



International Partnership
for Hydrogen and Fuel Cells
in the Economy



Hydrogen Cluster in Japan

- Local Government's Initiative to Promote Hydrogen -

05 December, 2018

Eiji Ohira

**New Energy and Industrial Techno
logy Development Organization (NEDO)**

Two Major H₂ Cluster (City) in Japan



Fukuoka Hydrogen Strategy

Fukuoka Pref.

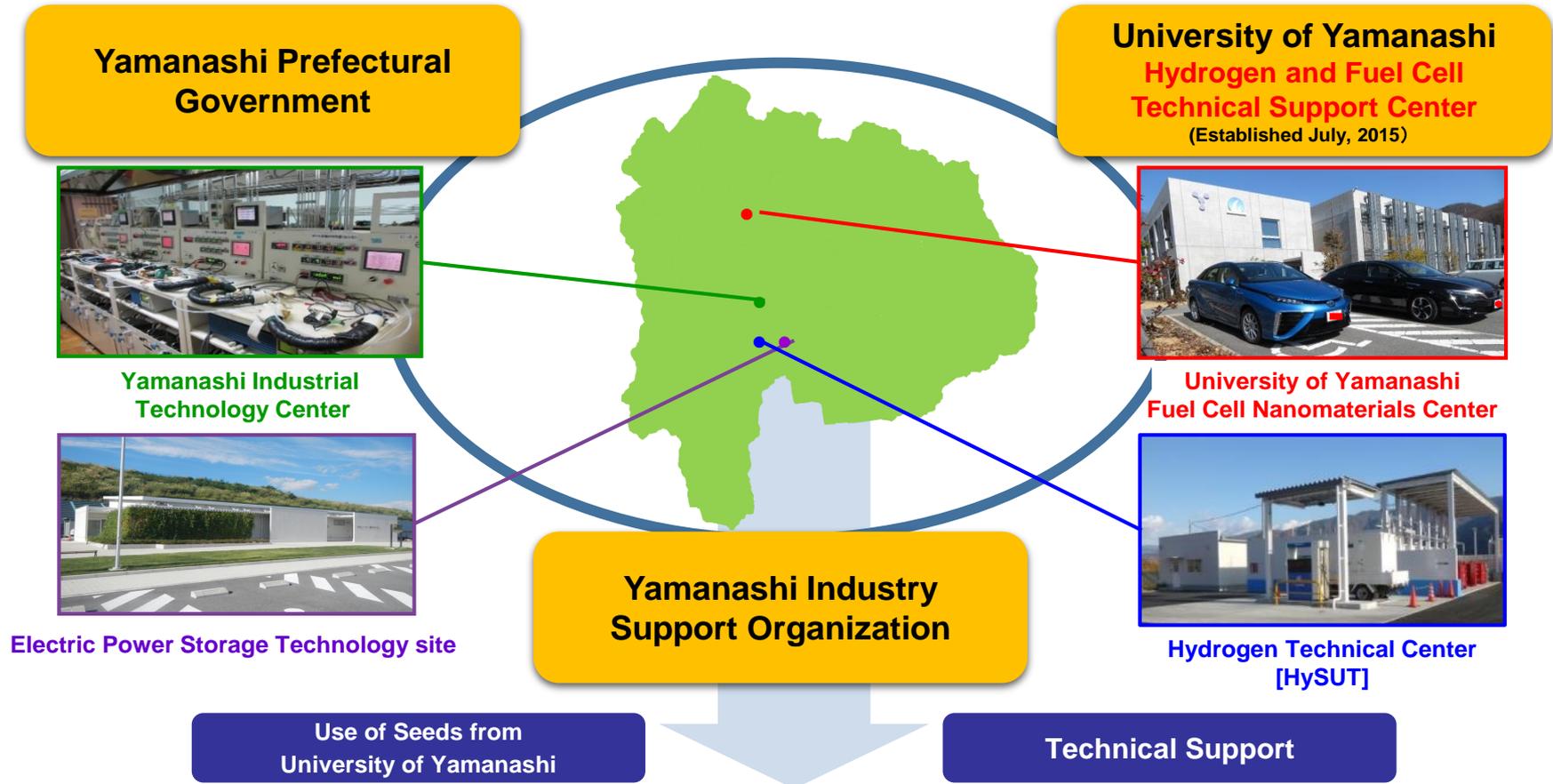
Yamanashi Fuel Cell Valley

Yamanashi Pref.



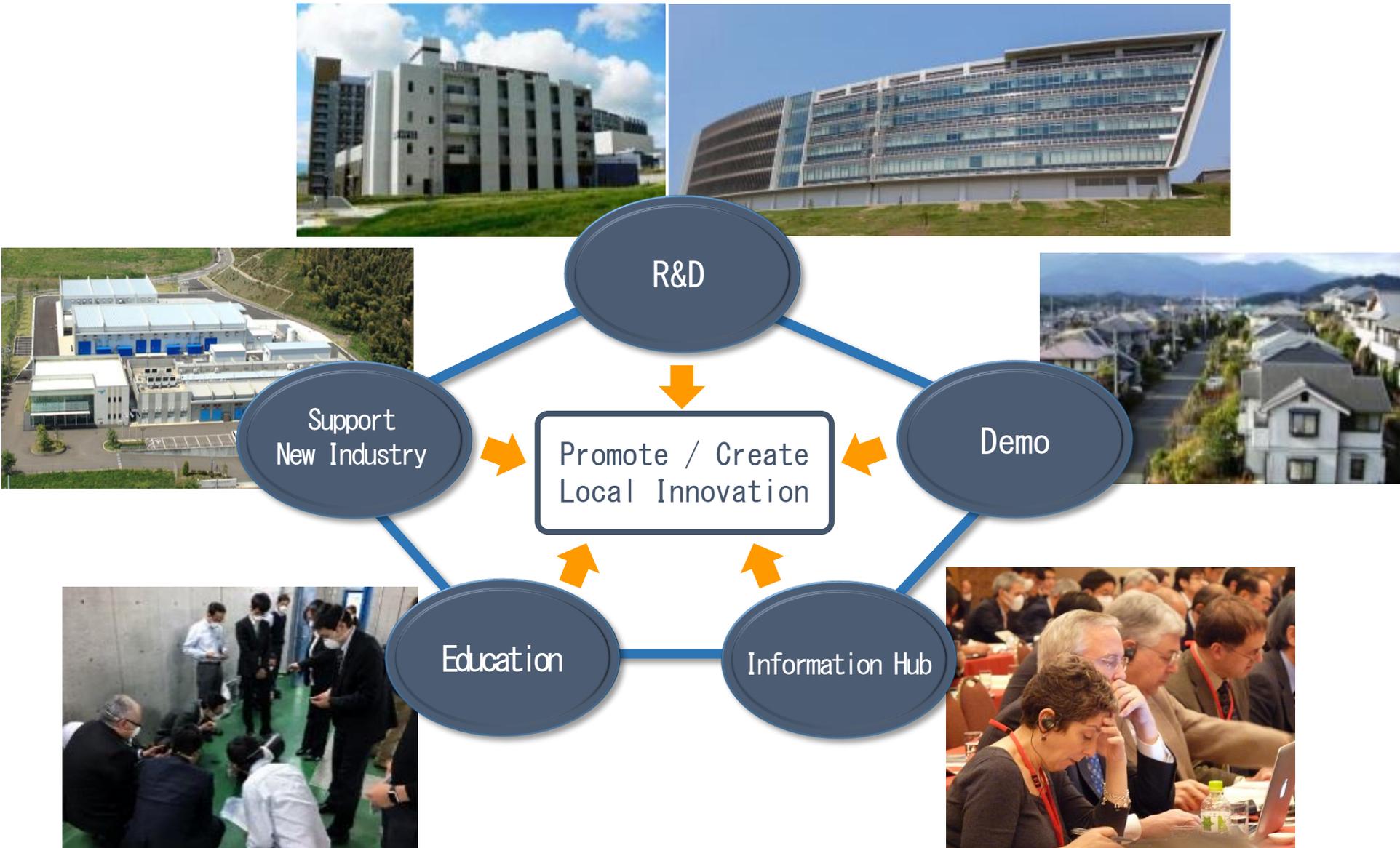
Structure of “Yamanashi Fuel Cell Valley”

Industry-Academia-Government collaboration

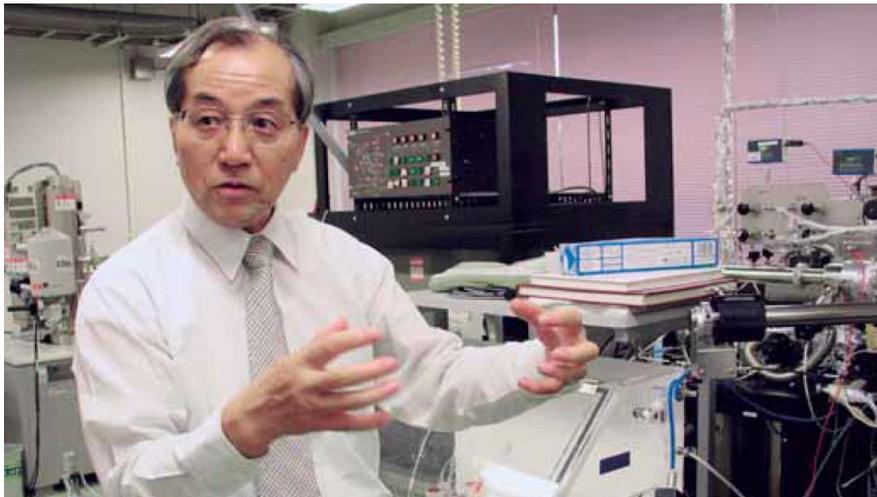


Contribute to the promotion of the hydrogen and fuel cell related industries !

Key pillars of “Fukuoka Hydrogen Strategy”

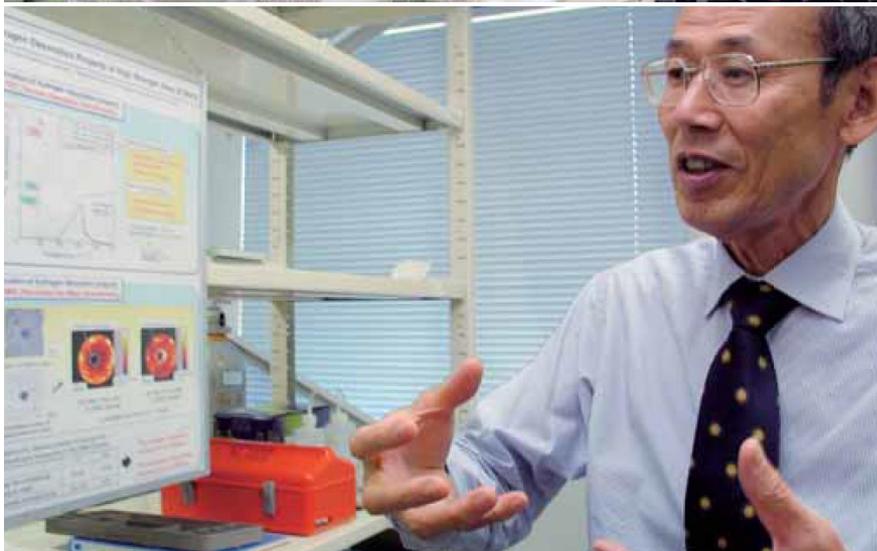


Strong Leaders with Unique Research



Professor Masahiro Watanabe
Yamanashi University

Visualization of fuel cell reaction



Professor Yukitaka Murakami
Kyushu University

*Elucidation of the mechanism of
hydrogen embrittlement*

They were Project Leader for NEDO project in mid. 2000s

Core Universities as Center of Excellence

Yamanashi University



2001.4:
Clean Energy Research Center
2008.4:
Fuel Cell Nanomaterials Center

Kyushu University



2004.4:
Hydrogen Technology Research Center
2006.7:
Research Center for Hydrogen Industrial Use
and Storage “HYDROGENIUS”
2010.12:
International Institute for Carbon-Neutral
Energy Research “I²CNER”
2012.1:
Next-Generation Fuel Cell Research Center
“NEXT-FC”

Support facility for industry

Yamanashi Pref.



2016.4:
Fuel Cell Evaluation / Testing Facility
at Yamanashi Industrial Tech Center
2017.12:
Hydrogen Technology Center for HRS

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2009.3:
Hydrogen Energy Test and Research Center
“HyTReC”



Demonstration as living lab.

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PV (10MW) + Energy Storage

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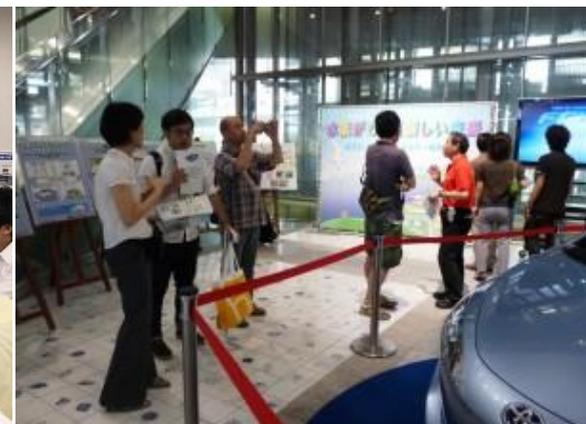
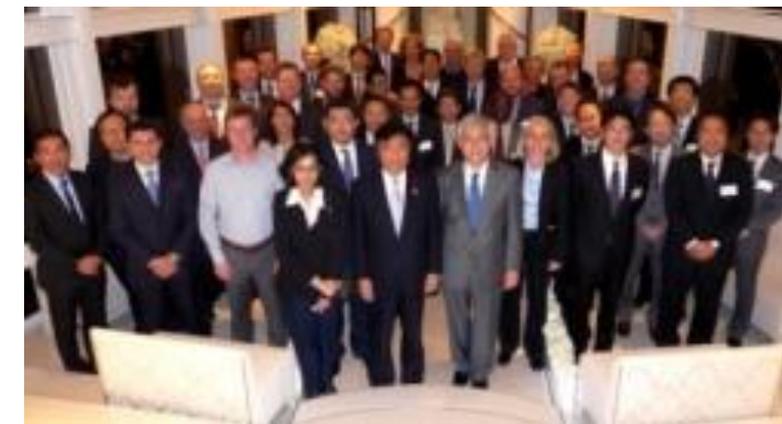
Utilizing by-product hydrogen from steel industry

Education and Outreach

Yamanashi Pref.



Fukuoka Pref.



Implementing bodies

Yamanashi Pref.



Established “Yamanashi Fuel Cell Commercialization Promotion Committee” in 2009

Established “ Yamanashi Fuel Cell Industrialization Promotion Committee” in 2016 and compiled roadmap for “Yamanashi Hydrogen and Fuel Cell Valley.” in 2018.

Fukuoka Pref.



Established “Fukuoka Hydrogen Strategy Committee” in 2004 with Governor's Leadership

Over 800 members from industry, academia , administration

Conclusion

- *Starting from Core technology, developing eco-system*
 - *Core: Unique and Basic technology*
 - *Technology Supporting function*
 - *Several Demonstration as loving lab.*

- *Support & Leadership from Local Government*
 - *Developing public- private partnership*
 - *Education & outreach collaborate with Industry / academia*

- *Sustainable approach*
 - *“Hydrogen Valley” was not build in a day*
 - *But We can accelerate with a strong willingness*



Thank you!