

#### Japan-U.S. Comparison (Launching and Developing Deep Tech Startups)



## U.S. Model for Launching and Developing Deep Tech Startups

Scientific Founder/Advisor **CEO** Lab Member (PhD/Postdoc) External Executive Talent



#### Startup (Pre-Funding Stage)

- Public R&D Support (STTR/SBIR) 4,000 projects / ¥600 billion per year
- Prototype Development

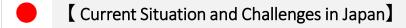


#### Startup (Growth Stage)

- Public R&D for Companies
- Public Procurement / Collaboration with Private Enterprises

# Connected to Global Ecosystems

- ⇒ Strategic development from R&D to commercialization at a global level, with themes aimed at transforming society
- ⇒ Formation of networks and communities is of utmost importance







# Startup (Pre-Funding Stage)

Limited support options



#### Startup (Growth Stage)

Public support through certified VC programs and similar initiatives

# Disconnected from Global Ecosystems

- ⇒ Needs are not fully understood, and themes that attract talent and funding are insufficiently defined
- ⇒ There is a lack of development of PhD-CEOs essential for deep tech startups

#### The Vision of GSC and Its Three Pillars



## Challenges to Address

Not connected to Global Ecosystems

Vision and the Three Core

**Programs** 

Establishing a Hub Connected to Global Ecosystems
(Global Startup Campus)



- nemes that attract talent and funding, are insufficiently defined
  - Lack of global-level support

Shortage of PhD-CEOs

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Weak perspective on ecosystem-building even within Japan (especially in terms of connectivity)

1)Thematic International Research Programs to attract researchers and investors

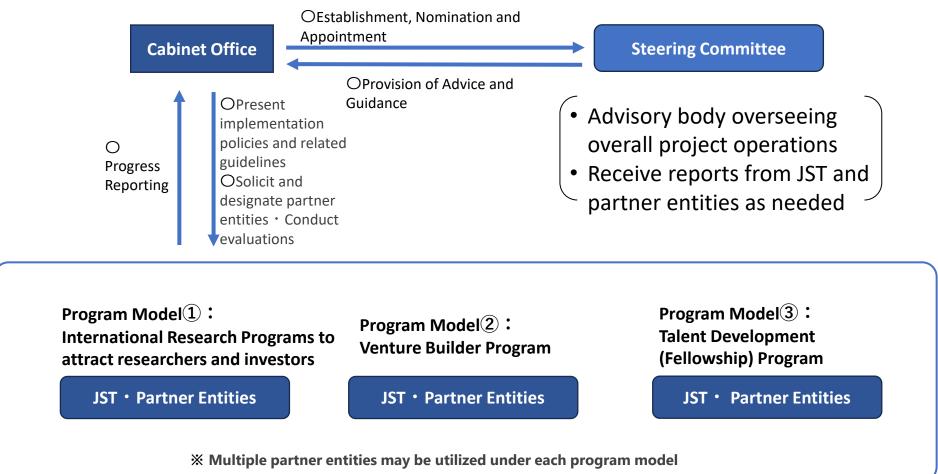
**2** Venture Builder Program

3 Talent Development (Fellowship) Program

# **Implementation Scheme for Pilot Activities**



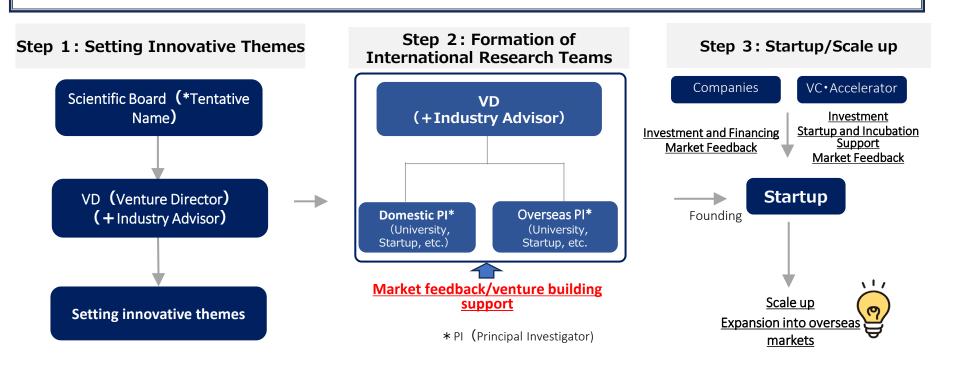
- A Steering Committee composed of external experts will be established within the Cabinet Office to oversee overall operations
- Domestic and international external organizations will be engaged as partner entities to enable flexible and agile execution



## **Program Model 1: International Research Programs to attract researchers and investors**



- To attract global talent and capital, international research will be conducted under high-impact, innovative themes in collaboration with overseas universities and institutions.
- A program with the following features will be established:
  - Setting innovative deep tech themes that are attractive to global researchers and companies
  - Appointing VDs who manage with a focus on commercialization and make swift decisions



## **International Research Program aimed at attracting researchers and investors:** Envisioned Implementation ~ An example ~

#### **Cabinet Office**

OEstablishment, Nomination and Appointment

Oprovision of Advice and Guidance

- Recommen dation of VDs and research themes
- Present the **Implementation** Policy and related guidelines
- Decide on VDs and research themes

OEstablished with the cooperation of

#### **Steering Committee**

- Advisory body for overall project management
- The advisory body will receive reports from Japan Science and Technology Agency (JST) and the Partner Entity, as needed.

#### JST • Partner Entities

XIf necessary, will collaborate with overseas organizations to establish SB, select VDs, set research themes, select PIs, etc.

The Partner Entity will be tasked with supporting the selection of VDs and the development of research themes. It is envisioned to be a foundation or similar organization with expertise in research and researcher support, and with a strong network of overseas universities and support institutions.



Develop a **BD promotion model** tailored to each research theme

## overseas organizations

# **Scientific Board**

Advisory body composed of scientists, entrepreneurs, VCs, etc. from around the world

OOpinion on selection and evaluation

**OMarket** Feedback

#### **VD** (Venture Director)

OWorkshops, etc. (Japan & overseas)

OPI selection

#### **Setting Innovative Themes**

OProgress management, advice, etc.

#### **Industry Advisor**

Provide specialized expertise to VD and PI from the perspective of commercializing

of research results.

(Domestic Univ A) (Domestic Univ B)





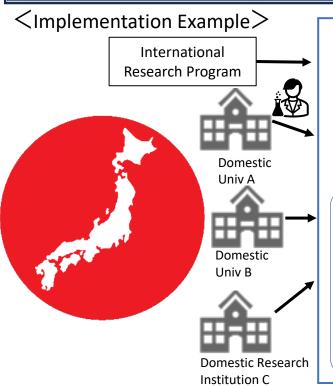
(Overseas Univ D)

※The Scientific Board and Industry Advisor are established within the partner entity.

## **Program Model 2: Venture Builder Program**



- In addition to the research outcomes of the international research program, the initiative targets
  deep tech seeds and startups originating from domestic universities, research institutions, and hub
  cities that aim for global expansion.
- Venture Builder Program will be provided in collaboration with domestic and international organizations that have a proven track record in supporting the commercialization of university research.
- The program features globally competitive execution by partner entities who have proven domestic and international commercialization support (as venture building support organization).

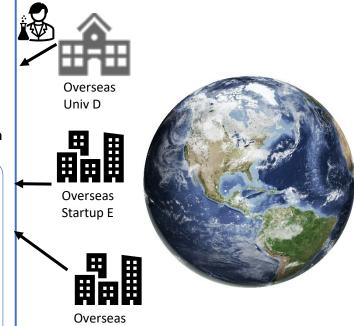




Partner Entity (Venture Building Support Organization)

Development and implementation of a Venture Builder Program for Commercialization targeting domestic researchers, including those participating in international research programs.

- Discovery of promising domestic researchers and seeds
- Provision of management knowhow
- Mentor support
- Formation of communities with overseas counterparts
- Opportunities for networking with overseas VCs



VC F



- Development of young researchers (Post Docs) with strong entrepreneurial spirit, aiming to develop talent (such as PhD-CEOs) essential for ecosystem enhancement
- Characterized by long-term overseas OJT-based training

# 1 Overseas dispatch and hosting of young researchers (Post Docs)

- Dispatch of young researchers to overseas university (※) laboratories that produce startups
- Hosting excellent overseas researchers in pioneering Domestic labs to promote network formation
- Duration: 1 year to maximum 3 years
   Willize this framework to implement emergency responses in light of recent changes in international conditions

- ② Overseas dispatch of business professionals with strong interest in deep tech commercialization
- Dispatch of business professionals with strong interest in deep tech commercialization to overseas VCs and similar institutions, implementing an OJT-based program
- Duration: 6 months to a maximum of 2 years

<u>3 Training of Venture Directors (VDs) / operational personnel with strong interest in deep</u> tech commercialization (overseas dispatch)

## **Timeline (Envisioned)**



## Basic Concept:

- Before and during the initial phase of establishing the operating entity, programs will be implemented with the support of external contractors.
- After the operating entity is fully established (steady-state), programs will be implemented in-house, leveraging insights gained from external contractors.
- Before the establishment of the operating entity
   (external contractor utilization)

② After establishment (initial phase) (external contractor utilization + inhouse preparation) 3 After establishment (steady-state) (full in-house operation)

# Cabinet Office/JST Steering Committee

Selection/ Outsourcing Reporting

Partner Entities (research, business development support, talent development, etc.)

#### Cabinet Office, etc.

Policy Reporting

#### **GSC Operating Entity**

Selection/ Outsourcing Reporting

Partner Entities (research, business development support, talent development, etc.)

#### Cabinet Office, etc.

Policy Reporting

#### **GSC Operating Entity**

Supervisory Reporting

GSC Management Team (research, business development support, talent development, etc.)

Utilize new GSC facilities (flagship campus)

Utilise existing universities, private facilities, etc.

# **Appendix**

# The Global Startup Campus Initiative (Concept)



#### **Mission**

## To create a hub of the world's leading innovation ecosystem

#### **Activities**

# I Research and development

- ◆ Focus on deep tech with significant social impact
- ◆ Market feedback from early stages of research
- ♦ Well-equipped research environment

#### II Incubation and acceleration

- ◆ Business development and intellectual property support
- ◆ Invite overseas VCs and startup support organizations
- ◆ **Spaces** for universities, research institutes, companies, startups

# III Development of human resources

- Fellowship programs to train researchers, VCs, and BD/IP professionals
- ◆ Environment to learn global business management for innovation

#### **IV** Others

- Various events to facilitate global networks
- ◆ Residence and business environment support for overseas researchers
- ◆ Research and studies on global R&D trends

## Operating entity and business deployment

#### (Operating entity)

- ◆ Formed as a private entity in which the government will be involved
- ◆ Support the entire process of R&D, startup creation, and global business development (Business deployment)
- ◆ Independent and sustainable operation utilizing diverse funding sources from investors, philanthropists, and public sectors
- ◆ Operation in an all-Japan framework by obtaining cooperation from relevant ministries and public research agencies

#### Land/facility

- ◆ Use government-owned land in Shibuya, Tokyo
- ◆ Design a facility that appeals to the world's leading talent, maximizing private-sector expertise and funding

#### **Pilot projects**

- ◆ Start leading-edge research projects on a pilot basis before the facility completion
- ◆ Start **fellowship programs** to establish global networks

# The Global Startup Campus Initiative (Image)



## **GSC** operating entity

- Organizational entity/operation
- **Support the entire process** of R&D, startup creation, and global business development.
- Achieve flexible operations. (Utilize outsourcing and other means suitable for each activities).
- Business deployment
- Independent and sustainable operations utilizing diverse funding sources
- Collaborations and cooperations with relevant ministries and public research agencies (all-Japan framework)

