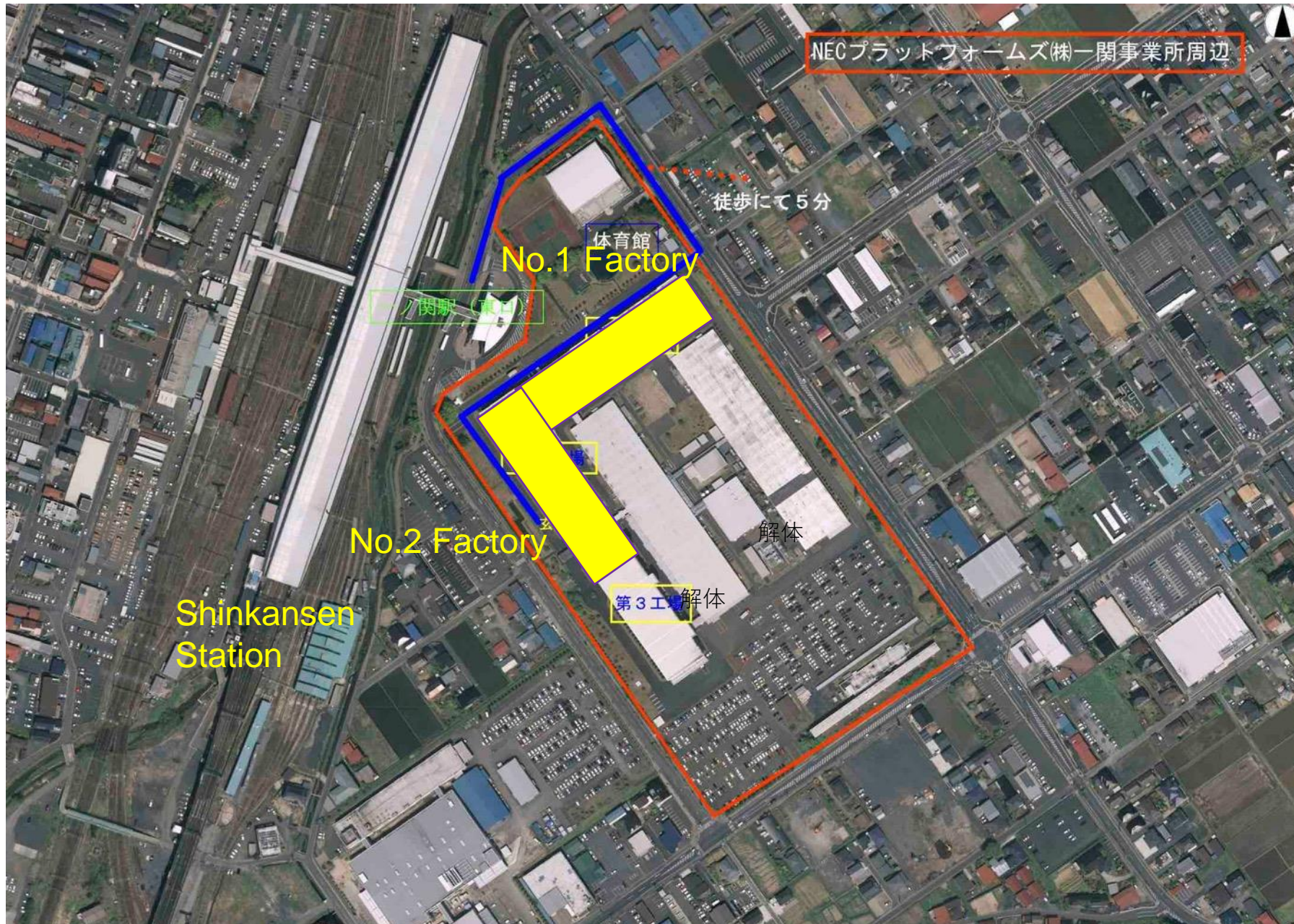


# ***Old-NEC-Factory Utilization proposal for ILC accelerator Facilities***

H. Hayano 10272019

# Old-NEC-Factory Building



## No.1 Factory

~133m x 30m

3-floor building

Total usable area 5320m<sup>2</sup>

(it was not correct)

## No.2 Factory

~127m x 30m

3-floor building

Total usable area 6000m<sup>2</sup>

(it was not correct)





NEC NEC

No.1 Factory

Receiving entrance

No.2 Factory

Main Entrance

Ichinoseki-station  
East gate

NEC sub-entrance

Factory Outside



Low ceiling room (~3m)

Factory Inside

~30m x ~100mクラスの部屋が 3-4室/階

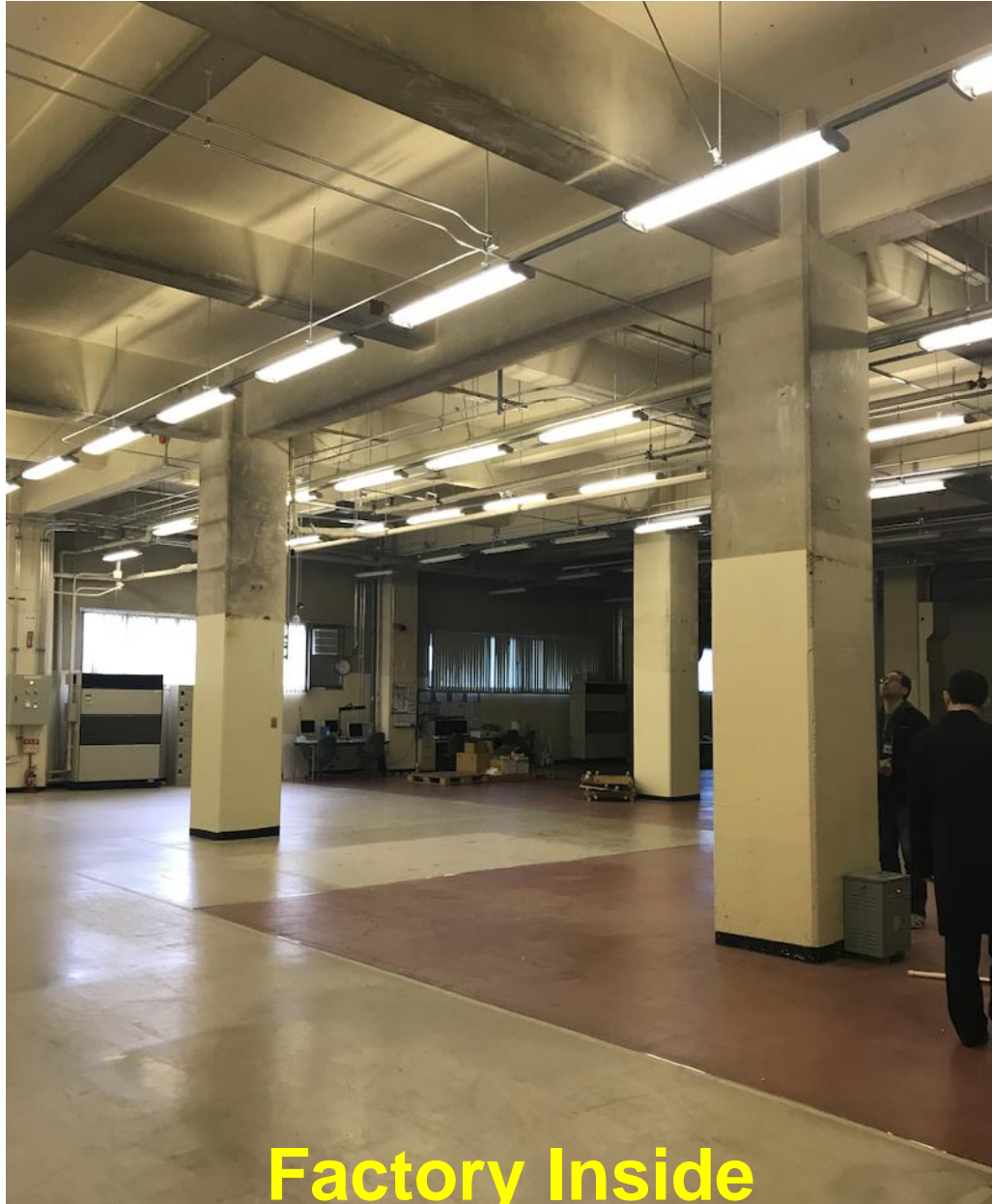


Low ceiling room (~3m)

Factory Inside



**High ceiling room (~4-5m)**



**Factory Inside**

**Receiving entrance room**



**Factory Inside**



Mizusawa-Esashi

ILC250

IP

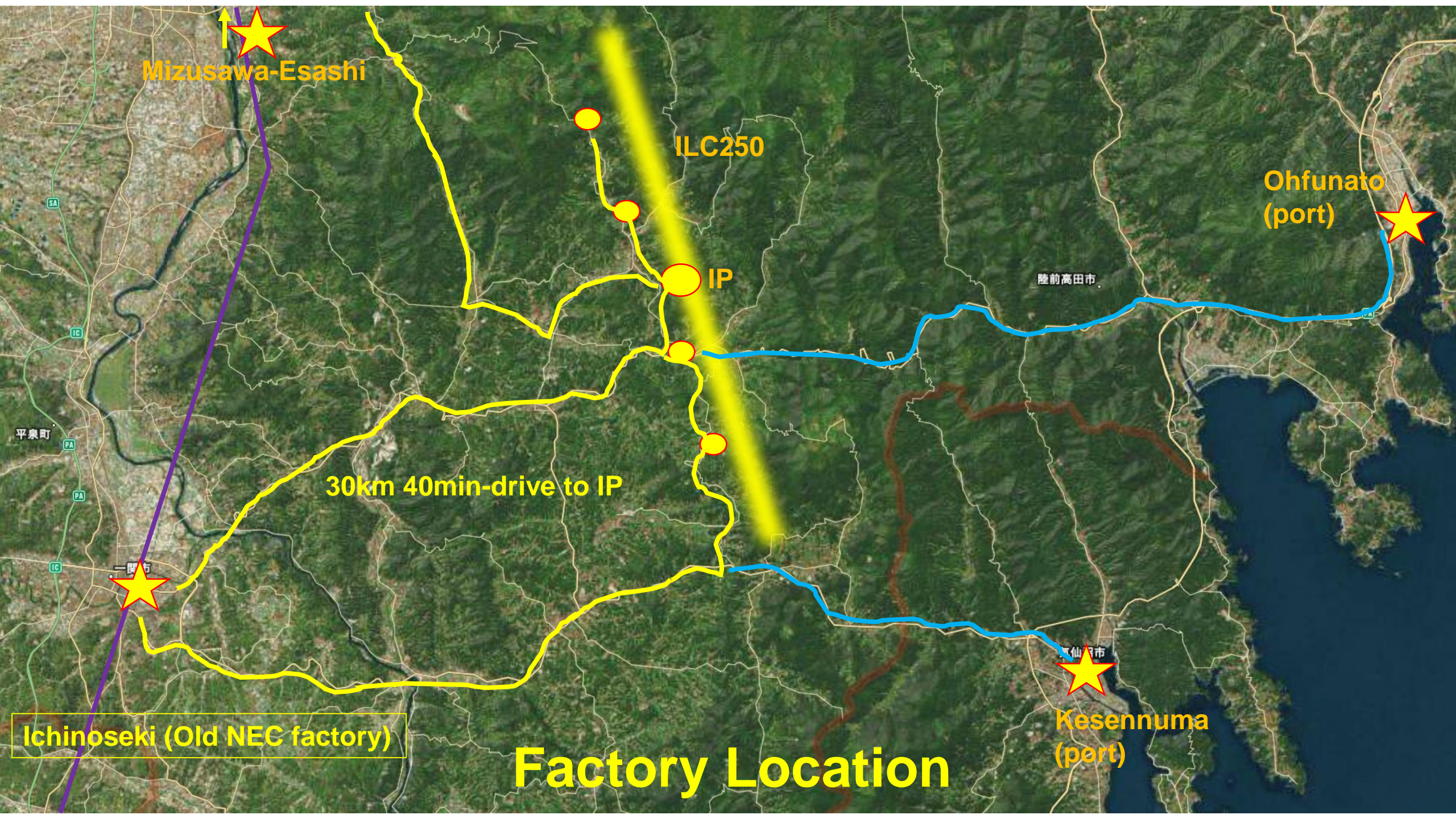
Ohfunato  
(port)

30km 40min-drive to IP

Ichinoseki (Old NEC factory)

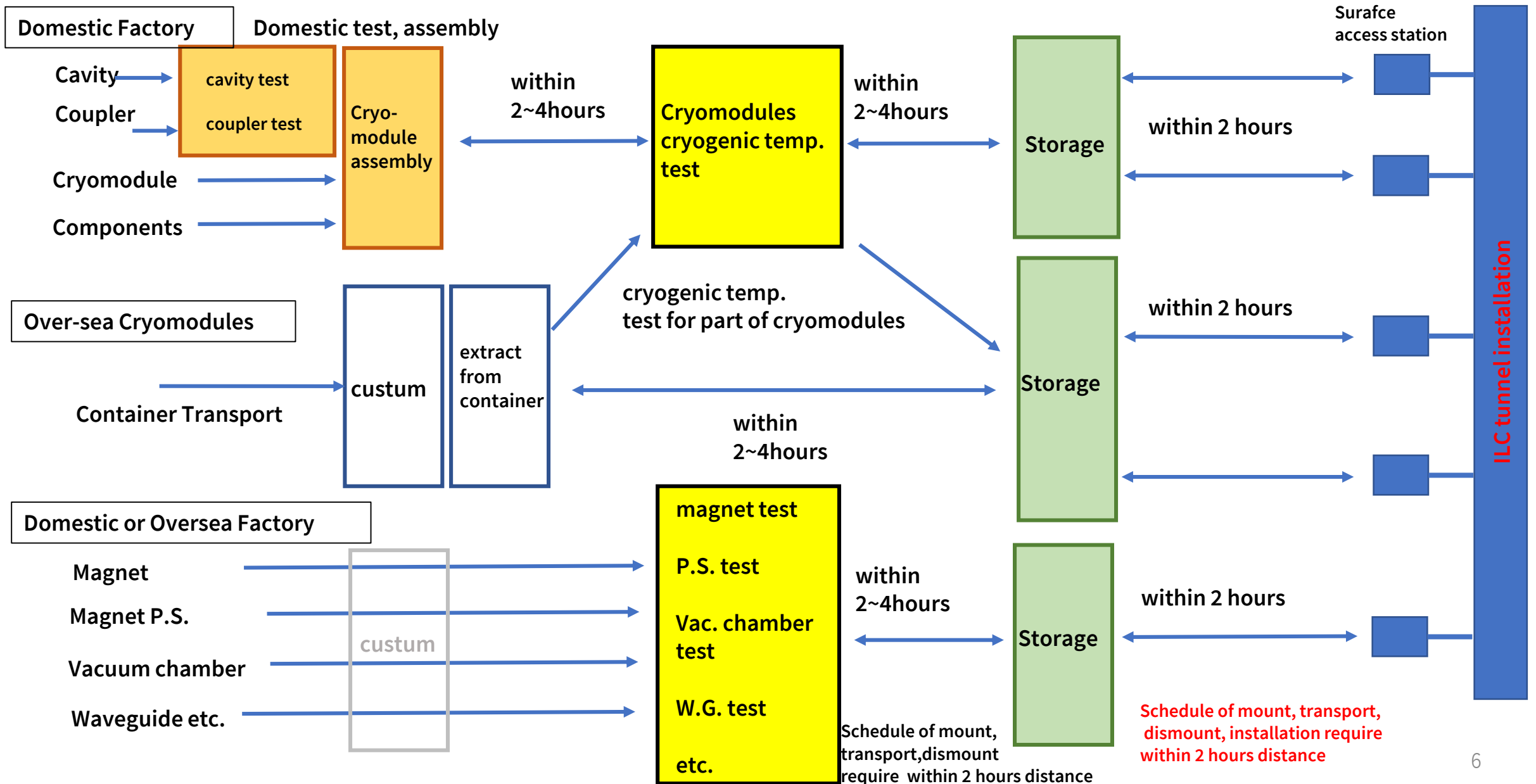
Factory Location

Kesennuma  
(port)

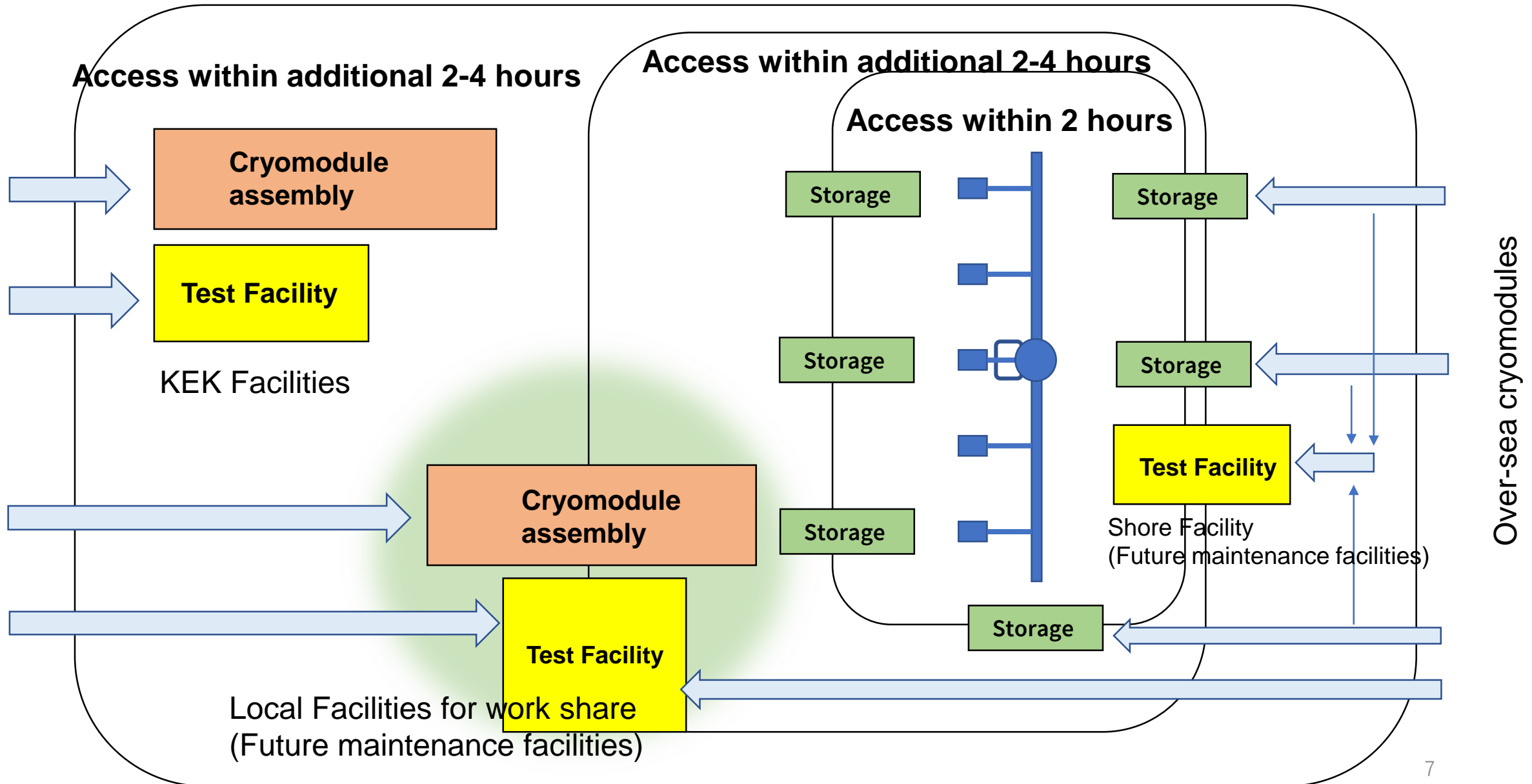




# Flow of Accelerator Component Test, Assembly, Installation

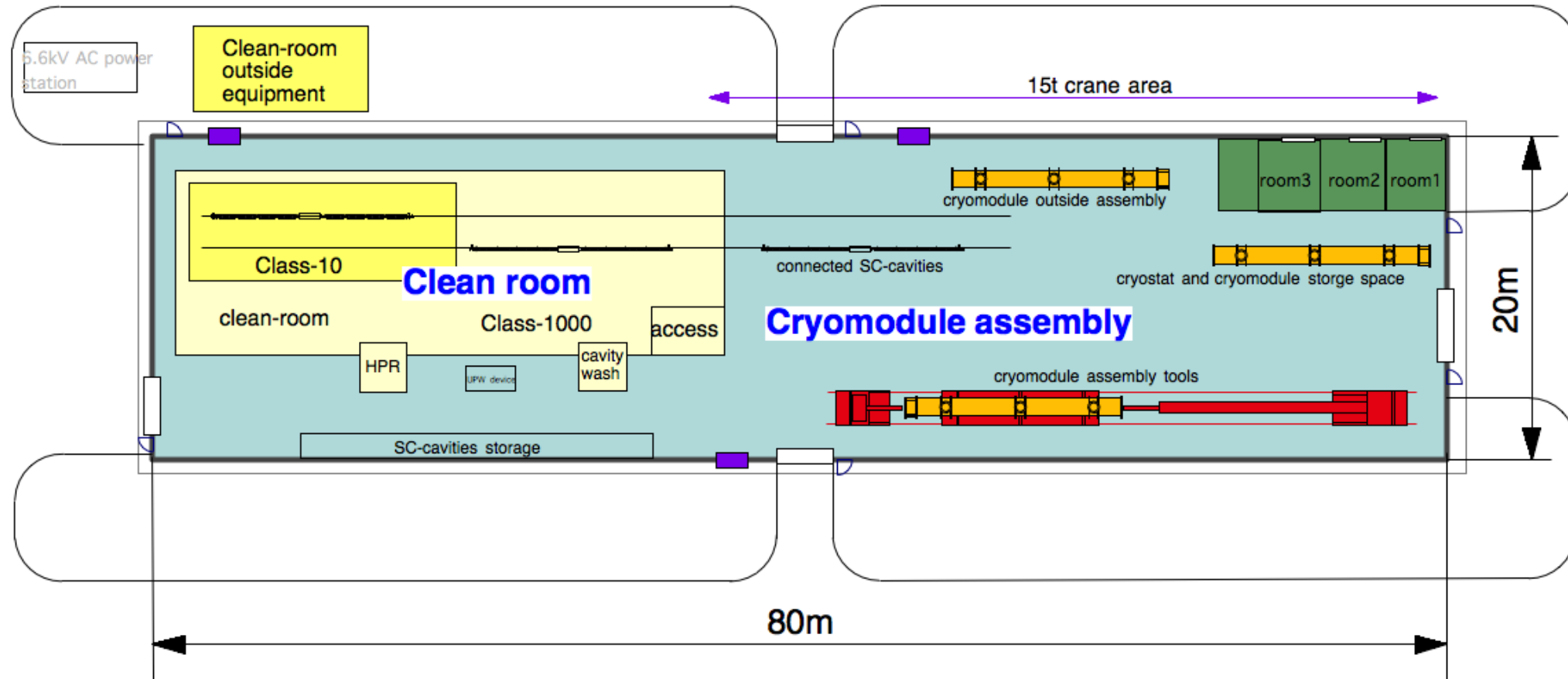


# Accelerator Facilities Mapping Proposal



# Cryomodule Assembly Facility

## Cryomodule Assembly Hall

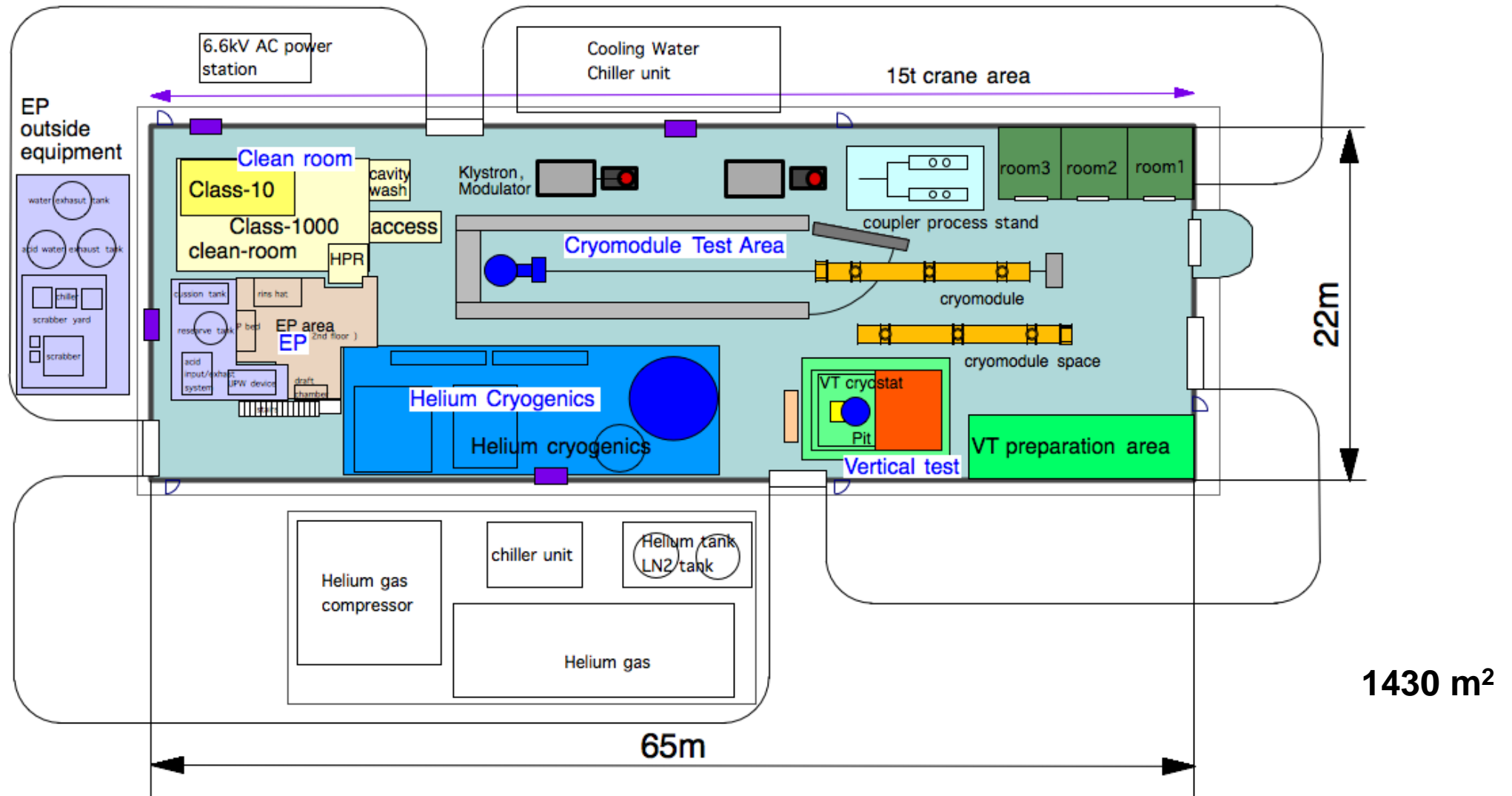


1600 m<sup>2</sup>



# Cavity and Cryomodule Test Facility

## Superconducting Cavity and Cryomodule Test Facility



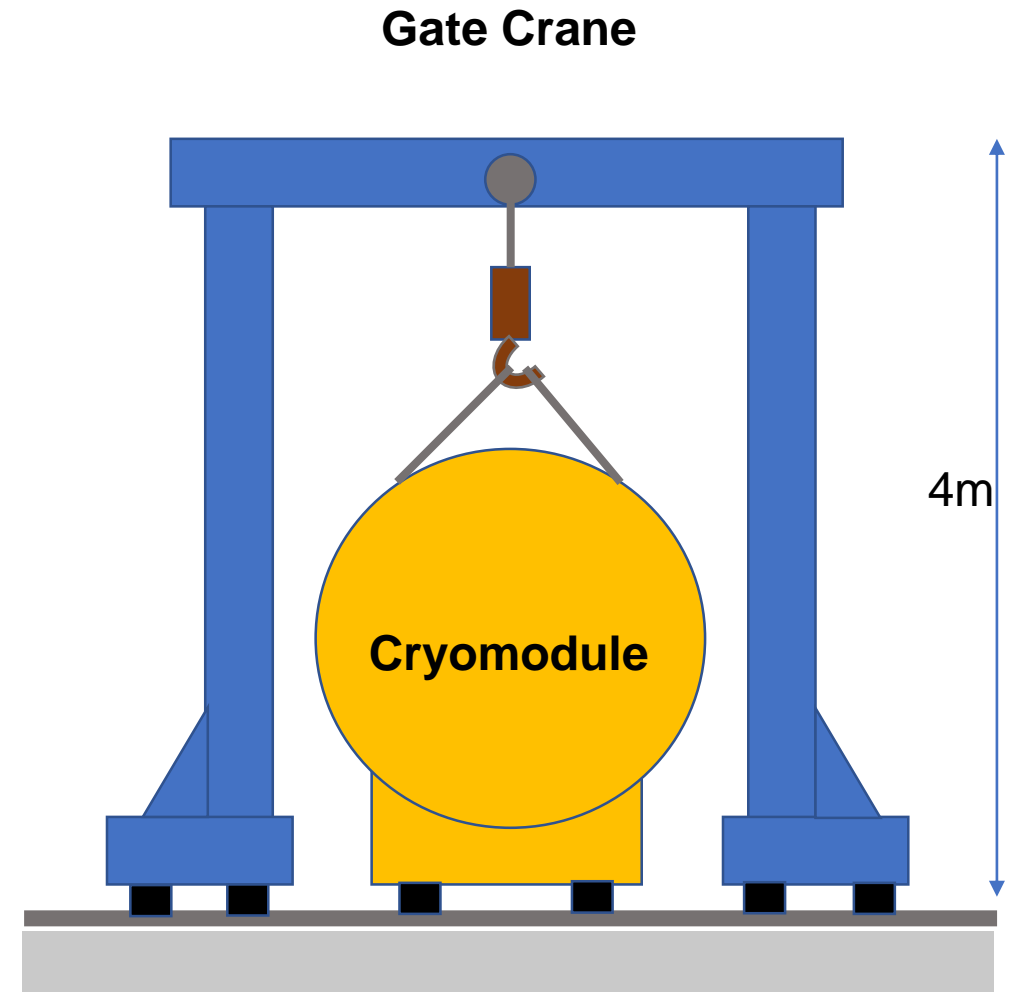
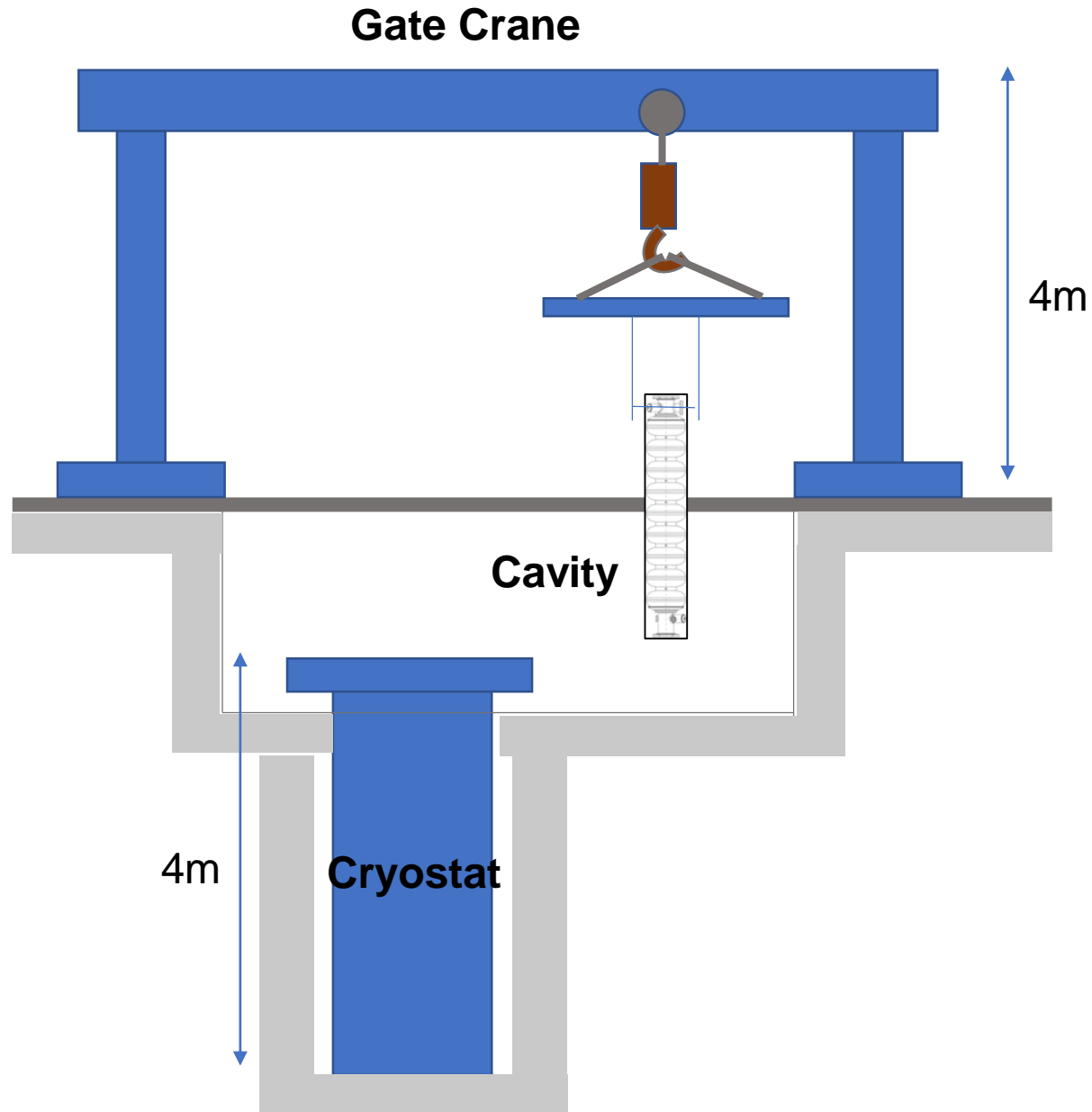
## *Summary of required Test Facility Area*

<b>Cryomodule Assembly Facility</b>	<b>1600 m<sup>2</sup></b>
<b>Cavity and Cryomodule Test Facility</b>	<b>1430 m<sup>2</sup></b>
<b>Coupler Test Facility</b>	<b>600 m<sup>2</sup></b>
<b>Wave-Guide Test Facility</b>	<b>800 m<sup>2</sup></b>
<b>Magnet Test Facility</b>	<b>600 m<sup>2</sup></b>
<b>Vacuum Chamber Test Facility</b>	<b>800 m<sup>2</sup></b>
<b>Beam Monitor Test Facility</b>	<b>400 m<sup>2</sup></b>

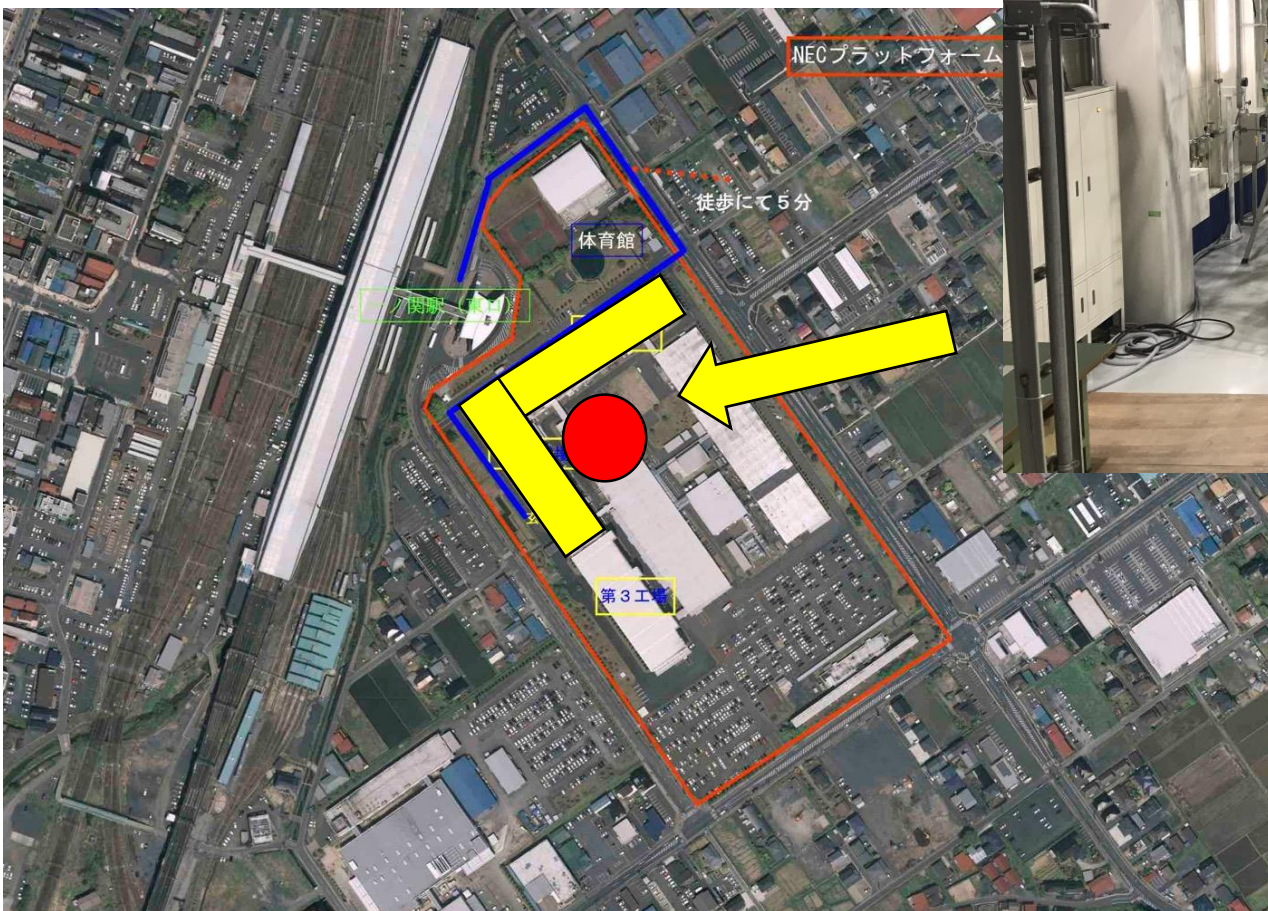
**Total 6230 m<sup>2</sup> ( ≈ No.2 Factory )**



# Digging floor deep and Use of Gate-Crane for cavity & cryomodule



# Cryogenics require new building, outside of factory



+ He compressor

20m x 20m with 10t crane, 6.6kV supply  
outside He cardle, He tank, LN2 tank,  
water chiller



## *Summary*

- (1) Old-NEC-Factory is located 30km away from ILC,  
Good for quick build of Accelerator Local-Test-Facilities,  
for accelerator construction work share with KEK,  
for future maintenance facilities of ILC laboratory.**
- (2) Low ceiling building require some idea  
for cavity testing device,  
for cryomodule assembly,  
for heavy magnet component handling,  
for cryogenics outside new-building.**