

股票代號：2515



# 中華工程股份有限公司

## BES Engineering Corporation

2017年法人說明會  
Investor Conference  
2017-12-08

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# **AGENDA**

**I. Corporation Background**

**II. Financial Overview**

**III. Business Operation**

**IV. Strategy & Future Perspective**



## I . Corporation Background

II. Financial Overview

III. Business Operation

IV. Strategy & Future Perspective

**BES Engineering Corporation** was established in 1950, being originally subordinated to State-owned Enterprise Commission, Ministry of Economic Affairs, transferred from governmental to private ownership in June 1994.

Major business: **construction, development, urban renewal & industrial estate development.**



**Before 1978**

**1978-1995**

**1995-1997**

**1997-Now**

**State-owned company**

**Privatization**

**Transition**

**Transformation**

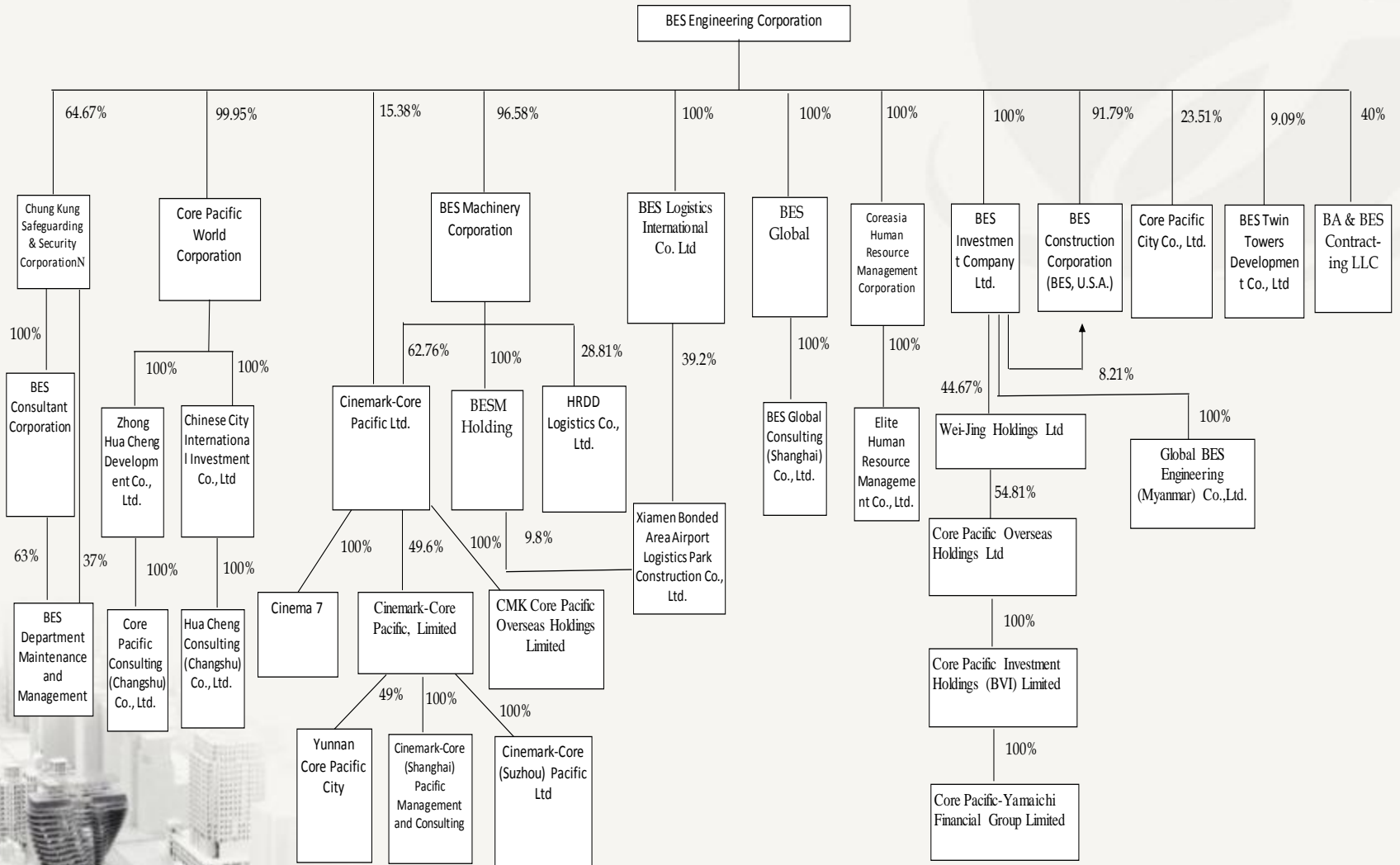
The state-owned company that managed heavy construction equipments, named as Bureau of Engineering Services (BES), was renamed as BES Engineering Corporation in 1959.

Officially listed shares, privatization is successful, paid-in capital increased to NT\$ 4.8 billion.

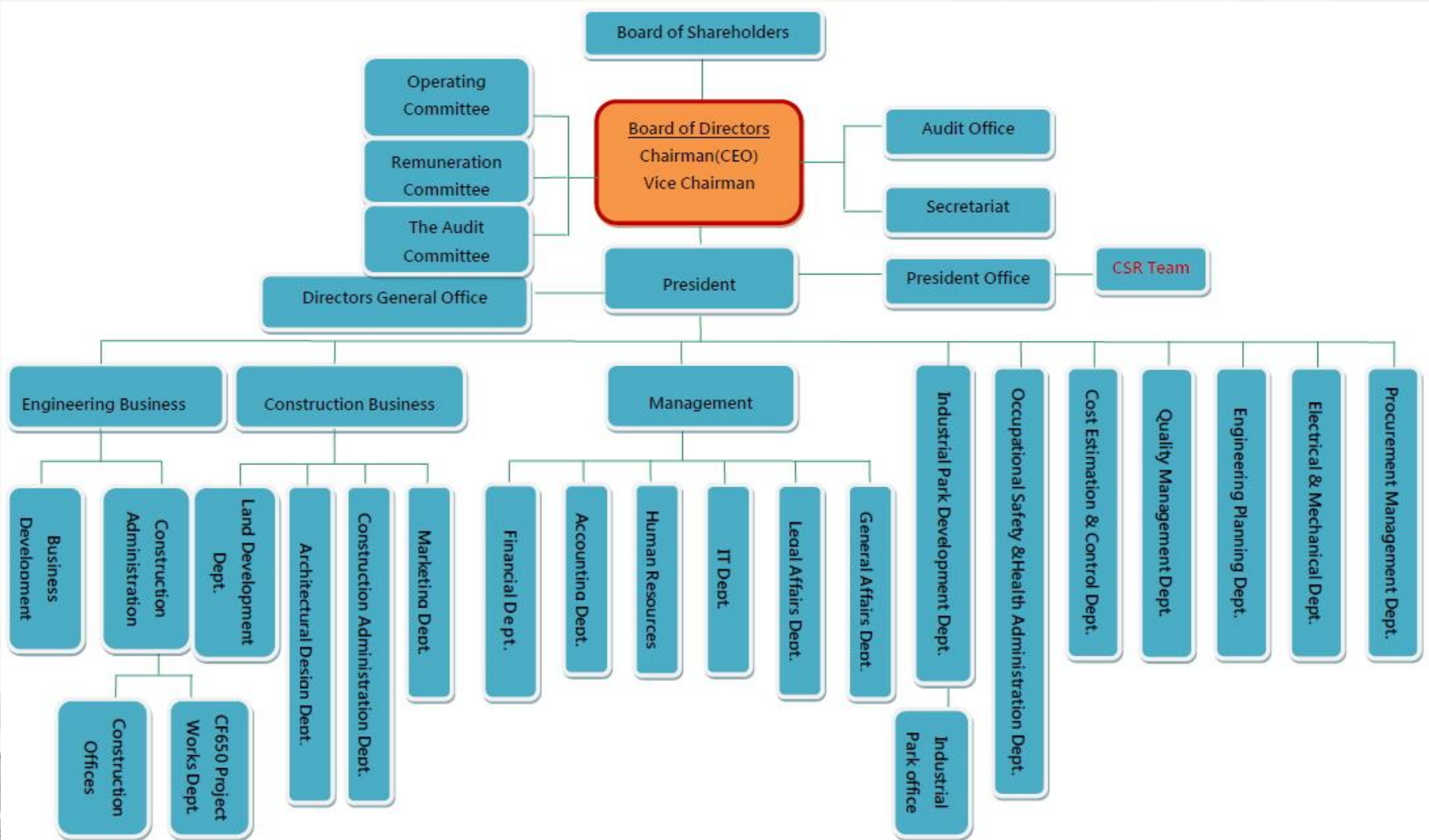
Reinvestment of profit surplus of NT\$ 1.6 billion, paid-in capital increased to NT\$ 9.4 billion.

Merged into Core Pacific Group, the capital of NT\$ 30 billion, paid-in NT\$ 15.3billion. Restructuring efforts are made to develop both construction and real estate development business.

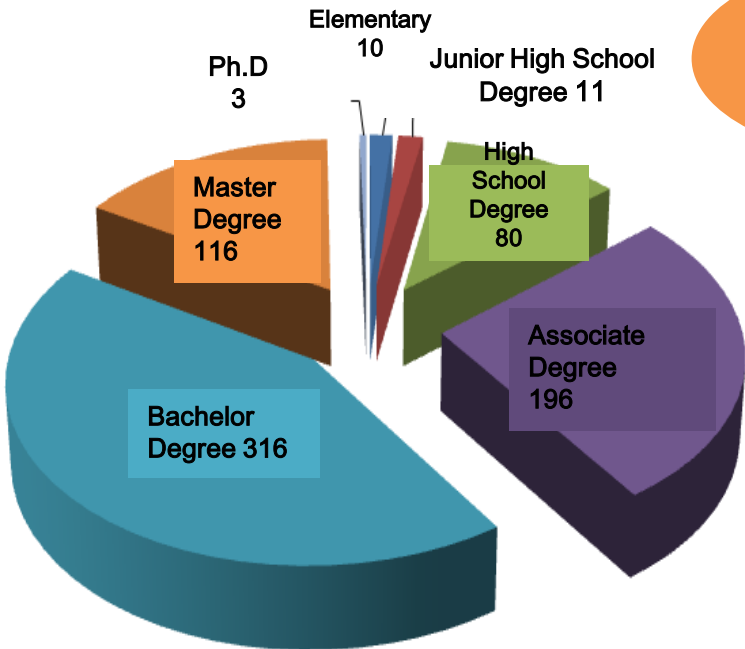
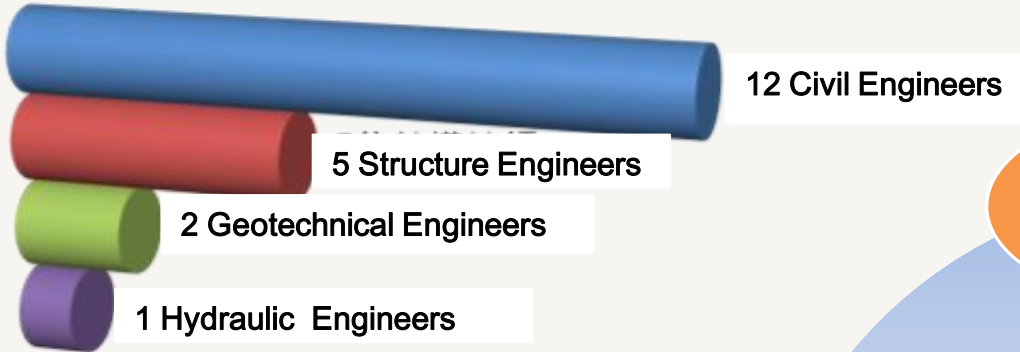
# INVESTMENT STRUCTURE



# BUSINESS ORGANIZATION

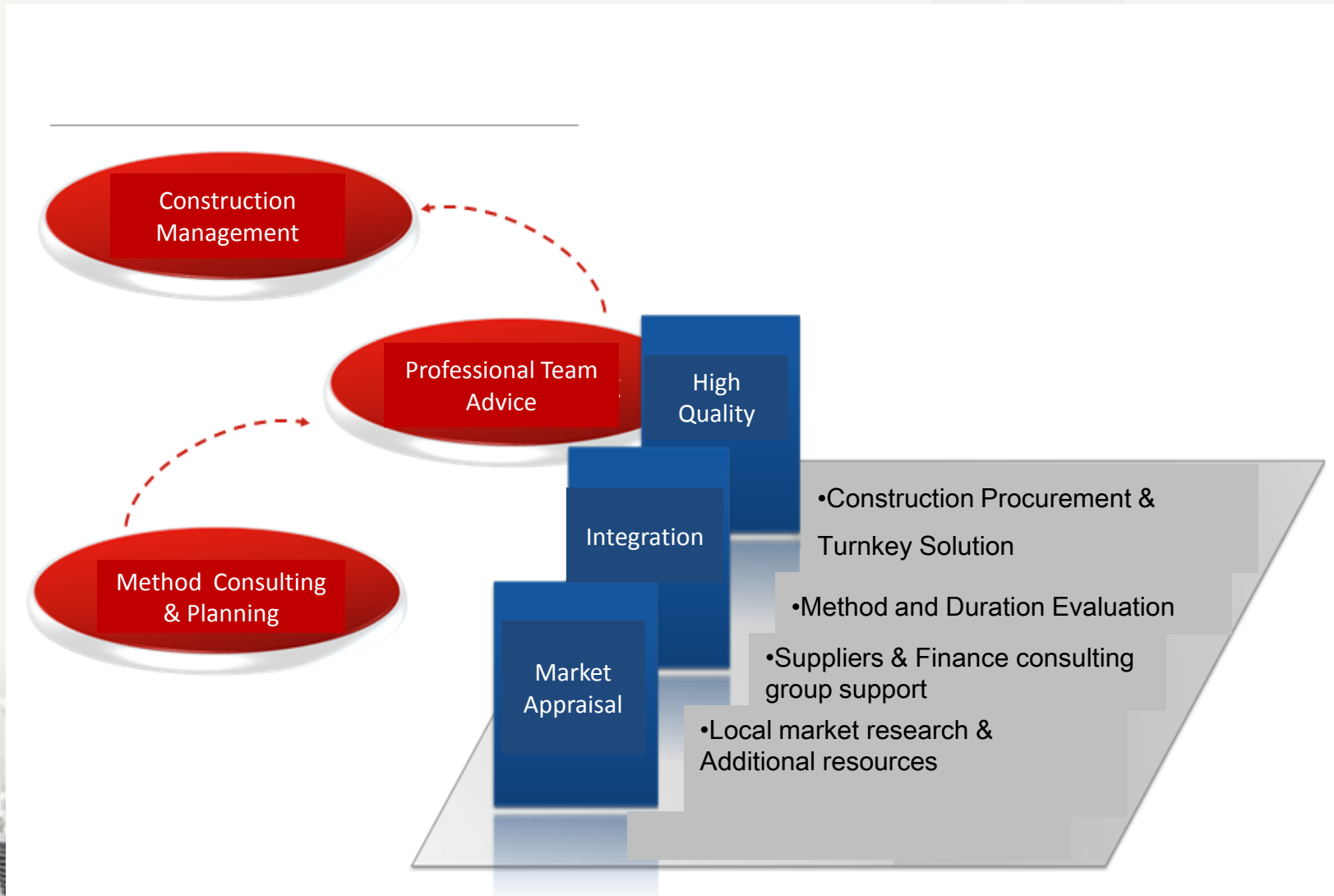


# PROFESSIONAL TEAM





# OUR SERVICE



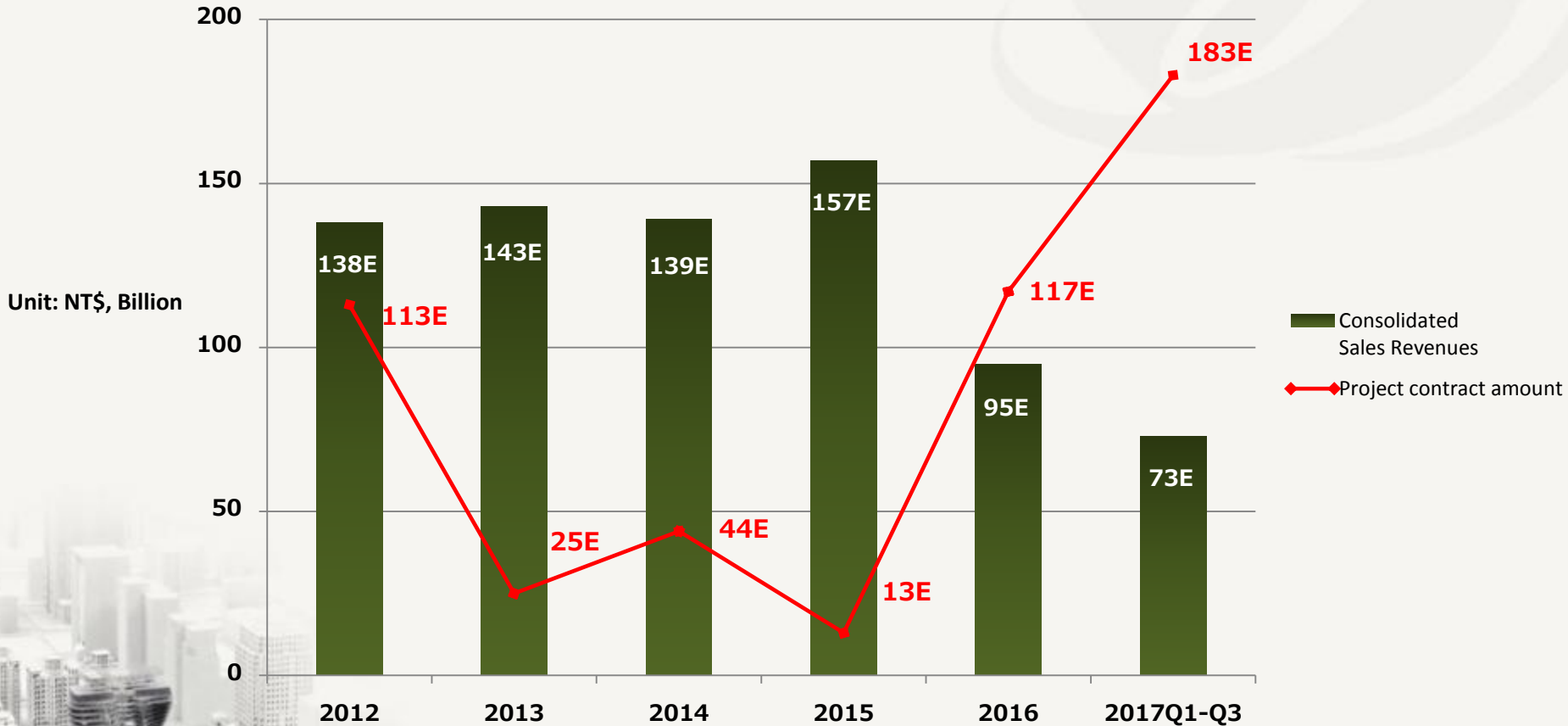
I. Corporation Background

**II. Financial Overview**

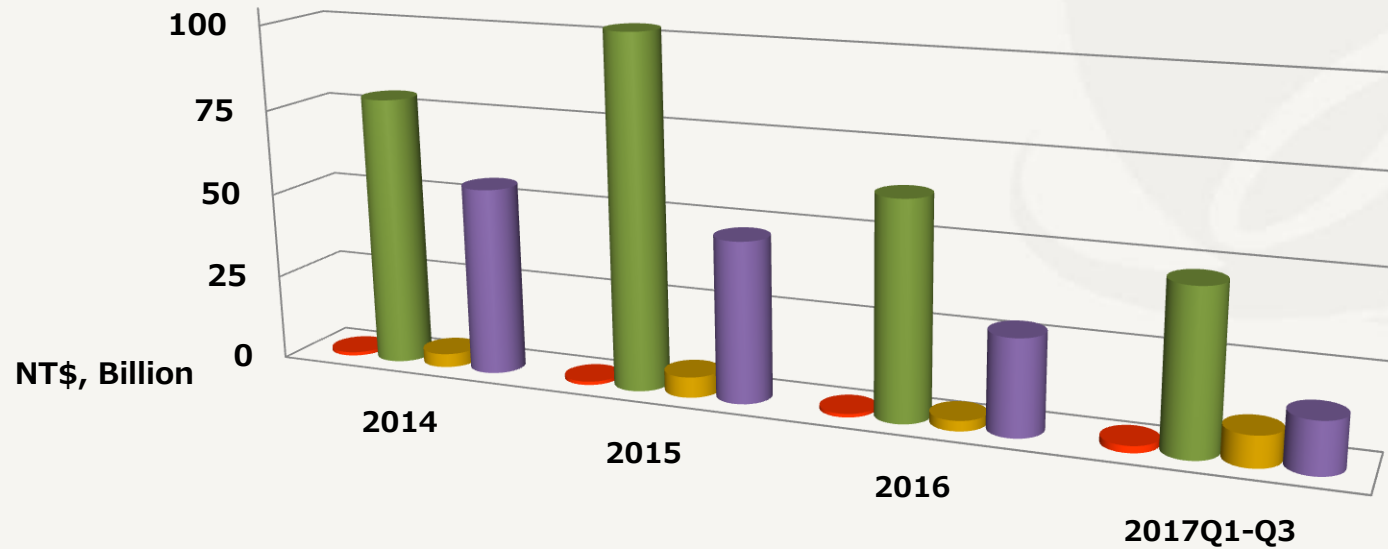
III. Business Operation

IV. Strategy & Future Perspective

# CONSOLIDATED SALES REVENUES

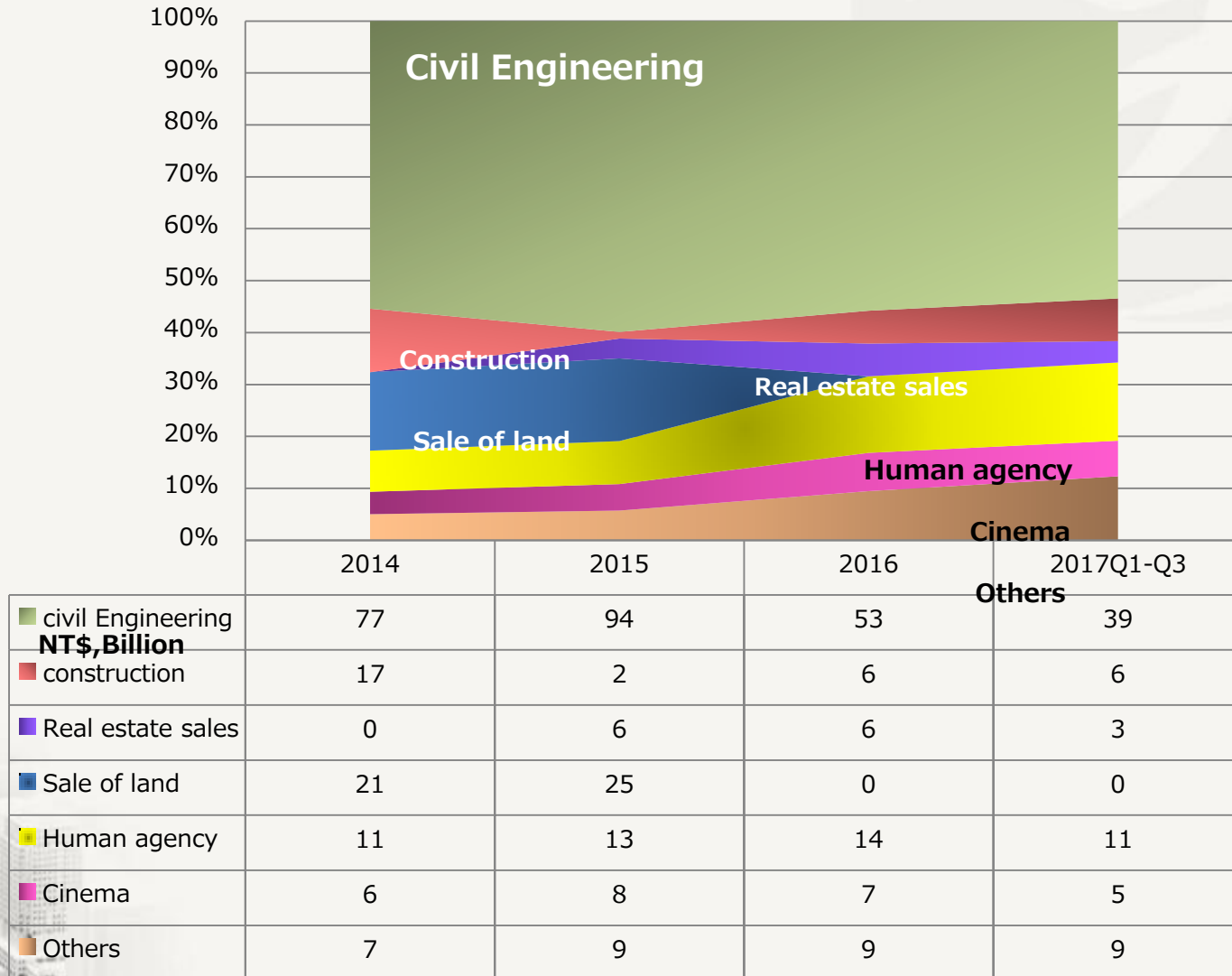


# CONSOLIDATED SALES REVENUES AND BREAKDOWN



	2014	2015	2016	2017Q1-Q3
■ China	1	1	1	2
■ North of Taiwan	79	103	63	47
■ Centrai Taiwan	4	6	3	9
■ Southern Taiwan	55	47	28	15

# CONSOLIDATED SALES REVENUES AND BREAKDOWN



# CONSOLIDATED INCOME STATEMENT

	NT\$, million			
	2014	2015	2016	2017Q1-Q3
<b>Sales Revenues</b>	<b>13,899</b>	<b>15,682</b>	<b>9,504</b>	<b>7,297</b>
<b>Gross Profit</b>	1,186	2,073	1,033	786
<b>Operating income</b>	<b>406</b>	<b>1,132</b>	<b>241</b>	<b>245</b>
<b>Total non-operating income and expenses</b>	(51)	(587)	159	41
<b>Net Profit Attributable</b>	<b>534</b>	<b>534</b>	<b>272</b>	<b>246</b>
<b>Total Comprehensive income Attributable</b>	551	227	239	397
<b>Total basic earnings per share EPS(NT)</b>	<b>0.34</b>	<b>0.34</b>	<b>0.17</b>	<b>0.16</b>

# CONSOLIDATED BALANCE SHEET

	NT\$, million			
	2014/12/31	2015/12/31	2016/12/31	2017/09/30
<b>Current assets</b>	27,854	27,714	29,753	28,817
<b>Property, plant and equipment</b>	3,408	3,346	3,538	3,472
<b>Investment properties</b>	951	902	883	879
<b>Other non-current assets</b>	5,897	5,071	4,995	4,716
<b>Total assets</b>	<b>38,110</b>	<b>37,033</b>	<b>39,169</b>	<b>37,884</b>
<b>Current liabilities</b>	11,807	11,727	14,778	13,426
<b>Long-term borrowings</b>	4,184	2,857	2,845	2,867
<b>Other non-current liabilities</b>	2,266	2,590	1,757	1,702
<b>Total equity</b>	<b>18,257</b>	<b>17,174</b>	<b>19,380</b>	<b>17,995</b>
<b>Total liabilities and equity</b>	<b>19,853</b>	<b>19,859</b>	<b>19,789</b>	<b>19,889</b>
<b>Net worth per share</b>	<b>12.91</b>	<b>12.87</b>	<b>12.82</b>	<b>12.88</b>

# FINANCIAL RATIO ANALYSIS

	2014	2015	2016	2017Q1-Q3	2014-2017Q3 Construction stock average
<b>Debt Ratio</b>	47.90	46.37	49.48	47.50	58.08~61.84
<b>Current Ratio</b>	235.91	236.33	201.34	214.63	159.45~183.24
<b>Times Interest Earned Ratio</b>	3.11	5.16	3.44	2.58	
<b>Return on Equity</b>	2.72	2.69	1.37	1.24	
<b>Profit Rate</b>	3.84	3.40	2.86	3.37	

Source :



# DIVIDEND PAYMENT

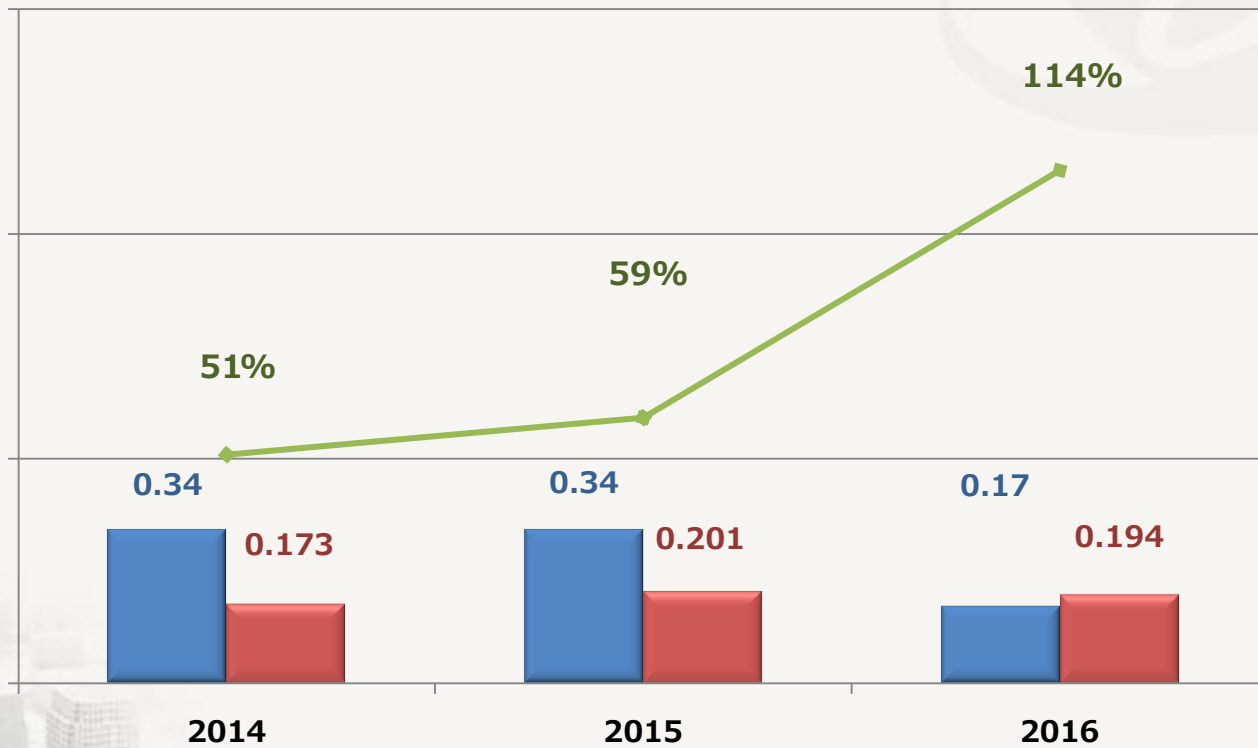
NT\$




1.5

1

0.5

0



 EPS(NT\$)  
 Cash DPS(NT\$)  
 Payout Ratios(%)



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# BES construction reference in Taiwan

**BES construction activities boost Taiwan's Economy.**

- ### Statistics
- 10 bases of county & city
  - 16 construction site offices
  - 3 industrial park site offices



- Improvement of the First Terminal Building, Taiwan Taoyuan International Airport
- Parking apron and runways of Third Terminal Building, Taiwan Taoyuan International Airport
- Earthwork construction & Foundation work of third Terminal, Taiwan Taoyuan International Airport
- Silt-up Prevention Tunneling Project, phase I, Shihmen Reservoir

- WH10-C Main Line Construction Project, West Coast Expressway
- WH10-B Main Line Construction Project, West Coast Expressway
- Expansion Project of Shen-Gang interchange of National Freeway No.4

- Silt-up Prevention Tunneling Project of Zengwen Reservoir
- CL311 Min-Zu Station, TRA Railway Underground Project
- Runway Reconstruction, Kaohsiung International Airport
- Kaohsiung International Container Terminal Building, phase II.



- CF650 Circular Line Of Taipei MRT
- CR580C, Eastern Extension Section, Xinyi Line Of Taipei MRT
- Tao-Zhu Yin Yuan
- Yanshou Resident Building
- Gong-guan Housing Reconstruction & Turnkey project
- Urban Renewal Project of Xindian District



**Taipei MRT Circular Line CF650**

Commencement Date: 2011.05.25  
Scheduled Completion Date: 2018.01.06  
Budget: NT\$ 13.76 billion (US\$ 447,523,336)  
Client: East District Project Office, DORTS

The project is subordinate to Taipei MRT system, the total length of which is 6.4 km, containing seven elevated stations, the construction methods of which include pre-stressed U-girders, steel box girders. The construction features of the project are the building of the new MRT tracks and stations across the existing expressway of the Pali-Xindian Line.

**West Coastal Expressway WH10-C  
64K+005~69K+600 Project**

Budget: NT\$ 4.085 billion  
Construction period: 1,150 calendar days

The project is new construction of the main line of "West Coastal Expressway Guanyin to Fenggang section (WH09-A, WH10-A, WH10-B, WH10-C)" sub-program, being part of the Subsequent Construction Program of Tai-61 Line West Coastal Expressway, 5,595 meters in length, 6.5 ~ 31.42 meters in width.





曾文水庫防淤隧道工程 | 啟用日期  
2013年~迄今

**Silt-up Prevention Tunneling Project, Zeng-Wen Reservoir**

**Commencement Date: 2013.03.31**

**Scheduled Completion Date: 2016.09.25**

**Contract Amount: NT\$ 2.03 billion**

**Client: Southern Region Water Resources Office, WRA, MOEA**

The project is a turnkey project of civil engineering, in which Li-Ming engineering consultant company is commissioned to design. A diversion tunnel approx. 760 M is constructed at Zeng-Wen Reservoir and a super large underground cavern of approx. 147 M long and max. 48 M high is excavated and made a lining, currently being the civil work of Taiwan's largest underground cavern.

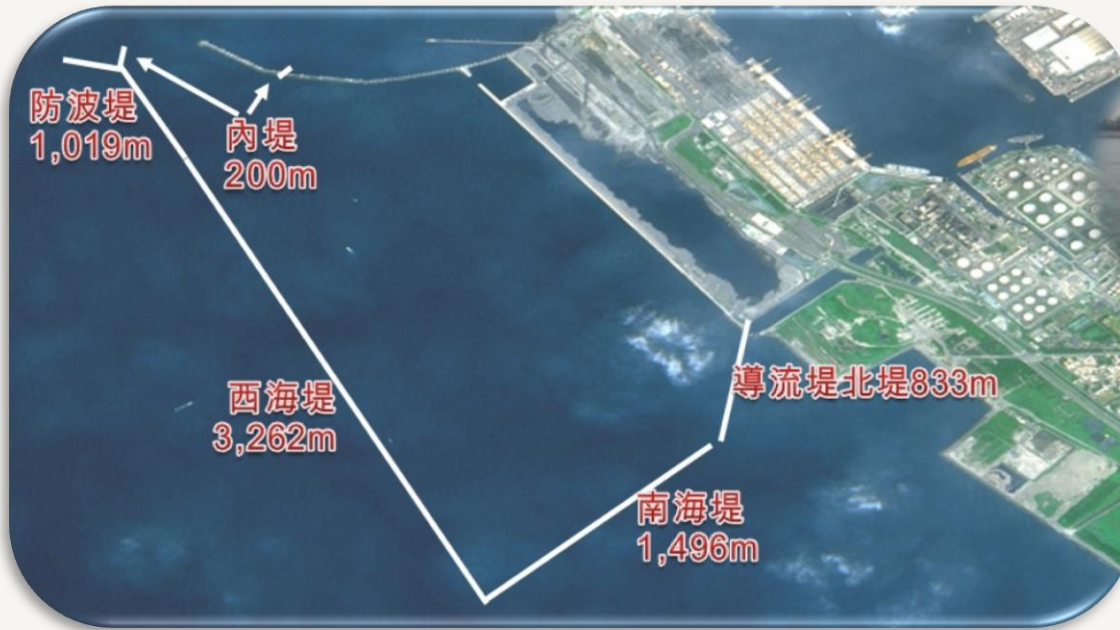
**Shimen Reservoir Anti-silt Tunnel Project (Phase I) - Amping Anti-silt Tunnel Project**

**Contract Amount: NT\$ 3.362 billion**

**Construction Period: 1,530 calendar days**

- 640,000 cubic meters of silt reduction per year by means of mechanical mud pumping and hydraulic scouring and silting.
- Improve reservoir discharge capacity and increase flood discharge above 600cms.





**"Kaohsiung Intercontinental Container Center Phase II Project Seawall and Breakwater Works" and "Taipower Dalin Plant Renovation and Reconstruction Project North Bank Works of Diversion Dike"**

Commencement Date: 2012.03.07

Scheduled Completion Date: 2017.11.30

Budget: NT\$ 8.7 billion (US\$ 290,000,000)

Client: Taiwan International Ports Corporation, Ltd..

The project is located in the surrounding waters of the Dalin Commercial Port District, Kaohsiung Harbor. After extending offshore 1,496 m to south dike from the end (A2) of north bank of Taipower diversion dike, turning northbound to build 3,262 m west sea bank and 1.019 m breakwater and 200m inner bank, comprising caisson manufacture/drag installation (267 nos.), stone throwing, placing, levelling, and sloping, block and wave breaker block manufacture/lifting installation, dredging and backfill embankment, cast in-situ concrete on bank surface and parapet.



台北市松山區寶清段(K)  
松山區寶清段一小段S7-2地號

### New construction of Yanshou

District K residential  
 Lot size of 2,871 square meters  
 Existing 85 households  
 Land zoning of Residence-3  
 Building Coverage Ratio of 45%,  
 Floor Area Ratio 225%  
 Start Date: October 12, 2017

### Turnkey Project of Gongguan Camp Barracks Rehabilitation

Lot size of 86,817 square meters  
 Contract Amount: NT\$ 2.983 billion  
 Start Date: June 27, 2017  
 Features: Green Building, Intelligent Building Qualification Grade



Left: Command Building, Middle: Wing Unit Building, Right: Integrated Activities Center



### Friendship Zhenmei – New Construction of Residential Buildings

Lot size: 2,261.71m<sup>2</sup>  
 Contract Amounts : NT\$ 513 million  
 Start Date: July 27, 2016  
 Structure Type : RC/ 17 floors above ground/ 5 floors below ground  
 Architecture Planning: 1 Building, 2 Blocks, 130 Units



側面模型相片

正面模型相片



## Anti-Warming Carbon Absorbing Vertical Forest Residence

《Originate》 Egoistic Neighboring World-Benefited. Love Tree Love Forest Anti-Warming



- Salute the earth by a vertical forest
- feedback the world with Tao-Zhu spirit
- Only become a tree so as to become eternal
- Anti-warming pioneer, Egoistic, Neighboring, World-Benefited
- East meets West to inherit rare works
- Extend hundreds of years for a special structure
- Urban trees, green building artwork

**Lot size: 8,160 m<sup>2</sup>**

**Floor area : 43,000 m<sup>2</sup>**

**Floor planning : aboveground 21 floors/underground 4 floors**



**《Landscape》 Vertical Forest Residence**  
Planting 356 nos. of Arbor, 22,996 nos. of Shrub



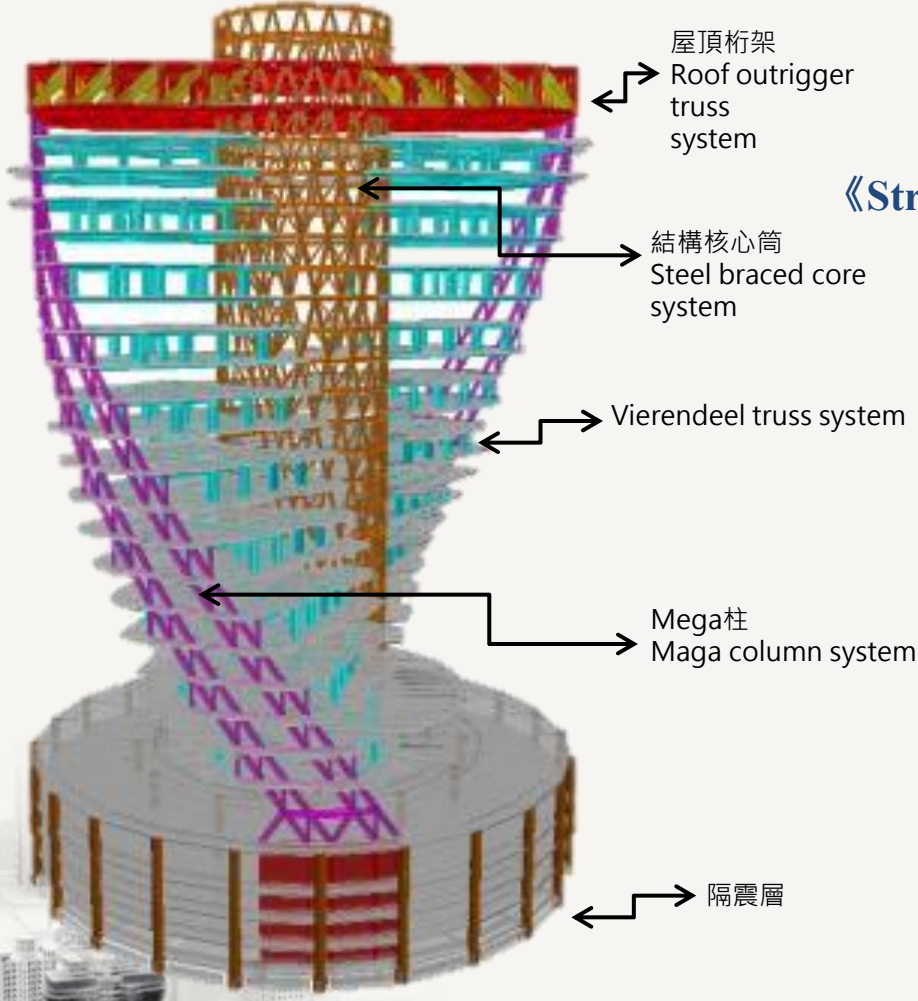




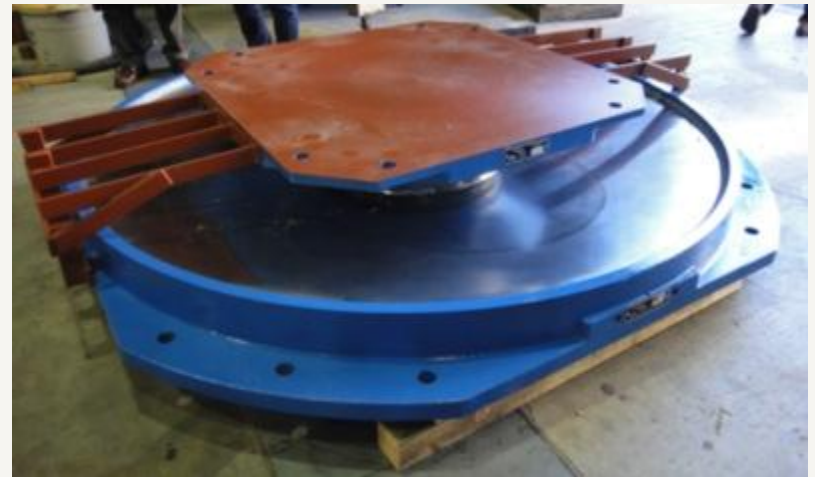
《Architecture》

Collection handed down for generations  
Talented Beauty Lasting

### STURCTUEAL SYSTEM



《Structure》 Landmark of Taiwan, Special Structure



**OH** Shifting skylines: The 9 new buildings set to define cities in 2016

© Updated 1104 GMT (1904 HKT) December 21, 2015



9 photos:

**Tao Zhu Yin Yuan Tower (Taipei, Taiwan)** – Vincent Callebaut, a self-proclaimed “archibotect” made waves when he first put forward his designs for the Tao Zhu Yin Yuan tower – also known as the Agora Garden tower – in 2010. The twisting tower aims to be one of the world’s most eco-friendly structures. It has several of its own gardens and forests to sustain those who reside within, recycles all organic waste and used water and is heated using solar power.

《Glory》 Bloom Globally See Taiwan

- ***CNN ranks as the 2016 world's landmark -- global unique residential case***
- 2015 CTBUH Innovation Award for Architecture
- 2014 Singapore WAF Future Architecture Prize
- 2012 US LEED Gold green building
- Pre-validation of seismic resistance label of Taiwan Architecture Center
- Golden class pre-validation of Taiwan green architecture
- Diamond class pre-validation of intellectual architecture
- Passing at a time of Taipei Urban Design



Co-create the tri-win situation of beautifying the urban environment, improving the living standards of residence, and sustaining the development of enterprises.

From 2010, responding to the government policies, the development antenna actively participated in the urban renewal redevelopment business, being devoted to beautify the urban environment, promote the public interest, reduce public disasters, improve the quality of residence, and use "the first brand of urban renewal" as the goal of implementation, constantly sophisticated with self-expectation.



## Yan-Shou M District

Mode of development : urban renewal

Lot size: 922m<sup>2</sup>

Lot location : alley 325, Jian-Kang Road, Song-Shan District

Planning of architecture : aboveground 12

floors/underground 4 floors, RC structure

Completion : 2015

It won the 2014 National Excellence Award for Urban Renewal Construction Quality.



## Yan-Shou K District

**Mode of development : urban renewal**

**Lot size: 2,871 m<sup>2</sup>**

**Lot location: Alley 325, Jian-Kang Road, Song-Shan District**

**Planning of architecture: aboveground 15 floors/underground 3 floors, RC structure**

**Construction plan: 2017~2019**



## Yan-Shou I District

**Mode of development : urban renewal**

**Lot size: 4,780 m<sup>2</sup>**

**Lot location: Yan-Shou Street, Song-Shan District**

**Planning of architecture: aboveground 24 floors/underground 4 floors, RC structure**

**Construction plan: 2018~2020**



## Yan-Shou J District

**Mode of development :** urban renewal  
**Lot size:** 10,034m<sup>2</sup>  
**Lot location:** Yan-Shou Street, Song-Shan District  
**Planning of architecture:** aboveground 21 floors/underground 4 floors, SRC structure  
**Construction plan:** 2019~2021  
**Rare 3,000 pings complete street block urban renewal case**



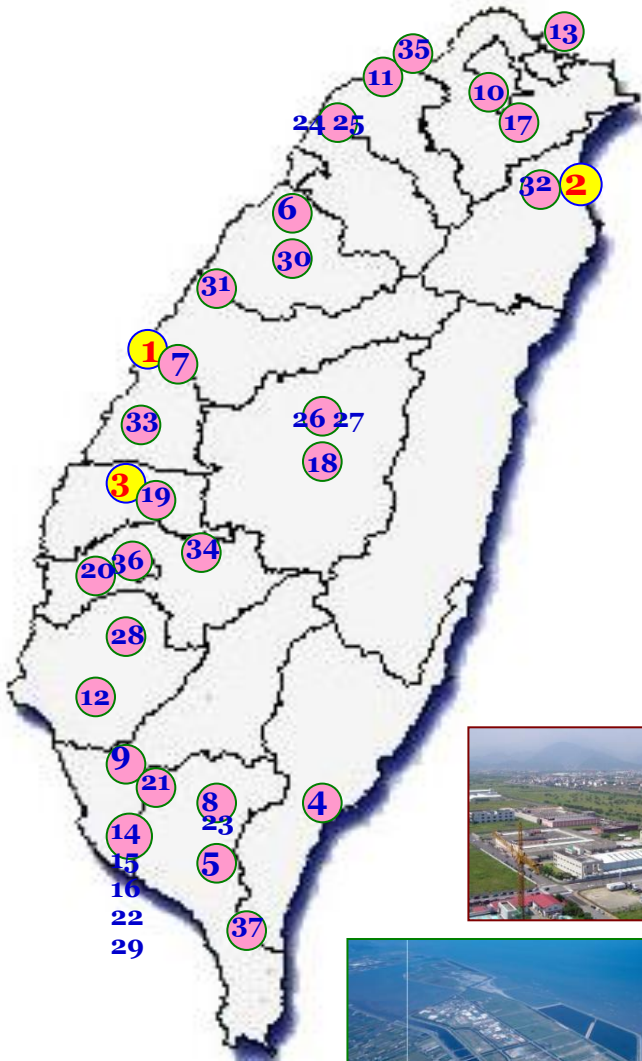
## Nan-Gang Case

**Mode of development :** urban renewal  
**Lot size:** 2,216m<sup>2</sup>  
**Lot location:** Chong-Yang Road, Nan-Gang District  
**Planning of floors:** aboveground 15 floors/underground 4 floors, RC structure  
**Construction plan:** 2018~2020



## Development of Industrial Park

The company was commissioned by the government since 1970, conducting the industrial park development and rental business on behalf of the government. Up to 2015, it develops totally 37 places of industrial park, total development areas approx. 8,656 hectares, the total number of manufacturers introduced about six thousand. It has become a leader of industrial park development in Taiwan.



	Industrial Park (nos.)	Development Area (hec.)	Sale Area (hec.)	Number of manufacturer (nos.)	Investment Amount (100 million NTD)
Development completed	34	5,628	4,437	6,045	650
Under developing	3	3,028	2,014	3,40	598
<b>Total</b>	<b>37</b>	<b>8,656</b>	<b>6,451</b>	<b>6,385</b>	<b>1,248</b>

■ Achievement of development

■ 1980~2015 Industrial parks under developing

- 1. Zhang-Hua Coastal 2455hec.
- 2. Li-Ze 330hec.
- 3. Yun-Lin Technology 243hec.

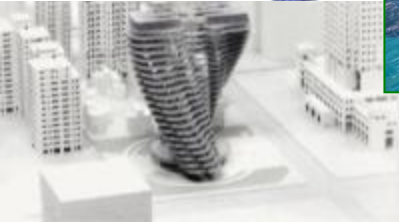
■ 1980~1990 Industrial parks developed

- 4. Feng-Le 18hec.
- 5. Nei-Pu 99hec.
- 6. Zhu-Nan 78hec.
- 7. Quan-Xing 248hec.
- 8. Ping-Dong Automobile 100hec.

■ 1970~1980 Industrial Park developed

- 9. Ren-Wu 21hec.
- 10. Shu-Lin 22hec.
- 11. Tao-Yuan You-Shi 65hec.
- 12. An-Ping 198hec.
- 13. Da-Wu-Lun 30hec.
- 14. Kaohsiung Coastal 1177hec.
- 15. Kaohsiung Coastal Small & Medium-sized Enterprises 19hec.
- 16. Kaohsiung Coastal Industrial Square 15hec.
- 17. Tu-Cheng 107hec.
- 18. Zhu-Shan 23hec.
- 19. Yuan-Zhang 16hec.
- 20. Yi-Zhu 16hec.
- 21. Feng-Shan 11hec.

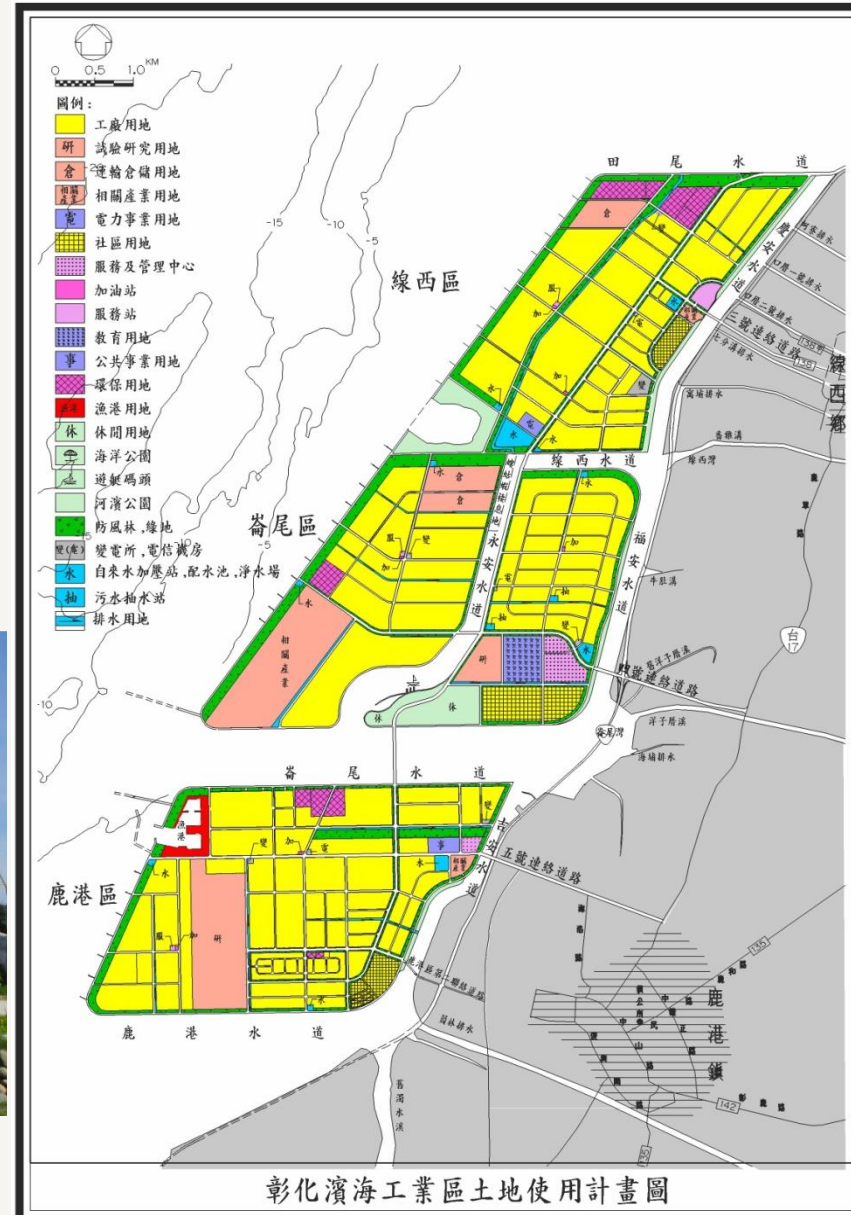
- 22. Lin-Yuan 388hec.
- 23. Ping-Dong 156hec.
- 24/25. Xin-Zhu (Expansion) 532hec.
- 26/27. Nan-Gang (Expansion) 411hec.
- 28. Guan-Tian 227hec.
- 29. Da-Fa 391hec.
- 30. Tong-Luo 50hec.
- 31. Da-Jia You-Shi 218hec.
- 32. Long-Te 236hec.
- 33. Fang-Yuan 160hec.
- 34. Min-Xiong 244hec.
- 35. Lin-Kou Gong-Er 55hec.
- 36. Po-Zi 21hec.
- 37. Ping-Nan 276hec.





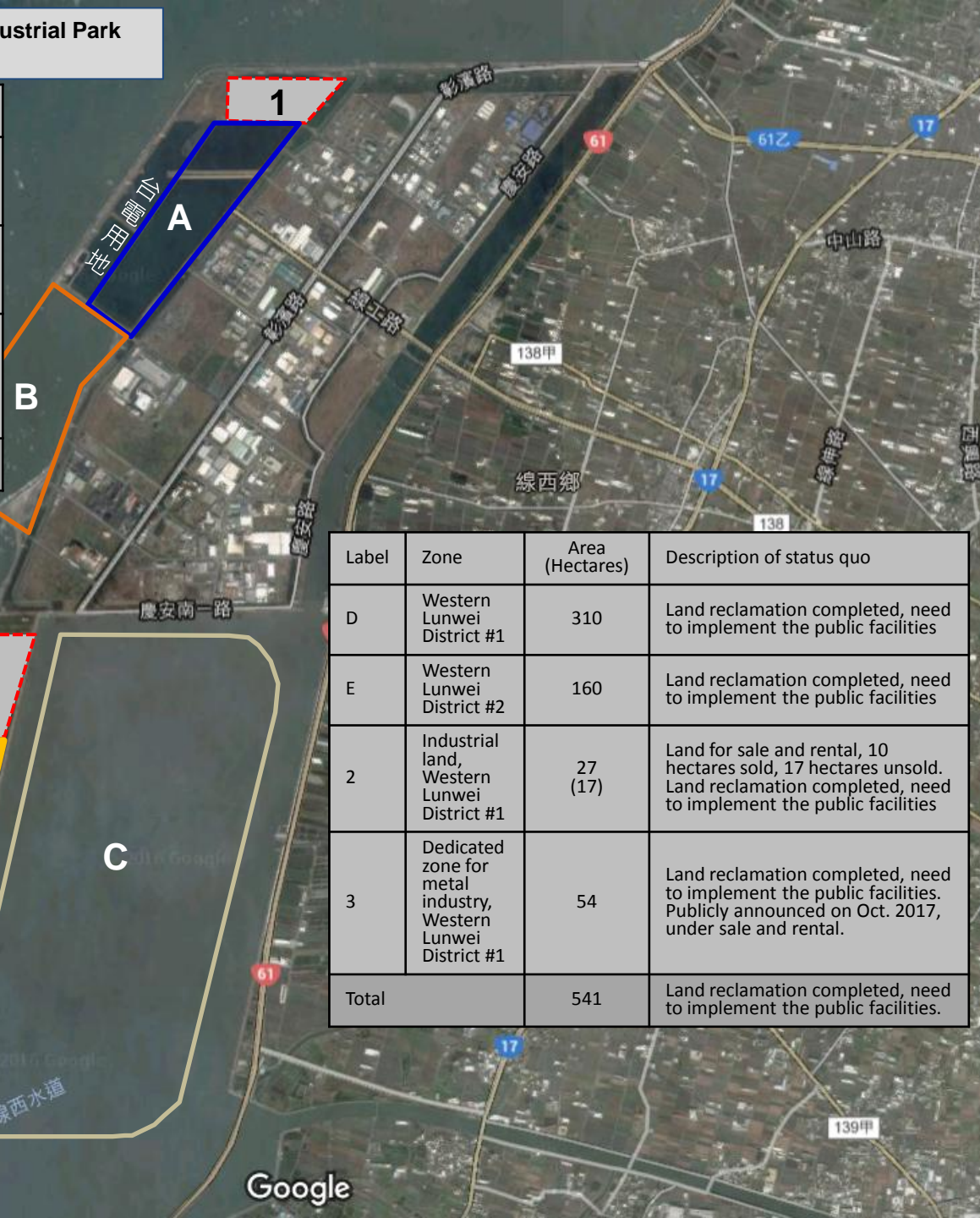
# 彰濱工業區(線西區崙尾區) Chung-Hua Coastal Industrial Park

“Zhang-Hua Coastal Industrial Park” is the large-scale town-making of industrial park for the first time domestically. Based on a solid traditional industry, it re-shapes the features of Taiwan, introducing emerging industry trends, to achieve a grand and vast new situation of sustainable development.



**Hsienhsi District, Lunwei District, Chung-Hua Coastal Industrial Park  
- 1,310 hectares of land for sale**

Label	Zone	Area (Hectares)	Description of status quo
A	Western Hsienhsi District #3	64	Beach land with border dike, embankment completed, need to fill the earth and implement the public facilities
B	Western Hsienhsi District #3	105	Beach land without border dike, need to construct the seawalls, reclamation, and public facilities
C	Eastern Lunwei District	600	Beach land without border dike, need to construct the seawalls, reclamation, and public facilities. Publicly announced for rental on 30 Nov. 2017, Renewable Energy Zone (solar power is preferred)
Total		769	Beach land with/without border dike



Label	Zone	Area (Hectares)	Description of status quo
D	Western Lunwei District #1	310	Land reclamation completed, need to implement the public facilities
E	Western Lunwei District #2	160	Land reclamation completed, need to implement the public facilities
2	Industrial land, Western Lunwei District #1	27 (17)	Land for sale and rental, 10 hectares sold, 17 hectares unsold. Land reclamation completed, need to implement the public facilities
3	Dedicated zone for metal industry, Western Lunwei District #1	54	Land reclamation completed, need to implement the public facilities. Publicly announced on Oct. 2017, under sale and rental.
Total		541	Land reclamation completed, need to implement the public facilities.

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## Intelligent Management

### Brief Introduction to Management Services

## BIM(Building Information Modeling)

Overall introduction of Building Information Modeling, to employ BIM for the planning and design stage, construction stage, and operation management stage of the construction projects to avoid the wrong design, reduce the changes of design and shorten the planning and construction processes.

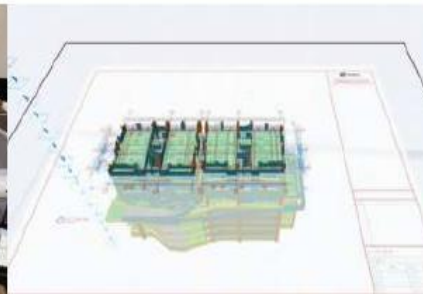


Simulation of steel hoisting and installation

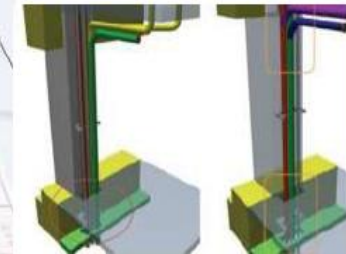
Auxiliary mobile devices



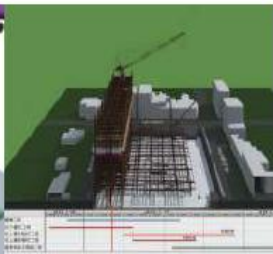
BIM management team



3D-output drawings



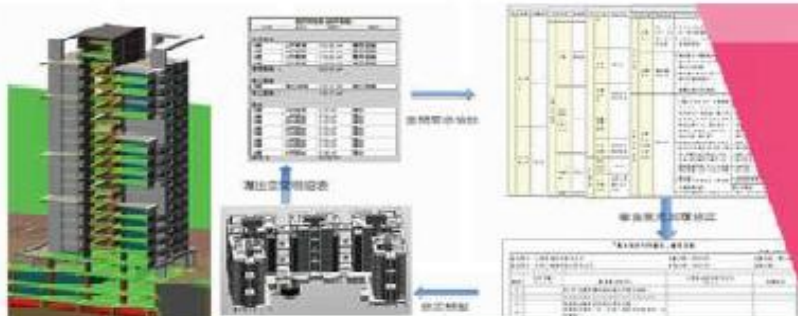
Optimization of pipeline configuration



Simulation of sequencing and scheduling



# The Database Applications for Various Stages



## Review at the basic design stage

- Integration of the model establishment of the basic design stage, design coordination.
- Examination of space requirements, induction of space details.
- Revision of the model according to the comments of review.

## Review at the detail design stage

- Development of architectural and structural models at the detail design stage.
- Review and revision of MEP collision, to review and revise the relevant paths.
- Clearing and clarification of construction drawings.



## Computer-aided Checking and Verification System for Building Construction Permit



Creating the first exemplification in the country from acquiring the building construction permit using ArchiCAD BIM model



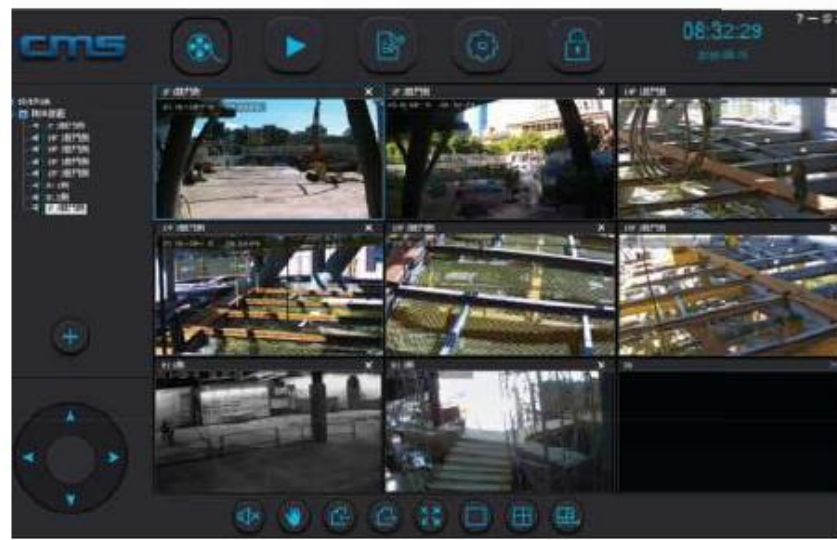
# Real Time Video Management Center - Intelligent Real Time and Management Control System

Real-time management and control of the construction sites, through the auxiliary of the video system, effective confirmation of the real time control of the construction control points, safety & hygiene, and quality management.

To start using the "Real Time Video Management Center" ahead of the industry. The company always on the way supervises the operation status of the construction sites, through the video system to assist the construction and safety & hygiene management, and at the same time to confirm the quality and progress to achieve the site overall check and examination.



Real time live stream on the construction site



Monitoring screens

The intelligent construction management system, through the handheld devices connecting the internet, at any time to assist the construction and safety & hygiene management, real-time connection, real-time response, and real-time confirmation, as if visiting at the scene.



## Public Construction

According to the public construction budget report for the fiscal year of 2018, the estimated budget will reach NT\$ 238.9 billion for infrastructure construction project, reaching a 7 year high.

BES continues to participate in Taiwan infrastructure construction, moreover, actively seek opportunities of Joint Venture construction project overseas.



# New Construction Business

**Tao-Zhu Yin Yuan**  
Green-building & Carbon-absorbed Art Housing.

- The main structures were completed on Nov.2016
- Apply for Building Use Permit in The first quarter of 2018.

**Tucheng Industrial Park**

- Product Positioning Strategies & Architectural Design Planning are in progress
- The case is still under administrative processing by Urban Redevelopment Office of New Taipei City Government

**The Minsheng Community Urban Renewal Project**

- Building demolition work will complete by the third quarter of 2016
- Presale begun on Oct.2016



## Industrial Park Development

- Hsienhsi District of Changhua Coastal Park has been announced for lease/sale, and the investment solicitation process got started in the beginning of 2017, and at present the development works are under construction.

- In line with the regulations of the illegal agricultural land banning and developing the renewable energy industry (solar photovoltaic and wind power industry), the planning of the metal surface treatment area in Western Lunwei District and the renewable energy land in Eastern Lunwei District have been implemented. We will carry out investment solicitation activities soon.





# THANK YOU

# Q&A

