

Virtual Science Park for the Knowledge Society

– the Strategic Spatial Planning of Knowledge Complex in the Regeneration of Regions

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Introduction

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Knowledge city to make or knowledge city to be transformed

2. Challenge and attention

Failure of Knowledge Cities making without Urban regeneration

3. Alternative

good governance and virtual Science park for strategy spatial planning approach

4. Case studies

Kaohsiung in a transformation Processes to knowledge City

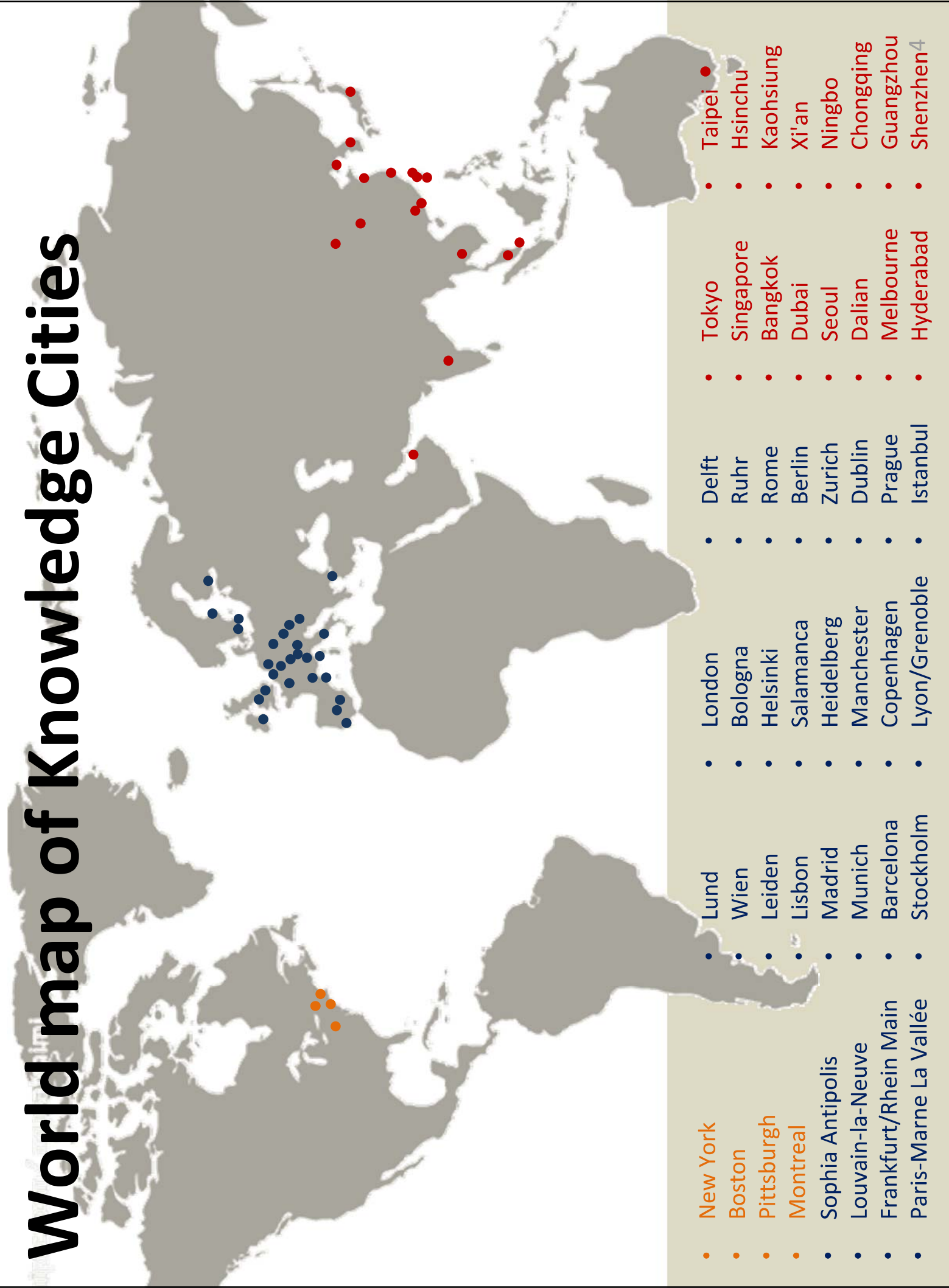
5. Conclusion

Virtual Science Park as strategy for foresighted planning in a regeneration of Regions

Review and critique

Knowledge city to make or knowledge city to be transformed

World map of Knowledge Cities



Comparison of Knowledge City to make or to be transformed

Comparison Project		Knowledge city by make	Knowledge city by transformed
Space Issues	Form	Close	Borderless
	Development approach	Expansion	Compact
	Relationship with the city	Isolate	Symbiosis
Promote Tools	Major promoter	National	Knowledge Alliance
	Land Source	Acquisition	Brown field, Renew
	Financial	Public Budget	Multi-Investment
	Management	Government	Knowledge Alliance
Knowledge Energy	Knowledge-based institutions	New	Upgrade
	Human Resources	Migration	Migration , Local
Urban Infrastructure	Transport Facilities	New	Upgrade
	Public Service Facilities	New	Strengthen the link

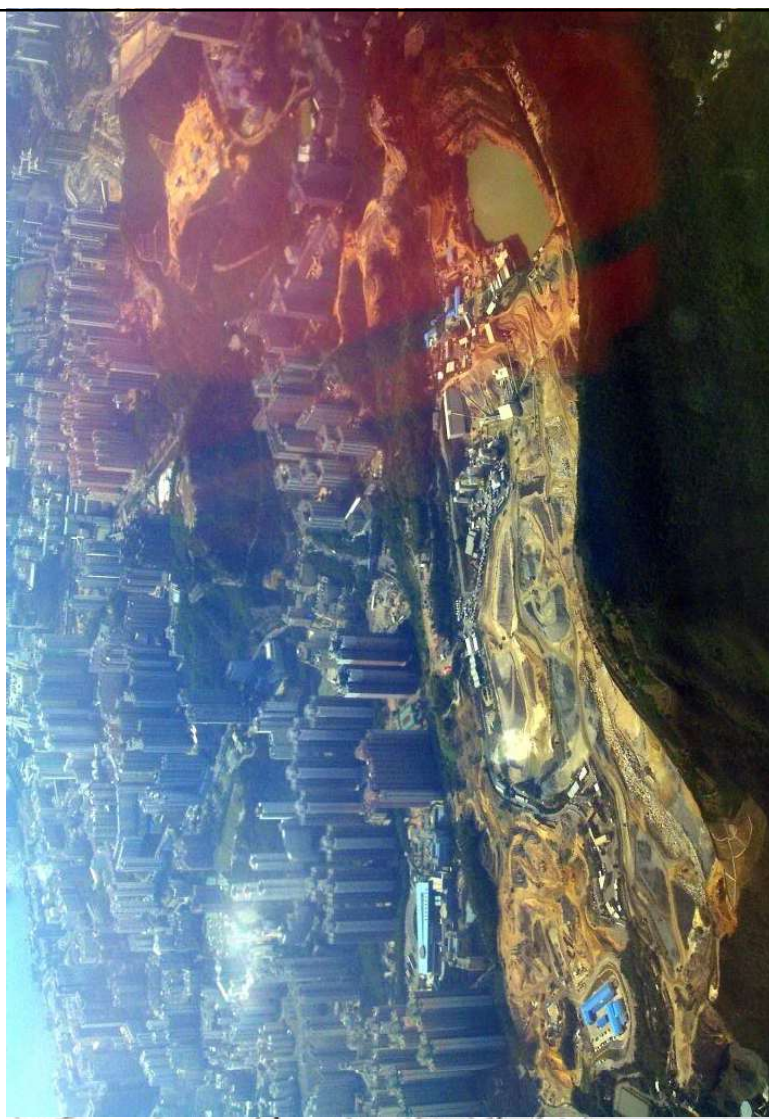
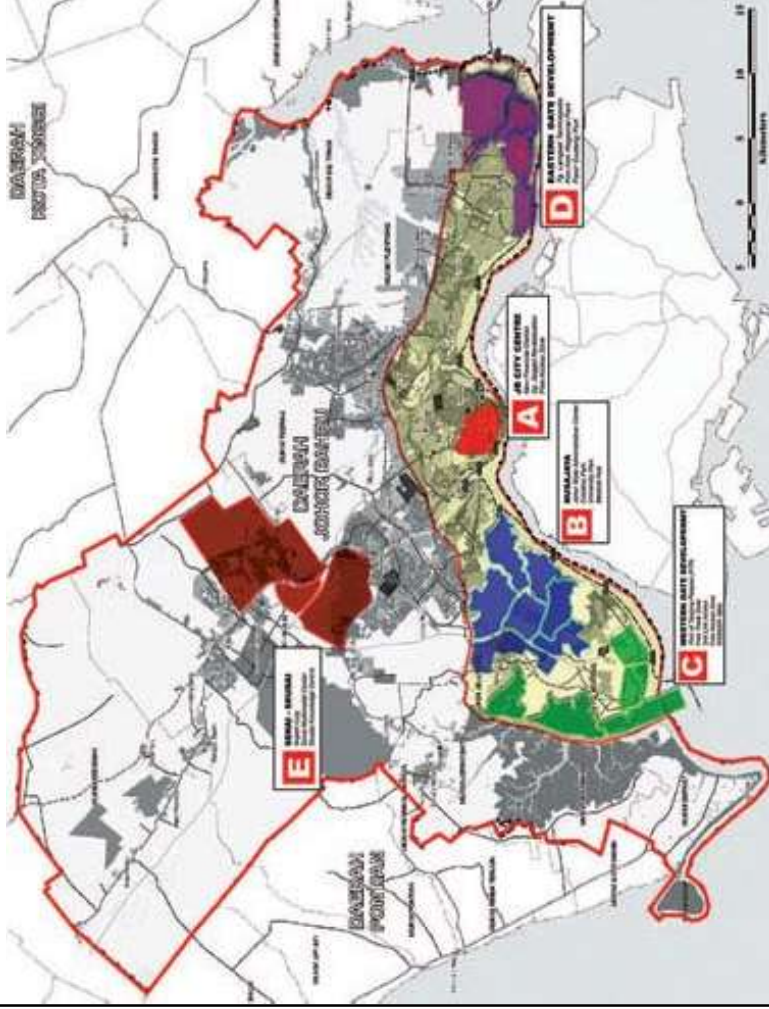
Challenge and attention

Failure of Knowledge Cities making without Urban regeneration

Kuala Lumpur

MSC Cyberport Johor's Flagship Project

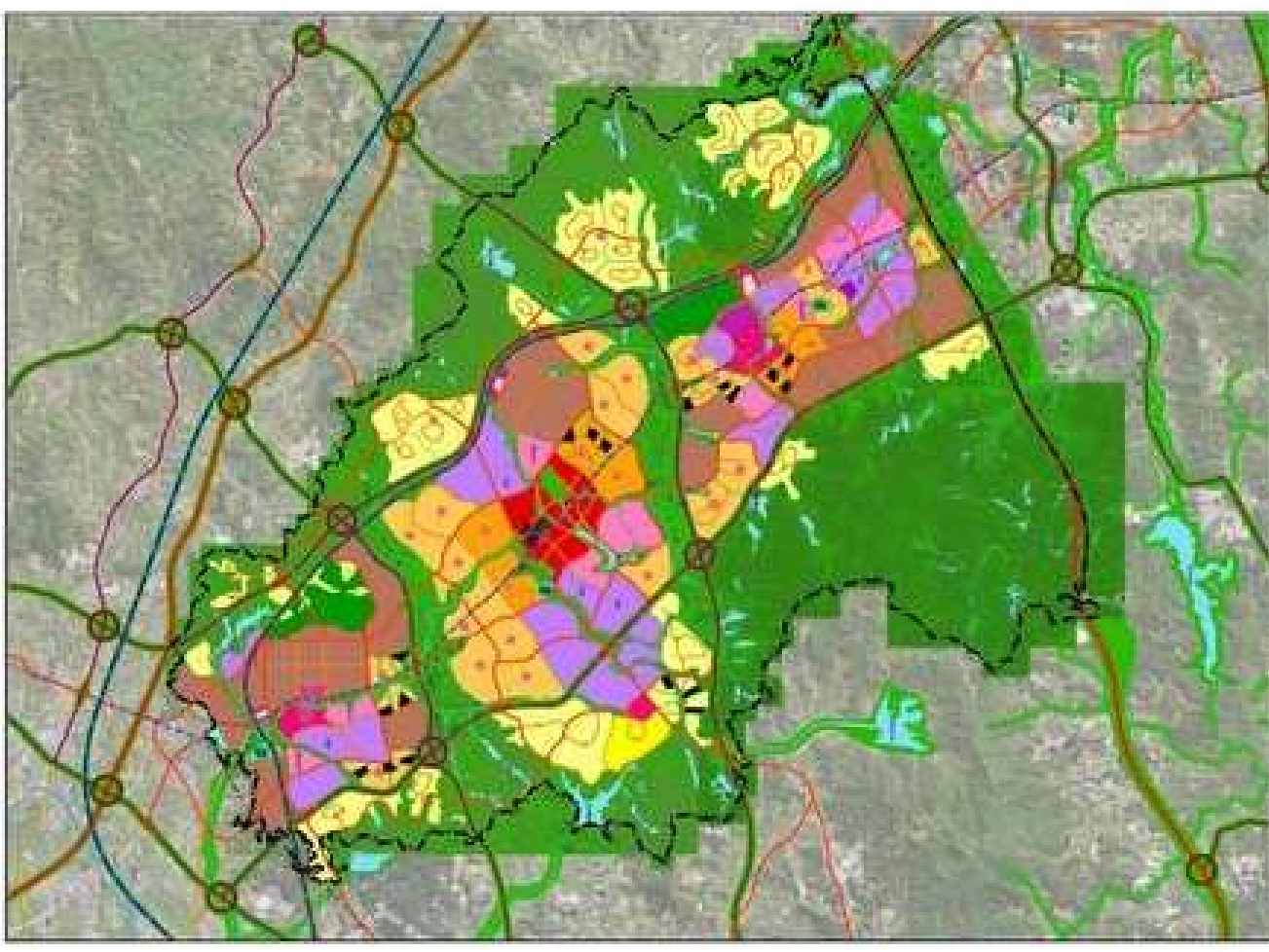
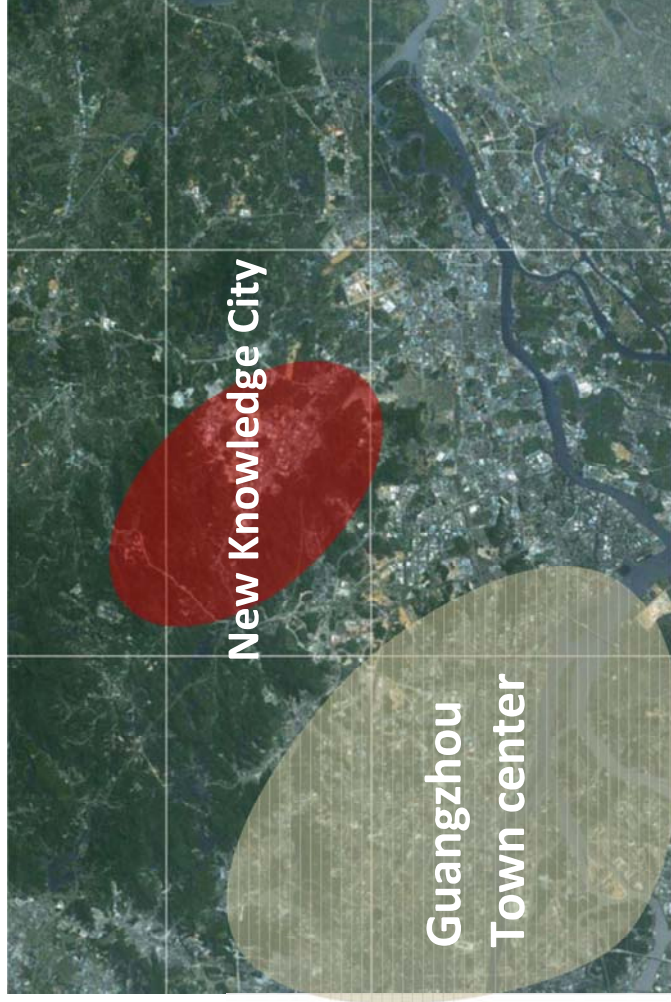
- The proposed Bandar MSC Cyberport will be developed in 3 phases, starting from 2009 over a 8-year period.
- MSC Cyberport had recently signed a MOU with an Indian based Leading Special Economic Zones Developer, Sunil Mantri Realty Ltd, to bring in USD 100 Mil worth of investment to develop, construct and market Bandar MSC Cyberport in Kulai.



Guangzhou

New Knowledge City

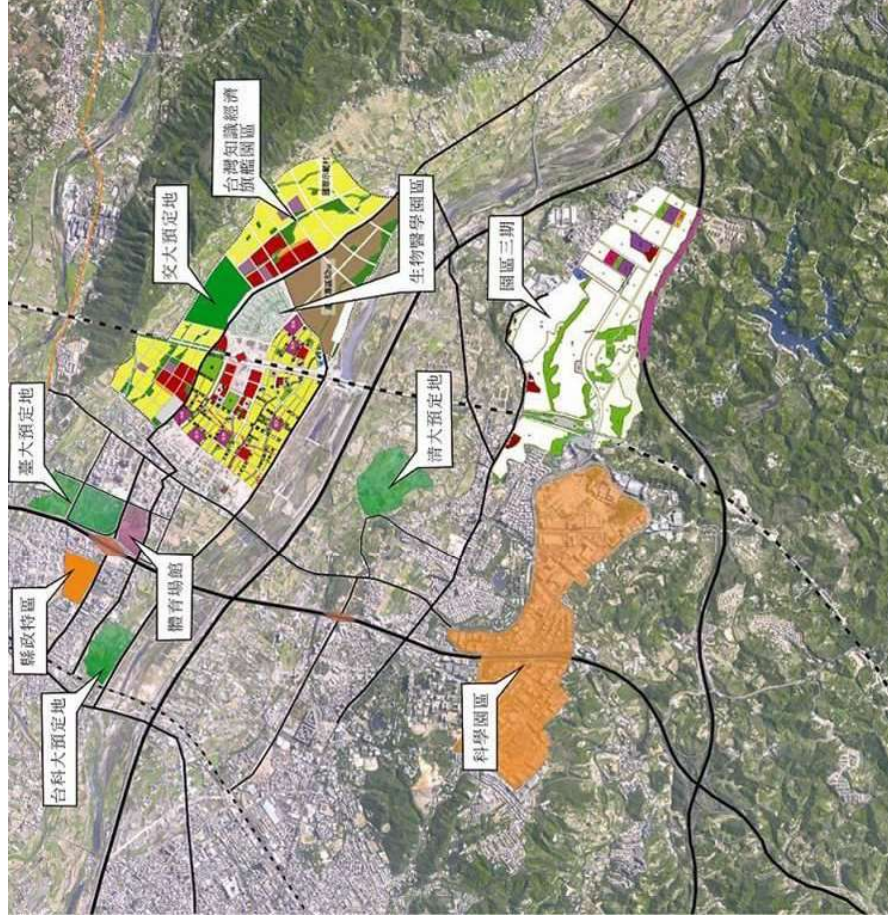
- A new town in the northeastern of Guangzhou city
- New Development Zone, with a total area of 6.12 square kilometers, from China, Singapore Cooperation



Hsinchu, Taiwan

Taiwan Knowledge Economy Flagship Park

- Make a new town with the Hsinchu Science Park and nearby universities to develop large-scale suburban agricultural area



Saudi Arabia

Medina New Knowledge City

- Knowledge Economic City is designed as a project to position Saudi Arabia and young Saudi Arabian
- Entrepreneurs as internationally respected leaders in knowledge based industries and aims to attract and develop talent from around the world.

It will focus on:

- ① Electronic Government
- ② Distance learning
- ③ Arabic language improvement and technology
- ④ Tourism technology
- ⑤ Call centres



Dubai

Dubai Knowledge Village

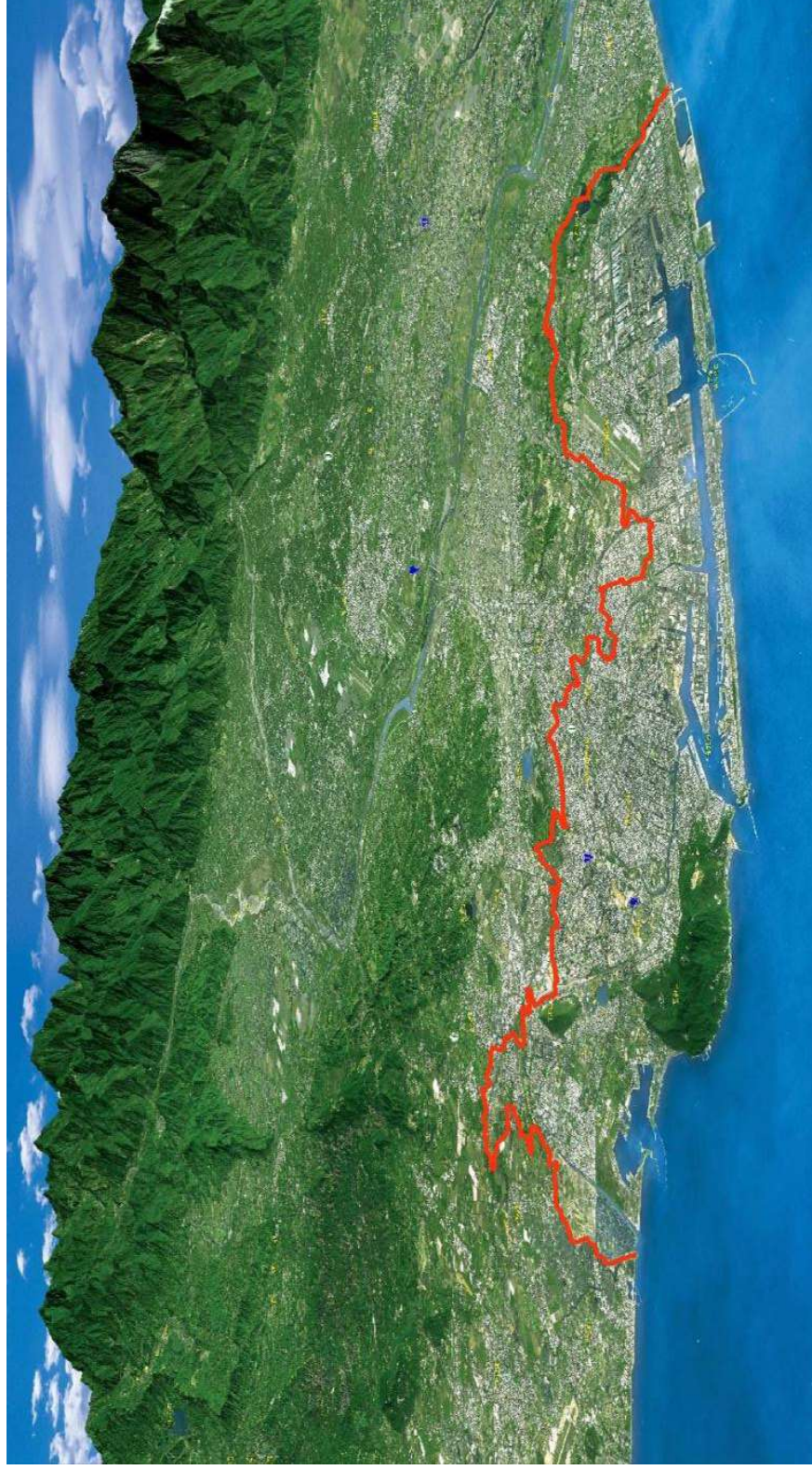
- Dubai Knowledge Village (DKV) is the world's only Free Zone area dedicated to Human Resource Management and learning excellence. Established in 2003 as part of TECOM Investments, DKV aims to develop the region's talent pool and establish the UAE as a knowledge-based economy.
- Located in the heart of Dubai ,DKV is a unique hub that offers the best selection of Human Resource Management, Consultancy, Training and Personal Development programmes.



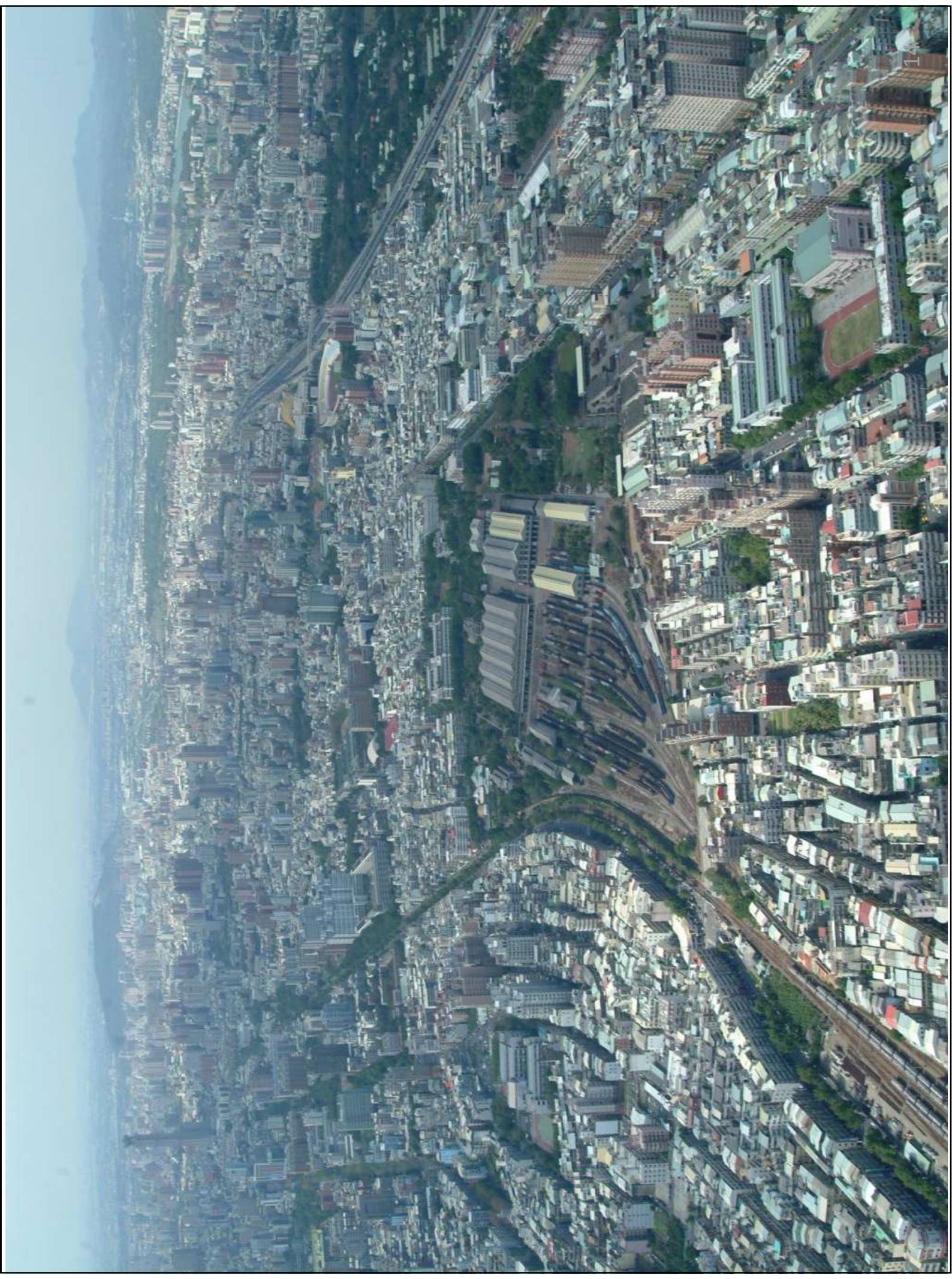
Social and spatial Consequence of isolated science park development in national scale

1. inner-regional imbalance
2. deterioration of income distribution
3. financial liabilities
4. hidden social costs
5. conflicts from Internal competition for resources
6. Destruction of natural environment
7. squander of repeating allocation of resources

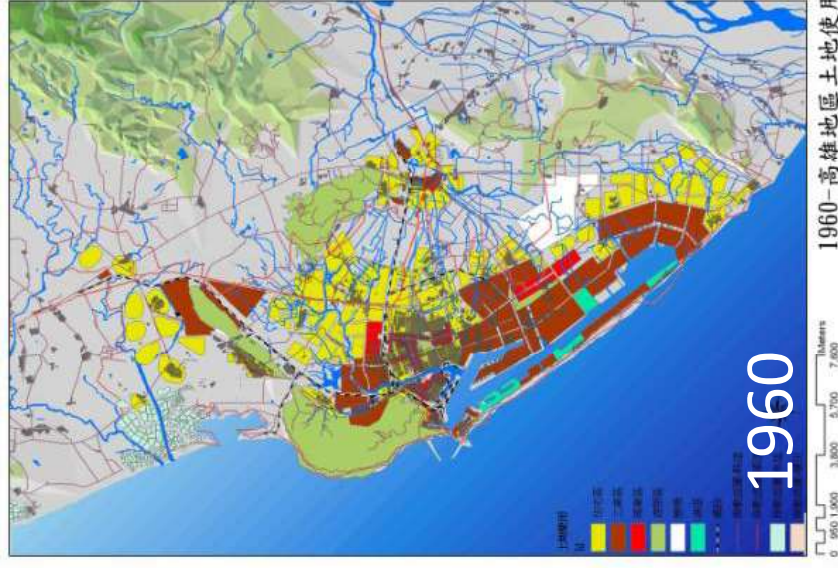
Location and basic data Kaohsiung



- metropolitan area about 270 KM²
- population about 2.75 million
- less-favored regions with industrial past



Population development and Urban sprawl



Population Development (1885-2006)

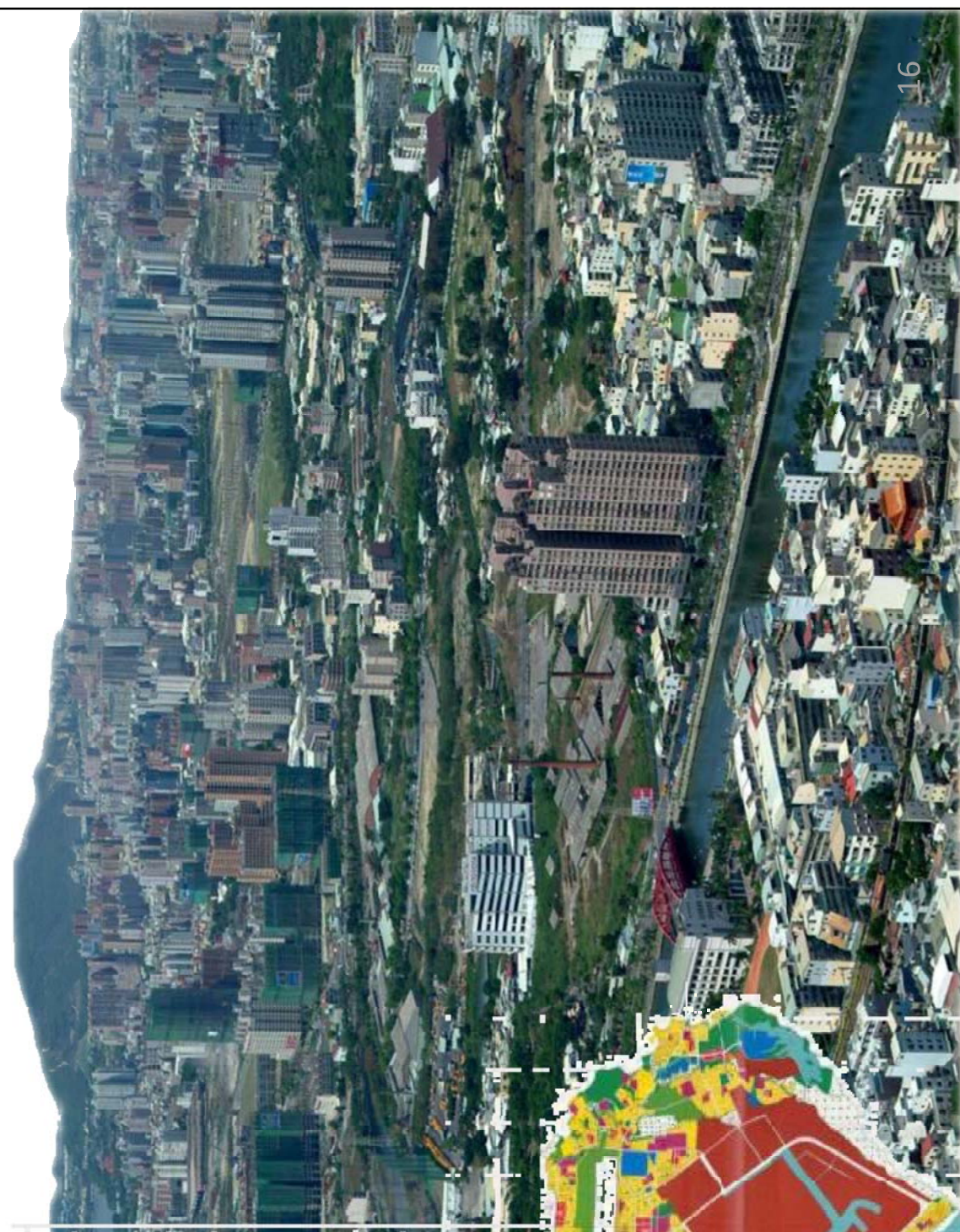
rapid urban expansion from 1970

Driving force of Urban Development

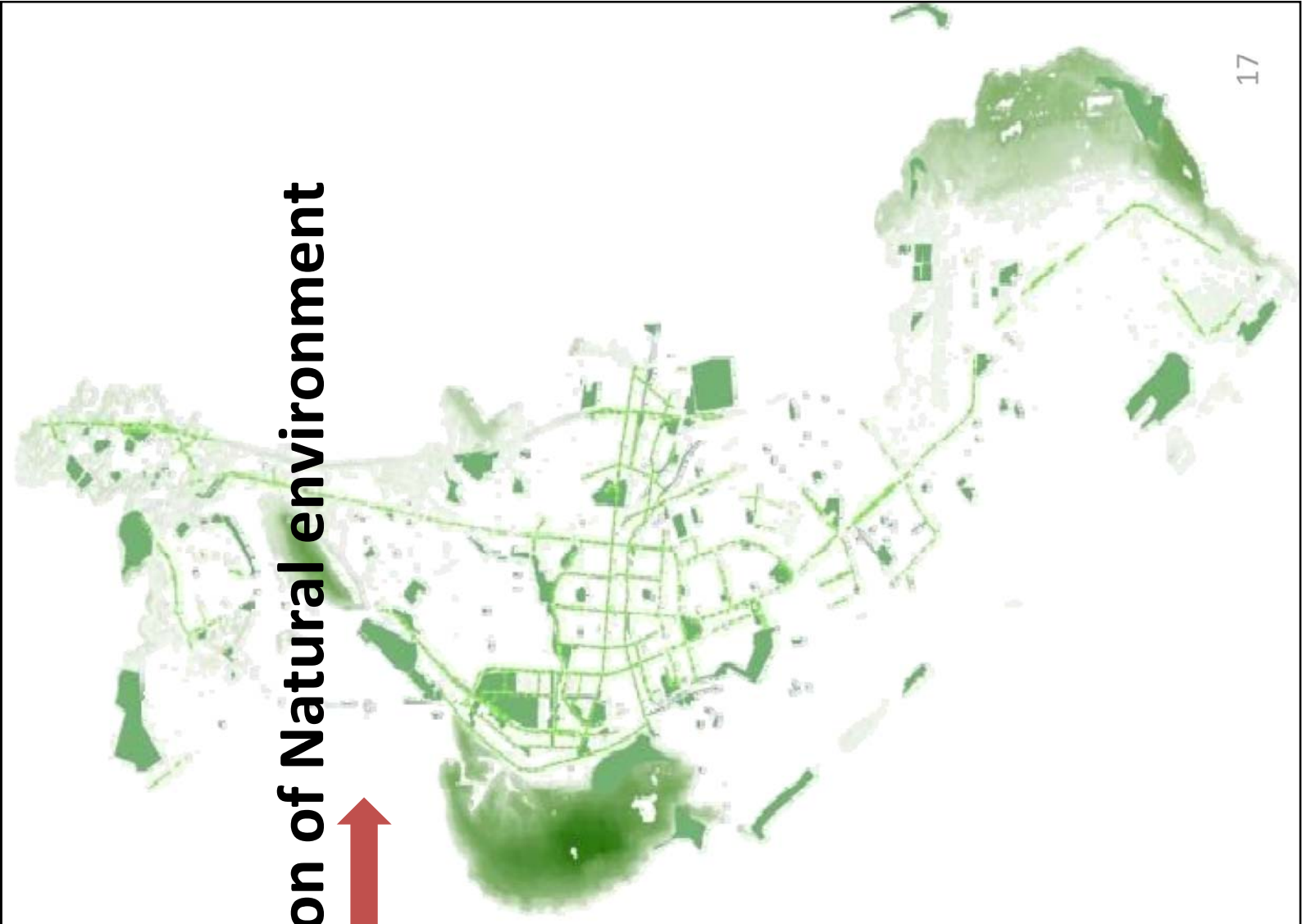
National economic program set up Kaohsiung as Industrial region for Taiwan in 1960



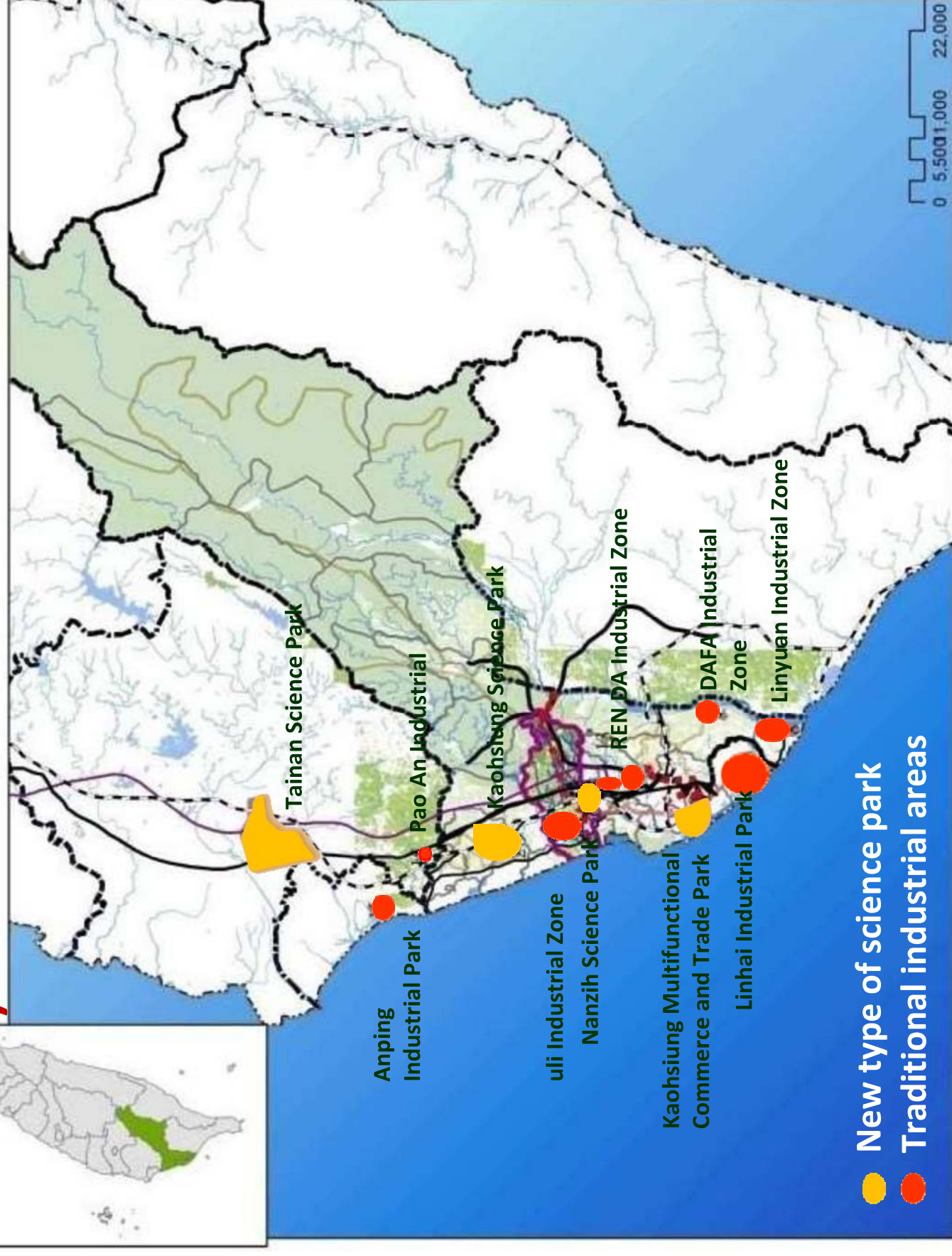
Industrial Brown field left behind after 2000



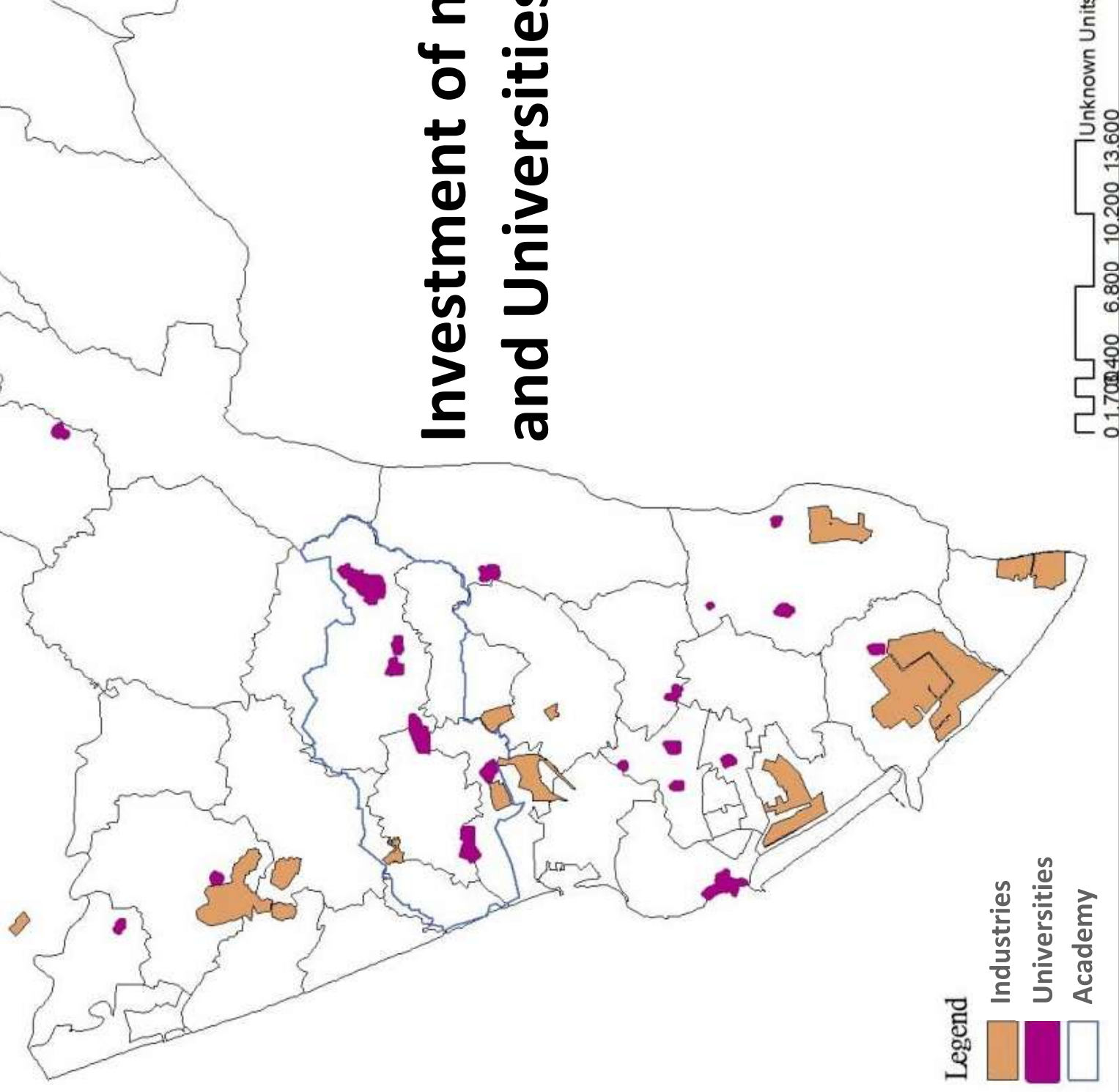
Destruction of Natural environment



The newly development of science park (2000 – 2010)

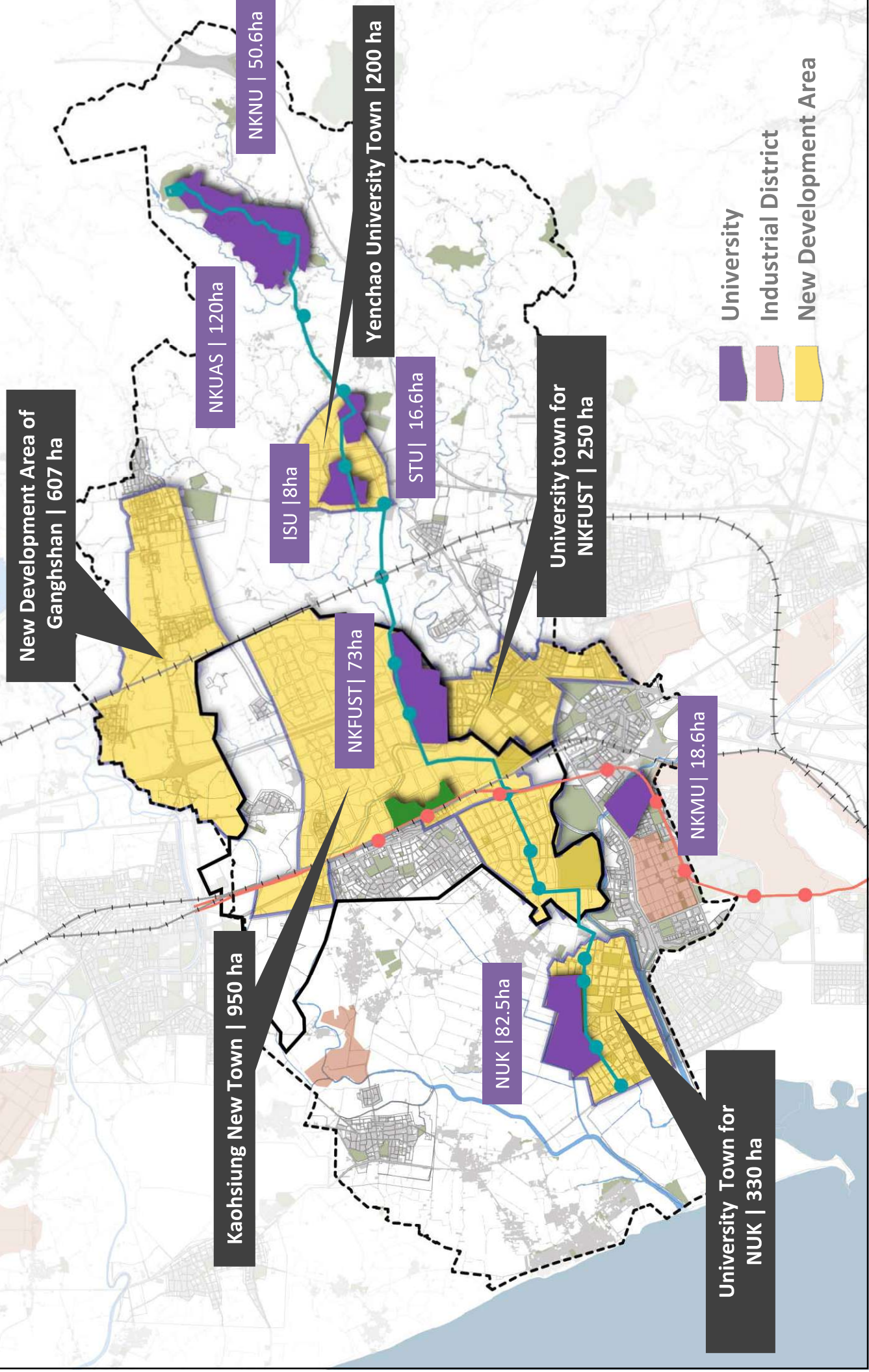


Investment of new industries and Universities



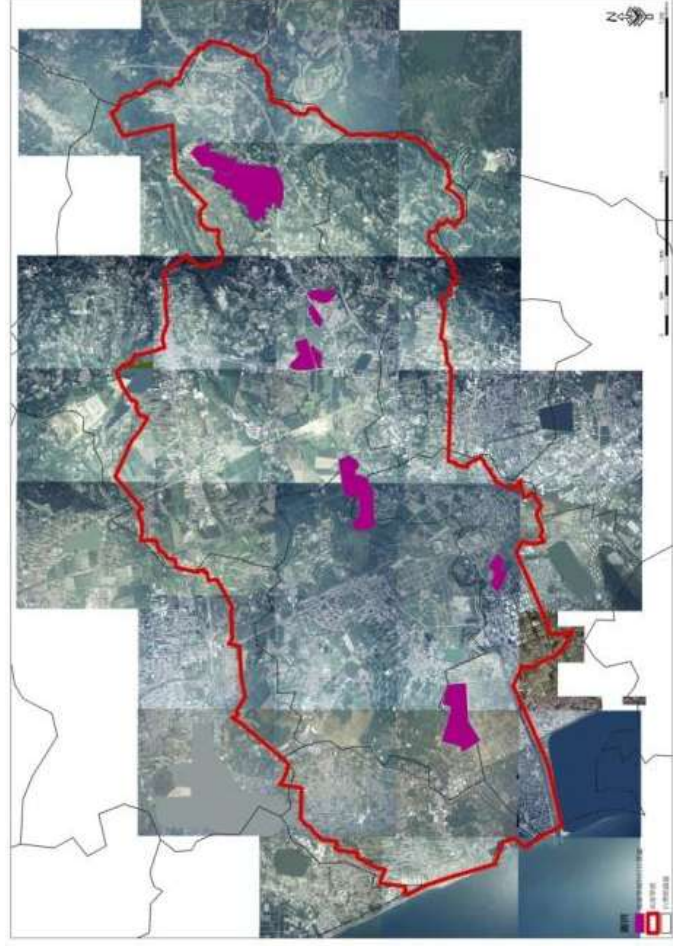
University Town and Urban development

About 2,300 hectares of new development zones

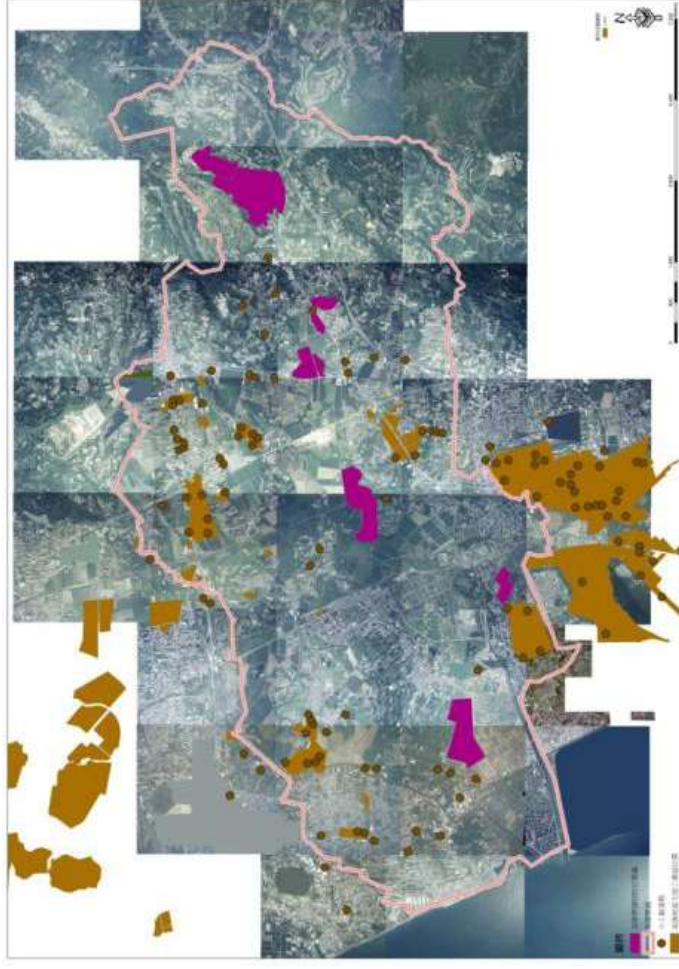


The investment of public sector

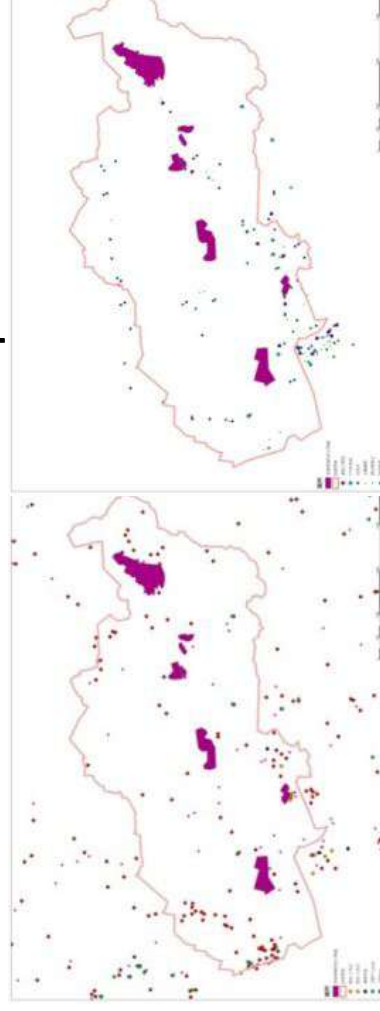
Form and logic of educational facilities



Traditional closed campus

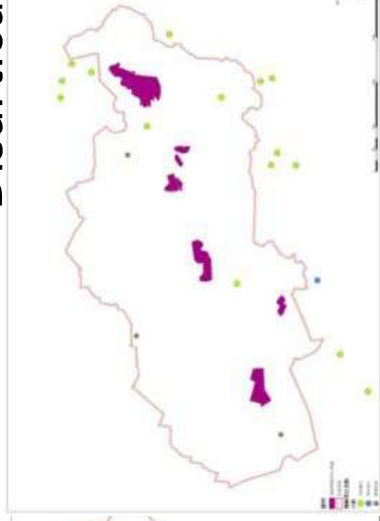


Disarticulation of connection

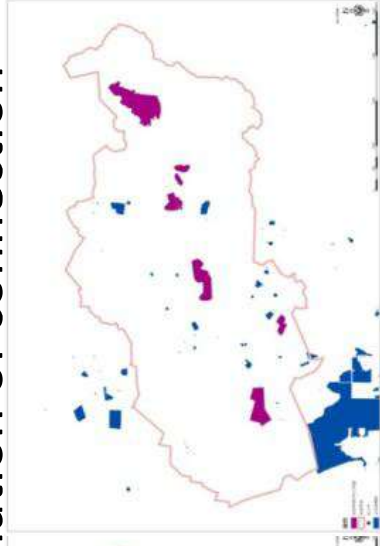


Connection to life

Connection to consumption



Connection to leisure

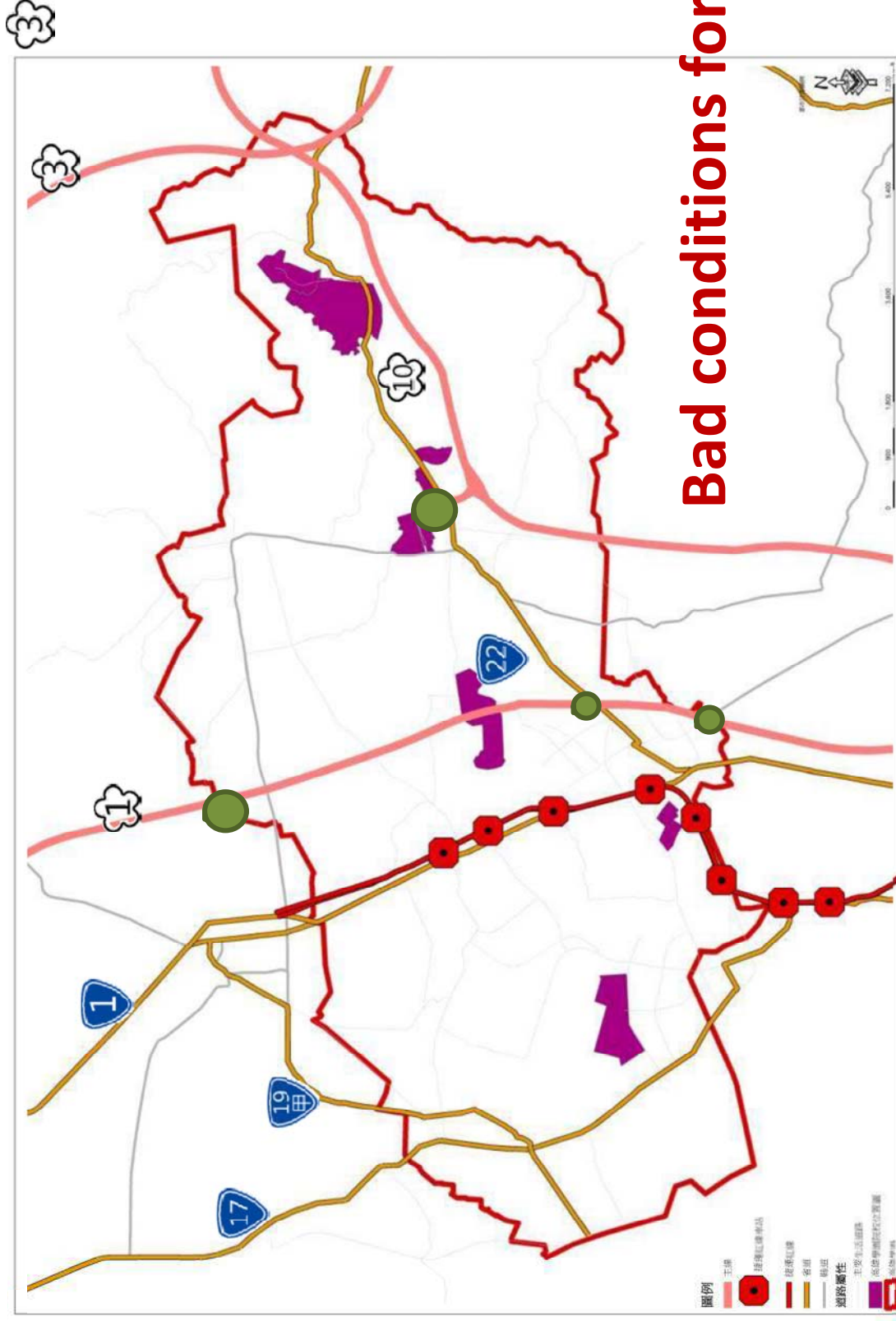


Connection to administration

➔ **Investment in the desert**

Disarticulation of cluster effects

- 3 Highway
- 3 Interchange
- 3 Provincial Road : Line1、Line17、Line22
- Kaohsiung MRT : Link train station, high-speed rail stations and airports



Critical review

Knowledge cities to make

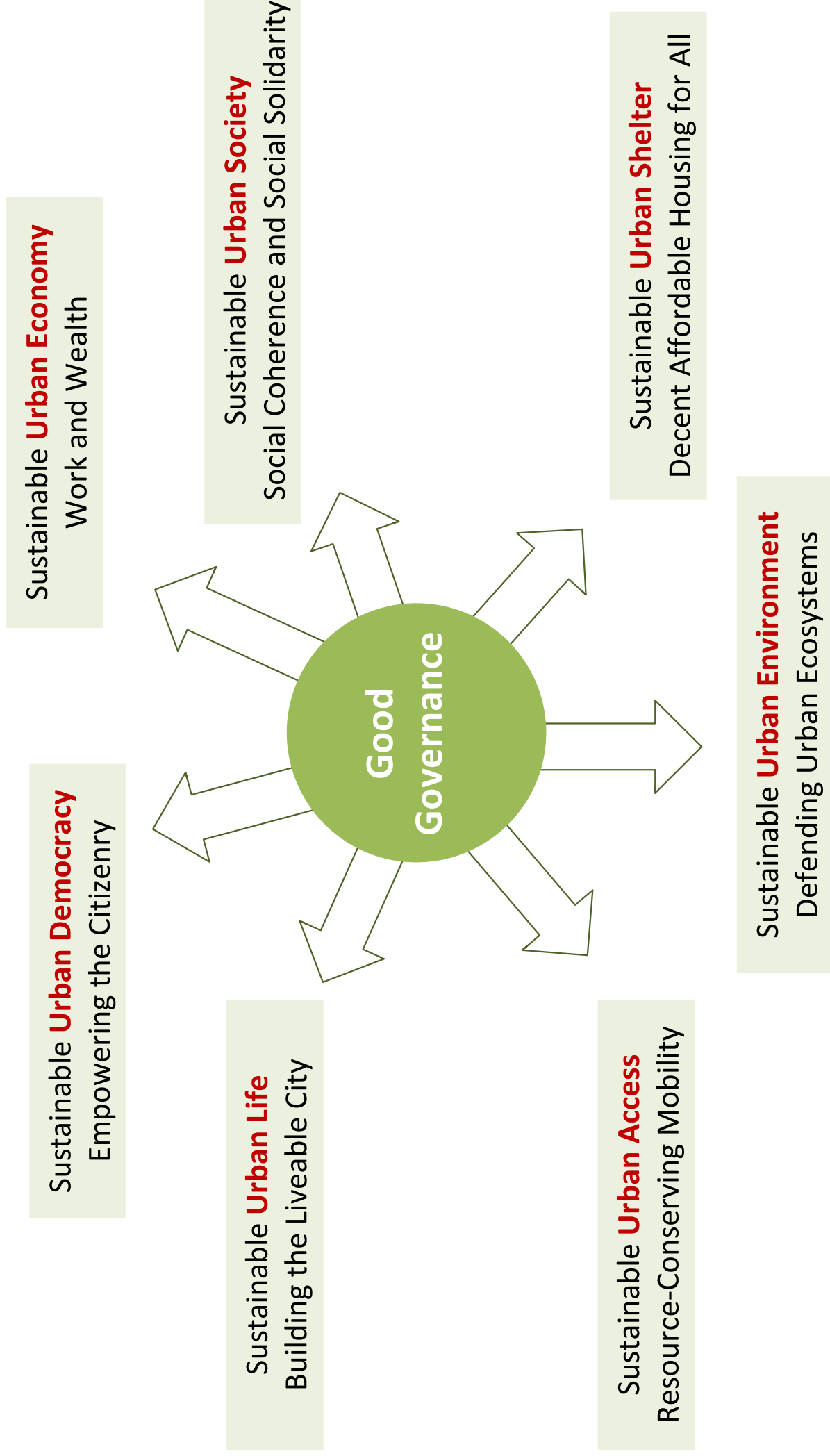
1. Problems and Failure of New Town Model
2. Neglect of exiting urban structure
3. short-term solution
4. “focus shift effect”
5. Lack of social initiative from bottom
6. Incompetence of professionals of urban planning

Alternative

Good governance and virtual Science park
for strategy spatial planning approach

Good governance

an all-embracing concept with sustainable development at its central objective



Alternative

new rules and culture of governance

1. Management instead development
2. Subsidiarity and solidarity
3. Working with market
4. Change the people with the people: new form of PPP.
5. “antagonistic cooperation” and consens- oriented competition”
6. Multi-level governance (Stabilization, distribution and allocation)
7. Set the accent with basic needs
8. Decentralization but network connected

Alternative

virtual science park concept

1. Science park, but invisible (virtual science park)
2. Repair instead exploitation
3. Perspective planning with good visions
4. Embeddedness of new knowledge space and infrastructure
5. Optimized Integration (Urban structure, living environment and nature)
6. Efficient upgrade of existing infrastructure
7. New organizational form (equal Cooperation and PPP.)
8. Acupunctural approach
9. Leverage and accountability of public expenditure

Case studies

Kaohsiung in a transformation Processes to knowledge City

Virtual Science Park as Spatial Strategy

AN IMPROVEMENT OF TERRAFIC SYSTEM
(Knowledge base industrial area)

- 1 Life Application Design Center
- 2 Smart Living Design Center
- 3 Low Carbon Green Design Center
- 4 Value-added industrial Center
- 5 Medical care and health Center

Life Application Design Center

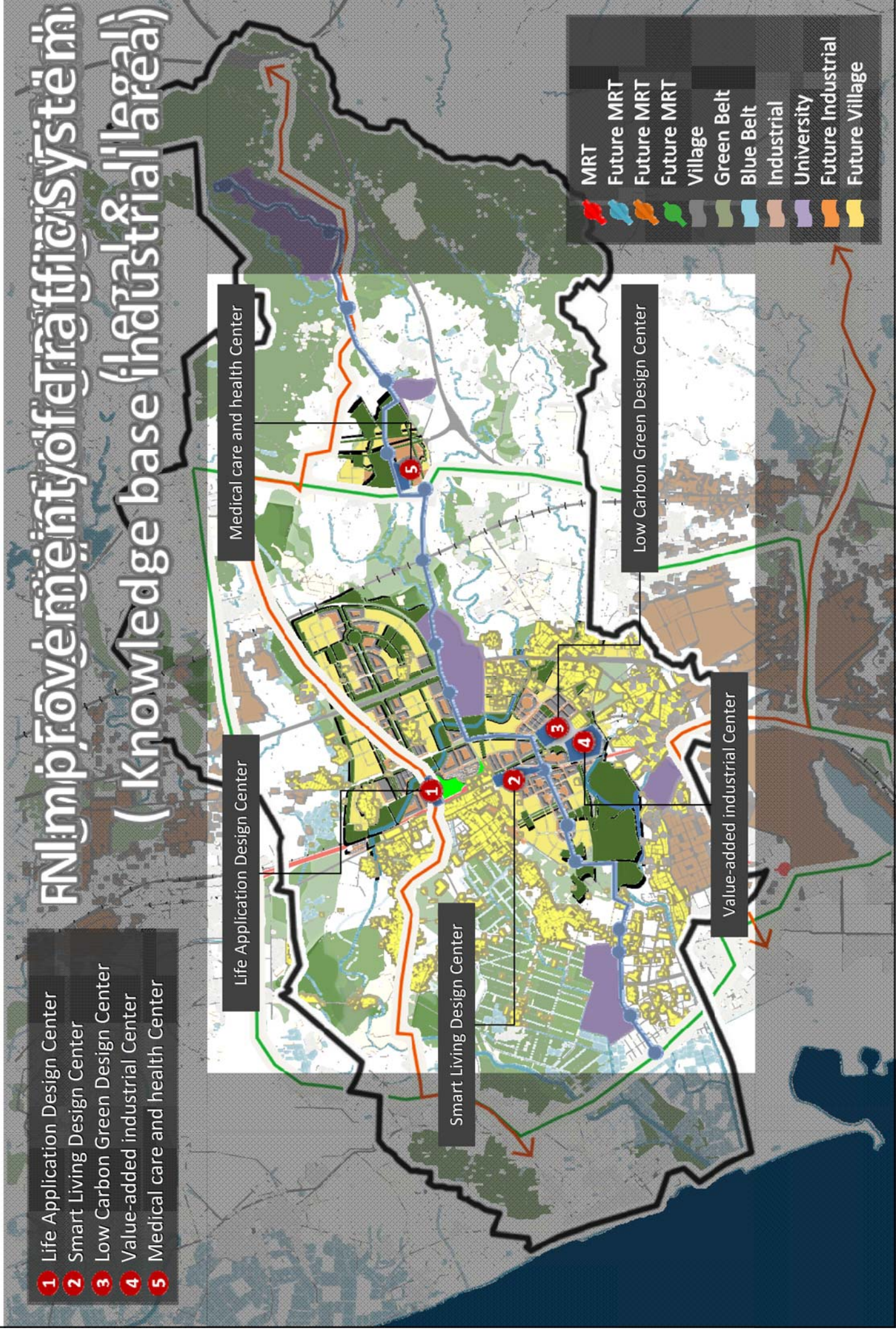
Medical care and health Center

Smart Living Design Center

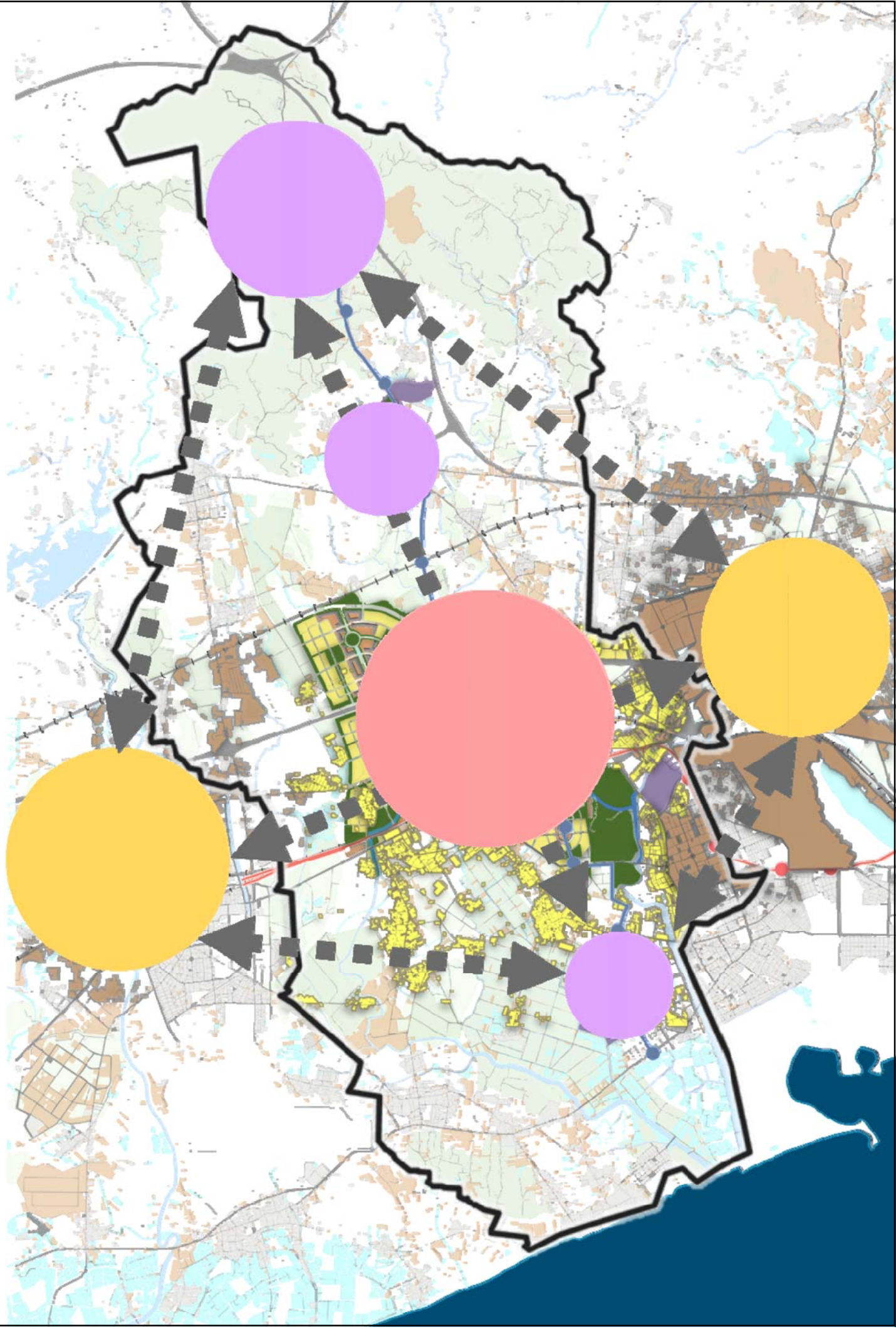
Low Carbon Green Design Center

Value-added industrial Center

MRT
Future MRT
Future MRT
Future MRT
Village
Green Belt
Blue Belt
Industrial
University
Future Industrial
Future Village



Virtual Science Park in Knowledge Network



Conclusion

Virtual Science Park as strategy for foresighted planning
in a regeneration of Regions

Review and assessment

Meaning for the better governance

1. Urban regeneration should also take charge of Social transformation
2. Changing the people with the people
3. gentle platform and processes for transformation
4. Creative Fuzzy for political realities
5. Image steering with perspective planning
6. Strategic approach for multi-dimensional governance
7. Evolutional approach for the urban transformation

Review and assessment

Tactical value for urban planning

1. Changing with Structural transformation
2. Upgrade of public investment and infrastructure
3. Economically dealing with the Resource
4. Integration Mechanism for all sides
5. Compact city approach in a gentle way

Thanks for your attention

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