EBITDA | (8.9) | 10.1 | 19.3 | 14.0 | 4.6 |
| Pre-tax profit | (23.1) | 19.3 | (0.2) | 18.1 | 7.3 |
| Net profit | (9.7) | 9.3 | (7.8) | 16.7 | 6.1 |
| Net profit (adj.) | n.a. | (1.6) | 0.0 | 16.7 | 6.1 |
| EPS | (4.4) | (1.6) | 0.1 | 16.7 | 6.1 |
| Profitability | | | | | |
| EBITDA margin | 13.3 | 13.6 | 13.0 | 14.0 | 14.1 |
| EBIT margin | 8.0 | 8.4 | 7.6 | 8.5 | 8.8 |
| Gross margin | 21.3 | 20.0 | 20.0 | 20.0 | 20.0 |
| Pre-tax margin | 7.5 | 8.3 | 6.7 | 7.4 | 7.7 |
| Net margin | 7.3 | 7.4 | 5.5 | 6.1 | 6.2 |
| ROE | 23.1 | 24.3 | 22.5 | 26.6 | 26.6 |
| ROA | 5.4 | 5.6 | 4.2 | 4.2 | 4.4 |
| ROIC | 12.5 | 13.1 | 9.8 | 9.0 | 9.4 |
| RONTA | 12.0 | 11.8 | 13.1 | 14.2 | 14.3 |
| Leverage | | | | | |
| Interest cover (x) | 15.3 | 29.0 | 11.5 | 10.0 | 9.7 |
| Debt to total capital | 44.3 | 44.2 | 70.0 | 69.0 | 66.9 |
| Debt to equity | 79.5 | 79.3 | 233.5 | 222.1 | 202.0 |
| Net debt/(cash) to equity | 29.7 | 26.8 | 182.1 | 179.2 | 163.1 |
| Current ratio (x) | 1.2 | 1.1 | 1.2 | 1.2 | 1.2 |

Source: STE, UOB Kay Hian

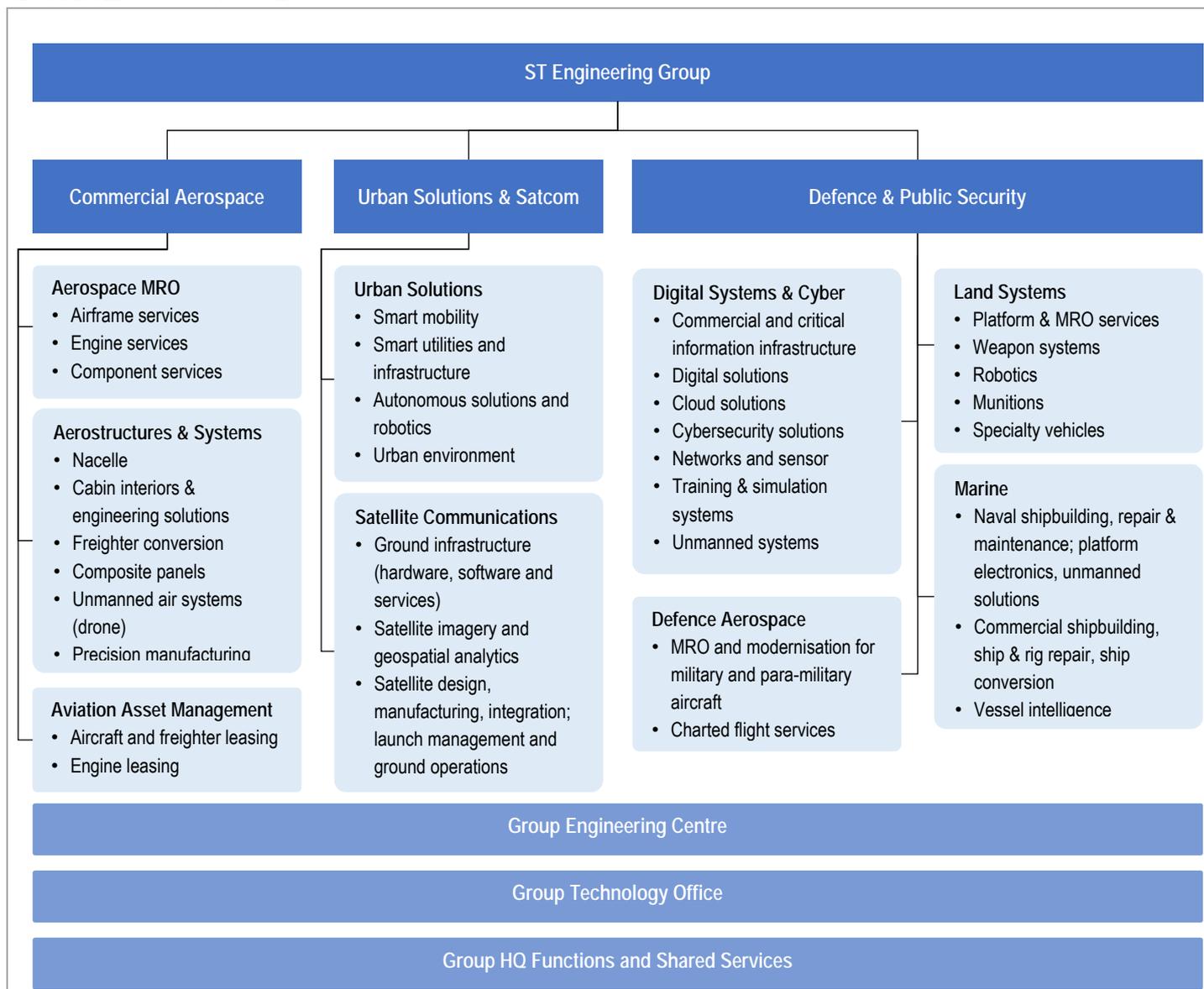
Appendix I – Company Background

COMPANY OVERVIEW

STE is a global technology, defence and engineering group with businesses across the aerospace, smart city and defence and public security segments. Headquartered in Singapore, STE has operations spanning across Asia, Europe, the Middle East and the US, serving customers in more than 100 countries. Today, STE has about 25,000 employees globally, including about 17,000 engineering and technical staff. The Singapore sovereign fund Temasek Holdings is STE's 51.69% major shareholder, while Singapore's Ministry of Finance holds one special share that has veto rights over shareholder resolutions and board matters. STE enjoys Aaa (negative outlook) and AA+ (stable) credit ratings by Moody's and S&P respectively.

To enhance its competitive position in the global market and to better prepare itself for sustainable long-term growth, STE undertook a major group reorganisation in 2020. Effective from 1 Jan 21, STE's new organisational structure is shown as follows.

REORGANISED GROUP STRUCTURE

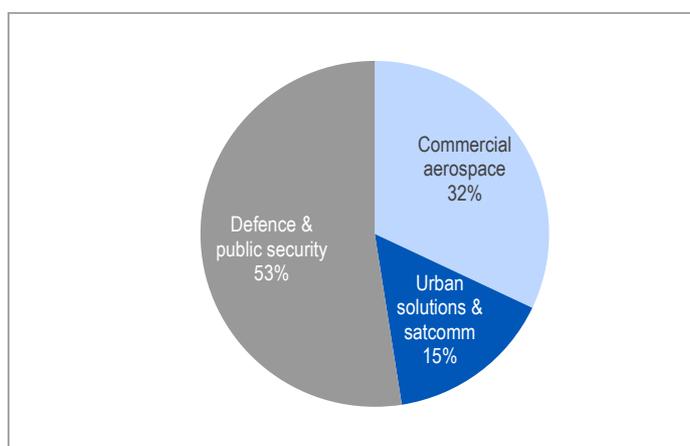


Source: STE

Under the new organisational structure, STE's businesses have been reorganised into two major clusters: Commercial and DPS, with three reportable business segments – CA, USS (both CA and USS are under the Commercial cluster) and DPS. The group has also set up a new Group Engineering Centre, which works closely with Group Technology Office to augment engineering teams at the business level and to drive technology and engineering applications across different business areas.

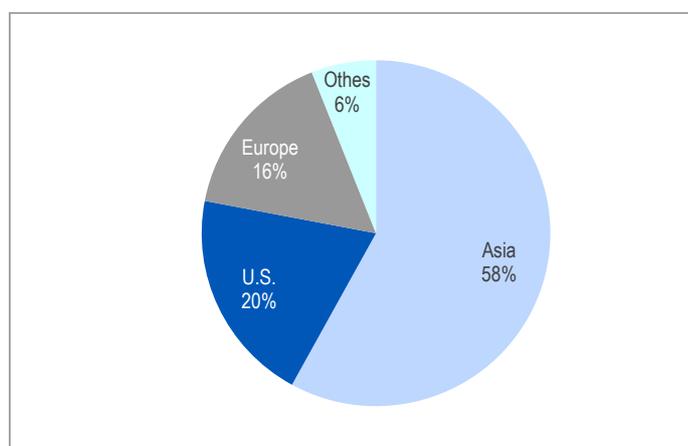
Compared to its previous sector-centric structure (four business segments comprising aerospace, electronics, land systems and marine), the new structure is expected to allow STE to: a) sharpen its customer focus, b) deepen its engineering and technology core, and c) enhance its competitive position on the global stage.

REVENUE BY BUSINESS SEGMENT (2021)



Source: STE

REVENUE BY CUSTOMER LOCATION (2021)



Source: STE

KEY BUSINESS SEGMENTS

STE's CA, USS and DPS segments contributed to 32%, 15% and 53% of group revenue in 2021.

a) Commercial Aerospace (2021 revenue: S\$2.5b, 32% of group total). STE's CA segment provides comprehensive life cycle fleet solutions, including design and engineering, certification, OEM, nose-to-tail aftermarket and maintenance services, P2F conversion, as well as asset management and leasing.

Aerostructure & Systems

- **World's leading engine nacelle OEM.** Through its 100%-owned subsidiary MRAS (acquired from General Electric in Apr 19), STE is today a world-leading OEM for engine nacelle systems. MRAS has 90 years of development and manufacturing expertise and owns a strong portfolio of IPs and patents for nacelle systems. It has a good combination of mature and next-generation nacelle programmes, all of which are single-source contracts.

One most important programme is the nacelle programme for Airbus A320neo. In partnership with Safran Nacelles, MRAS supplies nacelle systems for Airbus A320neo aircraft using CFM International's LEAP-1A engines (LEAP-1A is the leading one of only two engine options for A320neo, which in turn has the lion's share of 60% of global narrowbody aircraft orders today). Other single-source programmes in MRAS' portfolio include Commercial Aircraft Corporation of China's (COMAC) C919, powered by CFM International's LEAP-1C turbofan engine, and ARJ21, powered by General Electric's CF34 engine. MRAS also provides nacelles for Bombardier's Global 7000/8000 series of next-generation private/business jets.

- **One of the world's leading solution providers for freighter conversion.** Through EFW (reported as STE's 55%-owned subsidiary), its JV with Airbus, STE is today one of the world's largest and most experienced solution providers for

ENGINE NACELLE



Source: STE

MRAS' SINGLE-SOURCE NACELLE PROGRAMME CONTRACTS

| | Aircraft Type | Aircraft OEM | Engine OEM |
|-----------------|---------------|--------------|-------------------|
| Next generation | A320neo | Airbus | CFM International |
| | C919 | COMAC | CFM International |
| | ARJ21 | COMAC | General Electric |
| | 7000/8000 | Bombardier | General Electric |
| Mature | B747-8 | Boeing | General Electric |
| | A330 | Airbus | General Electric |
| | B767 | Boeing | General Electric |
| | ERJ-190 | Embraer | General Electric |

Source: STE

freighter conversion, and has redelivered over 400 aircraft through its P2F programmes since 1996. Backed by Airbus and through EFW, STE is the only global conversion house offering Airbus freighter conversion through Supplemental Type Certificates (STC) using aircraft OEM data. STE is also the first in the world to redeliver an A321 converted freighter. In Mar 22, STE became the first in the world to receive STC for Airbus A320P2F aircraft, joining the existing P2F programmes of A330-200P2F, A330-300P2F and A321P2F. Today, STE has conversion facilities in Singapore; Dresden, Germany; Guangzhou, China and San Antonio, US. The group plans to set up new conversion lines in Shanghai, China and Mobile, US in 2022.

- **Turnkey solutions provider for lightweight composite components.** Besides P2F conversion, EFW also develops, designs and manufactures flat sandwich components for structures and cabin interiors for the entire Airbus family. EFW's product range includes floor and ceiling panels, cargo linings and bullet-proof cockpit doors, with 50,000 different shapes and layups in total. It also designs and produces complete modules and systems like the crew rest compartment for freighters.

Other services under aerospace & systems include cabin interiors and engineering solutions, precision manufacturing and unmanned air systems (eg drones).

Aerospace MRO

- **World's largest third-party airframe MRO service provider.** First started in 1975 as a military MRO service provider in Singapore, STE has grown over the past few decades into the world's largest independent airframe MRO service provider by manhours, with a global capacity to work on up to 44 widebody, 26 narrowbody and 24 general aviation aircraft across its network of facilities in the Asia Pacific, the US and Europe. Besides airframe MRO services, STE also offers engine MRO services in Singapore and Xiamen, China, with a combined capacity to serve over 450 aircraft engines per annum. It also provides 24/7 support for aircraft components and delivers more than 80,000 components annually from its component MRO facilities in Singapore, Sweden, the US and Vietnam.

GLOBAL PRESENCE OF AEROSPACE MRO AND AEROSTRUCTURE & SYSTEM BUSINESSES



Source: STE

Aviation Asset Management

STE is also a full-fledged aircraft and engine lessor with core competencies in deal origination, financing, securitisation, lease management, technical asset management, re-marketing and repossession. To date, STE has established:

- Total Engine Asset Management (TEAM), a 50-50 engine leasing JV with Japanese trading conglomerate Marubeni. TEAM securitised a portfolio of 30 engines in Feb 20.
- Keystone Holdings, a 50-50 aircraft leasing JV with Japanese trading company Sojitz Group, targeting mid-life and end-of-life single-aisle aircraft assets.
- Juniper Aviation Investments, a 50-50 JV with Temasek to invest in passenger aircraft to be converted into freighters.

The aircraft and engine leasing businesses complement STE's core aircraft MRO and freighter conversion businesses as they can refer service volume to the latter. On the other hand, STE can also extend MRO and/or freighter conversion service options to lease customers to provide total support and turnkey solutions. As at end-21, STE had a total of S\$1.05b worth of aviation assets under management.

- b) Urban Solutions & Satcom (2021 revenue: S\$1.2b, 15% of group total).** This segment offers a comprehensive suite of smart city solutions to address the connectivity, mobility, security, infrastructure and environmental needs of cities. Its two sub-segments are urban solutions and satellite communications.

Urban Solutions

- **Engineering powerhouse driving smart city initiatives of Singapore and worldwide.** STE has a strong track record in the smart city market, having undertaken more than 700 smart city projects in over 130 cities globally. The table below is an overview of the suite of urban solutions offered by STE.

URBAN SOLUTIONS

| Major category | Subcategory | Products and services |
|------------------------------------|-----------------------------------|--|
| Smart mobility | Smart metro | Metro control centre, command, control and communications system, passenger information system, automatic fare collection, platform screen door, rail asset management system, smart rail inspection and predictive maintenance solution |
| | Smart roads | Urban traffic management system; surveillance, advisory and enforcement system; smart traffic signal control; tolling and congestion pricing; smart car park suite; bus/taxi fleet management system; driver assistance (collision warning, anti-fatigue) system |
| | Electric vehicle solutions | Electric bus assembly, diesel-to-electric bus retrofitting, electric vehicle charger management and payment solution, electric commercial van distribution |
| | Autonomous transport solutions | AV bus kit with hardware (sensors and computers) and software (algorithms for safety and security control), AV fleet management system, AV monitoring and evaluation system, on-demand solution |
| | Other services | Vehicle type approval and homologation, vehicle/rail testing and inspection, accident taxi repair, MRO of rail electronic card |
| Smart utilities and infrastructure | Smart security and automation | Integrated security management system, identity management platform, perimeter intrusion detection system, video analytics platform |
| | IoT and utilities | IoT platform and sensor solution for smart city management, smart water management with advanced metering infrastructure, smart in-building lighting and street lighting, smart lift monitoring, smart waste monitoring |
| | Digital facilities and services | Digitalisation solution for facility and infrastructure management, cross domain system integration, private cloud design and implementation, etc |
| Robotics and automation | Network and fibre infrastructure | Connectivity diversity – network enabled by unique fibre pathways alongside power network cables (alternative to the mainstream telecommunication operator network), edge cloud, edge computing |
| | Logistic robots | Aethon brand mobile robot for automated material transport and delivery in industrial, healthcare, hospitality and other commercial environments |
| Urban environment solutions | Autonomous transport for seaports | Automated guided vehicle for container transfer |
| | Respiratory protection | Surgical mask and N95 mask, AIR+ brand mask (reusable mask with an innovative attachable ventilator) |
| | Sustainable cooling | Airbitat brand city cooler for outdoor space and urban cooler for industrial/commercial space |

Source: STE

EXAMPLES OF STE'S SMART CITY PROJECTS (URBAN SOLUTIONS)

| | | | |
|---|--|--|---|
|  <p>Queensland's Cross River Rail 1st Mobility Rail win in Australia</p> |  <p>Kaohsiung MRT Red Line Extension Delivered turnkey Electrical & Mechanical (E&M) systems</p> |  <p>Rail Enterprise Asset Mgmt Sys Asset performance tracking with data analytics</p> |  <p>Dubai iTraffic Road Command & Control Centre with state-of-art technologies</p> |
|  <p>Barrier-free smart car park Singapore's first, launched in Nanyang Technological University</p> |  <p>Land Transport Authority Delivered 1st batch of Electric Buses</p> |  <p>Autonomous Bus Completed 3-mth commercial trial at Jurong Island & Science Park 2</p> |  <p>Automated Guided Vehicle Deployed at new Tuas Mega-Port for container transport</p> |
|  <p>Rio de Janeiro >300k Smart Street Lighting controls with AGIL IoT platform</p> |  <p>Public Agency One of the largest deployments of a Smart Lift Monitoring solution</p> |  <p>Overseas Customer Development of next generation of Emergency Response System</p> |  <p>Punggol Digital District Co-develop Open Digital Platform for Smart Estate</p> |

Source: STE

- Expansion into North America smart mobility market via TransCore acquisition.** In Mar 22, STE completed the acquisition of 100% shares of TransCore, a US market leader in electronic toll collection (ETC), congestion pricing and intelligent transportation systems (ITS). Valued at US\$2.68b, this is the largest deal in STE's history. According to management, the acquisition would not only allow STE to tap the fast-growing ETC and ITS markets in North America, but also boost its growth in the smart city business with more complete offerings and cross-selling opportunities.

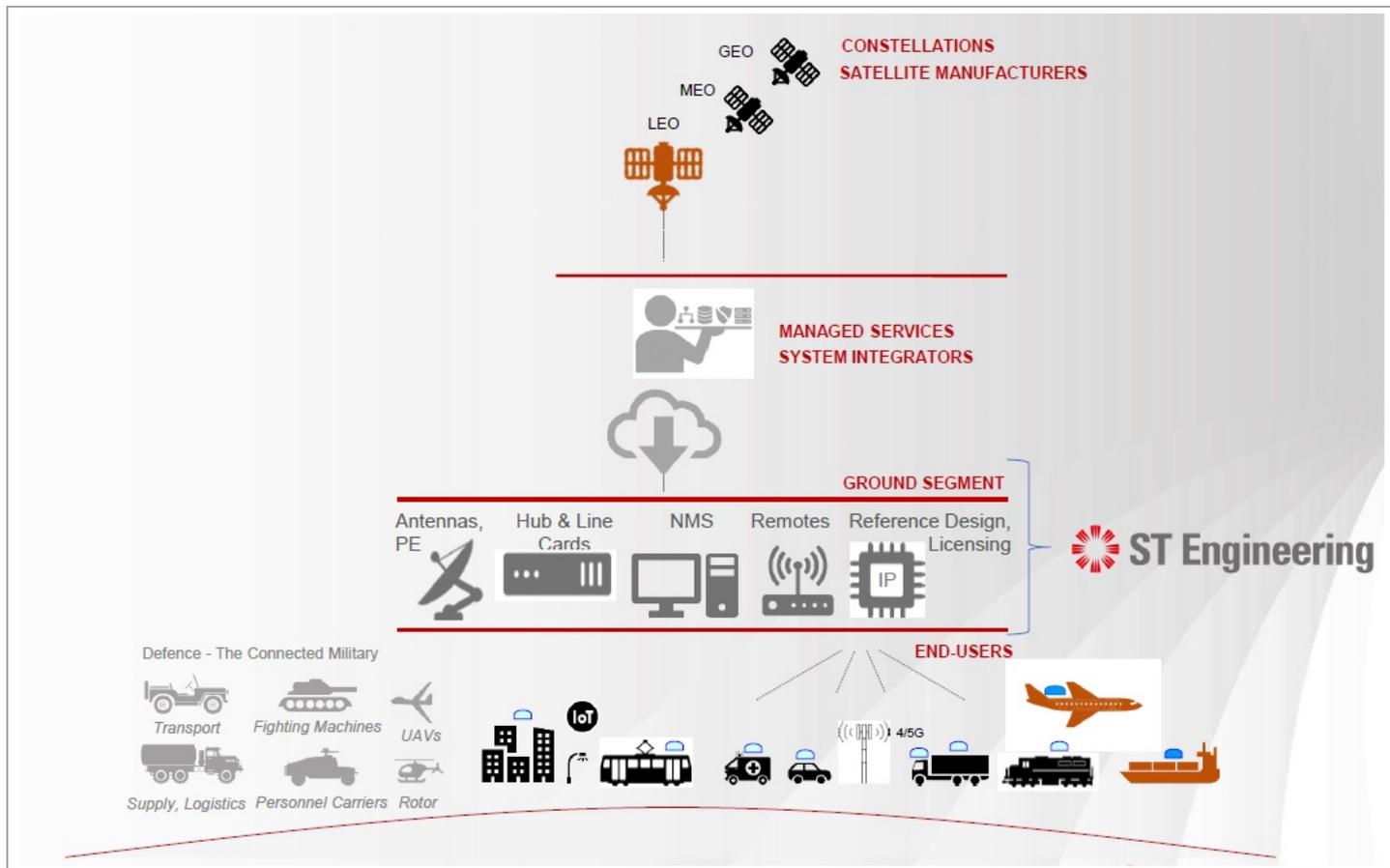
Satellite Communications

- World's leading technology provider in satcom ground segment.** STE's satcom business is underpinned by its US-based ST Engineering iDirect and Singapore-based satcom product and solution business. ST Engineering iDirect is the world's largest time-division multiple access (TDMA) enterprise and very small aperture terminal (VSAT) manufacturer, and is the market leader in key industries including broadcast, mobility and military/government. According to COMSYS VSAT Report 14th Edition published in 2017, ST Engineering iDirect's market shares of global satcom TDMA sites-in-service for the maritime, aviation and military sectors were 60%, 46% and 41% respectively.

With a large array of hardware (hub systems, modems and terminal equipment), software and service offerings, ST Engineering iDirect has close partnerships with leading satellite operators in the world, such as Inmarsat, Intelsat and SES. According to the company, 75% of the world's top 20 satellite operators use its satcom systems.

- Complementary and synergistic merger with Newtec.** STE completed the €250m acquisition of Newtec in Oct 19. Newtec was a Belgium-based satcom technology provider and a recognised industry pioneer with unique ultra-high throughput capabilities and a strong presence in the European satcom market (particularly the broadcast segment). Newtec was also among the first companies to successfully test over-the-air communication via LEO satellites, which are expected to drive the next wave of development and transformation of the satellite industry. The acquisition is believed to have expanded the intellectual property, products and market access of ST Engineering iDirect. After the acquisition, Newtec has been renamed to ST Engineering iDirect (Europe) and become STE's European centre for its satcom business.
- Acquisition of Glowlink for satcom anti-jamming capabilities.** In Sep 19, STE, through its 100%-owned subsidiary iDirect Government, completed a US\$20m deal to acquire Glowlink, a US-based innovative satcom technology company specialising in signal interference mitigation solutions. The acquisition has enhanced iDirect Government's satcom product offerings in terms of anti-jam capabilities and resilience against signal interference.
- Supplying to US government and Department of Defence.** iDirect Government was established in 2007 with the purpose of serving only the US Department of Defense (DOD), US government and its allies. Since then, iDirect Government has been a trusted partner of the US government for 17 years. All defence-grade products sold by iDirect Government are designed, developed, assembled, programmed and verified within the US.

SATCOM INDUSTRY VALUE CHAIN - STE IS A GLOBAL LEADER IN THE SATCOM GROUND SEGMENT

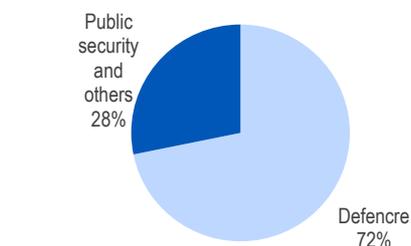


Source: STE

c) Defence & Public Security (2021 revenue: S\$4.0b, 53% of group total). Having integrated all of STE's defence capabilities under one roof, the DPS cluster provides defence and security solutions across air, land, sea and cyberspace for governments and armed forces. The cluster also provides safety and security solutions covering critical infrastructure, intelligence operations, homeland security and maritime solutions to government agencies worldwide to manage potential incidents, safeguard critical infrastructure and counter threats from disasters and crime.

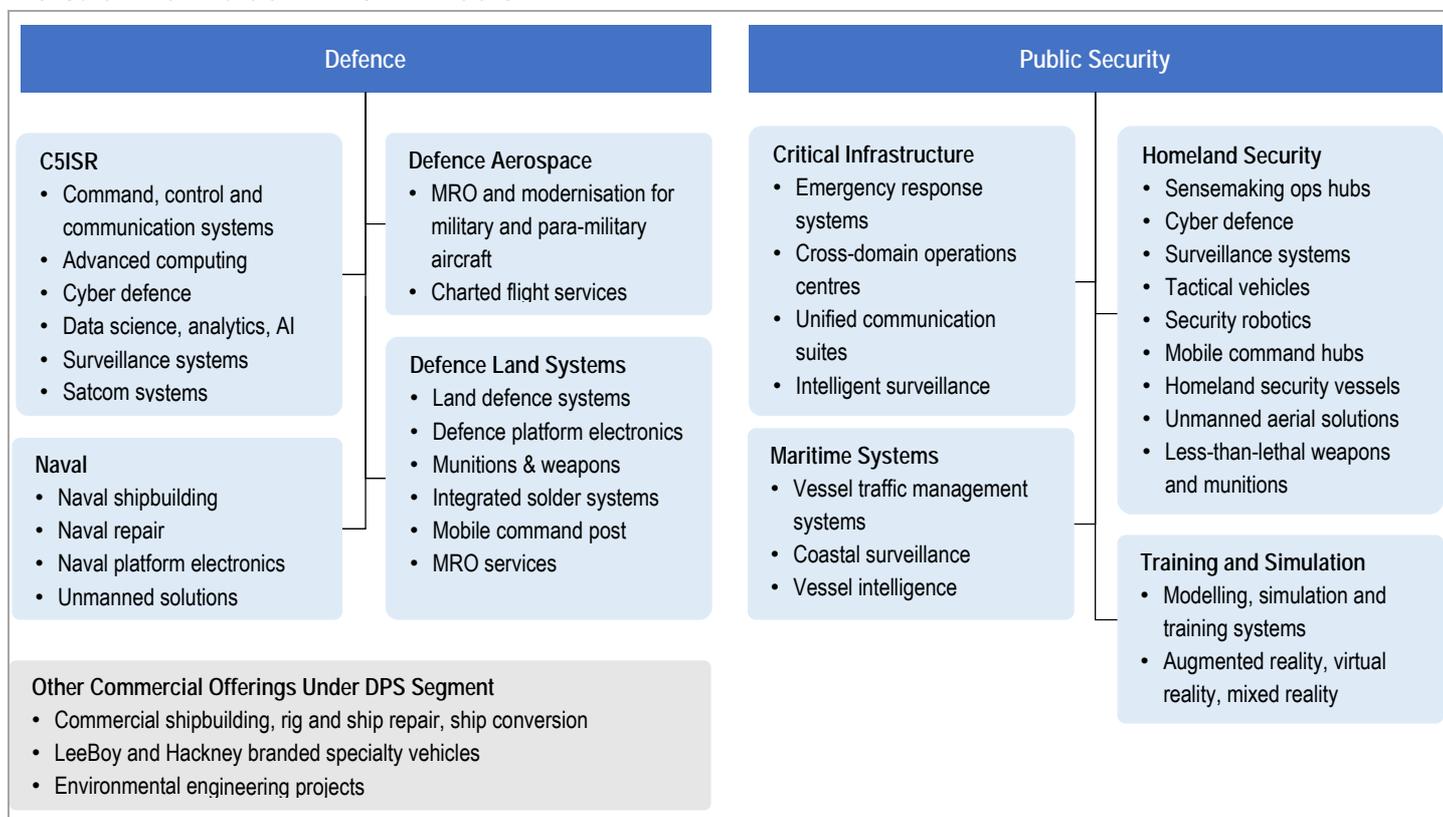
DPS is STE's largest reporting segment in terms of revenue size, contributing S\$4.0b, or 52% of the group's total revenue, in 2021. Within the cluster, defence revenue amounted to S\$2.9b in 2021, or 72% of the total DPS revenue; the remaining S\$1.1b, or 28%, was derived from public security solutions as well as other commercial product and service offerings that have been parked under this segment.

72% OF DPS REVENUE IN 2021 WAS DERIVED FROM DEFENCE



Source: STE

PRODUCTS AND SERVICES OFFERED UNDER DPS SEGMENT



Source: STE

- Largest defence company in Southeast Asia by revenue.** According to a report published by Stockholm International Peace Research Institute (SIPRI) in Dec 21, STE is the largest arms-producing and military services company in Southeast Asia by arms sales (ie pure defence revenue) and ranked no. 61 on the global stage.
- Deeply integrated into defence and security needs of Singapore.** The Singapore government is an anchor customer of STE's DPS solutions. STE has a strong business relationship with MINDEF and is a major supplier of ordnances and other defence solutions to the Singapore Armed Forces. STE also provides integrated solutions to other Singapore governmental agencies, including the Singapore Police Force, Singapore Civil Defence Force, Land Transport Authority, Maritime Port Authority of Singapore, Civil Aviation Authority of Singapore, JTC Corporation (a statutory corporation promoting sustainable industry development in Singapore) and Port of Singapore Authority.

- Expanding international defence business.** The international defence business has been identified as a strategic growth area by STE in the group's 2021 and 2018 strategic reviews. To differentiate itself and enhance its competitive position against larger international defence players, STE is more focused on investing in capabilities and providing targeted solutions in several niche areas, such as small and highly advanced military and paramilitary vehicles and vessels, weapons and ammunition (STE is a world leader in 40mm ammunition, supplying to 44 countries), navigation and satellite systems, and unmanned solutions.

For confidentiality reasons, disclosure on STE's defence contracts was limited. Below are some of the international defence contract wins disclosed by STE in the past few years:

- Design and construction of T-AGS 67 Oceanographic Survey Ship, Polar Security Cutters (PSC) and Auxiliary Personnel Lighter-Small (APL(S)) Class berthing barges for the US Navy;
- Supply of design, platform equipment and technical assistance for Falaj 3-class Offshore Patrol Vessels for the UAE Navy;
- Construction of ExtremV vehicles for the German Federal Armed Forces; and
- Supply of weapons and munitions for various international customers.

Together with its partner Oshkosh Defense, STE has successfully delivered two Cold Weather All-Terrain Vehicle prototypes for the US Army and is now bidding for the production. STE expects the outcome of the bidding to be known in 2H22.

DPS PRODUCT AND PROJECT HIGHLIGHTS

| | | | |
|---|---|--|---|
|  |  |  |  |
| Cold-Weather All Terrain Vehicle Prototype for US Army | Hunter Armoured Fighting Vehicle for Singapore Ministry of Defence | C130 Hercules MRO (RAFO/Gulf Air/Lynden) | AS332M/M1 Super Puma MRO |
|  |  |  |  |
| Pathfinder Class Vessel for US Navy | Auxiliary Personnel Berthing Barge for US Navy | Polar Security Cutter for US Coast Guard | Offshore Patrol Vessel for UAE Navy |
|  |  |  |  |
| World leader for 40mm ammunition (sold to 44 countries) | ExtremV Vehicle for German Federal Armed Forces | Next Generation Fast Response Cars for Singapore Police Force | Unmanned Surface Vessel for Singapore Navy |

Source: STE

COMPANY HISTORY

In 1967, Chartered Industries of Singapore (CIS) was formed as a pioneer indigenous defence company making ordnances for the Singapore Armed Forces. Its shares were then held by MOF Inc, a holding company of Singapore's Ministry of Finance.

In 1975, MOF Inc transferred its shares in CIS to Sheng-Li Holding Co (Sheng-Li, now known as Singapore Technologies Holdings), which was established as the holding company for companies with defence interests.

Subsequently, MOF Inc transferred other defence-related companies to Sheng-Li. These companies included:

- Singapore Electronics & Engineering (Private) Limited (ST Electronics), now known as ST Engineering Electronics;
- Singapore Automotive Engineering (Private) Limited (ST Automotive), which was subsequently restructured under Singapore Technologies Kinetics, now known as ST Engineering Land Systems; and
- Singapore Shipbuilding & Engineering (Private) Limited (ST Marine), now known as ST Engineering Marine.

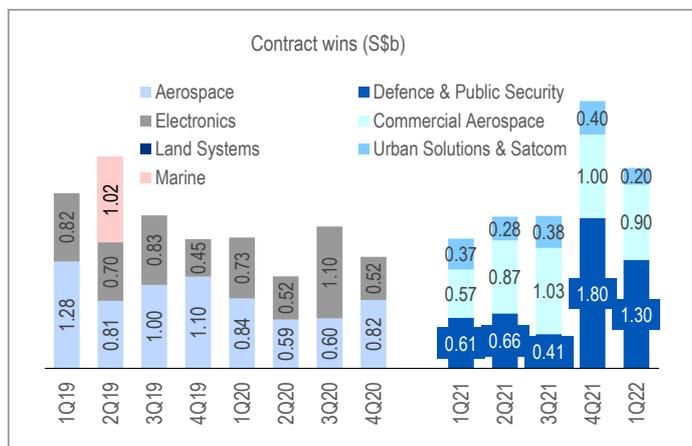
Singapore Aircraft Industries (ST Aerospace), now known as ST Engineering Aerospace, was incorporated in 1981 as the holding company for the group's CA segment.

ST Aerospace, ST Electronics, ST Automotive and ST Marine were listed on the SGX-ST between 1990 and 1991.

In 1997, Singapore Technologies Engineering (STE) was incorporated in Singapore under a scheme of arrangement pursuant to which the four publicly-listed companies, ST Aerospace, ST Electronics, ST Marine and ST Automotive, were each delisted and amalgamated under the new holding company, which was listed on the main board of the SGX-ST on 8 Dec 97. The amalgamation is believed to have provided STE with synergies across multiple segments and allowed it to compete more effectively in the global marketplace.

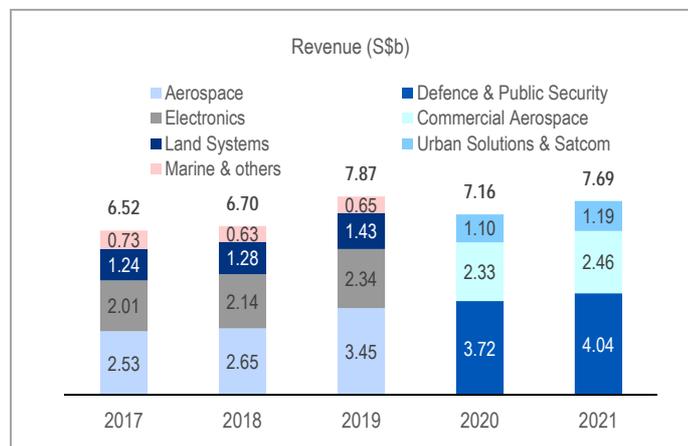
Appendix II – Financial Track Record

DISCLOSED CONTRACT WINS OVER PAST 3 YEARS



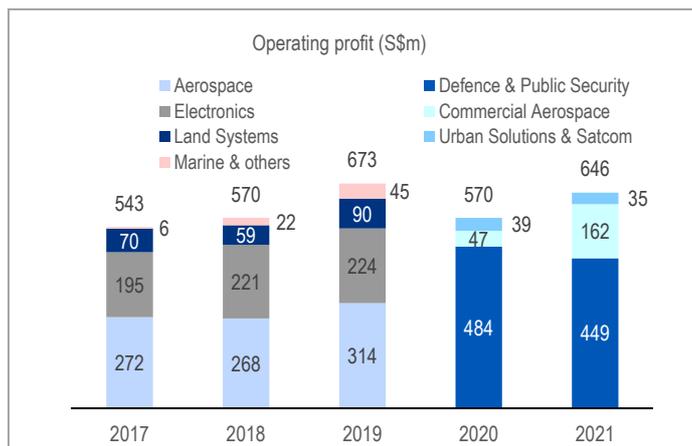
Source: STE

REVENUE BY BUSINESS SEGMENT



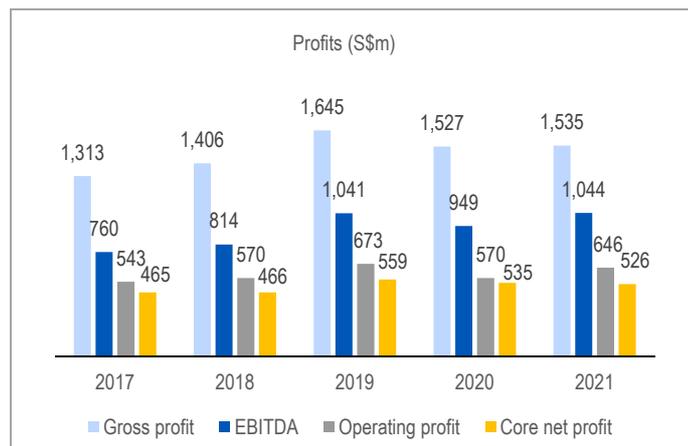
Source: STE

OPERATING PROFIT BY BUSINESS SEGMENT



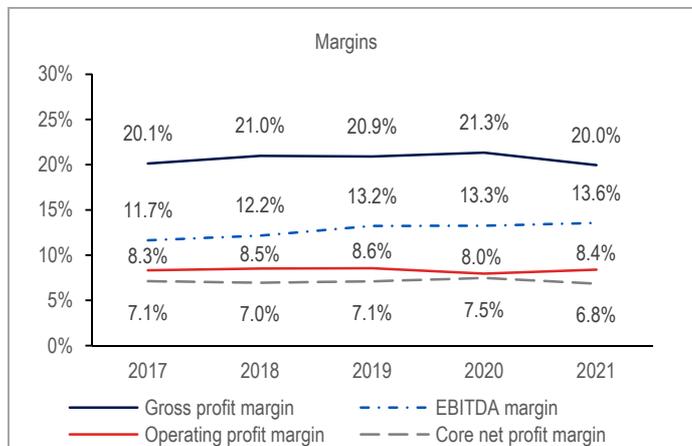
Source: STE

GROSS PROFIT, OPERATING PROFIT AND CORE NET PROFIT



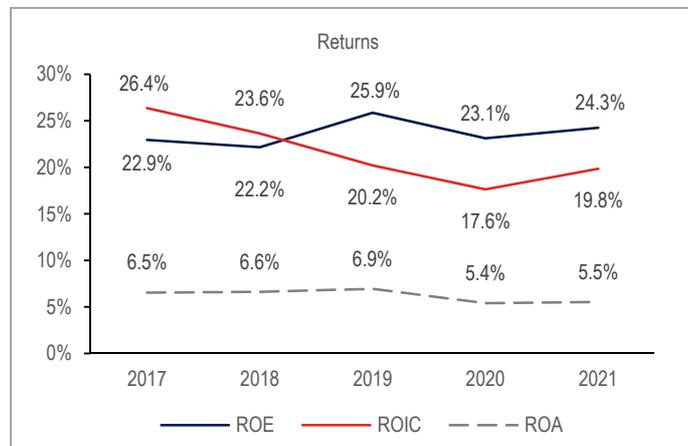
Source: STE, UOB Kay Hian

MARGINS



Source: STE, UOB Kay Hian

CAPITAL RETURNS



Source: STE, UOB Kay Hian

Appendix III – Key Management Personnel And Board of Directors

KEY MANAGEMENT PERSONNEL

| Name | Age | Position | Date of Appointment | Experience |
|-----------------------|-----|--|---------------------|---|
| Vincent Chong Sy Feng | 52 | President and Chief Executive Officer Executive and Non-Independent Director | Oct 16 | Mr Chong had a 20-year global career in the petroleum industry, holding a variety of technical, operations and senior management positions including refining and supply, product marketing, and strategic planning. He is a board member of JTC Corporation and Jurong Port. He was a member of the Ministry of Trade and Industry's International Advisory Panel for Advanced Manufacturing and Engineering. |
| Cedric Foo Chee Keng | 61 | Group Chief Financial Officer | Jul 17 | Prior to joining STE, Mr Foo was the Group Deputy President and Chief Financial Officer of Neptune Orient Lines. Before that, he was Senior Vice President, Finance and Administration at Singapore Airlines. Mr Foo was also the Chairman of JTC Corporation from 2008 to 2012 and of Spring Singapore from 2003 to 2007. |
| Tan Lee Chew | 58 | President, Commercial | Sep 21 | Ms Tan oversees and drives growth for the commercial cluster which comprises three business areas: commercial aerospace, urban solutions and satellite communications. She was previously Managing Director, Worldwide Public Sector (ASEAN) at Amazon Web Services and responsible for leading new business growth through the adoption of AWS services. Prior to that, she was the Senior Vice President of Global Hybrid IT Sales and Category Management at Hewlett-Packard, where she led the go-to-market planning and execution of product sales strategies for the company's Data Center Infrastructure and Software Defined Technology portfolios globally. |
| Ravinder Singh | 57 | Group Chief Operating Officer (Technology and Innovation) and President, Defence & Public Security | Jan 21 | Mr Singh oversees the development of multi-domain technologies, and business innovation across the group as its COO. He also leads the group's businesses across Digital Systems, Cyber, Land Systems, Marine and Defence Aerospace as President of Defence and Public Security. Mr Singh has over 30 years of technology and defence experience. Before assuming the current position, he was President of the group's Land Systems Segment, then President, Defence Business of the group and President of the group's Electronics Segment. He is also the Deputy Chairman of the National Environment Agency's Board, and a board member of the Agency for Science, Technology and Research. |
| Lee Shiang Long | - | Group Chief Technology & Digital Officer | Jan 21 | Dr Lee drives advanced technology development, research partnerships and engineering applications across the group. He is also responsible for accelerating the group's digital transformation and oversees digital innovation for its products and solutions. Prior to being Group CTO, Shiang Long was President, Land Systems at STE since 2017. Before joining STE, he was SAF Chief Information Officer for 7 years, and Executive Director for A*STAR-I2R for 3 years, where he led I2R to support the former IDA and government agencies in Smart Nation initiatives. |
| Cheryl Chan | - | Group Chief Strategy & Sustainability Officer | Sep 21 | Ms Chan joined STE on 1 July 21 from Linde where she was Head of APAC Clean Hydrogen. In her 14 years with Linde, she held various global and APAC management positions in strategy, product, marketing, project integration and business development. |
| Lau Thiam Beng | - | Chief Operating Officer, Defence & Public Security and Head, Public Safety & Security Business | Jan 22 | Prior to this position, Mr Lau was President, Defence Business and Cyber Security Systems of ST Engineering Electronics. Having been focused on the defence, security, public and enterprise sectors, Mr Lau has rich experience in the formulation and implementation of strategies as well as business, executive and financial management. |
| Jeffrey Lam | - | President / Head, Commercial Aerospace | Oct 20 | Mr Lam is responsible for driving the growth of STE's commercial aerospace segment, enhancing its position as a global integrated aviation solution provider with OEM and aftermarket capabilities. Prior to this position, Mr Lam was previously Deputy President of the aerospace segment. He joined the aerospace segment in 2011 and served in various roles within the segment with P&L and business development responsibilities. He played a critical role in overseeing operations within the group of companies at the aerospace segment with a special focus on continuous improvement and digitalisation initiatives. |
| Chew Men Leong | - | President / Head, Urban Solutions | Jan 21 | Mr Chew leads the group's global smart city business in the areas of mobility, utilities, infrastructure, connectivity, and autonomous and sustainable solutions. Prior to this role, he previously served as the group's Chief Marketing Officer where he oversaw the marketing of smart city solutions and defence exports, while holding concurrent appointment as Deputy President and President (Defence Business) for its marine arm. Prior to joining STE, Mr Chew was the Chief Executive of the Land Transport Authority. He also served as the Chief Executive of Public Utilities Board. |
| Low Ka Hoe | - | President, Satellite Communications | Sep 21 | Before assuming the new role of President, Satellite Communications, Mr Low was the Group Chief Strategy & Sustainability Officer, a position he had held since joining the group in 2016. Prior to joining STE, he was Head, Group Strategy and Partnerships at SingTel. |

Source: STE, LinkedIn and various media sources

BOARD OF DIRECTORS

| Name | Age | Position | Date of Appointment | Experience / Other Directorships |
|---------------------------------------|-----|---|---------------------|--|
| Kwa Chong Seng | 75 | Chairman, Non-Executive and Independent Director | Sep 12 | <ul style="list-style-type: none"> Has > 40 years of experience in the petroleum industry Chairman of Singapore Exchange Board member of the Public Service Commission, Singapore, SeaTown Holdings and Defence Science & Technology Agency (DSTA) Chairman and Managing Director of ExxonMobil Asia Pacific before retirement in 2011 |
| Vincent Chong Sy Feng | 52 | President and CEO, Executive and Non-Independent Director | Oct 16 | <ul style="list-style-type: none"> See Key Management Personnel table above |
| Kevin Kwok | 66 | Non-Executive and Independent Director | Oct 21 | <ul style="list-style-type: none"> Independent Director and Chairman of the Audit Committee of Singapore Exchange Independent Director and Chairman of the Audit and Risk Committee of Mapletree North Asia Commercial Trust Management |
| Lim Ah Doo | 72 | Non-Executive and Independent Director | Nov 15 | <ul style="list-style-type: none"> Board member of GDS Holdings, GP Industries, Olam International, Singapore Technologies Telemedia and Virtus HoldCo |
| Lim Chin Hu | 63 | Non-Executive and Independent Director | Jul 18 | <ul style="list-style-type: none"> Has > 30 years of experience in the info-communications industry Board member of Citibank Singapore, Singapore Exchange, Heliconia Capital Management and Sentosa Development Corporation |
| Lim Sim Seng | 63 | Non-Executive and Independent Director | May 15 | <ul style="list-style-type: none"> Group Head of Consumer Banking Group & Wealth Management of DBS Bank (DBS) Chairman of DBS Vickers Securities Holdings Board member of Singapore Land Authority and Nikko Asset Management Co Singapore's High Commissioner (Non Resident) to the Federal Republic of Nigeria |
| Ng Bee Bee (May) | 54 | Non-Executive and Independent Director | Jun 20 | <ul style="list-style-type: none"> CEO and Director of Pan-United Corporation Board member of NTUC Enterprise Co-operative |
| Lieutenant-General Ong Su Kiat Melvyn | 47 | Non-Executive and Non-Independent Director | Jun 18 | <ul style="list-style-type: none"> Chief of Defence Force in the Ministry of Defence of Singapore Board member of JTC Corporation and Defence Science & Technology Agency |
| Quek See Tiat | 67 | Non-Executive and Independent Director | Jul 13 | <ul style="list-style-type: none"> Chairman of the Accounting Standards Council Singapore President/Council member of the Council of Estate Agencies Board member of Monetary Authority of Singapore, Singapore Press Holdings and Temasek Foundation |
| Song Su-Min | 48 | Non-Executive and Independent Director | Sep 18 | <ul style="list-style-type: none"> Partner of Allen and Gledhill LLP Specialises in single and multijurisdictional M&As, domestic and international JVs and corporate restructuring, and advises generally on corporate and commercial law Ranked in Corporate M&A by Chambers Asia-Pacific and is noted for her work in other publications such as The Legal 500 Asia Pacific and IFLR1000 |
| Tan Peng Yam | 63 | Non-Executive and Non-Independent Director | Aug 21 | <ul style="list-style-type: none"> Chief Defence Scientist of Ministry of Defence of Singapore Chairman of Temasek Defence Systems Institute (TDSI) Management Board, NUS Board member of Land Transport Authority and PUB Board Committee for Transformation Chairman of SMRT Technical Advisory Panel |
| Teo Ming Kian | 70 | Non-Executive and Non-Independent Director | Aug 21 | <ul style="list-style-type: none"> Chairman of Vertex Venture Holdings Non-executive director of Temasek Holdings (Private) Limited Director of several technology start-ups and non-profit organisations |

Source: STE

Appendix IV – Contract Wins

DISCLOSED CONTRACT WINS OVER THE PAST 3 YEARS

| 1Q22 | | |
|---------------------------|----------|---|
| Commercial Aerospace | S\$0.9b | <ul style="list-style-type: none"> Comprehensive component Maintenance-By-the-Hour (MBH™) contract Landing gear contract with an Asian low-cost carrier A330P2F orders by DHL and CDB Aviation |
| Urban Solutions & Satcom | S\$0.2b | <ul style="list-style-type: none"> Rail electronics contracts for the Downtown Line in Singapore and an Enterprise Asset Management System for Wuxi Metro in China Smart lighting solutions for various housing estates in Singapore Smart streetlight solutions in the city of Birmingham, Alabama, US Integrated security management solutions for customers in Singapore Satcom ground infrastructure products/solutions for the maritime, government, oil & gas, broadcast and broadband segments |
| Defence & Public Security | S\$1.3b | <ul style="list-style-type: none"> AI-enabled mission critical command and control systems (including cybersecurity products and services) Digital solutions and services in the areas of cloud, data centre and training & simulation Munitions for international customers Ship repair and maintenance contracts in Singapore and the US |
| 4Q21 | | |
| Commercial Aerospace | S\$1.0b | <ul style="list-style-type: none"> Multi-year component MBH™ contracts from Virgin Australia Airlines and China Airlines Airframe maintenance contract extension with a Japanese airline, heavy maintenance and cabin refresh modifications for Boeing 767 CFM56-5B and -7B engine MRO contracts from Asian airlines Order for 6 x A321P2F from cargo operator Smart Lynx and 15 x A321P2F from an aircraft leasing company |
| Urban Solutions & Satcom | S\$0.4b | <ul style="list-style-type: none"> Rail electronics including turnkey smart metro solutions for Taiwan's Kaohsiung MRT Red Line Extension and Passenger Information System solution in Romania for Bucharest Metro Line 5 Smart utilities including smart street light control solutions for Rio de Janeiro, and integrated smart security management solutions for customers in Singapore Satcom ground infrastructure for the land mobility, government and defence, and oil & gas markets including a contract with Eclipse Global Connectivity for an airborne ISR satellite communications solution for military and government aircraft |
| Defence & Public Security | S\$1.8b | <ul style="list-style-type: none"> Supply of cybersecurity products and solutions, AI-based mission critical systems, on-premise cloud solutions and cloud managed services Munitions for various international customers Various ship repair and shipbuilding contracts in Singapore and US yards including the fifth US Navy APL(S) berthing barge, the supply of design, platform equipment and technical assistance for four Falaj 3-class Offshore Patrol Vessels and second PSC. |
| 3Q21 | | |
| Commercial Aerospace | S\$1.03b | <ul style="list-style-type: none"> 5-year component MBHTM contracts from Japan Airlines 5-year CFM56-7B engine MRO contract from Alaska Airlines 4-year airframe maintenance contract from Asia LCC; and 3-year airframe heavy maintenance contract to support an Australia-based airline Order for 18 units of A320/A321 P2F from BBAM, an aircraft lessor |
| Urban Solutions & Satcom | S\$382m | <ul style="list-style-type: none"> Rail electronics contracts including Platform Screen Door solutions and Passenger Information Systems for international customers; renewal of communications systems for Singapore's North-South and East-West Lines and the Bukit Panjang LRT (as part of Siemens Mobility consortium) Smart utilities contracts including smart lift monitoring solutions for lifts in Singapore and smart security solutions for customers in Singapore Satcom ground infrastructure for the land mobility, government and defence, and broadcast markets including a contract with USSI Global to modernise satellite programmers' distribution uplinks to power sports distribution systems in the US as part of C-Band transition |
| Defence & Public Security | S\$413m | <ul style="list-style-type: none"> Broadband communication, cybersecurity, autonomous products and solutions Mission critical & data analytics systems and cloud managed services for government agencies and enterprise customers Munitions for various international customers Various shipbuilding and ship repair contracts in Singapore and US yards Naval vessel repair contract for Royal NZ Navy |
| 2Q21 | | |
| Commercial Aerospace | S\$874m | <ul style="list-style-type: none"> 5-year contract to support an Asian Pacific airline in airframe heavy maintenance for its Boeing 787 fleet A321P2F and A330P2F contracts from operators and lessors including MNG Airlines Engine heavy maintenance MRO contracts from Alaska Airlines and an Asian airline Orders for customised composite panels from international airlines and composite floor panels from a European train manufacturer |
| Urban Solutions & Satcom | S\$284m | <ul style="list-style-type: none"> Rail electronics in Singapore, Thailand, China and Passenger Information System solution in Egypt for the 10th of Ramadan City Railway Smart utilities and integrated security management solutions for customers in Singapore Satcom ground infrastructure across key market verticals, including with Eutelsat for the launch of their flexible and scalable global Network-as-a-Service offering |
| Defence & Public Security | S\$660m | <ul style="list-style-type: none"> Cybersecurity products, solutions and services Mission critical & data analytics systems and cloud managed services Construction of T-AGS 67 Oceanographic Survey Ship for the US Navy, and other defence contracts |
| 1Q21 | | |
| Commercial Aerospace | S\$573m | <ul style="list-style-type: none"> 5-year contract to support a North American airline in airframe heavy maintenance 3-year component MBH contract to support a South Korean airline 4 units of A321P2F for GTLK Europe DAC, a European leasing company |
| Urban Solutions & Satcom | S\$371m | <ul style="list-style-type: none"> Rail electronics in Australia, Thailand, Singapore including Platform Screen Door solutions for Queensland's Cross River Rail Bus fleet management system enhancement in Singapore Satcom ground infrastructure across key market verticals, including with a tier-1 mobile network operator to expand cellular backhaul network across Brazil |
| Defence & Public Security | S\$610m | <ul style="list-style-type: none"> Cybersecurity products, solutions and services Mission critical & data analytics systems and cloud managed services One Auxiliary Personnel Lighter-Small (APL(s)) 67 Class berthing barge for the US Navy, and other international defence contracts |

| | | |
|--------------|---------|--|
| 4Q20 | | <ul style="list-style-type: none"> • Deployment of Enterprise Asset Management System for the Singapore MRT North-East Line and Passenger Information System for the Singapore MRT Circle Line and North-East |
| Electronics | S\$516m | <ul style="list-style-type: none"> • Extension of streetlight control solutions to cities in New Zealand, the US and Sweden • Global extension of Advanced Metering Infrastructure solution to optimise water consumption and operational efficiency • Deployment of its first Perimeter Intrusion Detection System for a global pharmaceutical facility based in Singapore • Port surveillance and tracking system • Digital platform with integrated AI capabilities for a healthcare institution |
| Aerospace | S\$821m | <ul style="list-style-type: none"> • P2F conversion orders for A330P2F units from freight operators and lessors • 5-year airframe heavy maintenance contract supporting an international air cargo carrier's multiple fleet types • 4-year airframe heavy maintenance contract to support a North American airline's Boeing 777 fleet |
| 3Q20 | | |
| Electronics | S\$1.1b | <ul style="list-style-type: none"> • Rail electronics projects in Singapore, Thailand and China • Smart digital building solutions including smart lighting, and command, control and communications systems in Singapore • DPS projects |
| Aerospace | S\$0.6b | <ul style="list-style-type: none"> • Nacelle manufacturing and floor panel manufacturing |
| 2Q20 | | |
| Electronics | S\$517m | <ul style="list-style-type: none"> • Deployment of next-generation Perimeter Intrusion Detection System for its first airport project in the US • Building and deployment of a Security Operations Centre • Provision of cybersecurity services • Secured communications equipment for customers in defence and other government sectors |
| Aerospace | S\$586m | <ul style="list-style-type: none"> • MRO contracts from new customers such as a Chinese cargo airline |
| 1Q20 | | |
| Electronics | S\$730m | <ul style="list-style-type: none"> • Provision of platform screen doors (PSD) for two underground stations in the Chennai Metro Rail Phase 1 Extension • Delivery of a Passenger Information System for 31 trains in Mumbai Metro Line 3 • Provision of Security Operations Centres • Enhancement of security monitoring services and cybersecurity advisory support for government, critical infrastructure and enterprise customers • Enhancement and maintenance of an Intelligent Water Management System |
| Aerospace | S\$838m | <ul style="list-style-type: none"> • A320 heavy maintenance contracts • CFM56-7B engine maintenance contracts from Chinese airlines • Component Maintenance-By-the-Hour (MBH™) contract from a Southeast Asian airline to provide comprehensive component maintenance services for its entire fleet of Boeing 737 and Bombardier Q400 • Multi-year engine and component MRO contracts from a South Korean airline • 5-year nacelle maintenance contract • 3-year airframe heavy maintenance contract |
| Land Systems | - | <ul style="list-style-type: none"> • Production and supply of the Hunter Armoured Fighting Vehicle from the Ministry of Defence of Singapore • Provision of integrated logistics support which includes spares, training and documentation |
| 4Q19 | | |
| Electronics | S\$449m | <ul style="list-style-type: none"> • Delivery of communications system and an Automatic Fare Collection (AFC) system for a new station in Bangkok's Mass Transit System Silom Line • An Air Traffic Control Tower Simulator system for the Civil Aviation Authority of the Philippines, equipped with five major 3D aerodrome models for the Manila, Clark, Mactan, Davao and Plaridel airports |
| Aerospace | S\$1.1b | <ul style="list-style-type: none"> • Heavy maintenance service for a line of Boeing 757 for an American airline from 2H20 • Transition checks for a freight operator's MD-11s, and landing gear overhaul service for Japanese domestic airline Solaseed Air's Boeing 737-800 fleet over a four-year period • 15-year engine MBHTM programme to support Japan Transocean Air's Boeing 737NG fleet, as announced in Nov 19 |
| 3Q19 | | |
| Electronics | S\$833m | <ul style="list-style-type: none"> • Enhancement of communications for first response teams, and to ensure business continuity for healthcare and banking in rural US • Passenger Information Systems for China's Wuhan Metro Line 5, Nanjing Line 7, Nanchang Line 3 • Communication system for the Philippines' Manila Light Rail Transit System Line 2 Extension • PSDs for Saudi Arabia's Riyadh Metro Line 4, and AFC systems in Singapore • Deployment of smart water meters and smart street lighting in various global cities • Delivery of cybersecurity products and solutions to Vietnam's enterprises and critical information infrastructure (CII), and Singapore's aviation and homeland security customers • Cybersecurity training for insurance and healthcare sectors |
| Aerospace | S\$1.0b | <ul style="list-style-type: none"> • Nacelle component and floor panel manufacturing for aircraft airframes, and helicopter MRO support services • 10-year agreement to work with Airbus Helicopters starting in early-21 to support the scheduled maintenance, inspection and on-demand repairs of a substantial part of the German Armed Forces' NH90 fleet • 5-year extension agreement for airframe maintenance from an A380 operator • 7-year agreement to provide component Maintenance-By-the-Hour support to an operator's fleet of Boeing 737NGs |
| 2Q19 | | |
| Electronics | S\$702m | <ul style="list-style-type: none"> • Provision of rail electronics solutions including train-borne communications, PSDs, AFC and Supervisory Control and Data Acquisition (SCADA) systems to Taiwan's Taoyuan MRT Green Line • Delivery of a Maintenance Management System to China's Foshan Metro Line 2 and Gaoming District Tram • Installation of smart indoor lighting control solutions to maximise energy savings and operational efficiency in residential estates and carparks • Development of an advanced command centre that enables digitalisation, automation and intelligent decision-making for Tuas port operations with PSA in Singapore |
| Aerospace | S\$809m | <ul style="list-style-type: none"> • Multi-year agreement from a long-time customer to provide heavy maintenance services to their entire fleet of Boeing 717s • Heavy maintenance and engine maintenance contracts for AirAsiaX and Beibu Gulf Airlines • A drone system contract for security and surveillance applications |
| Marine | S\$1.0b | <ul style="list-style-type: none"> • Detail design and construction of a US Coast Guard PSC; total contract value raised to S\$2.6b if options for another two vessels are exercised |

Source: STE

Appendix V – Acronyms

| | |
|--------|--|
| AFC | Automatic Fare Collection |
| AV | Autonomous Vehicle |
| CA | Commercial Aerospace |
| CIS | Chartered Industries of Singapore |
| COMAC | Commercial Aircraft Corporation of China |
| DOD | Department of Defense |
| DPS | Defence & Public Safety |
| EFW | Elbe Flugzeugwerke |
| ETC | Electronic Toll Collection |
| GEO | Geosynchronous Equatorial Orbit |
| IATA | International Air Transport Association |
| ITS | Intelligent Transportation System |
| LEO | Low Earth Orbit |
| LTA | Land Transport Authority |
| MBH™ | Maintenance-By-the-Hour |
| MEO | Medium Earth Orbit |
| MINDEF | Ministry of Defence of Singapore |
| MOF | Ministry of Finance |
| MRAS | Middle River Aerostructure Systems |
| MRO | Maintenance, repair and overhaul |
| NGEO | Non-Geosynchronous Equatorial Orbit |
| NSR | Northern Sky Research |
| OEM | Original Equipment Manufacturing |
| P2F | Passenger-Aircraft-to-Freighter (Conversion) |
| PSC | Polar Security Cutters |
| RAFO | Royal Air Force of Oman |
| SAF | Singapore Armed Forces |
| SIPRI | Stockholm International Peace Research Institute |
| STC | Supplemental Type Certificate |
| STE | Singapore Technologies Engineering |
| TDMA | Time-Division Multiple Access |
| TEAM | Total Engine Asset Management |
| USS | Urban Solutions & Satcom |
| VSAT | Very Small Aperture Terminal |

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