Manufacturing and Machinery Track

R&D Agenda

Acknowledgement

- Hon. Walden F. Bello, Former U.P. Professor and currently Akbayan Party List Representative
- Mr. Tristan A. Canare, Economist at Asian Institute of Management Policy Center
- Mr. Dennis A. Lim, OIC-Chief EDs, National Economic and Development Authority
- Engr. Emmanuel R. Lim, Vice President for Internals of U.P. Alumni Engineers
- Dr. Ronald U. Mendoza, Executive Director of Asian Institute of Management Policy Center
- Dr. Rene E. Ofreneo, Professor at U.P. School of Labor and Industrial Relations
- Prof. Edwin N. Quiros, Associate Professor at U.P. CoE Mechanical Eng'g Department
- Dr. Virginia AlonTeodosio, Director of U.P. SOLAIR Center for Industry Productivity and Competitiveness
- Prof. Renato T. Goco, Senior Lecturer at U.P. College of Engineering Diliman

Acknowledgement

- Mr. Rey Lignes, Senior Investment Specialist, Board of Investment
- Ms. Ethel Briones, Foundation Affairs Officer, Foundation for Economic Freedom
- Atty. Nepo Malaluan, Trustee, Action for Economic Reforms
- Engr. Alfonso Aliga Jr., U.P. College of Engineering Industry and Government Linkage with Academe Program
- Engr. Emmanuel Lim, Vice President for Internals, U.P. Alumni Engineers
- Philippine Council for Industry, Energy and Emerging Technology Research and Development
    - Dr. Rowena Cristina L. Guevara, Executive Director
    - Engr. Niña Liza Escorial, Chief Science Research Specialist
    - Ms. Russell Pili, Senior Science Research Specialist

Acknowledgement

- Dr. Ma. Lourdes D. Catral, Dean of U.P. College of Home Economics
- Dr. Ma. Patricia Azanza, Professor at U.P. College of Home Economics Department of Food Science and Nutrition
- Mr. Mauro M. Llorera Jr., VP for Education, Aniban ng mga Magsasaka sa Agrikultura (AMMMA-Katipunan)
- Mr. Ignacio Campomanes, VP for Finance, Aniban ng mga Magsasaka sa Agrikultura (AMMMA-Katipunan)
- Ms. Rachelle Rocafort, Senior Research Specialist – National Food Authority Food Development Center
- Mr. Alexis Ortiz, Science Research Specialist, DOST Food and Nutrition Research Institute
- Dr. Rajah Rasiah
- DOST Metals Industry Research and Development Center
    - Dr. Agustin M. Fudolig, Dep. Exec. Director for Technical Services
    - Engr. Jonathan Q. Puerto, OIC, Office of the Dep. Exec. Director for R&D
    - Engr. Fred P. Liza**,** OIC, Prototyping Division
- Philippine Rubber Industries Association, Inc.

Manufacturing and Machinery

- Are large industries that are vital to the development of the country

- The engineering aspects of these disciplines are covered by the academic programs of the ERDT (IE, ME, MEM, MatE, Elec.&Elec., ChE, AgE, CompSci, etc)

ERDT Manufacturing and Machinery R&D Track

- This R&D track was recently proposed to help in identifying aspects and sectors of the Manufacturing Industry which can be made more competitive through R&D activities and can be nurtured by the ERDT program

- Complementary to other R&D tracks of the ERDT Program

Development of the ERDT Manufacturing and Machinery R&D Track

- Series of focus group discussions (FGDs) leading to a round table discussion (RTD) were organized to gather necessary information from various sectors to develop our country's Manufacturing Industry through R&D.
- Formulated medium and long-term R&D agenda in the RTD will be discussed in this presentation

Manufacturing and Machinery Track Series of Focus Group Discussions and Round Table Discussion

ERDT

ATTENDEES

ECONOMICS AND INDUSTRY EXPERTS/ANALYSTS

- Hon. Walden F. Bello, Former U.P. Professor and currently Akbayan Party List Representative
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- Dr. Virginia Alon Teodosio, Director of U.P.

GOVERNMENT/PRIVATE ORGANIZATIONS/NGOs

- Department of Trade and Industry Development and Trade Policy Group
- National Competitiveness Council
- Board of Investment Manufacturing Industries Department
- Philippine Institute for Development Studies
- Philippine Chamber of Commerce and Industry
- Makati Business Club
- Federation of Philippine Industry
- Action for Economic Reforms
- Foundation for Economic Freedom
- Philippine Foundation for Science and Technology
- U.P. College of Engineering Industry and Government Linkage with Academe Program
- U.P. Institute for Small-Scale Industries
- Philippine Council for Industry, Energy and Emerging Technology Research and Development

INDUSTRY

- Selected Industries

QUESTIONS

SITUATIONER/ BACKGROUNDER

1. How will you describe the present state of the Philippine Manufacturing Industry? Where is it going?
2. Which manufacturing sector would you suggest be pursued, particularly by research and development, in order to improve Philippine competitiveness? Why?
3. Aside from your answer in (2), which among the manufacturing sectors mentioned by the other participants would you suggest be pursued through research and development? Why?
4. In the manufacturing sector that you first answered, what is the specific or concrete research and development activity that you think must be undertaken locally?
5. For the second manufacturing sector, what specific or concrete research and development activity do you think must be undertaken locally?
6. In the R&D activities that you mentioned, how do you think can the academe contribute?

ZOOMING INTO MANUFACTURING SECTOR

1. In your opinion, what metrics (i.e., factors and their weights) should we use to identify the manufacturing sectors that, through Research and Development, we should help improve the competitiveness of?
2. Which manufacturing sectors do you suggest we focus on? How do these manufacturing sectors perform according to your suggested metrics?

SETTING R&D AGENDA

1. Being a focus manufacturing sector identified through the agreed R&D prioritization metrics, what are the top 3 R&D activities that can be undertaken locally to improve your competitiveness?

FGD 1: General Situationer

(Objective: To identify the manufacturing sector(s) to pursue for Philippine competitiveness through R&D)

25 SEPT 2012
UP COE

FGD 2: Zooming into Manufacturing Sectors

(Objective: To identify metrics and manufacturing sectors that can improve competitiveness through R&D)

18 OCT 2012
UP COE

FGD 3: SETTING R&D AGENDA

(Objective: To identify R&D activities)

15 NOV 2012
UP COE

NOTE:

1. During FGD1, it was suggested that metrics and corresponding weights for identifying mfg sectors must be formulated first
2. The metrics and how it is applied to the possible sectors should be consulted to stakeholders for acceptance and transparency
3. This led to the revised objective of FGD2

RTD
29 NOV 2012
UP COE

TARGETS

- Formulation of Medium and Long Term R&D agenda

Attendees: Key speakers from the 3 FGDs

R&D SUMMIT

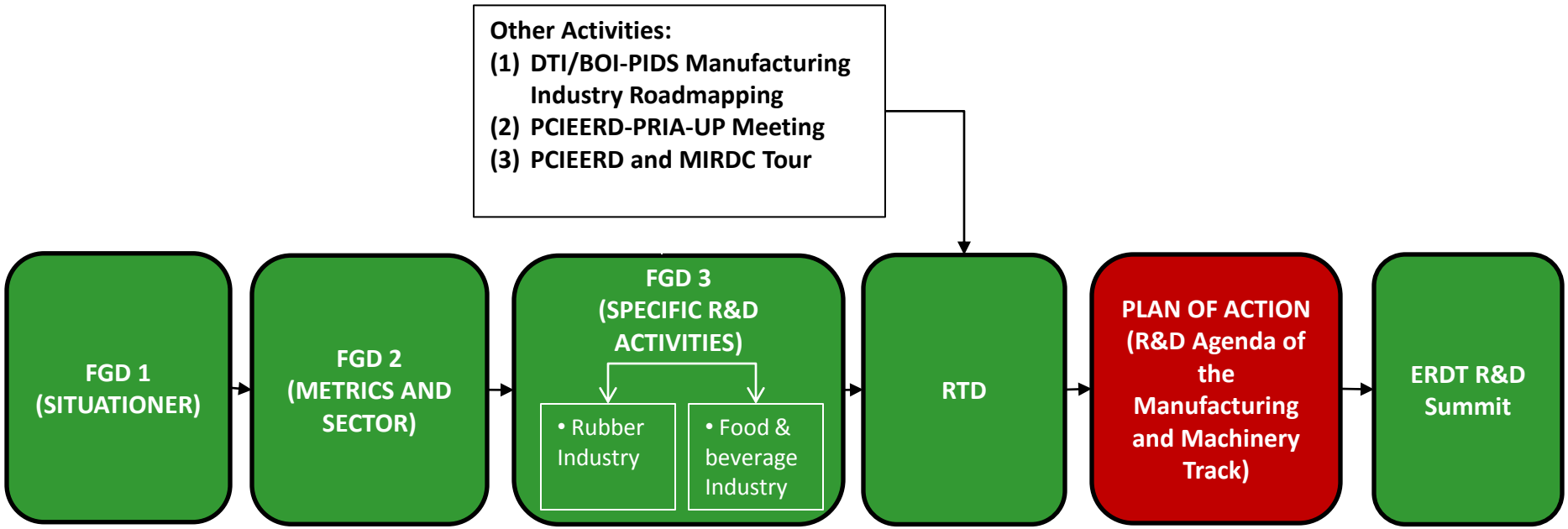
Objective: To present R&D agenda on Manufacturing

7 Dec 2012

NOTE:

1. R&D programs in M&M track are intended to be identified.

Activities
June-December 2012



Manufacturing and Machinery Track

Results of the FGDs and RTD

FGD 1 (SITUATIONER)

CONDITION:

- stagnant
- Uncompetitive
- "parang may bagyong dumaan"
- seen as central to the development of the country
- DTI is currently plotting the manufacturing roadmap

WHAT TO DO:

- university should establish connections with industry and make private sector fund research activities
- create platforms for the development of the manufacturing industry
- need for industrial policy
- need for coherence
- find "niche" in different industries
- preserve whatever exists now, modernize those transform those, and identify those areas that can be developed
- partnership of state, private sector and academe

FGD 2 (METRICS AND SECTOR)

METRICS:

1. Innovation Potential
2. Impact (Creation of Jobs and Grassroots Industry)
3. Competitive Advantage
4. Commercial Viability
5. Core Competence

MANUFACTURING SECTORS:

1. Food manufacturers
2. Rubber and plastic products
3. Beverage industries
4. Wood, bamboo, cane and rattan articles
5. Machinery and equipment
6. Electrical machinery and apparatus
7. Furniture and fixtures
8. Textile manufacturers
9. Basic metal industries
10. Fabricated metal products
11. Radio, television and communication equipment

FGD 3 (R&D ACTIVITIES)

FOOD AND BEVERAGE

R&D can be done on the following:

1. Locally-produced machinery and equipment
2. R&D on the product (e.g., quality of the raw material)
3. R&D on the process (i.e., quality of processing)

Value Chain:

(a) raw material to (b) process to (c) semi-process to (d) process then to (e) consumer level

Activities must be done on R&D that will:

1. Increase value-added component of native raw materials (i.e., for these to reach functional level), including packaging
2. Improve product consistency (i.e., in terms of quality and supply)
3. Enable economic fabrication of machineries for (a); Also, enable manufacturability at feasible scales

Priority areas for R&D:

1. Coconut (4 times cited by participants)
2. Bamboo (3 times cited)
3. Rice
4. Rubber
5. Herbs
6. Seaweed
7. Processing equipment
8. Storage and post-harvest facility

*3 to 8 were cited once

RTD

PLAN OF ACTION (R&D Agenda)

OTHER ACTIVITIES

Manufacturing and Machinery Track

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Manufacturing and Machinery Track

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Manufacturing and Machinery Track

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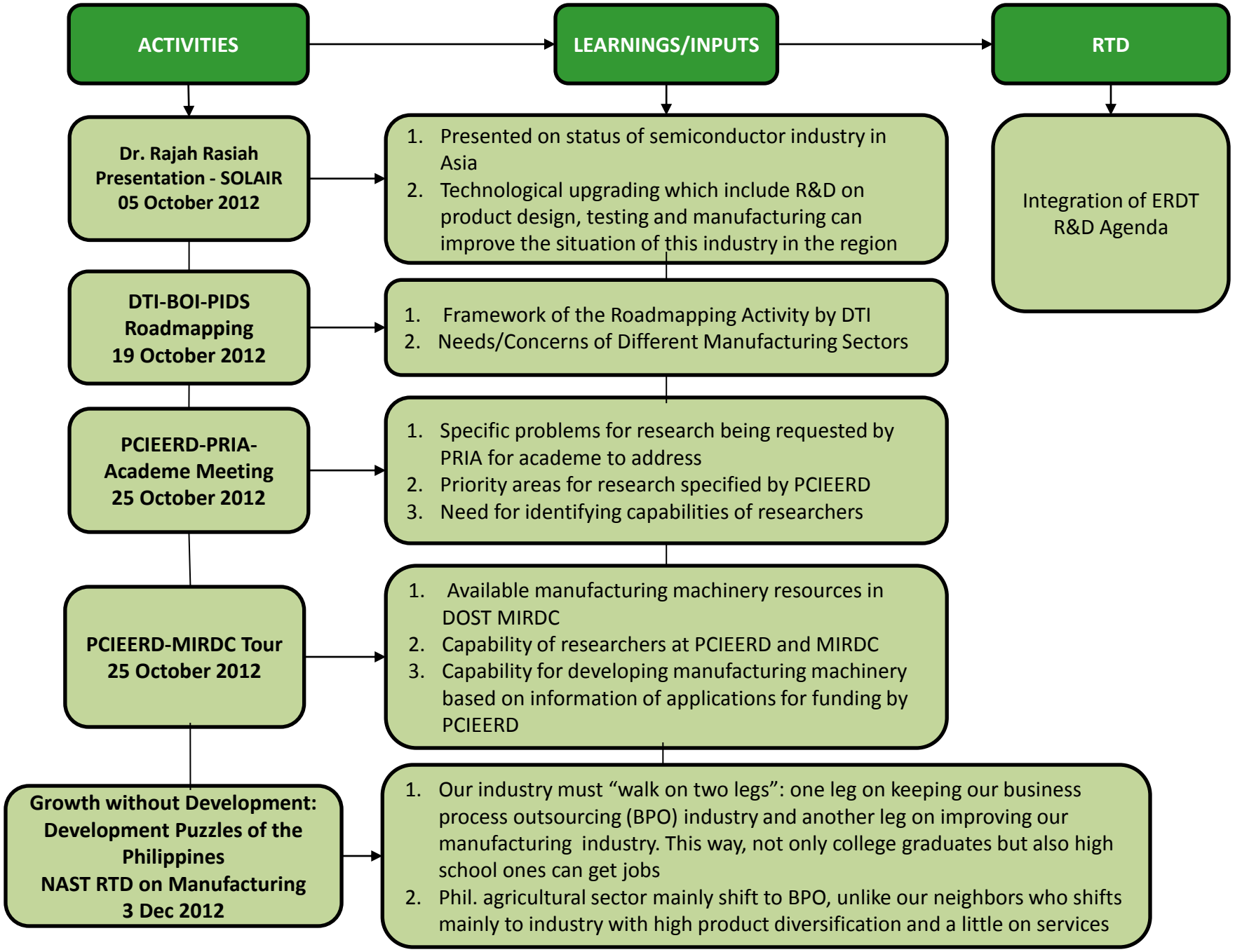
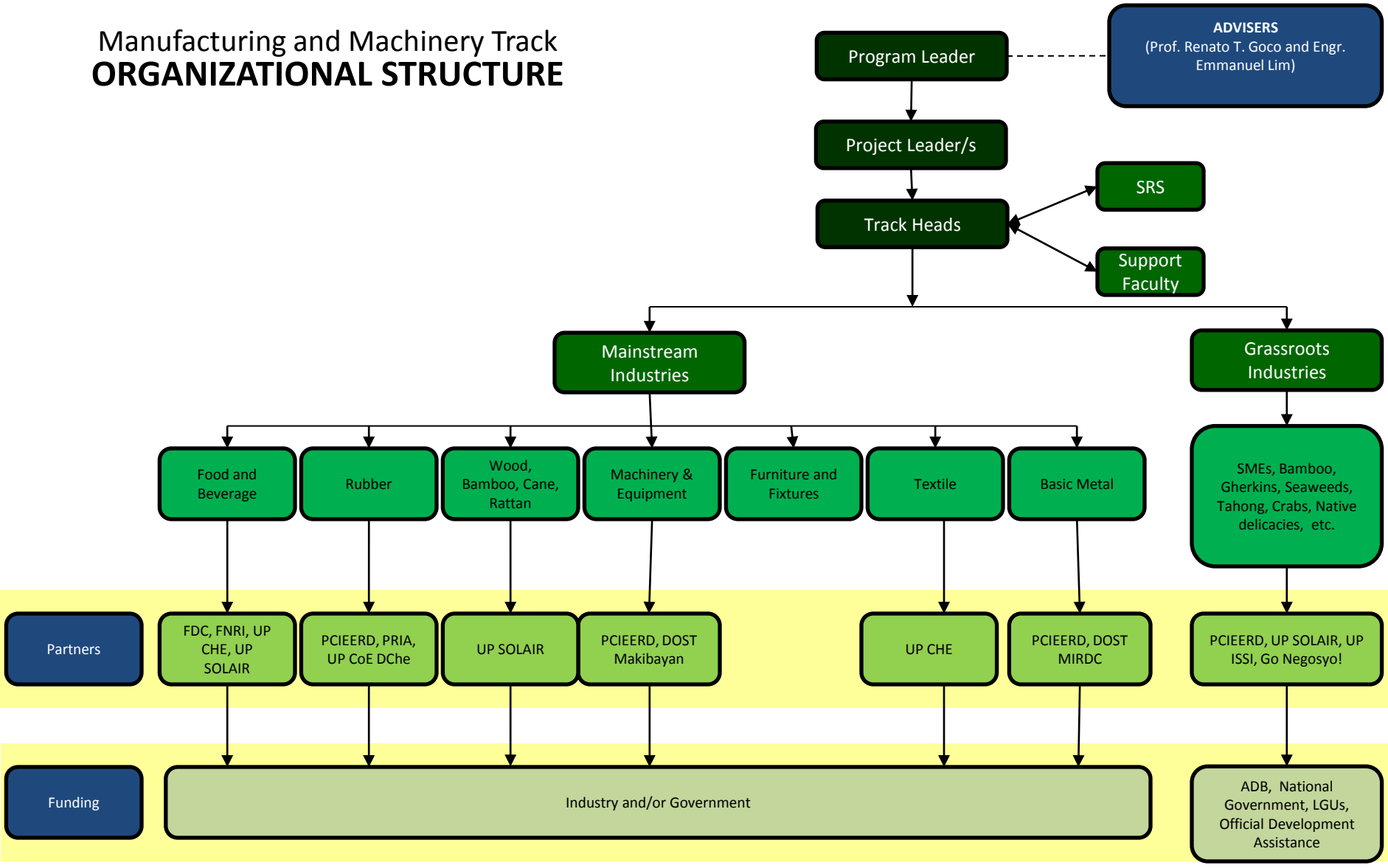
Other Activities



Manufacturing and Machinery Track

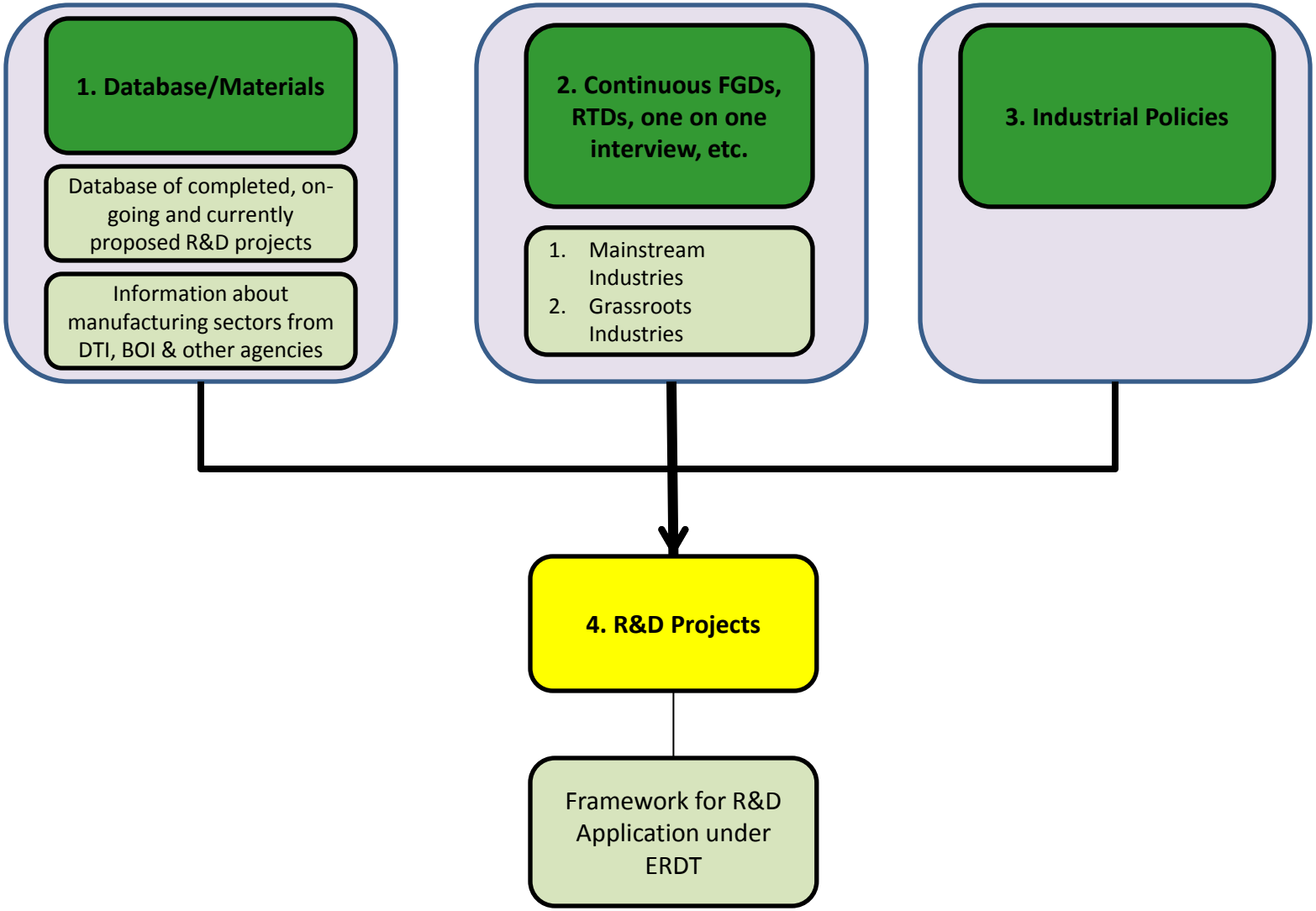
ORGANIZATIONAL STRUCTURE



Different Needs or Concerns of Two Industries

Mainstream industries	Grassroots Industries
Role of Government, Government Policies (High Taxes, FTAs)	Capital, Source of Funding
High Costs (Power, Infrastructure, Labor, Raw Materials, Doing Business)	Market
Smuggling and Dumping	Capacity to meet International Standards
Red Tape	Innovation
Foreign Competition	Manpower, skills and training
Fragmented Industries	Consistency of Quality
Peace and Order	Business Management
Lack of nationalism	
Firm Level Competitiveness	
Upgrade technological capability	

Plan of Action for 2013



1. Database/Materials

Source of Information

- **Identification and Profiling (for projects, partnership, source of fund)**
  - Existing government agencies/institutions (e.g. PCIEERD, MIRDC, DOST Makibayan)
  - Existing federation, association, organization of manufacturing industries and their corresponding members
  - Existing manufacturing industries but with no affiliation to those federation, association.
  - Grassroots industries
- **Database**
  - List of Undergraduate Research Competition (UPD)
  - List of Theses/Dissertations of ERDT Scholars
  - List of completed, on going and proposed R&D Projects
  - List of PCA

Possible Output

- **Promotional documents, activities, road shows with the industries**

  Materials:
  - AVP
  - Poster
  - Application Form
  - ERDT Brochures (focus on R&D)
  - UPD CoE Departments Brochures (Faculty and specialization)
  - Other Member – Consortium Brochures (Faculty and specialization)

2. FGDs, RTDs, Interviews, etc.

- Continuous discussions for different stakeholders (especially for grassroots industries)
- R&D Projects, Partnership, Share of Resources, Source of Funding

3. Industrial Policies

- Long Term
- Call for Policy
- Position Paper

Examples:

- Supermarkets to designate strategic place for local market products

- Quarterly Caravan/Expo for locally made products

4. Intended Output: Research Project Applications and Framework for Application

- **Construct Framework for R&D Application**

  Industry: Where, when and how to apply

  ERDT: How to process industry request

  Materials:

  - Letter of request
  - Specific and detailed needs of the industry
  - MOA/MOU
  - Criteria for selection, recommendation and approval
  - Matching with available faculty

PARTNERS







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Makinarya at Teknolohiya Para sa Bayan

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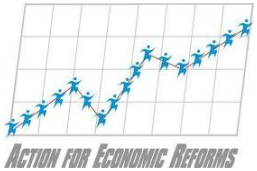
ACTION FOR ECONOMIC REFORMS

FEF

SCHOOL OF LABOR AND INDUSTRIAL RELATIONS
UP

FOR SMALL-SCALE INDUSTRIES
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UNIVERSITY OF THE PHILIPPINES


ASIAN INSTITUTE OF MANAGEMENT
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