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# Software Industry in Mongolia

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# Briefly about Mongolia

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- Nomadic people who lived in steppes from ancient time
- Today`s Mongolia- World`s Top level Democratic Country
- Mongolian people are very talented in natural sciences
- IT Profession is very popular



# Results of International Mathematics Olympics

<b>Asian Top 10 countries</b>			
<b>( 1 9 9 5 - 2 0 0 4 )</b>			
<b>Asia</b>	<b>World</b>	<b>Country</b>	
1	2	China	
2	6	Vietnam	
3	7	Korea	
4	11	Taiwan	
5	12	Japan	
6	12	India	
7	26	Hongkong	
8	31	Singapore	
9	33	Mongolia	
10	35	Thailand	
11		<b>Central Asian countries</b>	
	73	ShriLanka	



# Software Industry: Brief Overview in Mongolia

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- Number of SW companies - 60
- Number of programmers - 1000
- Universities preparing IT specialists - 20
- Students for IT related profession-7000
- Number of graduates annually - 450



# Domestic Major Software products

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- ERP Software
  - Accounting packages, University Management systems and etc.
- Banking Systems
- State Customs System
- Civil Registration System
- Insurance Company System
- e-commerce
- Game software
- etc.



# Technology

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- **Microsoft Technology**
- **Java technology**
  - J2SE (Core/Desktop)
  - J2EE Enterprise/Server)
  - J2ME (Mobile/Wireless)
  - Java Web Services
  - Other Java Technologies
- **Windows Programming**
  - -Delphi, Visual Basic
  - -Visual C++, Visual C
- **Database technology**
  - -Oracle
  - -Microsoft SQL
  - -MySQL Internet programming
  - - php, jsp, asp
- **Web programming**
  - -Flash -HTML, DHTML, CSS -Javascript , XML
- **Platforms**
  - -Windows
  - -Linux
  - -FreeBSD



# Recent Developments in ICT sector

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- National IT Park established
- ICT Authority established
- e-Mongolia Program: Asian top 10 by 2012
- e-Government Master Plan draft
- Software Outsourcing Business is starting
- Encouragement mechanisms made by Government (VAT exemption for SW companies and HW)
- IT profession is becoming more attractive

Software Outsourcing Business  
Value



Japan, Switzerland, USA,  
Canada, Korea

IT Consulting

Software Development

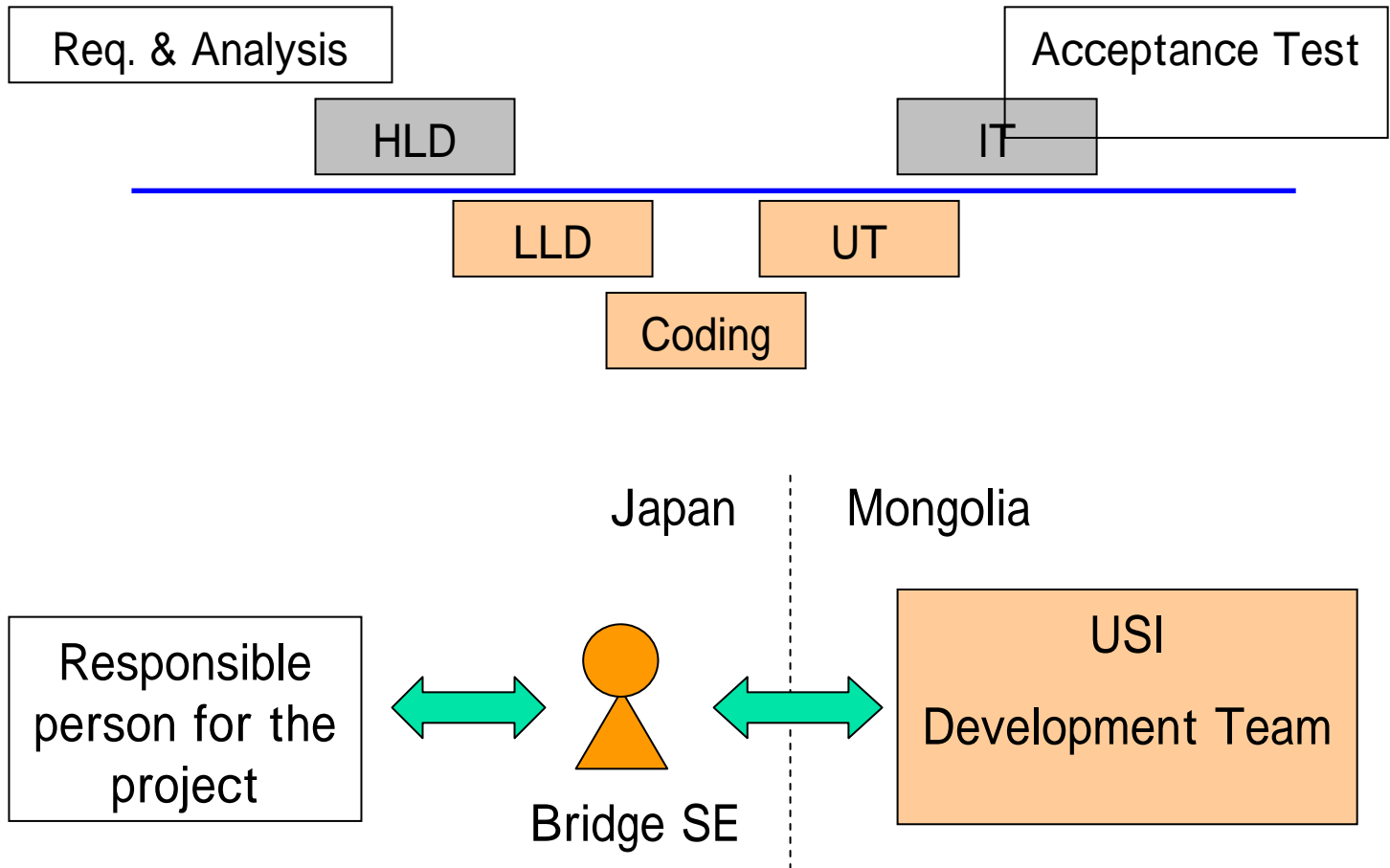
Call Center, Customer  
Service Centers, etc

Data Entry &  
Data Processing

A few companies  
with Japanese Market



# Our experiences in Outsourcing





# Our experiences in Outsourcing

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- Technological skill is sufficient
- Lack of a proper Process Management and Project Management
- Cultural Barrier



# Resources we have:

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- Natural science background
- Language ability
- Open minded harmonizing ability with other cultures
- Good technological resource
- Learning Ability
- Good Team Play skill



# Future imagination of the Industry

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- 10,000 engineers
- 200 software companies
- Annual Revenue at least 100,000,000 US\$



# Strategy SW outsourcing

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Quality

We have limited but high quality human resource.

Japanese market

Japanese Language is most similar language to the Mongolian.  
Good relationship with Japan.  
Cultural advantage.



# ■ The Principle of Learning by doing:

Gain the knowledge through direct experience.

Improvement on Language, management and marketing skills, and cultural knowledge.

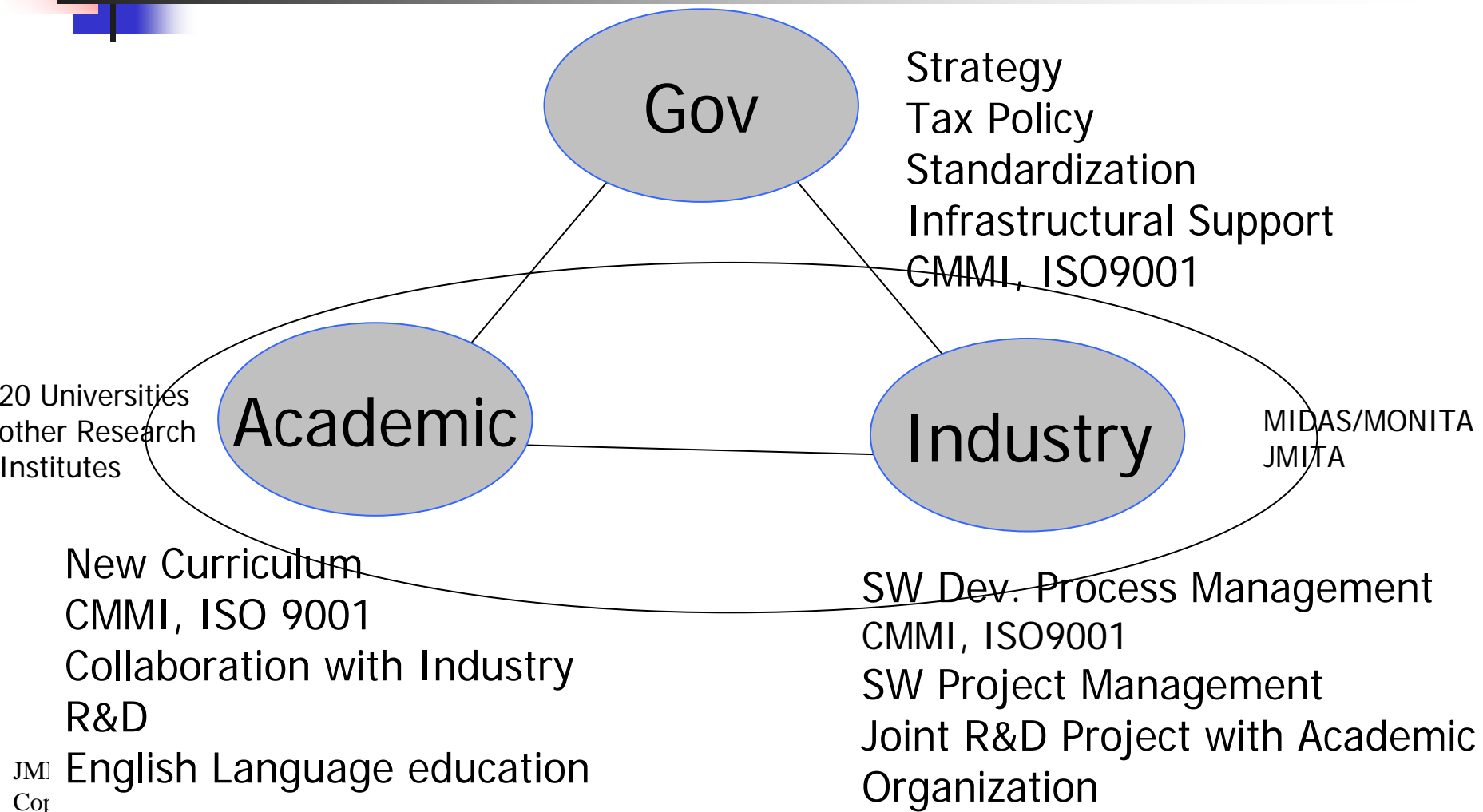


# What to do?

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- **Well determined Government Policy**
  - Regulatory encouragement
  - Master Plan for SW Outsourcing
  - Increase capacity of the Industry
  - Support for Human Resource Development
  - Support for Company Development
- **Improve educational quality**
  - Collaboration of academic and industrial organizations
  - Productive training
- Research and development
- **Improve companies' professional level**
- Company cooperation
- Individual Skill

# What to do?







# Movements towards IT Engineers Examination

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- Aug 2002, Bilateral Conference on IT cooperation, hosted by CICC
- January 2003, IT sector`s representatives visited to Japan and studied the Examination
- Sep 2004, CICC on-site training on FE was held in Ulaanbaatar
- Sep 2005, AOTS on-site training projects were held for FE and FEIT courses



# AOTS Training Projects on FE and FEIT courses

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- 30 people attended for FE course
- 15 people attended for FEIT course
- 100 % + 1 graduation
- Average achievement for morning exam - 48%
- Average achievement for afternoon exam - 68%



# IT Engineers Examination

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- Working group established by ICTA`s Chairman`s Resolution for the localization of IT Engineers Examination.
- The Working group is planning to implement its goal within 1 year.

# Cooperation with Japan and other countries



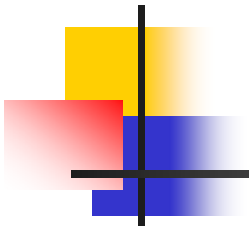
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- G to G cooperation
- Cooperation on Education
- B to B cooperation
- Dispatch Engineers (based on agreement)
- Direct Investment
- Experience sharing with other ITEE localized countries
- Continuation of the training programs (demand is high)
- Translation of training textbooks into Mongolian (copyright issues)



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Thank you for attention



The end  
is the beginning