

## 9

# Central IT Engagement with Researchers

*What do researchers want?*  
—With apologies to Sigmund Freud

## Key Findings

- ◆ Computation-intensive research is creating new demands for researcher support.
- ◆ CIOs have an important role to play in articulating the value of computation-intensive research to other leaders around the institution.
- ◆ There is an increasing need for CIOs and researchers to work together on such issues as infrastructure development, research allocation, and policy design and implementation.
- ◆ Most central IT organizations lack formal mechanisms for engaging researchers.
- ◆ Two-thirds of institutions indicated that they do not engage in any form of long-range planning to determine IT researchers' needs.
- ◆ Three-quarters of respondents said that central IT is never, rarely, or only sometimes involved in pre-award planning.
- ◆ The overwhelming majority said that they are never, rarely, or only sometimes involved in the faculty recruitment process to ensure that IT-related promises made to candidates are feasible.

**IT** support of research activity extends beyond the provision of servers and network connections. It involves the immersion of IT support personnel into a robust culture with its own configuration of values, behaviors, incentives, and norms. This chapter will address two questions:

- ◆ What are some of the critical elements of faculty culture that affect the delivery of IT support?
- ◆ How well do central IT organizations engage faculty and researchers in discussion of their issues and needs?

## What Researchers Want

For faculty and staff who have made a commitment to research, the ability to conduct their research is central to their personal identities, ambitions, and goals. The extent to which faculty take up and effectively use IT in their research is more affected by disciplinary norms than by national culture (Costa & Meadows, 1990) or intrainstitutional social networks (Durrington, Repman, & Valente, 2000). Structural factors (Jacobson, Butterill, & Goering, 2004; Orlikowski & Barley, 2001), cognitive processes (Mühlfelder & Luczak,

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2003), sociotechnical configurations (Kling, McKim, & King, 2003), research policy (Feldman, Guston, Hilgartner, Hollander, & Slaughter, 2003), and professional development (Macpherson, 2000) all affect just when, and how, researchers become engaged with IT in the course of their work. Not all of these factors are within the purview of CIOs, but awareness of the complexities of the research environment can be helpful when developing solutions to those problems that are. As CIOs are increasingly viewed as research partners, opportunities to participate in shaping general institutional practices will also grow.

### Challenges for IT

We will not dwell here on the many benefits of computation-intensive IT, which include the ability to ask new research questions, explore new possibilities through large data sets, extend beyond the constraints of disciplinary or institutional boundaries, and share results with a global audience. We will assume that an ECAR audience does not need to be sold on the advantages of IT. Less obvious are the challenges that IT poses for researchers. As research becomes increasingly reliant on IT, researchers confront some new pressures and difficult choices.

Consider, for example, data repositories. Until recently, many researchers would catalog and archive their data (to whatever extent they did) according to their own standards. Now, some disciplines are building their own data repositories, some institutions are developing their own data collections, and the National Institutes of Health (among other agencies) are requiring funded researchers to contribute materials to its own databases and archives. These different storage venues may use different techniques for data ingestion, security, and metadata standards, potentially requiring the researcher to navigate among com-

peting demands. If researchers feel that contributing their data to a long-lived data collection requires a considerable investment of their time, they may either opt out or seek other research challenges.

Similarly, the evolution of new computing platforms and storage media presents researchers with the seemingly constant necessity to migrate their research projects and products. If researchers see the maintenance of technological currency as an unwelcome diversion, they are less willing to get and stay involved in IT-intensive research. Digital research and presentations are not cheaper than print if the resources committed to them don't produce products that endure. Many researchers in the humanities and social sciences in particular have significant amounts of research results in digital forms that can no longer be accessed.

The research lives of faculty cannot be separated from their lives as educators. Those who do computationally intense research are bringing those data collection, analysis, and presentation tools into graduate—and, increasingly, into undergraduate—classrooms. Such practices put growing pressure on computational capacity. They may also create a demand for additional types of support systems, such as those needed for students (and faculty) who use online course management systems. If such support is not forthcoming, researchers might be tempted either to scale back the extent of the technology used in teaching or jury-rig a support system that may or may not conform to central or local IT standards.

To a great extent, it is a question of setting the right expectation of what is and is not possible from the IT organization—and of adjusting one's own expectations as the faculty push back. Joanne Kossuth, CIO at Olin College, a new and innovative undergraduate engineering college, explained the learning curve that she and her faculty went through:

As a new institution, we have our own challenges. Our faculty came from MIT, where they had 10 servers, and they expected them here. To attract the faculty, the provost gave them a blank slate. We went through two years of the “IT sucks” thing. It took us a while to fix the culture. We started out saying that we wanted to have standards, but then we had to change things because of faculty needs. We have to work out issues all the time. (interview, January 26, 2006)

It is not the job of the IT organizations, whether central or local, to meet every demand researchers place on them. But an appreciation of the various challenges researchers face is the necessary foundation for addressing them. Considerable anecdotal evidence suggests that researchers who feel an institution is ignoring their IT needs will seek to situate themselves at an institution that will address them.

### Faculty Incentives

Like everyone else, faculty are sensitive to incentives and rewards; they will gravitate toward those activities and behaviors that get them what they want, be it promotion, tenure, increased compensation, release time, employment at a better institution, or recognition of their success.

Partly as a result of the growing gap between traditional practice and technological evolution, faculty are seeing increasing disconnects between the rewards they seek and the behaviors that have traditionally gotten them those rewards. For example:

- ◆ Many institutions continue to place heavy emphasis on publication within peer-reviewed journals. Many researchers, however, view this mechanism as too slow and bureaucratic, and prefer to publish their findings in non-peer-reviewed electronic venues that ensure immediate dissemination and critique.

- ◆ Researchers often develop new software or instrumentation as part of their research agendas, but promotion and tenure committees rarely recognize or reward these potentially breakthrough successes. MIT is addressing this problem by granting the development of new computational algorithms and related innovations equal status with publications, for promotion and tenure purposes.
- ◆ Tenure is granted as recognition of a scholar’s individual contribution to knowledge. Increasingly, however, research is collaborative and dependent on the distinctive contributions of subject experts, technologists, and librarians. In addition, today’s interdisciplinary and multi-institutional research teams are often large, complex, and less hierarchical, making it difficult to assign credit for contributions. Young faculty, especially, will think twice about immersing themselves in an exciting research project if they believe that it will prove difficult to state later, “Here is what I did.”

Researchers are understandably reluctant to pursue research if it is not valued by the powers that dispense rewards and recognition. CIOs have a role to play by helping to articulate the value of this type of work to nonspecialists. When collaborations among institutions involve reliance on an institutionally supported data repository or instrument, CIOs can also participate in decisions about the assignment of credit or responsibility.

### IT Involvement with Faculty— and Vice Versa

The provision of IT services does not work well when researchers are the passive recipients of those services. Greater effectiveness accrues to everyone when the researchers—do we dare call them “customers”?—play an active role in discussions and decisions in such areas as faculty recruitment, resource allocation, infrastructure development,

and policy design and implementation. This obligates central IT to be engaged in the lives of faculty and researchers. Kris Hafner, associate vice president for information resources and communications in the University of California Office of the President, outlined the CIO's responsibilities:

As CIOs and IT leaders, we need to position ourselves much closer to the research community and be visible at the boundary where IT and research meet. Researchers need to see us as partners who can help them succeed. In turn, we must understand what's happening in their world: Who are the primary researchers in the disciplines on campus? What are they working on? What capabilities do their future projects depend on? These partnerships need to be developed and tested so that new models for supporting research computing on campus become reality. (personal communication, January 25, 2006)

When recruiting faculty, it would be useful to include a description of IT infrastructure and support in communications about job openings. At some colleges and universities, CIOs have developed brochures about computing and networking infrastructure and related support services that can describe capabilities in a general way. Meetings between researchers involved in computationally intense work and top IT unit representatives—even the CIO—can be incorporated into job interview schedules to help identify specific needs and establish relationships. Processes should be considered that include IT review of commitments being made. Anecdotal evidence exists of faculty who lose significant amounts of research time trying to wire their own labs or who must fight to purchase equipment promised them during recruitment. The cost of such failures to an individual's commitment to an institution is incalculably high.

A decade ago only a few individuals on most campuses had much interest in computation-intensive research and supercomputing, so decisions about allocating IT resources and computing cycles were not seen as a general faculty issue. These traditional decision-making structures have remained in place even though the population of researchers whose work is computationally intense has grown and become more disciplinarily diverse. Units with long computational histories, such as computer science and mathematics, are often reluctant to give up their privileged positions regarding decision making even when their needs differ greatly from those of disciplines newer to computation-intensive research. In some cases, faculty-wide interest in resource allocation has arisen in response to the poor management of existing computing centers by particular faculty members who try to use resources to serve their own interests exclusively.

Various processes are being used to transform decision-making structures. At some universities with strong faculty governance, the faculty senate has involved itself in these decisions. At other universities, breaking the stranglehold on research computing by a small group requires the institution to develop alternative computing infrastructure available to all. And at still others, CIOs appoint advisory groups that serve the resource allocation function internally.

Infrastructure development affecting researchers can also benefit from collaboration with faculty. Many campuses currently have some infrastructure redundancy because autonomous units have deployed equipment and services all over campus. Some of the existing equipment, therefore, may be used only part of the time, while other faculty who might benefit from it go without because they do not know it exists. A vibrant mechanism for coordinating infrastructure development across units can help resolve some of these issues. Collaboration between central IT, lo-

cal IT units, and researchers can coordinate infrastructure development in a way that both improves access to existing technology and rationalizes the procurement and expansion of the infrastructure. The Office of Information Technology at Princeton University, for example, coordinated an effort that brought an IBM supercomputer to campus by pooling funding resources from central IT, the Princeton Institute for Computational Science and Engineering, the School of Engineering and Applied Science, and the personal grant funds of seven individual researchers.

North Dakota State University (NDSU) provides another example. The university's Center for High-Performance Computing (CHPC) put together a senior faculty advisory council to set policy and determine how to leverage resources. Through joint grant proposals, faculty who acquire cluster nodes will turn them over to CHPC to manage and have recommended that CHPC do their purchasing. The CHPC has also signed a service level agreement with the university's central IT department to provide all the systems administration and networking services to the center, another example of reducing redundancy and costs in the research IT environment. Bonnie Neas, associate vice president for federal government relations and CHPC director, views this as a major advance, since NDSU has traditionally not engaged in such cooperative ventures.

Innumerable policy issues relate directly to the effectiveness of research. For example:

- ◆ Faculty must be kept informed on security policies as they continue to evolve in the face of changing national security concerns. Faculty also need training in security techniques, along with support—including financial—for security adaptations to systems.
- ◆ Because privacy law is so complex, researchers need to understand how those laws are translated into institutional policies and must be trained in techniques for protecting their own data.
- ◆ In the area of intellectual property rights, clear policy guidance is required on such matters as interinstitutional data archives and work that relies upon institutional support systems.
- ◆ For other problematic aspects of intellectual property rights law, such as treatment of collaborative work and protection of texts and innovations that appear in multiple iterations, researchers must be kept aware of developments in Congress and the courts.

It's one thing for an institution or an IT unit to set policies but quite another for researchers to know what those policies are, understand their importance, and comply. Faculty involvement in policy development makes it easier to achieve buy-in. Even where the institution's needs supersede those of researchers, collaboration and communication can go a long way toward making unpopular policies more palatable—and having them observed.

## Current State of Engagement

So how are central IT organizations engaging researchers in collaborative efforts? Again, because our survey respondents were from the central IT organizations, we did not gather data directly from the researchers themselves. Still, we were able to triangulate on the issue by asking a series of questions about the various mechanisms through which central IT engages with researchers about their needs and concerns. These mechanisms include

- ◆ formal processes for engaging researchers,
- ◆ an advisory group that works with central IT to identify researcher needs,
- ◆ long-term planning related to researcher infrastructure and support needs,
- ◆ involvement in faculty grant preparation,
- ◆ involvement in faculty recruitment, and
- ◆ cooperation with an institutional research office.

## Formal Processes

Our initial concern was to discover the range of formal mechanisms through which central IT organizations engage researchers and also to understand the extent to which they are used. In our survey we presented respondents with a list of mechanisms through which central IT organizations engage researchers, and we asked them to select all that apply to their institution. This list included both formal and informal engagement mechanisms. The most striking finding, as Table 9-1 shows, was that over half of the respondents (181 of 328, or 55.2 percent) said that there is no formal engagement.

Arrayed in descending order, the methods of engagement are overwhelmingly informal. Of all institutions participating in the survey, 64 percent do ad hoc consultations, and only a shade more than a third (34.8

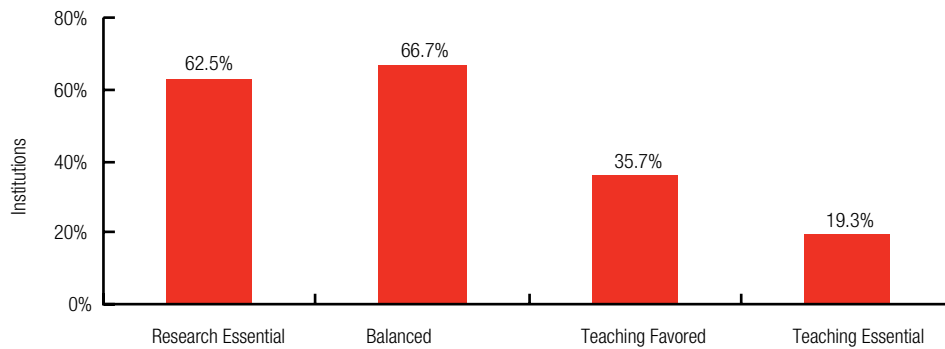
percent) claim “regular and active informal networking.” Even the “formal consultations” associated with specific research grants are at one level ad hoc because they hinge on particular circumstances. The most common forms of formal engagement—consultations supported by specific grants and regular meetings with academic leaders—are maintained by less than one-fifth of the institutions. Only 10 percent or so of institutions have advisory or working groups organized around research issues or platforms. If higher education is indeed entering a vortex of a research revolution, the central IT organizations seem disconcertingly disengaged.

There is a strong association between the presence of formal engagement with researchers and institutional mission (Figure 9-1). Approximately two-thirds of the Research Essential and Balanced institutions (62.5 percent

**Table 9-1. Methods of Engaging Researchers**

Method of Engagement	Number of Institutions	Percentage of Institutions
No formal engagement with faculty around research-related IT	181	55.2%
Ad hoc consultations on an as-needed basis	210	64.0%
Regular and active informal networking by central IT staff with researchers	114	34.8%
Formal consultations supported by specific research grants	64	19.5%
Regular meetings with deans, chairs, and heads of institutes regarding research-related IT needs	62	18.9%
A single formal research advisory or working group	37	11.3%
Open meetings for all researchers to provide input on research-related IT needs	37	11.3%
Multiple advisory or working groups organized around shared research problems or methods	35	10.7%
Surveys to colleges, departments, or researchers regarding research-related IT needs	34	10.4%
Multiple advisory or working groups organized around computing platforms	26	7.9%

**Q:** How does your central IT organization engage with researchers around the IT aspects of their work? (Select all that apply.)



**Figure 9-1.**  
**Formal**  
**Engagement**  
**with Researchers,**  
**by Institutional**  
**Mission**

**Q:** How does your central IT organization engage with researchers around the IT aspects of their work?

and 66.7 percent, respectively) claim formal engagement, with the percentages dropping off to 35.7 percent and then 19.3 percent among the Teaching Favored and the Teaching Essential institutions, respectively.

Not surprisingly, there was a strong association between central IT organizations that formally engage researchers and those with a distinct unit explicitly tasked with supporting faculty, clinicians, and other researchers with their research needs. Among the institutions that have a distinct research IT unit, two-thirds (66.7 percent) formally engage researchers, while one-third do not. Among those institutions without such a unit, the relationship is exactly the opposite: only 35.5 percent engage faculty formally, while 64.5 percent do not.

We can look at the issue from another perspective as well: How many of the institutions claiming formal engagement have a distinct IT research unit? From this vantage, 42.3 percent of schools that formally engage researchers have a unit, while 57.7 percent do not. The distinction is even more stark when one considers that 83.2 percent of schools that do not engage researchers do not have IT research units, while only 16.8 percent of institutions that do not engage researchers do have such units. These numbers beg the question, of course, about which comes first:

the unit or the formal engagement? In reality, the structures and the activities most likely coevolve, with increased involvement with researchers lending itself to more dedicated IT resource time, and greater commitment of IT resources leading to the establishment of a distinct unit. But the association is clear, and formal involvement is more likely when people are tasked specifically with catering to researchers' IT needs.

### Advisory Groups

From the broad rubric of "formal engagement," we then narrowed the inquiry down to the presence (or not) of advisory groups. We approached the issue from another perspective, asking respondents if they have an advisory group that addresses research IT issues. In contrast to the previous question, which probed for the range of engagement mechanisms, this query focused specifically on the institutional advisory groups or committees that incorporate some elements of research IT in their agenda.

Of 328 institutions, 140, or less than half (42.7 percent), claimed to have an advisory group or groups that address research IT issues. We asked these institutions to identify, from a list, all of the activities in which the group engages. Table 9-2 shows the responses.

**Table 9-2. Research Advisory Group Activities**

Activity	Number of Institutions	Percentage of Institutions
Identify research-related IT needs of faculty and others	50	35.7%
Address policy issues, such as intellectual property	35	25.0%
Set priorities among competing research-related IT needs	31	22.1%
Request funds for research IT from central administration	31	22.1%
Establish service levels for central IT organization(s) for research-related IT support	26	18.6%
Establish standards for research-related technologies	25	17.9%
Coordinate central, school, center, and department IT resources related to research	25	17.9%
Allocate central IT resources for research support	23	16.4%
Provide oversight of consortia and partnerships related to IT	16	11.4%

**Q:** *If your institution has a research advisory group(s) that addresses research IT issues, in which of the following activities does it engage? (Select all that apply.)*

No single issue set dominated these advisory groups' agendas; the most common activity was the identification of research-related IT needs and policy issues. However, while the 50 institutions that reported engaging in this activity represent 35.7 percent of those claiming to have an advisory group, these 50 represent only 15.2 percent of the total survey population—again, a small number in an industry on the cusp of a computation-intensive future.

## Planning

Like other research-related activities, planning potentially involves interaction between central IT and researchers. We asked whether the institution engages in long-term planning exercises to determine researchers' needs for IT infrastructure and support services. Respondents were given a choice of no planning, every year, every two to three years, every four to five years, and every six to 10 years. Although the question specified long-term planning, we suspect that the type of planning that occurs every year is more tactical and

budget oriented, while the six-to-10-year horizon encompasses more of a blue-sky, what-should-we-anticipate kind of framework. The "planning" in our question, therefore, included a range of planning types.

It is sobering to consider, then, that more than two-thirds of the surveyed institutions said that they do not engage in any form of long-term planning to determine researchers' IT needs (Table 9-3).

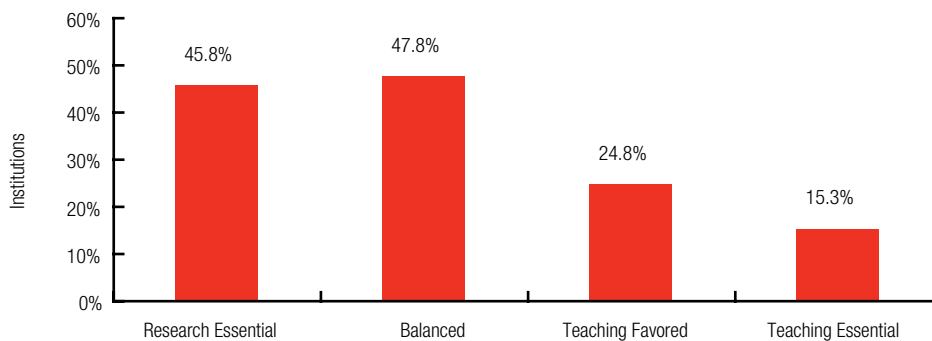
Planning exercises to determine researchers' needs for IT infrastructure and support services are much more likely to occur in institutions in which research is an important part of the mission. Yet as Figure 9-2 shows, even the majority of Research Essential and Balanced institutions do not engage in planning.

Other relationships among the data reveal that where long-term planning does take place, it is more likely to occur in institutions that have a configuration of other elements that indicate a research focus. These include a distinct unit within central IT dedicated to research-related IT, larger numbers of central

**Table 9-3. Institutions Engaging in Long-Term Planning for Research IT Infrastructure and Support (N = 325)**

Frequency of Long-Term Planning	Number of Institutions	Percentage of Institutions
Do not engage in long-term planning	221	68.0%
Every year	48	14.8%
Every 2–3 years	30	9.2%
Every 4–5 years	22	6.8%
Every 6–10 years	4	1.2%

**Q:** Does your institution engage in long-term planning exercises to determine researchers' needs for IT infrastructure and support services?



**Figure 9-2. Presence of Long-Term Planning, by Institutional Mission**

**Q:** Does your institution engage in long-term planning exercises to determine researchers' needs for IT infrastructure and support services?

IT staff concentrated on research support, and the presence of a vice president or vice chancellor for research.

### Involvement in Pre-Award Planning

Beyond the kind of planning that occurs at the central organizational level, two important activities occur repeatedly within the academic departments that can have a significant impact on central IT's ability to plan. In both of these areas—grants acquisition and faculty hiring—decisions made by researchers can affect the allocation of IT resources. We asked two questions, therefore, intended to gauge the central IT department's involvement in these two critical dimensions of academic research.

The first question was, "To what extent is central IT consulted in the pre-award process of contracts and grants to identify needs and resources?" Our question was motivated by anecdotal evidence of grants requiring considerable IT infrastructure and/or support services that had been submitted without the knowledge of central IT. Once the grants had been won, we heard, IT was expected to deliver on promises to which it had not been a party. Table 9-4 shows the distribution of responses.

More than three-quarters of respondents said that central IT is consulted never, rarely, or only sometimes. This makes it easier to understand why those stories of grant surprises might occur. No meaningful associations were found between central IT involvement in the

**Table 9-4. Central IT Consultation in the Pre-award Process (N = 307)**

	Number of Institutions	Percentage of Institutions
Never	25	8.1%
Rarely	102	33.2%
Sometimes	108	35.2%
Often	42	13.7%
Always	30	9.8%

**Q:** To what extent is central IT consulted in the pre-award process of contract and grants to identify IT needs and resources? (1 = never, 2 = rarely, 3 = sometimes, 4 = often, 5 = always)

pre-award process and institutional mission. Figure 9-3 does show a relationship with Carnegie class—but an unexpected one.

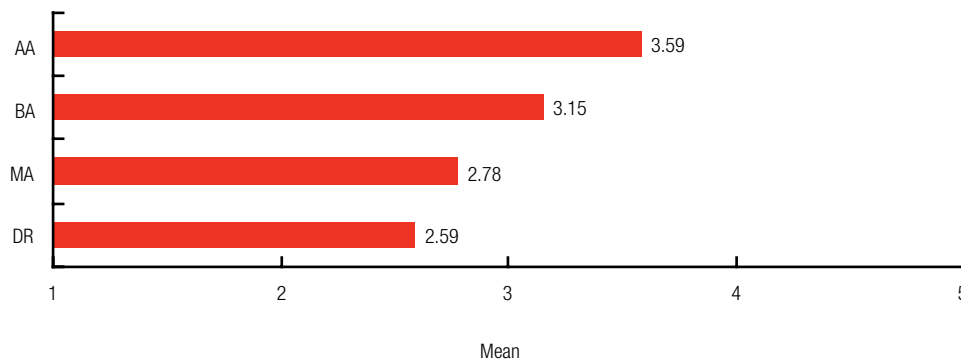
Central IT has the least involvement in pre-award processes in doctoral institutions, where pre-award consultation occurs between “rarely” and “sometimes.” Consultation happens with greater frequency as one moves through the master’s, bachelor’s, and associate’s institutions. In the latter, consultations occur between “sometimes” and “often.” From one perspective, this is surprising, since the IT sophistication and the need for consultation are greatest in research-intensive universities; it is among the doctorals that greater consultation *should* occur. Yet from a sociological point of view, this is not unexpected; PhD-granting universities are more

complex and decentralized, and researchers may be more likely to consult with their local IT unit—if they consult at all. But the data do speak to the disconnect between the need for closer integration of IT into academic planning and the reality at many institutions.

### Participation in Faculty Recruitment to Identify IT Issues

A further question we asked about central IT involvement in academic processes was, “To what extent is central IT consulted in the faculty and researcher hiring process to identify their IT needs and resources?” Our concern, once again, was based on anecdotal evidence that deans and chairs were luring recruits to campus with promises of IT infrastructure

**Figure 9-3. Central IT Involvement in Pre-Award Processes, by Carnegie Classification**



**Q:** To what extent is central IT consulted in the pre-award process of contracts and grants to identify IT needs and resources? (1 = never, 2 = rarely, 3 = sometimes, 4 = often, 5 = always)

and support of which the central IT organization was not aware. At the aggregate level, the conditions for this situation appear to be ubiquitous. As Table 9-5 shows, 91.0 percent of respondents said that central IT is “never,” “rarely,” or only “sometimes” involved in recruitment.

These data lend credence to stories about surprise commitments materializing from new grants or new hires, and they emphasize that central IT organizations are often out of the loop in areas where they should be more materially involved. To the extent it is true that IT is becoming a more important component of research, and to the extent that the central organization is expected to provide that IT, then there would appear to be the need for greater integration of central IT into the processes that generate demands for research-related technology.

### Coordination with an Institutional Research Office

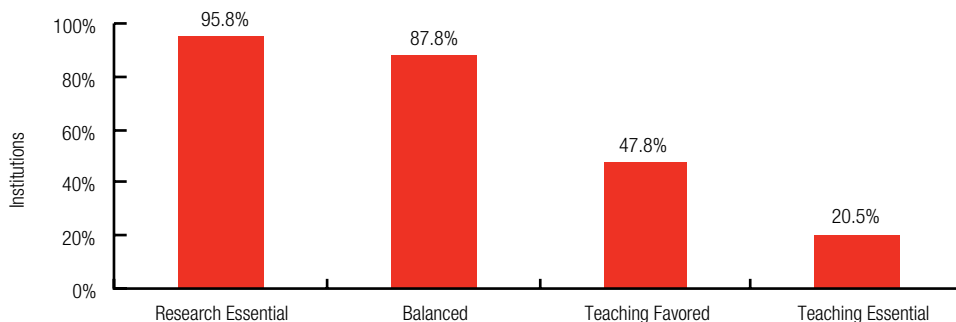
A more indirect way of assessing the extent to which central IT works with researchers is by examining its relations with the institutional research office. These offices are the focal point for (among other things) heightening the visibility of research both on campus and externally, and for improving the institution’s success rate on grantsmanship.

Of the 328 respondents, 195 (59.5 percent) said their institution does have an officially designated research office. As we might expect and as Figure 9-4 shows, a strong association exists between institutional mission and the presence of a research office. Again, the fact that a large percentage of both Research Essential and Balanced institutions have such an office demonstrates that a commitment to research brings with it obliga-

**Table 9-5. Central IT Participation in the Faculty Recruitment Process (N = 299)**

	Number of Institutions	Percentage of Institutions
Never	102	34.2%
Rarely	100	33.4%
Sometimes	70	23.4%
Often	17	5.7%
Always	10	3.3%

**Q:** To what extent is central IT consulted in the faculty and researcher hiring process to identify their IT needs and resources? (1 = never, 2 = rarely, 3 = sometimes, 4 = often, 5 = always)



**Figure 9-4. Presence of Institutional Research Office, by Institutional Mission**

**Q:** Does your institution have an officially designated office of research?

tions to create the appropriate organizational infrastructure, regardless of whatever other priorities the institution may have.

So what is the role of the institutional research office, and how closely does central IT work with that office? Only the 195 institutions with such an office could answer these questions. Regarding the first question, about the research office's role, we instructed respondents to select all functions that applied. Table 9-6 shows the distribution of responses. "Other" responsibilities contributed by respondents included technology licensing, institutional research, and state and federal reporting.

The most common research office functions included assisting researchers with proposals, formulating policies on research, and assisting researchers with regulatory issues. It is noteworthy, but not surprising, that the two IT-related items—assisting researchers on IT tools and methodologies, and on the selection and use of technology—fall far down at the bottom of the list; IT matters rightly belong with the IT organization.

But this leads to the next question, about how closely central IT works with the research office. After all, the research office contains a wealth of information about research: what proposals are going in, what is being funded, what the money is being used for, and the like. For an IT organization intent on supporting research, the research office potentially can be a valuable source of information about the needs of faculty. We asked about the relationship between the central IT organization and the research office, offering respondents four characterizations. We received the following responses:

- ◆ We are integral to one another's success and work together at every opportunity (11.8 percent).
- ◆ We maintain a close working relationship and coordinate our activities on a regular basis (19.5 percent).
- ◆ We coordinate our activities as necessary when common issues arise (56.4 percent).
- ◆ We operate independently (12.3 percent).

**Table 9-6. Responsibilities of the Office of Research (N = 195)**

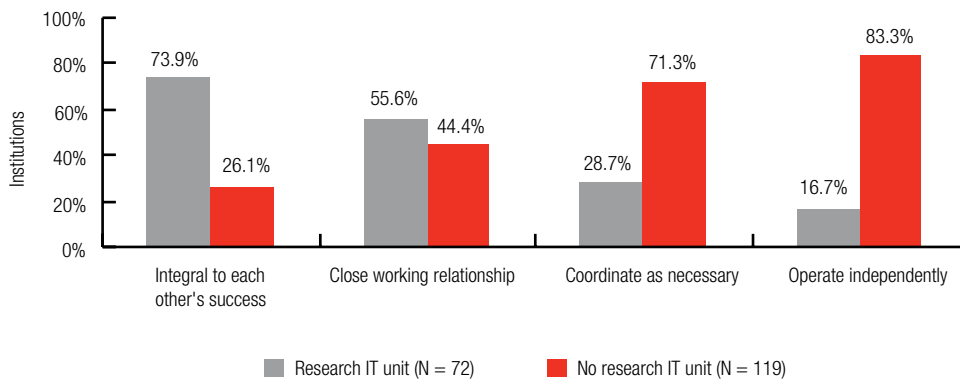
Activity	Number of Institutions	Percentage of Institutions
Assist researchers on pre-award grant and proposal writing	180	92.3%
Formulate and promulgate institutional policy on research	173	88.7%
Assist researchers on regulatory affairs	168	86.2%
Assist researchers on post-award grant management	159	81.5%
Manage relationships with other institutions and consortia on research issues	146	74.9%
Assist researchers on IT tools and methodologies	29	14.9%
Assist researchers on the selection and use of technology	19	9.7%

**Q:** *What are the responsibilities of the office of research? (Select all that apply.)*

Figure 9-5 shows the percentage distribution of responses for two sets of populations: those that have and those that do not have a distinct unit within central IT with the explicit mission of supporting researchers.

From another perspective, of the respondents who said that the IT and research organizations are integral to one another’s success and work together at every opportunity, 73.9 percent have a distinct unit for research IT. Moving down the “closeness” chain, the corresponding percentages are 55.6 percent (close working relationship), 28.7 percent (coordinate as necessary), and 16.7 percent (operate independently).

We cannot infer from the data that having an institutional research office encourages the creation of a corresponding unit within central IT, or that having a distinct research IT unit within central IT results in a closer relationship with the office of research. Instead, we can claim only that IT organizations that have a research IT unit exhibit a closer relationship with the research office—and that, presumably, means they are keeping a finger more closely on the pulse of their institutions’ research activities and needs. And, as we argue in the next chapter, that is exactly what CIOs need to do.



**Figure 9-5.**  
**Relationship of Central IT with Research Office, by Presence of IT Research Unit**