

## ANNEX I.4

### CASE STUDY/RIIC REGION 11

(Storyline: What are the elements that bring key players in Science, Technology and Innovation (STI) from government, industry and academe together (or apart) towards strengthening innovation ecosystem and collaboration/partnership via the Regional Inclusive Innovation Centers (RIICs)

#### RESPONDENT INFO

Date: 07/01/2021

Name: RD Anthony Sales

Sex: Male

Agency: Department of Science and Technology

Designation: Regional Director

Role in RIIC:

We actually mirrored the structure of in the Region with DTI, DOST, DICT, CHED as members of RIIC in Davao and were on board during the planning of RIICs even the strategic planning that we conducted, to determine the direction of RIIC's Davao. We serve as one of the key members of the group that spearheaded the planning and implementation of RIIC in the region.

No lead agency/partner. We tried to mirror the structure with the Regional R&D and Innovation Committee (RRDIC) under the Regional Development Council (RDC). The role of RRDIC is to translate the results of R&D and innovations into policies and programs that will benefit our stakeholders in Davao. RIIC is one of the development initiatives that were endorsed to the RDC for approval and adoption by the members of the council. We have an R&D Innovation Agenda for Davao Region as part of the output of the RIIC.

Project Setting: (Urban, Suburban, Rural): Urban

Specify location unit of analysis- (city, province, whole region?) whole region (Region 11)

A. Planning the RIIC	
QUESTIONS	ANSWERS
1. Why did you establish an RIIC in the region?	<p>First of all, we wanted to integrate all efforts on the R&amp;D in the Region, Before the innovation players did their thing on their own in isolation with each other. Two main reasons why we wanted to establish RIIC is to:</p> <ol style="list-style-type: none"> <li>1. Harmonize all these efforts and work on the same goal towards the end. Preferable strategic objectives and</li> </ol>

A. Planning the RIIC	
QUESTIONS	ANSWERS
	<p>contribute to the overall development of the region</p> <p>2. Map out the key players, to identify resources, expertise, and facilities that can be used in innovative activities and link them all. It is important to be connected in one ecosystem; else we cannot achieve the objectives</p> <p>INTEGRATION MAP out and take stock</p>
2. For partners, why did you join the RIIC in the region?	<p>DOST is in the crux of all these things; we have the facilities:</p> <ol style="list-style-type: none"> <li>1. food processing innovation center, the very first in the country –anchored in an academic institution, in R&amp;D as well as in the innovation.</li> <li>2. complementary food production center, anchored in the academe,</li> <li>3. shared services of the DTI, that can help the industry. For example, FABLAB-supported by DOST and DTI anchored at the University of Southeastern Philippines (USEP), an academic institution that will help micro, small, and medium-sized enterprises (MSMEs).</li> </ol>
3. Why was your location chosen for the RIIC implementation?	<p>STRIDE – Davao is a leading region that has generated so much output; specifically, in government and industry collaboration. This is evidenced by the number of projects funded by DOST under Collaborative Research and Development to Leverage Philippine Economy (CRADLE) to support and address the problems that industries encounter in their business through R&amp;D. Example is a project that with Hijo Resources and Corporation (HRC). Through CRADLE and a collaborative research with USEP through internet of things (IOT). They were able to diagnose banana disease in real time. Thus, the use of pesticide on bananas can be regulated – a lot of savings can be made in terms of</p>

A. Planning the RIIC	
QUESTIONS	ANSWERS
	pesticide usage and has an implication on the environment. In Davao, there are many Multi-National Companies (as well as chemical companies), as Davao is considered as the fruit basket in the Philippines.
4. Is the proximity to the Cities Development Initiative (CDI) a factor in the selection of your location?	yes
4.1 If yes, how did the CDI influence RIIC formation?	Davao is the admin and financial center of Mindanao; we consider that the city's development initiative has an implication in the development of the other cities in Mindanao. There is a close relationship with Davao and the rest of Mindanao. Considered the CDI to have implications as there are interlinkages among cities. There are implications in development. In Mindanao, we have city ecosystem one island, one science. One Island, One Science- integrate all the development in all the regions of Mindanao. We want to harmonize methodologies – that is comparable across the whole island, to easily consolidate R&D results and innovation. This also includes the BARRM. DOST Davao established ecosystems to integrate all R and D efforts. We convened major R&D innovation players in Mindanao, we call them now “Mindanao Science Engineering Technology and Innovation Ecosystem” that are aligned in the Mindanao Development corridors
5. Are there other similar projects as the RIICs in your location?	<p>Yes. Mindanao-wide ecosystem was planned; its objective is to cascade this down to the regional level. We wanted to develop a Mindanao-wide ecosystem. We have ecosystem on renewable energy, food processing, aquatic resources, genomics consortium, all aligned with over all Mindanao ecosystem. In all, there are 8 or 9 thematic areas.</p> <p>CRADLE is Science for change program-bilateral collaboration between two organizations. Example: Hijos is in collaboration with USEP. Similar to RIIC ecosystem.</p>

A. Planning the RIIC	
QUESTIONS	ANSWERS
	<p>We employ the penta-helix approach to development, engaging all 5 sectors (government, industry, academe, civil society and communities, and media). Media is important in communicating the messages. DOST is suffering from low visibility, due to lack of expertise in communication.</p> <p>NICER, the engagement is limited to academic and RDIs (Research and Development Institutions)</p> <p>RIICs, this is multi sectoral.</p> <p>DOST-S4CP-NICER Program is not multi sectoral. In Davao we have 2 NICER centers, (1) renewable energy Ateneo de Davao University (ADDU is the hub), (2) Infectious diseases. Mindanao in scope. What happens in Davao will have implications in the whole island. Inclusiveness of all efforts in all of the regions in Mindanao.</p>
5.1. If yes, how did the STRIDE initiated RIIC add value to your projects?	<p>RIIC clarified the different mechanisms that we put in place and use. In RIIC Davao, we focused on functional foods and processed fruits and are aligned to the Mindanao Development Corridors. One of the thematic areas is food. We wanted to focus on functional foods and processed fruits due to the (1) abundance of raw materials and (2) we have the technology and facilities that is complementary food centers in almost all the state universities in the Davao region. (3) We have facilities that will help us assessing the safety for consumption.</p>
6. Towards convergence: What were the planning challenges and how were these overcome? (project management, budget, capacities etc.)	<p>What we agreed on was that each agency of RIIC will contribute resources, in the case of DOST we have one division assigned to take care..., R&amp;D division named ReDID (Research for Development and Innovation Division) - the same thing is done by DTI they have assigned Staff and so do DICT and CHED as well.</p>
7. What are the market opportunities (local, regional, foreign, etc.) of the RIIC in your area?	<p>We see the market of the products as well as the technology of RIIC not just for local market but also for the export market; the recent products that we have developed is Bucolite -from fresh or young coconut water. They want this not just for</p>

A. Planning the RIIC	
QUESTIONS	ANSWERS
	local consumption but also for export. We have considered one adopter of the technology. It has the potential not only in the local but also in the global market.
8. What are the R and D opportunities of the RIIC in your area? (Probing: are there SUCs, knowledge creation centers, technical schools?)	<p>ADDU, UP Mindanao, USEP</p> <p>Davao del Norte State College, Davao Oriental State University, Davao del Sur State College, Southern Philippines Agri-Business and Marine and Aquatic School of Technology (SPAMAST) in Davao Occidental.</p> <p>Big private universities: University of Immaculate Conception, ADDU, University of Mindanao</p> <p>My dream is that both public and private HEIs will become active in the R&amp;D. ...and we did this thru RIIC.</p>
9. Before the RIICs, was there any link between the academe and the industry in your location? (i. e. through the GIA program of the academe/DOST?)	<p>Yes, there were collaboration between industry and academe through the programs of DOST.</p> <p>The advantage with RIIC was we were able to bring all the possible players in our innovation. We made sure that we are inclusive in the representations of the HEIs, industry, government agencies, NGOs, and POs – who can all can be a part of the ecosystem</p> <p>I sit in all the six board of regents of the state universities and state colleges in Davao Region.</p>
Is there a need that DTI will be part of the Board of Regents?	

B. Implementation	
QUESTIONS	ANSWERS
<p>1. What have been the gains of the RIIC so far?</p> <p>1.1 (probe) Please compare to the initial condition, i. e. without the RIIC.</p> <p>-</p> <p>1.2 Towards Convergence: What are the implementation challenges?</p>	<p>Gains:</p> <p>Identified collaborative project between industry and academe (through the ideation workshop)- a matching activity, of academe and industry. What expertise is available in academe and what are the needs of the industry. Identified a number</p>

B. Implementation	
QUESTIONS	ANSWERS
(i.e., funding, capacities, distrust, lack of policies, lack of matching between academe and industry, etc.)	of projects, there are many products that were developed. (can give a list of these products)
2. Towards Convergence: What are the implementation challenges? (i.e., funding, capacities, distrust, lack of policies, lack of matching between academe and industry, etc.)	<p>Initial resistance, as agencies have their own respective agenda. When RIIC came in, there were already regular programs. Local grants in aid, as part of the General Appropriations Act (GAA). When RIIC came in, annual budget/funds were already subscribed. Eventually I decided to let go some of the projects so that RIIC can come in. in fact we decided to provide around 1 M for RIICs (as innovation funds) for grassroots innovation, from the grassroots community (IPs, women, farmers, and fisher folks). The fund from Grassroots Innovation for Inclusive Development (GRIND) Program through UNDP was used for ethnobotanicals, and is related to RIIC.</p> <p>(The Innovation Council has not been activated, so innovation funds from NEDA is not yet available).</p> <p>Funds from other sources are aligned with the RIIC such as foreign funds having activities similar to RIIC. There is good relations with the DTI RD, there may be problems in other regions but not in Davao.</p>
2.1 How were these overcome?	
3. What are the partnership challenges? Please specify.	

Added Summary from Dr. Chona Echavez:

I really just like to highlight that the problem was on harmonization and integration in all of these initiatives and Dir Sales was able to do that. It is a best practice that needs to be highlighted in the case study, because putting together all funds from other agencies (e.g. UNDP etc.) and putting it with a perspective under RIIC, this could help in making others learn from it and adopt it. This is really very good. I would just like to highlight that because harmonization and integration is always a problem in all of these initiatives. Putting together all the funds from all the actors for the region is a good

mechanism. With the corridor wide approach, other regions could also benefit because of this mechanism not just Region 11 but the entire Mindanao.

C. Evaluating Effectiveness	
QUESTIONS	ANSWERS
<p>1. What are the roles of partners as follows:</p> <p>1.1 government –</p> <p>1.2 academe –</p> <p>1.3 industry –</p> <p>1.4 civil society –</p> <p>1.5 Other partners?</p>	<p>Government –</p> <ol style="list-style-type: none"> <li>1. Policy; policy, regulatory and statutory requirements for all programs and projects, if there are new policies, government will help in the RDC</li> <li>2. Financial support – many of these innovators are grassroots innovators. They don't have much access to the formal R&amp;D an innovation fund for financing mechanisms. DTI, DOST, DICT, and CHED will have those funding windows at the regional level.</li> <li>3. Providing the direction for innovation; defined at the RDC level; well - orchestrated</li> </ol> <p>Academe –</p> <p>the expertise on R&amp;D and they have the facilities; anchor these hubs in the academe as they have the facilities and a certain degree of autonomy how to use the funds to support the innovation</p> <p>Industry –</p> <p>we have SETUP (Small Enterprise Technology Upgrading Program) of DOST. We closely interphase with the industry, particularly in the industry that we cover: metals and engineering, food processing, aquaculture and agriculture, GHD (Gifts, Housewares, and Decors), halal products and services, related to functional food and processed fruits.</p> <p>Marketed in the global market</p> <p>We do not operate the Technology Business Incubation (TBI) but we fund and they are members of the ecosystem.</p>
<p>2. What were the essential initial conditions that made this project successful?</p>	<p>Champions are very crucial – I had reservations initially. Because I thought this is a duplication of what we are doing. We had similar platforms and arrangements. In hind sight, I realized RIIC help in</p>

C. Evaluating Effectiveness	
	integrating efforts. Before, I was operating alone and to collaborate with other agencies at a minimal extent and advancing my own agenda as DOST but through RIIC, it is a collective effort of many agencies or sectors to reach out further.
5. Are there other data to demonstrate the impact of the RIIC (indicators or measures of success such as increased productivity, increased network, increased sales, increased participation of MSME, others)?	Increase network through expanded and enhanced cooperation with ecosystem players

D. Making Improvements	
QUESTIONS	ANSWERS
1. What strategies do you have in mind to strengthen collaboration among agencies?	<p>Good that we have defined the strategic direction that extend up to 2025, guided by these, we know what areas to focus on, and major programs and projects to pursue, in the medium term, then we identify players to be part of the RIICs. DA and TESDA they should be part of RIIC because they also provide capability building programs and projects on food processing. DA can help in providing/ensuring raw materials that will be used be available, and TESDA (1B for the LCAP), can provide start up kits.</p> <p>NGOs-Indigenous Peoples (IPs) are the stewards of our indigenous materials, ethno-botanicals, that we need in our functional food market or sector. On processed fruits, we need to work with industry associations and intensify our efforts to engage them, particularly in providing investments for shop floor R&amp;D to address problems to production floor; to provide investment of shop floor or production floor-to provide counterparts for research and development and counterpart from them, more industry partners and;</p> <p>The local government unit, with Mandana's ruling, there will be an increase in the Internal</p>

D. Making Improvements	
QUESTIONS	ANSWERS
	Revenue Allotment (IRA) of the Local Government Units (LGUs). LGU can help in matter of funds and facilities. Davao City passed an ordinance for the establishment of the Davao City Innovation and Invention Center. This is considered as an offshoot of the RIIC because of collaboration and engagement with the city and partners. Mindanao Science and Technology Centrum, will be the site- put in the materials and technologies. Centrum is in UP Mindanao, funded by the congressional funds, but DOST initiated.
<p>1.1 Strategies to attract more partners?</p> <p>1.2 Strategies to sustain the partnership/convergence?</p> <p>1.3 Any challenges with the sustainability of partnership?</p>	
E. Sharing the Benefits	
QUESTIONS	ANSWERS
1. How and with whom do you plan to share the impact your project?	<p>We want to see the impact is on the grassroots. Grassroots as active players in the innovation process, not just a beneficiary. We are engaging them on with three bottom lines- social, economic, environmental.</p> <ol style="list-style-type: none"> <li>1. Economic for gainful pursuit. For sustainable livelihood. They themselves can produce the functional foods or ethnobotanicals.</li> <li>2. Social benefits, functional foods have health benefits that would address the health requirements as malnutrition is still a problem.</li> <li>3. environmental benefits- intensify production of raw materials for functional fruits and processed fruits, we can protect the environment. We also need to look on the environmental protection. If we only look at the economic benefits, it is not sustainable.</li> </ol> <p>Multiplier effects - can rely on other regions for raw materials. To expand food processing, go</p>

D. Making Improvements	
QUESTIONS	ANSWERS
	beyond the region to engage the whole of Mindanao.
2. What recommendations do you have for regions interested in replicating your project?	<ol style="list-style-type: none"> <li>1) Try to recruit champions. Try to recruit champions as without the champions nothing will happen; if you have no partners and people in influential positions in LGUs, nothing will happen. These champions could include in LGUs esp. in the legislative council, national government agencies, and industry associations, chambers of commerce. Strong advocate in the Davao legislative council. Maybe this has to do with gender (Female champions), and Financing availability.</li> <li>2) helps if you sit in the boards of academic institutions, you can influence resource allocation. We have been quite successful in doing this.</li> <li>3) engage consortia (ecosystem has to be complete and vibrant), people should provide the impetus to work together and active in pursuing our agenda in research and innovation.</li> </ol> <p>Ideally, one should have an own Project Management Office (PMO). In the case of RIIC Davao, we are looking at the Davao City Innovation and Invention Center as PMO; no physical facility for RIIC office. The Davao City Innovation and Invention Center (DCIIC) can serve as the physical facility and office of the RIIC.</p>
3. Describe any sustainability plan of the RIIC to allow continued implementation once the grant period has ended.	<p>I can mention a few strategy</p> <ol style="list-style-type: none"> <li>1. working with the city government for the approval of an executive order or ordinance making as the Centro Mindanao the Mindanao Science and Tech Park as the physical office or center of the DCIIC and also the RIIC center</li> <li>2. Funding- every year, provide at least 1M for innovation fund for RIIC local GIA. There are other programs like the GRIND program, SET UP, funds for the</li> </ol>

D. Making Improvements	
QUESTIONS	ANSWERS
	<p>innovation center to be accessible to the RIIC. Solicit from DTI as they have other programs that can support RIIC Funds for the innovation center from the LGU that is tapped for the RIIC operation and management.</p> <p>NEDA in the near future, 2022 or 2023, from the Innovation Fund.</p> <p>The SUCs – as they have their own autonomy identifying the areas where they can fund. SUCs can be another source of fund. There is a circular from CHED if how many percent for R and D.</p> <p>Private HEIs- Free, Prior and Informed Consent (FPIC) - provided the building for the innovation center. They have pledged to invest for the expansion of food processing innovation center.</p> <p>LGUs - Mandana’s ruling means bigger IRA.</p> <p>3. In terms of people, permanent contract of service staff (COS) staff can be provided so management issues can be lessened. Permanent office and permanent staff.</p>
<p>END OF CASE STUDY QUESTIONS</p> <p>Other comments:</p> <p>Influence in the curriculum of the demands for RIICs- a number of SUCs who offer food tech programs, no need to revise the curriculum, akma na sa needs of the industry. Graduates can aptly provide the needs of the industry.</p> <p>Example- UPMindanao graduate- solve the yeast and molds problem, and the company was able to register with the FDA. This is example of the shopfloor problem and solution by the academe.</p>	

[Note on HRC - A pioneer and pillar of the Philippine banana industry, Hijo Resources Corporation (HRC), based in Madalum, Tagum City, Davao del Norte was established in 1959].

Key points:

1. On the essential key initial condition: Champions on the RIIC are important (innovation ideas and funding will follow)
  - a. Narrative from the transcript (Response from: question 2, Part E. Sharing the Benefits, 1st paragraph):
 

“Try to recruit champions. Try to recruit champions without the champions nothing will happen; if you have no partners and people in influential positions in LGUs, nothing will happen. These champions could include in LGUs esp. in the legislative council, national government agencies, and industry associations, chambers of commerce. Strong advocate in the Davao legislative council. Maybe have to do with gender (Female champions), and Financing availability.”
  - b. Summary:
    - Recruit people/agencies/institutions who are influential and can help in creating innovative ideas and opportunities. These actors may also create financial windows for funding certain projects/programs.
  
2. On improvements: Attract more partners ((a) DA (production of raw materials, food processing technologies, funding, etc.), (b) TESDA starter kits for entrepreneurs, generate more start-ups, funding), (c) Other NGOs (who are also helping the katutubo, as stewards of ethnobotanical plants, etc.) (d) More industry players (sharing solutions to shop-floor problems, etc))
  - a. Narrative from the transcript (Response from: question 1, Part D. Making Improvements):
 

“Good that we have defined the strategic direction that extend up to 2025, guided by these, we know what areas to focus on, and major programs and projects to pursue, in the medium term, then we identify players to be part of the RIICs. DA and TESDA they should be part of RIIC because they also provide capability building programs and projects on food processing. DA can help in providing/ensuring raw materials that will be used be available, and TESDA (1B for the LCAP), can provide start up kits.

NGOs- IPs are the stewards of our indigenous materials, ethno-botanicals, that we need in our functional food market or sector. On processed fruits, we need to work with industry associations and intensify our efforts to engage them, particularly in providing investments for shop floor R&D to address problems to production floor; to provide investment of shop floor or production floor-to provide counterparts for research and D and counterpart from them, more industry partners and

The local government unit, Mandana’s ruling, increased the IRA of the LGUs. LGU can help in funds and facilities. Davao City passed an ordinance for the establishment of the Davao City Innovation and Invention Center. This is considered as an offshoot of the RIIC because of collaboration and engagement with the city and partners. Mindanao Science and Technology Centrum, will be the site- put in the materials and technologies. Centrum is in UP Mindanao, funded by the congressional funds, but DOST initiated”
  - b. Summary:

- The much-needed programs and projects has already been identified as per indicated in the strategic direction for the year 2025. Areas that need to be improved were also identified. In the meantime, there is a need to recruit partners in RIIC that could provide capability building programs and projects. DA could provide raw materials and ensuring its availability. In addition, TESDA could provide start up kits. Moreover, the IPOs can help as they are stewards of indigenous materials, the ethnobotanicals. These indigenous materials are needed for the functional food market and sector. There is also a need to intensify efforts to engage with industry associations, especially in providing shop floor R&D investments to address problems in production floors. As the Mandana’s ruling will be implemented, the role of the LGUs could help in financing and creating venues for facilities. An example, the LGU of Davao City has passed an ordinance in creating the Davao City Innovation and Invention Center. This mechanism was said to be an offshoot of RIIC due to the collaboration with the city and its partners.

3. Sharing of benefits: whole of Mindanao; grassroots - IP communities (not just as beneficiaries but also producers of ethnobotanical products and ethnic foods

a. Narrative from the transcript (Response from: question 1, Part E. Sharing the Benefits):

“We want to see the impact is on the grassroots. Grassroots as active players in the innovation process, not just a beneficiary. We are engaging them on with three bottom lines- social, economic, environmental.

- Economic for gainful pursuit. For sustainable livelihood. They themselves can produce the functional foods or ethnobotanicals.
- Social benefits, functional foods have health benefits that would address the health requirements as malnutrition is still a problem.
- environmental benefits- intensify production of raw materials for functional fruits and processed fruits, we can protect the environment. We also need to look on the environmental protection. if we only look on the economic benefits, it is not sustainable.

Multiplier effects - can rely on other regions for raw materials. To expand food processing, go beyond the region to engage the whole of Mindanao.”

b. Summary

- The impact should be realized from the grassroots level. The actors on the grassroots level should actively participate on the programs and projects as they should not just be a beneficiary. In order to do this, the grassroots actors must be engaged on the three-bottom line approach; economic, social, and environmental. Economic benefits indicate the people should be able to have a sustainable livelihood, thus considered as a gainful pursuit. On the other hand, for social benefits, as they have their own livelihood, they must also address social issues that are still present. For example, functional foods have health benefits that would address health requirements as malnutrition is still a problem. This approach should be also shared to all other regions in Mindanao, to make all other regions engage and collaborate.

4. Recommendations to other regions on RIIC ((a) recruit champions (LGUs, national agencies, industry associations), (b) Explore and access financing windows, (c) As part of the Board of SUCs (to help influence where to put R&D money), (d) Ecosystem has to be vibrant, people to provide the impetus for research and innovation.))

- a. Narrative from the transcript (Response from: question 2, Part E. Sharing the Benefits and question 3, Part E. Sharing the Benefits, 2nd and 3rd answer):

“Try to recruit champions. Try to recruit champions without the champions nothing will happen; if you have no partners and people in influential positions in LGUs, nothing will happen. These champions could include in LGUs esp. in the legislative council, national government agencies, and industry associations, chambers of commerce. Strong advocate in the Davao legislative council. Maybe have to do with gender (Female champions), and Financing availability.

It helps if you sit in the boards of academe, you can influence resource allocation. We have been quite successful in doing this.

Engage consortia (ecosystem has to be complete and vibrant), people should provide the impetus to work together and active in pursuing our agenda in research and innovation.”

“2. Funding- every year, provide at least 1M for innovation fund for RIICs, local GIA. There are other programs like the GRIND program, SET UP, funds for the innovation center to be accessible to the RIICs. Solicit from DTI as they have other programs that can support RIICs. Funds for the innovation center from the LGU that is tapped for the RIICs operation and management.

NEDA in the near future, 2022 or 2023, from the Innovation funding.

The SUCs – as they have their own autonomy identifying the areas where they can fund. SUCs can be another source of fund. There is a circular from CHED if how many percent for R&D.

3. In terms of people, permanent contract of service staff (COS) can be provided so management issues can be lessened. Permanent office and permanent staff.”

- b. Summary

- To recruit actors who are very crucial and who are in influential positions in the LGU. These champions could include in LGUs esp. in the legislative council, national government agencies, and industry associations, chambers of commerce. As a part of the Board of Regents in the Academe, one can influence the budget allocation of a HEI. SUCs have their own autonomy identifying the areas where they can fund. As per CHED circular, HEIs can allocate certain percentage for R&D. An agency may also allocate certain amount of fund for RIIC. LGUs may allocate more funds because of Mandana’s ruling. Also, agencies

should hire permanent contract of service staff to address management issues. Finally, engage people who could provide the impetus to work together and active in pursuing our agenda in research and innovation.