

# **ASEAN IVO Forum 2016**

## **Appropriate Electronics and Communication for Smart Utilities under Disaster Situation**

**Jittiwut SUWATTHIKUL**

National Electronics and Computer Technology  
Center, Thailand

[jittiwut.suwatthikul@nectec.or.th](mailto:jittiwut.suwatthikul@nectec.or.th)

# Agenda

- Introduction
- Objectives
- Plans
- Expected results
- Q & A

# Introduction (1)

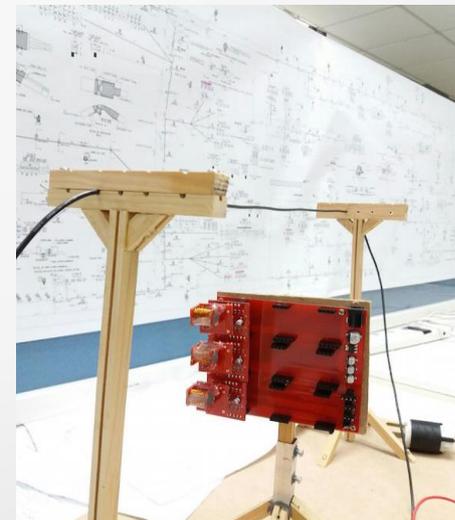
- Recent natural disasters have significantly affected human lives
- The 2011 great flood in Thailand:
  - 65 of 77 provinces were declared flood disaster zones, including the capital Bangkok
  - More than 13 million people and the major utilities were affected.
- Focused in this project is the disruption to the electricity utility



2016 flood in Ayuthaya - [www.matichon.co.th/](http://www.matichon.co.th/)

# Introduction (2)

- Previous projects related to smart utilities conducted by NECTEC
  - Distribution Automation System for Metropolitan Electricity Authority (MEA)
  - Water Distribution Automation System for Metropolitan Waterworks Authority (MWA)
  - Dam Safety Remote Monitoring System for Electricity Generating



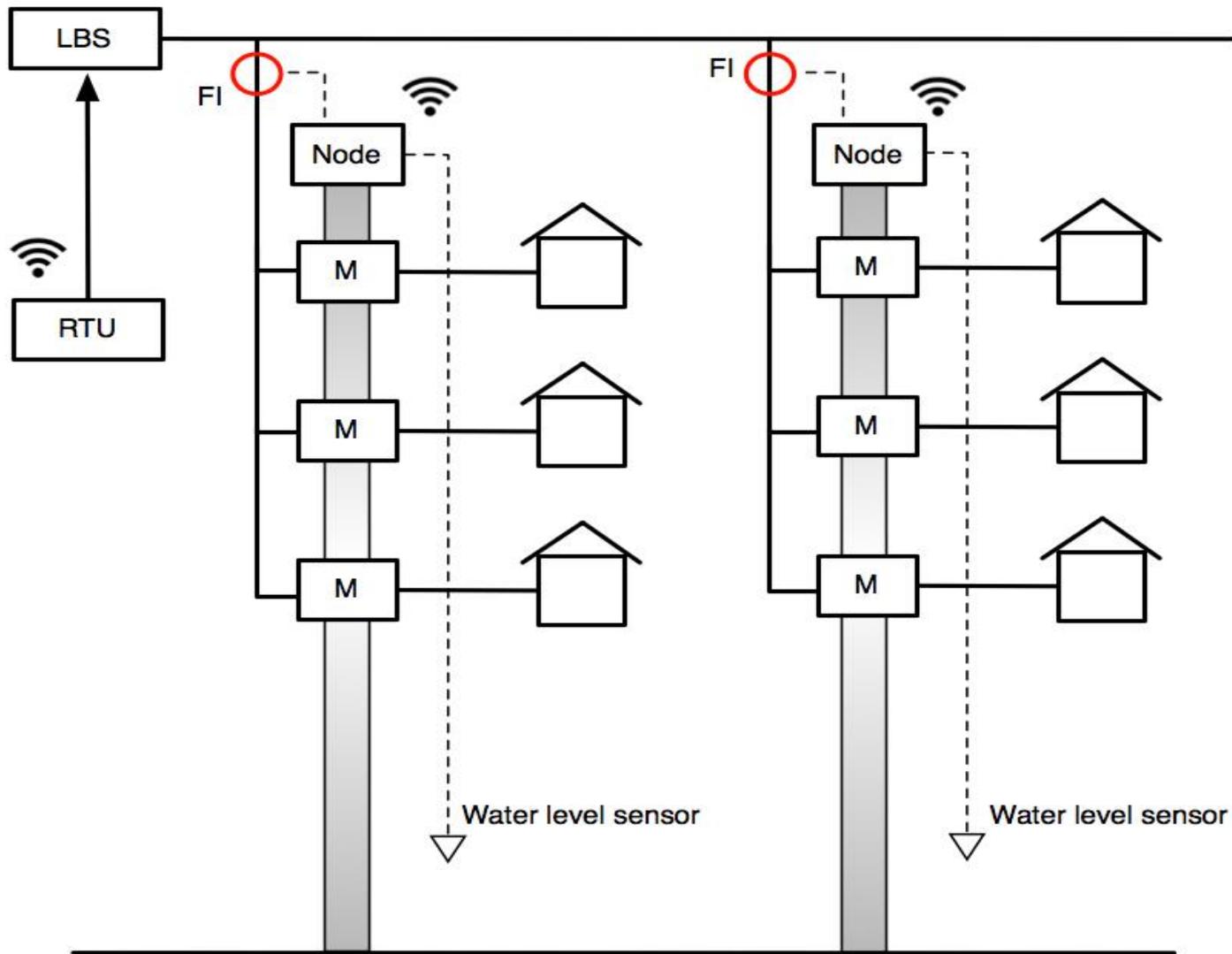
# Objectives

- To demonstrate the application of emerging ICT technologies to utilities' monitoring systems, by taking into account system availability under flood condition
- To evaluate appropriateness and limitations of a testbed composed of wired, wireless and low-power ICT equipment when used under such

# Plans (1)

- Define project scope, timeline and sites
- Equipment sourcing
- Installation and testing
- Data collection, analysis and evaluation
- Documentation

# Plans (2)

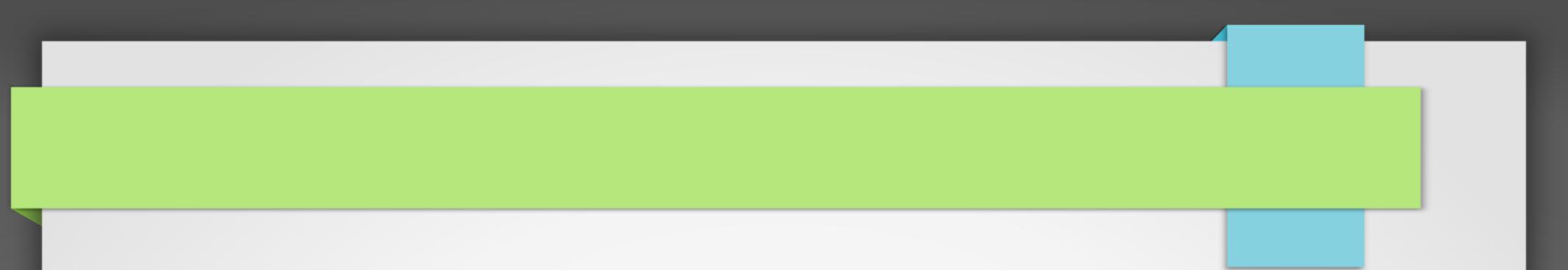


## Integrated Features

- Meter reading
- Fault indicator
- flood sensing
- LBS open when unsafe flood level is reached

# Expected results

- Demonstration results of how the selected technologies improve service continuity under flood condition
- Project report
- Collaborations among interested ASEAN countries



**Thank you for your attention**

**Q & A**