

# Technology Transfer – a process of economic discovery



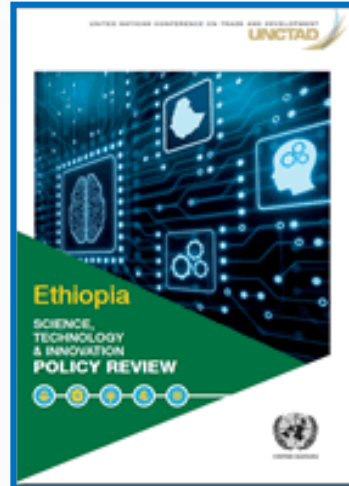
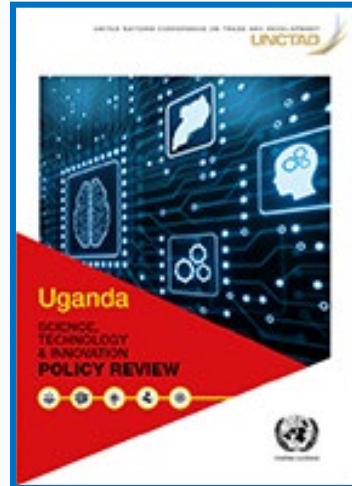
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# UNCTAD STI Policy Reviews

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Science, technology and innovation / Strengthening National Innovation Systems

## Strengthening National Innovation Systems

Science, Technology and Innovation Policy Reviews (STIP Reviews) are undertaken by UNCTAD at the request of member States.

Through a STIP Review, a country's STI stakeholders can identify the key strengths and weaknesses of their innovation systems and establish strategic priorities for its development.

The STIP Review report published by UNCTAD includes a diagnosis of the national system of innovation (NSI), an assessment of the STI policies in place, and is normally complemented by in-depth studies of specific sectors, institutions or STI-related problems that are of particular relevance to the country under review.

The STIP Review process is also intended to raise awareness and to stimulate a policy dialogue among stakeholders about the role of STI in national development and to encourage the emergence of stronger linkages among the STI players.

Another key goal of the STIP Review process is to identify practical actions that favour technological capacity-building (the capacity to generate, absorb and diffuse knowledge and to create and support dynamic linkages and learning processes among STI stakeholders) and the strengthening of their innovation capabilities (the practical and productive materialization of science and technology into socially or commercially valuable products and services).

STIP Reviews can provide the basis for capacity-building activities targeting various elements of the innovation system. In several beneficiary countries, STIP Reviews have ignited significant renewal in STI policy, helped raise its profile in national development strategies and facilitated the inclusion of STI activities in international cooperation plans.

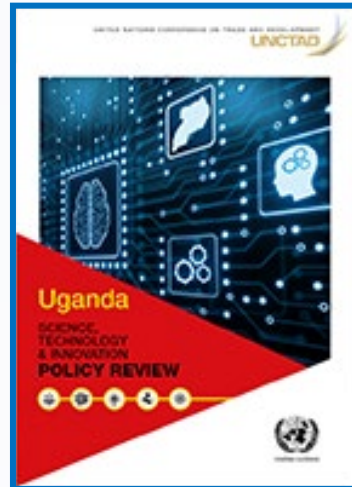
## Documents and Publications

Examen de las políticas de ciencia, tecnología e innovación : República Dominicana  
UNCTAD/DTL/STICT/2020/8 - 26 Apr 2021  
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**OBJECTIVE:**

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**1. Technology Transfer – a process of economic discovery**

2. Absorptive capacities and innovative capabilities

3. Channels of technology transfer



# 1. Technology Transfer – a process of economic discovery

2. Absorptive capacities and innovative capabilities

3. Channels of technology transfer





# 1. Technology Transfer – a process of economic discovery ... definitions not changed much

“... the systematic knowledge for the application of a process that results in the manufacture of a product or the delivery of a service.”

(UNCTAD, 1985, 2014)

“... systematic, theoretical, and practical knowledge and skills, used in the process of development, delivery and implementation of a service or product.”

(Burgelman, 2008)



# 1. Technology Transfer – a process of economic discovery ... *transactions* also not changed much

- Purchase or lease of machines, **equipment**
- Purchase of intellectual property (**licences**)
- Transfer of systematic **knowledge** for the:
  - ✓ manufacture of a product
  - ✓ application of a process
  - ✓ rendering of a service ... ... and often includes:
- transfer of knowledge to **install and operate** equipment
- transfer of technical cooperation, technology transfer **agreements**

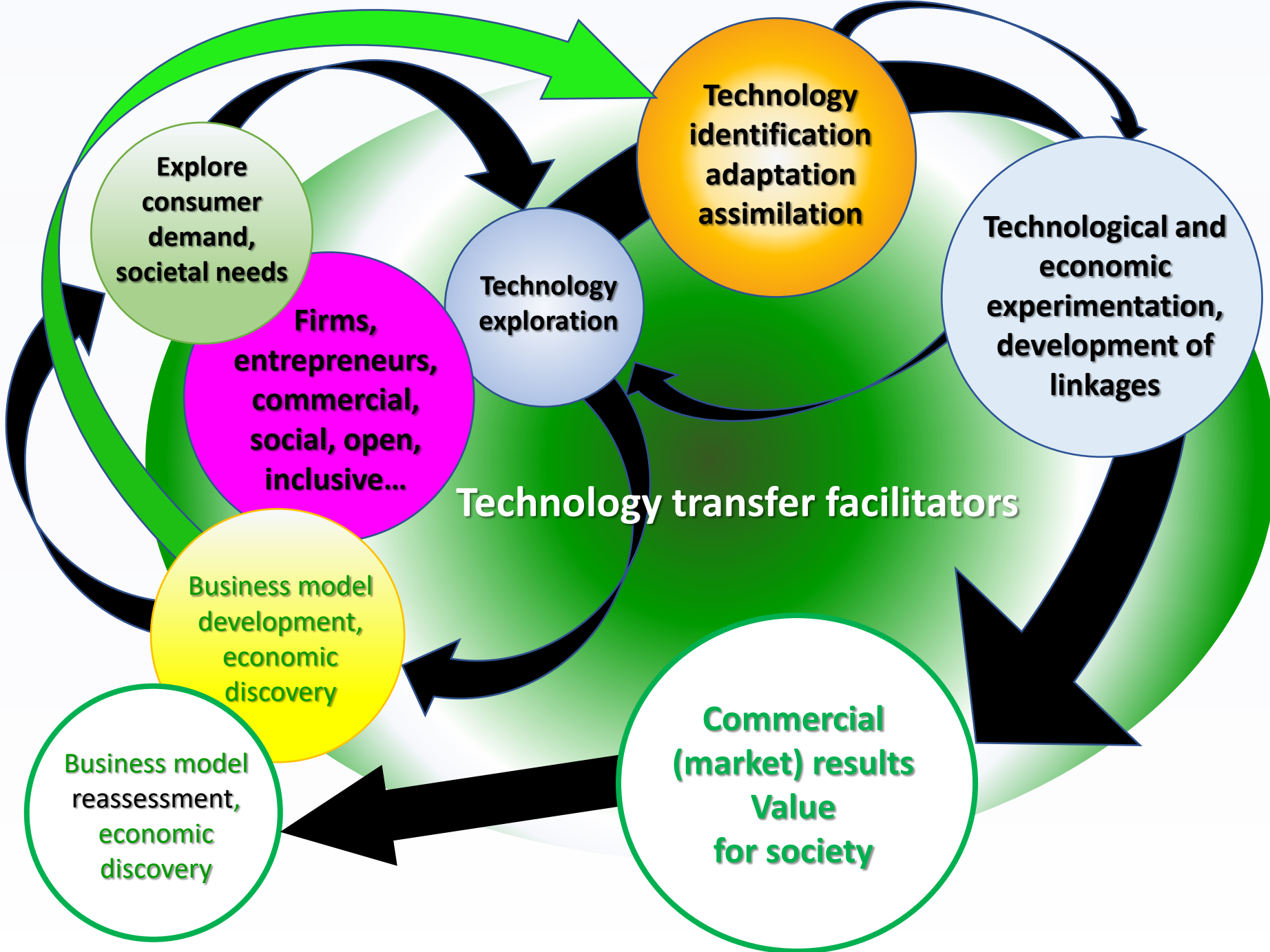


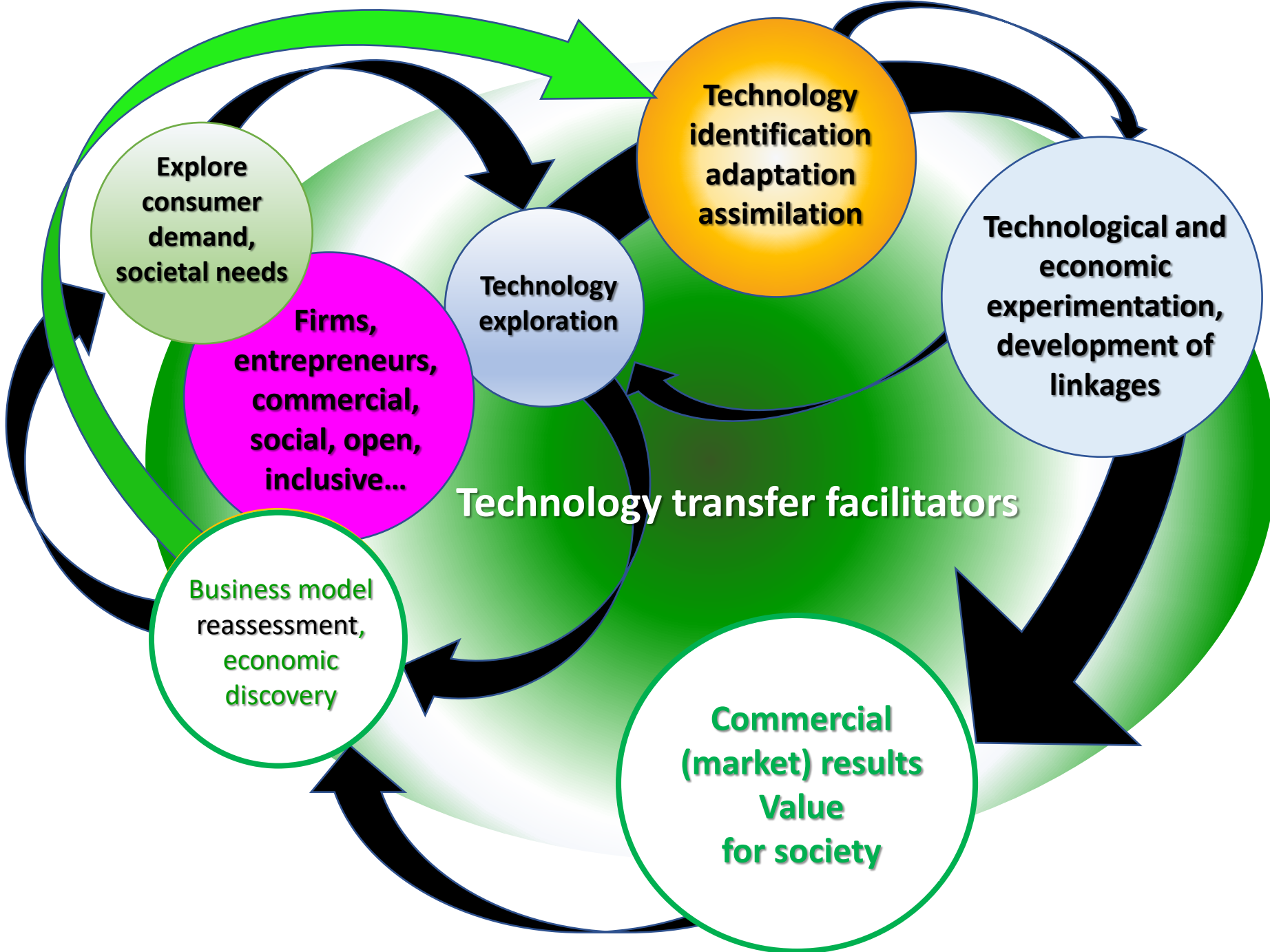
# 1. Technology Transfer – a process of economic discovery

**Technology  
identification  
adaptation  
assimilation  
Transfer**











# Why?

- Innovators (entrepreneurs, firms) are included
- Avoids “solutions looking for problems”
- Addresses Lab-to-field challenges
- Rationale to engage financiers, investors
- Technology transfer facilitators recognized
- Consumers/citizens needs better understood
- More complete scope of stakeholders
- **Reflects NSI framework, networks for value creation**





# National System of Innovation

Linkages

Interactions

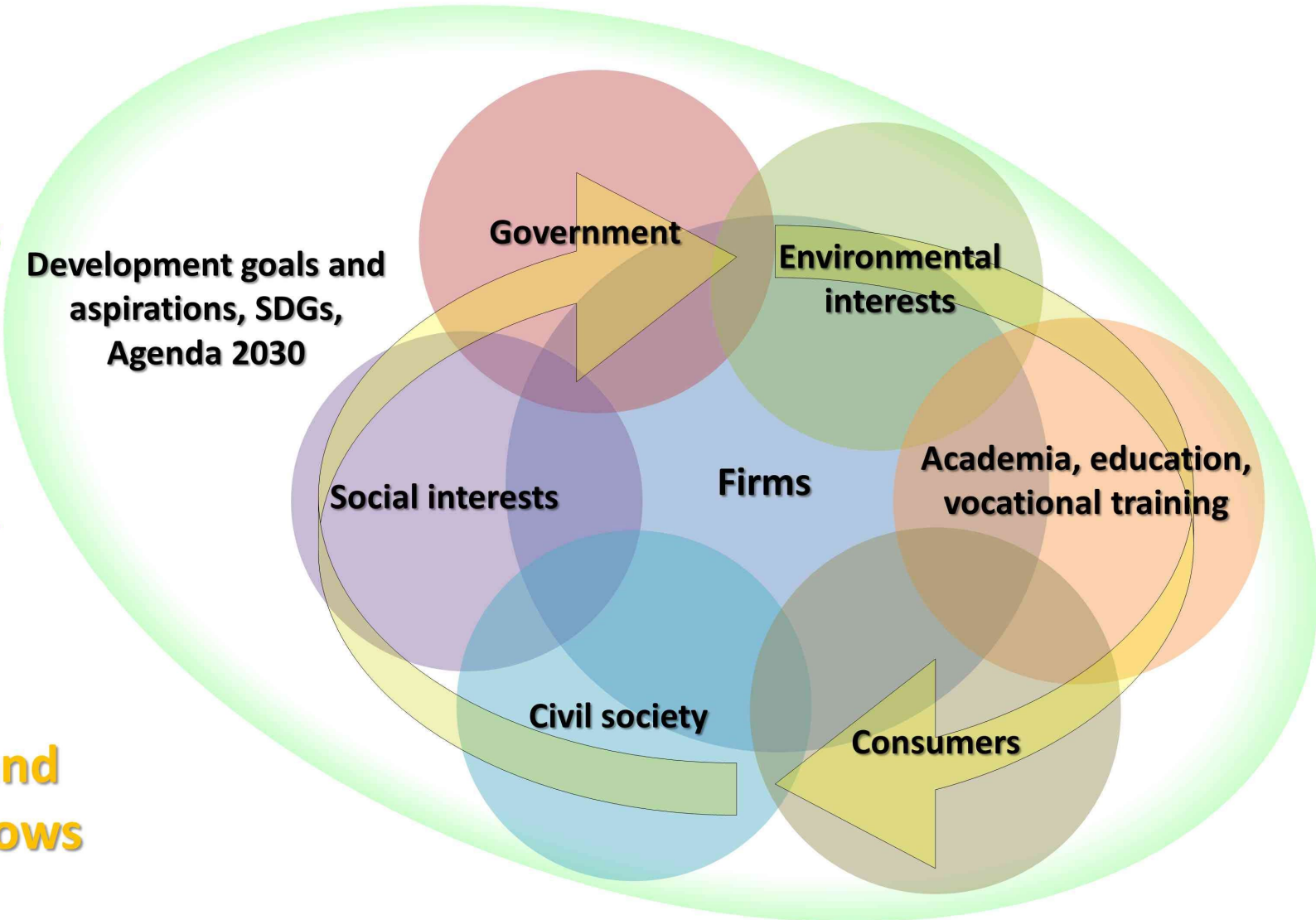
Relationships

Quantity  
Quality

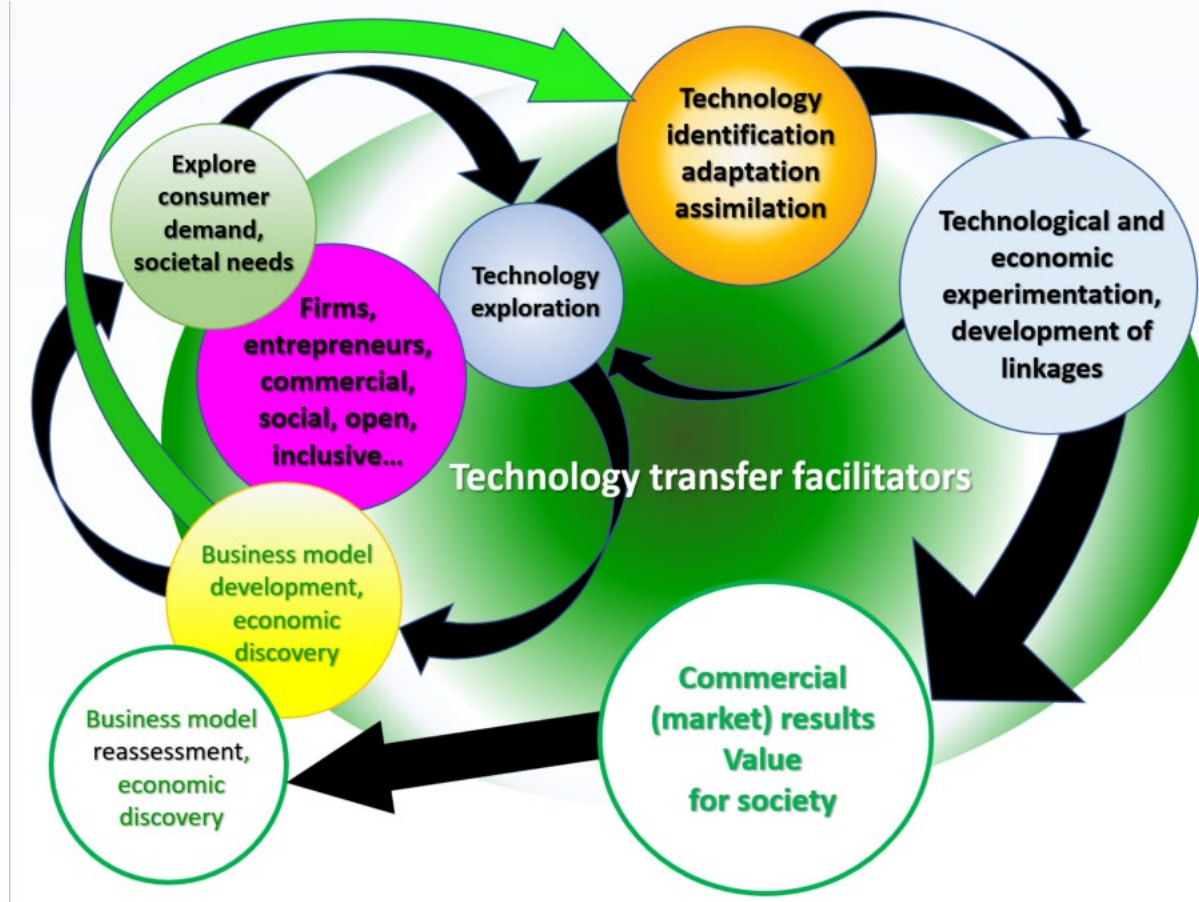
Stakeholders

Capability  
Capacity

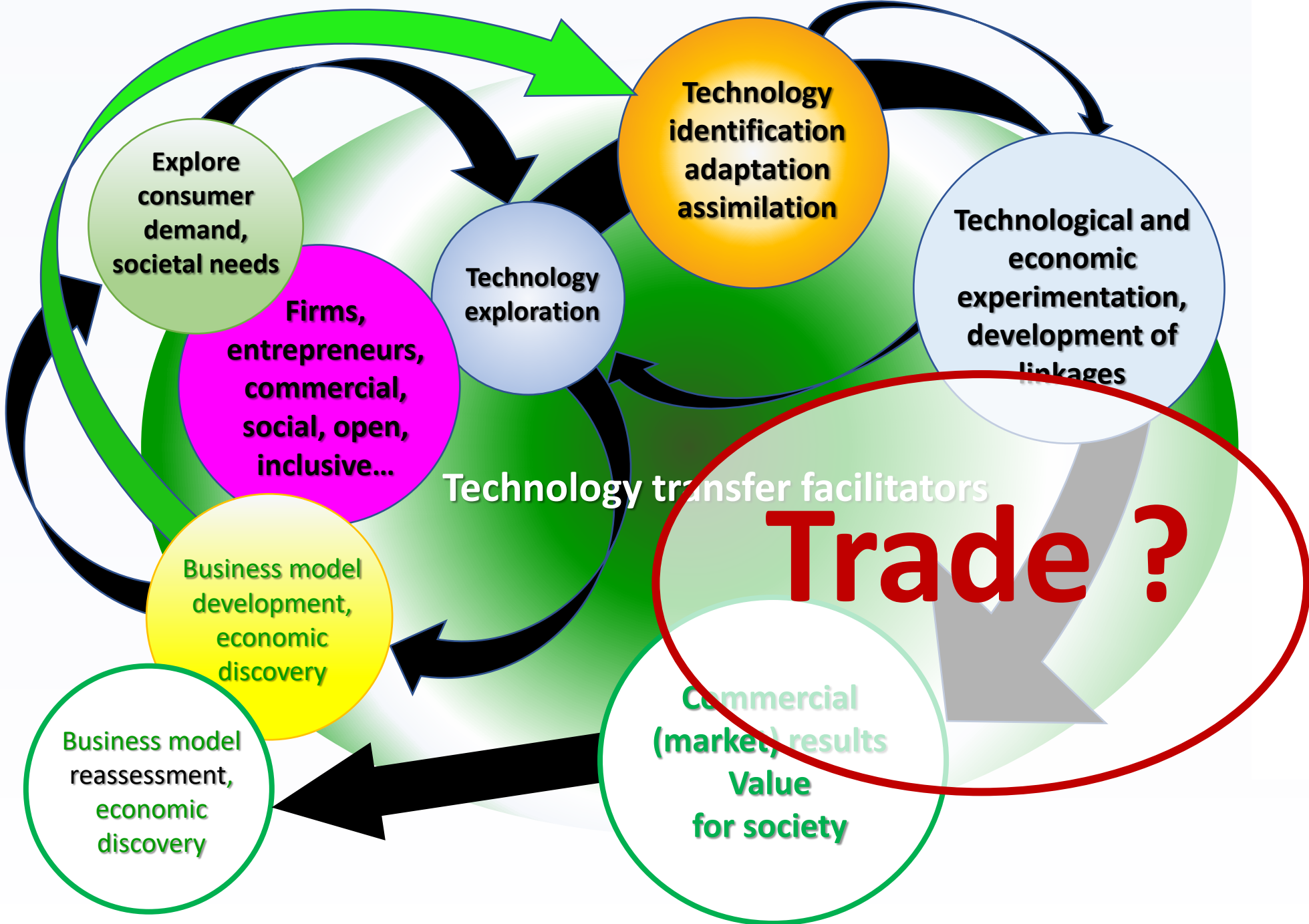
Learning,  
technology, and  
knowledge flows



# So where is trade in all this?









# STI policy and trade policy (agreements) links

- Intellectual property rights
- Market access – import tech, export tech products
- Standardization: common standards and technical regulations, compatibility and interoperability of technologies
- R&D collaboration
- Competition policy
- Support for SMEs, participation in GVCs



# Practical example of successful technology transfer?



IMPACT on SDGs

**ASYCUDA**  
Automated System for Customs Data



**ASYCUDA COMPENDIUM 2022**  
DIGITAL CONNECTIVITY FOR INCLUSIVE TRADE

ASYCUDA Compendium 2022  
Digital Connectivity for Inclusive Trade

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- User Countries
- Partners
- Forum
- Customs & Trade
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# Practical example of successful technology transfer...

The **Automated System for Customs Data (ASYCUDA)** is a computerized customs management system

**Started in 1981, UNCTAD regularly designs and develops new versions,** uses the latest open and web-based technology

**Preparation > Pilot > Roll-Out**

Reforms, capacity building, **technology transfer**

**Full transfer of know-how to ensure national long-term sustainability**

**102 countries, 51 operational projects, 7 regional/interregional**

**Impact:** increase in customs revenue yield, reliable trade statistics and reduction in average clearance time





# Thank you!



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