# Tech Startup HOKURIKU (TeSH)

## FY2024 GAP Fund
## Activity Report and Plan for the Next Fiscal Year


Monday, March 24, 2025
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Program Head of Directors, Tech Startup HOKURIKU/
Director, Startup Promotion Office,
Headquarters for Promotion of Future Innovation, JAIST

# Keywords for 3 Hokuriku Prefectures

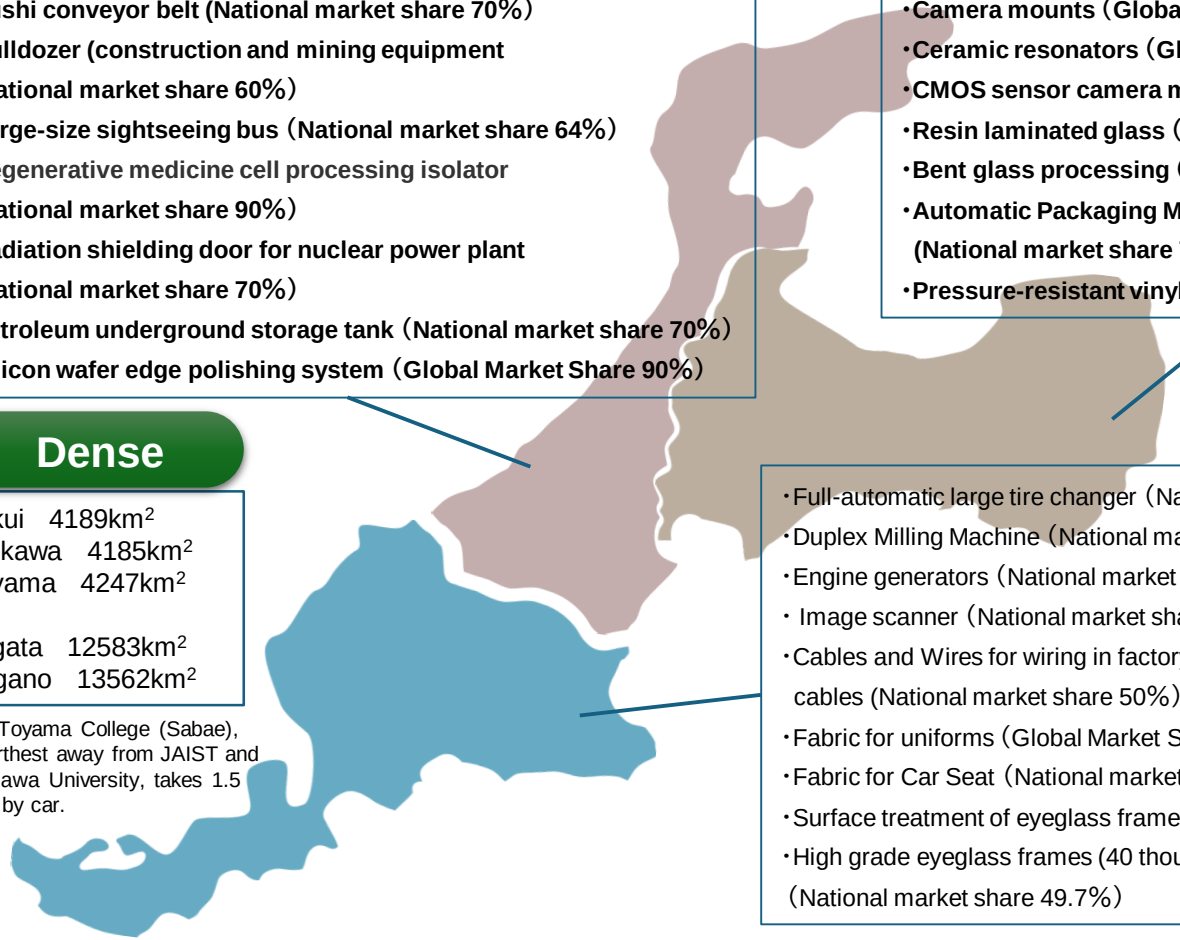
**Dense environment features Niche Top product lines, covering roughly the same size area as Niigata and Nagano.**
**Top economic Prosperity and Well-being in Japan, with strong Research Capacities.**

## Niche Top

**Examples of products with top market share in Hokuriku**
**(Source: Hokuriku Economic Federation "Top 150 Shares in Hokuriku")**

- Industrial large washing and drying machines (National market share 50%)
- Incinerator for industrial waste (National market share 40%)
- Sushi conveyor belt (National market share 70%)
- Bulldozer (construction and mining equipment (National market share 60%)
- Large-size sightseeing bus (National market share 64%)
- Regenerative medicine cell processing isolator (National market share 90%)
- Radiation shielding door for nuclear power plant (National market share 70%)
- Petroleum underground storage tank (National market share 70%)
- Silicon wafer edge polishing system (Global Market Share 90%)

- High-performance smartphone components with high-speed communication support (Global Market Share 100%)
- Shock sensors for PCs (Global Market Share 100%)
- Camera mounts (Global Market Share 90%)
- Ceramic resonators (Global Market Share 75%)
- CMOS sensor camera module (National market share 90%)
- Resin laminated glass (National market share 70%)
- Bent glass processing (National market share 70%)
- Automatic Packaging Machine (Film Packaging) (National market share 70%)
- Pressure-resistant vinyl hoses (National market share 72%)



## Dense

Fukui 4189km$^2$
Ishikawa 4185km$^2$
Toyama 4247km$^2$

Niigata 12583km$^2$
Nagano 13562km$^2$

Even Toyama College (Sabae), the furthest away from JAIST and Kanazawa University, takes 1.5 hours by car.

- Full-automatic large tire changer (National market share 100%)
- Duplex Milling Machine (National market share 65%)
- Engine generators (National market share 65%)
- Image scanner (National market share 69%)
- Cables and Wires for wiring in factory and industrial communication cables (National market share 50%)
- Fabric for uniforms (Global Market Share 20%)
- Fabric for Car Seat (National market share 70%)
- Surface treatment of eyeglass frames (National market share 70%)
- High grade eyeglass frames (40 thousand yen or more) (National market share 49.7%)

## Prosperity / Well-being

**Disposable Income Ranking (March 2021 MLIT)**

1st: Toyama 465,635
2nd: Fukui 449,794

22nd: Ishikawa 404,794

**Happiness Report 2024 (Japan Research Institute)**

1st: Fukui
2nd: Tokyo
3rd: Toyama
4th: Nagano
5th: Ishikawa

## Research Capacity

◇Life Science
Molecular Biology and Genetics (Kanazawa Univ. 7th)
Pharmaceutical Science (Univ. of Toyama 7th)
◇Technology
Engineering (Univ. of Toyama 4th)
Materials Science (JAIST 5th)
Computer Science (Kanazawa Univ. 7$^{th}$, Univ. of Toyama 8th)
Chemistry (JAIST 5$^{th}$, Kanazawa Univ. 10th)

# Current Status of Hokuriku Academic Startups

## Japan

**Startup Policy - Current Status, Challenges, and Future Direction**
**(Material released on February 13, 2025, METI)**

### Number of Startups

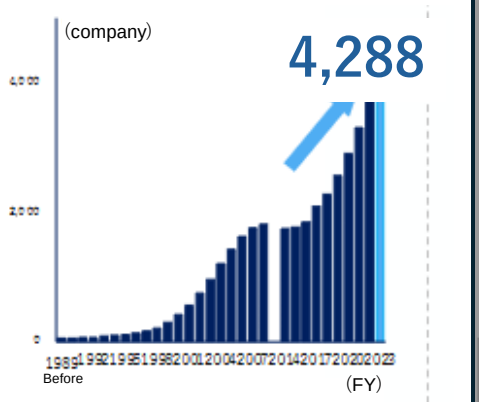
**Increase of about 1.5 times compared to 2021**

(2021: **16,100** companies→2023: **22,000** companies)

### Number of University Startups*

**Increasing every year, with record growth in 2023**

(2021: 3,305 companies→2023: **4,288** companies)




Source: SPEEDA Startup Information Research
*Targeted at University ventures established as of the end of October 2023
Source: METI "Survey of University Ventures in FY2023"

### METI University Ventures Definition

① **Research Results Venture**
② Joint Research Venture
③ Technology transfer venture
④ **Student venture**
⑤ Faculty member venture
⑥ Related venture: Ventures that have a strong connection with the university, such as receiving investment from it.

## Hokuriku

**METI Definitions ① through ⑥**

**48 / 4288 companies**

**Ishikawa：24 companies**
**Toyama：12 companies**
**Fukui：12 companies**

**with funding**

**8 companies**

**Ishikawa：8 companies**
**Toyama：0 companies**
**Fukui：0 companies**

# TeSH Opportunity Comes to Hokuriku Academia

## Government “Startup Development Five-year Plan” Nov. 2022

～Increase investment in startups 10 times by FY2027
100 unicorns and 100,000 startups～

**New Industry Creation Fund for University Startups (2023-2027)** **Supplementary budget (98.8 billion yen)**

①Deep Tech Startup International Development Program （D-Global)

②Startup Ecosystem Co-creation program (Aug. 29, 2023, Open call ）

Base-city Platform Co-creation Support

Regional Platform Co-Creation Support

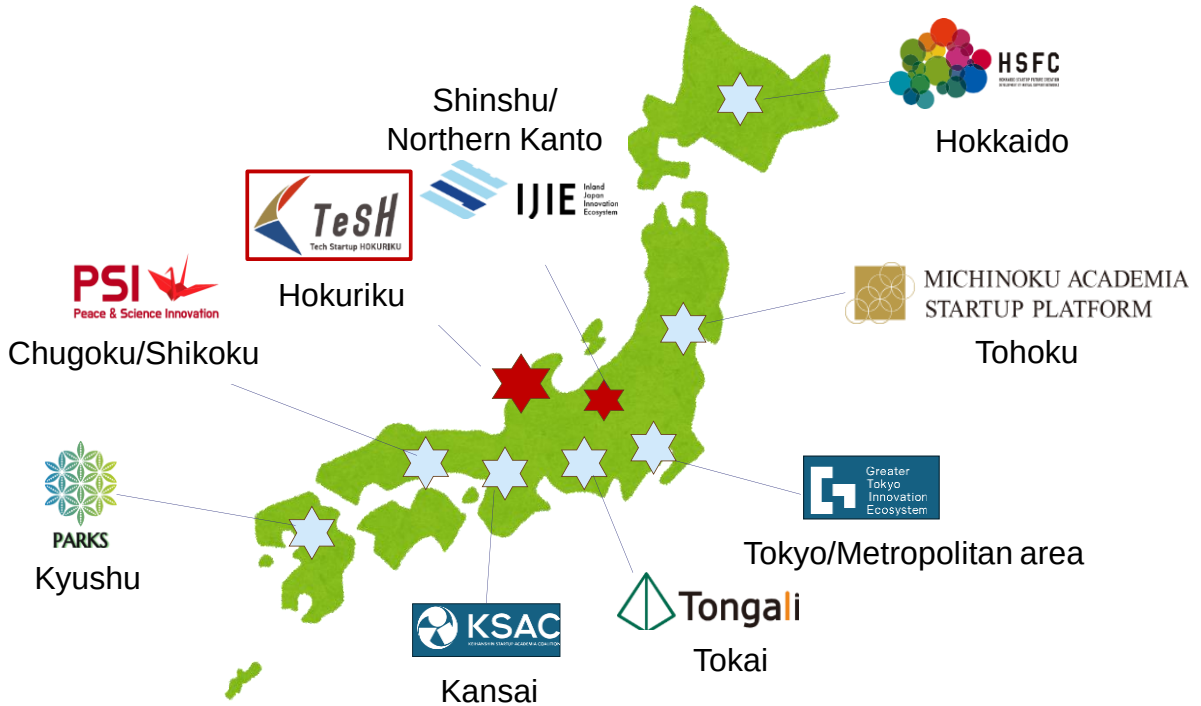
**Universities and technical colleges in the Hokuriku unite to propose**

**Tech Startup HOKURIKU(TeSH)**

| Selection Reasons | ・Collaboration in Hokuriku<br>・Application addresses startup creation challenges |
|---|---|

Base-city Platform Co-creation Support

Regional Platform Co-Creation Support




**9 Platforms adopted by the Startup Ecosystem Co-Creation Program (From Feb. 1, 2023)**

# Initiatives and Achievements in the First Year

**Are there any excellent SU seeds in Hokuriku academia?**
**How many researchers are interested in starting their own businesses?**

## 1. Seeds Discovery


## 2. Network Expansion

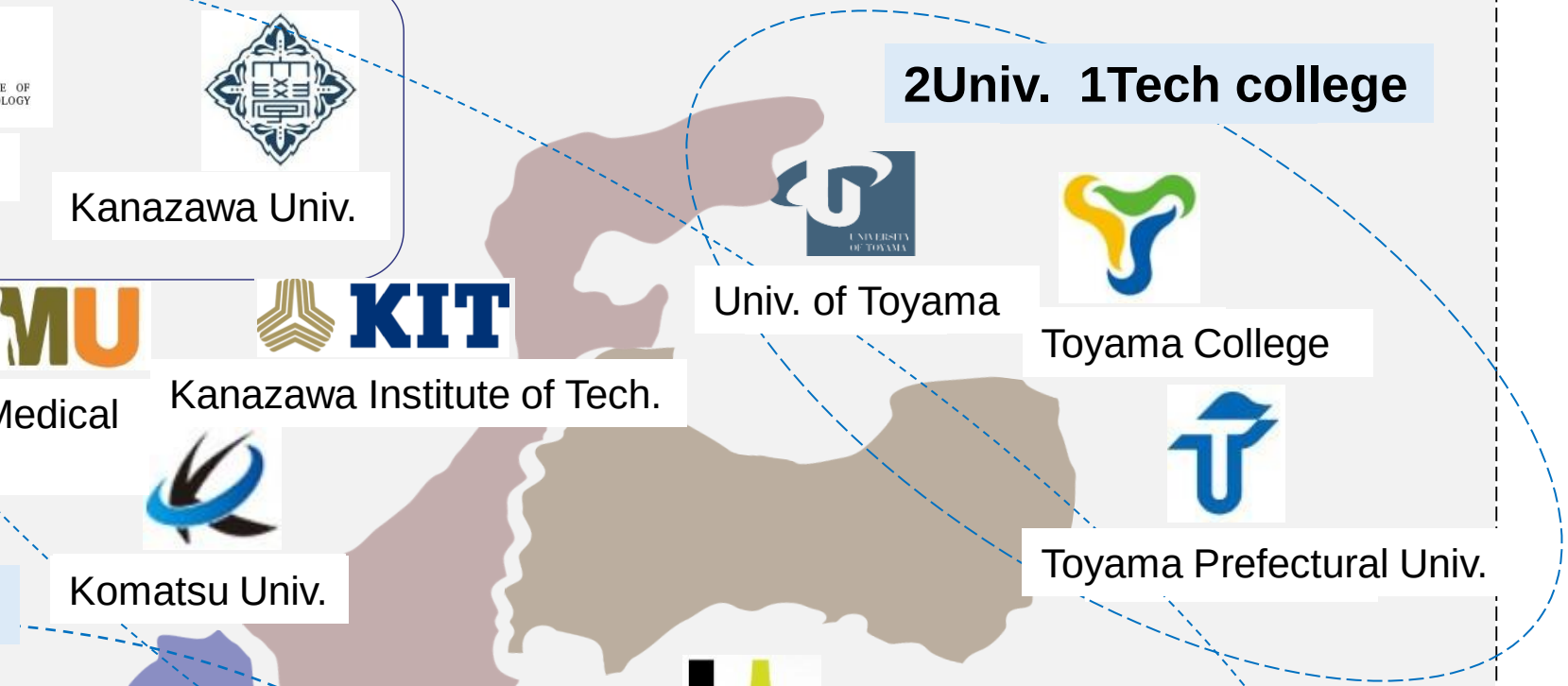

## 3. SU Environment Improvement

# Team TeSH: 13 Universities & 3 Tech colleges

**Primary Institutions**

**13 Universities & 3 Tech colleges**

**4 National Univ.**
**5 Public Univ.**
**4 Private Univ.**
**3 Tech colleges**



JAIST

Kanazawa Univ.

**2Univ. 1Tech college**

Univ. of Toyama

Toyama College

Toyama Prefectural Univ.

Kanazawa Medical Univ.

Kanazawa Institute of Tech.

Komatsu Univ.

**3Univ. 1Tech college**

Univ. of Fukui

Fukui Prefectural Univ.

Hokuriku Univ.

Ishikawa Prefectural Univ.

Ishikawa College

Fukui Univ. of Tech.

Fukui College

**KANAZAWA COLLEGE OF ART (From Dec. 2024)**

**8Univ. 1Tech college**

# TeSH Seeds Discovery System

**① Classify into 3 Groups ② Submit Entry Form ③ TeSH Mentors' Application Advice to Group B and T Applicants**

①

**Group I (Innovation)**
Substantial Experience

JAIST
Kanazawa University
Univ. of Toyama
Univ. of Fukui

**Group B (Breakthrough)**
Some Experience

Kanazawa Institute of Tech
Kanazawa Medical Univ.
Toyama Prefectural Univ.
Ishikawa Prefectural Univ.
Fukui Prefectural Univ.
Fukui College
Fukui University of Tech

**Group T (Transformation)**
No Experience

Komatsu Univ.
Hokuriku Univ.
Toyama College
Ishikawa College
Kanazawa College of art

②

ENTRY FORM (Submit cover page + 1 summary)

SU Coordinator (TeSH)

③ Application Advice

SU Coordinator (TeSH)
+
Mentor (TeSH)

③ Application Advice

SU Coordinator (TeSH)
+
Mentor (TeSH)

APPLICATION

SCREENING

ADOPTION

**STEP1**

SU Coordinator (TeSH)
+
Mentor (TeSH)
+
Commercialization Promotion Organizations

**Mentor (TeSH)**

- Financial institution background
- In charge of Private Community Relations
- Experienced in private-sector commercialization
- Business manager
- Entrepreneurial experience
- Head of University Startup Division

# 1. Seeds Discovery　155 Seeds Discovered in First Year, and Group B and T Became Vitalize

① **155 Seeds** were discovered, and **the Number of Applications** nearly **Doubled the KPI** set during the project proposal.
② In FY2025, 5 applications from Group B for STEP2 and 12 from Group T were submitted and **Spread Throughout the Group.**

**FY2024 GAP Fund Discovery**

| Discovery（Entry Form ） | 72 | Application | 54 |
|---|---|---|---|
| Group I:40 (8) | | Group I:33 (6) | |
| Group B:30 (3) | | Group B:20 | |
| Group T:2 | | Group T:1 | |

（ ）STEP2

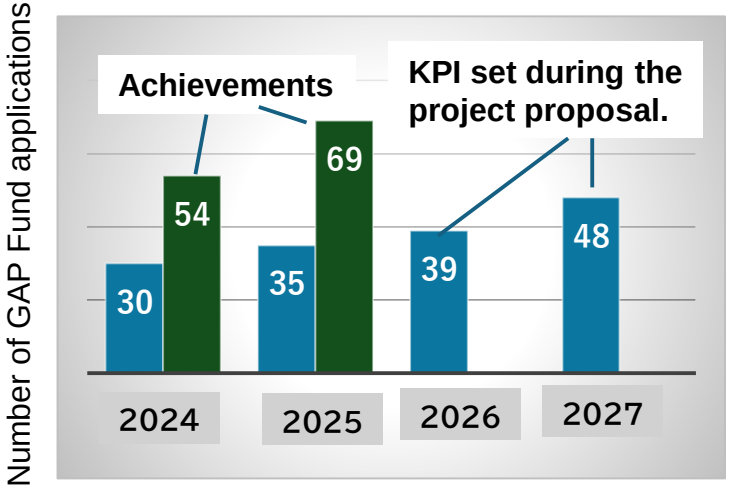
**FY2025 GAP Fund Discovery**

| Discovery（Entry Form） | 83 | Application | 69 |
|---|---|---|---|
| Group I:44 | | Group I:37 (4) | |
| Group B:24 | | Group B:20 (5) | |
| Group T:15 | | Group T:12 | |

（ ）STEP2

## Number of TeSH GAP Fund Applications

**Nearly doubled the KPI set during the project proposal.**



# Expanded Team TeSH：67 Organizations
(As of March 24, 2025)

## Cooperative Organizations 41 Organizations

Blue: New in FY 2024

1⇒16 organizations

### Prefecture, Municipality, etc.

Toyama Prefectural Govt.
Ishikawa Prefectural Govt.
Fukui Prefectural Govt.
Toyama New Industry Organization
ISICO
Fukui Industrial Support Center
**Kaga City**

### Economic Organization

Hokuriku Economic Federation
SME SUPPORT JAPAN
Chubu Bureau of Economy, Trade and Industry
Chubu Bureau of Economy, Trade and Industry-Electricity and Gas Business Hokuriku Branch
Hokuriku Industrial Advancement Center

### Finance

HOKURIKU BANK
BANK of Toyama
First Bank of Toyama
DBJ Hokuriku Branch
Fukui Bank
Sumitomo Mitsui Trust Bank
**SMBC**
**SMBC Venture Capital**
**JP Bank**

### Private Company

NIHONKAI Lab.
**KDDI**
**Asian Bridge**
**HOKURYO DENKO**
**BEING HOLDINGS**
**I-O DATA**
**ACTREE**
**HOKUDEN Business Investment**
**MEDIPAL HOLDINGS**
**KIYOKAWA Plating Industry**
**TATEYAMA KAGAKU**
**NICCA CHEMICAL**
**Sugino Machine**
**KEC**
**SHIBUYA CORPORATION**
**Relic**

### Other

JETRO Kanazawa
JETRO Toyama
JETRO Fukui
Mitsubishi Research Institute

## Commercialization Promotion Organizations 26 Organizations

Blue: New in FY 2024

9⇒26 organizations

### VC, Kanazawa University

Vision Incubate

### VC,CVC, Hokuriku

Hokuhoku Financial Group
Fukui C&C
QR INVESTMENT
Carbon Ventures
**HED**

### Private Accelerator

RICH
**Sojitz Institute of Innovations Technologies**

### VC, Outside of Hokuriku

KSP
U TOKYO IPC
INCUBATE FUND
**Beyond Next Ventures**
**JAFCO**
**ANRI**
**SAMURAI INCUBATE**
**Fast Track Initiative**
**QB Capital**
**Bio-Sight Capital**
**DEFTA Capital**
**MIRAISOZO INVESTMENT**
**Mitsubishi UFJ Capital**
**HACK VENTURES**
**AN Ventures**
**UntroD Capital Japan**
**SBI Investment**
**Quantum Leaps Ventures**

# TeSH Creates Opportunities for Venture Capitalists to Focus on Hokuriku

Nov. 13th, 2024, Matching Session in Kanazawa

## TeSH GAP Fund Premium Session 2024


**34 Venture Capitalists**

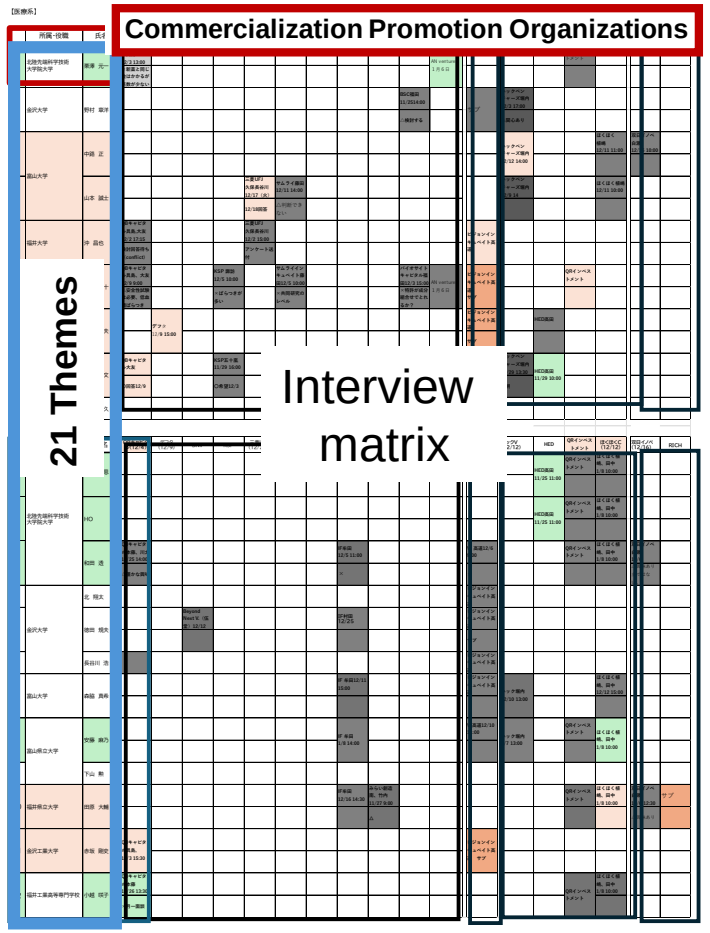
- S, A, B, C grades
- Comments
- Questionnaire for Interview requests

**Adopted 21 Themes for TeSH STEP1**

Interview Requests

## Individual Matching

TeSH conducts individual interviews
As the owner（1 hour x 46 times）




Through the stages, jointly apply for FY2025 STEP2

# A Year of TeSH

FY2023 | FY2024 | FY2025

**2024 STEP1** — 21
- 2/29 – 4/26: Application Period
- 4/26 – 7/12: Screening
- 7/12: Plan confirmation Agreement
- Adoption
- 3/10: Final Debriefing

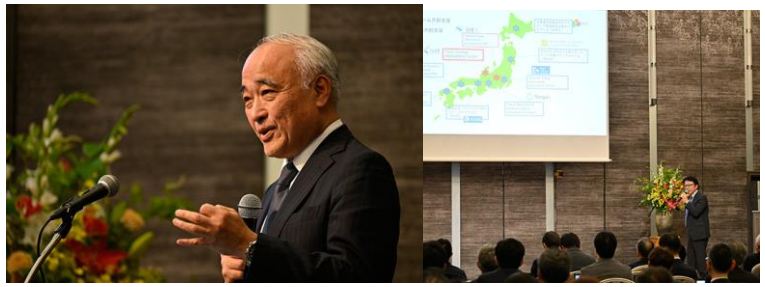
**2024 STEP2** — 4
- 9/10 – 10/10: Application Period
- 10/10 – 12/28: Screening
- Plan confirmation Agreement
- Adoption

2/1 Start of program

**2025 STEP1**
- 1/7 – June-: Application Period
- Screening
- Plan confirmation Agreement
- Adoption

**2025 STEP2**
- 1/31 – 2/28: Application Period
- Screening
- Plan confirmation Agreement
- June-: Adoption

## Kick-off Symposium (May 8)



## DEMO DAY(November 3)

## Today

**National Platform Community Event @ TIB**

# FY2024 GAP Fund STEP2

## Establishment of large-scale production and quality control technologies for high-quality exosome formulations

Life Science

**Commercialization Promotion Organization** Vision Incubate Co., Ltd.

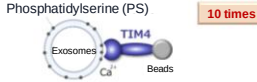
**Principal Investigator** Kanazawa University Professor HANAYAMA, Rikinari

Exosomes are vesicles 50-100 nm in diameter secreted by cells. They transfer proteins, DNA, and RNA, and therapeutic approaches utilizing exosomes are being developed.

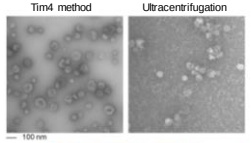
| | |
|---|---|
| **Prospect** | Development of innovative preventive and therapeutic approaches in various medical fields such as cancer, immune, infectious, neurological, cardiovascular, endocrine diseases, regenerative medicine, etc. |
| **Problem** | Insufficient guidelines and lack of standard protocols by regulatory authorities in each country for production methods, quality control, safety assessment, etc. |

Phosphatidylserine (PS)

**10 times higher purity and 100 times more sensitive**

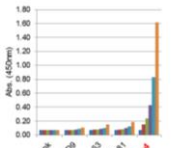



Tim4 method | Ultracentrifugation



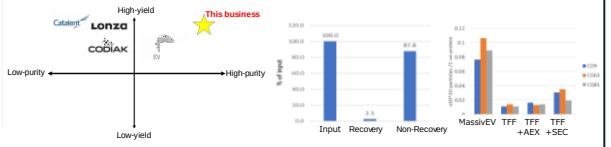

Patent 6824742; US11639924, etc.
Exosome analysis method using TIM4

FUJIFILM




Proteins coated on a microtiter plate


| Comparison of mass purification methods | MassiveV (TIM4 method) | TFF + AEX | TFF + SEC |
|---|---|---|---|
| Steps and Time | 1 step, 8 hours | 2 steps, 10 hours | 2 steps, 10 hours |
| Number of particles recovered from 1 liter | $1\times10^{12}$ | $5\times10^{11}$ | $3\times10^{11}$ |
| Purity | High (More than 10 times) | Low | Low |
| Exosomes that can be purified | High uniformity | Varies by fractionation | Varies by fractionation |
| Specific activity | 3 | 1 | 1 |




Expected establishment date: December 2027 Target market: Global

## Platform validation of drug discovery and diagnostics based on Ab-epitope profiling technologies in allergic diseases

Life Science

**Commercialization Promotion Organization** DEFTA Capital Inc.

**Principal Investigator** Kanazawa University Professor WATANABE, Yoshihiro

*Market Size*

**Global Market Size for Diagnosis and Treatment of Food Allergy → $13.5 billion (2030)**

**Market Size for Diagnostic Kits and Immune Tolerance Inducing Drugs → $680 million**

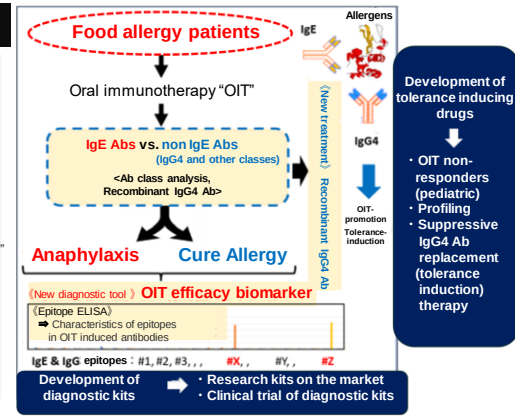
*Achievements and Development policy*

Ab-epitope Profiling

- Allergic diseases
- Infectious disease (Virus/Bacteria, etc.)
- Autoimmune and other disease

"Pathogenic epitope"
"Antibody tolerance inducing epitope"
Identify antibody targets and select candidate IgG4 antibodies

Development of diagnostic kits and tolerance inducing drugs




Expected establishment date: FY 2027 Target market: Global, Domestic

## Realization of next-generation film-type solar cells with low-cost, long life, and high efficiency for GX Innovation

Technology

**Commercialization Promotion Organization** Vision Incubate Co., Ltd.

**Principal Investigator** Kanazawa University Professor TAIMA, Tetsuya

**Our two innovative technologies overcome key challenges and enable the development of next generation flexible perovskite solar cells (PSCs)**

**Innovative Technology 1: Ionic-liquid Addition Technology**

**① Stability (Lifetime)**
Several hours of durability in ambient air
High stability of over 6000 hours without sealing

**② Manufacturing Cost**
Competitor's face high manufacturing costs due to the use of expensive sealing films
Simple sealing reduces costs

**Innovative Technology 2: Bonding Technology**

**③ Coating Technology**
Unestablished technology for neatly coating large-area films
Joint development of equipment with REIKO Co., Ltd.

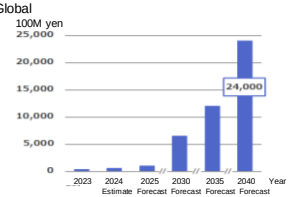
**④ Power Conversion Efficiency**
Single-junction flexible PSCs reach up to 15% efficiency
Over 30% efficiency is possible in tandem solar cells

Professor, Nanomaterials Research Institute, Kanazawa University

TAIMA, Tetsuya Ph.D.

Unit leader, Study on Ionic-liquid Addition Technology

- FY2023 37 billion yen
- FY2040 2.4 trillion yen Growth potential




**Perovskite Solar Cell Market Size**

Expected establishment date: FY 2026 Target market: Global, Domestic

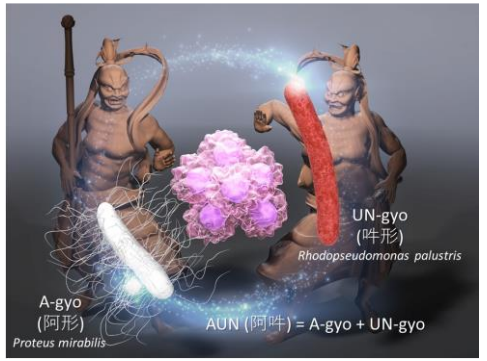
## Transcendent Bacterial Cancer Therapy

Life Science

**Commercialization Promotion Organization** QB Capital LLC

**Principal Investigator** JAIST Professor MIYAKO, Eijiro

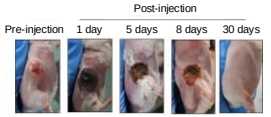
- **Successfully isolated potent antitumour bacteria, named A-gyo, UN-gyo, and AUN, from tumour biopsies**
- **AUN composed of Proteus mirabilis (A-gyo) and Rhodopseudomonas palustris (UN-gyo) expresses high biocompatibility and strong tumour suppression ability**




The image is that AUN composed of *Proteus mirabilis* (A-gyo) and *Rhodopseudomonas palustris* (UN-gyo) are defeating cancer cells by good chemistry.

Safety assessments (hematological and histological) suggest High Biocompatibility of AUN

Published in top science journal Advanced Science (IF2022=15.1) and press release from JAIST. Highlighted in many national and international media (Nikkan Kogyo Shimbun, Tokyo Shimbun, Hokkoku Shimbun, Yahoo, EurekAlert, Alpha Galileo, etc.)




Antitumour efficacy of AUN
**(Tumours are eliminated by a single administration)**

Prof. MIYAKO, Eijiro

【PATENT】
- Relating to cancer diagnosis and treatment technologies using bacteria and near-infrared-light (Entering the national phase)
- Relating to intratumoral bacteria 1 (PCT application filed)
- Relating to intratumoral bacteria 2 (PCT application filed)
- Formulation related technologies(PCT application planned)

Expected establishment date: FY 2027 Target market: Global, Domestic

# FY2024 STEP1：Life Science 9 themes

Global Market

## Japan Advanced Institute of Science and Technology (JAIST)

| Principal Investigator | Research Theme |
|---|---|
| Professor **KURISAWA, Motoichi** | Commercialization of innovative nanoparticles for treating posterior ocular diseases through eye drops |

## University of Fukui

| Principal Investigator | Research Theme |
|---|---|
| Professor **OKI, Masaya** | Development of Therapeutic Agents for Retinal Ischemic Disease |

## Kanazawa University

| Principal Investigator | Research Theme |
|---|---|
| Professor **NOMURA, Akihiro** | Development of Digital Therapeutics for Eating Disorder |

## Fukui Prefectural University

| Principal Investigator | Research Theme |
|---|---|
| Professor **Hamano, Yoshimitsu** | Oral administration of biopharmaceuticals via gastrointestinal absorption using abacterial polycationic peptides |

## University of Toyama

| Principal Investigator | Research Theme |
|---|---|
| Associate Professor **NAKAJI, Tadashi** | Practical application of simple and high-performance cell sorting device |
| Associate Professor **YAMAMOTO, Seiji** | Development of novel drugs based on the exacerbation molecular mechanism for the rare diseases that are no effective treatment |

## Kanazawa Medical University

| Principal Investigator | Research Theme |
|---|---|
| Associate Professor **SHIMASAKI, Takeo** | Business Development for Various Organ Cell Panels as Alternatives to Animal Testing, Combining Cellular Technology and Microphysiological Systems (MPS) |
| Senior Assistant Professor **NISHIZONO, Hirofumi** | Development and Commercialization of a Device for Mammalian Sperm Activation Using Specific Wavelength Light Irradiation |
| Professor **HATTA, Toshihisa** | Feasibility Study for the Commercialization of a Tissue Clearing Kit for Biological Specimens |

# FY2024 STEP1：Technology, Environment, Others, 12 themes

Global Market　Address Regional Issue

## Japan Advanced Institute of Science and Technology (JAIST)

| Principal Investigator | Research Theme |
|---|---|
| Doctoral Course **TADANO, Rion** | Business development of a harvesting robot arm and harvesting motion system mounted with a soft robotic hand |
| Professor **HO, Anh Van** | Business Investigation on a Safe and Efficiently Operable Drone with Tombo Propeller |
| Assistant Professor **WADA, Toru** | Toward a World Free from Oxidative Degradation of Plastics - Discovering Synergistic Stabilizer Formulations through Ultra-Efficient Screening |

## Kanazawa University

| Principal Investigator | Research Theme |
|---|---|
| Assistant Professor **KITA, Shota** | Power supply capable of stable operation under extreme space environments |
| Professor **TOKUDA, Norio** | Creation of Space Semiconductor Business Using World's First Inversion-Layer Diamond MOSFET |
| Professor **HASEGAWA, Hiroshi** | Development of safe and eco-friendly chemical remediation methods for heavy metal-contaminated soils |

## University of Toyama

| Principal Investigator | Research Theme |
|---|---|
| Assistant Professor **MORIWAKI, Maki** | Biorefinery project utilizing high-performance fermenting fungi for second-generation biomass |

## Toyama Prefectural University

| Principal Investigator | Research Theme |
|---|---|
| Master's Course **ANDO, Mano** | Developing a business model for nanoneedle patches |
| President **SHIMOYAMA, Isao** | AI Front Sensing Business |

## Fukui Prefectural University

| Principal Investigator | Research Theme |
|---|---|
| Professor **TAHARA, Daisuke** | Practical research plan for the hatchry-based aquaculture of mackerel ( Project Name: SABAival PROJECT) |

## Kanazawa Institute of Technology

| Principal Investigator | Research Theme |
|---|---|
| Professor **AKASAKA, Takeshi** | VTOL-type winged electric drone business with maximum payload of 50 kg and range of over 50 km |

## Fukui College

| Principal Investigator | Research Theme |
|---|---|
| Professor **OGOSHI, Sakiko** | Smart Support System for Children with Special Needs and All Related Stakeholders |

TeSH Hokuriku Region Contribution
Potential Startups ①

# Hatchery-based aquaculture of mackerel and create new market for fish farming

FY2024 STEP1

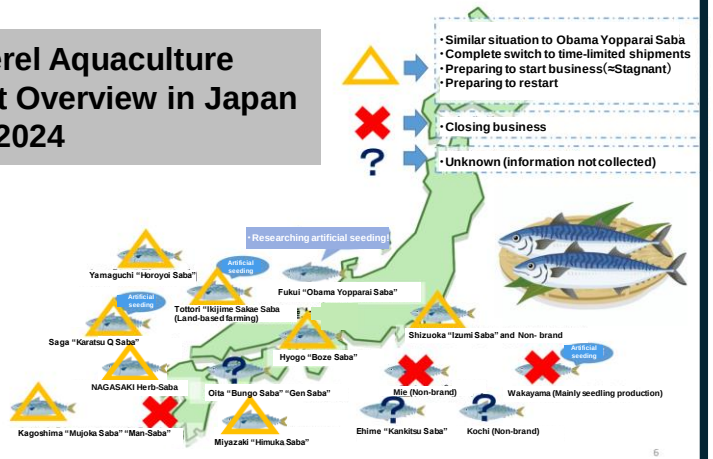
## SABAival PROJECT

Fukui Prefectural University

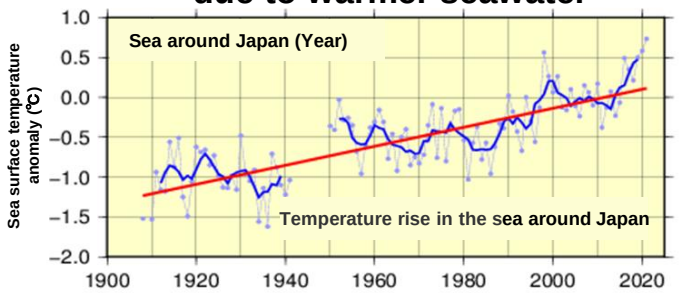
## Problem

### Mackerel aquaculture endangered in Japan

**Mackerel Aquaculture Market Overview in Japan As of 2024**




**【Factor 1】Massive mackerel mortality due to warmer seawater**




**【Factor 2】Shortage of mackerel seeds due to poor catch**

## Achievements in Obama city

From 2016

Obama City, Fukui "SABAival" project

Faculty of Marine Science and Technology, Fukui Prefectural University
Fukui Fisheries Promotion Center
Tagarasu Suisan

Research achievements in hatchery-based aquaculture through industry-academia-government collaboration

2019-2023 **"Obama Yopparai Saba" Business development in fish fattening**

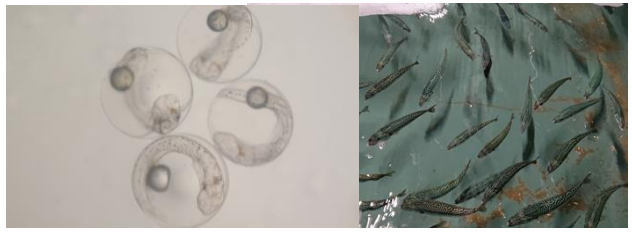
2020 **Successful production of approximately 10,000 artificial seed**

2023 **Test sales of hatcher-based aquaculture of mackerel achieved!**

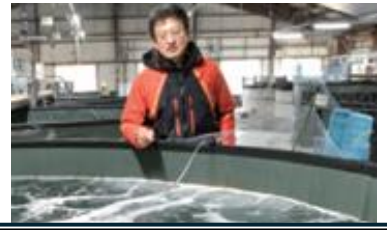
## Results of STEP1

Hatching rate of fertilized egg

**25%⇒75%**



## Challenges through startup



Prof. **Daisuke TAHARA**
Department of Advanced Aquaculture Science
Faculty of Marine Science and Technology,
Fukui Prefectural University

**Core technology -Creation of the strongest Hybrid seeds-**

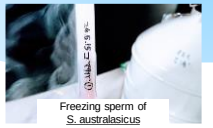
**Scomber japonicus** ✖ **Scomber australasicus**

Patent Application Scheduled

- Taste of S. japonicus & High temperature tolerance of S. australasicus
- No risk of ecological impact
- Not started in fish farming⇒High novelty

Comprehensive hatchery-based Aquaculture of mackerel system

Seeding
Feed
Environment



Freezing sperm of S. australasicus

Eggs of S. japonicus

### Business Goals

**Domestic mackerel artificial seed market ⇒12 billion yen**

**Global edible mackerel market ⇒ approx. 200 billion yen**

TeSH Hokuriku Region Contribution Potential Startups ②

# VTOL-type winged electric drone business with maximum payload of 50 kg and range of over 50 km

**FY2024 STEP1**

**Noto Peninsula earthquake** is the start of the project

## Problem

- **Customer: Transporters of materials and supplies in harsh environments such as mountainous and depopulated areas**
  - **Power line construction and maintenance:** Electric Power Company, Power Distribution Company, Power line maintenance company, etc.
  - **Transportation of supplies to mountain huts:** Mountain hut operator, etc.
  - **Disaster and Humanitarian Aid, Disaster Prevention and Defense:** Government Contractors, etc.
- **Customer Issues: Labor shortage, high costs, safety risks**

✓Shortage of transport workers(Declining population, changing work styles, and tendency to avoid physical labor)

✓High cost of helicopter transport (Rising fuel costs, etc., Human-powered transportation to arrival and departure sites)

Difficulty securing land for loading (Not nearby due to the high cost of installation. Cost increase due to necessary coordination with landowners)

High dependence on those with transportation (Difficult to negotiate the amount of goods that can be transported and the delivery date, etc. on equal terms.)

✓Significant risk, including fatalities (Risk of slipping and heat stroke at work)

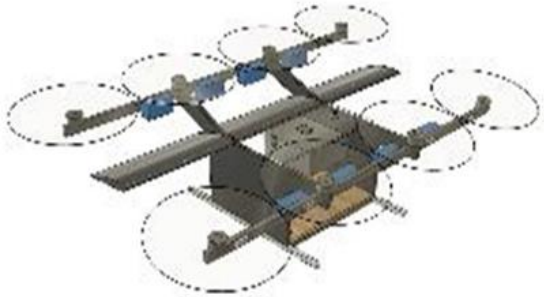
## Results of STEP1

March 2025: Unit1(50 Kg lifted)

Prof. **AKASAKA Takeshi**
College of Engineering,
Kanazawa Institute of Technology

## Challenges through startup

- **VTOL-type winged electric drone "Drone 50/50"**
  - ◎ **Maximum payload of 50 kg and range of over 50 km**
    - →Travel short distances multiple times without charging
    - →Long-distance, heavy-cargo drones are rare
  - ○ **Vertical take-off and landing**
    - →OK on uneven ground and in parking lots
  - ○ **Electric**
    - →Easy to handle
- **To the global drone market**



Drone 50/50 (image)

# Toward FY 2025

FY2024 | FY2025 | FY2026



GAP Fund

FY2024 STEP1

FY2024 STEP2

1/7 – 2/28: Application Period
June-: Adoption
FY2025 STEP1

1/31 – 2/28: Application Period
June-: Adoption
FY2025 STEP2

FY2026 STEP1: Application Period → Adoption

FY2026 STEP2: Application Period → Adoption

## Thank you for your attention!


**March 24, 2025**
**UCHIDA Fumihiko**
**Program Head of Directors, Tech Startup HOKURIKU/**
**Director, Startup Promotion Office,**
**Headquarters for Promotion of Future Innovation, JAIST**