



Taiwan ICT Outlook and Cooperation Opportunities

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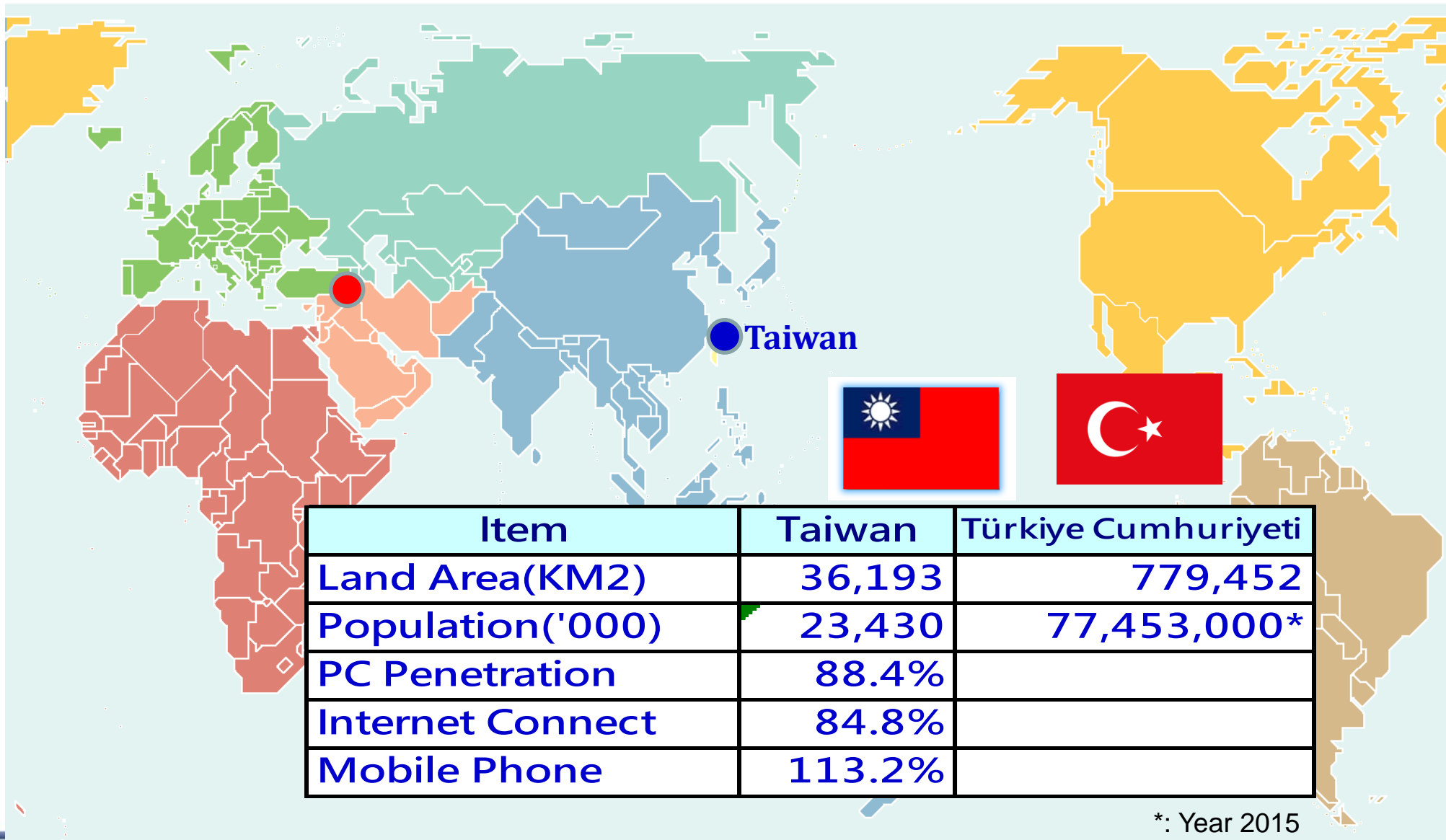
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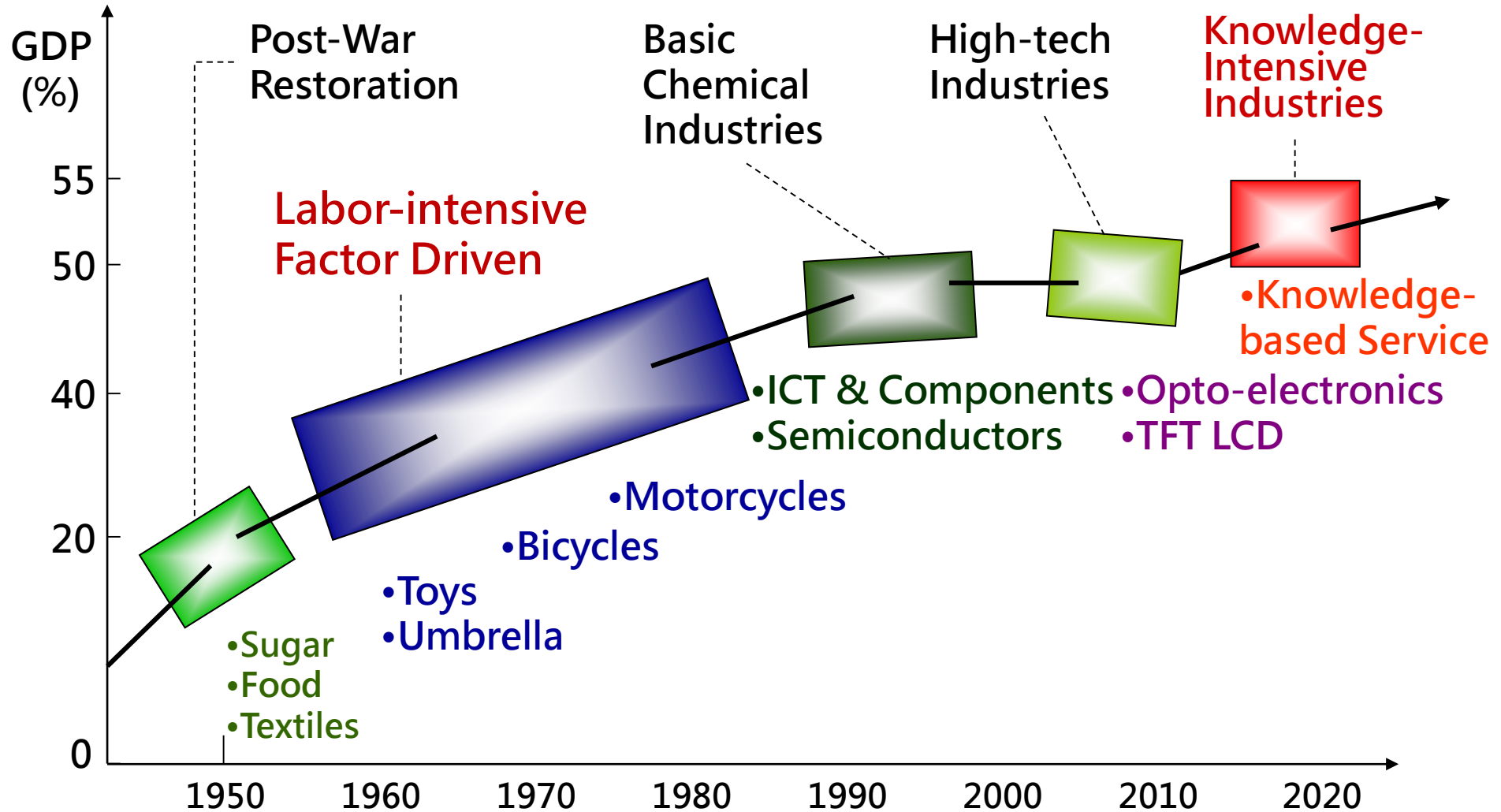
Taiwan Profile



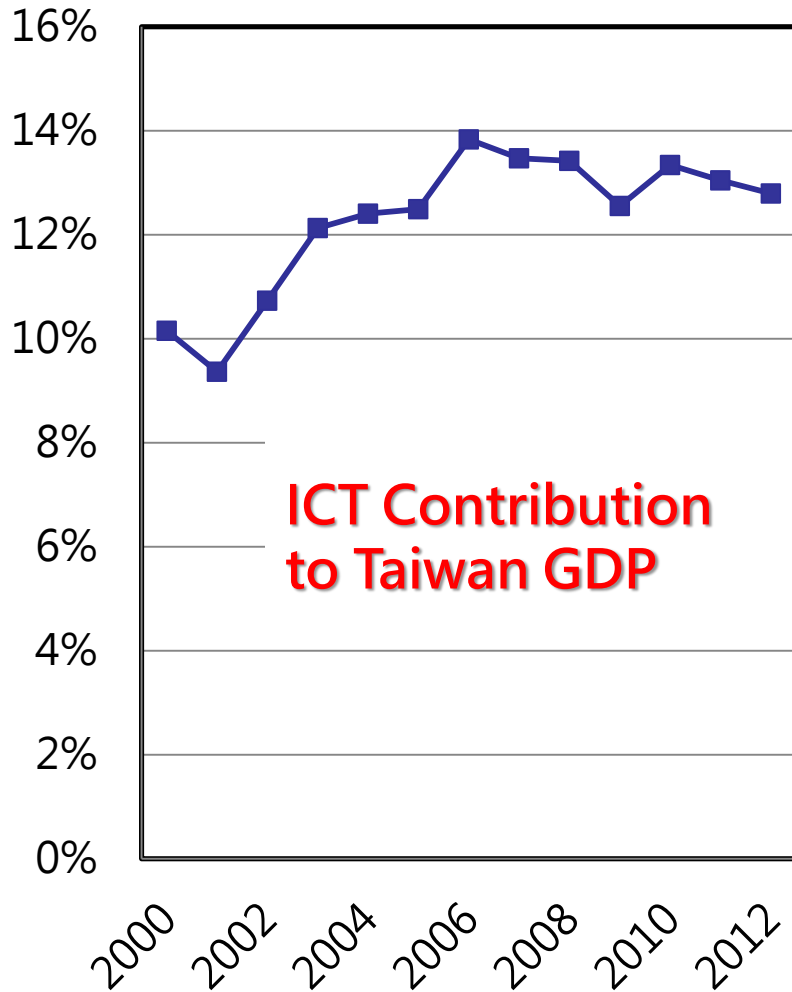


2 Taiwan's ICT Hard Power

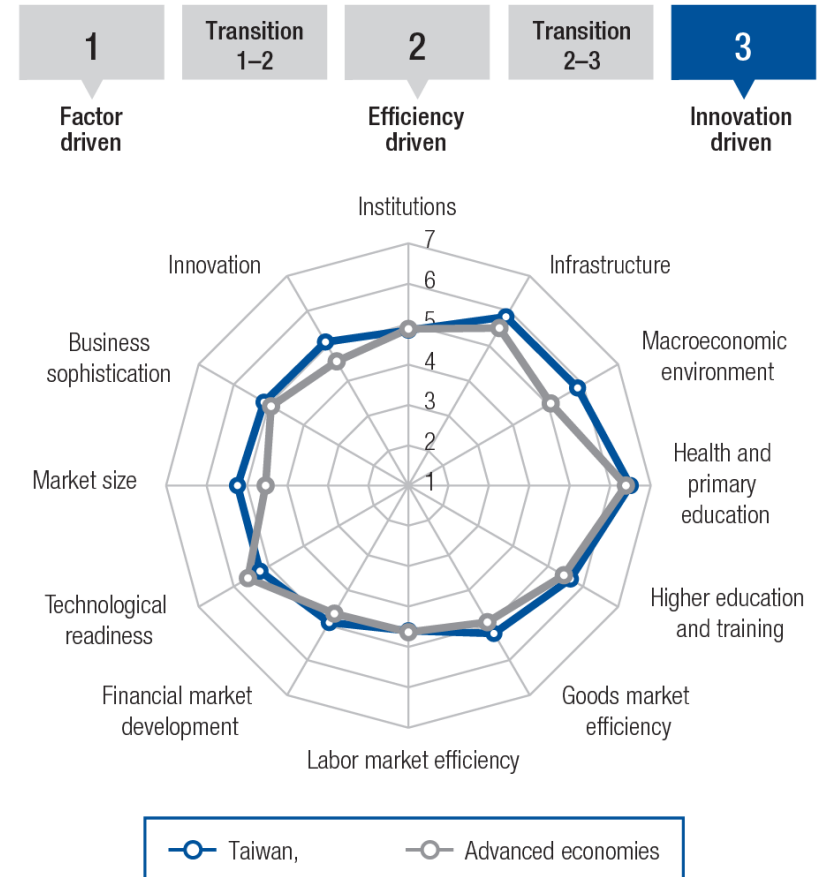
Taiwan Industry Development History



Taiwan's Global Competitiveness



Stage of development



Source: The Global Competitiveness Report 2014-2015, WEF

Taiwan is in the stage of “innovation driven”. However, we still strive for breakthrough innovation and industry transformation!

Taiwan Inside® - Partnering with the world

The speed of Taiwan ICT production...








- ❖ Every 0.35 second produce a Notebook Computer
- ❖ Every 0.68 second produce a Desktop Computer
- ❖ Every 0.21 second produce a Motherboard
- ❖ Every 10.7 second produce a Server
- ❖ Every 3.70 second produce a CDT Monitor
- ❖ Every 0.27 second produce a LCD Monitor
- ❖ Every 0.36 second produce a Optical Disk Drive
- ❖ Every 0.63 second produce a Digital Still Camera
- ❖ Every 0.20 second produce a WLAN
- ❖ Every 0.28 second produce a Mobile Phone
- ❖ Every 8.54 second produce a PDA



85% of PCs installed in the world with Windows® OS are produced by Taiwanese IT companies and about **80% of worldwide data communications equipment** is produced by Taiwanese networking communications equipment companies. **“Taiwan Inside®”** would probably be the most suitable description of Taiwan’s vitality and its position in the worldwide ICT Industry.

Source: MIC/III, April 2014

Information Society Rank

Evaluated By		Ranking Index						
	WEF	2015 Networked Readiness	18	10	12	1	14	62
	EIU	2010 Digital Economy	12	16	13	8	7	56
		2011 Benchmarking IT Industry Competitiveness	13	16	19	3	19	38
	World Bank	2012 Knowledge Economy Index	12	22	29	23	18	83
BROOKINGS Brookings Institution		2015 Global E-Government	2	37	1	4	24	67
	Japan Waseda U.	2015 e-Government	17	6	5	1	24	49

•Source: As above, Compiled by FIND, III

IMD World Competitiveness

Rank	2010	2011	2012	2013	2014	2015
1	Singapore	Hong Kong, US	Hong Kong	US	US	US
2	Hong Kong		US	Switzerland	Switzerland	Hong Kong
3	US	Singapore	Switzerland	Hong Kong	Singapore	Singapore
4	Switzerland	Sweden	Singapore	Sweden	Hong Kong	Switzerland
5	Australia	Switzerland	Sweden	Singapore	Sweden	Canada
6	Sweden	Taiwan	Canada	Norway	Germany	Luxembourg
7	Canada	Canada	Taiwan	Canada	Canada	Norway
8	Taiwan	Qatar	Norway	UAE	UAE	Denmark
9	Norway	Australia	Germany	Germany	Denmark	Sweden
10	Malaysia	Germany	Qatar	Qatar	Norway	Germany
11	Luxembourg	Luxembourg	Netherlands	Taiwan	Luxembourg	Taiwan
12	Netherlands	Denmark	Luxembourg	Denmark	Malaysia	UAE
13	Denmark	Norway	Denmark	Luxembourg	Taiwan	Qatar
14	Australia	Netherlands	Malaysia	Netherlands	Netherlands	Malaysia
15	Qatar	Finland	Australia	Malaysia	Ireland	Netherlands
Korea			22	22	26	25
Japan			27	24	21	27

WEF Competitiveness Rankings (2014-2015)

Countries	WW	AP	Countries	WW	AP
Switzerland	1		New Zealand	17	5
Singapore	2	1	Belgium	18	
United States	3		Luxembourg	19	
Finland	4		Malaysia	20	6
Germany	5		Austria	21	
Japan	6	2	Australia	22	7
Hong Kong SAR	7	3	France	23	
Netherlands	8		Saudi Arabia	24	
United Kingdom	9		Ireland	25	
Sweden	10		Korea, Rep.	26	8
Norway	11		Israel	27	
United Arab Emirates	12		China	28	9
Denmark	13		Estonia	29	
Taiwan	14	4	Iceland	30	
Canada	15		Thailand	31	10
Qatar	16		Puerto Rico	32	

WEF Competitiveness Rankings⁽²⁰¹⁴⁻²⁰¹⁵⁾

Innovation Top 10 in WW 144 Economies	
Finland	1
Switzerland	2
Israel	3
Japan	4
United States	5
Germany	6
Sweden	7
Netherlands	8
Singapore	9
Taiwan	10

In short, Taiwan is . . .

**Friendly IT
Environment**

- ◆ **# 1 Free Wi-Fi networks**
2014 UK Telegraph: World's most connected cities

**Industrial
Chain of HW-
SW Integration**

- ◆ **# 1 State of cluster development**
2012-2013 WEF Global competitiveness Report

**High-Tech
Economy**

- ◆ **# 1 High-tech exports**
2013 IMD World Competitiveness Yearbook
- ◆ **51 innovation centers in Taiwan**
(Google, Intel, HP, DELL, SONY, MS, IBM)



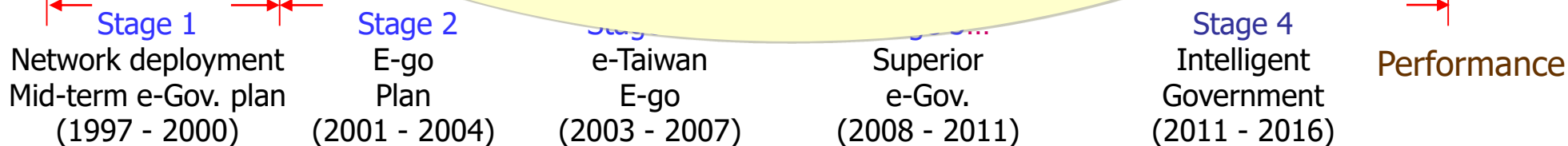
Taiwan's ICT Soft Power

Now, ICT has empowered many sectors in Taiwan

ICT has changed the way...

Government Provides its Services

- Offer **4,000** online services for gov't efficiency
 - **64.7%** tax payers filed Income Tax online
 - **97.8%** business entities pay Sales Tax online
- Implement **GPKI** and information security services to ensure a secure environment for gov't transactions
- Rank **top 5** from 2001~2008 (**Top 1** for 3 yrs) in Global e-Gov't Study by Brown University



Open 12,200 Data Sets to Create Value

Government Open Data is a major infrastructure of an information society. The objective of Open Data is better governance, service innovation and driving digital economy.

Data → Value



12,200 data sets have been opened for value added applications such as ETC, weather rain,...etc.

Source: National Development Council, 2015

Taiwan Open Data No.#1 in the World in 2015

Taiwan's Open Data Index was ranked NO.1(out of 122 nations/regions) by Open Knowledge Foundation in 2015.
(Taiwan was ranked No. 11 in 2014)



Prime Minister Simon Chang spoke in the Asia Pacific Open Data Summit

The measurements include:

1. Government Budget, Government Spending
2. Election Results
3. Company Registration
4. National Map,
5. National Statistics
6. Legislation,
7. Postcodes/zip codes
8. Location datasets,
9. Pollutant Emissions,
10. Procurement tenders,
11. Weather forecast,
12. Water Quality
13. Land Ownership
14. Health performance

Source: Open Knowledge Foundation,
National Development Council, 2015

City Governments Smarter

7 cities out of all
20 cities in Taiwan are
recognized as
**International Smart
Cities** by ICF.



**Intelligent
Community
of the Year**



Taichung (2013)



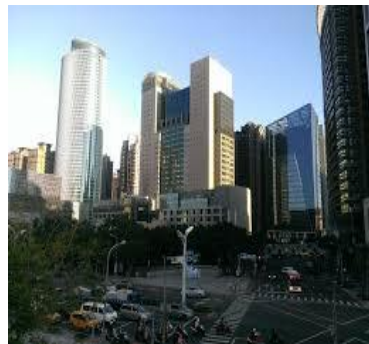
Taipei (2006)



**Intelligent
Communities
of the Year**



Hsinchu
(2014)



New Taipei
(2014)



Taichung
(2013,2012)



Taoyuan (2013) Taipei (2006,2004)



ICF 5 indicators : Broadband connectivity,
Knowledge workforce, Innovation, Digital
inclusion, Marketing and Advocacy

Source : ICF

Taiwanese's Life Style

Easy Card makes lives easier



ezfly 易飛網
www.ezfly.com

- Gov. service (i-bone)
- Buy Taiwan High-speed Rail Tickets or booking on **Internet**



Citizen Digital Certificate for e-filing income tax



PChome **24h** 購物

Online shopping
Pay by **credit cards** or **Web ATM**

• **e-Service everywhere**
• **e-life Style**



See a doctor
By **Health Card**

3 Possible Areas of Cooperation

Opportunity

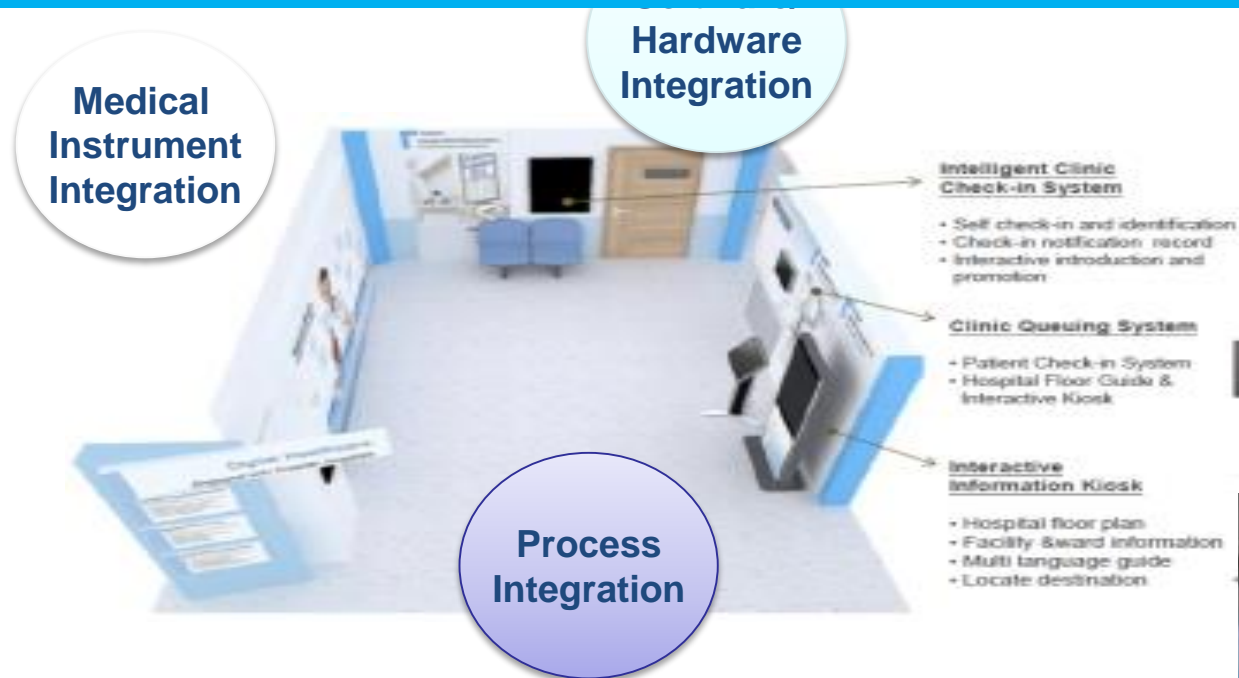
for Taiwan and Turkey

Healthcare

- **We care! All care!**
- **Big market in Turkey & Middle East, Europe.**
- **Can be combined with tourism sector**
- **Increasing trend for wearable devices that can be designed jointly by Taiwan ICT companies and Turkey companies.**



Integrated Hospital's services



Integration of HIS, EMR, and PACS

https://www.youtube.com/watch?v=LlafbX_JXHE&authuser=0

Benefits:

- No need to re-do the check ups in different hospitals
- Reduce the chance of error, staff will be able to provide better care for patients, thereby improving the overall service quality.

Smart Manufactures

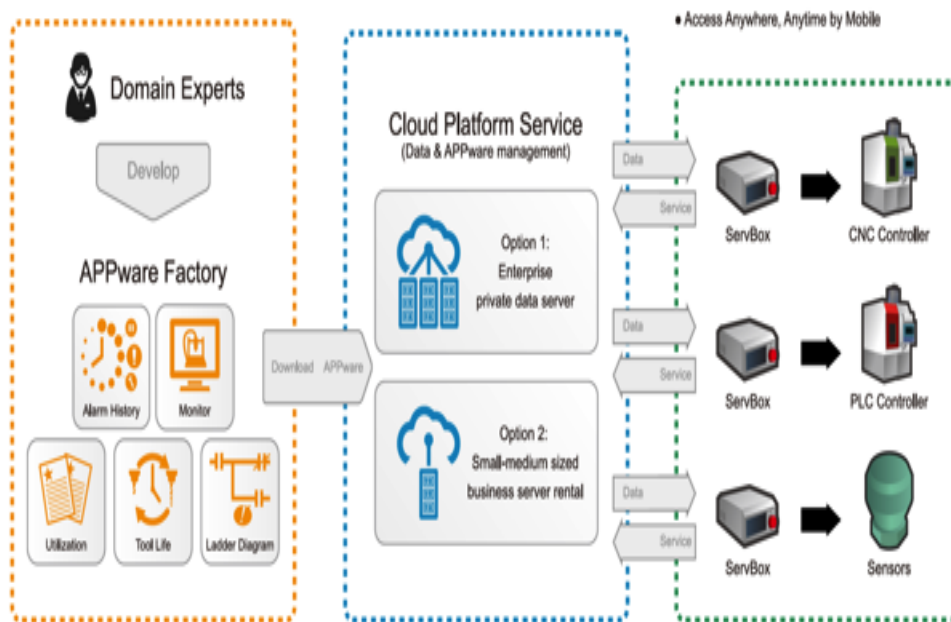
Example: ANKO Food Processing Machine Co. Ltd.

- Knowing the machine operation around the world
- Have domain experts' knowledge to operate every machine in many countries
- ICT of manufacture 4.0 is heavily adopted
 - Cloud
 - Big data
 - Internet marketing based on the data around the world
 - Help clients to understand more about their clients



Smart Manufactures

By Ser-volution, a solution dedicated for machinery sectors



- Provides flexibility and info transparency in production process

- Integrate machine tools: **kiosk, interactive element, application and platform info structure**

- 80% and above compatibility with CNC controller, PLC, sensor.

**2014 Intel Global Challenge
Entrepreneurship Initiative Award- Ser-volution
“ServTech”(Ill spin-off)**



Smart Bus, Satisfied Passengers



Trace the bus, and display bus schedule

Bus Stop Information

Smart bus display board



Wi-Fi in Bus



Source: IHI Alliance Partner - Chunghwa System Integration

Real Time Video Monitoring

- Provide GUI to monitor traffic status
 - Real time monitoring the results of vehicle detector, signal controllers, and CCTV



Remote control CCTV

Multi-CCTV display

Traffic Control Center

Total Visitors : 317343

The screenshot displays the Traffic Control Center interface. At the top, there are tabs for **CCTV**, **CMS**, **VD**, **MOE**, **EVENT**, and **Clear Marker**. The **CCTV** tab is selected. On the left, a sidebar menu contains buttons for **RealTime Event**, **CCTV**, **CMS**, **VD**, **Route Planning**, **Road Speed**, **Guidance**, **Contact Information**, **Duties**, and **Links**. Below the **Road Speed** button is an **illustration** legend with three categories: **smooth** (green), **busy** (orange), and **jammed** (red), with a grey box for **no data**. The main area shows a map of Taipei with various road segments color-coded according to the legend. Numerous **CMS** icons are placed on the map. A purple callout bubble points to the **CCTV** tab with the text: **Click on tab to display CCTV / CMS / Traffic Signal / Traffic Event**. A green callout bubble points to a **CMS** icon with the text: **Click on CMS to modify display message**. A blue callout bubble points to a **CCTV** icon with the text: **Click on CCTV to see real-time road video stream**. A pop-up window for a specific CMS icon displays the following information: **編號: XLPN840**, **點閱數: 52**, **位置: 敦化長春往南[向南]**, and **125日06至0830時仁愛路交管、享**. On the right side, there is a real-time video stream showing a road view, with a **點閱數: 2545** and a **時間: 2016/08/01 19:09:08** displayed above it. The top right corner features language options for **中文** and **English**, along with the **TAIPEI** logo.

Smart Agriculture



External View



Semi-closed Factory



Closed Factory



Flower



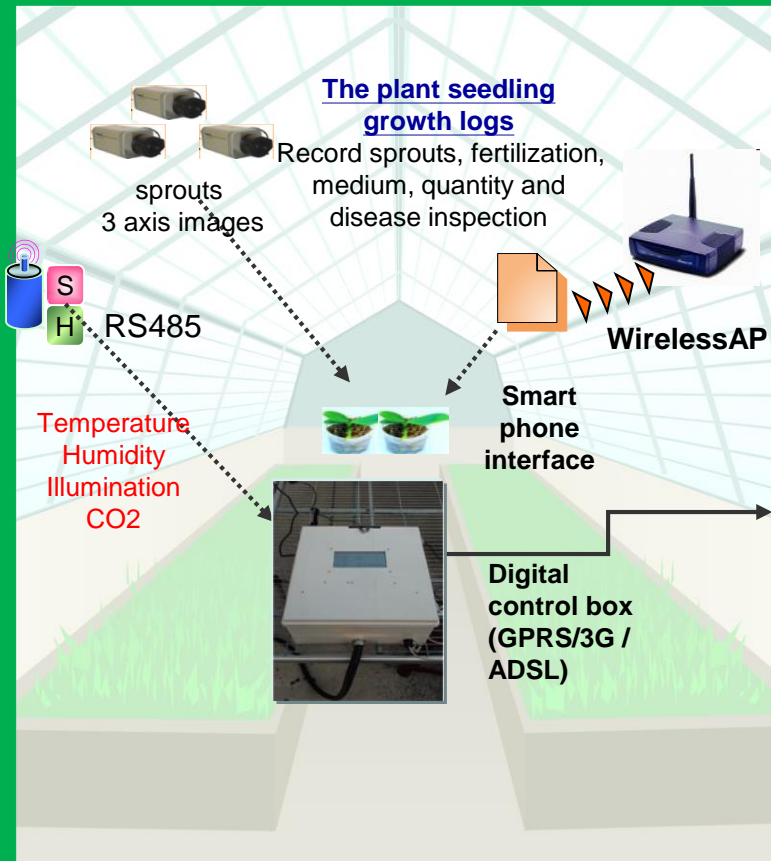
Orchid



Honeydew Melon

Smart Agriculture

Greenhouse operating environment



- e-Applications to improve efficiencies and productivity in Agriculture
- Features and benefits
 - Automatic measurement
 - Crop cultivation knowledge base
 - Automatic detection of crop pests and diseases
 - Remote greenhouse environment monitoring
 - To increase survival rate



And More...

- Smart library
- Smart campus
- Smart tourism
- Smart energy
- Cloud Computing
- Internet Of Things
- Wearable devices
- Big data applications

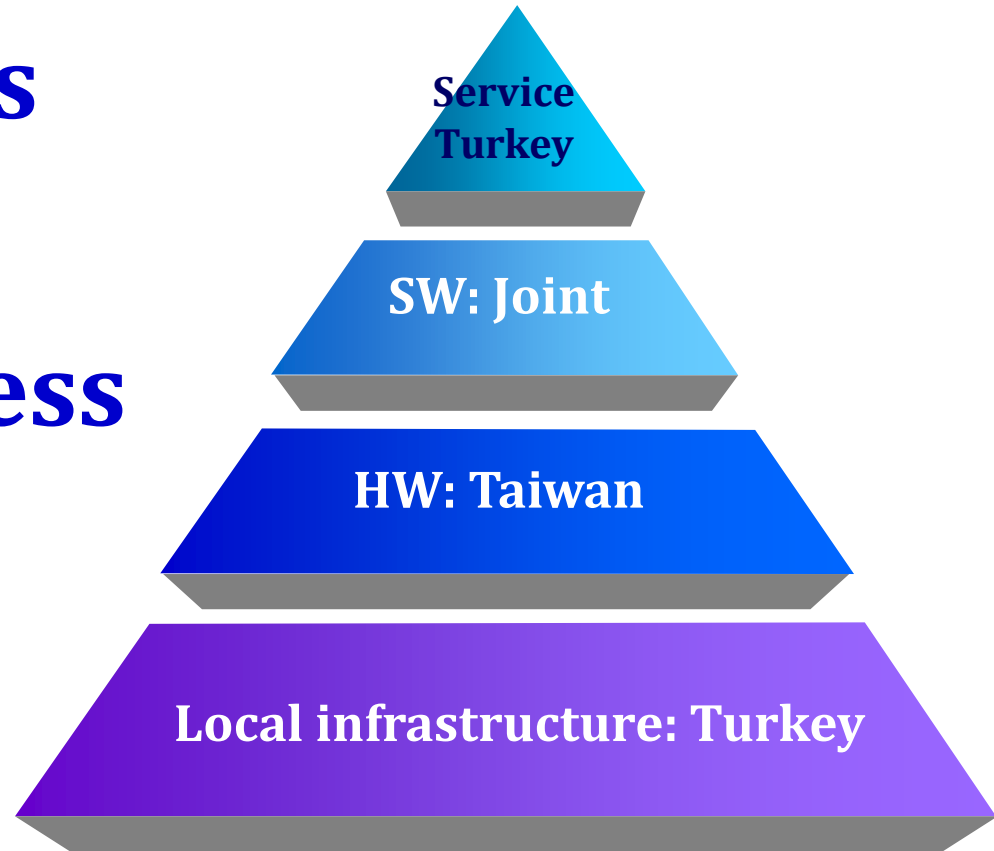




4

Why Taiwan is your strategic partner?

- **Total solutions**
- **Friendship**
- **Trustworthiness**



To The Future

It would be a platform to facilitate the ICT cooperation between Turkey and Taiwan to create win-win!

Choose trustworthy Taiwan,

You are smarter!

