



ENGINEERING OUR
REGION'S FUTURE

www.ecas.com.sg



MESSAGE

Over the past few years, ECAS has transformed into an established engineering consulting firm and a leader in the Built Environment sector. We have grown significantly and as we do so, we find ourselves facing new challenges and embracing new opportunities.

To ensure productivity in our work process, we have empowered our internal Quality Assurance and Quality Control Committee and established an Innovation Research Unit. We continue to explore, learn, and implement new construction technologies to better control our efficiency.

All of these new initiatives have made ECAS a firm that not only provides high quality service to its clients but also attains awards and recognition within the professional services industry. Over the last few years we have attained the prestigious Singapore Quality Class Award and have received the Enterprise 50 Award. We intend to continue striving for business excellence and recognition in the years to come.

ECAS is now in a position where it is strong enough locally that it can expand internationally. Internationalization goes in line with our vision to become our region's leading engineering firm. We possess the knowledge and experience, and we are ready to share it with other countries in South East Asia.

We are all very proud of what ECAS has become since its inception in 1996. From a small firm of few engineers providing only civil engineering, to a robust multi-disciplinary engineering consulting firm with over 180 members. However, our journey is not over yet. We still work hard to provide more and better services to our clients and strive to make everyone at ECAS feel fortunate to be part of this journey.

Kind Regards,

Chan Ewe Jin
Managing Director







WISMA GEYLANG SERAI

Design of Punggol Cove Primary School comprising of one 6-storey and two 7-storey classroom blocks and one part 2/3-storey administrative building with indoor sport hall (multipurpose hall).





ABOUT ECAS

With our core values of Excellence, Commitment, Assurance, and Safety, our goal is to be leaders in the development of our region. We fully commit to all projects we undertake and strive to raise industry standards.

ECAS offers civil, structural, geotechnical, mechanical, and environmental engineering services to clients of the public and private sector in Singapore. Drawing on our more than 20 years of experience, we provide consultancy, design and accredited checking services with expertise in rail, bridges, tunnels, and building works.

Crafted by a team of more than 180 dedicated professional, technical, and support personnel, our best-value solutions save resources, increase efficiency, and maximize outcomes while maintaining a high industry standard. We rely on the work of our people to deliver innovative solutions, develop strong client relationships, and be leaders in the development of our region.

ECAS has a strong commitment to quality standards, environmental impact, and health and safety guidelines; its systems, processes, and directions are ISO 9001:2008, ISO 14001:2004, and OHSAS 18001:2007 certified, and has achieved bizSAFE STAR level. ECAS was also certified

with the Singapore Quality Class for its attainment of strong business fundamentals and standards for good business performance.

We fulfill our clients' needs by providing higher buildability and higher value to our designs. We approach every project with strong professionalism and strive to add value to the work we deliver. From the tender to the handover stage, we work closely together with our clients to understand and meet their technical requirements, and provide solutions that adhere to our quality standards.

VISION: We strive to be the leading multidisciplinary engineering firm in our region.

MISSION: To deliver innovative engineering solutions, develop strong client relationships, and be leaders in the development of our region. We achieve this through a client focused approach, continuous knowledge cultivation and contribution, and preservation of high industry standards.

THE TEAM



180+ EMPLOYEES



12 PROFESSIONAL ENGINEERS



8 NATIONALITIES



We rely on the work of our team of more than 180 dedicated professional, technical and support personnel to develop strong client relationships, and become leaders in the development of our region.

Our team members are fully conversant in all engineering systems and other disciplines including experience in public relations and interfacing issues. Our Professional Engineers are highly involved in the design and implementation of projects and act as mentors for the engineers who want to achieve higher certifications.

DIRECTORS

Chan Ewe Jin
Leong Boon Cheng
Ng Shu Wei, Sharron
Tay Thiam Yeow, Titus
Cecil Chua
Dr. Shen Wei Yue
Liu Yujun
Chin Kheng Ming

ASSOCIATE DIRECTORS

Hu Yang Fu
Yu Yong Hua

MILESTONES

1996

Founding of EJ Consultants Pte Ltd by Er. Chan Ewe Jin, our current Managing Director. Since the beginning, the firm was known for its reliable project deliveries while solving pertinent issues in infrastructure of the region.

2002

EJ Consultants Pte Ltd merges with ECAS Consultants Pte to form ECAS-EJ Consultants Pte Ltd. The firm went through internal restructuring in order to offer a complete range of engineering consultancy services across the market including design and build capabilities.

2016

Celebrated 20 years of excellence in providing high quality engineering services to the region and ranked 15th largest engineering firm in Singapore by Singapore Business Review, the first time on the list. The company re-branded to ECAS Consultants Pte Ltd to reflect our new position as a multidisciplinary firm.

2017

ECAS received Singapore Quality Class certification for its attainment of strong business fundamentals and standards for good business performance. At the same time, ECAS signed the BCA Better Workplace Pledge.

2018

ECAS is ranked 14th largest engineering firm in Singapore by Singapore Business Review for the year 2017 and received the Enterprise 50 Award given to companies that have contributed to economic development in Singapore.





SERVICES

We provide professional engineering services from tender preparation, to submission and coordination, to construction and completion. We pride ourselves as being client-centric; we provide all services and act on behalf of the client. We oversee time and cost for control and efficiency.

DESIGN CONSULTANCY SERVICES

We conduct economic and technical feasibility studies to understand the impact of the project and propose the best solution to the client. We look at the project not as an independent property but as a small piece in a bigger puzzle.

ECAS offers design support on the areas of civil, structural, geotechnical, mechanical, and environmental. We provide DfMA services including PPVC, MET, and Structural Steel, and ABC Waters consulting.

CONSTRUCTION MANAGEMENT

As our pledge to support the client all the way through the development process, we make sure that the construction stage of the development is completed as planned. Our professionals offer on-site supervision of the complete project to comply with industry standards. We make sure that what was designed is developed keeping in mind cost-efficient solutions to benefit the client. Our teams are composed of experienced engineers at construction management levels and are supported by Resident Engineers and Resident Technical Officers.

DESIGN REVIEW

ECAS is an Accredited Checking Organization under the Building Control Act of Singapore. We independently check the designs of the works to assure the constructability of the project and ensure that all structures are compliant with the standards our region demands. Our professionals are well versed on all design aspects of structures and are up-to-date with the latest design innovations in order to check and provide useful changes to the proposed design.

ASSESSMENT AND INSPECTION

We have dedicated engineers to perform these inspections all over Singapore, make structural assessments of the inspected structures and submit the inspection reports to the relevant authorities. Our engineers will assess the loading and usage of the structure, identify defects, determine the severity of any deterioration and assess the surroundings to detect any aggressive environments that might affect the structure. If defects are found, we will provide solutions for the repair of the structure. An effective inspection will identify defects early for rectification which can lead to cost savings.



CASHEW STATION
Design, construction and completion of architectural, civil, structural, electrical and mechanical works for Cashew Station, the connecting bored tunnels, and the TBM retrieval shaft.

BUILDING INFORMATION MODELING (BIM)

ECAS offers pre-construction solutions for the creation and management of intelligent models leading to the design, construction and operation of various facilities. We have adopted BIM capabilities to ensure that there are no discrepancies in drawings between consultants. If such discrepancies arise, we are able to provide different solutions before the construction of the project to ensure a timely completion.

DESIGN FOR SAFETY (DFS)

We assist our clients to address and identify means to mitigate the risks inherent in the design of a construction project so as to reduce the safety and health risks during the construction, maintenance or repair phase, and demolition of the building and structure. We coordinate the flow of construction project safety and health risks information among the stakeholders from the design stage, to the construction stage, and until we do the handover to the client for occupation and maintenance.

PROJECT MANAGEMENT

ECAS Consultants Pte Ltd is registered with BCA to offer Project Management Services for the construction industry under PSPC-PM04. We are qualified to manage construction projects, whether it is a new building, a new extension of a building, Alteration & Addition (A&A) Works, or upgrading works, up to S\$13 million project value. We, therefore, offer project management and consultancy services for a wide range of engineering and construction activities to our clients and to ensure that their critical tasks and goals are met accordingly.



CAPABILITIES

ECAS is a multi-disciplinary engineering firm. We offer different capabilities across the spectrum of engineering in order to serve our clients better.

We recognize that the sector is ever changing, and to stay ahead, we continuously train and learn to add new technologies and capabilities to our offerings.



STRUCTURAL ENGINEERING

Regardless of the type of project we are dealing with, ECAS makes sure that the structural aspect of the work is up-to-date with standards and innovation in the industry. We take into consideration all of the client's requirements and demands and we deliver a project that suits the community and adheres to standards.



ENVIRONMENTAL ENGINEERING

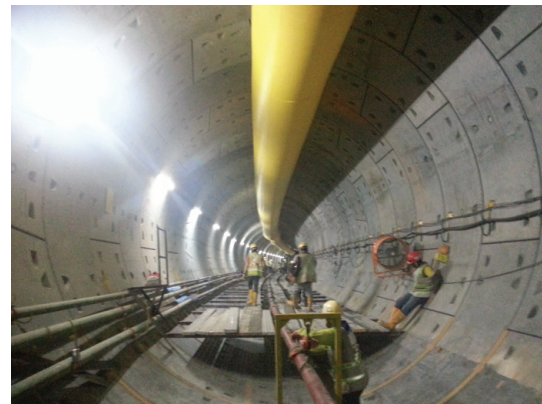
Our environmental engineers are well-versed in treating and minimising waste and pollution, and protecting ourselves, the air, water and soil from contamination by harmful chemicals. We focus on ABC Waters and Soil Erosion Control and make sure that all designs and projects meet the government requirements.

TUNNEL ENGINEERING

Our tunnel engineering services play a key role in the development of solutions that deal with Singapore's scarcity of land and constant search for solutions that do not congest the community and environment. ECAS provides tunnelling expertise in the planning, design, and construction supervision of tunnels for roads, rail, sewerage, power, and other utilities.

RAIL ENGINEERING

Over the years, ECAS has acquired expertise in rail infrastructure design. We carry out the complete design process from feasibility studies to engineering design and construction supervision. We manage challenging environment conditions and coordinate with all stakeholders to build stations and tunnels without disrupting services.





CIVIL ENGINEERING

With the fast development of Singapore and other areas in the region, the government relies on civil engineers to plan, design, and develop infrastructure projects that will support the growth of the nation.

TRAFFIC PLANNING

At ECAS we place great importance in understanding the impact that roads and other networks could have from our projects. We provide comprehensive Traffic Impact Assessment studies to understand these impacts and develop practical solutions to mitigate them. We provide Pedestrian Impact Assessments to strengthen the infrastructure and facilities certain developments need for safe pedestrian movement.



GEOTECHNICAL ENGINEERING

With all civil engineering projects comes the need to understand the ground conditions and design a suitable foundation system for the safe transfer of the imposed load including the self-weight of the structures.

MECHANICAL ENGINEERING

Our mechanical engineers can provide integrated and effective solutions to building services and facilities. Features such as energy-efficient air-conditioning and mechanical ventilation systems, reliable fire safety and protection systems, and well-designed layout of piping and plumbing systems will effectively enhance the value of a building, add to its efficiency and create safe and comfortable environments for its occupants.



BUILDING ENGINEERING

Making sure that the buildings where we live, work, and learn are safe and enjoyable structures is the goal of all our building engineering projects. ECAS offers structural design for building projects ranging from residential buildings to commercial, institutional, hospitality, and industrial.

URBAN PUBLIC TRANSPORT ENGINEERING

We provide risk assessments, crisis and emergency management, set-up of security organisations, awareness raising campaigns and analyses on specific threats. We offer a broad range of training solutions for both personnel in the public transport industry and passengers. In order to provide the most suitable and viable solutions for our customers, we use a holistic approach for integrating safety and security in public transport systems.



INFRASTRUCTURE ENGINEERING

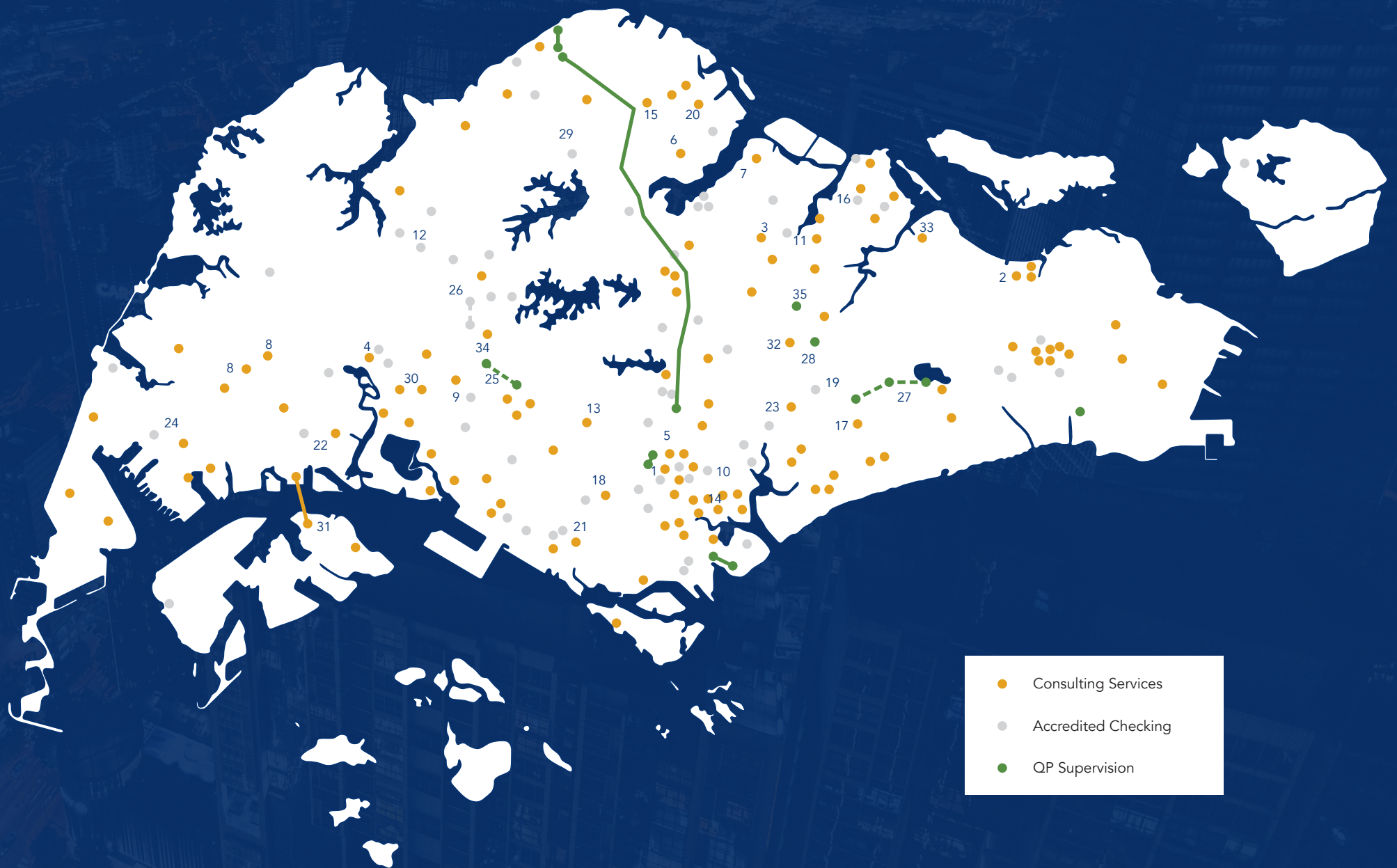
Our infrastructure engineering services help create a safer, more sustainable, and prosperous future for Singapore. ECAS manages infrastructure engineering works from planning to completion of construction and awarding of completion permits.

BRIDGE AND ROAD ENGINEERING

Our bridge and road engineering services assure that high quality and safe infrastructure is in place for the transportation solutions our region demands. We work with key entities and stakeholders in the widening and extension of roads, and construction of bridges. These projects are closely managed as it involves different stakeholders and has to reduce the disruption to already congested roads.



PROJECTS





Seastrand Condominium

RESIDENTIAL AND COMMERCIAL

1. Lumos - 2012
2. Seastrand Condominium - 2015
3. Greenwich V - 2015
4. Jurong East HDB - 2016
5. Alba Condominium - 2016
6. Yishun HDB - 2018

INDUSTRIAL

19. Oxley BizHub - 2013
20. STATCHipPAC - 2013
21. ABM Building - 2016
22. Jurong Port Admin Building - 2017
23. Project Kingston at Boon Keng Road - 2018
24. JTC Space @ Tuas - 2018



Project Kingston



Tower at Seletar Airport

UTILITIES

7. Air Traffic Control Tower at Seletar Airport - 2012
8. JTC 66/22kV Substation Design (Cleantech and Bulim Substations) - 2015
9. NEWater Infrastructure Plan - 2016
10. Stamford Diversion Canal - 2018
11. Sewers in Mugliston Park and Buangkok Link Areas - 2018
12. Pang Sua Canal - 2019

RAIL TRANSPORTATION

25. DTL: Cashew and Hillview Station - 2015
26. DTL: Bukit Panjang Station and Tunnels - 2016
27. DTL: Bedok North Station, Bedok Town Park and Ubi Station - 2017
28. Bishan Depot Workstation and SPLRT - 2017
29. TL: Woodlands North to Mount Pleasant Station - 2018



Hillview Station



Nanyang Primary School

INSTITUTIONAL

13. Nanyang Primary School - 2014
14. Church of Saints Peter & Paul - 2016
15. Ahmad Ibrahim Secondary School - 2018
16. Sengkang Hospital - 2018
17. Wisma Geylang Serai - 2018
18. St. Andrew's Nursing Home (Queenstown) - 2019

INFRASTRUCTURE

30. Widening of Jurong East Street 21 - 2015
31. Jurong Island Checkpoint Expansion - 2016
32. Roadworks at Upper Serangoon Road - 2017
33. Infrastructure works at Lorong Halus - 2017
34. Improvement to roadside drains at Hillview Avenue - 2017
35. Hougang Bus Depot - 2017



Infrastructure works at Lorong Halus

PRODUCTIVITY AND INNOVATION

We understand the importance of innovation in our industry and the need to keep changing and improving our processes for better quality and assurance.

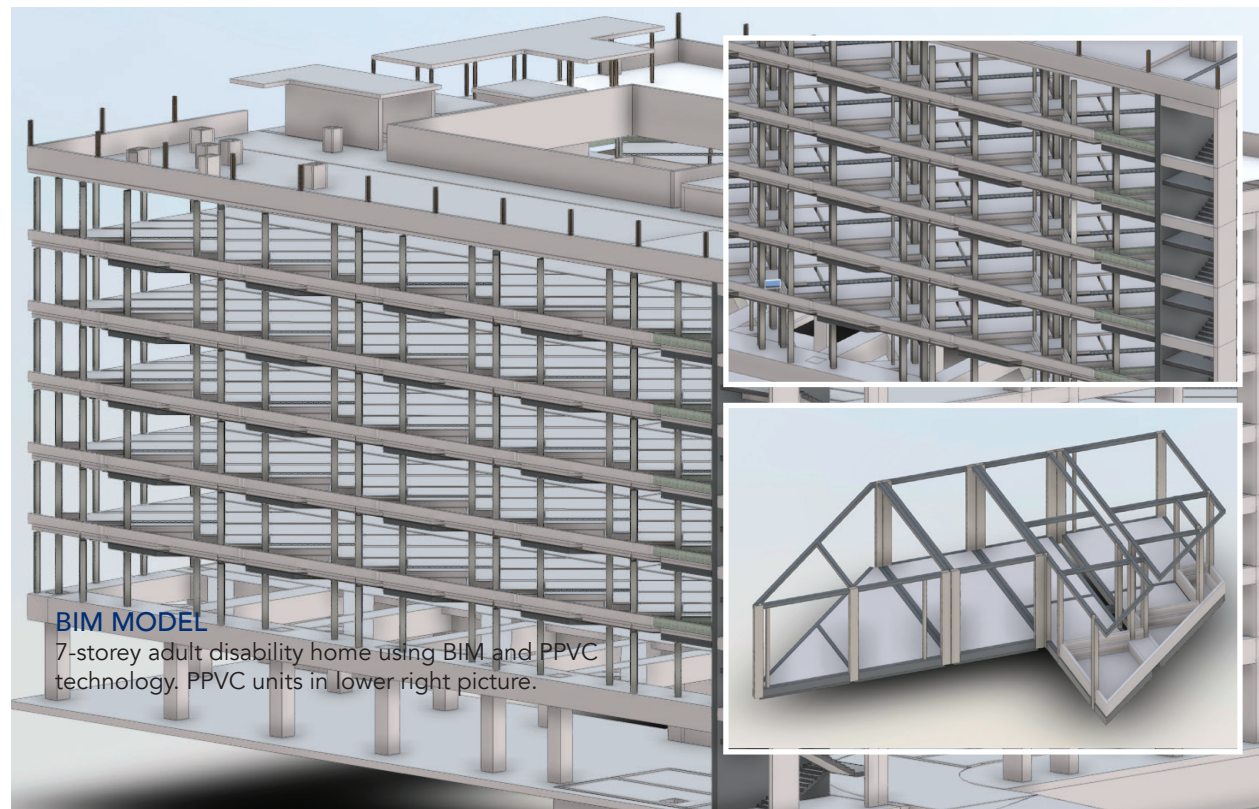
We count on an Innovation Research Unit to identify and test new software that will improve our work flow and overall productivity. The unit is tasked with integration of developing systems such as BIM to engineering softwares and vice versa. Through this unit we have developed new capabilities in Design for Safety, DfMA (PPVC and MET), Steel Design, and Virtual Design in construction.

Our Quality Control and Assurance Committee is responsible for the implementation of new productivity measure and monitoring their effectiveness. We use engineering software (such as TEKLA) for analysis and integration with BIM, so that we can contribute to Construction Productivity.

Having these units allows us speed up our work processes and strengthen collaboration among stakeholders while staying at the forefront of technological developments.



PEI HWA SECONDARY SCHOOL
Indoor Sports Hall with MET at
second storey and roof.



BIM MODEL
7-storey adult disability home using BIM and PPVC
technology. PPVC units in lower right picture.



MANPOWER DEVELOPMENT AND TRAINING

All of our engineers are well trained in their line of engineering. We develop our capabilities through our commitment to developing engineers through internal and external trainings.

Our business is fully based on the skills and knowledge that our engineers possess. From our most junior engineers to the most experienced, we never stop learning.

Some of our engineers join us as early as during their final college years. We work closely with BCA and universities to shape future engineers. Once they are fully on-board, they grow through on-the-job training, internal training, and external training. We offer assistance for certification programmes such as BIM Management and Greenmark Certification, and we classify and groom engineers who have the qualities to become Professional Engineers in the future.

ECAS constantly reviews the staff's capabilities and compares them to future demanded skills to provide training frameworks.



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