

Mongolian ICT Policy demand towards Technology Transfer and Commercialization

Session 5:

- Technology commercialization practices and technology collaboration demand

October 2015, Daejeon, Korea

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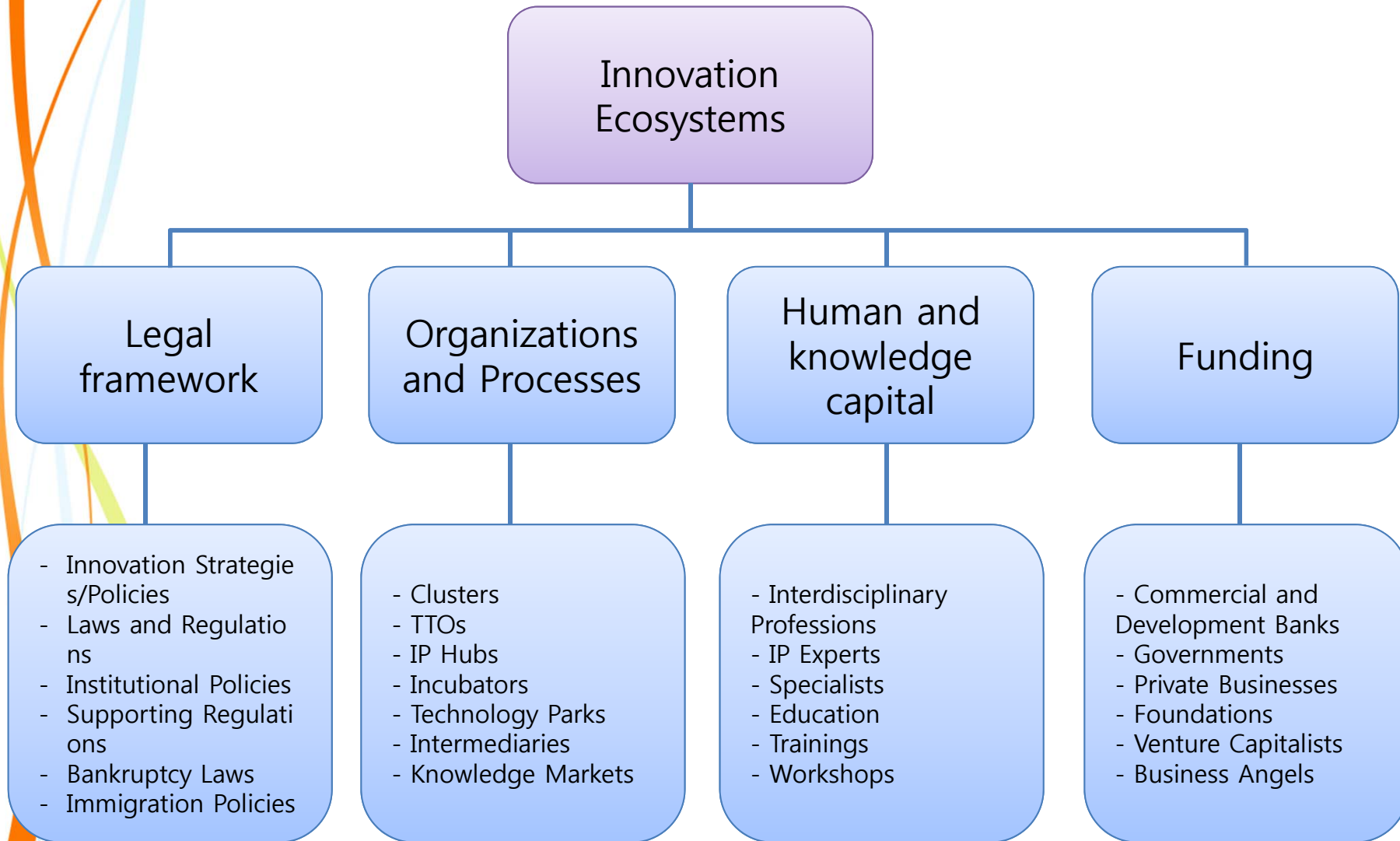


1) Global policy trend

Technology transfer and commercialization trend globally:

- **Technology transfer and licensing;**
- **Intellectual property and strategies for development;**
- **Small and medium-sized enterprises**
 - Commercializing IP;
 - Valuation of IP assets;
- **University-Industry (U-I) collaborations;**
- **Innovation;**
- **Higher investment in R&D.**

Global policy trend (2)



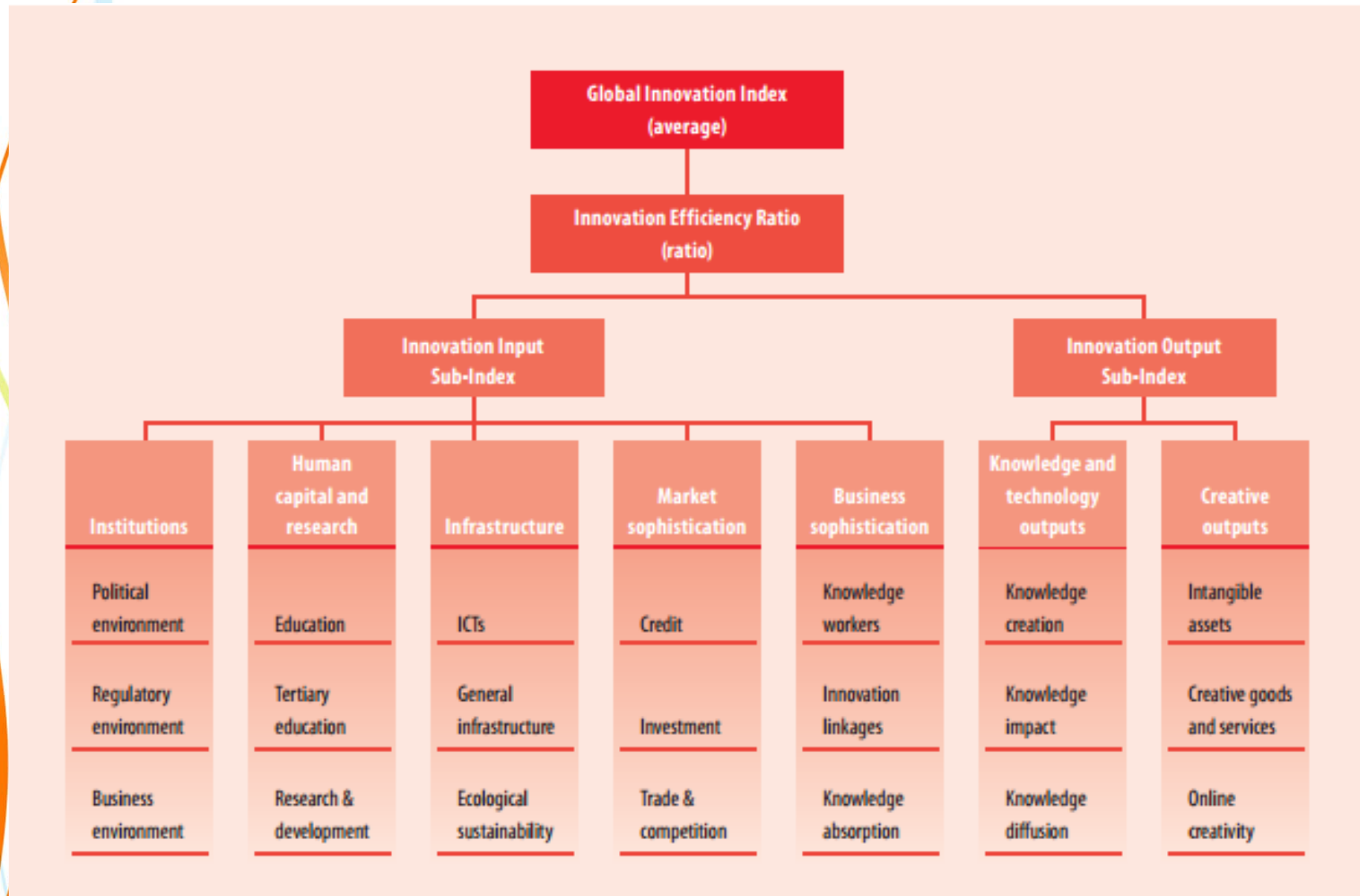
Source: WIPO

Global policy trend (3)

- A Global Measurement Tool
- To move beyond simplistic metrics of innovation (R&D);
- Measuring Innovation as a Process in Time – Potentially Useful Tool for Definition of Innovation Strategies;
- 142 Countries Benchmarked
- 84 Selected Innovation Indicators - basic framework for innovation eco-system.



Global policy trend (4)



Source: GII 2015

Global policy trend (5)

GII 2015 Rankings by income group

High-income economies

1. Switzerland
2. United Kingdom
3. Sweden
4. Netherlands
5. United States of America
6. Finland
7. Singapore
8. Ireland
9. Luxembourg
10. Denmark

Upper-middle-income economies

1. China
2. Malaysia
3. Hungary
4. Bulgaria
5. Montenegro
6. Mauritius
7. Costa Rica
8. Belarus
9. Romania
10. Thailand

Lower-middle-income economies

1. Moldova, Republic of
2. Viet Nam
3. Armenia
4. Ukraine
5. **Mongolia (66)**
6. Georgia
7. Morocco
8. India
9. Philippines
10. Senegal

Low-income economies

1. Cambodia
2. Kenya
3. Rwanda
4. Mozambique
5. Malawi
6. Burkina Faso
7. Mali
8. Uganda
9. Gambia
10. Tajikistan

2) Current situation in Mongolia

Legal framework on Technology transfer and Commercialization
(Innovation)

ICT sector



2005 e-Mongolia national program
(2005-2012)

2012 e-Government national program
(2012-2016)

2011 e-Signature Law

2015 Information, Communications
Development Policy (2015-2025)

2012 Mongolia's economic and social
development priorities (2012-2016)

Other sector



1998 Technology transfer Law

2006 Copyright Law

2006 Patent Law

2012 Innovation Law

2007 Science and technology Master
plan (2007-2020)

2007 Mongolian innovation system
development program (2008-2015)

2010 State high-tech industrial policy

2011 Regulation of intellectual property
assessment on creation and verification



Current situation in Mongolia (2)

Technology Transfer Law (1998):

Purpose:

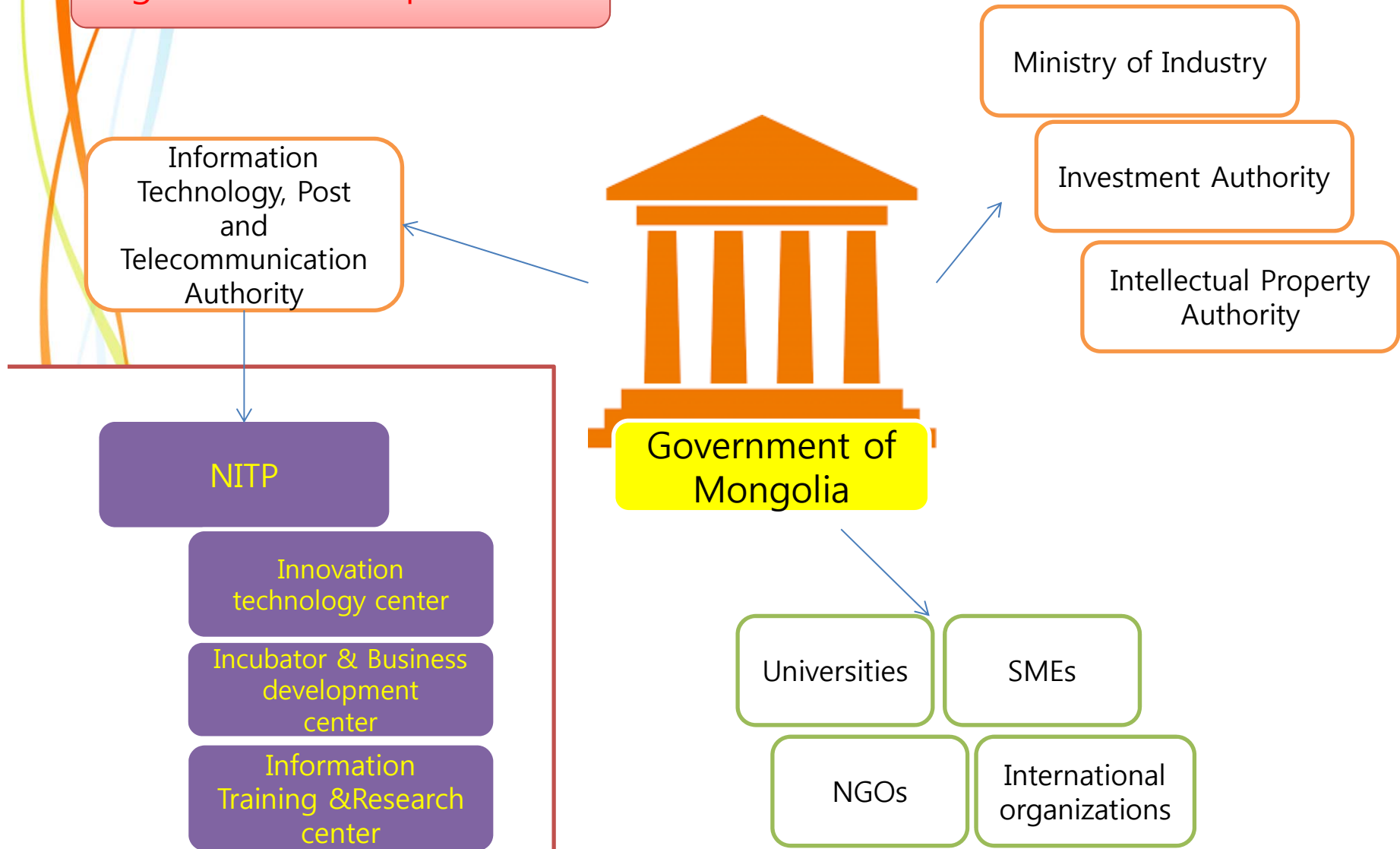
To regulate relation of the technology transfer, principles of technology transfer, technology level evaluation and determine the requirements for technology transfer.

Technology transfer:

- technological and operational conditions;
- consulting services for technological processes, procedures and elements;
- technology and equipment required for the introduction of technology;
- science and technology research results;
- patents and licenses, product design;
- know-how.

Current situation in Mongolia (3)

Organizations and processes



Current situation in Mongolia (5)

Incubator, Business Development Center

- The first non-profit government business incubator in constant operation in Mongolia.
- It concentrates on rapidly developing software businesses that are not yet fully developed and supports their market production.
- Since its commencement and its first recruitment in September, 2003, NITP has made 21 enrollments of incubator companies as of the first quarter of 2014.

20 office space
(1000 sq.m)



Current situation in Mongolia (6)

Successful graduates of the Incubator



- Around 220 companies and individuals were enrolled;
- 90 companies and individuals were provided with incubator services.
- 54 have successfully graduated from the incubator.

Current situation in Mongolia (7)

Package services for incubator companies

Package 1: Working environment

Office rental discount, free utilization of the training rooms and laboratories (by schedule), and free utilization of the IT Coworking Space once a month.

Package 2: For businesses

1 time provision of company stamp, 1 time printing right of company logo, 100 company letterheads, and 100 name cards.

Package 3: Website

Domain name, website, and web hosting

Package 4: Training

One time participation in each of the following 8 trainings in the first year in the incubator: Lector Center training, Entrepreneur, Paper processing, Software engineering, Design Pattern, and Enterprise architecture.

Package 5: Marketing

Free user meetings, product exhibitions, newspaper interviews, advertisements in articles, television, and magazines once a year, and participation in press conferences twice a year for free.

Package 6: Software

Internet service payment discount, paid Github account and Google count.

Package 7: Best company

If a company is selected the Best Company from the annually organized competition among the incubator companies, they win participation in international exhibitions and seminar (or if they choose, monetary prize)

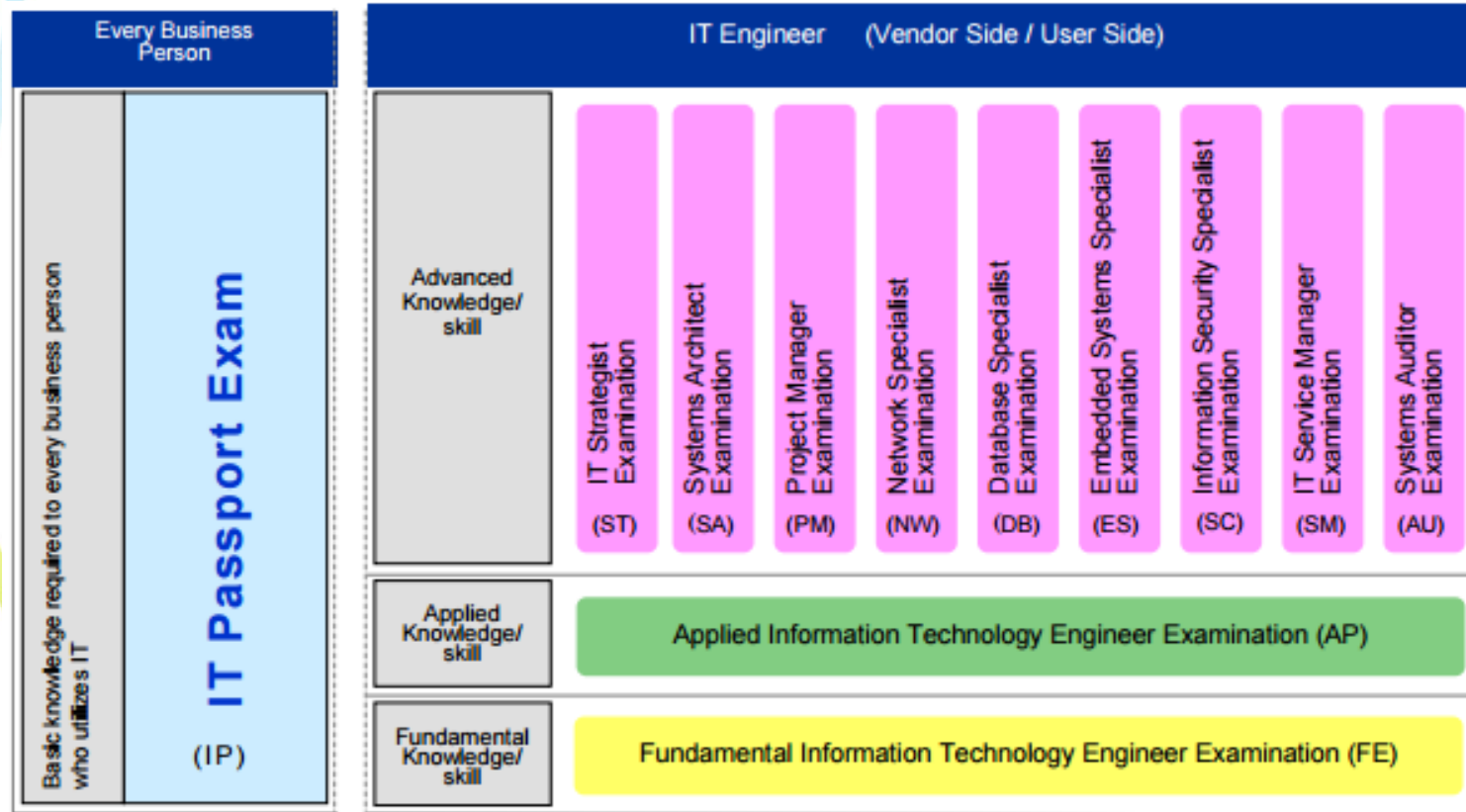
Package 8: Consulting services

In the second year, the companies are allowed to one time services for each of the following 5 professional consulting services: IT expert, business development, project management for project development, financial analysis, and protection of intellectual property rights.

Current situation in Mongolia (8)



Information Technology Engineers Examination



IP Information Technology Passport Examination

163 applicants since 2010 (8.4%)

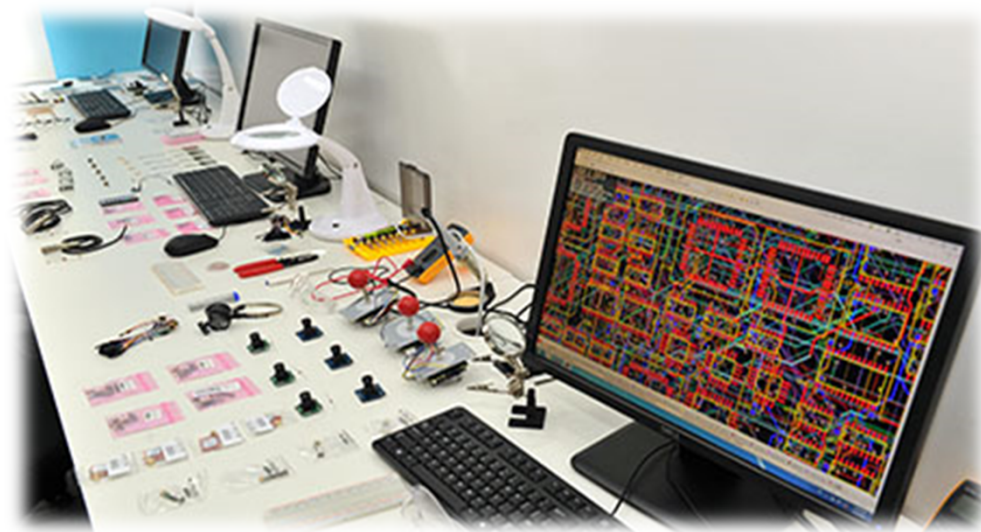
FE Fundamental Information Technology Engineer Examination

758 applicants since 2006 (25.3%)

Current situation in Mongolia (9)

Embedded system development laboratory

- To increase the level of scientific research at an international level, experiment and develop new ideas and products, create a brand new IT market, and increase the number of work places.
- Equipped with embedded technology equipment (electron board, detail mounting machines).



Current situation in Mongolia (10)

Human and knowledge capital

Higher education situation in Engineering field

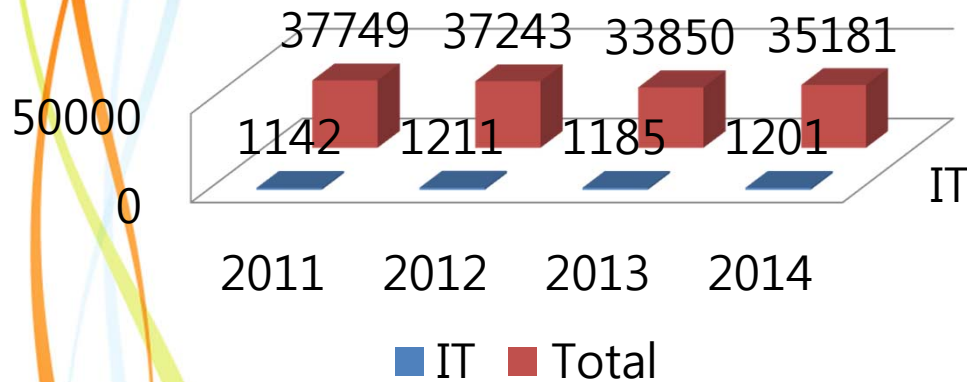
- Enrollment statistics of Information Communications Technology field in 2014-2015 school year :
 - Total of 28 state owned and private universities;
 - **6500** students
 - **2829** students (Mongolian University of Science and Technology)
 - **2310** students (National University of Mongolia)

Source: MUST



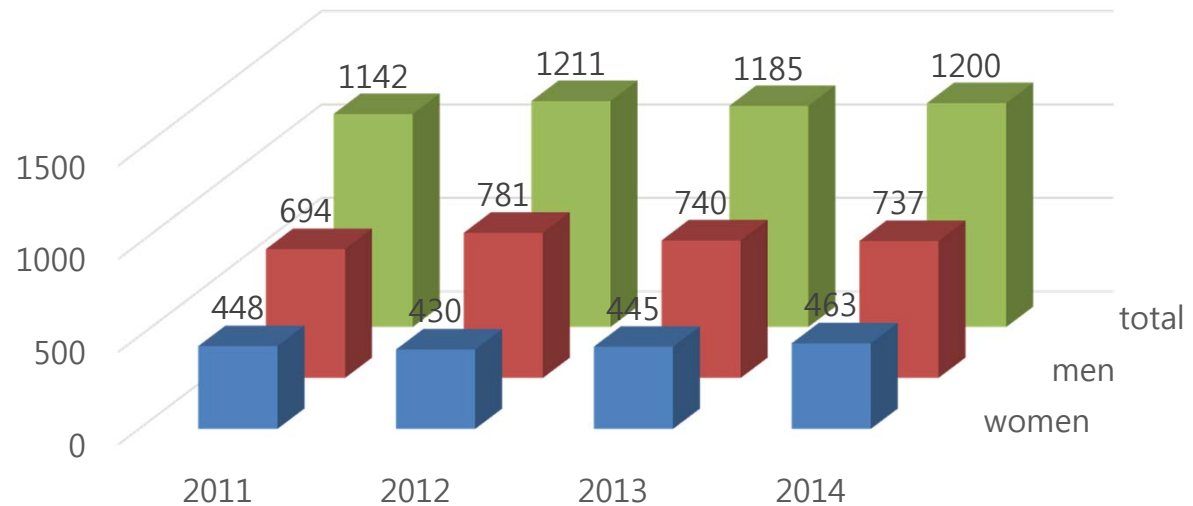
Current situation in Mongolia (11)

Number of IT graduates:



Source: Ministry of education, culture and science 2014-2015 statistics

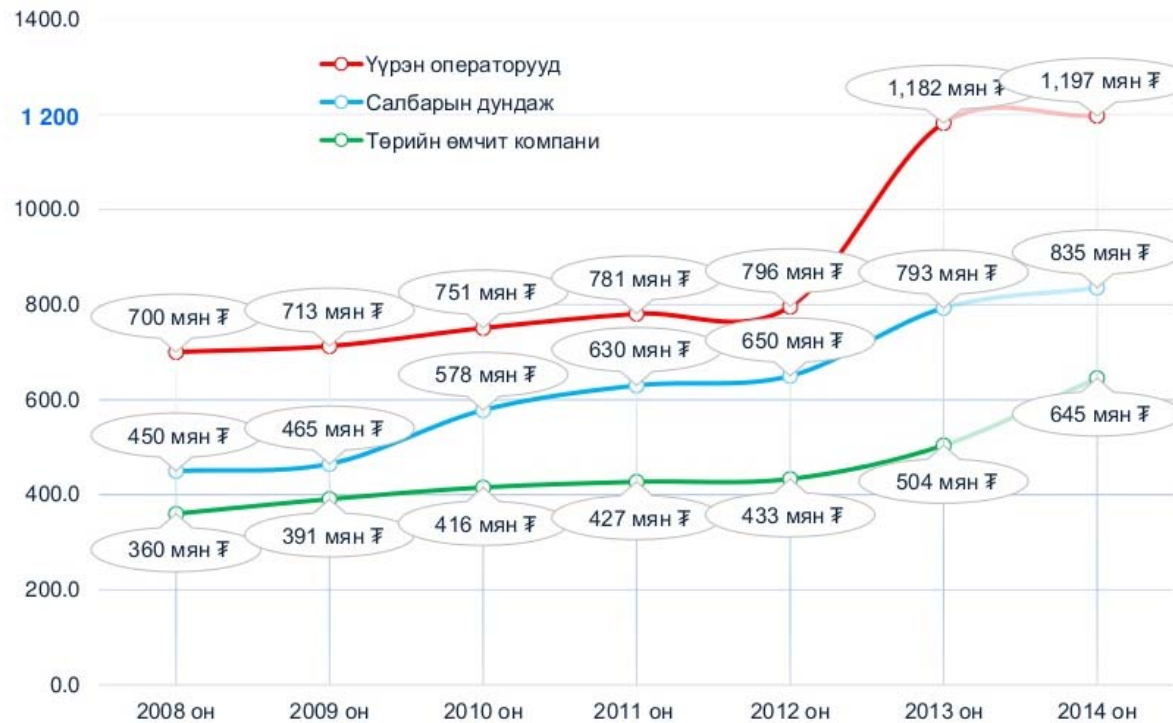
Gender of IT graduates:



Current situation in Mongolia (12)

Human resource situation in ICT sector

- As of 2014, total employees in ICT sector reached 17.8 thousand (1.6% of total employees in Mongolia)
- Average monthly salary is 330\$~600\$ in ICT sector

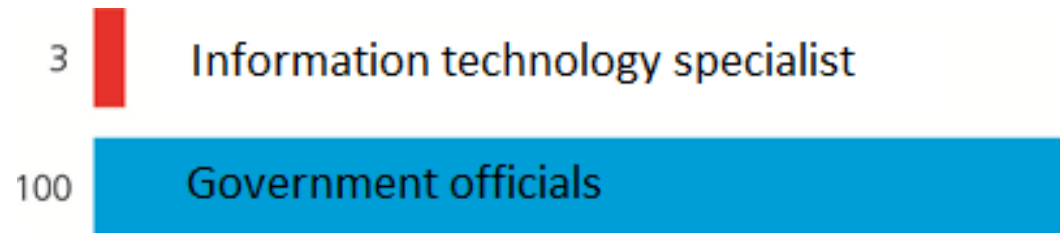


Source: CRC
2014 statistics

Current situation in Mongolia (13)

IT specialists situation in Mongolian government organizations

There are 3 Information Technology professionals imposed in 100 employee government organization.



Source: Government risk evaluation 2015





Current situation in Mongolia (14)

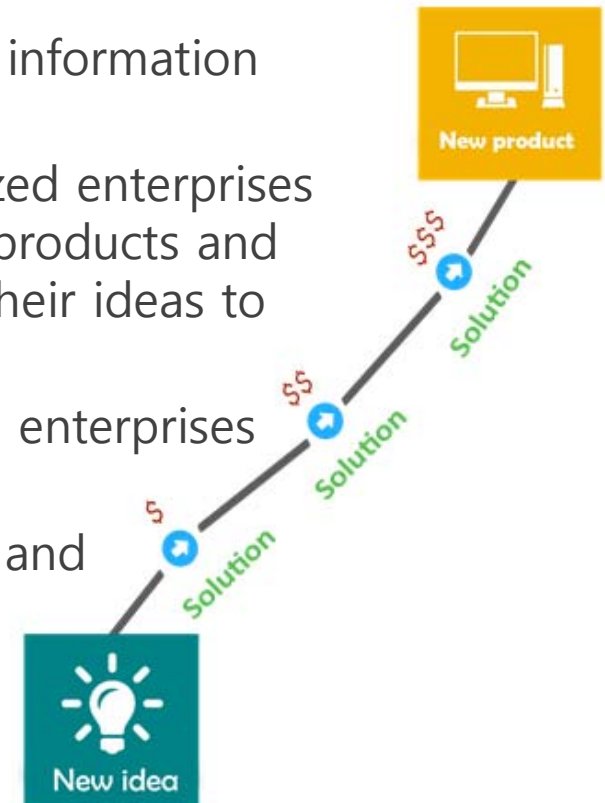
Challenges:

- The legal environment is not mature, lack of economic incentives from the Government to support implementation of the innovative activities;
- Weak innovation infrastructure, lack of knowledge and technology transfer mechanisms and unclear benefits;
- Mobility of the real economic sector innovation of small enterprises has been slow to mature;
- Low level of industrial technology and highly dependent on foreign technologies;
- Not commercializing the research results, weak cooperation between large, medium and small sized companies;
- Industrial sites not willing to accept new technology solutions, research and development work is on not enough demand.

Further policy demands (1)

Key Points in ICT policy 2025 towards Technology transfer and commercialization:

- Providing legal and financially flexible environment for start-up companies;
- Enabling usage and accessibility of the public information and the open data;
- Setting up a system for small and medium-sized enterprises and start-up companies who working on ICT products and services are able to find investors and make their ideas to product;
- Capacity building for small and medium-sized enterprises and start-up companies;
- Supporting flexible tax system for investment and production activities related to exports.



Give a man a fish and you feed him for a day.

Give a man a fishing rod, and he feeds himself and his family for as long as the rod lasts.

Help a man develop the knowledge and means to improve the fishing rod and to design and produce new ones, and he may feed himself and his society for years to come.

Thank you!

OYUN Tsogtsaikhan
Information Technology, Post and
Telecommunications Authority

oyun@ipta.gov.mn