



**Key issues and policies promoting transformation of IPRs  
under the Strategy of Innovation-driven Development:  
A case from Chinese Academy of Sciences**

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## Main contents

- 1. IPRs of Chinese academy of sciences*
- 2. Strategy of Innovation-driven Development*
- 3. Law on Promoting Transformation of Scientific and Technological achievements*



Non-profit

**CAS is a leading academic institution and comprehensive research and development center in natural science, technological science and high-tech innovation in China.**

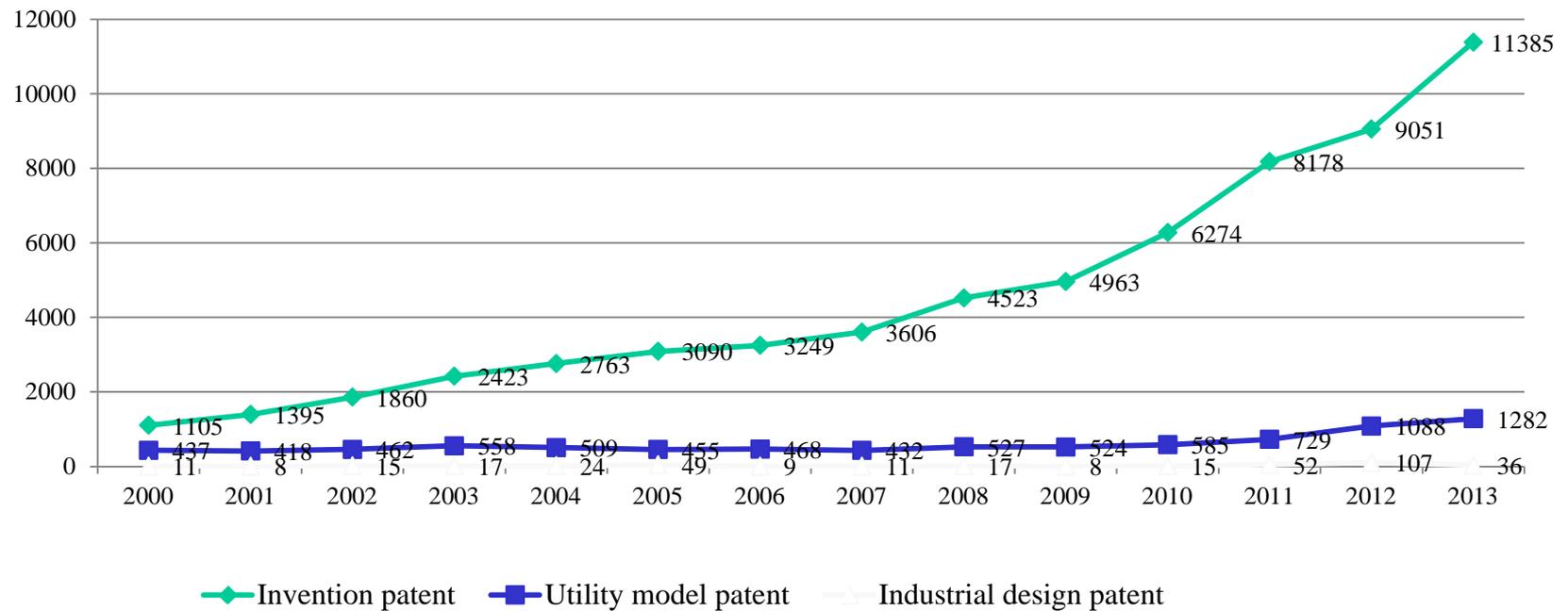
Relative to the public interest



Obvious externality

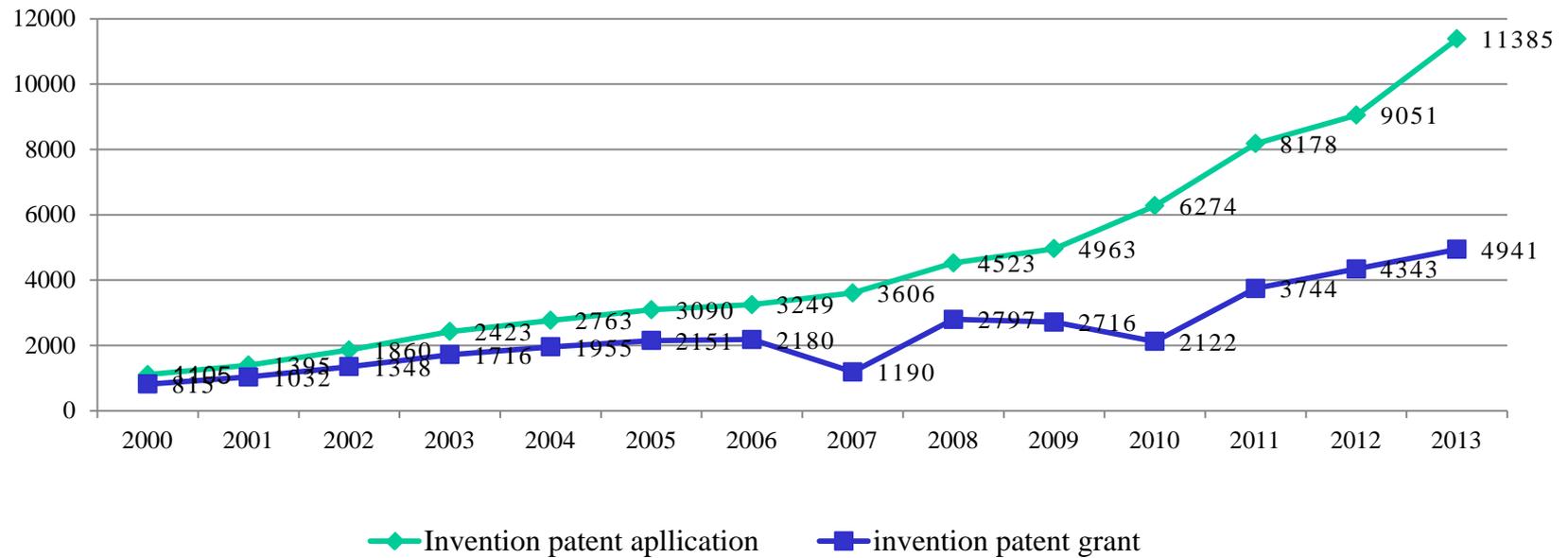


## Number of three kinds of Patent application and grant of CAS



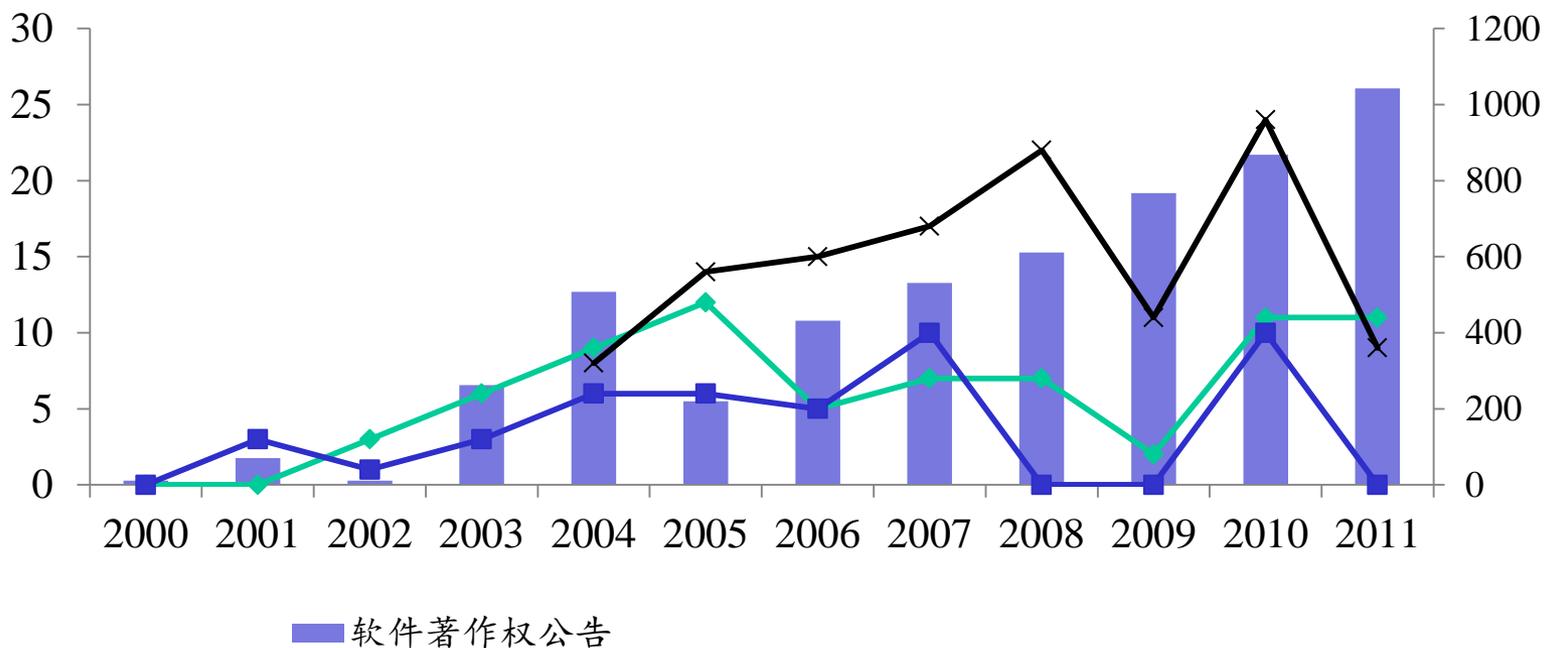


## Number of invention Patent application and grant of CAS





## Number of other kinds of IPRs of CAS



Software copyright published

Plant variety granted

plant variety application

Topographies of Integrated Circuits published

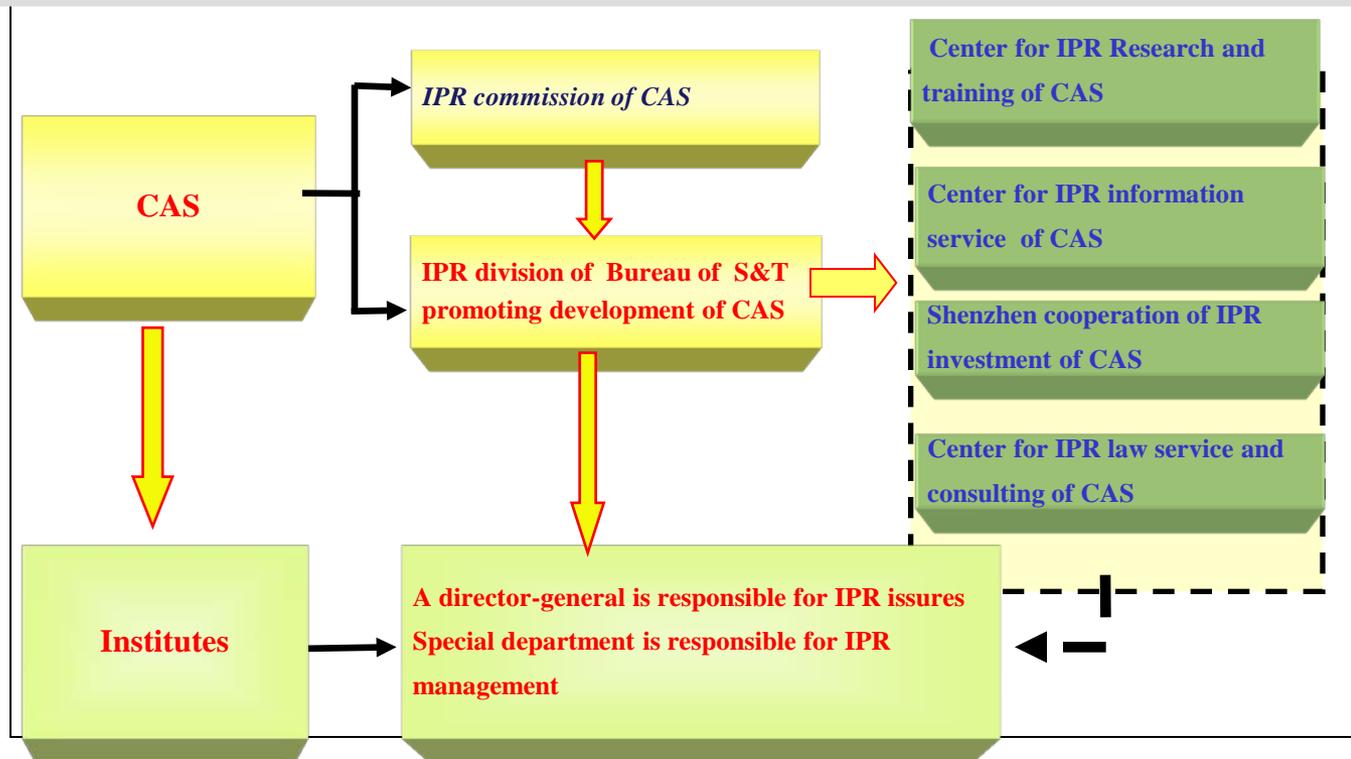


## **IPR management policies of CAS**

- **In 2007, the leading communist party group of CAS passed the policy “Directive opinion to further Enhance the IPR work of CAS”**
- **In 2009, CAS issued “IPR management regulation of CAS”, “Guideline of IPR work of CAS”, “IPR management regulation of the affiliate unit of CAS”, “Regulation of IPR commissioner examination of CAS”, “Management regulation of IPR commissioner of CAS”.**
- **In 2012, “The 12th five-year IPR promotion plan of CAS” was issued.**
- **In 2014, “The award regulation of IPR transferred and transformed are under laying down.**



## IPR management organizations of CAS





## IPR commissioner system of CAS

1. Before beginning of R& D project, a independent IPR analysis report is needed: **IPR Retrieving and analysis. Approval or not**



2. At the end of the project(check and accept), a independent IPR Analysis Report is needed :  
**S&T Achievements, IPR strategic deployment: Accepted or not**



3. Three years after the project finished , a independent IPR analysis report is needed : **License and transfer: The basis for new R&D project**



## IPR training of CAS

**IPR laws and regulations**

**Applications, examination, reexamination and  
Invalidation of patent**

**IPR research and analysis report writing**

**IPR strategy and utilization management**

- **Since 2008, 75 times and 7300 scientists and managers of IPR training finished.**
- **6 times' IPR Commissioner qualification examination finished and 168 people distributed in 57 affiliates got the CAS IPR commissioner certificate.**



## Technology transfer of CAS

### Bureau of S&T promoting development of CAS

Branches

12, such as Beijing Branch of CAS

New established institutes

12, such as Shenzhen advanced technology research institute

Technology transfer organizations as platform

29, such as Incubation Center of Xiamen institute for urban environment

Technology transfer organizations as intermediacy

8, such as Lanzhou technology transfer centre

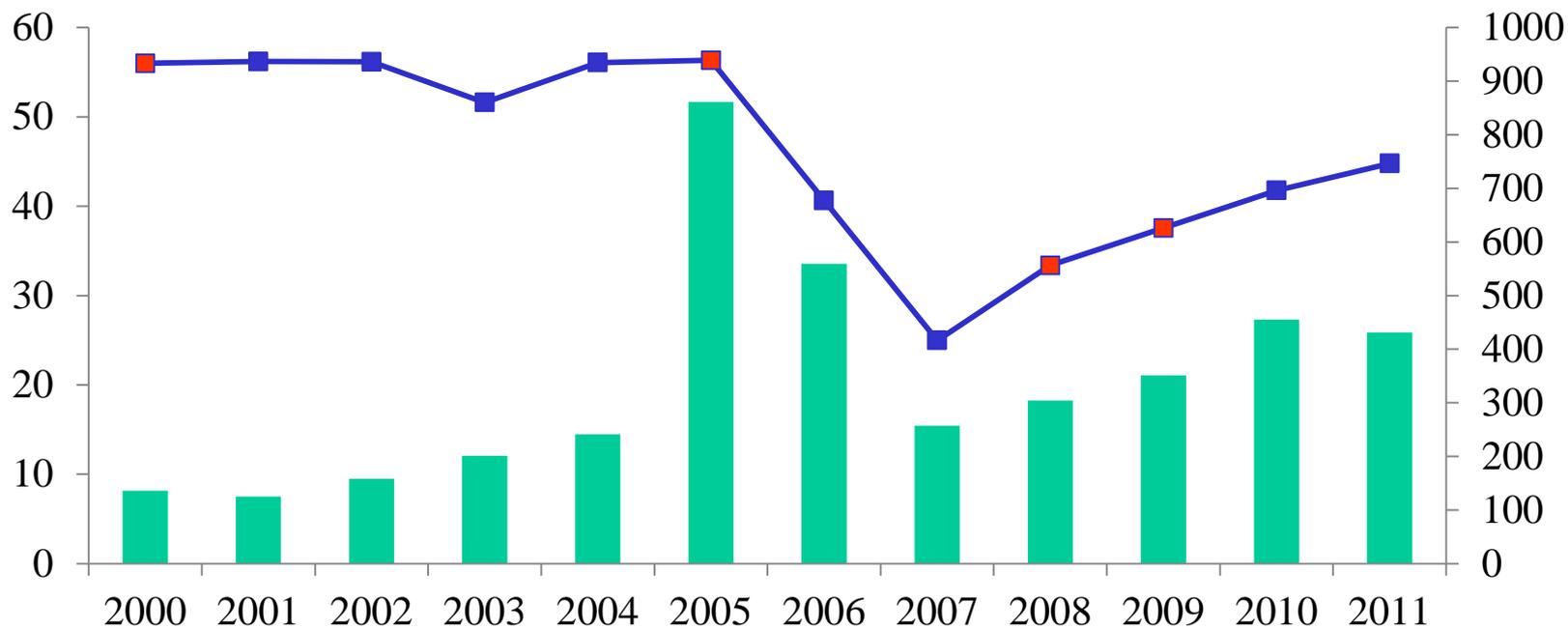
Innovation parks

8, such as Baiyin industrial park



## Technology transfer way of CAS (2011)

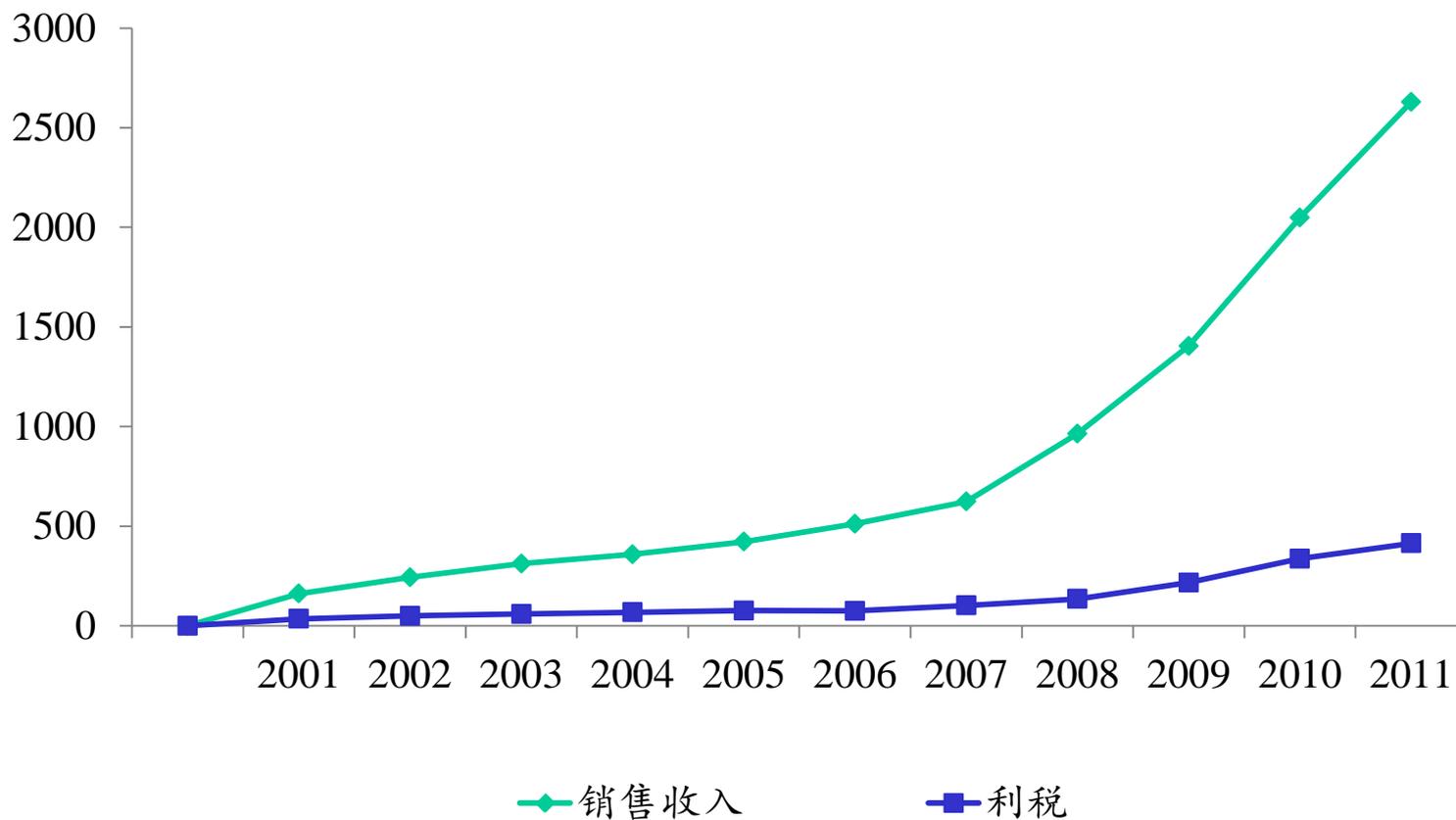
TT way \ IPR type	Invention patent	Utility model patent	Industrial design patent	Software copyright	Know-how	New Plant variety	other	total
license	92	1		3		7		<b>103</b>
transfer	106	12			5		1	<b>124</b>
Self-Implementing	32							<b>32</b>
Technology development	25	5	5	9	12		19	<b>75</b>
As stock right	16	1			2			<b>19</b>
Technology service	23	1		15			12	<b>51</b>
Dividend income	1							<b>1</b>
others	6			1	7		12	<b>26</b>
<b>total</b>	<b>301</b>	<b>20</b>	<b>5</b>	<b>28</b>	<b>26</b>	<b>7</b>	<b>44</b>	<b>431</b>



■ 知识产权许可实施数量

■ 单位专利许可费收入

**IPR licensed number, license fee per patent**



**Sale, tax and revenue**

**Commercialization of S&TAs of CAS**



- **The 18th CPC Central Committee demanded to implement the Strategy of Innovation-driven Development.**
- **The Decision on main issues concerning comprehensively deepening reforms of the Third Plenary Session of the 18th CPC Central Committee .**
  - **Strengthen intellectual property application and protection.**
  - **Improve the venture capital system, innovate business models and promote capitalization and industrialization for the scientific and technological achievements**



## □ The requirements of the Strategy of Innovation-driven Development to the IPR

- Strategy of innovation-driven development is a general planning for large scale creation and high efficiency application of the science and technology achievements, and for gaining profit and value conforming to the economic and social development demand.
- **There are two requirements for the strategy to IPR.**
- One is that a large number, high quality, high creative IPRs with international competitiveness are to be created , especially the core and key industrial patents.
- Another is that the indigenous IPRs are effectively utilized. IPRs are not only to be competitive tools, but also can be achieved commercialization.



### 3. Law on Promoting the Transformation of Scientific and Technological Achievements (STAs)

- The main revised articles of the law on promoting transformation of STAs in the draft version
- There are many new provisions in the revision such as the responsibilities, rights and obligations of government, universities and institutes, and enterprises, the R&D cooperation, the science and technology intermediary service, the new capital projects, financial support for the transformation of STAs and punishment to Cheating activities.



## □ The Basic and objective problems restricting STAs transformation for the draft revised law

1. The Information asymmetry and risk asymmetry are the **fundamental problems** restricting transformation of STAs. There are no regulations.
2. Deficiency in supporting identifying the effective demand is the **essential problem** to promoting transformation of STAs. It is still a planning and supplying law.
3. The difficulty of entrepreneurship is the **bottleneck problem** in transformation of STAs. Many measures are EX post measures and indirectly measures.
4. Absence of integrating IPRs especially essential patents is the **critical problem** for transformation STAs. MPEG-LA, SISVEL
5. Insufficiency of transformation organization, talent team, and the transformation ability are **key problems** for the transformation of STAs. It is still is a intermediary idea. OTL



## **□ Other related problems influencing STAs transformation for the draft revised law**

- 1. There are operability problems of the law promoting transformation of STAs. No consorted rules**
- 2. Overlapping problems among the laws. The reward of the service inventors of patent law is the minimum 2% of pure profit and 10% of license fee. The law of STAs is the minimum 20% of the pure income.**
- 3. No policies system promoting transformation STAs. Subsidy, tax deduction, loan, government procurement.**
- 3. State owned asset management. Assessment, examination and approval, two lines of revenue and expenditure.**
- 4. The evaluation of project approval and agencies mainly focus on quantity rather than quality.**
- 5. Less original technology**
- 6. Enterprise mainly rely on technology imported**



## □ Some recommendations

- 1. Revising the law of promoting transformation of STAs according to the rule of market.** The transformation of STAs should be determined by demand. The law is also needed to solve the market rule issues. A punitive compensation should be had to behavior of deceive transformation activities.
- 2. Optimizing government functions of transformation of STAs.** The functions of transformation of STAs, intellectual property management and industrialization should be converged.
- 3. Improving the function of all kinds of STAs organizations.** The key engineering university and research institutes should establish OTLs or OTTs, and integrating technology transfer, intellectual property management and investment together. More than 200 laboratories should set up technology application position. The intermediary service organizations should develop function of pay and treasure and some should be changed to corporations of the patent pool or patent portfolios under technical standards.



- 4. Establishing a policy system for transformation of STAs.** The market failure problem should be resolved by policies. Especially the subsidy of S&T input policy, the taxable technology transfer income for university and institutes of tax deduction policy, the seed fund of finance policy and the industrial technology buying of government procurement policy.
- 5. Allocating rationally the income of transformation of STAs.** The inventor's participation is an essential precondition for successful transformation. The income distribution of transformation of STAs should follow priority principle of contract, but needed to take into account the interests of all parties. The proportion of income distribution according international rules can be to 1/3 to university or institute, and 1/3 to the inventors.
- 6. Changing the talent training mode of technology transfer.** It is needed to support construction of technology transfer talent team. The cultivation should focus on technology disclosure assessment, patent application, contracts, negotiations, investment and other types of professional talent.



Thank you for your attention!