



**KEY  
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Comprehensive IT for Research



## **Three Innovative Ways To Improve Efficiency in Research Administration**

Key Solutions presents a deep dive into the innovative ways high performing research administrators are reducing administrative burden for their PIs, increasing their organizational efficiency, and demonstrating greater accountability while improving their overall research development performance.

*A Review of Best Practices in Research Administration*

# Reducing the Administrative Burden on Principal Investigators

## Managing the demands of multidisciplinary research

**The most common and perennial complaint made by PIs across the country is that mounting research administrative operations are taking up too much of the time they need to devote to actually doing science.**

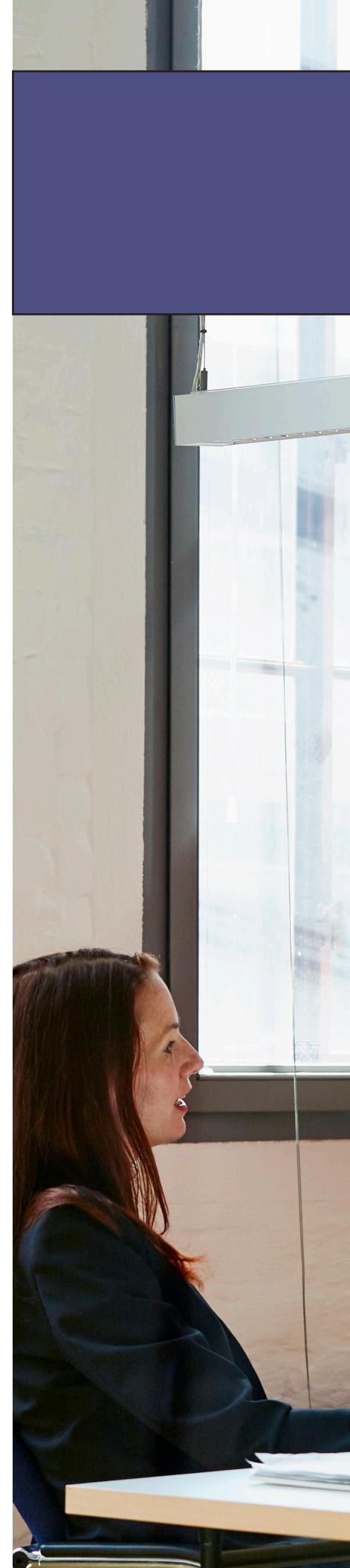
A vast majority—over 80% of PIs—perceive that the administrative burden associated with federally funded grants is increasing. Whether writing grant proposals, dealing with financial management and effort reporting or managing research personnel, PIs, on average, spend “42 percent of their time on associated administrative tasks.”

Fully 95% of the respondents to the FDP surveys studying administrative burden stated that they could devote additional time to doing research if they had more administrative assistance.

At the same time that administrative requirements are commanding more time, the contraction of public and private research funding is intensifying competition for fewer and fewer resources.

Moreover, the increasing complexity and demands of multidisciplinary research, the increasing availability of new research administration technologies and the change-management for organizational innovations are all placed squarely on the shoulders of the research administrators responsible for reducing these administrative burdens to begin with.

Given the rising tides of change in the research enterprise, how are SPOs adapting the organization to meet these demands?



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# Cultivating Research Capacity and Grant Readiness

## Managing the demands of multidisciplinary research

**In search of best practices on grant readiness and grant capacity, in a recent study published at Research Management Review, Michael Preuss conducted a broad based literature review ranging across three decades of thought leadership in the five major peer reviewed publications bearing on professional research administration.**

Surprisingly, he reported that “no evidence was found of systematic assessment of grant capacity and readiness. In 1,032 articles published across 32 years, no authors addressed measurement of grant capacity and only two authors directly discussed assessment of grant readiness.” Furthermore, in the two articles that discussed readiness, the

authors spoke only “in general terms of advisable but reasonably ubiquitous practices without providing evidence that these practices have a measured impact or identifying the sphere and extent of that impact.”

As you may be thinking, and as Preuss points out, this is all the more surprising given the fact that “discussion of every grant proposal includes some interaction about the institution’s capacity to complete the project and readiness to undertake it.”

Preuss spares no lament, going so far as to claim that it is “inconceivable” and a “substantial flaw” that research administrators have not yet “produced a means of measuring and benchmarking the elements of this capability” (Preuss, 2015).

The lack of identifiable published work on assessment of grant capacity at the institutional or project team levels seems inconceivable. The capacity of the recipient entity to implement, complete, and sustain initiatives, as described in the proposal, is instrumental to every grant project. Yet the research administration field has not produced a means of measuring and benchmarking the elements of this capability (Preuss, 2015).

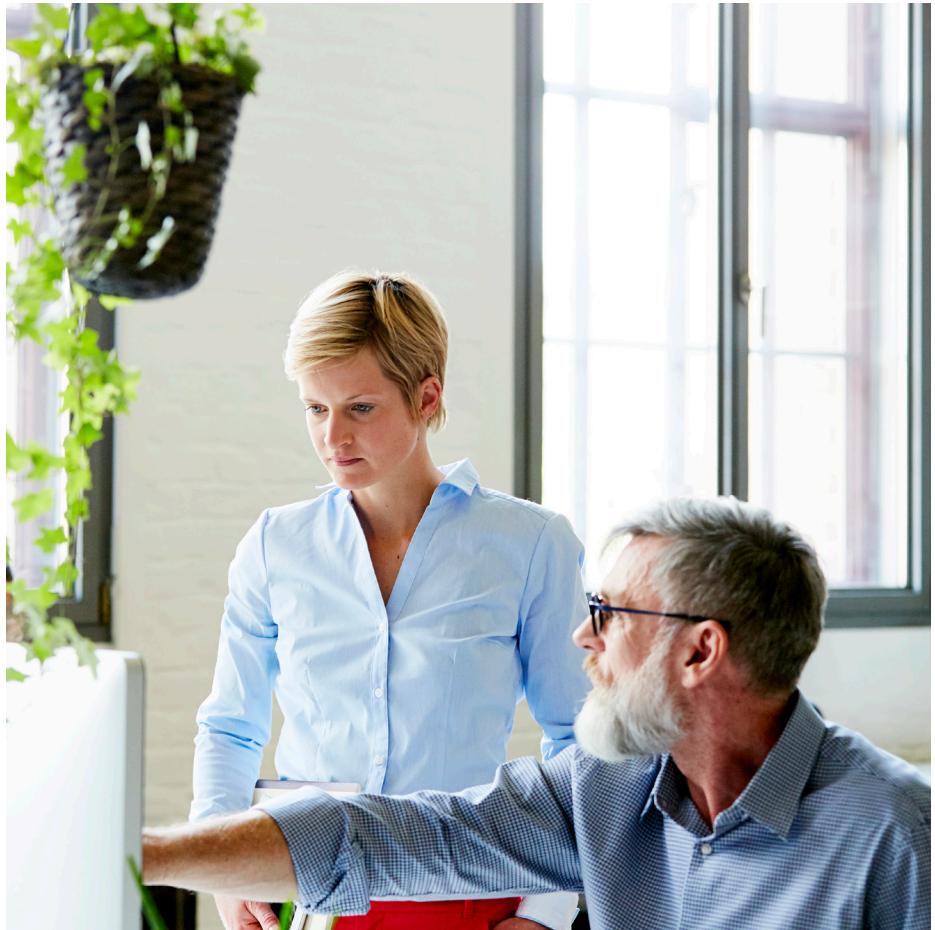
While the definitive standards to measuring and benchmarking grant readiness and grant capacity may not yet be established, we know that SPOs around the world are well aware of the pressures and need to increase administrative efficiencies. There is no lack of consensus about the fact that the responsibilities—and expectations—of research

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administrators are increasing.

The question remains to be how the SPO can better manage an increasingly multidisciplinary research system.

In this paper we review some of the greatest needs and showcase some of the best recommendations to innovate and address this growing set of challenges.





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# Implementing a Metrics Study to Conduct Internal Evaluation

## Performance measurement at the SPO

At least since the 1980s, organizations across all sectors have attempted to implement systematic performance measurement to improve business processes and track strategic outcomes. In their analysis of the practice data from the 2002 SRA BearingPoint Benchmarking Survey, Kirby and Waugaman blame Tom Peters, the business consultant who famously chided the management class with the memorable refrain: “what gets measured gets done” (as cited in Kirby & Waugaman, 2005). And while the literature shows that research administrators have been thinking about performance metrics since then, the persistent and increasing number of conference sessions devoted to developing systems to measure research performance indicate that, with the inertia that is characteristic of most organizations, managing change and innovation at the SPO is a stubborn problem.

To start, many research administrators may not yet be convinced of the virtues of performance evaluation in research development.

One author even suggests that, in the academic context where core values like freedom of thought and the universal pursuit of truth hold sway, the idea of increasing “efficiency” and “productivity” might strike some as “a little repugnant” (Olsen, 2005). Nonetheless, as Olsen admits, whether we like it or not, “assessment looms over us all as education moves through an active period of new ideas and new structures.”

But why should metrics evaluation be one of the core innovations we adopt? Why do we need a metrics study to begin with?

Do the benefits of performance evaluation truly outweigh the burden of implementing and managing yet another internal system?

### TOTAL RESEARCH AWARDS 2016

\$142,200,000,000

### MOST AWARDED INSTITUTIONS

Johns Hopkins University \$454,227,609  
University of Pennsylvania \$379,821,590  
University of California-San Francisco \$363,648,042  
University of Washington \$325,046,213  
University of Pittsburgh \$319,064,044

### MOST AWARDED PIs

Norah Seraphim UC Berkeley  
Eragor Trery, MIT  
Rutn Hambe Johns Hopkins

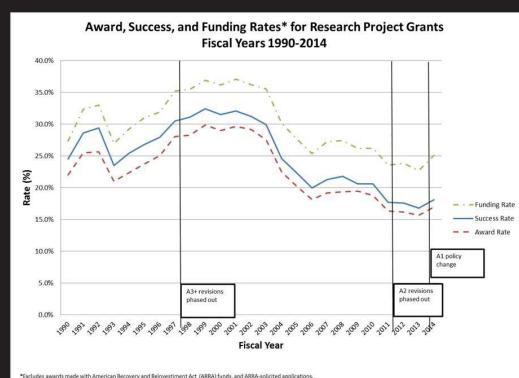
### LARGEST AWARD

Seina Reina UC Irvine  
Moretple Ernosdo, MIT  
Roga Meubet, Johns Hopkins

### AVERAGE PROPOSAL DEVELOPMENT TIME

129 Days

### CHART OF SUCCESS RATES



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Sarah Marina, Research Development Specialist at Tufts University, makes a strong case for the less intuitive advantages of metrics and satisfaction surveys at the SPO. Aside from the common measures—numbers of applications submitted, funding amounts received, success rate, etc.—Marina points out that, reliably tracking your office's performance not only increases your internal accountability, you also create an opportunity to speak to senior leadership in your organization and “gain support for

investments in resources, justify investments previously made in resources, [and] explain the value your office brings to the University beyond successful proposals.”

Furthermore, and more insightfully, she reminds us that the SPO is already being evaluated. Developing an internal evaluation program affords research administrators an opportunity to “gain control over what you are evaluated for” (Marina, 2015).

Perhaps the primary difficulty in research performance

measurement is devising an apples-to-apples standard for benchmarking success rates and recording best practices from one institution to the next. The lack of a universal standard of measurement is one of the common themes that runs throughout the discussion on research performance metrics. When inventing an evaluation system, each research organization inevitably faces its own peculiar circumstances, defined by unique organizational cultures and business practices, as



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This major shortcoming in the field inhibits strategically meaningful quantification and qualification of grant activity and leaves research administration without reliable and replicable benchmarking capability. It also leaves the most obvious (but not the most representative) measure of quality and success, dollars in external funding received, as the primary easy-to-understand means by which research development, research administration, and proposal development assistance can be evaluated. There is a growing sense of dissatisfaction with this incomplete and limited form of assessment.

well as specific external pressures from funders and suppliers of research information.

To date, one of the most significant and comprehensive efforts to address the lack of a global standard was presented by Falk-Krzesinski et al. at NORDP 2013, where they suggest the adoption of Snowball Metrics, a worldwide academia-industry collaboration for performance measurement designed to establish “global standards that enable institutional benchmarking, and to cover the entire spectrum of research activities.” (“Snowball Metrics: Global Standards for Institutional Benchmarking,” 2016).

The Snowball Metrics system propounds the metaphor of a “cookbook” for research

performance metrics. Rather than impose an overbearing matrix of performance analysis to be stamped like a cookie cutter across every organization, the system presents a “Recipe Book” of standardized evaluation methods and criteria that each institution can reference to cobble together the right mix of performance measurement for their specific situation. As Jennifer Johnson, Head of Performance, Governance & Operations, Research & Innovation at University of Leeds explains, the Snowball Metrics Recipe Book creates “a common language so that institutions are confident that they can use all of their data to compare their performance with each other in an apples-to-apples way. It’s not

trying to tell anyone which of these metrics to use to answer any particular question . . . it’s just like using a recipe book to cook your dinner: I don’t need to cook the entire book to find it useful” (Colledge, 2014).

As the wave of organizational change sweeps across the world of research, resources for thinking about, developing and deploying a performance measurement system abound. If the SPO leads the way in adopting a system of performance measurement for the institution, it not only has an opportunity to prove the centrality of its value, it can foster its influence within the enterprise and make a persuasive case for growth.

# Facilitating the Exchange of Institutional Knowledge

## Developing Systems to Improve Intraorganizational Collaboration

Certainly, while your goal as a research administrator is to enable funding success and unburden your faculty from administrative tasks, there are some administrative duties that only the PI can fill. And with funding and award rates shrinking, it is more important than ever to maximize the time your faculty spend doing administration.

One of the most useful services the SPO provides is helping PIs build and maintain a repertoire of understanding how the underlying governing policies and philosophies of each granting program will impact their proposal success rates.

Throughout the proposal development process, the overarching goal of the “research administrator as coach” is to help their researchers internalize an

important mantra: “Do the goals of the grant match the intent of this research project?”

One method of ensuring your PIs have a grasp of the difference between a “good research idea” and a “fundable research idea” is offered by Michael Preuss and Susan Perri. They remind us to keep in mind that, “when formulating and refining a project concept in hopes of submission to an agency or foundation, it is prudent to consider the funding priorities expressed by and the giving history of each potential funder in an effort to delineate what types of activity each sees as advancing their agenda” (Preuss & Perri, 2014).

It can be tough for young PIs to learn to balance their own research priorities with those of the funder. As Preuss et al.

point out, “perhaps the most obvious pattern found among ‘good ideas’ is that the proposed undertaking aligns with the personal or professional interests and experience of the proponent.” The learning curve for new PIs will chart along their ability to design research that recognizes the funding agencies’ priorities.

Incorporating onboarding programs and required proposal development workshops that help distribute criteria for evaluating “good ideas” versus “fundable ideas” throughout the organization will help you establish a culture for intelligent research design that will ultimately improve the quality of your proposals.

You can find the table mentioned above at NCURA Magazine.

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## Developing A Preproposal Communications Strategy

Another way to help your PIs ascertain a solid understanding of the critical success factors for each specific funding opportunity well before the proposal writing begins is to develop a formal preproposal communications program for reaching out to Program Officers at funding agencies. Robert Porter, grant writing workshop guru and former Director of Research Development at the University of Tennessee, advises administrators to work with investigators to develop a preproposal communications strategy to build and maintain these relationships.

Porter shows that one of the most frequent rejection comments

investigators receive is that their project is a poor fit for the goals of the funding program. Investigators can maximize their proposal preparation time by having a strong grasp of the goals of various funding programs and aligning their project design with those goals. “Preproposal communications can have a powerful impact on the researcher’s thinking.”

Porter notes, “from reshaping the research design to rethinking where the proposal should be submitted, or if it should be written at all” (Porter, 2009). Especially when working with younger investigators, make sure

they understand that there is a deep agenda and institutional context beneath the stated goals of any particular funding program.

More importantly, you can make sure your investigators feel comfortable with pre-proposal outreach by having an established system and coaching them through the process. Porter’s method helpfully outlines a step by step process you can rehearse with your PIs.

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## Developing A Strategic Mentoring Program

While you may not maintain a mental map that can match all of your researchers project ideas with the most appropriate funding agency institutes or centers, you most certainly have access to senior investigators who do. One way to save administrative time at your organization is to have an established matchmaking process that helps PIs find advice on general research questions by facilitating the smooth exchange of institutional knowledge from researcher to researcher.

Knowing which experts in your organization are best positioned to offer younger PIs insight on how a specific research project might be (or might not be) building on existing science, or whether or not

a new proposal is offering a unique research approach compared to existing awards, can help your PIs develop a better sense of whether or not their projects are best positioned to win funding.

This kind of program can be especially impactful for younger PIs, who may “find themselves in a lonely ‘sink or swim’ environment when it comes to sponsored research, and many are hesitant to approach experienced grant writers on their own” (Porter, 2011). But another reason a strategic mentoring initiative can be important is to facilitate the exchange of institutional knowledge across the demographic boundaries that exist in our organizations.

Research has shown that formal mentoring programs are especially beneficial for women and minorities (Grove, Ward & Gahimer, 2016). As our organizations evolve to keep pace with the changing demographics patterns of the country more broadly, implementing strategic mentoring programs can not only help the University support and retain women and minority research faculty, it can help the research administration more seamlessly communicate institutional knowledge from one generation of researchers to the next (Piechowski, Tuttle & Preuss, 2014).



# Evaluating Your Institution's Technology Resources

## Cultivating Research Administration Technologists

Like most every other part of the modern world, perhaps no other area of research administration has seen as much change in the past 20 years as the technology used to facilitate the day to day operations of the SPO and the research institution as a whole. Making sure your organization has adopted robust and reliable information technology to conduct your business is probably the

single most impactful way the SPO can improve the efficacy of its research administration. And there are few skillsets more advantageous to the organization than the research administration technologist.

MaryJo D. Banasik talks about the need to develop highly effective research administrators as a process of inculcating

and maintaining a culture of “T-Shaped Professionals” in the SPO. Borrowing this jargon from the late 1990s, Banasik defines the T-Shape professional as someone having “deep disciplinary knowledge, excellent problem solving skills, and complex communication skills that allow them to successfully collaborate with specialists from diverse disciplines and functional areas.”

## Key Solutions eGrants Module

### Increase the probability of your grant acceptance while reducing administrative headaches

With increasing pressures of government agencies mandating electronic submissions, research institutions are finding it seemingly difficult to manage the transition from the current paper based submission to the electronic process.

The simple, user friendly, web-based eGrants module streamlines the submission and award processes.

The easy to use Grant Management System provides the necessary solution to facilitate the management of grant activities – creating, submitting and tracking proposals to post-award activities

The system provides a central repository for all institutional data, increasing efficiency, reducing redundancy, and eliminating errors.

eGrants open architecture and enterprise class design allow interfaces with leading ERP systems such as Banner, PeopleSoft, Oracle, and more.

The grant management system supports integration with IRB, IACUC, and other research systems.

**Regularly reviewing the technology resources available to your institutions can pay dividends in terms of faculty support and efficiency. Business process and approval driven systems give not only your investigators, but also your research administrators, the tools to rise to the occasion and successfully support the grant-making process**

As she notes, one of the most important areas for T-Shaped pros to develop deep expertise is the domain of information technology. The “T-Shaped professional makes an effort to be familiar with the latest technology and to understand how technology may be used to make the practice of research administration more efficient and effective. Technology is an important tool in research administration, and T-Shaped research administration professionals are at the forefront of this rapidly changing environment” (Banasik, 2015).

She advises research administrators to seek out professional development opportunities to learn about the latest trends in information technology as it applies to research administration.

Aside from staff professional development, there are internal processes that can make or break your efficacy as an organization. As technology is rapidly changing and improving, it's imperative to maintain a rigorous technology and audit review cycle to benchmark

your digital resources to the state of the art. Ask yourself how technology can be used to make your organization more efficient and effective. Are your people spinning their wheels performing redundant tasks or missing opportunities to streamline organizational processes and communications?

What opportunities exist to replace sclerotic operations and disparate technologies into a more comprehensive platform?

**Whether your SPO has already moved to an electronic platform or you're still schlepping paper from one office to the next, the opportunity may exist to adopt a better and more comprehensive research administration platform.**

**We invite you to take a look at our suite of research administration applications to determine whether or not Key Solutions might be the right fit for your organization.**

**You can contact us here or feel free to reach out to XYZ with any questions about how we can help.**



