

# RUN Digital Cluster

Digital Technology and Smart City Site Visit

23 February – 1 March, 2017

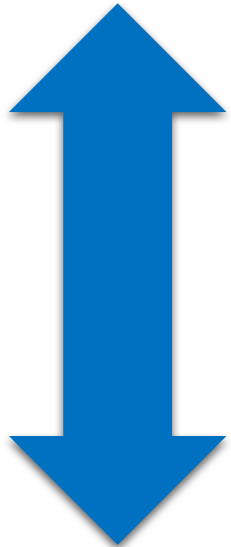
Tokyo, Japan

# Thai Economy 4.0

THAILAND 4.0



**Nature**



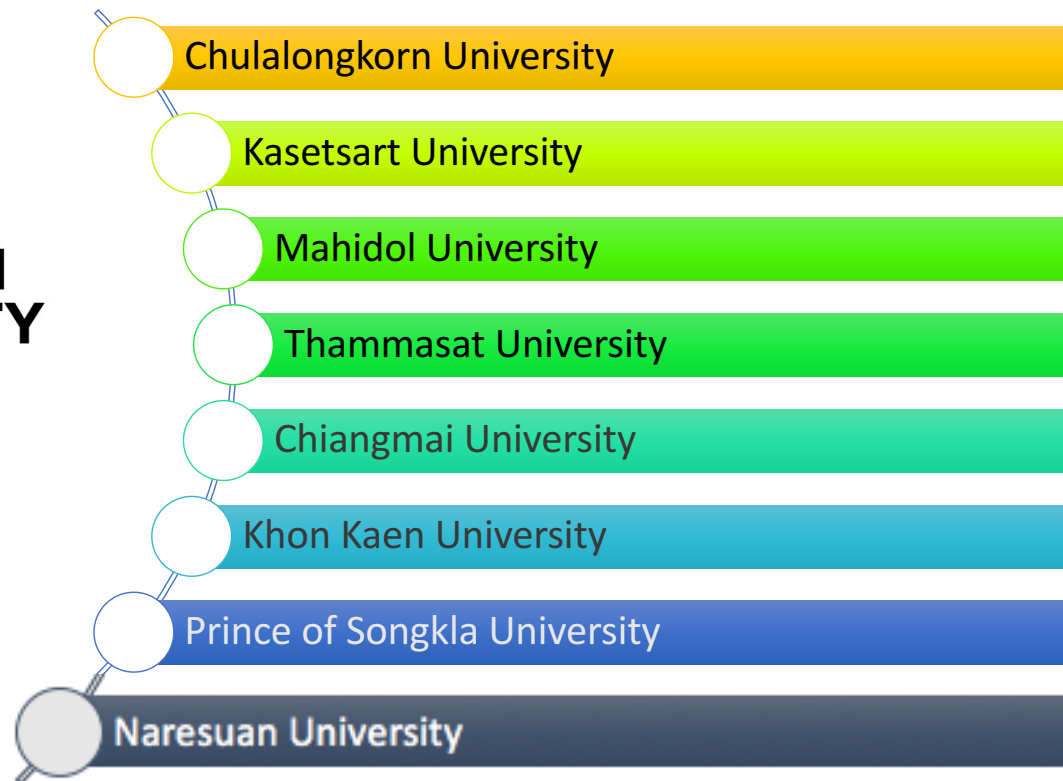
**Culture**

**Bio-Diversity**

**Cultural - Diversity**

- Food Agriculture & Bio-tech
- Health, Wellness & Bio-Med
- Smart Devices, Robotics & Mechatronics
- Digital, IOT, Embedded Technol
- Creative, Culture & High Value Services

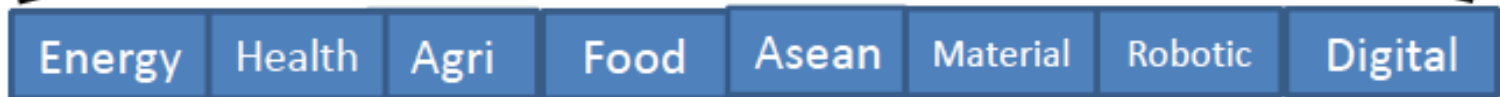
# Members of RUN



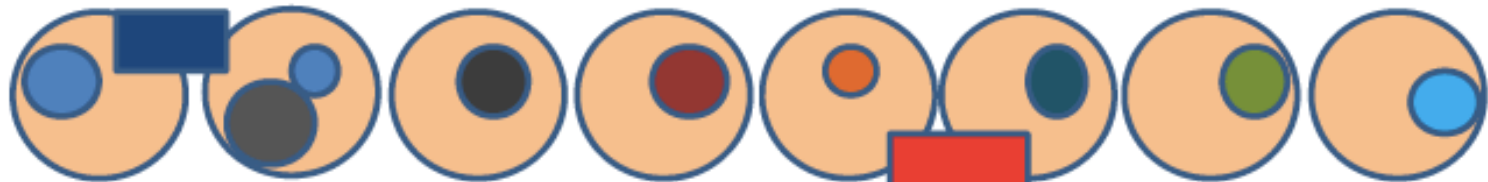
Vision

Sincerely, Equally, Excellently  
SHARING

Cluster



Plan/Project



New S-Curve

6 target industries



Fundamental Knowledge

Source of Fund



Expectation

THAILAND GROWTH

# RUN Digital Cluster

# Objectives

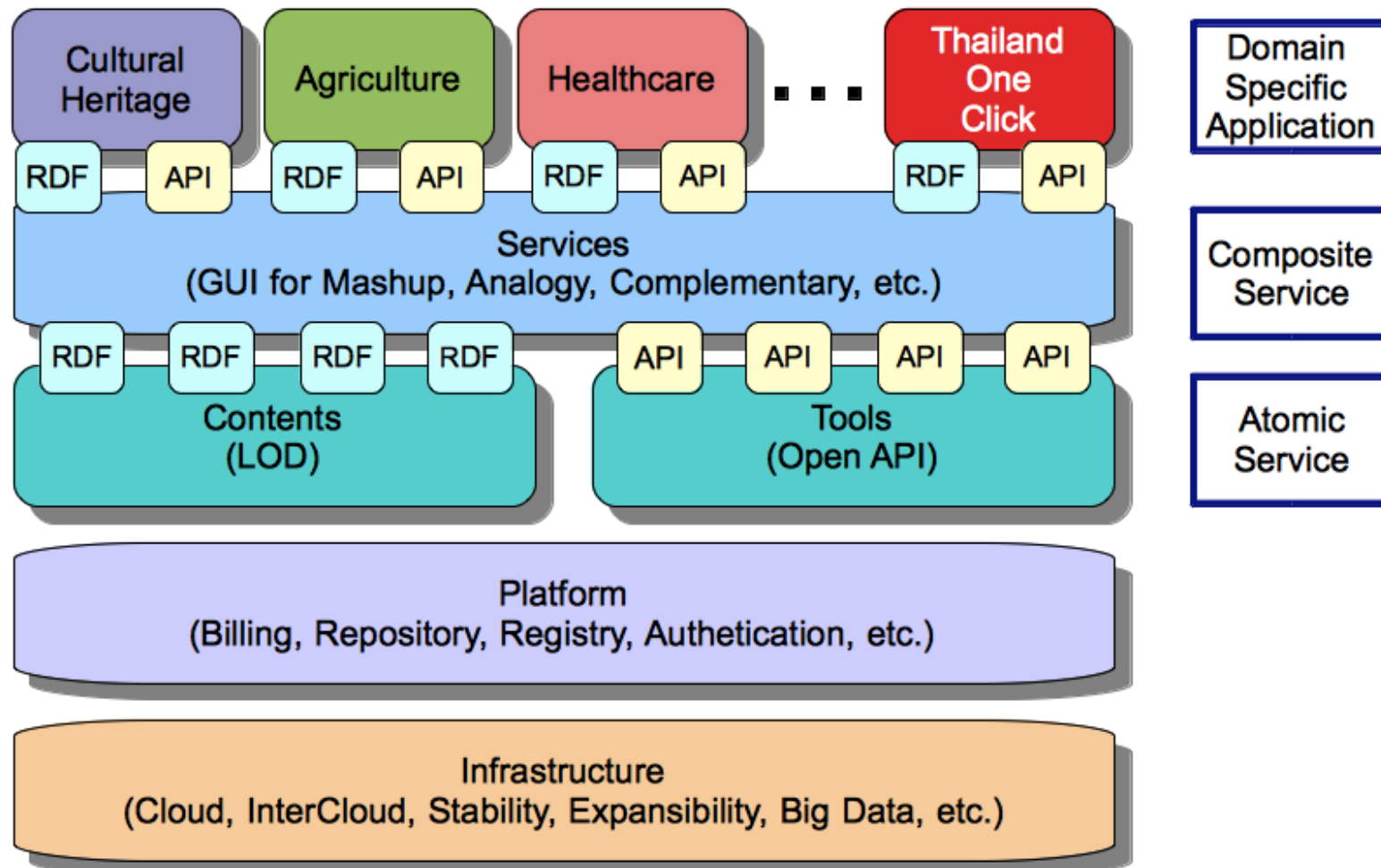
- Bring in the **multidisciplinary** research collaboration on digital platform
- Leverage the research in the **very large scale** of data and **real world computing** environment
- Outreach out the digital opportunity to **real sector** implementation
- **Share** standardized data to gain more concrete knowledge and experience

# Goal

- Open Digital platform for research and service
- Open AI platform for intelligent service development
- Competitive digital research and business potential

# Open Digital Platform

## Framework of Open API

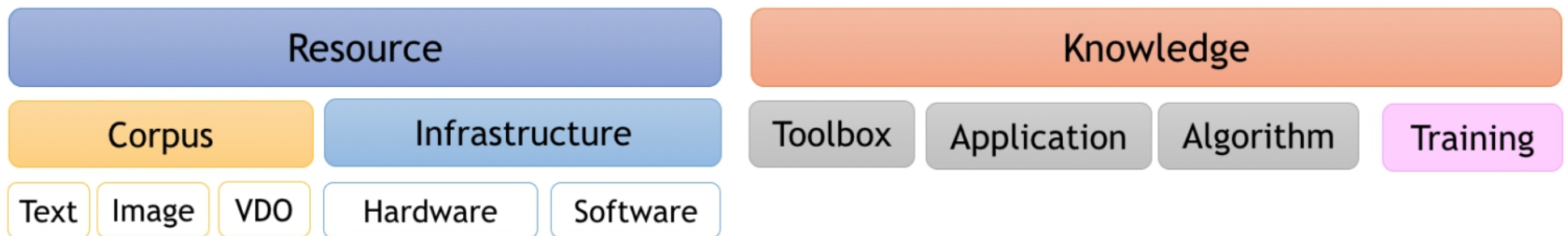




# Open AI Platform

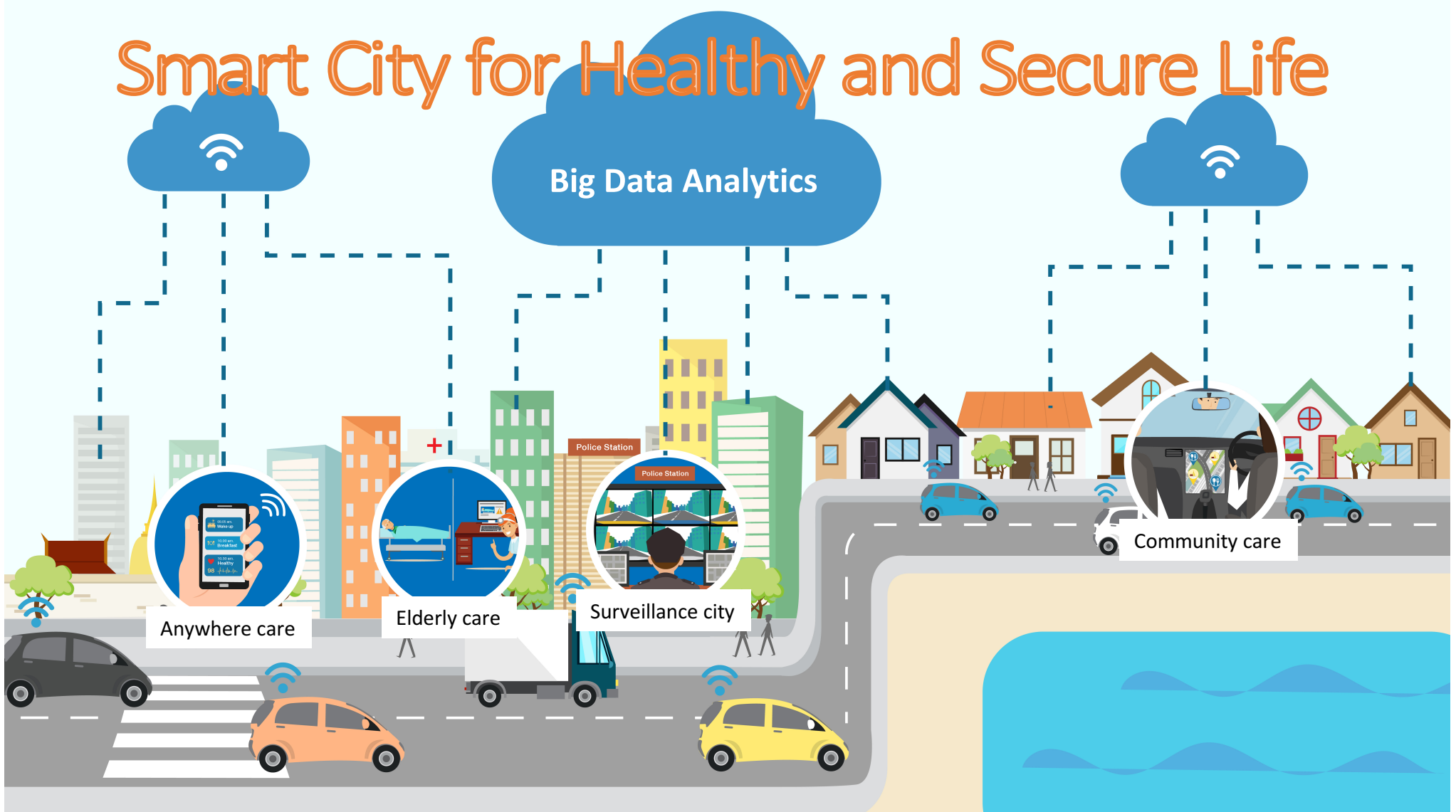


## Artificial Intelligence Platform



# Smart City for Healthy and Secure Life

Big Data Analytics



Anywhere care

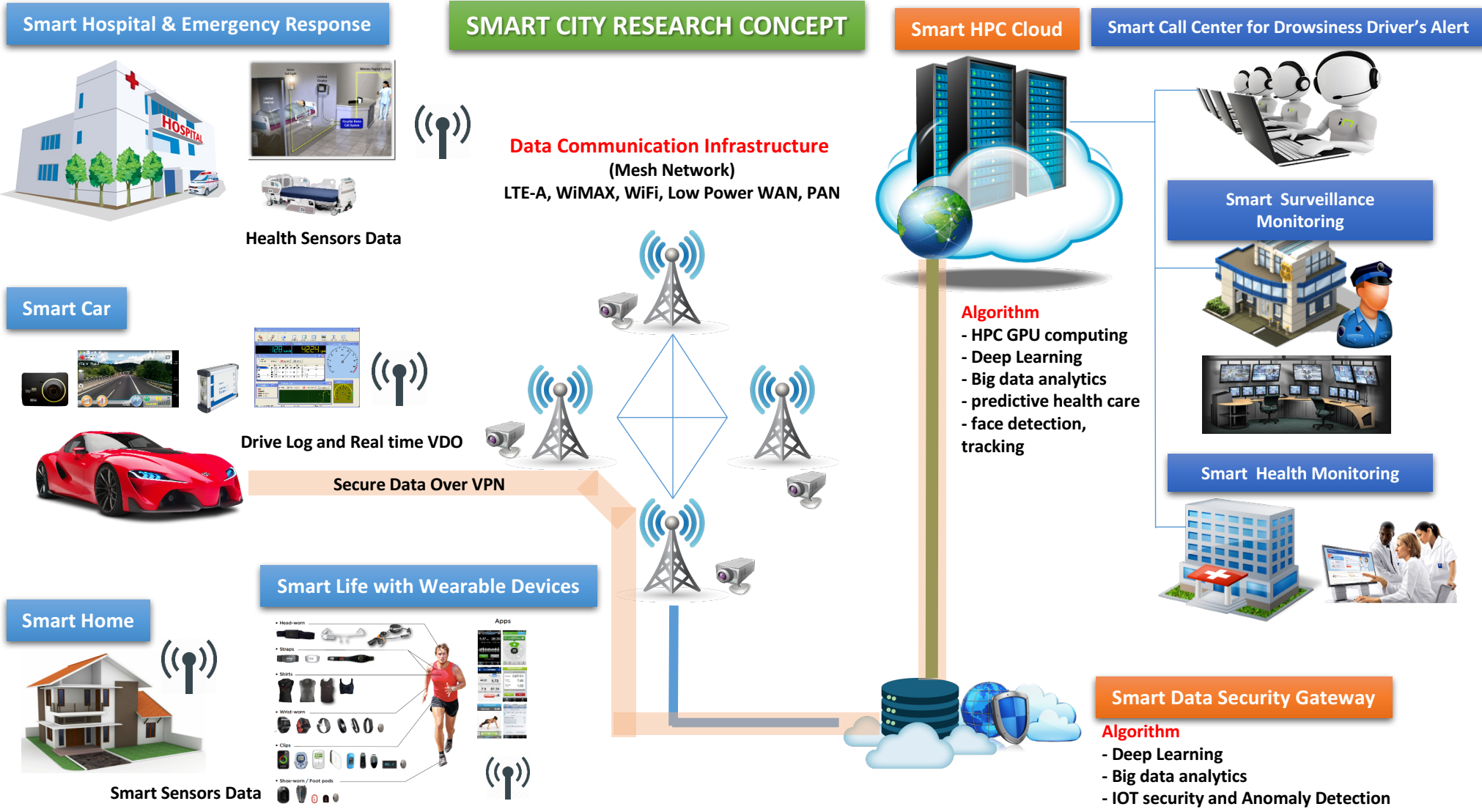
Elderly care

Surveillance city

Community care



# Smart City Model for Healthcare and City Surveillance



# Plan

## R&D via Local, Regional and International Collaboration

- Digital health information monitoring system for **elderly care**
- Smart city model on healthcare and **city surveillance**
- Smart **eco-friendly mobility**

## RUN Digital Cluster Kickoff Meeting

Thammasat University organized the kickoff meeting for RUN Digital cluster on November 9, 2016 at Thammasat Rangsit campus. 34 faculty members from 8 RUN member universities participated to establish a framework for collaboration on R&D in Digital Cluster.

Members agreed to collaborate on preparing a platform for data and tools sharing. One of the high impact projects can be an R&D on technological integration for Smart City concept. Digital will then be developed to serve the data collection and analysis to understand and provide a suitable control on the city community. In addition, the topics on aging society and city surveillance which are the national issues will be the primary focus in the proposed Smart City architecture. Followings are the candidate topics

- Digital based Smart City (Toward Olympics 2020)
- Digital based Smart Environment Friendly Mobility (EV)
- Digital based Elderly Care
- Fintech (Market trend)
- Social listening (Customer insight)
- Industry 4.0 (IoT, Factory simulation)
- Researcher database
- Research database



**Figure 6** RUN Digital Cluster Kickoff Meeting on November 9, 2016

Applications and services will be designed on the 2 stacking platforms of Open API Platform and Open AI Platform for sustainable research and development. Tools and data will be shared on the basic open API standards to guarantee the service

## RUN Digital Cluster Meeting #2

Banphaeo Hospital has shown strong interest to improve their internal process in terms cost reduction and service efficiency. Digital Cluster has taken this opportunity to set up a hearing meeting between cluster members and Banphaeo staffs. The meeting has been set up at Banphaeo Hospital in Banphaeo, Samut Prakan on January 19, 2017. 12 expert members from 4 universities has attended the meeting.

*Dr. Pornthep the director and Dr. Surapong the deputy director* welcomed Digital Cluster members by introducing the hospital activities and the suffering in Banphaeo resident health data collection and management. Until now, data are collected without accumulating for further analysis. This is a big lost in the opportunity to learn for better services and the city healthcare insight. It is expected that digital technology can serve the service efficiency and reduce the cost. Moreover, with the current Big Data technology, the researchers need large scale data and conduct the research for practical use. The collaboration with Banphaeo Hospital will be able to serve requirement from the both parties.



**Figure 7** RUN Digital Cluster and Banphaeo Hospital Meeting on January 19, 2017

Possible topics to start the collaboration are

- City resident health data collection and analysis
- Medical device data connection

We take this opportunity to observe the evaluation of using sensing equipment (Mimamori system supported by JICA and AIVS) to monitor the patient behavior on bed. The data of patient behavior on bed have already been collected and annotated for use in research. Patient posture detection and prediction are one of the tasks to prevent falling, especially for the purpose of elderly care.

Cluster members take back the requirements for preparing proposal of collaboration.

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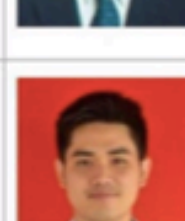
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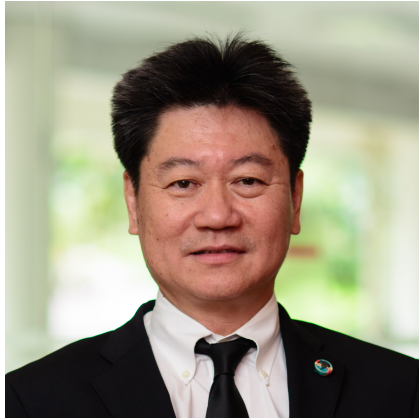
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