Towards Sustainability and Intelligence
Positioning Urban Development Strategy for Xinzhuang District, New Taipei City
Forward

“Applying the Innovation Systems and Services, Developing Strategies and Creating a Sense of Local Identity in Xinzhuang District” is one of the seven projects under the National Science Council’s three-year University — Industry Collaborative Research in the topic of “the Innovative System Integration and Service Package Applications for the Next Generation Smart Living Community”

Responding to the Needs of the Local Community

Ensuring a Stronger Local Voice

Industry

遠雄 Farglory

University

City Eco-City

“Industrial Golden Triangle + 1” Project

Xinzhuang Knowledge Park
New Taipei Industrial Park
Xinzhuang International Innovation Park
Xinzhuang New Urban Centre

Major Transport Infrastructure Investment Projects

Metro Taipei Circular Line

Taoyuan International Airport MRT
Objective

Create a *single long-term strategic shared vision* of Xinzhuang by involving the **Smart City principles** for a more **sustainable** and **innovative** New Taipei City.
Geographical Location
THE INVOLVEMENT OF INTERNATIONAL URBAN DEVELOPMENT ASSOCIATION
The Renewal Plan of La Défense Seine Arche

Several modernisation projects: new transport options, new business activities and new housing programmes — all in a “quality sustainable environment” — is what former French President Nicolas Sarkozy’s vision of La Défense Seine Arche all about in the Grand Paris (Le Grand Paris) initiative.

<table>
<thead>
<tr>
<th>Diversified Transportation Services</th>
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<tr>
<td>• Construction of the RER E (Eole) → to relieve the congested traffic on the RER A by at least 15%</td>
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<td>• Construction of Grand Paris Express → to directly connect the business district to Roissy and Orly International airports</td>
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<td>• Extension of the T1 and T2 tramway to strengthen the north-south axis</td>
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<td>• Redeveloping the expressways and service roads into urban avenues (ring-road, avenue de la République, boulevard des Bouvets, boulevard Pesaro etc...) which combine various modes of mobility: people with reduced mobility, pedestrians, cyclists, vehicles.</td>
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<th>Sustainable Business Activities</th>
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<tr>
<td>• The renovation of offices to sustainable development standards and the construction of 450,000 sq.m of new office space</td>
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<td>• 180,000 job opportunities</td>
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<tr>
<td>• Expand to the Banking, Insurance and Financial Industries, promote green investments, attract small and medium-sized companies, and develop local businesses</td>
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<td>• Construction of sustainable skyscrapers, such as Phare Tower and Hermitage Plaza Towers</td>
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<th>Accessible Homes for All</th>
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<tr>
<td>• With 100,000 sq.m for housing development, 5000 housing unites are under tender, planned and being marketed; 40% of which are social housing under home purchase schemes, assisted home purchase schemes for low families, private, local authority, cooperative home rental and student residence schemes in order to increase social mixity</td>
</tr>
<tr>
<td>• Towards a 24-hour economy and secured living environment to accommodate the needs of existing and potential residents, university students and employees.</td>
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</table>
Sustainability of the business pursuit of La Défense Seine Arche is at risk

- **Limited physical space** to expend the district by adding new buildings
- **Other comparative high-rise locations** in the Grand Paris are coming up at lower costs, transport infrastructures, and with a higher degree of sustainability and urbanity
- **Growing demand for a healthy work-life balance** and other quality of life issues from the existing and potential employees

The Role of INTA

International Urban Development Association (INTA) serves as a consultant of the Urban Development Corporation of La Défense Seine Arche (EPADESA is a public agency in charge of the development of the business district of La Défense).

INTA advocates that the urban development of Xinzhuang is similar to that of La Défense Seine Arche.

The Space of Flows supersedes The Space of Places
Advice from INTA

- Create a single long-term strategic joint vision for all of La Défense Seine Arche area
- Ensure this vision is urbanistically, economically, socially, culturally and environmentally ambitious to compete with the best urban core developments internationally
- Set up a new public and well-managed dialogue between people, companies and institutions that gives voice to existing and future actives and beneficiaries
- Agree and publicise the vision with its action plan within 2 years in order not to miss the point of turn-around, mobilisation and ambition generation.
- Agree to start with smaller and medium size projects showing rapid progress in terms of quality and ambition and new cooperative spirit.

The Role of INTA

What is the way forward for La Défense Seine Arche?

SMART possibilities

Data rich environments
- intelligent environments

New perspectives
- new city layers

People power
- continuous feedback and increased participation

Cities as systems
- platform, operating systems, hardware and apps
Site visit/ analysis, agenda setting and vision development

• The team of INTA incorporates professionals in the fields of marketing strategy, sustainable transportation, ICT, urban politics, green technologies, architecture and urban planning. The site visit of Xinzhuang aims at enabling INTA to have a better understanding of the locality in order to help with its agenda setting and vision development.

• With INTA’s pan-European consulting experience, the team of INTA would be able to give some advice from international perspectives.

Develop strategies of Smart Eco Systems on the basis of the experience of La Défense Seine Arche or other related case studies

• Give advice on enrichment of public services and enhancement of local visions in order to accommodate the development of Xinzhuang Knowledge Park, New Taipei Industrial Park, Xinzhuang International Innovation Park and Xinzhuang New Urban Centre.

Develop a holistic vision for the future development of urban Xinzhuang

• Discuss Xinzhuang’s local visions and potential opportunities and constraints for inter- and intra-urban competitiveness.

• Suggest ideas for a new innovative system for public services that echoes New Taipei City Government’s current plan and local policies, empowers local neighbourhoods, as well as considers private sector interests.

• Act as a catalyst to speed up the administrative processes of the National Science Council in order to prevent the plan from possible risk and uncertainty.
## Provisional Timescale

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<th>Phase</th>
<th>4</th>
<th>5</th>
<th>7</th>
<th>9</th>
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<tr>
<td>Site visit</td>
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<td>④</td>
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<tr>
<td>Ensure a joint vision and issues for further discussions are established</td>
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<tr>
<td>Analyse Xinzhuang’s advantages, potential opportunities and constraints</td>
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<td>③</td>
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</tr>
<tr>
<td>Agenda setting, key issues + vision development</td>
<td>②</td>
<td>③</td>
<td>③</td>
<td>③</td>
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<tr>
<td>Analyse La Defense and its smart city strategies</td>
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<td>Examine the London Thames Gateway Development Corporation (LTGDC)</td>
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<td>Suggest ideas for a new innovative system for public services that incorporates public sector, private sector and civil society interests</td>
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<td>Conduct an international conference</td>
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<td>Develop mechanisms for public-private partnerships</td>
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<td>Publish a book that summarises overall discussion and conclusions</td>
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### 預期工作成果

1. **Dialogue between New Taipei City Government and INTA panelists.**
2. **The Smart City Initiative of Xinzhuang is self-evolving and adaptive to the constantly changing contextual influences (e.g. the development of ICT and globalisation) and its local urban fabric (e.g. pre-existing spatial layout), and is developed with better customer-centric services, innovative lifestyles, and carbon management systems.**
3. **Develop a practical strategy of a Smart Eco System which meets the requirements of the national policies and regulations as well as the processes of local development projects.**
4. **Explore and exploit the way in which urban ICT could act as an accelerator to offer new perspectives of city layers of Xinzhuang that go beyond the physically-defined boundaries. The co-existence of physical and virtual neighbourhoods in Xinzhuang could enhance its competitive edge and local identity, making it smarter and more sustainable.**

### 預期工作成果

- **3/23-28**
- **約5月初前後**
- **約7月**
INTA 參與專家學者

Michel Sudarskis
Secretary General of INTA

Christian Laroche
Architect and Planner, Paris, France

Ramon Forcada Pons
Director for Planning, Land Development Agency of Catalonia, Barcelona, Spain

Didier Lourdin
Director for Transport and Sustainable Development, La Defense, Paris

Henry Chabert
Former Deputy Mayor of Lyon in charge of Urban Planning, Lyon, France
Smart Living Technology
Chin-Teng Lin Director, Eco-City Smart Living Center, National Chiao-Tung University

Ren-Jye Dzeng CEO, Eco-City Smart Living Center, National Chiao-Tung University

Strategic Urban Planning
Charles Lin
Associate Professor, Department of Humanities and Social Science, Graduate Institute of Architecture, National Chiao Tung University

Team of COSMOS
Her-Ching Wang Chairman, COSMOS INC.

Song-Nien Xia President, COSMOS INC
DIRECTIONS FOR THE URBAN DEVELOPMENT OF XINZHUHUANG
5 billion people will be living in cities in 2020

Buildings use 40% of world’s energy savings and up to 40% of energy savings are not captured today

Smarter Logistics could yield 27% fuel savings

More than 50% of web connections will be mobile by 2013

5 billion people have mobile phones today

Access to public data is estimated to be worth €27 billion in the EU

Smart grid creates 50% more jobs than the average infrastructure project

ICT-enabled energy efficiency could translate into over €600 billion worth of cost savings for the public and private sector

15% of emissions can be saved in 2020 through ICT-enabled energy efficiency

5 billion people have mobile phones today

Source: Information Marketplaces: The New Economics of Cities (The Climate Group, 2011)
Beyond Capitalism...

An economist Tim Jackson has written a book called “Prosperity Without Growth”. It sums up that “growth” does not necessarily bring us well-being and our planet sustainability. The current model of economic system fundamentally flawed, as reflected in the current financial crisis.

What if economic growth is going to end, what else could make people feel contented in an age of prosperity without growth?
Can Xinzhuan as an urban ICT centre be a lever for the sustainable development of the metropolitan area of New Taipei City?

Given the steep rise in oil prices, what will become of Xinzhuan with its proposed tall buildings, workers and businesses?

What should be done to speed up the switch to a post-oil / post-capitalist metropolis?
Taipei’s urban development projects over the past 10 years

Xinzhuang Urban Center (proposed development)
- Mixed-use development, including commercial and financial offices, residential houses, retails, and governmental services
- Many Brownfield sites
- Promote the transformation of conventional industry and logistics industry into knowledge-based industry and green industry

Neihu Tech. Park
- Mixed-use development, including office headquarters, luxury condominiums and logistics and storage industry
- Lack of living, recreational and commercial facilities

Xinyi Financial District
- Mixed-use development, including commercial and financial offices, convention center, luxury condominiums, cultural and creative clusters, entertainment, shopping centers, landmarks and local government services.
- Not directly adjacent to Nangang Software Park and Bio-technology Park.
- Serves as a recreational and entertainment centre for Neihu Industrial Park.

Bangqiao District
- Mixed-use development, including commercial offices, luxury condominiums and local government services
- Lack of industrial development
Yet... over the past 10 years, Xinzhuang has struggled to adapt to fast-changing and increasingly fragmented environment ...
So... what are Xinzhuan's competitive advantages?
Regional Advantage

**Xinzhuang** is geographically located at the centre of the Keelung-Taipei-Taoyuan Technological and Industrial Corridor.

- Link to the logistic hubs of international airports and ports via advanced highway systems.

Xinzhuang will be an urban centre of the Keelung-Taipei-Taoyuan Region and the national technological corridor.
Major Transport Investment Projects in Xinzhuang

One Express Way: Express Way #2

Two National Highways:

National Highway #1: 40 minutes to Taoyuan International Airport; 15 minutes to Sungshan International Airport; and in close proximity to Neihu Technology Park, Xizhi Technology Park and Hsinchu Science Park.

National Highway #3: Taipei Port Designated Area, Wugu New Township, and Tucheng Industrial Park

Three MRT Lines:

MRT Airport Line: 5 minutes to THSR (Taiwan High Speed Rail) Taipei Station/Banqiao Station; 25 minutes to Greater Taipei Metropolitan Area; and 20 minutes to Taoyuan International Airport

MRT Circular Line: 15 minutes to Shilin/Beitou Technology Park; 20 minutes to Taipei Songshan Airport; and 30 minutes to Neihu Technology Park.

MRT Xinzhuang Line: 15 minutes to Fu Jen Catholic University; and in close proximity to old downtown of Xinzhuang
Investments in major transport infrastructure would fasten the movement of people and ease the flow of goods and capital to spur processes of urban development in Xinzhuang.

**One Express Way**

**Two National Highways**

**Three MRT Lines**

- Two airports and one port that link to the world
- Five minutes to THSR Taipei Station which links to five main municipalities in Taiwan
- Quick access to major businesses, offices, and recreational areas in Taipei City
- Quick access to Northern Taiwan Smart Technology Corridor including Neihu Technology Park, Tucheng Industrial Park, Business Park, New Taipei Industrial Park, Taoyuan Air City, and Hsinchu Science Park
- Link to the most important technology corridor in Greater Taipei Area along the Metro Taipei Circular Line
Industrial Golden Triangle + 1 Project

New Taipei Industrial Park:
The site for industrial transformation and upgrading

North Xinzhuang Knowledge-based Industrial Park:
A platform for culture and knowledge exchange

International Innovation Park:
Next-generation industrial technology and R&D

Xinzhuang New Urban Centre:
Mixed-use development + administrative and political centre
New Taipei Industrial Park

Area: **140.55HA**
Employees: **28,000**
Turnover: **$550 billion TWD/yr**

Objectives:
- Aims at **transforming and upgrading** the current industries
- However, the overarching objective has not been identified…
North Xinzhuang Knowledge-based Industrial Park

Area: **34.1HA**
Population: **2,700**
Objectives: Establish a platform for culture and knowledge exchange where animation, digital games, and the audio and video industries are the major investments via public-private partnerships between the private businesses and the local government.

- **Promote cultural exchange:** Establish the National Cinema Cultural Center to attract more creative individuals and promote cultural exchange and idea sharing.
- **Facilitate knowledge transfer and idea generation:** Empower creative individuals and the service industry to generate more innovative ideas and provide a large variety of production services in order to reinforce local R&D activities and nurture creative talents.
- **Create well-connected network of waterways:** Enhance the views and landscapes of Zhunggang Canal and Er-Chung floodway where the two proposed MRT lines would pass by.

**Note:**
- The plan was approved by New Taipei City Government (December, 2010)
- The plan was approved by Ministry of the Interior (October, 2011)
- The implementation date (TBA)
Proposed initiatives:

- **Creative Quarter:** In response to the tendency of “Otaku Economy” or “Stay-at-Home Economy,” “live/work loft” is designed and constructed to house residents and their business, especially those who are designers, computer engineers, architects and startup founders.

- **24-hour District:** Consider the need for leisure activities from flexible, polyvalent and highly mobile workers, and subculture consumption from the youths, 24-hour district is designed with many open public spaces. Retails and restaurants are mainly located on lower floors to ensure a safe and secure living environment, especially during night time.

- **Green Recreation Corridor:** The design of well-connected network of waterways enhances the views and landscapes of Zhunggang Canal and Er-Chung floodway.

In the future, **50%** of the designated area will be green space. It creates a green corridor leading to a **460-hectare** park.

**Industrial Park:** is expected to occupy **6.2 hectares**. Its business solicitation process by the Department of Economic Development, New Taipei City Government, has already started.

**Land allocation** will begin in May, 2014 and zone expropriation is expected to be completed by the end of 2014.
International Innovation Park

Objectives:

• Establish a core centre for the next-generation industrial technology, focusing on R&D in the fields of creative, digital services and value added traditional industry

• Turnover: $150 billion TWD/yr

• Provide 10,000 new jobs

• ≥ Attract 100 domestic and international flagship companies

• ≥ Allow 10 domestic and international enterprises to establish Asian Pacific operational headquarters and R&D centers

• Construct the 1st LEED platinum-certified green buildings, seismically sustainable buildings and smart buildings
**PHASE I**
High-intensity industrial-office buildings
- Attract public and private research institutions
- Focus on R&D in the fields of materials, components, energy, transportation for more intelligent and innovative lifestyle options

**PHASE II**
AU International Transit Hub
- Developer: CECI Engineering Consultants
- Complete feasibility study (by the end of 2012)
- Host an investment promotion event (by the end of 2013)

**PHASE III**
High-intensity industrial-office buildings
- Develop high-rise office buildings (above 40 floors + high intensity)
- Construct the first LEED platinum-certified green buildings and the prototype for future construction
- Host an investment promotion event (by the end of 2014)
The development process of Xinzhuang Urban Center will be more time-efficient and holistic than the Xinyi Financial District.

**Admin Culture**
- **Central Government Office**: Labor, Cultural, Hakka, Aboriginal administrations. It will accommodate 2700 staff. Gold Class Green Building Certificate
  - 2013.06
- **Xinzhuang Knowledge Park**
  - New Taipei Industrial Park
  - 2018
- **Transport Environment**
  - 3 MRT lines: Airport Line/Circular Line/Xinzhuang-Zhonghe Line are expected to be completed in 2015
  - 2015

**Xinyi**
- **Taipei City Government**: Capacity: 6,000 staff
  - 1995
- **Sun Yat-sen Memorial Hall/New Stage**
  - 1972
- **Taipei World Trade Center**: 1,554 units
  - 1985.12
- **MRT Ban-nan/Xinyi Lines**
  - 1999.12
- **Zhonggang Green Drainage/Corridor/Er-chong Floodway/Central Park**
  - 2015

Under 5% of Xinzhuang Urban Centre is developed. Xinyi District 1995
$70 billion TWD Taipei Golden Twin Towns Investment Project

投資規模：700至800億
樓地板面積：158,000坪（1.5倍的101大樓）

完工時間：106-107年
空間內容：商辦/百貨/國際商務旅館為主

6鐵1客運交通樞紐（高/台鐵、3捷運線、機場捷運、國道客運），繼香港/吉隆坡/曼谷後，成為全球第4個「捷運站中兼具延伸國際機場服務功能」的城市。
Regional Repositioning Potentials of Xinzuang: Strategic Location, Public-Private Partnerships and Major Transport Infrastructure Investment

• 2 Airport Line MRT Stations link to Taipei Main Station and Taoyuan International Airport
• MRT A3 Station provides airport check-in services

• Taipei Metro Circular Line strengthens the relationship between New Taipei Industrial Park, Shilin Beitou Tech. Park and Neihu Tech. Park

• MRT A3 and A4 Stations are located at large brownfield sites which create possibilities for talent exchange and the diversified provision of logistics services
• MRT A4 Station Central Government Office provides industries direct services.

• Links to Taipei Metro Ban-nan Line which goes to Xinyi Financial District and Nangang Econ. Trade Park with Taipei’s major commercial offices, entertainment and cultural creative clusters

• 5 mins. to THSR (Taiwan High Speed Rail Taipei Station) which links to 5 major metropolitans in Taiwan.
XINZHUANG’S POTENTIAL OPPORTUNITIES AND CONSTRAINTS
Xinzhuang’s Historic Trajectory: Transport Development (1700s-1900s)

In the early 18th century, Xinzhuang is located in the western margin of the Taipei basin. Its flat-lying fertile land alongshore the Dahan River attracted the immigration and settlement of Han Chinese and enabled hectic trading betwixt Fujian and Xinzhuang. These laid the foundation for the economic prosperity of Xinzhuang in which it became an important village for agricultural production, transit port for tea, rice, camphor and administrative and commercial centre in northern Taiwan.

After 1809, Dahan River and Tamsui River were heavily deposited which caused the port lost its functions. At the same time, there was a spatial shift of commercial development towards East Taipei. Xinzhuang’s place identity was replaced by Mengchia, Wanhua District of Taipei City, and its social, economic and population growth were dampened.

In 1889, Liu Mingchuan (a Chinese official during the Qing dynasty and the first governor of Taiwan Province) contributed to railroad construction, connecting the cities of Taipei and Taoyuan. Although newly built railway routes revived Xinzhuang’s commercial development for a short period of time, the routes were redirected to other cities and towns in 1901. It exacerbated Xinzhuang’s existing business and trade, and therefore prevented it from being commercially developed. Therefore, it retained as an agricultural-centric village focused on the production of rice.
Xinzhuang’s Historic Trajectory: Industrial Development (1970s-1990s)

In the 1970s, government-led industrialisation and urban expansion spurred the establishment of industrial zones in Xinzhuang and its neighbouring areas, including Wugu, Linkou, Taishan and Tucheng. A large number of agricultural lands were transformed into industrial lands. Xinzhuang thus became a popular destination for rural-urban migration from central and southern Taiwan.

In 1980, Xinzhuang as a village was upgraded to a county-controlled city. The growing population, rising housing prices and major investments in transport infrastructure in Taipei City enhanced transport connections betwixt Xinzhuang and Banqiao. As a result, Xinzhuang attracted massive foreign immigrants and became one of the most prime industrial and commercial satellite cities in West Taipei.

Since the late 1990s, large-scale manufacturing in Taiwan had gradually moved overseas. The role of Xinzhuang also shifted from a production base for export to a regional centre for business, consumer purchases, general offices, residential life and high-value production.
Linking the past to the future ...

Xinzhuang’s population is highly concentrated in the north (Touqian) and the south-west (Denfeng). Reflecting on historic trajectory of Xinzhuang, its frequent and irregular changes in the local economy, and historic importance on public infrastructure investment and industrial development may lead the local residents be more adaptable and looking forward to the new chapter of Xinzhuang.
What can be done for Xinzhhuang in the age of transformation
Can Xinzhuang be a Smart Creative Metropolis?
CONCLUSIONS AND DISCUSSION
Discussion contents and questionnaires with INTA experts on the Technological Application for Smart Community Living and Urban Repositioning Strategies in Xinzhuang Urban Center

Xinzhuang Urban Center was once defined as a local sub-urban core for the Taipei County in 1990. However, through the change of fast global mobility phenomena, including talent exchange, logistics, free flow of information and financial liquidity; the advantage of new regional governance system change, i.e. Taipei County became New Taipei City, a Special Municipalities, and the completion of the new national infrastructures corridors, i.e. Xinzhuang to be on the national transportation corridor between the National Airport and Taipei Main Station via highway and rapid transits, how shall one reposition Xinzhuang Urban Center?

1. Under the needs of Xinzhuang Urban Center finding a new position within the Taipei Metropolitan Area, and to connect to the surrounding Wugu Manufacturing Industrial Area which awaits for transformation, Xinzhuang Urban Center needs to implement a comprehensive redevelopment plan. Thus, what is the prioritized public improvement project list for urban green infrastructure projects, urban activities creation, urban industrial transformation, smart living model improvement and other innovative physical environmental and public service systems? In other words, what are the prioritized urban redevelopment areas, public improvement actions and the new smart service systems that need to be considered first?
2. Advanced smart technological service applications provide new imagination and possibilities in urban development. What are the public-private development cooperation mechanisms (allowing for new comers’ participation), community environmental management systems and other innovative mechanisms that one can learn from?

3. What are other European or American cities that are similar to Xinzhuang area in New Taipei City, exploring to be smart cities other than La Defense Seine Arche, which can be reference for building Xinzhuang Urban Center’s redevelopment strategies?

4. Since there are overlaps between urban development and smart technological application in recent development, what are the priorities for Xinzhuang Urban Center in consideration of urban green infrastructure and its related public information, public green transportation modules and other smart applications that suit for Xinzhuang area?

5. Among the above mentioned urban innovative service applications, what can be incorporated into official development design guidelines, public infrastructure or architectural development and design guidelines?