



The 28th STAG Board Meeting
Session III: Quality Living
Topic III:
Market Strategy for Smart Living
Technology Applications

Department of Industrial Technology,
MOEA

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Outline

- I. Foreword**
- II. Analytic Review of Current Status**
- III. Promotion Strategy**
- IV. Conclusion**



I. Foreword



I. Foreword

- In view of the fact that industries in Taiwan are currently facing pressure to transform and upgrade due to globalization trends, it is our top priority to identify emerging industries with significant growth potential and to facilitate development of these industries so as to power our future economic growth.
- Examining macro-environment development, the market for technology applications, which improve people's quality of life, is experiencing rapid growth as a result of the fact that the fundamental network environment has become more complete and information technology has become more sophisticated. This market has become a focus of attention, and has stimulated active engagement and investments by multinationals of various industries.
- The development of smart living technology applications should be encouraged in an attempt to create diverse business opportunities and realize a high-quality living environment. This should be done by setting up advanced network infrastructure and creating an open-site environment, so as to encourage talented people and high-quality businesses to work and start enterprises in Taiwan, thereby facilitating the promotion of overall industrial competitiveness in Taiwan.
- The "12 i-Taiwan Projects" focus on the "Intelligent" concept and includes programs aimed at areas such as cultivating talents, the cultural and creative industries, efforts to establish the world's first country-wide wireless broadband environment and the establishment of smart traffic systems and smart living environments.



II. Analytic Review of Current Status



1. Smart Living Summary

(1) Profile





1. Smart Living Summary (continued)

(2) Creating Smart Living by Integrating “Domain Knowledge” and “Enabling Technology”

Enabling Technology

RFID, WSN, EC, Security, NFC, Surveillance, ITS, Robot, AI, Sensor, B/M/W Comm, IPTV, VoIP, Web, Nano, E-learning, Motion Detection, Biomedical signal monitor, etc.

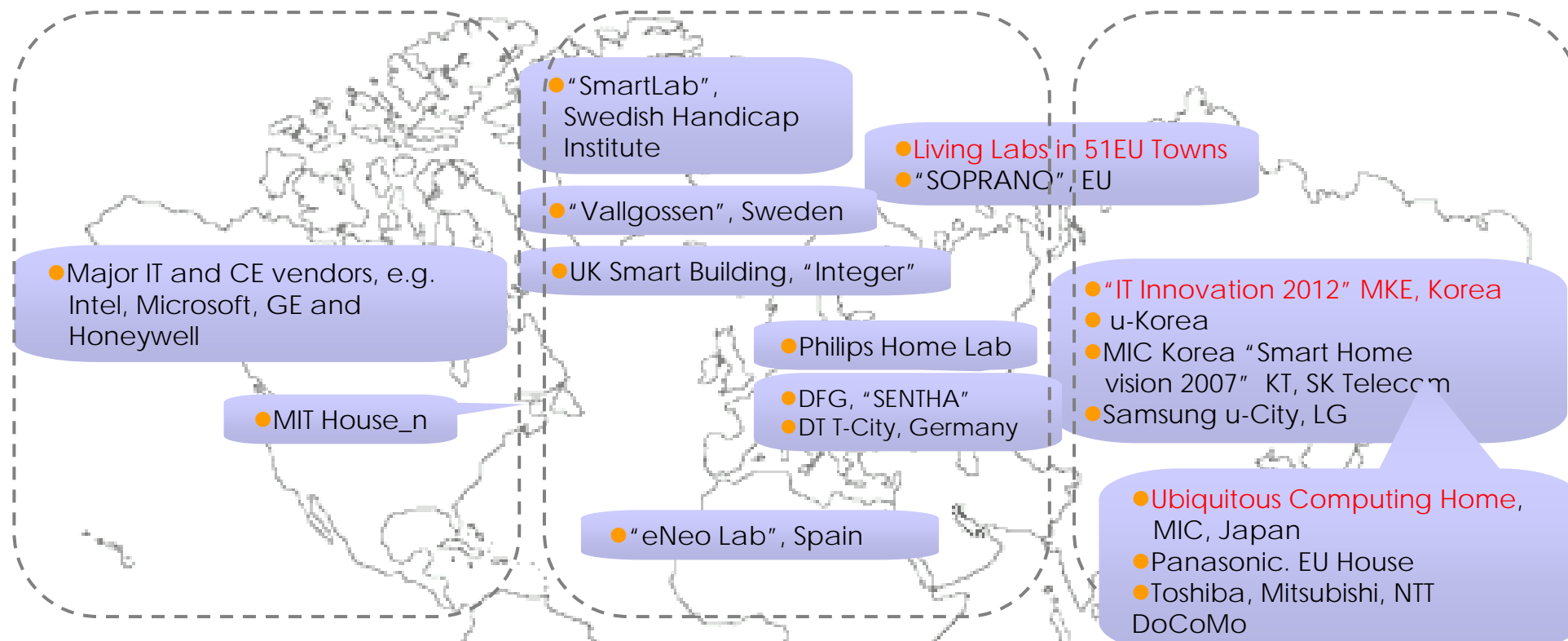
Agriculture & Aquaculture, Fresh-Product Logistics, Catering Services, Food Production, Health Care/Medical Treatment, Water & Electricity, Property Management, Architectural Design, Building Material Production, Medical Instruments, Furniture, Bathroom Equipment, Robots, Health Care, Security Services, Transportation & Storehouse, Automobiles, Telecommunications, Exercise Equipment, Supplementary Education, Teaching Aids/Materials, Travel, Electric Appliances, Banks, Internet Services, etc.

Domain Knowledge



2. Review of Domestic & Foreign Status

(1) Global Development Trend: Improve Welfare with Technology



Safety & Disaster Prevention
 Remote Security Monitoring, Access Control, Fog/Fire Detection, Remote Disaster-Prevention Monitoring

Medical Care and Nursing
 Comprehensive Home Care designed for Patients, Old People and Disabled People; Funded by Tax, Additional Charges and Insurance

Energy-Saving and Sustainability
 Use Renewable Energy e.g. Solar Energy, Wind Power through Building Design and Choice of Materials; Use Sensor Lighting and Air-Condition Devices

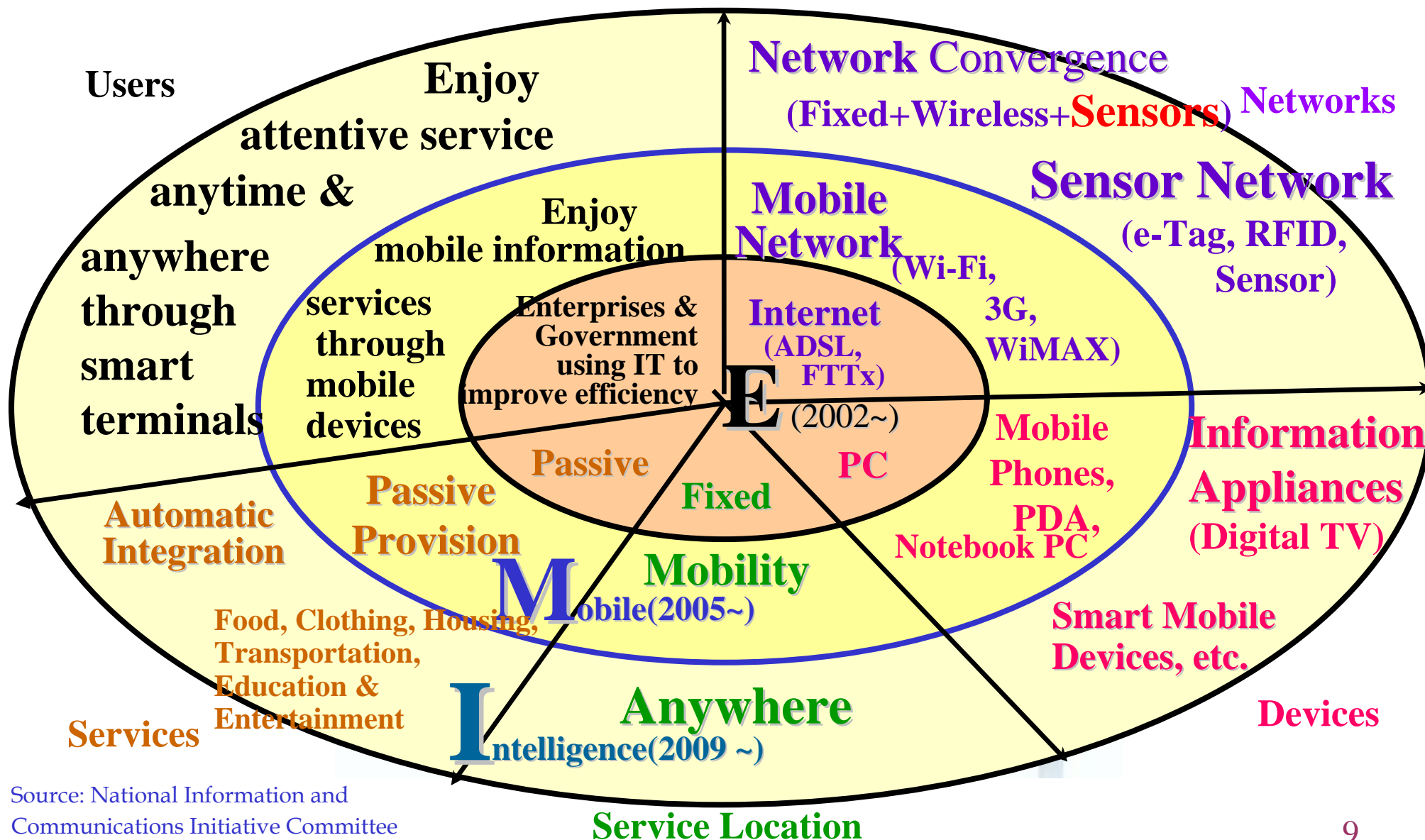
Smart Access
 Smart Transportation, Mobile Navigation, LBS, Mobile Learning, E-Transaction, Smart Proxy

Comfort and Accessibility
 Situational Control, Sleep Inducer, Control or Remote Control, Multi-Function Remotes, Mobile Phones, and Web pads



(2) Current Market Status in Taiwan

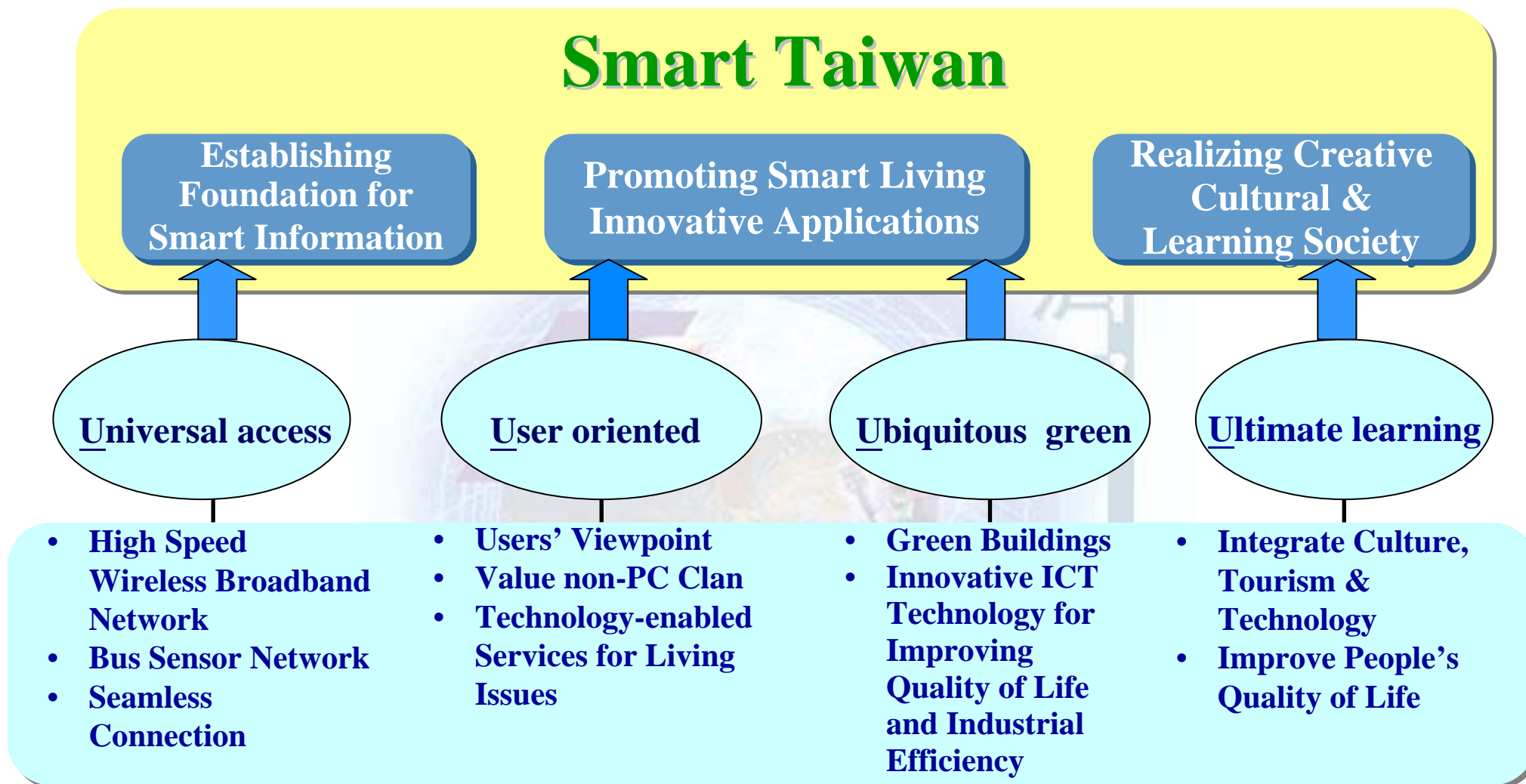
Promotion Objective: M-Taiwan / i-Taiwan



Source: National Information and Communications Initiative Committee



Core Concept of Smart Taiwan





Promotion Plan

e-Taiwan

- e-Business
- e-Government
- e-Living
- Reduce Digital Divide
- Broadband to the Home

M-Taiwan

- **Mobile Service**
Emergency Support System, Traffic & Safety Monitoring System, Homeland Security Monitoring, Mobile City Navigation & Business Applications, Smart Fleet Management, etc.
- **Mobile Living**
MRT Mobil Living, Interactive Portable TV Programs, Digital Home Multimedia Services, Digital Ads & Mobile Internet Services, etc.
- **Mobile Learning**
M-IPTV Courses, Wireless Internet Learning Station for Indigenous Villages, etc.



3. Challenges in Marketing Smart Living Technology Applications

(1) Lack of Service Trial Environment

Before being launched, innovative services have to be gradually optimized through multiple stages. However, there are insufficient trial environments and trial users for service providers to conduct sufficient testing. Thus, like other emerging services, it is possible that these services fail on the market.

(2) Overvaluing Technology Adoption, Insufficient Service Depth

In the past there was a technology-orientation, with a focus on how to integrate technologies to create new services. This sometimes resulted in meaningless integration work that fails to meet market demand. Also, the link between system integration and value proposition has usually not been well considered; this leads to indistinct operation models and insufficient service depth, causing difficulties in commercialization.

(3) Lack of Long-Term Commitment on the Part of Major Vendors

Innovative applications and services typically require cross-sector integration, and it is difficult for a single company to create a complete service value chain by itself. For instance, health care needs cooperation between hospitals, SI companies and equipment suppliers. The cooperation can only work with a proper operation model led by a major vendor.



4. Case Study

(1) Japan: Sendai-Finland Wellbeing Center

- This is a transnational project run by Finland and Sendai city in Japan with a license fee of 3,600 Euro. The center is composed of a care unit and an R&D unit, which provide services and devices for old people's independent living.
- This center is supported by multiple partners including the Ministry of Economy, Trade and Industry, Ministry of Internal Affairs and Communications, The Japan External Trade Organization (JETRO), Sendai City Government, universities, enterprises and banks.
- Purpose:
 - To research and develop products and services that are helpful to old people's independent living in target markets in Europe, US and Japan
- Strategic Approaches:
 - To work together to develop services and products suitable to Europe, US and Japan based on care concepts, structures, and technologies from Finland
 - To create an effective environment of health care and to cooperate with the R&D unit with the focus on utilization of existing technologies and systematic innovation



Source:
Sendai- Finnish Wellbeing Center



4. Case Study

(1) Europe: T-City by Deutsche Telekom

- This project is directed by Deutsche Telekom and jointly achieved by the city of Friedrichshafen, which was chosen from 52 towns, a political association (DStGB), a telecommunications firm (Alcatel-Lucent), a media outlet (Stern), a public TV service provider (ZDF), a university (University of Bonn) and others.
- DT will have invested 80 Million Euro by the end of the 5th year of the project and had finished the mobile/broadband infrastructure for HSDPA and VDSL at the end of 2007.
- Purpose:
 - To support the firm’s strategic goal of improving innovation, service quality and efficiency by creating an open-site environment for testing new preliminary plans and uniting the suppliers of all products /services to jointly innovate applications
- Strategic Approaches:
 - To show how innovative applications of IC technology improve residents’ quality of life on a town-level scale
 - To enhance overall performance of DT’s mobile services by transplanting innovative applications, that receive excellent results, to other towns, cities, or even other countries



Source: Deutsche Telekom

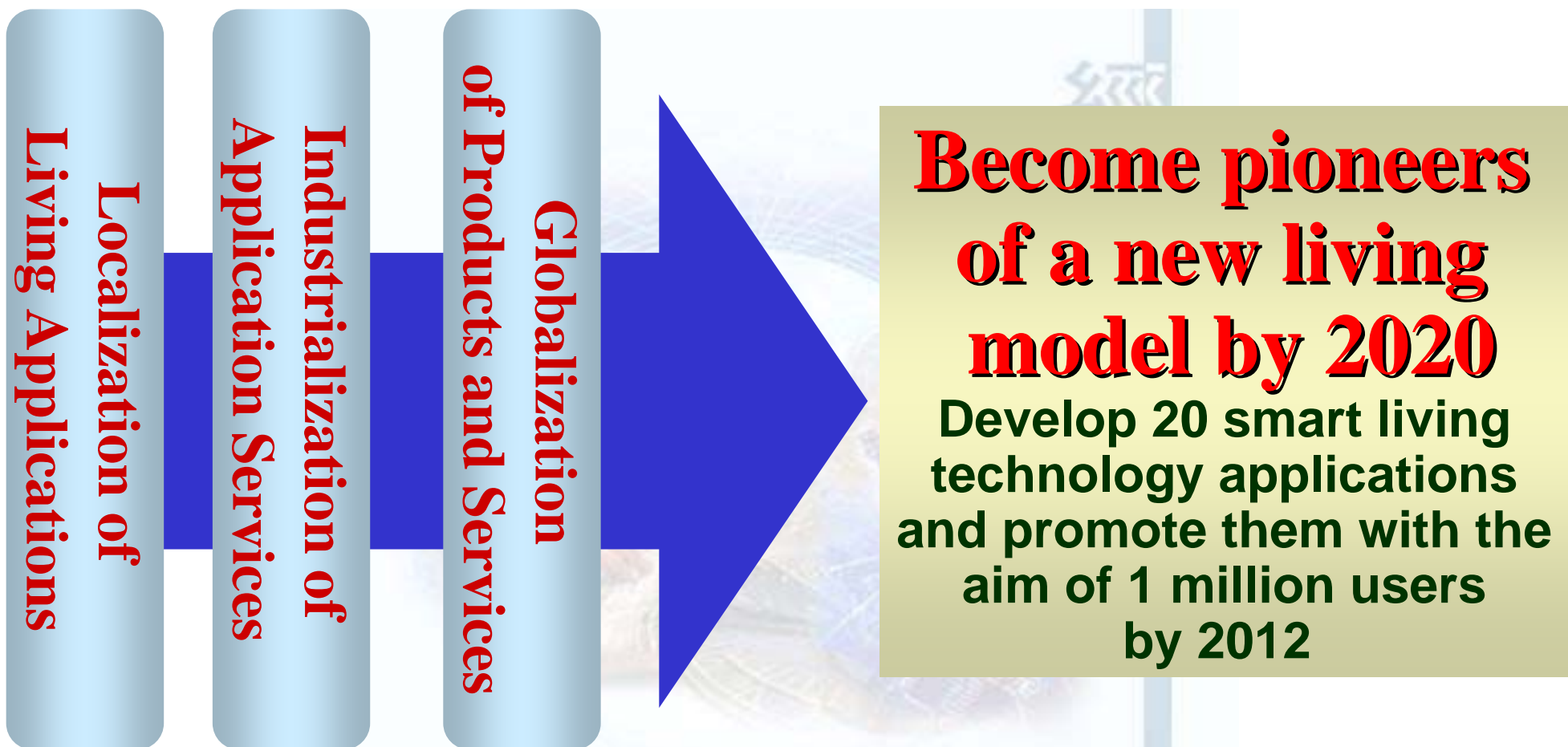


III. Promotion Strategy





1. Vision and Goal





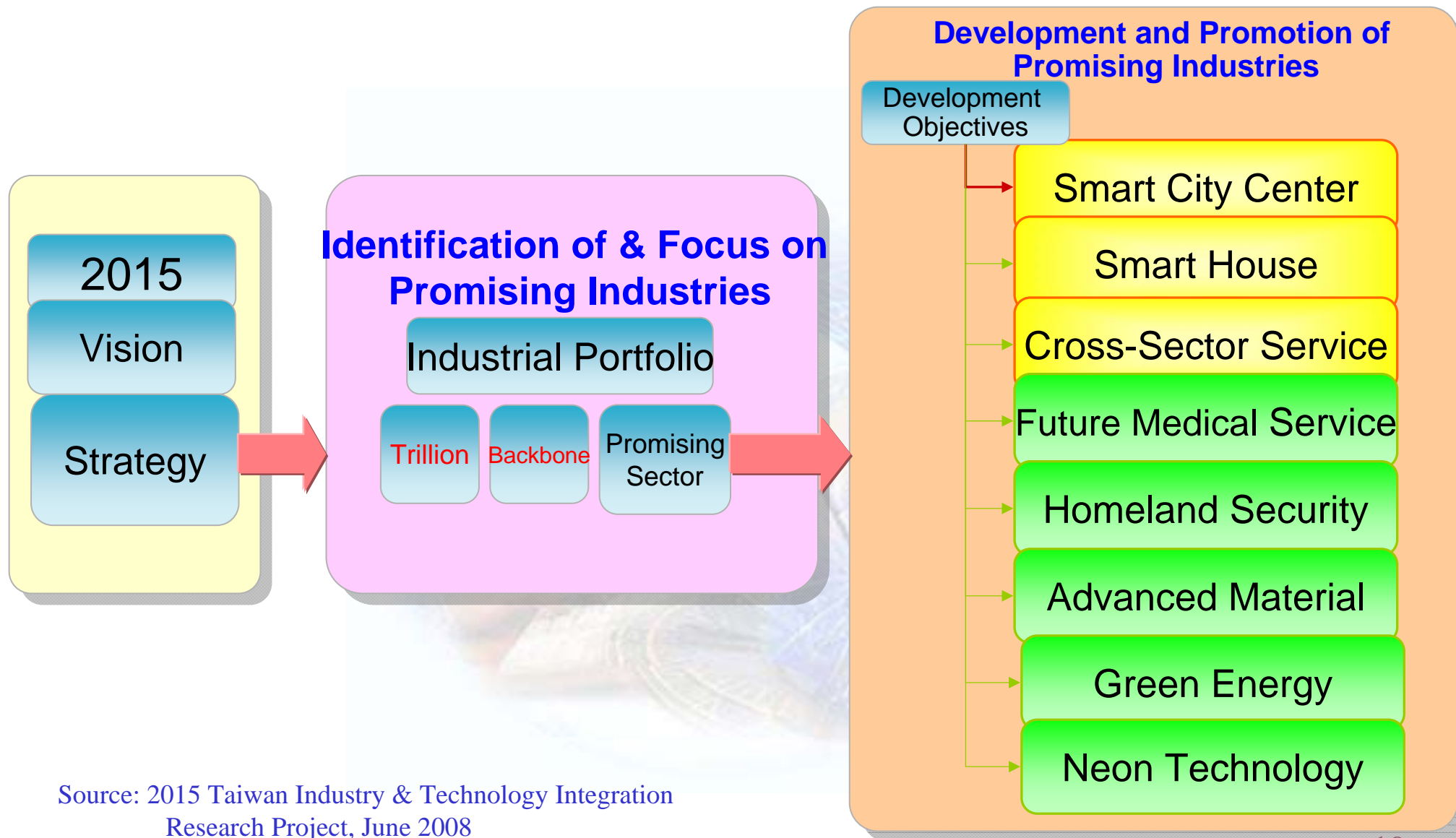
2. Development Strategy & Action Plan

(1) Conception of Promotion Strategy for Smart Living Technology Applications

1. Appropriate major vendors are to be selected for cooperation, and an environment required for the smart living applications and services relevant is to be established so as to accomplish effective research on innovative applications and services.
2. In addition, research on future demand is necessary to identify promising innovative applications and services and preliminary trials are required to improve service models through the actual interaction among users, enterprises and R&D units.
3. A dedicated promotion office is to be established for managing the execution of plans related to smart living technology applications and for conducting inter-agency communication.
4. The scope of application services is to be gradually expanded so as to realize industrialization of the application services.



Conceptual Basis of Market Objectives for Smart Living Technology Applications



Source: 2015 Taiwan Industry & Technology Integration Research Project, June 2008

Objective 1: Smart Town



Smart living applications such as seamless network services, smart family applications, remote care, smart transportation, various mobile applications and green applications are to be provided in a small town or administrative area with a population less than 100,000 people .

| Leaders | Partners | Integrated Applications |
|---|---|--|
| The government or ICT sector, and large enterprises in areas such as telecommunication services, family appliances, energy supply | ICT vendors, transportation companies, banks, energy suppliers, medical service providers, tourism companies, farming and fishing enterprises, universities and R&D units | Smart low-carbon electricity network, resource recycling system, small payment services, smart transportation, LBS, e-ticket, mobile audio & video entertainment, digital medical and remote care services, ecological tour guide, specialty food logistics system, etc. |



Objective 2: i-Park

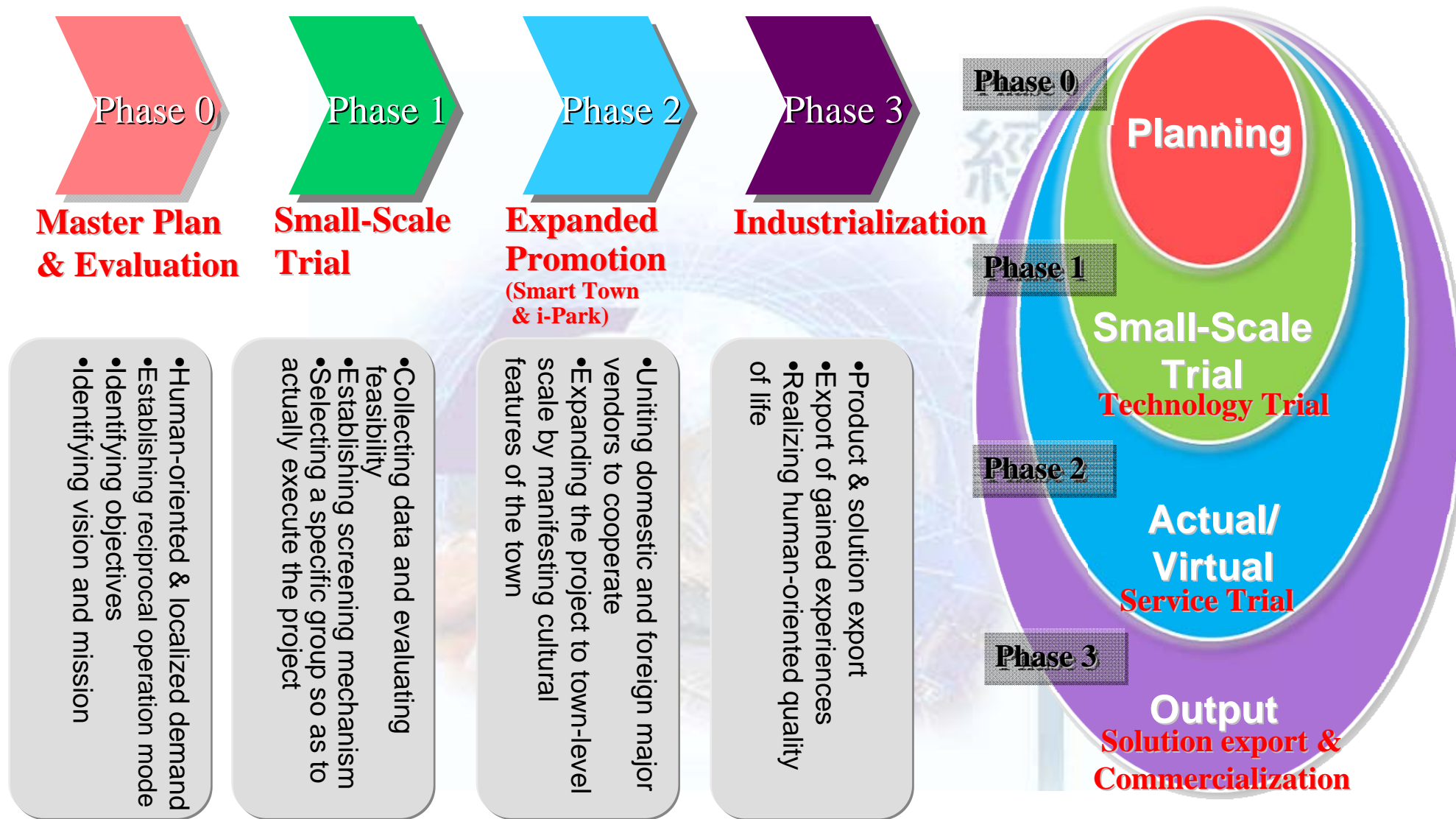


Various applications such as dynamic transportation planning service, smart management of energy and resources, security monitoring, cross-sector service, virtual-actual integration learning, mobile application services and others are to be applied in an i-Park and the peripheral area around the i-Park guided by a master plan.

| Leaders | Partners | Integrated Applications |
|---|--|--|
| The government and large enterprises in areas such as property management, security services or ICT | ICT vendors, energy suppliers, transportation companies, logistics companies, security services, supplementary education companies, universities and R&D units, etc. | Security monitoring system, energy management system, smart transportation, smart public space, virtual enterprise space, 3D experience services, transnational learning, auto-translation service, etc. |



(3) Promotion Process for Smart Living Technology Applications





IV. Conclusion





IV. Conclusion

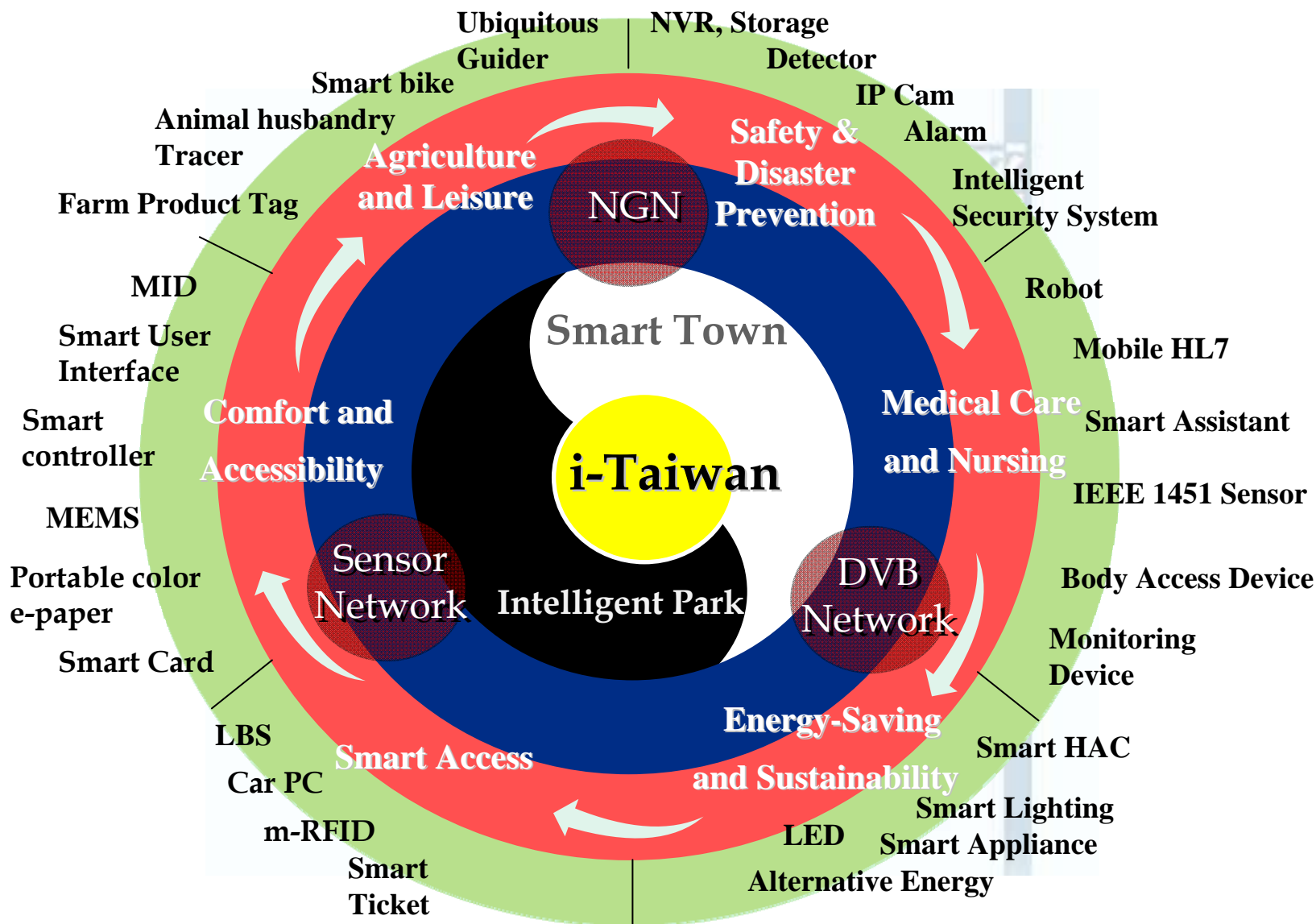
Promotion Strategy for i236 of i-Taiwan:

1. In the “Smart Town” and “i-Park”, which are a result of the integration of next-generation broadband network, digital TV network and sensor networks, the 6 smart living technology innovative applications (Safety & Disaster Prevention, Medical Care and Nursing, Energy-Saving and Sustainability, Smart Access, Comfort and Accessibility and Agriculture and Leisure), which are supported by domestic and foreign companies, are to be introduced for trial in an open-site environment. The goal is to ensure the success of services/products, and the applications are to be extensively promoted so as to build up emerging industries.
2. By promoting smart living technology applications, not only can quality of life be improved, but related innovative applications and products including hardware and software can also be developed, thereby increasing added value of the ICT industry in Taiwan.



I236 Strategies for i-Taiwan

(2 Objectives & 3 Networks & 6 Applications)





Discussion Topics

- Suitability of the strategies and methods used for promoting smart living technology applications
 - Establish a real environment for close cooperation between users, enterprises and R&D organizations in order to increase the success rate of applications and services
 - Strengthen the leading roles of key companies to ensure the operational performance of the abovementioned environment
- Suitability of the action plans for smart living technology applications
 - Conduct open-site projects in northern, central, southern and eastern areas of Taiwan
 - With S-Town and i-Park as the major focus areas of promotion, establish an open-site environment consisting of next-generation broadband networks, digital television networks and sensor networks; promote six major service areas, including safety & disaster prevention, medical care and nursing, energy-saving and sustainability, smart access, comfort and accessibility, and agriculture and Leisure



Thank you.

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Cost Estimates

Unit: Million New Taiwan Dollars

| Item | Description | Total Cost for 5 Years | Remark |
|---------------------------|--|------------------------|---|
| Trial Zone Setting | 4 Trial Zones | 2,400 | High Speed Wired/Wireless Broadband Networks & Sensor Networks, Service Platform, Related Hardware & Software |
| Promotion Office | Promotion Office & Technology Convergence Office | 300 | Rent, Personnel, Equipment, Communication, etc. |
| Research | Industry Study, Demand Survey, Early Planning, Operation Mode Research, Industrial Efficiency Evaluation | 250 | $50 * 5 = 250$ |
| Applications/ Services | 20 Smart Living Applications/Services Development & Establishment | 900 | $20 * 45 = 900$, Application/Service System Development & Establishment |
| Equipment RD & Production | Innovative Equipment and Devices for 10 Applications / Services | 500 | $10 * 50 = 500$ |
| Others | | 150 | |
| Total | | 4,500 | |