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DEPARTMENT ADMINISTRATIVE ORDER
No. 2021 - 03

MAR 04 2021

**SUBJECT: REVISED GUIDELINES AND PROCEDURES IN THE
MANAGEMENT OF DENR RESEARCH, DEVELOPMENT AND
EXTENSION (RDE) SYSTEMS UNDER ITS RATIONALIZED
ORGANIZATIONAL STRUCTURE**

Pursuant to Executive Order (EO) No. 192 "Providing for the Reorganization of the Department of Environment, Energy and Natural Resources, Renaming it as the Department of Environment and Natural Resources (DENR), and for Other Purposes", EO No. 366 "Directing a Strategic Review of the Operations and Organizations of the Executive Branch and Providing Options and Incentives for Government Employees Who may be Affected by the Rationalization of the Functions and Agencies of the Executive Branch", and the approved Rationalization Plan of DENR, the following guidelines and procedures are hereby promulgated for the guidance and compliance of all concerned.

SECTION 1. Declaration of Policies

The State acknowledges that science and technology are essential for national development and progress; thus, the state shall give priority to research and development, invention, innovation and their utilization.

Towards this end and in consonance with the mandate of the DENR and its principal research arm, ERDB, it is hereby declared the policy of the Department to undertake research, development, and extension (RDE) activities for the sustainable management of the country's environment and natural resources (ENR) with a policy focus on ecological balance, ecosystems productivity, equity and social justice.

SECTION 2. Objectives

This Order has the following objectives:

- 1) To harmonize the research, development and extension (RDE) functions of the Ecosystems Research and Development Bureau (ERDB) with regard to the approved Rationalization Plan of DENR; and
- 2) To establish policy guidelines for the efficient and effective RDE management system.

SECTION 3. Scope and Coverage

This Order covers the following:

1. Management and operations of DENR ERDB RDE PAPs through its Main Office and Research Development and Extension Centers (RDECs);
2. Technical and administrative guidelines in the ENR RDE formulation, implementation, monitoring and evaluation of PAPs, technology transfer, and assessment of impacts and translating results into policies and guidelines;
3. Collaboration between ERDB and other DENR Bureaus and offices relative to the latter's needs for science-based information in the exercise of their mandates.

SECTION 4. Definition of Terms

As used in this DAO, the following definition of terms shall be adopted:

1. Assessment of Completed Projects (ACP) - an assessment of completed RDE PAPs within the year. It shall involve table evaluation, optional field/site validation and verification of project outcomes and recommendation of the appropriate preparation of terminal report and other courses of action as recommended by evaluators.
2. Research - an original or verificatory investigation undertaken to acquire new knowledge and is directed primarily towards a specific aim or objective to resolve a particular problem.
3. Basic Research - the experimental or theoretical work undertaken primarily to acquire new knowledge on the underlying foundations of phenomena and observable facts, with no particular application or use in view.
4. Canopy International – a semi-technical publication of ERDB which publishes highlights of RDE PAPs.
5. Clientele - a group of persons, organizations, institutions and entities that adopts, applies and utilizes information, technology, or benefits from research results economically, ecologically and socially. This includes all recipients of all information or technology, technical assistance, and other services provided by ERDB.
6. Dissemination of Packaged Technology - the process of bringing the packaged technology to the intended end-user through a selected medium (e.g. media, interpersonal and electronic)
7. Ecosystems Approach - pertains to holistic, integrated, and interdisciplinary undertakings in the formulation and implementation of RDE PAPs.

8. ENR Research, Development and Extension Framework - a document that spells out the general direction of RDE PAPs for the various ecosystems and natural resources.
9. Extension - pertains to all activities to achieve continuous presence, visibility and availability of technical assistance to priority clientele. This shall involve, apart from field visits, immersion work that will entail technical personnel to stay with priority clientele for a specific length of time to bring about technology use and adoption and the monitoring of process of utilization and outcome of activities.
10. Logical Framework (Logframe) – a tool for improving the planning, implementation, management, monitoring and evaluation, of projects. It is a way of structuring the main elements of a planned project and highlighting the logical linkages between them and communicating what the plan intends to accomplish in terms of its benefits, context, strategies, deliverables, and the means of achieving those. It provides criteria for success and describes the factors critical to the success of the plan.
11. National Agriculture and Resources Research and Development Network (NARRDN) - a research and development network established and managed by the Philippine Council for Agriculture, Aquatic, Forestry and Natural Resources Research and Development (PCAARRD) with the task of promoting coordination and linkages among agencies and institutions in agriculture, aquatic, forestry and natural resources sectors.
12. Packaged Technology – are information/products/processes/ services that have been put together or combined aiming to provide stakeholders with efficient and effective technologies for sustainable management of ENR and/or provide environment-friendly livelihood sources for target clients.
13. Policy Research – an inquiry into the nature and origins of problems that public policy aims to solve and identifying the causes of problems that policy might change.
14. Regional Research and Development Consortium – an organization instituted by PCAARRD that serves as a mechanism for joint planning, coordinating, monitoring, evaluating and sharing of resources of member agencies in conducting RDE activities at the regional level.
15. RDE Project Concept Proposal – an abridged concept document outlining the basic relevance, objectives, of a specific RDE project and the strategies on how activities shall be undertaken including the indicative budget.
16. RDE Project Full-blown Proposal - a document that comprehensively defines the rationale/significance of a proposed RDE project, conceptual framework, specifies its objectives and target outputs; determines scope and limitations based on an extensive review of literature, and lays out methodology within a specific time frame and the resources required to attain the objectives. An RDE project Full-blown proposal is usually attached with the corresponding Logical

Framework (Log frame), Work and Financial Plan (WFP), Travel Plan and Procurement Plan.

17. Research, Development and Extension (RDE) - an organized, systematic and scientific search for knowledge leading to an understanding of the relationship or integration of one component with the other components for the protection, rehabilitation, utilization and appropriate management of ecosystems and the transfer of knowledge through media and extension activities to the clientele.
18. RDE Program - constitutes a group of interrelated or complementing RDE projects on a multi-disciplinary approach to meet established goals within a specific time frame.
19. RDE Project - a component of a program to meet pre-determined objectives within a specific timeframe.
20. Sylvatrop – the technical journal of Philippine Ecosystems and Natural Resources.
21. Technology - a product, process, information or service that when utilized contributes towards the enhancement of the productivity, generation of income and protection of general welfare of specific group of individuals.
22. Technology Commercialization - the licensing, sale, application and utilization of research results and technologies by an enterprise or industry and deriving benefits therefrom.
23. Technology Dissemination – the promotion of ENR technologies to big group of clients including the general public using the appropriate and efficient mass media or other efficient communication strategies.
24. Technology Generation - the process of conducting research and communicating results with the primary aim of solving specific problems previously identified.
25. Technology Transfer – the process of communicating the outputs of research in the form of technologies (information/products/processes/services) from the technology generator to the target clients/end-users using appropriate media, interpersonal methods, and other strategies.

SECTION 5. Institutional Arrangements

5.1 ERDB Organizational Structure and Functions

- 5.1.1 ERDB's organizational structure (Annex 1) shall be composed of the Office of the Director, Planning and Information and Communications Technology Division (PICTD), the Technical Divisions [Forest Ecosystem Research Division (FERD), Coastal Zone and Freshwater Ecosystems Research Division (CZFERD) and Urban Ecosystem

Research Division (UERD)], the Service Divisions [Laboratory and Experimental Services Division (LESD) and Technology Transfer Division (TTD)], the Administrative, Financial and Management Division (AFMD) and the Research Centers [Watershed and Water Resources RDE Center (WWRRDEC), Urban and Biodiversity RDE Center (UBRDEC), Coastal Resources and Ecotourism RDE Center (CRERDEC), Forest and Wetland RDE Center (FWRDEC), Agroforestry RDE Center (ARDEC), and Toxic and Hazardous Wastes RDE Center (THWRDEC)] (The illustration of the functional relationships among Technical and Service Divisions and RDECs is shown in Annex 2).

- 5.1.2 ERDB is the research agency of DENR and shall be responsible for the formulation, prioritization, implementation, coordination, monitoring and evaluation of all RDE PAPs, and other cross-cutting concerns to address the needs of various sectors in support of the DENR thrusts and programs.
- 5.1.3 ERDB shall conduct basic and applied researches and develop standards and protocols to address the needs of the different DENR Bureaus, end-users and stakeholders.
- 5.1.4 ERDB shall develop, maintain and enhance networks and linkages with other DENR Bureaus and offices, local and international institutions, other stakeholders and civil society groups; provide technical assistance to the same and perform other functions that may be assigned by higher authorities.
- 5.1.5 ERDB shall provide technical assistance to its clientele to provide knowledge, techniques, methodologies, guidance, or any combination thereof. Technical assistance may include, but not limited to: attending to simple queries of walk-in clients; deployment in the field in the conduct of scientific investigation; technology briefings; conduct of capability building activity and enhancement activities; provision of technical inputs to policies, programs and projects; and provision of expertise on ENR wide long-term engagements.
- 5.1.6 ERDB shall represent DENR in the National Agriculture and Resources Research and Development Network (NARRDN) and may serve as member in the Regional Research and Development Consortia that are recognized by the Regional Development Councils.

5.2 Planning and Information and Communications Technology Division (PICTD)

- 5.2.1 PICTD shall coordinate and facilitate the formulation of ERDB's long-term, medium-term, and annual RDE plans and programs, and provides support/assistance with respect to the Bureau's planning, monitoring and evaluation functions.

- 5.2.2 PICTD shall exercise the overall planning functions on ENR RDE which include, but not limited to, budget planning and programming, monitoring and evaluation, and statistical concerns.
- 5.2.3 PICTD shall ensure a smooth and speedy review of proposals and terminal reports and in coordination with the technical and service divisions, conduct a monitoring and evaluation of programs/projects and activities of the Bureau.
- 5.2.4 PICTD shall facilitate the integration of research results for translation into policy or inputs to development plans that would provide science-based knowledge in the management of environment.
- 5.2.5 PICTD shall continuously develop and maintain Research Information Systems (RIS) on RDE and related operations and shall develop links with DENR Central Office thru Knowledge and Information Systems Service (KISS), other bureaus and offices and other relevant agencies of the government to facilitate efficient flow of information and communication.
- 5.2.6 PICTD shall be the repository of all information concerning programs and projects and special studies i.e. from submission to the evaluation/revision process until its approval and implementation and all the changes that transpired from conception to completion.
- 5.2.7 PICTD shall provide secretariat services during ExeCom and ETRC meetings including management conference.

5.3 The ERDB Technical and Service Divisions

- 5.3.1 The Technical Divisions or TDs (FERD, UERD and CZFERD) shall formulate, coordinate and monitor RDE Programs on ecosystems under their respective concerns, the implementation of which shall be spearheaded by RDECs and coordinated with external stakeholders.
- 5.3.2 TDs shall conduct policy research in collaboration with the concerned bureaus and serve as clearinghouse for all research outputs by concerned RDECs for possible translation into technology innovation or policy recommendation for consideration by the Secretary and adoption of the bureau concerned.
- 5.3.3 LESD shall be in charge of coordination and monitoring the provision of laboratory services being performed by RDECs and collaborating with other national and international institutions as regards technological research on ecosystems and natural resources.
- 5.3.4 LESD shall perform laboratory services that could not be provided by RDECs including, but not limited to DNA assay analysis/fingerprinting

and tissue culture which are used for the propagation of forest plant species.

- 5.3.5 LESD shall also serve as the repository of plant and wildlife specimen, including quality seeds (gene banks), mycorrhiza and shall be in charge of developing seed germination and mycorrhizal protocols of indigenous forest trees.
- 5.3.6 The Technology Transfer Division (TTD) shall monitor and evaluate the technology transfer and extension activities of RDECs, translate research outputs into viable technologies that could be disseminated for improved ENR Management through public-private sector engagement as well as to determine the proper resource mobilization for the purpose.
- 5.3.7 The ERDB-MO Division Chiefs exercise supervision in the conduct, internal monitoring and reporting of the status of projects and activities under their areas of concern.

5.4 Administrative and Financial Management Division

- 5.4.1 AFMD shall manage the overall administrative and financial affairs of the Bureau in support to RDE operations. Its responsibilities shall include setting the budget, dealing with purchases, disbursing salaries, providing means of transportation, and making and maintaining contracts of agreements pertaining to maintenance, lease, water, power, cleaning equipment, facilities, and security and safety.
- 5.4.2 ERDB, thru AFMD, shall pursue capacity enhancement initiatives for further development of the Bureau's core skills and capabilities in order to build its effectiveness and sustainability. It may collaborate with the academe and other research institutions locally and internationally, on graduate programs, advanced studies, training courses, and similar capacity building activities.
- 5.4.3 Capacity enhancement shall focus on human resources development to improve the expertise and skills of employees through training and career development; and organizational and institutional development to strengthen the Bureau's capacity to achieve its goals and mission and create larger impact through strategic partnerships and linkages with other institutions and communities.
- 5.4.4 ERDB, through AFMD, shall develop a system of awards and merits for its employees. The system shall include provision of recognition and incentives to creative technology generators, developer of breakthroughs and noteworthy milestones, effective extension agents, and employees performing exemplary deeds and uplifting the cause of the Bureau and the DENR.

- 5.4.5 ERDB shall provide reward and recognition to administrative and support staff contributing significantly to the Bureau's RDE accomplishment. Likewise, recognition shall be given to other DENR employees, partners, cooperators, and clients performing worthy deeds in support to the ENR-RDE.
- 5.4.6 AFMD shall participate in different RDE related committees as needed, and provide financial and administrative statistics to the Bureau and the DENR.
- 5.4.7 An Administrative and Financial Focal Person shall be designated in each RDEC to support the AFMD functions.

5.5 The Research, Development and Extension Centers (RDECs)

- 5.5.1 The Research, Development and Extension Centers (RDECs) namely: (1) WWRDEC which covers CAR and Regions 1-3 has its main office located in Baguio City; (2) UBRDEC composing of Regions 4A, 4B and 5 is stationed in Pagbilao, Quezon; (3) THWRDEC covers the whole National Capital Region (NCR) and is located in Quezon City; (4) CRERDEC which includes Regions 6, 7 and 8 has its main office situated in Cebu City; (5) FWRDEC comprising of Regions 9, 10 and 13 has its office located in Bislig, Surigao del Sur; and (6) ARDEC consisting of Regions 11 and 12 is in Davao City.
- 5.5.2 RDECs shall primarily undertake RDE activities under their respective concerns as "areas of excellence" and related cross-cutting concerns that shall strengthen RDE systems and processes by addressing focused critical ENR concerns in support of pursuing a cohesive management approach.
- 5.5.3 RDECs shall perform basic researches and shall ensure the continuation and sustainability of research operations and management of existing experimental forests, demonstration areas, field laboratories and pilot areas within their areas of responsibilities.
- 5.5.4 RDECs shall implement applied researches and conduct technology transfer activities within their areas of jurisdiction in coordination with ERDB-MO and regional offices.
- 5.5.5 RDECs shall maintain demonstration areas to showcase generated ENR technologies.

5.6 The ERDB Executive Committee (ExeCom)

- 5.6.1 The ExeCom shall be composed of the Director as Chair, the Assistant Director, the ERDB Main Office (ERDB-MO) Division Chiefs, RDEC Heads, and the Bureau Employees Association (ERDB-EA) President

as members. The Legal Officer shall provide support to the ExeComon legal matters and related concerns, including the development of policy recommendations generated from RDE programs, activities and projects.

- 5.6.2 The ExeCom shall be the central advisory and policy-making body of ERDB. It shall exercise overall planning, organizing, staffing, directing and controlling of DENR's RDE Management System.
- 5.6.3 The ExeCom shall be primarily responsible for setting the direction, review and updating of the Bureau's RDE Agenda/Framework that shall be embodied in Programs, Activities and Projects (PAPs) in line with the national and regional development thrusts and goals. Such review and updating shall be in close coordination and consultation with the clientele.
- 5.6.4 The ExeCom shall exercise authority in the conduct, revision, continuation or otherwise, termination of approved RDE PAPs and the final review of the suitability of research outputs for extension and for other uses.
- 5.6.5 The ExeCom shall meet in a Management Conference (ManCon) at least once every quarter of the year to discuss issues including but not limited to, the wider and long-term RDE management matters. Representatives from various DENR Bureaus and offices may be invited during the ManCon for consultation and review of the RDE concerns of the Department. The Director may call for special meetings on urgent management matters and issues.

5.7 The ERDB Technical Review Committees (ETRCs)

ETRCs shall be composed of subject matter specialists from the ERDB Main Office and shall be principally in charge of the technical evaluation of RDE project proposals, and terminal reports. ETRC Chairs, through the technical divisions as clearinghouse, shall recommend to the ExeCom appropriate courses of action based on the results of their evaluation.

5.8 Research Coordination

- 5.8.1 ERDB, thru PICTD, shall coordinate and consult with other DENR Bureaus and offices to facilitate the integration of science-based information to the policies, plans and programs of DENR. It may enter into agreement with local government units (LGUs), other government agencies, academe, people's organizations, non-government organizations and other lawful entities relative to the conduct of research and extension of results to the clientele.

- 5.8.2 Research needs of other DENR Bureaus and offices, including, but not limited to science-based support to plans and programs, regulations and monitoring and evaluation shall be coordinated with ERDB thru PICTD. PICTD shall continuously develop and update its database to assess the availability of similar or related researches already conducted, the appropriate experimental or sampling designs, data gathering schemes, methods of analysis and the expected outputs/outcomes.
- 5.8.3 In case that research needs of other DENR Bureaus and offices require highly specialized expertise, methods, equipment, computer programs and the like, ERDB shall assist the concerned bureau or office in the evaluation of such needs. It shall recommend to DENR Management the involvement of external experts and consultancy groups for assistance.
- 5.8.4 Whenever external experts are authorized to assist in the conduct of research, said experts shall update ERDB of the progress of their research work quarterly through the concerned bureau/office. ERDB and the concerned bureau/office shall collaborate relative to the acceptance of the research completion report and other outputs of the hired external experts.
- 5.8.5 Gender and Development (GAD) concerns shall be mainstreamed into RDE PAPs from conceptualization, review, implementation, monitoring and evaluation and post evaluation. Appropriate gender analysis tools shall be adopted in determining the gender-responsiveness of the Bureau and its PAPs.

SECTION 6. Formulation, Implementation and Management of RDE PAPs

- 6.1 ERDB shall adopt the ecosystems approach in the management, formulation, implementation, monitoring and evaluation of ENR RDE PAPs. As such, it shall consider the ecosystem components (e.g. human activities, habitats and species, genetics and physical and biological processes), ecosystem functions and ecosystem services and the participation of stakeholders in the RDE cycle.
- 6.2 The ENR RDE Framework/Agenda shall be the principal guide in ERDB's RDE management. It shall include identified priority programs on ecosystems (forest, urban and coastal) and other cross-cutting concerns.
- 6.3 The ENR RDE Framework/Agenda shall be assessed and updated every six (6) years or whenever DENR and ERDB management deem it necessary in consultation with the other DENR Bureaus and Offices and other stakeholders.

- 6.4 ERDB shall conduct periodic strategic planning for research management, develop and review RDE PAPs Roadmaps and perform strategic RDE PAPs development and similar activities.

SECTION 7. The ENR RDE Management

The ENR RDE Management of RDE PAPs shall involve three (3) major phases: Phase I – RDE PAPs Proposal Preparation and Review (Annex 3); Phase II – RDE PAPs Implementation, Monitoring and Evaluation (Annex 4) and Phase III - Technology Transfer and Extension (Annex 5). Subject to agreements agreed upon, these phases shall also apply to externally funded RDE projects conducted by the Bureau.

- 7.1 Phase I shall involve the identification, and review of ENR policy and management directions and issues and problems that can be addressed with RDE, preparation of RDE PAPs proposals, clearing by the concerned Technical Division(s), technical review by ETRC, approval by the ExeCom for implementation, funding and preparation and conduct of other arrangements for RDE PAPs implementation for technology generation.
- 7.2 Phase II includes the implementation of approved RDE PAPs proposals, monitoring and evaluation, periodic preparation and submission of progress reports up until the preparation of completion reports (CRs), drafting of inputs related policy instrument(s) and preparation of IEC materials for dissemination or publication out of the completed PAPs.
- 7.3 Phase III technology assessment; packaging of technology; dissemination; establishment of demonstration areas; preparation of draft policy whenever applicable; patent application of ERDB patent, technology spin-off and commercialization by authorized entity whenever feasible and technology impact evaluation.

SECTION 8. Funding of RDE PAPs

In addition to funds from General Appropriations and subject to existing rules and regulations, ERDB may source out RDE-PAPs funding requirements from local and foreign funding institutions including other DENR bureaus and offices requesting specific researches. Subject to the Technology Transfer Act and the Intellectual Property Code of the Philippines, ERDB must ascertain the assignment of Intellectual Property Rights and possible royalty arrangements before any external funding is finalized.

SECTION 9. Development of Manuals

After the approval of this DAO, ERDB shall develop the following manuals articulating specific standard procedures and the required templates to ensure the effective and efficient conceptualization, generation, monitoring and evaluation, transfer and impact assessment of ENR technologies.

1. RDE Project Preparation and Implementation Manual
2. Monitoring and Evaluation Manual
3. Policy Formulation Manual
4. Management Information Systems Manual
5. Technology Transfer and Extension Manual
6. Administrative, Financial and Management Manual

ERDB shall periodically review and update such manuals and may develop other related manuals and handbooks as necessary.

SECTION 10. Issuance of Technical Bulletins

ERDB may issue technical bulletins in support of this Order for the guidance of all concerned at ERDB-MO and RDECs.

SECTION 11. Separability Clause



Should any of the provisions of this Order be subsequently declared invalid or null and void, the validity of the other provisions not affected shall not be impaired and shall remain to be in full force and effect.

SECTION 12. Repealing Clause

This DAO repeals DENR DAO 96-27 (Amending Department Administrative Order No. 44 Series of 1990) and all orders, circulars, memoranda and other issuances inconsistent herewith are hereby repealed and/or modified accordingly.

SECTION 13. Effectivity

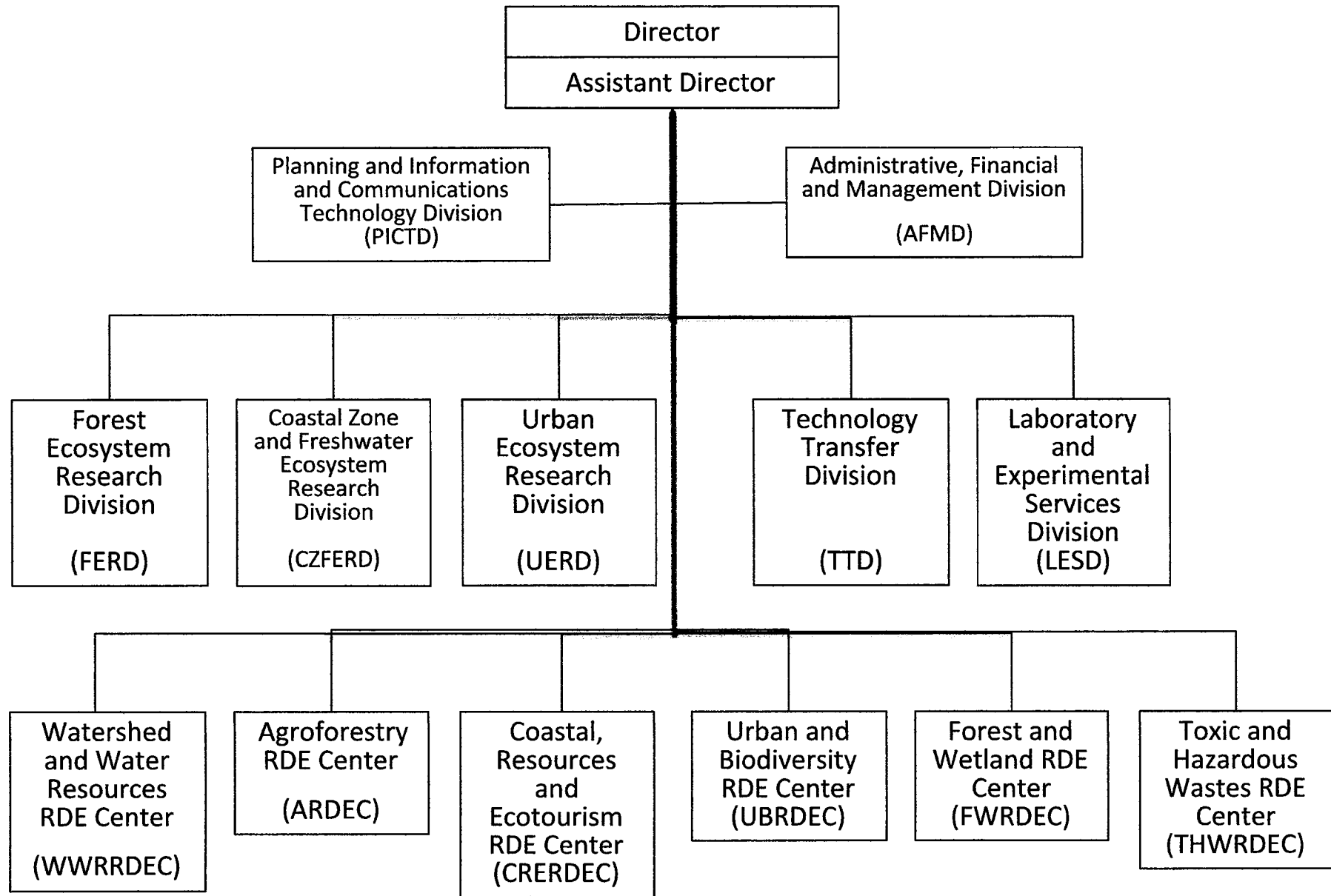
This Order shall take effect fifteen (15) days after its publication in a newspaper of general circulation and its registration with the Office of the National Administrative Register (ONAR).


ROY A. CIMATU
Secretary 

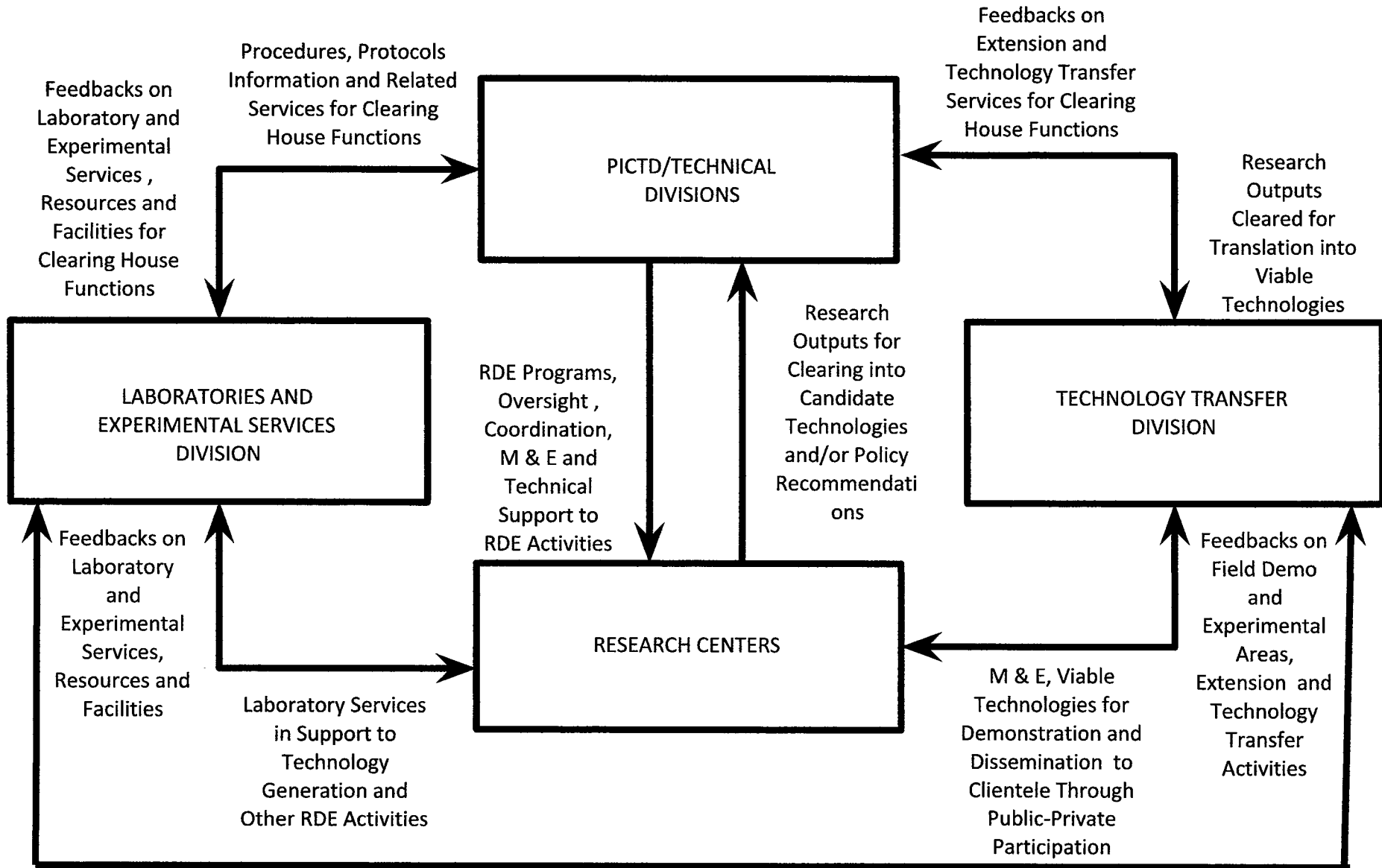
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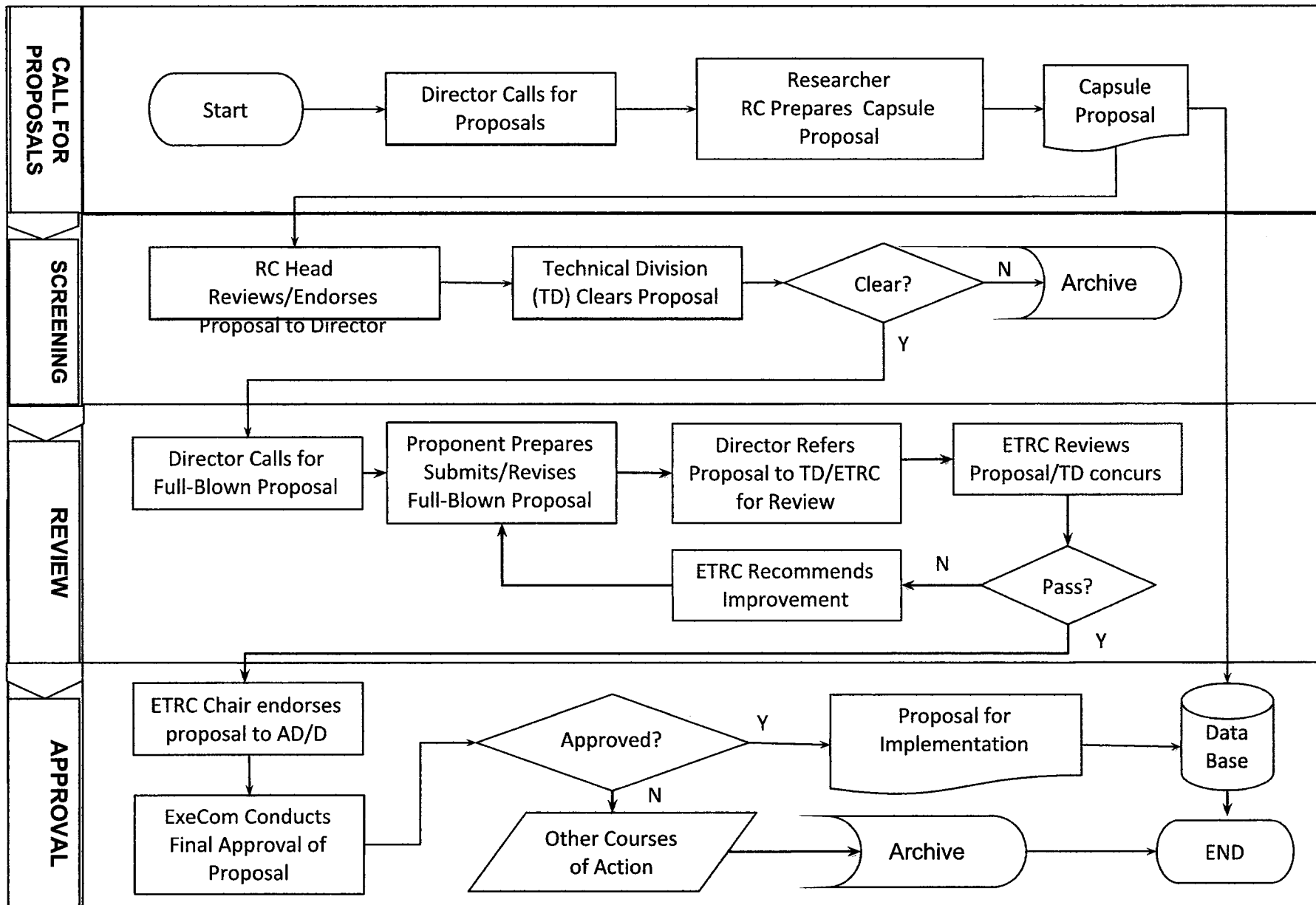




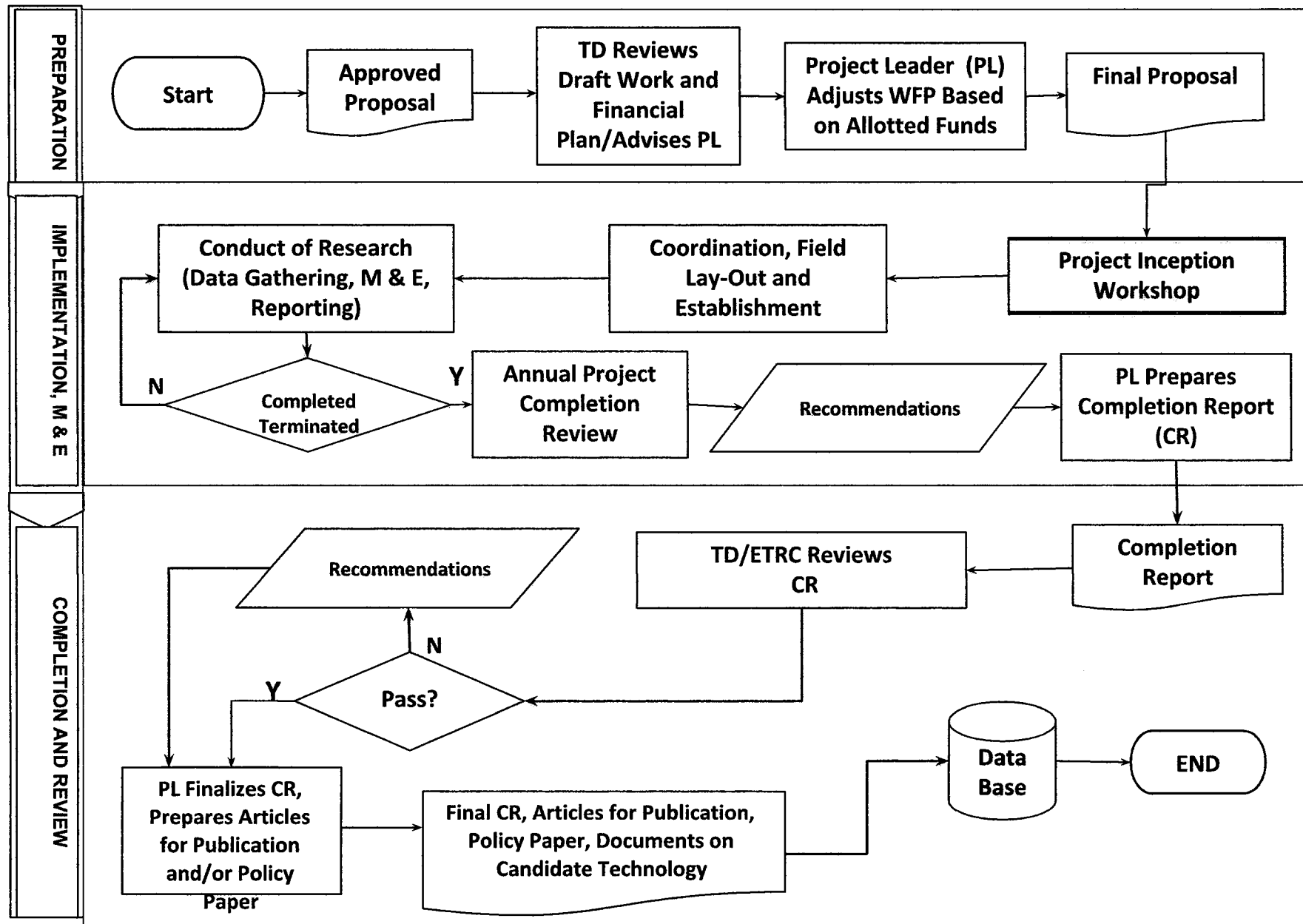
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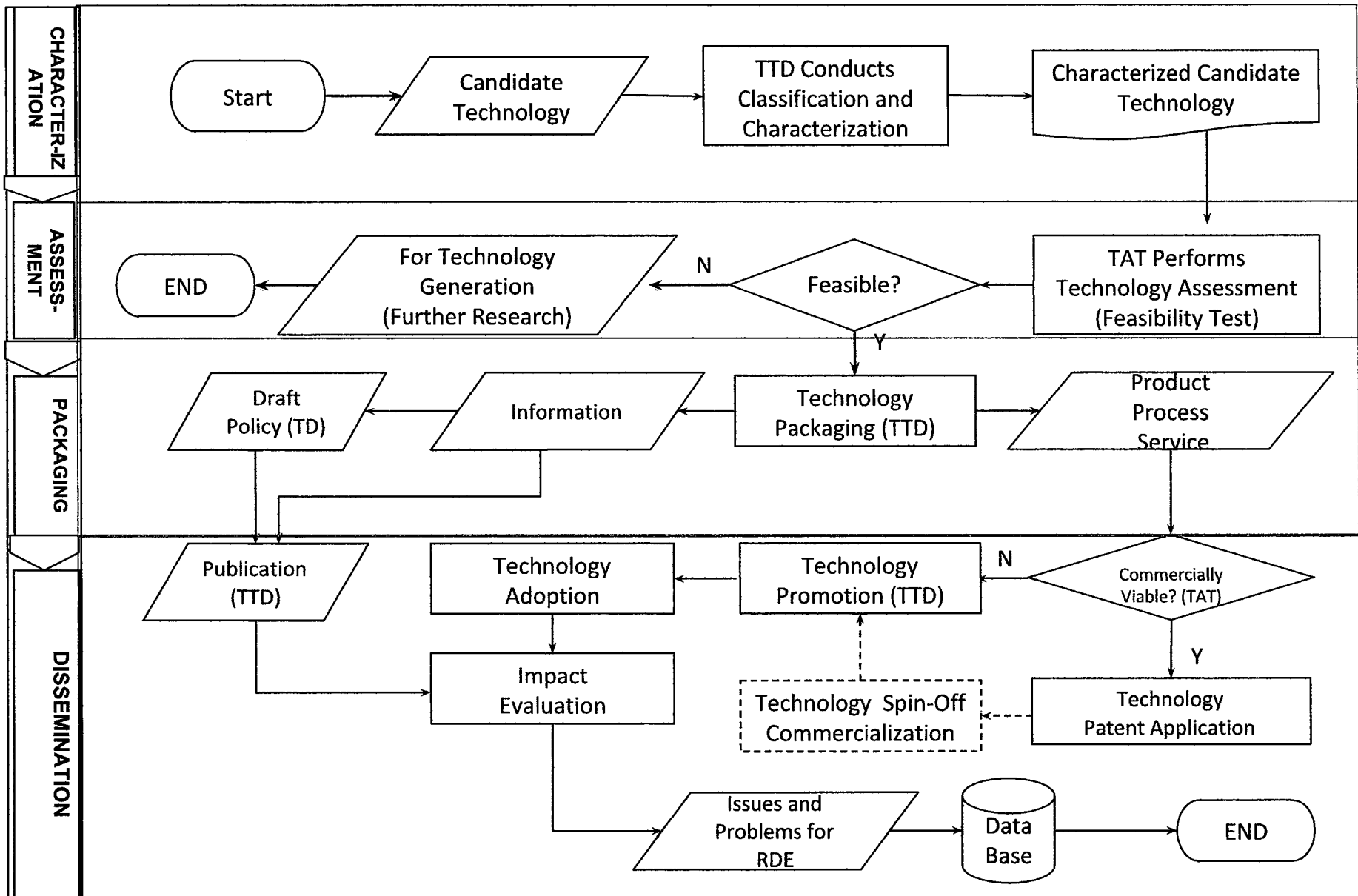
Functional relationships among ERDB divisions and RDECs



Preparation and review of RDE PAPs proposal flowchart



ENR-RDE project implementation flowchart



ENR technology transfer flowchart