

## Guide to External RSCAD Success at K-State Polytechnic

### RSCAD = Research, Scholarship, Creative Activity and Discovery

RSCAD takes many forms, from the relatively simple to the very complex. For those new to the process it is probably best to tackle a simple project at first or, if it must be more complex, partner with someone more experienced. If you're not sure who that more experienced person or group could be please let your administrative leadership team know and we will help you in making those connections. The attached flow-chart is designed to help you through the necessary administrative process stages of external engagement on our campus.

The simplest forms of external engagement don't require formal university processes at all, although it is wise to coordinate with your supervisor and keep them informed. Conversations with companies/organizations and attending meetings usually do not require prior approval and they are definitely forms of RSCAD that could lead to more complex involvement. The general guideline is that when time, material, or financial commitments from K-State are being considered, then it is time to engage the formal process so that the project proceeds without delay or miscommunication.

There is an important university concept to keep in mind as you embark on this pathway. As the project initiator at K-State, you are automatically considered to be the project PI or Principal Investigator unless someone else agrees to assume that role. This is true even if the project has an overall PI at another organization or institution; you will be the PI or technical collaborator from the K-State perspective. The PI is an important role that holds the responsibility for the project completion, including compliance issues, meeting deadlines, project management duties (delegation, meeting management, schedule and budget tracking, etc.) project reporting, and more. This is the standard practice at Carnegie Research-1 universities, like KSU. While there is plenty of administrative support for those in this role, the final responsibility for project success at K-State rests with the PI.

Once you and your supervisor decide this is a direction you will pursue, there are a series of steps that need to be completed. As the PI for your project, the first step is to make a Project Plan. This internal project plan helps relevant people on campus to understand the intended outcomes, impacts, who will be involved, and in what capacity. It doesn't need to be a long or complex document, but it should be complete enough to be circulated among the administrative leadership team for discussion and awareness. The purpose of this plan is to eliminate confusion and ambiguity as to what is expected from each person involved. In general this plan should include the following:

External Parties involved:

Designated Lead/PI plus other KSU faculty/staff involved:

Anticipated Timeline:

Expected outcomes:

Impact on routine operations:

Anticipated Resources Required:

Project Significance:

Signatures of supervisor and Dean:

The next step depends on whether you will need to acquire support through a competitive proposal (a longer process) or a direct contract with an outside agency. If this is a direct project, please contact the Associate Dean of Research to guide you through the contracting process. You and the Associate Dean will work with the Pre-Awards Department to complete the discussions, documents and other requirements that culminate in a contract.

If you are not sure where the funding would come from for this project, please engage with the campus grant specialist to identify potential opportunities and outline a timeline of activity. The process is similar if you are responding to a request for proposals (RFP), except that you will already know the agency requirements and deadline. In either case the PI's responsibilities are to

1. Follow the instructions in the RFP to the letter,
2. Build a working relationship with the appropriate contact at the agency sponsor, and
3. Allow adequate time for writing, review and signatures.

The budget is often the most mysterious part of the proposal submission process for potential PIs, however there are good templates available to help make this task much easier. The grant specialist can connect you with appropriate resources, help get costs into the correct categories, and walk the draft through the pre-award review process.

While there are resources to assist with the sponsored project process at Polytechnic, the pre-award office in Manhattan (part of the Office of Research and Sponsored Programs) is the official unit at K-State that processes external proposals and contracts with sponsors. Once your proposal or contract is complete, they are the ones who make sure that all of your sponsor's protocols are followed and that timelines are met. Please keep the Pre-Award office advised of deadlines and allow 1 – 2 weeks (depending on complexity) for them to complete their pre-submission review. In rare cases they can expedite this process, but that is not the norm and often comes at the cost of their usual meticulous review.

Before you get too far into the proposal development or contracting process it is important to ensure that your research training is complete and current. There are three main training requirements that all researchers must complete:

1. ITAR/Export Controls Training,
2. Responsible Conduct of Research, and
3. Human Subjects research training (if your project involves collecting research from human subjects in any way -- including surveys).

Other training requirements may also be required, depending on your project parameters. All of the researcher training certifications expire every three years. If you are unsure of your training status, you can email [comply@ksu.edu](mailto:comply@ksu.edu) to find out.

If your project involves sensitive or secret information (known as “controlled information”), an Export Controls Plan (ECP) may be needed which will need to be approved by, and kept on file with the Office of Research and Sponsored Programs. Templates and examples for ECPs are available; please contact the Associate Dean of Research for more information if you suspect that this applies to your project.

We hope this information will be helpful as you seek to become a more engaged faculty member. Please contact me with any questions you may have.

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***The following material has been previously distributed and is a guide for those new to the concept of RSCAD in light of faculty expectations (depending on assignment).***

RSCAD – Research, Scholarship, Creative Activity and Discovery.

This brief guide is written for those who would like to become active, or more active in RSCAD but are not sure exactly how to proceed.

It is important for the reader to gain an understanding of what the research focus areas are both on our campus and the Manhattan campus. To engage in RSCAD, it is not absolutely necessary for you to engage in these areas, however doing so will lead to greater collaborative potential and opportunities to succeed more quickly at K-State. Both the Associate Dean for Research on the Polytechnic campus and any of the research development officers on the Manhattan campus (Office of Research and Sponsored Programs) can help you become familiar with these strengths at K-State.

While recognizing that the scope of RSCAD at K-State is broad and encompasses a range of endeavors, this discussion focuses primarily on traditional peer-reviewed scholarship that is relevant to most of the disciplines found on the Polytechnic campus.

Please note that significant scholarship and creative activity can fall outside the traditional view of peer-reviewed setting; some examples might be publishing or performing a creative work or undertaking a creative service-related project. That form of scholarship however can vary widely in its form, so it is up to individual academic units and the associated leadership team to determine what is acceptable in terms of RSDAD in those cases.

It is important here to draw a distinction between the different forms of activities identified in the acronym RSCAD. Basically, Research is the discovery of new knowledge or information through accepted scholarly methods of inquiry that involve the collection of quantitative, qualitative, or archival data and the ensuing analysis and interpretation of that data which is aimed at broader generalization. Research can be “basic” or “applied”. Basic research is discovery purely for the sake of pushing the limits of what

is known while applied research is undertaken usually to solve a particular problem or as a part of a broader project. Scholarship usually consists of the support activities necessary to facilitate or promote research such as grant applications and management as well as dissemination activities such as publishing and then presenting the results. Creative Activity is considered to be the assemblage and presentation of either previously discovered knowledge or talent and presented for a larger audience. Discovery is an underlying theme across each of the previous categories whereby the unknown becomes known to a broader group of people.

Traditional scholarship most often takes the form of research (and the related funding applications required to support that research), publication in peer-reviewed journals, or invited publication in prominent broader-interest venues that are controlled by an editorial review board or process. Often those publications serve as the basis for conference paper presentations, panel discussions, and invited lectures.

These activities are often one of the most prominent and distinguishing features of a successful academic career and should serve to enhance, enrich, and invigorate a faculty member's performance in the classroom, not detract from it. Good teaching and RSCAD must work together to appropriately challenge students in an academic degree program.

At the heart of good scholarship is a deep and innate desire to make a lasting contribution to knowledge and advancement in your focus area. At its pinnacle, this will often result in being widely known and sought as a person of influence within a chosen field. This recognized expertise is only gained through countless hours of personal time and expense invested over many years. However, it can be very rewarding to become a "discoverer" of knowledge in your area, rather than merely a consumer or purveyor of knowledge. If this is your goal, the following steps may provide some guidance.

#### **Having the appropriate skills.**

While a terminal degree in a given field certainly enhances the visibility of a scholarly work, and in some cases perhaps the chances of being published as a primary author, it is not a requirement in many application-centered publications. What IS necessary is that you are familiar with the methods of scientific inquiry and reporting results that are relevant to your field. In addition to subject matter expertise, an adequate skill set includes descriptive and inferential statistics and research methods. It is essential that a good researcher learn how to translate ideas into an appropriate and repeatable format, and can analyze and interpret the results obtained from it.

#### **Connecting your ideas**

One of the most important factors at the outset of a scholarly initiative is to understand that you MUST connect your thoughts and ideas to the larger discussion and body of literature in your area. Answering questions that no one is asking will most likely result in scholarly frustration and ultimate failure. Relevant journals, periodicals, conferences and seminars or even discussion boards and blogs are all places where current problems are discussed, ideas are formulated/challenged, and progress is made.

It is helpful at this point to become familiar with relevant journals in your field. This is to learn what the current problems are, and also the format, flows, quality, and writing styles that are acceptable in the area in which you will focus. Examples of quality journals relevant to some disciplines on the Polytechnic campus include:

<http://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=9754>

<http://www.journals.elsevier.com/journal-of-air-transport-management/>

<http://www.onefpa.org/journal/Pages/default.aspx>

It is well worth the time at the outset of your effort to subscribe to (or acquire copies of) relevant journals and spend ample time reading and studying the articles. This should happen well in advance of when you intend to make your scholarly entry into that field. The K-State library system provides access to a vast array of databases of peer-reviewed and non-peer-reviewed publications with just a few clicks: <http://www.salina.k-state.edu/library/index.html>

### **Relationship Building**

The time, energy and travel invested in building key relationships may be the important factors in your RSCAD success. These relationships are helpful to connect with researchers already working on funded projects in your field who may have opportunities for collaboration or may know of others with appropriate opportunities.

For Federally funded projects, it is well worth the time to make contact with program managers who manage their agency research budgets. Program Officers are employed at the larger government research facilities such as NSF, USDA, the FAA (i.e. the Tech Center in New Jersey), Army Research Labs, Navy Research Labs, the Air Force Research Labs. Although meeting in person is excellent if possible, most contacts are made through email or phone calls. Program Officers can share information about current funding priorities, where the research dollars are being channeled, what contract vehicles are available and which opportunities are open or soon will be. Program managers can also connect you to others who may have funding, are looking for a collaborator, or may wish to put you on an upcoming project as a principal investigator (PI) or co-PI.

Traveling to conferences and building relationships with commercial vendors and contractors can also prove helpful; socializing after hours at official gatherings will often yield great potential. Be willing to start with a small, even pro-bono project if the commitment is manageable. This will allow you the opportunity to prove your ability to deliver a quality product on-time. The Polytechnic Associate Dean of Research can help you identify how best to structure contract opportunities with the private or public sector once an opportunity is identified. A small investment in travel is something any new researcher should prioritize.

### **Mentoring**

Mentoring can be particularly helpful at the outset of a scholarly career but can occur whenever a faculty wishes to become more active in scholarship. Mentorship is certainly not required and certain

faculty might become successful without mentoring, but it can add significant depth, dimension, and richness to the scholar who wishes to expand his or her horizons.

Should you choose this route and you are already well-versed in the literature and proceedings of your scholarly field, it is important to choose a potential mentor who can provide you with some guidance and open doors for you. A full blown mentoring program has the components of both accountability and expected outputs, so be prepared for that process. It is often helpful to team with a more experienced scholar in your area (and this is expected in many areas of science) on an article or two before embarking on an effort of your own.

The mentor should be a person whose work is well-respected in the field and one who has the time and desire to help others; good mentoring can be hard work. Typically later-career researchers have the perspective of years which helps them appreciate the value of developing lesser experienced researchers. Should you desire to find someone who can help you develop your scholarship, the Polytechnic Associate Dean of Research will gladly help you find an appropriate mentor. Often a suitable mentor will be a researcher from another institution or organization who might be connected through a common national or international association or other organization.

A formal mentoring program should include an individual scholarship development plan as one of the elements. This is a personal document that takes inventory of your current skills and abilities, your desired direction, and outlines appropriate steps to help you arrive at your scholarly goals. Here is a sample scholarship development plan:

#### **Scholarship Development Plan for Faculty**

Individual Scholarship Development Plans (ISDPs) is a planning document that identifies both professional development needs and career objectives. Furthermore, ISDPs serve as a communication tool between individuals, their mentors, and administration. An ISDP can be considered one component of a broader mentoring program, and should be instituted in all units that host faculty with research and scholarly expectations.

Expertise and Research focus areas- This is the starting point for an ISDP; not having this identified will only lead to frustration. This section serves as the overarching framework and focus for each individual faculty and will drive the rest of the document and thought process.

#### **Establish goals**

Faculty need to identify:

- Long-term career options they wish to pursue and the necessary tools to meet these; and
- Short-term needs to improve current performance.

#### **Benefits**

Once developed, faculty will have an identified process to assist in developing long-term goals that focus on scholarly efforts and activities. Short-term goals provide a clearer sense of expectations and help identify milestones along the way to achieving specific objectives. The ISDP also provides a tool for communication between the faculty mentee and a faculty mentor.

#### **Outline of ISDP Process**

The development, implementation and revision of the ISDP requires a series of steps to be conducted by the faculty and the mentor. These steps are an interactive effort, and so both the faculty and the mentor must participate fully in the process.

#### **BASIC STEPS**

##### *For Faculty*

**Step 1:** Conduct a self-assessment

**Step 2:** Survey opportunities with mentor

**Step 3:** Write an ISDP, share ISDP with mentor and revise

**Step 4:** Implement the plan

**Step 5:** Revise the ISDP as needed

##### *For Mentors*

**Step 1:** Become familiar with available opportunities

**Step 2:** Discuss opportunities with faculty mentee

**Step 3:** Review ISDP and help revise

**Step 4:** Establish regular review of progress and help revise the ISDP as needed

#### **Execution of the ISDP Process**

##### *For Faculty:*

#### **Step 1. Conduct a Self-Assessment.**

-Assess your skills, strengths and areas which need development. Formal assessment tools can be helpful. (Examples can be found in Resources: Self-Assessment at the end of this document).

-Take a realistic look at your current abilities. This is a critical part of career planning. Ask your peers, mentors, family and friends what they see as your strengths and your development needs.

-Outline your long-term career objectives. Ask yourself:

-What type of work would I like to be doing?

-Where would I like to be in an organization?

-What is important to me in a career?

**Step 2. Survey Opportunities with Mentor.**

-Identify career opportunities and select from those that interest you.

-Identify developmental needs by comparing current skills and strengths with those needed for your chosen scholarly path.

-Prioritize your developmental areas and discuss with your mentor how these should be addressed.

**Step 3. Write an ISDP.**

The ISDP maps out the general path you want to take and helps match skills and strengths to your scholarship choices. It is a changing document, since needs and goals will almost certainly evolve over time as a faculty member. The aim is to build upon current strengths and skills by identifying areas for development and providing a way to address these. The specific objectives of a typical ISDP are to:

-Establish effective dates for the remainder of your academic career.

-Identify specific skills and strengths that you need to develop (based on discussions with your mentor).

-Define the approaches to obtain the specific skills and strengths (e.g., courses, technical skills, teaching, and supervision) together with anticipated time frames.

-Discuss your draft ISDP with your mentor.

-Revise the ISDP as appropriate.

**Step 4. Implement Your Plan.**

The plan is just the beginning of the scholarly development process and serves as the road map. Now it's time to take action!

-Put your plan into action.

-Revise and modify the plan as necessary. The plan is not cast in concrete; it will need to be modified as circumstances and goals change. The challenge of implementation is to remain flexible and open to change.

-Review the plan with your mentor regularly. Revise the plan on the basis of these discussions.

***For Mentors***

**Step 1. Become familiar with available opportunities.**

By virtue of your experience you should already have knowledge of some scholarly opportunities, but you may want to familiarize yourself with other scholarship opportunities and trends in the faculty member's chosen area.

**Step 2.** Discuss opportunities with faculty mentee.

This needs to be a private, scheduled meeting distinct from other specific meetings. There should be adequate time set aside for an open and honest discussion.

**Step 3.** Review ISDP and help revise.

Provide honest feedback - both positive and negative - to help faculty set realistic goals. Agree on a development plan that will allow faculty to be productive in their scholarly pursuits and adequately prepare them for their chosen path.

**Step 4.** Establish regular review of progress.

The mentor should meet at regular intervals with the faculty to assess progress, expectations and changing goals. On at least an annual basis, the mentor should conduct a performance review designed to analyze what has been accomplished and what still needs to be done. A written review is most helpful in objectively documenting accomplishments.

*\*This document was adapted from the Federation of American Societies for Experimental Biology (FASEB)'s Science Policy Committee.*

### WORKSHEET TEMPLATE FOR SCHOLARSHIP DEVELOPMENT PLANS

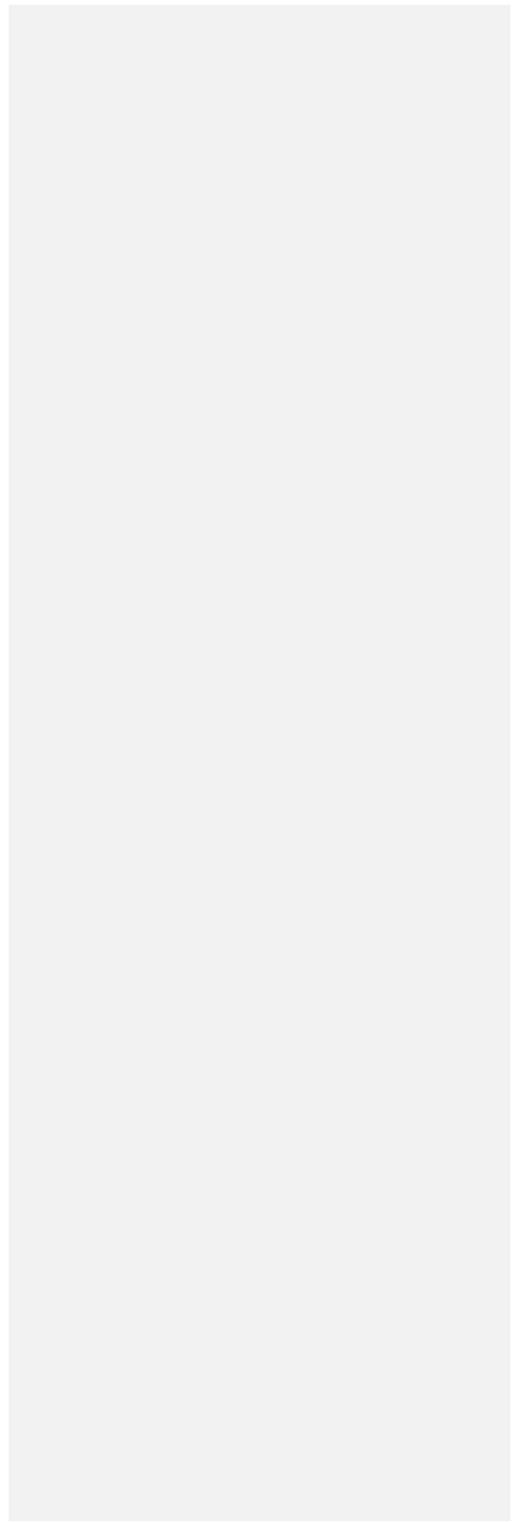
Name: \_\_\_\_\_

Date Developed: \_\_\_\_\_

Revised: \_\_\_\_\_

Potential Areas to Develop/ Enhance/Explore (Research, Scholarship, or Development)	Goals:	Method/Activity/ Resources to Achieve Goal	Target Date	Date Completed	Outcomes/ Revisions
Scholarship Goal 1					
Scholarship Goal 2					
Scholarship Goal 3					

Scholarship Goal 4					
Etc.					



### *Components of the Professional Development Plan*

**[This form is optional and could be used in departments that don't already have their own Scholarship development plan in place.]**

Information on this form will address:

- Specific goals for the upcoming year in performance areas of scholarship.
- Strategies to be used to meet these goals.
- Resources needed (time, money, equipment, continuing education, reduced teaching load, etc.).
- Expectations of the program/department in order to meet its goals/objectives.
- Methods for measuring accomplishments.

After the professional development plan has been reviewed and approved by the department head and faculty member, both will sign the **Scholarship development plan**.

**Signed copies of the Plan will be filed in the department and given to the faculty member. This step is necessary regardless of which evaluation instrument is used. Copies of the Worksheet (or other instrument) stay on file in the department and with the faculty member.**

**Step 4.** The hard work- beginning your scholarly endeavor

Whether it's a peer-reviewed article or a grant application or something else it's time to get down to the hard work of doing what you came to do. Should help be needed to connect with funding opportunities, having proposals or articles reviewed, contact the office of the Polytechnic Associate Dean for Research and Engagement for assistance.

## Appendix A

## Funding Opportunities De-coded

Contractual relationships with sponsors can take many forms; from simple memorandums of intent to work together, to complex service agreements and multi-agency grant funded projects. The office of Research and Sponsored Program Pre-Award office has dozens of templates to help you get started at <http://www.k-state.edu/research/preaward/>

Below is a list of some common proposal and sponsored project opportunity terminology- this list is by no means exhaustive so feel free to add your own as appropriate.

Army Research Labs: <http://www.arl.army.mil/www/default.cfm>

Air Force Research Lab: <http://www.wpafb.af.mil/AFRL/>

Air Force Office of Scientific Research: <http://www.wpafb.af.mil/afsl/afosr/>

FAA Technical Center: [http://www.faa.gov/about/office\\_org/headquarters\\_offices/ang/offices/tc/](http://www.faa.gov/about/office_org/headquarters_offices/ang/offices/tc/)

National Science Foundation: <http://www.nsf.gov/funding/>

NAVAIR: <http://www.navair.navy.mil/>

Navy Research Lab: <http://www.nrl.navy.mil/>

SBIR- [http://en.wikipedia.org/wiki/Small\\_Business\\_Innovation\\_Research](http://en.wikipedia.org/wiki/Small_Business_Innovation_Research)

CRDA- [http://en.wikipedia.org/wiki/Cooperative\\_Research\\_and\\_Development\\_Agreement](http://en.wikipedia.org/wiki/Cooperative_Research_and_Development_Agreement)

EPSCOR- [http://www.nsf.gov/od/iaa/programs/epscor/Outreach%20Procedures\\_updated2013.pdf](http://www.nsf.gov/od/iaa/programs/epscor/Outreach%20Procedures_updated2013.pdf)

FDA/USRG- <http://www.k-state.edu/research/funding/fdausrg.html>

Limited Submissions- <http://www.k-state.edu/research/funding/limitedsubmissions/>

Federal Agencies- <http://www.k-state.edu/research/funding/fedgrant.html>

Private Sources- <http://www.k-state.edu/research/funding/private.html>

FedBizOps (FBO)- <https://www.fbo.gov/index?cck=1&au=&ck>

Grants.gov- <http://www.grants.gov/web/grants/home.html>

Defense Innovation Marketplace- <http://www.defenseinnovationmarketplace.mil/industryresources.html>

Notices in RSCAD Momentum: <http://www.k-state.edu/vpr/news/>

Updates in the weekly Funding Connection- <http://www.k-state.edu/research/funding/connection/index.html>

U.S. Department of Health and Human Services Grant Application Guide: [http://grants.nih.gov/grants/funding/424/SF424\\_RR\\_Guide\\_SBIR\\_STTR\\_Adobe\\_VerB.pdf](http://grants.nih.gov/grants/funding/424/SF424_RR_Guide_SBIR_STTR_Adobe_VerB.pdf)

Reconstructing America Opportunities: <http://reconnectingamerica.org/resource-center/federal-grant-opportunities/>

**Comment [s1]:** Is the intent to add additional sources for grant opportunities? If so then I would include NSF, DOD(BAAs for example), and other relevant opportunity that is germane to the Salina Campus.