

CESUN 2018 Workshop Outline

Workshop 1: Smart and Resilient Communities in the IoT Era

Yoshiki YAMAGATA (NIES), Ayyoob Sharifi (GCP), Perry Yang (Georgia Tech)

We are expecting up to 30 experts with diverse backgrounds to attend the workshop and enjoy free discussion toward the development of new urban systems design projects in Tokyo in the World Café style. The workshop will cover the application of energy, environmental, and IoT tools and a previously completed design studio in Urawa-Misono (north of Tokyo) which proposed a Planning Support System.

14:30 - 15:15: Connection between Urawa-Misono Urban Design Project and Smart City concepts

- Opening Remarks 5 minutes
- Possible Application of IoT for Smart Cities 20 minutes
- Urawa-Misono Design Studio and Planning Support Systems 20 minutes
Background / Key Issues / Pre-studio concept development / Concept Design timeline (CD-1, 2, 3, M, J) / Energy / Mobility / Planning Support System / Two projects bridging from studio (Superblock planning support system in practice - enhanced energy and typology modeling scenarios & Walkability, microsimulation agent-based modeling)

15:15 - 16:15: Coordination of groups for World Cafe/Discuss Questions and Issues

- Smart Sustainable Systems and World Cafe Discussion Questions 10 min
Co-Facilitators: Yoshiki Yamagata, Ayyoob Sharifi, Robert Binder, Michael Tobey, Takahiro Yoshida, Kanae Matsui
- Break into four to five groups, based on diversity of practice, for discussion of topics and questions
- **Main Topic:** Energy and Environmental Assessment Modeling Results in Urawa-Misono (based on three basic Conceptual Design scenarios and one Japanese style)

- Question Topics:

Building and Energy Technology

- Does the energy system integrate with other systems and how could this impact energy results? (Interoperability and connections to the other systems)
- Which conceptual design has elements that make it more feasible than the others? Is there one that integrates more with new technology? Is there one that only builds from older technology?

Smart Transport Systems

- When a conceptual design changes the way a transportation system functions from existing conditions, what are the ramifications to the local network and more broadly to the regional network?
- IoT for Smarter Cities
- What information and data should be open-source or not?
- How do these challenge and/or effect resident behavior?

Behavioral Changes

- How do feedback loops of real-time data effect instance behavior and behavior over time?

Planning Support Systems

- How does the PSS effect the way an area is governed or the planning process in general? Is the system open (or not) to residents for public involvement purposes?

Sustainability Considerations

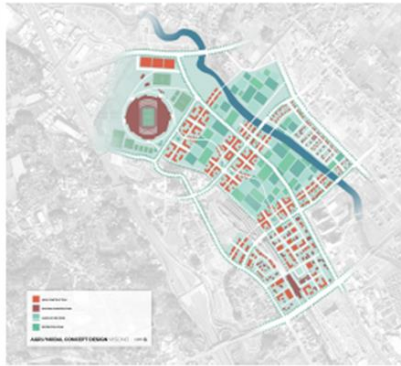
- Building from the thoughts on the previous items, discuss sustainability concerns and priorities (i.e. systems integration, technology changes, energy micro-grids)

16:15 - 16:30: BREAK

16:30 - 17:30: Reporting of Discussion and Final Remarks

Co-Facilitators: Yoshiki YAMAGATA, Ayyoob Sharifi, Robert Binder

Conceptual Designs (CD) at Urawa-Misono



CD-1: Urban agriculture



CD-2: Transit-oriented



CD-3: City in a garden



CD-J: Japanese-style



Workshop