

Functions of Government, Academe and Industry in Philippine Food Innovation Centers for Regional Development

A Public Lecture and Presentation by:

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**Southeast Asian Regional Center for Graduate Study
and Research in Agriculture**
Science and Education for Agriculture and Development

Lecture Outline

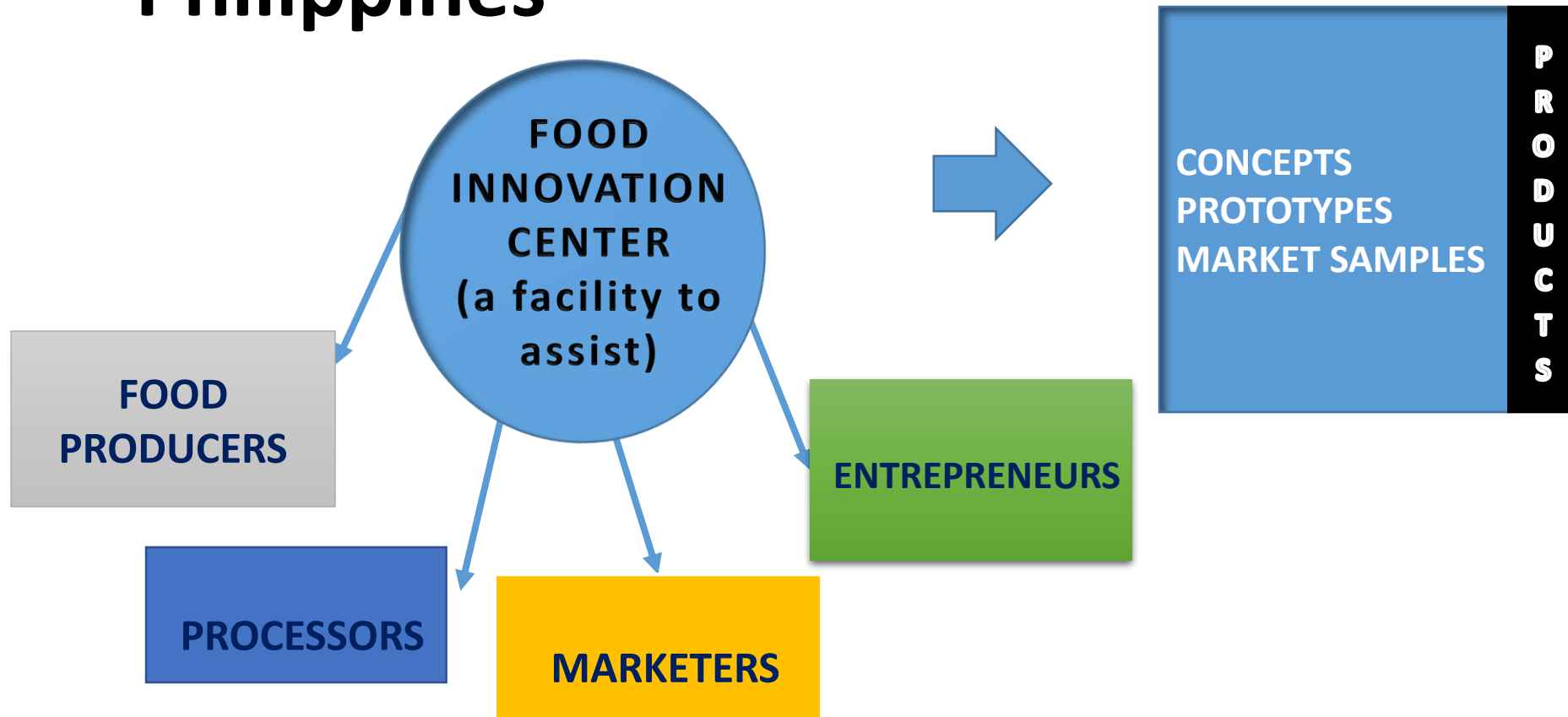
- FIC and its Regional Establishment in the Philippines
- Experimental Framework of the Research
- Identified Functions of DOST-FIC Stakeplayers
- Actual Functions of DOST-FIC Stakeplayers
- Variation in the Functions of FIC Stakeplayers
- Developed Conceptual Framework of the Research
- Project Recommendations

FOOD INNOVATION CENTER

“FIC provides a platform that offers facilities for food processing and testing, and often includes technical assistance for marketing, business development, and regulation compliance”

(Babcock, 2008)

Philippines

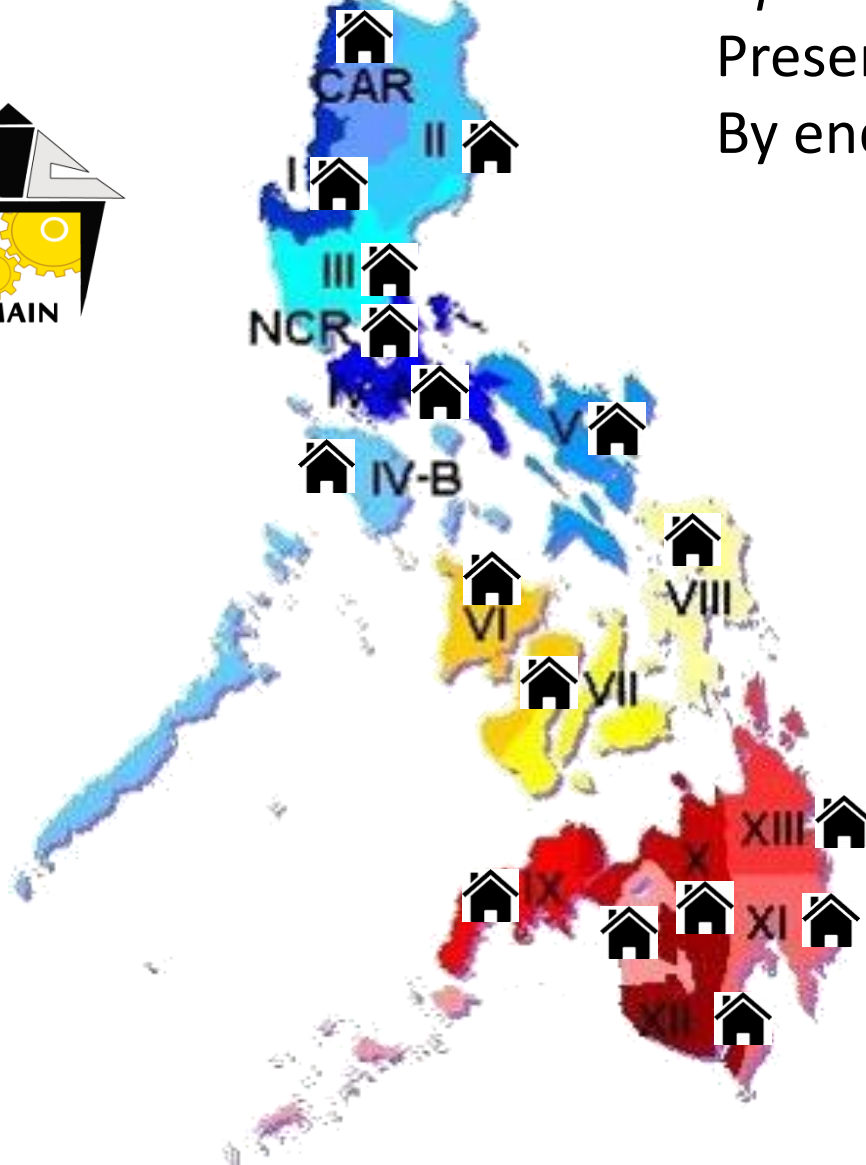


FICs in Academic Institutions

Operational FICs:

Present (as of Jan 2017) – 10 FICs

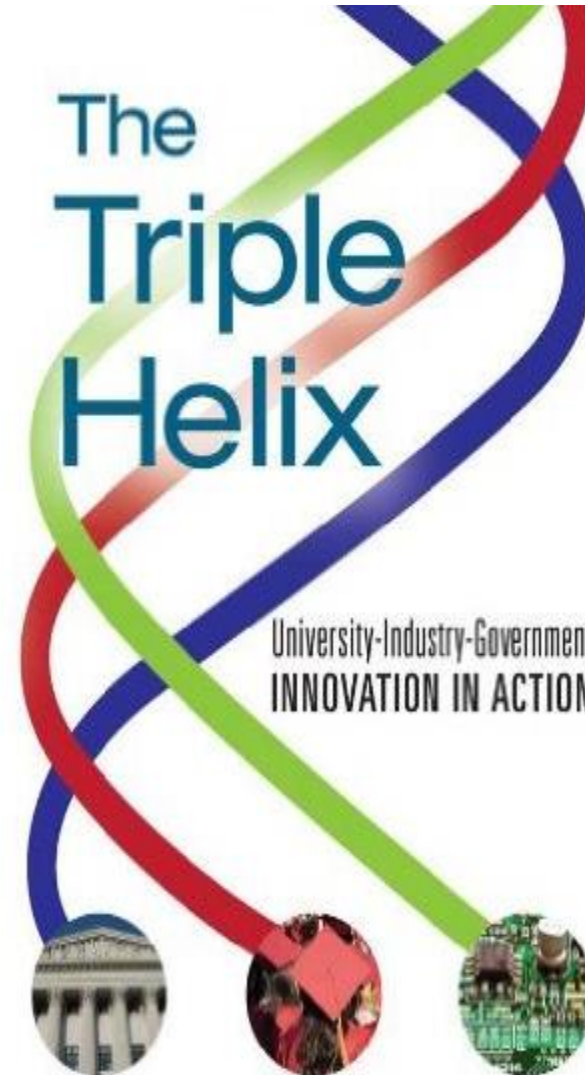
By end of 2017 – additional 8 FICs



Government RDI designed FIC Processing equipment:

1. SPRAY DRYER
2. VACUUM FRYER
3. FREEZE DRYER
4. WATER RETORT

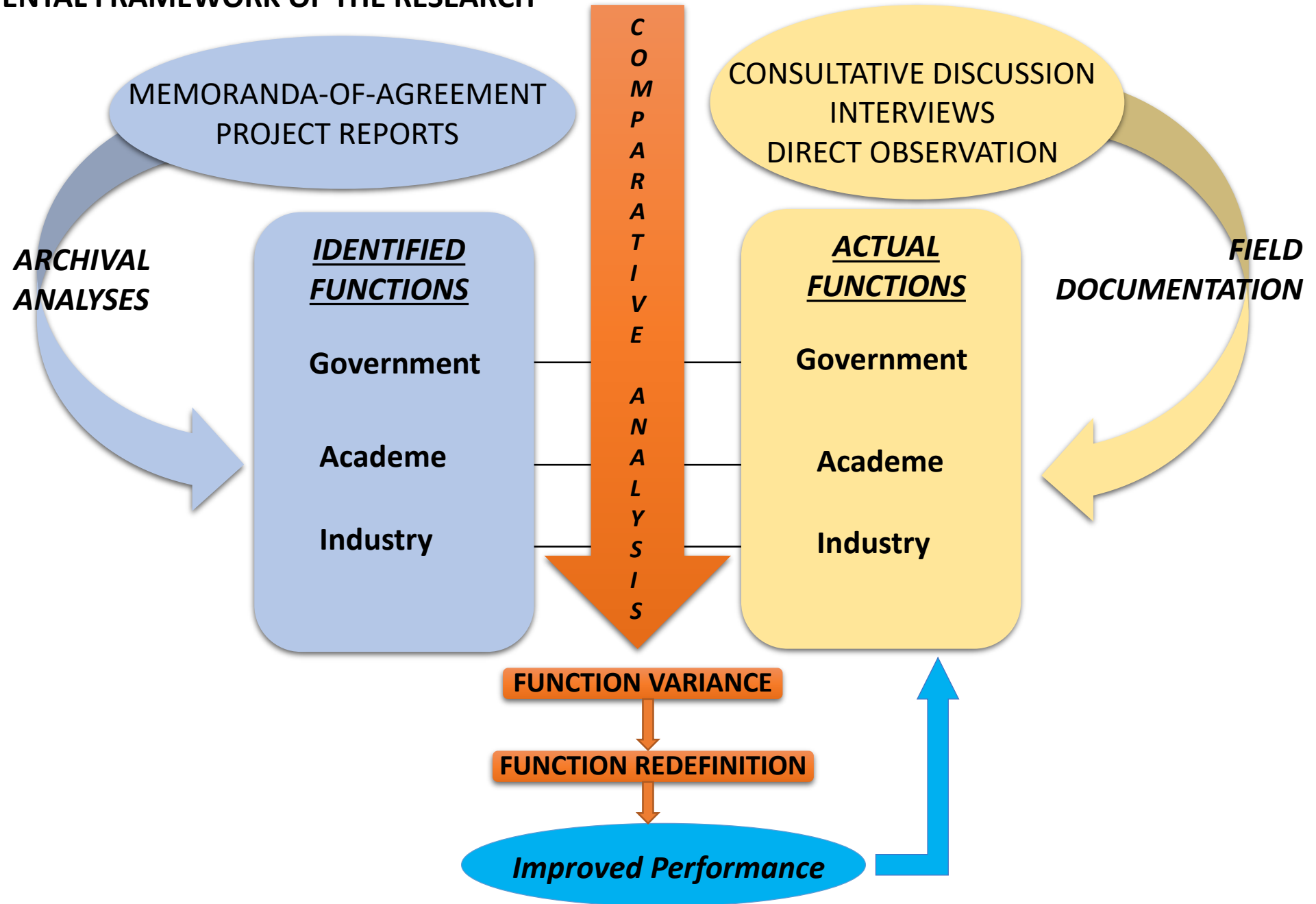
The Food Innovation Center in Triple Helix Platform



“regional growth towards national development”

Source: http://america.pink/triple-helix_4525383.html

EXPERIMENTAL FRAMEWORK OF THE RESEARCH



IDENTIFIED FUNCTIONS

Review of MOA and Project Reports:

- Design and Development of Process Equipment for the Food Processing Firms
- HITS: Roll-Out of DOST-Designed Food Processing Equipment to the Regions
- Development of Competence of the DOST Food Innovation Centers (FICs) and Recognition of Most Innovative Products

Methodology

COMPARATIVE ANALYSIS

Variation in Function

Additional Function



RECOMMENDATION

Redefined Function

ACTUAL FUNCTIONS

Field Visits

Submitted Organizational Chart

Interviews, Direct Observation, Consultative Discussion of FICs in Regions 2, 6, 8, 10, 11 and NCR

Identified - document written function

Actual - document written function with variation in terms of who and how it will be performed

Additional - function that is not document written but is actually being performed

CONCEPT ROLES OF PHILIPPINE FIC STAKEPLAYERS

GOVERNMENT

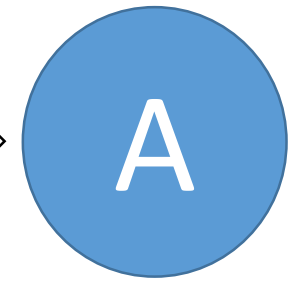
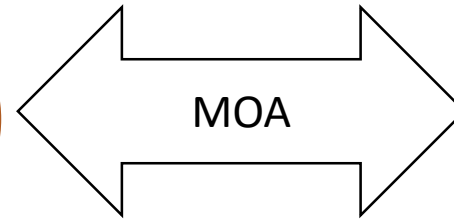
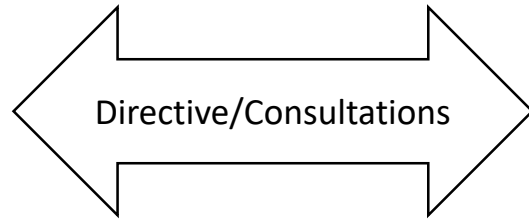
- Developer of FIC concept
- Provider of 1st generation Science, Technology and Innovation (STI) knowledge for FIC
- Provider of STI regional infrastructure
- Provider of venues for industry linkages
- Over-all steward of FIC growth

ACADEMIA

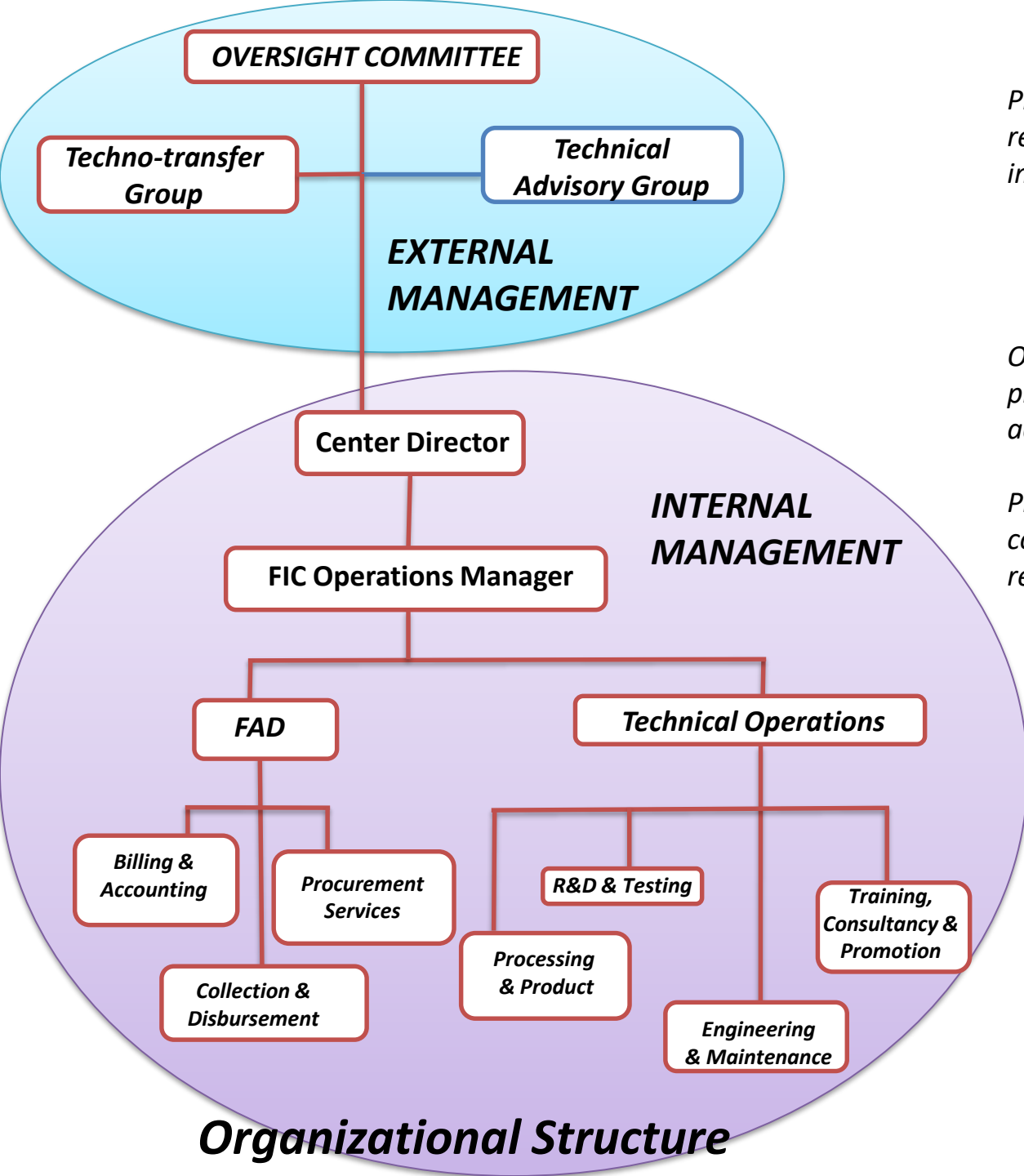
- Incubator of STI infrastructure
- Developer of succeeding generation STI knowledge
- Link with STI knowledge adaptors

INDUSTRY

- Recipient and beneficiary of STI knowledge
- Initiator of STI-based businesses
- Engines of economic growth



NATI	ACADEME
<p>Proj 1: Equipment</p> <ul style="list-style-type: none"> ✓ Industry/resea ✓ Benchmarking ✓ Prototype fabr ✓ Functional/per ✓ Operations ma <p>Proj 2: Regional</p> <ul style="list-style-type: none"> ✓ Fabricator ID ✓ Functional/per ✓ HRD Region ✓ Facility GMP C ✓ Monitoring of <p>Proj 3: Compete</p> <p>Most Innovative</p> <ul style="list-style-type: none"> ✓ Training and m Development, Pr ✓ Assistance in s ✓ Recognition of 	<p>Proj 1: Equipment Design and Development</p> <ul style="list-style-type: none"> ✓ No identified written roles <p>Proj 2: Regional Equipment Roll-Out</p> <ul style="list-style-type: none"> ✓ Provision of building/facility with recommended GMP compliant plant lay out ✓ Provide manpower and maintenance and other operating expenses (MOOE) requirement of FICs <p>Proj 3: Competence Development and Recognition of Most Innovative Products</p> <ul style="list-style-type: none"> ✓ No identified written roles



Organizational Structure

FUNCTIONS

STAFFING REQUIREMENT

FUNCTIONS	STAFFING REQUIREMENT
<i>Provide policies, directions and recommendations for continual improvement in FIC operation</i>	Oversight Committee RG – Director; Assistant Director; Project Coordinator; Secretariat Rep A – President; R&D VP Secretariat Rep
<i>Oversee intellectual property (IP) protection and commercialization activities</i>	Techno-transfer Group RG – Coordinator A – Coordinator
<i>Provide technical advice and consultancy through technical review and evaluation</i>	Technical Advisory Group NG – Concerned Agencies (DOST, DA, DTI) RG – FIC Focal Person A – Deans
<i>Implement project; Manage, monitor and evaluate overall operation</i>	Center Director A – Faculty in-charge
<i>Supervise operation by overseeing work of functional units</i>	Operations Manager A – Food technologist
<i>Ensure efficient finance/administrative services</i>	Finance and Administration A - Staff
<i>Undertake technical services for efficient operation</i>	Technical Operations A – Staff

ROLE VARIANCES IN INTERNAL OPERATION OF FIC

SYSTEMS	GOVERNMENT ROLE	ACADEMIA ROLE
•Recruitment and hiring (Academe identified)	✓ Position description	✓ Develop and finalize recruitment
•FIC Administration/ Management (Academe identified)	✓ Oversight Committee	✓ Over-all management of FIC personnel
•Capability building (National and Regional Government identified)	✓ Competency assessment ✓ Training needs assessment ✓ Developer of training modules ✓ Training of FIC personnel 1. Equipment operation 2. Product development	✓ Application of training competencies ✓ Echo of training ✓ Adaptation of training modules for industry
•Performance evaluation (Additional function)	✓ Design of performance evaluation system ✓ Audit performance ✓ Monitoring of product development & equipment efficiency	✓ Implementation of performance evaluation system

LEGEND:

Identified - document written function

Actual - document written function with variation in terms of who and how it will be performed

Additional - function that is not document written but is actually being performed

FIC PERSONNEL

Academia- based:

- ✓ Food Technologist
- ✓ Machine Operators
- ✓ University Experts in
 - Business
 - Food Science & Hygiene
 - Engineering
 - IP

Government-based:

- ✓ Oversight from national & regional DOST offices



PRODUCT DEVELOPMENT RELATED ROLES

SYSTEM	KEY ROLE PLAYERS		
	GOVERNMENT	ACADEMIA	INDUSTRY
•FIC-to-client interface (Govt ID for Academe)	✓ Provision of general types of engagement	✓ Procedure and implementation of engagement	✓ Compliance with the procedure
•Techno-transfer management (Govt ID for Academe & Industry)	<ul style="list-style-type: none"> ✓ Implementation of IPR of government ✓ Host techno-transfer events 	<ul style="list-style-type: none"> ✓ Harmonize with government IPR ✓ Promote techno-transfer activities 	<ul style="list-style-type: none"> ✓ Access to IP based on harmonized IPR ✓ Access data on technologies
•Assistance for Product Dev't Capability (Govt ID for Academe & Industry)	✓ Benefactor of start-up materials and procedures for processing	<ul style="list-style-type: none"> ✓ Manager of over-all operations ✓ Undertake processing procedures 	✓ Access to facility and expertise for product development
•Financing modes for Product Dev't	✓ Provide info for public financing of start-up/upgrading	✓ Systems for fund generation and utilization	✓ Subscribe to sources of financing (public/private)

NEWLY ESTABLISHED FORMS OF FIC ENGAGEMENTS



Actual - document written function with variation in terms of who and how it will be performed

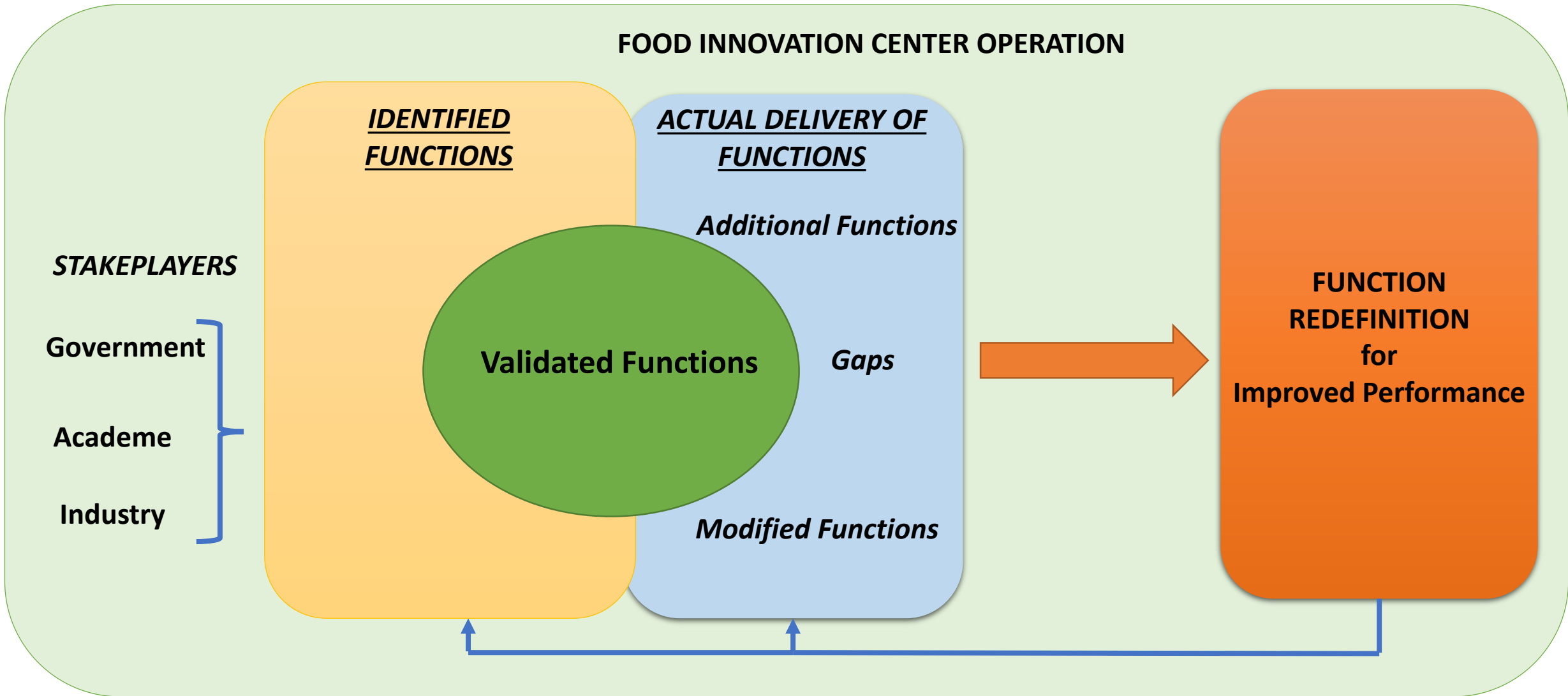
- A. Rent of equipment/facility = use of facility
- B. A + technical service advice = technical service using training material
- C. A + transfer of FIC developed technology = technology transfer
+ MOA for commercialization = licensing
- D. Client driven product development/prototyping = contract R&D
- E. Referral to an equipment fabricator or toll packer = referral

General Findings

- Identified government & academe roles in documents were all observed as actual roles
- Industry roles not written in documents
- FICs & ROs developed organizational charts/staffing patterns as actual function & to dovetail the monitoring of RO and NG within the FIC
- FIC engagement with industries completes triple helix relationship with academe and government
- Need to clarify to ROs/Academe that FIC is not for commercial production
- Techno-transfer activity with sales & technical pitching for FIC staff
- Identified roles for process scale-up & marketing protocols for FIC to be established

General Findings

- Additional functions were created to supplement the identified and actual functions in enhancing further the delivery of service and operation of FICs
 - Performance Evaluation Systems for FIC equipment and product development activity
 - Articulated financial engagements that are harmonized with DOST modes of industry assistance

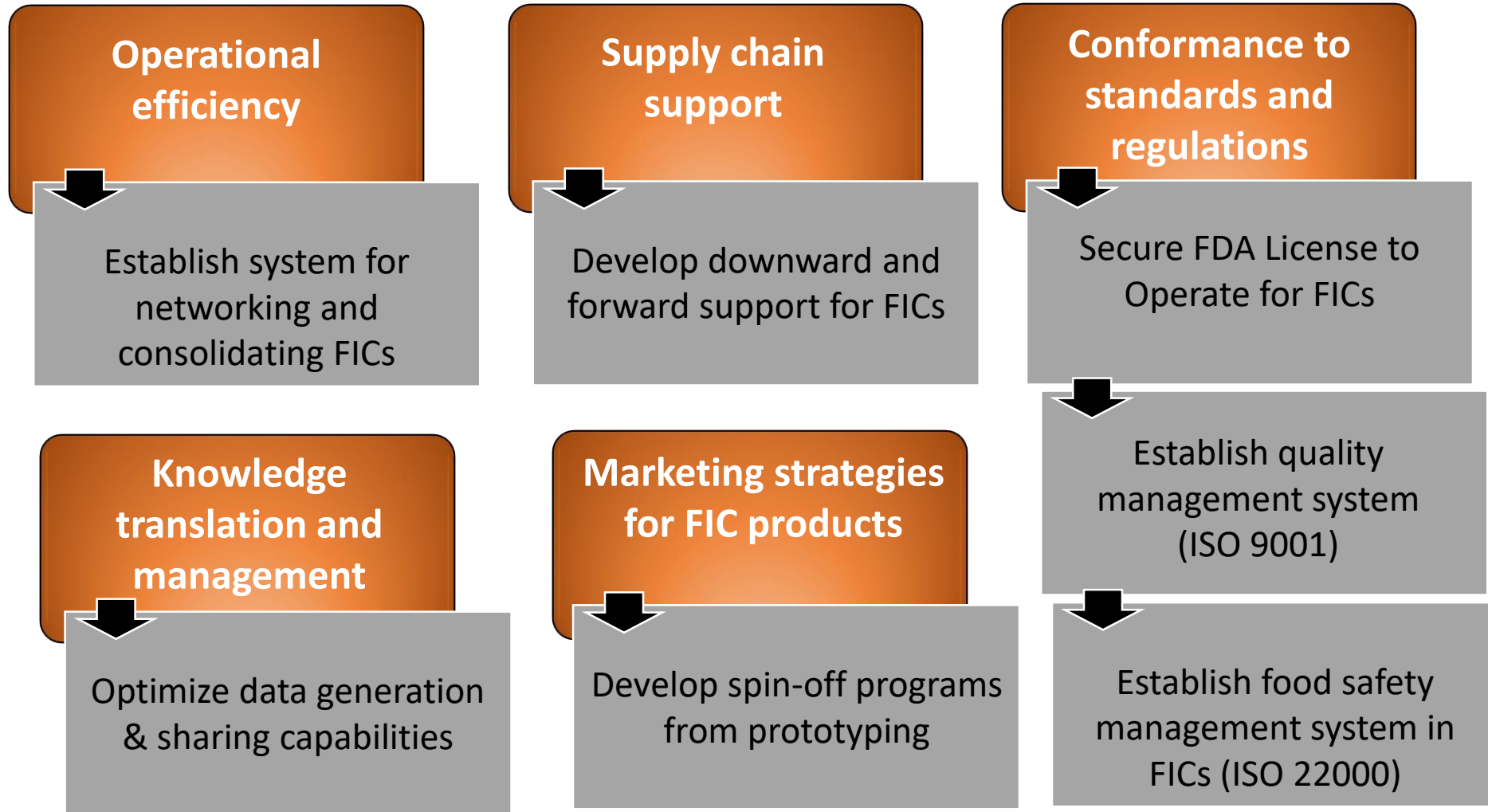


Conceptual Framework on the Dynamics of Philippine Food Innovation Center Enhanced Functions to Improve Operation

GAPS

AND

RECOMMENDATIONS



THANK YOU