Regional Inclusive Innovation Center (RIIC) Region 2

Implementation Guide

Ver. 4 (May 20, 2021)

Version History

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3	Draft	21 Mar 2021	formatting, directory	STRIDE
4	Draft	20 May	Updated objectives, framework, phases of implementation and activities based on approved project proposal; updated composition of Core Group and PMT	STRIDE
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Release Authorization

This document is authorized for release upon the approval of the following:

(Name and Position)	(Date)
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(Name and Position)	(Date)

Table of Contents

Acronyms Used

ABBREVIATION	DESCRIPTION
BFAR	Bureau of Fisheries and Aquatic Resources
BIRD-C	Business Intelligence Research & Development Center (BIRD
BIU	Business Innovation Unit
CSU	Cagayan State University
CHED	Commission on Higher Education
DA	Department of Agriculture
DOST	Department of Science and Technology
DTI	Department of Trade and Industry
FIC	Food Innovation Center
GIA	Government, Industry & Academe
HVCDP	High-Value Crops Development Program
ISU	Isabela State University
LGIA	Local Grants-In-Aid
MSME	Micro, small and medium enterprises
NEDA	National Economic and Development Authority
NVSU	Nueva Vizcaya State University
QSU	Quirino State University
RIIC	Regional Inclusive Innovation Center
RDP	Regional Development Plan
RDC	Regional Development Council
RPCAC	Regional Policy Change Advocacy Clusters
RRDA	Regional Research Development Agenda
R&D	Research and Development
STI	Science Technology and Innovation
STRIDE	Science, Technology, Research and Innovation for Development
SUC	State University and Colleges
S&T	Science and Technology
TBI	Technology Business Incubator

BACKGROUND

Rationale

Science, technology and innovation (STI) plays an important role in achieving the region's objectives toward inclusive and sustainable development. Long-term investments in building local STI capacity will spur innovations that can strengthen existing businesses, create new industries, and increase job opportunities. With access to new technologies for public goods and services, Region 2 will be better equipped to address development needs, especially for the disadvantaged in areas of health, education, energy, disaster resiliency, climate change adaptation, among others.

The Cagayan Valley Regional Development Plan 2017-2020 identified several challenges in advancing science, technology and innovation in the Region. These include the following:

1) Low R&D expenditures - ranked 5th among regions with lowest R&D expenditure, and 7th on number of researchers (DOST, 2013);
2) Limited financial support to undertake research activities and commercialization of developed technologies;
3) Low adoption and application of technology to advance production processes (lack of right information; financial capacity to acquire technology; uncertainty on the results of adoption; lack of technical know-how; lack of government support);
4) Weak public private people partnership and technology transfer (research agenda unresponsive to industry need so difficult to commercialize and adopt; weak partnership between generators and adopters of a technology, affecting utilization of research); and
5) Weak harmonization of R&D efforts of agencies and institutions (avoid duplication; align with RRDA to ensure complementation of activities towards attainment of sectoral goals and better serve industries).

To address these challenges and stimulate innovation in the Region, open collaboration among actors in the STI ecosystem needs to be strengthened. This is one of the intermediate results put forward in the Region's Strategic Framework for Vigorously Advancing Science, Technology and Innovation[1] wherein the following were identified as two key strategies:

1. Intensifying linkages and engagements between the generators and adopters of technology to ensure that the Regional Research Development Agenda (RRDA) is responsive to the needs of the local industries. To encourage more R&D activities, appropriate incentives for generators of R&D and simplified procedures shall be explored; and
2. Establishing a database of research in the region that will serve as reference to generators and adopters of technology and entry point to facilitate more collaboration in research efforts relative to the RRDA.

Challenges and Development Opportunities in Cagayan Valley

The series of scoping meetings conducted by STRIDE from September to October 2020 with stakeholders from government, academe and industry affirmed the challenges cited in the Cagayan Valley RDP.

While there are significant efforts done to advance science, technology and innovation in the region, there is a further need for a more coordinated approach in harmonizing R&D efforts of agencies and

[1] "Strategic Framework for Vigorously Advancing Science, Technology and Innovation," in the Cagayan Valley Regional Development Plan 2017-2020, NEDA Region 2.

institutions, and linking academe and industry for a more responsive R&D outputs.

DTI cited that implementation is fragmented with agencies working in silos thereby resulting to duplication of effort and scant distribution of resources. There are also missed opportunities of SUCs in commercializing their R&D outputs.

There are other factors that hinder the optimization of production and potential for commercialization that could draw in more investors in the Region. According to DA, although there are plenty of high value crops in the region, there is a low capacity to process raw materials. Farmer organizations need to be capacitated to facilitate grant eligibility and reach production quota in order to achieve inclusive growth. Stakeholders from academe shared that weak organization of farmers hinder the capacity for bulk production and meeting market demand.

Respondents from industry echoed this view: citing the need to regulate and optimize production of raw materials and increase capacity for processing to meet volume requirements. There is limited knowledge of suppliers in the region who could develop local equipment with industry players (i.e. service parts, after sales). This has implications in driving technology adoption to grow the industry and sustain gains.

DOST identified issues on production and weak presence of investors, which are further compounded by frequent typhoons and lack of infrastructure (i.e. road networks, electricity, ICT). The agency also highlighted the limited access to S&T (i.e. only one laboratory in the province; need for more technology business incubators and food innovation centers).

Cagayan Region has sectoral roadmaps for regional production of high value crops i.e. coffee, cacao, citrus, mushroom, banana. While physical infrastructure is limited, there are those that could complement or add value to the industry. These include the 1) Cagayan Valley Integrated Agricultural Laboratory (one-stop-shop for laboratory needs); 2) DA provincial experiment stations (to localize researches and TESDA-accredited learning centers for mechanization and crop production); 3) SUCs with technology adoption facilities (FICs, TBIs, BIRD-C), and 4) BFAR facilities. In addition, several fabrication centers could be tapped to address gaps in the agri-machinery sector and support production and processing: 1) ISU Equipment Manufacturing Center, 2) CSU Metals Engineering and Innovation Center, and 3) Fabrication Laboratory Santiago City. There are also convergence mechanisms in the region: 1) RPCAC, 2) DTI Food Development Program, 3) Industry Cluster Enhancement (ICE) Program, and 4) Industry Cluster Teams/Councils. All of these existing capacities could be harnessed to improve synergy in the region towards a more vibrant innovation ecosystem.

REGIONAL INCLUSIVE INNOVATION CENTERS (RIICS)

A DTI-DOST initiative supported by USAID-STRIDE, the RIICs is one of the cornerstones of the Inclusive Filipinnovation and Entrepreneurship Roadmap. It is envisioned to contribute to strengthening the capacity for innovation to drive inclusive economic growth in the countryside. The RIIC is aligned with Cagayan Valley's trust of realizing inclusive growth, a high-trust society, and a globally-competitive economy.

Specifically, it is designed to be a mechanism to strengthen industry-academe innovation collaboration in the regions. This could be achieved by establishing a local network of innovation agents that act to synergize government agencies, industries, universities, LGUs, start-ups, MSMEs, R&D laboratories, S&T parks, incubators, Fab Labs, investors, and other elements in the innovation ecosystem, to harness the region's innovation potential.

The diagram below illustrates a potential operational model of the RIIC that has been implemented in the four pilot RIIC sites of Cagayan de Oro, Cebu, Davao, and Legazpi. It highlights the need to have all resources for innovation harmonized and synergized to unlock and sustain competitive advantage for local businesses towards local economic development in the region.

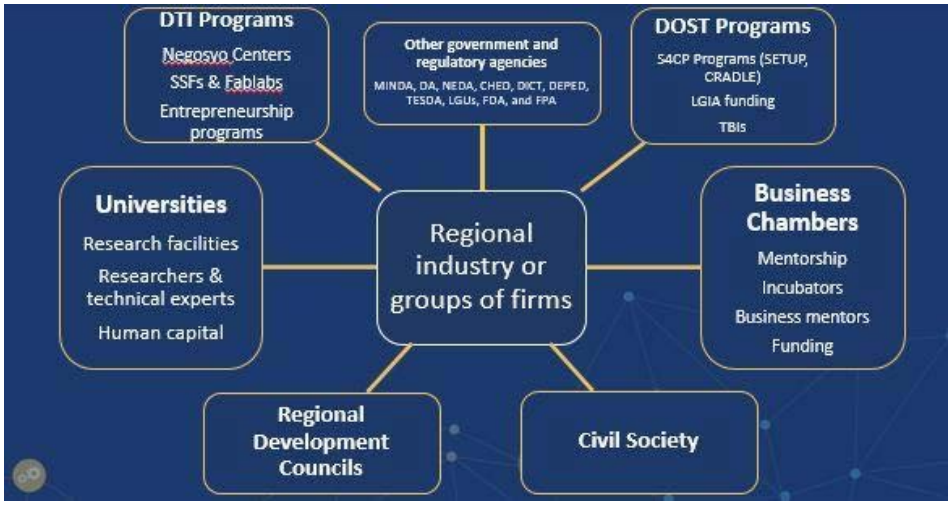

Figure 1. RIIC Operational Model

Operational Strategy for the RIIC

To operationalize the establishment of RIICs, sets of activities have been identified using STRIDE's Mapping-Linking-Aligning (M-L-A) Strategy. Through this, STRIDE has developed and designed a variety of activities that allow for a) the mapping of innovation actors and their capabilities in the regions, b) the linking of innovation actors for more impactful innovation partnerships; and c) the aligning of existing resources to the needs of local industries.

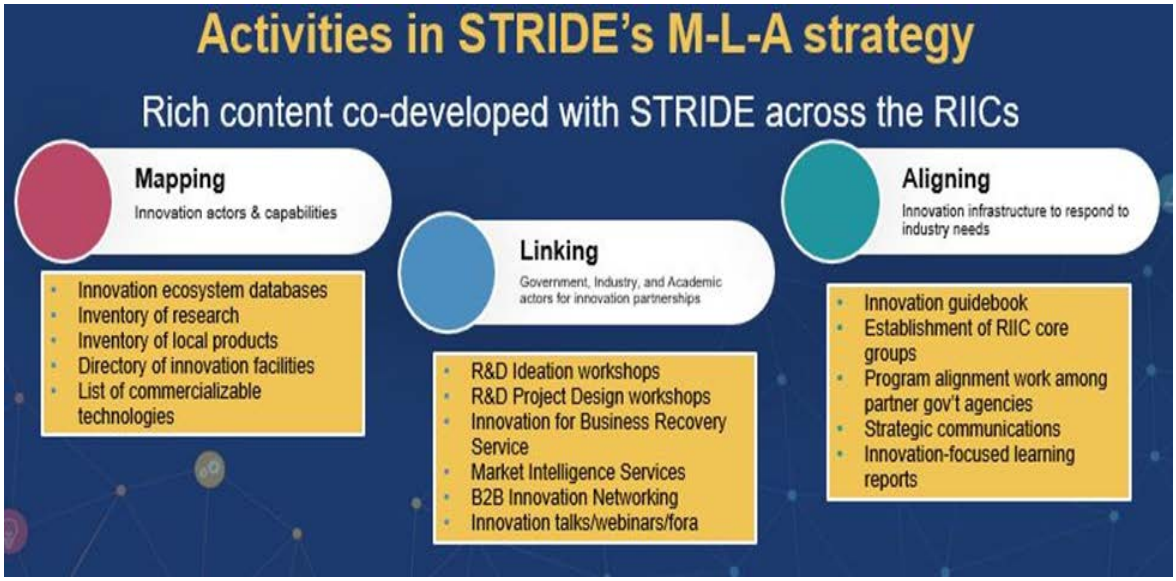

Figure 2. RIIC Operational Strategy

Objectives

The RIIC-2 initiative aims to:

1. Harmonize existing knowledge and innovation assets;
2. Formulate a more responsive and demand-driven research agenda;
3. Guide MSMEs in accessing and using innovation resources for business resiliency and competitiveness;
4. Streamline adoption of innovative technologies for improved production and post-production systems; and
5. Create access points for innovation among GIA stakeholders.

Management Structure

The diagram below illustrates the proposed management structure that will be established for the implementation of the RIIC-2 Innovation Program:

Figure 3. Region 2 RIIC Management Structure

Guided by the overall direction set by the RIIC Region 2 (RIIC-2) Core Group, the pilot implementation of the Region 2 RIIC Innovation Program will be facilitated by a Project Leader and overseen by the Project Management Team.

RIIC-2 Core Group (Steering Committee):

The RIIC-2 Core Group is initially comprised of DOST and DTI as lead convenors, supported by DA, CHED, and NEDA; Philippine Chamber of Commerce and Industry - Region 2 (PCCI-2) and Cagayan Valley Citrus Industry Council (CVCIC) as industry partners; and Nueva Vizcaya State University (NVSU), Cagayan State University (CSU), Isabela State University (ISU), and Quirino State University (QSU) as academe partners. Members of the Core Group are the heads of these agencies and institutions. The

Core Group may be expanded based on the programs for implementation and is open to stakeholders who express their interest and commitment.

Following are the members of the RIIC-2 Core Group (Steering Committee):

AGENCY	NAME	DESIGNATION	CONTACT DETAILS
DOST-2	Engr. Sancho A. Mabborang, CESO III	Regional Director	records@ro2.dost.gov.ph
DTI-2	Romleah Juliet Pulido-Ocampo	Regional Director	r02@dti.gov.ph
DA-2	Rose Mary G. Aquino	OIC-RTD for Research, Regulatory and Finance Administration	da_rfu2000@yahoo.com
CHED-2	Julieta M. Paras, Ed. D., CESE	Regional Director	jparas@ched.gov.ph
NEDA-2	Dionisio C. Ledres, Jr.	Regional Director	neda_ro2@yahoo.com
PHILIPPINE CHAMBER OF COMMERCE AND INDUSTRY – REGION 2	Cloyd C. Velasco	Regional Governor	cloydvels@gmail.com
CAGAYAN VALLEY CITRUS INDUSTRY DEVELOPMENT COUNCIL	Josephine L. Namujhe	Chairperson	josephinenamujhe@gmail.com
NUEVA VIZCAYA STATE UNIVERSITY	Ruth R. Padilla	OIC - University President	info@nvsu.edu.ph
CAGAYAN STATE UNIVERSITY	Urdujah G. Alvarado, PhD, CESO II	University President	uat203@csu.edu.ph
ISABELA STATE UNIVERSITY	Ricmar P. Aquino, PhD	University President	president@isu.edu.ph
QUIRINO STATE UNIVERSITY	Hermenegildo F. Samoy, Jr., PhD	University President	info@qsu.edu.ph

The primary function of the RIIC Core Group is to provide program direction and policy support to the PMT on the implementation, monitoring, evaluation and review of the RIIC-2 innovation programs and projects.

To achieve this, the Core Group (Steering Committee):

1) monitor emerging trends/technologies, and provide guidance, inputs, and technical information on submitted proposals;

2) contribute their skills, knowledge and experience on innovation processes, systems and program management in relation to the implementation measures proposed by the PMT, with regards to the adoption and uptake of these technologies by industry, including finding solutions to barriers and impediments;

3) hold regular meetings with the primary purpose of sharing information and agency updates, discussing concerns on implementation activity, as a means of ensuring effective implementation of the RIIC-2 programs and services; and

4) participate in an annual review of the TWG.

The RIIC-2 Core Group shall be chaired by the DOST Regional Director. The Chair shall convene the TWG on a regular basis to share updates to discuss updates, special concerns, lessons learned, and opportunities, in order to overcome common challenges and ensure synergy among the tools/systems being developed.

Project Management Team (PMT):

The Project Management Team is composed of representatives from partner agencies involved in the RIIC-2 implementation. Representatives shall be preferably those with decision-making authority (e.g. assistant regional directors, division chiefs, executive directors, etc.) and have operative knowledge on the programs/services of their respective agencies, as follows:

- DOST: Facilities management, funding programs
- DTI: SSF management, trainings
- DA: HVCDP, Research/Experiment Stations
- Industry: Business concerns, sectoral development
- Academe: RDE expertise and facilities

The PMT shall:

1) provide strategic support to the Project Leader for the effective and efficient implementation of the RIIC Innovation Program;

2) serve as coordination officers and points of reference between the program and partner agencies;

3) provide technical advice to the Project Lead in the areas covering their specific agency concerns;

4) ensure that all necessary support and information from each agency are made available and delivered on time;

5) provide support to the operationalization of the Business Innovation Unit;

6) meet at least twice a month to discuss updates and concerns on implementation of activities relative to the RIIC-2 Innovation Program as a means of ensuring alignment of efforts towards the effective implementation of the RIIC-2 programs and services; and

7) report and provide regular updates on the RIIC-2 activities and implementation status to their respective agency heads.

The list of RIIC-2 PMT Members is as follows:

AGENCY	NAME	DESIGNATION	CONTACT DETAILS
DOST-2	1. Permanent: Raquel B. Santos	Science Research Specialist I, Office of the Regional Director	raquel.santos@ro2.dost.gov.ph
	2. Alternate: Rocela Angelica Gorospe	Provincial Director, PSTC-Quirino	rocelaangelica.gorospe@ro2.dost.gov.ph
	Engr. Jonathan R. Nuestro	Provincial Director, PSTC-Nueva Vizcaya	jonathan.nuestro@ro2.dost.gov.ph
DTI-2	1. Permanent: Winston Singun	Provincial Director, DTI-Isabela / Supervising Director for Innovation	WinstonSingun@dti.gov.ph
	2. Alternate: Mary Ann Dy	Division Chief, Industry Development Division (IDD)	MaryAnnDy@dti.gov.ph
DA-2	1. Permanent: Lovelyn A. Gaspar	OIC-Chief, Research Division	lovygaspar@yahoo.com
	2. Alternate: Rosario U. Paccarangan	Chief, Agribusiness & Marketing Assistance Division	darfu02amad@gmail.com
CHED-2	1. Permanent: Almacita Abrigo	Chief, Education Program Specialist	aabrigo@ched.gov.ph
	2. Alternate: Jocelyn P. Carag	Education Supervisor II	jcarag@ched.gov.ph
	Anastacio Siogie G. Saguibo, Jr.	Education Supervisor II	asaguibo@ched.gov.ph

NEDA-2	1. Permanent: Mildred B. Maglaya 2. Alternate: Lilian D. Marasigan	Supervising Economic Development Specialist Senior Economic Development Specialist	neda2_drd@yahoo.com neda_ro2@yahoo.com
PHILIPPINE CHAMBER OF COMMERCE AND INDUSTRY – REGION 2	1. Permanent: Evelyn Velasco 2. Alternate: Ramon A. Morales	President, PCCI Cagayan Board of Trustees Chairman, PCCI Cagayan	gypeesy@gmail.com ramsyl_05@yahoo.com
CAGAYAN VALLEY CITRUS INDUSTRY DEVELOPMENT COUNCIL	1. Permanent: Dr. Elbert Sana	Secretary	elbertsana@gmail.com
NUEVA VIZCAYA STATE UNIVERSITY	1. Permanent: Wilfredo Dumale, Jr. 2. Alternate: Cristina R. Salvosa	VP for Research, Extension and Training Campus Administrator / HEIRIT Project Leader	dumalewajr@yahoo.com crsalvosa@yahoo.com
CAGAYAN STATE UNIVERSITY	1. Permanent: Junel B. Guzman 2. Alternate: Josie Y. Bas-ong	VP for Research, Development and Extension Director for Extension	jbgcsueng@gmail.com josiebasong@gmail.com
ISABELA STATE UNIVERSITY	1. Permanent: Orlando F. Balderama 2. Alternate: Eva U. Cammayo	VP for Research and Development, Extension and Training (RDET) Director, Center for Technology Commercialization and Entrepreneurship Development	ofbalderama@gmail.com euccpa@yahoo.com.ph

QUIRINO STATE UNIVERSITY	1. Permanent: Elizabeth T. Carig 2. Alternate: Fredisminda M. Dolojan	VP for Academic and Research Director for Extension	elizabeth.carig@qsu.edu.ph FredisDolojan@yahoo.com

The Project Leader:

The Project Leader for the RIIC-2 is the Philippine Chamber of Commerce and Industry (PCCI-2). With technical support from the USAID-STRIDE, the Project Leader shall oversee coordination and monitoring of RIIC-2 activities, provide guidance to the Business Innovation Unit, and facilitate endorsement of policy issues to the Core Group, as necessary.

The Business Innovation Unit (BIU):

The program will implement a Business Innovation Unit BIU) which shall be under the direct supervision of the Project Leader. The BIU is aimed to increase subscription of MSMEs to the programs and services of the regional line agencies and in the uptake of research outputs from key R&D partners in the region. It is envisioned as a functioning unit that serves as a dynamic one-stop shop (helpdesk) and valuable first contact for prospective innovators among businesses and a strategic communications point for GIA stakeholders in the region.

The establishment of the BIU shall be through the submission of a non-R&D project, as part of the RIIC-2 Innovation Program, to DOST through the LGIA mechanism for possible funding support. Its goal is to create as many connections for innovation as possible.

The BIU will have the following components:

- Qualified consultants – to develop technical content for RIICs activities, who can be identified among HEI faculty and RDI experts. Implementation and development of the technical content (per activity) will be handled by qualified consultants and experts.
- Project Administration Unit – for coordination with member agencies and regional industries and support to activity implementation.
- Monitoring & Evaluation Unit – for progress and impact monitoring. This can be mobilized from existing M&E units among partner agencies.

For Region 2 it is proposed to have two groups for the BIU – the Citrus Industry Council (CVCIDC) and the PCCI Region 2. The Citrus Council will handle more intensive RIIC services i.e. mapping out and linking of industry-specific innovation assets. On the other hand, the PCCI BIU will handle more general activities (i.e. mapping, industry-academe consultations, IBR planning). At the same time, PCCI BIU will seek industry partners for the Cagayan Valley banana sector. Temporarily, activities for the banana sector shall be subsumed under the PCCI BIU until such time that an industry partner will be selected to lead the BIU for the banana sector.

RIIC-2 Framework

The RIIC-2 Innovation Program Framework (below) illustrates a possible operationalization of the RIIC in the region. The framework below showcases the various objectives and activities that can be conducted as part of the region's innovation program, as well as the outputs that may be delivered.

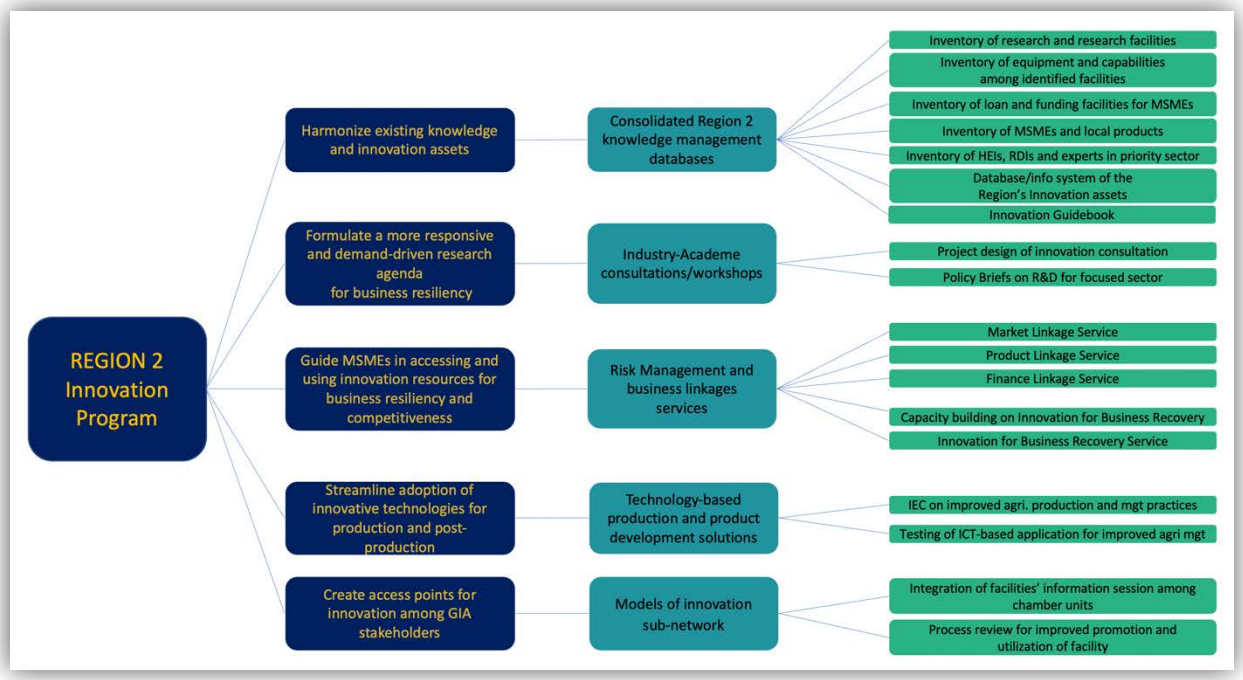

Figure 4. Cagayan Valley RIIC Innovation Program Framework

RIIC-2 Program Components:

1. Development and release of RIIC knowledge management (KM) products

To address the gap in knowledge of MSMEs on available innovation resources in the region and facilitate more collaboration among government-industry- academe (GIA) stakeholders in the region, the Cagayan Valley RIIC will map out innovation resources, consolidate data sets into a database and make them available via multiple access points. These would include resources such as inventories of research and research facilities; equipment; funding and loans facilities; MSMEs and local products; and Higher Education Institutions (HEIs), Research and Development Institutions (RDI) and experts in priority sector. An existing web-based information system on citrus will also be expanded and enhanced to include other relevant data sets.

Other knowledge management products such as a localized Innovation guidebook will also be developed to guide MSMEs on how they could integrate innovation at every stage of their enterprise development.

2. Access to innovation stakeholders' fora and consultations

The Cagayan Valley RIIC will help enable better synergy among academe and industry partners in the pursuit of market-oriented research that meets the needs of the industry and helps address societal

issues through the creation of new products and services and generation of jobs. To achieve this, the RIIC will facilitate dialogue, focus group discussions, consultations, ideation workshops among industry and academe stakeholders. This would include specific activities such as a Best Practices Forum to review and document completed high impact R & D that may be prioritized for technology application.

3. Risk management and business linkages services

As a dynamic one-stop-shop (helpdesk) and valuable first contact for prospective innovators among businesses, the Business Innovation Unit of the Cagayan Valley RIIC shall provide one-on-one coaching services to MSMEs to help them:

- Identify appropriate partners for their specific innovation needs;
- Access and promote their products in established online platforms;
- Access and coordinate with raw materials producers in the region;
- Identify and leverage available government, private, and donor-partners financing support for business recovery and continuity; and
- Prepare and implement their Innovative Business Recovery Plan

The Cagayan Valley RIIC shall facilitate capacity building on Innovation for Business Recovery (IBR) and provide one-on-one consultancy services to selected MSMEs as they develop and implement their respective IBR plans. This service aims to enable MSMEs to make an informed choice about their recovery and continuity amidst the COVID-19 pandemic. To ensure sustainability and wider reach of this initiative, an initial training of trainors will be conducted among chamber/industry partners and DOST's Technology Business Incubator (TBI) facilities in the region to equip them to re-echo these capacity building activities and provide support to interested MSMEs.

4. Technology-based production and product development solutions

The demonstration model on the RIIC's focused industry (citrus) will leverage smart agriculture to efficiently provide real-time information and aid for both immediate and long-term decision making. Specifically, an existing system application (i.e. SARAI) would be customized and tested for adoption to improve decision making specifically on fertilizer management, irrigation, and pest/disease identification for citrus and later in banana and other crops in the region.

The RIIC will also create innovative technology option packages for increased orchard productivity in the region and package it into IEC material for easy reference of citrus farmers and industry stakeholders.

5. Develop/enhance models of innovation sub-network

The Cagayan Valley RIIC would lead in facilitating stronger alignment of innovation facilities with industry needs and develop model sub-networks to demonstrate effectiveness of increased synergy and resource-sharing among innovation programs and services. Some of the specific activities may include the conduct of business process review and design of an appropriate promotion and marketing of FICs to improve its utilization; and conduct of information sessions around the BIRD-C and the Food Innovation Centers to improve appreciation of innovation and innovation work of industry partners and stakeholders.

Phases of Program Implementation:

Cagayan Valley RIIC will be implemented for a period of 3 years covering 2021 to 2024.The project will be implemented in three phases:

Phase 1 (Year I, Q1-Q4) will focus on the setting up of the processes and systems of the RIIC and conduct of activities that will help deliver proof of concept for this convergence mechanism. As such, all services and key functions of the RIIC shall be implemented on Phase 1 that will include the following:

- Consolidated Region 2 knowledge management databases
- Industry-academe consultations/workshops
- Risk-management and linkages services
- Technology-based production and product development solutions
- Models of innovation sub-network

As part of setting up of processes and systems for the newly-installed Business Innovation Unit several activities will be conducted such as the following:

- benchmarking activities that aim to assess the current status of the focus industry vis-à-vis best practices and align RIIC activities to address gaps and opportunities for improvement; and
- process documentation sessions to detail process flows for the services of the BIU

Phase 2 (Year II, Q1-Q4 – Year III, Q1-Q2) will further showcase the efficient consolidation, sharing of resources and effective collaboration of innovation partners as they create a demonstration model around the region's citrus industry as a pilot industry. Experiences and lessons learned from this demonstration model shall be extensively documented to serve as basis for replicating it to banana and to other industries. A regional forum will be conducted to share the gains and opportunities thus far of this innovation program and the citrus demo model to drum up support for the sustainability of the RIIC mechanism in terms of generating investors and future industry partners.

On Phase 2 more sub-activities will be conducted under technology-based production and product development solutions. Specifically, the RIIC Division on Citrus will lead the development of a competitive citrus-based processed products for selected Micro, Small, and Medium Enterprises (MSME), OneStore hub, or OTOP center in the region. The linkages services of the RIIC will be expanded to provide guidance and capacity building to selected MSMEs in terms of new and evolving citrus-based products as viable investment options. Product promotions will also be conducted to tap existing market and gather support for possible investment growth.

Phase 3 (Year III, Q2-Q4) will focus on setting up the replication of convergence demonstration model to other industries. This initiative may include but will not be limited to the following activities:

- updating of innovation database especially for the target industry;
- creation of a new division and engagement of industry partner for the target industry; and
- Industry-academe consultations/workshops to facilitate better matching/ development of R&D initiatives that meet industry needs for this target industry

RIIC-2 Industry Focus and Smart Agriculture

In the initial phase of implementation of the RIIC in Region 2, it is deemed crucial to have an industry focus that could help deliver results or proof of work in the short term. This strategy is being recommended to also enable efficient consolidation and sharing of resources and effective collaboration while developing a demonstration model around specific facilities (i.e. ISU Equipment Manufacturing Center, CSU Metals Innovation Center, and Fabrication Laboratories). It is envisioned that success in this initial stage of implementing the RIIC could then be replicated to cover other industries of the region.

To determine the focus industry for the RIIC, the following were proposed as criteria to consider: 1) presence of activities for innovation (i.e. value-adding); 2) readiness for partnership (more collaborative; existing innovation partnerships; and 3) comparable strength of commodity (i.e. supply sufficiency and quality) against other regions. For RIIC Region 2, citrus (main sector) and banana (support sector) were selected as focus industries, based on a series of scoping meetings conducted by STRIDE with government, academe and industry, and the multi-stakeholder consultation on 17 November 2020.

The demonstration model will also leverage smart agriculture: 1) crop establishment (i.e. technology for real-time crop distribution; machinery); 2) post-harvest facilities, and 3) light farming tools.

While industry engagement/linkage within the demonstration model will be specific to citrus and banana, other mapping activities of the RIIC could cover other commodities (i.e. rice).

PROGRAM OF ACTIVITIES AND MILESTONES

STRIDE and partners will implement and operationalize the innovation program on a rolling 12-week timetable. The initial timetable will feature activities agreed upon with stakeholders during the initial scoping engagements. Near the end of the 12-week period, primary partners shall reconvene to evaluate implementation, revisit strategies and create a sustainability plan for the RIIC.

In the initial plan, the priority would be on delivering a proof of work – to learn fast and identify effective strategies, then revise (as necessary); come up with as many mechanisms and activities as possible; and focus on laying out processes and developing activity design among key partners.

I. Institutionalization Mechanisms

Output 1.1. Project Proposal for the RIIC 2 Innovation Program submitted to DOST

Timeline	Key Sub Activities	Key implementer (partners)
January 2021	Drafting of Proposal	PCCI-2 and Citrus Council with DOST, STRIDE
February 2021	Review and revisions	PCCI-2 and Citrus Council with DOST, STRIDE
March 1, 2021	Presentation to DTI and DOST RIIC Core Group members	PCCI-2 and Citrus Council with DOST, STRIDE
March 15-22, 2021	Finalization of Proposal	PCCI-2 / Citrus Council

March 22, 2021	Submission to DOST	PCCI-2 / Citrus Council

Output 1.2. RIIC initiative adopted as a regional development agenda in RDC

Timeline	Key Sub Activities	Key implementer (partners)
January 12, 2021	Meeting with NEDA RD to discuss creation or identification of appropriate committee that will represent/endorse the RIIC with the RDC.	DOST and DTI RDs
Q1 2021	Presentation of the RIIC initiative at the RDC-Sectoral Committee on Economic Development or Innovation Committee	DOST, STRIDE
Q1 2021	Endorsement/presentation of the RIIC-2 initiative to the RDC Council	DOST

Output 1.3. Business Innovation Unit (BIU) established

Institutionalization	Establishment of the Region 2 RIIC Business Innovation Unit
Rationale	Increase subscription/uptake of Region-2 MSMEs to government programs and R&D outputs from key partners
Vision	A dynamic one-stop shop (helpdesk) and valuable first contact for prospective innovators among businesses. It also serves as a strategic communications point for GIA stakeholders in the region, covering all information relative to the programs and services for MSMEs.
Key implementer (partners)	Cagayan Valley Citrus Industry Council (CVCDC) Philippine Chamber of Commerce and Industry – Region 2
Governance arrangements:	**Lead:** The Chamber and the Council shall share responsibilities in leading sub-activities relative to the fulfillment of the activity and coordinate efforts to consolidate and crosslink with DOST, DTI, and all other line agencies in Cagayan Valley. DOST shall endorse the Chamber and Council to all CL line agencies. PCCI BIU will cover general activities (i.e. mapping, linking industry-academe consultations, IBR planning), while exploring industry partners for the banana sector. The Citrus Council BIU will include more intensive RIIC services (i.e. mapping out and linking of industry-specific innovation assets). **Resources:** The Chamber and the Council shall provide manpower needs towards the development of the Center, with support from RIIC Core Group**.**

	Communication/Reporting: The Chamber and the Council shall initiate development of protocols for access, updating, and management of the Center with the PMT / TWG
Timelines:	**Key Sub-activities**
December 2020	**Inception Phase** Core group to agree on the objectives and functionality of the BIU; meeting with Project Leader and BIU Head to level off on roles and responsibilities
25 January – 22 March 2021	**Project Proposal Phase** Drafting of the project proposal for the innovation program of RIIC, integrating the establishment of the BIU within the RIIC; review of the project proposal by the Core Group/DOST; submission of the project proposal by the Chamber to DOST for funding.
April 2021	**Preliminary design (process design)** Engagement of expert/s on the development of process design for the Center (physical and online); Develop design to operationalize the BIU; approval of the process design by the RIIC-2 Core Group
April 2021	**Implementation Phase** Data gathering among Region 2 key government agencies (DOST, DTI, DA, CHED and NEDA)
June 2021	**Integration and Deployment Phase** Integration of all data into the Center and develop institutional arrangements and protocols for access, utilization, updating, maintenance, cross-linking; Develop communication plan.

Output 1.4. RIIC Region 2 Launching and MOU signing

Timeline	Key Sub Activities	Key implementer (partners)
April 2021	Develop RIIC Branding and communication strategy.	DTI
June 2021	RIIC Launching and MOU Signing	RIIC Core Group

Proposed branding for the RIIC Innovation Program: Shine Cagayan Valley

GANTT CHART FOR THE INSTITUTIONALIZATION ACTIVITIES

INSTITUTIONALIZATION ACTIVITIES	Y1 2021					
	Jan	Feb	March	April	May	June
Project Proposal for the RIIC-2 Innovation Program						

RIIC initiative adopted as a regional development agenda in the Region 2 RDC						
Establishment of the Region 2 RIIC Business Innovation Unit						
RIIC-2 Launching and MOA Signing						

II. Mapping Activities

Output 2.1. Inventory of Innovation Data completed

Mapping Activity 1	Inventory of Research and Research Facilities (relevant to priority sectors - citrus and banana)
Target Outcome	Increased access to and utilization of research and research facilities
Key Deliverables	1) index of research studies published; 2) soft copies of published research studies; 3) list and profile of research facilities
Key implementer (partners)	DOST, DA, CHED, Citrus Council, HEIs
Governance arrangements:	**Lead actors:** Citrus Council to coordinate with NVSU (citrus), DA (NVES, NCES, CVRC and QES), CHED for the inventory of research, and DOST for the inventory of research facilities and RDE consortia/councils **Resources:** NVSU and DOST to provide manpower needs **Communication/Reporting:** key partners to develop their respective deployment protocols: a) DOST and DA for research facilities and vice versa, b) CHED to HEIs and vice versa **Consolidation/Reporting:** NVSU, DOST, DA, CHED to officially endorse inventory of research and research facilities to the Business Innovation Unit. Efforts on this shall be monitored by the Project Leader.
Timelines:	**Key Sub-activities**
March 29-31, 2021	**Planning phase** Citrus Council and NVSU to coordinate with DOST/DA/CHED to discuss level of information that will be gathered and what information are already existing.
April 5- 9, 2021	**Socialization phase** DOST/DA/CHED to prepare communication to all concerned HEIs and agencies on the conduct of inventory – to introduce the RIIC and level-off objectives and extent of data/information that need to be gathered.
April 12-30, 2021 (3 weeks)	**Data gathering phase**

	Deployment of staff (if necessary) or tools to HEIs and research facilities to collect data and documentation requirements; Submission of inventory from provincial to DOST/DA/CHED Regional Offices.
May 3 - 7, 2021	**Review phase** Review of submitted inventory of research and R&D facilities by DOST/DA/CHED, respectively.
May 10-12, 2021	**Consolidation phase** Endorsement of final inventory/key deliverables to the Business Information Unit.

Mapping Activity 2	Inventory of existing equipment and capabilities among identified facilities
Target Outcome	Industries are able to source locally-made manufacturing and agriculture equipment, parts and tools
Key Deliverables	Profile of the following fabrication centers in the region, including list of equipment, parts and tools manufactured, industries served: 1) ISU Equipment Manufacturing Center, 2) CSU Metals Innovation Center, and 3) Fabrication Laboratory Santiago City
Key implementer (partners)	Citrus Council, R&D facility managers, DOST, DTI, CHED
Governance arrangements:	**Lead actors:** Facility managers to provide profile and other details relative to their respective facilities **Resources:** CHED and DOST to provide necessary support **Communication/Reporting**: CHED and DOST to develop their respective deployment protocols: a) CHED to HEIs and vice versa and b) DTI to FabLab and vice versa. **Consolidation/Reporting:** Facility managers to officially endorse inventory of research facilities to the Business Innovation Unit.
Timelines:	**Key Sub-activities**
March 29-31, 2021	**Planning phase** Citrus Council to coordinate with DA, CHED and DOST to discuss level of information that will be gathered and what information are already existing.
April 5- 9, 2021	**Socialization phase** CHED to prepare communication to all concerned HEIs on the conduct of inventory – to introduce the RIIC and level off objectives and extent of data/information that need to be gathered.
April 12 – 30, 2021 (3 weeks)	**Data gathering phase** Deployment of staff (if necessary) or tools to HEIs and to collect data and documentation requirements; Submission of inventory to CHED and DOST Regional Offices.
May 3 – 7, 2021	**Review phase** Review of submitted inventory of HEI facilities by CHED and DOST.

May 10 – 12, 2021	**Consolidation phase** Endorsement of final inventory/key deliverables by CHED and DOST to the Business Innovation Unit.

Mapping Activity 3	Inventory of MSMEs and local products in priority sector
Target Outcome	MSMEs can easily match their resource needs with suppliers and service providers.
Key Deliverables	1) Updated list and profile of MSMEs and their products and services (including SETUP beneficiaries); 2) List of existing and potential markets for product advertisement & linkages.
Key implementer (partners)	DTI Regional and Provincial Offices and Negosyo Centers;
Governance arrangements:	**Lead:** DTI to lead development and implementation of MSME inventory, with support from DOST on the SETUP program **Resources:** DTI and DOST shall provide manpower needs and deployment protocols **Communication/Reporting:** Provincial representatives shall submit their respective inventory to DTI-RO. **Consolidation/Reporting:** DTI Regional Office to officially endorse inventory of MSMEs, local products and existing / potential markets to the Business Innovation Unit
Timelines:	**Key Sub-activities**
April 5-6, 2021	**Planning phase** DTI to determine level of information that will be gathered and what information are already existing.
April 7-9, 2021	**Socialization phase** DTI to prepare communication to all concerned DTI provincial and partner agencies, industry associations on the conduct of inventory – to introduce the RIIC and level off objectives and extent of data/information that need to be gathered.
April 12-30, 2021 (3 weeks)	**Data gathering phase** Deployment of staff if necessary) or tools for collection of data and documentation requirements; Submission of inventory from provincial to DTI Regional Office
May 3-7, 2021	**Review phase** Review of submitted inventory of MSMEs and local products by DTI
May 10-12, 2021	**Consolidation phase** Endorsement of final inventory/key deliverables by DTI to BIU.

Mapping Activity 4	Inventory of funding and loan facilities for MSMEs
Target Outcome	MSMEs can easily access funding and loan facilities to sustain operations

Key Deliverables	List of facilities categorized into 1) funding and 2) loan including information on minimum and maximum amount, interest rates, requirements, etc.
Key implementer (partners)	DTI, PCCI
Governance arrangements:	• **Lead:** DTI to lead development and implementation of the inventory • **Resources:** DTI shall provide manpower needs and deployment protocols • **Communication/Reporting:** Provincial representatives shall submit their respective inventory to DTI-RO. • **Consolidation/Reporting:** DTI Regional Office to officially endorse inventory of funding and loan facilities for MSMEs to BIU**.**
Timelines:	**Key Sub-activities**
April 12 – 13, 2021	**Planning phase** DTI representatives to determine level of information that will be gathered and what information are already existing.
April 14 – 16, 2021	**Socialization phase** DTI and PCCI-2 to prepare communication to all concerned DTI provincial and partner agencies, industry associations on the conduct of inventory – to introduce the RIIC and level off objectives and extent of data/information that need to be gathered.
April 19 – May 7, 2021 (3 weeks)	**Data gathering phase** Deployment of staff (if necessary) or tools for collection of data and documentation requirements; Submission of inventory from provincial to DTI Regional Office
May 10-14, 2021	**Review phase** Review of submitted inventory of funding and loan by DTI
May 17-19, 2021	**Consolidation phase** Endorsement of final inventory/key deliverables by DTI to BIU.

Mapping Activity 5	Inventory of HEIs and Experts in priority sector
Target Outcome	Increased awareness and utilization by MSMEs of available innovation resources/intellectual capital in the region.
Key Deliverables	1) Updated list and profile of HEIs; 2) List and profile of innovation experts per HEI (including external consultants) per area of specialization
Key implementer (partners)	PCCI, CHED, HEIs
Governance arrangements:	**Lead:** PCCI shall coordinate with CHED all activities for this deliverable **Resources:** CHED shall provide manpower needs and deployment protocols **Communication/Reporting:** CHED shall coordinate deployment protocols with HEIs

	Consolidation/Reporting: CHED Regional Office to officially endorse inventory of HEIs and Experts to PCCI.
Timelines:	**Key Sub-activities**
April 5-9, 2021	**Planning phase** PCCI to meet with CHED to discuss level of information that will be gathered and what information are already existing.
April 12 – 16, 2021	**Socialization phase** CHED to prepare communication to all concerned HEIs and partner institutions on the conduct of inventory – to introduce the RIIC and level off objectives and extent of data/information that need to be gathered.
April 19 – May 14, 2021 (4 weeks)	**Data gathering phase** Deployment of staff (if necessary) or tools for collection of data and documentation requirements; Submission of inventory (Yellow Pages) of HEIs and Experts per area of specialization to CHED Regional Office.
May 17-21, 2021	**Review phase** Review of submitted inventory of HEIs and Experts by CHED regional office.
May 24-26, 2021	**Consolidation phase** Endorsement of final inventory/key deliverables by CHED to PCCI.

Output 2.2. Innovation data consolidated into a database and multiple access points created

Mapping Activity 6	Consolidation of data sets and creation of multiple access points across Region 2
Target Outcome	Harmonized platform for innovation data access and sharing
Key Deliverables	A functional innovation database with multiple access points across Region 2
Key implementer (partners)	NVSU
Governance arrangements:	**Lead:** NVSU shall lead all sub-activities relative to the development of the innovation database and coordinate efforts to consolidate and crosslink with HEIs and industry partners **Resources:** NVSU shall provide manpower needs **Communication/Reporting:** NVSU shall initiate development of database access, updating, management protocols with the PMT / TWG
Timelines:	**Key Sub-activities**
April 19 – May 30, 2021 (6 weeks)	**Planning Phase** Designing the database; Consolidation of all inventories gathered.

May 10 – 14, 2021	**Socialization Phase** Communicate with identified institutions regarding the project, expectations from them as access points, and get their commitments
June 1 – 30, 2021 (4 weeks)	**Development Phase** Database development, migration of data; Initiate crosslinking and access point development
July 5-16, 2021	**Testing Phase** Testing access to the innovation database; debugging and checking for technical errors
July 19 - 23, 2021	**Deployment Phase** Institutional arrangements and development of Protocols for access, utilization, updating, maintenance, cross-linking; capacity building for database managers; develop communication plan.

The Innovation Database shall be designed, set up and operated as a dynamic database that will serve as a rich source of information on the technical expertise and capabilities of local HEIs that MSMEs can access; partners who can provide resources or supply requirements of the industry; innovation resources and facilities that are available; and such other information that can better guide the users in making informed decisions. Ultimately, all of these should lead to the following outcomes: a) Increased access to and utilization of research and research facilities; b) MSMEs can easily match their resource needs with suppliers and service providers; c) Increased awareness and utilization by MSMEs of available innovation resources/intellectual capital in the region.

Output 2.3. NVSU Citrus Genetic Resources Information System (CITRIS) expanded to a regional citrus industry information system - target of by end of Q3, Y1

Mapping Activity 7	Consolidation of data sets and updating of CITRIS
Target Outcome	Regional Citrus Industry Information System
Key Deliverables	A web-based information system that contains relevant information resources of Region 2 i.e. citrus researches, experts, facilities and equipment, MSMEs
Key implementer (partners)	NVSU
Governance arrangements:	**Lead:** NVSU shall lead all sub-activities relative to the development of the expanded CiTris **Resources:** NVSU shall provide manpower needs **Communication/Reporting:** NVSU shall initiate development of the web-based info system, updating, and management protocols and update the PMT / TWG
Timelines:	**Key Sub-activities**
	Planning Phase Designing of web-based application; Consolidation of all inventories gathered.
	Socialization Phase Communicate with identified institutions regarding the project, expectations from them as access points, and get their commitments
	Development Phase

	Database development, migration of data; Initiate crosslinking and access point development
	Testing Phase Testing access to the innovation database; debugging and checking for technical errors
	Deployment Phase Institutional arrangements and development of Protocols for access, utilization, updating, maintenance, cross-linking; capacity building for database managers; develop communication plan.

III. Linking Activities

Output 3.1. Innovation Consultation Conducted

Linking Activity 1	Program design of innovation consultations
Target Outcome	Improved awareness and guidance to MSMEs on innovation and in accessing appropriate innovation resources
Key Deliverables	1) Design of Innovation Consultations in various platforms; 2) Action/Communication Plan; 3) At least one innovation consultation activity conducted; 4) Consultation results and recommendations disseminated
Key implementer (partners)	Industry Partner/Chamber, USAID-STRIDE
Governance arrangements:	**Lead:** Industry Partner/Chamber **Resources:** Chamber to assign responsible person who may do one activity design per platform, develop communication plan/strategy. USAID-STRIDE will provide TA. **Communication/Reporting:** Chamber to disseminate Consultation Report to pertinent industry partners and government agencies
Timelines:	**Key Sub-activities**
	Planning phase Meeting with Chamber core group to plan out innovation consultation platforms, possible themes/topics; Activity Design development per platform
	Socialization phase Presentation to RIIC partners for inputs/discussion
	Implementation phase Conduct at least 1 innovation consultation activity
	Review phase Conduct post-event activity assessment
	Post-training phase Disseminate Consultation Report to pertinent industry partners and government agencies to address concerns raised

Output 3.2. Capacity building on Innovation for Business Recovery (IBR) conducted

Linking Activity 2	Capacity Building on Innovation for Business Recovery (IBR)

Target Outcome	Enhanced business resiliency and competitiveness
Key Deliverables	1) Industry Partners and MSMEs capacitated on IBR Planning; 2) MSME IBR Plans;
Key implementer (partners)	USAID-STRIDE, Industry Partner/Chamber
Governance arrangements:	**Lead:** USAID-STRIDE to lead the conduct of capacity building and IBR Planning; Industry Partner/Chamber to be capacitated and will provide support in the IBR Plan development, implementation and monitoring **Resources:** USAID-STRIDE will provide the training; agencies involved shall provide resources as may be necessary **Communication/Reporting:** USAID-STRIDE to provide process documentation report to Chamber for re-echoing to other interested MSMEs
Timelines:	**Key Sub-activities**
	Planning phase Selection of participants, preparations for the conduct of the capacity building
	Assessment phase Business Impact Survey (BIS): Online survey instrument to gather both quantitative and qualitative information on participating firm's current operations and experience amidst the COVID-19 pandemic and disasters; Rapid Needs Assessment (RNA): Virtual 1-on-1 interview with the participating firm to further understand its current situation and identify priorities; Suggestive Next Steps (SNS): Virtual 1-on-1 follow-on meeting with participating firm to provide possible options and next steps based on firm's priorities.
	Intermediate phase B2B innovation networking sessions to link participating businesses to specific innovation providers, such as on digitization or e-commerce, or existing technologies; Virtual R&D ideation sessions to link participating businesses to either university departments or existing start-ups in either DOST or DTI's database; Innovation for Business Recovery planning co-implemented with external partners, wherein STRIDE will only provide the ideation and technology-related support.
	Implementation and Monitoring Phase Partnerships Brokering Meetings; IBR drafting and development

Output 3.3. Capacity building on enterprise management and market linkage conducted

Linking Activity 3	Capacity Building on enterprise management and market linkage for start-up enterprises in the priority industry
Target Outcome	Improved capacity for start-up businesses on management and marketing innovations
Key Deliverables	1) Market study; 2) Market Positioning Strategy

Key implementer (partners)	Industry Partner/Chamber, DTI, USAID-STRIDE
Governance arrangements:	**Lead:** Industry Partner/Chamber to lead the market study/survey for the MSMEs and the development of Market Positioning Strategy; DTI will conduct enterprise management training and facilitate the development of the marketing strategy. USAID-STRIDE will provide technical assistance in the conduct of capacity building and development of Market Positioning Strategy; **Resources:** Industry Partner/Chamber will provide the training and will coordinate requirements with partner agencies within the RIIC; agencies concerned shall provide resources as may be necessary **Communication/Reporting:** Partner Industry/Chamber and DTI will provide report to the RIIC Core Group
Timelines:	**Key Sub-activities**
	Planning phase Selection of participants and resource persons, development of activity design, and preparations for the conduct of the capacity building
	Socialization phase DTI and PCCI-2 to prepare communication to all concerned MSMEs on the conduct of the activity – to introduce the RIIC and level off objectives of the activity.
	Implementation phase Conduct of Market Survey to determine market viability of the products (e.g., citrus wine, cider, jams, etc.); Conduct of enterprise management innovations training and development of Market Positioning Strategy
	Post-training phase Implementation of the Market Positioning Strategy and conduct of market linkaging activities
	Monitoring phase DTI to monitor progress of the enterprise and implementation of the Market Positioning Strategy; and conduct feedbacking activity with the MSMEs for enhancement of strategies based on economic trends, if necessary.

Output 3.4. Citrus Industry Roadmap Consultation Conducted

Linking Activity 4	Citrus Industry Roadmap Consultation
Target Outcome	Improved synergy among academe and industry partners in the pursuit of market-oriented research that meets industry needs
Key Deliverables	1) Design of Consultation; 2) Institutional policy briefs among SUCs on anchoring a part of R and D thrusts for citrus industry needs; and 3) Memorandum of agreement
Key implementer (partners)	RIIC 2 Business Innovation Unit (BIU) on Citrus; Cagayan Valley Citrus Industry Development Council (CVCIDC); NVSU; PCCI-2

Governance arrangements:	**Lead:** BIU **Resources:** CVICIDC and NVSU to prepare activity design, develop communication plan/strategy. **Communication/Reporting:** BIU to disseminate Consultation Report to pertinent industry partners and government agencies
Timelines:	**Key Sub-activities**
	Planning phase Meeting of key implementer to plan details of the consultation
	Socialization phase Presentation to RIIC partners for inputs/discussion; Conduct pre-activity meetings with SUCs;
	Implementation phase Conduct consultation activity; Prepare institutional policy briefs and MOA
	Review phase Conduct post-event activity assessment
	Post-event phase Disseminate Consultation Report to pertinent industry partners and government agencies

Output 3.5. Best Practices Forum Conducted

Linking Activity 5	Best Practices Forum
Target Outcome	Improved synergy among academe and industry partners in the pursuit of market-oriented research that meets industry needs
Key Deliverables	Documentation of three completed priority R and D models
Key implementer (partners)	RIIC 2 Business Innovation Unit (BIU) on Citrus; SUCs
Governance arrangements:	**Lead:** BIU **Resources:** BIU, in partnership with SUCs, to prepare activity design, develop communication plan/strategy. **Communication/Reporting:** BIU to disseminate documentation of 3 completed priority R&D models to pertinent industry partners and government agencies
Timelines:	**Key Sub-activities**
	Planning phase Meeting of key implementer to plan details of the forum
	Socialization phase Presentation to RIIC partners for inputs/discussion
	Implementation phase Conduct Forum; Review and document completed high impact R & D that may be prioritized for technology application
	Review phase Conduct post-event activity assessment
	Post-event phase Disseminate Forum Report/documentation of the 3 completed priority R&D models to pertinent industry partners and government agencies

Output 3.6. Business Process of Market, Producers, and Finance linkages Services of BIU developed

Linking Activity 6	Business Process Documentation
Target Outcome	Improved access of MSMEs to market, producers and finance
Key Deliverables	Business Process documentation
Key implementer (partners)	RIIC 2 Business Innovation Unit (BIU) on Citrus, PCCI-2, STRIDE
Governance arrangements:	**Lead:** BIU **Resources:** BIU shall prepare business process documentation and communication plan with technical support from PCCI-2 and STRIDE. **Communication/Reporting:** BIU to disseminate information on the services of the BIU to pertinent industry partners and government agencies
Timelines:	**Key Sub-activities**
	Planning phase Develop design for the development of the business process documentation
	Socialization phase Vetting of design with RIIC partners for inputs/discussion
	Implementation and monitoring phase Conduct business process documentation; Implement services and document processes and lessons learned to further enhance processes

In the conduct of each of the linking activities, organizers will carefully conduct participant selection, ensuring that it is facilitative in encouraging wider participation. The lead partner and BIU shall also jointly document the processes undertaken and progress and outputs of each of the linking activities. This will serve as input to evaluation and planning activities as well as media releases that will support communication and advocacy efforts of the RIIC.

IV. Aligning Activities

Output 4.1. Demonstration model around FIC developed

Aligning Activity 1	Develop demonstration models around Food Innovation Center (FIC) (low – program design, high – process improvement on information networking)
Target Outcome	Improved access and utilization of FICs
Key Deliverables	Business Process/Delivery Design for CSU and ISU FICs
Key implementer (partners)	DOST, Partner Industry/Chamber, SUCs, STRIDE
Governance arrangements:	**Lead:** DOST shall lead all sub-activities toward the fulfillment of the key deliverable under this activity **Resources:** DOST to assign staff to conduct business process review and design with appropriate documentation; STRIDE to provide technical assistance

	Communication/Reporting: DOST Provincial Offices to submit report to DOST-RO2; DOST RO2 to disseminate results of the business process review and design to relevant industry groups
Timelines:	**Key Sub-activities**
	Planning phase Preparation of Activity Design
	Socialization phase DOST-RO2 to communicate to provincial offices and SUCs about the conduct of business process review of select FICs, set criteria for selection and communicate objectives of the activity;
	Implementation phase Conduct of actual business process review focusing on the industry engagement component
	Analysis and design Phase Analysis of the process and designing an appropriate promotion and marketing of FICs
	Deployment Phase Disseminate results and design for the promotion and utilization of FICs to industry partners;
	Monitoring Phase Monitor and evaluate implementation for future enhancement based on economic trends and outlook.

Output 4.2 Information sessions on innovation designed

Aligning Activity 2	Design and harmonize information sessions around innovation
Target Outcome	Improved appreciation of innovation and innovation work
Key Deliverables	1) Design of information sessions around the BIRD-C and the Food Innovation Centers; 2) At least one information session implemented; and 3) Feedback Report/Discussion Documentation
Key implementer (partners)	Partner Industry/Chamber, SUCs, DOST, STRIDE
Governance arrangements:	**Lead:** The Partner Industry/Chamber shall lead all sub-activities toward the fulfillment of the key deliverable under this activity **Resources:** SUCs and DOST to provide resource persons during the information sessions; STRIDE to provide technical assistance in the session design **Communication/Reporting:** The Partner Industry/Chamber shall implement the session design, provide proper documentation, and send out highlights of the discussions and concerns raised to relevant stakeholders for appropriate action towards improving innovation work and processes and other measures.
Timelines:	**Key Sub-activities**
	Planning phase Preparation of Activity Design and other logistics
	Socialization phase Chamber to communicate to partners, invite resource persons and stakeholders to the information session

	Implementation phase Conduct of actual information sessions
	Feedbacking Phase Disseminate results to concerned industry partners and stakeholders for appropriate action on concerns raised and process improvement if necessary
	Monitoring Phase Discuss and evaluate implementation for future enhancement based on economic trends and outlook.

Output 4.3 Technoguide on citrus best orchard production and management practices

Aligning Activity 3	Creation of technology option packages for increased citrus orchard productivity
Target Outcome	Contribute to streamlining adoption of innovative technologies for improved production and post-production systems through creation of technology option packages for increased orchard productivity in the region
Key Deliverables	1) A package of citrus best orchard production and management practices in a technoguide for farmers and entrepreneurs
Key implementer (partners)	NVSU; RIIC 2 Business Innovation Unit (BIU) on Citrus; Cagayan Valley Citrus Industry Development Council (CVCIDC)
Governance arrangements:	**Lead:** NVSU **Resources:** NVSU and CVCIDC to prepare technoguide **Communication/Reporting:** BIU, CVCIDC and NVSU to disseminate technoguide to relevant stakeholders (farmers and entrepreneurs)
Timelines:	**Key Sub-activities**
	Planning phase Preparation of technoguide
	Socialization phase Conduct consultations with farms with best orchard practices in creating or updating technoguide.
	Implementation phase Development of technoguide
	Feedbacking Phase Disseminate best orchard practices technoguide to farmers and entrepreneurs
	Monitoring Phase Gather feedback from selected farmers that adopted recommended practices.

Output 4.4 Innovation Guidebook developed

Aligning Activity 4	Development of innovation guidebook for MSMEs of Cagayan Valley RIIC
Target Outcome	Increased knowledge of MSMEs of innovation resources that could support them at every stage of their innovation journey and promote innovation as the activity integral in sustaining economic viability and competitiveness of MSMEs.
Key Deliverables	localized innovation guidebook

Key implementer (partners)	STRIDE with CVRIIC partners
Governance arrangements:	**Lead:** STRIDE **Resources:** STRIDE to provide technical assistance in the development of the innovation guide; CVRIIC partners to provide assistance in validating and enriching list of resources and content **Communication/Reporting:** STRIDE to turnover to CVRIIC copy of the Innovation Guide
Timelines:	**Key Sub-activities**
	Planning phase Mapping of innovation resources in the region and categorization according to innovation stage
	Socialization phase Vetting of list of innovation resources with CVRIIC partners
	Implementation phase Development of the Innovation Guide
	Feedbacking Phase CVRIIC disseminates copy of Innovation Guide

MONITORING AND EVALUATION OF PROGRAM IMPLEMENTATION

The RIIC Monitoring and Evaluation Unit shall conduct progress monitoring of program implementation on a monthly basis to ensure that all activities are implemented on time, that processes are improved, and activities are adjusted as needed to achieve intended results.

Monitoring can be done through the conduct of regular partners meetings, learning forums, participatory reviews by stakeholders, and site visits (if applicable).

On the fourth quarter of the Year 1 implementation, the RIIC Core Group, PMT and BIU will reconvene to evaluate the progress and achievements of the RIIC. This session will focus on discussing lessons learned and opportunities for scaling up which will serve as inputs in drafting RIIC-2 sustainability plan.

Timeline of activities of the RIIC-2 Innovation Program are outlined in **Appendix A** and includes other activities to be implemented in Years 2 and 3.

APPENDIX A. Timeline of Activities as of May 2021

ACTIVITIES	TARGET ACCOMPLISHMENTS (quantify, if possible)	Y1				Y2				Y3			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1. Development and release of RIIC knowledge management products	1 inventory of research and research facilities across local HEIs 1 Inventory of existing equipment and capabilities among identified facilities 1 Inventory of funding and loans facilities for MSMEs 1 Inventory of MSMEs & local products in priority sector 1 Inventory of HEIs, RDIs & experts in priority sector 1 Innovation guidebook 1 **Central Hub** database system for innovation assets with multiple access points across Cagayan Valley												
	NVSU Citrus Genetic Resources Information System (CiTris) expanded to a regional citrus industry information system and linked to the **Central Hub**.												
2. Citrus Industry Roadmap consultation	Institutional policy briefs among SUCs on anchoring a part of R and D thrusts for citrus industry needs supported with memorandum of agreement												
3. Conduct of fora, ideation/project design workshops	One Best Practices Forum conducted to validate high impact commodity-based R and D in the region Documentation of three completed priority R and D models												
4. Market Linkages Service	15 (5/year) innovation consultations and information sessions conducted												
5. Producers Linkages service	15 (5/year) products accessed and established in online platforms												
	09 (3/year) MSMEs linked to local raw material sources												
6. Finance Linkages Services	09 (3/year) MSMEs linked to government and private financial programs												
	09 (3/year) MSMEs accessing financial programs												

ACTIVITIES	TARGET ACCOMPLISHMENTS (quantify, if possible)	Y1				Y2				Y3			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
7. Capacity building on enterprise management and market linkage	10 trainings conducted on enterprise management and market linkage for start-up enterprises in the priority industry 02 market studies for citrus and banana 02 market positioning strategies 20 MSMEs trained												
8. Risk management service for MSMEs	01 Innovation Business Recovery Team created 03 trainings conducted on Innovation for Business Recovery 01 for year 1 and 2 for year 2 Innovation for business recovery plans developed 10 MSMEs assessed												
9. Creation of technology option packages for increased orchard productivity in the region	A package of citrus best orchard production and management practices in a technoguide for farmers and entrepreneurs Citrus Production Appreciation												
	One press con saga												
	Citrus Innovation Forum												
10. Testing information and communication technology (ICT)-based applications for precision agriculture in citrus	A customized ICT-based system application for improved management of citrus												
11. Creation of technology option packages for increased banana productivity in the region	A package of improved production practices for banana in a technoguide												
12. ICT-based applications replicated in Banana	A customized ICT-based system application for improved management of citrus												
13. Acquisition of processing equipment and operation of a citrus based processing facility for product development	01 citrus-based processing facility in the production site at Malabing Valley												

ACTIVITIES	TARGET ACCOMPLISHMENTS (quantify, if possible)	Y1				Y2				Y3			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
14. Organization of a citrus cluster as raw material sources	A citrus grower cluster consisting of five farms with a minimum of 3 hectares each												
15. In-house protocol optimization for priority citrus-based processed products (mandarin juice, pectin, and oil)	Protocols for juice, pectin, and oil extraction												
16. Mandarin fruit processing for extraction of juice, pectin, and oil	From 10 tons batch of raw fruits, 5,000 L of juice, 200 kg of powder pectin, 400 L of liquid pectin; and 150 ml citrus oil												
17. Product analysis, packaging, and shelf-life test for three products	Nutrition facts for juice; Vitamin C and phytochemical contents of juice												
	Pectin grade as a gelling agent (liquid and powdered pectin)												
	Oil fraction content (essential oil and flavor)												
	Shelf life for the three products												
18. Product launching and market arrangements	04 Market Channels established in the region (one for each province, Batanes not included)												
19. Banana Forum and Product Exhibits	Banana Forum cum Product exhibits conducted												
20. Develop demonstration models around Food Innovation Center (FIC)	1 business process review/design for improved promotion and utilization of food innovation centers												