



Paper 5: The Development of Industrial Land

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Taiwan had a rapid economic growth in the later twentieth century due to the developmental state strategy applied on industrial policy. Government had a high domination over the industrial development and the land supply policy; however, industrial development was more difficult in recent years. One of the reasons is the rising awareness of democracy and environmental protection, the intensified conflicts between life and industrial production revealed a spatial planning issue in Taiwan. For instance, the heavy industry was driven away from the city and suburban industrial land was diverted to non-industrial use, it will damage industrial development safety and land use efficiency. In order to reduce the conflicts between different land uses and turn the situation into a positive development, government should propose principles to the cooperation of industrial and other land uses to ensure a proper development position and lead the country become more sustainable.

On the other hand, there are still some younger developmental states in Southeast Asia that probably encountering industrial transformation. Taiwanese experience could provide an example and conducive to ease the conflicts in urbanization.

Keyword: Developmental State, Industrial Land Policy, Spatial Plan, Urbanization



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The Development of Industrial Land

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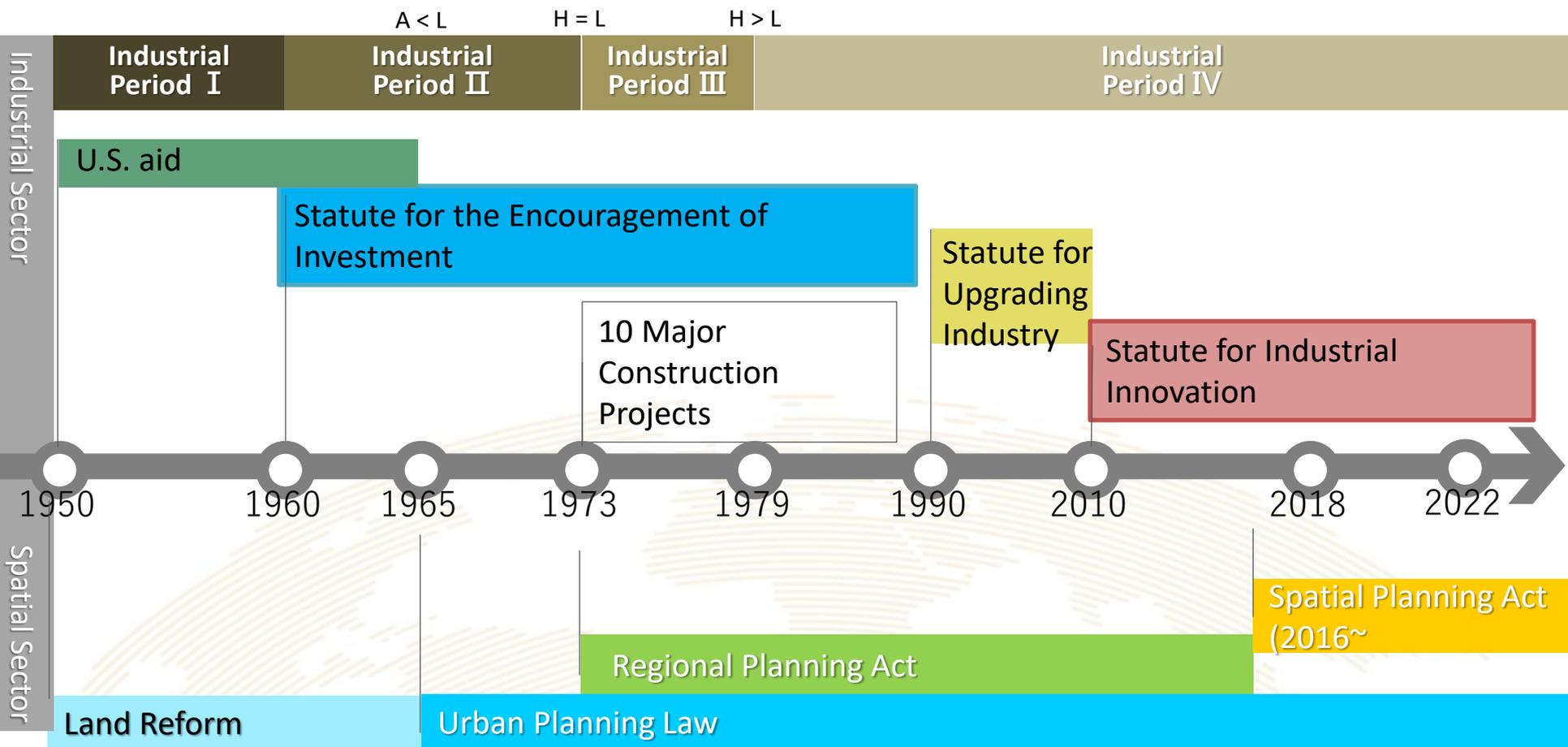


Overview of presentation

- History Timeline after WWII
- Introduction of Industrial Land Development
- Challenges and Impacts Resulted from Urbanization
- Institutional Response
- Conclusion



History Timeline after WWII

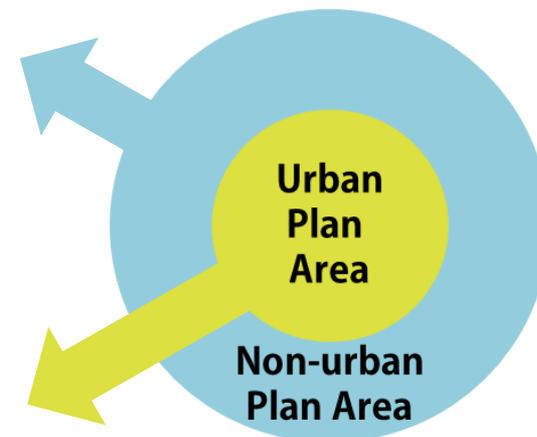




Developmental State Strategy

- State-led rapid industrialization
- Strategic industry + selected location
- Designated industrial park developed by central government
- Industrial land development depending on economic planning not on spatial plan

Spatial Land Use System



Urban Plan Area

Following urban plan

- Land Use Zoning -

1. Residential Zones
2. Commercial Zones
3. Industrial Zones
4. Agricultural Zones, and so on....

Non-urban Plan Area

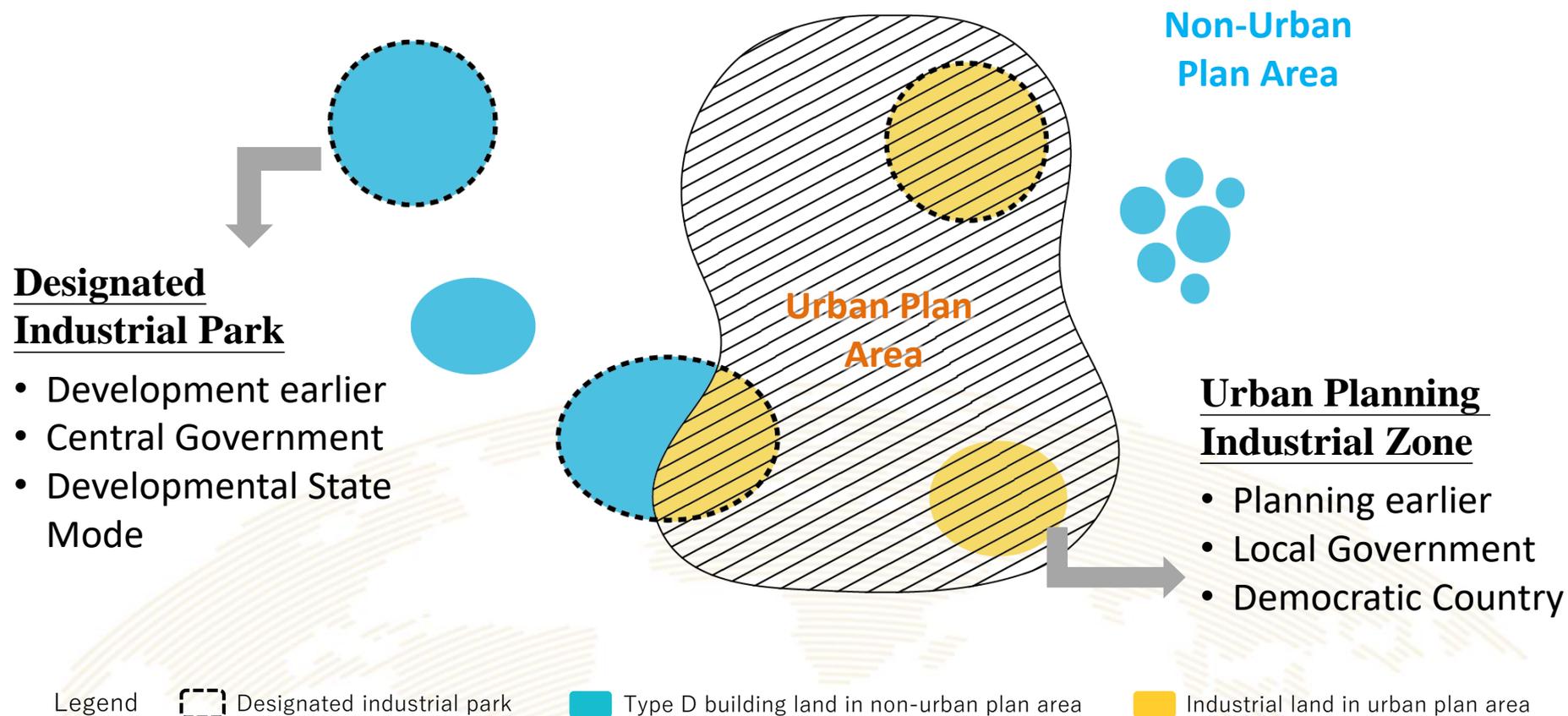
Following existing land use

- Land Use Order (Building Land)-

1. Type A Building Lands
2. Type B Building Lands
3. Type C Building Lands
4. Type D building Lands (permitted for industrial use), and so on...



Industrial Land Supply Systems



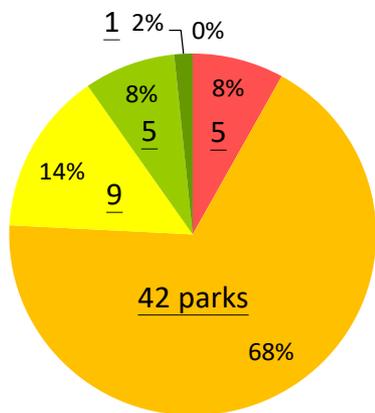


Industrial Land Development Trend

Central government's control decreased.

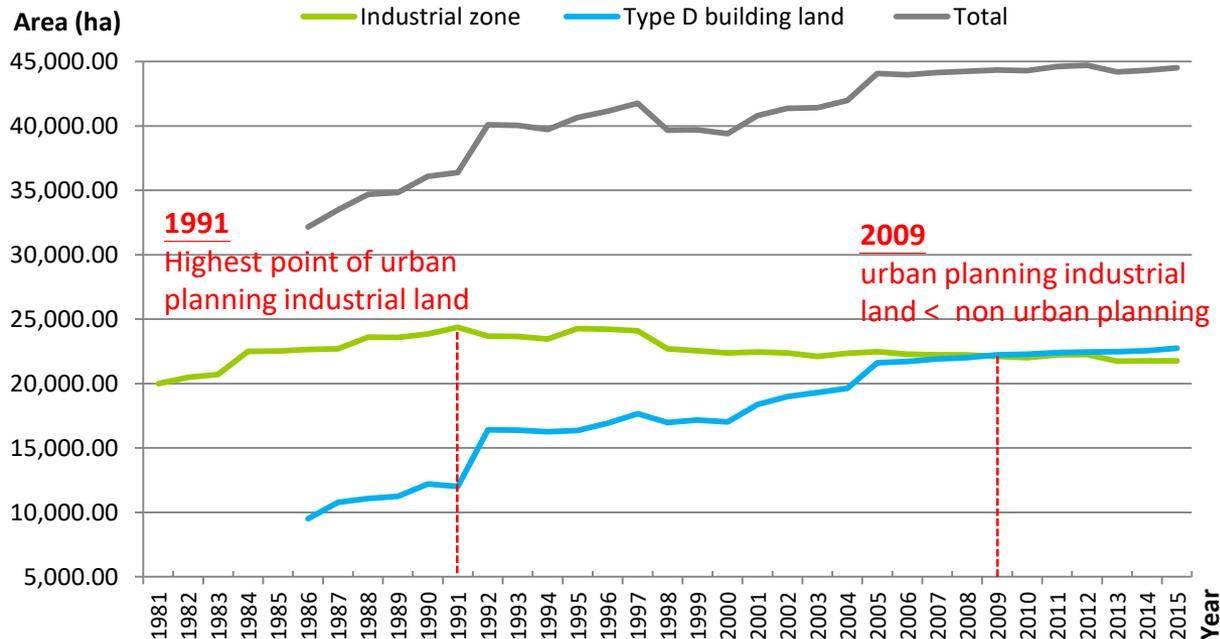
Urbanization and Local Democracy

Industrial land controlled by local government but also decreased.



1961-1970 1971-1980 1981-1990
1991-2000 2001-2010 2011-2017

In 1971-1980 developed designated parks most.



1991
Highest point of urban planning industrial land

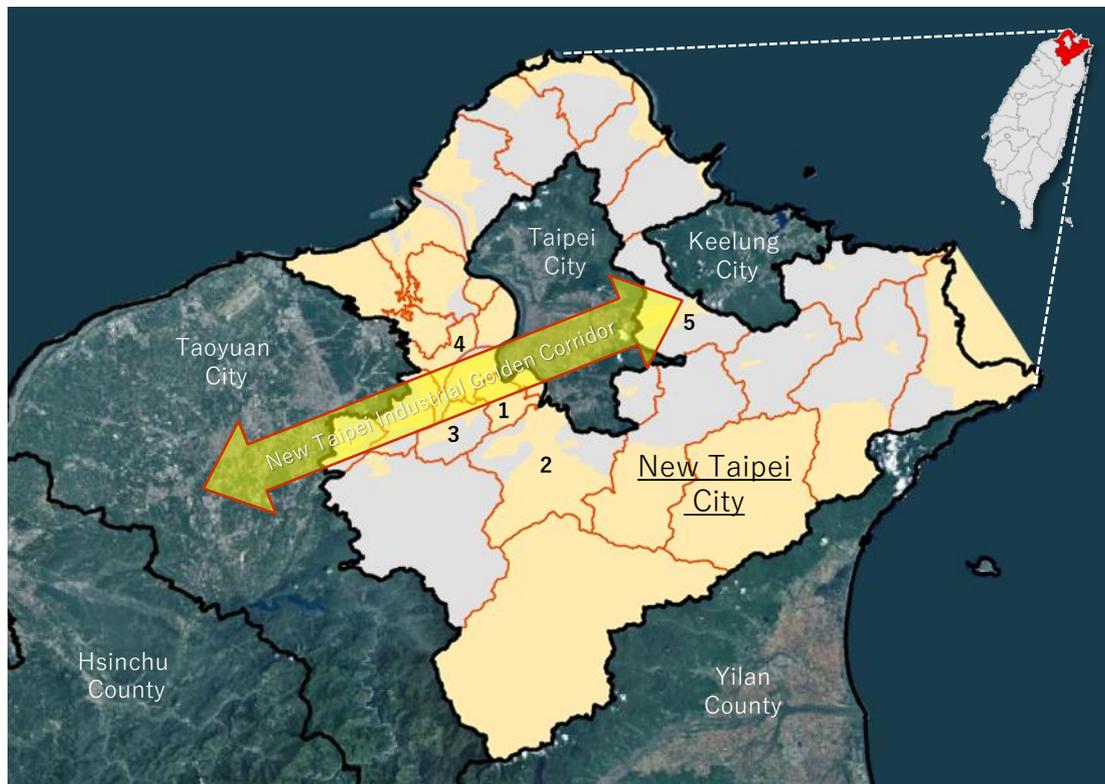
2009
urban planning industrial land < non urban planning



Challenges and Impacts Resulted from Urbanization

- Loss of industrial land especially in urban area
- Non-industrial use on industrial land
- The rise of local democracy (local authority take the lead)
- The voice of NIMBY from communities

Industrial Land for Other Usages



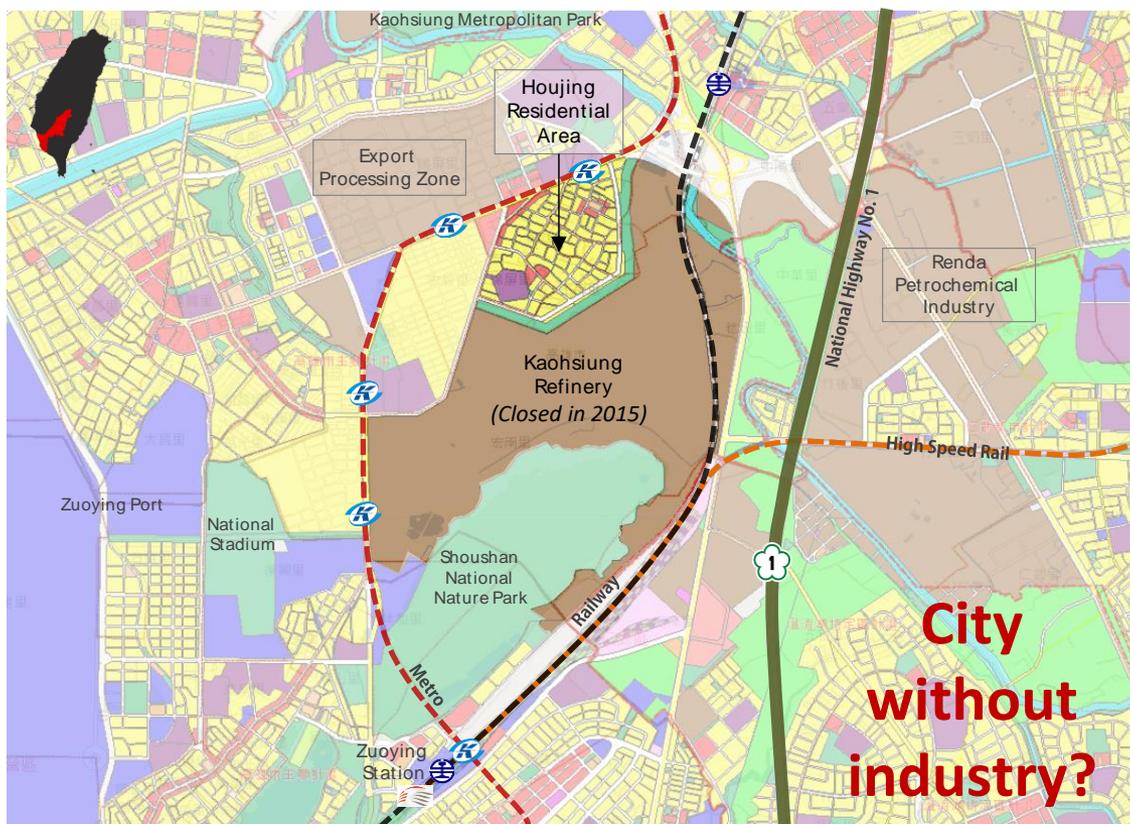
Legend

Non urban planning area	1 = Zhonghe	3 = Tucheng	5 = Xizhi
Urban planning area	2 = Xindian	4 = Xinzhuang	

New Taipei City

- Total area: 205,300 ha.
- Industrial: 3,268 ha. (1.59%)
(urban 80%, non-urban 20%)
- Industrial Golden Corridor connected Taipei, New Taipei and Taoyuan and brought urbanization
- The lost of industrial land, the hurt of agriculture and environment.
- Loss of 22 industrial parks since 2001.

Incompatibility of Industry & Life

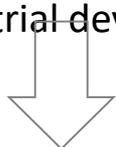


Kaohsiung City

- Total area: 295,200 ha.
- Industrial: 4,360 ha. (1.48%)
(urban 75%, non-urban 25%)
- 10 Major Constructions made it became heavy industrial city since 1970s.
- Conflicts grew with the rising awareness of environmental protection and democracy.
- Consensus reached with the permission of refinery shutdown in certain years.

Reform of Spatial Plan

The disconnection between industrial development and the spatial planning caused problems, i.e. conflicts between farming land and industrial development.



Necessity of integration

Spatial Planning Act (2016)

- “Spatial Development Strategy of Departments” needed.
- Divided into 4 functional zones and reduced land use changing flexibility to reduce conflicts.
- Top-down planning logic is remained.
- Industrial land only in Urban-rural development zones made the supply more difficult.

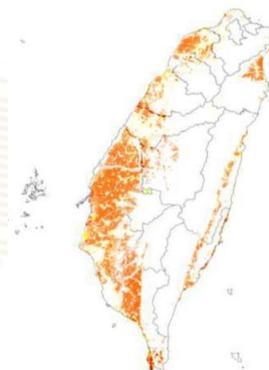
Environmental Conservation Zone



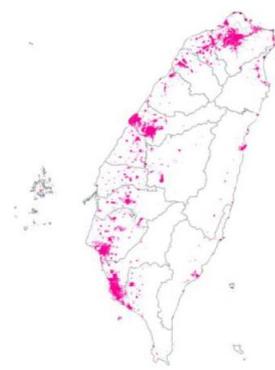
Marine Resource Zone



Agricultural Development Zone

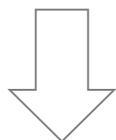


Urban-rural Development Zone



Industrial Land White Paper

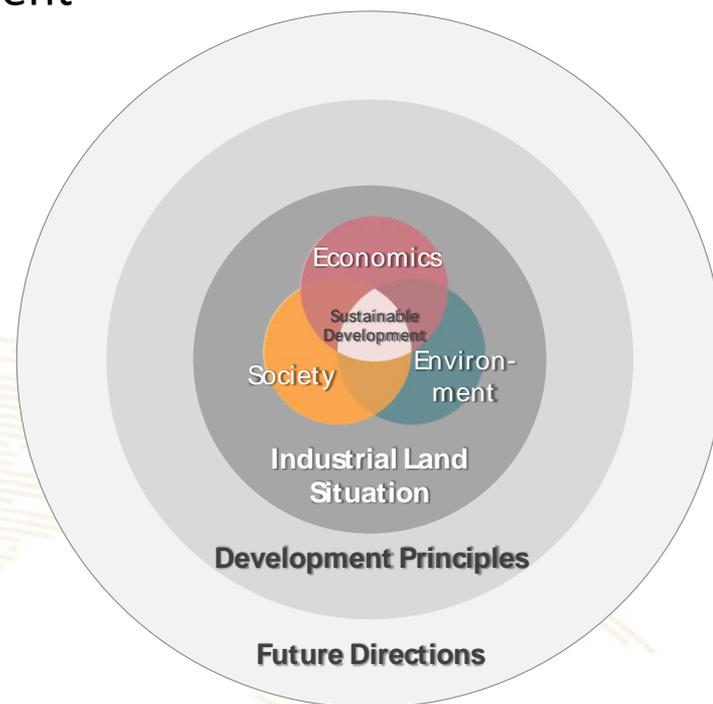
Elaborates department's attitude of industrial land development through white paper.



- *Communication with society*
- *Balance of economy, environment and society*
- *Sustainable development*

Development Principles

- Land use efficiency improved.
- Industrial land loss prevent.
- Land speculation restrained.
- Future industrial land demand satisfaction.
- Industrial parks development and management.





Conclusion

For Taiwan

- The early industrial development without land use policy guide had created rapid growth but had paid the price eventually. (i.e. disorder land use, fragmented industrial location and confusing industrial land system)
- The awareness of citizens and environmental protection have brought huge impacts on industrial land use and led to institutional change..
- Industrial Land White Paper is an answer to land policy. (engaged to the Spatial Plan, respect to land use policy and unify urban and non-urban industrial land)

Conclusion

For the rest of the world

- Taiwan's experience based as a reference model for economies in transition
- Understanding of the transformation process from developmental state to regulatory .
- The return of land use policy in industrial land development.
- Land use policy does matter but Institutional adjustments as time are inevitable.



THANK YOU

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