



# What is Intellectual Property and Why is it important for Universities and R&D Institutions

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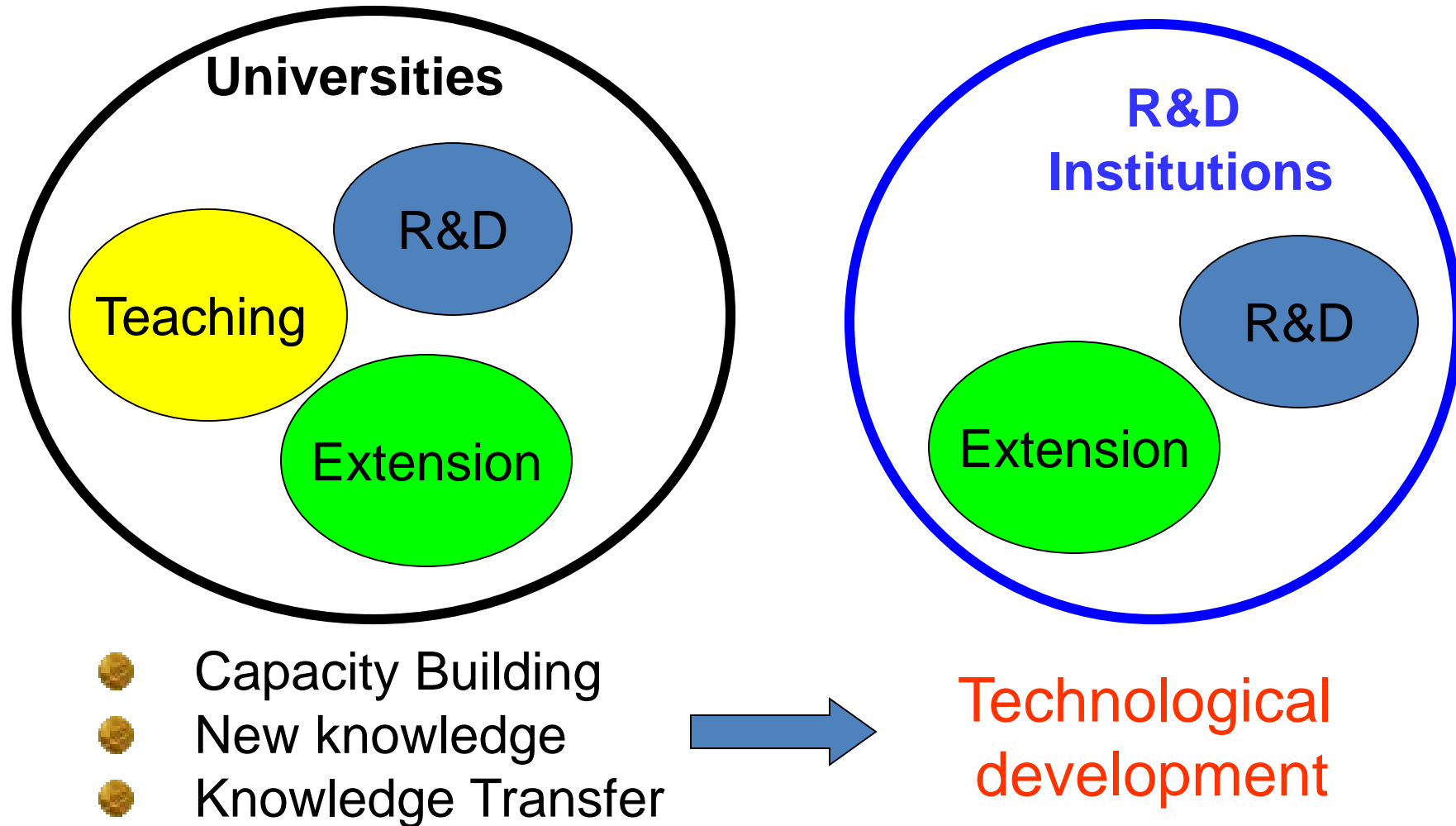
**National Intellectual Property Week for Kenya  
June 19-20, 2019**

# Content of Presentation

- Making R&D work for development
- Basic requirements to make R&D work for development
- Conclusions

# Making Research Work for Development

## 1.1. Mandates of RTOs



## 1.2. RESEARCH PRODUCTS

The direct product of research is knowledge. It can be in the form of

- New Technology
- New Product
- New Process
- Improvement in existing product, process or technology

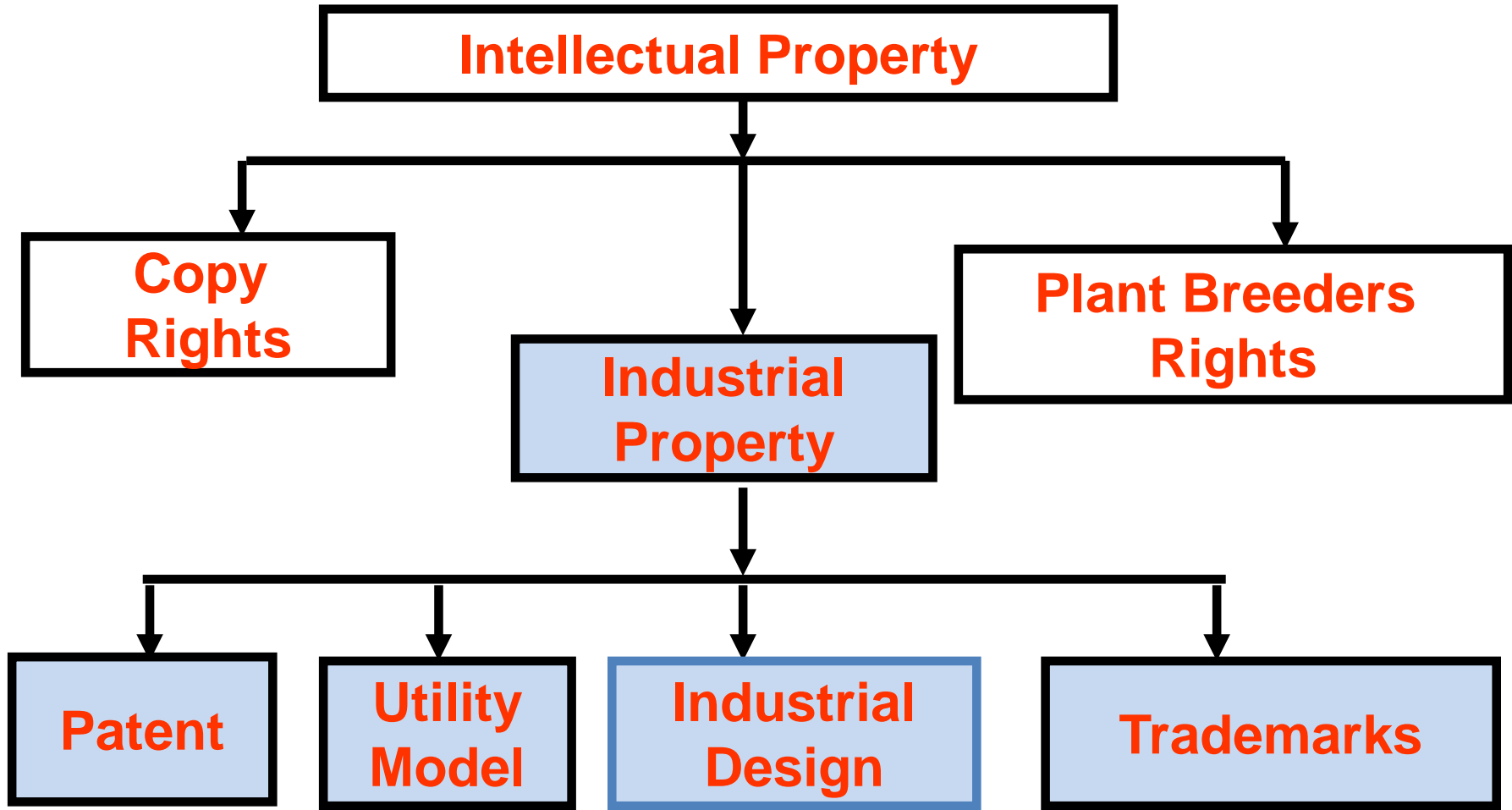
# Making Research Work for Development

## 1.3. Link of R&D with intellectual property

- New knowledge (Research Outputs) , if legally protected, becomes intellectual property assets
- Protection means nobody else can use it without owners Authority or permission
- Legally protected knowledge is called intellectual property

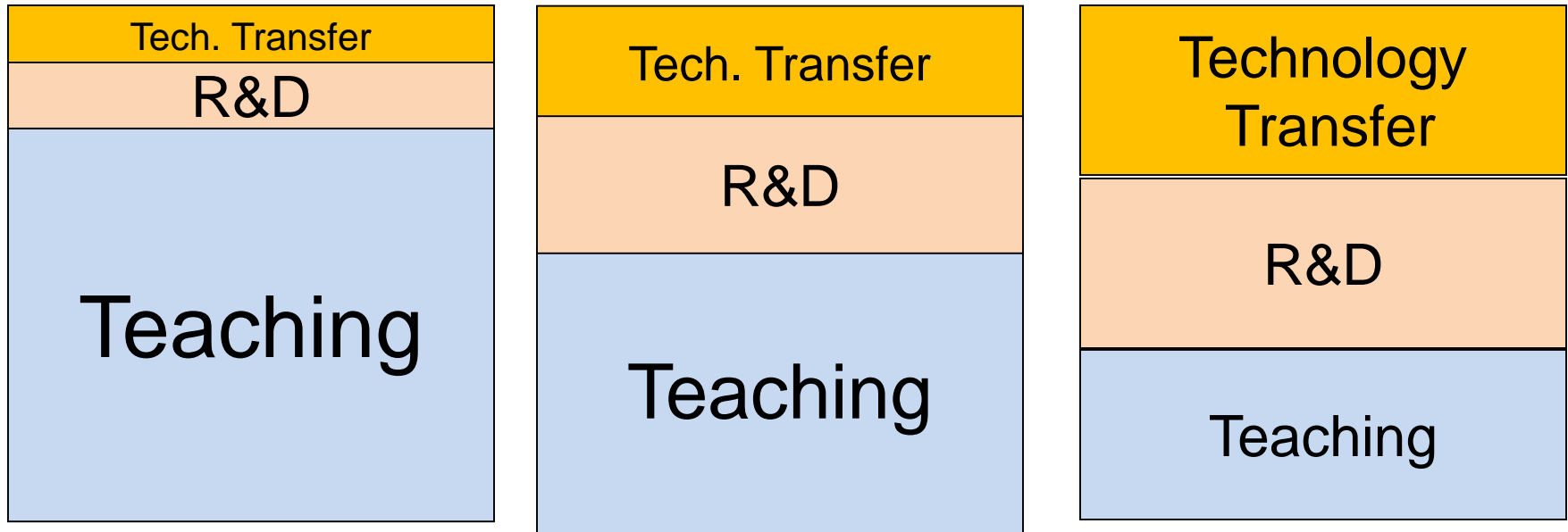
# 1.4. Possible Intellectual Property Rights for universities and R&D organizations

**Making Research Work for Development**



# 1.5. Balancing Teaching, research and dissemination

## Making Research Work for Development



Technological stages

## 1.6. Utilization Of Research Products

- Publication a traditional R&D output
- R&D is only useful if its products can lead to
  1. Job creation
  2. Poverty Reduction
  3. Industrialization
  4. Hunger
- These economic results can only be realized if can be transferred and taken up by users



## **1.7. Changing paradigm in the evaluation of performance of research**



### **Outputs**

1. No of Publications,
2. Patent applications, IP Assets generated, IP Assets Licensed



### **Outcomes**

1. Income from Technology Licensing
2. No of Companies created
3. Increase in sales, tax revenues, profitability
4. Jobs created

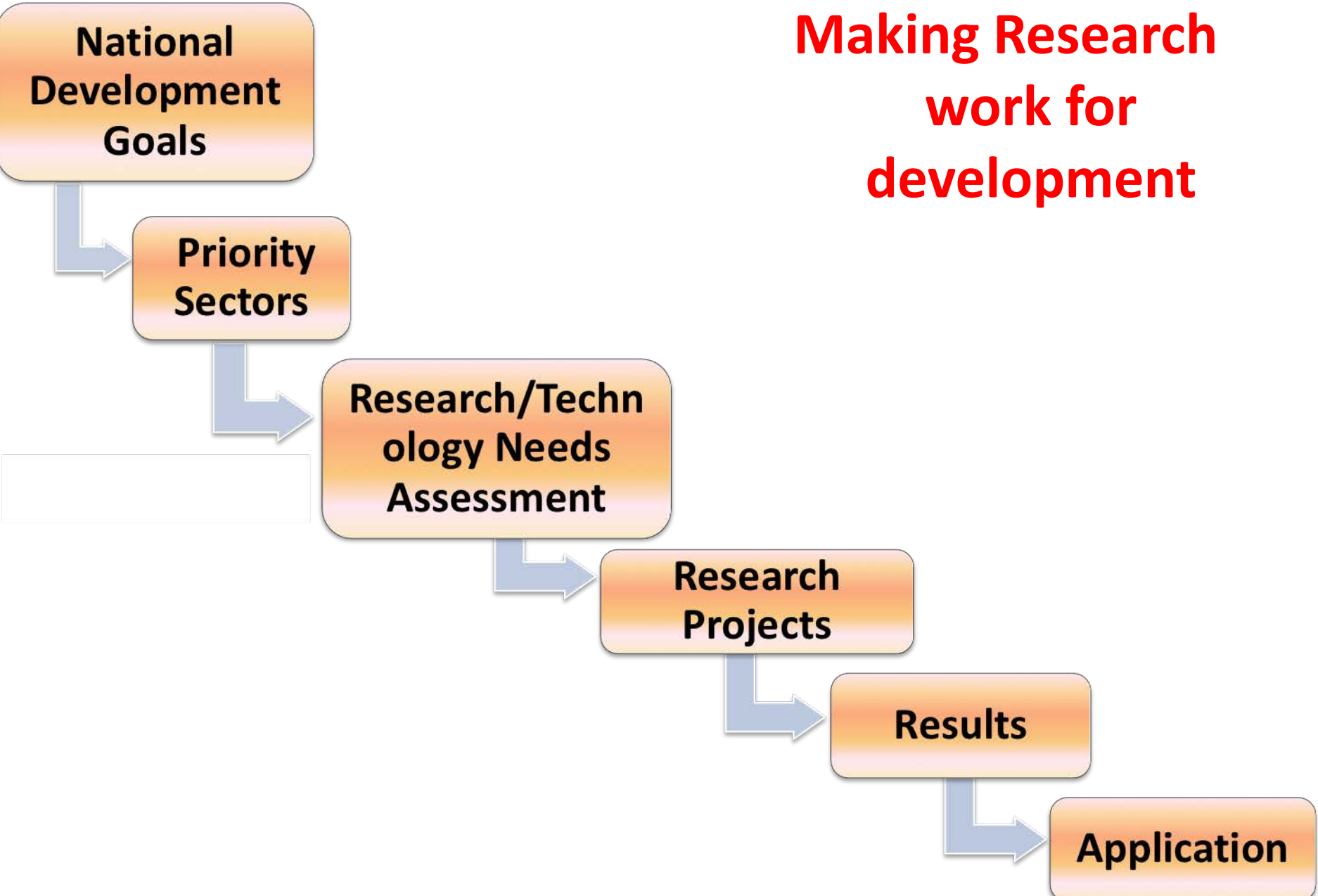


### **Impacts**

1. Contribution to the GDP

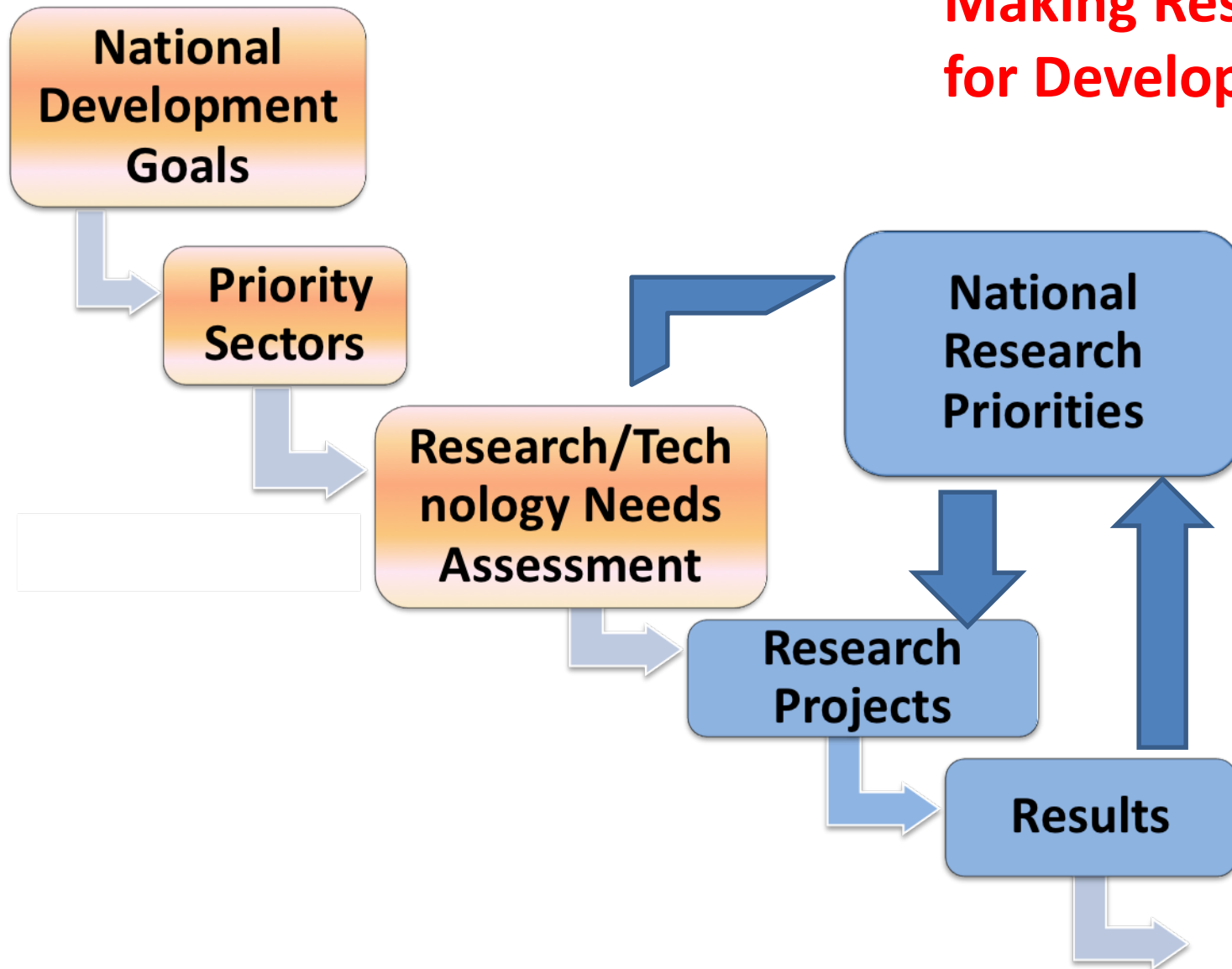
# 1.9. Linking Research Agenda to Development Goals

**Making Research  
work for  
development**

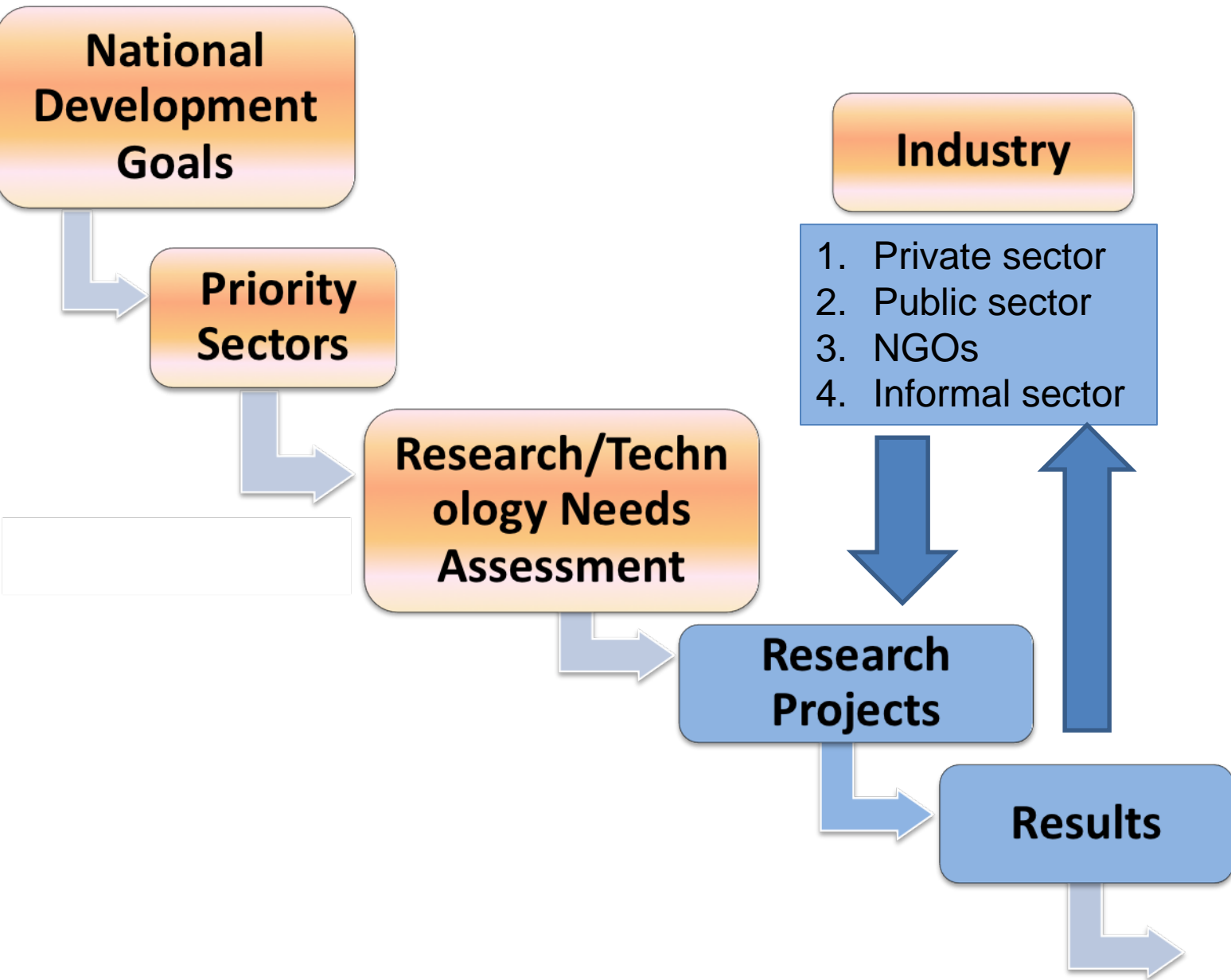


# 1.10. Linking Research Agenda to development agenda

## Making Research Work for Development



# 1.11. Linking Research Agenda to development agenda



## 2. Basic requirements to make R&D work for development

- Clear understanding of the available options for commercialization of R&D results
- Effective institutional IP policy
- Effective institutional support structure

# Basic Requirements for effective PPP

## 2.1. Routes for Technology Transfer by Universities and Research Organizations

- Own Exploitation
- Sell of IP rights
- Licensing
- Join Venture

**None of these routes will work without involving the private sector**

## Basic Requirements for effective PPP

### 2.1a. Own exploitation

University start a company based on its IP rights

- The inventor is willing to be involved in the exploitation
- The university has the required resources to invest
- Can be done as a way of testing the market (piloting)
- Is a strategy to attract high dividend in future

Unfortunately

- Own exploitation is currently based on informal departmental production units, with no intention to grow or to make profit
- Just like most traditional inventors, most departments do not want to let go their IP assets even if they are not making money

## Basic Requirements for effective PPP

### 2.1b. Sale of IP rights

University does this to:

- Get money back to invest in further R&D or product development
- Minimum risks, minimum returns
- Not preferred route because of lack of capacity to value the worth of the IP assets
- Companies are smarter, can get the technology through back door

Today not aware of a university that has sold its IP rights



## Basic Requirements for effective PPP

### 2.1c. Licensing

- Most preferred route by universities, both locally and abroad
- University allows an investor to exploit the technology, while it retains the IP rights. In exchange the university is given royalty
- Case study to explain more

### 2.1d. Joint Venture

- Second most ideal
- University brings the technology and knowhow
- Private sector brings in finance and management skills
- Both make ideal partners
- Very few cases – perhaps due to mistrust between universities and private sector
- Some success made through pilot projects models

# Basic requirements for effective technology transfer

## 2.2a. Effective Institutional IP Policy

- Provide guidelines on key issues related to creation, protection and commercialization of IP Assets
- Harmonize conflicting interest on various stakeholders particularly on the issue of ownership of IP rights and benefit sharing
- Define obligations and responsibilities of universities, research organizations and the Inventors

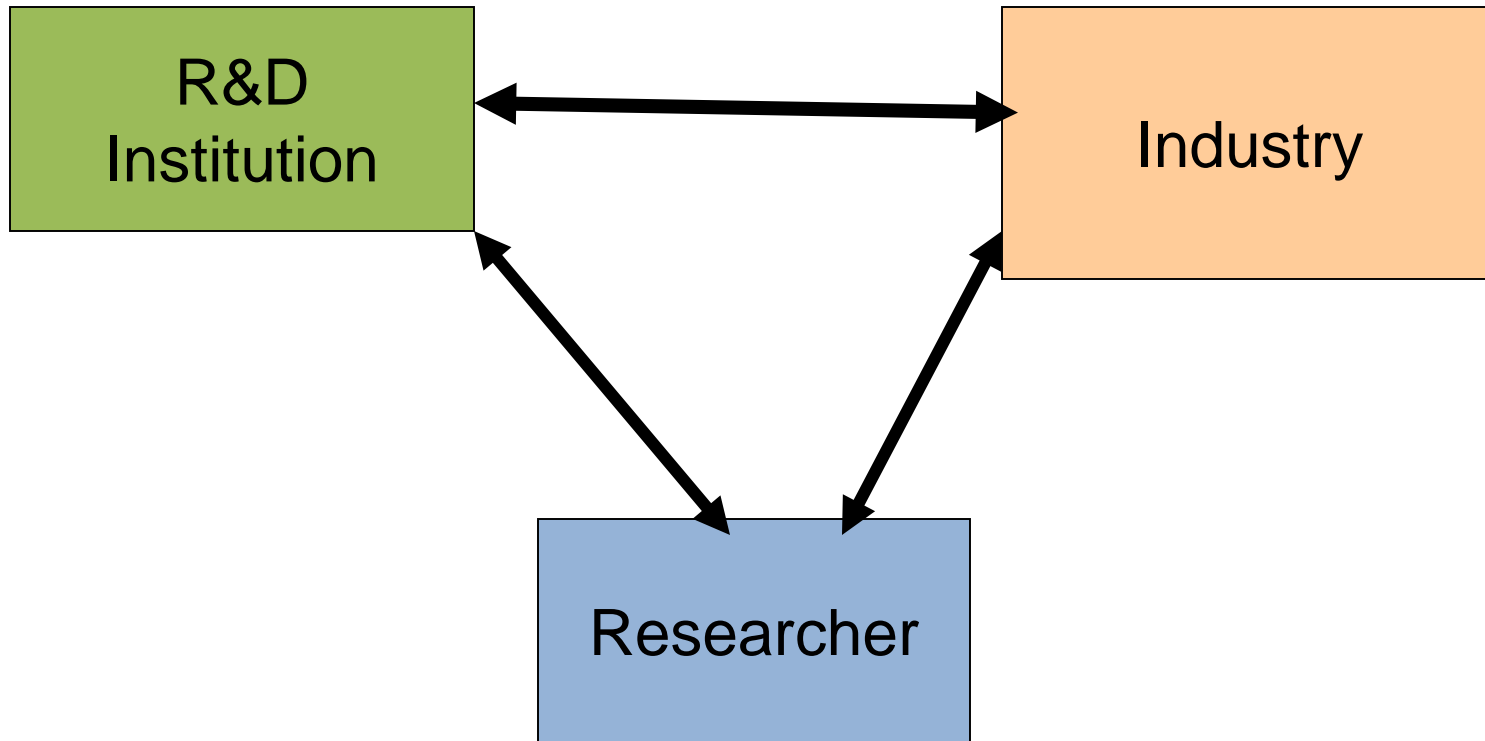
# Basic requirements for effective technology transfer

## 2.2b. Effective Institutional IP Policy (key issues)

- Ownership of IP public funded research
- Benefit sharing
- Collaboration with the private sector
- Collaboration with other universities abroad
- Patenting or Publishing
- Promotions based on IP
- Funding of IP
- Tapping innovativeness of the youth
- Mining of the “lost” IP in publication and dissertation

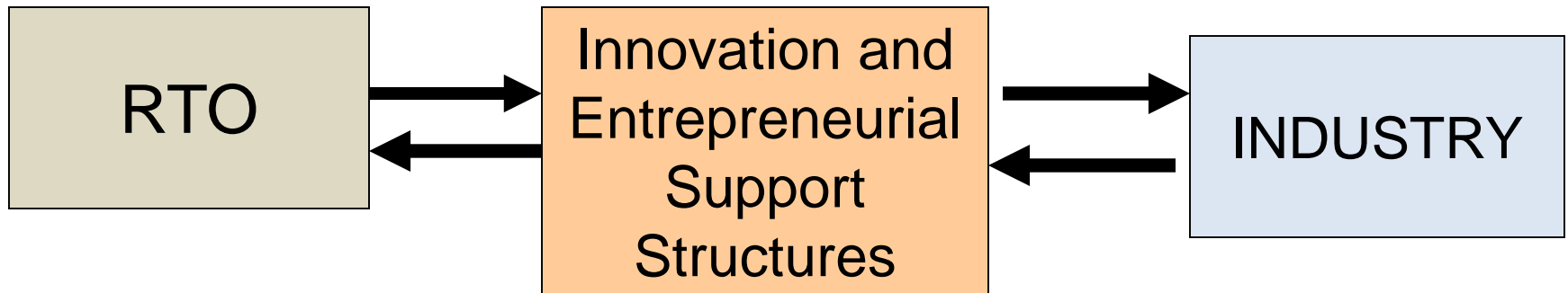
## 2.3a. Effective support structure for technology transfer

**Barriers and challenges**



# Support structures

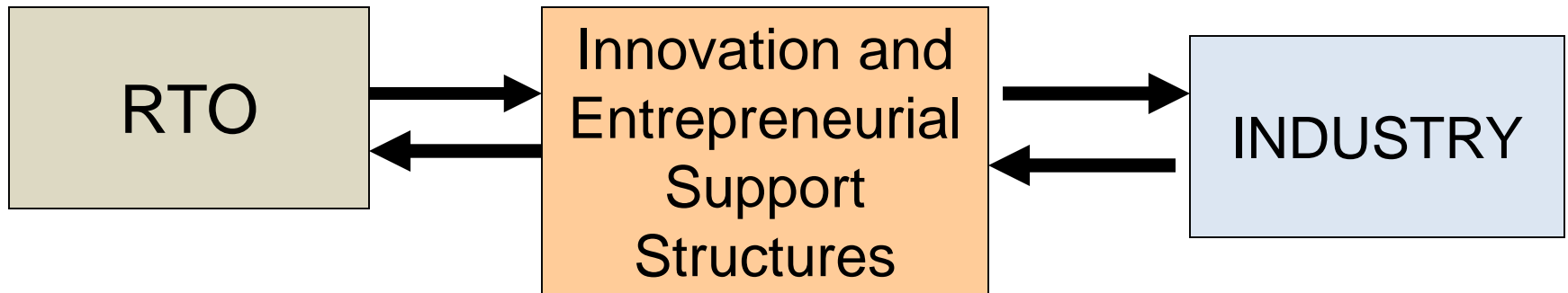
## 2.3b. What is support structures for TT



Administration Units that supports and facilitates disclosure, protection, technology transfer and commercialization of R&D results

# Support structures

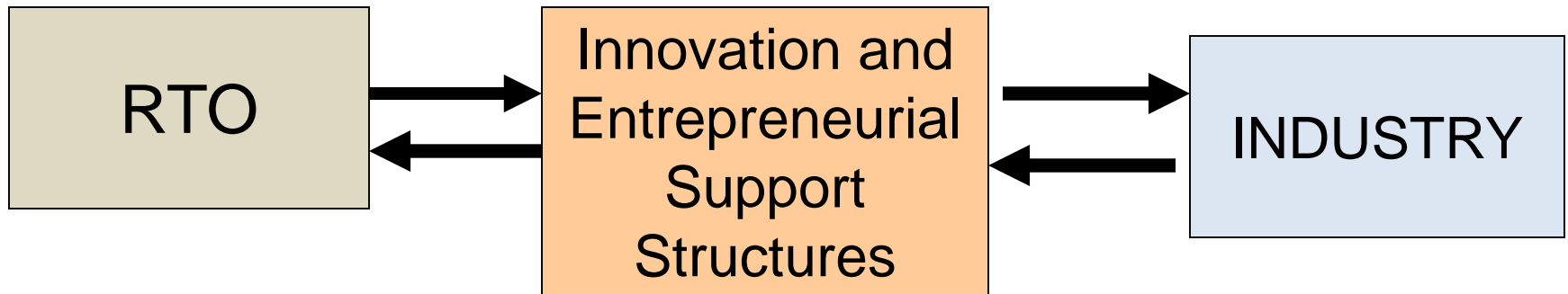
## 2.3c. Need for support structures for TT



Understands RTO culture, speaks the language of industry and behaves like a private enterprise

# Support structures

## 2.3d. Examples of support structures



- Technology Transfer Office
- Business Incubation Services
- University Companies
- Industrial/Science Park



# Conclusions

## 3. What we would like to see

- Government recognizes the importance of R&D for economic development and funding it
- Researchers are addressing local problems
- Knowledge generated through R&D activities is transferred to the Industry
- Strong and self sustaining linkages with industries
- Industries are funding R&D activities
- R&D institutions producing new industries
- IP and Innovation are integrated in the research culture of the university and research organization