

Global City Teams Challenge

－米国におけるスマートシティー/IoTの取組み－

情報通信研究機構

オープンイノベーション推進本部ソーシャルイノベーションユニット
戦略的プログラムオフィス研究企画推進室

小山泰弘

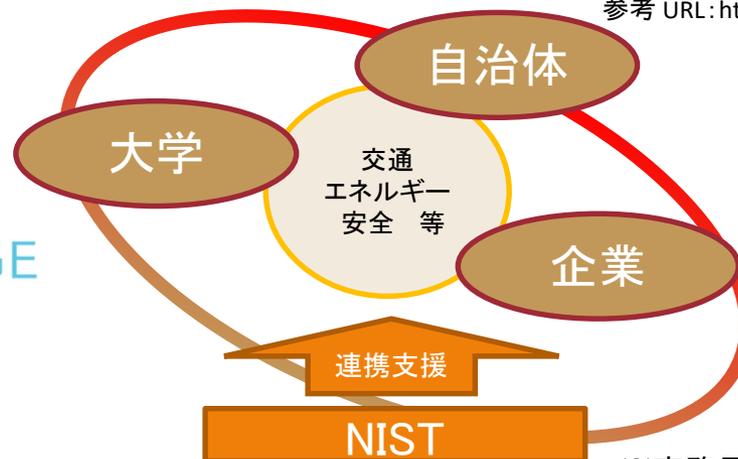
Global City Teams Challenge (GCTC) とは

- 米国標準技術院(NIST)が主導する、IoT技術をスマートシティに展開することを目指したプログラム。
- 2013年12月からのSmart America Challengeを後継する取り組みとして2014年にスタートし、オバマ大統領が2015年9月14日に発表したスマートシティー・イニシアティブからさらに2年間のSecond Roundをスタート。
- 解決したい課題を抱える自治体、研究開発をする大学、技術の実展開を目指す企業がチームを組み、参加。
- 米国の大・中都市のほかアムステルダム、ジェノバ、釜山など欧州・アジアも参加。
- 公共分野を中心に、交通、安全、災害対応、エネルギー、健康医療など。
- 必要な資金はチーム参加者が用意するのが基本。参加団体が政府機関から資金提供を受けるケースも多い。
- NIST が主導し、NSF(国立科学財団)、運輸省、エネルギー省、保健省といった連邦政府機関及びIBM、インテル、クワルコム、シスコ等のIT企業が連携・協力。

参考 URL: <http://www.nist.gov/cps/sagc.cfm>



GCTC ロゴマーク



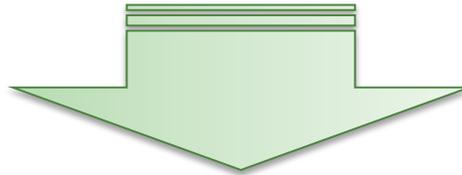
※事務局としてUSIgniteが協力

GCTC の狙い

多くの自治体におけるスマートシティ構築の取り組みは横断的な連携が不足しており、ベンダー依存度が高く、拡張性や相互接続性に乏しい。

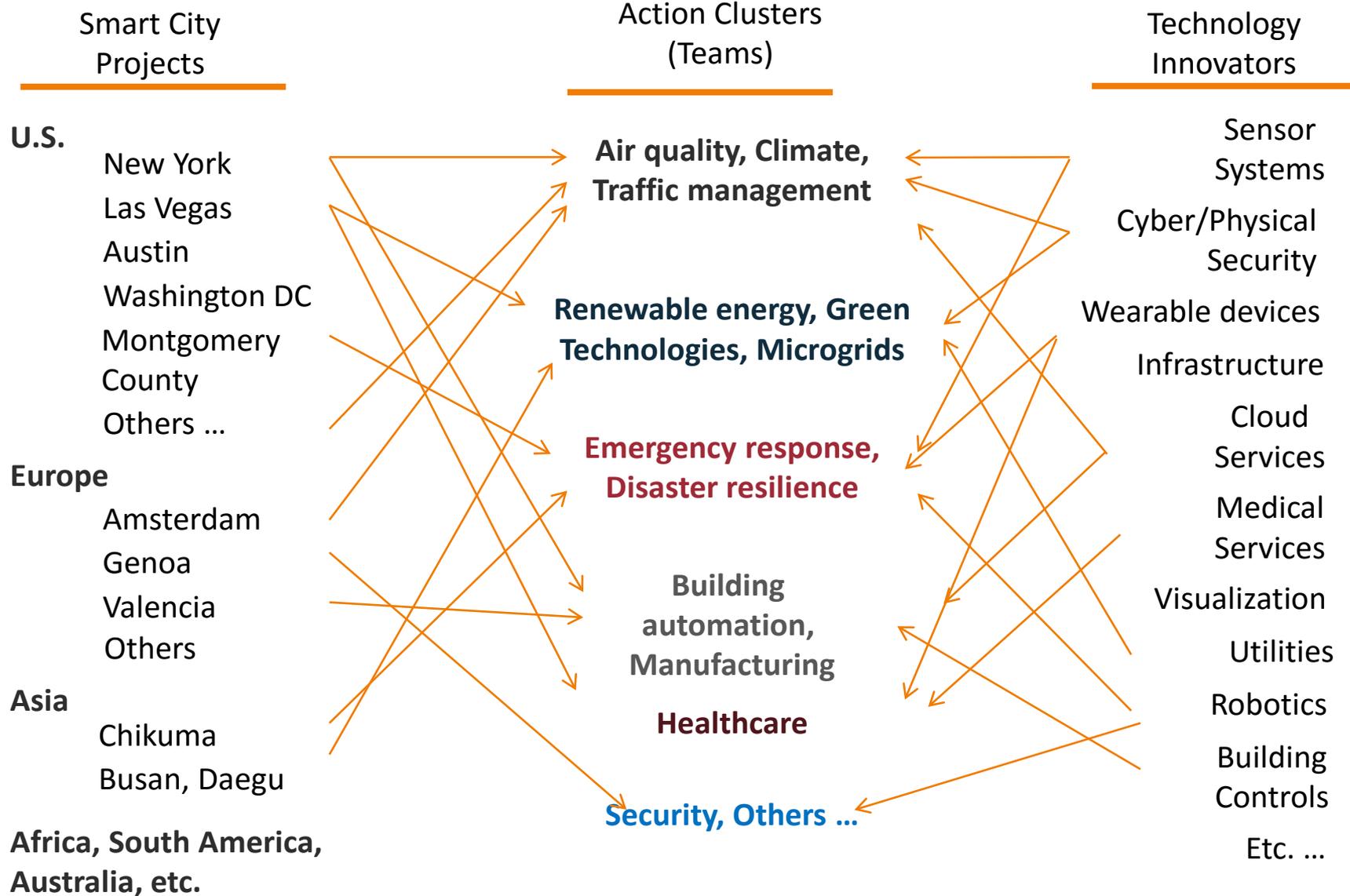


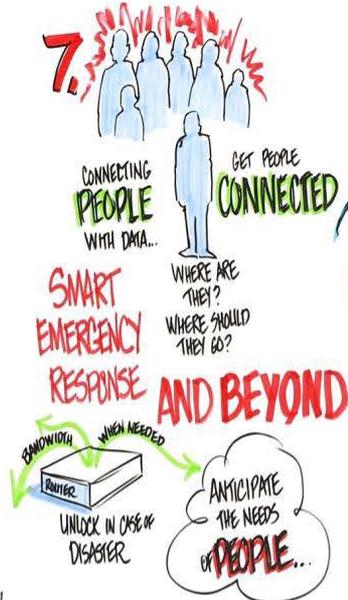
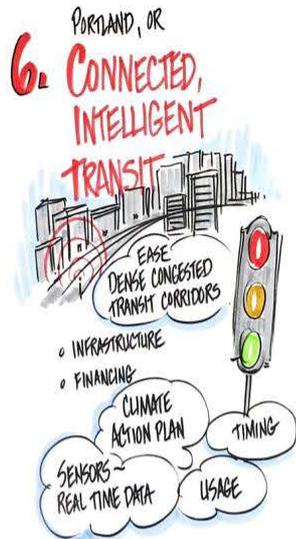
個々のスマートシティの取り組みは孤立化し、費用対効果が悪い。



Replicable, Scalable, Sustainable なスマートシティモデルの構築
IoTソリューションにおける標準化の推進
相互接続性の改善
計測可能な Key Performance Index の設定

GCTC2016のコンセプト





LUCINDA LEVINE
CROWLEY & CO. US

タイムライン

- Smart America Challenges : Dec. 2013 - June 2014
 - 12チームからスタート。その後24チームに拡大。
- GCTC2015 : Sep. 2014 – May 2015
 - Sep. 2014 GCTC Kickoff Event
 - Feb. 2015 GCTC Tech Jam
 - May 2015 GCTC Expo
 - 欧州との連携。60を超えるチームが参加。
- GCTC2016 (second round) : Sep 2015 – Summer 2017
 - Nov. 2015 Kick Off Event
 - Mar. 2016 GCTC Tech Jam 2016
 - June 2016 GCTC Expo 2016
 - Q4 GCTC Tech Jam Conference
 - Summer 2017 GCTC Expo 2017

Phase 1
Team Building Process

Phase 2
Implementation Process

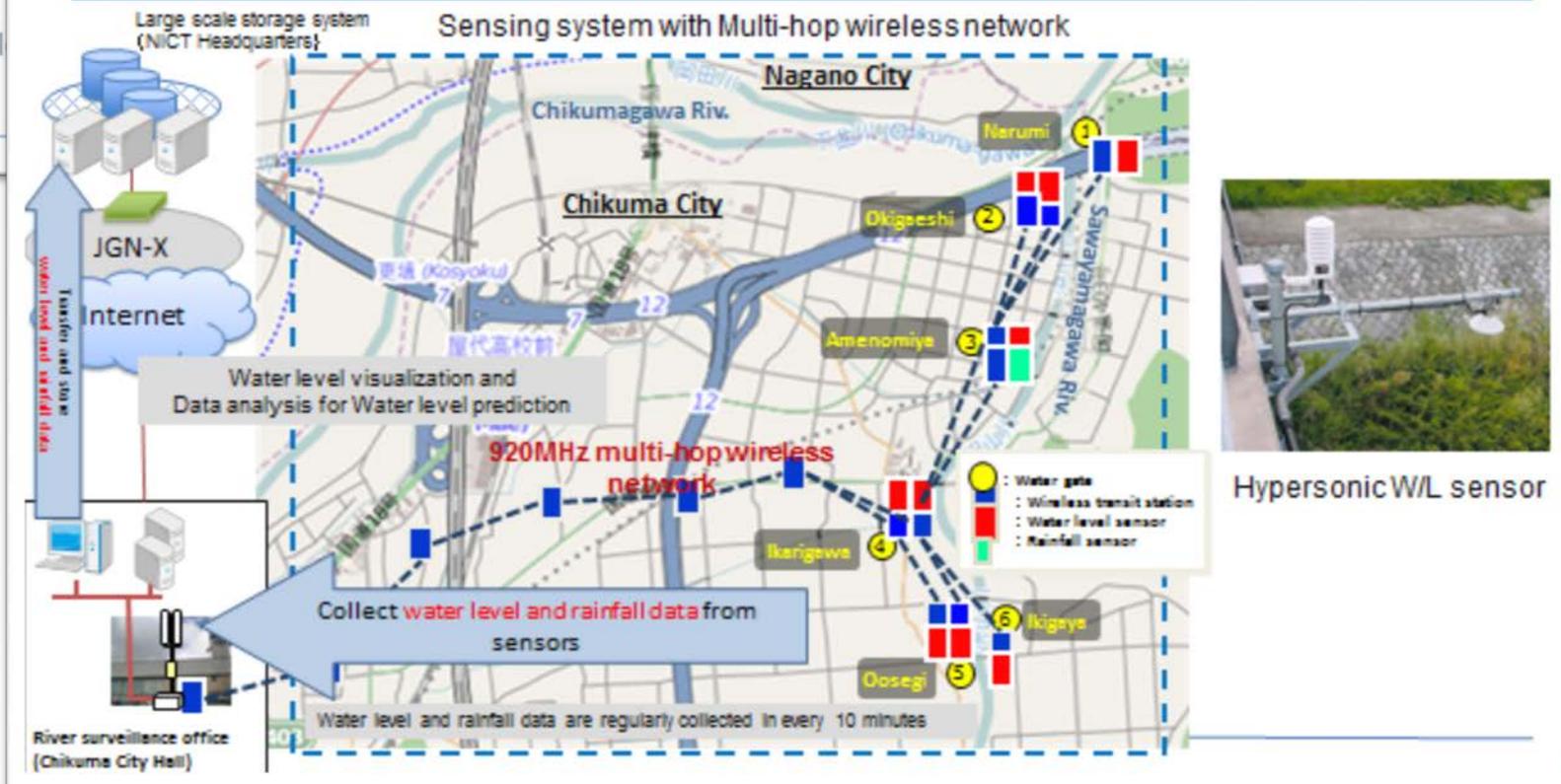
日本からの参画①

Water level management for preventing flood

Nozomu Nishinaga (NICT)



Flood monitoring system configuration



日本からの参画②

Safe Town of Shirahama

Preparing for Disasters
with Resilient Communication Platform "NerveNet"



Team Leaders

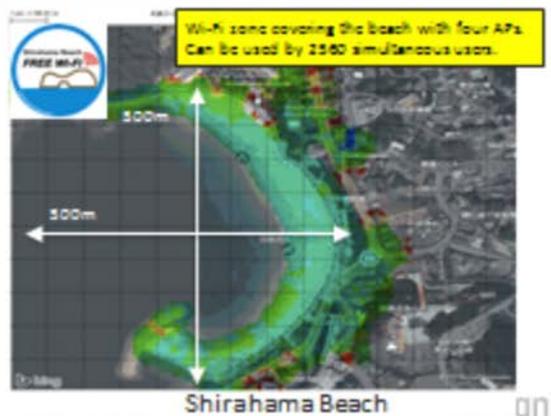
Kazuhiro Sakamoto, Shirahama Town
Masugi Inoue, National Institute of Information and Communications Technology
Municipal Government
Shirahama Town, Wakayama Prefecture, Japan



Nine base stations of NerveNet



Members of the town assembly listening to instructions from NICT.



International Technical Working Group on IES-City Framework: Overview

June 15, 2016

Dr. Martin Burns

Electronic Engineer

Smart Grid and Cyber Physical Systems Program

Engineering Laboratory

National Institute of Standards and Technology



IoT-Enabled Smart City Framework

- Smart City technologies are being developed and deployed at a rapid pace.
- Many previous smart city deployments are custom solutions.
- A number of architectural design efforts are underway worldwide but have not yet converged.
- NIST and its partners are convening a public working group to distill a common set of architectural features from these architectural efforts and city stakeholders.



Goal: A reference framework for the development incremental and composable Smart Cities



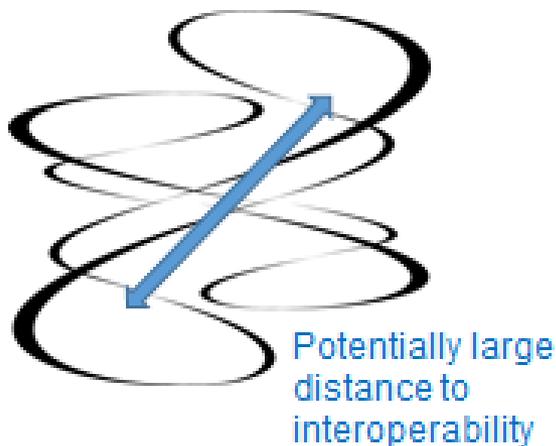
IES-City Framework Goals

- Facilitate convergence and encourage harmonization among the many standards and consortia
- Produce a useful result in a short time certain
 - Minimum complexity
 - Actionable
 - Reduce barriers to interoperability/integration
- Not pick winners and losers
- Attract collaborators from the key architecture and standards efforts so that they can bring results to their efforts
- The group will be open and free for participation by anyone, anywhere in the world and documents produced by the group will be available to anyone and at no-cost at the group web site

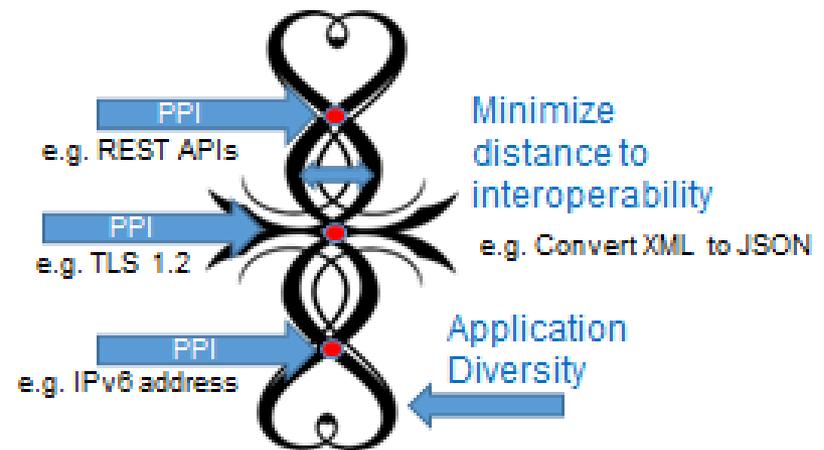


Pivotal Points of Interoperability (PPI)

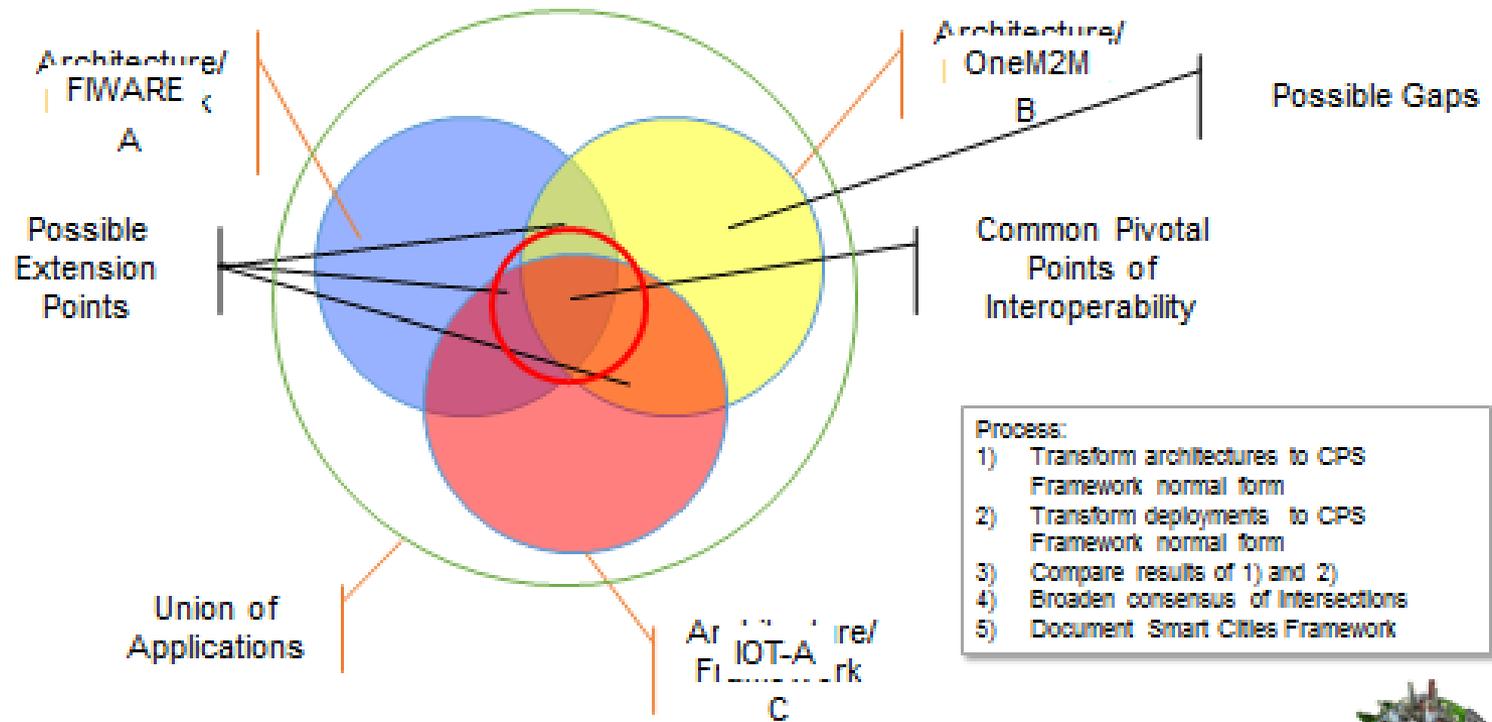
Independent
technology
deployments



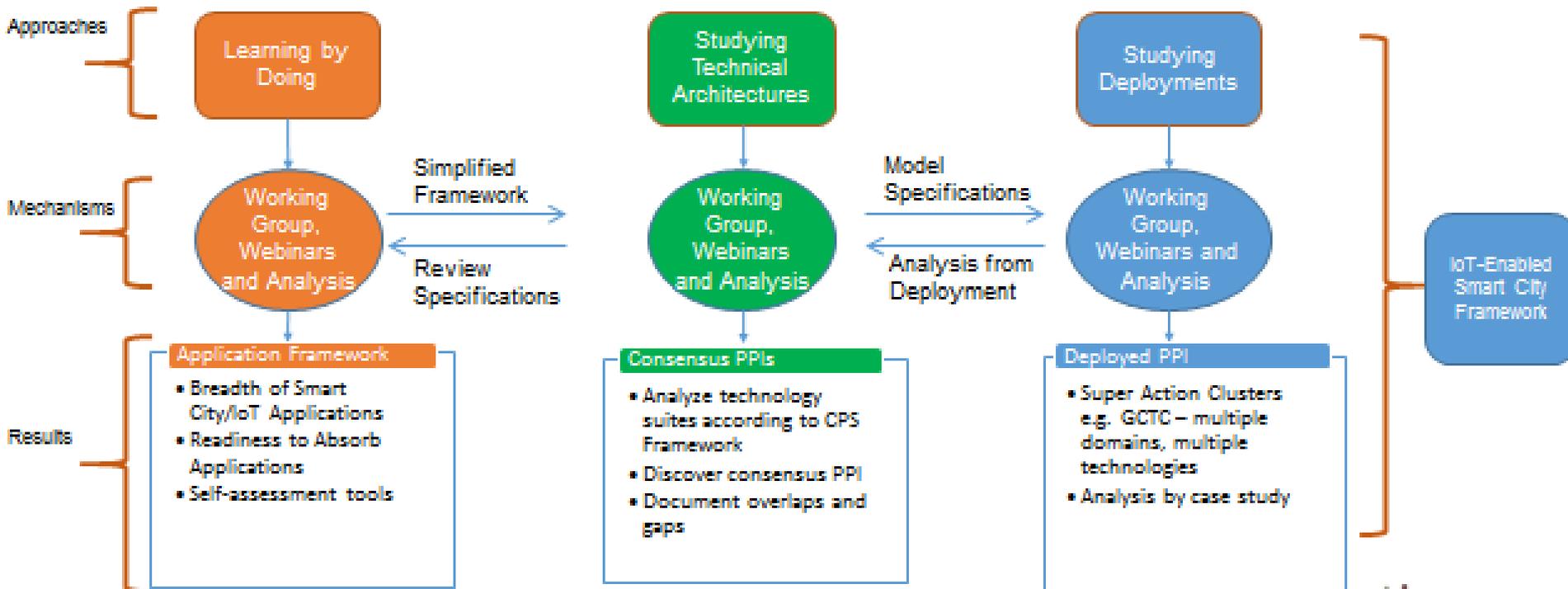
With Pivotal
Points of
Interoperability



How to Discover Consensus



Public Working Groups



Participants: City leaders (includes CTOs, CIOs, Innovation Officers), Experts, Companies, Technical Stakeholders, Researchers



When?

The timeline:



- NIST is convening a public working group from around the globe including:
 - Smart city leaders, administrators and planners
 - Manufacturers of Internet of Things and other Smart City related components
 - Researchers studying the integration of technologies into smart city designs
 - Standards organizations investigating and developing smart city standards
 - Industrial and commercial consortia developing IoT specifications and designs
 - Governments involved in smart city planning and policy
- Activities will begin in November 2015 with a key kickoff workshop in March 24..25 2016 (at NIST) and April 14..15 2016 (at ENEA in Rome). A draft result is planned to be available late fall, 2016



- GCTC の狙いとするところは日本にとっても大いに参考になるのではないか。
- 日本の企業や自治体を巻き込んだ参加が重要。
- Framework 策定の動きを注視しておく必要。