# VIRTUAL ASSESSOR FOR FOOD SAFETY COURSE

## CHALLENGE OWNER

This challenge is part of the **innovPlus Challenge 2024 Run 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 training provider that offers industry-relevant skills-based training programmes designed to upskill learners in skills and competencies that are required to be effective in their fields of work, and lead to the Singapore Workforce Skills Qualifications (WSQ). To support the food and beverage (F&B) industry in providing better food safety assurance to consumers, the Challenge Owner's Food Safety Academy works with F&B establishments to prepare their nominated employees to become WSQ-certified Food Handlers and/or Food Hygiene Officers.

## CONTEXT

**CURRENT SITUATION**

The Challenge Owner is one of the SkillsFuture Singapore (SSG)-approved providers of the Food Safety Course Level 1 (FSCL1), and trains around 1,500 trainees monthly, or an average of around 50 to 60 trainees daily, with a trainer to trainee ratio of 1:20 as required by the Singapore Food Agency (SFA) and around four to six classes running simultaneously at one time. FSCL1 is a foundational training course on food hygiene that is mandatory for all food handlers and employees working in F&B establishments. The course is specifically designed for all food handlers, which includes individuals involved in any capacity of preparing, cooking, serving, or handling food within food establishments. No formal qualification is required; however, participants should be able to converse, read, and write in the course language they have registered for to understand the course content and instructions. Trainees come from diverse backgrounds and job environments/levels (e.g. restaurant manager, hawker stall helper etc), with differing levels of education and tech savviness. Upon registering for the course, trainees are profiled through a series of questions (e.g. about their level of computer proficiency), and trainers are able to access the profiles of the trainees in their class three days in advance of the course date.

The course programme begins with six hours of training to equip trainees with the knowledge and understanding of the importance of food hygiene and safety, which is conducted in the four official languages of English, Chinese, Malay and Tamil by bilingual trainers. Training materials such as the Learner Guide (LG) are also available in these languages.

The training is followed by a 1.5-hour assessment that consists of two parts. Trainees must pass both assessments in order to be certified. The assessment comprises a written assessment of multiple-choice (MCQ) and short answer questions (SAQ), and a practical assessment that tests trainees' performance of tasks relating to good personal hygiene, storing and handling food safely, and using safe ingredients. Under SFA's current requirements, practical assessments must be conducted in person by approved training providers with the proper setup of equipment and props (e.g. hand-washing station, restaurant setup, picture cards etc) for trainees to demonstrate their performance of the tasks to trainers/assessors. In cases where a trainee is unable to successfully complete a part of

the MCQ, SAQ, or any practical task, an oral assessment will be administered. For the purposes of audit and verification, this oral examination will be video-recorded, and has to be uploaded to a storage drive/cloud. For written assessments, the physical test papers have to be stored for three years for audit purposes.

**PAST AND CURRENT SOLUTIONING EFFORTS**
Before the COVID-19 pandemic, training and assessments were exclusively conducted in person. However, during the pandemic, the shift to remote learning meant that all training sessions and assessments (written and practical) transitioned to online formats, using video conferencing platforms like Zoom and the Challenge Owner's Learning Management System (LMS). Practical assessments required trainees to prepare their setups and props at home, with both assessors and trainees setting up cameras for these assessments. Now, following the pandemic, the course is offered through both in-person sessions and synchronous e-learning, accommodating a wider range of learning preferences.

Currently, in response to SFA's mandate that assessments (both written and practical) be held at SFA-approved locations, the Challenge Owner has reverted to conducting in-person assessments for both in-person training and synchronous e-learning sessions. Typically, the Challenge Owner, along with trainees and employers, favours completing assessments right after training sessions to streamline operations and enhance time and cost efficiency. This preference is partly because trainees must be compensated their regular workday salary during the training period.

In addition, with the increasing demand for training of non-Singaporean trainees with different language proficiencies outside of the four official languages (e.g. Japanese, Korean, Vietnamese, Burmese, Hindi etc), the Challenge Owner has had to engage professional translators to translate the training and assessment materials, as well as do "live" translation as the course is being delivered by the trainers.

**CHALLENGE / GAP / UNREALISED POTENTIAL**
The main challenges faced by the Challenge Owner in delivering FSCL1, particularly the assessments, are as follows:

- Time-consuming and high-cost assessment process. The Challenge Owner must comply to the SFA's stringent requirements for physical setups to conduct the training and assessment which requires considerable budget and time, and hence only has two training rooms for practical assessments. Under SFA's requirements, each assessor can only conduct the assessments for four trainees at a time, and each batch of practical assessments takes around 30 minutes. Hence, practical assessments can only be conducted in small batches, which results in prolonged wait times of up to two to three hours for trainees who have completed their written assessments and have to wait their turn for the practical assessments. This could lead to trainees' frustration and potentially impact their motivation to learn, as well as their performance during the assessments. F&B employers are also unable to conduct training and assessments at their own premises, which limits the flexibility and reach of the training programme.
- Resource-intensive and inefficient manual record-keeping. The current assessment process is manual and resource-intensive, requiring a physical presence, which demands utilities, practical props, room space, and time. Additionally, maintaining video recordings for oral assessment for SFA validation and audit purposes adds to the resource burden. The process becomes even more resource-heavy when managing synchronous learning sessions, where both training and assessment recordings necessitate storage.

- Language barriers during assessment. For trainees taking the assessment facilitated by a translator (i.e. in a language other than the four official languages), the language barriers could hinder their ability to understand food safety concepts and perform well in the assessments.

Hence, the Challenge Owner is looking for a solution to help improve the learning process for trainees, as well as provide a more streamlined and efficient way to conduct and document assessments.

## CHALLENGE STATEMENT

How might we conduct and document assessments of the Food Safety Course more efficiently in an automated manner, so as to provide a seamless, intuitive assessment experience to trainees, and improve overall learning outcomes?

## WHAT ARE WE LOOKING FOR?

The Challenge Owner is looking for an immersive simulation-based solution that can act like a virtual assessor to deliver both written and practical assessments for FSCL1 seamlessly and effectively in multiple languages to reduce waiting time for trainees, improve learning outcomes, and automate the assessment and evidence-recording process, while still ensuring compliance to SFA's requirements. The Challenge Owner's intention is for the solution to run concurrently alongside the existing assessments in the short-term, and to completely replace the current in-person assessment process in future.

The solution should meet the following criteria:

- User authentication. Able to authenticate trainees' identities when they log into the solution.
- Realistic and immersive practical assessments. Able to allow trainees to perform and be assessed on the FSCL1 practical assessment tasks/skills virtually in a realistic simulated environment, including the following tasks:
  - o Practicing good personal hygiene (e.g. choosing the right attire before food handling, proper hand washing)
  - o Handling food safely (e.g. ensuring proper usage of crockery, handling cash correctly)
  - o Storing food safely (e.g. storing food items correctly in the fridge)
  - o Use of safe ingredients (e.g. tidying of storage area that is used for storing dry food products)
- Digitised written assessments. Able to administer the written assessments of multiple-choice questions and short answer questions in a digital format.
- Sequential and clear testing. Provide clear instructions and information to trainees on what they need to do and how the grading will be done, as well as contact information for technical support. Conduct assessments in sequential order, where written assessments must be completed before practical assessments can be attempted. Once an assessment is started, it must be completed in one sitting in order to be recorded as a completed assessment.
- Grading and sharing of assessment outcomes. Able to grade both written and practical assessments based on an assessment checklist in an automated manner, with the outcomes shared with trainees immediately after completion. In the event that trainees fail the assessments, able to redirect trainees to the next attempt until trainees complete the assessment successfully.
- Data capture and evidence-recording. Able to record and store written assessments and video footage of practical assessments for documentation and audit purposes. The record archives should be accessible by trainers/assessors, and be able to be shared with SFA for verification.
- Prompts and real-time feedback. Able to provide feedback, cues and hints to trainees at relevant points during the assessments. At the end of the assessment, to be able to evaluate

performance and share personalised feedback with trainees on areas of improvement. Able to point trainees towards relevant training materials/links where they can learn about areas which they have not performed well in.

- Multiple language capabilities. Allow trainees to select their language of choice for the assessment. Able to translate the assessment report into English for documentation. At prototype stage, the solution should prioritise assessments in English and Mandarin, with the potential for expansion to Malay, Tamil and other languages for future implementation.
- Customisable virtual environments (optional). Able to simulate different F&B environments (e.g. restaurant, hawker centre, central kitchen) and allow trainees to select their preferred virtual environment for practical assessments. For this prototype, at least one virtual environment should be developed and tested.

**OVERALL PERFORMANCE REQUIREMENTS**
- Portability and ease of setup. The solution should be portable enough to allow remote assessment to take place in controlled environments including SFA-approved premises like the Challenge Owner's own training premises, or F&B establishments where assessments are to take place.
- Duration of practical assessments. Each practical assessment simulation should be able to be completed in around 15 to 20 minutes.
- Regulatory compliance. The solution should adhere to SFA's requirements for assessment setups for FSCL1 assessments.
- Tamper-proof and fair assessments. The assessment results recorded by the solution should be tamper-proof, and assessments should be able to be conducted simultaneously for multiple trainees for fairness of assessment.
- User-friendly. The solution should be easy to use, so as to be accessible to a diverse range of trainees of different backgrounds, language proficiencies and levels of IT-savviness.
- Cost-effectiveness and scalability. The solution should be affordable and easy to maintain, such that it is cost-effective in the long run when scaling up for larger numbers of trainees and simultaneous assessments (estimated around 50 to 100 at one time). The solution should also be scalable for different assessment processes beyond FSCL1.
- Compatibility. The solution should be compatible with the Challenge Owner's LMS.

**TARGETED LEARNERS/USERS**
**Primary and Secondary targeted learners/users of the envisaged solution (including estimated numerical figures)**
- Estimated 1,500 to 2,000 trainees assessed by the Challenge Owner per month
- Potentially scalable to around 5,000 trainees per month across other training providers of FSCL1

**MEASURES OF SUCCESS**
- Reduced assessment waiting time. The waiting time for trainees to take their turn for the practical assessment, which is currently around two to three hours on average, should be reduced by at least two-thirds.
- Number of concurrent assessments. The solution should be able to administer simultaneous assessments for at least 20 trainees (the size of one class).
- Reduced failure rate due to language barrier. With the solution being able to administer the course assessment in different languages without the need for human translators, the course assessment failure rate of 5% should be reduced.
- User satisfaction rating. Trainees currently undergo a mandatory survey on training quality by SSG, which is scored upon 5. With the use of the solution, trainees' satisfaction with the quality of training should meet an average score of at least 4 to 4.5.

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. The Solution Partner should allow the solution to be tested for at least 9 months with at least 100 users before further refinement and potential deployment.

## POSSIBLE USE CASES

1. <u>Seamless and efficient assessments</u>. Xiaoli, a Chinese speaker, is a trainee registered to take FSCL1. After she completes the six hours of training at the Challenge Owner's training centre, she is immediately directed to another training room with the other trainees in her class to take the two-part assessment using the solution. After logging into the solution, she selects the Mandarin-language assessment, and completes the written assessment of multiple-choice and short answer questions in Chinese. Next, she proceeds to take the practical assessment. The solution instructs her in Mandarin about the tasks she is required to complete in the simulated virtual environment. When she hesitates over the correct way of storing food properly in the fridge, the solution gives her a prompt, and she is able to complete the task successfully. Upon completion of the assessment, the solution generates her assessment grade immediately, gives her personalised feedback for areas of improvement, and points her towards relevant training resources. A video recording of Xiaoli's performance during the practical assessment is automatically captured and uploaded to a shared cloud, and an assessment report is generated in English for documentation of her results.

2. <u>Simultaneous and offsite assessments</u>. Sunil, an FSCL1 trainer, is engaged by a restaurant to train their new staff at their restaurant premise. He brings the solution along to the restaurant, and after he has completed the training, he is able to administer the written and practical assessments for all the trainees simultaneously without any physical setup required. Within an hour, all trainees have completed the assessments and received their automatically generated results in the solution, with all video footage and assessment records of each trainee captured and uploaded to a shared cloud. Sunil is able to view the results of the trainees in the solution, and use the extra time at the end of the session to share feedback with the trainees on their areas of improvement, which also allows the trainees to garner learning points from one another and enhance their own understanding.

## WHAT'S IN IT FOR YOU

- Up to S$200,000 of prototyping grant (innovPlus Grant) for each winning Challenge Team of the innovPlus Challenge 2024 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 commercialization.

## INNOVPLUS COMPETITION PHASE PROCESS FLOW

<u>Diagram 1</u> illustrates the innovPlus process flow in the competition phase and the requirements for active involvement of each party. Stage 3 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
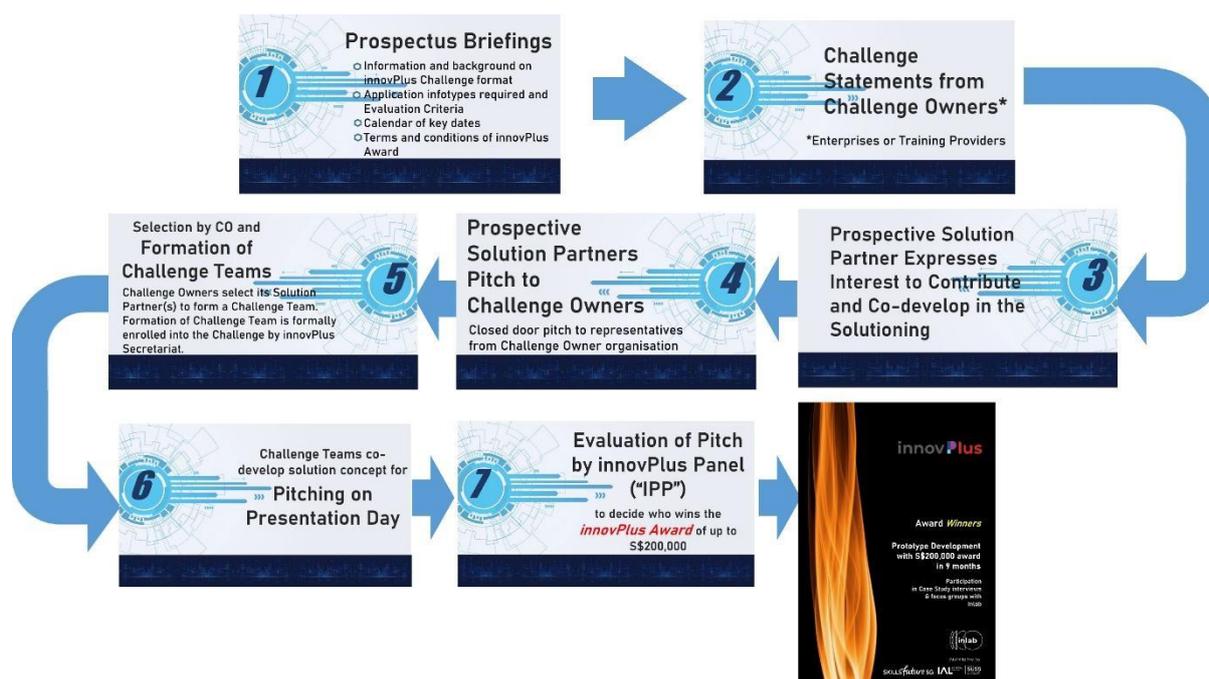


The Challenge Owner will evaluate all proposals by Prospective Solution Partners received on the OIP based on the evaluation criteria below, and invite shortlisted partners to a second stage evaluation in the form of a pitch (Stage 4 of Diagram 1).

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| **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? <br> Scalability: Is there any evidence to suggest capacity to scale? <br> 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? <br> Cost Effectiveness and Innovativeness: Is the solution cost effective and truly innovative? <br> Does it make use of new technologies in the market, and can it potentially generate new IP? <br> How sustainable and affordable is the estimated cost for pilot trial, deployment, software support and post-pilot rollout? |
| **Company Profile (20%)** | Business Traction: Does the product have user and revenue traction? <br> Is the company able to demonstrate financial capability and resources to complete the prototype? <br> 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 5 in Diagram 1). The Challenge Team will pitch their solution in the final round of the competition, known as the innovPlus Presentation Day. On that day,

the Challenge Teams will present how the envisaged solution could deliver the stated learning outcomes with a presentation and demonstration to the innovPlus Panel (Stage 6 in Diagram 1). The innovPlus Panel shall have the final decision on whom the eventual Grant awardees shall be (Stage 7 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 2024 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 (2023 or most recent) with certificate confirming registration of business
- Corporate Compliance and Financial Profile from BizFile (2023 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 **12 April 2024, 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].

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[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, intended by the learning challenge, who would benefit from, either by way of learning enabled by or by use of the outputs of, the developed prototype. Pilot testing shall encompass minimally 30% of the **targeted learner/user population**, or 100 learners/users, whichever is lower.

[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 30% of targeted learner/user population or 100 learners/users (whichever is lower).

**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 challenge 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 ("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 as administered by the innovPlus Secretariat. The innovPlus Grant is funded by SkillsFuture Singapore ("SSG") and is administered by SUSS-IAL, by appointment of SSG. 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 assessments. 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:

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[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.

a. innovPlus Challenge Statement Application Form (for prospective Challenge Owner);

b. innovPlus Expression of Interest ("EOI") Form (for prospective Solution Partner, with respect to the specific Challenge Statement published);

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

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, Innovation Centre, 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

       ▪ Provide grounds to justify why the challenge should be addressed or taken on and how the proposed solution addresses the challenge / opens up opportunity for better quality CET outcomes and delivery; and

       ▪ Extent objectives, goals and desired outcomes can be achieved.

    b. Innovation

       ▪ Extent proposed innovation goes beyond known / existing solutions with (a) clear innovative value and (b) absolute valued added;

       ▪ Potential for spin-offs to be generated from the proposed innovation e.g. in user / learning experiences for other CET professionals, learners and/or organisations; and

       ▪ Evidence of sound pedagogical design underpinning the proposed solution to enhance effectiveness of learning or desired learning outcomes.

    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 total prototype development cost, 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:

| Tranche & Grant Quantum | Milestone | Milestone Timeline | Typical Grant amount |
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[6] To be supported with evidence for actual hourly rate charged (either with the payslip or a salary statement from HR)

| 1st: 30% of maximum grant amount | Effect of LOA by signature of SUSS-IAL and Challenge Owner organisation | Start of prototype development | up to S$60,000 |
|---|---|---|---|
| 2nd: 20% of maximum grant amount | Mid-Term Progress Report, Presentation and required claim documents | 3 months after start of prototype development | up to S$40,000 |
| 3rd: 20% of maximum grant amount | 1st part of Final Summative Report, Prototype completion, Presentation and required claim documents | Not more than 6 months after start of prototype development | 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 | 6 to 9 months after start of prototype development | 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 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 team work, 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; and

29. 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 12 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.

30. 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.

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

**GENERAL**

32. 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 Innovation Centre, that complies with the intent and spirit of innovPlus.

33. 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.*