

Sendai BOSAI-TECH Innovation Program

~Societal Implementation of the Sendai Framework for
Disaster Risk Reduction ~



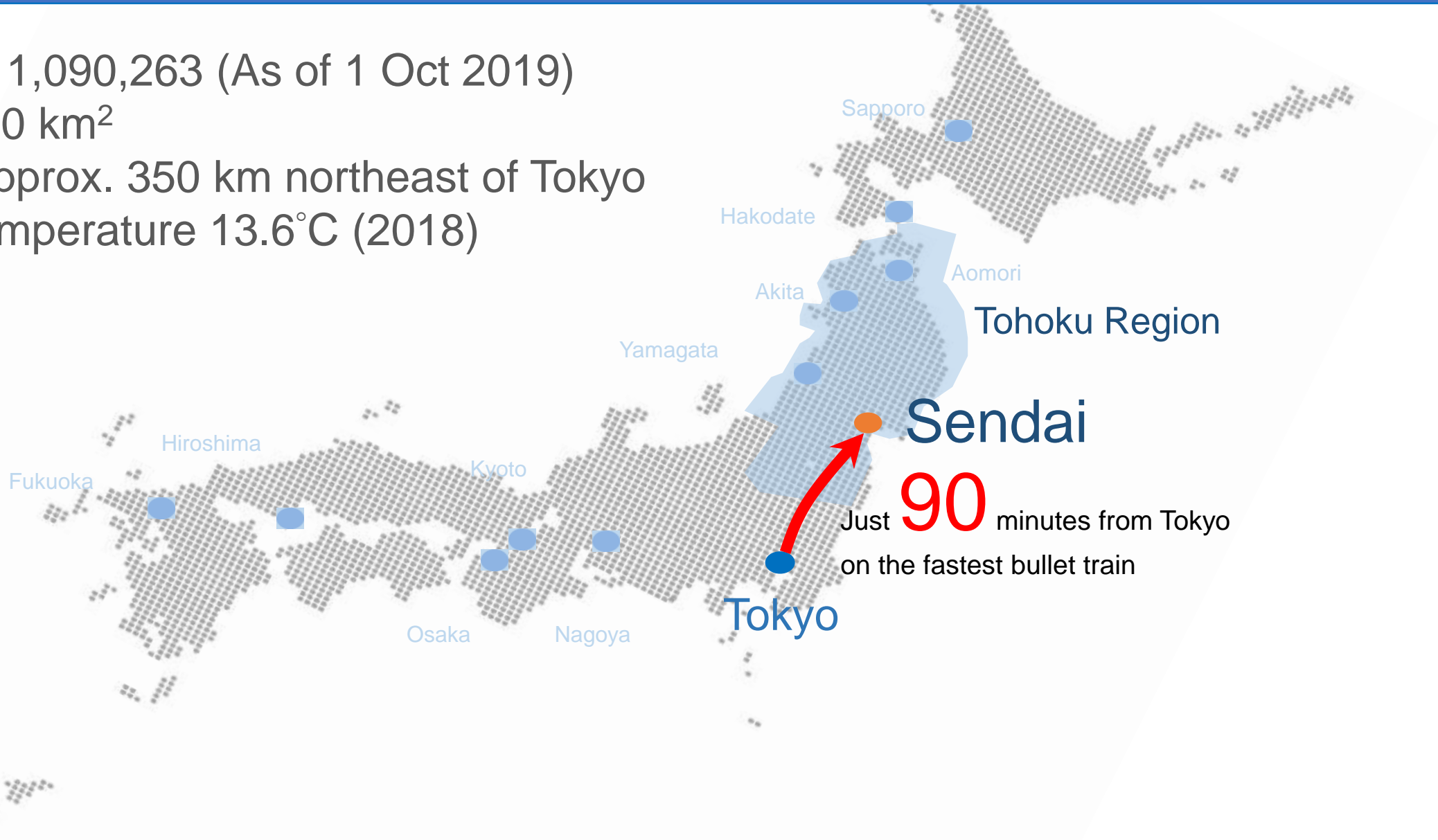
Industry Promotion Section,
Economic Affairs Bureau, City of Sendai



About Sendai

About Sendai

- ◎ Population: 1,090,263 (As of 1 Oct 2019)
- ◎ Area: 786.30 km²
- ◎ Location: Approx. 350 km northeast of Tokyo
- ◎ Average Temperature 13.6°C (2018)



Agreement Between Sendai City and Finland

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- Title** : Memorandum of Understanding (MoU) on Cooperation Between Sendai and Finland (2005-)
- Purpose** : To enable cooperation between Sendai City and Finland to assist with the development of health and wellness devices. In recent years, cooperation has expanded to include wellbeing and the ICT field to assist with the development and import/export of food products and designs, etc. that enable people to achieve fulfilling lifestyles.
- Signatories:** Sendai City, Sendai City Industrial Promotion Organization, Business Finland, BusinessOulu, THL (Ministry of Social Affairs and Health), Laurea University of Applied Sciences



**BUSINESS
FINLAND**



TERVEYDEN JA
HYVINVOINNIN LAITOS

Laurea UAS



**Oulu Capital
of Northern
Scandinavia**



OULU | BusinessOulu

This MoU enables open, flexible collaboration to suit any project involving existing partners.



社会福祉法人 東北福祉会



Agreement Between Sendai City and Oulu

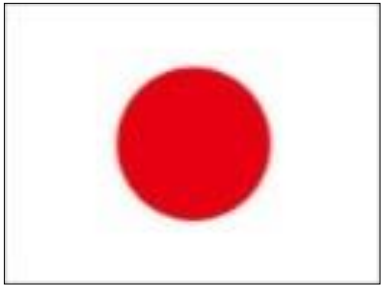
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Title : Co-Incubation Agreement for Industry Promotion (2005-)

Purpose : To enable cooperation for industry development in both the Sendai and Oulu areas.

Sendai City aims to create more sophisticated, globally-focused companies in the Sendai area through its partnership with the City of Oulu, which is world-famous for its ICT industry cluster.

Signatories: Sendai City,
Sendai City Industrial Promotion Organization,
City of Oulu, BusinessOulu



Oulu Capital
of Northern
Scandinavia



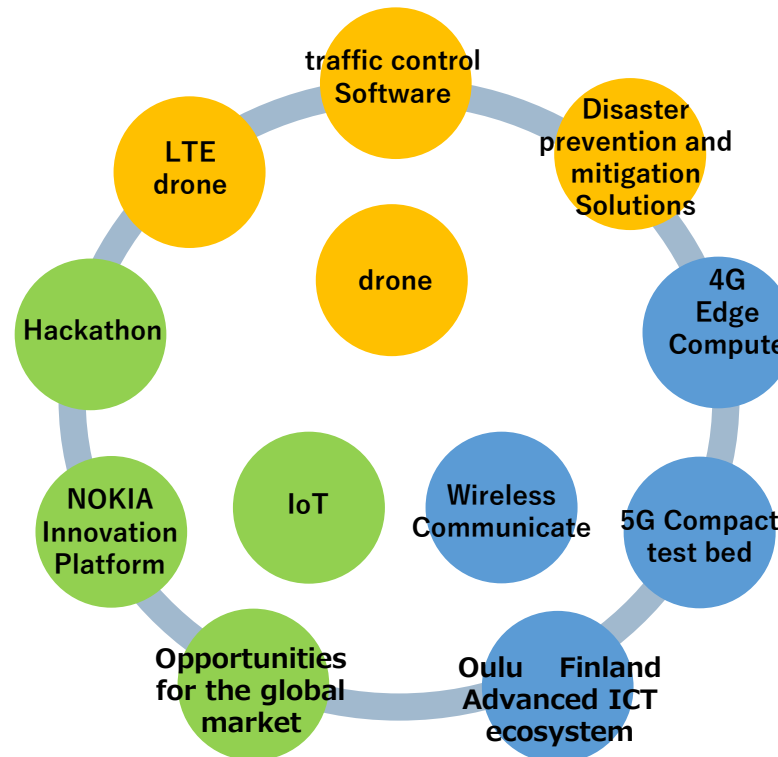
OULU | BusinessOulu

Partnership With Nokia

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Support and Initiatives Based on the Collaboration Agreement
between Sendai City and Nokia (Concluded in October 2017)

Disaster Prevention and Mitigation in Sendai
Nokia Public Safety Solutions Help



Innovation from Sendai
(Tohoku) to the World

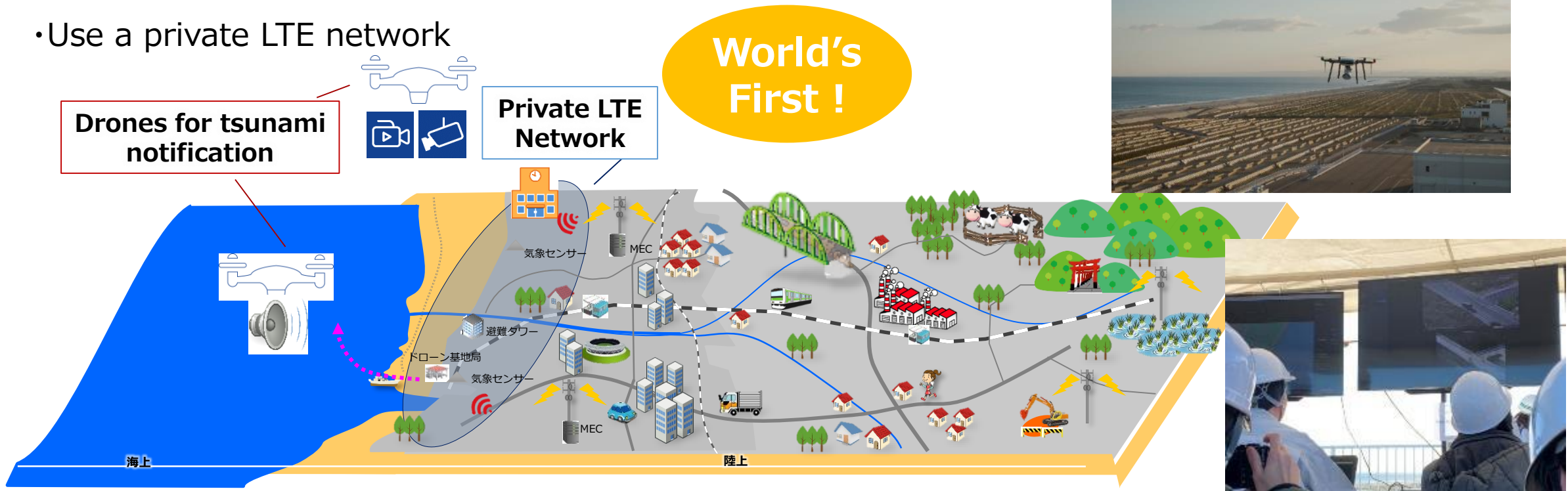
Fostering new initiatives and
ICT business models

Implementation of Advanced Technology to Sendai coastal area

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■ Flight demonstration of “Fully-autonomous drones for tsunami evacuation alerts” (2019)

- Drones fly automatically in times of disaster, give evacuation alerts through mounted speakers, and send video images to a system on the ground
- Use a private LTE network



■ FY2021 : Implementation (planned)

What the “Sendai Framework for Disaster Risk Reduction
2015-2030” is

Share reconstruction experience from the earthquake disaster and lessons with the world

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● 3rd UN World Conference on Disaster Risk Reduction (March 2015)

Disseminate lessons that Japan learned from various disasters, DRR techniques, and know-how etc.

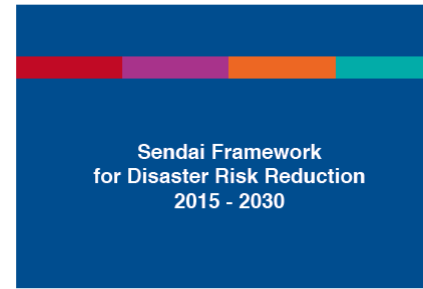
An international action plan for disaster risk reduction “**Sendai Disaster Risk Reduction 2015 - 2030**” was adopted



● Sustainable Development Goals (adopted in September 2015)

Target 11.b (Excerpt)

“By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the **Sendai Framework for Disaster Risk Reduction 2015-2030**, holistic disaster risk management at all levels”



Sendai BOSAI-TECH Innovation Creation and Promotion Program

BOSAI-TECH : Disaster Prevention × Leading ICT

Three core aims of Sendai BOSAI-TECH

**Development of
Leading
Disaster
Prevention
Solutions
through Open
Innovation**

**Groundwork for
a Government-Industry
-Academia-Banking
Collaboration
based on the Sendai
Framework for DRR**

**Evolution of
a global
“New Market
for Disaster
Prevention”**

Collaboration with Finnish companies (RBC 2019)

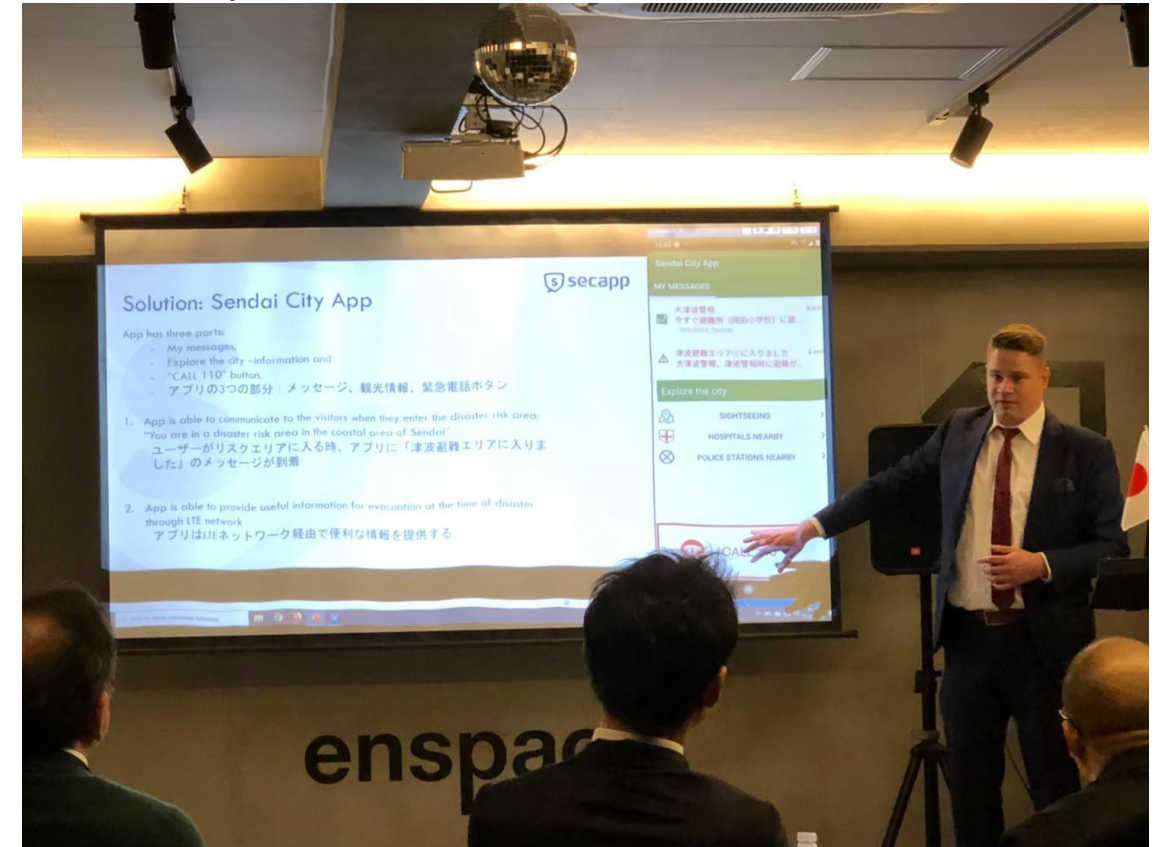
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RBC Program: Invited Finnish companies proposing new solutions using advanced ICT technology and conducted the Hackathon

Nov. 14th, 2019: Hackathon Camp in Sendai



Nov. 15th, 2019: PoC proposals and final presentations



Creation of disaster prevention solutions by overseas companies collaboration

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PARTNER

Four leading partner companies



SUPPORTER

International Research Institute of Disaster Science, Tohoku University



Fukushima Robot Test Field

■ RBC2020

~BOSAI-TECH Open Innovation Challenge~

A program to globally collect innovative ideas related to disaster prevention and support project collaborations between domestic and overseas companies as a **Collaboration of Sendai City and Fukushima pref.**

■ Nov. 2020 to Mar. 2021

■ 4 partners

■ Recruitment of 9 overseas companies

■ Entry by **37 overseas companies (17 countries)**

■ Results

- Presentation events from overseas companies to partners
- Matching of businesses such as IT companies in Sendai, related robotics industries in Fukushima, and overseas companies

Partners

The Dai-ichi Life Insurance Company

NTT docomo Inc.

Mitsui Knowledge Industry

Tokio Marine & Nichido Fire Insurance Co., Ltd.

① Collaboration themes of overseas businesses

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Partners	Theme
The Dai-ichi Life Insurance Company	Improve QOL of customers (during daily life and times of disasters) in fields closely related to insurance services (for healthcare and seniors)
NTT docomo Inc.	Safe evacuation during disasters (guidance to proper evacuation routes and distribution of information), and rescue of victims (efficient search technology for victims in need of rescue)
Mitsui Knowledge Industry (Mitsui Fudosan)	Expansion (additional services and application to social infrastructures) of earthquake sensors under development (visualization of building damage through examination)
Tokio Marine & Nichido Fire Insurance Co., Ltd.	The field of disaster prevention as a digital strategy for resolution of social issues, especially for themes related to pre-disaster aspects (predict and prepare)

STEP1

Discovering and nurturing an ecosystem foundation

Overseas Companies

Local Companies

Proposal Development ↔ Commission Collaboration

Leading Domestic Companies, etc.

STEP2

Ecosystem promotion and standardization of technology

Open Innovation Platform

Information Transmission

Online Matching

- **Technology Development for Local Disaster Prevention by Local Industries**
- Social practice in local communities
- Standardization of Technology

Industry Technologies ex.)
• Inclination monitoring IoT sensor: Nishihara Village
(NIED, NTT docomo, Kumamoto KOSEN)

STEP3

Global expansion

Expand Into local and global DRR market

- **ISO standard tech.**
- Creation of New DRR industries
- Expand market in frequent disaster occurrence areas

Frequent disaster occurrence area
Ex.: The 2004 Indian Ocean earthquake (M9.1)
• Death toll : 220,000
• Economy impact : approx. 1 trillion ¥

Social Implementation of Sendai Framework

SUSTAINABLE DEVELOPMENT GOALS

2030年に向けて
世界が合意した
「持続可能な開発目標」です

Sustainable Development of Participant Companies

Contribution to Global DRR

Sendai Economic Development Strategy 2023

	FY2020	FY2021	FY2022	FY2023	FY2024 and after
Industry Promotion Section	Project Development Program ・ Follow up RBC Project (2020・2021) ・RBC Follow up		Support collaboration ・ PLTE operation at normal time		Home and Abroad demonstration support
Crisis Management Department	P-LTE・Drones Introduction		P-LTE・Drones Operation		
DRR ISO Committee	Activities		Issuances		Global expansion of standard Technology

Related Material

World Now – JETRO Global Eye

Utilizing overseas ideas for disaster prevention -Sendai's collaboration with Finland-in 2019

<https://www.jetro.go.jp/tv/internet/2020/01/929af90b8b302114.html>

Sendai City deploys connected drones for disaster alert and rescue in 2019

(Sendai City and NOKIA Drone Flight Demonstration for notifications of tsunami evacuations)

https://www.youtube.com/watch?v=_VbET8XiN_I

BOSAI-TECH Innovation Program in 2020

<https://sendai-bosai-tech.jp>

RBC 2020

<https://rbc2020.sendai-bosai-tech.jp/>