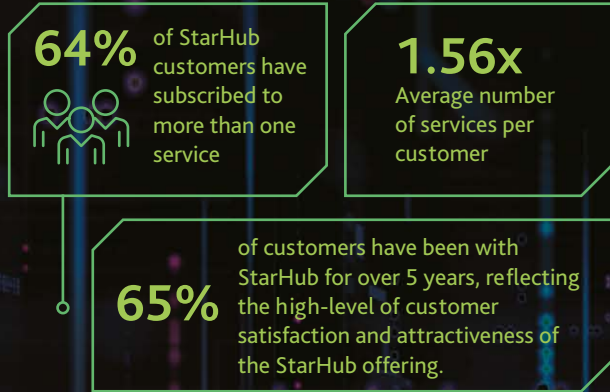# BUSINESS REVIEW
CONSUMER

In FY2023, our consumer segments demonstrated either stability or growth despite continued contraction in the market. As consumers continued to demand greater value amidst an inflationary environment, our resilient performance underscores the effectiveness of our Infinity Play and bundling strategy in enhancing customer lifetime value and establishing market differentiation.

As a forward-thinking organisation, we foresaw several critical consumer trends and adapted our strategies accordingly over the year. With the increasing sophistication of consumers, we saw a continuous adoption of digital lifestyle. This underpinned the growing need for connectivity, leading to an increase in the prevalence of connected devices, including wearables. Moreover, customers in pursuit of high-quality entertainment shifted their viewing preferences towards OTT platforms. With 1-in-5 Singaporeans aged 65 years and above in 2022, we continued to address the changing needs of an aging population by providing solutions that cater to their requirements for connectivity, entertainment, and security, amongst others.

Our endeavours have yielded initial benefits, affirming the positive impact of Infinity Play on the enhancement of customer lifetime value. Our statistics convey a compelling message, reflecting the significant potential our Infinity Play strategy holds for StarHub in the years ahead.

64% of StarHub customers have subscribed to more than one service

1.56x Average number of services per customer

65% of customers have been with StarHub for over 5 years, reflecting the high-level of customer satisfaction and attractiveness of the StarHub offering.

SAFETY SUITE

GAMEHUB+

LIFEHUB+

LEADING MARKET POSITION + INFINITY PLAY

MOBILE
Strong #2
Revenue Market Share

ENTERTAINMENT
Strong #1
Revenue Market Share

BROADBAND
#1
Revenue Market Share

MOBILE: FUELLING GROWTH

StarHub holds a strong second position in the Mobile segment, specifically in terms of Mobile service revenue market share. Despite the intensifying competition in the market, we have significantly widened the gap between us and the third-ranked operator over the past two years.

We continue to focus on market differentiation to stabilise ARPU performance, steering clear of engaging in a price war with competitors who are more prominent in the lower-value segments. To this end, service bundling remains key to our DARE+ and differentiation strategies. We offer a variety of flexible plans that combine data, voice and entertainment allowing our customers to customise their mobile experience and maximise the value of their plans.

With coverage across 195 destinations worldwide, StarHub's roaming data service continues to be the widest in the industry. Over the period, we recorded strong roaming revenue growth despite increased roaming dilution in the market. This success is attributed primarily to our enhanced digital experience and the expansion of our roaming plans.

We continued to offer unparalleled network experience to customers by operating Singapore's most awarded network. At Opensignal's 5G Global Mobile Network Experience Awards 2023, StarHub was named Global Winner for providing the best 5G video experience and our network was recognized as the "Most Consistent Overall Experience". The Info-communications Media Development Authority (IMDA) of Singapore also commended StarHub for our network excellence, highlighting our consistent and reliable network which delivers customers speed, stability, and performance.

Our digital fighter brand, giga!, continues to contribute to the growth of the Mobile segment. The app has digitalised the customer experience by incorporating social media technologies, AI chatbots, automated marketing tools with streamlined internal processes. This has enabled an efficient, data-driven model; one with the ability to deliver personalised campaigns and to respond to customer requirements in real-time.

giga! has performed well to date, maintaining its industry leading Net Promoter Score in FY2023. The highly functional app has attracted digital savvy customers through number transfers from our competitors. As a testament to giga!'s strong following, our brand awareness grew by 77% in FY2023, with top of mind awareness at 4%, surpassing our closest competitor by 2%. Furthermore, the app boasts the highest industry trialists to loyal customer conversion rate at 78%. With a lean team and an efficient business model, we continue to realise healthy gross margins from this business. To further monetise giga!, we will broaden our segments; effect disruptions in selected targeted segments; and

connect communities through digital experiences and love for the brand.

As a result of these endeavours, Mobile service revenue grew substantially by 8% in FY2023 to $609 million. We increased our Postpaid ARPU to $33 at the end of 2023, compared to $32 in 4Q2022 despite intense market competition.

Moving forward, our strategy to enhance customer engagement and satisfaction involves four key approaches. First, we will continue to leverage Infinity Play bundling to strengthen market differentiation by driving greater value to customers, thereby improving segment performance by elevating customer lifetime value. Secondly, we will continue to encourage 5G migration and maintaining 5G premiums by leveraging the power of Infinity Play bundling. Thirdly, we will continue to elevate customer experience through transformation initiatives, concentrating on refining customer journeys with reliable, relevant and innovative solutions. Lastly, we aim to unlock the full potential of global travel through new technology and strategic partnerships to solidify our leadership in tourist and travel segments.

Singapore's **#1** Awarded Network

#1 5G Availability | #1 Consistent Network Quality | #1 5G Streaming Experience

OPENSIGNAL

Based on winning 9 award metrics in Opensignal Awards – Singapore Mobile Network Experience Report November 2023.

BUSINESS REVIEW
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BROADBAND: UNMATCHED SERVICE DIFFERENTIATION

Following the acquisition and integration of MyRepublic Broadband ("MRBB") in FY2022, we have successfully established a strong #1 position in the Broadband market[4]. We have solidified our position through market differentiation by bundling with Entertainment products and services as part of our Infinity Play proposition. We continued to extend our reach in the higher-value gaming segment, an area in which MRBB has a cult following amongst gamers in Singapore and across the region.

In February 2023, StarHub was the first operator in Singapore to trial nationwide 10G XGS-PON (Gigabit-capable Symmetric Passive Optical Network) broadband, boosting connectivity through simultaneous 10Gbps transmission speeds on both download and upload. This StarHub UltraSpeed standard caters to the demands of consumers seeking a dependable and superior network experience, especially in work-from-home and smart home environments. Our UltraSpeed network offers a critical advantage over traditional 1Gbps and 2Gbps networks by optimizing responsiveness for online gaming and deliver rapid speeds for content streaming.

Subsequent to the success of the trials, we were the first Singapore operator to launch our integrated Optical Network Router in June 2023. This solution combines an optical network terminal and a router into a single device, providing customers with blazing upload and download speeds of up to 10Gbps. In August 2023, MRBB introduced HyperSpeed 10Gbps, expanding our portfolio with a lightning-fast solution for customers seeking faster in-home, simultaneous multi-device connectivity.

To address the highly competitive and price-sensitive consumer market, we continued to differentiate StarHub with unique products and leverage cross-bundling opportunities as part of our Infinity Play strategy. On this front, we launched attractive cross-bundling packages such as StarHub's Sports+, Premier League and Broadband bundle in May 2023; and HomeHub+ 10Gbps festive bundle that includes a full suite of entertainment offerings including Netflix, Disney+ and Premier+ in December 2023 .

On the StarHub main brand, we have seen a 40% YoY growth in number of subscribers on higher 2Gbps and 10Gbps bandwidth plans in 4Q2023. We continue to focus on margin performance for the Broadband business, tactically adjusting our premiums and promotions to compete in this segment. Overall, the Broadband business registered a 2.6% increase in service revenue to $249 million for FY2023, while ARPU remained stable at $34 at the end of 4Q2023.

As we enter FY2024, we anticipate heightened competition in the Broadband segment. To address these challenges proactively, we plan to expedite the migration of our customers to our advanced 10G-XGS-PON network. This move is aimed at providing an enhanced network experience, complemented by the latest WiFi 7 routers. Additionally, we remain committed to expanding our Infinity Play differentiation and ensuring an unparalleled customer experience throughout both pre- and post-sales journeys, without compromising on price.

4   *By Service revenue market share, based on internal estimates.*

ENTERTAINMENT: HOME OF SPORTS

We continued to maintain a strong #1 market position[5] due to our ability to cross-bundle with Infinity Play, as well as our differentiated market positioning as the Home of Sports, offering the most comprehensive sports content in Singapore.

In FY2023, we accelerated the migration of our customer base from traditional IPTV product lines to advanced OTT delivery as part of our Entertainment business transformation. This shift has enhanced customer experience with a wider choice of content, incorporated advanced features such as time-shift and native multi-screen functions. Looking ahead, this transition will enable us to deliver even more personalised experiences and targeted recommendations including OTT content, and present upsell opportunities while lowering our overall costs and allowing us to enhance our content coverage.

During the year, we strengthened our position as the Home of Sports by introducing diverse sports content, including FIA Formula One World Championship, FIFA Women's World Cup Australia & New Zealand, Rugby World Cup, ICC Cricket World Cup, MOLA Sport and MOLA Golf. These trending and entertaining sports programs not only captivate sports enthusiasts but also function as a strong tool for customer acquisition.

A case in point is Premier League. Since the commencement of our second Premier League season in July 2023, we have garnered additional bundle subscribers due to promotions related to our broadband services. We have also been successful in upselling the Premier League base with additional Entertainment passes and Broadband services. With these initiatives, our Sports subscriber base has grown substantially as customers take on additional channels and services. Moreover, the majority of our Premier League subscribers have signed on to multiple services with StarHub. This trend is expected to continue given our plans to roll-out additional upselling activities.

With stronger subscription revenue driven by Premier League, as well as higher pull-through revenue such as commercial TV and advertising revenue, the Entertainment segment registered a 5.4% YoY increase in service revenue to $228 million in FY2023, while ARPU grew to $46 as at 4Q2023 compared to $45 a year ago.

Looking ahead, we will drive the business by strengthening brand association through two proven platforms: StarHub live screenings and unique sport events which have gained significant traction within the community – bringing on-screen experiences off-screen. In FY2023, we provided live screenings of the ICC World Cup Finals 2023 and the 2023/24 Premier League season match between Merseyside rivals Liverpool and Everton. We also organised an inaugural football clinic for over 60 aspiring young footballers in Singapore, giving them a special opportunity to learn tips on improving their football skills from Manchester United legends, Dwight Yorke and Andy Cole.

Over 1,000 football fans at Downtown East enjoying a Premier League live screening and meeting Neil Humphreys and Chia Han Keong, co-hosts of popular podcast, Yahoo Footballing Weekly.

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5   *By service revenue and subscribers market share amongst Pay TV service operators, based on internal estimates.*

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As part of our community engagement programmes, we also introduced a senior-exclusive Premier+ discount specially packaged to reinvigorate these customers' love for exciting live football action. These initiatives have allowed us to raise StarHub's share of mind amongst sports enthusiasts and build goodwill with the community.

While widening sports content is a key component of our Entertainment strategy, we continued to add content that can broaden our viewers' entertainment options. During the year, we relaunched and added Discovery HD and HGTV to our already-extensive StarHub TV+ line-up


StarHub partners ACE Group to bring ICC Men's Cricket World Cup Finals live screening to almost 3,000 Migrant Workers

of content options from Warner Bros. We also added our 12th streaming platform with a partnership with ZEE5 Global, the world's largest streaming provider for South Asian content with over 200,000 hours of on-demand Indian and South Asian films and shows across 18 languages.

We are optimistic that the strategies we are implementing with Premier League and cross-bundling will enable us to surmount the immediate and intense competition in the Entertainment segment.

NEW INFINITY PLAY VERTICALS:
ENHANCE, ELEVATE, EXPAND

Our new verticals saw strong traction in FY2023, recording 20% YoY growth in the division's contribution to Postpaid ARPU. This was on the back of a 15% YoY growth in New Vertical subscriber base.
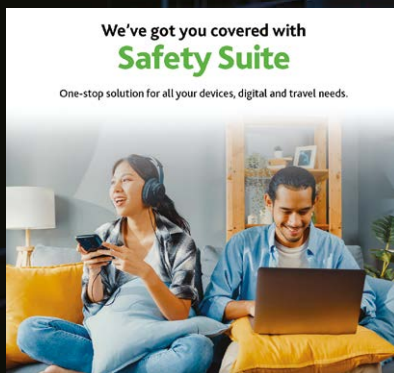
Safety Suite

During the year, we saw strong demand in the safety and security consumer solution sectors driven by the escalating prevalence of consumer misinformation, privacy violations and security breaches.

Overall, there was a YoY increase of 21% in subscribers and a 22% growth in revenue from this segment.
Our robust solutions continue to meet this demand by providing consumers holistic protection from everyday risks in their digital lives.

Looking ahead, we aim to double down on Safety Suite, meeting strong consumer demand for safe and secure products and services as we transition our value shift from offering pure connectivity to digital enablers and solutions. We will look to bolster device protection programs for consumers and SMEs, through affordable, hassle free and easy-to-use solutions to fortify StarHub as 'The' trusted go-to brand. We will continue to operate Safety Suite on an asset-light and scalable business model, optimising its contribution to the Group's performance.

SmartSupport
A hassle-free device care experience that provides device swap or replacements within four hours, complete with tech support and security advisor features.

CyberProtect
Powered by F-Secure, a multi-award winning cyber security provider, CyberProtect, protects multiple devices – mobile devices, laptops, and PCs, allowing customers to shop, browse and bank safely with peace of mind.

SmartSupport Home
A unique break-down coverage available to all StarHub Mobile and Broadband customers. Covers over 10 categories, including laptops, tablets, and smart TVs, it offers a single subscription for unlimited number of existing and new devices.

CyberCover
Underwritten by Chubb, CyberCover provides customers with up to $13,000 coverage against online threats, such as fraud, cyber-bullying, unauthorised transactions, undelivered online purchases and identity theft.

GameHub+

Our aim is to become the ultimate cloud gaming hub for customers with GameHub+, a dynamic and distinctive ecosystem that empowers all gamers to unleash their full gaming potential. GameHub+ has been designed to deliver an exciting and meaningful gaming experience, supported by StarHub's cutting-edge technologies and seamless connectivity.

Launched in September 2021, our strategic partnership with NVIDIA GeForce NOW allows StarHub to continue leveraging on NVIDIA's cutting-edge graphics technology and cloud infrastructure boosting GeForce NOW performance and enabling groundbreaking gaming experiences, solidifying StarHub's leadership in the cloud gaming industry in the region.

Today, GameHub+ has garnered a strong following across Asia with more than 60% of subscribers based outside of Singapore. We are encouraged by this traction as it reflects the potential for Infinity Play to extend StarHub's reach beyond our existing customer base.

In FY2023, we expanded our GameHub+ offering with Instant Play! and Mobile Play to cater to mobile cloud gamers in Singapore and the Southeast Asia region. In September 2023, StarHub launched Instant Play! in partnership with U2opia Mobile, allowing GameHub+ customers to access U2opia's library of over 60 games under their Mojo Gaming brand. With the positive response from the market, we formed partnerships with cloud gaming distributors CareGame and OnMobile Global in November 2023 to bring over 100 mobile game titles to Mobile Play.

These partnerships and initiatives will allow GameHub+ to grow and thrive as a multi-partner gaming platform. We will continue onboarding popular partners as part of our Southeast Asia growth strategy and solidify GameHub+ as a the leading gaming brand in Asia – one which is synonymous with innovation and known for pushing the boundaries of interactive entertainment.

>10M Play Hours
On NVIDIA GeForce NOW

>25 Hours
Monthly Gameplay Per GameHub+ Subscriber

>1.5K Games
on NVIDIA GeForce NOW and >100 Free-to-Play games available on GameHub+, with more to come

Healthcare and wellness in the comfort of your own space

LifeHub+

As a leading telecommunications company in Singapore with strong track record of innovation, StarHub is well-positioned to play a pivotal role in the development of Healthtech in Singapore. Our LifeHub+ strategy was crafted with a clear goal in mind to increase the accessibility and affordability of Healthtech-care in line with the Singapore Government's initiatives for a healthier Singapore by promoting preventive healthcare.

StarHub continues to refine the market strategy of the LifeHub+ vertical, with exciting new changes to be launched in FY2024.
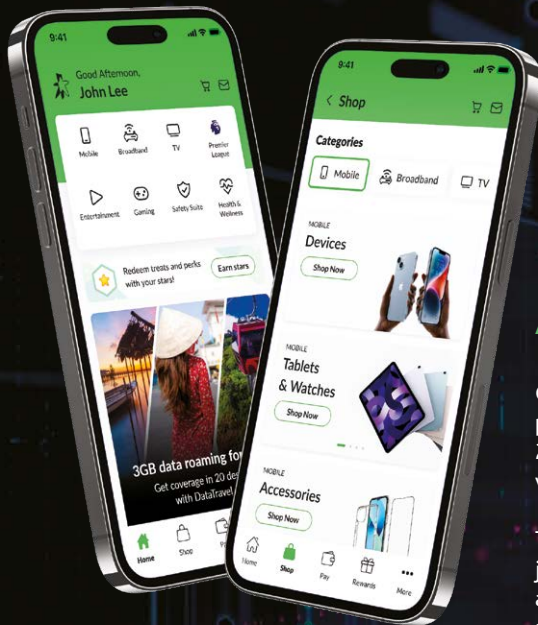
BUSINESS REVIEW
CONSUMER

DIGITAL INNOVATION: LEADING THE CHARGE

All-In-One App

Our 'All-In-One' app consolidates our wide range of Infinity Play products on a unified and scalable platform providing users with 24x7 access to a suite of digital solutions under our six consumer verticals.

Targeted for completion in FY2024, the app simplifies the customer journey and enhances convenience and usability with features such as biometrics login, a range of payment options, 24x7 chatbot assistant, rewards and gamification. Leveraging data analytics, our 'All-in-One' app tailors and personalises customer experience, paving the way for StarHub to cross- and up-sell Infinity Play solutions for enhanced customer lifetime value and revenue growth. Furthermore, the app has in-built cloud-based agility to deliver market demands promptly at lower tech operating costs.
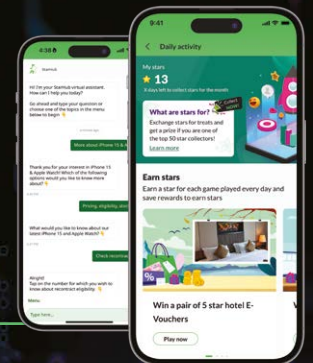
Our efforts in digitalisation continue to gain positive traction:

82% of our customer base have used our 'All-in-One' app in FY2023.

With the widespread adoption, the volume of chatbot queries have increased **three-fold** YoY in FY2023.
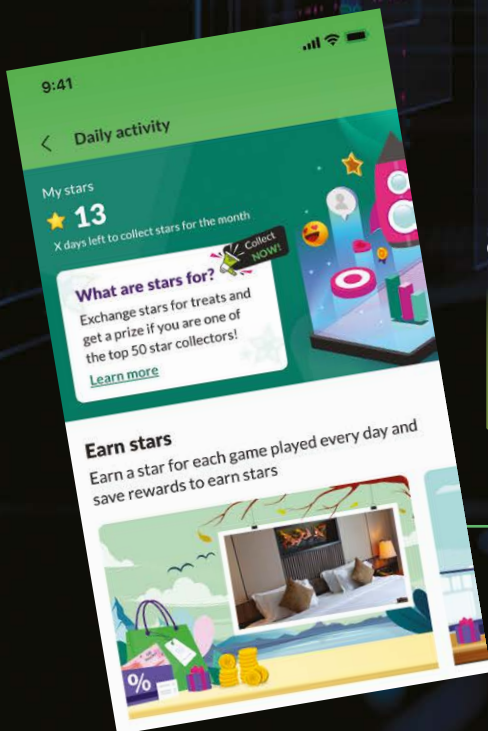
Elevating Digital Engagement

We continue to focus on strategic digital transformation and customer experience enhancement initiatives to bolster our data and AI capabilities and sharpen our personalised customer targeting abilities:

+ **Enhanced Deep Personalisation:**
  Tailored product and service recommendations, leading to a more individualised customer experience.

+ **Improved Data Analytics:**
  Leveraging StarHub's data lake, we will be able to offer more relevant and timely products and services, driven by deeper insights into customer behavior and trends.

+ **Agile Campaign Execution:**
  Facilitating faster responses to customer needs and preferences, ensuring quicker campaign rollouts and adaptations.

+ **Advanced Artificial Intelligence and Machine Learning Capabilities:**
  Providing an enhanced user experience with intelligent features, anchored by accurate predictive models for trend analysis.

+ **Efficient Data Management:**
  Ensuring a consistent and reliable service experience, with streamlined data processes bolstering strategic decision-making.

As we expand and bring these initiatives to fruition, we are committed to forward planning to maintain our leadership in an increasingly competitive market. We aim to expand our AI applications and integrate AI into next-generation customer service technologies and customer-centric solutions. As a progressive organisation, we will embrace future challenges, learning and adapting through these transitions to strengthen our resilience and capability to innovate.

With a customer-centric approach, StarHub's digital channels continued record higher customer satisfaction. As a testament to this, giga! achieved a 2023 NPS score which is 2.5 times higher than traditional Postpaid.

In FY2023, we achieved a significant milestone with the ongoing transition from IPTV to TV+. StarHub's TV+ customer base now represents 66% of our total Entertainment customer segment, a substantial increase from 51% in FY2022. Upon concluding the migration process, we expect substantial gains in knowledge and experience, and cost savings resulting from the retirement of the old platform.

5G

Experience blazing 5G speeds

and enjoy the flexibility you need

STAR PLAN
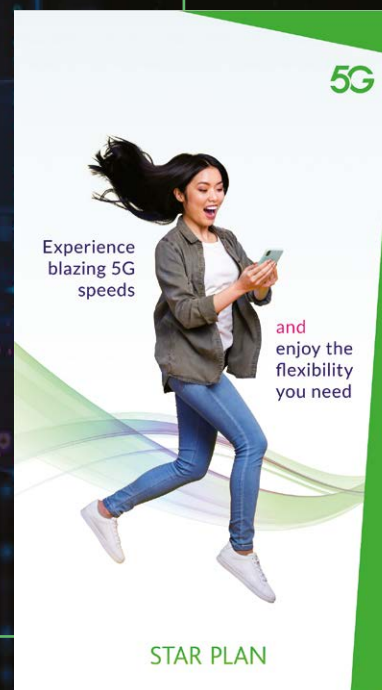
Fostering a Future-Ready Ecosystem

Our strategic initiatives in digital transformation and customer experience enhancement are more than just technological upgrades. They represent our unwavering commitment to providing our customers with a smarter, more intuitive, and personalised experience, laying the foundation for a future-ready and customer-centric ecosystem at StarHub.

We are on track with our consumer DARE+ transformation. We have confidence that our current endeavours – ranging from embedding Infinity Play into the lives of our customers, to building cloud and Data Lake capabilities for improved customer engagement – will secure the future of our consumer business.

BUSINESS REVIEW
ENTERPRISE

REFOCUSING BEYOND TELCO

#2 in Connectivity & Managed Services

ENSIGN INFOSECURITY **#1** in Cybersecurity Services

STRATEQ jos Deep ICT expertise with regional presence

STARHUB

10 offices in **7 cities** across Asia

8 data centres across Singapore, Malaysia

13 network exchanges

More than **880,000 km** of international connectivity

Over **11,000 km** of connectivity in Singapore

STARHUB continues to maintain its leadership in the Enterprise sector through a differentiated market positioning. This is underpinned by our ability to offer unique, innovative converged 3C solutions: Cloud, Cybersecurity and Connectivity. Forming the foundation of our offering, these cutting-edge solutions will be further fortified and differentiated by Cloud Infinity.

Supported by a strong and dedicated team, our Enterprise business group maintained impressive momentum to achieve commendable YoY growth in FY2023. Enterprise business group revenues grew almost 5% to $906 million in FY2023 from $866 million in the preceding year. This strength was driven largely by higher contribution from Cybersecurity Services, which grew 16% to $350 million, and an encouraging 2.1% YoY growth achieved by Network Solutions, successfully stemming YoY declines from the commoditised traditional telco services. The growth from Network Solutions was buoyed by a strong 18% increase in contributions from Managed Services, which saw increased project completions and higher contributions from data centre-related services.

These achievements were made possible by our efforts to enhance our go-to-market approach and strategies over the last year. We reorganised and restructured our teams into an agile-principled organisation with three service lines: Enterprise Connectivity, Enterprise Mobility, and Strategic Services, to refocus on driving digital solutions beyond traditional telco services. Each service line has end-to-end oversight, from product development to go-to-market to service delivery, allowing teams to be aligned to common outcomes and strategic objectives.

We also continue to strengthen our products and offerings to enhance our market competitiveness. For instance, we added additional services to our mobility solutions offering, and included services such as Mobile Threat Defence, which

has been increasingly embraced by the financial sector. Enterprise connectivity has also sharpened its focus on pulling through customised connectivity solutions instead of point connectivity services, allowing us to increase share of wallet in existing clients.

We are also seeing good traction for Strategic Services, which involves the integration of emerging technology – such as data analytics and artificial intelligence ("AI"), application modernisation, hybrid multi-cloud services leveraging Cloud Infinity – with underlying resilient and reliable connectivity. This integrated approach has greatly enhanced our market positioning and mind share with clients, as we continue to add to our growing order book to secure future earnings growth visibility.

Smart Retail Platform with Gen-AI: Co-Creation with Singapore's Largest Retail Provider

StarHub Enterprise has partnered with one of the largest retail mall operator in Singapore, to co-develop a Smart Retail platform. This platform aims to offer actionable insights on existing and potential customers, as well as competitors, with supported self-serve functions augmented with Gen-AI.

The Smart Retail Platform provides our partner with valuable insights to craft well-defined audience strategy as well as perform target audience activation. The platform's distinctive differentiation lies in its capability to provide unified insights from beyond our partner's first-party data to provide full ecosystem insights for their retail businesses. This enables mall operators to sharpen their retail strategies for differentiated growth, leading to footfall expansion, improved customer experience, higher ARPU, and new customer recruitment.
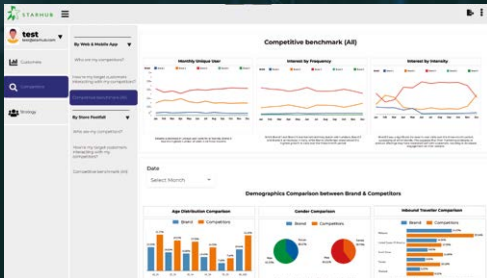

MOOVE SMART

Partnership with Moove Media

StarHub Enterprise has partnered with ComfortDelGro's advertising arm to build an Audience Data Platform and dashboard that unifies all media assets and audience insights across Moove Media's out-of-home advertising platform that reaches commuters island-wide.

The project involves layering telco consumer insights onto offline media assets to enable improved targeting of customers for advertisers. This, in turn, increases the value proposition to consumers and subsequently leads to improved fill-rate of the client's advertising inventory and better retail and/or marketing performance for their customers.

With telco consumer insights, we are well-positioned to support media and advertising clients to evolve their media solution to audience-based selling from location-based to dynamic audience-based selling. Users will be able to perform consultative selling with more dynamism across various classes of media assets. This solution can also be deployed for other offline media owners and retail digital screens for advertising and data monetisation.
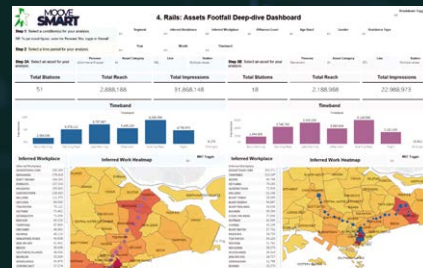
BUSINESS REVIEW
ENTERPRISE

STRATEGIC SERVICES: CO-CREATING ADVANCED SOLUTIONS

Smart City Service Provider: Punggol Digital District

StarHub Enterprise has been awarded a multi-year network servicing contract by JTC and will build in the upcoming Punggol Digital District ("PDD"), an intelligent software-defined network integrated with 5G and network automation for data centre, campus and sub-systems network. PDD is being developed as a green district that will set the benchmark for smart and sustainable business districts in Singapore. As the cornerstone of Singapore's Smart Nation ambitions, PDD will be a microcosm of a Smart City with innovations in cybersecurity, smart living and estate management.

StarHub will differentiate with location-based analytics and network telemetry for digital twin, network operations and maintenance will be automated with AI-Ops with security by design. Our solution will be highly scalable and has the potential to function as the blueprint architecture for new smart cities and districts, giving StarHub Enterprise a first mover advantage and track record in this nascent and growing market. Leveraging Cloud Infinity and 5G and our track record with PDD, we will co-create smart, safe and sustainable use cases to accumulate our credentials in Singapore and beyond.

Enhancing SCDF Operational Readiness through 5G, AR and AI

StarHub stands at the forefront of innovation alongside IMDA, HTX, SCDF, and IBM in a groundbreaking 5G project that will enable SCDF frontliners to enhance operational readiness through automating equipment inspection process and facilitating remote assistance using smart glasses, AI and Augmented Reality ("AR") technologies.

Test-bedded in SCDF's Smart Fire Station in Punggol, on its latest-generation fire emergency vehicles, StarHub's secured 5G connectivity and hardware ensures optimal performance of the solutions, enhancing SCDF's operations through real-time information management, operations synchronisation, and AR remote assist. Leveraging StarHub's capabilities in 5G, AI, Cloud and Green Tech solutions, this project demonstrates an indispensable role StarHub could play in shaping digital transformation to deliver enduring value to enterprise and government clients in the region.

Backed by IMDA's 5G Innovation Programme, the next phase of this two-year project will see full integration of solutions with backend services and ongoing field testing.

StarHub, alongside partners, at the IBM Think 2023 event.
From left to right: Tan Kit Yong, Head of EBG, StarHub; Ronald Castro, VP of Supply Chain, IBM; Colin Tan, GM and Tech Leader, IBM; Josephine Teo, Minister for Communications and Information of Singapore; AC Leow Chew Hong, SCDF; AC Anthony Toh, SCDF; Nga Chee Wei, Director, Emerging Technology Office, IMDA

PLATFORMS FOR FUTURE GROWTH

In FY2023, we focused on the development and implementation of several innovative and unique platforms that will bolster our Enterprise capabilities and value proposition to new and existing enterprise clients.

Cloud Infinity

Our investment in Cloud Infinity, our hybrid multi-cloud architecture enabled with automation and artificial intelligence operations, began recently in FY2023, and we have started expanding pursuits of MVPs and Proof of Concepts ("POC") with early adopters and key clients in this space. There is potential to expand these MVPs to enterprise and public sector clients in Singapore and the region, securing our position as a leading provider of innovative solutions.

Slated to be the backbone to sophisticated hybrid multi-cloud solutions for Enterprises, Cloud Infinity comprises four platforms that can be seamlessly integrated:

Network-X:

This platform will provide ultra-low latency beyond borders and high-speed packet-optimal connectivity over long distances. It facilitates access-agnostic converging of 5G, 4G, 10G-XGS-PON. Network-X potentially fills an urgent market need as telcos do not presently offer connectivity and API-as-a Service.

Content-X:

Leveraging ultra-low latency, this platform will enable the delivery of innovative entertainment technology and concepts such as AR/VR, hologram, metaverse, streaming, amongst others. Context-X will fill a market gap as there is no single unified lifestyle platform handling all content services with a single stack today. To advance our marketability, we will develop use cases for large scale online/offline/hybrid events and applications.

Secure-X:

This platform will deliver security by design with gold standard in observability, embedded from core-to-edge, including autonomous operation and an integrated service and cybersecurity operation center. Secure-X will fill a market gap as the only single technology stack for end-to-end observability and AI-based detection in a hybrid multi-cloud infrastructure.

Cloud-X:

This platform will aggregate and enable true visibility across multi-cloud network, cloud area networking and private cloud. Cloud-X will fill an urgent market need as it is currently not possible for Enterprises to deploy hybrid, multi-cloud through a single pane of control using agnostic access.

These four Cloud Infinity platforms are scheduled to be launched commercially by end-FY2024, and will be integrated to empower enterprises to harness the potential of hybrid multi-cloud in a secure and effective method, from core-to-edge. We will be better positioned as a leading provider of innovative solutions to our enterprise clients: empowering business scalability, achieving efficiency with process automation and delivering service assurance. We will become co-creators of business applications that are enabled by highly programmable and automated networks, allowing us to build an edge ecosystem and offer end-to-end solutions combining networking, edge computing, network API's, applications and services.

With this, we will seek to expand opportunities for enterprise productisation through a Cloud Infinity "marketplace" and monetise our network API's to generate business value from StarHub's digital infrastructure.

BUSINESS REVIEW
ENTERPRISE

Modernising Enterprise IT Platform

During the year, we initiated a significant Enterprise IT Transformation program aimed at streamlining StarHub Enterprise's systems and processes, ultimately enhancing the efficiency of our services.

Prior to this transformation, our services had been developed in silo using multiple platforms with duplicated functionalities and limited integration. Consequently, our services were complex, involving manual workflows and fragmented processes. Moreover, the dispersal of data across various systems posed challenges for consolidation and reporting.

The Enterprise IT transformation that we have embarked on will be a game changer for StarHub Enterprise. We are in the process of rationalising our existing client sales, order, care, and billing systems into a unified architecture – our cloud-based SaaS platform, to facilitate common processes across all services. This will allow us to better respond to client requirements, build solutions based on a common operating model, enhance our business scalability, and realise lower operating costs.

Through this unified architecture, we will empower enterprises with enhanced digital self-service options with greater convenience when purchasing and managing selected services online, downloading and viewing bills, viewing service utilisation, and raising or tracking service requests. Furthermore, we will have a consolidated view of our enterprise clients' data, enhancing our reporting capabilities and providing us with a deeper understanding of our clients.

To improve client experience, we are redrawing the entire client journey with a focus on: rationalisation and simplification; making available scalable and client driven solutions on our new cloud-SaaS platform; and upholding governance on quality control and assurance.

We are looking forward to migrate our first Enterprise services to new stacks from mid-FY2024 and complete our Enterprise IT Transformation by FY2025.

CYBERSECURITY SERVICES

Since its founding in 2018, Ensign InfoSecurity ("Ensign") continues to grow rapidly as the anchor of StarHub Enterprise's Cybersecurity Services division. Over the past five years, Ensign has grown its headcount to 870 employees across five major regions including Singapore, Malaysia, Hong Kong, South Korea, Indonesia and Australia. Today, Ensign's business reach extends beyond our five major regions, serving clients in Asia Pacific and Western Europe with projects completed across diverse locations.

Ensign possesses deep knowledge of the threats facing organisations in Asia and has the capability to design, build and operate comprehensive solutions to address complex challenges. These solutions are supplemented by a proprietary suite of innovations that are developed in-house. Ensign's strong market position as the largest end-to-end pure-play cybersecurity services company in Asia-Pacific strengthens our 3C's delivery capabilities and competitive positioning in the increasingly competitive market. As a result, revenue has grown more than three times over the past five years with CAGR consistently above 30%.

To remain at the forefront of its industry, Ensign upholds an annual R&D investment ranging from 6% to 9% of its revenue. This commitment to R&D has resulted in a suite of proprietary innovations that benefit clients, creating novel solutions that interoperate with commercial solutions to enhance cyber defence. Ensign's R&D work has been recognised with three global patents awarded. To this end, Ensign partners each client on their long-term journey of cyber resilience against emerging threats. Ensign has a proven track record for

The Ensign InfoSecurity team at 2023 GovWare Conference and Exhibition - the region's premier cybersecurity event.

complex solution design, build and/ or operate for IT, OT (Operational Technology), IoT (Internet of Things) and Cloud environments, which are critical for enterprises navigating the digital age. Notable projects include designing, building, and operating a 24x7 Cloud security operations centre (SOC) for a tech unicorn, AI-powered solutions for a client with global footprint and management of the cybersecurity implementation globally for a MNC.

During the year, StarHub conducted a strategic review of its businesses and portfolio investments to sharpen its focus on core products and services, technology, capabilities and customer diversification. The team identified a significant growth opportunity for the Enterprise Business Group to offer converged 3C's solutions and platform-based offerings that are scalable regionally.

Following the review, StarHub extended Ensign Assigned Rights for two more years till 4 October 2025, maintaining its 55.73% effective interest in Ensign InfoSecurity. There is also potential for StarHub to retain the Assigned Rights beyond the 2025

deadline through a further extension to be negotiated with Temasek, or a transfer of the Assigned Rights Shares to StarHub for a consideration to be determined. This development indicates that Ensign's capabilities and business remains core to StarHub's 3C's strategy.

Along the same vein, StarHub also announced the divestment of Ensign's subsidiary, D'Crypt, which focuses primarily on hardware development for the defence sector. The divestment of D'Crypt will allow StarHub and Ensign to optimise and channel resources to other businesses which will advance StarHub's 3C's strategy.

Looking ahead, Ensign will continue to offer comprehensive and complete service offerings, serving as a trusted advisor and single point of accountability for each client's evolving cybersecurity needs. The team will grow Ensign's recurring revenue by increasing its share of revenue from Managed Services, address cybersecurity outcomes for underserved segments, and expand into overseas markets. Underpinning Ensign's growth is a consistent culture of innovation to strengthen and supplement the proprietary tech stack.

Tammie Tham, Group Chief Executive Officer of Ensign InfoSecurity, addressing a group of investors at Starhub's Investor Day focused on the cybersecurity unit.

BUSINESS REVIEW
ENTERPRISE

PURSUING REGIONAL OPPORTUNITIES

Leveraging the regional footprint of our subsidiaries – Ensign, Strateq, JOS Singapore ("JOS SG") and Malaysia ("JOS MY") – we have established a robust regional enterprise platform to meet the needs of businesses in an increasingly complex and competitive marketplace.

Following the aforementioned strategic business review, StarHub has acquired the remaining 40% stake in JOS SG and JOS MY, and both entities are now fully-owned subsidiaries. The acquisition allows JOS SG, which has been fully embedded within StarHub Enterprise, to capture full cost and revenue synergies through full integration, such as an integrated
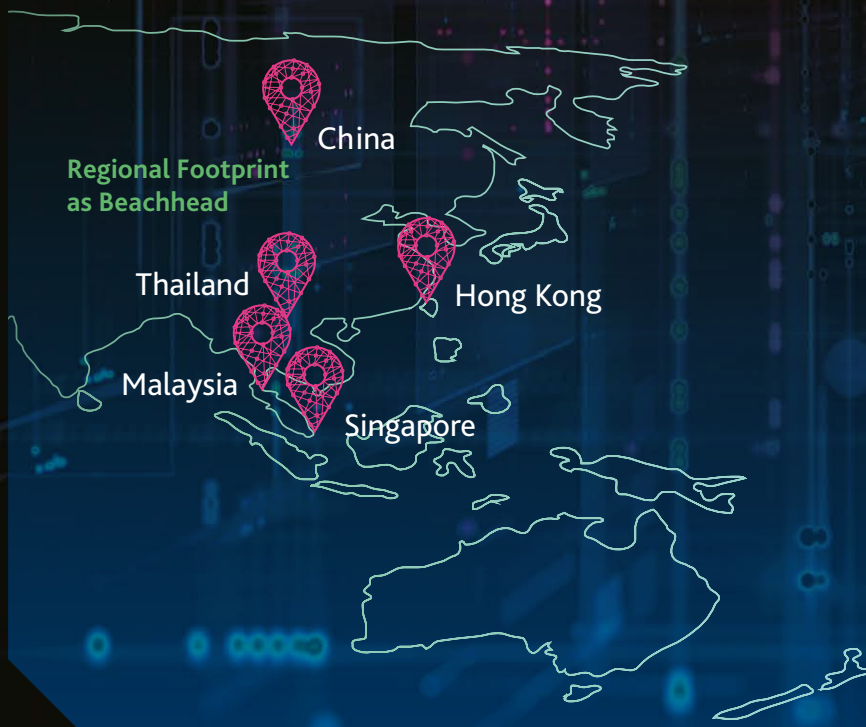
go-to-market approach and delivery engagement model to expand market reach. While JOS SG is undergoing near-term impact from a deliberate strategic decision to refocus on higher-margin projects, Strateq and JOS MY continue to strengthen its order book and leverage StarHub's regional platform to pursue new growth areas.
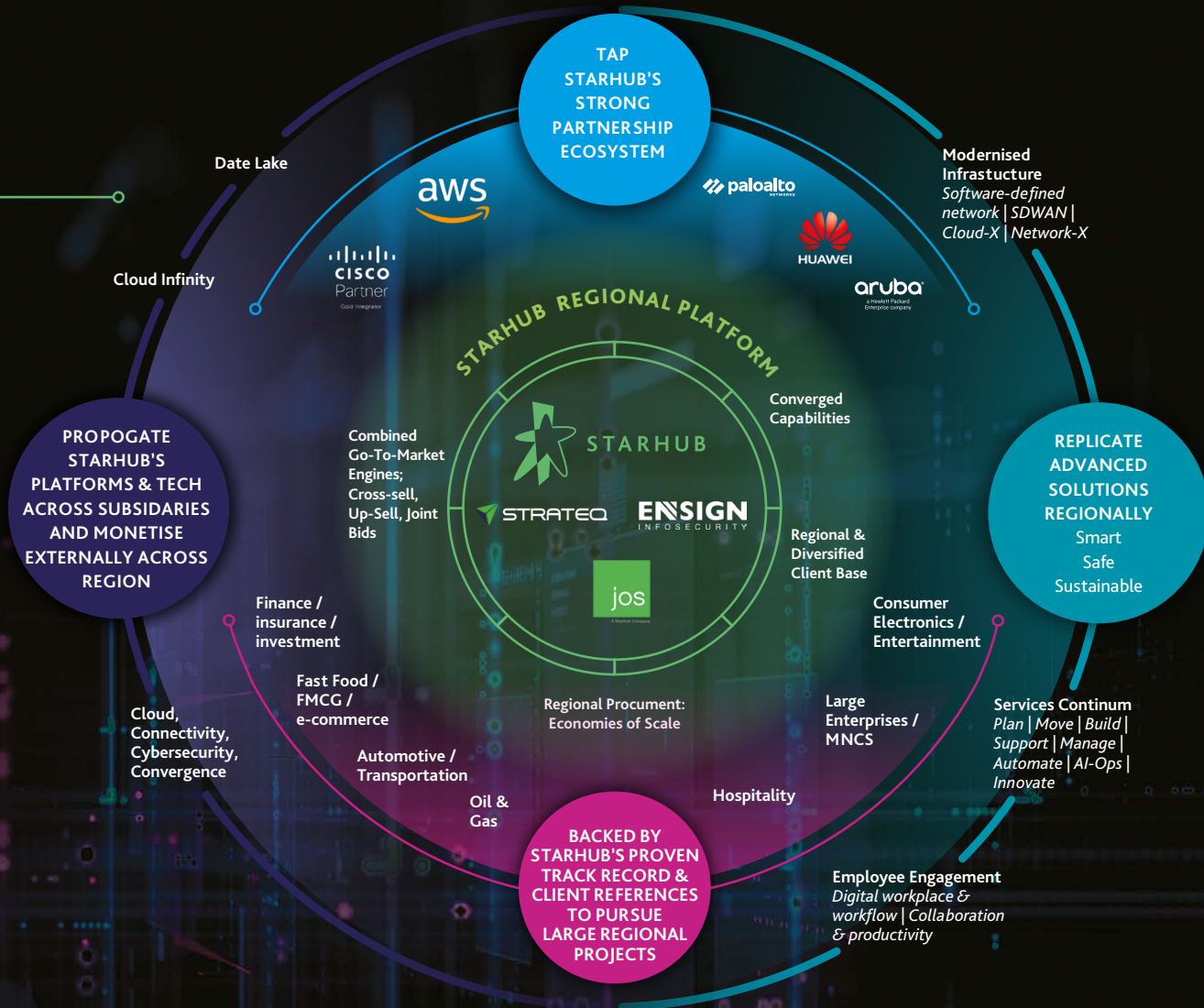
With the regional enterprise platform, we are now able to converge the complementary capabilities of StarHub and our subsidiaries to grow our market positioning and offerings regionally. We seek to achieve this by combining our go-to-market engines to amplify

cross- and up-sell opportunities and participating in regional joint bids when the opportunity arises. With each entity having a strong foothold in their respective sector and geography, the enlarged customer base will allow all entities to pursue mutual growth while reaping greater economies of scale and savings for regional procurement efforts.

To solidify our position, we will offer our regional subsidiaries access to our partnership ecosystem, proven track record and strong client references, as well as propagate our modern platforms and technology (such as Cloud Infinity, Data Lake, 3C's convergence) for monetisation opportunities across the region.

Conversely, we will be able to leverage on our subsidiaries' regional offices to capitalise on regional opportunities, replicating our advanced solutions regionally in a Smart, Safe and Sustainable way. Key areas identified include the propagation of modernised infrastructure to developing economies, including software-defined network with Cloud-X and Network-X layered on; as well as employee engagement solutions such as digital workplace and workflow to enhance cross-organisation collaboration and productivity. These solutions are highly scalable across industries and geographies, with an initial focus on the finance, FMCG, automotive, hospitality and consumer electronics sectors, as well as large enterprises.

Regional Footprint as Beachhead

China

Thailand

Hong Kong

Malaysia

Singapore

TAP STARHUB'S STRONG PARTNERSHIP ECOSYSTEM

Modernised Infrastucture
Software-defined network | SDWAN | Cloud-X | Network-X

Date Lake

Cloud Infinity

STARHUB REGIONAL PLATFORM

STARHUB
STRATEQ
ENSIGN INFOSECURITY
jos

Combined Go-To-Market Engines; Cross-sell, Up-Sell, Joint Bids

Converged Capabilities

Regional & Diversified Client Base

PROPOGATE STARHUB'S PLATFORMS & TECH ACROSS SUBSIDARIES AND MONETISE EXTERNALLY ACROSS REGION

REPLICATE ADVANCED SOLUTIONS REGIONALLY
Smart
Safe
Sustainable

Finance / insurance / investment

Fast Food / FMCG / e-commerce

Automotive / Transportation

Cloud, Connectivity, Cybersecurity, Convergence

Oil & Gas

Regional Procurment: Economies of Scale

Hospitality

Large Enterprises / MNCS

Consumer Electronics / Entertainment

Services Continum
Plan | Move | Build | Support | Manage | Automate | AI-Ops | Innovate

BACKED BY STARHUB'S PROVEN TRACK RECORD & CLIENT REFERENCES TO PURSUE LARGE REGIONAL PROJECTS

Employee Engagement
Digital workplace & workflow | Collaboration & productivity

Pursuing Large-Scale Regional Enterprise Projects

IP Optical Networking:
We have launched low latency connectivity between Singapore and Malaysia ranging as low as below 6ms to different data centres in the proximity of Kuala Lumpur, Malaysia. This low latency capability would be integrated into our Regional Network-X offering and would be of interest to the financial and services sectors, as we continue to engage with clients to co-create Network-X solutions such as IP optical network and network service orchestrator.

Regional Cloud Area Networking:
We will be launching local data centre interconnect (DCI) services in FY2024, and regionally by FY2025. Unlocking the power of global data exchange, our cutting-edge solution seamlessly connects data centers with competitive low latency speeds while bridging the gap to cable landing stations. By integrating these critical points, we ensure high-speed packet-optimal connectivity over long distances, enabling businesses to capitalise on real-time opportunities across continents. Our ultra-low latency network solution optimises data center interconnectivity, ensuring critical applications run at maximum efficiency.

Safe, Smart, Sustainable Cities:
We will leverage our track record and solutions created for Punggol Digital District and Kuala Lumpur's upcoming financial district, to pursue similar smart city opportunities in the region. Cloud Infinity will strengthen our value proposition by offering security-by-design; hybrid multi-cloud architecture; digital infrastructure with AI-Ops, and delivering service assurance with end-to-end services.