

Hsinchu Forum

- Case of new campus of NCTU and new CBD of Chupei

The Background Information - Hsinchu Region -



Content

- **Section**

- Natural Environment

- Population

- Artificial Environment

- Semiconductor Industry and Science Park in Taiwan

- West Taiwan Space Structure and Hsinchu after High Speed Rail

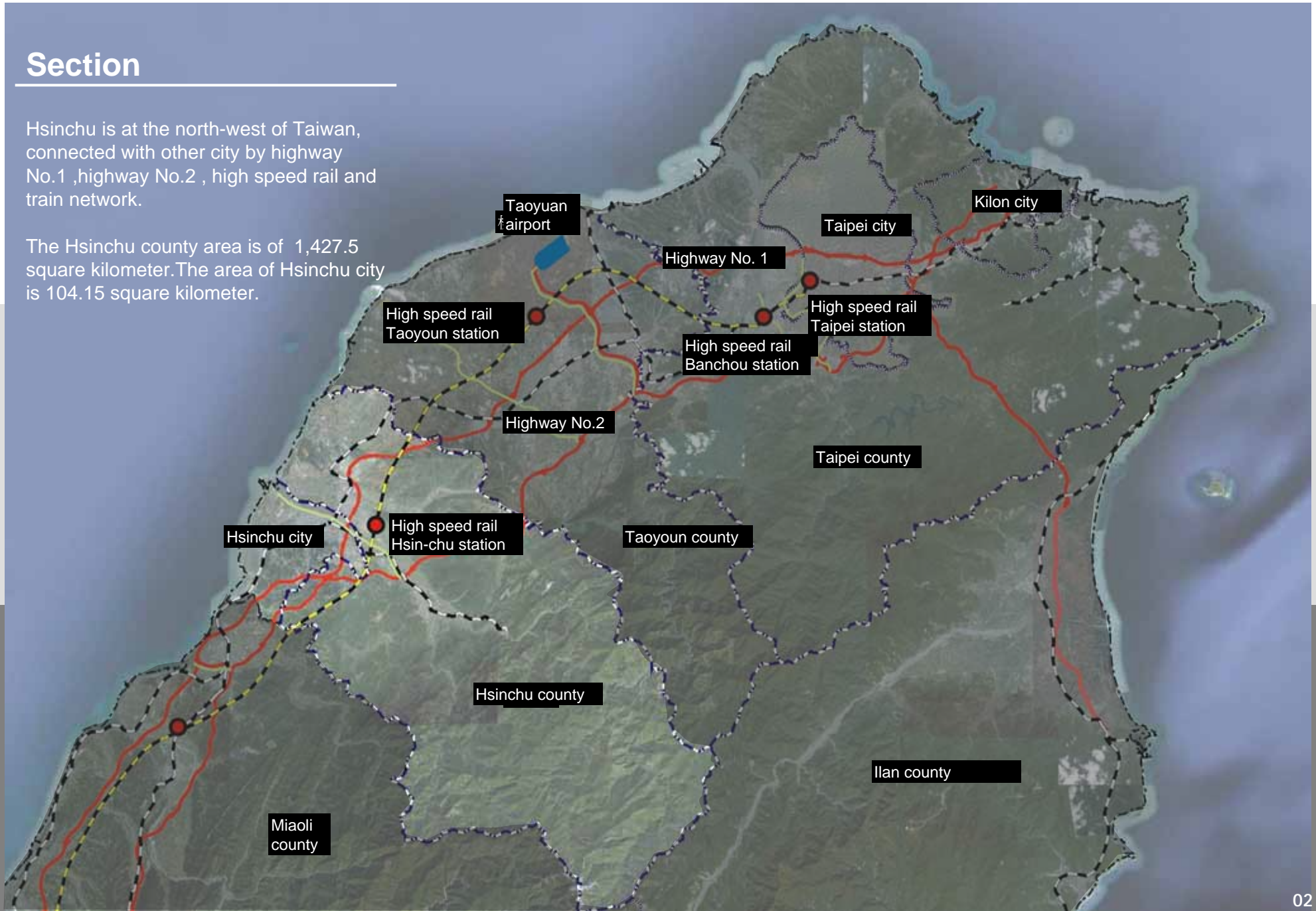
- The Due Core of Hsinchu : Chuchain Old Town and Chupei city



Section

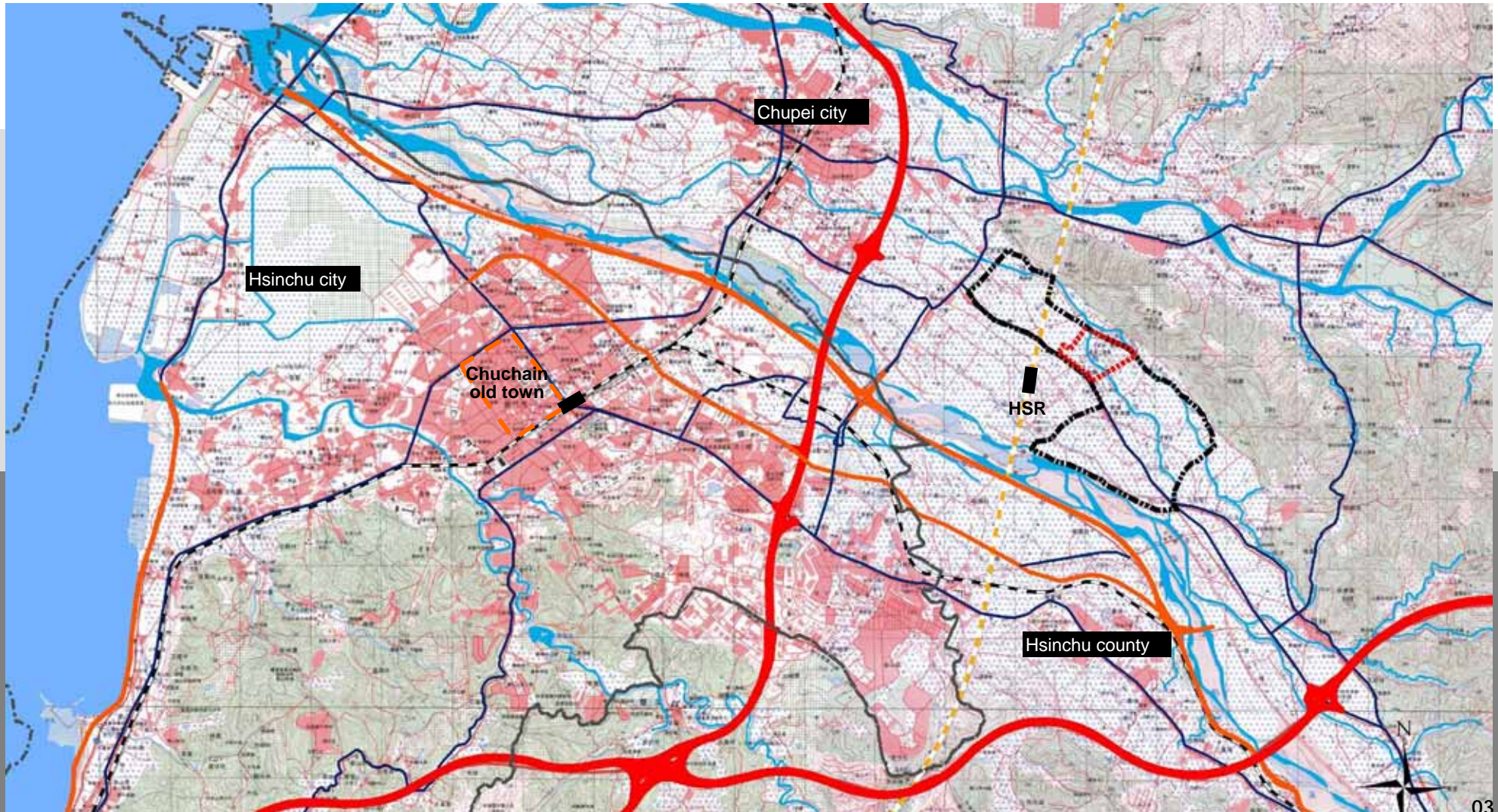
Hsinchu is at the north-west of Taiwan, connected with other city by highway No.1 ,highway No.2 , high speed rail and train network.

The Hsinchu county area is of 1,427.5 square kilometer.The area of Hsinchu city is 104.15 square kilometer.



The main develop region of Hsinchu are gather around the plain field. The main development area in Hsinchu region is Hsinchu city, and there is a high speed rail station in it.

The Chupei city is at the north of Taochen river, it has become a new urban develop core because of the high speed rail and the saturation of Hsinchu city.





- Section
- **Natural Environment**

- Population
- Artificial Environment
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Natural Environment

Weather

Hsinchu belongs to subtropics monsoon climatic region. The average temperature is 23°C and the relative humidity is about 70~80%, the average rainfall is about 2,085mm. Mostly are dry northeast monsoon in the winter and moist southwest monsoon in the summer.

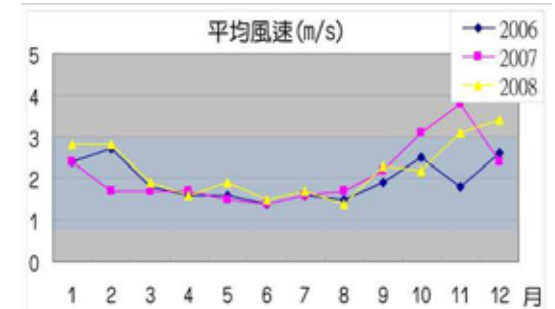
The plain region in Hsinchu is presented from south east to north west, once the monsoon blow in to the city then it will strength by the terrain, doesn't matter it's north east monsoon or south west monsoon. The north east monsoon prevail at September to December and average wind speed is 2.6m/s. the south west monsoon prevail at April to July and average wind speed is 1.6m/s, average maxima wind speed is 6.6m/s.



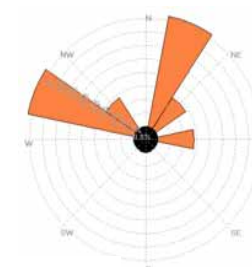
North Taiwan winter monsoon field



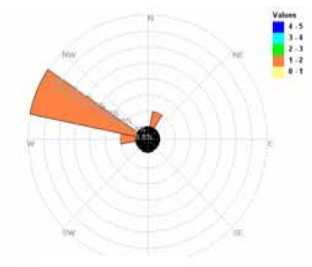
North Taiwan summer monsoon wind field



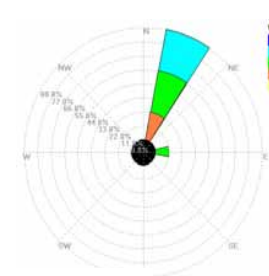
The average wind speed between 2006~2008 in Hsinchu monitor station



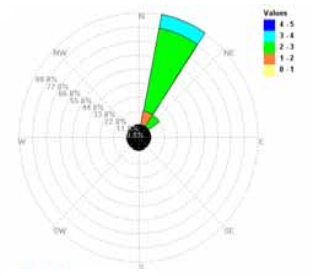
spring



summer



fall

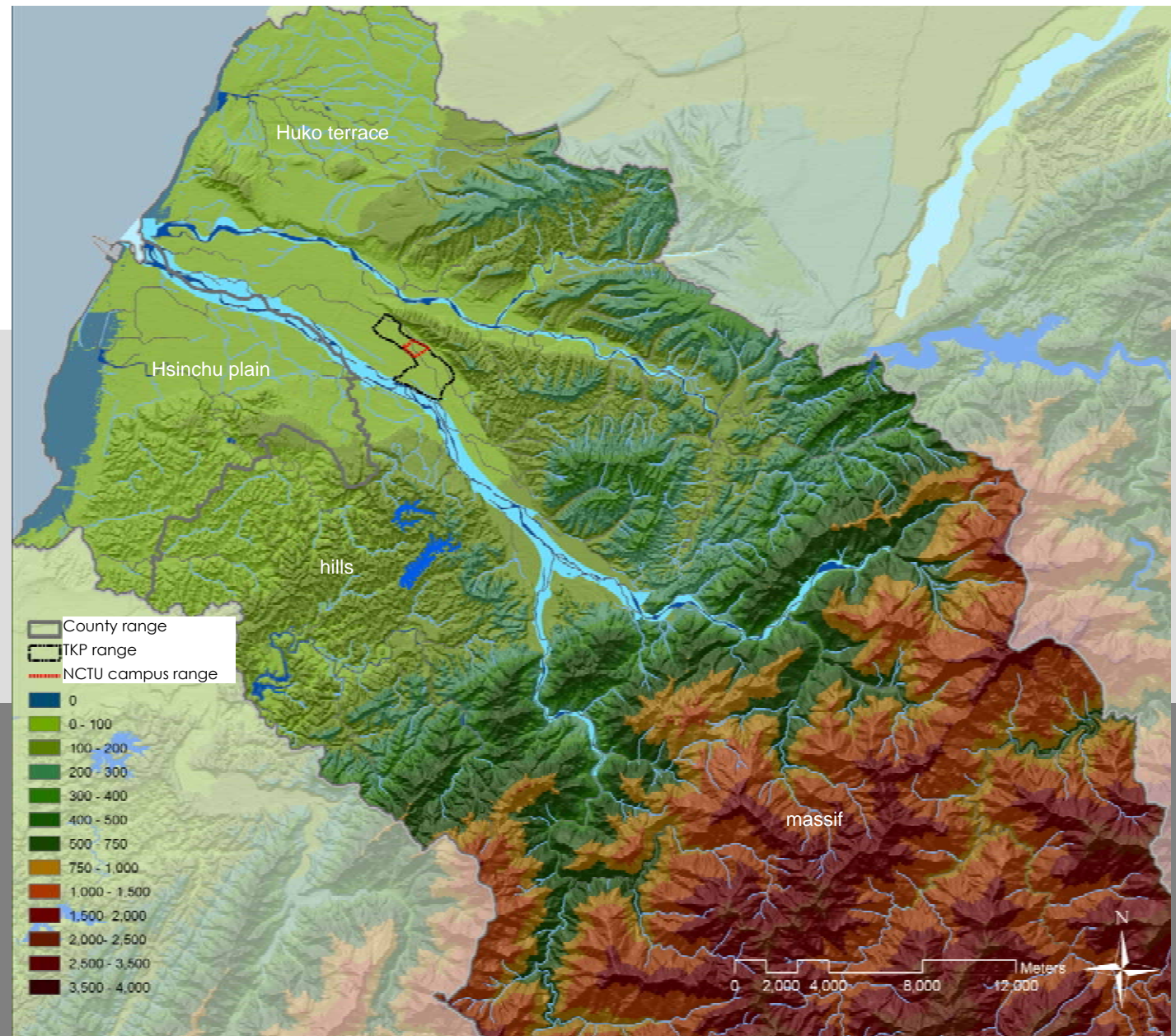


winter

The wind rose at Hsinchu monitor station 2006~2008

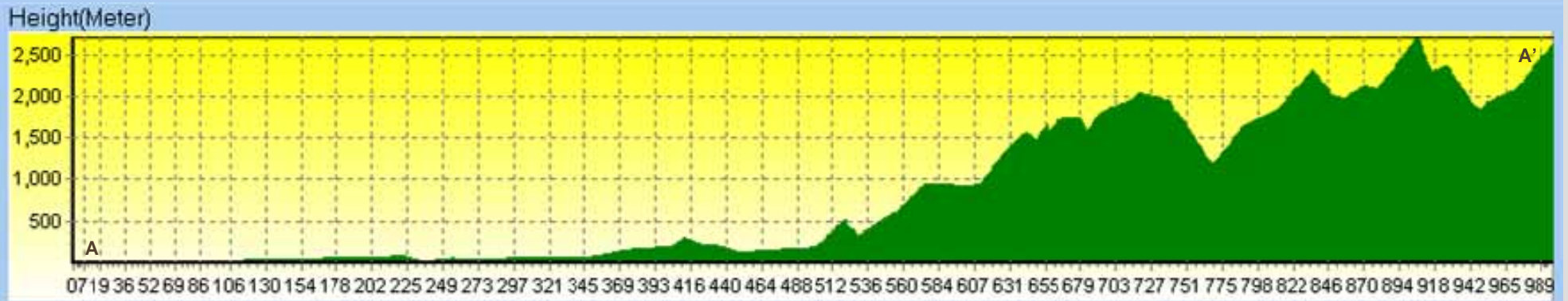
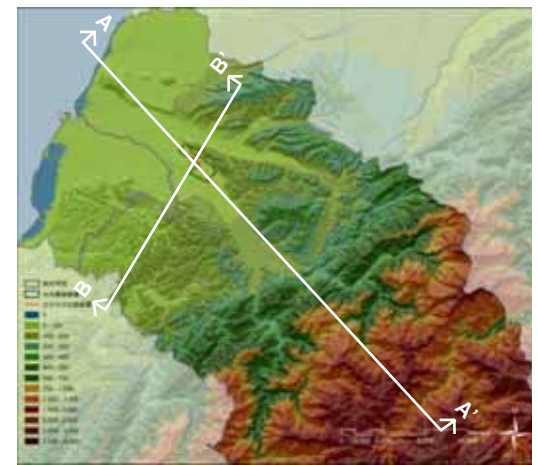
The Landscape form Mountain to Sea

Hsinchu has mountains around three directions. Most of them are hills. It got four different type of terrain : hills , wolds , plain and Huko terrace.



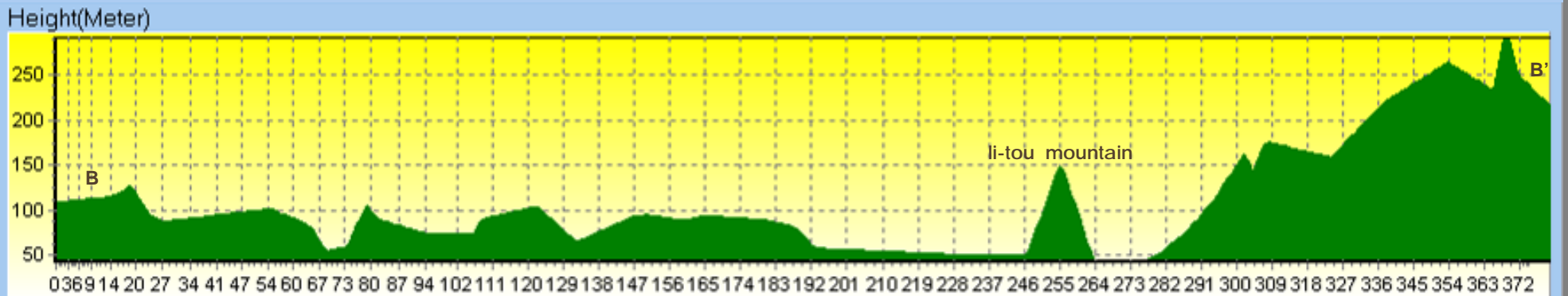
Terrain

The terrain decreases from south east to north west. The highest altitude at north Hsinchu city is only between the 20~30 meters. The highest altitude reaches more than 3000 meters.



The section A-A' from north west to south east in Hsinchu region

90m/grid



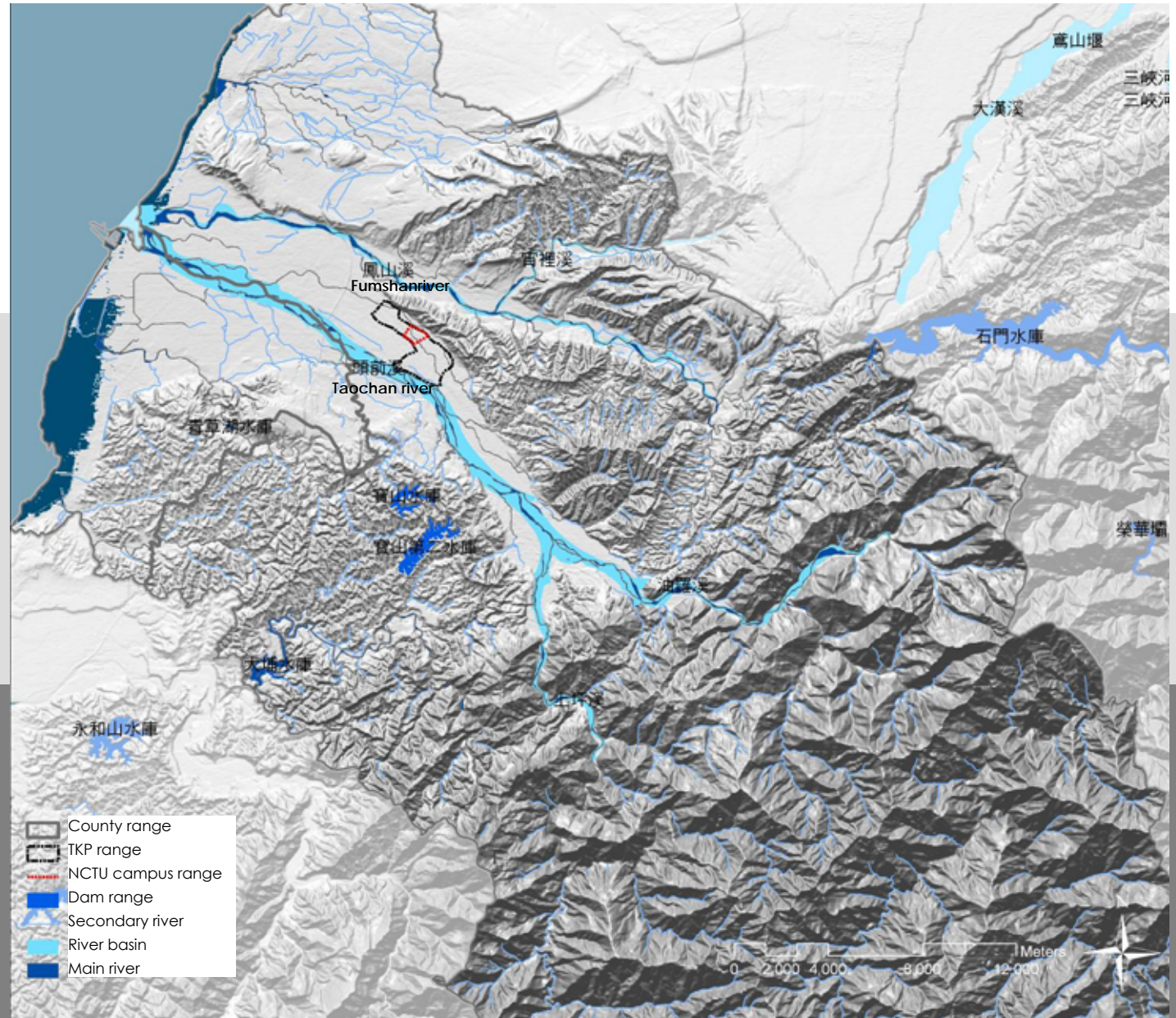
The section B-B' from north east to south west in Hsinchu region

90m/grid

Two of the main river basins are Taochan river and Fumshan river

The Taochan river is the most important hydrologic project in Hsinchu and it includes several watersheds:

1. Fumshan river watershed
2. Taochan river watershed
3. ChinChao lake dam watershed



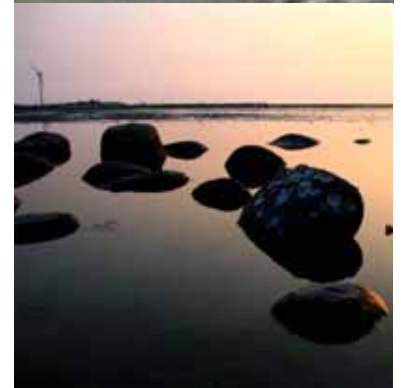
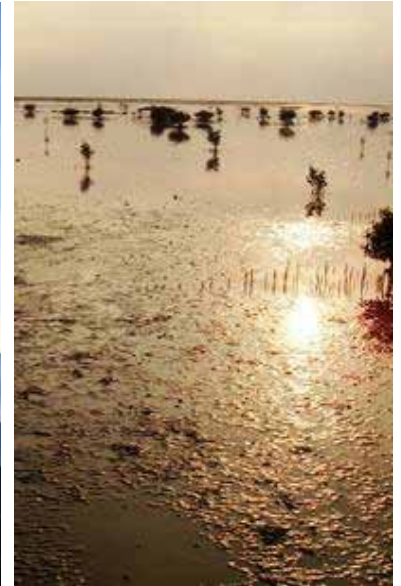
River database

River	area(km)	Length (km)	Runoff (10m ³)	Sand transport (10)	Flood (cms)
Fum-shan	250.10	45.45	401.73	0.69	2350
Tao-chan	565.40	63.4	951.97	2.46	5570
Ke-ya	48.41	10.9	73.89	0.19	720

The Most Important Habitats are the Coast line and the Mountains

Hsinchu region is at an important ecosystem connection of Sheisam mountain and Central mountain. Part of the mountain in Hsinchu belongs to Sheipa national park and has plenty of natural landscape and wild animals.

Shansam wetland is the most important bird area located at Hsinchu coast line and Keya river.



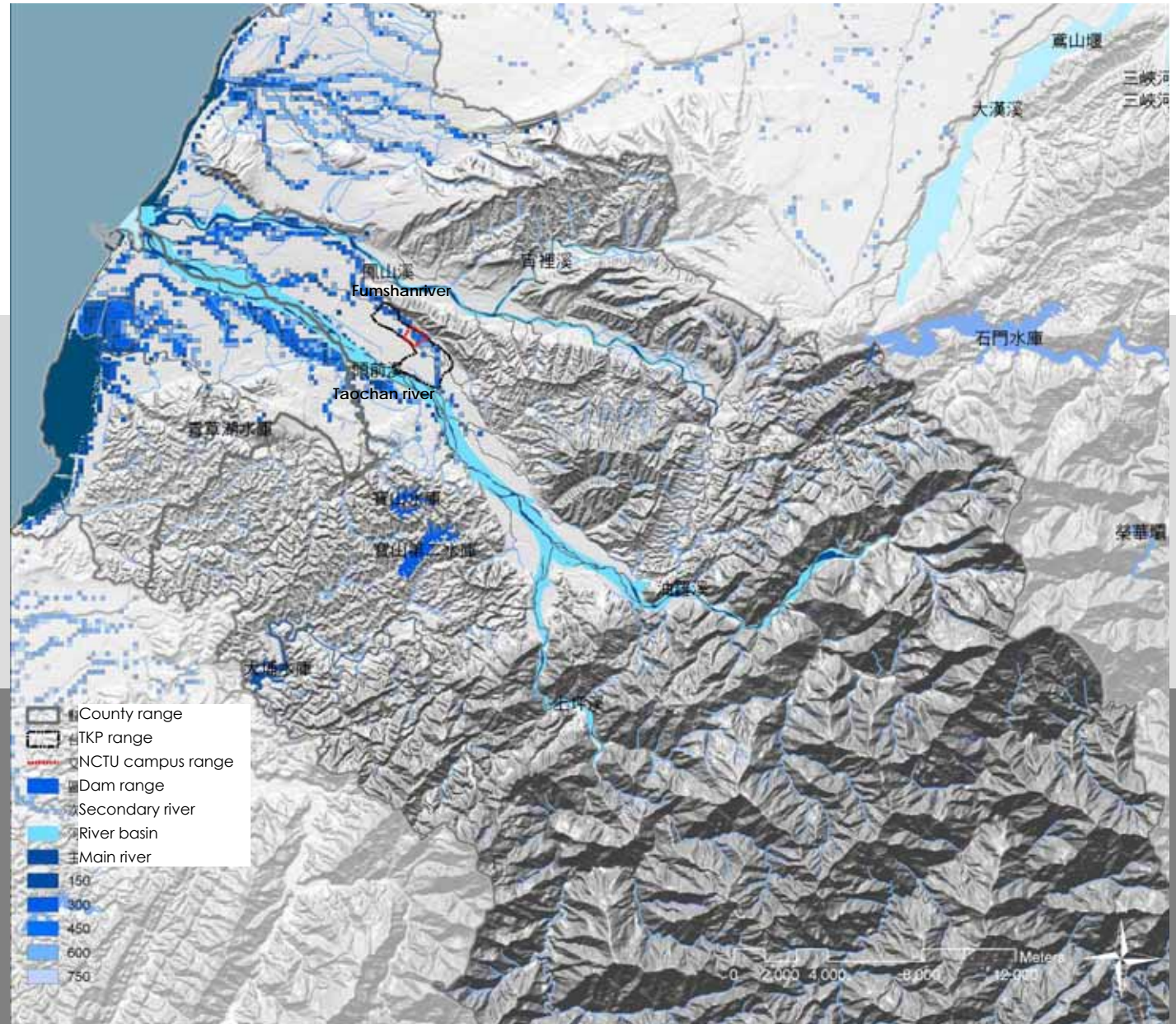
Taiwan national park location



Taiwan migr(IBA)

Possible Flooding Area

According to the National science and technology center for disaster and reduction, we gather up the locations when Hsinchu's rainfall reaches up to 150mm, 300mm, 450mm, 600mm. Then putting all the layers together on top to get the result that the main flooding area is near by Taochan river and Fumshan river.



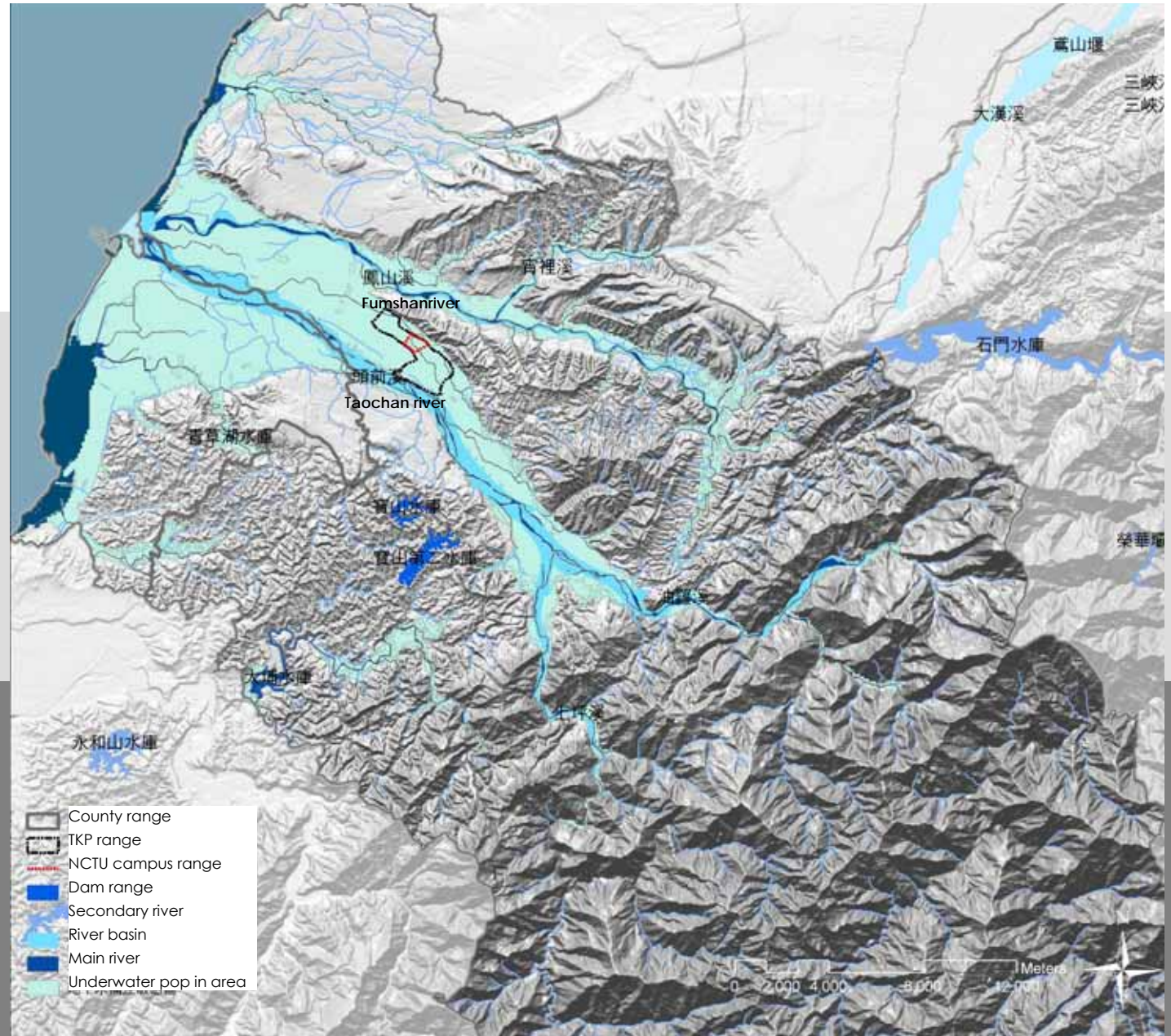
Hydrology Intensive Area


Hsinchu hydrology intensive area is based on underwater region program and Taochan river protection program.

The underwater pop station in Hsinchu region is located at north Hsinchu and at both sides of the Taochan river. The total area is of 552.3 square kilometer and there are seven underwater pop-out stations.



The water quality protect area

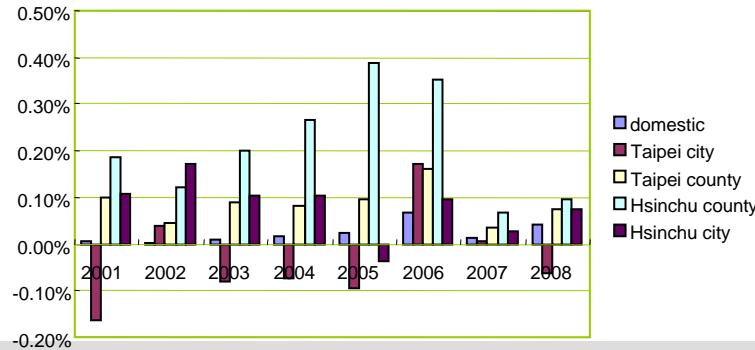


- 
- Section
 - Natural Environment
 - **Population**
 - Artificial Environment
 - Semiconductor Industry and Science Park in Taiwan
 - West Taiwan Space Structure and Hsinchu after High Speed Rail
 - The Due Core of Hsinchu : Chuchain Old Town and Chupei city
- 

Publicity

The fastest population gross rate in Taiwan

The main reason that cost Hsin-chu population grow so fast are because of Hsin-chu science park and high speed rail since 2006. The population in Hsinchu has gross 56973 and its about 12.77% during 2001~2008

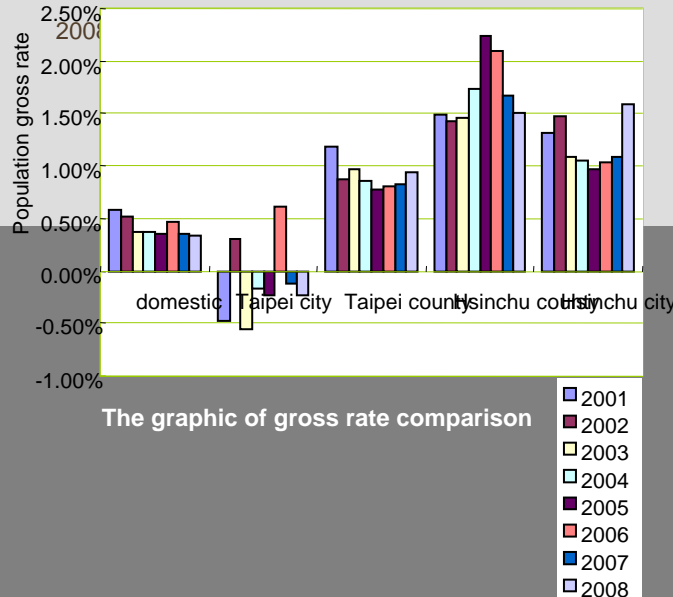


The graphic of gross rate tendency in Taiwan

Hsin-chu city and North Hsin-chu city are the core population growing cities

Due to the end of 2008, the population in Hsin-chu city are four hundred thousand and Hsin-chu county are five hundred thousand

More over, the gross rate in Chupei city is higher than Hsin-chu city. Chupei city was the highest gross rate in Hsinchu region form the graphic of population gross rate, especially in 2005.



The graphic of gross rate comparison

The high quality of human resource in Hsinchu region

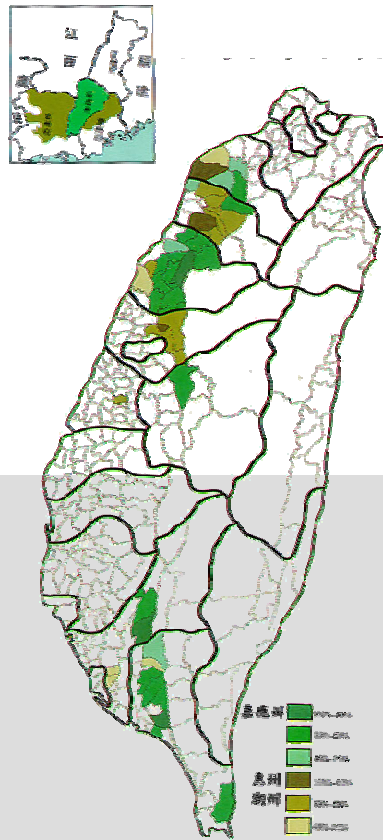
In Hsinchu city, there are 31.67% of people are above university education, 18% are above collage, 32.25% above high school. For all Hsinchu county, there are 20.3% of people are above university, 18.84% are above collage, 80.51% are above high school. To compare with Chupei and Chunlin, Chupei city was more over 31% than average of educational population. Chunlin was lower than average but it still got 20%. These are showing that the high quality human resource in Hsinchu region are gather up in these two districts.

The educational rate in Hsinchu county , Chupei and Chunlin (unit : %)

District / educational	Above university	collage	High school	Junior high	Below elementary school
Hsinchu city	31.67	18.00	32.25	11.08	7.00
Hsinchu county	20.30	18.84	41.37	12.75	6.73
Chupei city	31.00	15.00	30.00	11.00	12.00
Chunlin	20.00	14.00	31.00	14.00	19.00

Multicultural Population

Hsinchu region has four kinds of ethnics, there are Hakka, Minnan, Waishen and aboriginals. Mostly are Hakka. Because of that, most of the historic buildings are traditional Hakka architecture.



The Hakka race spread Taiwan during Japanese Occupation



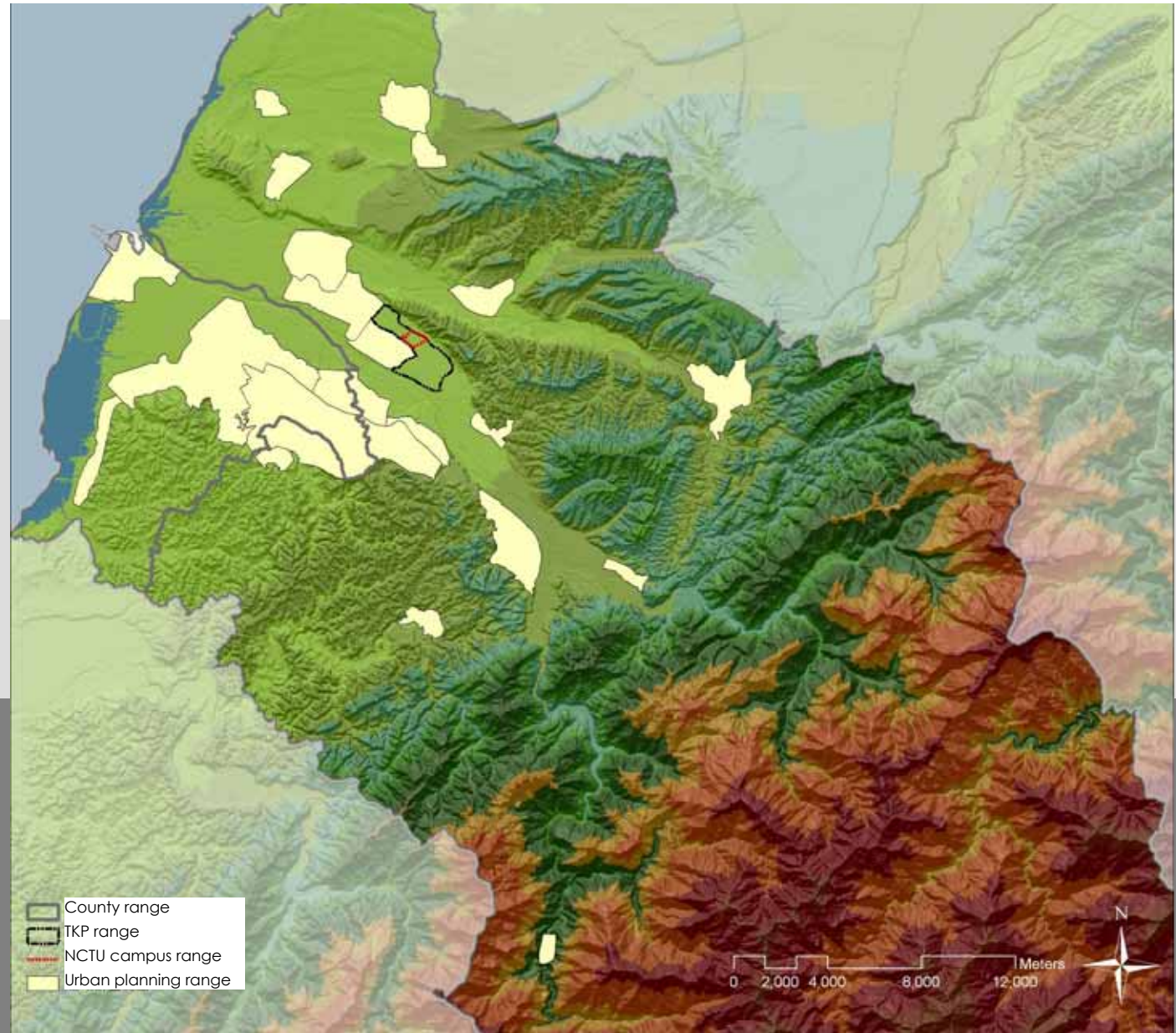
- 
- Section
 - Natural Environment
 - Population
 - **Artificial Environment**
 - Semiconductor Industry and Science Park in Taiwan
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- 

Artificial Environment

Urban Development Area

There are 21 urban planning areas in the Hsinchu region, 6 in Hsinchu city and 15 in Hsinchu county.

The area in Hsinchu city urban planning is about 42.6% of the total Hsinchu city. The population density is 7,065/square kilometer, and it is 79.5% of the total population in the urban planning area. The area in Hsinchu county urban planning is about 3.8% of the total Hsinchu city. The population density is 5,261/square kilometer, and it is 57.8% of the total population in the urban planning area.



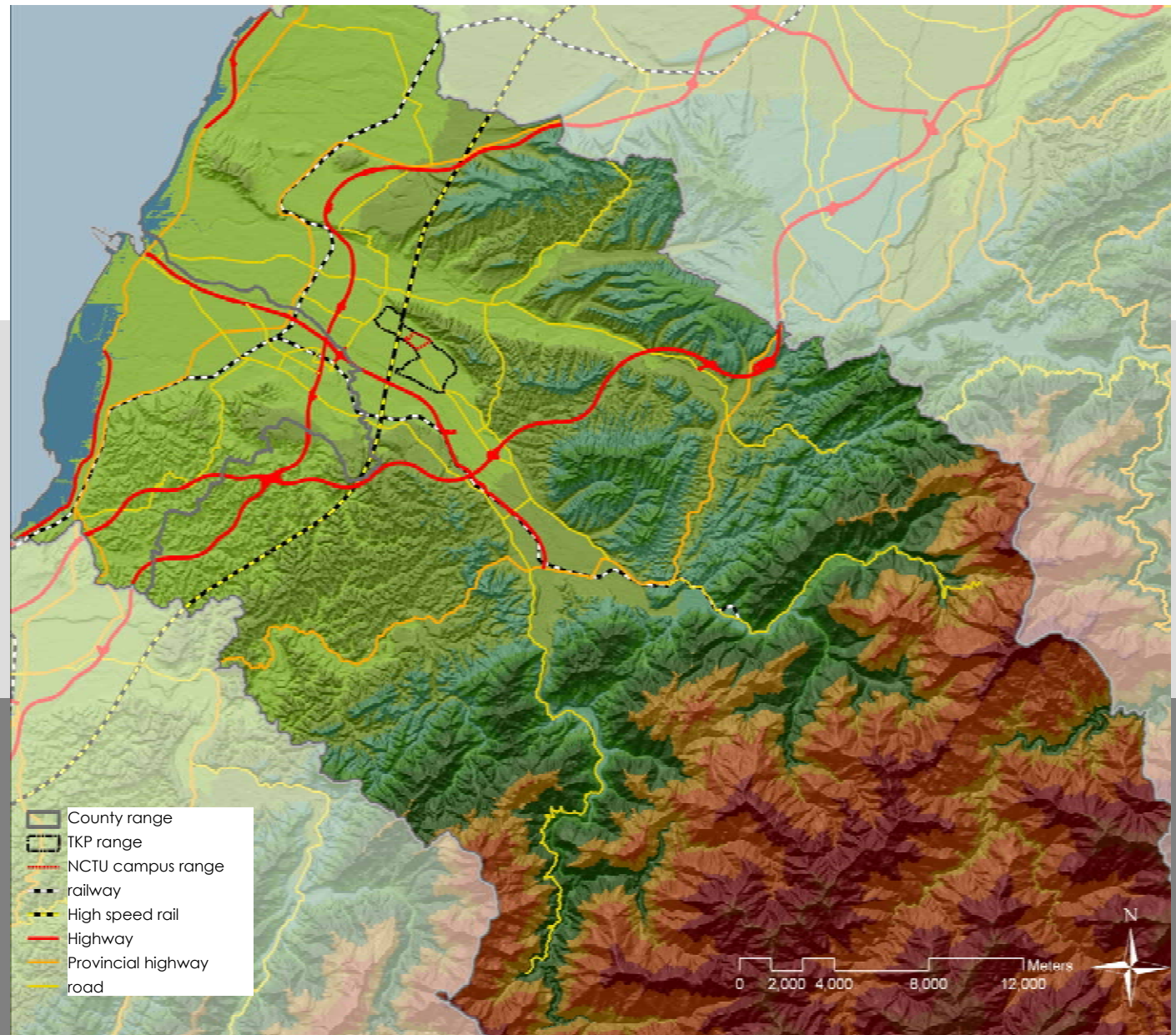
Transportation

1. Rail system

There are high speed rail and train in the rail system. High speed rail set up a station in Hsinchu. And railway has two service line for the north to south both way and east to west both way.

2. Road transport system

Hsinchu urban region depending on highway No.1 and No.3 , and there are four provincial highways provide west to east connection.

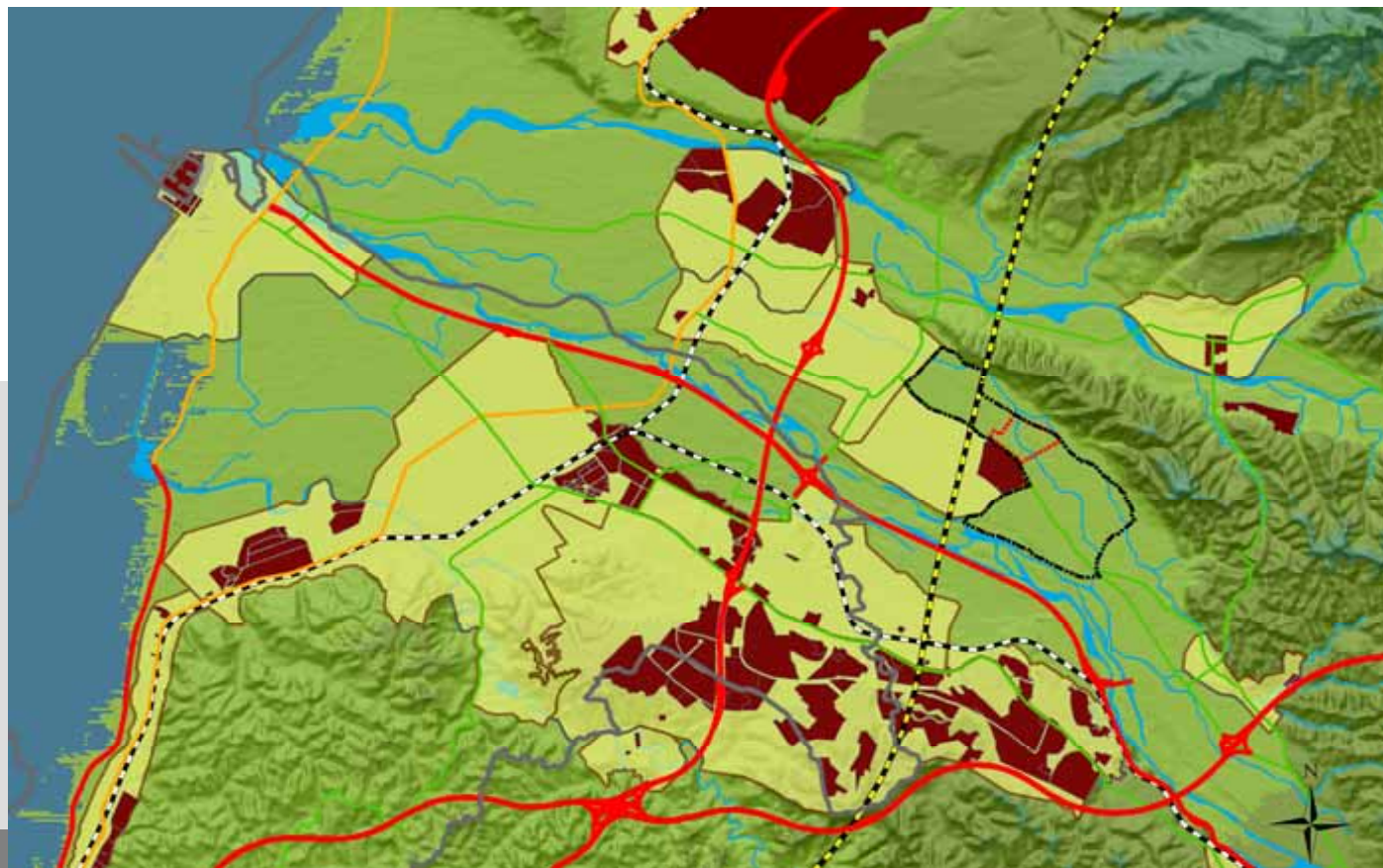


The General Situation of Hsinchu Region

Form the graphic of the industrial distribution of employed persons, the main industry in Hsinchu city is tertiary industry, then secondary industry and then primary industry. But in Hsinchu county, the main industry is secondary industry ,then tertiary and primary industry only has 6% of total industry.

In the graphic of industrial distribution of employed persons and employed persons as % of total pop at Hsinchu city in 2007, the employed person are 45.3% of total population and was more than 0.2% of the national employed persons as %. Hsinchu county was also got 43.4%. The employed persons as % of total labor pop in Hsinchu county and Hsinchu city are 96.15 and 96.2%.

The main industry development are leaded by hi-tech industry in HCSP. But the main industry in Hsinchu county are still traditional industry. These years started to develop hi-tech and biomedical industry by setting biomedical science park in Chupei city.




Distribution of Industrial area in Hsinchu region

The graphic of industrial distribution of employed persons and employed persons as %

Location	Employed persons as % of total pop	Employed persons as % of total labor pop	Industrial distribution of employed persons					
			Primary industry		Secondary industry		Tertiary industry	
			numbers(1000)	%	numbers(1000)	%	numbers(1000)	%
Taiwan	45.1	96.1	543	5.3	3788	36.8	5962	57.9
Hsinchu city	45.3	96.2	1	0.6	77	43	101	56.4
Hsinchu county	43.4	96.1	7	3.3	106	49.5	101	47.2

source: The paper of human resource investigation in Taiwan in 2007 published by Executive Yuan.

- 
- Section
 - Natural Environment
 - Population
 - Artificial Environment
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- 

Semiconductor Industry and Science Park in Taiwan

The Gross Rate of Taiwan Semiconductor Industry is Higher than the Global Semiconductor Industry rate

- For over 30 years, Taiwan has imported semiconductor technology and industry, since 1970.
- Taiwan semiconductor industry consistently became NO.1 in Asia, because of the advantage of both the manufacture RAM and wafer labor. Then, coming after South Korea, China and Singapore. The overall output value was over 4 billion dollars since 2004, it is about 15.40% of the global output value. Taiwan semiconductor industry is equal to 17.43% of global total output value in 2007.
- Taiwan got the unique and complete division labor. Formed the core of the science park industrial supply chain, Taiwan has become the rule model of the global semiconductor industry.

2007 global semiconductor industry top 20

Resource : IC Insights(2008/01) ; IEK(2008/03)

Ranking		company	Revenue (USD million)		
2006	2007		2006	2007	Growth Rate
1	1	Intel	32,268	35,021	8.50%
2	2	Samsung	19,670	19,951	1.40%
3	3	TI	13,730	13,309	-3.10%
5	4	Toshiba	9,782	11,850	21.10%
4	5	STMicroelectronics	9,838	9,966	1.30%
6	6	TSMC	9,748	9,813	0.70%
7	7	Hynix	7,932	9,201	16%
8	8	Renesas	9,700	8,001	-17.50%
10	9	SONY	6,019	7,203	19.70%
13	10	AMD	5,649	6,013	6.40%
11	11	NXP	5,874	5,831	-0.70%
16	12	Infineon	5,120	5,772	12.70%
14	13	Micron	5,520	5,665	2.60%
17	14	Qualcomm	4,528	5,619	24.10%
12	15	NEC	5,685	5,593	-1.60%
9	16	Freescale	6,049	5,447	-10%
19	17	Fujitsu	3,858	4,568	18.40%
18	18	IBM	3,955	4,010	1.40%
15	19	Qimonda	5,413	4,006	-26%
25	20	Nvidia	2,980	3,979	33.50%

Asia is the Biggest and Fastest Growing Market in the Whole World

- Because of the semiconductor chips demanded by PC, digital products and mobile communication products, increasing the sales volume of the global semiconductor. Expected the Asia total sales volume will become 48% of the global sales volume.

The global semiconductor sales volume prediction

unit: hundred million USD

	2004	rate	2005	rate	2006	rate	2007F	rate	2008F	rate
America	390.7	18.34%	407.4	17.91%	449.12	18.13%	428.2	16.65%	459.0	16.36%
Europe	394.2	18.50%	392.8	17.27%	399.04	16.11%	411.8	16.01%	437.5	15.59%
Japan	457.6	21.48%	440.8	19.38%	464.18	18.74%	486.1	18.90%	506.6	18.06%
Asia	887.8	41.67%	1,033.9	45.45%	1,164.8	47.02%	1,246.2	48.45%	1,402.5	49.99%
Total	2130.3	100.00%	2274.8	100.00%	2477.16	100.00%	2,572.4	100.00%	2,805.6	100.00%
Gross rate	28.00%		6.78%		8.90%		3.84%		9.07%	

Resource: World Semiconductor Trade Statistics, WSTS , 2007/11/13

Taiwan Semiconductor Industry Gross Rate is Higher than Global Semiconductor Industry Gross Rate

	2000	2001	2002	2003	2004	2005	2006	2007	2008F
Overall IC industry volume	7,144	5,269	6,529	8,188	10,990	11,179	13,933	14,667	15,860
IC design	1,152	1,220	1,478	1,902	2,608	2,850	3,234	3,997	4,500
IC manufacture	4,686	3,025	3,785	4,701	6,239	5,874	7,667	7,367	7,660
Wafer labor	2,966	2,048	2,467	3,090	3,985	3,735	4,378	4,518	4,910
IC package	978	771	948	1,176	1,566	1,780	2,108	2,280	2,550
IC test	328	253	318	409	577	675	924	1,023	1,150
Global market share	11.20%	11.20%	13.40%	14.30%	15.40%	15.20%	16.33%	17.43%	17.95%
Taiwan overall IC industry gross rate	68.70%	-26.20%	23.90%	25.40%	34.22%	1.72%	24.60%	4.60%	8.80%
Global semiconductor gross rate	36.80%	-32.00%	1.30%	18.30%	28.00%	6.78%	8.90%	3.38%	9.07%

Resource : WSTS ; TSS ; ITIS ; TRI ; IEK(2008/04)

The Position of Taiwan Semiconductor Industry and Product in the World

unit : million USD

	2006 capacity	2007 capacity	Global market share	Global rate	The country on top
DRAM	7,900	7,015	22.40%	2	South Korea
Mask ROM	287	373	98.70%	1	Taiwan
LS-LCD Driver	1,622	1,886	49.70%	1	Taiwan
DVD MPEG	438	420	56.00%	1	Taiwan
Decoder IC					
Design industry	8,954	12,186	26.50%	2	America
Wafer labor	13,145	13,774	67.80%	1	Taiwan
Packaging industry	6,486	7,450	47.60%	1	Taiwan
Testing industry	2,843	3,350	67.70%	1	Taiwan
Manufacturing industry capacity	--	--	19.20%	3	America, Japan

PS : counted by the country of the industry, including oversea volume
Source : IEK(2008/03)

Taiwan Semiconductor Industry Volume and Extra Volume

- 2007 Taiwan semiconductor industry extra volume got to 100billion USD, the gross rate is 6.0% ◦
- 2006 Taiwan GDP was about six thousand billion USD, semiconductor industry shared about 2.95% of GDP, extra volume shared 23.6%, being the top of all the other industries.
- The main objective of Taiwan IC design extra volume is to make profit. The IC industry is about depreciation and amortization. The main income of extra volume is depreciation and labor reward in IC package industry.
- Form the structure of extra volume, the IC design industry is demanding for brain storm , the IC manufacture industry is demanding for capital, the IC package and test industry is demanding for labor.

unit: hundred million USD

	2002	2003	2004	2005	2006	2007(E)	2008(E)
The overall industry volume	201	252	338	344	429	448	488
IC design industry	45	59	80	88	97	123	138
IC manufacture industry	116	145	192	181	231	224	236
IC package and test industry	39	49	66	76	96	102	114
The overall industry extra volume	58	68	100	84	101	107	119

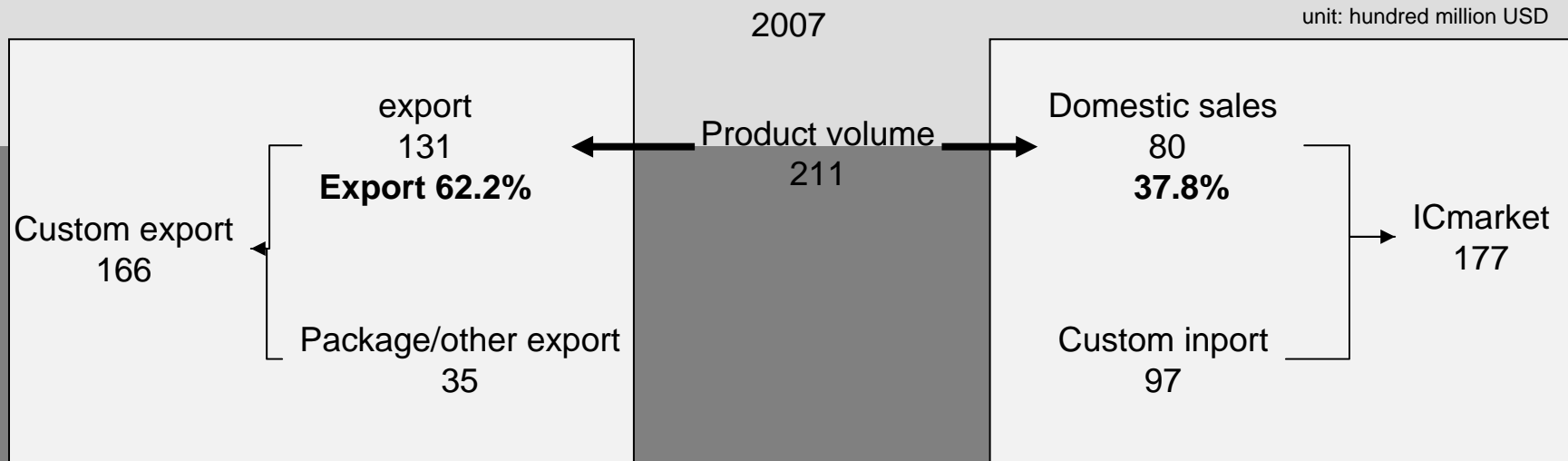
Source:IEK(2008.2)

The Key Guide Line of Taiwan IC Industry—The GDP Rate in Taiwan IC Industry

	2003	2004	2005	2006	2007
GDP (million dollars)	305,624	331,007	355,958	365,503	383,303
Average person GDP(USD)	13,587	14,663	15,714	16,073	16,790
Manufacture industry/GDP	24.40%	25.50%	26.30%	27.30%	28.40%
Computer , communication and electronic products	9.70%	8.70%	9.20%	9.60%	10.10%
Electronic components	19.00%	21.40%	24.80%	28.70%	31.80%

Source : DGBAS executive yuan(2008/02) ; IEK(2008/03)

The Key Guide Line of Taiwan IC Industry—The Structure of Taiwan IC Industry



Source : custom ROC ; IEK(2008/04)

The Representing Taiwan IC Industry—The Top 10 Companies in Taiwan

unit: hundred million USD

Ranking		Company	Products	revenue		
2006	2007			2006	2007	Growth Rate
1	1	TSMC	Wafer labor	98	99	1.60%
2	2	UMC	Wafer labor	32	33	2.60%
3	3	ASETWN	Package and test	31	31	0.80%
8	4	MTK	Design	16	25	51.70%
4	5	PSC	RAM	28	24	-15.90%
7	6	ASEC	Package and test	17	20	14.50%
5	7	NANYA	RAM	23	16	-29.60%
6	8	PROMOS	RAM	18	15	-20.80%
9	9	INOTERA	RAM	13	14	12.50%
11	10	NOVATEK	design	10	11	15.00%

Source : IEK(2008/04)

The Representing Taiwan IC Industry—The Top 10 Fabless Companies

2006 Rank	2007 Rank	Company	Location	2007 employee	2007business volume (hundred million USD)	2007 employee volume (ten thousand USD)
1	1	UMC	Hsin-chu	62	25	124
2	2	NOVATEK	Hsin-chu	37	11	93
3	3	CMO	Southern Taiwan	22	9	132
6	4	PHISON	South Hsin-chu	13	6	152
7	5	REALTEK	Hsin-chu	46	5	32
4	6	VIA	Xing-dean,Taipei	37	5	38
8	7	ETRON	Hsin-chu	14	4	88
5	8	SUNPLUS	Hsin-chu	18	3	47
20	9	SOC	Hsin-chu	12	2	54
11	10	ESMT	Hsin-chu	6	2	105
--	--	HCSP	Hsin-chu	4,018	309	24

Source : IEK(2008/03)

The Development of Science Park

- The objective of setting science park is to promoting the standard of science in the nation.
- By the strategy of setting science park to scatter the core location, developing the same type of satellite park at the same time in order to build the high-tech industry town. Promoting the competitive of the nation and the regional developing balance.

The Key Element of High-tech Industry : Industry and University Cooperation

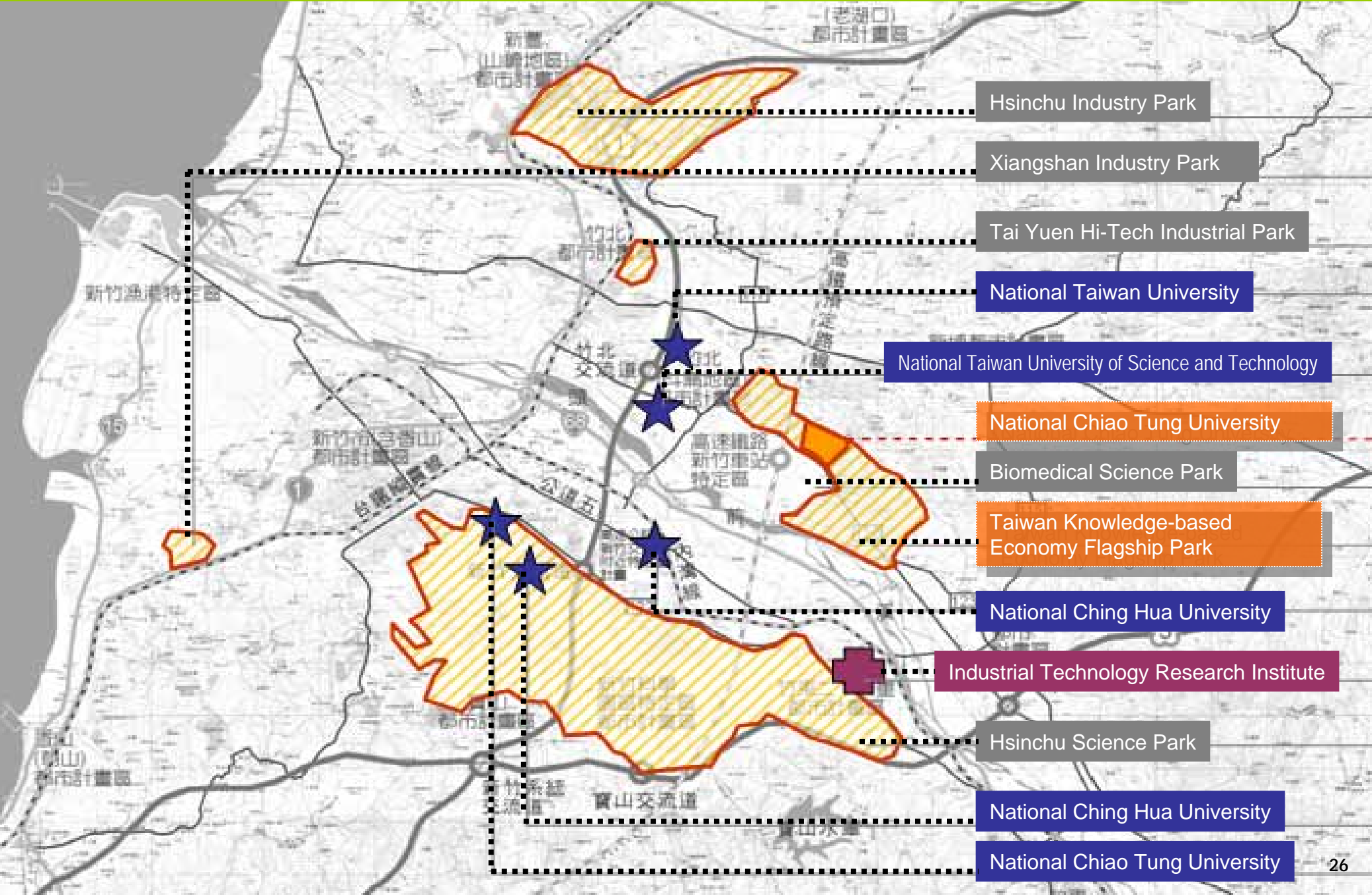
- At the beginning of 1950 , Prof. Truman built up an industry park in the University of Stanford, then became in the Silicon valley it is today and built up the fundamental of Stanford learning position. This is the perfect example of an American University for all these years.
- Northern European countries like Sweden, Denmark and Norway are great at national defense, car manufacture ...etc. The key is at the university education and industrial development getting tight together. This is the successful example in Northern European countries.

The volume of science park

unit: hundred million USD

year	Hsinchu science park		Central Taiwan science park		Southern Taiwan science park	
	Volume	Gross rate	volume	Gross rate	volume	Gross rate
92年	264	21.82%	-	-	48	50.64%
93年	334	26.59%	-	-	80	67.02%
94年	304	-9.02%	33	-	109	35.98%
95年	345	13.46%	55	68.48%	139	28.01%
96年	318	-7.67%	82	48.85%	172	23.75%
97年	309	-2.86%	88	7.69%	168	-2.03%

Cluster of Industry Development and Research Institute in Hsinchu Area



Development status of Science Parks in Taiwan

Hsinchu Science Park

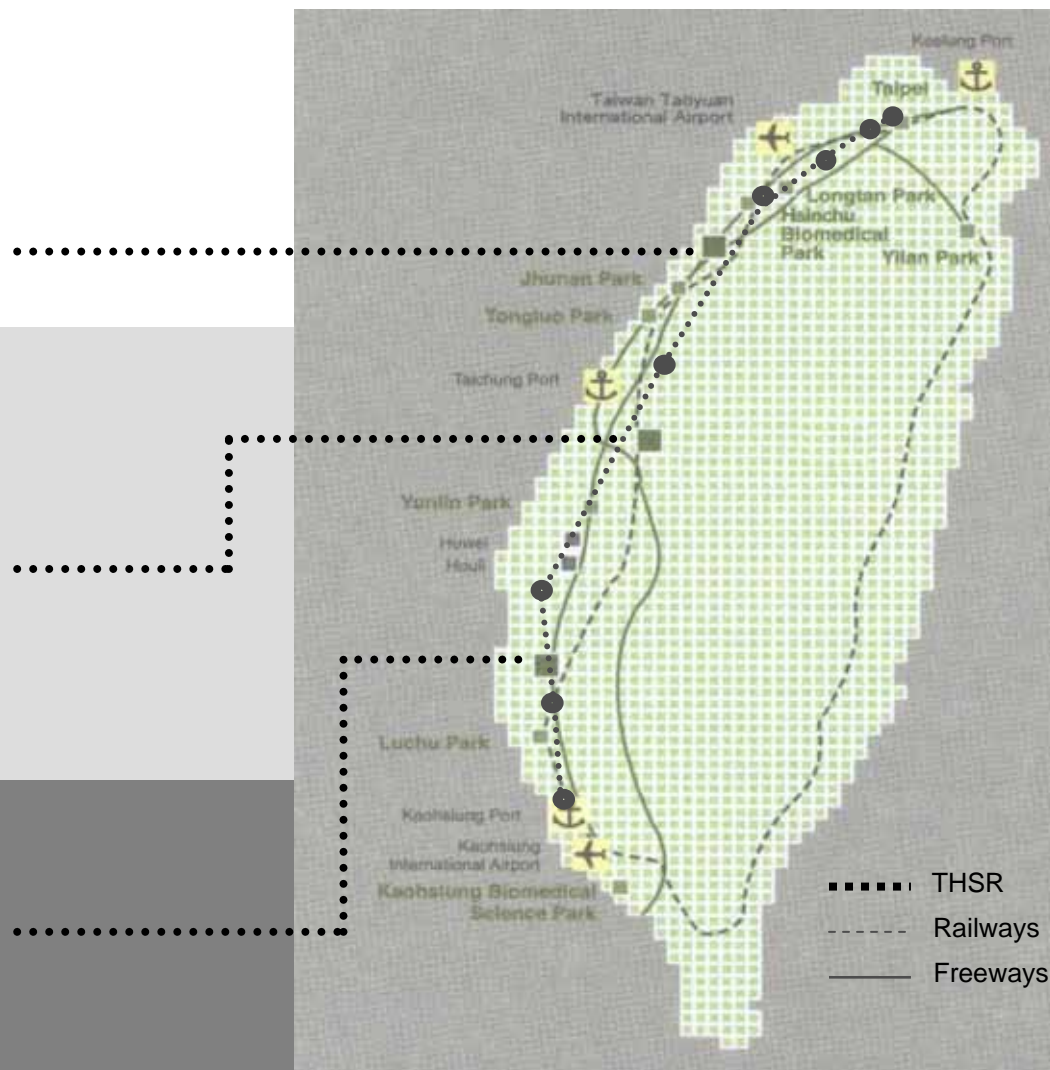
- Hsinchu : 653ha
 - Chunan : 123ha
 - Tongluo : 350ha
 - Chubei : 38ha
 - Lungtan : 107ha
 - Ilan : 102ha
- Area : 1,373ha in total
Revenue : US\$ 30,455 Million
Employee : 130,577
Main Industry : IC (70.03%)

Central Science Park

- Taichung : 413ha
 - Huwei : 97ha
 - Houli : 255ha
 - Erlin : 635ha
- Area : 1,400ha in total
Revenue : US\$ 8,061 Million
Employee : 20,736
Main Industry : Photonics (79.3%)

Southern Science Park

- Tainan : 1,038ha
 - Kaohsiung : 570ha
- Area : 1,608ha in total
Revenue : US\$ 16,591 Million
Employee : 48,136
Main Industry : Photonics (64.5%)



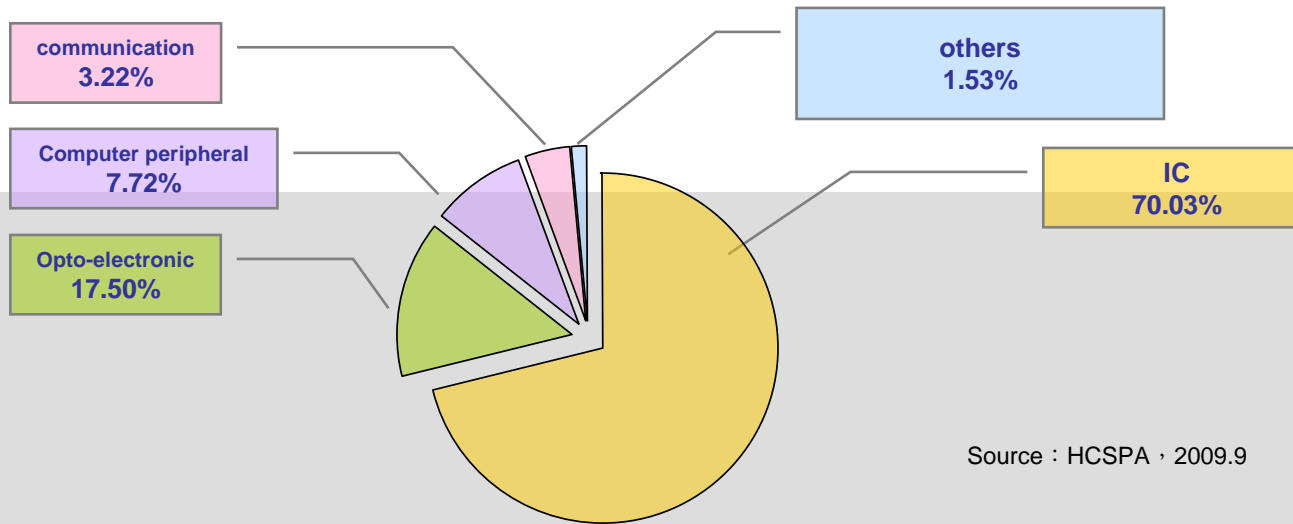
source : 2008/12 · Hsin0chu science park · central and southern Taiwan science park

The development of Hsinchu science park

- Hsinchu science park has built an excellent global fame since 1980. It also started a successful example for the hi-tech industry in Taiwan. Created a strong actual strength for hi-tech industry by nurturing human resources and integrating development resources.
- Accorded to the World Economic Forum 「The report of world competition」, Taiwan had the No.1 of the world on the “state of cluster development” in 2006~2008 . The experience of Hsinchu science park has become the study example for many other countries.
- The semiconductors and panels are the most successful cluster industry in the Hsinchu science park .
- The sales volume of semiconductor industry in Hsinchu science park is 71.6% of total sales volume. Half of the industries are semiconductor related. For example: wafer manufacture, IC design, package and test, material and equipments ,etc.
- The complete industry chain of semiconductor will bring up the volume of product and will also promote hundreds of IC design companies. The semiconductor industry will still be the representing industry in Taiwan in the next ten years.
- The Hsinchu Biomedical Science Park , witch was built for the development and internationalization of Taiwan biomedical, has already begun the first step of booth recruitment.
- The Hsinchu Biomedical Science Park will set up a standard bio-tech factory, an innovation incubation center and a disease control center, etc. These projects will promote the biomedical industry in Hsinchu Biomedical Science Park.
- Since the development of Hsinchu Science Park, the average family income became No.2 of the nation and the capacity of expend reached NO.1, these definitely are because of the development of Hsinchu Science Park.
- The Hsinchu region with its complete structure of hi-tech industry is facing the pressure of upgrade and transform.
 - Based on research and development.
 - Creating intellectual property.
 - Hard to get the land to build factories.



2008 Hsinchu science park industry structure



Source : HCSPA , 2009.9

The volume of Hsinchu science park

unit: hundred million USD

industry	Business volume (hundred million USD)					
	2003	2004	2005	2006	2007	2008
IC	173.3	228.5	210.8	244.7	230.8	216.6
Computer peripheral	41.5	42.5	31.4	31.2	27.0	23.9
communication	17.4	18.6	14.9	13.9	10.4	10.0
Opto-electronic	29.0	40.4	42.2	49.4	49.0	54.1
Precision machinery	1.8	2.8	3.0	4.1	3.2	3.6
Bio-tech	0.6	0.8	0.9	1.0	0.9	1.1
total	263.9	334.1	304.0	344.9	318.4	309.3

The Human Resource of Hsinchu Science Park Research and Development

- The investment of research development and human resource
 - In 2007, Hsinchu science park put 18 billion dollars in IC industry, 22.4% of business volume was put into research and development.
 - In 2008, Hsinchu science park has 130,577 employees, 70% of employees (91,835) are graduated from university and college. 23% of employees(30,937) are graduated or Ph.D. 29%(37,180); 18%(23,718) of employees are graduated from college.

Compare with the three science park

Educational background	Hsinchu science park		Central Taiwan science park		Southern Taiwan science park	
	numbers	percentage	numbers	percentage	numbers	percentage
Ph.D	1,696	1.30	72	0.37	361	0.75
Graduated	27,230	20.85	2,939	14.90	7,028	14.60
Under graduate	37,482	28.70	7,015	35.56	14,166	29.43
Collage	25,577	19.59	4,689	23.77	11,890	24.70
High school	29,863	22.87	4,757	24.11	14,359	29.83
others	8,729	6.68	256	1.30	332	0.69
total	130,577	100	19,728	100	48,136	100



PS: duel to the end of 2008

The Business Volume and Average Volume of Employee in Hsinchu Science Park

years	Business volume per year (hundred million USD)	numbers	Average volume per person (ten thousand USD)
1999	200	82,822	24
2000	286	102,775	28
2001	203	96,293	21
2002	217	98,685	22
2003	264	101,832	26
2004	334	113,477	29
2005	303	111,583	27
2006	344	117,851	29
2007	321	129,460	28
	309	130,577	24

Other Successful Park in Taiwan

- Nankang software park (began at 1999)
 - area : 8.2 ha.
 - Business volume at 2007 : 600 billion dollars
 - employees : 14,020 (2007)
 - Main industry : software industry and bio-tech industry
- Neihu technology park (began at 2002)
 - area : 149.72 ha.
 - Business volume at 2007 : 9000 billion dollars
 - employees : 90,473人 (2008/6)
 - Main industry : development design 、 marketing 、 service

- 
- Section
 - Natural Environment
 - Population
 - Artificial Environment
 - Semiconductor Industry and Science Park in Taiwan
 - **West Taiwan Space Structure and Hsinchu after High Speed Rail**
 - The Due Core of Hsinchu : Chuchain Old Town and Chupei city
- 

West Taiwan Space Structure and Hsinchu after High Speed Rail

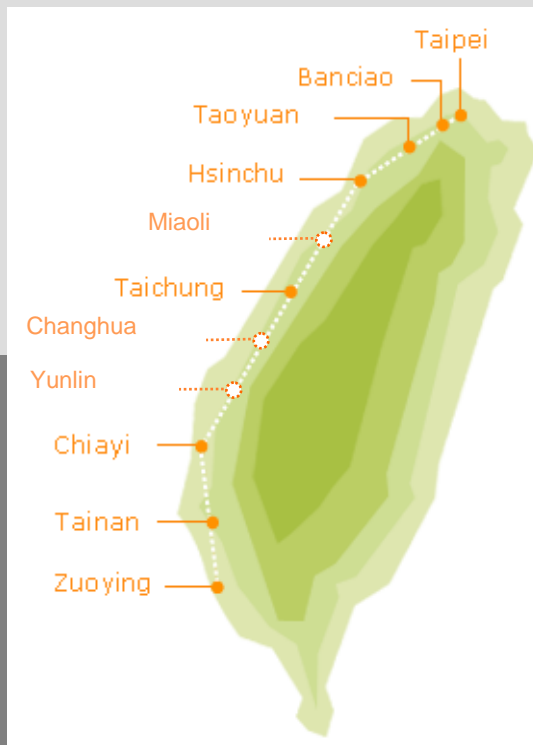
High Speed Rail Creates One- Day Distance at West of Taiwan

Because of the high speed rail, it shortened the travel time from 4 hours to 90 minutes. In the future, high speed rail will play an important role to connect every main city at the west of Taiwan to achieve “One day distance at the west of Taiwan”.

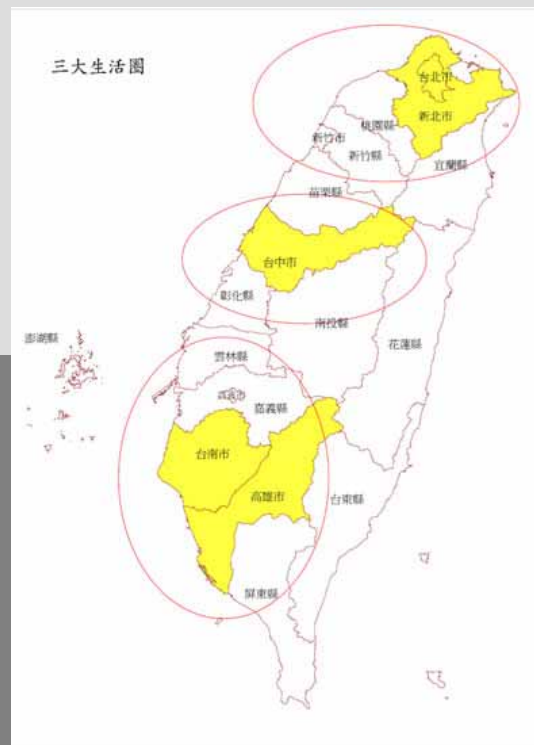
The Homeland Structure after High Speed Rail---Three Main Living Regions, Seven Main Areas

Our homeland will be divided into three sections: “north, central, south” Taiwan and seven main areas.

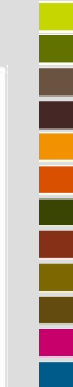
In the future, the three main living regions will integrate population, geography, economics, transportation, history, culture and eco-environment. Several cities will group together to form a “develop area”, and each area can still keep its own characteristics.



The location of all high speed rail



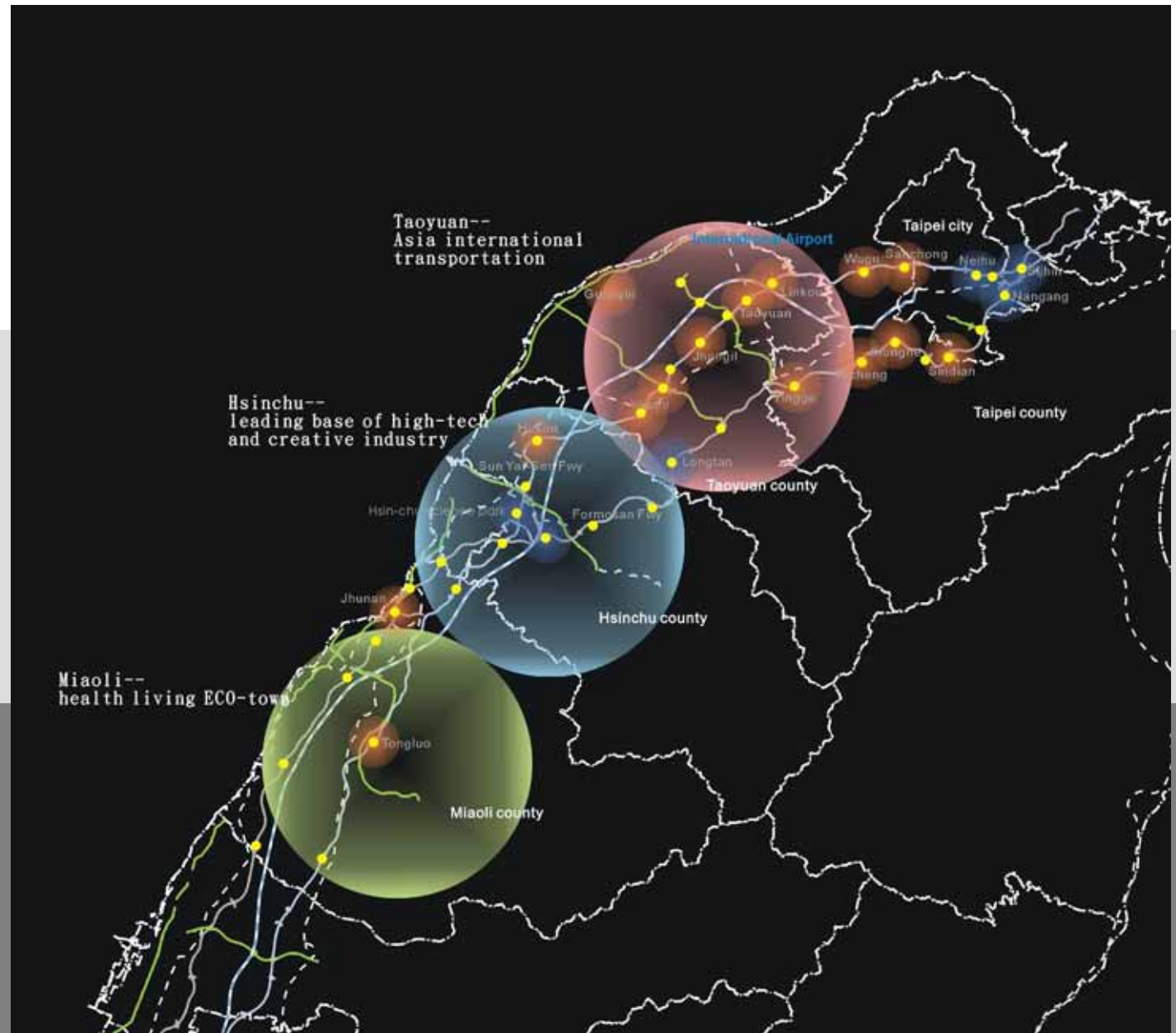
Three main living region and seven main area



Hsinchu Should Become the Hi-Tech Creative Leader

“Tao-Chu-Mio” region, including Taoyuan county, Hsinchu city, Hsinchu county and Miaoli county, should integrate all the technology development and advanced industry, plus the program of Taoyuan aerotropolis in order to complete the development of the region.

Because of those reasons, Hsinchu region should add additional volume and creativity, and become the hi-tech creative leader in order to link with “Taoyuan Asia transportation” and “Miaoli healthy living eco-town”.





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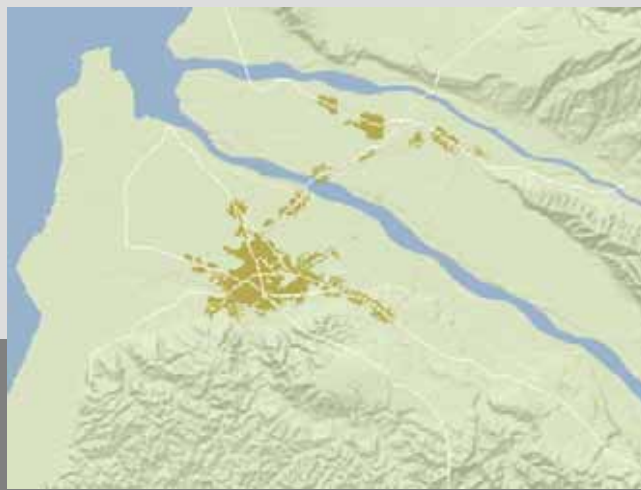
The Due Growing Core of Hsinchu : Chuchain Old Town and Chupei City

Hsinchu Development Began form Hsinchu Old Town

At the very beginning, the development of Hsinchu was from Hsinchu plain, which was called Chuchain. It was built four gates and walls around the city in 1826 and broke every wall and gate except the east gate in 1902 in order to correct the city streets. It can be realized that the development of Hsinchu region was from Hsinchu city to east and west.



1900



1940



1990

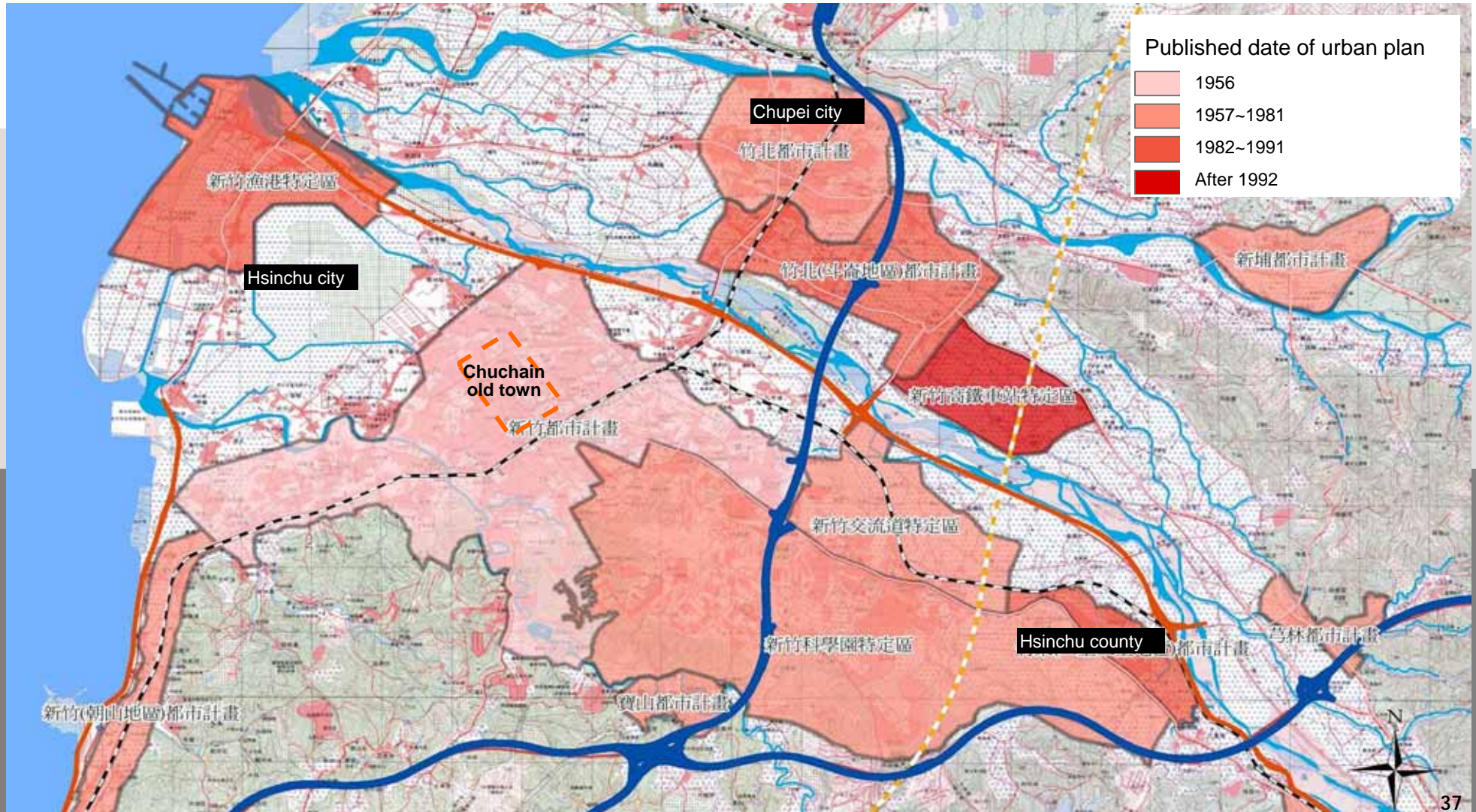


To check the process of urban develop from the executed date of urban plan

1950 : Under the conditions of development of histrionic village and Hsinchu train station, Hsinchu city becomes the main core.

1970 : After the finishing of highway No.1, it brought up the development of the near area by interchange.

2000 : After the high speed station set up at north Hsinchu city, north Hsinchu city becomes the main developing area.



Hsinchu Old Town Urban Design

The old name of Hsinchu is Chuchain, meaning the city built in bamboo. The Hsinchu government made a lot of space renewal programs at Chuchain old town. First, it is the “Hsinchu city old town renew project” made by EDS group.

The project was offered the idea and strategy to renew the Hsinchu old town. The main idea was to rebuild the old town atmosphere and add the energy of modern materials, by the principle of keeping local emotion .



Hsinchu Old Town Urban Design

Hsinchu city government executed many public constructions at Hsinchu old town between 1997~2001. Including the heart of Hsinchu - Eastern Gate, Canal Around , Cheng Huang temple Plaza, etc.



▲東門城 Eastern Gate



▶護城河
Canal Around



▼城隍廟週邊
Cheng Huang Temple



◀影像博物館
Hsinchu Municipal Image Museum

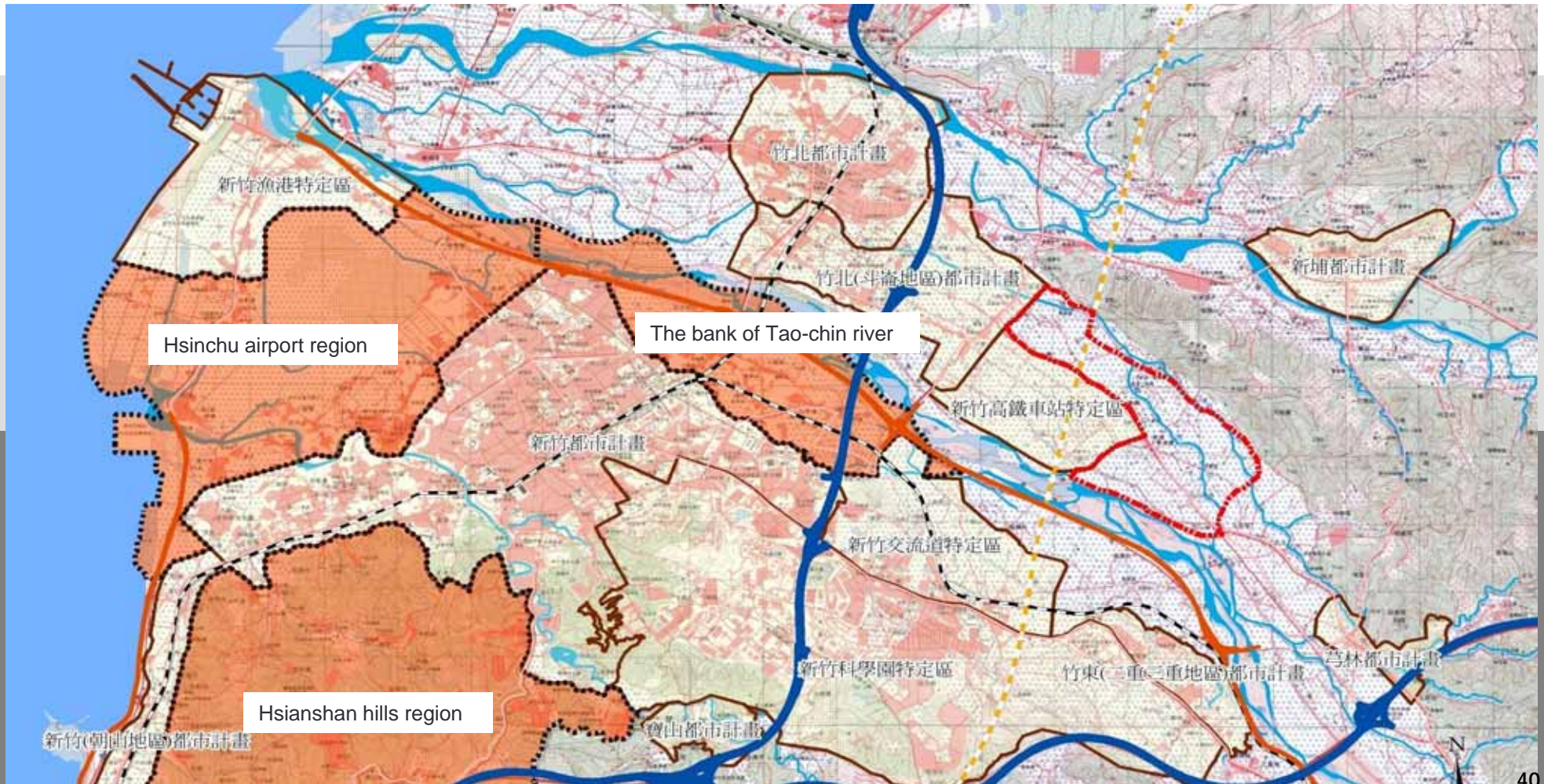


Hsinchu City are Making the Urban Programs for Each Section

Hsinchu airport region : integration of the nearby programs to fit both environmental protection and urban development.

The bank of Tao-chin river : creating nice quality of living, working, studying and outdoor activity environment. In order to get to the goal of environmental protection and sustainability.

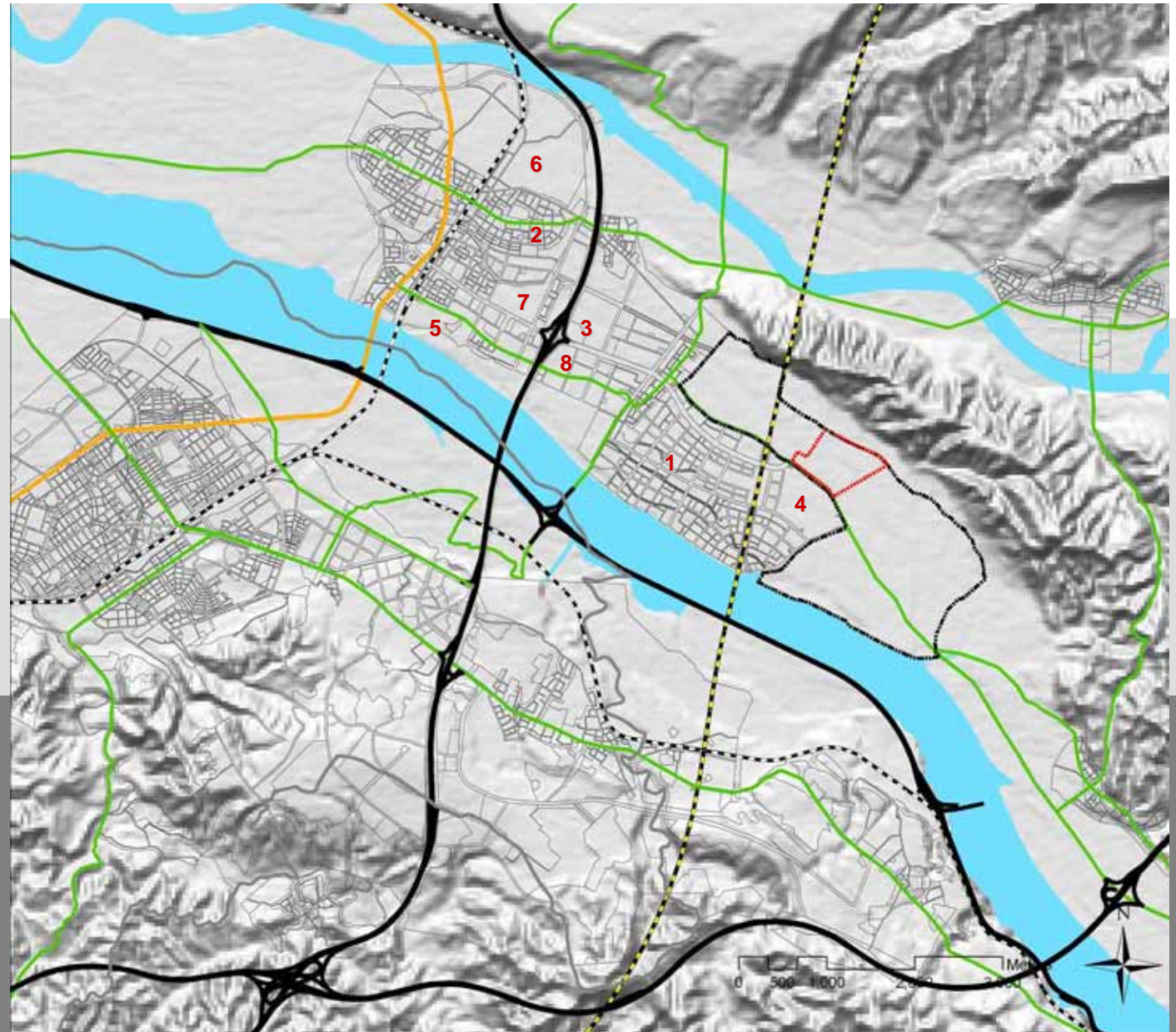
Hsianshan hills region : integration the near by programs .



Chupei City is now undertaken a couple of key projects that form a new urban development corridor

Taiwan knowledge park is near by Hsinchu HSR station area and north Hsinchu urban planning area. The main projects in recent years are present as follow:

- 1.Hsinchu HSR station area .
- 2.Expand north Hsinchu city urban planning area.
- 3.Branch campus of NTU
- 4.Hsinchu biomedical science park project
- 5.Branch campus of NTUST
- 6.Taiyuen hi-tech park project
- 7.Hsinchu county hall
8. HsinChu County Stadium



The north Hsinchu region is fast developing because of the relative programs. The landscape has changed when the high speed rail started to operated. High speed rail section has changed from farmland to urban develop area and become the new urban area.

