ILC Opportunity for Tohoku City Planni

Action2025 | Vision2035

Glocal | Innovation | Sustainability

2010～
SDGs・Strategic Environmental Assessment

2014～ GreenILC

2014～ Next generation town planning study and concept development for the ILC opportunity

2019 Global Village Visioning Committee

2023～
Environmental Assessment

2020～ ILC Community Development, Study Groups by Region(Northern Iwate, Morioka, Central Iwate, Ichinoseki, Sanriku)

2021～ Community Development Model Case Study/Collaborative Research

Realization of ILC Tohoku

ILC Opportunity Community Development

ILC
2030 - 2040

A New Development Starting with the ILC

**From Reconstruction to the World's Leading Edge:
World-Class City of the Future "Tohoku**

Vision for Creating a Global Village**2019**

Action2025 | **Vision2035**

ILC triggered **Vision2035**

Vision for Creating a Global Village2019

A place where diverse people from around the world gather and challenge the resolution of humanity's issues.

「Vision for Creating a Global Village」

Vision for Creating a Global Village Committee

Suguru Ito, Chairman, General Incorporated Foundation, Land Planning Association
Makiko Uchida, Scriptwriter, Author
Seiichi Ohtaki, Director, Jissenkan Educational Institution
Jiro Terashima, Chairman, Japan Research Institute Foundation
Ken Fujii, Advisor, Tokyu Research Institute Inc.
Hiroya Masuda, Advisor, Nomura Research Institute, Ltd
Titles are as of September 2019..

Town planning study group with ILC as a trigger.
Realization of the first global village.

Vision2035

Glocal (Global×Local)

- ✓ highly skilled personnel and world-leading companies by the of ILC.
- ✓ Cultivation of the next generation with a global perspective.
- ✓ A place where various people from the world live and interact with local residents.

Innovation

- ✓ A system that produces high-level human resources and innovators with a global perspective
- ✓ Dissemination of Research Results and Technology Transffer

Sustainability

- ✓ **ILC and local communities coexist to achieve Carbon neutral**
- ✓ **Explore the future of a sustainable earth**
- ✓ **Symbiosis with Nature, Wood, Agriculture, Food Village, Recycling-oriented Society**

Action2025

Community development to solve current local issues for ILC

2020～ City Planning Study Session

- Kita-Iwate Study Group
- Morioka Study Group
- Chubu-Iwate Study Group
- Sanriku Sutady Group
- Ichinoseki Stidu Group

2021～City Planning Collaborative Research
Tohoku ILC Project Dev. Center ・Iwate-U・AAA・IVI

Glocal

①Citizn QOL (Quality of Life)・inbound demand

- ・Inbound Tourism, Settlement, Migration Policies
- ・Hotels and residences utilizing existing resource
- ・Internationalization and advancement measures

Innovation

②Creating Innovation

- ・Securing new bearers
- ・ Co-creation education and startup development

Sustainability

③Carbon Neutral

- ・Decarbonization Plan / Renewable Energy
- ・Effective use of forest resources
- ・Unused waste heat → utilization in agriculture and forestry

Confirm the potential for various regions to join community development

Vision2035

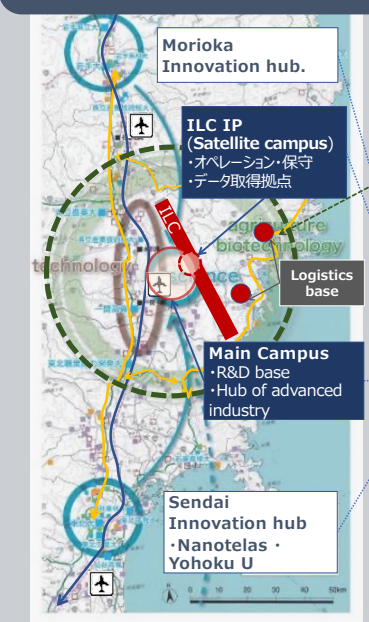
Urban development to maximize the effects of ILC on the occasion of its realization

Global Innovation Field

a place where diverse people from all over the world [illegible] of solving human issues.

**starting ILC→National Strategic Special Zones.
Tohuku to to be an Advanced Social Demonstration Field**

**Users, researchers
~12,400
+
30% of users and families
8,000**



Glocal

Residential site development

①QOL of researchers

- excellent living environment: rich lifestyle and culture of rural Japan, next-gen. cutting-edge technology a place where the world's most highly skilled people aspire to live.

Innovation

**Innovation hub.
ILC ecosystem**

②Creating ILC related jobs

- a global innovation hub that continues to produce innovative and highly-skilled human resources with a global perspective and lead the world

Sustainability

③Green ILC・Carbon Neutral

- Realizing ILC Carbon neutral with Tohoku

Glocal

A city that provides an excellent living environment combining the rich lifestyle and culture of rural Japan with next-generation, cutting-edge technology and that attracts the world's people.

Tohoku Life Attractive local life

Sake and Food culture of Tohoku

Activities in Tohoku 4 seasons

High quality hotel and hot sprig

Action2025

Collaboration with advanced medical centers, Medical tourism

intake of high-level foreign human resources and affluent people and local medical care
(securing treatment opportunities for local residents, high-level medical personnel, and ensuring sustainability of local medical management))

high-tech. medical facility such as radiation therapy

Cancer therapy
Cancer research society

Kanazawa medic tourism

Area for Next-Generation Mobility Society Implementation

Resolving issues such as the transportation of vulnerable people and new lifestyles through innovative transportation technology

Image of next gen. mobility (AAA report)
・automatic operation, eVTOL, Drone

Vision2035

Sustainable living with the advantages of rural areas.

■ Wood First
sustainable forest management

■ carbon neutral
Local Production of Energy and Wood Resources
Utilization of unused energy

■ ILC waste heat community

Wood chip

Abandoned farmland
To Smart agriculture (he… ply)

● Biomass
● Solar
● Factory
● Hot spring

■ Wood house

Old private houses and dispersed hotels

All wood construction, ~ 200~300 units

Residenti… area

Wood building
・circle・shops
・sports facility

Utilization of Existing Urban Areas

Green field farmland

Trans. Hub

eVTOL

old town

■ ILC researcher QOL innovation

Farm Dwelling

■ startup incubation
■ Demonstration site provided
・medical, health
・education・next gen. mobility
・dilital rural city
・Society5.0

■ Secured living environment for ILC researchers by utilizing existing old houses

Innovation

Global innovation hub that continues to produce innovative and highly-skilled human resources with a global perspective and lead the world

World level research institutes are alredy in Tohoku

Accelerator industries, users, institutes,

2024～
NanoTerasu

2023～
Fukushima inst. for Research Education and Innovation(F-REI)

Action2025

Fostering human resources who can play an active role in the next generation and be recognized around the world

Both prestigious and regional schools promote International Baccalaureate accreditation

Trad. school IB/Dorm.
Mixed schol IB/ Returns and Japns
Japan standard IB
Internationalizatio n of public schools

Municipalities, financial, commerce and industry, educational, local businesses

elemental to colledge
collab. satellite of local×urban univ., over seas
Innovation hub

Int. Bach. STEAM Edu. PBL(Project-Based-Learning) EdTEC

Solving Glocal Issues
Regional development cooperation

Highly skilled personnel, partners, and family members "Tohoku" provides international caliculum

Vision2035

ILC joins group of int. research institutes in Tohoku:
Global Innovation fields in Tohoku

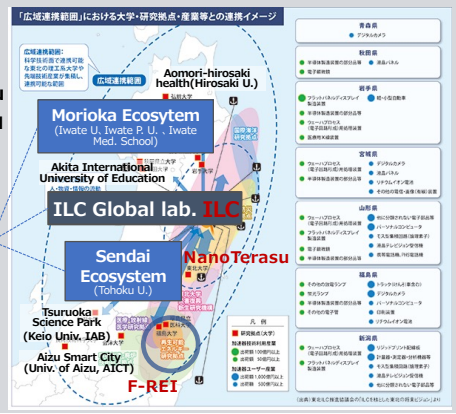
Tohoku will be Advanced Social Demonstration Field after approval of ILC (Special National Strategy Zone)

Providing Innovative personnel

Tohoku Global Innovation Field

ILC ecosystem
(Supporting ILC related industries, businesses)
・knowledge transger
・riaison office

ILC Global Lab.
Hi-tech personnel of IL related start-up industries



サスティナビリティ …ral with Tohoku Innovate collaboration with the key industries, and disseminate to the world

Decarbonizing Communities Project

・ahead of the curve in decarbonization

Introduce renewable energy utilizing regional characteristics

Forest management. Absorbing Cos

出典： SolarJournal HP、林野庁HP
日本経済新聞 HP、松尾八幡平地熱発電所(アーバンエナジーHP)

Action2025

Introduce local renewable energy and wood resource recycling, with a view to achieving carbon neutrality in the life cycle of ILC

Caron neutral partnership of ILC and local community

(Whole Life ILC-Carbon Neutral)

CO2

ILC energy
33.7/year ※1

Saving energy of ILC facility

Lower power CO2 rate
0.482(2021)→0.100(2050 goal)

residual CO2

①conservation

②Utilizing ILC waste heat
→ Lowe fossil energy

③Co2 absorption by forest

④Fixation of CO2 by wood construction

ILC research
ILC const.
26.6 ※2

CO2 absorpti on ・offset

carbon offset

※1 ILCの年間消費電力量：7億kWh 東北電力CO2排出係数(2021年)：0.482kg-CO2/kWh
※2 Suzanne Evans(ARUP)算出による建設時のライフサイクルCO2排出量

Infrastructure to promote ILC energy conservation

Sanriku Renewable Energy Field (power line augmentation)

Vision2035

Wood ILC facility,
Energy circulation campus by using biomass, waste heart etc

ILC IP campus
surrounding abandoned farmland to be a state-of-the-art agricultural and forestry production center

ILC Undergroumd facility

■Waste Heat from ILC IP(40-70℃)

■Image of waste heat utilization
・ILC IP campus (air condition) +wood Wood processing and drying facilities + Agricultural facilities

Example, wood accelerator facility (PSI)

ILC IP campus
・On site office
・control room
・exp. maintenance, factory
・power, air condition

Effective utilization of waste heat from ILC facilities Export the most advanced role models in agriculture and forestry to the world

Agricultural greenhouses, plant factories, mycorrhizal mushrooms

東日本機電開発株式会社 八幡平スマートファーム 久慈バイオマスエネルギー/マルヒ製材

On shore

Wood/woody biomass drying

(一財)地球システム総合研究所 ILC計画研究会(IVI) 街づくり部会 2024.06.23.