

MEETING DEMAND FOR IMPROVEMENTS IN PUBLIC SYSTEM INSTITUTIONAL RESEARCH

Progress Report on the NASH Project in IR
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Jonathan S. Gagliardi, NASH Coordinator
Jane Wellman, Project Consultant

NASH
National Association
of System Heads

This report summarizes the findings from the first of a two-year project of the National Association of System Heads (NASH) to address opportunities to strengthen institutional research (IR) among public systems, and colleges and universities in the United States. The first year has concentrated on an assessment of general capacity of system and campus IR functions, conducted via a survey of IR offices supplemented with interviews. The second year of the project will focus on ways NASH can work with systems to improve IR, through the identification and promotion of emerging best practices within the field, and by enjoining a team of experts to work with volunteer systems on potential redesigns and improvements in IR both among systems and the campuses that comprise them.



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Summary of findings

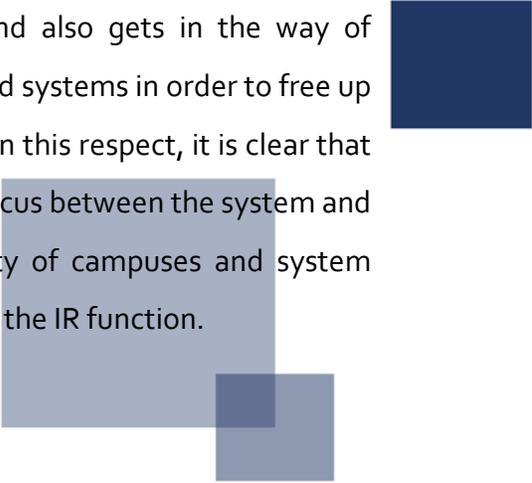
Higher education is going through a period of rapid change, faced with an imperative to increase student access and success without diluting quality and in the face of real financial constraints. Institutional leaders need to meet unprecedented public demand for information while also doing more with data to improve performance within their institutions. Most also face considerable pressure to overhaul basic business functions, to reduce costs and to put investments into places that enhance student success. They want information that often goes past traditional measures of activity, like enrollments and credit hour production, to better understand the conditions that produce student success, including the connection between resource use and student outcomes. Information demands do not stop at the college door; college leaders need to know more about their students beginning with their K-12 preparation, as well as how they fare in the workforce. This calls for more frequent and fluid connection of student information between campuses, the system office, and myriad external agencies. Deeper and broader information and analysis, and more compelling narratives are needed to satisfy the growing appetite for knowledge among internal and external stakeholders.

Against this backdrop of demand for IR, the picture that emerges from this study is of a field that is at best unevenly positioned to support change. IR offices are running hard and yet many are still falling behind, deluged by demands for data collection and report writing that blot out time and attention for deeper research, analysis and communication. Many do not have the information they need to get at the performance questions of most interest to them, their boards or public officials, either because it doesn't exist or because it's not collected in a way that admits of analysis. The analytic functions in most systems and campuses remain topically stove-piped, with the named "IR" office focused primarily on student and student related research, with reporting and any research in other topical areas (resource use, efficiency and effectiveness, and personnel) handled by the budget and human relations offices. The overall ability of IR offices to use data to look at issues affecting many of the cross-cutting issues of

the day—such as the connections between resource use and student success—is nascent at best.

There are some success stories, despite the unevenness of IR. In the area of student retention and graduation, both system and campus IR offices report improvements in analytics and in use of data by decision makers which in turn are contributing to improvements in student success. More can be done, but there's no question that the field has evolved to a much higher level of performance than in previous eras. This has come about because leaders at all levels have demanded such data, and the field has responded. That success story does not extend to other major performance issues facing higher education, such as resource use, cost and tuition control, and meeting workforce needs. These topical areas are quite simply not a major focus for either system or campus IR offices in most universities. While most system offices see these as areas of emerging priorities for future research, that view is not held by the majority of campus IR offices.

The surveys also show frequent disconnections between system and campus IR offices, caused by different IT systems and data definitions, even inside a single campus as well as within systems. This limits capacity for either system or campus decision makers to compare performance across campuses or systems, to understand the reasons for differences and to use data to drive improvements. While gaps exist in data governance and infrastructure among systems and their campuses, there is also a redundancy in reporting between system and campus, perhaps necessitated by different audiences for the different levels of work. This contributes to confusion about basic measures and metrics, and also gets in the way of potential efforts for greater sharing of work between campuses and systems in order to free up staff to do other things. While some systems are ahead of others in this respect, it is clear that many stand to benefit from a more intentional differentiation of focus between the system and the campus. This seemingly better use of the collective capacity of campuses and system offices has the potential to improve professional development and the IR function.



Interviews with IR office heads and with institutional leaders and other users of IR confirmed the basic accuracy of the survey findings. They see the demand for work increasing exponentially, against a field that is not well positioned to meet the needs of the future. Institutional leaders see weaknesses in IR inhibiting their ability to address basic and legitimate questions about performance in higher education being asked of them by their boards, legislatures, and consumers. They welcome the opportunity to improve the function, through the identification and promotion of emerging practices within the field and to more attention to professional development for IR professionals. Institutional leaders and other users of IR share a desire to widen the lens to bring in perspectives from outside of IR, to think about a potential redesign of analytic capacity, and to better meet the needs of the future. Among institutional leaders and those in public policy positions, we heard a sense of urgency about this topic, some of whom characterized it as being among the most vexing issues facing public institutions. They also see it as an area where systematic attention and willingness to take bold steps will yield big payoffs.

We hope to use the next year of this project to take steps in that direction. Working with campus and system leaders in IR, we plan to improve the network of IR professionals across public systems, to better identify and promote best practices and to improve professional development. We also plan to invest in the development and testing of new approaches to IR among volunteer systems, in conjunction with a team of expert advisors including some from outside of higher education, from whom we have much to learn.



The context for changes in institutional research

Higher education is facing unprecedented pressures for rapid change, to increase access and improve success for all students, to improve student learning, to meet future demands for jobs, and to reduce costs. We have witnessed huge changes in how data are accessed and used, and will continue to experience changes for the foreseeable future. Technical information is becoming more and more widely available – via social media tools – and easily accessible to major databases. The business of higher education is no longer only the province of the institutions themselves. College and university performance is now also the people's business, and is a major topic of public policy. A myriad of sophisticated nonprofit public policy and research groups have developed over the last two decades, each focused on data driven analysis about some facet of higher education performance. Demand for easily accessible, relevant data about higher education performance has never been stronger: from federal officials, 'think tanks,' among state officials, in the media, and in the blogosphere. The days when higher education could control the flow of data, or even define the terms of the discussion about performance, are over.

A current example of this dynamic can be found in the Obama administration's plan to develop a new 'ratings' systems for colleges and universities, based on measures of 'value' and 'value-added' that have yet to be defined. The administration has asked for input about the measures, and will likely unveil their new proposals within a year or so. The feedback from the higher education community has by and large been to support the concept but to question the technical basis on which measures will be developed. They see the issues of definitions and data as critical to the integrity of any new rating system, and potentially dangerous to higher education if not developed with great care as to consistency and quality of the data elements. The Obama administration, while listening to the field about these issues, has clearly signaled an intent to move forward with new measures, without waiting for consensus about the technical infrastructure on which any such system must be built.

While IR is unquestionably needed to inform external accountability demands, a deeper need lies in the potential to use IR to inform and leverage strategic change and organizational learning necessary to propel change. Good organizational intelligence, the type of information that looks both inward and outward, is central to the management of strategic change in higher education. Colleges and universities often change at the edges, in ad hoc and idiosyncratic ways driven by individuals and disconnected from the central business of the institution. For change to take hold and to grow to scale, it has to be strategic and organizational. This type of change depends on leadership and persuasion. Information is absolutely essential to this, particularly for faculty and for administrators who need to draw their own conclusions about where and why to do things differently. Faculty are notorious skeptics, but they are also invested in organizational success, and many care deeply about finding ways to do more to increase the success of their institutions. Successful change efforts require building consensus and support through engagement and communication with stakeholders at both the system and campus levels.

The following framework for 'change agency,' adapted from work by Swing (2009), shows the steps in the process of organizational change.



Framework for Change Agency: (adapted from work by Swing, 2009)		
Step	Key Pieces Important to Actualizing Change	Role of IR
Build Awareness	Establish a common language; Anticipate the scale and scope of awareness needed to advance the issue; Ensure that constituents perceive the planned change as one that the campus can influence or has direct control over; Consider human desires to change.	Hypothesis testing and communication; Help standardize language.
Develop Focus	Apply framing theory: Communicate data-based information that identifies and disaggregates components of complex issues; Refine the language used in diagnosing issues; Ensure that others can articulate the timeliness of issues; Encourage debate and discussion of the issues.	Narrator: Use problem framing to present information in a way that clearly defines problems and solutions and resonates with various stakeholders.
Increase Knowledge	Sample stakeholders; Move campus from considering a problem to a finite and narrow list of potential solutions; Peer comparisons; Understand where political and cultural barriers may arise and work to navigate them; Knowledge-building; Find a critical mass of people who support the change.	Surveys, focus groups, other tools and research to quickly build a body of knowledge to drive consensus.
Resolve to Change	Continue to build momentum behind decision, or run the risk of failed adoption; Pilot projects and small demonstrations; Understanding campus dynamics; Disseminate and communicate a change plan; Assist decision makers in establishing and monitoring a timeline; Track progress through initiation, implementation, and continuation.	Develop performance measures to monitor change efforts; Help establish routines and monitoring tools.
Incorporate or Replace	Fairly evaluate efforts; Create, change, or disband where appropriate; Intentional revision and continuous improvement; Building a leadership succession plan.	Serve as an objective evaluator of policies and programs.

This new reality presents opportunities and challenges. The explosion of interest in higher education is a positive for the sector, as is the opportunity for leaders to push for changes that improve student success and ultimately benefit the whole society. But it also presents real challenges to the capacity to process change and to keep up with demand. Workload and chronic staffing shortages make this a challenge everywhere. Governing boards are asking for more information, as are senior administrators, faculty and student services professionals, and accrediting agencies. There is also a new source of demand, from the media, students, employers, analysts at think tanks, not-for-profit organizations, and so on. Some are sophisticated users of information, and know how to access state and federal databases without bothering to go to institutions for data. Others may not be so knowledgeable, and it can be problematic that some of the new users of data do not have context for making sense of it. Small things like technical definitions, differences in reporting formats, dates, and the like, can lead to big changes in the inferences one reach about performance. There can also be big differences in results depending on whether the student, program, or institution is the unit of analysis.

Another challenge comes in the ability of system and campus IR offices to create knowledge from an abundance of data much more rapidly than earlier generations of reporting systems. This has the potential to change the lens for looking at all kinds of performance information in higher education, from the traditional 'relational' systems (where performance metrics are routinely contextualized according to norms such as adjusting for FTE enrollments), to school years. The transition to big file structures where data are not normalized presents an opportunity to explore patterns and relationships among data elements at a more granular level than ever before and will likely yield information to help educators proactively diagnose issues before they even occur. Electronically-mediated instruction methods continue to advance and diversify, potentially exploding the knowledge base for understanding student learning. We will soon be able to see how students interact with the subject matter/teaching materials, and that will be a huge source of information on ways to improve student learning.

The changes in demand for data, and in institutional capacity to generate information, both increase demand for IR, but also require changes in the skill set needed to translate data into information in a data-rich environment. In this environment, the value-added of the IR offices changes somewhat, from the arbiter of data to the interpreter and analyst of data. Visualization tools, and clarity about definitions and context, are increasingly important. We have the sense that other sectors – business, nonprofit – are ahead of the norm in higher education in this regard.



About the survey and interviews

The National Association of System Heads (NASH) collaborated with the Association of Institutional Research (AIR), to develop surveys of both system and campus IR offices. Guided by a national advisory committee (see Appendix 1 for names of committee members), the survey results then formed the basis for interviews about the findings with both IR professionals and users of IR – academic provosts, fiscal officers, government relations personnel, system heads, and individuals in policy positions at both state and national levels. We used the interviews to confirm findings from the surveys, and to test perceptions among key stakeholders as to whether the function is well positioned to meet the needs of the future. Questions were designed to get at issues of IR organization, workflow, audience, impact, and readiness for change.

Two separate surveys were developed, one for system IR offices, and one for campus IR offices. Although we asked the IR offices to complete the survey, we asked them to frame responses about the IR function, whether or not that is done within a designated IR or other-named office. Draft surveys were field tested with both system and campus offices, and distributed to all 48 system offices and to the IR offices for 349 campuses within systems. NASH sent letters to all system heads, informing them about the survey, and encouraging member institutions to participate in it. We received responses from 35 system offices, and from 157 campus IR offices, for a response rate from systems of 73% and for campuses of 45%. A listing of respondents is provided in Appendix 2. A copy of the survey instrument and a detailed summary of the complete campus and system surveys and results are available at AIR (<https://www.airweb.org/Resources/IRStudies/Pages/SystemIROffices.aspx>).

NASH wishes to acknowledge the contributions from many colleagues without whom this work would not have been possible: Dr. Darlena Jones from Educational Benchmarking Incorporated (EBI), Dr. Bobby Sharp from Appalachian State University, Dr. Marsha Kroseng from Bluefield State College, and Teri Hines from the Association of Public Land Grant Universities. EBI allowed us to use their Web Enabled Survey System (WEBB) for the distribution and collection of the survey. Dr. Amelia Parnell (AIR) shepherded the survey work through all phases of the project, and she and Dr. Randy Swing (AIR) shared in the analysis, the interviews, and the distillation of findings. Their partnership has been critical to the success of this work, and we look forward to continued collaborations with them in the future.



Highlights from the surveys of IR offices

The IR functions at both campus and system offices and is dominated by data collection, organization, editing and report writing. The majority of work is directed to preparation of mandatory accountability reports to the system governing board. The analytical function is much weaker in most institutions and in systems. Campuses carry the bulk of the workload in preparing federal data reports for the IPEDS (Integrated Postsecondary Education Data System), and also do more than the system in working with 'other' outside groups (such as special reports required for accreditation reviews or reports for foundations).

The primary focus of IR at both the system and campus level is on student or student-related research enrollments, demographics, retention, graduation, and in strategic planning. **The primary focus—and arguably strength—of both system and campus IR is in student-related research.**

- 97% of systems and 94% of campuses reported the relative focus of system IR on students and student-related research as high or very high 86% of systems and 92% of campuses reported a high or very high relative focus of campus IR on academic program information (e.g., course enrollments, degrees conferred)
- 60% of systems and 60% of campuses report a high or very high focus on short-term planning
- and 71% of systems and 54% of campuses on long-term strategic planning

Table 1: Rate the relative focus of system IR on each of the following:		
Focus Area	High or Very High (%)	Low or Very Low (%)
Students and student-related research	97%	0%
Academic program information	86%	0%
Personnel information	29%	29%
Financial information	41%	27%
Facilities	15%	64%
Short-term strategic planning	60%	23%
Long-term strategic planning	71%	11%
Academic Achievement	54%	14%
NASH IR Survey Project		

Table 2: Rate the relative focus of campus IR on each of the following:		
Focus Area	High or Very High (%)	Low or Very Low (%)
Students and student-related research	94%	1%
Academic program information	92%	1%
Personnel information	45%	28%
Financial information	21%	39%
Short-term strategic planning	60%	16%
Long-term strategic planning	54%	18%
NASH IR Survey Project		

There is much less focus on IR for either resources or personnel at both the system and campus levels. Both systems and campus IR offices report much less focus on issues related to finances or personnel, although systems have a relatively stronger focus on finances than is the case with campuses, while campuses focus more on personnel than do systems.

- Only 41% of systems and 21% of campuses reported a high or very high degree of focus on finances; in contrast to 27% of systems and 39% of campuses reporting "no" or "low" focus on finances
- 29% of systems and 45% of campuses report a high or very high focus on personnel

Connections of IR to decision making and to actual improved performance are reported to be highest in areas related to student retention and graduation.

- Over 80% of systems reported that IR/data analytics are very or extremely important to improving student retention and graduation rates
- More than half of campuses reported that they are highly or very highly engaged with the system office in improving graduation and retention rates
- 68% of campuses reported a high or very high impact for IR in improving campus decision-making, and 53% report high or very high impact of IR and better data on actual improvements in student success
- In contrast, campus IR offices reported a sense of zero or low impact from IR in the areas of achieving return-on-investment for state financial support (57% low or no impact); improving faculty productivity (43% low or no impact); reducing student cost of attendance (76% low or no impact); growth in tuition (78% low or no impact); reducing administrative costs (60% low or no impact), or achieving high employment rates for graduates (64% low or no impact).

Table 3: To what degree have campus IR studies positively impacted the following results in recent years?		
Answer	High or Very High (%)	Low or Very Low (%)
Reducing tuition	6%	78%
Reducing student cost of attendance	6%	76%
Reducing campus administrative costs	14%	60%
Improving student success	53%	14%
Improving faculty productivity	21%	43%
Increasing research funding opportunities	15%	61%
Improving senior level campus decision making	68%	9%
Achieving return on investment for state financial support	16%	57%
Improving student learning outcomes	44%	24%
Achieving equity of student outcomes across groups	29%	39%
Improving graduation rates	52%	16%
Achieving high employment rates for graduates	11%	64%
Improving college access	22%	44%
NASH IR Survey Project		

Both system and campus offices report an *interest* in the use of data and analysis to affect performance in a number of areas – although the degree of interest and the types of areas differ somewhat between systems and campuses.

For instance:

- 50% of systems and just 5% of campuses report a concern about using data analytics to help reduce student tuitions
- 36% of systems and 7% of campuses report an interest in data to help in reductions of administrative costs

The majority of both systems and campuses do not have data connections to workforce, K-12, community colleges, or to other 'external' databases. Connections to workforce, K-12, community college, and other 'external' databases are roughly equal between system and campus IR offices, although current levels of connections are relatively low at both the system and campus levels. The survey revealed:

- Approximately 20% of both system and campus offices report connections to K-12 data systems
- Roughly 15% of both system and campus offices report connections to labor/employment information
- 7% of systems and 12% of campus IR offices connect to career/technical education offices

Table 4: During the past year, have the system and campus IR offices exchanged data or other work products with any of the following state entities? (Choose all that apply)		
Entity	System % of Total	Campus % of Total
K-12 Education Department	20%	22%
Career/technical Education Department	7%	12%
Adult/continuing Education Department	3%	8%
Labor Department	15%	14%
Economic Development Department	9%	14%
Legislative Research Agency	16%	22%
Community college system/other higher education system	17%	NA
Tax collector's office	1%	NA
Veterans affairs	2%	NA
Other	10%	7%
NASH IR Survey Project		

However, system offices report a far stronger anticipation that such connections will increase in the future:

- 66% of system offices and 11% of campus offices expect K-12 reporting connections to increase
- 60% of systems and 6% of campuses report expected growth in connections to labor/employment information
- 7% of systems and 12% of campus IR offices connect to career/technical education offices

The system itself is a heavy consumer of campus IR services, as evidenced by the response from campus offices to the following question:

Table 5: Which of the following consumes the largest amount of campus and system IR office resources (Choose one)?		
Body	System Offices %	Campus Offices %
System Governing Board	41%	17%
System Internal Decision Makers	38%	39%
State Legislative Agency	9%	7%
Federal Agencies	3%	12%
External Agencies	3%	25%
Campuses In the system	0%	NA
NASH IR Survey Project		

Table 6: Estimate the percent of campus IR office resources used to provide data and reports to the system IR	
Less than 10%	27%
10-24%	40%
25-49%	16%
50% or more	17%
NASH IR Survey Project	

The majority of the system-required reports from campuses appear to be related to state or system-level accountability reporting:

Table 7: Which of the following reports are supplied to system IR offices by the campuses (Choose all that apply)	
Report Type	% of Total
State-wide accountability metrics/standards	14%
Results from student satisfaction/engagement surveys	8%
Results from measures of student learning	4%
Facility/space inventory and usage	8%
Faculty workload	10%
Enrollments	16%
Student retention/persistence and completion	14%
Post-graduation outcomes (e.g., graduation surveys; alumni surveys)	6%
Student financial aid	11%
Sponsored research/grants	6%
Other	3%
NASH IR Survey Project	



Variability in structure and focus

Both systems and campuses reported a high degree of redundancy in the generation of reports between systems and campuses. There is a good deal of variability in the way the IR function is configured across campuses and systems. This is not surprising, since the systems themselves are so variable, in terms of size, types of institutions, and political history. The IR function is reportedly carried out by a centralized office in the majority of systems and campuses (78% of systems report a centralized function, versus 94% for campuses). However, that does not mean that all IR is done by those offices. A number of systems and campuses reported that the IR office is primarily focused on reporting about students and enrollment patterns, whereas analytics about resources are done by the budget office, and personnel by the human relations offices. When asked about the adequacy of staff/resources to perform the IR function, both system and campus reported substantial comfort with the adequacy of the staff, with slightly higher negatives for the area of staff expertise and knowledge of the subject than for the number of staff.

Table 8: How often do the campus and system IR offices produce redundant/similar reports?		
Answer	Campus % of Total	System % of Total
Never/Rarely	28%	23%
Occasionally	54%	60%
Frequently	19%	17%
NASH IR Survey Project		

- Only 28% of campus IR offices and 23% of system IR offices reported that campus and system IR offices never/rarely produce similar reports.
- There is a sense among both systems and campuses that redundancy is inevitable because of different audiences and needs for similar topics: 55% of campuses and 66% of systems reported that redundancy is due to different audience needs.
- 7% of systems and 12% of campus IR offices connect to career/technical education offices.

System office support for campuses is strongest for IPEDS data collections. We asked campus offices about the support they received from system offices for help with workload, professional development, and other areas. Responses suggest that campuses see the system offices are most likely to provide support for IPEDS reporting, but that the degree of support is relatively low in most other areas:

Table 9: To what degree does the system IR office provide support to campus IR offices for the following:		
Topic	High or Very High (%)	Low or Very Low (%)
IPEDS Reporting	53%	31%
Display of mandatory disclosures	25%	56%
Benchmarking across campuses within the system	45%	23%
Benchmarking across campuses outside the system	15%	62%
Web displayed analytics	20%	58%
System wide software purchasing/licensing	18%	63%
Market review/economic impact studies	8%	71%
Enrollment projections/pipeline studies	15%	66%
Budget for national data collections	17%	63%
Professional development/training	14%	63%
Reports mandated by state government	47%	25%
Coordination of membership in national projects	23%	60%
NASH IR Survey Project		

- 53% of campuses report a high or very high degree of support from the system office for IPEDS data collections, and 45% high or very high for benchmarking across campuses within the system.
- Yet campus reports of system office help is much lower in other areas: the percent of campuses reporting *low or no* support from the system is:
 - 62% for help benchmarking across campuses outside the system;
 - 56% in preparing mandatory disclosures such as the net price calculator or crime statistics;
 - 58% for help in preparing web-displayed analytics;
 - 71% for preparing market/economic impact studies
 - 66% for preparing enrollment projections or pipeline studies
 - 63% for professional development/training or for fiscal support for national data collections such as the National Survey of Student Engagement or Student Assessments

While some systems and campuses share data electronically and use common data systems and reporting formats, the opposite is true in the majority of systems and campuses. The mechanism for sharing data between campuses/systems varies by the topical area. According to the system survey responses:

- 57% of campuses send *student* data (the most common form of reporting) to systems in frozen files to the system office; 20% have a common system-wide information system from which the system office extracts data; 6% of system offices extract data directly from individual campus data systems; and 9% report no sharing of data between the campus and the system for student related data.
- For *financial* data, 31% report no transfer of financial data from the campus to the system; in 22% of systems, systems extract data from a system-wide common file, in 19% of systems campuses send frozen files to the system office, and in 11% the system IR office extracts data directly from individual campus data.
- For *personnel* data; 31% of systems receive data from a system-wide common system; 25% receive frozen files from campuses; 17% share no personnel data between systems and campuses; and in 11% systems extract data from campus files.

Agreement or alignment between systems and campuses on data structures and definitions remains a challenge, with just 44% of systems reporting a common data structure and definition, to ensure seamless alignment of data. The remainder need moderate to significant re-coding of data to achieve comparability. And even with systems with common data structures and definitions, 53% of systems and 38% of campuses report a need for moderate or significant data cleaning and re-coding before the information could be used.

Table 10: Which statement best describes the alignment of data variable names and definitions?		
Answer	System % of Total	Campus % of Total
System and campuses use a common data structure and definitions, so data align seamlessly	44%	24%
Systems and campuses data systems do not align but share a data dictionary	NA	33%
System and campuses data need moderate recoding to align	28%	33%
System and campuses data needs significant recoding to align	25%	25%
I don't know	3%	5%
NASH IR Survey Project		

The gap between systems and campuses in direct access to student data appears likely to continue: Of the systems that do not have direct access to student-level data, 62% reported that they are not likely or somewhat unlikely to create or improve direct access to campus data in the next three years.



Summary of themes from the surveys

The picture that emerges from the surveys of IR is about a function that is dominated by data collection and report writing. The analytical and communication function are less well developed, and largely siloed. Student success-related research remains at the heart of most offices named “IR” or analytical studies. Meanwhile, research in other areas, including resource use, efficiency and effectiveness, and personnel, are conducted by budget and human relations offices, and are never reconnected again to holistic analytics about overall performance.

Both system and campus IR offices report that the work on student retention and graduation has been well connected to decision-makers and has contributed to improvements in institutional performance. There is a real 'success story' for IR in this area. However, the success story does not extend to other major performance issues facing higher education, such as resource use, administrative cost reductions, tuition control, and meeting workforce needs. These topical areas are not a major focus for either system or campus IR offices. This fragmentation of analytical capacity across topical areas means that most systems and campuses are not well situated to do work that connects the areas of resource use to student success. While most system offices see these as areas of emerging priority for future research, that view is not by and large held by campus IR offices.

Another emergent theme is about some level of disconnection between system and campus IR offices. The issue of campus-level differences in information (IT) systems and in technical definitions and access to data contribute to some of these disconnects. Even in the area of student-related research, the majority of system offices do not have direct access to campus data. Differences between campuses within systems in data definitions and reporting conventions mean that the majority of institutions still do not have consistent definitions about basic variables. The differences in reporting formats across campuses also constrains them and system offices from being able to do the comparative research about factors that contribute to differences in performance. In the absence of some context for making sense of

data, campus and system decision makers will remain hamstrung in their ability to use IR data to document performance, much less to drive changes in it. Bridging differences in these technical areas will be a critical step in making progress.

There is a good deal of redundancy in reporting between systems and campuses. Most people in the IR offices do not think this is a problem in and of itself, as there are differences in audiences and in users. But it does lead to the potential for confusion between multiple measures and slightly different reporting conventions, and some loss of capability. Strategic differentiation between systems and their campuses can strengthen the collective capacity of systems and their campuses. To that end, we saw evidence that a few systems are developing more of a differentiated approach to IR between systems and campuses, with the system office primarily focused on aggregate reporting to the board, and to connections between the system with the rest of the state. Those are the systems that appear to be doing the most to look at cross-cutting topical areas, including connections to K-12 and to community colleges as well as to state workforce data. In this respect, they seem to be ahead of the field, and a potential good source of future attention to the identification and promotion of emerging best practices.





Perceptions in interviews and recommendations for next steps

We used the themes from the surveys as the basis for interviews with people both in system and campus IR offices, and with users of IR—including system heads, provosts, and people in policy positions. These were open-ended discussions, where we presented the themes as characterized above, and asked respondents 1) whether this summary seemed accurate from their perspective, 2) how well positioned the field is as a whole to handle the challenges ahead, and 3) what advice they might have for the direction of the project in the next year.

There was strong consensus from all parties that the basic findings resonated with their experience. There were some differences in opinion between IR professionals and IR users about issues of capacity and future directions, with the IR professionals more likely to see the function as capable of adapting to the needs of the future, whereas institutional leaders and particularly policy audiences were more likely to see a case for not just incremental but fundamental change in the field. They often expressed the need for some 'outside' help in this area, drawing from expertise from other complex organizations such as hospitals, where there is a sense that more is being done to use data to drive both accountability and change.

Both IR producers and users express a concern that the types of skills needed for the data collection and report writing function are not the same as the skills needed to address emerging policy issues about overall performance, nor to communicate effectively to multiple audiences. They all see a need to bring new skills and perspectives into the field, to address cross-cutting topics, to improve communication, and to learn how to think about 'big data' and what it means for IR. Both also express a desire to do more to identify and promote some of the emerging practices in IR in the systems and campuses that seem to be ahead of the game, to find efficient ways to connect to workforce data, improve data analytics, and do a better job of presenting complicated information in ways that are digestible to decision-makers. They see opportunities for system offices to collaborate with campus colleagues to provide support for them not just in IPEDS reporting, but in coordinating responses to the seemingly endless

parade of requests for new measures, such as the net price calculator, or new measures of value, benchmarking across campuses within systems, and help in preparing web-displayed analytics. Systems can also play a role in spreading costs to participate in national surveys, such as the National Survey of Student Engagement, or for participating in the National Student Clearinghouse. However, there is general acknowledgement about the needed synergies between system and campus IR offices. The only way for system offices to improve their IR capacity is to do so in conjunction with their campuses; after all, the data come from the campuses. But individual campus reports cannot tell the story for the whole system, and the system is in the best position to make connections outside of the institutions to the workforce and to other states.

Institutional leaders also expressed an interest in getting some help to not just improve but to reshape their IR capacity, to get at persistent issues of data comparability, benchmarking, development of cross-cutting measures, and better connecting data to information needs of campus level professionals. While they think that some of the expertise for this resides inside their institutions, they also see a need for new perspectives and skills from outside of higher education, from people who have done this work in other sectors. For this purpose, they would like to find resources to support a team of professionals to work with volunteer system and campus offices, to take a look at their needs and capacities for IR and to give them recommendations about ways to strengthen it in the future. The hope is that an independent and fresh look can give them some concrete plans about ways to reshape their IR functions, driven by the needs of the future and less constrained by the multiple compromises of political history and organizational structures that define too much of the field today.

Appendix 1: Members of the Advisory Committee

University of California

Ryan Cherland
Assistant Vice Chancellor
Institutional Research and Decision Support
University of California, Irvine

Marsha Kelman
Secretary and Chief of Staff
University of California Board of Regents

State University of New York

Rick Miller
Associate Provost for Institutional Research
The State University of New York
System Administration

Bruce P. Szelest, Ph.D.
Associate Vice Provost
Academic and Resource Planning
University at Albany

University of North Carolina

Kate Henz
Senior Director for Academic Policy
and Funding Analyses
University of North Carolina
General Administration

Margot Neverett
Senior Research Associate
Office of Institutional Research,
Institutional Planning, Assessment & Research
East Carolina University

Oregon University System

Salvador Castillo
Director
Office of Institutional Research
Oregon State University

Bob Kieran
Assistant Vice Chancellor
Institutional Research and Planning
Oregon University System

University of Texas

Kristi D. Fisher
Associate Vice Provost
Information Management and Analysis
University of Texas at Austin

Dr. Stephanie Huie (Chair of the group)
Vice Chancellor
Office of Strategic Initiatives

University of Wisconsin

Meredith Drzakowski
Assistant Vice Chancellor
Planning, Assessment, Research and Quality
University of Wisconsin Stout

Heather Kim
Associate Vice President
University of Wisconsin System
Office of Policy Analysis and Research

Project Consultants

Dr. Amelia Parnell
Director of Research Initiatives
Association for Institutional Research

Dr. Randy L. Swing
Executive Director
Association for Institutional Research

Dr. Bobby Sharp
Consultant to AIR, and Director
Institutional Research and Planning
Appalachian State University

NASH Staff

Jane Wellman
Project Director
National Association of System Heads

Rebecca Martin
Executive Director
National Association of System Heads

Jonathan S. Gagliardi, Ph.D.
Coordinator
National Association of System Heads

Appendix 2: Survey respondents

System	System Office Response [^]	# of Campus Responses
Total # of offices responding	35	157
Arizona Board of Regents	√	2
Board of Regents, State of Iowa	--	1
California State University	√	7
Connecticut State Colleges and Universities Board of Regents for Higher Education	√	8
Idaho State Board of Education	√	3
Kansas Board of Regents	√	0
Michigan Public Higher Education	NA	1
Minnesota State Colleges and Universities	--	3
Mississippi Institutions of Higher Learning	√	4
Montana University System	√	4
Nebraska State College System	--	2
Nevada System of Higher Education	√	0
North Dakota University System	√	2
Oregon University System	√	5
Pennsylvania State System of Higher Education	√	3
South Dakota Board of Regents	√	2
Southern Illinois University	√	1
State University of New York	√	11
State University System of Florida	√	7
Tennessee Board of Regents	--	1
Texas A&M University	--	1
The City University of New York	√	3
The Texas State University System	√	1
University of Alaska System of Higher Education	√	2
University of California	√	6
University of Colorado	√	3
University of Hawaii	√	2
University of Houston System	√	2
University of Illinois	--	1
University of Louisiana System	--	5
University of Massachusetts	√	4
University of Minnesota	--	2
University of Missouri	√	3

University of Nebraska	√	1
University of North Carolina	√	9
University of North Texas System	√	1
University of Tennessee	√	2
University of Texas System	√	6
University of Wisconsin System	√	8
University System of Georgia	--	12
University System of Maine	--	4
University System of Maryland	√	2
University System of New Hampshire	√	3
Utah System of Higher Education	√	4
Vermont State Colleges	√	0
West Virginia Higher Education Policy Commission	√	1
Non-system Campuses*	NA	2

^ √ = Responded -- = No response NA = Not Applicable

*Two additional campus survey responses were received from institutions that are not part of a system.



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