



**SINGAPORE
INSTITUTE OF
TECHNOLOGY**



INTEGRATED INDUSTRY SOLUTIONS

**BUILDING YOUR
TALENT PIPELINE**

**UPSKILLING
AND RESKILLING**

**CREATING INNOVATIVE
SOLUTIONS**

ONE SIT APPROACH: Integrated Industry Solutions

Singapore Institute of Technology (SIT) is Singapore's University of Applied Learning. Established in 2009 and gazetted as an autonomous university in 2014, SIT aspires to be the leader in innovative university education by integrating learning, industry, and community.

We maintain a close nexus with the industry through the following ways:



BUILDING YOUR TALENT PIPELINE

- ▶ SIT has several programmes in which students gain skills and experience through industry exposure. Trained to be industry-ready, our students are able to contribute to projects within your organisation and also help create a dynamic and vibrant working environment in your company.

By working with them during their course of study, you will be able to secure and develop the best talents for your organisation upon their graduation.



UPSKILLING AND RESKILLING

- ▶ In support of Singapore's national SkillsFuture movement, SIT offers professional development programmes to aid the upskilling and reskilling of your employees. From short courses to part-time degree programmes, the course curriculum integrates learning with hands-on application at the workplace with the objective of building workplace competencies. In addition, SIT has launched the Industrial Doctorate and Masters programmes, which build research manpower for industry at the postgraduate level on an in-employment basis, to upskill and transform the local industry.



CREATING INNOVATIVE SOLUTIONS

- ▶ SIT is a one-stop centre for companies to collaborate and create innovative solutions with our technology experts and students. Companies can advance the development of their innovative products and services by leveraging on the multidisciplinary expertise of our faculty, Professional Officers, and students.

We welcome industry and community partners who wish to collaborate with us. Working with SIT, our students, and staff, will be the catalysts that transform your workplace for the future.

WHAT SETS US APART

A University of Applied Learning

SIT is Singapore's University of Applied Learning, providing relevant practice-oriented education and training with a focus on industry.

Industry-Ready Talents

SIT has a robust curriculum that trains our undergraduates to be industry-ready.

Domain Expertise

SIT has a team of faculty and Professional Officers with niche industry expertise to support the multidisciplinary and complex nature of problems faced by the industry and community.

Industry-Centric Programmes

SIT has designed our courses and programmes with the industry in mind, aiming to further strengthen the nexus between skills acquisition and utilisation at the workplace.

Industry-Friendly Intellectual Property Policy

Our industry-friendly Intellectual Property (IP) policy allows companies to co-own IP and/or exploit IP commercially.

Sustainable Partnerships to Create Industry Impact

Our team will partner with you to develop integrated solutions to meet your organisational needs.



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BUILDING YOUR TALENT PIPELINE



INTEGRATED WORK STUDY PROGRAMME

The Integrated Work Study Programme (IWSP) is a distinctive feature of SIT degree programmes. Students are given the opportunity to work and learn in a real work environment for six to 12 months, integrating classroom knowledge with real-world application. Not only will you be able to contribute to the students' education and training, you will also be building closer ties with the university, creating a green harvesting platform for your talent pipelines. The IWSP develops skilled talents who are ready to work in your organisation.

CareerReadiness@SingaporeTech.edu.sg



OVERSEAS INTEGRATED WORK STUDY PROGRAMME

In alignment with the Committee for Future Economy to deepen and diversify international connections of our graduates, the Global Experience Division will work with your company to allow SIT students to gain overseas work experience through Overseas Integrated Work Study Programme (OIWSP), the overseas equivalent of IWSP.

OIWSP can take place entirely overseas or through a combination of local and overseas work stints. OIWSP students will be able to provide fresh international perspectives, creating a more dynamic and vibrant work environment.

GED@SingaporeTech.edu.sg



SKILLSFUTURE WORK-STUDY DEGREE - GREEN HARVESTING OF TALENTS

SkillsFuture Work-Study Degree (WSDeg) is an integration of institution-based learning and structured on-the-job training. WSDeg students alternate between spending one to three trimesters in the university and at work during the course of their studies, facilitating their transition to the workplace.

Key Benefits for Company

- A structured approach to develop talent pipeline early
- Identify potential students and secure their commitment through sponsorship and/or apprenticeship
- Evaluate the supported students while they are undergoing their studies and at work
- Work closely with the supported students in creating a specialised career track while they are on the job, enabling immediate assimilation to the company upon their graduation.

SkillsFutureWS@SingaporeTech.edu.sg



INDUSTRY MENTORSHIP PROGRAMME

Be an industry mentor to our students. Share your wealth of work experience, provide real-time industry information and practical guidance to develop relevant competencies, and better prepare them for the workplace and their career. Your authentic sharing will provide them with a deeper understanding of work life and the opportunities that lie ahead of them.

CareerReadiness@SingaporeTech.edu.sg



CAREER EVENTS

SIT's career events give you the chance to engage and build rapport with our undergraduates. Apart from the annual Career Nexus networking event, where you can gain access to a larger number of talents in a one-stop environment, you can also be a part of our smaller-scale career events, such as industry talks and career talks. Or, you can work with us to organise a student visit to your company to increase your company's brand awareness amongst your prospective talents.

CareerReadiness@SingaporeTech.edu.sg

UPSKILLING AND RESKILLING

SITLEARN PROFESSIONAL DEVELOPMENT COURSES

Our courses focus on distinctive offerings that reinforce the university's core competencies based on a demand-led model. We strive to meet skills development in key focus areas derived from five core clusters:



Engineering (ENG)



Chemical Engineering
and Food Technology
(CEFT)



Infocomm Technology (ICT)



Health and Social
Sciences (HSS)



Design and
Specialised
Businesses
(DSB)

In addition, there are also courses beyond these areas, such as lean transformation, people management, and communication skills training.



Open Courses:

For individuals and small teams

SITLEARN Professional Development (SITLEARN PD) offers working professionals the flexibility to develop skills at different phases of their careers through:

- One-day masterclasses
- Multi-week short courses
- Bite-sized credit-bearing courses stackable towards postgraduate qualifications or specialist certificates



Custom Courses:

For organisations

Tailored to your organisation's specific training needs, custom courses are designed after extensive consultation to understand your business context and capability development goals.

Whether you are looking to retain and grow key talent, or develop specialist expertise, SITLEARN PD can help you create a customised learning solution that delivers impact.

For more information,
please write to SITLearn@SingaporeTech.edu.sg

WORKPLACE LEARNING AND PROJECT MANAGEMENT

The National Centre of Excellence for Workplace Learning (NACE@SIT) is the first workplace learning centre set up in an autonomous university. Supported by SkillsFuture Singapore (SSG), NACE@SIT helps organisations build workplace competencies, equipping employees to respond effectively to a rapidly changing economic environment. Companies can embark on Workplace Learning projects with NACE@SIT to:



Train your employees
while solving an
existing business
problem



Learn new and
emerging skills
relevant to
your industry



Conduct training at the workplace,
cutting down travelling time while
still allowing workers to attend to
urgent matters

Workplace Learning Programmes:

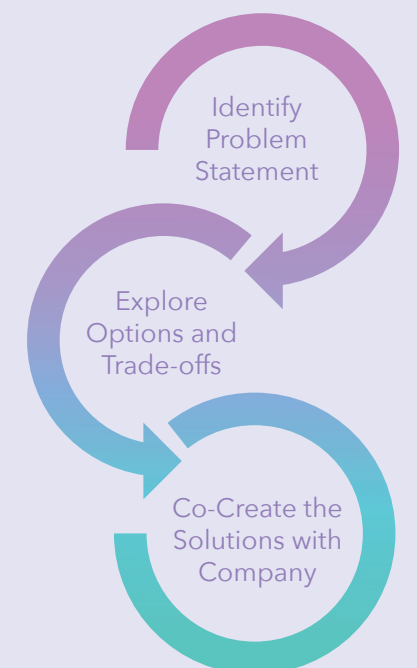
- The Lean! Project
- The Kaizen Project

Using the model on the right, we help companies identify problems or skills gaps, as well as co-create options and solutions through Workplace Learning projects at your workplace.

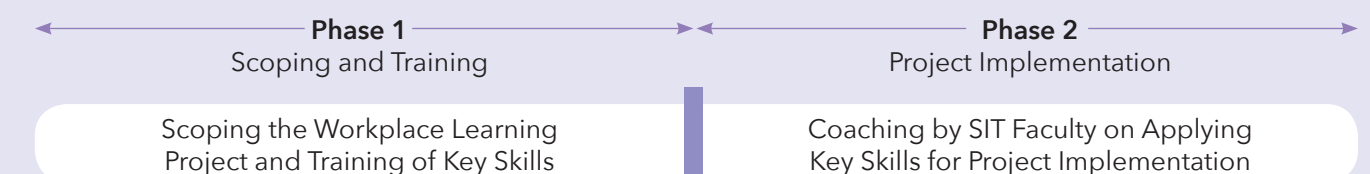
Work alongside faculty and Professional Officers from our five specialised clusters to meet your industry needs. Current projects involve SIT expertise in the following areas:

- Reliability/Stress Analysis, Finite Element Analysis, Condition Monitoring
- Tribology, Lubricant Analysis
- Materials Analysis, Metallurgy, Corrosion and Welding
- Reliability Analysis, Reliability Centred Maintenance, FMECA, Mechanical System Design
- Design of Maintenance Tools, Corrosion of Infrastructure
- IoT Solution
- Fatigue and Fracture Mechanics, System Reliability Analysis

Do approach NACE@SIT if any of your interest areas is not listed above, we are more than happy to source for the relevant expertise for you.



Programme Structure



- 8 training days over a period of 3 months
- Minimum 3 key staff to be involved in each Workplace Learning Project
- Up to 90% and 70% SkillsFuture Singapore (SSG) subsidy for SMEs and non-SMEs respectively
- \$5,000 prototyping fund available for each Workplace Learning Project

**Programme structure can be customised to cater to your company's operational requirements.*

For more information,
please write to SIT.NACE@SingaporeTech.edu.sg

IWSP CORPORATE COACHING AND MENTORING PROGRAMME

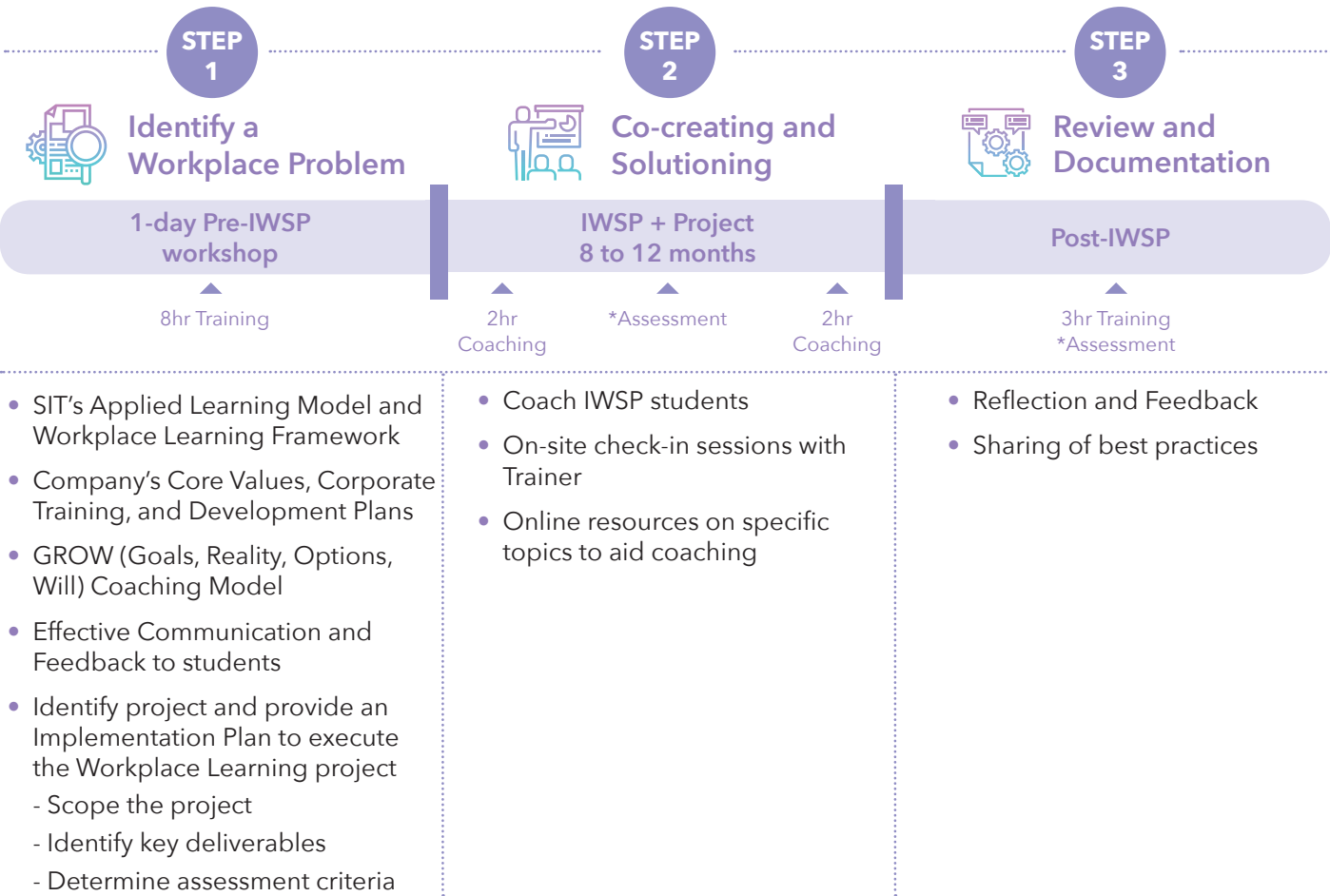
At SIT, we pride ourselves in pairing our students with companies that have authentic learning opportunities. To further enhance the mentoring and coaching skills of company supervisors, NACE@SIT offers training for company supervisors through our IWSP Corporate Mentoring and Coaching Programme.

The programme provides company supervisors with the right coaching skills (e.g. Solution-Focused Coaching, GROW model) and exposure to SIT's unique applied learning model and workplace learning framework.

Company supervisors can enjoy a highly subsidised SSG funding support of up to a 90% grant, if the trainee comes from an SME.

**The Integrated Work Study Programme (IWSP) is a distinctive feature of SIT's degree programmes, in which SIT students will undertake six to 12 months of paid employment within companies relevant to their degree programmes, under the supervision of their workplace supervisor to develop specific professional competencies.*

Programme Structure



Course Certification

Upon completion of this programme, participants who have met the course requirements and passed the assessments will be awarded a Certificate of Attainment issued by Singapore Institute of Technology.

Holders of the Certificate of Attainment are eligible to apply for award of credit exemptions, from the Institute for Adult Learning (IAL), for two modules* of the WSQ Advanced Certificate in Learning and Performance (ACLP), fulfilling the Training and Adult Education (TAE) competencies recognised by SkillsFuture Singapore (SSG) for in-house Trainers and Assessors of SSG-funded certifiable courses.

**Exempted ACLP Modules: Module 4 (M4) - Facilitate Workplace Learning | Elective 2 (E2) - Assess Workplace Learning*

**For more information,
please write to SIT.NACE@SingaporeTech.edu.sg**

SKILLSFUTURE WORK-STUDY DEGREE - DEEP-SKILLING YOUR EMPLOYEES

SkillsFuture Work-Study Degree (WSDeg) is available to employers who intend to develop and retain their talents. This provides in-employment students with deep skill sets and increase their competencies, adding value to the workplace. Employers will be able to plan specific career pathways for their employees and attribute their progress to their career advancement.

In-employment students are able to obtain a bachelor degree with minimal work disruptions under the Work-Day/Study-Day (WD/SD) model; or through sponsorship in pursuance of full-time degree under the Term-In/Term-Out (TI/TO) model.

SkillsFuture WSDeg Models

Term-In/Term-Out (TI/TO)	Students alternate between spending one to three trimesters in university and at the workplace.
Work-Day/Study-Day (WD/SD)	Students alternate between working and studying during a week; <ul style="list-style-type: none">• 4-Day Work / 1-Day Study• 3-Day Work / 2-Day Study

**For more information,
please write to SkillsFutureWS@SingaporeTech.edu.sg**

INDUSTRIAL MASTERS AND INDUSTRIAL DOCTORATE PROGRAMMES

SIT's Industrial Masters and Industrial Doctorate programmes are designed to develop a talent pipeline at the postgraduate level for the industry. The objective of these programmes is to equip professionals with applied research skills and industrial management knowledge, so that the graduates are able to make innovative advances in their organisation's business, practice, or processes. Current employees of companies with recognised Bachelor's degree qualifications are encouraged to apply. These candidates will be salaried employees at the partner company while pursuing full-time graduate studies with SIT.

We offer Industrial Doctorate and Industrial Masters Degree programmes in the Engineering, Chemical Engineering and Food Technology, Information and Communications Technology (ICT), as well as Health and Social Sciences clusters.

- Master of Engineering (MEng)
- Master of Clinical Research in Health Sciences (MClinRes Health Sciences)
- Doctor of Engineering (DEng)
- Doctor of Clinical Research in Health Sciences (DClinRes Health Sciences)

Companies can tap on the EDB-IPP or SIT-Industrial Postgraduate Scholarship (SIT-IPS) which provides funding support for eligible candidates to embark on the ID/IM programmes.

**For more information,
please write to ppr@SingaporeTech.edu.sg**

CREATING INNOVATIVE SOLUTIONS

COLLABORATION ON APPLIED RESEARCH AND INNOVATION

SIT aspires to be a premier University of Applied Learning through deepening applied learning and strengthening its applied research capabilities. We work with companies on research and innovative projects to solve real-world problems faced by the industry, thereby providing students with an authentic learning experience. These collaborations provide companies with access to facilities, expertise, and students as supplementary talent to help companies move up the innovation value chain and in the process, catalyse industry transformation.

End-to-End Innovation (e2ei) Framework

Developing Talent Pipeline of Innovators, Value Creators and Intrapreneurs as Catalyst for Transformation

INNOVATION AND ENTERPRISE

To foster an Innovative and Entrepreneurial Culture, we adopt a two-pronged approach to be executed through these initiatives:

Initiative 1: End-to-End Innovation (e2ei) Framework

Through an End-to-End Innovation Framework, comprising of Design Factory@SIT, Rapid Product Innovation & Development (RaPID) Centre, and Intrapreneurship programmes, companies can work with our students and academic staff to apply design and innovation methodologies and skills, like design thinking, rapid prototyping, and intrapreneurship, to scope their problems, ideate solutions, and develop prototypes for new/enhanced products to create value for the company.

a. Design Factory@SIT

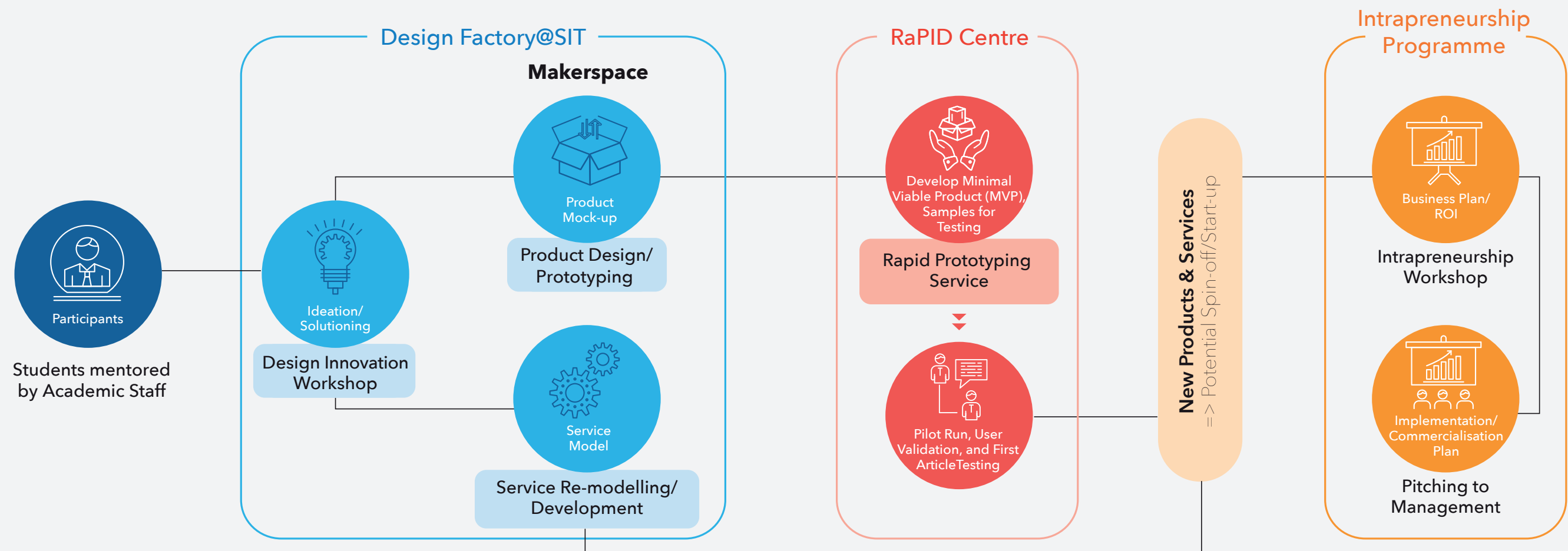
Companies could leverage on students who are trained by Design Factory@SIT to apply design thinking to empathise with company challenges, scope problem statements, ideate solutions, and find unique value proposition in new business models, products, and services through iterative user feedback and experimentation to help companies.

b. Rapid Product Innovation & Development (RaPID) Centre

RaPID provides core capabilities in engineering design, fabrication, and systems integration to support companies in their prototyping and sample product development needs. Companies can work directly with SIT academic staff and students to turn novel ideas into innovative products through ideation and prototyping before scaling up for production.

c. Intrapreneurship Programme

The intrapreneurship programmes will see students applying entrepreneurial skills to conduct market analysis, develop business models, compute return-on-investment, and pitch a roll-out plan to management for a company's newly developed or enhanced product.



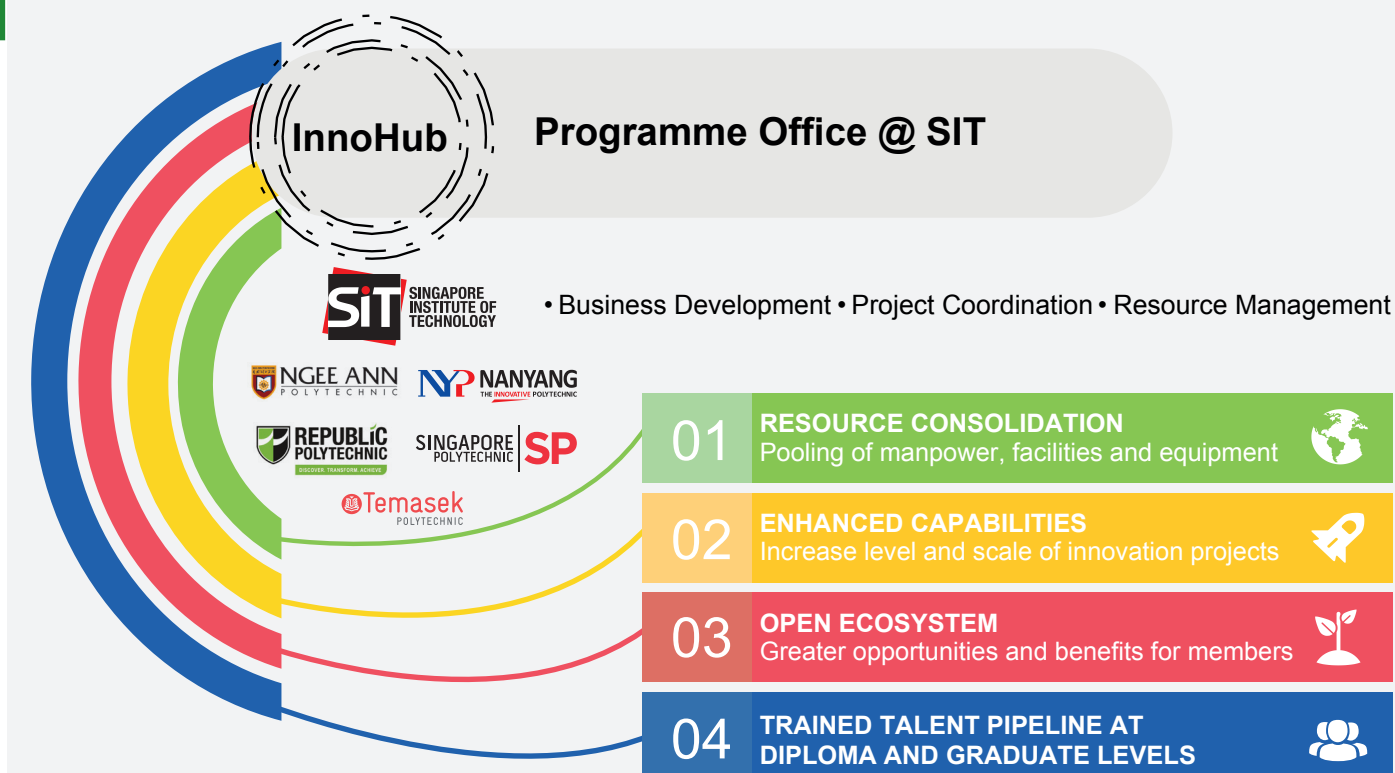
Working on industry projects with company personnel providing domain expertise

Initiative 2: InnoHub

InnoHub coordinates and consolidates expertise, capabilities, and resources across Centres of Innovation (Cols) at the polytechnics and Technology Innovation Centres (TICs) at SIT to provide a one-stop solution to help SMEs develop technology-driven innovation and talent development. First of its kind, this university-polytechnic partnership will endow InnoHub with an expanded suite of complementary expertise and facilities jointly offered by SIT and the Polytechnics, to effectively help SMEs move up the innovation value chain.

InnoHub

A Network of Cols and TICs



TECHNOLOGY INNOVATION CENTRES

To foster greater strategic partnerships that involve multidisciplinary applied research collaborations, talent development, as well as workforce training, SIT has set up various thematic Technology Innovation Centres (TICs) to support industry in their respective needs:



Accounting Technology & Innovation Centre (AccTech Centre)

A joint initiative between SIT and Singapore Accountancy Commission, the AccTech Centre is a resource centre that facilitates collaboration and catalyses technology and business innovations for adoption in the accounting sector.

Local accounting entities can collaborate with AccTech Centre to work with SIT faculty, technology partners, and government agencies to innovate processes, service delivery, products, and business models.

The Centre will also provide networking opportunities with thought leaders and technology partners. Participants can attend workshops and symposiums on advanced accounting technologies, as well as undergo training through SITLEARN Professional Development to upgrade their technical and technology skill sets.



Energy Efficiency Technology Centre (EETC)

In collaboration with National Environment Agency (NEA), EETC will drive energy efficiency initiatives for Singapore's manufacturing industries.

Companies can partner EETC to conduct energy assessments for their facilities to establish energy consumption baseline standards. The Centre will also upskill working professionals with skill sets in industrial energy efficiency, and train SIT undergraduates with practical experience in energy assessments for the industry.

Contact EETC for:

- Low-cost, high-quality energy assessments, particularly for SMEs
- Collaboration in developing solutions to reduce energy costs or solve current industry challenges



Food Technology Innovation Centre (FoodPlant)

In collaboration with Enterprise Singapore and JTC Corporation, the soon-to-be set up FoodPlant will be the first shared food-licensed facility for small batch production in Singapore.

To be located at JTC Food Hub@Senoko, FoodPlant will support innovation in the food manufacturing industry. Food companies can work with the Centre to develop innovative processes and technological solutions at a pilot scale, as well as access the Centre's equipment to run small batch production affordably for market testing and commercialisation.

In addition to specialised equipment and consultancy services offered at the Centre, workplace training courses will be made available to help companies deepen their technical capabilities and skills, and adopt advanced and cutting-edge food processing technologies.



Rapid Product Innovation and Development (RaPID) Centre

RaPID Centre is a one-stop rapid prototyping and sample product development facility, aimed at supporting companies, including SMEs and start-ups in product innovation and development.

Through RaPID, companies can work with SIT academic staff and students to turn novel ideas into innovative products through ideation, prototyping, and user-validation of minimum viable products before scaling up for production.



Verbosecurity Pte Ltd (VBS)

In partnership with Infocomm Media Development Authority of Singapore (IMDA), VBS' GoSecure Programme serves to promote and develop cybersecurity capabilities for local enterprises.

This programme supports companies in identifying security gaps in their infocomm technology (ICT) products and solutions through vulnerability assessments to reduce cybersecurity risks.

Contact VBS to:

- Perform Vulnerability Assessments (VA) for ICT products and solutions
- Build in-house cybersecurity capabilities for your employees

For collaboration opportunities,
please write to Innovate@SingaporeTech.edu.sg

INNOVATIVE PROJECTS WITH VARIOUS INDUSTRIES

uArm, the Gamified Arm-skate Rehabilitative Device

SIT was involved in the re-design of an arm-skate rehabilitative device for METTA's Day Rehabilitation Centre for the Elderly. The multidisciplinary faculty and student team infused a virtual-reality game to the device to make rehabilitation more 'fun', in order to motivate post-stroke survivors to regain their upper limb mobility.



Secured IoT Deployment in a Smart Industrial Estate

SIT developed a set of guidelines for securing IoT smart devices and proposed IoT network architecture designs to an industrial space developer, with reference to the current industry best practices as a foundation for the development of IoT smart estate plans. In addition, a compliance script was also developed to ensure that all devices comply with security policy requirements.



Development and Characterisation of Texture-Modified Foods for Dysphagia Patients

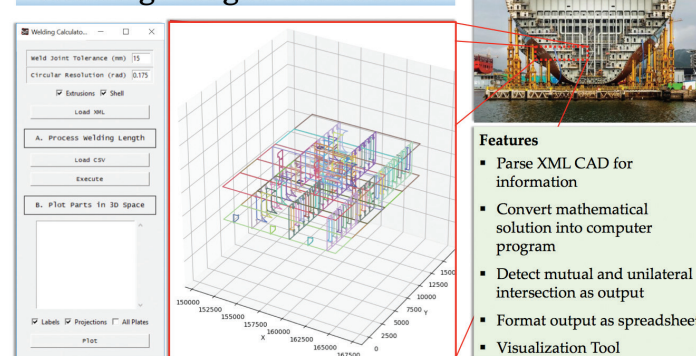
SIT, together with Massey University, Khoo Teck Puat Hospital and Faesol Pte Ltd, successfully developed a thickener blend for texture-modified foods intended for dysphagia patients. It also meets the IDDSI (International Dysphagia Diet Standardisation Initiative) Level 4 standard requirements.

The thickener blend will aid in the preparation of texture modified foods that are visually appealing and tasty, and to achieve consistency suitable for those with swallowing difficulty.



© The International Dysphagia Diet Standardisation Initiative 2019 @ <https://iddsi.org/framework/>
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Derivative works extending beyond language translation are NOT PERMITTED.

Welding Length Calculator



Automation of Weld Length Calculation for Shipyard Production

A software was developed to automate weld length calculation at shipyards. Two prototypes were developed to replace manual process for calculation of welded plate and shell structures.

The automation process has improved operational efficiency of the production work as the calculation of manhours could be completed in a day, instead of weeks in the past, by several engineers.

- Features**
- Parse XML CAD for information
 - Convert mathematical solution into computer program
 - Detect mutual and unilateral intersection as output
 - Format output as spreadsheet
 - Visualization Tool

OUR DIVISIONS

APPLIED RESEARCH, INNOVATION AND ENTERPRISE (ARIE)

SIT's Applied Research, Innovation and Enterprise (ARIE) Division is a one-stop access for collaboration with SIT's faculty, Professional Officers, and students to work on industry and community innovation projects.

ARIE has a strong team of officers, who will source for industry partnership for our multidisciplinary teams to solve multi-faceted and complex challenges faced by the industry and community. It also administers collaboration agreements, including the development and management of intellectual property (IP) policy.

We welcome collaborations to set up large-scale applied research programmes, known as Technology Innovation Centres (TICs), which are strategic to SIT's applied learning and research goals, while aligned to the nation's Industry Transformation Maps. These TICs will anchor the three pillars of Applied Research, Integrated Work Study Programme (IWSP), and Continuing Education and Training (CET).

For collaboration opportunities, get in touch with us at Innovate@SingaporeTech.edu.sg

CENTRE FOR CAREER READINESS (CCR)

The Centre for Career Readiness (CCR) is a dynamic team which aims to develop career-ready talents. With a dedicated account manager assigned to each degree programme, we ensure that you will be able to reach your target audience effectively as you search for the right talents for your company.

We will also work together with you for the Integrated Work Study Programme (IWSP) – a distinctive feature of SIT's degree programmes, where you will play a part in helping our undergraduates integrate theory and practice, and develop deep specialist skills in their chosen field.

Join us, as we work hand-in-hand in developing our next generation of talents by dropping us an email at CareerReadiness@SingaporeTech.edu.sg.

GLOBAL EXPERIENCE

The Global Experience Division (GED) oversees the operations of Student Mobility Programmes, building and strengthening relationships with Overseas University (OU) Partners, and conducting industry scans. The Student Mobility portfolio covers five types of programmes that provide opportunities for students to gain overseas exposure through a variety of academic exchanges, industry exposures, or work attachments.

The function of managing OU Partners collaboration focuses on contract negotiations, partnership reviews, and relationship management to ensure a healthy ecosystem of OU partnerships to enrich SIT's applied learning pedagogy.

The Industry Scan team gathers market intelligence on human capital and skills demands, which will support the possible development of a new programme or facilitate the review of existing programmes.

NATIONAL CENTRE OF EXCELLENCE FOR WORKPLACE LEARNING (NACE@SIT)

The National Centre of Excellence for Workplace Learning (NACE@SIT) is the first workplace learning centre set up jointly by SkillsFuture Singapore (SSG) and SIT. We are here to help you identify your problem statement, explore options together, weigh the trade-offs, and co-create the solutions with you.

At NACE@SIT, we pay attention to details to make things work! You will build workplace competencies with your staff and value chain partners. Your employees will learn new capabilities at their work environment, and be better equipped to respond effectively to a rapidly changing economic environment.

www.SingaporeTech.edu.sg/NACE
SIT.NACE@SingaporeTech.edu.sg

SITLEARN PROFESSIONAL DEVELOPMENT

We are the lifelong learning division of SIT. Developed in consultation with industry, our courses emphasise the integration of theory with hands-on application, and are delivered by SIT academic staff and thought leaders, with support from industry experts.


SKILLSFUTURE WORK-STUDY (SWS)

The SkillsFuture Work-Study (SWS) unit administers the SkillsFuture Work-Study Degree (WSDeg) – an initiative by the Ministry of Education, Singapore.

WSDeg places a high level of collaboration between academia and industry partners to provide prospective students with deep industry knowledge and meaningful career opportunities for the workplace. The degree programmes are delivered by SIT, in partnership with industry partners and agencies.

For more information, get in touch with us at SkillsFutureWS@SingaporeTech.edu.sg.

Applied Research, Innovation and Enterprise

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Industrial Postgraduate Programmes

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