



UPM
UNIVERSITI PUTRA MALAYSIA
BERILMU BERBAKTI

Promote the effective Transfer of Appropriate Technologies: Importance of the Role of the Structure in Charge of TT & Innovation



Mohamed Shariff Mohamed Din

**Faculty of Veterinary Medicine
Universiti Putra Malaysia**

50 mins

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Effective role of TTO



How it is done in UPM

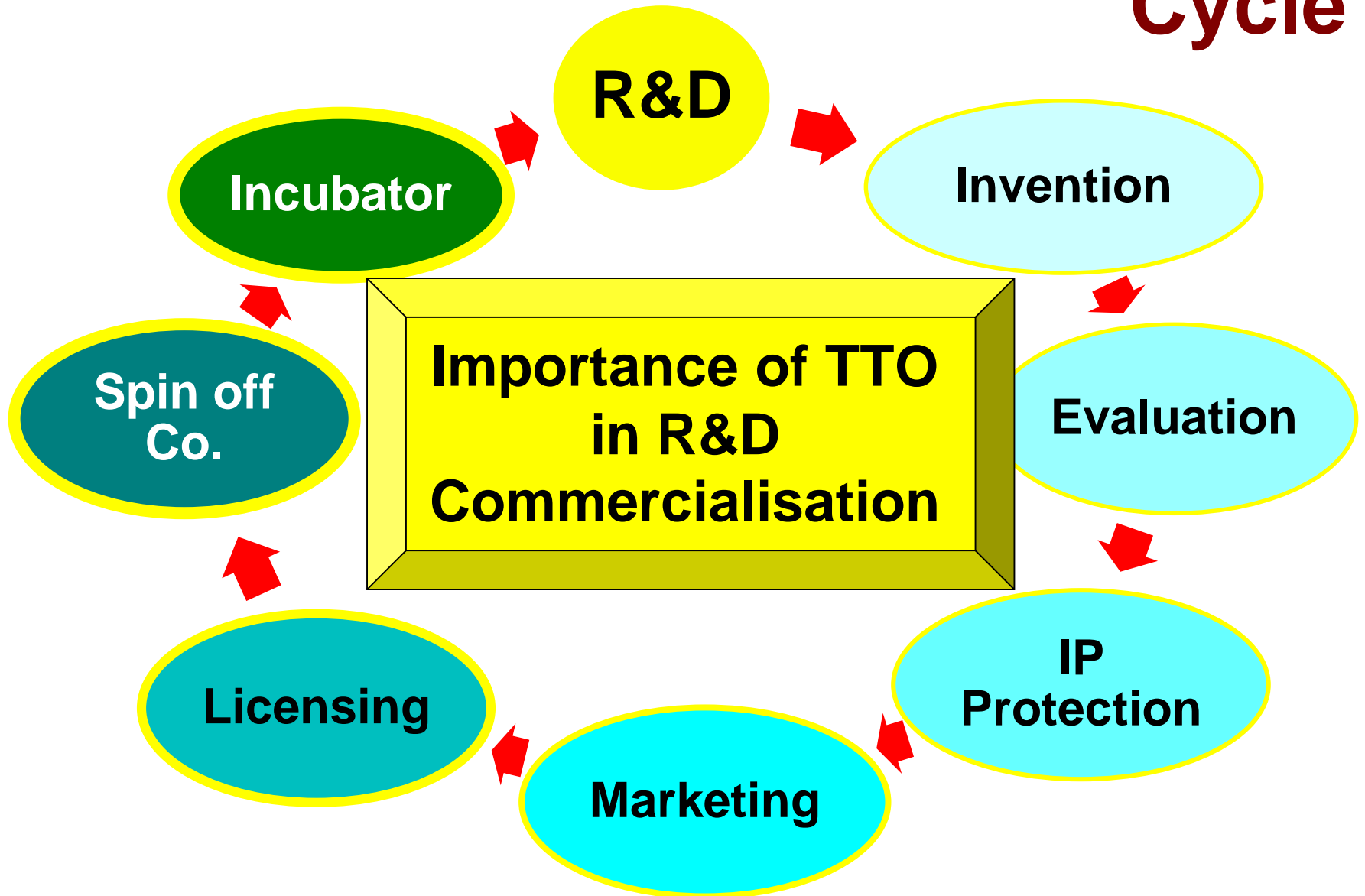


Invention disclosure process



Challenges

Transfer Technology Cycle



Organizational Structure

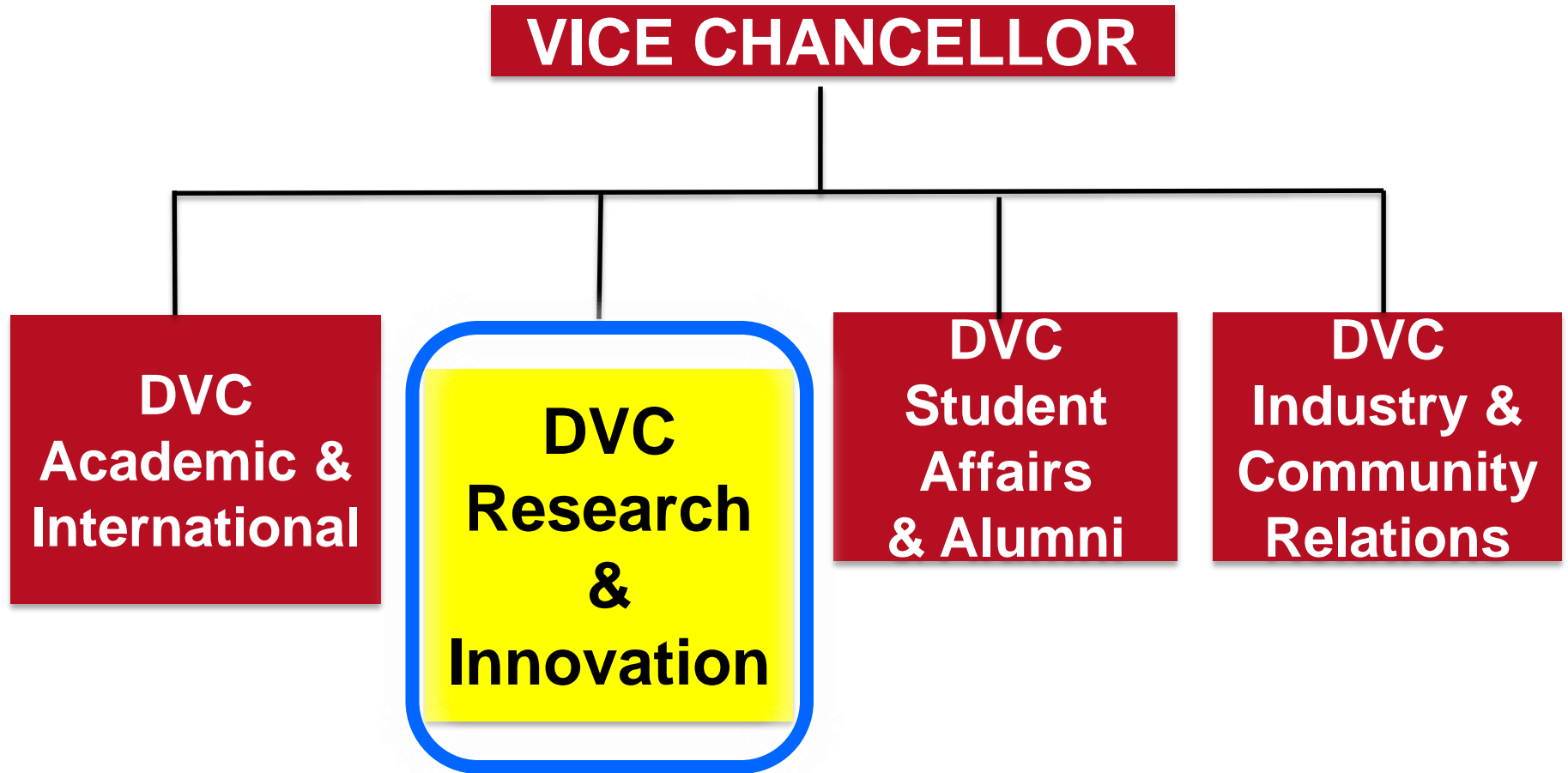
VICE CHANCELLOR

**DVC
Academic &
International**

**DVC
Research
&
Innovation**

**DVC
Student
Affairs
& Alumni**

**DVC
Industry &
Community
Relations**



Function as one stop centre

- **Patent Management**
- **Up scaling**
- **TT/Commercialisation**

Important policy making

- **Draw up strategies & policies**
- **Provide incentives**
- **Make it easy to commercialize technologies**

User friendly policies & guidelines

TTO – set the right environment

Policies that will:

- **Facilitate**
- **Motivate**
- **Enhance**

Synergize with research staff & private sector to commercialize technologies

Set right culture among researchers

- **Patent filing**
- **Commercialisation**

Handle Important Legal Aspects

Safeguard interest of all parties by negotiating & signing legal documents

-  **NDA before detail discussion on technical aspects**
-  **MoA for all terms negotiated**

Negotiate IP ownership - collaborators

Depend on contribution

❖ Negotiate for appropriate ownership

Attend to details in MoA

- **Exclusive or non-exclusive licensing?**
- **Can the licensee sub-license?**
- **Any limitations - eg, geographic or territorial, minimum sales, min. production requirement etc?**
- **Amount to be paid, frequency, & form of payment, eg either lump sum or by way of royalty, or both, or other payment schedule?**

Ensure appropriate revenue sharing

- **Recover expenses for IP protection & exploitation**
- **As revenue increases, inventor's % share decreases**
- **Revised as necessary due to inflation & other economic factors**

Establish entrepreneurship program

- ❖ **Key to TT success**
- ❖ **Mentoring by successful entrepreneurs**
- ❖ **Provide incentives**

Provide 1st Class Service

- Help & make it easy & flexible
- Provide prompt professional service
- Credit for promotion
- Commercialise IPs to generate income for researchers



Innovation

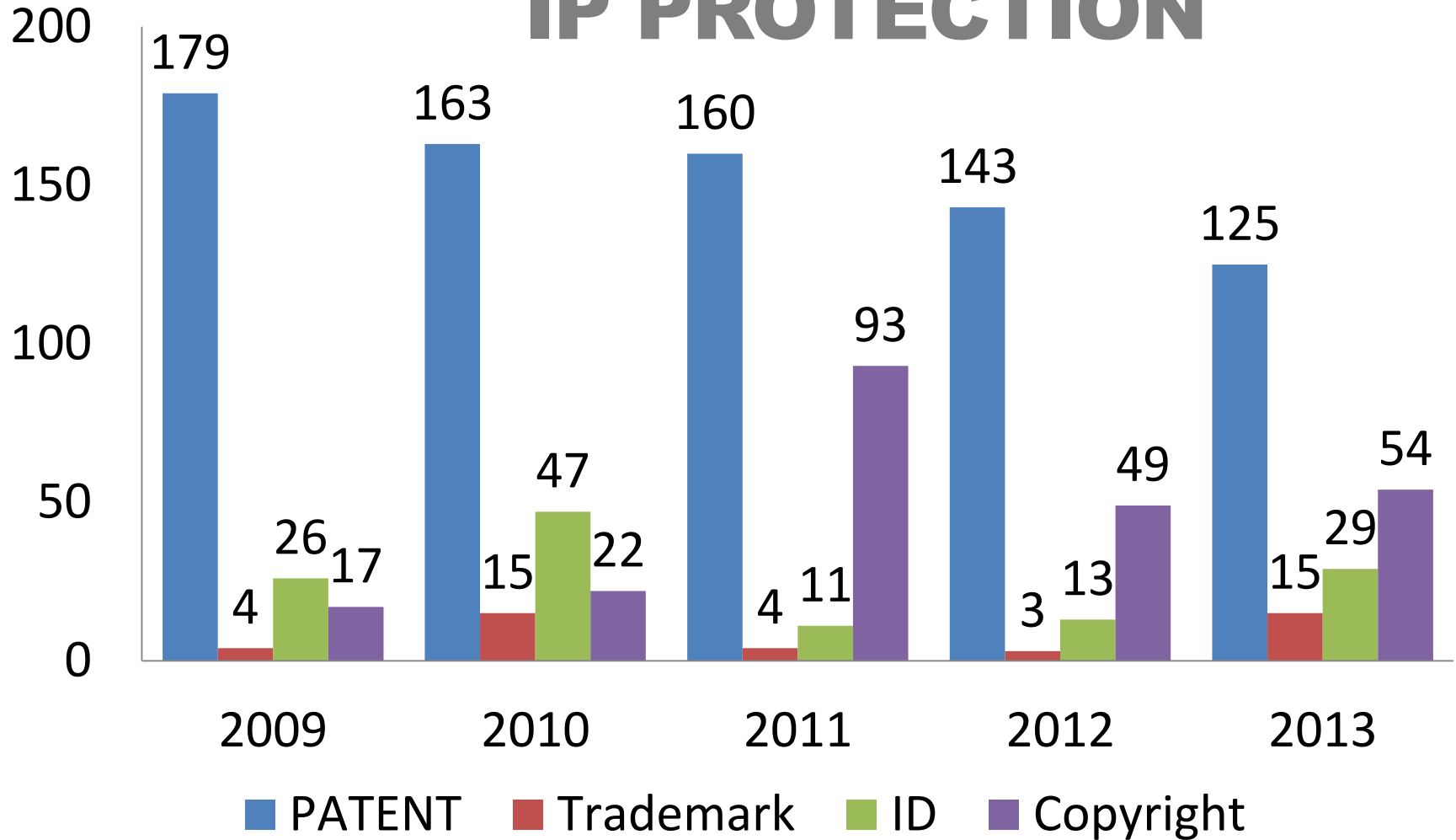
How it is done at

At

Universiti Putra Malaysia



IP PROTECTION



Cumulative Patent 2012

- 
- Australia
 - Brazil
 - Canada
 - China
 - Egypt
 - European
 - Hong Kong
 - India
 - Indonesia
 - Japan
 - Korea
 - Libya
 - Mexico
 - Morocco
 - New Zealand
 - Philippines
 - Singapore
 - South Africa
 - Sri Lanka
 - Switzerland
 - Taiwan
 - Thailand
 - UAE
 - United Kingdom
 - USA
 - Vietnam

108

Filed in
Foreign
countries

Technology Transfer Related Activities

- **New guidelines**
- **Innovation policy**
- **New funding mechanisms**
- **Incentives**
- **Trainings programs**



Introduce concept of
Wealth Creation
&
Nation Building

University Innovation Model



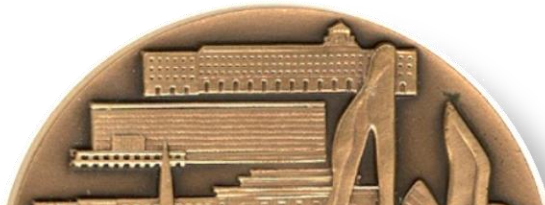
- 🏆 Massachusetts Institute of Technology (MIT) good model for innovation: –

*Wealth Creation
&
Nation Building*

- 🏆 Involvement in annual sales \$230B
- 🏆 Created 1,100,000 jobs

Contribution towards nation building?

Zero contribution
if technologies not
commercialised



Past main research output



- **Journal papers**
- **Presentations at seminars – national & international meetings**
- **Human resource development MSc, PhD**

Additional research output

More



Develop IP & technology transfer culture

Patents

Lab scale technologies

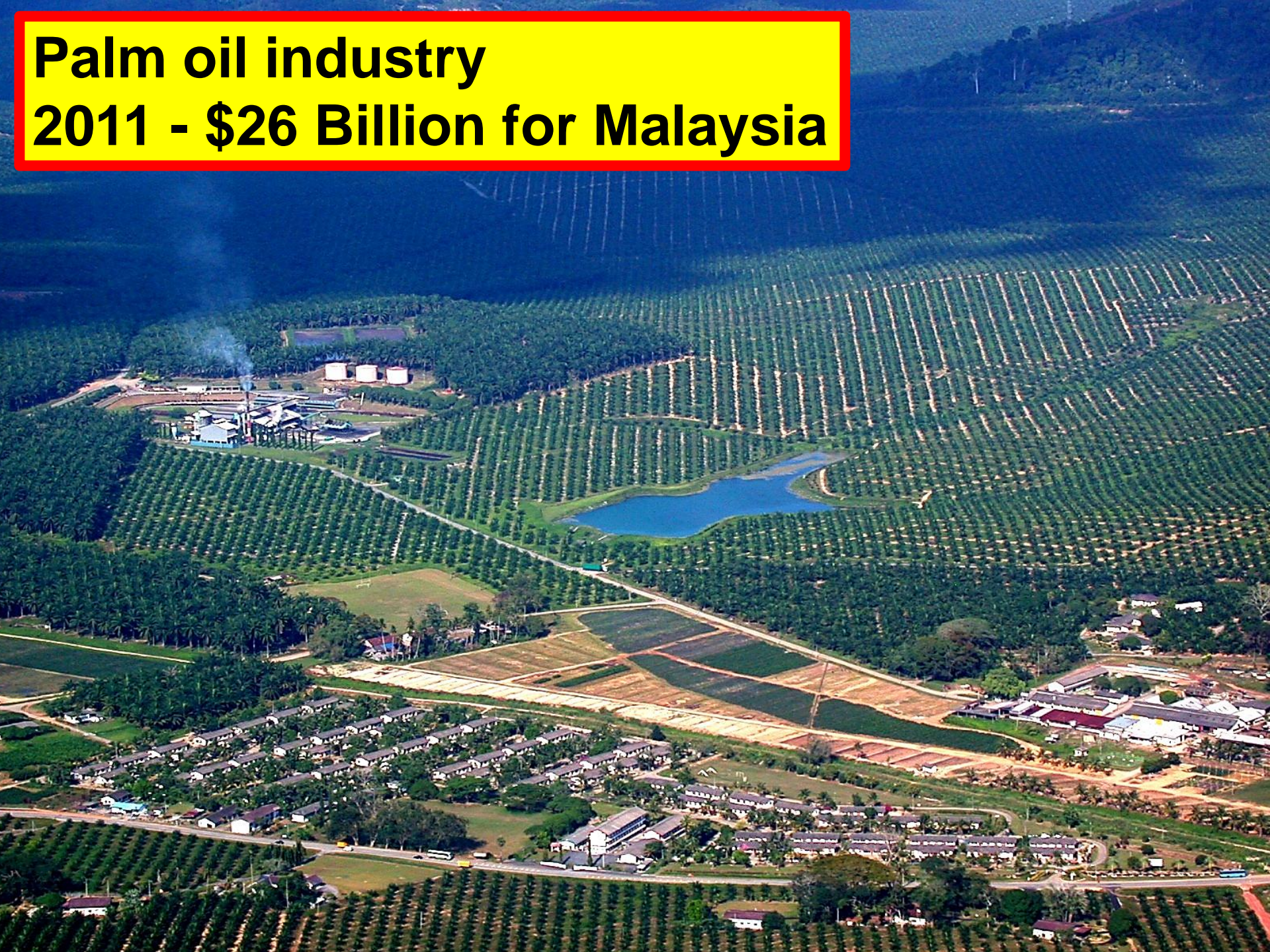
Change of mindset

Marketable products
(prototype)

Paradigm shift required

Good
understanding on
the Importance
of IP

Palm oil industry 2011 - \$26 Billion for Malaysia



Patent - financial benefit to nation

20% OER (Malaysia average)

\$26 Billion (2011)

**UPM - New patented
technology**

OER increased by 1%

+ \$260 million

increase by 2%

+ \$320 million





Awareness Campaign
*for top
management*

Awareness campaigns



*Involve the
total
enterprise!*

Top management

- Vice Chancellor
- Deputy Vice Chancellors
- Registrar
- Bursar
- Deans
- Deputy Deans



Awareness Campaign
for
researchers

Awareness campaigns

⚡ All academic staff

⚡ Road show to all faculties & Institutes



Get a feedback

Motivation!

Role of TTO to synergise with researchers

**SRI
Commercialisation
Training – 5 DOI**

*SRI International
USA*



**Advanced
Commercialisation
Course**

*Philip Mendes,
Australia*



Awareness campaign & training in IP

Phase I - Awareness & training campaigns

Phase II – Introduce policy & guidelines

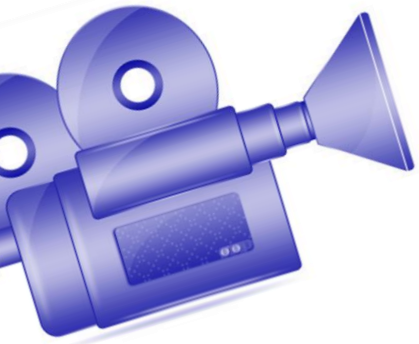
Phase III – Implementation of policy

Phase IV - Fine tuning & continuous improvement





Invention disclosure process



*A new culture in the
Univ. & PRIs!*

Disclosure/ Evaluation of technologies



Meeting every
2 weeks



Meeting every
week

- ☑ Learn about the technology
- ☑ Approve/reject patent/copyright/TS
- ☑ Fine tune

Disclosure/ Evaluation of technologies

Panel:

➤ Biotechnology

➤ Physics

➤ Engineer

➤ Biology

➤ IT

➤ Medical

➤ Business





➤ Chemistry



If approved:

Send to patent filing agents (6)

Confidentiality

-  Panel members sign a non-disclosure agreement (NDA)
-  Documents only distributed during meeting
-  Members cannot removed documents from meeting room
-  Documents are kept in a safety cabinet

No circulating of documents for approval!



Patent files in safety cabinets

Role of patent panel



Whether suitable for filing



Assess novelty



Non-obviousness



Prior art



Differences between prior art and disclosed technology



Process for Invention disclosure

Complete Invention Disclosure Form & Submit with prior art search documents



Applicant invited within 2 week for invention disclosure presentation



Approval/rejection letter sent within 1 week & if approved a copy to patent agent



The process at TT office - 3 weeks

Process for Invention disclosure

Agent meets applicant in TT office or faculty to assist finalise patent document



Agent given 3 months to work with Applicant to finalise patent document



TT office monitors document quality



Agent files for registration at MyIPO

IP Management

**Patent before participation in
exhibitions/seminars
& publishing**

**Protect the
technology!**

IP Management

Non disclosure agreement :-

- **Students**
- **Evaluators**

New guidelines!

Ownership of IP Rights and Revenue Sharing



Income for Researchers

**Distribution of income
generated from
commercialisation**

Researcher/
Inventor
75%

University
25%

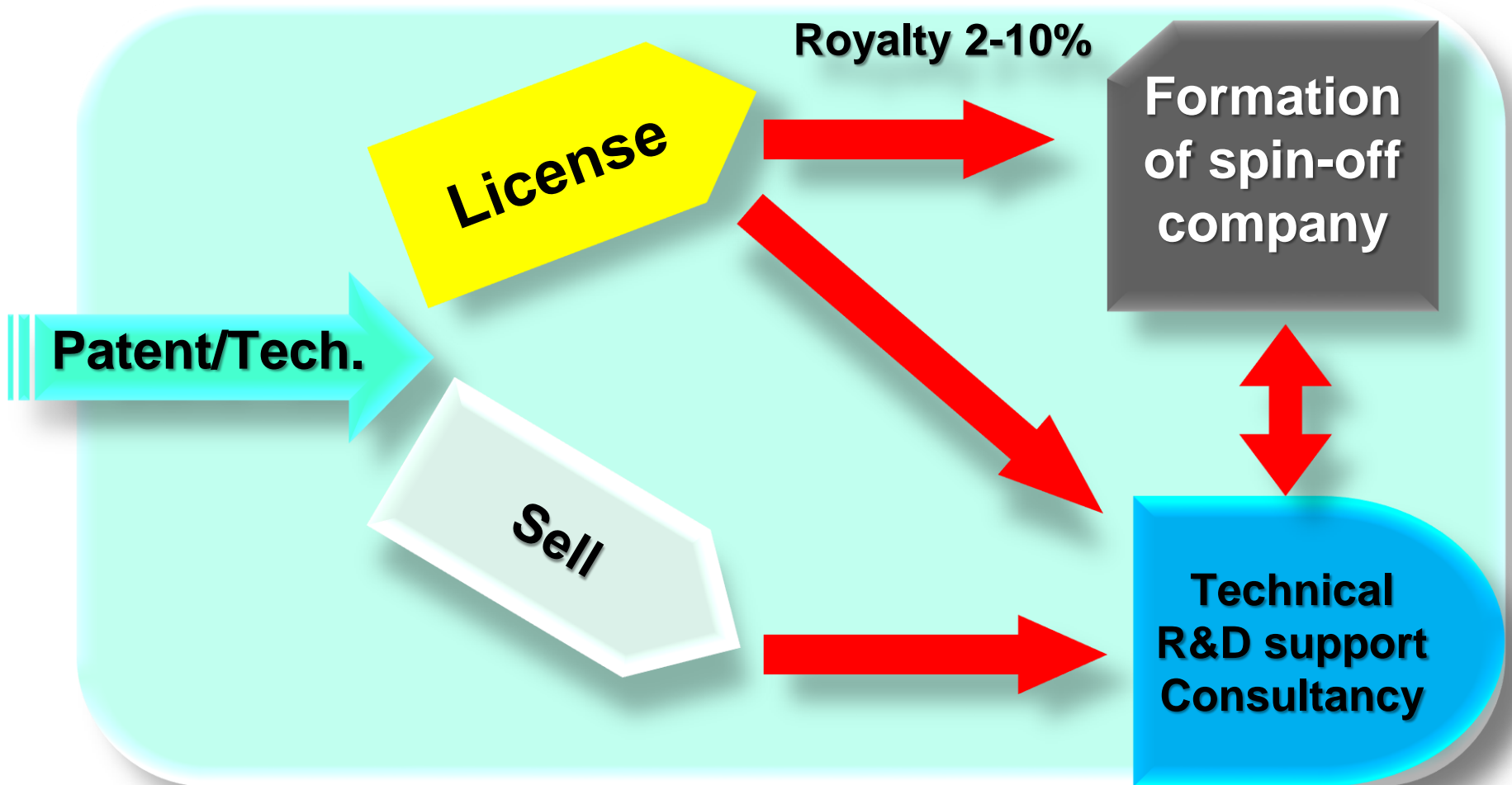


Technology transfer

Make it easy

& flexible

Modes : Technology Transfer





Issues & Challenges



Overcoming

New culture & shy scientists

- ❑ **The TT/ commercialization/ business is a new culture in University**
- ❑ **Scientists not aggressive in marketing themselves & their products**

Good agreement

Clearly spell out TOR

-  **Obligations & responsibilities of each party**
-  **Milestones & payments**



**Going global – working with
Stanford Research Institute
International**

Terima kasih

