

Strengths, Weaknesses, Opportunities, and Threats of Institutional Research:

REFLECTIONS FROM PROFESSIONALS IN INSTITUTIONAL RESEARCH AND INSTITUTIONAL EFFECTIVENESS

Katherine Gipalo

Samantha Nix

Eric Godin

Eric Atchison

Ciera Merritt

About the Authors

Katherine Gipalo and Samantha Nix are with the Office of Institutional Research at Florida State University. Eric Godin is with St. Thomas University. Eric Atchison is with the Arkansas State University System. Ciera Merritt is an undergraduate student at Florida State University.

Abstract

Institutional research and institutional effectiveness (IR/IE) offices often support the assessment and performance measurement of postsecondary institutions; however, rarely do we turn those skills upon our own work. Analyzing the strengths, weaknesses, opportunities, and threats (SWOT) in

the workplace allows organizations to consider the conditions in which they operate. This article reports on an analysis of responses from *The Node for IR/IE*, a weekly newsletter sent to IR/IE professionals, about the strengths, weaknesses, opportunities, and threats within and outside their offices. Our data analysis process included concurrent inductive and deductive coding followed by a series of meetings to reconcile the coding schemes and develop overall themes. In our analysis, we found that many participants spoke positively of the collaboration and overall environment of their office, but that they also had a variety of concerns about resources and the demands from their stakeholders. The direct contrast between many responses illustrated the vastly different experiences of IR/IE professionals. We discuss the implications of these responses in relation to the current context and how this research can inform and support office leaders and advance the field of IR/IE.

Keywords: institutional research; institutional effectiveness; resources; strengths, weaknesses, opportunities, and threats (SWOT); qualitative research; thematic analysis

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INTRODUCTION

Formal analyses of organizations are necessary to determine their capabilities and to develop coherent strategies for improvement. A well-known example of this type of analysis is the examination of an organization's strengths, weaknesses, opportunities, and threats (SWOT). Initially presented as the satisfactory, opportunity, fault, threat (SOFT) approach (Stewart et al., 1965), Stewart developed a series of prompts to answer the following questions (emphasis added):

- 1| What must be done to safeguard the *satisfactory* in present operations?
- 2| What must be done to open the door to *opportunities* in future operations?
- 3| What must be done to fix the cause of *faults* of present operations?
- 4| What must be done to thwart, ameliorate, or avert the *threats* to future operations?
(Puyt et al., 2023, p. 18)

While this model has evolved into the well-known SWOT approach, the value of such an assessment still relies on the evidence collected through internal perspectives, reliable information, and practitioner expertise (Puyt et al., 2023).

Institutional research and institutional effectiveness (IR/IE) are uniquely situated within postsecondary institutions at the intersection of institutional long-range planning and change management. Strategic planning for the postsecondary institution is typically managed by or supported by the IR/IE function through the measurement of key performance indicators. As IR/IE has evolved, a focus on quality enhancement "is both internally driven and

externally motivated" (Taylor et al., 2013, p. 63). Self-assessment using SWOT analyses can be employed as a strategic tool by office staff to navigate complex organizational environments and to manage current and future change.

The Association for Institutional Research (AIR) has conducted the AIR National Survey every 3 years since 2015 to examine similar issues through IR/IE leaders' perspectives. While this comprehensive survey examines organizational structures, leadership, staffing, and core work functions, missing from our field is an understanding of strengths, weaknesses, opportunities, and threats of IR/IE offices that may be inclusive of non-leader IR/IE perspectives. Therefore, this article applies Taylor et al., 2013's perspectives to the assessment of an IR/IE office's capabilities and examination of challenges via SWOT analyses. Three broad research questions (RQ) guided our inquiry:

- RQ1: What are individuals' perceptions of the strengths/opportunities within their IR/IE office?
- RQ2: What are individuals' perceptions of the weaknesses/threats within their IR/IE office?
- RQ3: What thematic overlaps exist across each SWOT area and how do these overlaps convey broader perceptions of the IR/IE function?

BACKGROUND

History of IR/IE and Strategic Planning

The duties of IR/IE offices have expanded significantly over the past quarter-century to include more than just the reporting, survey, and ad hoc analytic functions for which the field has historically been known (Reichard, 2012). The Golden Triangle framework of Volkwein et al. (2012) describes the roles that modern IR/IE offices must now balance: reporting and policy analysis; planning, enrollment, and financial management; and outcome assessment, program review, effectiveness, and accreditation. As the breadth of IR/IE's responsibilities has grown, so too has the need for constructing a plan to meet these demands in a way that honors an office's institutional mission and accounts for the constraints under which the office operates.

Strategic planning is an excellent tool to achieve that end. Though the practice has steadily become a foundational characteristic of higher education administration over the past 10 to 15 years, Trainer

(2004) was discussing the intersection of institutional strategic planning and institutional research (IR) more than 20 years ago. However, the conversation mostly focused on IR/IE's role in a larger, institutional strategic plan—not the construction of a plan *for* IR/IE offices. Though there are varied tools and frameworks that an office can use to facilitate the strategic planning process, SWOT not only “lies at the heart” of it, it is “one of the most familiar” (Trainer, 2004, pp. 133–134), and therefore lends itself to high-workload, understaffed, and/or overextended IR/IE offices.

What Is SWOT, and Where Did It Come From?

SWOT addresses the environmental scanning phase of strategic planning (Hunger & Wheelen, 2003) by providing a framework for unit employees to discuss their strengths, weaknesses, opportunities, and threats. Conducting a SWOT analysis asks participants “to think about the context in which a given organization functions and to assess the competition” (Trainer, 2004, p. 134). Often formatted as a matrix where impact (across the top) and scope (down the side) are intersected, a typical SWOT looks like Figure 1.

Figure 1. Matrix of Impact and Scope Used to Produce the SWOT Framework

		Helpful	Harmful
Internal	to the organization	<p>Strengths</p> <p>Internal, helpful characteristics, e.g., “What are we doing well?”</p>	<p>Weaknesses</p> <p>Internal, harmful characteristics, e.g., “What could we improve?”</p>
External	to the organization	<p>Opportunities</p> <p>External, helpful characteristics, e.g., “What trends are evident in the sector?”</p>	<p>Threats</p> <p>External, harmful characteristics, e.g., “What policies or changes might significantly impact how we operate?”</p>

Based in private industry in the 1950s, SWOT's predecessor, strengths, opportunities, faults, and threats (SOFT) was developed as a way for operational staff to communicate their views to upper management (Puyt et al., 2020). SOFT enabled an increasingly democratized process for building corporate strategy; it evolved into SWOT through the mid-1960s (Learned et al., 1965; Puyt et al., 2020). As in its original iteration, SWOT remains a valuable tool when an IR/IE office is beginning the strategic planning process for the first time, reinvigorating it after a period of dormancy, or refreshing it after significant change or growth in a unit.

How Does SWOT Compare to Other Strategic Planning Strategies?

There are a multitude of other processes and frameworks that address the foundation-building of a strategic plan, including political, economic, social, technological, legal, and environmental (PESTLE) factors (Christodoulou & Cullinane, 2019), Gap Analysis (Kim & Ji, 2018), Needs Assessment (Sleezer et al., 2014), Porter's Five Forces (Grundy, 2006), and strengths, opportunities, aspirations, and results (SOAR) (Stavros et al., 2003). However, the primary benefit of conducting a SWOT is the likelihood of prior familiarity among staff. Due to its ubiquity in both the private and public sectors, employees of all backgrounds are more likely to have heard of and/or used SWOT previously as compared to its alternatives. Additionally, the SWOT matrix is relatively simple to explain and understand; organizing thoughts into one of four different areas based on the helpful/harmful and internal/external dichotomies tends to be intuitive once introduced.

SIGNIFICANCE

Why Is Conducting SWOT Analysis Important in IR/IE?

In a fast-paced and/or high-demand environment, it can be difficult to intentionally carve out time to pause and look around, identify challenges and assets surrounding the work of the office, and build a roadmap for how the office should respond. The SWOT analysis framework is one of the easiest tools to facilitate that pause and review. However, most IR/IE practitioners have not used it recently. Readers of *The Node for IR/IE* (hereafter, *The Node*) were asked on June 5, 2024, if their office had conducted a SWOT analysis to support the office's development (Godin & Atchison, 2024). More than 60% responded "No" and about 7% were not sure. This poll indicated that only 33% remember conducting a SWOT in their office; of those, only a third remember doing so recently.

The increase in responsibilities and expectations of IR/IE (Volkwein et al., 2012) lends itself to SWOT in helping to take stock of resources currently available or being granted, as well as understanding what must be gained to effectively complete what is being asked by institutional leadership. Given that many universities have encountered operational challenges, experienced staff turnover, and seen fiscal shifts since the COVID-19 pandemic (CUPA-HR, 2024; Flannery, 2022; Kelchen et al., 2024), it stands to reason that IR/IE offices may experience similar disruptive activity. A SWOT analysis could prove to be an important tool in understanding the impact of these changes and in developing shared direction and purpose in this environment.

Why Is Research About SWOT in IR/IE Important?

Though SWOT as a strategic planning method has ample literature discussing its utility, there is a dearth of published research articles regarding its direct usage and implementation specific to IR/IE. This article begins the conversation about why using this specific methodology in this field is helpful. SWOT in this article provides a structural framework for national organizations including AIR, EDUCAUSE, and the like to understand the sentiments of IR/IE professionals. This study aids these groups in advocating for the value this discipline provides and the support that is needed to continue providing that value.

Additionally, conducting this research on a broader scale informs leadership development across IR/IE. Much of the content and strategies discussed to support or initiate strategic planning are done from an office-level perspective, or with an IR/IE office as a stakeholder within an institution. However, conducting this analysis across institutional boundaries and instead looking more broadly at the field and its common themes reframes how leadership within those offices can look at and reference SWOT as a tool. Particularly if the IR/IE field is thought of as an organization characteristic of its individual offices, this research gives leadership an understanding of the sentiments that may be present in their own offices.

DATA SOURCE

The Node is a free weekly e-newsletter highlighting news, reports, updates, and perspectives from IR/IE professionals that was developed in 2021. It includes 10–15 timely resources each week, and currently has more than 2,400 subscribers across 850+ diverse postsecondary institutions and 150+ organizations. Two-thirds of subscribers represent institutional leadership (director level and above). Readership reaches most institution classification types, from associate's colleges to doctoral universities, special focus institutions, and districts/systems.

In addition to sharing news and articles of interest, readers are engaged through weekly poll questions that ask about working in IR/IE, institutional context, and personal/professional background. Results are presented the following week in aggregate; response rates typically represent 10% to 15% of subscribers.

METHODOLOGY

Data Collection, Respondents, and Characteristics of Responses

The data for this study was collected via a series of four weekly polls administered by *The Node*. Starting on January 11, 2023, and continuing for the following 3 weeks, readers of *The Node* were asked this question stem: “What are the greatest ___ of your IR/IE office?” The blank in the question stem was filled in with “strengths,” “weaknesses,” “opportunities,” and “threats” on January 11, January 18, January 25, and February 1, respectively. An additional instruction was provided on all four poll questions: “Include up to 3, no need to rank order responses, include a few words each in the text box below separated by comma or period.”

The number of responses ranged between a high of 96 on the 1st week where subscribers were asked about strengths, to a low of 50 on the 3rd week when asked about opportunities (Figure 2). Due to the anonymous nature of the poll, we do not know the characteristics of the respondents, which we discuss more fully in the Limitations section of this article. However, we can report on *The Node’s* broader readership at the time. When the polls were distributed, there were approximately 2,041 subscribers: 91% (1,867) of the subscribers worked at U.S. colleges or universities, 1% (17) worked at non-U.S. colleges or universities, and 8% (157) worked at some other type of educational organization. Of those who worked at U.S. colleges or universities, 77% worked at 4-year institutions, 20% at 2-year institutions, and the remaining worked within some sort of administrative unit (e.g., system or district office). In addition, within the 93% who worked at U.S. institutions, 66% identified as administrators, 29% were non-administrators, and the remaining worked in some other category.

Figure 2. The Topics, Dates, and Number of Responses to The Node’s SWOT Polls



Following the additional instructions, the responses were brief, ranging between 1 and 103 words. Most responses (about 275 of the 302) were individual words or phrases with very few (about 25 of the 302) including full sentences. We discuss the limitations of the responses in more detail in the Limitations section.

Early Analysis

There were three separate analyses of the 302 responses to *The Node's* SWOT poll series. The first analysis was composed of 5 to 15 responses by frequency included in the subsequent weeks' newsletters. This analysis provided a quick overview of the responses, acknowledged respondents' time, and encouraged responses to the next poll. Graphics of the first analysis, as presented in the newsletters, are included in Appendix A.

The second analysis was conducted with the purpose of demonstrating how to use a specific software feature, Qualtrics' Text iQ, at a regional IR conference, the Southern Association for Institutional Research (SAIR), in Point Clear, Alabama, in October 2023. Developed to help survey administrators quickly analyze open-ended survey items, Text iQ gives researchers the ability to identify key words or phrases within blocks of text and to tag that entire block of text with a topic. Blocks of text can be assigned more than one topic, and the feature allows for a second level of topics to help group similar topics under different categories.

To fully demonstrate different applications of the Text iQ software, we engaged in inductive and deductive (Saldaña, 2014) coding procedures. Specifically, before the deductive coder read the responses, they used their experience in an IR office to develop a coding structure that would reflect what

they expected to find in the responses. They created queries that directed Text iQ to apply topics based on their coding structure and then applied those queries to the responses. Separately, the inductive coder engaged in open coding of the responses—in other words, they approached the responses with no coding structure. After skimming several responses, they started to identify patterns in the responses and developed Text iQ queries that they knew would tag the responses with specific topics.

The second analysis, discussed above, was presented at the SAIR 2023 conference as a technical demonstration (Gipalo & Nix, 2023). In addition to discussion about the software features, the conversation shifted to include curiosity about the content of the results. Thus, we began the third analysis with the intent to report our insights to the IR/IE community through this article.

Analytic Process

During the second phase of analysis described above, we recognized that respondents did not follow the traditional practice of referencing internal characteristics for strengths/weaknesses and external attributes for opportunities/threats. For instance, during the week that respondents were supposed to discuss opportunities (which should be external), there were many references to qualities of the staff in their office (which is internal).

To begin the third phase of analysis, two members of the research team engaged in two consolidation efforts. First, they combined responses along the impact dimension of the SWOT matrix: helpful entries (strengths/opportunities) were combined, and harmful entries (weaknesses/threats) were combined. This process was accomplished by simply appending those weeks' responses. Next,

they combined the inductive and deductive coding structures, which included both a first level (hereafter referred to as “themes”) and a second level (hereafter referred to as “codes”). They shared each of the structures with one another and identified overlaps between themes/codes or where themes/codes were close concepts of one another. The new coding structure that arose from this consolidation effort was a compromise between each coding effort, and was reflective of both researchers’ engagement with the material. With this new consolidated coding structure in hand, they re-read the responses and refined the coding structure even further. This refining process included removing duplicative words, separating distinct concepts into their own themes/codes, and further combining themes/codes when necessary. One researcher executed this work for the helpful (strengths/opportunities) structure, and another researcher executed this work for the harmful (weaknesses/threats) structure.

After consolidation of the coding structures, we undertook the development of themes and synthesis of our findings. This process occurred through team conversations, formal notetaking (approximately 10 meetings with notes), and reflections on the presentation to the regional conference audience. Two research team members synthesized the strengths/opportunities and weaknesses/threats results by talking through each of the themes, comparing similarities and differences in the themes, noting what was and was not discussed in the responses, and imagining the perspectives of colleagues and how the responses might fit together into a cohesive narrative.

We consider the final portion of analysis to include the presentation and conversation of these findings at the 2024 Association for Institutional Research

(AIR) Forum and the preparation of this article. During the 2024 AIR Forum, the authors presented the findings of the analysis and implications for the field. The resultant discussion served as an informal member-checking exercise where we received confirmation from audience members on the importance of the work and individual connections to the findings presented. Audience members also expressed interest in leveraging SWOT methods in their own office contexts. Several months after the 2024 AIR Forum, the researchers revisited the coding structure, synthesis, and findings in preparation for developing this article. Two research team members engaged in additional memoing (Saldaña, 2014) to fully define every theme and code. The deep thinking and reflection of the memoing process led to small changes in the structure and further refined it for final reporting.

LIMITATIONS

This study has notable limitations related to the timing of the data collection, limited understanding of the survey respondents, and the brief structure of the responses. While we took measures to mitigate the impact of these limitations and believe the findings still have meaning for IR/IE despite them, we acknowledge that they overall restrict the generalizability of this research. We offer these limitations to frame our findings below.

Regarding timing, the data was collected and initially analyzed in 2023, more than 2 years before the completion of this article. This time lapse became meaningful as the federal landscape for higher education shifted after the 2024 presidential election, and IR/IE offices were faced with new challenges beginning in January 2025. These 2023 respondents and 2024 AIR participants likely did not

have the current landscape in mind when sharing perceived strengths, weaknesses, opportunities, and threats of their offices. Yet we note that, given the international reach of *The Node* and the content of some of the responses, some foreshadowing of what is currently happening at the federal level had already started to occur at the state level, so some respondents' sentiments are likely aligned with those of the current era, although they were collected 2 years ago. For the relatively few responses that do not hold relevance to the current context, we still find them valuable as point-in-time impressions that preceded the large changes of the present era. In addition, as IR/IE professionals ourselves, the authors of this article all managed the shifting landscape while engaging in this qualitative analysis. The potentially delayed timing therefore allowed us to use these foundational impressions from respondents to inform our discussion and how these findings can be applied to today.

Related to not knowing the exact context to which respondents referred when writing about their perceived strengths, weaknesses, opportunities, and threats, the anonymous nature of the survey begets a lack of individual respondent characteristics. In the Methodology section we reported on the readership of *The Node*, but we do not know exactly who responded to the SWOT poll questions. In addition, the data was collected via convenience sampling and there were only about 300 responses. Only those who happened to open the newsletter each week and had an available moment were likely those who responded, meaning we lose information from those with low bandwidth. It is also possible that those who shared their impressions were those that had strong opinions on either side—particularly satisfied or particularly dissatisfied. Because we cannot verify the representativeness of this sample, we cannot confidently say that these findings are generalizable

across all IR/IE offices. Our efforts to share our findings at regional and national association meetings worked to mitigate this limitation via informal member-checking, but the individuals and offices who are afforded the opportunity to travel for professional development present a further limitation.

Last, the structure of the responses limited our analysis. While the longest response that was submitted was 103 words, approximately 91% of the responses (about 275 of the 302) were individual words or phrases. Only 8% of the responses (about 25 of the 302) included full sentences. This further restricted the amount of context that we could glean from these data and limited the textual richness overall. In addition, as noted in the Methodology section, we noticed that respondents did not conform to the external/internal dichotomy inherent in SWOT analysis. This means in practice that they might have shared observations about external opportunities/threats when asked about internal strengths/weaknesses or vice versa. We chose to manage these limitations with multiple rounds of analysis over the 1.5 years of our research process. We nevertheless acknowledge that our approach used basic qualitative methods and that other methodologies, such as qualitative content analysis, are options for future research. To avoid delays in addition to those mentioned in this section, we chose to close out our analysis and report on findings now in hopes that it might lay the foundation for future, more-robust research.

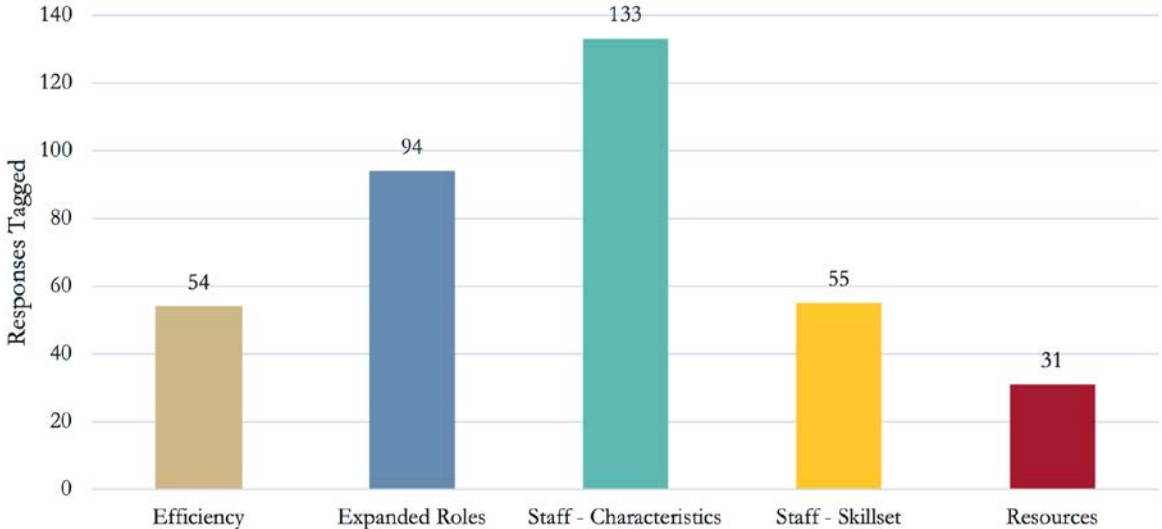
FINDINGS

Strengths/Opportunities

Out of the analyses described above, five themes were developed (in order of frequency): (1) Staff-Characteristics, (2) Expanded Roles, (3) Staff-Skillset, (4) Efficiency, and (5) Resources. The frequency of these themes and their corresponding codes' frequencies can be compared in Figure 3 and Figure B1 in Appendix B, respectively. Overall,

the responses to *The Node's* inquiry on strengths received the highest number of responses and the inquiry on opportunities received the lowest number of responses. Therefore, more of these themes centered on internal strengths rather than on external opportunities. Definitions for each theme and code, as well as examples of quotes for each code, can be found in Table C1 in Appendix C. Representative quotes for each theme are shown below.

Figure 3. Frequencies of Strengths/Opportunities Themes



STAFF-CHARACTERISTICS

This theme includes both the largest number of responses and the largest number of individual codes underneath it of all the themes in the analysis. Across all responses, direct references to IR/IE staff's personal characteristics, individually or collectively, were common. For instance, respondents positively described team-oriented, problem-solving, customer-focused office cultures. Some specifically

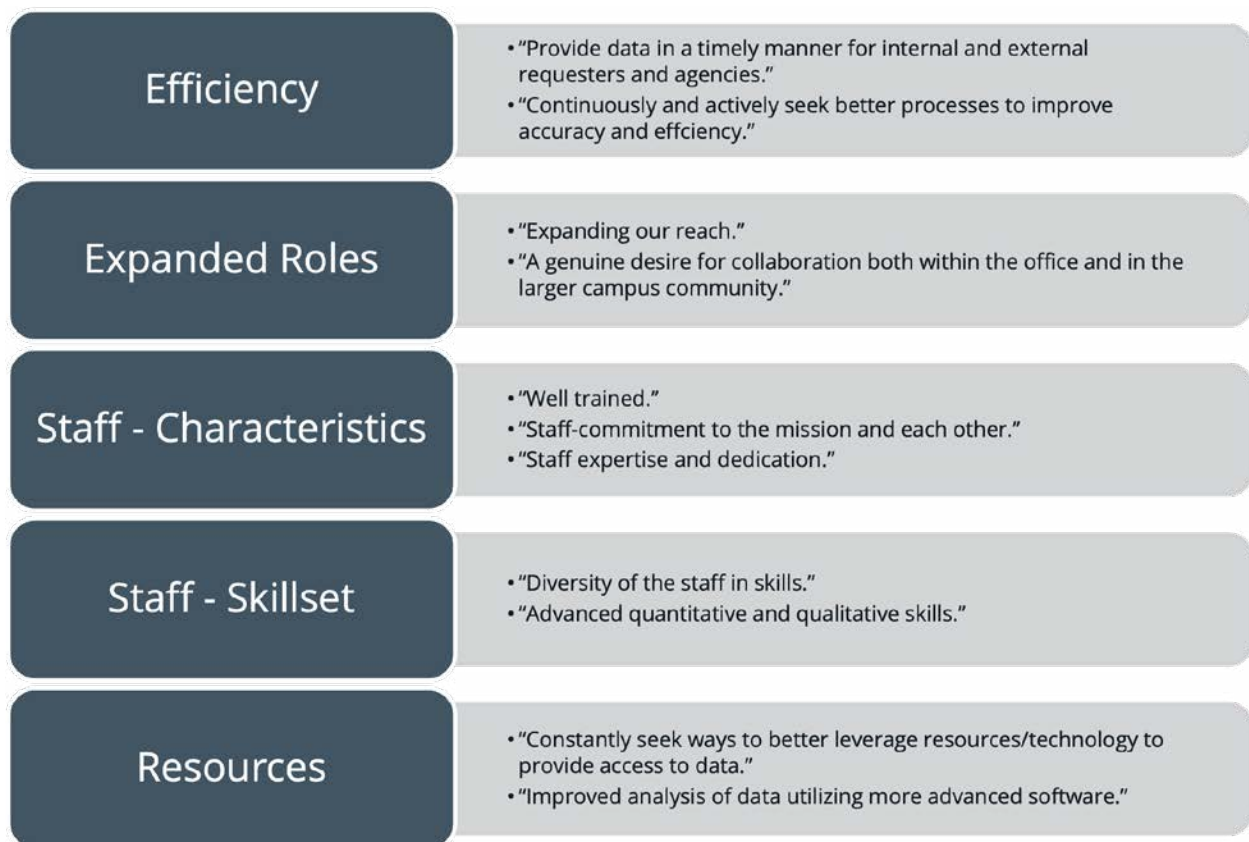
mentioned aptitudes such as detail orientation, strong leadership, or general work experience. While smaller in number, we noted that some respondents even took the time to describe their fellow IR/IE staff members as warm and considerate of work-life balance. These responses indicate that the skills necessary to be successful in IR are not limited to technical competency.

EXPANDED ROLES

The theme with the next-highest number of responses was Expanded Roles, which represents codes that are primarily external in nature and are centered around opportunities identified by institutional researchers. Respondents discussed how their collaboration with campus partners had moved from basic reporting to strategic decision-making, increasing their involvement in campus-wide discussions. Some respondents reported that growth in their offices occurred due to supportive campus leadership, especially from presidents and

provosts who were invested in IR/IE offices. Work in data governance was also cited, such as literacy, stewardship, policies, standards, quality checking, and transparency. Finally, a minority of respondents discussed seeing the opportunity presented by external data requests such as accreditors and state-level stakeholders. These responses broadly acknowledged that the roles that IR/IE offices and their staffs are fulfilling have expanded from their compliance reporting roots. Representative quotes for each theme in strengths/opportunities are shown in Figure 4.

Figure 4. Representative Quotes for Each Theme in Strengths/Opportunities



STAFF-SKILLSET

The Staff-Skillset theme very closely followed the Expanded Roles theme in the number of responses. Like the Staff-Characteristics theme, the Staff-Skillset theme included responses focused on the people who made up the IR/IE offices. However, in contrast to the Staff-Characteristics theme, the Staff-Skillset theme included codes focused on tangible skills that could be developed via prescribed steps as well as the use of the word “skills” with no additional context. For instance, some respondents discussed the strength of their offices in their technical skills such as software proficiency or research methodology expertise. The depth of staff members’ institutional knowledge and their access to professional development opportunities also featured in this theme’s codes. Last, respondents described strong communication skills via effective presentations and data visualization. The responses in this theme elevated the tangible or technical skills required for successful IR/IE offices.

EFFICIENCY

Both a strength and an opportunity, the next theme is Efficiency. Some respondents listed speed, timeliness, and efficiency of completing tasks, while a few others discussed how automation could support completion of tasks. Less generically, some responses described the existence of efficient processes characterized by flexibility, proper management, and overall organizational structure. The existence of the Efficiency theme illustrates that respondents either enact or plan to invest effort in saving time in their work processes.

RESOURCES

The least prominent of all the strengths/

opportunities themes was Resources. This theme included only two codes. The first was a code for technology, which stood for either generic uses of the term “technology” or explicit references to preferred software. The second code focused on explicit statements concerning access to data, either providing or having access. The existence of the Resources theme illustrates its necessity, but the lower number of responses suggests that it does not rank highly in its consideration as either a strength or an opportunity.

Overall Response to Strengths/ Opportunities

As a part of this study, we presented these findings to a group of IR/IE practitioners at the AIR Forum 2024. The audience expressed general agreement with the strengths/opportunities themes presented above. Of note was the engagement around the Staff-Characteristics theme, which we pointed out to the audience for including a code for “warmth,” or discussion of friendliness, enthusiasm, and approachability of members of IR/IE staff. While it could be assumed that IR/IE would attract people purely interested in the technical aspects of the work, the AIR Forum audience affirmed that those most successful in this field are those who can communicate the technicalities effectively. The role of institutional researchers is multifaceted, requiring both technical skill and the ability to strategize, communicate, organize, and manage the interpretation of data in complex, human systems.

Weaknesses/Threats

The analyses of weaknesses/threats produced five major themes (in frequency order): (1) Resources, (2) Human Resources, (3) Institution, (4) Planning,

and (5) Political/Legislative. The frequency of these themes and their corresponding codes' frequencies can be compared in Figure 5 and Figure B2 in Appendix B, respectively. Additional memoing after the AIR 2024 Forum did not lead to significant alteration of these larger themes but did lead to some movement and consolidation of smaller codes

beneath them. Definitions for each theme and code, as well as code-level representative quotes, can be found in Table C2 in Appendix C. Below, the overall sentiments for each theme (in order of frequency) are discussed in the aggregate, with representative quotes for each theme in weaknesses/threats found in Figure 6.

Figure 5. Frequencies of Themes in Weaknesses/Threats

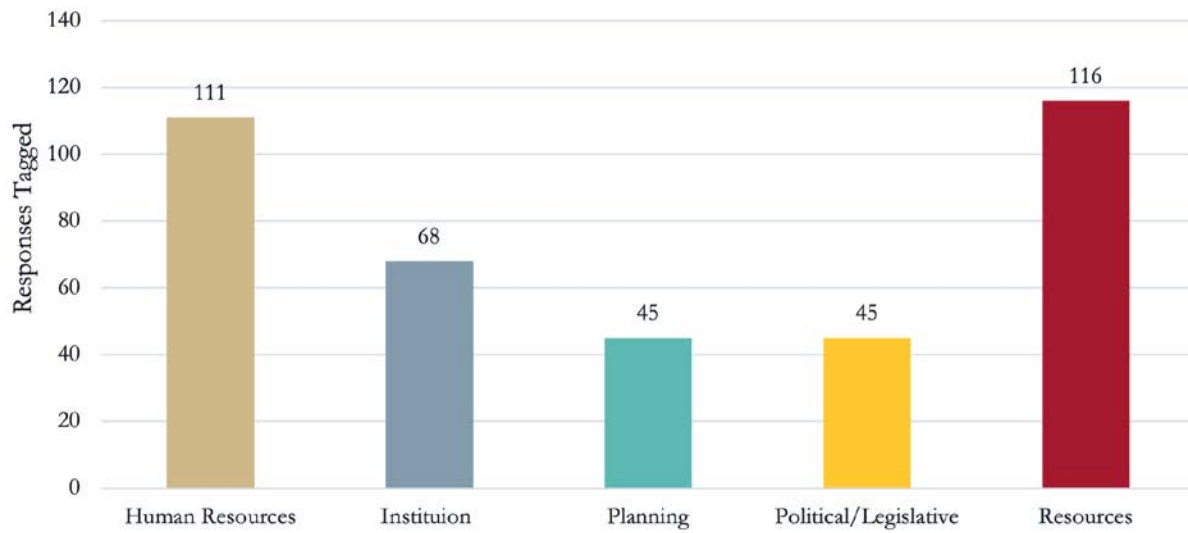
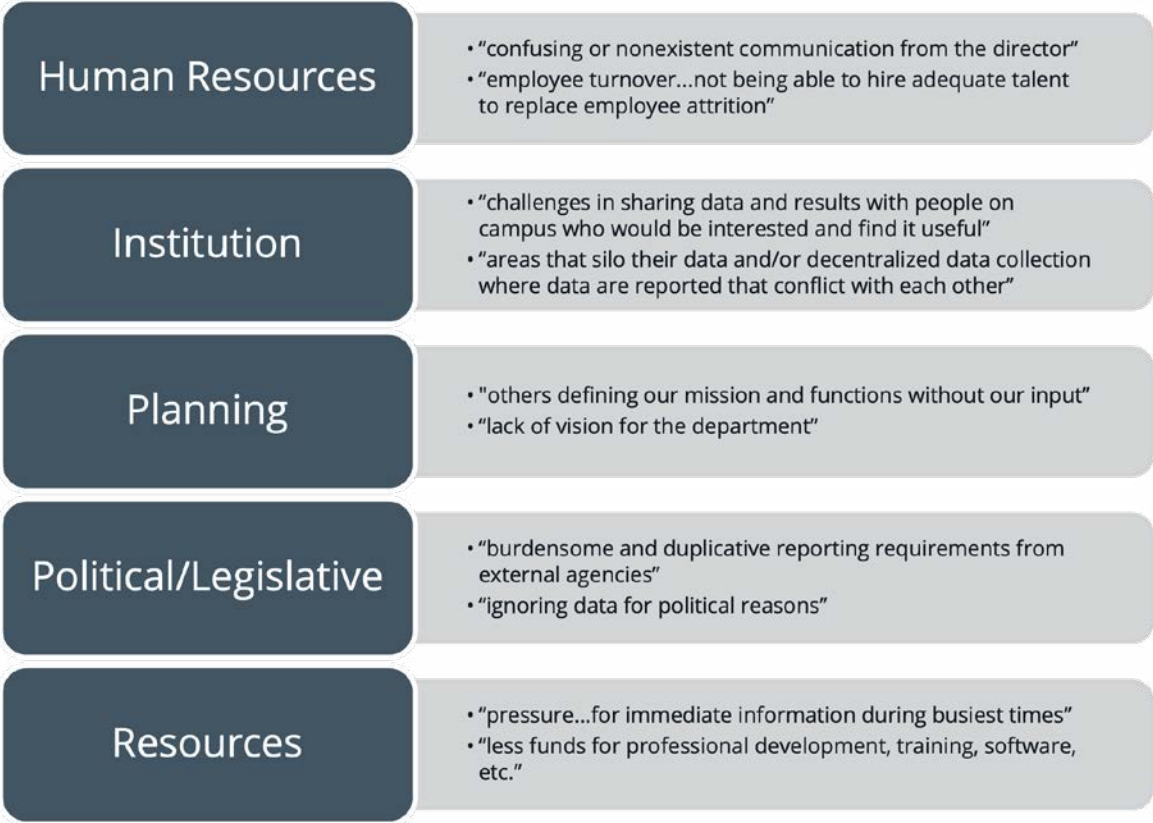


Figure 6. Representative Quotes for Each Theme in Weaknesses/Threats



RESOURCES

This theme was characterized by respondents' focus on capital, capacity, budget, skills, and other *non-human* assets that impact respondents' ability to do their work. Of note was the recurring reference to increased demand for data, data products, and insights that respondents believed did not consider the resources they had at their disposal. Respondents repeatedly mentioned the gaps between the resources they have and the expectations and goals they must meet. Additionally, lack or loss of specific tools and skills, making it more difficult or impossible for them to do their jobs or meet the demands of their requestors, was frequently stated. This theme underscores just how critical the assets supportive of IR/IE are to the work being done.

HUMAN RESOURCES

Though non-human Resources were discussed the most in weaknesses/threats, *Human Resources* came in a very close second. While there was some overlap between the theme Human Resources and the theme Resources, what made this theme distinct was the identification of issues with the administrative and office processes that characterize respondents' offices and the level of staffing they have access to. For example, what makes the "increased demand" and "capacity" codes in the Resources theme distinct from the same codes in the Human Resources theme is their focus on mismatches between expectations (of others) and reality (of what the office can do). In contrast, the Human Resources codes characterized responses reporting burnout, turnover, succession and longevity-focused practices, and general understaffing. The definition of the Human Resources theme is modeled after the classical

definition of a human resources department (addressing hiring, retention, administration, and training) rather than the literal definition of a resource being human. These responses emphasize that the human element of IR/IE is distinct and valuable, and that it merits consideration.

INSTITUTION

In this theme, many respondents reported unstable or minimal practices and standards at their organizations that included them, their offices, or the data they work on. Lack of cooperation between their unit and other offices, issues with data siloing and dissemination, and broader problems with data culture all characterized this theme. Though the theme Resources addresses more broadly spoken-of gaps between expectations of other departments and reality, the Institution theme is typically centered around negative relationships or interactions with other units. Comments in this theme reiterate the importance of others on campus recognizing IR's importance to the staff in the office.

PLANNING

Some respondents discussed the need for alignment between their unit's strategy and the larger plan of their institution. These respondents reported that their units are left out of decision-making processes that contribute to broader institutional goals, have management struggles due to lack of anticipatory strategy, or are generally dissatisfied or puzzled regarding the direction or purpose of their office as it relates to the broader organization. Though named Planning, this theme also strongly referenced strategy, goals, direction, and purpose. By discussing this theme, respondents indicate that there is a need for intentionality behind the work they do and the future of their office in relation to the purpose of the institution for which they work.

POLITICAL/LEGISLATIVE

Though mentioned the least often of all the themes, a handful of respondents noted the recent uptick in regulatory requirements at both the federal and state levels. These responses addressed the impact of reporting changes and environmental budget decreases on their ability to do their jobs. Though minimally mentioned, the Political/Legislative theme indicates that broader state and federal policies do produce impacts at the IR/IE office level.

Overall Response to Weaknesses/Threats

These themes for weaknesses/threats were generally met with agreement when the first draft of consolidated codes was presented at AIR 2024; however, of note was the significant spoken sentiment from the room in support of the Political/Legislative theme. The response count for this theme would suggest it is one of the less-pressing weaknesses/threats that IR/IE professionals see; however, the time lapse between the collection of these responses (early 2022) and the relative recent focus on reporting and regulatory changes in this field (2024–2025) is notable. Additionally, with the recent reduction in force orders from the president that significantly downsized the U.S. Department of Education (2025), the authors find it likely that, were this study to be replicated today, this theme would appear more frequently in respondents' answers.

DISCUSSION

Meeting the Moment

Our findings on strengths/opportunities reflect the ways in which IR/IE practitioners are “meeting

the moment” as the responsibilities, expectations, and structure of the field are changing. Literature has tracked the evolution of IR/IE from strictly the compliance reporting arm of institutions to a much more comprehensive data center included in decision-making, data governance, and strategy (Volkwein et al., 2012). Though various authors have recommendations for the knowledge and skills that are necessary to be successful in IR/IE (Eimers et al., 2012; Knight et al., 1999; Terenzini, 1993), the responses from strengths/opportunities provide insight from institutional researchers themselves. Staff characteristics and skills, ability to take on expanded involvement, high efficiency, and adequate resources reaffirm the frameworks suggested in literature and provide guidance rooted in practice.

In contrast, participants shared insights on “gaps” they identified while attempting to “meet the moment” through their responses to the weaknesses/threats survey items. While respondents acknowledged the high interpersonal and technical skills of their staff, collaborative working environments, and some support from campus leadership, they also reported that the height of expectations placed on their offices did not equal the resources provided to them. Notably, both non-human and human resources, such as capital and capacity, were cited as lacking or under-supported in relation to respondents' listed responsibilities. Furthermore, larger institutional data usage strategy and/or pathways to increased resources were found to be insufficient. The survey respondents often shared that they were either not included in strategy development or that there simply was not a data strategy in their offices or institutions. All these weaknesses/threats work against the solid foundation of the strengths/opportunities identified by the respondents.

Thematic Overlaps

In our synthesis of the findings, we present four ways that the strengths/opportunities and weaknesses/threats overlapped. These overlaps were shared with the AIR Forum 2024 audience and then expanded during the third analysis.

(WE NEED MORE) GREAT STAFF

A potentially novel insight from the analysis was the number of references to and the high value given for staff, the human beings who do the work of IR/IE. The greatest number of responses spoke to the characteristics of great staff who make up IR/IE offices; these responses were sometimes incredibly warm. There were positive comments about the diversity of IR/IE staff in skills, experience, interests, and approaches to work that make them great. Furthermore, respondents wrote about the professional and helpful attitudes of current IR/IE staff, the use of resources/technology to provide access, and their dedication to providing decision support. Respondents also shared insights on the lack of personnel, institutional support, and responsiveness; one respondent wrote, in triplicate, “need more bodies to do the work.” Beyond indicating the need for simply hiring more individuals, respondents also provided insight into the need for professional and technical skill development for existing staff. Probable substantiations for the need for more great staff are the increased demand for data, expanded roles of the IR/IE office, and economic pressures on salaries and budgets for resources.

HIGH EFFICIENCY VS. INCREASED DEMAND

Beyond the human capital often discussed in the responses, IR/IE professionals also spoke to the

technology and process efficiencies leveraged by their offices. Two potential sources of pressure to find efficiencies arose from the responses. First, there were additional reporting mandates and an increased demand for data that created interest in finding better software or data, often at lower or no cost due to resource scarcity. Second, there was an interest in providing greater data accessibility while also streamlining analytics so offices could focus on interpretation and strategy support. However, this increased demand for data and ever-expanding roles paired with a lack of supportive leadership and resources could lead to staff burnout, staff turnover, and weakened processes.

TWO SIDES OF THE SAME COIN: COLLABORATION AND DATA SILOS

Responses about campus partnerships and cooperation were relatively split in their sentiments. The largest number of responses in the “Expanded Roles” theme of strengths/opportunities pertained to the codes encapsulating collaboration around data, which were often fed by strong institutional leadership buy-in on data-informed decision-making. Centrally mentioned were positive comments about emerging partnerships with other campus units, satisfaction that data and data sharing were used in conversations about broader strategy, and mention of a top-down culture that is supportive of IR/IE inclusion. Inversely, the largest number of responses in the Institutions theme of weaknesses/threats addressed the codes about data silos and lack of collaboration. Discussed were the frustrations around not being viewed as a strategic partner, data silos producing reporting differences, and a lack of support from higher leadership. These responses indicate that, regardless of sentiment, the subject of collaboration (or lack thereof) is significant in

the minds of IR/IE practitioners as it relates to their experiences in their institutions and in the field more broadly.

IT'S COMPLICATED: THE RELATIONSHIP WITH EXTERNAL BODIES

When state or federal bodies are mentioned by respondents, they are exclusively mentioned in a negative light—even though the original function of, and still a major role for, IR/IE offices is reporting to these bodies. There were no mentions of positive support from state or federal entities. Instead, the relationship was often characterized as one-sided: our offices provide data and information, but all that those inputs provide (in the perception of our respondents) is pressure. Respondents expressed notable stress around increases in mandated reporting requirements, disagreement with how the data they report is being used in political decisions, and frustrations surrounding diminishing investment in their offices. In the current environment, we theorize that these sentiments may evolve. Though the presence of frustration may continue amidst the lack of acknowledgement by the federal executive about the importance of our work, anticipated issues with centralized reporting (particularly at the federal level) could produce positive sentiment about the few that were not subject to the recent reduction in force (U.S. Department of Education, 2025). Furthermore, as questions and issues arise at the federal level around institutional reporting, it is possible that an increased appreciation for continuity of state-level reporting could occur.

CONCLUSION

Value and Applications of This Research

The findings presented in this article have a multitude of applications, the first of which is to validate the thoughts and feelings of those in the IR/IE field regarding their offices, their positions at their institutions, and the supports and limitations they encounter in their everyday work. There is a great deal of literature that provides suggestions for IR/IE offices and their work (Gagliardi & Wellman, 2014; Knight et al., 1999; Webber, 2018); however, validating that with qualitative sentiments reaffirms that guidance and provides grounded direction to IR/IE leaders.

Along those lines, we hope this analysis serves as a resource for IR/IE leadership or institutional leadership to cite when advocating for the involvement of IR/IE in institutional decision-making, resource allocation, and the importance of the IR/IE function in postsecondary education. Particularly given the current political landscape, it is important now more than ever to have research that communicates the necessity of reporting and data collection. Parents, students, legislators, and business leaders all have questions about postsecondary return on investment, the cost of postsecondary credentials, and the populations that enroll in postsecondary institutions. It would be helpful to those stakeholders that IR/IE leadership use the findings in this article to understand how to support IR/IE staff in their endeavors to answer these questions.

Last, this research initiates and contributes to an introspective look at cross-positional IR/IE staff sentiments for others in the IR/IE field. Aside from validation of sentiments felt in the broader IR/IE

community, the efforts undertaken to take stock of and understand the status of the field have been largely organized around collection from IR/IE directors and other senior leadership. By enabling anyone in the field to respond, we hope that more positionally diverse voices are represented in this study that help supplement the submissions to surveys like the AIR National Survey of IR Offices (AIR, 2024).

Future Research

Though there are many directions in which future research on this subject could be taken, we highlight below those we believe to be most important. First, recognizing that the researcher is the analytic tool in qualitative research, we believe that different methods or software technologies applied to the same dataset could bring to light additional insights from the data. While we engaged in some basic qualitative techniques for this analysis, we believe that a robust qualitative content analysis (Flick, 2014; Grbich, 2022; Krippendorff, 2022) could glean important future insights. Though the depth of the data collected for this article is relatively limited, comparing it to insights gleaned from qualitative content analysis could be beneficial.

Second, we identified that the lack of context about SWOT in the poll questions led to a mix of items that varied widely across the impact dimension of the SWOT structure. A future study that expands the research with additional information about SWOT would likely elicit deeper insights from participants. In addition, future study could provide the opportunity for richer text data such as a greater number of words available and/or a focus group or interview methodology.

Finally, future researchers should consider collecting additional information about respondents and their institutions. Due to the anonymity of the survey in this study, we cannot be sure of respondents' positionality in their offices, the size of their offices or institutions, their years of experience in the field, or even if they identify their work as more in the IR or the IE spaces. Adding this additional context to the content of the responses would allow researchers to definitively determine whether their data and findings are representative of the field.

APPENDIX A: FIRST ANALYSIS FIGURES

Figure A1. Top Responses by Frequency: Strengths

What are the greatest Strengths of your IR/IE office?
(Most common responses in order of frequency)

Collaboration
Technical Skills
Institutional Knowledge
Integrity
Support
Efficiency
Staff
Teamwork
Communication
Professionalism
Responsiveness
Continuous Improvement
Customer Service

Figure A2. Top Responses by Frequency: Weaknesses

What are the greatest Weaknesses of your IR/IE office?
(Most common responses in order of frequency)

Understaffed
Budget/Resource Constraints
Lack of Leadership Support or IR/IE Not at Leadership Table
Time Constraints
Poor Institutional Communication
Staff Turnover
Poor IT/Data Infrastructure
Institutional Silos

Figure A3. Top Responses by Frequency: Opportunities

What are the greatest Opportunities of your IR/IE office?

(Most common responses in order of frequency)

Data Automation/Innovation
Data Literacy
Professional Development
Impact of Data on Leadership
Data Analysis
Collaboration
Growth Mindset of Staff

Figure A4. Top Responses by Frequency: Threats

What are the greatest Threats of your IR/IE office?

(Most common responses in order of frequency)

Financial Resources
Staff Turnover/Burnout/Office is Understaffed
Siloing/Misunderstanding the Role of an IR Office
Poor Data Literacy or Other Offices Not Using Data
Leadership Changes/Lack of Leadership Support
Poor Data Quality

APPENDIX B: FREQUENCY FIGURES FOR THEMATIC CODES

Figure B1. Frequencies of Strengths/Opportunities Codes Grouped by Theme

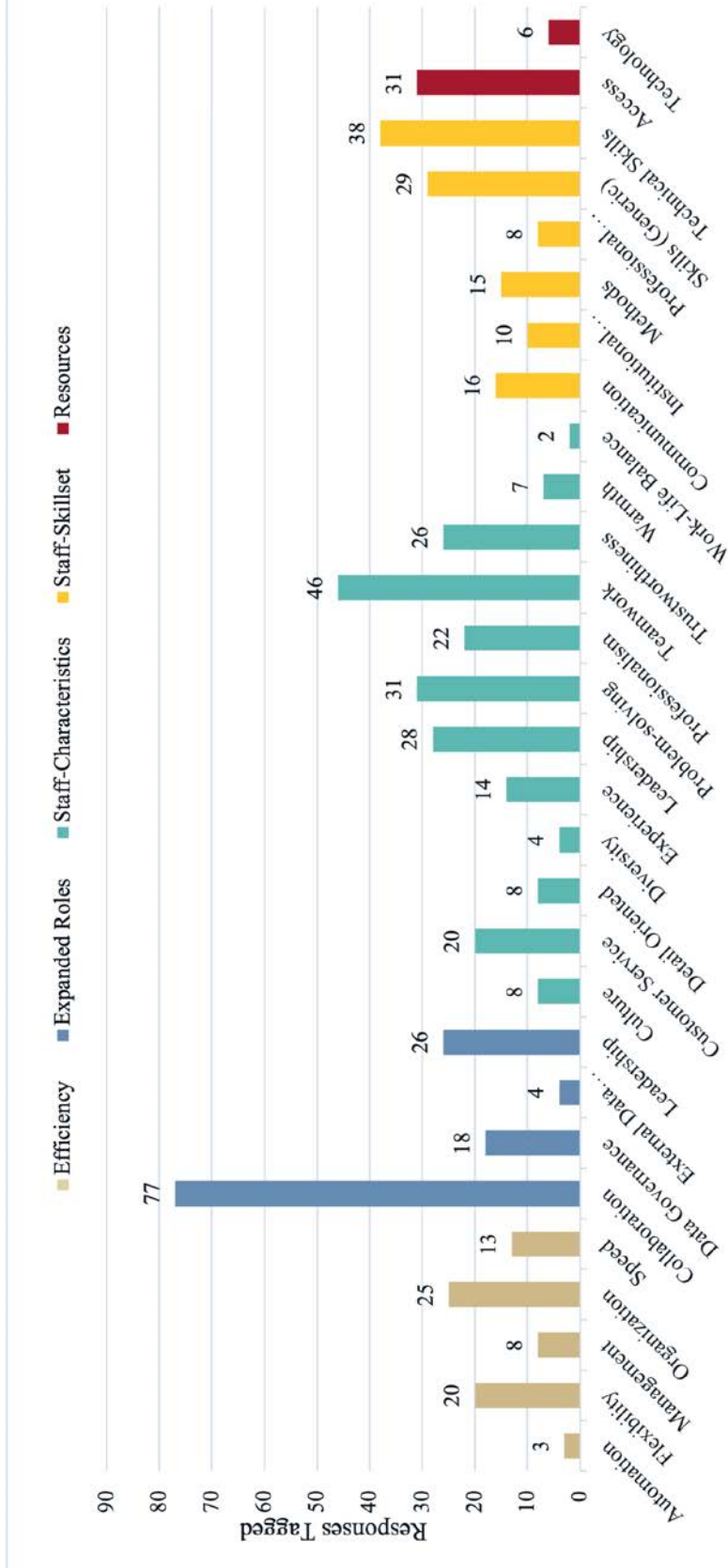
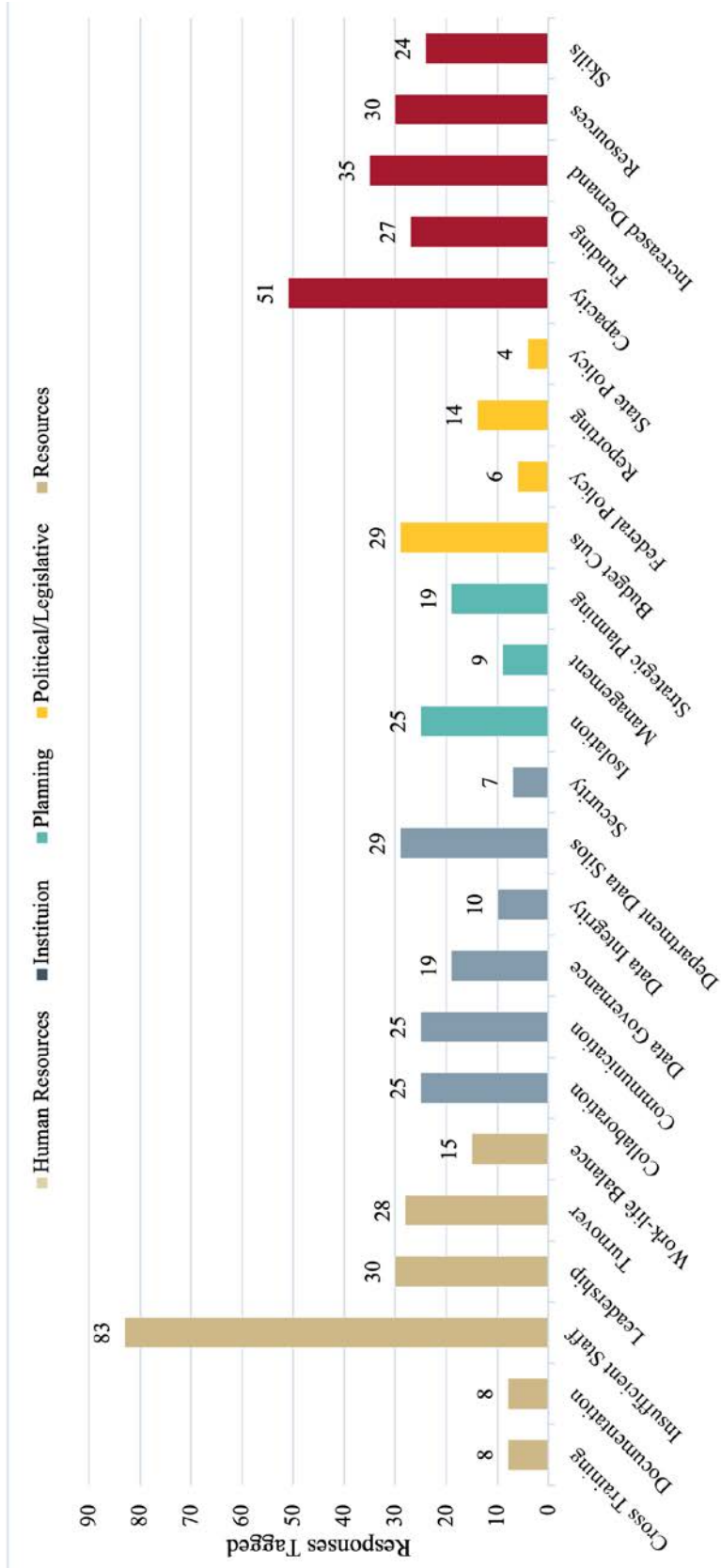


Figure B2. Frequencies of Weaknesses/Threats Codes Grouped by Theme



APPENDIX C: THEME AND CODE DEFINITIONS AND EXAMPLES

Table C1. Definitions and Examples for Strengths/Opportunities' Themes and Codes

Theme [Response Count]	Theme Definition	Code [Response Count]	Code Definition and Example(s)
<p>Efficiency</p> <p>Items focused on a collection of codes that speak to the efficiency of the IR/IE office.</p>		Automation [3]	<p>Related to "automation" or expounds on automation if processes for task completion. <i>Example: "Many mundane tasks are automated"</i></p>
		Flexibility [20]	<p>Related to the willingness to be responsive or adapt quickly to external office or university inputs such as changes to technology or needs/requests from campus partners. <i>Examples: "The office's ability to adapt to change," "The office's ability to complete work in a timely fashion," "nimble, versatile, aware of community needs"</i></p>
		Management [8]	<p>Related to targeted efforts to improve processes, prioritize work, and/or explicit references to project management. <i>Examples: "Committed to process improvement," "Collaboration with IT, Project Management, Forward Thinking"</i></p>
		Organization [25]	<p>Related to general organization and logistics strength not necessarily towards continuous improvement efforts. <i>Examples: "Reorganizing the office," "Organization, Accuracy, Experience"</i></p>
		Speed [13]	<p>Related to reference to the speed, timelines, and efficiency of completing tasks. <i>Examples: "Speed in responding to requests," "ability to respond quickly"</i></p>

Theme [Response Count]	Theme Definition	Code [Response Count]	Code Definition and Example(s)
<p>Expanded Roles [94]</p>	<p>Items focused on how the role of the IR/IE office has expanded.</p>	<p>Collaboration [77]</p>	<p>Related to references to engagement with campus partners from basic communication strategies to strategic decision-making groups. <i>Examples: "Collaborative efforts with other offices," "providing a broad-based view when discussing University issues (not being siloed)"</i></p>
		<p>Data Governance [18]</p>	<p>Related to governance concepts including literacy, stewardship, policies, standards, quality checking, transparency, and defining of infrastructure. <i>Example: "Increase Institutional Data Literacy/Awareness, Mentor other Departments who are learning data visualization, Building Institutional Trust in Data"</i></p>
		<p>External Data Requestors [4]</p>	<p>Related to what we understand as external to the institution data requestors such as accreditors, state-level stakeholders, and Perkins V. <i>Examples: "Community partnerships, Industry partnerships," "The office provides excellent service to internal and external customers"</i></p>
		<p>Leadership [26]</p>	<p>Related to university leadership such as presidents, provost, etc. <i>Examples: "Taking on larger leadership role in decision making," "influence the strategic direction of the university"</i></p>

Theme [Response Count]	Theme Definition	Code [Response Count]	Code Definition and Example(s)
Staff-Characteristics [133]	Feedback & Communication Course Engagement Critical Thinking Development Financial Support Parental Influence	Culture [27]	Related to mentalities, approaches, and attitudes of staff who work in the IR/IE office. <i>Examples: "Collaborative work environment," "Small size of university makes it easier to know and develop relationships"</i>
		Customer Service [20]	This is related to framing the role of the IR/IE office as a service provider generally and its commitment to quality, prompt, and helpful support. <i>Examples: "Service quality," "dedicated to being decision-support service providers to institutional colleagues," "Service Excellence"</i>
		Detail Oriented [8]	Related to references to "accuracy" as well as attention to detail and thoroughness. <i>Examples: "Prioritizes data integrity and accuracy," "Attention to detail"</i>
		Diversity [4]	Related to the term "diversity" in general and specific. <i>Examples: "Diversity of the staff in skills, experience, interests, approaches to work," "Diverse staff backgrounds"</i>
		Experience [14]	Related to staff experience and/or longevity. <i>Examples: "Staff longevity," "experienced staff"</i>
		Leadership [28]	Related to university leadership such as presidents, provost, etc. <i>Examples: "Taking on larger leadership role in decision making," "influence the strategic direction of the university"</i>
		Problem-solving [31]	Related to in-office skill or mindset related to solving problems including interest in learning and improvement. <i>Examples: "Eagerness to Learn," "creativity, problem solving," "innate curiosity, willingness to be wrong"</i>
		Professionalism [22]	Related to in-office skill or mindset related to solving problems including interest in learning and improvement. <i>Examples: "Eagerness to Learn," "creativity, problem solving," "innate curiosity, willingness to be wrong"</i>
		Teamwork [46]	Related to internal office relationships such as referring to one's "team" or "teamwork," collegiality, and camaraderie. <i>Examples: "Team mentality," "Cohesive division," "Team Player," "collegiality"</i>
		Trustworthiness [26]	Related to a value for trustworthiness, including trust-building, loyalty, transparency, honesty, and practicing with integrity. <i>Examples: "Building Institutional Trust in Data," "trust/integrity, dependability," "campus wide trust"</i>
		Warmth [7]	Related to the approachability, warmth, enthusiasm, and overall friendliness of the IR/IE staff. <i>Examples: "Genuine care," "friendly when helping others," "Approachability," "kindness"</i>
		Work-life-balance [2]	Related to working remotely and balance with personal lives. <i>Example: "Working from home"</i>

Theme [Response Count]	Theme Definition	Code [Response Count]	Code Definition and Example(s)
Staff-Skillset [55]	Items focused on the specific skill leveraged in an IR/IE offices work and/or discusses how those skills were developed.	Communication [16]	Related to IR/IE office's skill in communicating information through effective presentations of data visualizations. <i>Examples: "Visualization skills," "Data presentation using stakeholder friendly software, data analysis, forecasting"</i>
		Institutional Knowledge [10]	Related to understanding higher education and/or institutional context. <i>Examples: "Historical knowledge of the college," "broad institutional knowledge across many functional areas & 25 years of employment at institution"</i>
		Methods [15]	Related to the IR/IE office's skill in leveraging a range of research methods from traditional and program evaluation methods. <i>Examples: "Statistical knowledge, technical skill," "providing predictive analytics," "code reviews," "data mining and artificial intelligence"</i>
		Professional Development [8]	Related to efforts to enhance skills via conference attendance, trainings, professional learning communities, and within-office documentation. <i>Examples: "Opportunities to collaborate, training, conferences," "bite-size data training for campus users," "cross-training"</i>
		Skills (generic) [29]	Related to IR/IE office's generic "skills" or "talents" including reported excellence in foundational IR/IE functionalities of analytics and reporting. <i>Examples: "Increase team members' skills," "good mix of skill sets"</i>
		Technical skills [38]	Related to the technical skills both with software as well as research methodologies. <i>Examples: "Leveraging technology for routine tasks," "opportunity to learn new technologies, such as visualization tools, data mining and artificial intelligence"</i>

Theme [Response Count]	Theme Definition	Code [Response Count]	Code Definition and Example(s)
Resources [31]	Items focused on the materials that are used to do IR/IE work.	Access [6]	Related to explicit references to providing or having access to data. <i>Example: "Access to lots of data"</i>
		Technology [8]	Related to specific technology/software that are preferred and leveraged in IR/IE work. <i>Examples: "Adoption of new Tech Advances," "Improved analysis of data utilizing more advanced software"</i>

Table C2. Definitions and Examples for Weaknesses/Threats' Themes and Codes

Theme [Response Count]	Theme Definition	Code [Response Count]	Code Definition and Example(s)
<p>Human Resources [111]</p>	<p>Items focused on the staffing, Office Processes and administration, and skill availability of the IR/IE unit.</p>	<p>Cross Training [8]</p>	<p>Related to "automation" or expounds on automation if processes for task completion. <i>Example: "Many mundane tasks are automated"</i></p>
		<p>Documentation [8]</p>	<p>Related to the willingness to be responsive or adapt quickly to external office or university inputs such as changes to technology or needs/ requests from campus partners. <i>Examples: "The office's ability to adapt to change," "The office's ability to complete work in a timely fashion," "nimble, versatile, aware of community needs"</i></p>
		<p>Insufficient Staff [83]</p>	<p>Related to targeted efforts to improve processes, prioritize work, and/or explicit references to project management. <i>Examples: "Committed to process improvement," "Collaboration with IT, Project Management, Forward Thinking"</i></p>
		<p>Leadership [30]</p>	<p>Related to general organization and logistics strength not necessarily towards continuous improvement efforts. <i>Examples: "Reorganizing the office," "Organization, Accuracy, Experience"</i></p>
		<p>Turnover [28]</p>	<p>Related to reference to the speed, timelines, and efficiency of completing tasks. <i>Examples: "Speed in responding to requests," "ability to respond quickly"</i></p>
		<p>Work-life Balance [15]</p>	<p>Related to burnout, workload, and uneven ratios of work hours to work expectations. <i>Examples: "Continual workloads increase," "burnout/poor work-life balance habits"</i></p>

Theme [Response Count]	Theme Definition	Code [Response Count]	Code Definition and Example(s)
Institution [68]	Items focused on the practices and standards of the college, university, or organizations at which the respondent works.	Collaboration [25]	Related to the cooperative work between the IR/IE unit and other offices on campus. <i>Example: "Not viewed as a strategic partner by other departments on campus"</i>
		Communication [25]	Related to dissemination or sharing of data or information on campus. <i>Example: "Challenges in sharing data and results with people on campus who would be interested and find it useful"</i>
		Data Governance [19]	Related to data culture, literacy, management, warehousing, and support on campus. <i>Example: "Data silos/lack of data governance, low level of data literacy"</i>
		Data Integrity [10]	Related to the accuracy and consistency of data on and across campus. <i>Examples: "Unnoticed manual data entry errors," "inaccurate data entered by other offices"</i>
		Department Data Silos [29]	Related to isolation of data within campus units. <i>Example: "Areas that silo their data and/or decentralized data collection where data are reported that conflict with each other"</i>
		Security [7]	Related to privacy and safety of data collected on campus. <i>Examples: "Data security, cybersecurity," "abiding by security concerns"</i>

Theme [Response Count]	Theme Definition	Code [Response Count]	Code Definition and Example(s)
Planning [45]	Items focused on organizational strategy, unit preparation, and congruence between the two	Isolation [25]	Related to IR/IE unit exclusion or disregard in campus planning or decision-making activities. <i>Examples: "Others defining our mission and functions without our input," "no voice at the table"</i>
		Management [9]	Related to time allocation and efficiency as a result of pre-planning or lack thereof. <i>Examples: "Backlog of data needs," "unproductive meetings"</i>
		Strategic Planning [19]	Related to vision, direction, goals, priorities, and mission at the unit or campus level. <i>Examples: "Lack of vision for the department," "inconsistency in direction of the office"</i>
Political/ Legislative [45]	Items focused on impact of policy or law from a government or accrediting body	Budget Cuts [29]	Related to limits to funding allocation and budget decreases imposed by a government or accrediting body. <i>Example: "Unfunded mandates"</i>
		Federal Policy [6]	Related to national government policy or law that impacts IR/IE office operations. <i>Examples: "Changes to regulations," "ignoring data for political reasons"</i>
		Reporting [14]	Related to required data submission by IR/IE offices or accrediting body. <i>Examples: "Additional government reporting mandates," "burdensome and duplicative reporting requirements from external agencies"</i>
		State Policy [4]	Related to state government policy or law that impacts IR/IE office operations. <i>Example: "State politics"</i>

Theme [Response Count]	Theme Definition	Code [Response Count]	Code Definition and Example(s)
		Capacity [51]	Related to performance and capability to complete expected projects or tasks given constraints. <i>Examples: "Pressure . . . for immediate information during busiest times," "increasing requests for data with not enough resources"</i>
		Funding [27]	Related to funding allocation by the college, university, or organization at which the respondent works. <i>Example: "Less funds for professional development, training, software, etc."</i>
Resources [88]	Items focused on capital, capacity, budget, skills, and other assets.	Increased Demand [35]	Related to growth in needs or desires by those outside the IR/IE unit for work or performance by the unit. <i>Example: "Increasing number of data requests from [organization]"</i>
		Resources [30]	Related to technical or practical tools associated with IR/IE work. <i>Examples: "Loss of reporting tools," "major changes in software/systems with little notice"</i>
		Skills [24]	Related to skillsets or knowledge of IR/IE unit staff. <i>Examples: "Lack of skill sets related to . . . visualization," "over reliance on descriptive statistics," "programming skills (e.g. SQL)"</i>

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