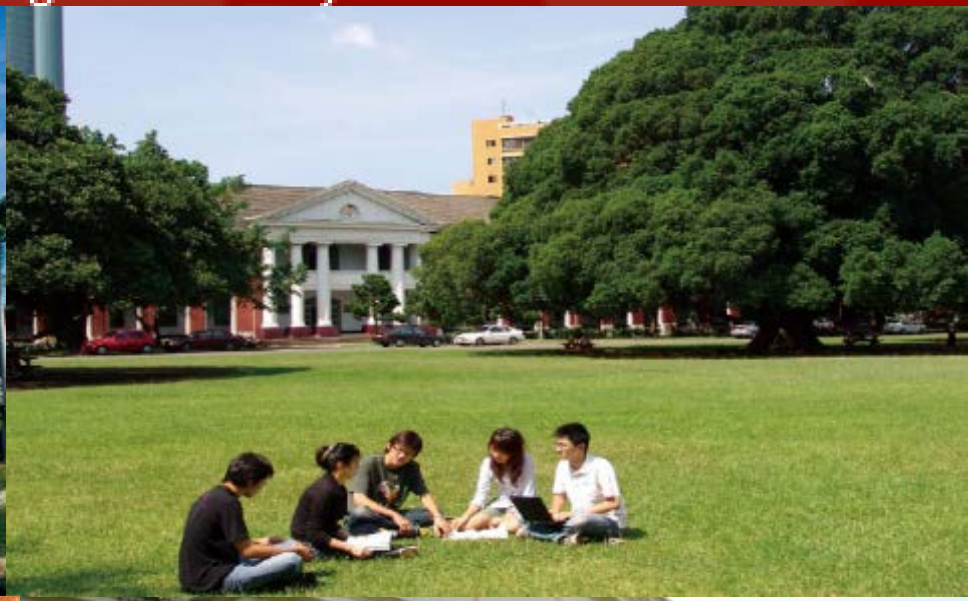
Challenges in Industry Linkages for Higher Education Institutions

Research & Service Headquarter
Chih-Han Chang

成功大學

National Cheng Kung University

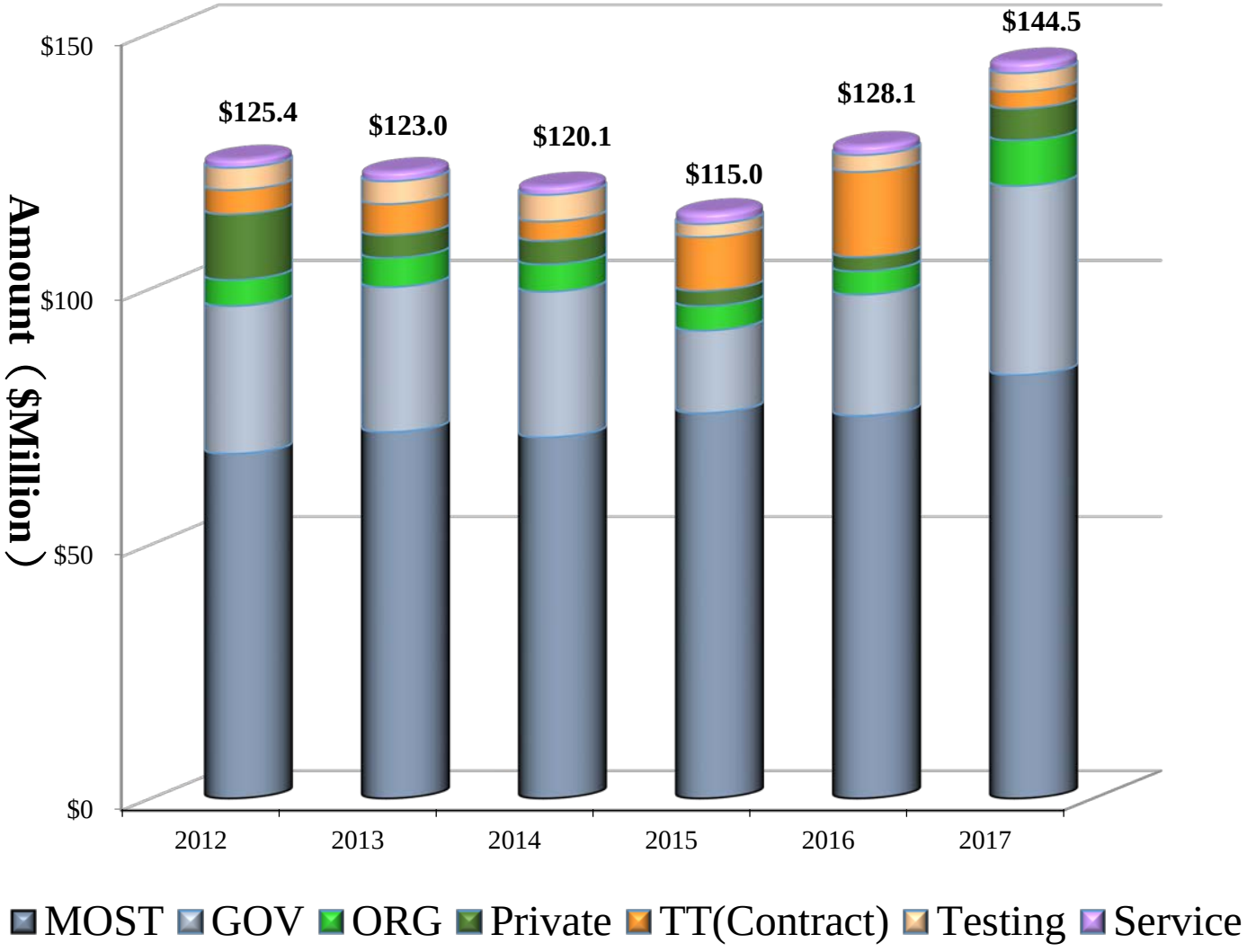


Outline

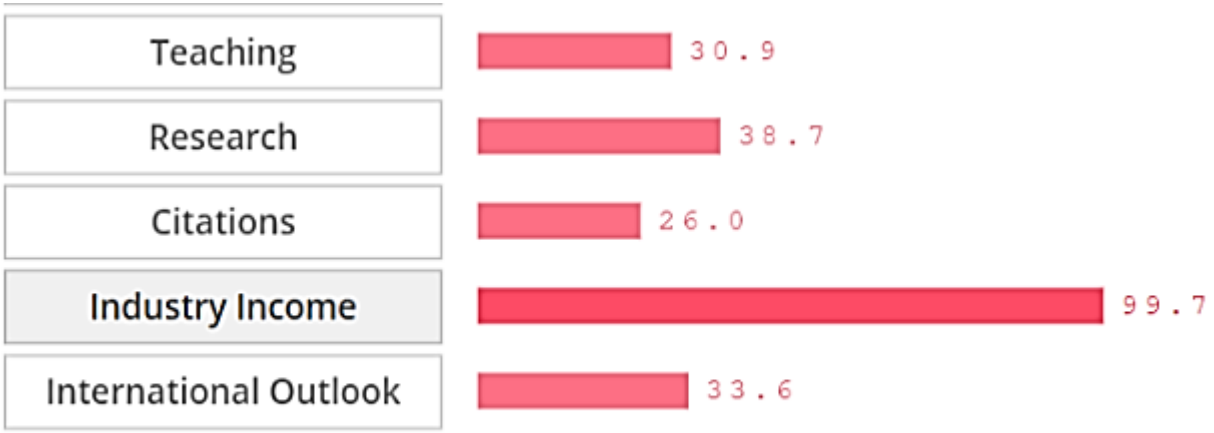
- University-Industry Collaboration @NCKU
- Challenges
- Intellectual Property
- Entrepreneurship & Startup
- GLORIA (& Oversea Center)

UIC @NCKU

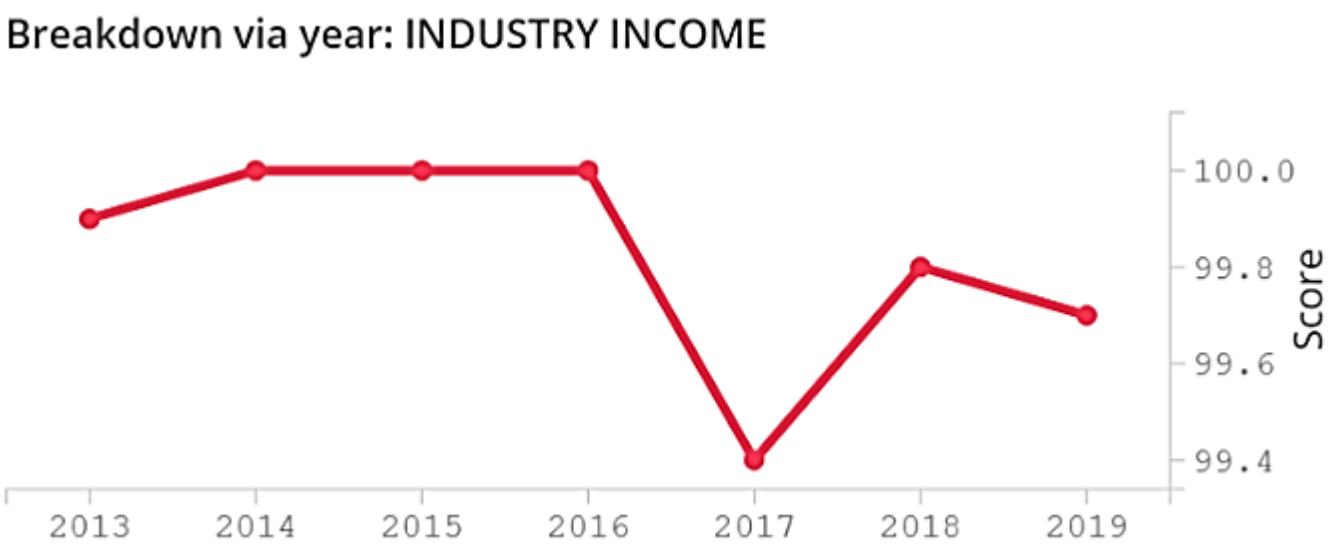
R&D Funding Sources



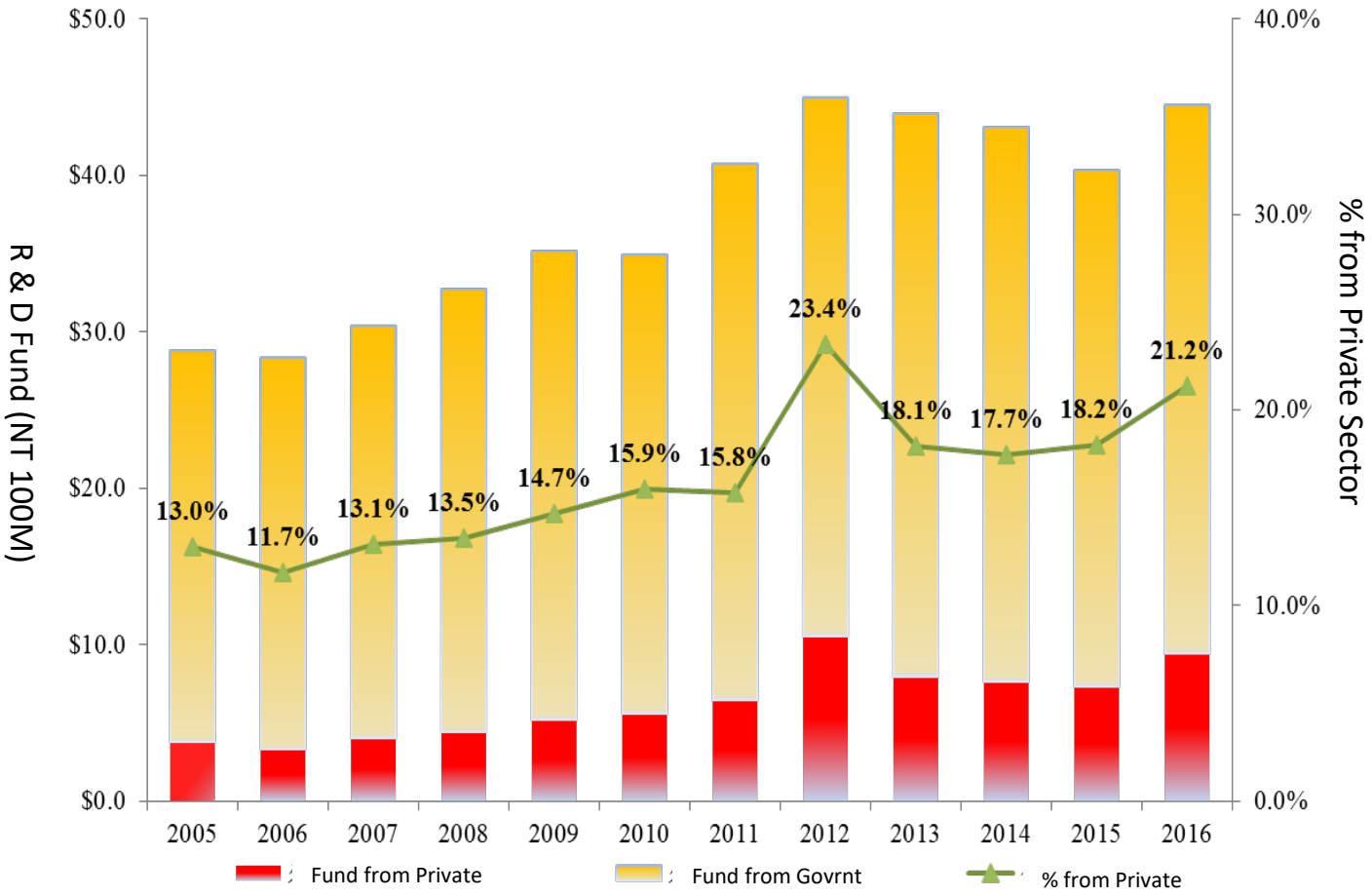
2019 THE Ranking



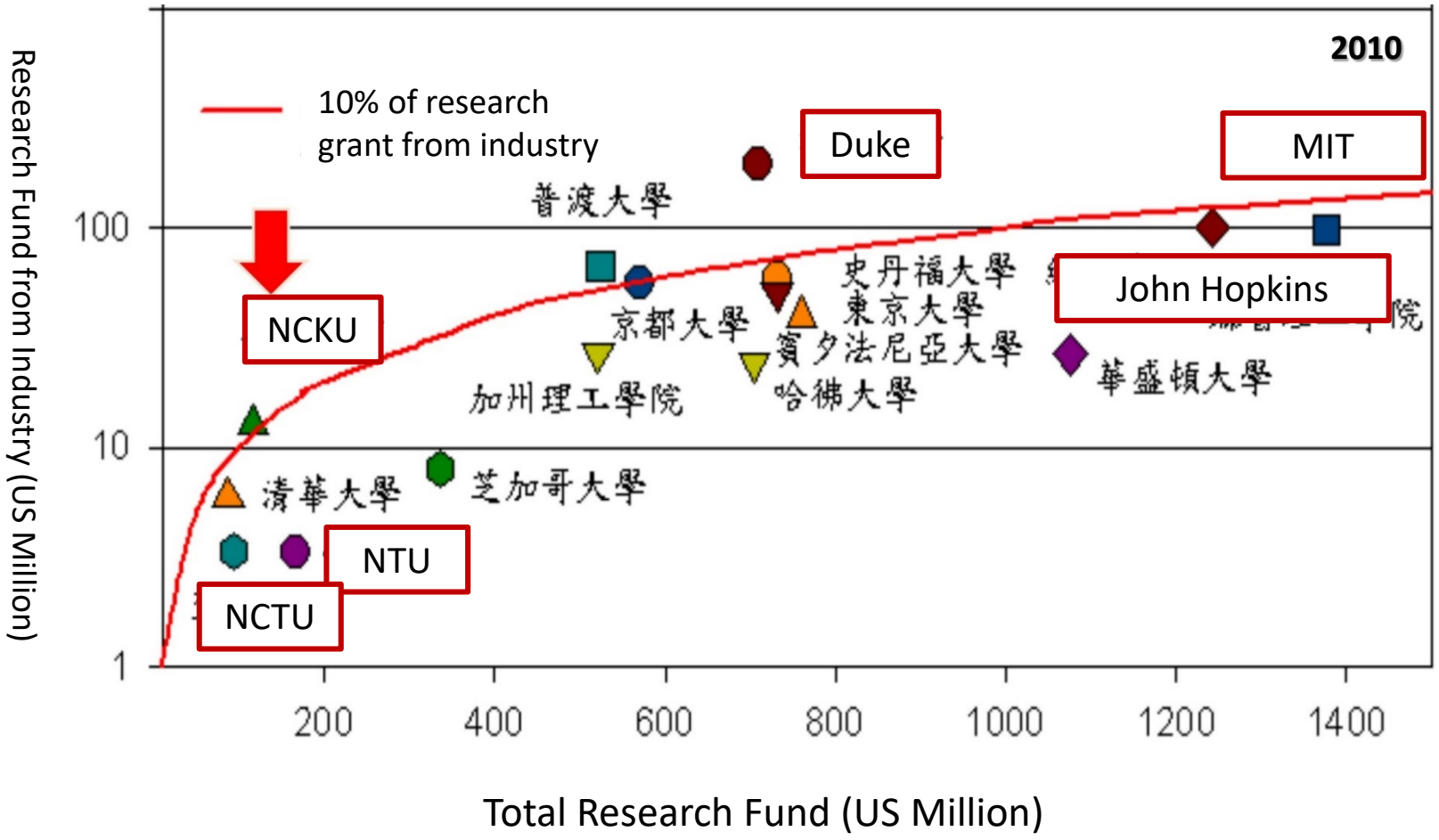
2019 THE Ranking



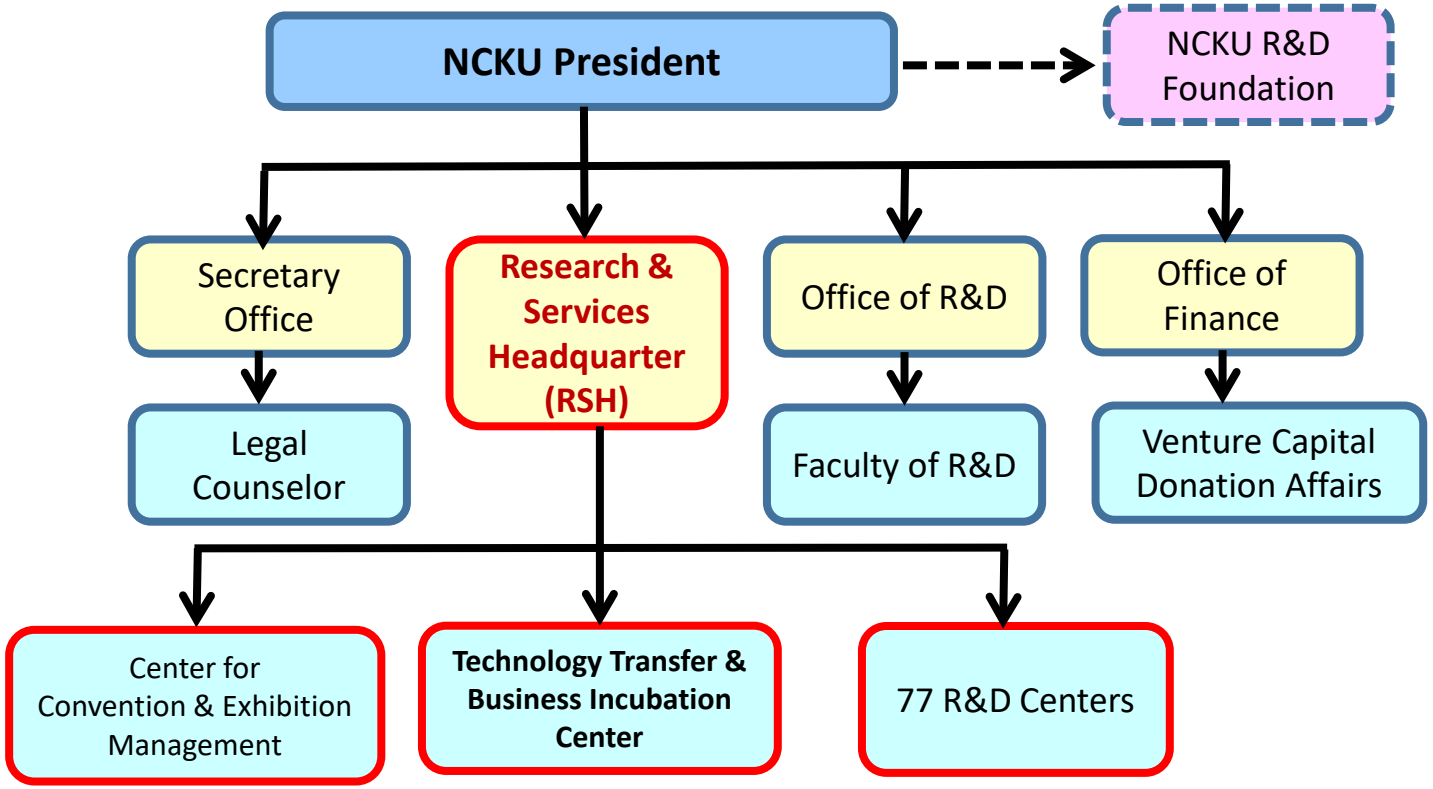
R & D Fund
(10~20% from Industry)



World Scale


2010
10% of research grant from industry
Duke
MIT
John Hopkins
NCKU
NTU
NCTU
普渡大學
京都大學
加州理工學院
史丹福大學
東京大學
賓夕法尼亞大學
哈佛大學
華盛頓大學
清華大學
芝加哥大學
100
10
1
200
400
600
800
1000
1200
1400
Research Fund from Industry (US Million)
Total Research Fund (US Million)

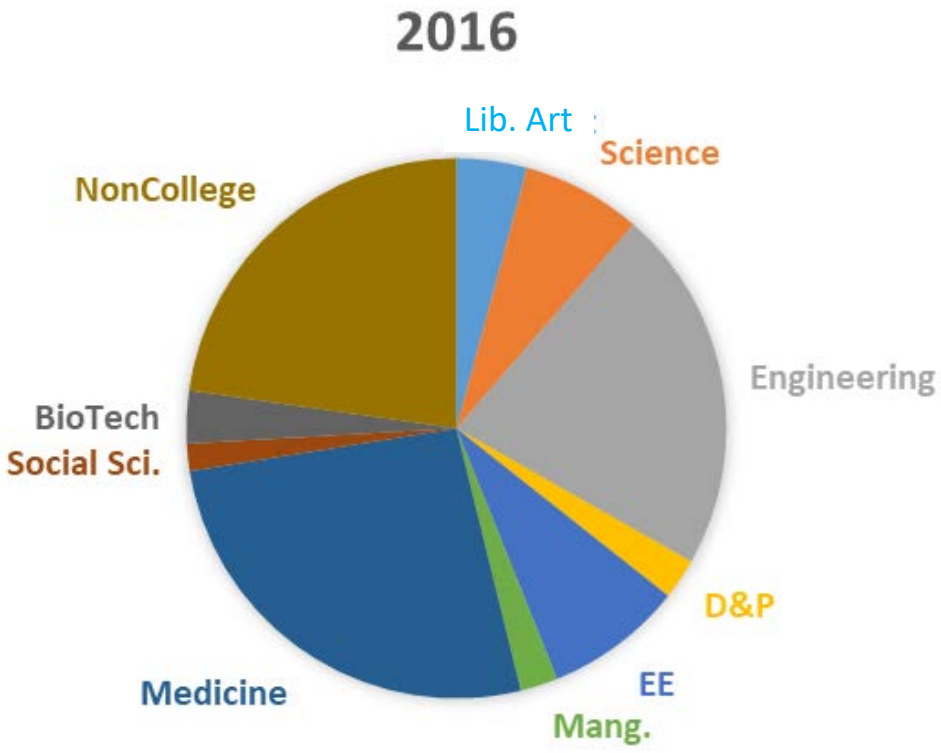
Organization for University-Industry Collaboration

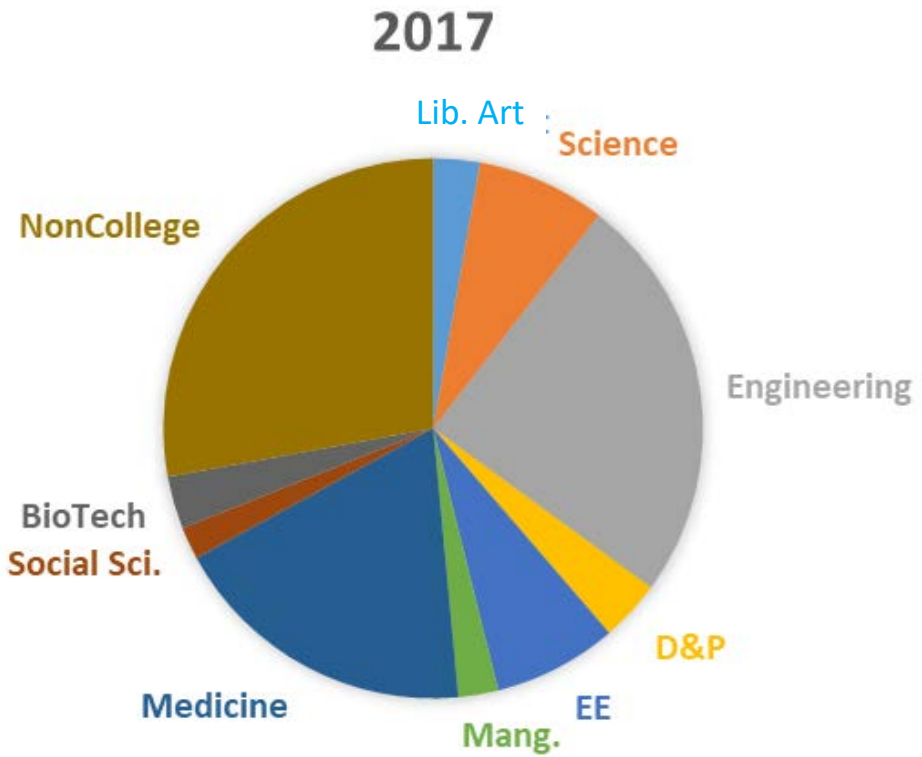


Research & Service Headquarter (RSH)

- Established in 1996 (first in Taiwan)
- Self-funded without school budget
- Currently with 79 self-funded research/service centers
- All centers are formed with cross-disciplinary researchers
- RSH provides a flexible system in recruiting, salary and management.

Research Fund by College





Lesson Learned
All professional domains are capable of UIC.

Challenges in UIC

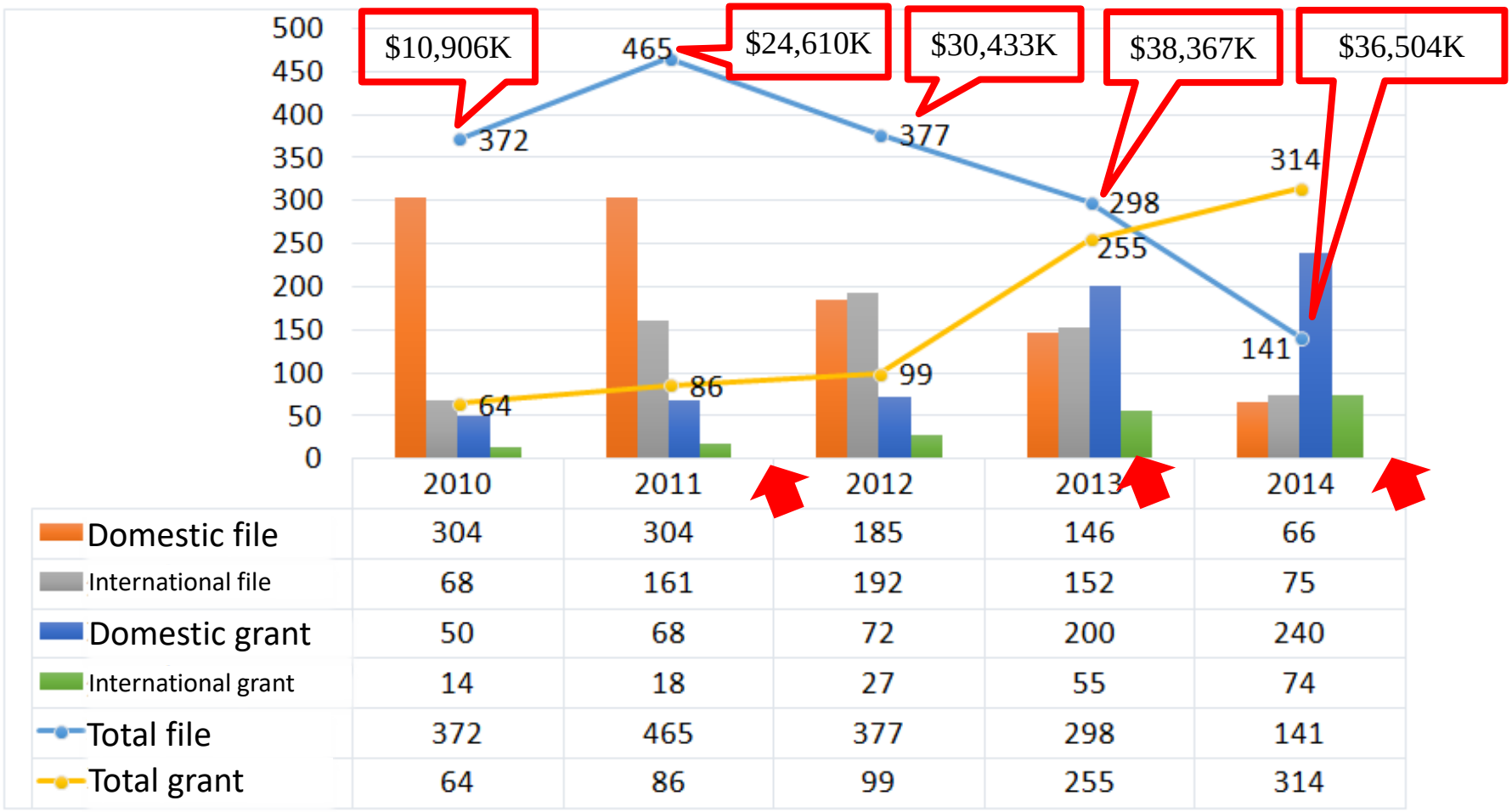
- Triple-Helix coordination
  - Government role: When to encourage and when to regulate (conflict of interest)
  - University aim: Big shot or SM business
  - Industry Expectation: Payless with immediate payback
- Mindset of Researchers
  - UIC is not research. It is the translation of the research.
- Rapid growing in technology push the model shifting in TT&UIC (Startup)
- Needs to incubate paragon successor in TT&UIC
- …

Guidance
Creation
Copyright
Licensing
INTELLECTUAL
PROPERTY
Novelty
Innovation
Authorship
Brands
Novelty
Patents
Trademarks
Invention
Counseling
Trade Secret

Observations

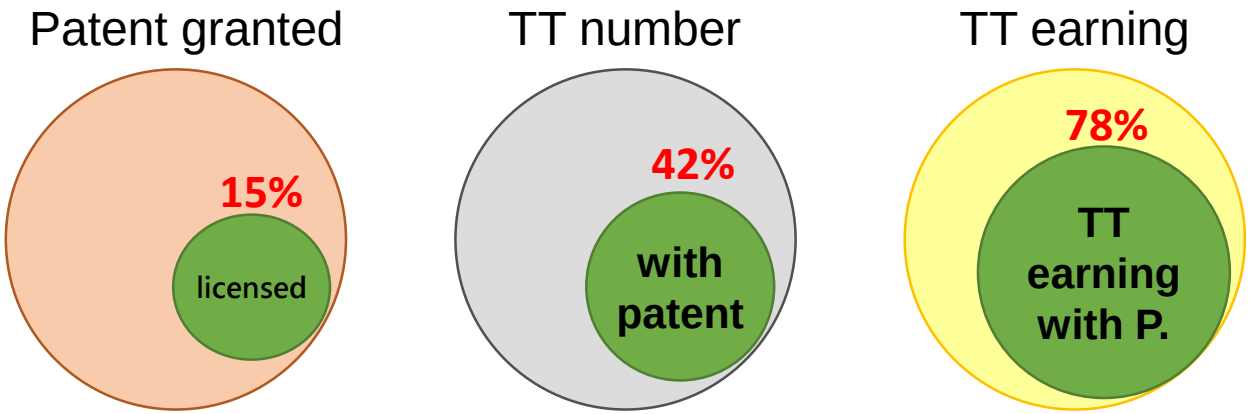
- There are various levels of IP: patent, copyright, or even treat secret/know how
- Government or university can NOT catch the true value of IP.
  - number of patent issued vs. licensed (ranking system)
- Most PIs don’t recognize the true strength of IPR.
  - treat patent as paper or credit
  - difficult to reach the PI for educate

Patent Payment Evolution

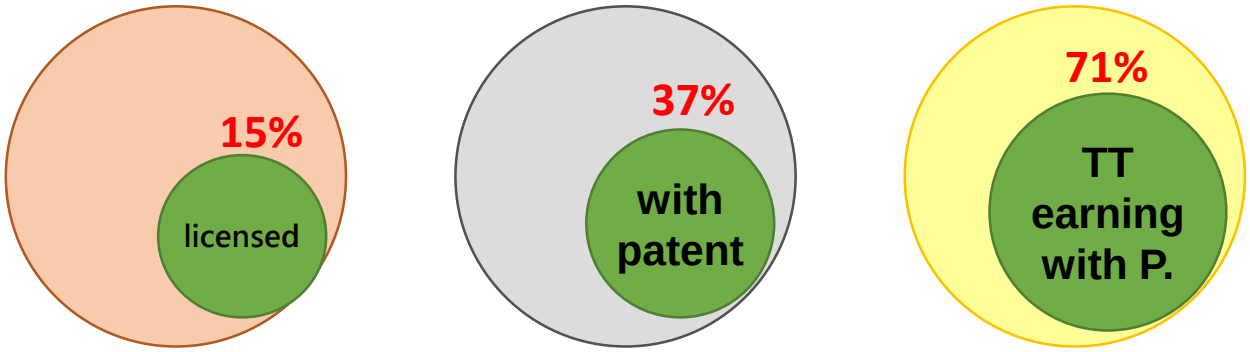


	2010	2011	2012	2013	2014
Domestic file	304	304	185	146	66
International file	68	161	192	152	75
Domestic grant	50	68	72	200	240
International grant	14	18	27	55	74
Total file	372	465	377	298	141
Total grant	64	86	99	255	314

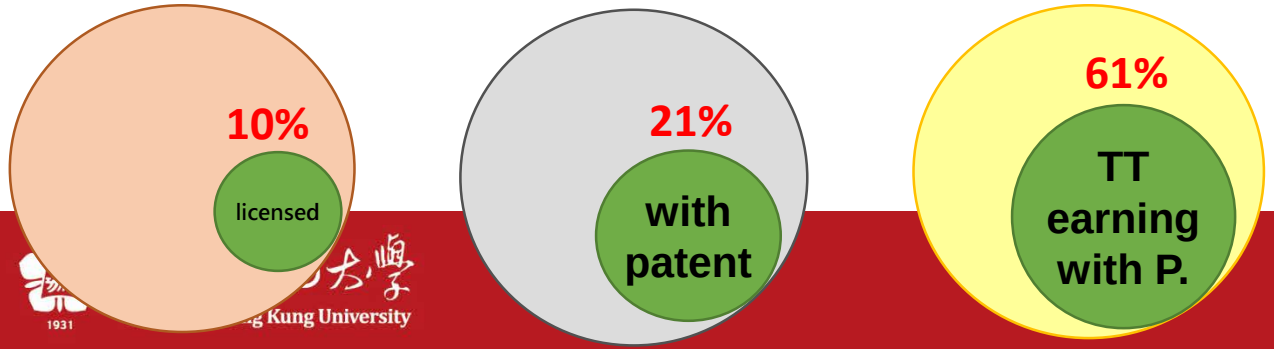
The Value of IPMS



Date：2001~2018/10



Date：2001~2017



Date：2001~2014

Lesson Learned

- **Lack of right mind set for IP for most PI.**
- **Patent without licensing is a debt not a property in university.**
- **It is the quality of patent decides the value of technology not the technology itself in TT.**

Entrepreneurship & Startup

Start a Startup

- Ideal/Technology
- Market size
- Team
- Fund

- Patent?
- Business Plane? (perhaps Business Model)

Two Tracks Incubation

Track 1 Training support for Lean Startup

Entrepreneurship course, forum, summer camp: to understand what is entrepreneurship and how to commercialize an idea

Track 2 Professional support for Research Translation team

Custom service in IP, Marketing, Finance, Regulation, BP as well as Fund raising
All the way to Startup Company

NCKU-Silicon Valley Alumni Angel

Supported by the NCKU alumni ($20k)
Startup teams were sent to SV for 3 months

SiLican, Green feed Green feel, Quantum Dot

Startup Performance

FITI Program
Excellent Startup every year

18/24 spin-off startups in the past 5 years

Lesson Learned

- Technology is important
  Business Model is more important
  The team is the most important
- BM evaluation should start asap, even before the POC.
- Milestone payment is essential for funding in translation research.
- We support everything but passion

GLObal Research & Industry Alliance
National Cheng Kung University

since 2017

成功大學
National Cheng Kung University

Mining in University with GLORIA
recruiting Industry Member for in depth UIC

1 Dedicated AO & Customized Service

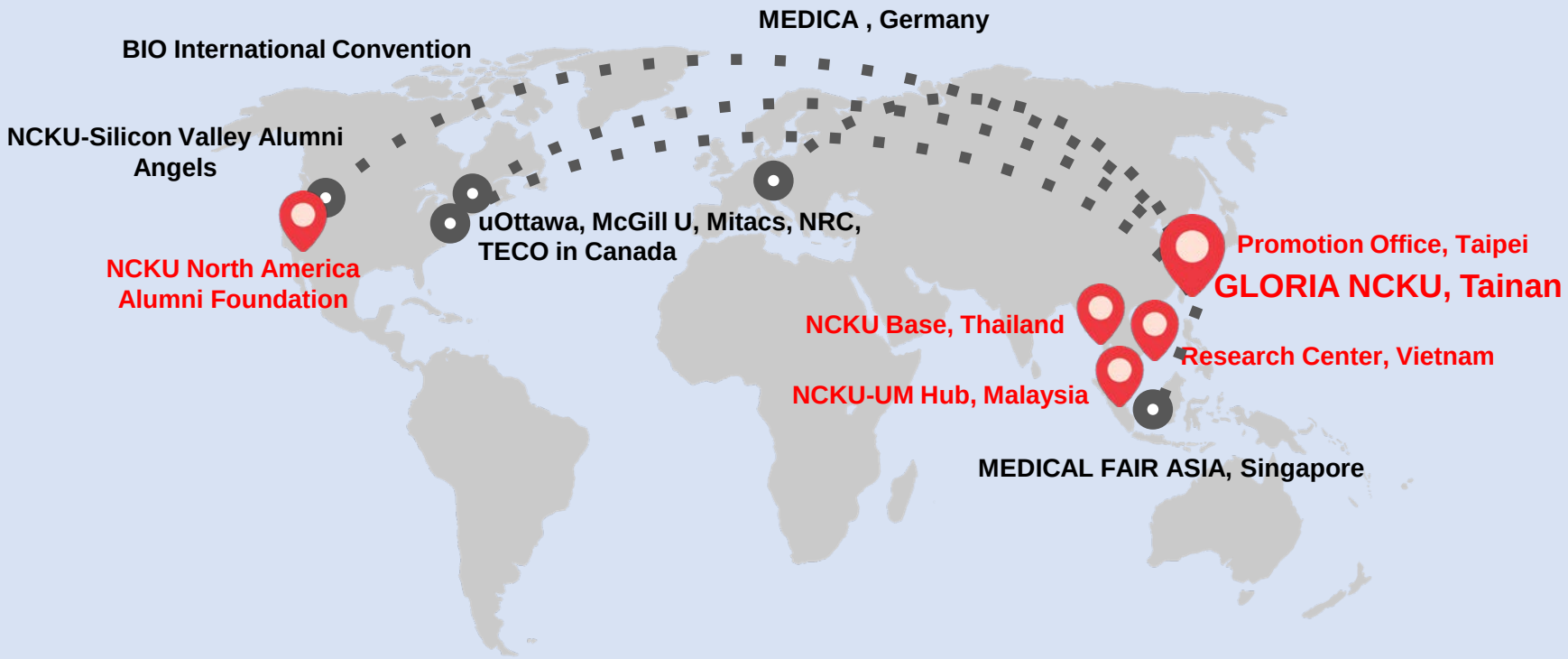
A dedicated Manager as a single contact window providing customized services

2 Joint R&D Center

“Corporate-NCKU R&D Center”→ Long-term collaboration

3 Global Networking

- Oversea U2U platform
- Alumni
- Business
- Conferences and exhibitions



4 Talent Channel

NCKU's Talents

- Talent cultivation
- On-job training programs
- Customized talent recruiting

Scholars for Corporate Lectures

Our Team

Principal

Director of RSH

Office of RD

Director of TTBIC

CEO Jesse Che

coo William Hu

Domain expert from industry to form PM linking with Industry Members
Starting with needs in stead of technology

Global Connection: AI Corp @ Silicon Valley

GLORIA
Global Research & Industry Alliance

AUTODESK.

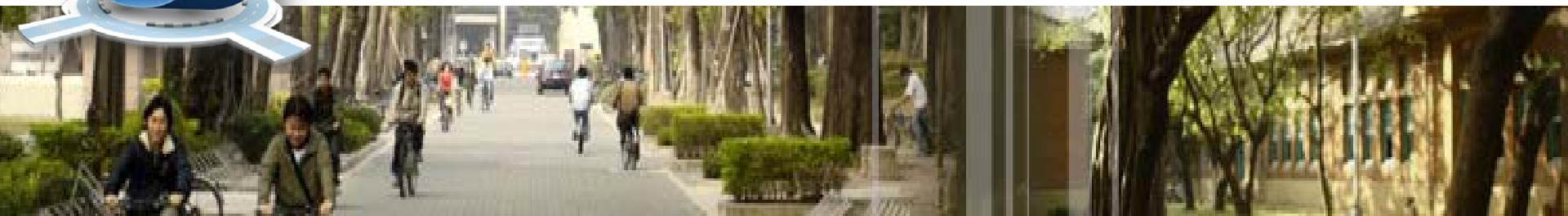
Noodle.ai

Landing.ai

intel

Google

成功大學

UIC is marathon not sprint.
It takes time to build trust &
needs room to learn.

Thank You !