

The background of the slide is a grayscale photograph of a university campus, likely CUHK, showing a large building with a central entrance and many trees. A semi-transparent purple rectangle is overlaid on the image, serving as a background for the text.

Information Session for TSSSU 2022-2023

5 October 2021

Office of Research & Knowledge Transfer Services (ORKTS)

Venture Acceleration Team

For TSSSU Program

Mr. Jonathan Chee

Head of Venture Acceleration

Head of PI Centre

ORKTS

Ms. Wing Li

Assistant Manager of PI Centre

Venture Acceleration Team

ORKTS

TSSSU Funding

HKD8,000,000
Per Institution

HKD700,000
At Max.
Per Year

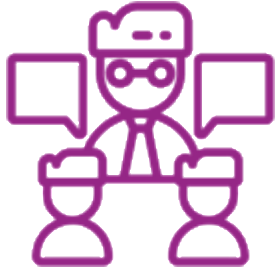
3 Years
At Max.

\$\$\$

Funded 62
TSSSU Companies
since 2014-15

TSSSU companies are **not owned**
by CUHK but they facilitate the
transfer of CUHK technologies
into innovative applications for
society.

Benefits for TSSSU



Consultancy & Mentorship

with our CUHK Entrepreneurship
consultant



Training & Workshops

By industry experts & practitioners
Online and Offline Resources



Fast Track

To startup Incubators & funding
preparation and Investors plus
media strategy and exposure



Funding Support

Up to HKD700,000 per year with no
more than 3 years



Coworking Space



Networking Opportunities

Successful Entrepreneurs, business
partners & industry experts



Establish & Fostering CUHK Start-up Community



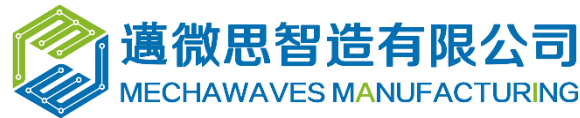
Talent Pool

TSSSU Companies funded in 2021-22

- Biotechnology/Health Care



- Adv. Manufacturing/Material Science



- FoodTech



- Sport Science



- ICT/IT



Summary of Eligibility

Person-in-Charge (PIC)

- Full-time Students (either UG or PG) or
- Full-time Professors or
- Alumni graduated within the last 36 months
- *the PIC cannot join concurrently other active teams funded by TSSSU*

Team Mix

- The number of team members including PIC of the Company must be **at least two** and can include alumni and non-CUHK individuals
- Research Staff, part-time student, non-CUHK individuals can be **team members** only
- Team members who are staff members and also alumni/students will be considered as staff members

Summary of Eligibility

Intellectual Property (IP)

- The technology involved in the application MUST be CUHK-related and with Intellectual Property (IP) owned by CUHK. If the technology has not yet filed IP under CUHK at the time of application, an Invention Disclosure Form or a Copyright Disclosure Form and Assignment must be submitted to ORKTS IP and Technology Licensing Team (Ms. Alison SIU at 3943 0635/ alisonsiu@cuhk.edu.hk or Ms. Fei Fei MIU at 3943 9398/ miufEIFEI@cuhk.edu.hk).
- IPs originated from CUHK students and/or professors are **compulsory and owned by CUHK**
- **Intellectual Property (IP):** “INDICATE ONLY” the technology involved and IP ownership in
(d) Declaration of Intellectual Property

(Please add separate sheet(s) if necessary)

Please provide details of any CUHK IP (e.g. patents, copyright, design, trademark, knowhow, etc.) that the company intends to use. Please specify if the IP has been created by the PIC or any team members(s) of the company.

- (i) Non-confidential working title of the IP
(Please quote the reference number, if any)

Technology Readiness Level (TRL)

- The technology involved in the application MUST reach the required TRL. Physical Science and Engineering technology MUST reach TRL 4 or above and HealthCare technology MUST reach TRL 3 or above

Registration of a Company

- The applicant must be a company already registered under the Companies Ordinance for no more than 24 months before the date specified by ITC, i.e. 1 Feb 2022
 - Earliest registration date: 1 Feb 2020
- The 24-month eligibility requirement does not apply to a start-up which is recommended for the TSSSU funding for the second or the third year

Shareholder Structure

- Active members of CUHK (current full-time students, full-time professors, or alumni graduated within the last 36 months) should be the effective majority of shareholders, **holding more than 50% of the shares** of the Company

Notes for Milestones and Budget

- Set out the milestones to be achieved from 1/4/2022 to 31/3/2023
- Budget in categories of Manpower, Equipment and Other Direct Costs has to be matched with the milestones
- Maximum allowable manpower remuneration for **founding members**
 - **HK\$12,000**/month for a member without a Bachelor degree
 - **HK\$16,000**/month for a member with a Bachelor degree
 - **HK\$22,000**/month for a member with a Master degree or above
- Up to **50% of the Fund** can be incurred in **Mainland China and/or other countries**

Endorsement (CUHK student or alumni PIC)

- CUHK-student PIC or alumni PIC should seek Departmental endorsement via Section E of Annex A
 - Copy of student ID card or graduation cert has to be provided for verification

SECTION E: Internal Signatures

For CUHK student/alumnus (PIC)

The PIC named _____ is an undergraduate student/ postgraduate student/
alumnus* of _____.programme. The year of graduation will be/is*
_____.

Endorsement (CUHK staff)

- **CUHK staff** (PIC and team members individually) should seek **Departmental & Faculty/Supervising Officer endorsement** via the Appendix to Annex A
- Our HR colleagues will brief you more HR related information about Outside Practice (OP) and Outside Business Activities (OBA)

Technology Readiness Level, TSSSU Evaluation Criteria and Tips on Pitching

Introduction to Technology Readiness Level (TRL)

<https://www.youtube.com/watch?v=in4TnQZGYj4>

Technology Maturity (TRL) Assessment

1. Where is the beginning and end of the scale?
2. Are readiness level phases or milestones?
3. Identification of critical technology elements
 - The assessment focuses on each element individually
4. Categorization of each element into a TRL (1-9)
5. How do the maturity of system elements and the overall system relate?

Technology Readiness Level (TRL) – Physical Sciences & Engineering

Physical Sciences & Engineering	
TRL 1	Basic principles observed
TRL 2	Technology concept formulated
TRL 3	Experimental proof of concept
TRL 4	Technology validated in lab
TRL 5	Technology validated in relevant environment
TRL 6	Technology demonstrated in relevant environment
TRL 7	System prototype demonstration in operation environment
TRL 8	System complete and qualified
TRL 9	Actual system proven in operational environment

Technology Readiness Level (TRL) – Healthcare (Pharmaceutical/ Drug Discovery)

Healthcare (Pharmaceutical/ Drug Discovery)	
TRL 1	Target Selection/ Hit Discovery
TRL 2	Lead Optimization
TRL 3	In Vitro Activity & Toxicity/ In Vitro Pharmacokinetics
TRL 4	Animal Models Demonstrated in Defined Laboratory/ Animal Models
TRL 5	Clinical Transition (followed by IND application) FDA/NMPA accredited Animal & Chemical Development (Pre-IND work)
TRL 6	Phase 1 Clinical Trials
TRL 7	Phase 2 Clinical Trials
TRL 8	Phase 3 Clinical Trials
TRL 9	Pharmaceutical can be distributed or marketed (Approval by FDA/NMPA)

Technology Readiness Level (TRL) – MedTech

MedTech	
TRL 1	Basic Principles Observed
TRL 2	Technology Concept Formulated
TRL 3	Experimental Proof of Concept in Vitro and in Vivo Research Models
TRL 4	Proof of Concept Demonstrated in Defined Laboratory/Animal Models
TRL 5	Product Development Plan
TRL 6	Phase 1 Clinical Trials
TRL 7	Clinical Safety and Effectiveness Trials in Operational Environment
TRL 8	Overall Risk-benefit Trials
TRL 9	Medical Device can be Distributed or Marketed

Evaluation Criteria

The Vetting Panel will take the following into account during assessment of applications.

1. Innovation and technology content of the business [40%]

- Potential for knowledge transfer;
- Intellectual property position, including patents, copyrights, trademark, know-how, etc.;
- Stage of technology development and readiness for application (Technology Readiness Level);
- Preference given to the innovation and technology that has synergy with CUHK Strategic Areas (i.e. China: Tradition & Modernity; Innovative Biomedicine; Information & Automation Technology; Environment & Sustainability)

2. Commercial viability of the business [30%]

- Well-defined business and budget plan;
- Well thought-out market analysis (e.g. opportunities, entry barriers, competitions, etc.);
- Viable and realistic milestones and deliverables;
- Whether the Start-up has secured other sources of funding apart from the TSSSU;

3. Team expertise and commitment [25%]

- R&D and management capabilities of the team;
- Drive and commitment of team members;
- Incentive in equity for core team members;

4. The social and/or community impact of the start-up's R&D project(s) [5%]

- Products and services that improve the quality of human life;
- Positive social impact to the society;

Tips on Pitching

1. **Problem** – What are the customers' pain points?
2. **Solution** - What kind of product/service you provided to solve the pain points?
3. **Business model** – Who is your target customer and how do you make money?
4. **Marketing and sales** – What is your market segment? How to reach your customers?
5. **Competition** – How big is the market size? Who are the current players and potential new entrants?
Any barriers to entry?
6. **Technology** – Why is it unique and sustainable? Any IP protection?
7. **Management team** – What are your team's relevant expertise and experience at this stage?
8. **Financial projections** – How do you calculate the cost and the revenue?
9. **Milestones and timeline** – How to plan the achievements in different major phase of work?

Compulsory Training

To increase the understanding of the business, the first-time TSSSU applicants are required to attend at least one of the below trainings:

- 1) **Online training course ENTRE101 provided by CfE**
(<https://course.keep.edu.hk/course/516298>)
- 2) **Tips on Pitching in Info Session (5 Oct 2021, 3-4pm)**
- 3) **Craft & Deliver an Outstanding Pitch (7 Oct 2021, 6:30-8pm)**
(<http://www.picentre.cuhk.edu.hk/events>)

Pre-application Meeting

Meeting with the Entrepreneurship Consultant & team

- To understand the Technology Readiness Level (TRL) of your research for commercialization
- To provide guidance for your business plan presentation to the TSSSU vetting panel if shortlisted for interview

Before the Meeting

- Prepare a 15-min presentation for your business plan based on the template

http://www.orkts.cuhk.edu.hk/images/TSSSU/business_plan_template.pdf

Pre-application Meeting

Scheduling of the Meeting (registration opens until 3 Nov)

<https://cloud.itsc.cuhk.edu.hk/webform/view.php?id=13638073>

On a first come first served basis

Meeting Timeslots

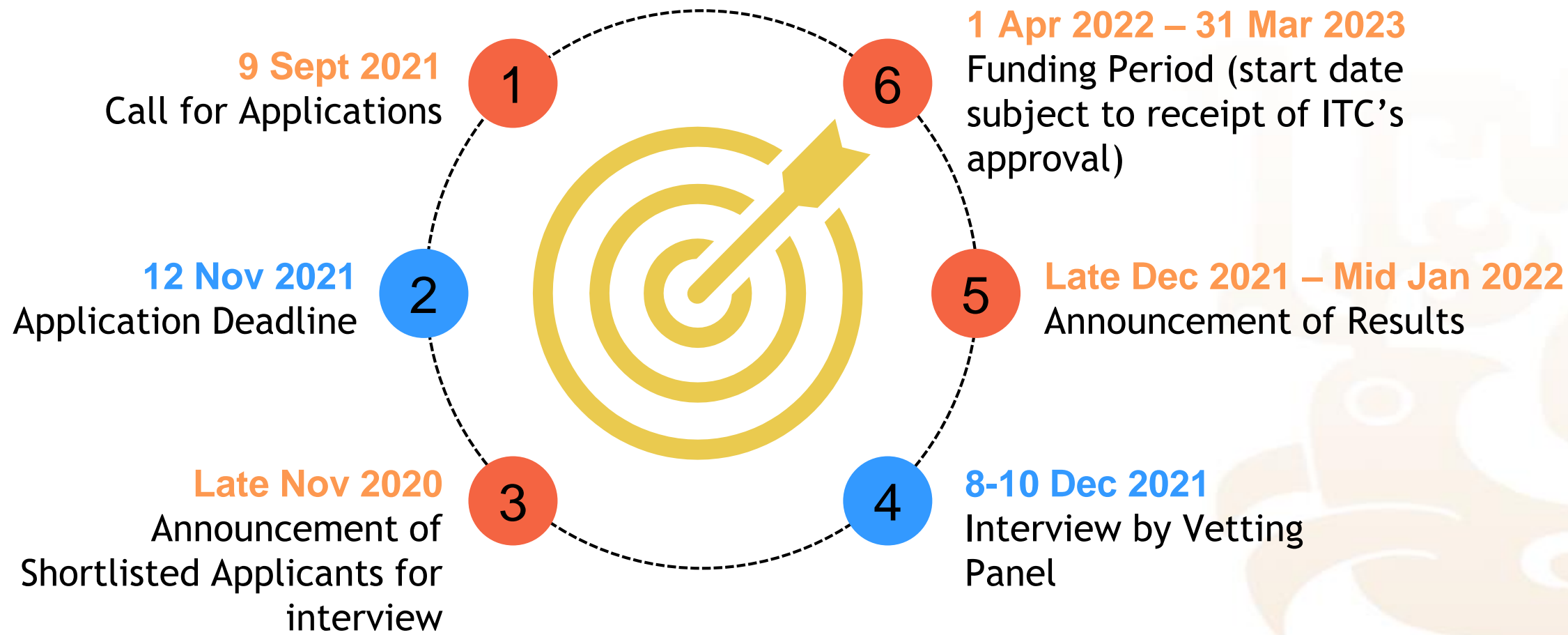
- 14 Oct 2021 (Thur) AM
- 21 Oct (Thur) PM
- 27 Oct 2021 (Wed) AM
- 2 Nov 2021 (Tue) PM
- 4 Nov 2021 (Thur) AM

Submission of Application

Application Documents

1. Application form (Annex A) (PIC and Team mix, share structure, declaration of IP, milestones, budget, endorsement, to be signed by PIC with a company chop)
 2. Business Proposal
 3. Copy of Certificate of Incorporation (CI) and Business Registration (BR)
 4. CV of all team members (max. 4 pages each)
 5. Agreement on royalties or IP rights with collaborating party (if any)
- The application form, with endorsement and supporting documents as listed in Section C of Annex A in **hard copy**, must be submitted in person to ORKTS at Unit 1A, 1/F, InnoPort, The Inter-University Hall by **5:00pm on Friday, 12 Nov 2021**
 - Online submission (**compulsory**) by **12 Nov 2021, 5PM**:
<https://cloud.itsc.cuhk.edu.hk/webform/view.php?id=13637517>

Important Dates



Contact us

Venture Acceleration Team & PI Centre, Office of Research and Knowledge Transfer Services (ORTKS)

Ms. Wing Li

3943 9568/ wingli@cuhk.edu.hk

Feedback form



Please scan the QR Code on the left or enter the following link to complete the feedback form:
<https://cloud.itsc.cuhk.edu.hk/webform/view.php?id=13639686>

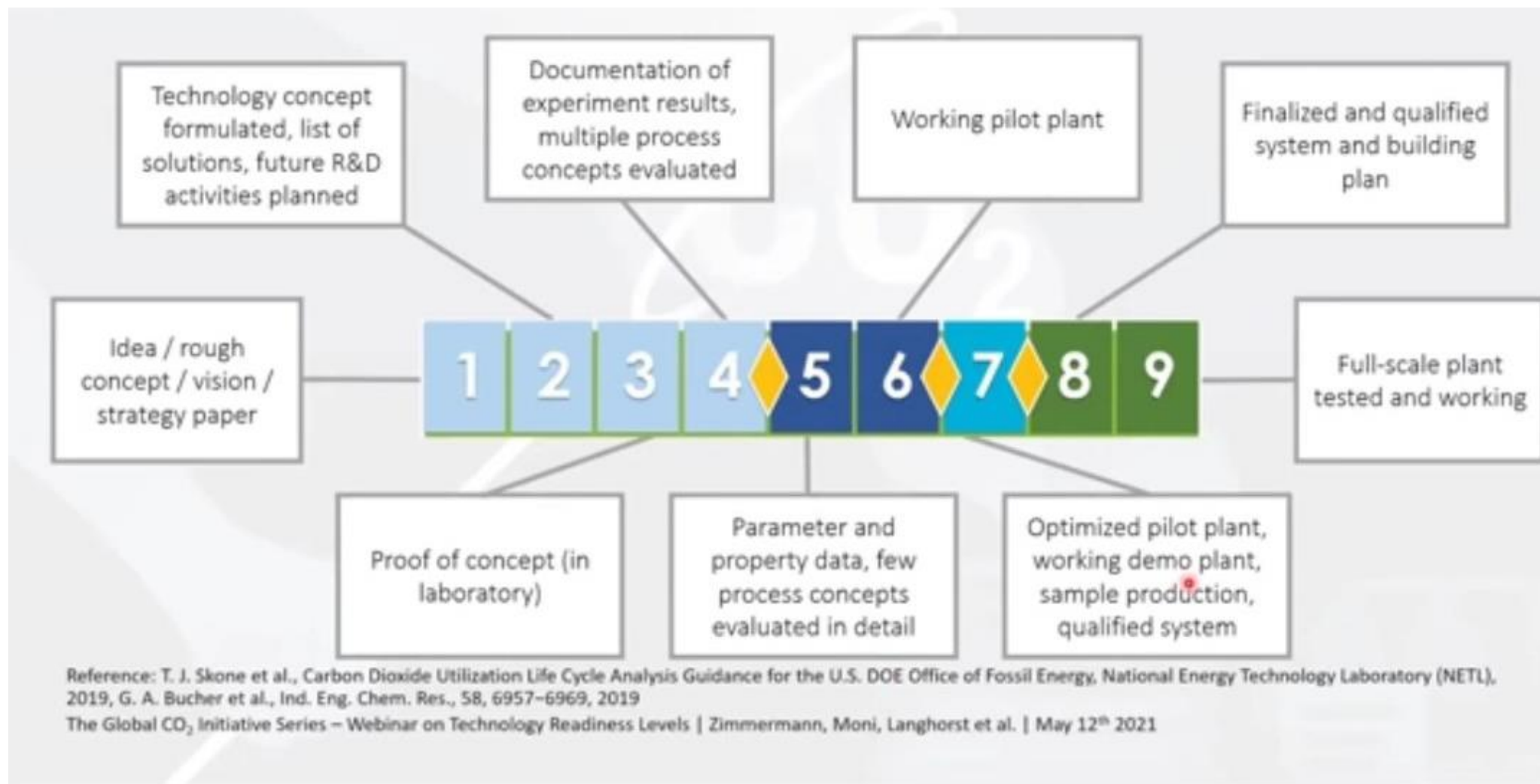
The presentation slides will be sent to audience after the info session.

	Contact	Tel
TSSSU application	Ms. Wing LI of ORKTS	3943 9568
OP & OBA	Miss Kate LEUNG of HRO	3943 5501

Thank you for joining TSSSU 2022-23 Information session

Appendix

Technology Readiness Level (TRL) – Examples (Chemicals, etc)



Technology Readiness Level (TRL) – Examples for Chemicals, etc

TRL 3-5



Lab scale

TRL 6-7



Pilot Scale

TRL 8-9



Industrial Scale