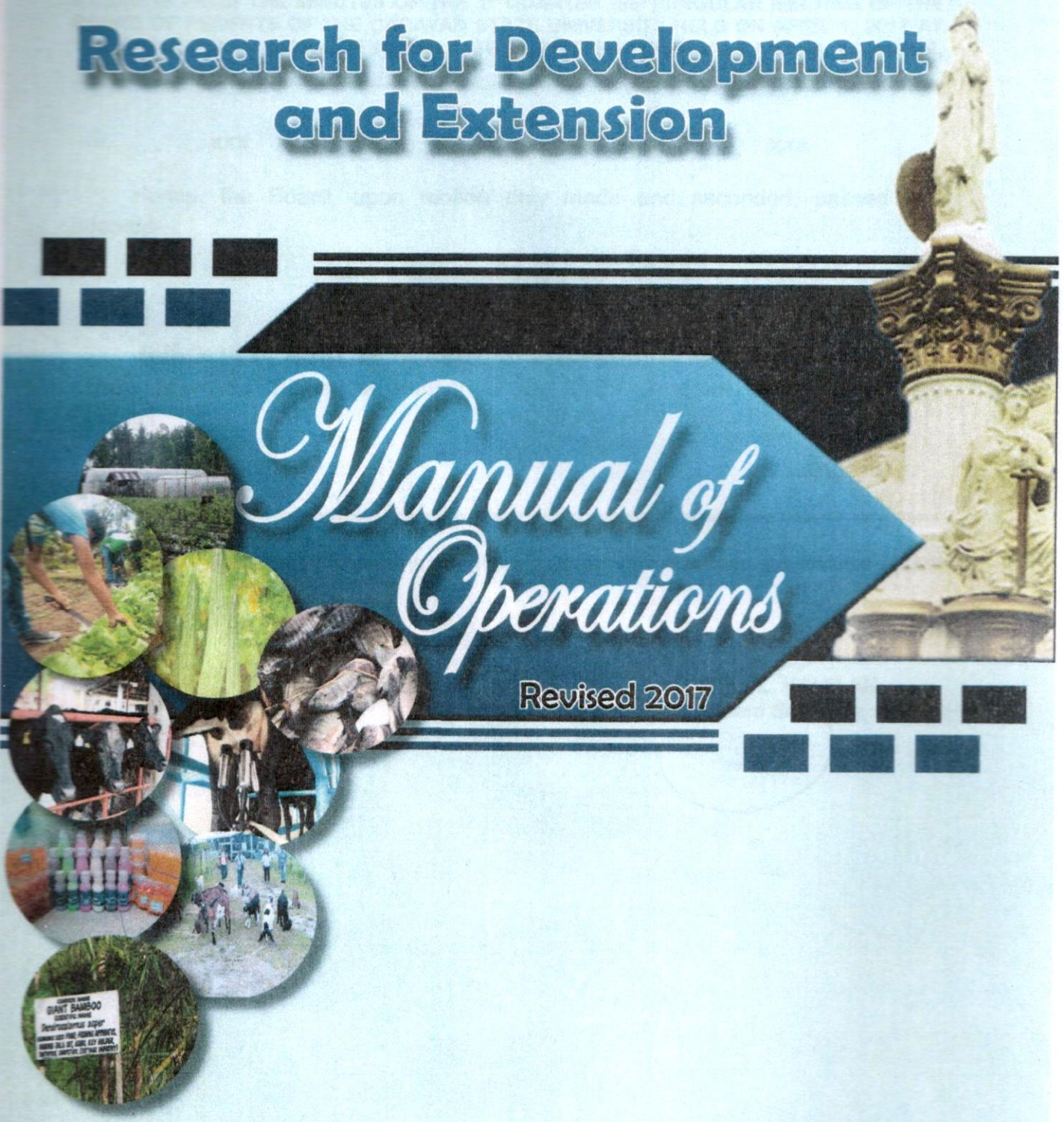
Cagayan State University

Research for Development and Extension



Manual of Operations

Revised 2017

Republic of the Philippines
CAGAYAN STATE UNIVERSITY
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BOARD OF REGENTS
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EXCERPTS FROM THE MINUTES OF THE 3rd QUARTER (67th) REGULAR MEETING OF THE BOARD OF REGENTS OF THE CAGAYAN STATE UNIVERSITY HELD ON SEPTEMBER 29, 2017 AT THE CONFERENCE ROOM, CSU ANDREWS CAMPUS, CARITAN SUR, TUGUEGARAO CITY, CAGAYAN.

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Hence, on duly seconded motion of Dr. Rex L. Navarro, the Board passed and adopted-

Resolution No. 97
Series of 2017

RESOLVED, AS IT IS HEREBY RESOLVED, that the CSU Board of Regents hereby approves the 2017 Revised CSU Research for Development and Extension Manual of Operations subject for amendments, should there be any, of certain provisions upon the submission of written comments by the members of the Board.

Approved

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I HEREBY CERTIFY that the foregoing excerpt resolution from the minutes is true and correct.

JOEY L. CAUILAN
Board Secretary

Chapter 1

OVERVIEW OF THE MANUAL

PURPOSE OF RESEARCH, DEVELOPMENT AND EXTENSION

Republic Act 7722, otherwise known as, "**An Act Creating the Commission on Higher Education" (CHED)** states that ***". . . the knowledge society or knowledge economy characterizes the university not just a generator of knowledge, an educator of young minds and a transmitter of culture but also as a major agent of economic growth, a Research and Development laboratory and a mechanism through which the nation builds its human capital to enable it to actively participate in the global economy."*** It is therefore imperative to inspire and enable Philippine higher education institutions (HEIs) to become platforms for research development, innovation and extension in pursuit of inclusive social and economic development. As the Philippines enters another era of rapid change and faces a dynamic array of economic, social, global and technological forces, there is a need to enable HEIs to optimally participate in national transformation through the production and transfer of knowledge that is fundamental to the country's engagement in the knowledge-based global economy (CHED Memorandum Order No. 52 s 2016).

Research and development comprises creative work undertaken on a cyclical and systematic basis in order to increase the stock of knowledge of man, culture and society; and the use of this stock of knowledge to devise new applications (Source: Organization for Economic Cooperation and Development)

Confronted with several issues and problems in the conduct of research, development and extension (RDE) activities such as the heavy teaching and administrative loads of faculty, low level of research collaboration, fragmented research and extension activities, low level of understanding on the role of research in the University among others, this Manual provides guidance in the planning, implementation, funding, monitoring and evaluation, and giving incentives of RDE projects.

PURPOSE AND SCOPE OF THE MANUAL

This Operations Manual will serve as a guide for the CSU faculty and non-teaching staff in the conduct of RDE. It aims to improve the research capabilities of the faculty and staff; instil a research culture among the faculty, staff and its stakeholders; serve as a way or guide to upgrade physical resources and infrastructure facilities for research; increase RDE productivity and improve the quality and impact of researches so that the University will be at par with other universities in the South East Asian Region. Research culture is the structure, process and interconnection based around the behavior of the faculty, staff and students that allows us to transfer

the gained knowledge to our students and to the community as a whole. It will also provide guidance to agencies conducting research in coordination with CSU.
Hence, this manual provides:

1. Directions on RDE management for research and extension program leaders, administrators, faculty researchers and extensionists;
2. A Frame of reference for the conduct of RDE within CSU and with other stakeholders; and
3. Excellence, uniformity, consistency, continuity and predictability in the conduct of RDE activities.

The research agenda and banner programs are indicated in chapter II of this manual. Some structures and processes are described for the successful management, implementation, monitoring and evaluation of RDE initiatives. It will be refined continuously to cope with the changing environment of the research community in order to maximize resources and arrest opportunities for RDE endeavors. It does not, however, discuss research processes being called out by other agencies.

Research ethics and intellectual property are also included in this manual. In order to institutionalize and uphold the research code of ethics and guidelines, to maintain the integrity, openness and transparency in the research process and to safeguard any intellectual property. Moreover, this manual will serve as a guide in the preparation of a more detailed CSU Research Code of Ethics and Technology Transfer Protocol.

This Manual takes into consideration the results of the External Program and Management Review (EPMR) that was conducted on November 2016 to March 2017, SUC Levelling, National Budget Circular (NBC) no. 461 and Institutional Sustainability Assessment policies, CHED Typology-Based Quality Standards, and Association of South East Asian Nations (ASEAN) RDE Standards with the end view of raising CSU's bar of performance from 2017 and beyond.

LEGAL BASES

The significant role of science and technology and the importance of research and extension services are enshrined in Section 10 of Article XIV of the 1987 Philippine Constitution, which provides that, ***"Science and technology are essential for national development and progress. The state shall give priority to research and development, invention, innovation and their utilization; and to science and technology education, training and services."***

Pursuant to this, **RA 8292, otherwise known as the *Higher Education Modernization Act* of 1997,** mandates the State Universities and Colleges (SUCs) to promote the establishment of research and development centers and to establish guidelines for participative decision making and transparency within the institution. Furthermore, **RA 8435, otherwise known as the *Agriculture and Fisheries Modernization Act of 1997*** under Section 89, states that, "*the state shall give priority to the utilization of research results through formal and non-formal*

education, extension and training services." Also, Section 90 provides that the SUCs shall primarily focus their extension services on the improvement of the capability of the Local Government Units (LGUs) in the delivery of their extension services.

The SUCs, as mandated by their respective charters, are to perform the fourfold functions: Instruction, Research, Extension and Production (IREP). These shall be given equal emphasis and importance in terms of resource allocation considering the fact that the SUCs are expected to be the prime movers of the socio-economic growth and progress in their area of domain.

The most recent issuance of a **Joint Circular No. 1 series of 2016 by CHED and DBM** provides for a revised levelling instrument for SUCs and guidelines for the implementation thereof. The instrument compels SUCs to move towards outcomes-based approach, align its functions with typology-based quality assurance and align quality assurance with ASEAN standards. The SUC levelling instrument is an institutional accreditation based on institutional performance. It is intended to categorize SUCs into five levels: Level 1 to Level 5, with the latter as the highest. It is a big challenge for CSU to comply with the criteria to attain Level V, which is the highest level of accreditation and recognition or SUC typology. Cagayan State University was assessed as SUC Level IV in October 2016 by the Regional Evaluation Committee which was composed of the CHED and Department of Budget Management (DBM) Regional Directors and Region 02 Philippine Association of State Universities and Colleges (PASUC) Chair.

A major recommendation of the External Program Management Review (EPMR) is to transform CSU into a stronger research university by shifting from Research and Development (R&D) into Research for Development (R4D) paradigm.

ORGANIZATION OF THE MANUAL

This manual consists of ten (10) chapters. The first chapter provides an overview of what the manual contains as well as its legal bases. It is followed by a discussion of the strategic framework for CSU-RDE in Chapter 2 and the RDE organization in the University in Chapter 3. Chapter 4 discusses RDE proposal development which provides policies and guidelines in the preparation of RDE proposals, while Chapter 5 presents policies on RDE implementation and management. Monitoring and Evaluation policies and guidelines are presented in Chapter 6. Chapter 7 discusses guidelines on research publications, patenting and dissemination, while Chapter 8 focuses on technology commercialization policies. Awards and Incentives are part of encouraging faculty members and staff to conduct RDE activities and the guidelines are provided in Chapter 9. Finally, discussed in Chapter 10 are the guidelines in the protection of property rights and the ethical standards in conducting RDE programs/projects and studies.

Definition of Basic Concepts

The following terms are to be understood and interpreted as defined in this operation's manual.

1. Research is a systematic, objective and critical investigation of available information directed towards the search for new knowledge or its advancement including its practical applications.

2. Development is a systematic work, drawing on existing knowledge gained from research and/or practical experience that is directed towards producing new materials, products or devices, installing new processes, systems and services, and substantially improving those that are already produced or installed.

3. Extension is a non-formal education activity which utilizes research based knowledge meant to improve the quality of life of partner clients.

4. Knowledge is the body of truth, information, and principles developed through research.

5. Technology is defined as a bridge between science and production of new products. It is the use of science-based knowledge to meet a need. Technology draws heavily on scientific advances and the understanding gained through research and development. It then leverages this information to improve both the performance and overall usefulness of products, systems, and services.

6. Innovation is the process of translating an idea or invention into a good or service that creates a value for which a customer will pay. Innovation involves deliberate application of information, imagination and initiative in deriving greater or different values from resources, and includes all processes by which new ideas are generated and converted into useful products.

7. Training refers to a planned and organized activity designed to acquire the necessary competencies in terms of knowledge, skills, attitudes and values.

8. Social science researches are researches conducted to seek understanding of social behaviours and relationships of individual members in and to society and generally regarded as including researches in sociology, psychology, anthropology, economics, political science, history and related disciplines given their relevance for development.

9. Education research refers to high quality research that nourishes the degree level teaching-learning in HEI environments. It is intended to generate new knowledge needed to improve policies, including the implementation and administration of higher education institutions, for the advancement of higher education.

10. Technical research, which are generally referred to as commodity researches, are conducted in the areas of agriculture, forestry, energy, environment, natural resources, engineering, cutting-edge fields and related disciplines intended to generate technologies to address the research priorities for prosperity, economic growth and development, and social well-being.

Chapter 2

STRATEGIC FRAMEWORK

CSU VISION, MISSION AND CORE VALUES

Vision: Transforming lives by educating for the best.

The basic vision of the University is to make the Cagayan State University as a catalyst of change in improving the lives of individuals and communities by educating for the best. The one-liner vision succinctly captures the profound meaning and ultimate purpose of the collective efforts and educational directions of the University.

Mission: Cagayan State University is committed to transform the lives of people and communities through high quality instruction and innovative research, development, extension and production.

The Cagayan State University, a credible and distinguished center of higher education in Northern Luzon, is committed to improve the lives of people and communities by providing advanced instruction in the arts, agriculture and natural sciences as well as in technological and professional fields through its strong quality of instruction and innovations in research, resource mobilization and extension. By providing quality instruction, research and extension, CSU contributes primarily to President Duterte's 10-point socio-economic agenda embodied in AmBisyon Natin 2040, the collective long-term vision and aspirations of the Filipino people for themselves and for the country in the next 25 years.

Core Values: The Cagayan State University vision and mission are ably supported by three (3) core values which constitute a formidable base to guide and support the CSU administration in the operation of all its programs and projects. The core values are captured in the acronym, CSU.

- **C**ompetence
- **S**ocial responsibility
- **U**nifying Presence

RDE VISION, MISSION, GOALS AND OBJECTIVES

Vision: CSU as a competitive center of RDE excellence significantly contributing to the improved quality of life of urban and rural communities in the Cagayan Valley Region.

Mission: To intensively pursue the generation, development, sharing, utilization and application of science-based knowledge, information and innovations for the inclusive agro-industrial development and climate change resiliency of the Cagayan Valley Region.

Goals:

Goal 1. To explore science-based and innovative solutions that will result in real impacts to improve the social and economic development of the region.

Goal 2. To address pressing needs of communities for resilience through indigenous and science-based knowledge and technologies.

Goal 3. To engage, capacitate and increase access to appropriate knowledge and technologies for sustainable and secure livelihood and wellbeing of communities.

Goal 4. To upgrade manpower facilities for resilience.

Objectives:

To achieve the above goals, CSU RDE shall pursue the following objectives:

1. Develop a new RDE agenda, package RDE proposals in line with its banner programs and the priorities of regional, national and international agencies; identify contemporary issues, challenges and opportunities for RDE; and review and assess the outputs, outcomes and impacts of RDE projects in the University.
2. Conduct stakeholders' consultation, need assessment survey, regular multi-sectoral RDE fora and strengthen RDE partnership with regional, national and international agencies.
3. Develop knowledge and technology management information system and intensify technology transfer and commercialization in the University.
4. Intensify applications to intellectual property of technological innovations, creations and inventions in the University.

RDE FRAMEWORK: THE RESEARCH FOR DEVELOPMENT (R4D)

The RDE framework is based on the Instruction, Research and Development and Extension interface. It is propelled by the technology development process from Technology Generation (TG), Technology Verification (TV), Technology Adaptation (TA), Technology Dissemination (TD), Technology Piloting (TP), Knowledge for Dissemination (KD) and Technology Commercialization (TC). The generators of technology are the researchers, faculty, students, administrators and research collaborators. TV, TA, TD and TP are conducted at the farmers' level through research cooperators, while KD and TC are done at local, regional and national level with industries and communities as adopters.

The Instruction, Research, and Extension mission of the University is equipped with physical infrastructure and laboratory facilities managed by good governance to produce competent graduates, resilient communities, and the 6Ps as deliverables of RDE as well as enterprise development as offshoot of production.

Financial and technical support from alumni, private sector, and from local and international partners would greatly contribute to the intensification of technology development within the University.

Likewise, feedbacking is encouraged for the improvement and advancement of technology innovation undertakings in the University.

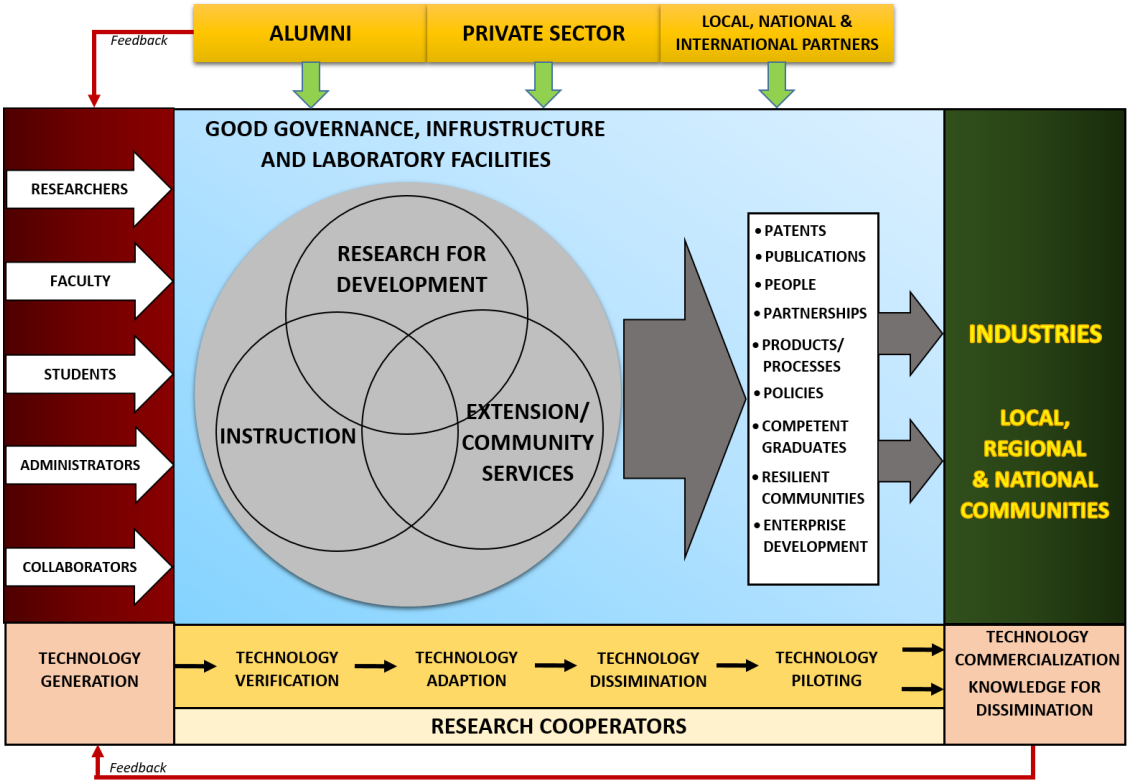


Figure 1. CSU RDE Framework

As CSU gears up to strengthen its capability in RDE, it needs to embrace and pursue a new RDE paradigm. The Sustainable Development Goals (SDGs) have broadened development outcomes from merely increasing food supply to include poverty reduction, human nutrition, environmental protection and related issues. Similarly, AmBisyon Natin 2040 is the anchor of the country's plans. It envisions Filipinos to enjoy a strongly rooted, comfortable, and secured life. As a consequence, RDE at CSU must be linked with the country's vision and Cagayan's development goals to gain more relevance and have significant impact.

The emergence of global markets and new technologies, particularly ICT and biotechnology has facilitated a paradigmatic shift in RDE. Towards this, public institutions like SUCs have adapted to the contemporary setting by redefining their priorities, changing their focus towards the poor and marginalized sectors of society.

More specifically, RDE are seeing the emergence of new capabilities, organizations, and institutional processes where partnerships are increasingly becoming important. As a result, the process of networking, establishing strategic alliances and coalition building have become very important.

In the foregoing context, R4D implements RDE programs and projects that (1) has developmental relevance, (2) links RDE with those who can use it, and (3) deploys a variety of approaches and strategies to ensure that the results of its RDE work is used and incorporated into development processes.

CSU should depart from the traditional R&D approach and shift to R4D paradigm. R4D links research outputs with development outcomes (e.g., poverty reduction, environmental protection, people empowerment) and priority RDE agenda is formulated with stakeholder engagement. Likewise, RDE thrusts should be based on market demand and inclusive, people oriented development (IPOD) approaches, and conduct R4D.

To ensure research relevance, CSU should efficiently produce the expected outputs of research in a focused and coordinated manner, to wit: a) information that advances knowledge; b) usable and commerciable technologies; and c) policy recommendations with majority of the outputs being usable technologies. The figure below shows the CSU R4D Roadmap commencing from research foundation to accomplishing its desired output.

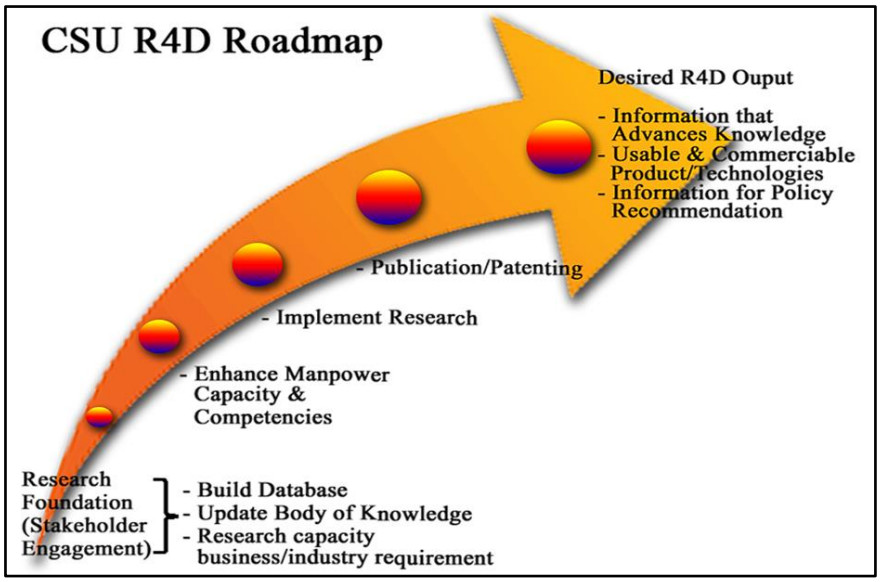


Figure2. CSU RDE Roadmap

R4D includes the following approaches: 1) analyzing and influencing, 2) advancing innovation, 3) designing, testing and adapting solutions, 4) increasing access to vital products and services, 5) building communities of knowledge and practice and 6) supporting local change agents.

R4D is therefore anchored on the innovations paradigm. An innovation system is made up of activities and processes associated with the generation, production, distribution, adaptation and use of new technical, institutional, and organizational or managerial knowledge.

The innovation process involves a series of interaction and participation of multiple stakeholders that operate within a knowledge system. Such interactions result in the initiation, generation, modification, accumulation and utilization of improved technology.

In the local setting, the innovation process involves the complex, iterative, and dynamic interaction among various groups of stakeholders involved in the agriculture RDE spectrum.

An innovation system has two broad elements:

1. Groups of organizations and individuals involved in the generation, sharing, adaptation, and use of knowledge of socio-economic significance.

2. The institutional context that governs the way these interactions and processes take place which includes the numerous norms and conventions that shape the way things are done, as well as more formal institutions such as intellectual property regimes and others.

The innovation process involves not only scientific research institutions, but also a range of other non-research organizations. Due to the foregoing, innovations come from various sources: researchers, extension workers, development agencies, farmers, civil society organizations (CSOs), the private sector and entrepreneurs. The diversity of various actors brings in a diversity of interests and knowledge systems, which could be both conflicting and complementary.

Innovations and impacts from research in the life sciences (biotechnology in particular) are increasingly dependent on new groupings, alliances, and relationships within science, and between science and the private business sector. Hence, the innovation process recognizes the importance of linkages, communication, public-private partnerships, coalitions and the way these assist information flows.

Since the innovation process depends on relationships among different people and organizations, managing these relationships is a central task of RDE. Likewise, the conventions or institutions governing the way RDE activities are conducted, and the role assigned to different organizations are pivotal to the innovation process.

In the Cagayan setting, the innovation process involves the complex, iterative, and dynamic interaction among various groups of stakeholders involved in the RDE spectrum. Hence, RDE must be carried out with the broad involvement of partners and stakeholders in the province's development spectrum.

Moreover, in agricultural innovations systems, CSU adopts a perspective which posits strong linkages between ecosystems and people. In this context, innovations are embedded in three interdependent and interacting systems: 1) agriculture and fisheries; 2) natural resources; and 3) social systems.

Agriculture innovation systems involve the production, processing and marketing of crops, livestock, fisheries aqua marine and trees for food, feed, clothing and shelter. Their productivity and sustainability are driven by changes in climate, technologies and arrangements in the country's natural resource systems and ecological services. Social systems are characterized by population size and quality, culture, peace and order and tenure systems. Finally, governance integrates the manner of how these systems are harnessed for human well-being.

RDE THRUSTS AND PRIORITIES

RDE Thematic Areas

Within the foregoing context, RDE at CSU will be conducted with strategic local, regional, national and international partners on the following themes:

Food Security, Self-sufficiency and Safety - This thematic area will respond to the country's quest for sustainable food security, self-sufficiency and safety. Cagayan being a major food producer and considering the country's vulnerability to natural calamities and disasters, it is important for people to be assured of available, adequate, affordable and safe food on their table.

Climate Change - The Philippines is experiencing warming temperatures brought about by climate change, most especially in the northern and southern regions. These regions (Northern Luzon and Mindanao) have also warmed the most and have dried the most. As climate change significantly affects agriculture and the environment, the National Climate Change Action Plan dealing with mitigation, adaptation, technology exchange and resource sharing will guide CSU's RDE work on this theme. Considering that climate change will impact the present and future scenarios, a strategic and holistic RDE approach will be pursued.

Environmental Resource Management - The thrust of this theme is to maintain and improve the state of environmental resources affected by human activities (i.e., the interaction and impact of communities on the environment) and climate change. Environmental issues that affect the land, air and water will also be studied. RDE on environmental resource management will ensure that ecosystem services are protected and maintained for equitable use and also maintain ecosystem integrity for future generations.

Human Health and Nutrition - Sound health is fundamental to human life, meeting basic needs and contributing to a productive life. In developing countries like the Philippines, hunger and health risks are aggravated by extreme poverty. Disease and malnutrition are mostly attributable to unsafe water, poor sanitation and hygiene. Many communicable diseases are emerging, so the country has to be prepared with appropriate medication, vaccines and diagnostic kits that are available and affordable to the poor.

Disaster Risk Reduction and Management - This theme will find out ways and means by which communities and local governments can identify, assess and reduce the risks of natural disasters. RDE along this area will help communities reduce socio-economic vulnerabilities to disasters as well as dealing with the environmental and other hazards that trigger them. The shift from prevention and mitigation to preparedness mode in disaster risk management requires a lot of research not only in policy formulation, community development and public awareness but also in hard science (e.g. forecasting, structural engineering, etc.).

Sustainable Renewable Energy Sources - Increasing the percentage of indigenous renewable energy source into the national energy mix will not only result in dollar saving and protection of the environment but more importantly, ensuring energy

security. The search, development and exploitation of renewable energy sources will involve a multidisciplinary approach.

Emerging Technologies - Emerging technologies are technical innovations on progressive developments within a field for competitive advantage, representing previously distinct fields which are moving towards convergence. These are indispensable in propelling the country to sustainable agro-industrial development. Currently emerging technologies include biotechnology, information technology, nanotechnology, robotics and artificial intelligence.

Social Sciences - Being concerned with society and human nature, the social sciences cut across disciplines and has a pivotal role in societal growth and development. In the context of CSU's RDE programs, the social sciences will cover socio-economics, entrepreneurship, higher education and law and governance.

RDE BANNER PROGRAMS

The University shall adopt banner programs which are consistent with its manpower capabilities, programs and natural endowments. These are:

1. Agriculture for Food Security & Poverty Alleviation
    a. Food crops
    b. High value crops
    c. Livestock & Poultry
    d. Organic Agriculture
    e. Indigenous & tropical fruits
    f. Industrial crops
    g. Honeybee
2. Aquaculture and Marine Technologies
3. Environment, Climate Change and Disaster Risk Reduction Management
4. Health & Nutrition
5. Industry, Energy & Emerging Technologies
6. Socio – Economics & Entrepreneurship
7. Governance
8. Alternative Learning Modalities and Technologies

RDE CENTERS

To pursue specific RDE commodities in different fields of specialization, Research, Innovation and Training Centers were established in the different campuses of the Cagayan State University (*BOR Resolution No. 143, Series of 2015*). Each center has its priority thrusts and it must propose RDE projects/studies in line with its thrusts, implement projects/studies and present the progress reports of their on-going projects/studies and terminal reports of completed projects/studies during agency-in-house reviews (AIHRs), and other fora.

Listed below are the research centers of the university:

1. Health Research Center
2. Center for Educational Research
3. Geo-Science and Climate Risks Management Research Center

4. Cross-Cultural and Indigenous People Study Center
5. Language Development Center
6. Entrepreneurship Development Center
7. Center for Natural Product Research and Development
8. Hospitality and Tourism Innovation Center
9. Post-Harvest Technology and Training
10. Center for Law and Governance
11. Dairy Research and Training Center
12. Coconut Research, Extension and Technology Center
13. Cacao Research and Development Center
14. Bamboo Research and Training Center
15. Sustainable Fisheries Resource Management Center
16. DOST 02 Food Innovation Center
17. Metal Craft Innovation Center (MCIC)
18. Tuklas Lunas Center (TLC)
19. Natural Products Reasearch and Innovation Center (NPRIC)
20. Integrated Coastal Resource Management Center (ICRMC)

PLANNING AND IMPLEMENTATION PROCESS

The RDE planning and implementation process involves the following:

Assessment of the environment

Program planning which is done by RDE management in coordination with the University Research, Development and Extension Council (URDEC) starts with the analysis of the factors in the environment relevant to RDE programs. Environment factors refer to the set of forces both inside and outside the organization that affects CSU performance. The internal environmental factors that can be considered are institutional capacity structure, support systems (financial and administrative) and organizational management.

Major consideration of the external factors can be focused on the political and national policies, laws and procedures of the government as well as the development programs of other national and regional line agencies.

Setting of priorities

In setting the RDE priorities and agenda, CSU should consider national and regional thrusts/mandates. It should also consider the information and feedback from various agencies and sources such as:

a. National Agencies. The priorities set by various agencies usually serve as basis for setting the RDE priorities and agenda. These include the Department of Science and Technology (DOST), the Philippine Council for Agriculture, Aquatic Resources Research and Development (PCAARRD) Research Agenda, the National Higher Education Research Agenda of the Commission on Higher Education, the Department of Agriculture's (DA) National Agricultural Research and Extension Agenda (NAREA), the Department of Environment and Natural Resources' (DENR) Research and Development Agenda and the harmonized National Integrated Basic

Research Agenda (NIBRA) of the National Economic and Development Authority (NEDA).

b. Regional Agencies. Regional priorities in RDE of the various line agencies in the region are also important bases in setting priorities.
c. Local Government Units. The University should also be sensitive to the priorities set by various local government units in the province, in particular and the region, in general.
d. Other funding agencies. The University should maintain close collaboration with national and international funding agencies. Through their RDE grants, RDE facilities, infrastructure and the competence of its manpower can be improved.

Translating Priorities into Action Plans and RDE Proposals

Once the priorities are set, the activity of translating them into action plans follows. Each division of the research and extension and the specialized RDE centers prepare an action plan with the corresponding RDE proposals. The prepared proposals are submitted to the Office of the Director for RDE for review, consolidation and submission to the Office of the VP RDE for further review and categorizing to institutionally funded or externally funded research study. Proposals that have potential for external funding is endorsed by the Office of the President to the respective funding agencies.

RDE Program/Project Proposal Screening/Evaluation and Approval

The screening/evaluation and approval of RDE projects follow a set of procedures. For research proposals forwarded for external funding, it should follow the research proposal evaluation crafted by the respective funding institution such as PCAARD, Philippine Council for Industry Energy and Emerging Technology Research and Development (PCIEERD), Philippine Council for Health Research and Development (PCHRD), CHED, DA, DABAR, and other research funding institutions. Researches should be packaged following the format prescribed by the funding institution and shall be endorsed by the President to the funding agency for evaluation. However, proposals seeking funding from DOST shall be forwarded by the President to Regional Development Council (RDC) through RRDC for approval and endorsement to DOST.

THE RDE PLANNING FRAMEWORK AND PRIORITY SETTING

The RDE thrusts and priorities must be in consonance with the CSU's Vision, Mission, Goals and Objectives (VMGOs), aligned with local, regional, national thrusts and priorities and the Philippine Development Framework as well as global development goals and thrusts. Environmental scanning shall be the basis of determining the flagship program of the University.

The Planning Framework

Environmental scanning of the service Area of the University

The holistic scanning of the University's service area is based on the formulated VGMOs of the University which must be articulated and understood by its various stakeholders to include the governing board, faculty and support staff, students, farmers and various groups of clientele, across sectors of the society. The result of the environmental scanning shall be stored and processed in the Knowledge and

Technology Management Information System for easier access in preparing individual research proposals.

Interdisciplinary, or multidisciplinary or transdisciplinary research approaches shall be explored and implemented where several researchers should look at a common problem, adopt a common framework, and relate the findings of one discipline to the other. However, it is advisable to concentrate more on determining the potentials of the service areas in terms of economic growth and development and how these growth and development objectives and processes can be interwoven into the major functions of the University particularly on the generation, advancement, dissemination and transfer of knowledge or technology, as desired.

The environmental scanning processes and procedures will be done as follows:

1. RDE Programs, Activities and Projects (PAP) must revolve around the banner programs utilizing the RDE continuum and the inter facing of Instruction, Research, Extension and Production must be adopted.
2. An Annual RDE performance review must be conducted as an input to planning and target setting.

Conformation of RDE programs and projects with the national, regional and institutional research agenda

In its attempt to enhance research productivity in higher education, CHED has set the general policies, directions, initiatives and priority areas for research and research-related programs (NHERA-2 2009-2018). Since the research areas are products of experts from the various disciplines to include institutional leaders, senior researchers and representatives from funding institutions, the University RDE program and projects shall be anchored on these agenda in the planning process, to include site-specific research areas along key disciplines that provide solutions to institutional (teaching learning environment) as well as local community problems.

Management of research and development centers

No duplication of RDE staff and RDE facilities between and among RDE centers, academic departments and other RDE units shall be maintained in order not to weaken programs on instruction by drawing away senior teaching staff from these academic departments

The RDE Planning Process

The planning process arises from the input of the various programs in the eight (8) campuses of the University. The expected output in the planning process is the tentative Strategic RDE Plan which shall be prepared by the Technical Working Committee (TWC) and presented to the URDE Council and key stakeholders. After the incorporation of suggestions and corresponding revision by the TWC, the Plan will be presented to the Board of Regents (BoR) for final approval and the same shall be disseminated and cascaded to all programs of the colleges and campuses.

The RDE Strategic Plan shall then be translated into Medium Term RDE Development Plans (MTRDEDP). To ensure commitment and full support in implementing the Plans, it is important that all those who are directly and indirectly involved in the execution of the Plans, its programs and activities, to include the campus executive

officers (CEOs), deans, center managers, university RDE directors, budget officer, the collaborating institutions and possibly, donor agencies, should be present in crafting the MTRDEDPs.

Once the MTRDEDPs are finalized, they shall be presented to the BoR for final approval.

RDE FINANCIAL MANAGEMENT SYSTEM

Annual Budget Preparations

Institutional research, development and extension programs, projects and activities are funded through the research and extension annual allocations of the University as provided for in the General Appropriations Act (GAA). These fund allocations shall be exclusively and strictly be spent for the purpose for which they have been allocated. ***Graduate and undergraduate*** theses and special problems of students may be funded by University funds if these are within the scope of the approved institutional research thrusts and directions subject to the recommendations of the dean, university research director and VPRDE and approval of the President. The respective colleges shall prepare and submit the research budget to be consolidated by the campus, and endorsed by the CEO to the President. The budgeting should follow the implementing rules and regulations set by Commission on Audit (COA) and DBM.

Emergency allocation of RDE funds

Emergency RDE funds shall be allocated for the conduct of researches and extension activities in response to urgent call of emergencies which are beneficial to the University. Funding for such purpose shall also be made available to provide incentives to researchers, pool of experts and consultants who may be tapped to render expert services.

Fund Sourcing for RDE Programs and Projects

Due to meagre financial resources of the University, a more aggressive sourcing of funds from local or foreign research institutions and other funding organizations shall be given major concern by the RDE Department. This is necessary to provide essential RDE services to target clients.

Where appropriate, legislations to create an equitable counterpart funding for RDE activities from the local governments should be pursued. This is especially true along the areas of technology generation and dissemination/commercialization to address prosperity, economic growth and development and social well-being.

Funds generated from outside/external funding either through project proposals or simply donations grants-in-aid, commissioned projects/studies, 7.5% to 10% may be allocated for administrative cost depending on the funding agency. Administrative cost covers electric/water bills and services of administrative staff involved in processing papers/coordinators consultants/supervisory services.

The partnership agreements, including funding support, with the private sector to include private universities and colleges, shall also be explored to enhance complementation of RDE programs and projects and save on costs.

As a *general rule*, all approved research/extension program/projects/studies, with funding from CSU or outside source shall be covered with a Memorandum of Agreement (MOA) and shall be directly under the supervision of the VPRDE.

Budgeting

Budget preparation and allocation

The budget preparation for RDE programs, projects and activities shall be done once a year in advance, usually late December or early January when the DBM issues a call. The annual budget preparation plan is made to translate the strategic RDE plan into operational plans.

Budget allocation from income for RDE programs and projects

On top of the GAA, at least ten percent (10%) of the University income generated from tuition and other fees is also allotted to supplement the funds for RDE operations (CMO 20 s. 2011). These funds shall specifically be allotted for the implementation of institutionally approved RDE programs, projects and activities, incentives for research, extension and training personnel, awards of winning best papers for RDE during agency in-house reviews, support to student theses/special problems under special cases, research publication, and support for paper presentations in international conferences, and related programs, projects and activities.

Policies and guidelines for cooperation, coordination, co-financing and budgeting of interphase activities, to bridge the functional gaps in and among research and development, extension and knowledge management services, shall be developed.

Participative and transparent budgeting

Budgeting for RDE programs and projects should be participatory and transparent following the general budget planning pathway that should start from the departments to the colleges, campuses, and University Budget Management Office.

CATEGORIES OF RESEARCH

Research in the University may be classified according to:
1. Purpose
2. Management and supervision
3. Functional responsibilities in the research-extension continuum
4. Fund source

Broad Categories of Research According to Purpose

In general, the University research program consist of three broad categories:
1. Research to nourish the quality of the teaching-learning environment
2. Research to develop the inquisitive and critical thinking of students
3. Research to transcend the boundaries of knowledge particularly in addressing the needs of target clientele

Research Classification According to Functional Responsibilities in the Research Extension Continuum

1. *Basic research* is an experimental or theoretical work undertaken to acquire new knowledge of the underlying foundations or phenomena and observable facts without any particular or specific application or use in mind.
2. *Applied research* is an investigation undertaken in order to acquire new knowledge directed primarily toward a specific aim or objective.
3. *Development research* is a systematic work, drawing on existing knowledge gained from research and/or practical experience that is directed towards producing new materials or devices, to installing new processes, system and services thereby improving substantially those already produced or installed.

Categories of Research According to Fund Source

By funding source, research support in the University are from two sources:

1. Internally funded research

Internally funded researches are researches conducted with funding coming from CSU either through the General Appropriation Act (Fund 101), or from income (Fund 164).

2. Externally funded research

Externally funded researches are researches conducted through funding support from external sources either from government or private institutions other than **GAA** and income such as **PCAARRD, PCIEERD, PCHRD** of **DOST, DA-BAR**, **CHED**, **NEDA**, **DA**, United Nations Development Program (**UNDP)**, etc.

3. Joint Funding

All research activities shall be based on the program thrusts and priority areas initiated by the University, CHED, DOST, NEDA, Central Luzon Industry and Energy Research and Development Consortium (CLIERDEC) and other funding agencies.

Chapter 3

RDE ORGANIZATION

RDE ADMINISTRATION AND STRUCTURE

Figure 3 shows the organizational structure of the University RDE Department. The structure reflects how work is divided among the different sections of the RDE Department. The relationship and work assignments of the various stakeholders in the RDE Department are briefly described in the succeeding sections.

Board of Regents

The highest governing body of the University RDE structure is the Board of Regents (BOR) which is the policy-making body of the University. The board sets the RDE policies, future plans, major programs and projects, annual budgets and major budgetary commitments. The BOR approves the direction that the University RDE Departments set and assures consistency of support of the officers and staff of the department in discharging their responsibilities.

University President

The president is the chief executive officer of the University system whose powers and duties are specified in P.D. 1436 and 1437 as amended by RA 8292. As the chief executive of the University, the president executes RDE policies and programs approved by the board. Supporting the president is the University Research and Development, Extension Council.

The University Research for Development and Extension Council (URDEC)

The University Research, Development and Extension Council (URDEC) serves as the policy-determining body and clearing house of the University as far as RDE is concerned. The URDEC is created in addition to the Administrative Council and Academic Council of the University.

Function of the URDE Council (URDEC)

The functions of the council are as follows:

1. Formulates policies, rules and guidelines on the effective conduct of research, development; knowledge and technology management; and extension plans, projects and programs and RDE governance and accountability

2. Provides advice to the university directors of RDE in the formulation of the University RDE framework, programs/plans and projects, including the short listing of proposals for priority funding;

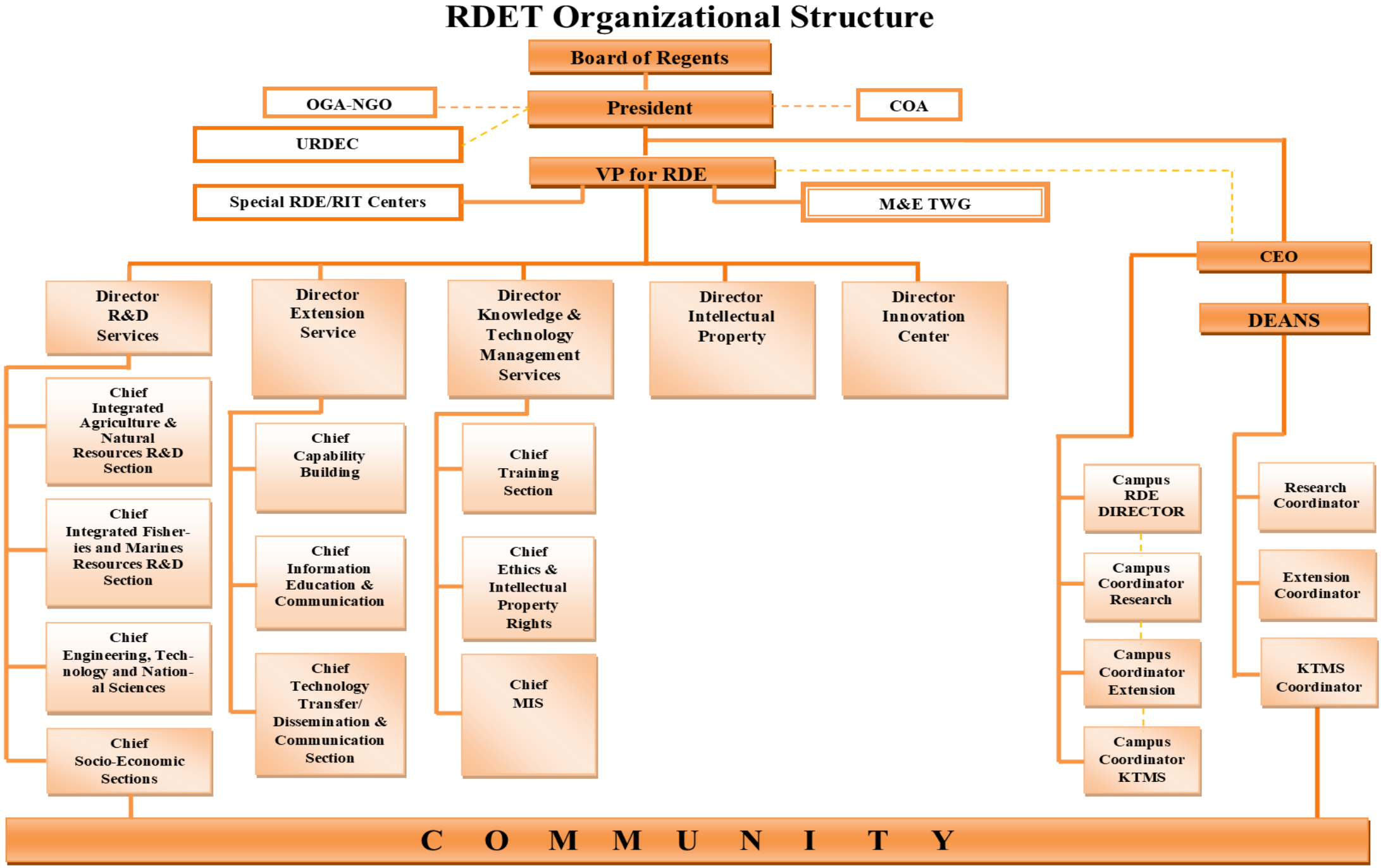


Figure 3. Organizational Structure of the University RDE Department

1. Designs effective strategies for the establishment of linkages with local, national and international institutions for funding and collaborating RDE activities; and on higher education and other national agencies of the government.

2. Develops policies and strategies for the integration, optimization and synergistic linkages among instruction, research, extension, production and stakeholders.

3. Recommends research and extension priorities of the University in accordance with its thrusts and directions of harmonized national research agenda and regional research and development agenda and other agencies such as the those of the DOST and CHED.

Composition of the URDE Council

The URDE Council is composed of the following:

Chair: University President
Vice Chair: University Vice President for RDE
Secretary: (to be elected among the members)
Members: University Vice President for Academic Affairs
University Vice President for Administration and Finance
University Vice President for Partnership and Resource Mobilization
University Director for Research
University Director for Development Extension
University Director for Knowledge and Technology Management
University Director for Intellectual Property Office
University Director for Planning and Development
Campus Executive Officers
Dean of Graduate School
University GAD Focal Person

The University RDE Council shall be backstopped by a technical working committee to formulate and recommend guidelines and policies to the Council relative to the overall RDE programs, projects and activities.

The Vice President for RDE shall be responsible for convening the concerned committee quarterly or as the need arises. However, the Committee shall meet at a maximum of six (6) times per year.

RDE OFFICES

The RDE offices are composed of the Offices of the Vice President for RDE, Research and Development Services, Development and Extension Services, Knowledge and Technology Management Services and the Intellectual Property Office.

Vice President for RDE

The Vice President for RDE shall be under the direct supervision of the Office of the President and shall have the following duties and responsibilities:

1. Assist the president in the planning, implementation, monitoring and evaluation of RDE programs.
2. Provide measures for the effective utilization and dissemination of research/extension project outputs and management of knowledge and technology as well as for the production, technology transfer and commercialization of outputs.
3. Provide leadership in the development of a well-organized university-wide research for development and extension agenda and programs.
4. Introduce innovative approaches to improve governance thereby increasing overall efficiency of the university RDE system.
5. Ensure dissemination and utility of research findings.
6. Oversee the establishment of long-term mutually enriching research and development linkages/relationships between the University and other academic/research institutions, departments, schools.
7. Source out funds for manpower development and acquisition of scientific and information technologies facilities.
8. Introduce innovative approaches to facilitate access among stakeholders, planners, and other clientele to RDE information and knowledge outputs.
9. Coordinate with other university programs and/or related agencies for inter program/agency complementation for efficient mediation of resources.
10. Determine the annual budgetary ceiling for identified R&D priority areas.
11. Perform other related tasks as directed.

The VPRDE Office is supported by the university directors of the four offices in RDE.

Research and Development Services

The Research and Development Services Office is headed by a University Director for Research with two Education Research Specialist, one Statistician, one Research Assistant and one Administrative Assistant. Other manpower needed are on contract of service. It is also composed of four sections namely (1) Integrated Agriculture and Natural Resources Research and Development Section, (2) Integrated Fisheries and Marine Resources Research and Development Section, (3) Engineering, Technology and Natural Sciences, (4) Socio-Economic Section. The main purpose of the Research and Development Services Office is to provide high quality, professional research and development support to researchers in line with the university R&D thrust and agenda and does the following duties and functions:

1. Assist the Vice President in the planning, implementation, monitoring and evaluation of research programs.
2. Spearhead the development of and recommend policies and guidelines on the preparation and evaluation of R&D programs/projects/study proposals, effective conduct of R&D projects and programs and research enhancement program to the URDEC through channels.

3. Formulate well-directed plans and programs of the university R&D.
4. Review and evaluate research and development project terminal reports and submits findings to the Knowledge and Technology Management Office;
5. Recommend R&D programs/projects/study proposals for institutional funding and/or for endorsement to outside funding agencies, and terminal reports for possible publication or approval.
6. Determine the viability of proposed budget requirements and work schedules in relation to the projected activities and expected results of R&D project proposals.
7. Review all approved research activities and recommends necessary approval of authority for each budget and work plan revision.
8. Evaluate research projects in accordance with existing research policies of the University and other funding agencies and submit recommendations to their respective committees or directly to the office of the VPRDE.
9. Recommend the teaching unit equivalences to be assigned as research workload of the faculty members to be involved in R&D projects.
10. Coordinate with other university programs and/or related agencies for program/agency complementation and efficient mediation of resources.
11. Perform other functions as may be directed.

Extension Services

The Extension and Training Services is composed of the following sections: (a) Community Outreach; (b) Applied Communications; and (c) Technology Transfer/Dissemination and Utilization. Its functions are the following:

1. Assist the Vice President in the planning, implementation, monitoring and evaluation of extension programs.
2. Formulate and recommend extension priorities and a well-organized and directed program of the university extension services;
3. Assist the different units of the university (e.g.; campuses, colleges and offices and other agencies outside the institution) in cultivating social responsibility among the members of the CSU community; and oversee the development of social awareness in the CSU community through active participation in programs and projects.
4. Spearhead the harnessing of the potentials, strengthening the capabilities and developing the competencies of the target partner communities.
5. Provide measures for the effective utilization and dissemination of research/extension project outputs as well as for the production, technology transfer and commercialization of the same; enhance the transfer of research and development results in response to the priority needs of the target partner community.
6. Empower people through the promotion of community-based organization.
7. Promote equal access to information and services through deliberate social marketing strategies and innovative and sustained advocacy.
8. Serve as a linkage between CSU and the community.
9. Conduct special community development programs and projects.
10. Conduct training, seminars, fora, symposia and conferences on skills and technology promotion and utilization, especially along the fields of (a) livelihood

opportunities; (b) community organizing (CO) and community development (CD); and (c) other concerns for human development.
11. Promote market research and development results, especially those developed by the University through (a) demonstration activities; (b) pilot and pre-tests of skills and technologies; (c) distribution and production of development materials such as pamphlets, leaflets modules, magazines; and (d) other forms of development communication techniques.
12. Conduct special community development programs and projects.
13. Implement extension cum research activities aimed to improve extension research delivery.
14. Document, assess, monitor and evaluate outreach activities for comprehensive data management and analysis as well as for input to re-planning.
15. Coordinate with other university program and/or related agencies for program/agency complementation and efficient mediation of resources.
16. Perform other related tasks as directed.

Knowledge and Technology Management Services

The Knowledge and Technology Management and Services is composed of the following sections: (a) Training (b) Professional Services. Its functions are as follows:

1. Assist the Vice President in the planning, implementation, monitoring and evaluation of KTM programs.
2. Formulate and recommend well-organized and directed policies, plans and programs of the university knowledge and technology management programs.
3. Conduct a systematic needs assessment to identify the needs of farmers, LGUs and the private sector in the province and region and organizes, manages these knowledge and results of researches conducted within the University.
4. Collect, store, and disseminate RDE knowledge and ultimately produce more innovative products and services that meet the needs of the university clients.
5. Maintain and/or co-manage the community extension and outreach convergence facility (center) to serve as a venue for community training and education and other related activities.
6. Collect, store, and disseminate knowledge and best practices to help employees work smarter, reduce duplication, and ultimately produce more innovative products and services that meet the needs of the university clients.
7. Develop a system of sharing of and access to technologies and knowledge generated from the research and development of the University.
8. Identify technologies generated, inventions, and developed software ready for copyright/patent.
9. Spearhead the conduct of trainings/workshops that will contribute to the resource generation program of the University.
10. Lead university personnel in advertising/offering of technical assistance to other government agencies, people's organizations (POs), non-government Organizations (NGOs), private organizations and individual clients.
11. Advertise/offer technical assistance along RDE to other government agencies, POs, NGOs, private organizations and individual clients.
12. Perform other related tasks as directed.

Intellectual Property Office

The functions of the Intellectual Property Office are as follows:

1. Assist the Vice President in the planning, implementation, monitoring and evaluation of IP programs.
2. Develop IP policies, plans and programs for the University.
3. Ensure that all technologies generated, inventions, and software developed by the University scientists/researchers/other personnel are given copyrights and/or patents before these are commercialized
4. Monitor efforts and effectiveness of the University in securing IP protection and pursuing IP commercialization and provide solutions and assistance in case of shortfall in performance of protecting, utilizing and commercializing research results of the University;
5. Keep account of revenues and payments to the University as stipulated in the research funding agreement and ensure that there is a proper sharing of revenues from IP commercialization;
6. Identify, ensure protection and management of Intellectual Properties (IPs) generated from RDE funded programs and projects in the University;
7. Ensure that technologies generated, inventions, and software developed by the university scientists/researchers/other personnel are given copyrights and/or patents.
8. Report regularly on any agreement entered into by the RDE for IP with other entity or person and on the progress of IP and/or IPR commercialization efforts and of all agreements entered and licenses granted.
9. Make a confidential disclosure to the University of any potential IPRs with possibilities for commercialization and/or technology transfer.
10. Perform other duties and functions which may be directed

COMMITTEES IN RDE

RDE Executive and Management Committee

The RDE Executive and Management Committee has the following functions:

1. Sets strategic direction and defines research goals.
2. Reviews and recommends research for implementation.
3. Monitors and evaluates RDE projects implementation and budget utilization.
4. Reviews and evaluates key research findings for dissemination, technology commercialization.
5. Reviews and approves/disapproves all recommendations for research results implementation.
6. Keeps track and consolidates RDE performance indicators.

The Composition of the RDE Executive and Management Committee are:

1. University RDE Executive and Management Committee

   Chair: Vice President for RDE

Vice Chair: Concerned Directors (RDE, KTM, IPO, IC)
Members: Campus RDE Directors or Coordinator
Secretary: Research staff

2. Campus RDE Executive and Management committee

Chair – Campus Executive Officer
Vice Chair – Campus RDE Director
Members: Campus/College RDE Coordinators
Secretary: Research staff

3. The Technical Working Committee (TWC)

The technical working committee shall serve as technical advisory committee for RDE of the University.

A technical working committee shall be created to undertake the following functions:

1. Align RDE programs and projects with the strategic direction of the University.
2. Provide expert advice and services in translating the university's plans/programs into specific activities and output(s).
3. Provide inputs to the creation of research problems, formulation, packaging, monitoring and evaluation (M&E) of RDE programs/projects.
4. Prioritize RDE needs.
5. Set the implementation results by describing outcomes and benefits of recommended RDE projects for implementation.
6. Receive and evaluate reports and presentations on RDE results.
7. Act as reviewer/evaluator during RDE program reviews, pre-agency in-house reviews, agency in-house reviews, field visits, and other related M&E activities of on-going projects.
8. Act as resource person during symposia, workshops, techno-for a, field days and other conductive meetings.
9. Assess relative contribution of RDE projects and activities towards achievements of goals and expected outputs.
10. Perform other tasks that may directed.

Composition of the University TWC

Chair: Vice President for RDE
Vice Chair: Concerned Director
Members: R&D Center Managers
Concerned Pool of Experts (there shall be a list of expert pool in the university based on commodity)
Secretary: Research staff

Composition of the Campus TWC

The Campus may create its Campus TWC. The composition of the Campus TWC is :

Chair: Campus RDE Director
Members: Campus Pool of Experts
Secretary: Research staff

SPECIAL PROJECTS/RESEARCH, INNOVATION AND TRAINING CENTERS

Special projects are RDE projects which are supported in terms of resources partially or fully by regional, international or internal partner agencies.

Research, Innovation and Training (RIT) Centers are the direct arms of the RDE Department in the planning, and implementation of the banner programs/priority thematic areas of the University.

The RIT Centers shall be directly under the supervision of the VPRDE. It shall coordinate closely with the CEO where the center is located for administrative functions.

The respective centers shall be led by a Center Manager with the following functions:

1. Provide leadership in developing a medium term research program.
2. Provide leadership in the overall management of the research center, RDE programs and projects.
3. Establish linkages with funding agencies or potential donors.
4. Seek the cooperation of competent staff in academic departments to develop project proposals.
5. Prepare and package RDET proposals for institutional and external funding.
6. Establish and/or strengthen collaborative RDET projects with regional or national research and extension consortia, LGUs including foreign institutions and research universities.
7. Plan and implement a staff development program.
8. Attend to public awareness activities and project a good image of the center.
9. Encourage and support the publication and dissemination of research results.
10. Prepare and submit the annual budget of the research center.
11. Assume accountability over facilities, money, property, records, etc. and to safeguard the security of the center.
12. Assume other responsibilities as directed from time to time by the research director or the VPRDE.

Health Research Center

The center for health research and development is established to develop and nurture the research skills and ability of faculty members and students through the use of the updated apparatus and equipment in the University Central Analytical and Biotechnology Laboratory.

Center for Educational Research

The center is developed to oversee the development, conduct, dissemination, and utilization of educational researches that are geared towards the attainment of quality, excellent, relevant, responsive, equitable, accessible, efficient and effective education.

Geo-Science and Climate Risks Management Research Center

The project mission is to build a pool of GIS users and practitioners utilizing up-to-date geospatial information for climate change adaptation and disaster risk reduction in the region. Its goal is to develop CSU as the center of geoscience and climate risk management in Region 02.

Cross-Cultural and Indigenous People Study Center

The center for Indigenous Peoples' Studies (CIPS) of Cagayan State University is an arm of the research and development division which promotes, develops and packages cultural research undertakings in Cagayan. The creation of the center is anchored on the University's mandate to be a leading research institution in Northern Luzon and in pursuit of its organizational commitment of alleviating the lives of the poor, vulnerable and marginalized sectors of the province. Its core focus is the study of indigenous peoples of Cagayan, namely, Ibanags, Itawes, Agtas, Malauegs, Ibatan and Yapayao.

Language Development Center

The center aims to offer short courses or training programs that address the language communication needs of those needing improvement in their competence in English as a global means of communication, in English for academic purposes and in English for the corporate setting giving premium focus on the four basic communication skills: listening, speaking, reading and writing.

Entrepreneurship Development Center

The study aims to present the growth and development of the micro, small and medium enterprises (MSMEs) in Cagayan.

Center for Natural Product Research and Development

A production center for biofertilizers, biopesticides, herbal concoctions, and nutriceuticals; a quality control facility for all CSU natural product based technology, a service provider for laboratory analytical and biotechnology protocols, and a consultancy center for natural product research, development, and extension rolled into one.

Hospitality and Tourism Innovation Center

The center caters not only to the students but also to people and communities outside the university, giving priorities to out-of-school youth, unemployed groups, people in the industry, and those in the side lines. The purpose of the program is to uplift the lives of these people by creating an opportunity of learning or further learning the skills and competencies in the hospitality industry.

Post-Harvest Technology and Training

The postharvest technology innovation and training center provides solutions to postharvest and processing problems through research, innovation, capacity building and formation of postharvest technology network in the Cagayan Valley region and the entire Philippines.

Center for Law and Governance

The Center for Law and Governance focuses on issues of political practice and governmental structure, with a special emphasis on questions of public participation, power distribution, democratic responsiveness and decentralization. These interests shall be pursued through research and action. Its research is multidisciplinary in that it draws not only on law, but also on democratic theory, political science, public administration, history, philosophy and sociology.

The center's projects include a wide range of activities, from data collection, to advising and consulting, to the conduct of commissioned research projects.

The center will be a forefront provider of policy-making, advocacy initiatives, and program crafting along social and human development issues and concerns in Cagayan Valley. The center is committed to the highest standards of research and training in furtherance of the University's mission to advance learning and knowledge.

Dairy Research and Training Center

The Dairy Research and Training Center caters to the instructional/skills development needs of the agriculture students (animal science major), teacher education students (TLE majors), professors and dairy farmers in the province of the region. It also serves as a training center for government, non-government entities, entrepreneurs/dairy cooperatives, assemblers and other stakeholders.

It aims to attain self-sufficiency in milk and milk products in Cagayan in partnership with government and private sectors through dairy research and development undertakings.

Coconut Research, Extension and Technology Center

The Coconut Research Center (CoReC) in cooperation with the University RDET center, and the different linkages both government and non-government

organizations, will strengthen the capacity of existing coconut farmers and industries in the province.

It aims to enhance the existing coconut research and development projects of CSU-SM being the banner commodity of the campus. It will identify entry points in the coconut value chain where other technologies are not yet in place to fully develop the local coconut industry, establish a contract farming relationship between processors, collectors, and coconut farmer groups, increase income of coconut growers, and create jobs for poor rural people. As a result, they will have better conditions to enhance their production capacity and sell coconut at better prices.

Cacao Research and Development Center

The center will be the source of knowledge for the cacao industry and the instrument for manpower development and thereby fulfilling its commitment to intensively pursue the development, sharing and utilization of science-based knowledge and innovations for the inclusive agro-industrial development of Cagayan Valley, specifically, of the cacao producers as communities through RDE. Thus making cacao farming as a competitive and sustainable business enterprise.

Bamboo Research and Development Center

A premier Bamboo Research and Development Center corresponding to the agro-industrial development of the region. As a catalyst of change, the center shall pursue excellence in bamboo research to invigorate quality instruction and translated into empowered communities responsive to the optimum utilization and conservation of lands toward agro-industrial development.

Sustainable Fisheries Resource Management Center

The center provides leadership in the conduct of researches and capacity building of stakeholders along sustainable aquatic resource management research and training. It will contribute to the improvement of aquaculture and post-harvest products and services that will lead to increased economic benefit of the fisherfolks.

In this center, the essence of fishery resource management will be taught to fisherfolks, political leaders and other stakeholders leading to its institutionalization in all towns of the province and will redound to a holistic approach to sustainable fishery resource management.

DOST 02 Food Innovation Center

The CSU-DOST02 Food Innovation Center serves as a center for innovations and support services for the development of processed food in Region II. It is envisioned that through this center, innovative technologies, relevant support services, technical expertise, necessary infrastructure and facilities will be more accessible for micro small and medium enterprises in the urban centers and countryside, all for more effective technology application, deployment (transfer) and commercialization for sustained economic growth and productivity.

The generation of significant research results and technological progress will not create competitive advantage without practical application—the vital step that transforms research breakthroughs into innovative products and services. Based on this premise, this project intends to enhance the innovative capacities of MSMEs in the food industry to improve the quality of their existing products and/or develop new ones; thereby increasing their competitiveness in local and export markets. Moreover, it harmonizes activities and rationalizes resources for industry development through better interface among R&D agenda, technology generation, science and technology programs and food industry need.

Metal Craft Innovation Center (MCIC)

A nationally recognized metal center for R&D, and production of innovative industrial equipment and engineered products of the region. It provides quality metals and engineering services to stakeholders for the upliftment of the region.

Integrated Coastal Resource Management Center (ICRMC)

The ICRMC is envisioned to be a pioneering RDE institution on Aqua Marine and agent for change in Region 02 working towards an improved quality of life of responsible stakeholders living in harmony with a healthy and productive environment. It provides leadership in RDE, capacity building of stakeholders and facilitates the convergence and synergy among individuals and institutions towards sustainable aquatic resource management.

Chapter 4

RDE PROPOSAL DEVELOPMENT

This section discusses the policies and conditions that have to be observed in the preparation and approval of RDE proposals submitted by faculty and staff of CSU for funding.

Research and development refers to the aggregate of basic and applied research and development with applied research directed towards practical application of knowledge, and basic/fundamental research directed primarily towards developing new or fuller scientific knowledge or understanding of the subject rather than the practical application. The term may also refer to creative work undertaken on a systematic basis in order to increase the stock of knowledge in science and technology.

GENERAL GUIDELINES AND POLICIES IN RDE PROPOSAL DEVELOPMENT

CSU shall fund the approved research proposal using Fund 101 or Fund 164 but a researcher as a principal proponent can only avail of fund in at most two at a time to give opportunity to other faculty. However, program/project proposals that can meet the requirements of funding agencies or are wide in scope (regional or national) shall be endorsed for external funding.

Only approved research/extension project that has not been funded by external/another source are qualified for institutional funding.

Qualifications of Research Proponents Applicants for Research Grants from CSU

1. Must be a permanent faculty member or staff of CSU;
2. The subject/interest of inquiry must be aligned with the researcher's field of specialization;
3. Must have no outstanding obligation or liability in the name of CSU with any funding agency;
4. Must be analytical, objective, creative and capable of implementing research and extension undertakings and working with other people/researcher;
5. Must be ethical in the conduct of research project activities and utilization of project results;
6. Must be prompt in the submission of progress, terminal reports and other required reports
7. Must be self-motivated and full of initiatives in sourcing out funds from outside to initiate and sustain research projects/programs.

Levels of Researches

Research Program

A research program is a unified set of two or more interrelated research-based projects implemented by the researcher with a well-defined central focus or goal in support to an identified research agenda/thrust/mandate. It is usually and interdisciplinary approach to meet established goals within a specific time frame.

Research Project

A research project is a unified set of two or more interrelated research-based studies implemented by the researcher. A research project is the basic unit in the investigation of a particular researchable problem with predetermined objectives to be accomplished within a specific time frame. It generally embraces a number of related problems within a given discipline and is made up of a number of studies.

Research Study

Research study is an investigation designed to provide solutions to specific problems or to achieve a very specific objective. It has a principal investigator.

However, for externally funded research, the categories shall be determined by the funding agency.

Qualifications and Functions of Program, Project and Study Leader

Program Leader

The program leader must be a permanent faculty of CSU. He/She must have knowledge and/or experience in the formulation and implementation of researches within his/her discipline and must have time to devote at least 12 hours weekly, which is equivalent to 9 units academic load, for research development, implementation and administration. The functions of the program leader are as follows:

1. Provides over-all direction in terms of setting common projects under the program;
2. Plans the schedule of work of the various projects and ensures that research and extension efforts are coordinated and synchronized to achieve expected outputs;
3. Provides guidance as to strategies, methods and processes by which the separate projects of the program can complement and supplement individual data collection activities; and
4. Represents the program when dealing with external organizations.

Project Leader

The project leader must be a permanent faculty of CSU. He/She must have knowledge and/or experience in the formulation and implementation of RDE projects within his/her discipline and must have time to devote at least 9 hours weekly, which is equivalent to 6 units academic load, for research development, implementation and administration. The functions of the project leader are as follows:

1. Plans and directs the RDE procedures and operations necessary to meet the objectives of the project;
2. Plans, organizes, coordinates and controls the duties and tasks of lower level project personnel through the different stages of the project;
3. Recommends the recruitment and termination of the project personnel;
4. Recommends the payment of salaries and fees of personnel;
5. Attests to the veracity of reimbursement requests for travel, transportation, per diems, and other project operating expenses;
6. Recommends the purchase of supplies, materials and equipment needed in the project;
7. Prepares and submits reports.

Study Leader

The study leader must be a permanent faculty of CSU. He/She must have knowledge and or experience in the formulation and implementation of RDE projects within his/her discipline and must have time to devote at least 6 hours weekly, which is equivalent to 3 units academic load for research development, implementation and administration. The functions of the study leader are as follows:

1. Assists the project leader in planning and managing overall project operations;
2. Plans and supervises the work of lower level research staff the implementation of the study aspects assigned to him/her by the project leader;
3. Reviews the findings, analyses and research interpretations arrived at by lower level project study personnel;
4. Initiates and supervises data collection and processing and report writing; and
5. If the study is not a component of a project, the functions are similar to that of the project leader.

Conditions for Granting Institutional Fund for Research and Extension

1. Institutional fund shall be granted to a proponent with no outstanding unliquidated research fund.
2. Institutional fund shall be granted to an approved proposal that has been presented in an in-house review.
3. Proposal with outcomes that has potentials for extension, technology commercialization or policy formulations.

PROPOSAL PROCESS FLOW

The office of the VPRDE facilitates the development, approval and funding of RDE proposals through an efficient system of processing. Figures 2 and 3 show the process and procedures in developing and approval of RDE proposals.

Call for proposals

The RDE decides strategic priorities for CSU research and development and extension needs and communicates this through Call for Proposals. The VPRDE calls for the submission of institutionally funded RDE proposals. The research proponents prepare proposals in accordance with the thrusts, directions, and goals and banner programs of the University. The deadline for submission of RDE proposals are as follows:

Table 1. Deadline for submission of RDE proposals

Cycle	Call for Proposals	Deadline for Submission of Detailed RDE Proposals	Issuance of Notice to Proceed
1st Cycle	2nd week of March	1st draft (for evaluation) – 2nd week of April Final proposal – 2nd week of June	2nd week of July
2nd Cycle	2nd week of September	1st draft (for evaluation) – 2nd week of October Final proposal – 2nd week of November	2nd week of December

Note: No on-going or completed research shall be presented in the In-House review unless proposal of said research undergone the review process by the TWC and URDEC.

Submission and endorsement of proposal

All proposals (capsule or detailed) prepared by the proponent shall be submitted to the dean and shall be endorsed by the CEO for review by the TWC. The CEO through the dean shall inform the proponent on the feedback arising after the review process.

Recording of Proposal

All proposals (capsule or detailed) endorsed by the CEO shall be recorded at the RDE office before it shall be routed for review by the TWC. Each shall be numbered and referenced accordingly.

Review of Proposal

Capsule proposals routed for review shall be evaluated on its technical feasibility by the TWC. On the other hand, detailed proposal shall undergo two stages of review. First, for technical feasibility and environmental soundness by the TWC and second, for final review by the URDEC.

Review of proposal for externally funded research shall be undertaken by the funding agency.

Approval of Proposal for institutionally funded research

Proposals (for institutional funding) that passed the review processed shall be endorsed by the URDEC to the VPRDE who shall recommend its approval to the president. Approval of proposal shall be done only by the president. A MOA between and among the proponent, CEO and the president shall be executed. Special Order (SO) shall be issued by the president before the project shall be implemented.

Approval of externally funded research shall be done by the funding agency. A MOA shall also be executed between and among the proponent, university president and the funding agency.

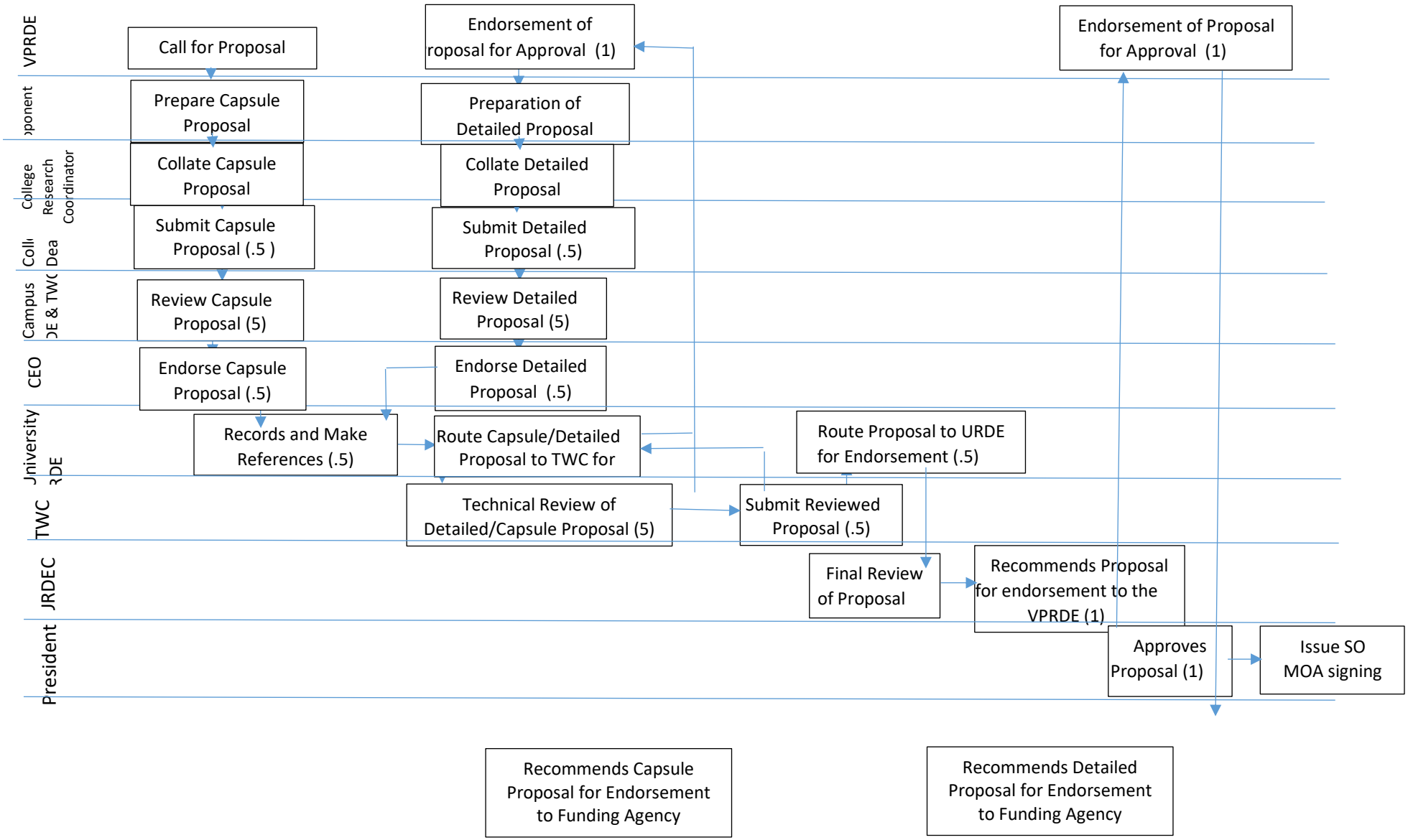


Figure 4. Process Flow of Institutionally Funded RDE

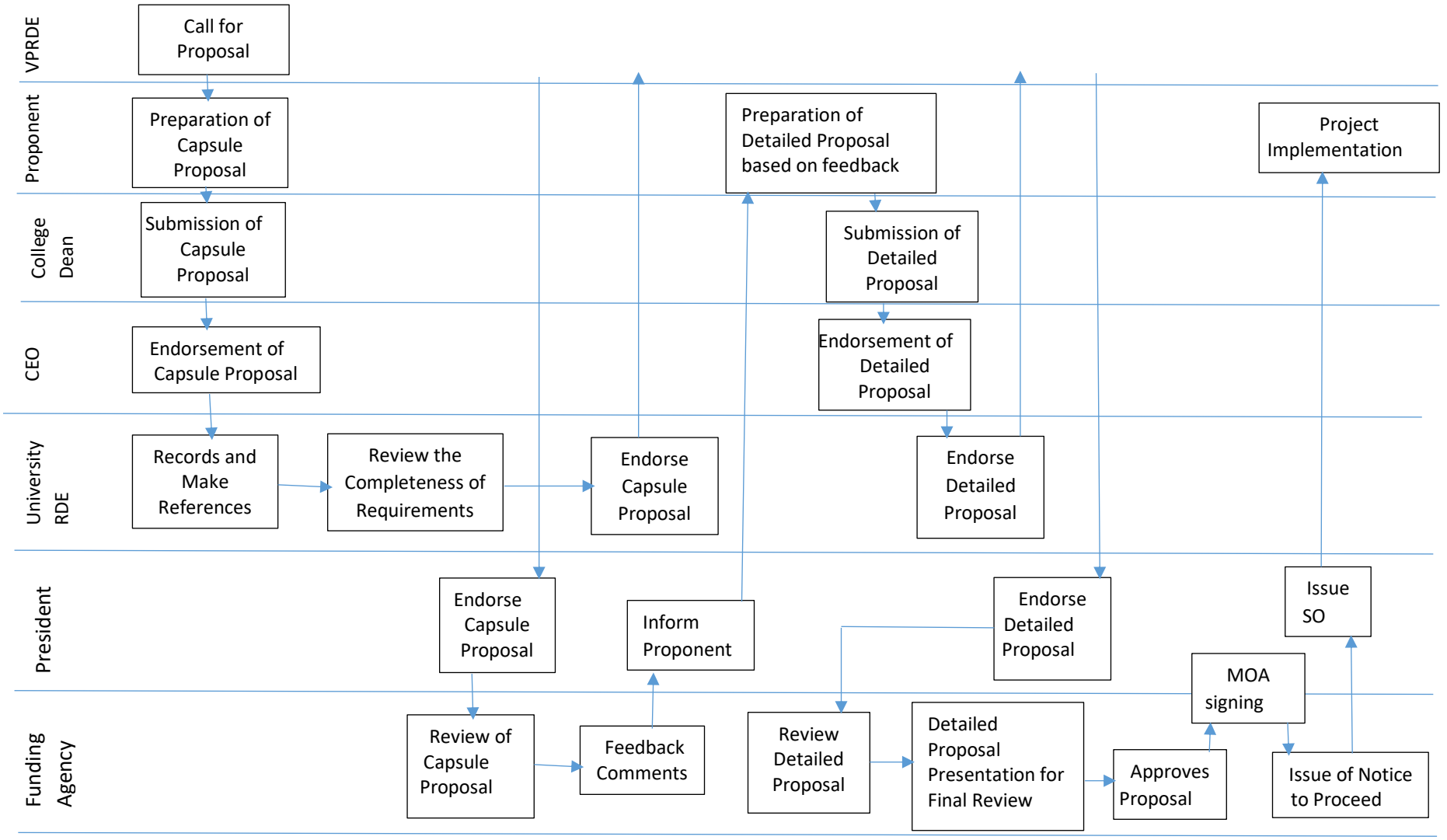


Figure 5. Process Flow of Externally Funded RDE

PROPOSAL CONTENT AND FORMATS

All proposals shall follow the guidelines and format as provided below.

Parts of the RDE Proposal

The specific parts of the RDE proposal are:

1. Introduction
2. Methodology
3. Expected Output
4. Literature Cited
5. Work and Financial Plan
6. Project Duration
7. Curriculum Vitae of proponent/s

Introduction

Background of the study. The background of the study states the rationale, the problems/issues to be addressed and make justification as to the need to undertake the study.

Objectives. The project objectives state what the research project is expected to achieve. The objectives should be Specific, Measurable, Attainable, Relevant and Time bound (SMART). It is formulated in general and specific statements. The general objective states the broad purpose of the research while the specific objectives are created from the general objective and are definite and detailed statements to address the identified problem/s or issue/s.

Significance of the study. This presents the importance of the study to the different sectors who will benefit from the research outputs. State the research problem and significance of the project to the current need of the region. It includes the utilization of the expected output and the impact the information generated will have on science, the target users and the country.

Review of Literature.

This presents the significant literatures to support the proposal. The literature synthesizes past and current research findings and the recommendations on the problem being investigated. It generally presents and discusses what has been done about the problem. It also includes existing knowledge about the subject of investigation to which the proposal is built on and will take off. It cites references to strengthen the position of the researcher in his/her research work. Only those reviews that will substantially strengthen the research position of the researcher should be included in the review.

Conceptual/Theoretical Framework.

The conceptual/theoretical framework is a set of interrelated concepts that guides a researcher on the factors that he/she wants to measure and the statistical relationships he/she is looking for. It is presented in a diagram and accompanied by a textual explanation. It contains both the dependent and independent variables and how these

variables are related or interrelated. It guides the researcher on how to analyze the data and the methodology to use. Not all projects, however, need a conceptual framework.

Methodology

The methodology generally describes the way the research work is carried out and what equipment and materials are to be used in the process. It is geared towards providing answers to the research questions as stated in the significance of the project and the objectives as set. The measurement of the expected outputs that the project will produce and expected values should also be included.

The methodology should show the appropriate treatment used, the experimental layout, and appropriate statistical design and analysis systems. It should include the discussion on how the data shall be generated, how frequent the measurement should be taken, and how the collected data will be processed and reported.

Research Design. The research design includes the statistical design to be used, the different treatments to be tested, including the statistical layout of the study.

Sampling Procedure. Sampling consists of measuring portions of a population and from the measured sampling units, obtaining estimates that are considered representative of the parent population.

Depending on the degree of homogeneity or heterogeneity of the population and the degree of required accuracy, the sample size is determined using either simple random sampling, stratified random sampling or simply, systematic sampling. The researcher should be able to find the relative strengths of the most appropriate sampling techniques to be used in the research.

Methods of Data Collection. The Method of Data Collection provides answers to the nature and extent of data to be collected, how the researcher proposes to collect them and how the data should be processed to be providing the necessary information for analysis.

Note that the information to be generated for analysis should be limited but large enough to enable the proponent to be confident that the data collected is trustworthy and serves the needs of the research. They may be obtained from the field in terms of experiments or through the use of personal interviews, or questionnaires in case of social research.

Methods of Data Analysis. Data analysis is the process of transforming the collected data into useful information. In many research works, data analysis involves three major steps: *data preparation, descriptive statistics and inferential statistics.*

1. *Data Preparation.* Data preparation involves the checking of the collected data for accuracy, data encoding or data entry into an appropriate computer, transforming the data into desired structure, and developing a database that integrates the various data into usable forms.
2. *Descriptive statistic.* Descriptive statistics refers to description of the basic features of the data for the study. It provides simple summaries about the collected data and includes tables, graphs, charts, scanned photographs or line drawings which are collectively termed as diagrams.

3. *Inferential statistics.* Inferential statistics is used to establish models and investigate hypothesis/es. By inferential statistics, the proponents try to infer from a given sample data what the population really is or make probability statements of the differences between groups in a very dependable judgement or had simply happened by chance. Hence, we use inferential statistics to make inferences about the data to the general conditions and these are linked to specific research questions or hypothesis that was formulated in the significance of the project.

Note that it is important to present simple data in order not to confuse the readers and where conditions do not warrant, the details of the data may be provided in the appendices.

Target Beneficiaries. The target beneficiaries of the project should be specified. They should be defined in terms of how the expected outcomes, effects and impacts of the project are being utilized.

Timetable of planned activities. The timetable of planned activities is usually presented using a Gantt chart illustrating the chronology of events or sequence of activities to be conducted. It generally provides answers on the expected time of completion of the activities as planned and the delivery of the desired outputs.

The various activities of the research should be properly planned in order not to delay completion. Following the plan is absolutely necessary but it should be flexible enough to allow for adjustments or revisions without substantially altering the delivery of outputs within the bounds of reasonable time.

Expected Output

The expected output indicates the specific products, processes or services, information or technologies which the project is expected to produce. Defined in terms of the social, economic and related measures, these outputs should be explicitly determined in terms of how they are being generated and realized through time.

In addition, the process on how the outputs should be promoted, utilized and commercialized should also be thoroughly explained in the expected output. The expected output statements in the proposal should be simple and measurable.

Literature Cited

The Literature Cited is a list of reading materials referred to in the project. The list should include books, periodicals, research reports, theses or dissertations, proceedings, articles, or papers presented in various fora.

The purpose of citing the references is to allow the readers to follow through the research work and compare them to the conclusions that the researcher has drawn from the research. The references should never be thought of as a method for the readers to think that the researcher has read enough.

For books, the proponent should be able to give the name of author/s, year, title, edition, place of publication, and publisher. For articles in journals, the proponent should be able to give the name of the authors, year, title of the article, and name of publication, volume

and page numbers. Note that if the proponent cannot possibly give these details, then probably, he does not have a proper reference. For web-based publications, the same basic principles should be applied in citing printed works (i.e. citing the date when the article was accessed).

Note that literature citations in peer-reviewed journals are more convincing than non-reviewed materials. The use of pictures are acceptable, however, permission should be sought from the author.

Work and Financial Plan

This refers to the amount to fund the conduct of the RDE project. The amount is based on the approved line item budget.

Project Duration

The project duration usually indicates the number of months or years the project shall be accomplished based on the timetable of the planned activities.

Curriculum Vitae

This refers to the qualifications of the persons who will be involved in the implementation of research/extension. They should be knowledgeable and skilful enough to do the RDE work. Hiring of research staff or personnel will be based on the approved line item budget of said research/extension program/s and project/s.

PROPOSAL TECHNICAL EVALUATION

Guidelines on the Evaluation of RDE Proposals

RDE proposals shall be evaluated first by the Campus TWC then at the University TWC and finally evaluated by URDEC using the instrument from the RDE office. Proposals should be in consonance with the university, regional and national research agenda, and sectors. Proposals shall be aligned with the respective banner programs of the campuses and shall be under its corresponding established research center. Proposals should be gender sensitive.

Only proposals reviewed and endorsed by the TWC and approved by the URDE Council shall be recommended for funding.

Criteria for Screening RDE Proposals

The criteria for screening RDE proposals are is presented in Table 2:

Table 2. Criteria for screening RDE proposals

CRITERIA	Points Equivalent
1. Introduction *Objectives *Conceptual/Analytical framework	15%
2. Significance of the study * Social Acceptability *Technical Feasibility *Financial/Economic Viability *Environmental Soundness	15%
3. Methodology * Use of appropriate tools in achieving the objectives * Clearly defined step-by-step procedures	25%
4. Expected Outcome Publication, Patent, Places, Product, Policies, Processes, People	20%
5. Competency of Proponents	25%
TOTAL	100%

A minimum rating of 80% must be achieved to be qualified for funding.

PROJECT NUMBER

A project number is assigned to all RDE proposals, graduate thesis and dissertation including undergraduate thesis to avoid duplication of programs, projects, and/or studies. The numbering will be done by the office of the KTM upon the submission of capsule proposal to the RDE office. The proponent through the CEO will be informed on matters arising after the recording and referencing of the submitted proposal.

WORK AND FINANCIAL PLAN

Indicate the specific programs/projects/studies/activities with the corresponding budget for each activity. This should include the timeframe of each activity.

BUDGETARY ALLOCATION

Upon approval of the proposal, the RDE office will endorse the budget of the approved project to the accounting office. The allocation should be based on the approved line item budget.

THESIS PROPOSAL APPROVAL FLOW

Undergraduate thesis proposal shall be presented to a committee of at least 3 members (adviser and 2 members) whose field of specialization is in line with the subject of the

thesis. The committee reserves the right to approve or disapprove the proposal. The approved proposal shall be registered at the RDE office for recording. No proposal shall be conducted unless this is assigned a project number.

THESIS ADVISING

Faculty members whose field of specialization is in line with the subject of the thesis may qualify as adviser. Students however, have an option to choose their adviser as long as he/she meets the qualification.

Chapter 5

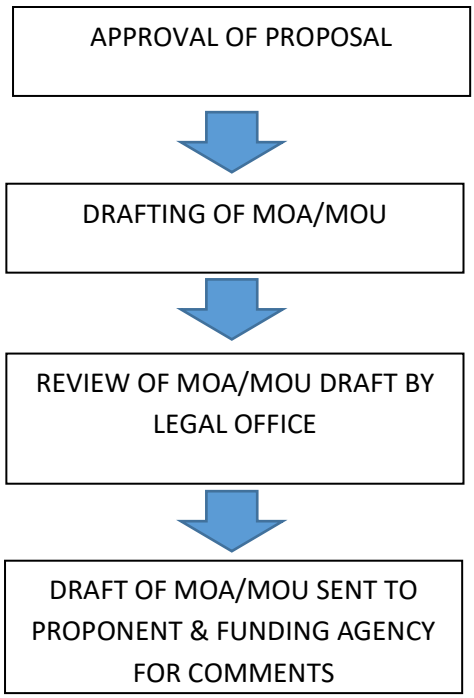
RDE IMPLEMENTATION AND MANAGEMENT

DEVELOPING AND EXECUTING LEGAL AGREEMENTS

Once a research proposal, either internally or externally funded, is approved for implementation, a Memorandum of Agreement/Memorandum of Understanding (MOA/MOU) between the proponent and the University, for institutionally funded, or with the funding agency for externally funded, is prepared. The MOA/MOU is a legal document containing agreements on rationale, expected deliverables, duties and responsibilities, funding, detailed workplan of implementation, and equivalent workload signed by two parties (university, represented by the president and the proponent/program/project leader/ researcher). The program/project/study leader shall be the signatory as the proponent (for institutionally funded projects), while the university president, shall be the signatory for externally funded researches. Attached to the MOA/MOU is the detailed RDE proposal.

As soon as the review by the Legal Office is done, the MOA/MOU will be sent back to the proponent and the University and/or funding agency for further comments. After the revision has been made, if any, the parties will sign the MOA/MOU. After which, it will be notarized and copies shall be provided to signing parties.

The president shall issue the Notice to Proceed (NP) through a special order giving authority to the proponent(s) to conduct the project. All faculty researchers who are involved in the implementation of the project are indicated in the special order. The offices of the VPRDE, concerned university RDE director, the chair of URDEC and record section shall be furnished copies of the special order.



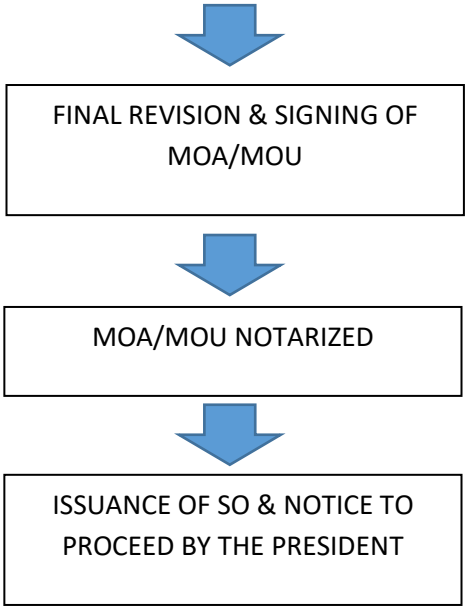


Figure 6. Flowchart for Developing and Executing Legal Agreements

FUND RELEASE

Fund release refers to the process of disbursing funds of RDE projects based on approved work and financial plan submitted by the proponent/s.

Internally Funded Project

1. For projects funded from GAA (Fund 101), the concerned RDE director will request to the president, through the VPRDE, for the release and downloading of funds for project(s) in the campuses.
2. The RDE office will advise the Budget Office for the transfer of the fund of the approved researches.
3. The fund shall be downloaded to the campus following the usual accounting rules and processes.
4. However, if the fund for the project comes from Fund 164 of the campus, a notice of advice shall be issued to the CEO for the release of the fund for the specific RDE program/project/study.

Externally Funded Project

1. Depending on the policy of the funding agency, the fund maybe directly released to the Campus Cashier, where the RDE project or proponent is located, or to the university cashier.
2. In case the fund is released to the university cashier, the university cashier will then release the fund to the concerned campus following the usual accounting rules and processes.

PROGRAM INITIATION AND INCEPTION MEETING FOR NEW PROJECTS

For newly approved RDE programs/projects/studies, an orientation or inception meeting with the program/project/study leaders shall be conducted by the concerned RDE directors. The process of implementation including expected outputs, duration of the project, procurement, accounting rules and regulations, and required reports shall be discussed.

Changes on the required starting schedule of activities and procurement plan, should be discussed during the inception meeting. The lead researcher discusses, prepares and submits the revised schedule to the VPRDE, as basis for monitoring and evaluation of the research.

EXECUTION AND IMPLEMENTATION OF THE RDE PROJECTS

As soon as project fund is made available, the proponent shall prepare his/her request for manpower (if any), supplies and materials needed for the implementation of the RDE project.

Hiring and Appointing Project Personnel

1. If the RDE project requires the hiring of project personnel, the program/ project/ study leader shall prepare a request for manpower.
2. The rate of the research assistants shall be based on the prescribed existing rules and regulations for researchers, while other manpower requirement such as laborers shall be based on existing university policies. Enumerators are either paid per day or per questionnaire.
3. The appointment papers of project staff shall be signed by the president upon the endorsement of CEO through the VPRDE, in accordance with the approved project proposal.
4. If contract workers are needed by the project, the project leader should make the necessary request to the VPRDE through the concerned university RDE director, campus RDE coordinators, dean of college or head of unit and college RDE coordinators. The duration of the contract is limited to three (3) months only and can be renewed with a gap of one (1) week each renewal period.

Purchasing Project Supplies and Equipment

Purchase of project equipment, supplies and materials shall be governed by the Government Procurement Guidelines. The project leader shall request for the purchase of project supplies and equipment based on the approved line-item budget following the prescribed procurement processes of the University.

Research Project Reports

The research leader shall submit a quarterly progress report and financial expenditures of the research project, every last working day of the quarter, to the VPRDE through channels using the prescribed format. Likewise, an audited financial

report should be submitted every six months. The M&E team may require other reports as may be deemed necessary.

Modifications from the Proposal

Any modification, deviation or change from the approved proposal should be properly documented and approved by the president upon the review and recommendation of the VPRDE. These include but are not limited to the following circumstances.

Change in Date of Implementation

The start and end of any RDE project shall be based on the terms and conditions set in the MOA/MOU. However, implementation schedules may be reset depending on the release of funds, issuance of the Notice to Proceed/special order and other circumstances such as unfavourable climate, cropping season, unavailability of labor and other justifiable reasons. The budget realignment may be considered for unforeseen expenses or savings in a particular line budget item.

Change on the start date of implementation must be made before starting the project while no funds are expended yet. The funding agency (for externally funded project) and RDE units in the University should be informed by the project leaders explaining in detail the circumstances of the delay or movements of dates of implementing the project.

The project leader must request for the adjustment of schedules of implementation to the VPRDE through channels to indicate the reasons for the change in implementation schedule and attach the new schedule of implementation. Request must be made immediately when the problem or the need for change in schedule is already perceived.

Budget Realignment/Reprogramming

Project leaders are advised to strictly follow the *line-item budget* (LIB) as programmed. Budget re-alignment or transfer of funds from one line-item budget to another may be allowed up to 30 percent of the budget.

1. Request for budget realignment of externally funded project follows the specific guidelines of the funding agency.
2. The following are not allowed for transfer of funds
   - Transfer of funds (major) from equipment to *maintenance and operating expenses* (MOE) or *personnel services* (PS); and
   - Request for additional project personnel.
3. Budget realignment is made only when there are changes from one expense class to another (within MOE).
4. Request for budget realignment should only be made six months after the start of implementation and before completion of the project.
5. Request for budget realignment should be made once only if the project duration is one year or less. For projects with duration of more than one year, budget re-alignment should only be made once a year only. The request should be in writing

to include justification for realignment, latest financial report and approved and proposed line-item budget.

6. Salary/PS budget cannot be realigned. Savings from salary cannot be used to augment rates of contracts of services, labourers and other technical services. It cannot also be used to augment salary increments, payment of honoraria, professional fees and other personnel services.

Transferring Project Leadership

Project leadership may be upon request due to the incapacity of the incumbent, or where the management deems it necessary; when outputs are sacrificed, sudden death or incapacity of the project leader.

The outgoing project leader shall, however, seek clearance prior to complete relief from duties, responsibilities and accountabilities and transfer all entrusted project supplies and materials including authorship and ETLs, to the incoming project leader. An acceptance report should be made.

The incoming project leader should be among the existing co-researchers and he/she must be able to do the job of a project leader. In case the project leader is not able to finish the research due to negligence, appropriate sanctions shall be issued as indicated in this chapter. Through channels, the VPRDE shall review and recommend the request of transfer of leadership and submits such request and approval to the president and/or funding agency, where appropriate, together with the resume or bio-data of the new project leader. A new special order shall be issued to the new project leader.

Use of Unobligated Balances

Unobligated Balances (UB) or unexpended funds from the previous year may be used for the same line item budget and for other necessary items the following year subject to the approval of the VPRDE through channels and the approval of the funding agency, or where appropriate, while awaiting the next release of the budget allotment.

Unused budget of the project shall be reverted to the university coffer for internally funded projects. As a general policy, unused funds for externally funded project shall be reverted back to the funding agency.

Program/Project Extension

Request for extension, renewal, or termination of projects are made through the VPRDE through channels which should be substantiated by a written request, evaluation results and updated reports. Project extension should:

- Not require additional cost. If the extension requires additional cost, it should be submitted as new proposal and shall be evaluated accordingly as discussed above.
- A maximum of six months for projects with more than one year duration and three months for projects with a duration of one year or less.

The request for extension, renewal, or termination of research projects indicating the status of fund used shall be deliberated immediately.

Change in Project Design

In case of change in research design and methodology, it shall be referred to the appropriate technical expert to study and determine appropriateness. Change in research design/methodology include changes in sampling method, sample size, experimental lay-out, location, statistical analysis, data gathering method, treatments and replications, and other methods of carrying out the research. For extension projects, this include changes in target beneficiaries, location, scope and coverage of the project, technology transferred, among others.

The project leader shall write a letter indicating the justification for such changes and the proposed project design. The proposed change however, does not require additional cost. Any intention to change a part of the project should be presented in an in-house review.

Grounds for Suspension and Termination of Researches

Grounds for Suspension

The following are grounds for suspension or deferring a research program/ project/ study:

1. The experimental units are destroyed due to *force majeur* including sickness.
2. If the project can be undertaken only at distant future dates because it requires the implementation of another project or need more information prior to its implementation.

Grounds for Termination

The grounds for termination of researches are the following:

1. The approved methodology procedure is not followed and the confidence on result is affected; and
2. Long delay of its implementation.

The M&E team shall recommend researches for suspension and termination.

WORKLOADS AND DE-LOADING

Basis for Research Workload

The Qualitative Contribution Evaluation (QCE) of the National Budget Circular No. 461 practices of the State Universities and Colleges is an integral and effective component of total quality assurance in public tertiary education. It is designed to make an effective motivator for the development of a culture of excellence in:

Instruction, Research, Extension, and Production. The following QCE for NBC461 guideline shall be the minimum basis of providing workload.

A faculty member of the university involved in the conduct of an approved research and development shall be "de-loaded" which has equivalent teaching loads following the regular teaching units equivalent to the research workload as indicated below:

Research and extension load should form part of the workload of faculty members. ETLs for research and extension of designated faculty members shall be added the ETL of designations.

The granting of Equivalent Teaching Load (ETL) will be based on the following guidelines:

Table 3. Guidelines in Granting ETL

Specific Designation in the R&D Activity	Equivalent Teaching Load (ETL) to Research Workload
Institutionally funded	
Program Leader (at least 2 projects) – handles 1 of the projects	9.0
Project Leader (at least 3 studies) – handles at least 1 of the studies	6.0
Study Leader (one study)	3.0
Externally funded	
Program	9.0
Project Leader	6.0
Study Leader	3.0

Researchers of externally funded projects shall be de-loaded for their research for the following reasons:

1. To provide time for the conduct the research – generally, funding agency requires 20 – 25 percent of the time of the researcher under MOA for the research.
2. The honorarium of the researcher is from the funding agency, not from CSU.
3. The researcher is bringing in resources to the University.
4. The researcher is establishing the name of the University externally: a track record building.
5. To encourage researchers to seek external funding for their research.

Research Load Under NBC 461

To rationalize the co-equality of the three major functions of instruction, research and extension, CSU faculty members shall be entitled for de-loading as provided in NBC # 461. The maximum percent for de-loading is as follows:

Table 4: Faculty Research Loads

Rank	**Workload**		
	Instruction	**Research or Extension**	**Remarks**
Instructor	Full	Optional	Faculty members under this rank may
Assistant Professor	Full	Optional	

			be involved in research & extension but is not required.
Associate Professor	70%	30%	
Professor	50% (I/E)	50%	Research is a **must**; the other 50% may be taken from instruction or extension.
University Professor	10	90%	Research is a **must**.

The above de-loading scheme of faculty members either institutionally or externally funded shall be the guide in assigning teaching loads as well as for research and extension. The load must be based on duly approved research and extension projects by the University with MOA or Notice to Proceed /special order.

Faculty members shall conduct a maximum of one program or two (2) research projects at a time per year. An additional program/project/study shall be awarded to a faculty member on a case to case basis in accordance with the capacity of the researcher.

Any faculty member who does not complete the research based on the approved date of completion shall payback the amount received, and for those who obtained service credits shall be cancelled unless due to justifiable circumstances. Researches not completed within the timeframe as indicated in the approved research proposal without valid reasons will no longer be credited and should be reflected in the Performance Evaluation of the faculty.

Researchers who are granted the extension for completing their research beyond the approved duration shall not be entitled to de-loading or the equivalent service credit. No faculty shall be entitled to receive equivalent credit in more than one project within a program or in more than one study within a project.

A detailed progress/completion report in the prescribed format, reviewed and recommended by the college extension coordinator, endorsed by the dean and the campus extension director and approved by the VPRDE must support claims for extension ETL.

Reporting during Prescribed Teachers' Leave

The RDE load during summer shall be credited as service credit or paid as summer teaching load based on the above number of units whether program, project or study. The crediting of service credit must be based on approved schedule of activities to be done during summer. For campuses with RDE directors, the schedule of activities to be done shall be submitted to the Campus Research Coordinator, who shall then submit it to the Campus RDE Director then to the Campus Executive Officer. For campuses without RDE directors, it shall be submitted to the Campus Research Coordinator, who shall submit it to the Campus Executive Officer. The Research

Coordinator shall provide the VP-RDE a summary of the researches to be given the service credit during summer.

Granting of Overload Pay or Service Credits

The faculty with approved research and development and/or extension project considered for ETL may opt to accept overload subjects on top of his/her regular workload (IRE) as long as he/she still have time to implement the RDE project. He/She may opt to be paid overload or granted service credits for his/her overload and the computation of overload pay must be based on existing policies of overload payment.

The grant of overload pay or service credits due to RDE load shall be given to:

1. All faculty who are involved in research and extension work.
2. Faculty who undertake researches that are approved by University RDE Council.
3. Faculty who conduct researches that do not have external funding.

The ETL for Center Managers of RDE Centers is 12 units provided that the center has at least two programs but he/she handles one of the programs. For centers with one program, the ETL is 9 units.

ACCOUNTING AND AUDITING OF RESEARCHES

For accounting and auditing procedures, the *Accounting and Auditing Manual for Research Operation* (**AAMRO**) Book 1 and the COA rules shall apply in the research projects.

Purchase of Supplies and Equipment

The purchase of office supplies and materials for research projects shall follow existing rules on procurement. The project leader prepares the Purchase Order and submit for approval and procurement.

Travelling Expense

Project researchers are entitled to travelling allowances provided that these are indicated in the line-item budget of the research project.

Transportation expenses for travels between cities/municipalities may be charged separately.

Unsettled travel funds shall be the accountability of the project staff and the project leader. *No further travel funds/request shall be approved and released unless previous ones are settled first.*

Cash Advances/Reimbursement

Project leaders are entitled to withdraw cash advance to cover project expenses. A surety bond approved by the Bureau of Treasury is required for cash advances ₱2,000

and above. No further cash advances shall be allowed unless a previous cash advance is fully liquidated.

ETHICS IN THE IMPLEMENTATION OF RESEARCH

Researchers are expected to understand and apply the ethical standards in conducting a research. Researchers must inculcate in them the highest integrity in all respect of their research activities.

Researchers should commit to strive for truth in their research and avoid fabricating, falsifying or misrepresenting data, errors in data gathering and other forms of dishonesty in the conduct of the research. Accuracy and reliability are required for every research. Without accuracy, the result is unreliable and can harm the general public.

Researchers are responsible in the protection of individual persons who participate in their research and to secure their rights and concerns.

Other forms in misconduct are:
1. Including names or giving a credit to those that have not made significant contribution to the research.
2. Violation of existing laws on animal rights (RA 8485) in the use of experiments.
3. Involving human subjects without their informed consent to the experiment.
4. Plagiarism
5. Failure to give credit to someone who makes substantial contribution to the research.
6. Falsification or fabrication of data.

RDE-STUDENT RELATIONSHIP

Involving students in researches will ultimately train students to become young researchers. The research group form as team coordinated by the Center Manager to determine needs and possible involvement of students in their research. The research team is composed of researchers doing research aligned to the center.

A mentor (senior researcher) from the research team who also serves as the thesis adviser shall be assigned to mentor students in doing their thesis research work that is aligned to the research the faculty researcher is into. In this, the faculty-mentor researcher provides critical comments and suggestions and share good practices to the student advisee/mentee, continuously

The Adviser/Mentor serves as a role model for the student. Thus, he/she must have a good track record of research in her field, is passionate in research and through his/her experiences in research can mentor the student to become young researcher.

The center manager shall call for applications and interview and select candidates for the student apprenticeship. If selected, the student conducts a research about a specific research problem the identified by the center. An oral presentation of the

results of the study shall be made to the whole research team of the program/Center. The research team shall conduct regular meetings with the students.

MANAGEMENT OF RESEARCH INCOME

1. Income derived from the conduct of researches shall accrue to the University. All income must have receipts.
2. All production and sale from research projects shall be properly documented by the researcher and a report must be submitted regularly.
3. All income shall be deposited in appropriate bank under an appropriate savings account of the University/Campus.
4. The Research Leader shall provide a report of all incomes derived from his/her research.
5. Within accounting and COA rules, the use of this income shall be determined.

GENDER AND DEVELOPMENT

From proposal packaging to research dissemination, gender and development (GAD) should always be incorporated. CHED Memorandum order No. 01, s 2015 (Establishing the Policies and Guidelines on Gender and Development in the Commission on Higher Education and Higher Education Institutions) indicates that a gender-responsive research program must consider the following:

1. Institutionalize GAD database with sex-disaggregated data and gender statistics in all research activities, as necessary;
2. GAD policy and program assessment and evaluation;
3. Establishment of Ethics Board that will review gender sensitivity in research activities;
4. GAD guidelines on ethical standards in research in accordance with Convention on the Elimination of all Forms of Discrimination against Women (CEDAW) and Magna carta of Women (MCW);
5. Incentives and other support structures for the conduct of researches related to GAD.

Guide questions in integrating gender elements in the research proposals, implementation, management and results of researches. In addition to integrating a gender perspective in researches, the research program can be strengthened by including those that are indicated in CMO 01, s 2015.

Chapter 6

MONITORING AND EVALUATION

SIGNIFICANCE OF MONITORING AND EVALUATION

Monitoring and evaluation enhance the effectiveness of RDE programs, project and activities of the Cagayan State University by establishing clear links between past, present and future interventions and results.

Monitoring and evaluation helps the University extract, from past and ongoing activities, relevant information that can subsequently be used as the basis for programmatic fine-tuning, reorientation and planning. Without monitoring and evaluation, it would be difficult to judge if the work is going at the right direction, whether progress and success could be claimed, and how future efforts might be improved.

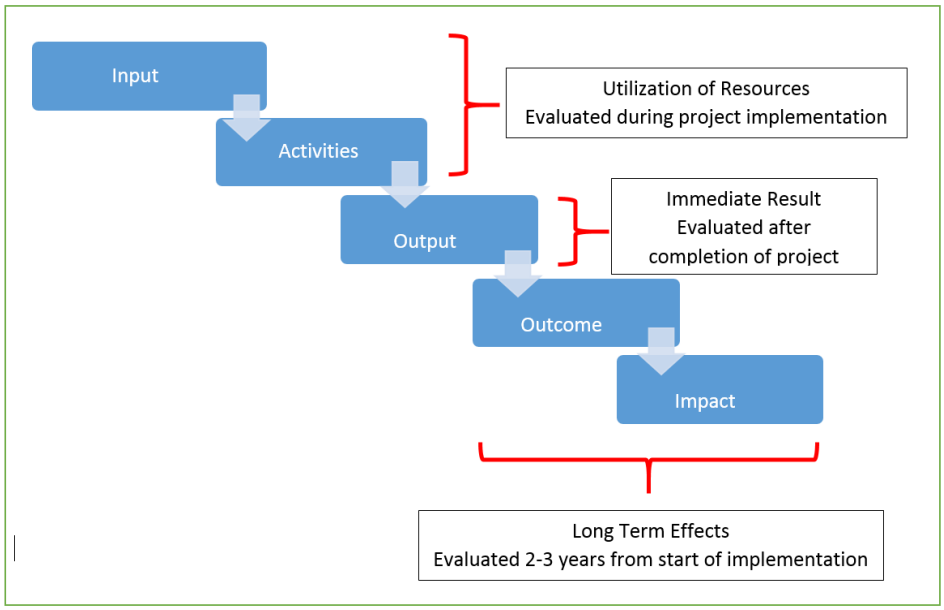


Figure 7: Monitoring and Evaluation Process

Performance evaluation will assess the project's success in achieving the outputs with the inputs provided and activities conducted. Evaluation of the project's success in achieving its outcomes will be monitored continuously throughout the project. Reliable baseline data will be collected at start of the project activities, and impact data will be collected when appropriate during the project implementation.

RDE MONITORING AND EVALUATION FRAMEWORK

Monitoring can be defined as a continuing process that aims primarily to provide management and main stakeholders of an ongoing intervention with early indications of progress, or lack thereof, in the achievement of results. An ongoing intervention might be a project, program or other kind of support to an outcome.

Evaluation is a selective exercise that attempts to systematically and objectively assess progress towards the achievement of an outcome. Evaluation is not a one-time event, but an exercise involving assessments of differing scope and depth carried out at several points in time in response to evolving needs for evaluative knowledge and learning during the effort to achieve an outcome. All evaluations—even project evaluations that assess relevance, performance and other criteria—need to be linked to outcomes as opposed to only implementation or immediate outputs.

Inputs are the goods, services and other resources provided for an activity with an expectation of producing outputs and achieving the objectives of the project. RDE program inputs consist of the manpower and the other resources needed for the purpose of attaining the RDE program objectives. RDE program, projects, and activities are actions undertaken in order to execute and implement the plans.

Outputs are the specific products or services resulting from the application of the inputs and can be a by-product of the process of undertaking RDE. Program outputs are the physical outcomes produced by the program and measurements of services provided.

Outcomes are the changes in policy, process/practices and/ or products that result from adaptation of the project outputs by intended users.

Impacts are the results of the project outcomes. These are the aggregate effects of changes in practices, products and policy. Impacts may be classified as economic, environmental and social. Program impacts are the changes in the environment as may be brought about by the program. Impact assessment is intended to determine whether a project caused the desired effects on individuals, institutions, and other stakeholders and whether those effects are attributable to the project intervention. It is assumed that the project's intended impact is a function of the project's outputs which in turn depend on the project's inputs.

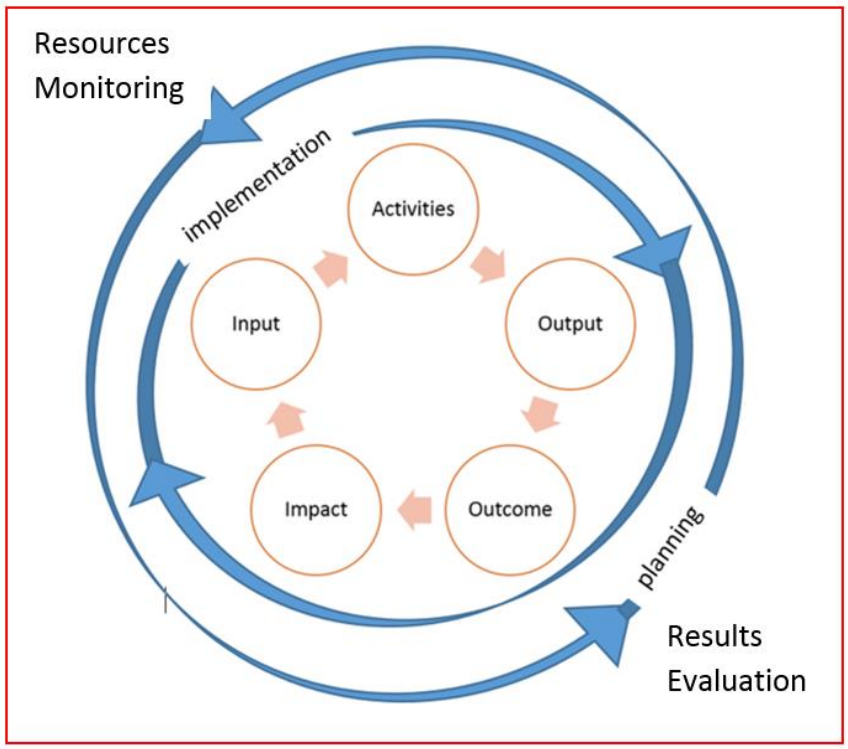


Figure 8. RDE Monitoring and Evaluation Framework

POLICIES AND GUIDELINES ON MONITORING AND EVALUATION

All RDE Programs/Projects/Studies/Activities (RDE-PPSA) whether institutionally or externally funded shall be financially, physically, and technically monitored and evaluated. The system of evaluation consists of three parts: ex-ante, on-vivo and ex-post evaluation.

RDE- PPSA shall be monitored and evaluated to determine whether the objectives, desired outcomes and impacts are efficiently achieved.

RDE Programs/Projects/Studies/Activities (RDE- PPSA) included in the Medium Term Development and Investment Plan (MTDIP) and Strategic Plan duly approved by the Board of Regents, shall be implemented with corresponding funding support from the University.

For RDE programs, projects, studies and activities (RDE-PPSA) not included in the approved Medium Term Development and Investment Plan (MTDIP) and Strategic Plan but anytime within the year, the P/P/A is thought to be essential and with potential impact to the community and the University. A duly approved project proposal is required if funding is sought from the university.

MONITORING & EVALUATION OF STUDENTS' INVOLVEMENT IN RDE

The Deans through the College RDE Coordinators shall monitor, coordinate, and consolidate students' participation in RDE programs/projects/studies/activities (PPSA). Report shall be submitted to the Campus RDE Directors and to the university level.

MONITORING AND EVALUATION RESPONSIBILITY

1. There shall be a University Monitoring and Evaluation Team (UMET). The composition shall be:
   Chairperson: Vice President for Research, Development and Extension
   Vice Chair: University Director Concerned
   Members: Other University RDE Directors
   Internal Audit Service
   University Finance Officer
   University Planning Director
   Secretary/Documentor

2. There shall be a Campus Monitoring and Evaluation Team (CMET). The composition shall be:
   Chairperson: Campus RDE Director Concerned
   Vice Chair: RDE Coordinator Concerned
   Campus Planning Officer
   Campus Finance Officer/Accountant
   College Dean Concerned
   Secretary/Documentor

3. The monitoring and evaluation teams shall include expert in the field or discipline of the project. The team must utilize the prescribed RDE monitoring and evaluation forms and must conduct a post evaluation conference with the stakeholders.

4. The Finance Department shall conduct financial monitoring and provide information on the status of project funds to the VP-RDE.

5. The VP-RDE Department shall also monitor the assignment of project personnel – project leaders, RDE staff and laborers, including requests and advice for sub-allotments and other pertinent documents related to the project.

6. RDE project leaders and staff shall be required to submit periodic reports using appropriate monitoring and evaluation forms.

MONITORING AND EVALUATION STRATEGIES AND SCHEDULE

Field Visits

Field visits are frequently used as a monitoring mechanism. Consideration should be given to the timing of the visit, its purpose in terms of monitoring, and what to look for in order to measure progress. Visits are usually complemented with key informant interviews, household interviews, and focus group discussions with project stakeholders, beneficiaries and partners. Visits shall be conducted monthly or as the need arises.

Agency In-House Review (AIHR)

1. The agency in-house review has the following objectives:
   a. Evaluate all ongoing and completed RDE programs/projects/studies/activities.
   b. Identify problems met during project implementation.
   c. Identify significant results/information for Technology Dissemination (TD), Technology for Packaging (TP), Technology Utilization (TU), Policy Formulation and Development Planning of the University.
   d. Identify new RDE projects that are within the priority areas that would impact on the lives of the beneficiaries.
   e. Identify cost-efficient and effective projects ready for Information Dissemination, Technology for Packaging and Technology Utilization.

2. The Agency In-House Review (AIHR) is composed of two parts:
   1. Evaluation of ongoing and completed RDE programs, projects, studies and activities (PPSA); and
   2. Planning workshop for the succeeding calendar year. The accomplishment being reviewed covers one calendar year (January-December) and shall be conducted every December.

3. All on-going, completed and RDE projects whether internally or externally funded shall be evaluated through presentations during the Agency in-house reviews. On-going and completed projects shall be conducted at the University level. Based on the findings of the evaluation, the project may be recommended for continuation, extension, termination, or revision.

4. An in house review must be conducted at the campus level for project proposal following the procedures in Chapter 4.

5. For completed projects, the Project Leaders and staff are also required to submit a terminal report of the project within thirty (30) days after completion after which they are required to present the results in an appropriate RDE forum.

6. All on-going RDE programs progress or status report shall be submitted. All completed projects and/or researches, whether internally or externally funded, must be presented during the scheduled agency-in-house review.

7. All Project Leaders must submit a technical paper for publication following strictly the university policies on publication.

8. All equipment and facilities acquired from externally and internally funded projects should be turned over to the university supply office or provided with Memorandum Receipt (MR) to the project leader and be utilized in the college upon approval by the VP for RDE.

9. All project leaders must satisfy all the requirements of the university/funding agency/ies.

10. For completed internally funded projects and researches not presented during scheduled in-house review. The proponent is given another chance to present during the next in-house review.

11. Outstanding Extension Worker and Best Extension Program shall be selected during the Agency In-House Reviews and to be validated during the on-site monitoring and evaluation using the set of criteria. (Please refer to Appendices)

Reports

1. Reports serve as the basis for assessing the performance of program and projects in terms of their contributions to intended outcomes and impacts.

2. All reports shall be submitted in hard copy and electronic copy forms. Photo documentation shall also be required for submission.

3. A quarterly and annual Audited Financial Report (AFR) shall be prepared by the Finance Division and submitted to the VP-RDE and to the funding agency. However, Program/Project/Study Leaders may request for an updated AFR as deemed necessary.

4. The flow of Submission of Annual reports shall be strictly followed. Campus annual reports shall be submitted second week of December. Annual results report shall be prepared to assess the outputs and outcomes indicators; the most significant changes that have occurred as a result of the project; the challenges and constraints; and recommendations for the following year. This can be done through field visits, participatory workshops, key informant interviews, household interviews, and focus group discussions with project stakeholders, beneficiaries and partners.

5. For completed RDE Programs, Projects, Studies and Activities (PPSA), PPSA leaders must submit the following:
   a. Technical reports
   b. Audited financial reports
   c. Journal type report (for refereed and accredited journals)
   d. Popular publication (for IEC)

Table 5. Monitoring & Evaluation Report Calendar

PHASE	REPORT	SCHEDULE
Before	Project proposal	December and June
During	Quarterly Accomplishment Report	1st Friday of April, July and October
	Annual Progress Report	2nd week of December
	Terminal Report	For locally funded, 1 month, for externally funded, 2months after completion of the project

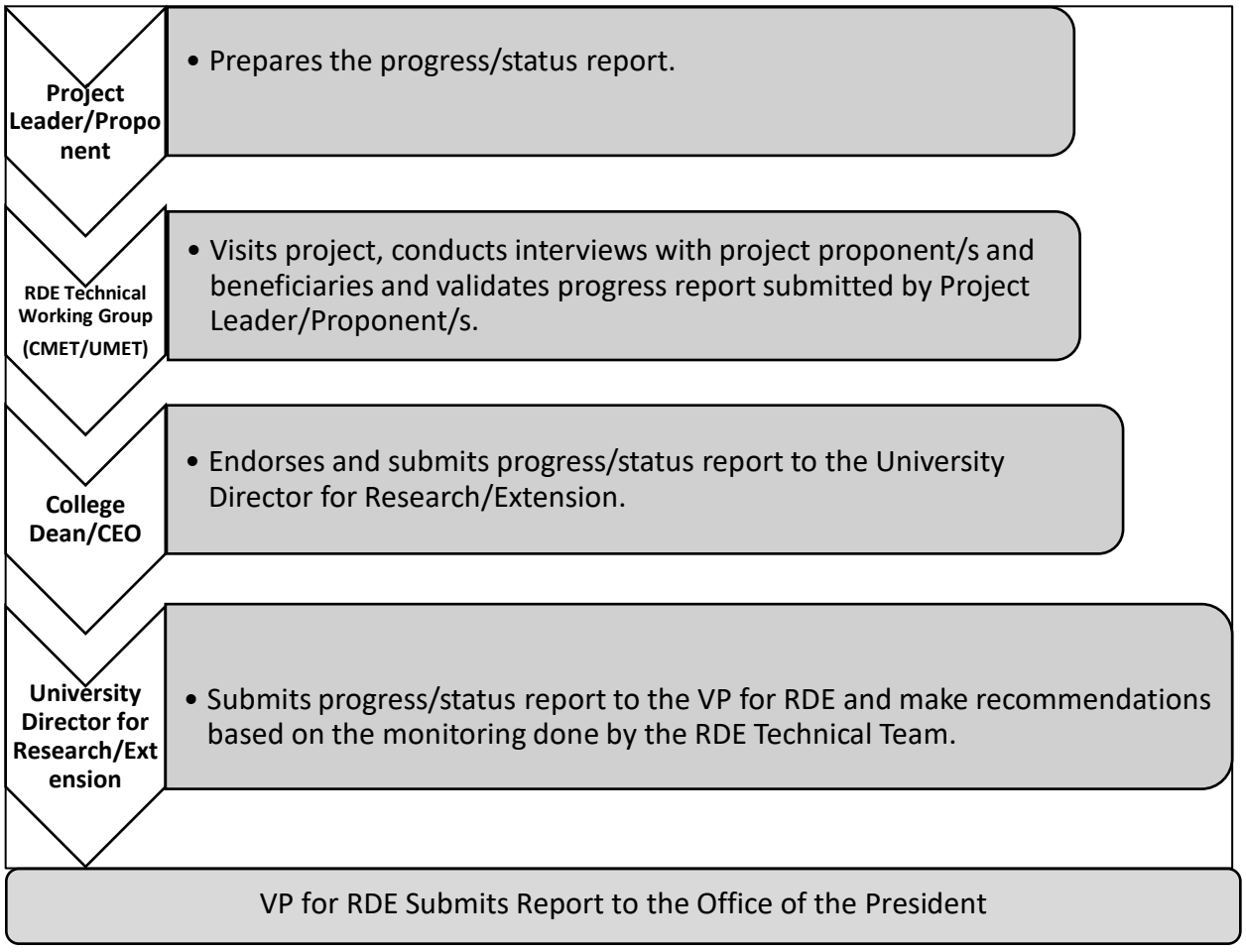


Figure 9. Flowchart of Monitoring and Evaluation of Development and Extension PPAs

Meetings

1. The University RDE Council shall meet regularly every quarter to be set by the council. Special meeting shall be called as the need arises.
2. The University RDE Executive Committee (RDEEC) shall meet regularly every quarter to be set by the committee. Special meetings shall be called as the need arises.

3. The Campus RDE Executive Committee shall meet regularly every quarter and special meeting shall be called as the need arises.

4. Faculty and personnel involved in RDE-PPSA may schedule meetings as the need arises.

MONITORING AND EVALUATION TOOLS

The following forms shall be accomplished to elicit information on the University accomplishments and the level of satisfaction of clients served by the University:

1. Campus Operational Plan - F-EXT- 4202
2. Work and Financial Plan per PPA- - - - - - - - - - - - - - - - - - F-EXT- 4204
3. Physical and Financial Monitoring Form- - - - - - - - - - - - F-EXT –4225
4. Gap Monitoring Form - F-EXT – 4226
5. Monthly Accomplishment Monitoring Form - - - - - - - - - F-EXT – 4227
6. List of Demonstration Areas Established - - - - - - - - - - - F-EXT – 4219
7. List of Adoptors with Profitable enterprises - - - - - - - - - F-EXT – 4220
8. Training Satisfaction Feedback - - - - - - - - - - - - - - - - - F-EXT – 4209
9. Technical Assistance/Advisory Services Feedback - - - - F-EXT- 4212
10. Field Day Feedback- F-EXT- 4223

COMPLETION AND CLOSURE

When a project is finished or terminated, a Letter of Closure shall be accomplished by the Project leader to formalize the termination of the project. A final report shall then be submitted by the Project leader to the university and the funding agency. Terminal report including financial report shall be submitted.

Chapter 7

PUBLICATIONS, PATENTING AND PRESENTATIONS

QUALITY OF RESEARCH PAPER

Publication is one way of communicating research outputs in written form. Writing and reporting the results of a research is the final step in the research cycle. This can be done by writing a scientific paper in a research journal. Since these papers become the references of other scientist and researchers and therefore it should be a high quality standards. High quality research starts from high quality proposals. To be of high quality research, it should possess the following elements:

1. *Measurable*: are the parameters measurable?
2. *Replicable:* are the results replicable? Do the results stimulate further investigation?
3. *Consistent*: are the results consistent with other established facts?
4. *Economy*: is the presentation simple and understandable

JOURNAL PUBLICATION

The current rate of publication of the university and the publication per faculty and/or researcher is very low. As such, research output publication is very crucial publication. CHED CMO No. 53 s 2016 also mentioned that only 28% of Philippine scientific journals out 777 Philippine scholarly journals that were able to penetrate Web of Science (WoS) core collection of Thomson Reuters or/and Elsevier's Scopus. As such, these guidelines on publications is aimed to elevate the level of CSU on publications. Any research output that is published should contribute to the University's performance such as in SUC levelling, normative financing and performance based bonus rather than just benefitting only the individual researcher. PBB evaluation and SUC Levelling consider only those university approved research outputs that are published in accredited journals. Therefore, only research articles published in accredited and refereed journals shall be considered such as the following:

List of Journals

- Journals listed and indexed in the Institute of the Scientific Information (ISI)
- Thomson Reuters
- Elsevier's Scopus
- ASEAN Citation Index
- Philippine Citation Index
- CHED-accredited journals (CHED Journal Challenge, CHED Journal Incubation Granted)

General Sections of a Scientific Paper for Publication

In general, the sections of a scientific paper for journal publication include the following:

1. Abstract: concise and brief that identifies the purpose, methodology, principal results and major conclusions.
2. Introduction: a short review of the literature pertaining to the research topic, provides background necessary to understand the research work. The introduction is then best constructed as a descriptive funnel, starting with broad topics and slowly focusing on the work at hand.
3. Methods: provides a straightforward description of the methods used in the study. It provides information as to the replicability or to repeat the work in the reader's own institution.
4. Results and discussion: the results present the experimental data to the reader and the discussion interprets the results obtained.
5. Conclusion: highlights the most important outcome of the study and how it contributes to the overall field of study.

The published article may be a component of a program/project RDE output. The criteria for publication depends on the policies and guidelines of the publishing company.

For articles that come from the outputs of CSU-RDE funded projects, the author is required to acknowledge CSU in the article.

All publications are subject to intellectual property rights rules and regulations and publication ethics.

Authorship of Publications

Authorship of publications could be single or multiple. Author guest-ghost-gift are not allowed(Elsevier); "Ghost" authors are those who contribute substantially but are not acknowledged; An author of a scientific paper gets credit at the same time is accountable for the research. In general, the author is an individual who has made a significant intellectual and analytical contribution to the study. Such contribution includes: *("to co-author or not to co-author, Southern Field Science*)

- Coming up with original idea for the project/research question/hypothesis
- Developing the initial proposal which attracted funding agency
- A notable contribution solving logistical problems in the set-up of the project
- Conducting a notable proportion of the experimental field/data collection
- Organizing and logistical support of the project
- A notable contribution to analysing the data
- A notable contribution to writing the paper

Authorship belongs to the faculty, researcher, research staff, and students who worked on the conceptualization, overall design, implementation, completion and writing of the research work. Joint ownership resulting from contributions from different persons shall be determined as follows:

1. By stipulation in the research contract;
2. By application of the law on joint and/or sole ownership; and
3. Through dispute resolution arbitrated by the IP Unit Head of CSU.

Hence, if the Project Leader publish the work, he/she should inform the co-researchers.

Author Submission

- The author/s shall choose the appropriate journal as to which his/her work will be submitted.
- Declare all sources of research funding and support
- Submit manuscript that are within the scope of journals
- Submit only work that has been honestly carried out according to rigorous standards
- Always give credit to the work and ideas of others that led to the research article

CSU JOURNALS

There are existing College, Campus and University Research Journal. However, these are not peer reviewed, not regularly published and not accredited journal by accrediting body. The sustainability of and quality of papers published in these journals are at stake. Articles published in these journals cannot be used for SUC levelling and NBC 461 since the requirement is that research outputs should be published in accredited and peer reviewed journal. Hence, the University shall make efforts to produce and submit the University journal for review and accreditation. The following are guidelines for the colleges to continue to publish their journals and work out for its accreditation:

Publishing of College/Campus Journals

The Colleges/Campuses may publish their own College/Campus RDE journal but shall be approved first by the President as endorsed by the VPRDE in order to maximize resources, quality and sustainability of journal publication. Journal publishing of College/Campus shall be reviewed and evaluated through a technical committee. The following are the requirements for the approval of journal publishing.

1. Copy of regular publication for the past two years
2. Members of the Editorial Board and Curriculum Vitae

3. List of reviewers per article published in the journal
4. Peer review and refereeing policy
5. Publication ethics policy
6. Reviewers' comments and recommendations on the articles published in the journal
7. Certified copy of the ISSN certification
8. Data on citations of the published articles of the journal

The general criteria for the evaluation of College/Campus journal publishing include the following:

1. Quality of content of the journal. This includes the articles published, contributors, significant contribution of the article to the field, readability of the article
2. Qualifications of Editorial Board
3. Peer reviewing system and peer reviewers
4. Publication standards such as plagiarism check, grammar check and research ethics
5. Regularity of publication
6. Standard elements of a journal

The University RDE Journal

CHED through its Journal Incentive Program (CHED CMO No 53 series 2016) provide funding portfolio to enable editors of scholarly journals to design and implement ethical measures to improve the international standing of local scholarly journals and to enable research outputs from HEIs to be more accessible to the local and international academic communities. The University shall maintain the University RDE Journal which shall contain outstanding RDE activities in the different campuses. The University shall aim for the accreditation of the journal with CSU as owner of the publications.

The journal welcomes original empirical investigations and outstanding RDE activities in the different colleges/campuses. All faculty researchers, administrative and support personnel and students who would like to publish their scientific RDE works in the University R&D Journal shall be governed by the policies and guidelines on publications. A policy for the University RDE Journal publication shall be drawn which include the following:

Editorial Board

The editorial board shall be selected and they shall be governed by the code of conduct for journal editors. The editors shall:

- Be accountable for everything published in the journal. It shall ensure that all published reports and reviews of research have been reviewed by suitably qualified reviewers. The qualifications and selection of editors are indicated in the editorial policy.

- Establish and maintain a database of suitably qualified peer reviewers at national and international levels
- Monitor the performance of peer reviewers/editorial board members and keep track the quality and timeliness of their reviews.

The Editorial Staff shall fundamentally consist of the following:

- Editor-in-Chief;
- Associate Editors corresponding to the sectoral concerns in the proposed publication;
- Circulation Manager;
- Copy Editor;
- Lay-out artists;
- Cover Design Artists; and
- Consultants (President and Vice-Presidents)

Peer Review

Peer review is fundamental in ensuring the integrity of the scientific publication process.

Peer review at the journal shall ensure fairness, unbiased and timeliness:

- Unknown to each other, the peer reviewers shall be selected by the editorial board through invitations from research institutions/agencies based on standards and qualifications of peer reviewers within their field of specializations;
- Peer reviewers who repeatedly produce poor quality, tardy, abusive or unconstructive reviews should not be considered again as peer reviewer; and
- peer reviewers should disclose if they have a conflict of interest with the material they are being asked to review.

Submission of Articles

- The article has not been published in any publication before except in the form of abstract, lectures or as literatures cited;
- The article should have not been under consideration in any publication;
- The publication of the article should have been approved by all co-authors and responsible authorities where the RDE has been carried out
- Articles to be submitted must follow the required mechanics and must be submitted online;
- The notice of official acknowledgement receipt shall be sent to the researcher(s) upon submission.

Timeliness of Publication

The CSU RDE shall publish journal regularly at least one issue per year. Editors shall be responsible for timeliness of article submission by providing prompt responses and decisions and acceptance on the submitted articles. A call for paper should be made every January and July.

Ethical Issues

The journal shall look into some ethical issues such as author guest-ghost-gift, data fabrication/falsification/manipulation, duplicate submission/publication and redundant publication, plagiarism, authorship issue, undeclared conflict of interest and others. These shall be included in the RDE Ethics.

Journal Publication Policy

The University RDE Journal shall disseminate its publication policy to guide researchers on the articles they submit. Likewise, it shall have policy on the following:

1. Editorial policy
2. Guidelines on submission of articles and formats
3. Publishing ethics, Code of Conduct and scientific malpractice statement
4. Refereeing system
5. Online publication
6. Peer reviewer selection and peer review process
7. Guidelines on authorship and changes in authorship
8. Plagiarism
9. Composition and responsibilities of editorial board

The article should be submitted in IMRAD Format with the following major contents:

- Title
- Author/s
- Abstract – briefly present the salient points of the study in about 250-300 words
- Keywords
- Introduction includes the background and significance of the research, objectives or research problem, hypothesis and theoretical considerations
- Methodology describes the research design, locale or setting of the study, sampling procedure, respondents/samples, validation of data gathering tools and procedures, data and statistical analysis and variables
- Results and Discussion – presents the findings according to the research objectives and discussion interprets the data as guided by the theoretical framework.

- Conclusion and Recommendation briefly shows the major findings that answer the problems and the recommendations
- Acknowledgement should not be due only to persons but also to funding institutions and agencies
- References Cited
- Appendices if necessary

PATENT, UTILITY MODEL, AND INDUSTRIAL DESIGN

It is the policy of the University to protect the intellectual property of faculty and employees in their RDE activities. Subject to the law on patents, utility models and industrial designs as contained in Part II of the IP Code of the Philippines, the following guidelines shall govern patents, utility models and industrial designs at CSU.

Patent is an exclusive right which provides the inventor and/or the applicant with the exclusive right for a product, process, or an improvement of a product to prevent others from processing, using, selling, manufacturing and importing the patented invention or offering to do any of these things within a definite geographical area. It is granted by the State through the IPOPHIL to a patent owner for a period of 20 years from the filing date of application.

Utility Model also known as petty patent is an invention that is new and industrially applicable. Utility models are usually sought for technically less complex inventions or for inventions that have a short commercial life and normally do not meet the patentability criteria. A utility model has a term of protection of seven years which cannot be renewed.
Industrial design refers to the right granted to protect the original, ornamental and non-functional features of a product that result from design activity. The right concerns merely the appearance (the 'design') of a product, not the product itself. An industrial design has a term of protection of five years. It can be renewed for two consecutive periods of five years.

1. CSU shall have ownership of patents or utility models and industrial design in any of the following instances:

    a. If commissioned by CSU;
    b. If provided for in the contract to generate an IP;
    c. If the inventor made the invention in the course of his contract with CSU;
    d. If the invention is the result of the performance of the inventor's regularly assigned duties, unless there is an agreement, expressed or implied, to the contrary.

2. The CSU employees or all those covered by these guidelines, shall own the invention, utility model, or industrial design generated outside of his/her regular

duties even if the employees use the time, facilities, and materials of the CSU, subject to other existing laws, rules, and regulations on the use of government time, facilities, and materials.

3. The right of collaborators/external partners shall be based on the stipulations in the agreement between CSU and their partners.

COPYRIGHTS

Copyright pertains to the rights given to creators or authors for their literacy and artistic works. The domain of the works includes writings, music, fine art (photography, paintings and sculptures) and technology-based works (computer software programs, websites, and electronic databases).

Subject to the Law on Copyright of the Intellectual Property Code of the Philippines, the following guidelines shall govern copyright and related rights at CSU.

Ownership and Assignment of Copyright

- CSU requires prior approval of author's copyright for commercial purposes. However, the author shall assign copyrighted works to CSU.
- Copyright to outputs of collaborative works by CSU with other institutions shall be governed by these guidelines and the stipulations in the agreement.

PUBLICATION EXCHANGE

The University shall work for the exchange of its journals with other universities and colleges locally and globally. The Journal shall also be published online.

RESEARCH OUTPUT PRESENTATION

Paper presentation outside the university is open to teaching and non-teaching permanent personnel who have completed approved research projects.

Criteria

- The completion report should have been presented in an in-house review.
- The conference to where the paper is to be presented should be a professional scientific conference and related to the field not a multi-disciplinary.
- Priority shall be given to papers that have not been presented in any fora.

Requirements

- Letter of intent for paper presentation
- Letter of acceptance from the organizing committee
- Certification from the RDE that the study had been presented in the agency in-house review. Review and evaluation of the panel of evaluators during the AIHR
- Copy of the paper to be presented
- If presentation is outside the country, Board Approval from the University.
- travel report indicating highlights of the conference, observations, learnings and recommendations shall be submitted after the travel.

It will be the responsibility of the researcher/presenter to his/her travelling arrangements

Other guidelines on paper presentation are indicated in the awards and incentives in Chapter 9.

Chapter 8

TECHNOLOGY TRANSFER AND COMMERCIALIZATION

SIGNIFICANCE OF TECHNOLOGY TRANSFER AND COMMERCIALIZATION

Technology transfer refers to the movement of know-how, skills, technical knowledge, procedures, methods, expertise or technology from one organizational setting to another (Roessner, 2000). Technology transfer is the process of transferring scientific findings from one organization to another for the purpose of further development, utilization, transfer, and commercialization. The process typically includes:

1. Identifying new technologies
2. Protecting technologies through patents and copyrights
3. Forming development and commercialization strategies such as marketing and licensing to existing private sector companies or creating new startup companies based on the technology

The Cagayan State University as an academic, research, development and extension institution, is engaged in technology transfer for a variety of reasons, such as:

1. Recognition for discoveries made at the institution
2. Compliance with government regulations
3. Attraction and retention of talented faculty
4. Development of local economy
5. Attraction of corporate research support
6. Licensing revenue to support further research and education

TECHNOLOGY DEVELOPMMENT PROCESS

The development of technology requires several stages before it is commercialized for clientele's adoption. The technology development process is composed of major five phases as established by PCAARRD:

Technology generation (TG).

This is the scientific and experimental stage wherein an R&D center utilizes all its resources human/technical, financial, material, physical and other resources to generate a component technology or a package of technology.

Technology Verification (TV).

A technology is classified for verification if it can be incorporated in a package of technology that has potential for improving existing farmers' practices. Specifically, it should satisfy the following:

a. It is an integrated technology conducted in the farmers' field

b. It has been tested for two seasons in technology generation (TG) trials
c. It has shown economic and technical feasibility in TG trials. Its computed return based on TG trial is better than that of farmers' practices as shown by marginal rate of return
d. It is perceived to be socially acceptable and environmentally safe

Technology Adaptation (TA).
A technology is classified as technology for adaptation if it meets the following criteria:

a. It is conducted in research station or farmers' field and only a component of technology
b. It has been tested for technology generation (TG) research for at least one season
c. It has shown good potential for economic feasibility as based on TG research
d. It has good potential for acceptance by intended end users

Technology Dissemination (TD).
This is the stage when promoters of technologies can use varied approaches and methods in bringing technologies to end users. Technologies are ready for dissemination if these have met the following criteria (PCAARRD Highlights)

a. *General adaptability* – these are replicable under field conditions
b. *Economic profitability* – their percent of profitability is equal to the prevailing rate of interest on loans of formal financial institutions. Profitability also considers social costs and benefits
c. *Social acceptability* – these do not contradict social norms and values prevailing in the community
d. *Potential availability of support services* – users have access to market, credit, facilities, material inputs and others

Information for Dissemination (ID).
R&D Centers also generate information not technologies, but they are very useful in our world of work. Information that is a product of research is important to agricultural and rural development

The technology development process, however, is significantly more complex than a linear progression from R&D to demonstration, commercialisation, market accumulation and wide-scale diffusion. Linkages between these stages allow learning by doing, learning by using and learning by interacting, all of which help innovators move along the experience curve.

TECHNOLOGY ASSESSMENT PROTOCOL (TAP)

Before projects are to be commercialized, all technologies identified for commercialization must undergo the technology assessment protocol. The technology assessment protocol serves as an early warning function about the possible positive or negative impacts of technologies to the intended beneficiaries. It also identifies precedent conditions and actions to be taken before promotion and commercialization.

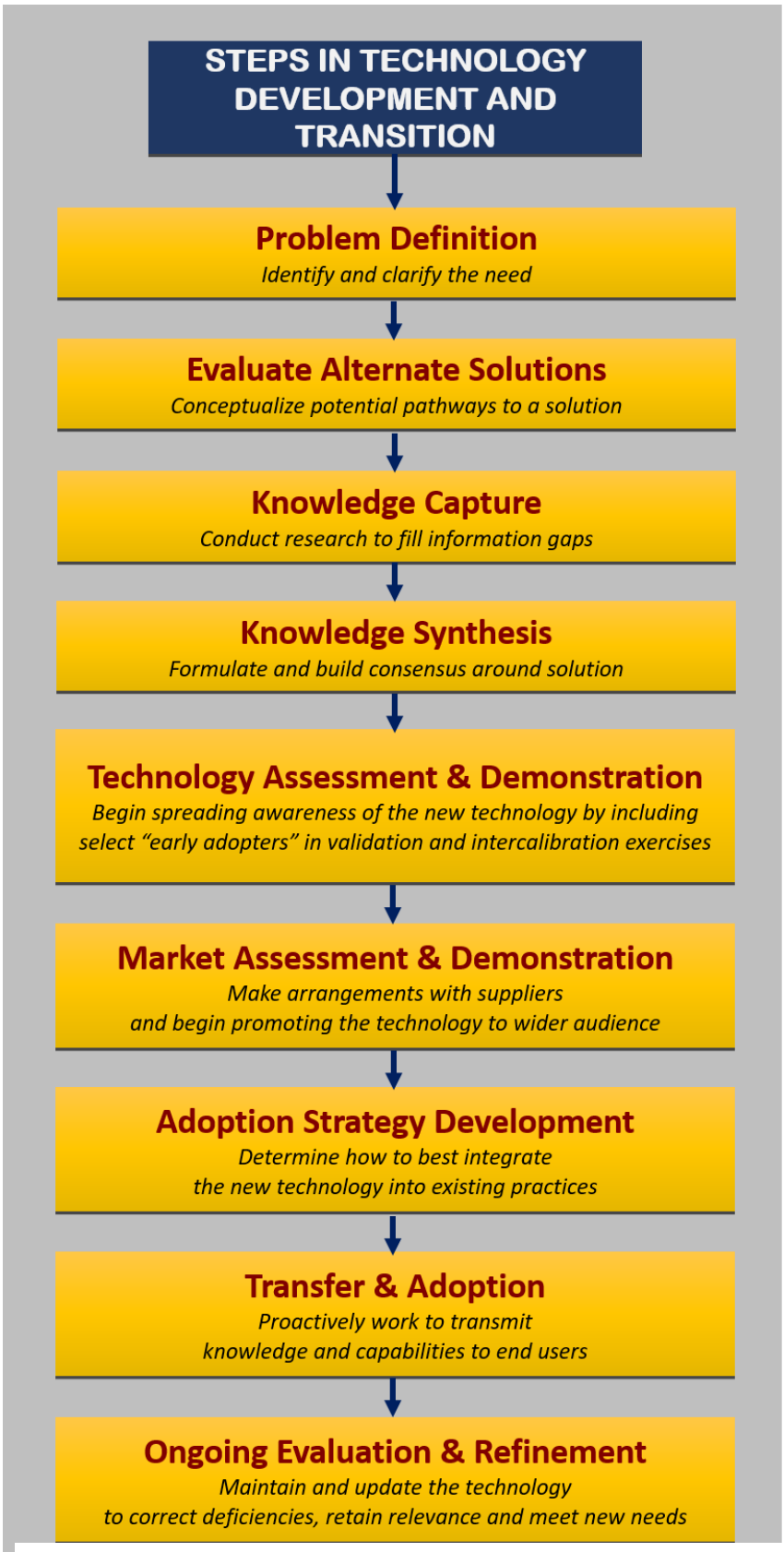


Figure 10: Steps in Technology Development and Transition

A Technology Assessment Team should be organized ensure the appropriateness in the promotion and commercialization of matured technologies by the Universiity. The team is mandated to do the following: a) Determine the degree of maturity of the generated technologies of the University; b) Identify and validate gaps and risks associated with generated technologies in terms of element enterprise building; c) Recommend action of particular technology either endorsed for packaging/repackaging, and promotion for further R&D work; and d) Recommend specific set of interaction to answer/overcome the identified gaps and risk;

The TAP aims to provide the step-by-step process of evaluating technologies for eventual promotion and commercialization.

The end-product of TAP are:

a. Indication of the present state of technologies and innovations
b. Identification of value-added products and commerciable enterprises
c. Set of recommended interventions and corrective measures for technology packaging, promotion and transfer
d. Reconfiguration of technologies already being promoted and/or utilized

Working Principles of Technology Assessment

1. *Participatory approach*
   - TA is a process of purposeful interaction between the technology assessment team and the various stakeholders of a particular technology/commodity and therefore it is area-and clientele-specific.

2. *Team delivery*
   - Team building is a necessary requirement in the participative delivery of technology assessment. It is important for the TA team to attain high degree of cohesiveness so that the members become more interactive and cooperative

3. *No role playing*
   - This means that the members are advised to let down the barrier brought about by official designations, ”turf”, and hierarchy of command. This allows for individuals in the team to express themselves freely resulting in more factual expression during interactions at all levels. More positive responses are elicited from the target clientele during the actual field validation process

4. *Consensus decision making*
   - The ratings, justifications and recommendations that come out in the course of assessing a particular technology/commodity are products of thoughtful discussions, deliberation and finally consensus building among the members of the TA team.

5. *Iterative and time bound*
    - TA makes full use of the reiterative principle of QRA and RMP. As such, it becomes an effective monitoring tool to find out whether or not the interventions – to bring a technology to promotion/commercialization stage or to improve the packaging of already promoted/commercialized technology – have achieved the desired results at a specified time using the allotted resources

source

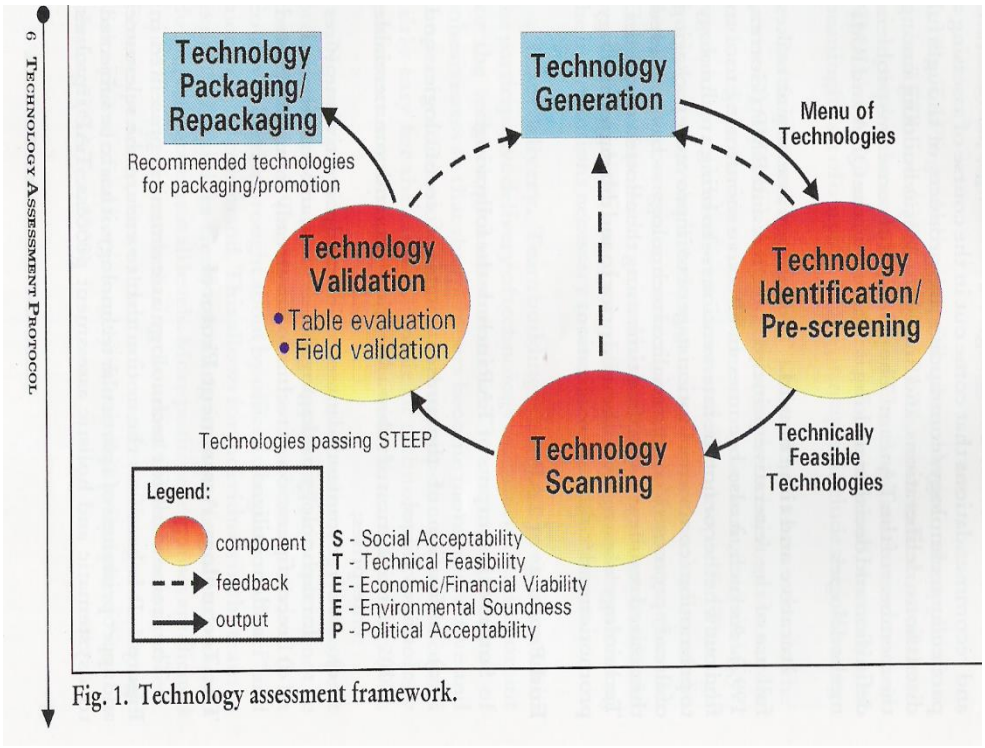


Fig. 1. Technology assessment framework.

source: PCAARRD

Steps in Technology Assessment Protocol

The technology assessment protocol involves three interrelated steps

Step 1- Technology Identification and Pre-Screening which stresses on the technology characterization

STEP 2- Technology Scanning – which is being used to gauge the state-of-the-art of a particular technology

STEP3- Technology Validation which is an offshoot of the findings and recommendations from the technology scanning exercise

Technology Identification/ Pre-Screening

1. Technology Classification. Classification is important because the type of technology determines, in part, the nature of activities, strategies and linkages

required for eventual technology packaging, promotion and commercialization. Technologies can be classified as:

- Product – takes the form of physical goods e.g. equipment, machinery, processed food products
- Process – technologies of this nature are not tangible and may refer to systems for doing things or systems for improved production and postproduction.
- Service – generally provides the complementary activities or services to enhance existing government programs and policies
- Information – other technologies are simply information or research findings that may indicate valuable socio-economic and technical databases for policy formulation and follow-up R&D activities. May also refer to computer-aided information systems in support of industry and energy sectors.

2. Technology Characterization. All part of technology characterization, all possible sources of information about a particular technology are gathered, examined and analyzed.
3. Technical Feasibility Test – this is particularly useful in screening through many technologies and prioritizing what of these technologies will be subjected to TAP. The following areas of concern should be answered:
   a. Validity – has the scientific basis for the technology been established? Are there reports, write-ups and conference papers written and published?
   b. Reliability – can the laboratory test results trials be reproduced at the farm or firm level?
   c. Replicability – using the same protocol can other interest groups (technical or commercial) produce approximately the same results?
4. Technologies found to have certain technical problems will be recommended for further R&D work, while those evaluated to be technically feasible will proceed to the following step – the technology scanning process

Step 2: Technology Scanning

At this stage, evaluation is more focused and specific in terms of clientele, location, and enterprise which a particular technology will support using the criteria known collectively as STEEP

STEEP Evaluation Criteria

EVALUATION CRITERIA	PURPOSE	INDICATORS
Social Acceptability	To determine the social significance of the technology to target end users	Appropriateness Acceptability
Technical Feasibility	To assess how well a technology is able to achieve what it was designed to do; To asses the technology's potential for	Validity Reliability Replicability

	Intellectual Property (IP) protection potential	
Financial/Economic Viability	To examine the financial/economic soundness of promoting the use of a particular technology	Net Income, ROI, IRR, NPV, BCR
Environmental Soundness	To understand the ecological implication of introducing a particular recommended technology	Ecological compatibility
Political Acceptability	To assess the political relevance of promoting the technology to the target end-users	Political compatibility

Step 3: Technology Validation

Technology validation starts from problems identified through the scanning process. It makes use of the tools of the Rural-Based-Enterprise Development (RED) Process namely: a) Quick Resource Appraisal (QRA) for the gap/problem definition and b) Risk Management Process (RMP) for the risk and intervention identification

The TA team together with the technical experts is convened to conduct a table QRA/RMP with details of the technologies being assessed provided in an info-data sheet.

TECHNOLOGY TRANSFER AND COMMERCIALIZATION FRAMEWORK

The United Nations defined transfer of technology as "the transfer of systematic knowledge for the manufacture of a product, application of a process or rendering of a service and does not extend to the mere sale or lease of goods". From this, five categories of transactions could represent transfer of technology as follows:

1. The assignment, sale and licensing of all forms of industrial property, except for trademarks, service marks and trade names when they are not part of technology transfer transactions;
2. The provision of know-how and technical expertise in the form of feasibility studies, plans, diagrams, models, instructions, guides, formulas, basic or detailed engineering designs, specifications and equipment for training, services involving technical advisory and managerial personnel, and personnel training;
3. The provision of technological knowledge necessary for the installation, operation and functioning of plant and equipment, and turnkey projects;
4. The provision of technological knowledge necessary to acquire, install and use machinery, equipment, intermediate goods and/or raw materials which have been acquired by purchase, lease or other means;
5. The provision of technological contents of industrial and technical cooperation arrangements (UNCTAD, 1985).

According to PCAARRD, technologies that have successfully passed the piloting stage, or have passed the criteria for piloting or not piloted yet, but have high potential for commercialization are considered priority technologies for commercialization. Technologies are selected - based on the following criteria:

1. Could provide the best alternative for improving income and productivity of majority of the people.
2. Could provide immediate solutions to self-sufficiency problems, environmental sustainability, import substitution, export generation and promotion of alternative sources of food.

Technology commercialization -also known as research commercialization- refers to the valorization of research and intellectual assets by industry, or the process of taking an idea to market and creating financial value. It implies the selling, licensing of, or contracting of technology services, intellectual assets, and related-knowledge into spinoff creation and R&D collaboration (Zuniga and Correa, 2013).

Technology transfer and commercialization (TTC) can generate important benefits for economic development. These benefits are embodied in knowledge spillovers and are realized through industry-science collaboration and technology transactions that can range from simple technical consultancy all the way to licensing of intellectual property. Improving the process of knowledge transfer can foster innovation and thereby raise productivity, create better job opportunities, and address societal challenges

University technology transfer occurs when innovations are licensed by a university to an organization, usually a for-profit organization, that commits to further develop these early-stage technologies into commercial products. The objective of this technology transfer is to create goods and services that will benefit and be generally available to the public.

POLICY GUIDELINES ON TECHNOLOGY TRANSFER AND COMMERCIALIZATION

1. The University encourages faculty, staff, and students to create literary, scholarly, and artistic works and will not assert ownership, interest, or share of the proceeds in the following types of Intellectual Property which are used or created for instructional purposes or as a result of scholarly activity: (a) publications, (b) textbooks, (c) educational courseware, (d) lectures, (e) recordings [video or audio], (f) original works of art, (g) fiction, including popular fiction, novels, poems, dramatic works, (h) motion pictures and other similar audio-visual works, (i) musical compositions, or (j) computer software. Ownership of copyrights of such works rests with the creator(s). However, there are exceptions to this rule such as works that are generated within the scope of the creator's employment, commissioned by the University, or are subject to a sponsor's agreement which provides for a different ownership.

2. The University shall collaborate with commercial concerns to promote the utilization of inventions arising from institutional funding.

3. The University is expected to give licensing preference to small businesses.

4. The University also encourages and supports technology transfer of other "intellectual properties" such as:
   a. original works of authorship copyrighted by university faculty,
   b. trademarks,
   c. individual knowhow, and
   d. tangible research materials.

STRATEGIES FOR SUSTAINED TECHNOLOGY TRANSFER AND COMMERCIALIZATION

The Cagayan State University shall proactively share technologies and information generated from research among government and other institutions to ensure that scientific and technological developments are made accessible to a wider range of users and clients who can further develop and share the knowledge for policy formulation and the technologies for developing new products, processes, materials and services.

1. Technology transfer, utilization and commercialization is the process of circulating, promoting and marketing research outputs or technologies to potential users.

In general, two mechanisms are used for this purpose:

   a. technology incubator- an environment and program that offers a full array of business assistance services tailored to the client companies;
   b. technology park- a mechanism designed to stimulate the development of entrepreneurial knowledge-based micro to small and medium size enterprises.

2. The University shall take steps to strengthening the Academe-Government Agencies-Industry (AGI) links. Strengthening the AGI link is the core path for technology transfer and commercialization that requires time and sustained convergent efforts.

To achieve this, the University shall:

   a. Develop cluster policies that are based on the premise that a company can realize higher levels of competitiveness when it strategically partners with others. Clusters contribute to the generation of innovations through the further development of knowledge spillovers, coordination between actors, reduction of coordination failures, and a better pooling of physical, human and financial resources for innovation.

b. Provide grants for collaborative R&D including competitive research and development and partner matching grants the former aiming at near-to-market technology generation and the latter promoting research partnerships for the development of novel products or services.
c. Establish Research, Development and Extension Centers of Excellence (RDE-CoEs) aimed at stimulating creative and efficient research and training environments. Establishing concentrations of researchers and resources in RDE-CoEs is considered as a means to increase quality and relevance of public sector research at the international level.
d. Award innovation vouchers, small lines of credit provided by the University in collaboration with other government agencies, to micro, small and medium enterprises (MSMEs) for the purchase of services from public knowledge providers in order to promote collaboration and stimulate the creation of small-scale innovations at the firm-level.
e. Participate in or organize technology platforms and fora. AGI led stakeholder forums that aim to define research priorities and action plans in a broad range of strategic technological areas where achieving competitiveness at the national or regional level requires major research and technological progress in the medium to long term.
f. Provide knowledge services such as consulting and knowledge transfer, which includes case studies and policy briefs.
g. Utilize technology matching services which are virtual problem solving mechanisms (web-based platforms) that connect knowledge intensive organizations and bring together expertise on new product development while increasing the potential of future tangible partnerships.
h. Market intelligence services: information collected by organizations to assess market opportunities, develop strategies to access markets, and make marketing decisions.
i. Foresee technological opportunities. A process of intense iterative periods of open reflection, networking, consultation and discussion, with the aim of drafting and exploiting long term technological opportunities.

3. The University shall conduct technology transfer and commercialization through knowledge dissemination. In a broader sense, technology transfer and commercialization may also include the dissemination of knowledge and discoveries to students, other academics, industry, scientists, and the general public. In that respect, technology transfer is another way for the Cagayan State University to teach and thereby disseminate knowledge for public utilization. Routes for such dissemination to occur include:

    a. Classroom discussions
    b. Attendance and presentation at conferences
    c. Publications in the scientific literature; and
    d. The employment of students by companies.

Chapter 9

GRANTS, AWARDS AND INCENTIVES

Among the pressing challenges along the various stages of the research enterprise faced by the Philippine Higher Education as indicated in the Commission on Higher Education (CHED) Memorandum Order (CMO) No. 52 (*Pathways to Equity, Relevance and Advancement in Research, Innovation, and Extension in the Philippine Higher Education*) include improving the research capabilities of faculty, research staff and graduates students; instilling a research culture and research vocation among faculty and graduate students; and increasing research productivity and raising research quality and impact. To address these challenges, several strategies need to be put in place. Providing research grants, awards and incentives to researchers are some of the strategies to promote the research culture in the University. This section provides guidelines for the research grants, awards and incentives for research, development and extension.

RESEARCH GRANTS AND RDE FUND SOURCING

These are grants for the implementation costs of earmarked or approved researches for funding. CSU has funding opportunities from the budget allocated through the General Appropriation Act (GAA) and from its income for research and faculty development. The GAA fund for research is classified under the Maintenance, Operating and Other Expenses (MOOE). The research grant for individual researches shall not exceed 5% of the total fund or P200,000 whichever is higher.

The research grant awardee shall be chosen from the selection of evaluated proposals as described in Chapter 4.

In addition to the institutional grants, there are funding agencies that can be tapped to fund researches that are within their respective research thrusts. A call for research proposals is usually announced.

Automatic allocation from the GAA fund (exclusive of the University approved RD&E projects) shall be as follows:

1. Direct Cost – 65%
2. Paper presentation – 10%
3. Capacity building – 15%
4. Incentives – 5%
5. Overhead – 5%

Fund for RD&E from the income of the University shall be:

1. Research and Development (RD) - 10%
2. Extension - 15%

The CHED CMO No. 20, s 2011 (Policies and Guidelines for the Use of Income, Special Trust Fund and Programs of Receipts and Expenditures of the State Universities and Colleges) provides allocations by SUC function: instruction – 50% of tuition fee (Sec 6), Research – 10% (Sec 8) and Extension – 10% (Sec. 10). It indicates that Campus Executive Director/Administrator is tasked to coordinate the plans, programs, projects activities of the campus in accordance with the overall vision, mission, goals and objectives of the SUC.

Researchers who are able to source out of research fund shall be given an incentive of one percent (1%) of externally funded RD&E project but not to exceed P100,000 based on LIB (this is practiced by other SUCs). The amount and schedule of giving the award shall be based on tranche release by the funding agency. The award should be based on the signed Memorandum of Agreement. The mechanics shall be based on COA rules. The distribution of the award to proponents shall be:

1. Project Leader/Proponent – 50%
2. Study Leaders – 50% divided equally

RDE PAPER PRESENTATION IN SCIENTIFIC CONFERENCES

This is a form of research dissemination where the researcher presents his/her paper in prestigious and scientific conferences and as a way to publicize high-quality researches of the University. The incentive for paper presentation shall be a full financial support for the presentation on official business provided that:

1. Paper presentation should only be on legitimate scientific conferences preferably organized by academic or scientific societies (avoid predatory conferences) except for invited papers for recognized expertise.

2. Paper presentation shall be approved at the University level only but endorsed from the campus through channels. Papers may be presented only if it is evaluated by the URDEC (or through report have been presented in the agency in-house review), duly endorsed by the VPRDE and approved by the University President for local presentations or the BOR for presentations abroad.

3. Only outputs from University sanctioned researches shall be considered and the paper should be related to the theme or focus of the conference.

4. For equity purposes, a paper should be supported once only for paper presentation. If the researcher wishes to present the paper the second time around in another

conference, it shall be on official time only, except for winning papers to be elevated for presentation at the regional, national or higher level.

5. To apply for the grant, the researcher must complete the following:
    - Letter of intent
    - Official invitation letter from the conference organizer which indicates the title and theme of the invited lecture
    - Acceptance letter from the conference organizers which indicates the title of the accepted paper
    - Official information about the conference
    - Abstract of the paper to be presented

A Notification of results of the application shall be made within 10 working days from the date of receipt of the application. Paper presentation grant is on a first come first serve basis subject to the availability of fund for paper presentations.
The grantee is advised to prepare his/her cash advance for the paper presentation expenses.

If the paper won on contested paper presentations, the incentive shall be for the researcher(s). The sharing of the award shall be among the authors. In addition to the award given by the organizing committee, the University shall provide incentive for authors of "Best Papers" presented in recognized scientific conference. Only papers based on research outputs from the University-sanctioned researches are entitled for the following award:

Table 6. Awards for research papers presented in conferences

Category	International	National	Regional
First	P10,000	P7,000	P5,000
Second	7,000	5,000	3,000
Third	5,000	3,000	1,500

**Subject to availability of funds*

"BEST PAPERS" IN AGENCY IN-HOUSE REVIEWS

Qualifications

1. Only research outputs from the University sanctioned researches shall be considered and the paper should be related to the research thrust of the University.
2. The research should have been a completed research.

Financial incentives for authors of "Best Papers" during the agency in-house reviews (University level) shall be provided:

Table 7. Awards for Best Papers presented in In-house reviews

Category	Rank	Amount (P)	Minimum Points garnered
Research Category	First	10,000	95%
	Second	7,000	90%
	Third	5,000	85%
Development/Extension Category	First	10,000	95%
	Second	7,000	90%
	Third	5,000	85%

**Subject to availability of funds*

The criteria to evaluate the best paper awards for both research and development categories are as follows:

Research Category

Table 8. Criteria for selecting Best Papers in research category

CRITERIA	Points Equivalent
1. Creativity, Originality and Quality of Work 30% • Rationale/State of the art (to include analysis of problem • Objectives • Conceptual/Analytical framework/Methodology	 10% 5% 15%
2. Significance of Findings 40% • Contribution to new knowledge S&T advancement • Relevance to national/regional development (patent, utility model, copyright, publication) - Regional Significance only (10%) National significance (full-20%)	 20% 20%
1. Manuscript/Write-up 20% • Accuracy of Figures and Language • Clarity and Style • Cogency and Logic	 10% 5% 5%
2. Paper Presentation 10% • Clarity of Presentation, Visual Aids, Stage Presence • Voice Modulation, Response to Inquires	 5% 5%
TOTAL	100%

Development/Extension Category

Table 9. Criteria for selecting Best Papers in development/extension category

CRITERIA	Points Equivalent
1. Creativity, Originality and Quality of Work 30% • Rationale /State of the art (to include analysis of problem • Objectives • Conceptual/Analytical framework/Methodology	 10% 5% 15%
2. Significance of Findings 40% • Social Acceptability • Technical Feasibility • Financial/Economic Viability • Environmental Soundness • Political Acceptability	 5% 5% 10% 10% 10%
3. Manuscript/Write-up **20%** • Accuracy of Figures and Language • Clarity and Style • Cogency and Logic	**10%** 5% 5%
4. Paper Presentation **10%** • Clarity of Presentation, Visual Aids, Stage Presence • Voice Modulation, Response to Inquires	 **5%** **5%**
TOTAL	100%

RESEARCH PAPER PUBLICATION AWARDS

All faculty members and staff of the University and thesis students who work on CSU projects (should indicate CSU as their affiliation) are eligible for the award. The paper publication should be in any of the following:

1. Journals listed and indexed in the Institute of the Scientific Information (ISI)
2. Thomson Reuters WoS Indices (Science CI Expanded, Social Science CI, Arts and Humanities CI)
3. Elsevier's Scopus Listings
4. ASEAN Citation Index
5. Philippine Citation Index (incoming)
6. CHED-accredited journals
    - CHED Journal Challenge

- CHED Journal Incubation grantee

Cash incentives to authors of published researches in the above mentioned accredited and refereed scientific journals mentioned above as follows (**Subject to availability of funds)*:

1. Thomson Reuters and Elsevier's Scopus - P50,000
2. ASEAN Citation Index – P40,000
3. Philippine Citation Index – P30,000
4. CHED Journal Challenge – P50,000 – when available
5. CHED Journal Incubation grantee – P40,000 (when list is available)

The amount is divided by the number of authors with the main author having 40% if more than two authors and 60% if two authors. Author/s must apply for the award with the following requirements:

1. Letter of application for the award or Application Form duly signed by authors endorsed by the Dean through channels.
2. Submission of a copy of the journal where the article was published and a popular publication for uploading in the CSU website and as part of CSU accomplishment.
3. An information about the publication journal.
4. The RDE Office assigns tracking number and review the application then submit to the President for approval.
5. RDE Office inform the application if the grant has been approved.
6. The grant amount is prepared and submit to finance office for processing.

Should the publication be withdrawn by the publisher due to valid reasons such as plagiarism or other forms of unethical acts like illegal use of data, the author/s shall refund the whole amount granted without prejudice to the application of other forms of University sanctions.

Financial incentive for research-based papers published for book or book chapters, peer reviewed Conference proceedings shall be provided:

1. Only books published by recognized Academic book publishers, prestigious university presses, and highly recognized international book publishers (such as Macmillan, Blackwell, and Elsevier) are entitled for this award.
2. The book should be a product of published researches of the author in the field he/she is recognized.
3. Books or chapters of books published must have gone through a rigid blind referee or review process. Evidence that the publication has undergone a review process must be submitted.
4. The author of the proceedings paper participated in the Conference (except when paper was solicited)
5. Books published before the start of the award (date of approval of this manual) are not entitled.

6. The awards shall be as follows (**Subject to availability of funds)*:

    - Published book – P40,000/book
    - Chapter in an edited published book – P30,000/chapter
    - Full paper in a peer reviewed Conference proceedings – P20,000/paper

The award is divided equally among authors if the book is co-authorship provided the book is published while they are still an employee of the University or before retirement/resignation.

REGISTERED INTELLECTUAL PROPERTY RIGHTS (IPR) OFFICE PHILIPPINES (IPROPHIL)

Registered IPR which:

1. Must be a product of research
2. The registration should be a joint institution-inventor registration. The invention is owned by the institution but the researcher remains to be the author.
3. Other provisions under the Technology Transfer Law and provisions under Chapter X of this Manual shall apply.
4. The following are the awards:
    - Patent – P50,000
    - Utility Model – P40,000
    - Copyright – P30,000
    - Trademark – P20,000

Applications for IPR shall be paid by the University following the accounting rules and regulations.

CITATIONS IN ARTICLES PUBLISHED BY OTHER RESEARCHERS

An incentive shall be given to researchers whose research publication in accredited journal is cited by other researchers in refereed/accredited journals as mentioned above. Each cited article shall be P1,500.00/citation.

BEST UNDERGRADUATE AND GRADUATE THESIS

A University-wide search shall be conducted at the end of each school year. The search shall be conducted not later than 15 days before the scheduled graduation. It shall include summer, first semester and second semester of the school year.

Cash incentive shall be given to undergraduate students of CSU whose thesis is adjudged by the panel of evaluators as outstanding undergraduate thesis. The thesis should be aligned within the banner programs of the University and regional challenges. It should also meet the minimum points set for the award to be given with the following cash incentives:

Table 10. Cash incentives for best theses

Rank	Minimum points Undergraduate	Minimum Points (Graduate)	Amount (P)
First	90	95	15,000
Second	85	90	12,000
Third	80	85	10,000

**Subject to availability of funds*

The criteria for the selection of thesis that is applicable for both graduate and undergraduate thesis are as follows:

Table 11. Criteria for selecting the best undergraduate thesis

Criteria	Points Equivalent
A. Creativity, Originality and Quality of Work - 30% 1. Rationale/State of the Art (to include analysis of problem) 2. Objectives 3. Conceptual/Analytical Framework and Methodology	 10% 5% 15%
B. Significance of Findings - 40% 1. Contribution to new knowledge and S&T advancement 2. Relevance to National/Regional Development	 20% 20%
C. Manuscript/Write-up - 20% 1. Accuracy of Figures and language (10%) 2. Clarity and style (5%) 3. Cogency and logic (5%)	 10% 5% 5%
D. Paper Presentation 10% Clarity of presenting visual aids, stage presence, voice modulation, response to inquiries	 10%
Total	100 %

HONORARIA AND EQUIVALENT TEACHING LOADS (ETLS)

Honoraria is given only to faculty researchers whose research is funded from other agency based on the approved budget line item, since this incentive is provided by the

agency. Faculty researchers whose research is institutionally funded cannot be given honoraria from the GAA Fund as stipulated in the accounting and auditing rules. In cases where honoraria is not permitted, the research load has part of the workload with equivalent teaching loads as stipulated in Chapter 4. In case the total workload (teaching + research + extension) exceed the maximum workload, the faculty researcher is given an overload pay.

Equivalent teaching load is granted only to duly approved research and extension projects. Designated officials with ETLs of 12 and above who will conduct research is granted additional research and extension ETLs for a maximum of 6 units, and 3 units it the designation has an ETL. Research and extension ETLs may be used for deloading the faculty researcher from actual teaching loads of 18 units and above. In case there is overload, the teaching unit should be made outside office hours.

OUTSTANDING RESEARCHER/EXTENSION WORKER

A Cash incentive shall be given to CSU employee who exhibit exemplary performance in research/extension in their respective campuses as adjudged by the university president upon the recommendation of Evaluators. All regular employees are entitled to this award. The criteria for the selection shall be pattered to the PRAISE system of the Civil Service Commission.

One Outstanding Researcher and one Outstanding Extension Worker shall be awarded annually to be given every end of the year – during the University Christmas Program. The cash incentives shall be P50,000 and only those accomplishments for the past three (3) years will be considered. The Curriculum Vitae is required from the individual nominees to evaluate the nominees' research track record.

SCIENTIFIC CAREER SYSTEM

Established within the Civil Service pursuant to Executive Order No. 784 dated 17 March 1982 and further reinforced by Section 4 of R.A. 8439 titled, "Magna Carta for Scientists, Engineers, Researchers and other Science and Technology Personnel in Government," the ***Scientific Career System*** (**SCS**) shall be implemented to establish a system of recruitment, career progression, recognition and reward of scientists in the public service, as a means of developing a pool of highly qualified and productive scientific personnel in the University.

The University supports faculty members applying through thru Scientific Career System. Awarding to the Scientist position is based on the Merit System of the Scientist Career System.

Any faculty member who is conferred on the qualifying scientist with five ranks (Scientist I, II, III, IV and V) shall receive an award of P50,000 per annum.

PROFESSORIAL CHAIR PROGRAM

In recognition of the competence of the CSU faculty for excellence in their chosen fields of specialization, a Professorial Chair Program shall be implemented by giving Professorial Chair Awards to deserving faculty members.

Criteria

The awardees must meet the following criteria:

1. Must be a Ph.D. degree holder in the field of priority focus of the Award;
2. Must hold an academic rank of Assistant Professor or higher;
3. Must have proven excellence in his academic and research work performances along his field of specialization with the priority thrusts of the granting agency; and
4. Must be officially endorsed by his peers, immediate supervisor/s, academic community and the University.

Terms of Reference

The following are the Terms of Reference of the Awardees:

1. Must teach at least one (1) graduate course in his/her area of specialization during the year of the award;
2. Deliver at least one (1) public lecture on the subject of his research during the period of the award at RDE's Research Forum;
3. Submit a hard and soft copy of the public lectures to the CSU-RDE Department;
4. The Award shall be approved by the Board of Regents through the recommendations of the VP for RDE and the President of the University; and
5. A copy of curriculum vitae and two copies of colored photo must be submitted to the Secretariat; and
6. Composition of the Selection and Evaluation Committee shall be formed.

GUIDELINES ON CONSULTANCY SERVICES

In recognition of the competence of the CSU faculty and staff to render consultancy services in various disciplines and in line with the University's commitment to provide relevant and responsive research and extension programs and expertise to various sectors, including the communities, in their cultural, social, economic and development needs, and generation of sufficient resources to support its various quality programs, the University adopts the following general policy guidelines governing consultancy services:

1. Faculty members and staff with proven track record to provide consultancy services and with a position of at least Assistant Professor shall be eligible for consultancy services when needed;

2. Application for consultancy services should indicate strong justification to include the program of activities and expected outputs. The candidate should apply to RDE Office. The Dean shall certify that the faculty/staff services in his/her college could be temporarily dispensed with and that there are other capable staff to take over the duties and responsibilities of the applicant;

3. Upon approval of the application, the consultant shall sign a contract with the University and comply with other requirements stipulated in the contract and other applicable laws;

4. Faculty member/staff granted to provide consultancy services shall be required to submit a quarterly progress report of his/her consultancy engagement with the corresponding output for the period and shall submit his/her final output upon completion of the consultancy services which should not exceed a period of one (1) year;

5. Applicants for consultancy services shall not be engaged in any other forms of employment or consultancy and similar activities while on such engagement outside the consultancy agreement;

6. The applicant and the University shall enter into a consultancy agreement with the firm or the receiving agency specifying among other things the following:

    - Consultancy relationship specifying the best efforts to perform the services such that the results are satisfactory to the consultant, the University and the receiving agency;
    - Fees in consideration for the services to be provided by the consultant and other obligations during the term of agreement;
    - Allowable expenses involved in relation to the services to be provided;
    - Term and termination specifying the period of consultancy agreement in terms of start and completion date;
    - Salary of the consultant from the University;
    - Method of provision of services;
    - Consultancy benefits and indemnification;
    - Supervision of consultant's services;
    - Confidentiality agreements;
    - Conflict resolution;
    - Severability;
    - Arbitration; and
    - Legal counsel.

VISITING RESEARCH FELLOWSHIP

Visiting Research Fellows may be allowed for a period of ten (10) months to promote collaboration and expertise sharing between CSU and other higher education institutions and to develop the research capability of faculty members.

A MOA shall be executed between CSU and the admitting HEI specifying among other things, the responsibilities of the parties, benefits of the institution, and other fellowship arrangements.

BALIK-SCIENTIST PROGRAM

To strengthen the scientific and technological capabilities of CSU, to promote information exchange, accelerate the flow of new technologies into the country and stimulate the development of new and strategically important technologies that are vital to national development, science and technology experts of Filipino descent are allowed to visit the University under the DOST Balik-Scientist Program for short term consultancy and if feasible, consider working permanently in the University. Priority areas for the program shall include alternative energy/fuel, biotechnology, information and communication technology, medical/health sciences, environment and related areas/climate change, law, public affairs, education, and governance.

Chapter 10

RESEARCH ETHICS AND INTELLECTUAL PROPERTY

RESEARCH ETHICS IN THE CONDUCT OF RDE

Creation of the Research Ethics Review Board

A Research Ethics Review Board **(RERB)** shall be created to be directly under the Office of the Vice President for RDE. The RERB shall be created to have the following functions:

1. To formulate and implement policies and guidelines pertaining to ethical review of research proposals;
2. To serve as consultative and appeals body promoting research integrity by identification and resolution of bioethical conflicts and issues on research;
3. To formulate criteria for ethical review and approval of research proposals in accordance with Good Clinical Practice (GCP) Guidelines (Appendix 1) and organizational regulations, local laws, standards of professional conduct and practice, and societal moves, values and needs;
4. To formulate and implement appropriate mechanisms to:
    - Ensure safety, protect the rights and promote the welfare of human participants;
    - Provide counsel to human participants including the researchers;
    - Ensure immediate reporting of amendments in the proposals and expected problems; and
    - Ensure proper documentation and adherence to the principles of informed consent and confidentiality; and
    - Ethical publishing and scientific misconduct
5. To review and evaluate reports of scientific misconduct and recommend appropriate measures to enforce proper and standard ethical conduct; and
6. To conduct continuing professional education on ethics in research in coordination with the University Training Officer.

Research Misconduct

All authors submitting manuscript for publications in the various RDE journals in the University shall observe research misconduct such as the following:

1. Unethical treatment of research subjects;
2. Fabrication of research data;
3. Falsification of research data; and
4. Plagiarism

By unethical treatment of research subjects, it applies to obligation of the researchers relevant to the subjects of the study, whether human or animals, particularly adherence to ethical standards in experimentation such as care and use of human beings and animals. On the other hand, fabrication and falsification of

research data refers to the invention, recording, or reporting of fraudulent data. Fabrication and falsification constitute the most serious forms of misconduct in research as they result in scientific record that do not accurately reflect observe truth.

Plagiarism is a form of piracy which is defined as the appropriation of ideas, data or methods without adequate permission or acknowledgement from the owners.

Publishing Ethics

Researchers should conduct their research from proposal to publication in line with the codes of conduct of relevant professional bodies and/or national or international bodies. A Committee on Publication Ethics shall be formed to develop a publishing ethics for a journal to include the following:

1. Guidelines on the submission of work
2. Guidelines on what constitute s authorship
3. Peer review process
4. Data fabrication/falsification
5. Redundant publication and duplicate submission/publication
6. Plagiarism
7. Conflict of interest
8. Other issues in publication

INTELLECTUAL PROPERTY

As a higher education institution (HEI) tasked to develop quality human resources, researches and technologies for people empowerment, global competitiveness and sustainable development, CSU encourages technological innovations, creations and inventions by researchers and faculty members. Pursuant to this, CSU-Owned technologies, creations and inventions when granted rights under existing intellectual property regimes, shall be made available for public use consistent with CSU's mandate to transfer and disseminate appropriate technologies, except for valid reasons that would prevent such case. In all cases, public access to CSU intellectual property rights is subject to rights of innovators, creators and inventors.

All official employees of CSU and those of its attached Centers of Excellence, and Centers of Development including, but not limited to, the following are covered by the rules:

1. Regular (plantillia) staff and faculty members whether in permanent, temporary (detail or secondment) status, and casuals;
2. Personnel under contract service, special appointments, or designation whether on a full-time or part-time basis including, but not limited to, service or professional contractors, and consultants;
3. Anyone using the facilities or resources of the University, including, but not limited to, students enrolled at the University in an undergraduate, graduate

degree program or certificate program, and postgraduates, fellows, and trainees; and

4. Collaborators or partners whether in the national or international research and development network, other agencies and organizations whether public or private.

All intellectual property derived from CSU which is directed, assisted, commissioned, contracted research and development projects, and other intellectual property over which the University has interest is covered by these rules.

Rights and Obligations of Those Covered by the Rules

Ownership of Intellectual Property Rights.

Intellectual Property Owned by Creator/Inventor.

Subject to the provisions of existing IP laws, the creator/inventor shall have exclusive property of the IP if it was developed outside the course and scope of the his/her employment or contract and which was developed and created on his/her own time and without the support of the University or use of the University's facilities or resources.

*Intellectual Property Owned by the University***.**

Subject to the provisions of existing IP laws, intellectual property either developed within the course and scope of employment of those individuals covered by these rules or those resulting from activities performed on University time, or with support of State funds, or from using facilities or resources owned by the University is owned by the University. In case of dispute, recourse shall be made to pertinent contracts and documents, such as but not limited to, employment contracts, licensing agreements, and Memoranda of Agreement.

Assignment to and Ownership by the University

All individuals subject to these Rules must hereby assign their rights in such intellectual property to the University. This shall be evidenced by a written assignment agreement signed by the creator and an authorized University official. Moreover, individuals subject to this Rule who create such intellectual property (creators) shall promptly execute and deliver all documents and other instruments as are reasonably necessary to reflect the University's ownership of such intellectual property. A creator of intellectual property owned by the University has no independent right or authority to convey, assign, encumber, or license such intellectual property to any entity.

Determination of the University's Interest.

Before the work or invention subject to the ownership of the University is disclosed to any party outside the system, to the public in general, or for commercial purposes, and before publishing the same, the creator/inventor shall submit a reasonably complete and detailed IP disclosure to the CSU-IP Unit, pursuant to Sections 14 and 15 of these Rules. The University will regularly and promptly communicate with the creator during this decision-making process.

Election Not to Assert Ownership Interest

If the University President or the CSU-IP Unit elects not to assert the University's interest, the primary creator-inventor will be notified in writing within 30 business days after the decision is made. Thereafter, the creator shall be free to IPR in his/her own right. In appropriate circumstances, the University President may impose limitations or obligations, including but not limited to, a nonexclusive license for the creator, University to use IP for care, teaching, scholarly and other academically related purposes, and non-profit research.

Later Release of Intellectual Property

Except where prohibited by existing laws or contractual obligations, the University President may elect to release a work or invention to the creator/inventor at any time after assessing CSU's interest, with notice to the CSU-IP Unit. However, such limitations must include provisions for recovery of University expenses for IP application and protection, if any, as well as retention of income rights, and may include certain limitations and obligations.

Execution of an Intellectual Property Undertaking

All employees of CSU covered by these rules shall execute an "Intellectual Property Undertaking" which is the first and formal step in IP protection and commercialization. It shall contain the following minimum provisions:

1. To comply with the CSU intellectual property policy and its guidelines;
2. To disclose promptly to CSU any intellectual property, which may be solely, or jointly discovered or generated with others in the performance of their regular duties, or with the use of CSU agency funds, facilities or services;
3. To perform all acts necessary to assist CSU in protecting and commercializing the intellectual property;
4. To use the intellectual property or proprietary information only in commercializing the intellectual property;

5. To use them in confidence and to employ all reasonable precautions to assure that they are not disclosed to unauthorized persons or used in an unauthorized manner, both during their employment or contract with CSU.

How to Execute an Intellectual Property Undertaking

1. The execution of the intellectual property undertaking shall be in writing, signed by the promisor-individual or entity, and in the language understood by him/her. The CSU IP Committee members or any duly authorized employee shall assist the promisor in the fulfillment of this requirement.
2. It shall be attested before any of the members of the CSU IP Committee or any duly authorized employee.
3. The IP Undertaking shall be filed and recorded in the CSU-IP Office.
4. The undertaking shall become effective as soon as the Promisor signs the same. Its period of effectivity shall be consistent with the provisions of IP laws of the Philippines.

Submission of Intellectual Property Disclosure

Those CSU employees covered by these rules must also submit an Intellectual Property Disclosure, which is a formal step in obtaining property protection in the University. The disclosure must divulge the title of creation or invention, names of the inventor/author, description of the work, sponsorship (if any), design date and date put into practice, and publication dates (existing or projected). The description should allow another person reading it to comprehend and reproduce the invention, and for a researcher or patent professional to comprehend the invention and to assess its patentability. The description should be in ink, preferably bound with numbered pages. The disclosure should be understood, witnessed, and signed by a non-inventor/author.

When and How to Submit Intellectual Property Disclosure

1. The disclosure must be submitted to CSU-IP Office at least twelve (12) months prior to sale, offer, publication, presentation or communication to the public of any information on any intellectual property or proprietary information.
2. Upon completion of the form as described in 14, above, the inventor shall submit the same to the CSU-IP Unit or to his/her College Dean.
3. The IP Unit will then evaluate the commercial potential and patentability of the IP. The IP Unit may consult with other University Personnel or independent experts who are competent in the field to assist in the evaluation if appropriate or necessary.
4. The IP Unit shall, within three (3) months from the date of receipt of the Disclosure Form, confirm in writing to the Inventor(s) whether or not the University will pursue patenting and/or commercialization of the IP. Failure of the TLO to act within the period as stated herein shall be deemed as a waiver by the University of its right to patent and/or commercialize.
5. The IP Unit generally will seek patent protection in order to pursue commercialization of the invention and/or protect scientifically meritorious inventions.

6. The Inventor(s) shall at all times maintain confidential the details of the invention in accordance with the rule on Confidentiality set out in Section 17 below, in particular during the period when the TLO or the IP Unit is assessing the viability of commercialization and/or patenting the invention. During the evaluation process, the inventor is obliged to delay public disclosure until patent application has been filed.
7. All Inventors shall disclose to the IP Unit the identity of any party interested in the commercial exploitation of the IP in sufficient detail and as soon as practicable after the relevant facts have come to their knowledge.

Disclosure of Other Engagements Using CSU IP

Those covered must also disclose any consulting or business engagement using any information on intellectual property or any proprietary information owned by CSU, and ensure that any arrangement involving intellectual property or proprietary information with any third party is authorized.

Confidentiality Agreement

When IP information is disclosed, the recipient parties are bound to enter into a confidentiality agreement, which may be a separate agreement between disclosing and recipient parties, or may be a term in a research contract, license agreement, or other pertinent contracts. Under the agreement, the recipient party is prevented from using the IP information without permission and obliged to protect the patentability of any invention, or the trade value of other works or technology disclosed.

Every college or institutional department, through the RDE, subject to the supervision of the CSU-IP Unit, should be responsible for ensuring that the research contract and confidentiality agreement, whichever is applicable, are signed by the parties. Violation thereof shall be subject to penalties prescribed by the laws and these rules.

Confidential Disclosure Agreement

When an IP-Unit member or staff wishes to disclose a creation or invention subject of a disclosure to an external researcher associated with a company or other profit organization, or directly to the company or organization itself, he/she is obliged to make the disclosure under an appropriate Confidential Disclosure Agreement. The CDA should contain an obligation of the recipient not to use the invention or other works, for any other purposes than to evaluate it.

Mandatory IP Clause

Subject to the general supervision of the CSU-IP Unit, those covered must ensure that all MOAs and other relevant contracts entered into by CSU, which may generate any intellectual property or proprietary information, shall contain the following clauses:
"Any intellectual property or proprietary information in the course of and as a result of the implementation of this agreement such as, but not limited to discoveries, inventions, varieties, works, database, information, reports, articles, papers, research papers, research notebooks or records, tri-media presentations, and other project outputs, shall be subject to CSU Intellectual Property Rights Policy and its Implementing Rules and Regulations, and such other laws, rules and regulations on intellectual property, all of which are deemed incorporated into this agreement. All personnel involved in carrying out this agreement shall further be subject to such policies, rules and regulations."

Material Agreement or License Agreement

Those covered must also ensure that the use of any intellectual property or propriety information by a third party shall be covered by a Material Agreement or License Agreement consistent with these Rules.

Considerations of a Material and License Agreement

The University, through the IP Unit, and those covered shall consider, but not limited to, the following items when evaluating the material or licensing agreement:

1. The particulars of the parties;
2. Scope of the agreement and the IPs to be licensed;
3. Obligations of the parties;
4. Nature of agreement;
5. Nature of property;
6. Property to be licensed or assigned;
7. Ownership of property;
8. Nature and extent of rights;
9. The right of the parties to assign the agreement or benefits;
10. The right and responsibilities of the licensee in granting sublicenses;
11. Payments and royalties;
12. Records keeping and the rights of inspection of the licensor;
13. Presence of mandatory provisions are provided by these rules;
14. Duration of the agreement;

15. Provision for the licensee to endeavor to create a market for and sell derived articles;
16. Provision on of infringement of the industrial property covered by the agreement;
17. List of licensed property;
18. Provision on confidentiality.

Obligations of the University

Consistent with the existing IP laws, rules and regulations of the Philippines, CSU has the following obligations:

1. Whenever an intellectual property is disclosed for possible commercialization, it is obliged to ascertain the IP's commercial potential.
2. It shall inform all the members of the CSU-IP Unit and persons or entities it may contract that the information contained in the disclosures (Section 14) is confidential, and no breach thereof is allowed.
3. It shall obtain written acknowledgment of the confidentiality of the disclosure from the said individuals pursuant to Sections 17 and 18 above.
4. It shall seek to facilitate the transfer of technology for the use and benefit of the public.

Limited License to the University

As reasonably required for the limited purpose of continuing an institution's scheduled course offerings, the University retains for one year following the loss of a course instructor's services, a fully paid-up, royalty-free, nonexclusive license to use, copy, distribute, display, perform, and create derivative works of materials prepared by the instructor for use in teaching a course (including lectures, lecture notes, syllabi, study guides, bibliographies, visual aids, images, diagrams, multimedia presentations, examinations, web-ready content, and educational software).

Copyright and Related Rights

Ownership of Copyright

Ownership by Creator.

Subject to the Law on Copyright of the IP Code, University employees and students shall own the copyright in the academic works they create, except for academic works described below, or unless otherwise provided in a written agreement between the creator(s) and the University. As an agency of the government of the

Philippines, the University cannot hold copyright but serves its rights to require prior approval if its work is exploited for commercial purposes.

*Ownership by CSU***.**

The University shall own the copyright in the following works created by University employees or students, acting individually and jointly with others:

1. Works created by University employees acting within the scope of their employment;
2. Directed works;
3. Works specially ordered or commissioned by the University and for which the University has agreed, in writing, to specially compensate or provide other support to the creator(s);
4. Works created in connection with the administration of the University; and
5. Works created pursuant to a contract with an outside sponsor that provides University ownership of the copyright in the works.

Written Acknowledgment

The University and University employees and students shall execute necessary or desirable written instruments or agreements to evidence and protect ownership of copyright and copyright licenses consistent with these rules.

Copyright to Collaborative Works

Copyright to outputs of collaborative works by CSU with other institutions shall be governed by these rules and the stipulations in the agreement.

Determination of Authorship in Collaborative Efforts

Joint ownership resulting from contributions from different persons shall be determined as follows:

1. By stipulation in the research contract;
2. By application of the law on joint and/or sole ownership; and
3. Through dispute resolution arbitrated by the IP Unit Head of CSU.

Copyright in Student Thesis/Dissertation

A student shall own the copyright of his or her thesis/dissertation subject to any agreement with the University or external parties. The Student shall grant to the

University a royalty-free permission to reproduce, publish and publicly distribute copies of the thesis, in whatever form, electronic or otherwise.

Exclusions

Nothing in these rules shall be construed to preclude the University and employees and students from entering into written agreements governing the use, licensing, or sharing of licensing revenues with each other with respect to works, whether such works are owned by the University, employee, or students.

Terms and Conditions of Use of Institutional Works

The use of institutional works shall be governed by the following:

1. CSU users shall be covered by the undertaking to be executed by them prior to or during their employment or contract with CSU. They are automatically authorized to use CSU institutional works provided that the materials are properly cited and attributed.
2. Third part users shall be covered by a separate agreement including but not limited to the following terms and conditions:

The agreement applies both to the user requesting the use of the material and the employer or organization for whose programs the materials shall be used. The agreement takes effect once the works are obtained;

1. The user must agree to a processing fee and the terms of payment as specified in the agreement. Fees, as determined by CSU, shall include but not limited to service charge, production fee, processing and handling fee and shipping fee, if necessary;
2. All materials obtained from CSU are strictly limited to the listed restrictions in the agreement or others as specified by CSU;
3. The period of use of the materials shall be specified by CSU and shall be stipulated in the agreement. Renewals or extensions in the use of the works shall be at the sole discretion of CSU;
4. Agreement shall be terminated or cancelled upon failure to comply with the restriction specified in the agreement;
5. Media such as photos, graphics, and power point presentations can be copied, printed, or downloaded for purposes of integrating the assets into their own multimedia programs or for other research, educational or non-commercial purposes provided that they are properly attributed and cited. Copies of the programs shall be furnished to CSU for validation free of charge;
6. Any alteration in publications such as news articles, books, bulletin, reports and artistic and literary works are not allowed. However, alterations for the purpose of improving the clarity, enhancing color, and cropping to maximize space, may be allowed by the CSU; and

7. The publications may not be used to infringe the copyright of any individual or organization. Users must ensure that the works will not be used for any unlawful, obscene, defamatory, or libelous acts. The user is liable for any damage caused to CSU and may enforce payment of such damages under applicable laws.

Terms and Conditions of Use of Database or Information Systems

Databases or information systems which are unique forms of derivative works shall be governed by the following rules:

1. Prior approval from the CSU shall be required for any use of database or information system;
2. A user shall not extract or re-utilize a database or contents thereof without prior approval of CSU or the copyright owner;
3. The user shall not distribute copies of the database or contents thereof to third parties without authority from CSU; and
4. A user shall properly attribute or cite CSU or author when using the database or content thereof for communication to the public.

Credit and Copyright Notice

Any public display or distribution of media assets and databases requires the user to place a copyright notice, photo credit or any form of acknowledgment at the end of its work.

Confidentiality

Information that is proprietary or confidential in nature shall be covered by a confidentiality agreement before any use thereof by third parties.

Patents, Utility Models and Industrial Designs

Ownership

Subject to the law on patents, utility models and industrial designs as contained in Part II of the IP Code, ownership of patents, utility models, and industrial design shall be governed by the following rules:

1. CSU shall have ownership of patents, utility models and industrial design in any of the following instances:
   a. If commissioned by CSU;
   b. If provided for in the contract to generate an IP;
   c. If the inventor made the invention in the course of his contract with CSU;

d. If the invention is the result of the performance of the inventor's regularly assigned duties, unless there is an agreement, expressed or implied, to the contrary.

2. The CSU employees or all those covered by these rules, shall own the invention, utility model, or industrial design generated outside of his/her regular duties even if the employees use the time, facilities, and materials of CSU, subject to other existing laws, rules, and regulations on the use of government time, facilities, and materials.

3. The right of collaborators/external partners shall be based on the stipulations in the agreement between CSU and their partners.

Patentable Invention in a Student Thesis

If a student thesis/dissertation contains information on an invention that may be patentable, the thesis may be required to be withheld in accordance with the rules below:

1. The College/Department may withhold public access to the Student's Thesis / dissertation containing information on patentable invention until such time a patent application is filed by the CSU-IP Unit; and
2. If the CSU-IP Unit decides not to pursue a patent protection in accordance with Section 11, the thesis/dissertation may be released in accordance with the procedures adopted by the University.

Other Intellectual Property Rights

Suppletory Application of IP Laws and Rules

The IP Code and its implementing rules and regulations shall govern the following intellectual property rights:

1. Trademarks and service marks or trade names;
2. Geographic indications;
3. Layout designs (topographies) of integrated circuits;
4. Protection of undisclosed information. Proprietary information as defined in these rules falls under the category of other intellectual property rights.

Ownership

The ownership of the other intellectual property rights shall be determined by any of the following:

1. Laws;
2. Contract;
3. Employment; and
4. Any other legal document.

Royalties and Benefits

Royalty Sharing

Based on the IP Code and the Magna Carta for S&T workers, inventors shall receive a percentage of royalties and other benefits generated from their commercialized IPs subject to the following terms and conditions:

1. Royalties shall only be in the form of cash;
2. Gross royalties, which are royalties from commercialization of work under the appropriate agreement, shall go to the University until all expenses used for protection and exploitation of the IPRs have been reimbursed. Such expenses include fees associated with patent filing and copyright registration and any other continuing costs associated with licensing and other commercialization of the intellectual property;
3. Unless otherwise necessary to meet the CSU IP Policy, the net royalties, which are gross royalties less non-reimbursed University expenses for IPR protection, shall be allocated as follows:

    a. For the first one hundred thousand pesos (P100,000.00) of net royalties –

For CSU – owned IP	40% (Creator/Inventor)
	60% (CSU); and
For IPs owned by holders	
Assigned to CSU	60% (Creator/Inventor)
	40% (CSU)

    b. For the income in excess of one hundred thousand pesos (P100,000.00) –

For CSU – owned IP	20% (Creator/Inventor)
	80% (CSU); and
For IPs owned by holders	
Assigned to CSU	40% (Creator/Inventor)
	60% (CSU)

4. With prior approval of the Board of Regents and after review by the University VP for Research and Extension and University Legal Adviser and the CSU IP Committee, the allocation of royalties set forth herein may be adjusted for all creators/inventors.
5. The manner of payment of royalties shall be mutually agreed upon by the parties;

6. Percentage share from the royalties shall be collected from the proceeds of one (1) intellectual property. If there is more than one (1) related intellectual property license, the royalty shall be calculated for each and apportioned as stipulated in the contract. When there is more than one CSU inventor involved, there share shall be divided equally, unless there is a written agreement to the contrary;
7. The CSU inventor's personal share survives termination of affiliation with CSU and in the event of death, shall accrue to the inventor's heirs, assignees, or successors-in-interest, in accordance with existing laws.
8. Awards, prizes, honoraria and the like received by CSU inventors primarily as recognition for achievement in the generation of the intellectual property shall not be considered royalty.
9. Except as may be provided otherwise in a written agreement approved by the University, the rule on sharing of royalties shall not apply to intellectual property owned solely by the University, as in the case of work for hire and institutional projects.

Waiver in favor of CSU

In case of inability to locate the CSU inventor or his/her heirs within ten (10) years from the last publication of these notices in a newspaper of general circulation, his/her royalty percentage share including interest shall be deemed waived in favor of CSU.

Deferral of Payment

Where there is a reasonable basis for believing that the royalty amounts may be refunded, or that others may have claim to such amounts, the payment thereof shall be deferred until the matter is resolved.

Royalty Claims

Any person who has legal grounds for receiving any royalty, but who does not receive it, shall submit to the CSU-IP Unit a claim in writing, containing his/her legal basis and the evidence necessary to prove his claim. Other incomes derived from the research shall not be considered royalty.

Conflict Resolution

In case of conflict arising from any of the provision of these rules, the parties may agree to result to mediation to settle the dispute with the assistance of the CSU-IP Unit. The decision is appealable to the University President whose decision shall be final. If the parties are not amenable to mediation, the parties may avail any remedy provided for by existing laws, rules, and regulations.

Transitory Provisions

The party shall apply to existing agreements between CSU and any third party, with potential to generate intellectual property, subject to the conformity of the latter. If an existing agreement is renewed, revised or amended after the CSU policy takes effect, the amended or new agreement shall conform to the IP Policy and these rules, or shall automatically be under the operative provisions of this policy.

Effectivity

These rules shall be effective upon the approval of the RDE Operations Manual by the CSU Board of Regents.