

MAKING MYANMAR THE NEXT ASIAN TIGER

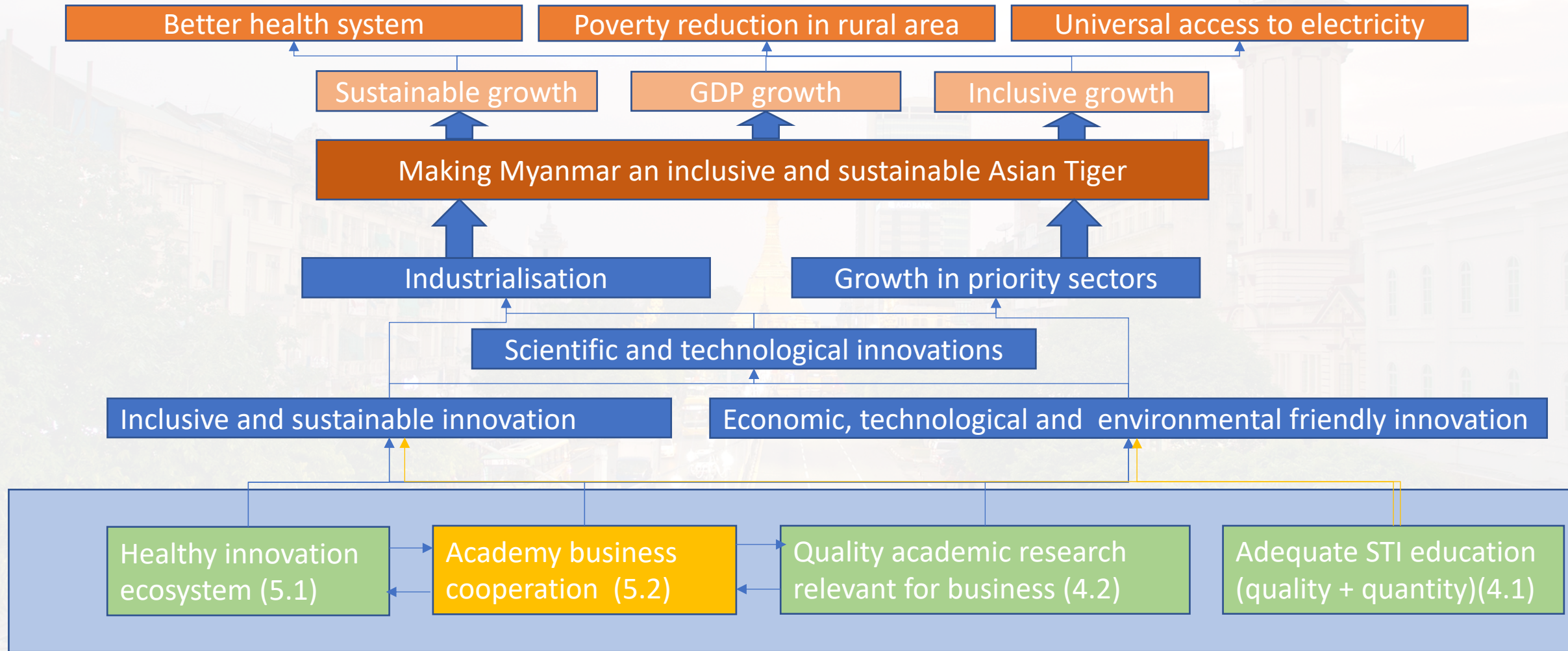
STI to support Myanmar's sustainable and inclusive development goals



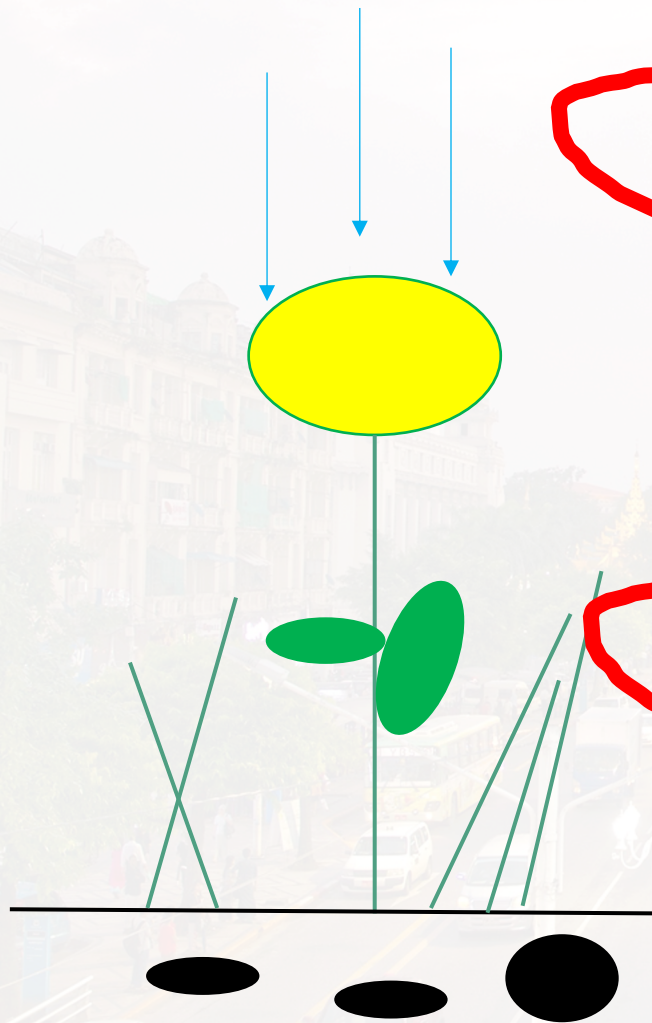
This presentation

- Goals for research-business interaction (iceberg exercise)
- Instruments for stimulating research-business interaction
- Group discussion on instruments for stimulating research-business interaction
- Other activities for STI policy
- Process for drafting an STI policy for Myanmar

Explicit goal setting: follow up of session 3



Gardening parallel (WB, 2008)

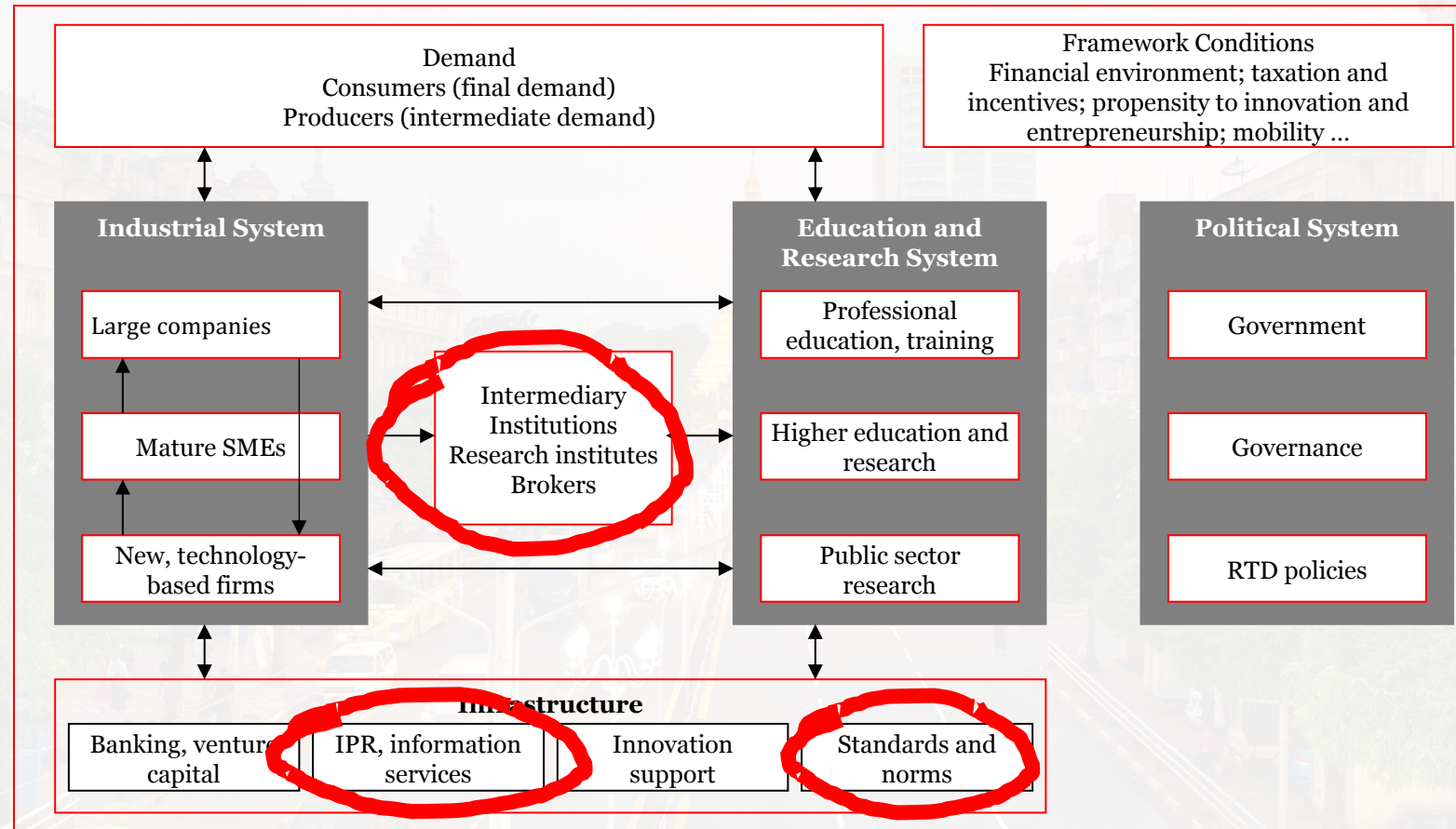


Watering (finance, support to innovators)

Removing the weeds (deregulation, competition)

Nurturing the soil (research, information)
Preparing the ground (education)

The complexity of innovation drives us to think in terms of National Innovation Systems



Source: Erik Arnold & Stefan Kuhlmann, 2000

Functions needed for successful innovation

1. Entrepreneurial activities
2. Knowledge development
3. Knowledge diffusion through networks, including policy networks
4. Guidance of the search ('directionality')
5. Market formation
6. Resources mobilisation
7. Creation of legitimacy/counteracting resistance to change

(Hekkert et al, 2007)

Cooperation instruments: goals, target groups and actors

- Policy Goals to support research-business interaction (to be discussed in iceberg exercise):
 - Create mutual understanding between research and business
 - Inform researchers of business needs
 - Inform business of possibilities of research
 - Inform business of research results
 - Generate business ideas based on research
 - Focus research in universities/institutes (better) on industry needs)
 - Increase cooperation between universities and/or research institutes and
- Target groups: universities, research institutes, industry
- Actors: DRI, funders, specific agency, intermediary organisations

Cooperation: ideas for instruments from round tables

health	We need research collaboration among Universities, e.g. ICT University and Universities of Medicine.
agriculture	Research institutes and industry collaborations
agriculture	Cluster commercial, academic research, end users together to accelerate R&D (e.g. commercial zones)
agriculture	Support university-industry linkages for R&D on industry challenges by developing and investing in mediation organisations
agriculture	Invest in programmes that allow students to interact with farmers/growers that are upstream in the value chain
resources&energy	Formulate policy for university-industry collaboration
resources&energy	Applied research funding to collaborate with industry
resources&energy	Industrial needs matching - industry outreach and internship and research collaboration programs
resources&energy	Provide funding & incentives that encourage collaboration between universities and private sector
ICT	More collaboration program Industry and Academia
Manufacturing	Awareness and monitoring center for manufacturing standards
Manufacturing	Financial autonomy for universities to enable more connections with industry
Manufacturing	Industry should be able to provide more direct inputs in the educational curriculum
Manufacturing	Bringing industry specialists to provide training in universities
Manufacturing	Have more internship programmes
Manufacturing	Legal frameworks to encourage industry to promote R&D in Universities
Manufacturing	Platforms and summits to put Uni and industry people together
Manufacturing	Set up a single platform to connect academic institutions and industry to offer upgrade facilities and modernise technology
Manufacturing	Technology transfer initiative for IR 4.0
Manufacturing	Encourage academic-industry partnerships in the IR 4.0 space
Manufacturing	Formulate offerings from offerings to industry from academia (i.e. pamphlet)
Manufacturing	Create internship programmes through industry placements for students in every academic year
Manufacturing	Cost effective and Quality Technology Facilities Center
Manufacturing	Promoting scientific and innovative practices for optimization
Manufacturing	Facilitating platform
Manufacturing	Tech-transfer from international partners (e.g. lab equipment and IP)

Policy options for academia-business interaction

- Regulatory
 - Providing universities with a third mission (economic/societal impact)
 - Financial autonomy for universities to enable more connections with industry
 - Participation of industry in research organization structures (Board, teacher, programme boards)
- Financial
 - (Programme for) Cooperative research (with or without grants)
 - Opening up research/testing facilities to industry
 - Universities formulating offerings to industry
- Communications/organisation
 - Exchange of research staff
 - Industry/university meetings
 - Matchmaking activities
 - (education): internships of students in companies

Cooperation: ideas for other instruments from round tables (1)

agriculture	Investment in digitalisation
agriculture	Market data research (independent information and data center)
agriculture	Strengthen market information system by upgrading its technology
agriculture	More coordination and law enforcement for markets
agriculture	Development Bank for farmer, grassroot, MSMEs
agriculture	Job creation provided by private or gov't
agriculture	Attract more international digital consultancies for agricultural tech sector
agriculture	Improve production standards (sanitary regulations) and brand-building
agriculture	Regulatory innovations to provide incentives for farmer to formalize their business
resources&energy	Foster International collaboration in the private sector
resources&energy	Policy to promote transparency between government and public so there is fair competition that gives a chance to all the foreign and local investors
resources&energy	Require public consultations for investments, EIA/SIA having the proper standard checklist to ensure there is limited negative impact to the environment
resources&energy	Policy initiative to attract investors who come with technology+financial resources to Myanmar
resources&energy	Proper funding mechanism
resources&energy	Enable international investments into the energy sector in Myanmar
resources&energy	Capability mapping, access to data resources, innovation on energy efficiency
resources&energy	To enhance funding resources and bankable processes (from WB and other international sources)
resources&energy	Policies to tap into the data sources and research of international organizations
resources&energy	Policy for the involvement of all kinds of organizations including women organizations, community-based organizations to consult in developing solutions and finding solutions
resources&energy	Policy to provide guarantees that ensure local banks are able to finance projects

Cooperation: ideas for other instruments from round tables (2)

ICT	Establishment of Intellectual Property protection legal framework, mechanisms, institutional capacity
ICT	Foreign investments: reduce risk for investors, provide incentives that compete with neighboring countries to invest in Myanmar
ICT	Enabling the legal framework for PPPs in digital space
ICT	Awareness or Educate about New Technology
ICT	Collective management organizations for copyright. Nonprofit organization supported by industry players and recognized by the legal system to advance IPR interestings
ICT	Greater emphasis on law enforcement
ICT	Supporting related law enforcement agencies with HR / capacity building, technologies, budget, and legal mandate to be able to enforce the Intellectual Property laws. - Police - Courts - mmCERT - other related agencies
Manufacturing	Government enforcement for IP
Manufacturing	URI regulation
Manufacturing	Deregulation of electricity market
Manufacturing	Invite multinational businesses to invest in building energy infrastructure in Myanmar
Manufacturing	investment incentives such as providing land for factories and tax exemption should be provided
Manufacturing	Prioritize manufacturing areas with local needs and market demand
Manufacturing	Assurance policy for investments
Manufacturing	Support the quality assurance, Research Policy
Manufacturing	FDI policy to facilitate investment in energy sector and shifting of assembly lines out of China into Myanmar