

ENGAGING STAKEHOLDERS FOR GLOBAL HEALTH INNOVATION CAPACITY DEVELOPMENT

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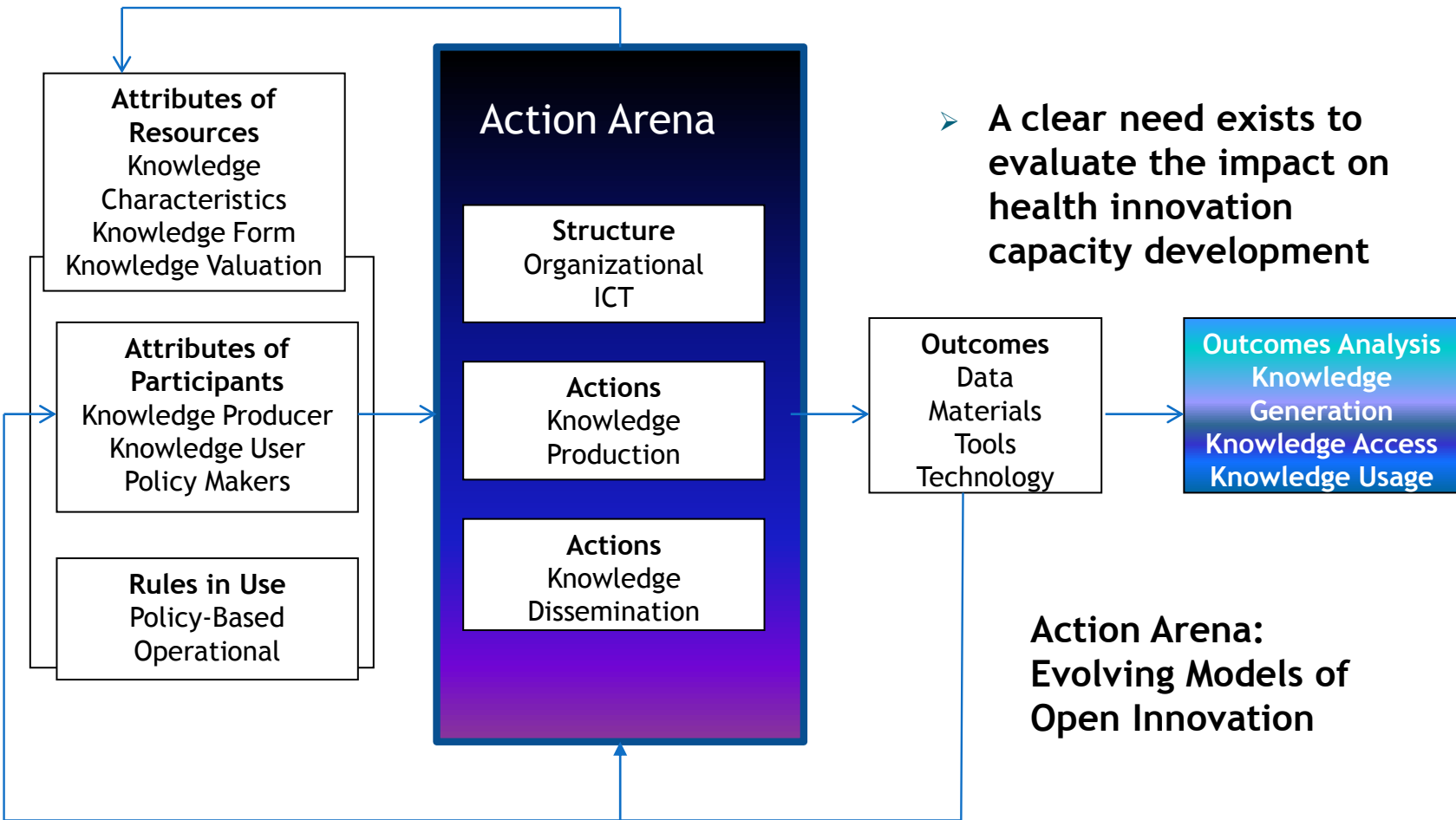
A PATH FROM THE COMMONS

Elements of the Commons	Elements of the Health Commons
Common pool resources	Knowledge based assets
Water, Forests, Fisheries	Biological Data, Models, Tools
High Subtractability, Difficult Exclusion	Low Subtractability, Low to High Exclusion
Rules in Use (Multiple Levels of Analysis)	Knowledge Access/ Dissemination Policies (Multiple Influences)
Appropriation Problems, Assignment Problems, Provision Problems	Provision Problems, Appropriation and Assignment Problems, Access Problems
Producers, Users	Creators, Users, Policy Makers

Implications on Health Capacity Development

- Understanding the transition from the health commons--open access space to the open innovation space
 - Open knowledge access to Privatization of knowledge
 - Collaboration to Competition
 - Equitable spot at the bargaining table for access to technology, innovation opportunities and health based products

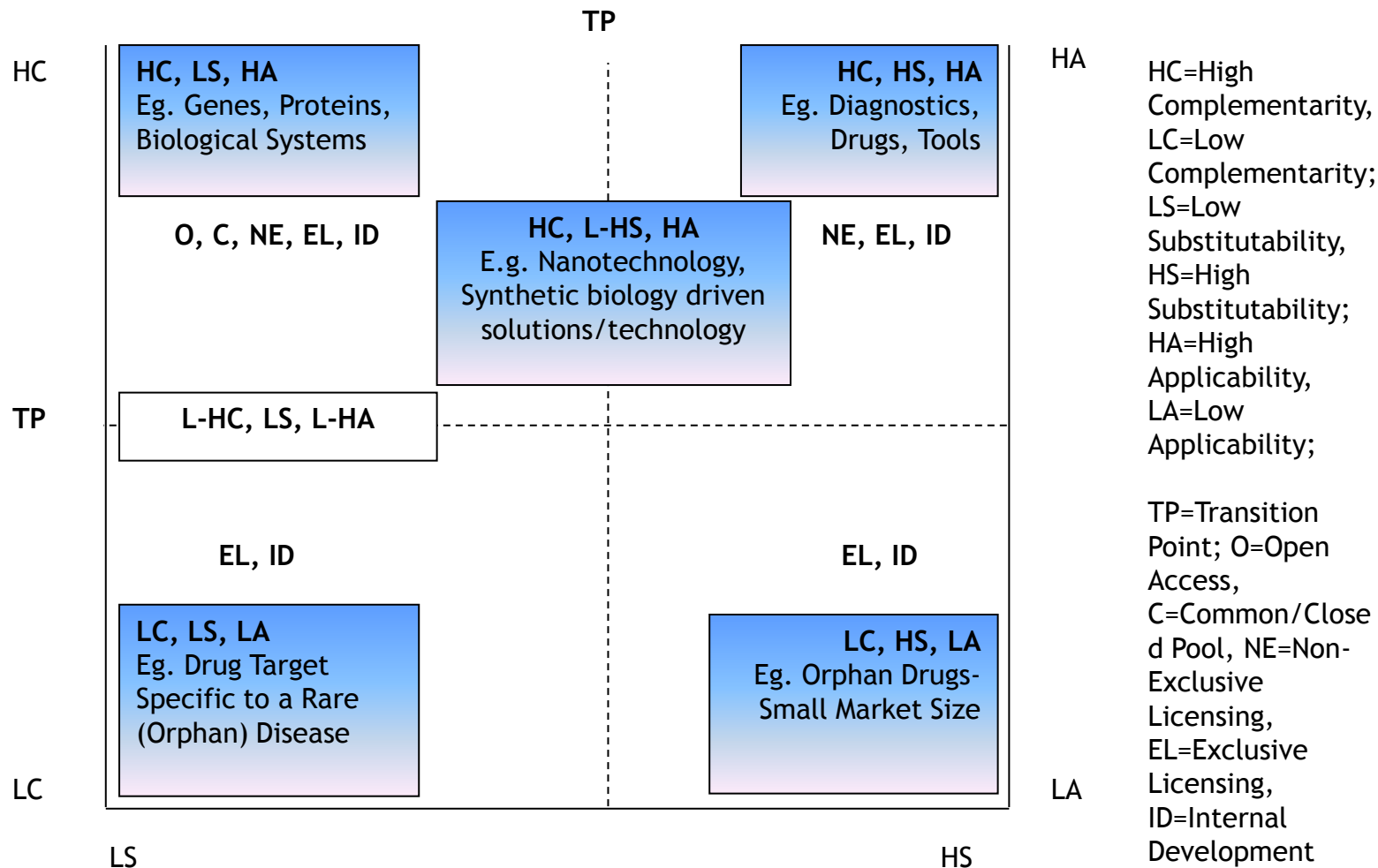
VALUE FROM THE INSTITUTIONAL ANALYSIS AND DEVELOPMENT FRAMEWORK



NUANCED KNOWLEDGE PERSPECTIVE

DISEMBODIED

EMBODIED



The Transition Point as a Function of Knowledge Form and Knowledge Characteristics

ENGAGING STAKEHOLDERS- INFORMATIVE MODELS

◎ **Commons Model**

- Impact of resource provision and appropriation

◎ **Game Models**

- Incentive to participation in the knowledge commons
- Incentive to invest in local health innovation capacity development

◎ **Institutional Analysis and Development Framework**

- Association between resource characteristics, governed actions, and outcomes

ENGAGING STAKEHOLDERS- INFORMATIVE MODELS

- ◎ **Stakeholder Theory**
 - Association between driving incentives and stakeholder interactions
- ◎ **Network Theory**
 - Ecosystem development, participants and possible actions/roles
- ◎ **Cluster Formation Theory**
 - Drivers for physical infrastructure development including role of anchors
- ◎ **National Systems of Innovation Models**
 - Knowledge/Technology Diffusion patterns, policy influence

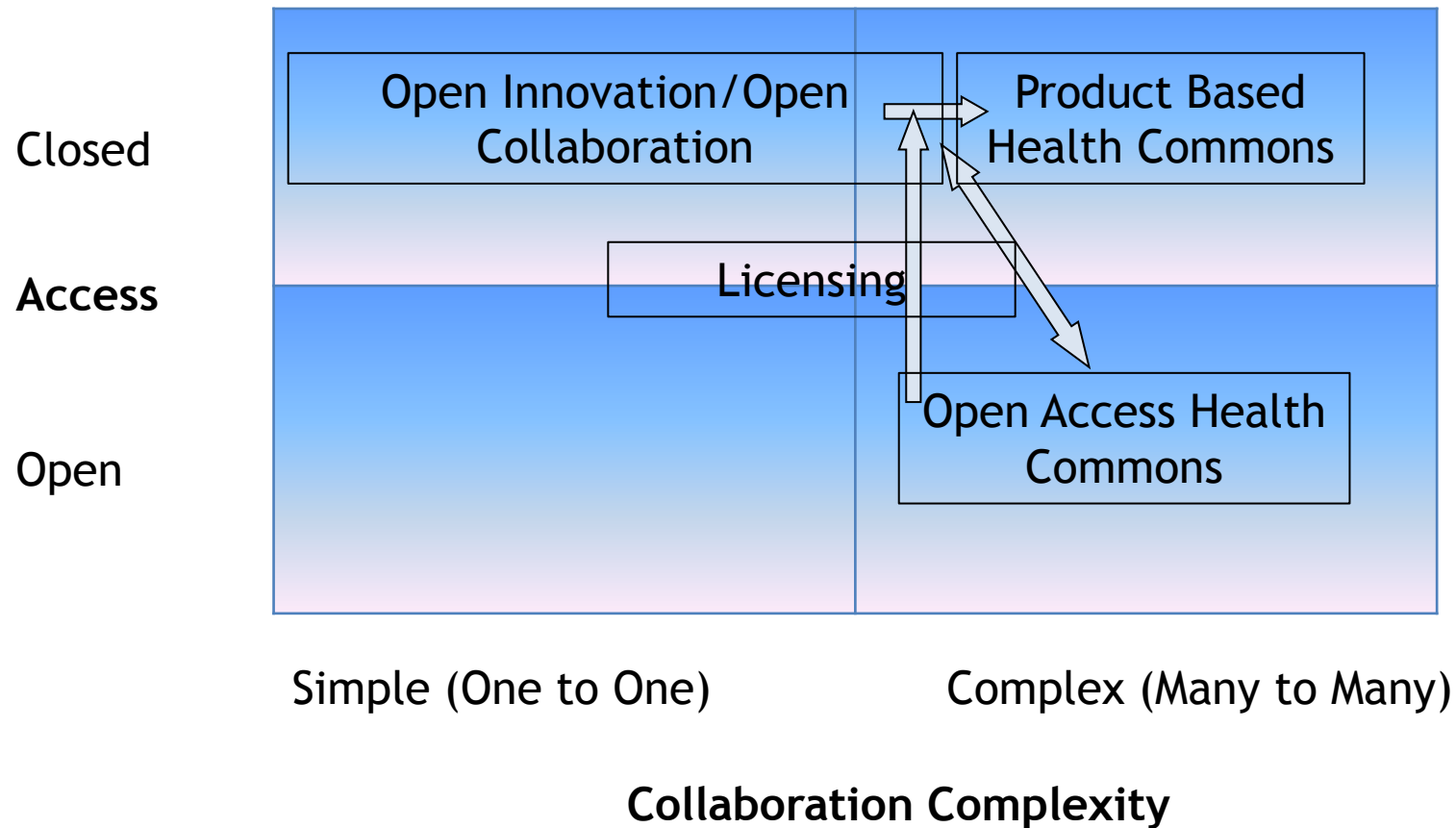
ENGAGING STAKEHOLDERS- GOVERNANCE/POLICY OBJECTIVE

Model	Policy Objective
Knowledge Commons	Participation Incentives Management E.g. Granting Agencies, Voluntary, Rules in Use
Game Models	Incentives Management E.g. Investment Incentives
Institutional Analysis Development Framework	Multi-Level Policy Formation E.g. Operational, Collective Choice, Constitutional
Stakeholder Theory	CSR Incentives Management E.g. Internal and External Drivers
Network Theory	Ecosystem Participation Incentives E.g. Cost, Risk Management
Cluster Theory	Cluster Formation Policies/Programs E.g. Incentives Management for Anchor
National Systems of Innovation	Governance of Technology/Knowledge Diffusion E.g. Incentives for Alliance Formation, Commercialization Incentives

ENGAGING STAKEHOLDERS- CURRENT INITIATIVES

- ◉ Open Source
 - OSDD, ACRG, ChEMBL, MR4
- ◉ Patent Pools
 - NTD Pool, MPP, WIPO RE: Search
- ◉ Open Innovation/Open Collaboration
 - OSDD, CDD, D3, PPP (TB Alliance, MMV, MVI, DNDi, ANDi)
- ◉ Centres of Excellence
 - GSK, Novartis, Astra Zeneca, Eli Lilly, SERUM Institute
- ◉ Cluster/Hub Formation
 - Nepad BioScience Hubs, Tanzanian Cluster Formation Program
- ◉ Network Formation
 - CRO-PPP, Clinical Networks
- ◉ Capacity Development
 - Global Health Accelerator, Seattle BioMed Training Program, EFINTD

AN EVOLVING NOTION OF OPENNESS- FROM OPEN ACCESS TO OPEN INNOVATION



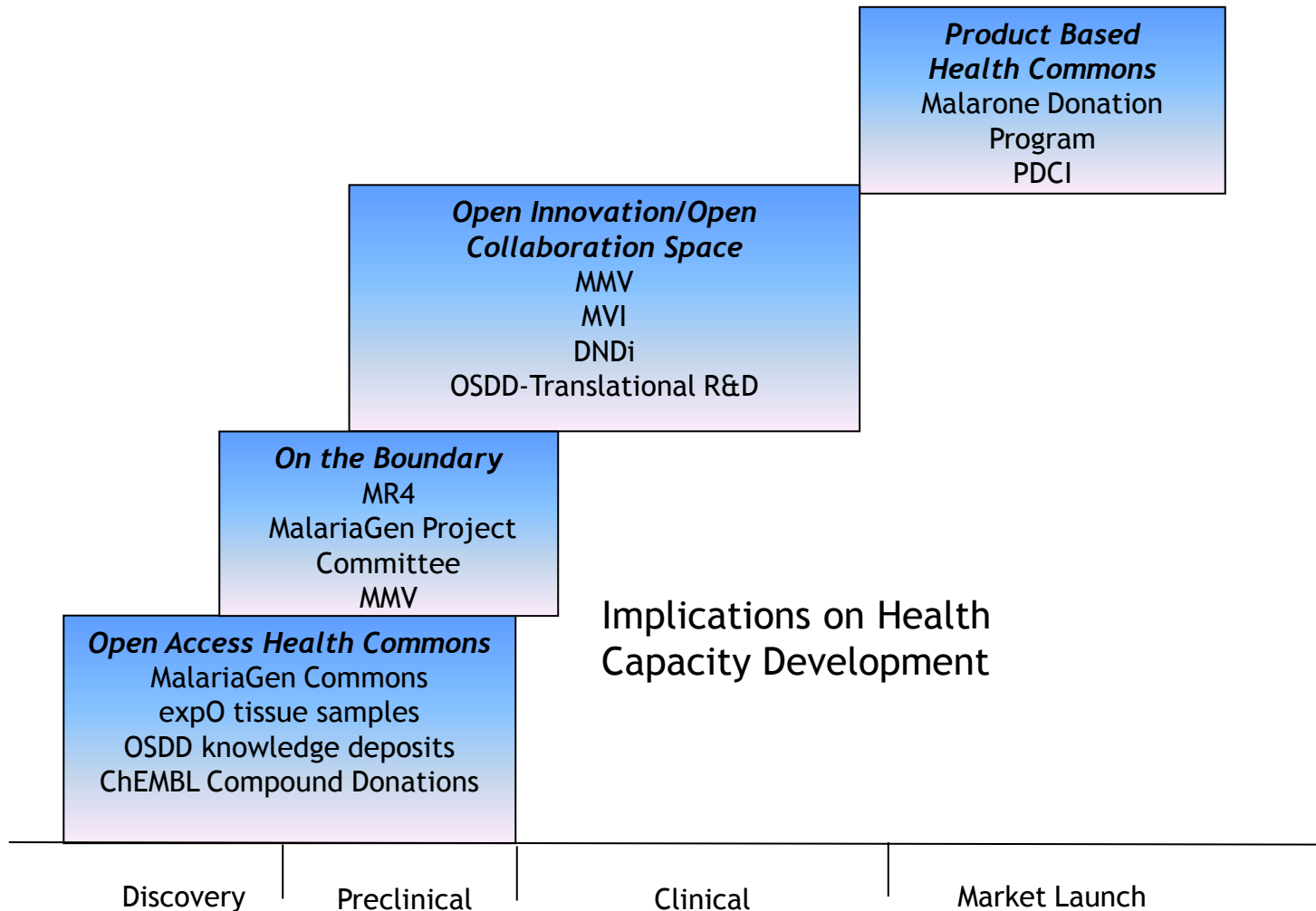
SUPPORTING POLICIES

- ◉ IP Management
 - Bayh-Dole Act-the benefits and costs
 - ◉ Need for modification/additional provisions in under-developed markets
 - Market-restrictive IP Management
- ◉ Ecosystem Development/Innovation Policy Consortium
 - NEPAD
 - BIPCEA
- ◉ Commercialization
 - Grant Agencies initiatives
 - TTO
 - Entrepreneurship development initiatives
- ◉ FDI
 - Tax incentives
 - Human capital development

FROM TARGETED TO GLOBAL HEALTH INNOVATION CAPACITY

- Neglected diseases and chronic diseases afflicting the BoP
 - E.g. ACRG, Pfizer's Strategy in Asia, CRO-PPP, Lilly-NCD partnership, India SAN for chronic diseases
- New technological opportunities
 - Biodiversity
 - Traditional medicines
- Technology transfer directional change
 - South to South
 - South to North
- New players
 - Multi-country initiatives

PRODUCT DEVELOPMENT VERSUS CAPACITY DEVELOPMENT



DEFINING CAPACITY DEVELOPMENT

Defining Parameter	Components
Technology Level	IP Creation, Technology Transfer (Local R&D Focus)
Human Capital Level	Skill Development/Program Development, Knowledge Transfer (Entrepreneurship/R&D Mgmt)
Infrastructure Level	Centres of Excellence (Subsidiaries), Academic Institutions, National Laboratories, Cluster Formation (Global Alliances)
Market Level	Product Development (Technological Embodiment), Product Purchases, Health Care Delivery (Export and Import Focus)

Participants:
Researchers,
SMEs, MNCs,
NGOs, State and
National Agencies

Vehicles:
Alliances,
Networks/
Ecosystems,
Consortia,
Hubs/Clusters

MEASURING CAPACITY DEVELOPMENT

- Number of Participants
- Degree of Local Interaction
- Primary and Supporting Local Infrastructure Development



- Local Resource Access and Usage
- Education Program Availability
- Researcher Development Opportunities



- Product Based Alliance Formation with Local Stakeholders



- Local IP Creation Ownership and Exploitation
- South to South/North Technology Transfer



- Product Approvals
- Local Product Launches



Discovery

Preclinical

Clinical

Market Launch

DISCOVERY INNOVATION CAPACITY: INFORMATIVE MODELS AND POLICIES

◉ Models:

- Open Source Models-Databases, Pools, Consortia
 - ◉ Regional and International Alliances/Consortia
- R&D Hub Formation

◉ Stakeholder Engagement:

- Researchers, Centres of Excellence, National Laboratories, TTO, SMEs

◉ Supporting Programs:

- National Sectoral Programs
 - ◉ Grant/Funding Programs
 - ◉ Human Capital Access Programs
- Research Based Tax Incentives
 - ◉ Commercialization Programs

◉ Analytical Frameworks:

- The Commons Institutional Analysis and Development Framework, NSI, Cluster Theory

DEVELOPMENT INNOVATION CAPACITY: RELEVANT MODELS AND POLICIES

- ◉ **Models:**
 - R&D Networks, Alliances, Virtual Pharma, Subsidiaries
- ◉ **Stakeholder Engagement:**
 - Service Providers
 - Local Product Developers
- ◉ **Supporting Programs:**
 - Tax Credits, FDI Policies
 - Human Capital/Labour Development Programs
 - IP Commercialization/Technology Transfer Programs
- ◉ **Analytical Frameworks:**
 - Game Models
 - Stakeholder Theory
 - Network Theory

DELIVERY CAPACITY: EXPANDING THE POSSIBILITIES

⦿ Models:

- PPP
- Sustainable Local Enterprise Networks (SLEN)

⦿ Stakeholder Engagement:

- NGO, Health Service Provides, Public Agencies

⦿ Supporting Programs:

- Donation Programs, Purchasing Programs
- Pricing Programs
- Distribution Programs

⦿ Analytical Frameworks:

- Stakeholder Theory (CSR)

POLICY IMPLICATIONS

- ◉ Stakeholder Engagement
 - Policies to increase the breadth and depth of engagement
- ◉ Incentive Management
 - Policies to increase the level of local investment, to target key sectors or markets
- ◉ Transparency Management
 - Critical need for ensuring transparency with respect to financial and technology investment and exploitation
- ◉ Knowledge Management
 - Policies to ensure equitable access to knowledge
- ◉ IP Management
 - Broad local and south-south technology transfer
- ◉ Value Creation Assessment
 - Mandatory capacity development assessment as a component of investment programs, technology/product development programs