SME informatization in collaboration with large enterprises
--The experience in Chinese Taipei

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Outline

- The general picture of Informatization
- The e-business strategy for industry
- The introduction of Plan ABCDE
- The unsolved issues & Supplement Solution for SMEs informatization
- Linking SMEs to Supply Chain--The introduction of SMEs connect to supply chain plan
- The Vision of the e-Society in Chinese Taipei
- Concluding Remarks
The general picture of informatization
The internet application for enterprises, Chinese Taipei

Base: internet connected enterprises
Source: ACI-FIND (2003/10)
The e-business activities of internet connected enterprises, Chinese Taipei

Base: internet connected enterprises
Source: ACI-FIND (2003/10)
The e-business strategy for industry
The e-Business Policy Guidance

Establish e-Taiwan
Compete global knowledge economy

Major Work

Content and Network Economy

Build whole environment

Internet connected rate

e-Society

- Research and survey relative application index.
- Raise the quality of digital content.
- Push the circulate of digital content, and the development of relative industries.

e-Society project major work

- Push enterprises and communities to use internet, and achieve 6 million people to use internet in 2007.
- Cultivate the talent people to analyze the development of internet industry, to assist the development of domestic internet industry.

e-Gov

- Government service online
- Government procurement online

e-Business

- Plan ABCDE
- Establish relative standards for EB supply chain management.
- The relative environment: the research and planning of EB policy, EB new technology, business model, legislation

Internet Commerce Project

NII Legislation Building Project

Increase internet popularity
Enhance infrastructure

- Increase internet connected rate, to achieve 3 million people connecting to internet in 3 years.
- Establish network bandwidth

Promote Internet Commerce innovative application

1997~1999
1999~2001
2001
2002

Time

Source: ACI-FIND, Institute for information industry
The Vision of Industrial e-Business

The Vision:
By using e-business technology, push Taiwan to become a global high value added product manufacturing and service center.
## Industrial e-Business SWOT Analysis

<table>
<thead>
<tr>
<th>Strength</th>
<th>Opportunity</th>
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</table>
| • The structure of industries, which including SMEs, are complete and flexible.  
• The enterprises hold domain know how of make/assembly/OEM business model  
• Plan ABCDE have established industrial e-business pilot models and mechanism. | • The liberalization trend in trading and investment re-organize the global production & marketing structure.  
• E-business crossing the geographic/time segment, and providing global R&D/logistic/marketing/service channel, has lowered the international trading barrier.  
• The new business models which integrate the production and marketing by e-business are rising. |

<table>
<thead>
<tr>
<th>Weakness</th>
<th>Threat</th>
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</table>
| • Except production, we still need to enhance the field of branding/service and RD.  
• The IT service providers do not have enough skill and capacity to support industrial e-business solution.  
• Limited scale of domestic market. | • Our industries no longer own the superiority of production/assembly for low level products. There still exist the pressure of industries upgrade.  
• Industries emigrant, China absorbs lots of investment, the domestic production is decreasing.  
• New rising countries develop technical OEM and re-organize the structure of production and marketing also shrink the market share. |
The Development Schema of Industrial e-Business

Vision

Global high value added product mfg & service center

Goal

Hi-Tech/Rising Industries Global Logistic Center

To nurture the e-business basic ability in domestic traditional industries

To speed up the e-business development of service industry

To enhance our IT service providers industrial scale and international competence.

Strategy

Build the high efficient supply chain management network

Build the logistic and channel management network

Develop the business model of industrial knowledge service

Enhance the enterprises application ability of e-business

Complete the e-business infrastructure

Encourage the development of IT providers
The Roadmap of Industry e-Business

Influential Scope

All partners

Customers/Suppliers

Inter-Business Departments

Intra-Business

Current

Future

Enhance collaboration between Supply & Demand

Integrate functions among the current value chain

Partially Optimize

Data Exchange

Data Sharing

Collaboration

Interactive Model
The introduction of Plan ABCDE
The Situation

In 1999 ...

1. Incomplete e-Business infrastructure
2. Increasing international competitions to Taiwan’s manufacturing industry
3. Insufficient competence of domestic e-Business service providers
Vision

To build a highly efficient e-supply chain management network for establishing a Global logistics operation system
Global Logistics Supply Chain Structure

- **Overseas distributors / customers**
- **Taiwan distributors / customers**
- **Overseas Production Plant**
- **Domestic Production Plant**
- **Enterprise Headquarter**
- **e-Marketplace**
- **Supplier A**
- **Supplier B**
- **Logistic center**
- **Ordering**
- **Manufacturing**
- **Delivery**
- **Shipping**

(PDM) (SCM) (ERP) (GMS) (M/C)
Strategies

- Enhance Industry e-Business Infrastructure
- Reinforce Industry Electronic Supply Chain
- Strengthen e-Marketplace Industry Development
Objectives

BY 2002 ...

1. Promote at least 15 supply chain systems in IT industry
   • Encourage 2,500 small and medium-sized enterprises (SMEs) to establish B2B e-Business capabilities

2. Promote at least 25 supply chain systems in major manufacturing industries
   • Encourage 3,500 SMEs to establish B2B e-Business capabilities
Objectives

3. Increase internet usage of manufacturing industries from 32.3% to 50%

4. Increase e-procurement rate of manufacturing industries from 5% to 10%

5. Generate revenue value of Taiwan’s e-Marketplace industry up to NT$ 4 billion (US$120,000,000)
Methodology – Plan A and B

International buyers

IBM HP Compaq

Plan A

Automatic Quotation, Quality Management, Suppliers management collaboration

Domestic IT manufacturers

Mitac Acer Asus Tatung Invertec etc

15 enterprises

Plan B

Automatic Quotation, Quality Management, Suppliers management, payment

Domestic components suppliers

SMEs

Viatech Honhai Liteon HKK Yageo Wpi etc

1,800 enterprises

SMEs

Information software services enterprises

1,800 enterprises
Methodology – Plan C, D and E

Plan C:
- Shipment tracking
- Inventory management
- Transportation planning
- Cash flow

Plan D:
- Holin, Dimerco, Evergreen-marine, Yang Ming
- Delivery

Plan E:
- Engineering design
- Change management
- Design data sharing

Informational Technologies Sphere

SMEs Information software services enterprises

Delivery enterprises

Banks
- Shihhua
- Fubon
- Bochk
- ... etc

Information software services enterprises

Customers and partners
- Viatech
- Psc
- IPF
- Sunon
- AmTran
- ...
Achievements– Plan A, B, C, D, E

- Strengthening local small and medium businesses’ competitiveness in securing global orders.
  - Introducing the global supply chain protocol – the RosettaNet that links the local e-business environment to the global markets.
  - Establishing 15 central plants and streamlining a total of 1,800 medium and small businesses into the e-supply chain system to establish a long-term strategic partnership.
  - Improving order delivery rate by 45% to 93% to reduce inventory cost, shorten the time on processing order, and improve the overall competitiveness.
- Improving B2B e-commerce adoption to increase global presence
- Developing the information applications service industry and software service industry.
# Achievements— Plan A, B, C, D, E

<table>
<thead>
<tr>
<th>Index Task Items</th>
<th>Objectives</th>
<th>Reality</th>
<th>Achieved Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of IT supply chain system (Corporation Numbers)</td>
<td>15 systems (2,500)</td>
<td>18 systems (3,955)</td>
<td>120% (158%)</td>
</tr>
<tr>
<td>Other major manufacturing industries systems</td>
<td>25 systems (3,500)</td>
<td>30 systems (6,421)</td>
<td>120% (183%)</td>
</tr>
<tr>
<td>e-Marketplace production value</td>
<td>NT$ 4 billions</td>
<td>NT$ 6.5 billions</td>
<td>163%</td>
</tr>
<tr>
<td>Internet usage rate in overall manufacturing industry</td>
<td>50%</td>
<td>59.7%</td>
<td>119%</td>
</tr>
<tr>
<td>e-Procurement rate in overall manufacturing industry</td>
<td>10%</td>
<td>14.3%</td>
<td>143%</td>
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</table>
Unsolved issues & supplement solutions for SMEs informatization
Role of SMEs—Components suppliers to domestic IT Central manufacturers

SMEs: An enterprise employed less than 200 regular workers
The unsolved issues for SMEs e-business

SMEs:

• The interface is not consistent when connecting to each large enterprises.
• The operating process are not improved when implement e-business

• The internal MIS is not ready.
• SMEs are lack of e-business knowledge, and e-business capability.

IT Service Providers:

• Lack of industrial know-how, they can not be trusted by SMEs.
• Lack of cooperating partners, they can not provide integrating service to SMEs.
Supplement Solution for SMEs informatization

• From top-down, to enhance the competence of the whole industry supply chain, by using e-business.
  – The Plan ABCDE

• From bottom-up, to solve the SMEs’ problems and requirements, and to improve the SMEs informatizing capability.
  – Linking SMEs to Supply Chain
# The solutions to solve SME e-business issues

## SMEs:

- Government’s assist to SMEs to improve their e-business operating process.
- Assist SMEs to build internal e-business mechanism.
- Cultivate more people for e-business talent.
- Build the industry e-business common module schema (message hub center) to avoid one-to-many connection problems and speed up the e-business implementation.

## IT Service Providers:

- Assist IT service providers to apply common modules
- Link IT service providers to serve SMEs and satisfy SMEs’ requirements.
Linking SMEs to Supply Chain

-- The introduction of SMEs connect to supply chain plan
MOEA SMEs connect to Supply Chain Plan

Plan Vision

- Enhance the SMEs e-business ability
- Modeling the complete e-business supply chain

Vision

Large Ent.
Down Stream
SME
Middle Stream
Small Ent.
Upper Stream

E-Service

System Assembly MFG.

Tier 1
Tier 2
## Annual Goal

<table>
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<tr>
<th>Annual Goal</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>Promote the project, build mechanism of choosing industries, hold seminars, formulate industrial common modules</strong>&lt;br&gt;<strong>Assist IT service providers to apply common modules</strong>&lt;br&gt;<strong>Maintain industrial common modules</strong>&lt;br&gt;<strong>Enlarge the project achievements to other supply chains</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Apply supply chain e-business to SMEs</strong>&lt;br&gt;<strong>Apply supply chain e-business to SMEs</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Maintain industrial common modules</strong>&lt;br&gt;<strong>Assist tier2 enterprises connect to supply chain</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Quickly diffuse this model</strong></td>
<td></td>
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</tbody>
</table>

*2007*
Strategy

- Enhance SMEs e-business ability, Complete e-business supply chain
- Evaluate Products & message hub center
- Apply & Maintain Message Hub Center
- Promote Message Hub Center
Idea: To Build the Industrial Clustering Common Architecture (Message Hub Center)

- Aggregate relative parties and IT providers to build followings:
  1. Standardize the message transmitting / receiving system
  2. Formulate the transaction information transmitting form
  3. Connecting method with internal MIS as the communication basis between SMEs, and large enterprises.
- Also according to these common rules, the IT providers can save cost and reduce developing schedule when they develop new products for the specific industries supply chain.
Benefits

- Reduce the time lag for SMEs to implement e-business
- Enhance SME e-business ability, increase the benefits and efficiency of the supply chain
- Decrease the average inventory days 30%
- Reduce operating cost 50%
Vision of an e-Society in Chinese Taipei

To Motion Taiwan, To Apply Wireless, To Leap forward to New View

M-Taiwan

M-Service

M-Lifestyle

M-Learning

broadband backbone network deployment

Establishment of Roaming Center

M-Training

Integration of GPRS+WLAN
Concluding Remarks

I. Experience sharing

Chinese Taipei is glad to share its information industry development experience with APEC member economies.

II. Developmental education /training

It is suggested that APEC member economies to initiate an education/training program to promote the cooperation between large enterprises and small businesses across the Asia Pacific region.