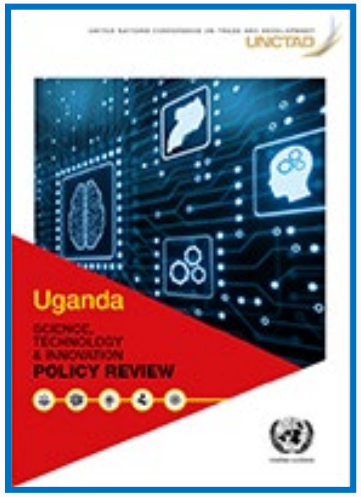
Technology Transfer –
a process of economic discovery

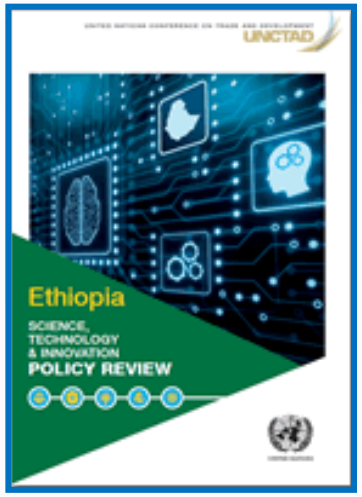
UNCTAD | Prosperity for all

Dimo Calovski
Science, Technology and Innovation Policy Section
DTL – UNCTAD
Email: dimo.Calovski@un.org

UNCTAD STI Policy Reviews

1. Botswana
2. Zambia*
3. Dominican Republic
4. Uganda*
5. Ethiopia
6. Panama
7. Rwanda*
8. Iran
9. Thailand
10. Oman*
11. El Salvador
12. Ghana
13. Peru
14. Lesotho
15. Mauritania
16. Angola

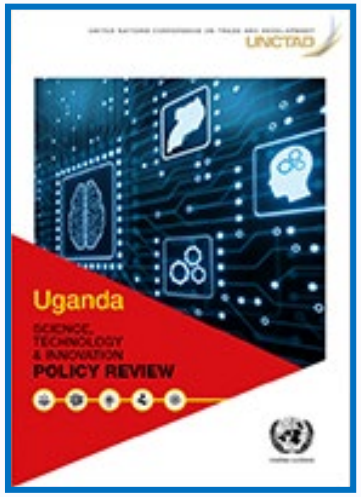




https://unctad.org/publications-search?f[0]=product%3A635

UNCTAD STI Policy Reviews

1. Botswana
2. Zambia*
3. Dominican Republic
4. Uganda*
5. Ethiopia
6. Panama
7. Rwanda*
8. Iran
9. Thailand
10. Oman*
11. El Salvador
12. Ghana
13. Peru
14. Lesotho
15. Mauritania
16. Angola



OBJECTIVE: ✓

https://unctad.org/publications-search?f[0]=product%3A635

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 th 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**

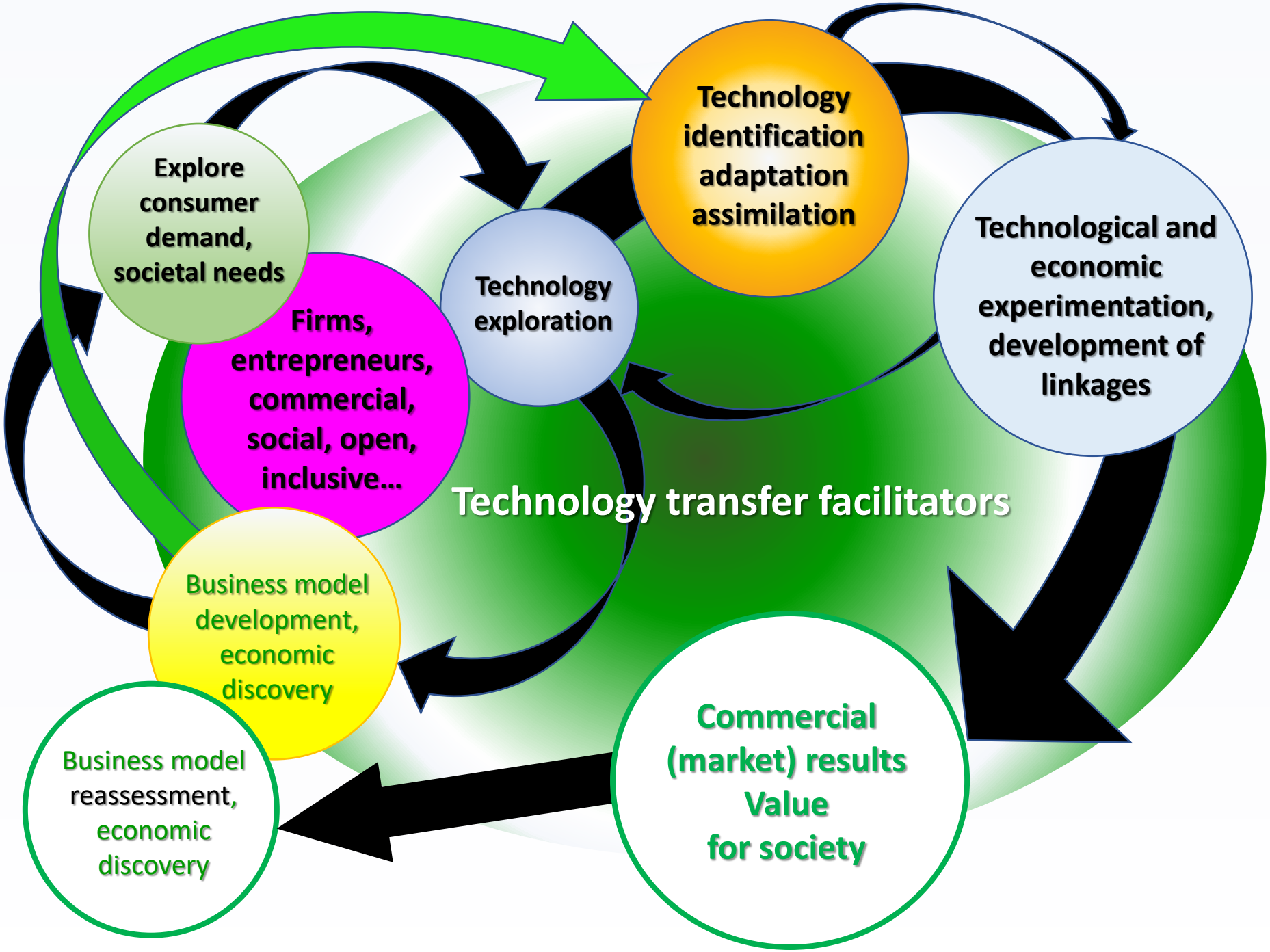
UNCTAD | Prosperity for all

1. Technology Transfer –

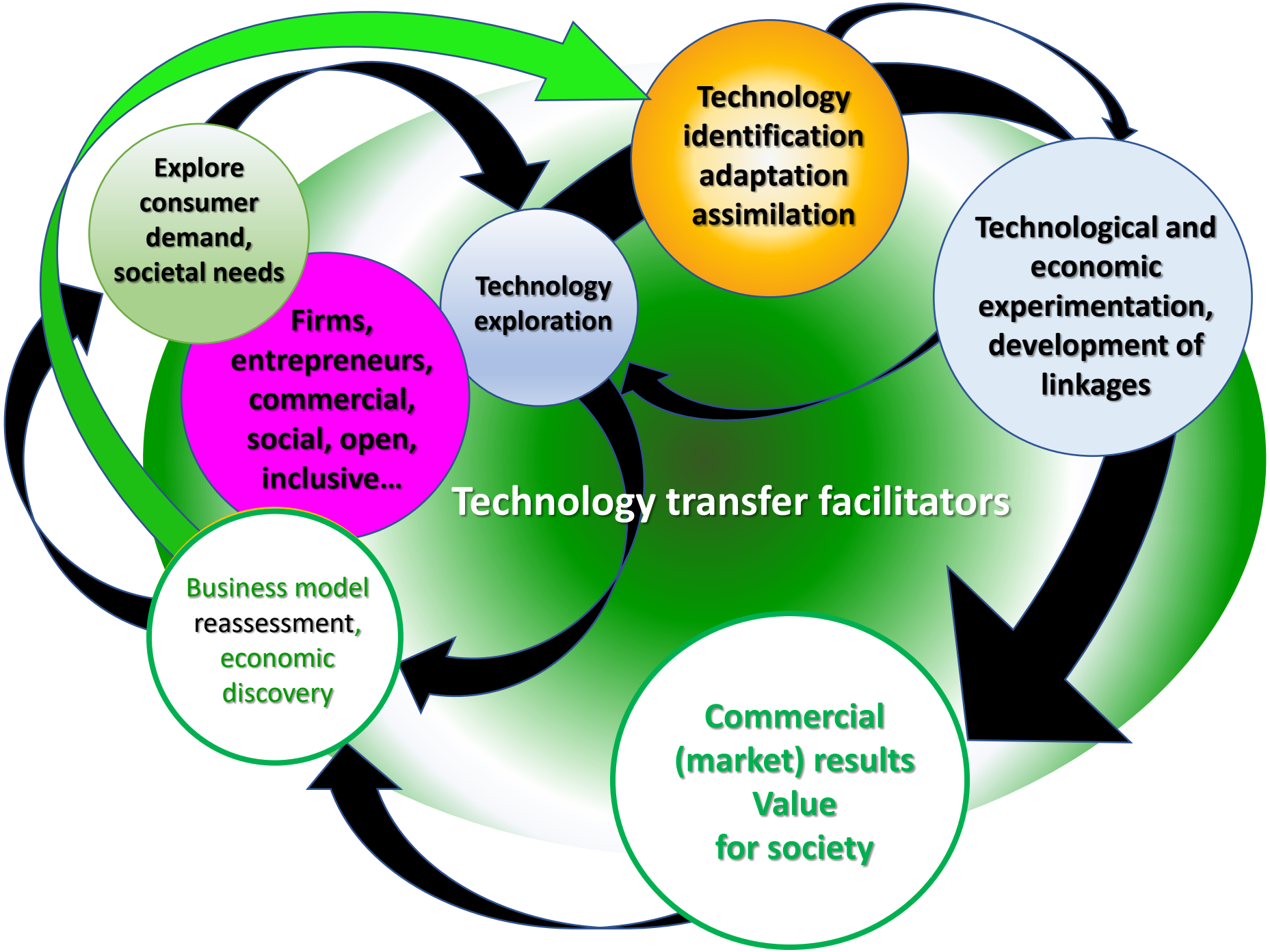
a process of economic discovery

Technology
identification
adaptation
assimilation
Transfer

UNCTAD | Prosperity for all



UNCTAD | Prosperity for all



UNCTAD | Prosperity for all

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

UNCTAD Prosperity for all

National System of Innovation

Linkages

Interactions

Relationships

Quantity

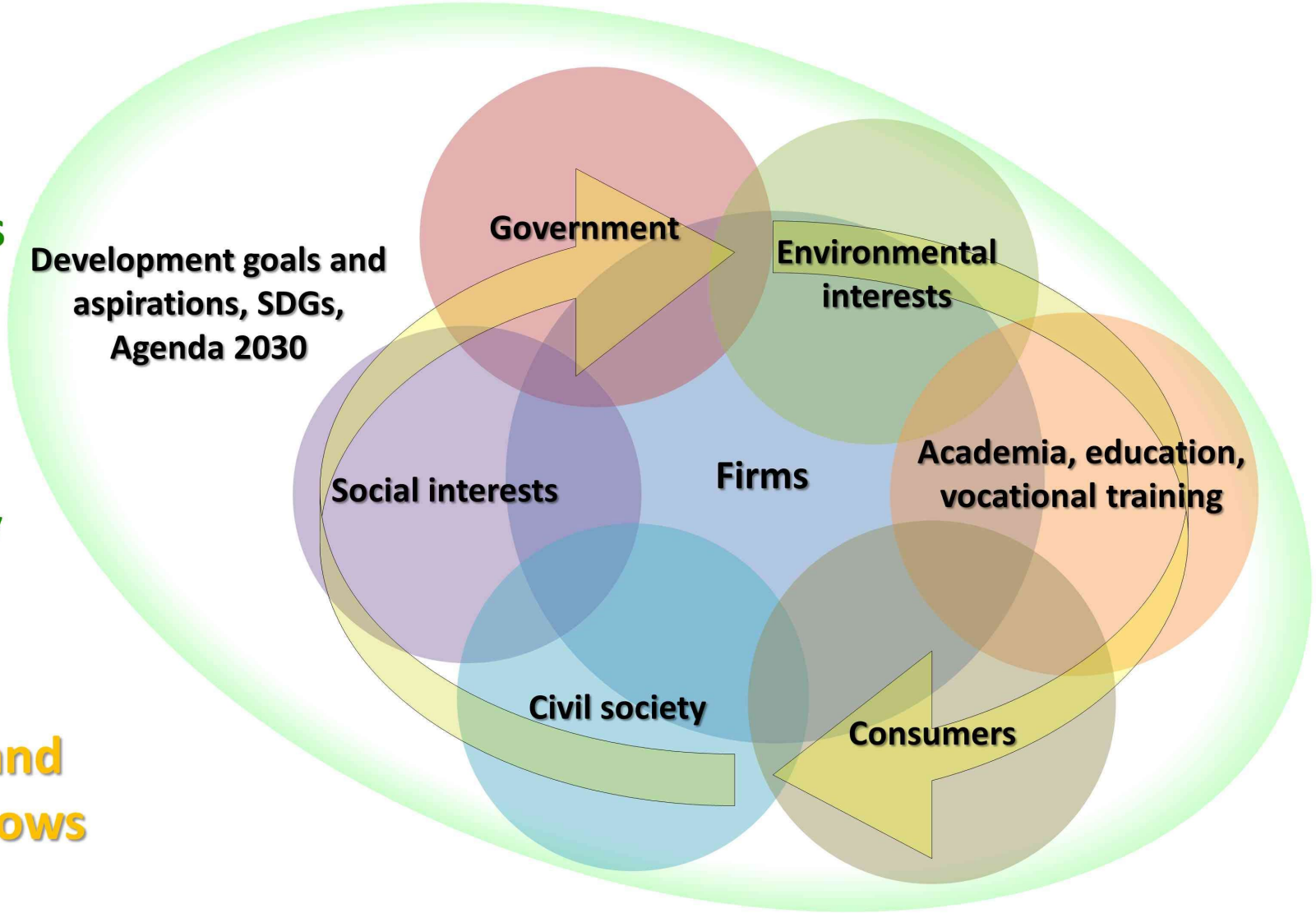
Quality

Stakeholders

Capability

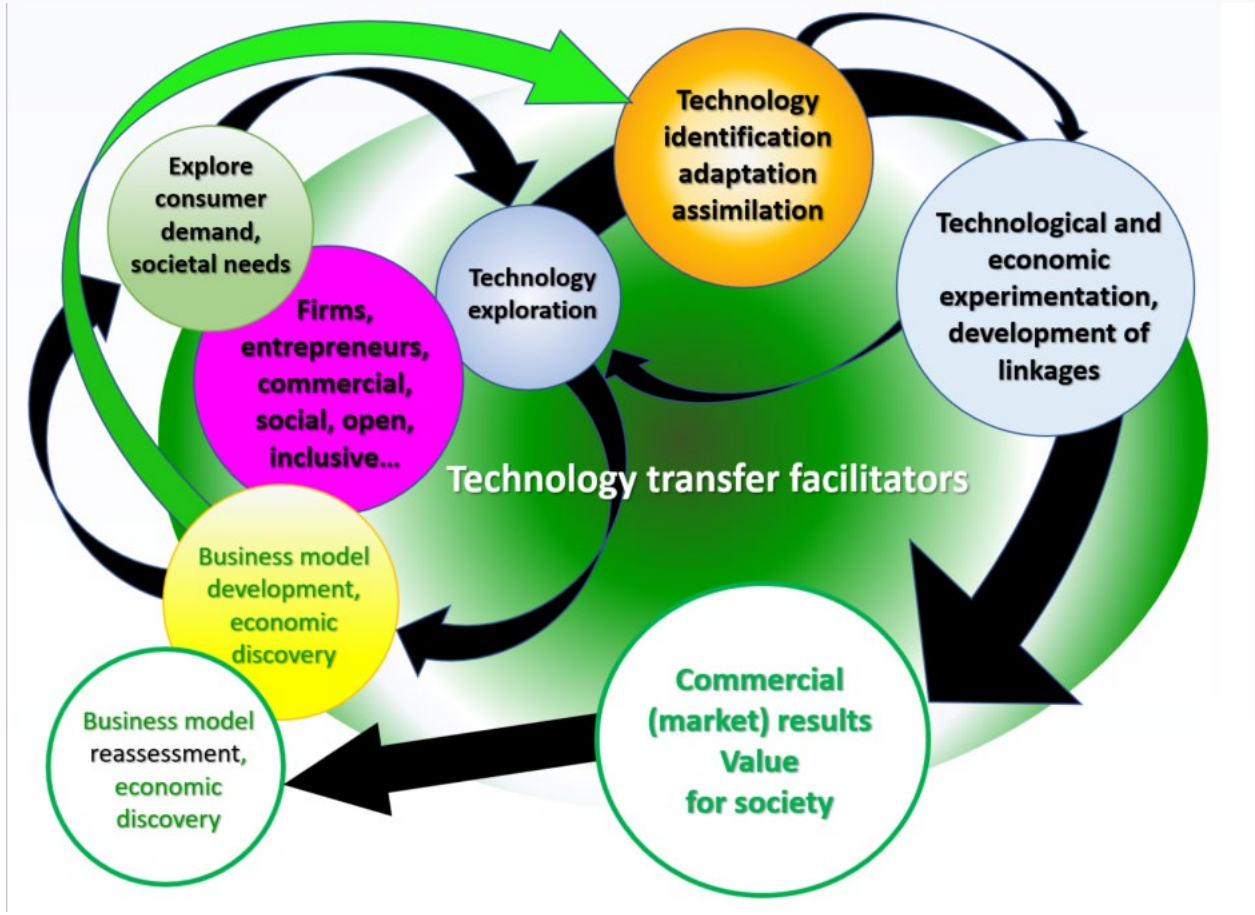
Capacity

Learning, technology, and knowledge flows

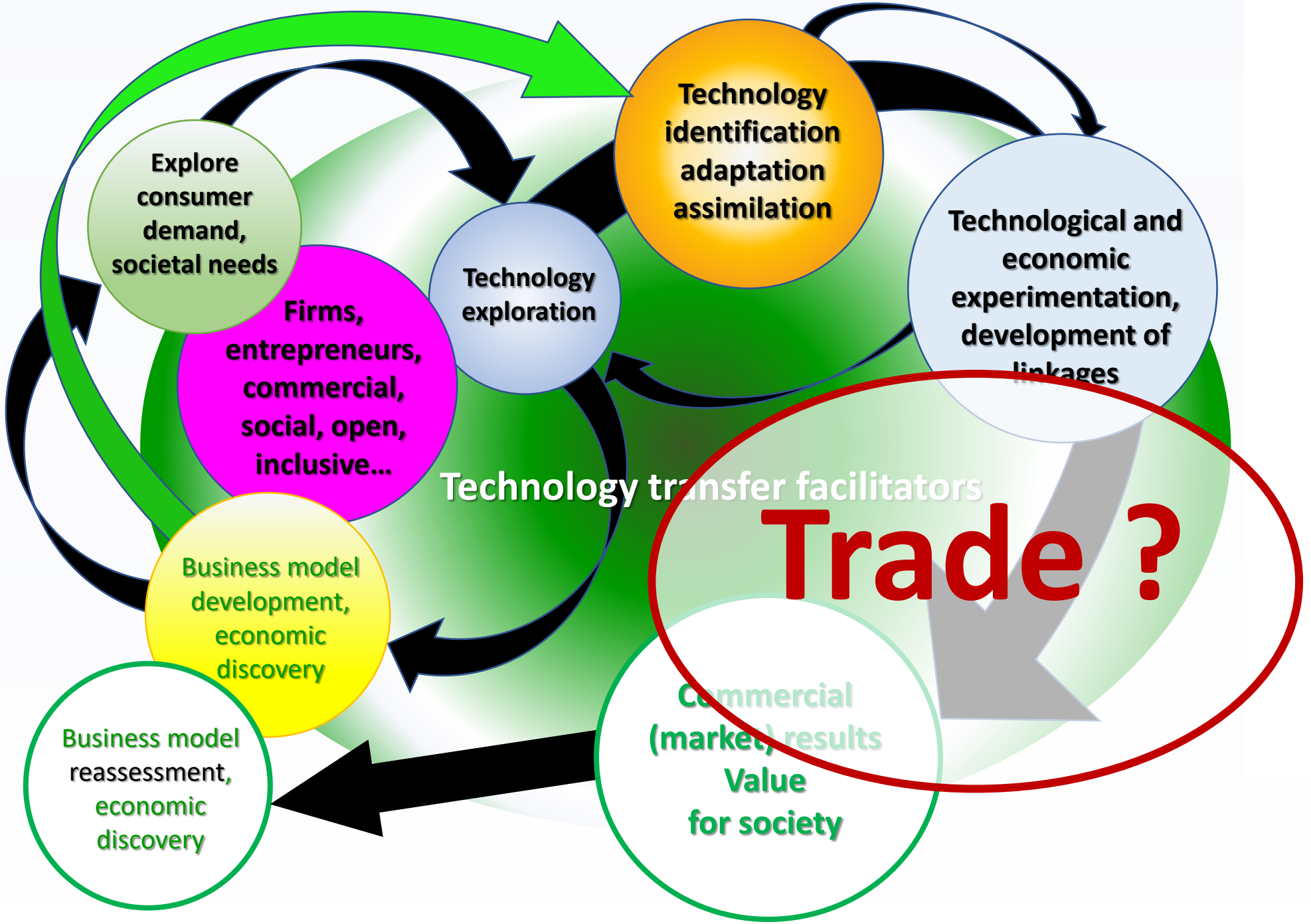


UNCTAD | Prosperity for all

So where is trade in all this?



UNCTAD | Prosperity for all



UNCTAD | Prosperity for all

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?

UNCTAD | Prosperity for all

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

UNCTAD | Prosperity for all

Thank you!

UNCTAD | Prosperity for all

Dimo Calovski
Science, Technology and Innovation Policy Section
DTL – UNCTAD
Email: dimo.Calovski@un.org