DRIVING SAFE AND CONSISTENT TERMINAL OPERATIONS THROUGH ADAPTIVE LEARNING AND WORKPLACE-INTEGRATED COMPETENCY ASSURANCE

CHALLENGE OWNER

This challenge is part of the **innovPlus Challenge 2025 Run 1 – Pathway 1**, organised by the Institute for Adult Learning's inlab. As part of the iN.LEARN 2.0 initiative, innovPlus facilitates the rapid development and pilot deployment of prototypes that can address learning challenges and exploit opportunities for better Learning and Development (L&D) and Continuing Education and Training (CET) outcomes, including design, delivery and assessment.

innovPlus is organised as a competition for training providers, organisations with L&D departments, learning experts, solutionists and technology partners to collaborate and present a holistic solution to real learning challenges faced by the training provider, organisation and/or groups of learners. Please refer to Annex A for more background on innovPlus.

The Challenge Owner is a leading partner in liquid storage logistics, operating a global network of terminals that handle a broad spectrum of products from chemicals, gases, and fuels to emerging and future energy sources. In addition to core storage capabilities, the company offers a wide range of specialised services, including blending, vessel and truck loading and unloading, pipeline transfers, and customs and excise handling. With a long-standing history and a strong reputation as a reliable partner, it brings adaptive, customer-oriented storage expertise underpinned by an unwavering commitment to safety, quality, and operational excellence.

CONTEXT

CURRENT SITUATION

The Challenge Owner aims to enhance its competency development and assurance programme for operations staff through continuous improvement. The current training focus is on strengthening essential competencies for terminal operators to ensure effective, consistent, and safe performance. A blended training approach is employed, combining asynchronous e-learning modules for compliance and foundational knowledge with in-person technical training. However, the foundational technical training remains highly reliant on in-person delivery. Although the company benefits from capable and experienced training managers, the loss of some key personnel over recent years has impacted knowledge retention and continuity. While the company has training materials that are formally documented, there were institutional knowledge related to specific location/operation that was communicated through peer learning informally, which resulted in incomplete information retention.

Training for operational activities typically follows standard operating procedures and is supplemented by on-the-job training under the guidance of a senior operator mentor. Competency assessments are conducted primarily through oral questioning by shift team leaders using a knowledge checklist. However, this process lacks clearly defined criteria, standardised questions, or specific accepted answers, which makes assessments potentially inconsistent when carried out by different assessors. Furthermore, there is currently no structured evaluation of practical skill demonstration, which is a critical area for improvement, given the nature of operations.

In the chemicals and energy industry, operational errors could have significant consequences ranging from safety incidents such as fires or toxic spills that endanger people and the environment, to product quality issues like contamination, which can result in costly delays and reputational damage. As such,

robust and structured training is not only a matter of workforce capability but also required as part of operational risk management.

In recent years, there is increasing talent shortage in the industry. This shift necessitates the inclusion of foundational knowledge such as basic process technology, into the training curriculum, if the candidates do not have direct relevant work experience. While structured in-person training has been used to address skill gaps using improved materials, further refinement is needed to improve learning outcomes. The breadth and depth of training content can be overwhelming to operators despite their willingness to learn.

PAST AND CURRENT SOLUTIONING EFFORTS

The Challenge Owner's training efforts have progressively matured in response to growing operational complexity and heightened regulatory requirements. In earlier years, training was heavily reliant on informal peer guidance, with limited structure or documentation. Recognising the need for greater consistency, the company has since made deliberate efforts toward establishing a comprehensive and more systematic learning ecosystem. Internally, it has developed a Competence Assurance Framework that clearly outlines performance requirements for each operational role. This framework is supported by a structured curriculum, each aligned with the capabilities expected of its operations workforce.

To further strengthen its instructional delivery, the Challenge Owner is reinforcing the Train-the-Trainer (TTT) programme, aimed at improving instructional quality and standardising assessment practices across its various terminals. This initiative is expected to build internal training capacity and ensure a consistent learning experience regardless of location or trainer.

Externally, the Challenge Owner draws upon industry standards and best practices established by recognised bodies such as the Maritime and Terminal Operations Competency and Training Guide (MTOCTG) by Oil Companies International Marine Forum (OCIMF). These references help ensure that its operational procedures and training materials are benchmarked against global norms and expectations.

In recent classroom settings, the company has introduced continual assessments to improve retention and enable formative evaluation of learner progress. Although foundational tools and frameworks are in place, they have not yet been fully integrated into a scalable system that supports modular, adaptive, or scenario-based learning. As it stands, current improvements are primarily focused on refining delivery methods rather than enacting a comprehensive transformation of the Challenge Owner's learning architecture.

CHALLENGE / GAP / UNREALISED POTENTIAL

Despite progress, the current training model does not fully meet the demands of the Challenge Owner's operations, which require precision, safety, and sound decision-making. Two main challenges are evident.

Firstly, there is a mismatch between learners' diversity and uniform training delivery. The Challenge Owner's workforce ranges from novices to experienced operators, yet the training content remains largely undifferentiated. This one-size-fits-all approach causes new hires to feel overwhelmed, experienced staff to become disengaged, and trainers struggle to manage the diverse group of learners. Consequently, resources are stretched, time-to-competency is prolonged, and learning outcomes are inconsistent.

Secondly, there is a lack of structured, scenario-based learning experiences. Operations involving vessel handling, pipeline transfers, and hazardous materials demand high situational judgement and adaptability. Existing training relies on passive instruction without immersive simulations that replicate emergencies or complex operational tasks. Learners may pass assessments but often lack the confidence to manage real-world high-risk situations. Furthermore, current learning is largely confined to the classroom or informal on-the-job training, with limited structured support available during actual operations. Workplace-integrated learning opportunities are needed to reinforce safe and compliant behaviours at the point of work, enable just-in-time learning, and support the consistent application of critical procedures and safety standards across diverse operational contexts.

In addition, without a robust and consistent approach to competency development and assurance, there is a risk that operators may not consistently perform tasks to required safety standards, potentially deviating from safety-critical procedures or lacking the readiness to respond effectively in abnormal or emergency situations. This could lead to operational errors, increased safety incidents, environmental risks, and reputational damage, ultimately jeopardising their license to operate and business continuity.

While the Challenge Owner has made deliberate progress in establishing a structured competency framework and improving training delivery, these initiatives have yet to produce an integrated learning system that supports an adaptive, immersive scenario-based learning solution is required to bridge these gaps for consistent, high-quality training across the organisation.

Hence, the Challenge Owner is seeking a solution that delivers practical training aligned with real-world operational contexts and enhances knowledge retention, builds situational confidence, and strengthens workforce competency. The solution should enable scalable and efficient training delivery across terminals, while upholding consistent safety standards and driving operational excellence.

CHALLENGE STATEMENT

How might we build an adaptive, competency development and assurance solution that empowers terminal operators to perform work safely, confidently, and consistently to strengthen performance, reduce operational risk, and drive operational excellence across terminals?

WHAT ARE WE LOOKING FOR?

The Challenge Owner is looking for a scalable solution that provides adaptive, competency-based training and assurance for operational staff in the petrochemical storage and logistics industry. The solution must support varied learner profiles, shorten time-to-competency, and enhance individual and organisational performance across terminals.

The solution should meet the following criteria:

- Foundational learning support. The solution must include foundational modules in e.g. process technology, controls etc, to support new hires with limited prior technical knowledge.
- Personalised and adaptive learning. Learning pathways should be customised based on learners' backgrounds, experience levels, and skill gaps, ensuring relevant content is delivered at an appropriate pace.
- Scenario-based simulations. The training must incorporate immersive, hands-on simulations that replicate real-world operational challenges, helping learners build critical problem-solving and decision-making skills.
- Prompts and feedback. Provide real-time feedback to learners during simulations so that they can immediately see the consequences of incorrect actions or receive positive feedback for

correct actions. Provide prompts and hints in the practice mode (e.g. when they missed details or made mistakes).

- Interactive content. Support a variety of engaging, modular formats such as videos, quizzes, polls, microlearning elements and gamification to enhance learners' engagement and retention.
- Data tracking and analytics. Robust analytics to monitor learners progress, measure time-to-competency, identify learning gaps, and track assessment results and certification status.
- Objective competency assessment. Competency evaluation should use clear rubrics and criteria, incorporating both knowledge checks and practical performance demonstrations of key operational tasks (e.g. hose connections and valve operations).
- Competency assurance and operational readiness. The solution should support structured competency assurance processes that enable verification of operators' ability to perform their roles safely and competently under both routine and non-routine (abnormal/emergency) operating conditions, aligned with the Challenge Owner's quality and safety standards.
- Ease of administration and scalability. Easy to implement and manage, reduce the dependence on experienced trainers for routine instruction. Scalable across different roles, terminals, and future learning needs.
- Workplace-integrated learning. Enable learning and performance support to occur not only in structured training sessions but also seamlessly at the point of work. The solution should support online access to learning content and performance support tools on mobile/tablet devices, allowing operators to review key procedures, safety steps, and critical skills during operations when appropriate. This will reinforce safe behaviours, support on-the-job coaching, and help embed a culture of continuous learning and operational excellence across terminals.

OVERALL PERFORMANCE REQUIREMENTS

- Compliance and security. Comply with Challenge Owner's Quality Assurance Framework and comply with ISO Integrated Management System standards, IT data privacy, and security policies.
- Operational accessibility. Accessible on mobile/tablet devices
- Development and scalability. Support rapid prototyping and deployment within challenge timelines and be scalable to accommodate a growing number of users across different operational roles and terminals. Solution must maintain a consistent, high-quality learning experience and be adaptable for future sector-wide implementation.
- User-friendly**.** A simple, intuitive interface that easy to use for both trainers and learners, regardless of IT proficiency levels.
- Cost-effective. The solution is cost-effective to optimise training resources and facilitate scaling.

TARGETED LEARNERS / USERS

Primary and Secondary targeted learners / users of the envisaged solution (including estimated numerical figures)

- Estimated 120 primary users within the Challenge Owner's operations function, which includes trainee technicians, technicians, senior technicians I & II, supervisors, assistant shift leaders and shift leaders. The pilot phase will involve a representative mix of learners about 10 new hires and 20 existing staff.
- Potential secondary users include 1,000 terminal operations personnel across 10-15 terminals in Singapore. It may also be scalable to over 10,000 personnel across adjacent sectors, including Energy & Chemicals and Energy & Power industries within Singapore.

Prospective Solution Partners who choose to apply for this challenge must be registered and operating in Singapore. The prototype needs to be demonstrated in Singapore.

MEASURES OF SUCCESS

- Enhanced workforce competency. At least 90% of new and existing staff should achieve a minimum score of 80% in post-training competency assessments.
- Improved training efficiency. Theoretical/classroom training time to be reduced by 30% with adaptive learning and scenario-based modules. Training logs and learners' progress data will be used to compare time savings against historical baselines.
- Users' satisfaction. At least 75% of participants should rate the training experience 4 out of 5 or higher in post-training surveys.
- Enhanced safety and operational performance. Achieve a ⩾10% reduction in Health, Safety, Security, and Environment related incidents (e.g. near-misses, unsafe acts, procedural non-compliance) through improved safe and compliant operational readiness, verified via structured competency assurance and post-training operational assessments within 12 months. Evaluated using leading indicators and safety incident reports collected pre- and post-training rollout.
- Reduced time-to-competency. Reduce average onboarding and role transition time from nine months to six months, tracked via staff onboarding to achievement of operational readiness based on assessment pass rates and supervisor validation.
- Platform adoption and scalability. Achieve >80% active usage among pilot group within three months via monitoring system login frequency, module completion rates, and certification data.

POSSIBLE USE CASES

The following use cases illustrate how the envisaged solution can support learning and performance across the operator lifecycle, from onboarding new hires, to enabling career progression for experienced staff, to empowering trainers to drive consistent competency assurance and operational excellence at the point of work.

1. Bridging knowledge gaps for new hires. Siti recently joined the company with no prior experience in terminal operations. With the current system, she struggles to keep pace with experienced colleagues during group training. The new solution begins with a diagnostic assessment that identifies her knowledge gaps in areas like process technology and operational safety. Based on this, Siti receives personalised and scaffolded foundational modules delivered in bite-sized formats that she can complete at her own pace, using her personal devices. Through immersive simulations, she practises critical procedures such as valve operations and emergency responses in a safe environment before attempting them in the field. She can also access key procedure guides and learning content on company approved mobile devices when performing relevant tasks on-site, supporting her learning at the point of work. Real-time feedback and progress tracking helps both Siti and her supervisor monitor her development, ensuring she achieves competency efficiently while maintaining safety standards.

2. Accelerating specialist role transitions. David has been a terminal operator for eight years and is being considered for a specialist role in hazardous materials handling. Rather than repeating familiar content through generic refresher courses, the new solution recognises his existing expertise through structured assessments. The system then focuses his training on advanced scenarios specific to his new role, such as managing abnormal pressure events and emergency containment procedures. Through recorded simulations and objective evaluation rubrics, David demonstrates his decision-making capabilities under pressure. In addition, David can access

targeted learning resources and advanced scenario references on company approved mobile devices, enabling him to refresh critical procedures and prepare for complex tasks directly in the field. This targeted approach not only speeds up his transition but also gives supervisors clear evidence of his readiness for increased responsibility.

3. Enhancing training consistency. Michael, a senior operator and in-house trainer, faces the challenge of maintaining engagement across diverse learner groups. The new solution provides him with a centralised platform containing structured content mapped to specific competency requirements. He can now assign customised learning paths based on individual needs while tracking progress systematically. The platform offers various interactive formats including virtual simulations for complex procedures and digital assessments with standardised rubrics. This allows Michael to focus on meaningful coaching while ensuring consistent training quality and competency assurance across all learners.

   The platform's analytics aggregate data from all learners' pathways, including new hires like Siti and transitioning specialists like David. This enables in-house trainers like Michael to continuously identify systemic gaps, such as patterns of procedural errors, safety-related knowledge gaps, or common learning challenges and adjust training content and coaching strategies accordingly. Michael can also leverage company approved mobile devices to facilitate on-the-job coaching, using the platform's data and resources to guide operators during actual operations, reinforcing safe and compliant behaviours in real time. In doing so, the solution supports stronger operational safety, reduces the likelihood of incidents, and drives continuous improvement in workforce readiness across the organisation.

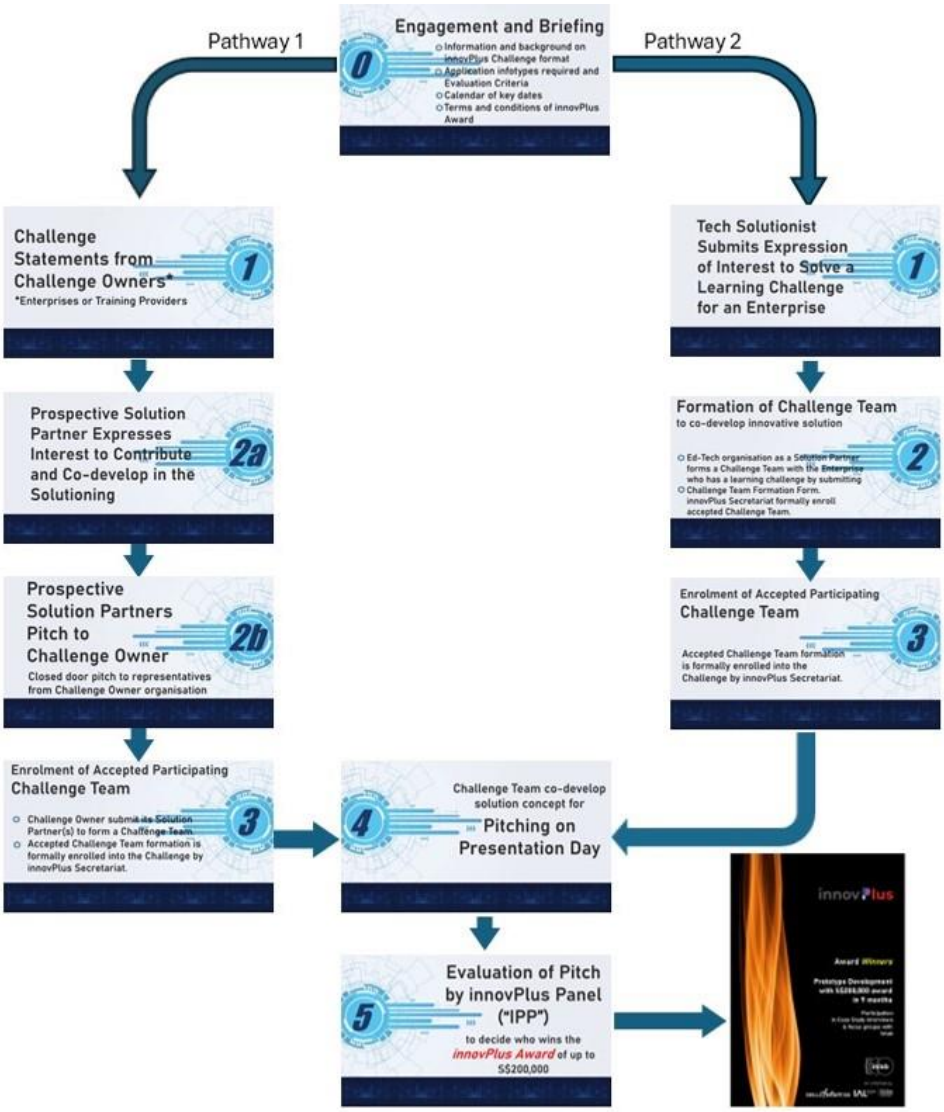
WHAT IS IN IT FOR YOU?

- Up to S$200,000 of prototyping grant (innovPlus Grant) for each winning Challenge Team of the innovPlus Challenge 2025 Run 1 (see Award Model) to develop and trial an innovative, feasible and scalable prototype that advances CET practice and learning outcomes
- Access to IMDA'S PIXEL corporate innovation hub and complimentary innovation consultancies (e.g. Design Thinking, Digital Storytelling) for prototype development, where applicable.
- Co-innovate with the Challenge Owner with access to their expertise, facilities, and human resources in developing the solution, and potential to scale the successful solution for commercialisation.

INNOVPLUS COMPETITION PHASE PROCESS FLOW

Diagram 1 illustrates the innovPlus process flow in the competition phase and the requirements for active involvement of each party. Stage 2a of Pathway 1 indicates the current stage of the competition, where Prospective Solution Partners are to express interest to contribute and co-develop solutions with the Challenge Owner through IMDA's Open Innovation Platform.

Diagram 1 - innovPlus Competition Phase Process Flow



The Challenge Owner will evaluate all proposals by Prospective Solution Partners received on the OIP based on the evaluation criteria below and invite shortlisted partners to a second stage evaluation in the form of a pitch (Stage 2b of Pathway 1 in Diagram 1).

Solution Fit (30%)	Relevance: To what extent does the proposed solution address the problem statement effectively?
Solution Readiness (20%)	Maturity: How ready is the proposed solution to go to the market? Scalability: Is there any evidence to suggest capacity to scale? Does the proposed solution offer potential to also help other enterprises facing similar challenges (i.e. broader application, adaptation and transferability)?
Solution Advantage (30%)	Pedagogical Design: What sound pedagogical design approaches underpin the proposed solution to enhance effectiveness of learning or desired learning outcomes? Cost Effectiveness and Innovativeness: Is the solution cost effective and truly innovative? Does it make use of new technologies in the market, and can it potentially generate new IP?

	How sustainable and affordable is the estimated cost for pilot trial, deployment, software support and post-pilot rollout?
Company Profile (20%)	Has presence in Singapore: The company must have a valid UEN in Singapore. Business Traction: Does the product have user and revenue traction? Is the company able to demonstrate financial capability and resources to complete the prototype? Team Experience: Do the team members possess strong pedagogy and scientific/technical background?

Thereafter, the Challenge Owner will decide on the Solution Partner to form a Challenge Team to co-develop the idea into a potential solution (Stage 3 of Pathway 1 in Diagram 1). The Challenge Team will pitch their solution in the final round of the competition, known as the innovPlus Presentation Day. On Presentation Day, the Challenge Teams from both Pathways 1 and 2 will present how the envisaged solution could deliver the stated learning outcomes with a presentation and demonstration to the innovPlus Panel (Stage 4 in Diagram 1). The innovPlus Panel shall have the final decision on whom the eventual Grant awardees shall be (Stage 5 in Diagram 1). Please refer to the Terms and Conditions in Annex B for further details.

AWARD MODEL

Up to S$200,000 of prototyping grant (innovPlus Grant) will be awarded to each winning Challenge Team of the innovPlus Challenge 2025 Run 1 for the development and pilot deployment of a prototype solution. The grant will NOT be inclusive of any applicable taxes and duties that any of the parties may incur. Guidelines on the grant disbursement quantum, milestones, timeline and supported cost items are stated in the Terms and Conditions under Annex B.

*Note that a finalist (prospective Solution Partner) who is selected to undertake the prototype will be required to enter into an agreement with Challenge Owner(s) that will include more detailed conditions pertaining to the POC/prototype.

SUBMISSION GUIDELINES AND DEADLINE

The proposal **must** include the following:

- Completed and countersigned innovPlus Expression of Interest (“EOI”) Form
- 1 deck of slides in PDF format explaining the proposed solution, how it addresses the challenge statement and meets the desired performance requirements. To include information such as the proposed data inputs, system that the proposed solution will run on, potential benefits, the envisaged learning innovation, and the team’s implementation plan
- Video or pictures (300dpi) of any prototype or simulation, if applicable
- ACRA Business Profile (2025 or most recent) with certificate confirming registration of business
- Corporate Compliance and Financial Profile from BizFile (2025 or most recent)
- Track record of the company (including financial capability to complete the project) / CV of the team

All submissions must be made by **1 Aug 2025, 1600 hours (SGT/GMT +8)**. inlab and IMDA may extend the deadline of the submission at their discretion. Late submissions on the OIP, or submissions via GeBIZ, will not be considered.

Annex A – About innovPlus

1. iN.LEARN 2.0 is an initiative launched by SkillsFuture Singapore to drive innovation in the Training and Adult Education ("TAE") sector from ideation to commercialisation through its three key programmes – the innovPlus, innovSpur and Sandbox. It will focus on four key areas:

   i. increasing the uptake of online and blended learning by individuals;
   ii. amplifying enterprises' adoption of innovative learning technology;
   iii. developing effective remote assessment and proctoring solutions for individual and enterprise-led training; and
   iv. developing effective placement solutions that tighten the industry-training nexus.

2. As part of iN.LEARN 2.0, innovPlus contributes to the initiative by facilitating the rapid development and pilot deployment of prototypes that can address learning challenges and exploit opportunities for better Learning and Development ("L&D") and Continuing Education and Training ("CET") outcomes, including design, delivery and assessment. It is organised as a competition for training providers, organisations with Learning and Development ("L&D") departments, learning experts, solutionists and technology partners to collaborate and present a holistic solution to real learning challenges faced by the training provider, organisation and/or groups of learners. innovPlus could cover any/all of the following areas of innovation:

   - Pedagogy / Learning Design and Delivery
   - Learning technology
   - Training management
   - Application of skills and workplace performance
   - Assessment and credentialing
   - Remote assessment and proctoring
   - Hybrid Mode
   - Adaptive Learning
   - Blended Learning
   - Workplace Learning

3. innovPlus comprises three rounds of evaluation:

   i. inlab of Institute for Adult Learning ("IAL") will assess if the stated Challenge Statement meets the eligibility criteria and competition guidelines stated in the Terms and Conditions under Annex B.
   ii. Participating organisations as Challenge Owners ("CO"), who are seeking solutions to their learning challenges, will hear pitches from prospective Solution Partners ("SP") on how their challenges can be overcome and select the partners whose ideas they assess to best meet their needs. The Challenge Owners and their selected Solution Partner(s) will then form a Challenge Team ("CT") to co-develop the ideas into a potential solution.
   iii. The Challenge Teams pitch their solutions in the final round of the competition, known as the innovPlus Presentation Day. On that day, the teams will present how the envisaged solution could deliver the stated learning outcomes with a presentation and demonstration to the innovPlus Panel ("IPP").

4. innovPlus is conducted once every six months. Prototyping grants, each up to **S$200,000**, could be awarded to the winning concepts to develop a prototype[1] for pilot testing with actual learners/users[2] within a maximum duration of 9 months[3].

[1] A *prototype* is defined as an original and novel model, form or solution, with its primary utility being to advance more effective learning. The key operators in this definition, 'original', 'novel', and 'more effective learning', must be clearly conveyable and verifiable.

[2] *Actual learners/users* is defined as the persons who will benefit from resolving the learning challenge, who you can commit to (primary target), e.g. within your organisation. Pilot testing shall encompass minimally 30% of the targeted primary learner/user population, which cannot be less than 15 users per pilot run.

[3] 6 months to complete a workable Proof of Concept with User Acceptance Test, and an additional 3 months to show scaling up of prototype (where applicable) and usability to minimally 30% of **primary** targeted learner/user population, which cannot be less than 15 users per pilot run.

Annex B – innovPlus Challenge and Award Official Terms and Conditions

As part of participating in innovPlus and submitting the innovPlus application form, all participating organisations and individuals agree to accept the following terms and conditions governing the innovPlus Challenge (and all its associated processes) and the innovPlus Grant offer (if applicable):

DESCRIPTION OF THE GRANT

1. The innovPlus Challenge ("innovPlus") is a competitive learning innovation grant that awards a prototyping grant of up to S$200,000 to winning organisations to develop and trial an innovative, feasible and scalable prototype that advances CET practice and learning outcomes. The innovPlus Challenge is organised by inlab of the Institute for Adult Learning ("SUSS-IAL"). Winning submissions will be as determined by the innovPlus Panel ("IPP") (defined below) in accordance with the prevailing Evaluation Criteria and Terms and Conditions. The innovPlus Grant is funded by SkillsFuture Singapore ("SSG") and is administered by SUSS-IAL, by appointment of SSG. SUSS-IAL is an autonomous institute of Singapore University of Social Sciences ("SUSS").

ELIGIBILITY

2. The innovPlus Challenge is open to organisations that are a registered business entity in Singapore (a valid ACRA or UEN identifier will be required for application), to participate as prospective Challenge Owners. Government Agencies and Statutory Boards are not eligible to participate[4]. Prospective Challenge Owners will be subjected to financial review. Only Singapore-registered business entities may apply to participate as a prospective Solution Partner.

3. Challenge Owner organisation and its choice of Solution Partner(s) shall form a Challenge Team.

4. Challenge Owner organisation[5] can be granted the innovPlus Grant for up to a maximum of two grants at any time within three years from date of the first award. The clock will reset after sitting out of two innovPlus Challenge runs.

5. Solution Partner organisation can be granted the innovPlus Grant for up to a maximum of three grants at any time within three years from date of first award. The clock will reset after sitting out of two innovPlus Challenge runs. Additionally, each Solution Partner is allowed to enrol in a maximum of two Challenge Teams in each eligible run.

HOW TO PARTICIPATE

6. To participate in the innovPlus Challenge, applicants may apply as either a Challenge Owner or as a Solution Partner. Application must be made using only the following official innovPlus application forms:

    a. innovPlus Challenge Statement Application Form (for prospective Challenge Owner participating via Pathway 1);

    b. innovPlus Expression of Interest ("EOI") Form (for prospective Solution Partner);

    c. Part 1 of innovPlus Challenge Team Formation Submission Form (for enrolment of team formation);

[4] Govt Agencies list: gov.sg | Ministries (sgdi.gov.sg)
Statutory Board list: gov.sg | Statutory Boards (sgdi.gov.sg)

[5] Second Grant Award must be to another Department/Division/Business Unit of the awarded organisation.

d. All parts of innovPlus Challenge Team Formation Submission Form; and

e. Projected budget and project schedule using prescribed innovPlus templates.

Only application forms downloaded from the official innovPlus webpage on SUSS-IAL's website will be accepted into the innovPlus Challenge. Completed forms must be submitted by email to the innovPlus Secretariat and inlab at the email addresses specified in the header section of all application forms. Only fully completed application forms received by the stipulated respective deadlines for each stage of the innovPlus will be considered for acceptance and enrolment into the innovPlus Challenge.

A submission may, in Secretariat's sole and absolute discretion, be rejected if it fails to follow the technical, creative, and legal requirements specified on the innovPlus webpage, the official innovPlus Infokit and in these Official Terms and Conditions. Applications that do not follow all of the instructions, provide the required information in their application form, or abide by these Official Terms and Conditions or other instructions of Secretariat may be disqualified at Secretariat's sole and absolute discretion. All entries that are late, illegible, incomplete, damaged, destroyed, forged or otherwise not in compliance with the Official Terms and Conditions may be disqualified from the innovPlus at Secretariat's sole and absolute discretion. Applications generated by script, macro or other automated means and entries by any means which subvert the entry process are void. All entries become the physical property of SUSS-IAL and Secretariat and will not be acknowledged or returned. Assurance of delivery of entries is the sole responsibility of the Applicant.

Additionally, applicants shall attend the activities organised by the innovPlus Secretariat to improve the capability of the Challenge Teams in identifying the root cause to their challenge and developing the appropriate solutioning. These include the innovPlus Prospectus Briefing, workshops and coaching sessions, and any other sessions deemed relevant to innovPlus participation. Failure to do so could lead to disqualification from the competition.

SUBMISSION GUIDELINES

7. Submission for evaluation by IPP pursuant to the award of the innovPlus Grant, will be in the following three parts:

   a. Paper submission via the official innovPlus Challenge Team Formation Submission Form and the projected budget and project schedule, by the stipulated deadline, of no less than 21 calendar days before Presentation Day. The paper submission is to be in English. The paper submission must answer the prompting guides as set out in the innovPlus Challenge Team Formation Submission Form;

   b. Presentation and demonstration of any concept mockup/wireframe (where applicable), in English, by (up to) five members of the Challenge Team to the IPP on Presentation Day (as informed by Secretariat) of no more than 15 minutes. This will be followed by engagement with IPP for up to 15 minutes The session will be conducted in closed-door to only the IPP in the Pitching Room.

The Challenge Team must have all rights, clearances, permissions, approvals and/or consents necessary for their Submission, including, but not limited to, music rights, releases from all persons listed in the submission, location releases for all recognisable locations, and releases from all and any person who participated in the production of the Submission. In the event that the Challenge Team does not have the appropriate rights, the Submission may be disqualified at the Secretariat's sole discretion. SUSS-IAL reserves the right to disqualify any entries if it views their materials to contain contents (e.g. text, sound or images) that in SUSS-IAL's opinion to be offensive, inappropriate, or that will cast innovPlus, Centre for Workplace and Learning Innovation, SUSS-IAL or SUSS in a negative light.

The above specified three parts shall collectively form the Submission of each enrolled Challenge Team, and shall be the basis by which each Challenge Team is evaluated for the Grant. Challenge Teams awarded the Grant, shall be held accountable to the Submission, and be funded to deliver, complete or report on all parts of this Submission, to qualify for a claim on the Grant. Should the Challenge Team be unable to deliver on the Submission,

the Team agrees for SUSS, acting through SUSS-IAL, to recover any grant already disbursed, and any liquidated damages resulting from the disbursement, so decided at the absolute discretion of SUSS-IAL.

EVALUATION OF SUBMISSIONS

8. On Presentation Day, all Submissions will be evaluated by the innovPlus Panel ("IPP"), which consists of a panel of institutional/industry/pedagogy experts based on the following evaluation criteria:

   a. Concept

      - Extent that the concept is clear and well-defined;
      - Extent that the concept is distinctive from other similar ideas;
      - Extent the concept aligns or is consistent with existing knowledge and evidence about the challenge being addressed; and
      - Extent the concept fit the context of the learning challenge being addressed, including addressing the key aspects of the learning challenge.

   b. Innovation

      - Extent proposed innovation goes beyond known / existing solutions with (a) clear innovative value and (b) absolute valued add in terms of raising the quality and ROI of the learning and learning outcomes;
      - Extent the proposed solution offers a competitive advantage vis-à-vis existing solutions in the market;
      - Evidence of sound pedagogical design being effectively harnessed to the proposed solution; and
      - Extent of user friendliness and adaptability.

   c. Impact and Scalability

      - Demonstrates feasibility of implementation organisation-wide, sector-wide or sizeable segments of the workforce. Solutions includes an evaluation process, success indicators and impact measurement; and
      - Offers potential to also help other enterprises facing similar challenges (i.e. broader application, adaptation and transferability)

   d. Project and Implementation Team

      - Team consists of members from different disciplines
      - Has a credible and realistic plan, budget and schedule to complete project in specified duration (maximum of 9 months)
      - Has a clear identification of all stakeholders involved in the project, with the relevant and necessary competencies and track records to ensure successful project delivery
      - Demonstrates commitment to develop the prototype as envisioned. Presence of a dedicated project manager to oversee implementation and manage the project, including progress reporting, budget management, resource management, etc

   e. Implementation Sustainability

      - Extent of thinking and/or planning for roll-out of solution to rest of organisation, including possible costs and resources required
      - Indication of project team's continued involvement in the roll-out plan

9. IPP shall have the final decision on whom the eventual Grant awardees shall be. The IPP may declare void any entry should they consider that there are no entries reaching the required standard, whereupon they can award

prizes or not as they deem fit. No correspondence will be entered into or comment issued on any matters concerning the evaluation of entries, and no reasons be given for any decision made by the IPP.

10. Awards conferred are not transferable under any circumstances. In the event a winning team is unable and/or unwilling to accept the award or withdraw for whatever reason, SUSS-IAL reserves the right to award it to the next highest scoring team that meets the qualifying criteria.

QUANTUM AND ADMINISTRATION OF THE GRANT

11. Winners of the innovPlus Challenge shall qualify to draw down on a pre-approved innovPlus Grant ("Grant") of up to S$200,000, with a mandatory co-contribution of at least 10% of approved budget, which can be in monetary form or in-kind[6].

12. The maximum grant amount of each award shall be exercised through a Letter of Award ("LOA") between Singapore University of Social Sciences ("SUSS") and the Challenge Owner organisation. Secretariat will consult the winning Challenge Team in working out and finalising the maximum grant amount and detailed budget for approval by SUSS-IAL, to constitute the LOA.

13. The Grant shall be disbursed in 4 tranches, strictly adhering to the stipulated milestone and timeline in the table below:

Tranch & Grant Quantum	Milestone	Milestone Timeline	Typical Grant amount
1st: 30% of maximum grant amount	Effect of LOA by signature of SUSS-IAL and Challenge Owner organisation	Start of Project Period	up to S$60,000
2nd: 20% of maximum grant amount	Mid-Term Progress Report, Presentation and required claim documents	Not more than 3 months after start of Project Period	up to S$40,000
3rd: 20% of maximum grant amount	1st part of Final Summative Report, Prototype and UAT completion, Presentation and required claim documents	Not more than 6 months after start of Project Period	up to S$40,000
4th: 30% of maximum grant amount	2nd part of Final Summative Report, Pilot completion and Evaluation, Final Presentation and required claim documents	Not more than 9 months after start of Project Period	up to S$60,000

Besides the first advance disbursement of 30%, subsequent funds will only be reimbursed on the submission and approval of the required reports and expenses incurred according to the approved budget. Proof of payment needs to be furnished before the claim can be approved.

CONDITIONS AND REQUIREMENTS OF AWARDED CHALLENGE TEAM AND PROTOTYPE

14. The innovPlus Grant is awarded on the basis of the presented prototype solution (and its proposed functionalities, features, capabilities, outputs and deliverables) and the envisioned scalability and roll out of the prototype to its intended users. As the implementation team as submitted in the application is evaluated as a criterion, any

[6] To be supported with evidence for actual hourly rate charged (either with the payslip or a salary statement from HR)

change to the composition of the Challenge Team after award of Grant must be submitted in writing, through Secretariat, for SUSS-IAL's prior approval. Failure to do so could lead to automatic disqualification.

15. The awardees of the innovPlus Grant accepts the grant by signing a Letter of Award ("LOA") within 8 weeks from Presentation Day, comprising the terms and conditions governing the grant, including piloting the prototype with learners, submitting a pre- and post-evaluation report of the prototype's strengths and weaknesses and conferring non-exclusive, irrevocable, free right and license to the use of the prototype and all intellectual property and information generated resulting from the performance of the Project to SUSS-IAL for non-commercial, academic, research and development purposes, including, but not limited to, the purposes of proliferating the knowledge gained therefrom to the training and adult education (TAE) community. For the avoidance of doubt, the terms of the National IP Protocol[4] shall apply. For the avoidance of any doubt, the terms and conditions in the LOA are strictly non-negotiable.

16. In general, the prototype development grant offered in the innovPlus Grant will support the following cost items:

    - Fees of expert services from entities (organisation or individual) outside the composition of the Challenge Team, that are required in the areas of technical and development work, or for purposes such as research or advice, shall be limited to a cap of 10% of the approved grant amount;
    - Professional services as charged to the Challenge Owner organisation by the Solution Partner(s) of the Challenge Team;
    - Supplies that are necessary for the overall operation, development and pilot of the awarded solution;
    - Equipment that have direct contribution to the overall operation, development and pilot of the awarded solution;
    - Software and / or other licensing that are essential for the project and for the duration of the project; and
    - Others – items not in the above list but necessary for the conduct and successful delivery of the project could be included in the funding request, subject to the approval of SUSS-IAL.

17. The grant will not support cost items that do not contribute directly to prototype development such as marketing, networking and publicity. It will also not support capital equipment not essential to the project, maintenance cost for software licensing, GST, and travel (local and overseas).

18. The Challenge Team is required to prove cost transparency and reasonableness on request by SUSS-IAL on all cost items it is claiming for funding.

19. No claims can be made on any items that are not in the budget submitted together with the proposal made in the Challenge Team Formation form.

20. SUSS-IAL shall not be under any obligation to make any payment to the Challenge Team on claims of:

    - unsupported cost items listed in the approved budget;
    - qualified expenses but which no adequate proof of expenditure and proof of payments has been furnished;
    - qualified manpower costs but which no adequate proof of cost reasonableness provided upon request;
    - any amount that exceeds the cost items listed in the approved budget; or
    - any amount that is based on expenditure / payment not in compliance with prevailing procurement practices in terms of not being value for money.

21. The Challenge Team shall be solely responsible for its own partnership management and teamwork, including Intellectual Property ("IP") arrangements and development / implementation plan.

22. The Challenge Team shall undertake that it will not infringe the intellectual property rights or any other rights of any person, and will comply with all applicable laws at all times.

23. The winning Challenge Team shall grant consent to SUSS-IAL disclosing, in such manner as SUSS-IAL deems appropriate, in its (SUSS-IAL's) publicity materials of the team's participation, and setting out and publishing in its publicity materials, in such manner as SUSS-IAL deems appropriate, information regarding the participation, including:

    a. the materials submitted for the innovPlus Challenge and any other information pertaining to its proposal;

    b. the contents of the findings or results, report(s) or any part thereof the awarded project; and

    c. information arising from or pertaining to the reports or any presentation, seminar, conference, or symposium conducted by the team.

24. The Challenge Team agrees to indemnify and hold harmless SUSS-IAL against any and all actions, claims, demands, and proceedings in any way arising out of or connected with SUSS-IAL's use, reproduction, publication or dissemination in the manner mentioned above, and all costs, expenses, losses and liabilities, howsoever arising.

25. The Challenge Team shall ensure that all information about the team or proposal provided to SUSS-IAL pursuant to its participation and for the subsequent purposes of or connected with making claims, are true, accurate and complete to the best of the team's knowledge. In the event that it comes to the knowledge of the team that any information already provided is or has become inaccurate, untrue, incomplete or misleading, the team shall immediately notify SUSS-IAL of such inaccuracy, incompleteness, misleading nature, or untruthfulness, and provide such information in connection therewith as SUSS-IAL may request.

26. The innovPlus Grant will be withdrawn if:

    a. the Challenge Team is unable to perform the obligations set out in the LOA; or

    b. the Challenge Team commits a breach of any of the provisions of the LOA.

SHOWCASING OF INNOVATION DEVELOPMENT

27. The Challenge Team shall undertake to collaborate with SUSS-IAL in the development of case studies and/or research papers detailing the experience and insights gleaned from the prototype development and any trialing/pilot that ensued. No confidential or private information will be revealed through this effort;

28. The Challenge Team shall undertake to allow SUSS-IAL to disseminate the case studies and/or research papers in various formats including printed materials, online articles, video, audio, and other digital recordings to any individuals or organisations that it deems will benefit from the learning and sharing;

29. The Challenge Team shall undertake to collaborate with SUSS-IAL to allow and facilitate the use of its prototype or solution within sandbox environments to individuals or organisations designated by SUSS-IAL to trial the prototype or solution during and/or after the project; and

30. The Challenge Team shall undertake to agree for SUSS-IAL to profile the companies and individuals involved, as well as the solution and/or prototype on the following platforms:

a. SUSS-IAL professional development seminars and workshops;

b. SUSS-IAL partner showcase for a period of 18 months;

c. SUSS-IAL conferences and events, e.g. the Adult Learning Symposium and Learning Roadshows; and

d. Conferences and events SUSS-IAL is participating in and where the themes / areas covered are aligned and of interest to the participants.

31. The full and prevailing terms and conditions of the innovPlus Challenge and innovPlus Grant can be found in the Challenge Statement application form, Expression of Interest and Challenge Team Formation submission form, and all applications submitted to the Challenge will be deemed to have accepted these terms and conditions.

32. Secretariat of the innovPlus Challenge and innovPlus Grant is the inlab, acting on behalf of the Institute for Adult Learning ("SUSS-IAL"), of 11 Eunos Road 8, #05-03, Singapore 408601, wherein SUSS-IAL is an autonomous institute of the Singapore University of Social Sciences.

GENERAL

33. Depending on the prevailing implementation challenges and needs, innovPlus Secretariat reserves the right to amend and change the terms and conditions with approval from the Director of Centre for Workplace and Learning Innovation, that complies with the intent and spirit of innovPlus.

34. SUSS-IAL reserves the right to disqualify any participant at any point in time during the innovPlus Challenge.

SUSS-IAL reserves the right to change these terms and conditions at any time without prior notice. In the event that any changes are made, the revised terms and conditions shall be posted on the innovPlus website immediately. Please check the latest information posted herein to inform yourself of any changes.