

MEETING DEMANDS FOR IMPROVEMENTS IN PUBLIC SYSTEM INSTITUTIONAL RESEARCH

**Assessing and Improving the Institutional
Research Function in Public University Systems**



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This report summarizes the findings from a two-year project undertaken by 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 concentrated on an assessment of the general capacity of system and campus IR functions. During the second year, NASH has designed a toolkit for public systems, and colleges and universities, for the purpose of assessing the state of their IR function relative to the changing landscape. This final report reflects the findings of both years of this work, and is designed to provide both the context, and a tool that system and IR leaders can use to align their functions with current and future challenges.

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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. To that end, NASH has undertaken a two-year study to better understand the opportunities and challenges facing institutional research (IR). As part of this study, NASH conducted a nationwide survey of IR officers in 2013. NASH also interviewed IR personnel and users, and visited with volunteer systems in an effort to further map the ability of IR to respond to growing demands.

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.

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.

Much about the state of the IR function at both systems and campuses was revealed as a result of the survey conducted during the first-year. This laid the foundation for a more in-depth investigation of the opportunities and challenges faced by system and institutional IR functions during the second-year of this study. The year began with

the creation of a team of experts composed by leaders from IR, and information technology (IT), and was further strengthened by experts from the health-care field who have faced and overcome challenges that are similar to what are faced by higher education today.

The team of experts began in earnest with the goal of designing a tool-kit that could be used by system and institutional leaders to evaluate the current capacity of IR functions to satisfy the increasingly diverse and complex challenges faced by systems and institutions today. In addition to the year-one findings, two premises about the direction of the field, and the cultural and political dynamics within systems that either impede or empower robust decision analytics were driving the current state of IR.

These are:

1. The IR function is evolving, from data collection and compliance reporting, to also encompass systems and institutional learning and improvement. Well-developed IR functions blend sophisticated data retrieval and good use of metrics with strong analysis and communication.
2. Robust decision analytics require decision makers that empower the work, by using data to set goals and evaluate performance, and by creating a culture of openness to inquiry and willingness to use data to document and improve performance.

Four broad themes emerged that served as foundational elements for these rubrics, which are organized by functional areas and by decision-makers most likely to be in a position to influence change. The broad categories include:

- **System and state relationships:** This includes the history of the system, the level of state interest in policy and performance, and the degree of autonomy of the system from the state.
- **Intra-system organizational dynamics:** This includes dynamics between the system and the Board, President or Chancellor, and/or the campuses.
- **The role of IR within the system and among campuses:** This includes whether or not IR is focused on compliance reporting and auditing, or geared more towards translating data into knowledge and action.
- **Data quality and the IR-IT nexus:** This includes how Institutional Research and Information Technology can best complement one another.

Once the rubric was created, it was tested at several systems to ensure it reflected the realities faced by these functions, which allowed for further refinement. To that end, the following report includes a more details analysis of the current state of the IR function at systems and institutions, as well as a toolkit for the purposes of assessing whether or not system and institution IR functions are well positioned to evolve in ways that meet the challenges and demands of today.



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' system 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 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	Important Pieces 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.



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 in 2013, 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 via the AIR website: (<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
- 71% of systems and 54% of campuses report a high or very high focus 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 response:

- 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
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

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.

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 themes from the surveys and the perceptions of the interviewees, coupled with the guidance of the steering and executive committees and intensive system visits were integrated into the design of system and campus rubrics. These rubrics are designed to be used by system and campus leaders to develop 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.



System and institution IR assessment rubrics

The National Association of System Heads (NASH) has developed this rubric for self-assessment and improvement in the institutional research/decision analysis function in public university systems and their constituent institutions. The rubric was developed by a team of system and campus IR and information technology (IT) professionals, and tested in several system and campus settings. It asks for user self-evaluation and assignment of scores on both the behavioral and technical functionality of IR.



There are two premises underlying the rubric, about the direction of the field, and the cultural/political dynamics within systems that either impede or empower robust decision analytics. These are:

- 1) The IR function is evolving, from data collection and compliance reporting, to also encompass institutional learning and improvement. Well- developed IR functions blend sophisticated data retrieval and good use of metrics with strong analysis and communication.
- 2) Robust decision analytics require decision makers that empower the work, by using data to set goals and evaluate performance, and by creating a culture of openness to inquiry and a willingness to use data to document and improve performance.

Assessments are organized into four broad categories, organized by functional areas and by decision-makers most likely to be in a position to influence change. The broad categories, as well as the rationalization for their inclusion, are listed in the following table:



Functional Areas Used to Assess System IR		
Functional area	Leadership responsibility for making improvements	Why this category?
<ul style="list-style-type: none"> - System/state relationship, history of the system, level of state interest in policy and performance, level of autonomy from the State 	<ul style="list-style-type: none"> - State policy officials, legislators, Governor, system head, system board 	<ul style="list-style-type: none"> - Robust IR does not develop within systems without parallel attention to data and performance from the state.
<ul style="list-style-type: none"> - Intra-system organizational dynamics: Board, President, system/campus dynamics 	<ul style="list-style-type: none"> - System head, Vice Chancellors/Vice Presidents, campus Presidents, system board 	<ul style="list-style-type: none"> - Mature systems have evolved good working dynamics, understand where and how to use the system; have boards that help to steer the agenda, and reasonable stability in leadership over time. - Campus/system relationships are collaborative and reinforcing. - System leaders use data to drive improvement in performance toward goals. - Transparency and candor is encouraged.
<ul style="list-style-type: none"> - Role of IR within the system 	<ul style="list-style-type: none"> - Executive Vice Chancellor, Head of IR, Head of IT 	<ul style="list-style-type: none"> - IR provides a service function to multiple offices in addition to carrying out its own agenda of analysis and reporting. - Topics are cross-functional (academic affairs, budget, student services, labor, etc), and address performance analytics and not just on compliance reporting.
<ul style="list-style-type: none"> - Data quality/IR-IT nexus 	<ul style="list-style-type: none"> - Head of IT, Head of IR, Vice Chancellor/VP Academic and Administration 	<ul style="list-style-type: none"> - Policies and practices on data stewardship, performance metrics, and data governance are well established IR/IT work well together in pursuit of a common agenda.

The more detailed questions embedded within these categories are shown below. The rubric provides examples of organizational responses to each question, organized along a continuum and scored on a 1-3 scale (1 representing a less than mature state; 2 represents an intermediately mature state; 3 represents the most mature state). The entire rubric with descriptive characteristics is attached.

- I. System/state context. This category is ungraded; it asks questions about the state political and data context within which IR functions, such as whether there is a mandatory statewide accountability system, a student unit-record system, or state or system collective bargaining.

- II. Intra-system organizational dynamics: Board, President, system/campus dynamic
 - a. Board level involvement in the IR agenda
 - b. System level leadership stability
 - c. System and campus dynamics

- III. Role of IR within the system
 - a. Orientation of the IR office
 - b. “Clients” and products of IR
 - c. Topical coverage and integration of data and indicators
 - d. Staff capacity, and professional development and support
 - e. Translation and contextualization of data
 - f. Accessibility of data and other products from IR
 - g. IR relation to other system offices

- IV. Data quality/IR-IT nexus
 - a. IR and IT relationships (reporting, communication, staff)
 - b. Data governance
 - c. Data Stewardship
 - d. Data accessibility





About NASH and the IR project

NASH is a network of the chief executives of 44 United States public multi campus university systems. The mission of NASH is to improve collective capacity for system leaders to drive educational innovation and institutional improvements to better meet public needs for higher education. They do this by identifying and promoting best practices in strategic areas central to improving educational performance, with an emphasis on educational equity, degree completion, efficiency and effectiveness, and public accountability for performance.

The work to support the development of this rubric has been supported by a grant to NASH from the Bill & Melinda Gates Foundation. The first phase of the project was spent in a general assessment of the state of IR, conducted via a national survey accompanied by interviews with institutional leaders. The results of that study are available at www.nashonline.org/institutional-research. The survey work led to the development of the rubric.

Members of the team that developed and tested the rubric include:

- Timothy Chester, Vice President Information Technology, University of Georgia
- Lisa Clarke, Consultant, RPK Consulting Group
- Jonathan Gagliardi, Deputy Director, National Association of System Heads
- Stephanie Bond Huie, Vice Chancellor, Office of Strategic Initiatives, University of Texas System
- Bobby Sharp, Director of Institutional Research and Assessment, University of North Carolina Asheville
- Jane Wellman, Consultant to NASH and Manager of Project on Systems and IR

The project has been also been overseen by a steering committee, whose members include:

- Margot Rogers, Parthenon Consulting
- Richard Steele, SysPartners
- Randy Swing, Association for Institutional Research
- Rebecca Martin, Executive Director of NASH.

February, 2015



System assessment rubric

NASH
National Association
of System Heads





How to use this rubric

The rubric will have greatest benefit if it is completed by several individuals with different roles in IR—users of IR (Chancellor’s or Presidents, provosts or academic vice presidents/chancellors, deans, budget officers) and producers of it in IR—and IT. The rubric may be used in a number of ways, for instance:

- As part of a group exercise within IR
- As an element of a more comprehensive strategic assessment and planning function by the senior Vice Chancellors in both academic, fiscal and administrative affairs
- As a basis for dialogue between the system head and campus presidents, about organizational culture and using data to drive institutional improvement
- Separately by individuals in several offices, as a prelude to discussions about differences in perceptions about performance, to lead to discussion of strategies for improvement
- It may be a regular element in IR planning and budgeting,
- It may be a vehicle for staff development and for team building between systems and campuses
- It can be a starting place for an external review team visit to a system IR office.

The first rubric presented here is designed for use in a public system IR or analytical studies office. A modified version for use at campus level offices, developed by Timothy Chester, Vice President for Information Technology at the University of Georgia, is also included. These rubrics are also available for download on the NASH website at www.nashonline.org/initiative/institutional-research.

The categories and the examples of organizational dynamics shown in the rubric were based on examples seen in different systems about the factors most likely to shape the functionality of IR and the transition from data reporting to analysis, communication and action. They are primarily oriented to the behavioral/cultural aspects of the function and not the technical aspects of it, based on the review group’s judgment that there are a number of other initiatives focused on measures, data quality and metrics (such as the products of the Data Quality Campaign, materials about state data systems prepared by the State Higher Education Executive Officers and other organizations, as well as work by Complete College America and Access to Success) to address more technical aspects of the topic. The perspective has also been informed by the team’s sense of the types of questions being asked about performance in higher education, which increasingly require cross-cutting analytics to look at multiple facets of institutional performance (students, courses, personnel, funding), student progress, costs, academic effectiveness, and connections to the workforce. Examples of the evolution of data

analytics in other spheres of public policy – particularly health care, but also K-12 education – have also been helpful.

The rubric is a diagnostic tool and not a prescriptive one. It will help users to reach judgments about strengths and weaknesses in their IR function both from the perspective of the producers of IR and the consumers of it. It will not generate comparative information about how each system IR functions look compare to those in other systems. To accomplish that, NASH recommends that system leaders supplement the self-assessment with a visit from an external review team with expertise in public systems and the IR function. The team can provide the system leaders with their perspective about the overall function, and can provide an independent assessment about strategies for improving performance. NASH has organized and trained an IR review team to support that function, which can be made available to systems on a cost-sharing basis.

As system leaders, NASH members are dependent on IR and data analytics to carry out their responsibilities for oversight and public accountability, to set goals for performance, and to monitor progress toward meeting those goals. Early research by NASH done in conjunction with the Association for Institutional Research (AIR) determined that despite a growing awareness of the importance of robust IR, the function itself is underdeveloped and often strained, dominated by the demands of data reporting and data cleaning, to the detriment of deeper analytics or connections to decision makers. The research also suggests that the systems that have been most successful in evolving multidimensional data analytics have developed sophistication both on the demand and production side of IR: from presidents and others who use data to set goals and to improve performance, and from the analysts and researchers who work collaboratively with others to inform questions and find new ways to measure and improve performance. The hope is that this diagnostic framework will be helpful to both constituencies as they find ways to improve this important function.



<p>SYSTEM IR ASSESSMENT RUBRIC</p> <p>RED (1 POINT) IS LESS THAN MATURE STATE; BLUE (2 POINTS) IS INTERMEDIATELY MATURE STATE; GREEN (3 POINTS) IS MATURE STATE</p>	<p>This rubric is designed to facilitate system self-assessments of the functionality of the IR process across four categories, which include: (1) State/System Context; (2) System-level organizational dynamics; (3) The role of IR within the system; and (4) Data quality/IR-IT interactions/and accessibility of the data. The completed rubric describes these in greater detail, and offers examples of what characteristics are of scores of 1 (red), 2 (blue) or 3 (green) for each of the elements. Following the generic presentation of the rubric, you have space to score your function based on your assessment. Depending on your sense of the relative importance of each of these categories, you could potentially ‘weight’ them. The scores should be based on collective judgments. We would be interested in your feedback about that; our own view is that this is an adaptable framework that can be very helpful to systems and to campuses.</p>
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<p>I. State/system context: role of the system within the state, political history, state policy environment (environment within which the function has evolved and the emerging context for future uses)</p>
<p>Systems’ capacity to evolve the IR function will vary depending on a system office’s history and relationship to state agencies. Issues to consider in contextualizing the demand for integrated and actionable analytics:</p> <ul style="list-style-type: none"> ▪ Is there a state coordinating agency that takes care of IPEDS reporting for the campuses? If NO, then system will need to perform this, which can detract from focus on data analytics. If NO, can system collaborate with other systems/institutions to share resources on reporting function? ▪ Does the state have a student unit-level record system connecting P-20? If NO, does the system have options to reach out to state Department of Education or Community Colleges (if separate) to share data on student academic preparation and other issues of interest? ▪ Does the system office have discretionary decision making authority over funding allocations to campuses, including incentive funding practices? If NO, then can system build an incentive funding “pot” for rewarding performance in key areas? ▪ Is there a statewide accountability system or a report card? If NO, then system and the board may need to develop their own indicators consistent with the strategic plan. ▪ Is there collective bargaining? Does the system do the bargaining on behalf of the campuses, or does the state do it? If YES, using data to develop aggregate indicators of performance may take back seat to data that may be certified to be used in bargaining. ▪ Is the state moving to or currently using outcomes based budgeting as the basis for allocating resources? If not, are discussions and studies underway about likely future metrics?
<p><ENTER COMMENTS HERE></p>



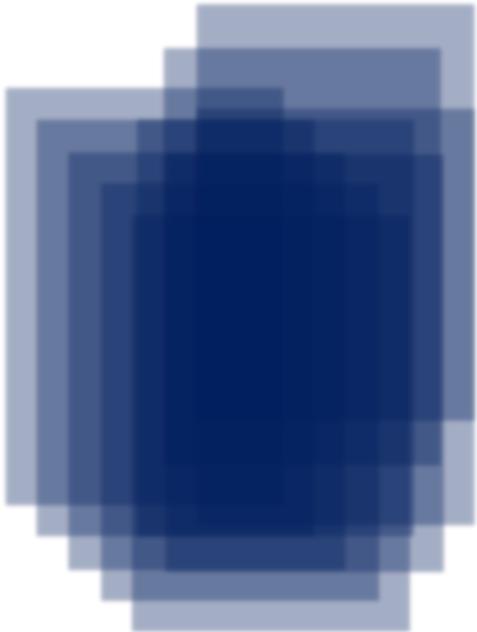
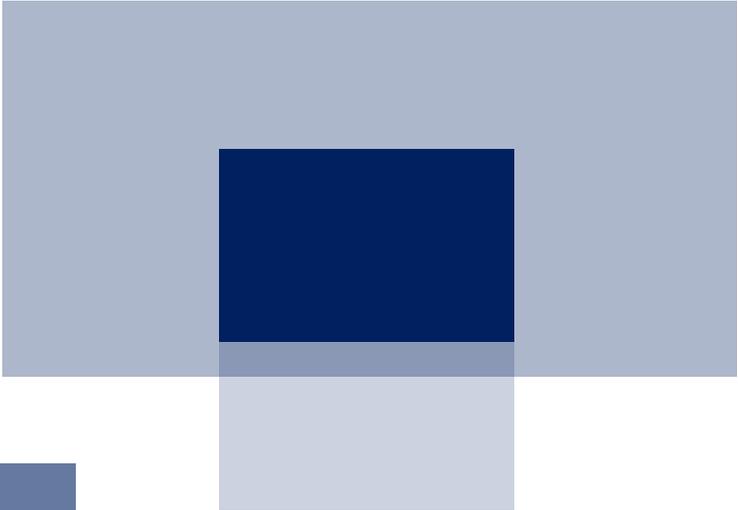
II. System level organizational dynamics: Board, President, system/campus dynamics			
Board-level Agenda Involvement	<ul style="list-style-type: none"> Board members are individually active and make many requests for data; Requests are not coordinated through the President; Staff are handling multiple requests 	<ul style="list-style-type: none"> The board is largely reactive to the agenda set by the President, but works well as a group; Not a major presence in driving IR 	<ul style="list-style-type: none"> System board and President are a team and together drive change in analytics; Board is pushing for cross-cutting measures, and public dashboards, benchmarks, and new business models
<ENTER RATING HERE>: <ENTER COMMENTS HERE>			
System Leadership Environment	<ul style="list-style-type: none"> Turnover in system office leadership; Agendas for IR change frequently 	<ul style="list-style-type: none"> Turnover in system leadership every five years or so; Agenda changes when turnover occurs 	<ul style="list-style-type: none"> Agenda and goals are set; Agenda and goals remain stable when leadership changes
<ENTER RATING HERE>: <ENTER COMMENTS HERE>			
System and Campus Interactions	<ul style="list-style-type: none"> Redundancy between system and campus in IR; Repetitive reporting layers with edit checks; System and campus offices are frequently competitive; Active efforts by some campuses to disconnect from the system; Campus option to participate in national data sharing consortium (AAU, Delaware Project, CLA; APLU-VSA) 	<ul style="list-style-type: none"> Good collaborative environment, with strong sense of systemness and potential to use system to improve; Unevenness in campuses means system spends considerable amount of time helping the weaker institutions; All campuses required to participate in some routine assessments (CLA, VSA) 	<ul style="list-style-type: none"> System leadership is strong; Good peer networks exist across campuses; Differentiation of roles for IR and analytics between systems and campuses (campuses do IPEDS, system does workforce and P-20); “Lead” campus model used to experiment with new approaches; System participated in national data/analytical consortia (Student Clearinghouse; HERI-Faculty satisfaction survey, Sightlines) to obtain comparative benchmark data at lower unit cost for all campuses
<ENTER RATING HERE>: <ENTER COMMENTS HERE>			

III. Role of IR within the System			
Orientation of System IR office	<ul style="list-style-type: none"> Function primarily oriented to reporting and compliance as the basis for budget development; Mandatory reporting to Federal government 	<ul style="list-style-type: none"> IR connected to analytics used for pattern analysis; Aggregations as well as for accountability 	<ul style="list-style-type: none"> IR embedded within strategic analysis and decision analytics connected to decision making users; Used for decision making and improvement; Helps system to drive a culture of continuous improvement
<ENTER RATING HERE>: <ENTER COMMENTS HERE>			
IR "Clients and Products	<ul style="list-style-type: none"> IPEDS reporting and data cleaning dominates staff time in system office; Federal government and state agencies are primary 'clients' of data 	<ul style="list-style-type: none"> System has goals and uses indicators to monitor and report on performance in discrete areas; Board and the legislature are primary 'clients' of data 	<ul style="list-style-type: none"> Multiple users access data and use analytics to increase performance; Measures are used for performance funding, executive compensation and performance review, and program review; Provosts, budget analysts, faculty, board, presidents/chancellors are 'clients'
<ENTER RATING HERE>: <ENTER COMMENTS HERE>			
Topical coverage and integration of data and indicators	<ul style="list-style-type: none"> Quantitative in focus; Primary focus of IR is student-related reporting (enrollments, credit hours, graduation rates, ethnicity, attrition); Stovepiping of topics between students/personnel/finances 	<ul style="list-style-type: none"> Some cross-cutting aggregations and analytics around graduation rates, attrition, remediation, and costs of remediation; Some qualitative information (student learning outcomes) 	<ul style="list-style-type: none"> Cross-functional evaluation of performance, cost per student; faculty workload; economic impact; student debt levels; Measures are benchmarked both inside the system and in comparison to other institutions
<ENTER RATING HERE>: <ENTER COMMENTS HERE>			
Staff Capacity and Professional Development	<ul style="list-style-type: none"> IR staff are chronically behind; Little time and resource is available for deeper analysis Staff are deficient in translation, writing, public speaking, and visual presentation 	<ul style="list-style-type: none"> IR staff have a good blend of skills; Staff is stable Staff attend annual meetings, and are provided with periodical PD courses to upgrade skills 	<ul style="list-style-type: none"> Staff have a good array of complementary skills, including coding statistics, communication, and visualization; Professional development is encouraged and provided
<ENTER RATING HERE>: <ENTER COMMENTS HERE>			
Translation and Contextualization	<ul style="list-style-type: none"> High premium placed on accuracy, auditability, and using IPEDS 	<ul style="list-style-type: none"> Aggregate indicators used to look at averaged, changes over time, and to 	<ul style="list-style-type: none"> Visuals, web access, strong presence of analytics;

	<ul style="list-style-type: none"> definitions Data remains unused for driving policy on behalf of system and campuses 	<ul style="list-style-type: none"> put information into context; Data reports unaccompanied by compelling narrative 	<ul style="list-style-type: none"> Articles by staff who use data; Data used for performance funding and for improvements
<ENTER RATING HERE>: <ENTER COMMENTS HERE>			
Accessibility of Data From IR	<ul style="list-style-type: none"> Spreadsheets are posted on the web; Most products are made public as part of a Board Agenda Book 	<ul style="list-style-type: none"> Some power point presentations and analyses are posted on the web 	<ul style="list-style-type: none"> Visualizations of data using multiple formats (Prezis, power points, infographics, and webinars)
<ENTER RATING HERE>: <ENTER COMMENTS HERE>			
IR Relation to Other System Offices	<ul style="list-style-type: none"> IR is a unit separate from and without own IT resources or strategic planning; Reports to academic vice president; IT resources required to support IR work; Reports to administrative or other vice president 	<ul style="list-style-type: none"> IR and the IT resources supporting the office report to the same VP, but are housed in separate offices; Business/personnel/finance/and budget have their own IR offices 	<ul style="list-style-type: none"> IR and its IR resources are in one office and do most of the financial/budget/personnel analysis; Will provide technical expertise to other researchers (faculty learning analysis typically separately done)
<ENTER RATING HERE>: <ENTER COMMENTS HERE>			

IV. Data quality/IR-IT interactions, accessibility of data			
IR & IT Dynamic	<ul style="list-style-type: none"> IR and IT competing for resources; IR and IT are not well connected 	<ul style="list-style-type: none"> IR and IT work together well; System office cannot control campus IT; Perpetual chase for new systems, hardware, and solutions 	<ul style="list-style-type: none"> Strong relationships between IR and IT and both are possibly in one unit; Report to the same people and commonly understand priorities and resources
<ENTER RATING HERE>: <ENTER COMMENTS HERE>			
Data Governance	<ul style="list-style-type: none"> Common data definitions and common elements for data storage are lacking; Data from separate functions are unevenly structures, creating multiple 'truths' 	<ul style="list-style-type: none"> Some areas have standardized data definitions; Protocols for sharing between system and campus 'in progress'; Data is considered reliable but cannot be used until it is certified, which compromises timely access to information 	<ul style="list-style-type: none"> Well-established data definitions; Established governance procedures for collaboration and sharing; Data are considered accurate, linked, tailored and timely
<ENTER RATING HERE>: <ENTER COMMENTS HERE>			
Data Stewardship	<ul style="list-style-type: none"> Sharing of data elements between system and system institutions is through flat-file transfers; No web interface exists; Sharing of data requires significant efforts by staff to manually clean data up upon data transfer between parties; Some manual data conversion is required upon data transfer between parties due to a lack of standardized data definitions for the data that is shared; There is no Enterprise Resource Planning (ERP) system or data warehouse structure that can integrate disparate data systems 	<ul style="list-style-type: none"> Sharing of data is performed mostly between systems and campuses via flat-file transfers; A web interface for collection exists; No capacity for user-generated reports Sharing of data requires some efforts by staff to manually clean data up upon data transfer between parties; Little or no manual data conversation is required as data shared is based on standardized data definitions for the data that is shared; The function has begun planning for the creation of an Enterprise Resource Planning (ERP) system or data warehouse 	<ul style="list-style-type: none"> Sharing of data is performed by automated data base to database transfers; Established data definitions and data integrity are enforced by automated rules checking upon data transfer; Minimal data cleanup is required; if required it is generally only for a limited number of exceptions; Discrete information from multiple data sources and format efficiently interact and aggregate, creating 'one truth' that stems from a centralized source; There is an optimal Enterprise Resource Planning (ERP) system or data warehouse that manages and integrates data
<ENTER RATING HERE>: <ENTER COMMENTS HERE>			

System IR Function Assessment Summary		
Category	Overall Assessment	Summary Rationale
I. State and System Level Context		
II. System level organizational dynamics: Board, President, system/campus dynamics		
III. Role of IR within the System		
IV. Data quality/IR-IT interactions, accessibility of data		



Institutional assessment rubric

NASH
National Association
of System Heads



<p>INSTITUTION IR ASSESSMENT RUBRIC</p> <p>RED (1 POINT) IS LESS THAN MATURE STATE; BLUE (2 POINTS) IS INTERMEDIATELY MATURE STATE; GREEN (3 POINTS) IS MATURE STATE</p>	<p>This rubric is designed to facilitate institutional self-assessments of the functionality of the IR process across three categories, which include: (1) Institution-level organizational dynamics; (2) The role of IR within the institution; and (3) Data quality/IR-IT interactions/and accessibility of the data. The completed rubric describes these in greater detail, and offers examples of what characteristics are of scores of 1 (red), 2 (blue) or 3 (green) for each of the elements. Following the generic presentation of the rubric, you have space to score your function based on your assessment. Depending on your sense of the relative importance of each of these categories, you could potentially 'weight' them. The scores should be based on collective judgments. We would be interested in your feedback about that; our own view is that this is an adaptable framework that can be very helpful to systems and to campuses.</p>
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I. Institution level organizational dynamics: Board, President, system/campus dynamics			
<p>Board-level Agenda Involvement</p>	<ul style="list-style-type: none"> ▪ Cabinet members and senior leadership are individually active and make many requests for data; ▪ Not coordinated through central gatekeepers; ▪ Staff need to be able to handle multiple requests 	<ul style="list-style-type: none"> ▪ The cabinet and senior leadership is largely reactive to strategic agenda set by campus strategic plan; ▪ Works well as a group; ▪ Not a major presence in driving IR 	<ul style="list-style-type: none"> ▪ Cabinet and senior leadership work as a team and together drive changes in analytics; ▪ Both are pushing for cross-cutting measures, public dashboards, benchmarks, and new business models
<p><ENTER RATING HERE>: <ENTER COMMENTS HERE></p>			
<p>Senior Leadership Environment</p>	<ul style="list-style-type: none"> ▪ Turnover in senior leadership; agendas for IR change frequently 	<ul style="list-style-type: none"> ▪ Turnover in senior leadership every 5 years or so; ▪ Agenda changes when turnover occurs 	<ul style="list-style-type: none"> ▪ Agenda and goals are set, and remain stable when there are changes in leadership
<p><ENTER RATING HERE>: <ENTER COMMENTS HERE></p>			
<p>IR and Campus Unit Interactions</p>	<ul style="list-style-type: none"> ▪ Redundancy between IR and other units performing reporting; ▪ Repetitive layers of reporting with or without common data definitions; ▪ Relationships between IR and other units performing reporting is frequently competitive; ▪ Active efforts by some units to perform reporting functions outside IR 	<ul style="list-style-type: none"> ▪ Good collaborative environment between IR and other units performing reporting; ▪ Strong sense of togetherness and potential to use data to improve 	<ul style="list-style-type: none"> ▪ IR leadership of function is strong; ▪ Good peer network across campus; ▪ Differentiation of roles for IR and analytics between performing reporting functions; ▪ IR takes lead to experiment with new approaches
<p><ENTER RATING HERE>: <ENTER COMMENTS HERE></p>			

II. Role of IR within the Institution			
Orientation of IR Office	<ul style="list-style-type: none"> Function primarily oriented to reporting and compliance as the basis for budget development, mandatory reporting to federal government, etc. 	<ul style="list-style-type: none"> IR connected to analytics used for pattern analysis, aggregations, as well as for accountability 	<ul style="list-style-type: none"> IR embedded within strategic analysis and decision analytics; Good connection to decision making users; Used for decision making and improvement; Help system to drive a culture of continuous improvement
<ENTER RATING HERE>: <ENTER COMMENTS HERE>			
IR “Clients” and Products	<ul style="list-style-type: none"> IPEDS reporting and data cleaning dominate staff time in IR offices; Federal government and state agencies are primary ‘clients’ of data 	<ul style="list-style-type: none"> Campus has goals and uses indicators to monitor and report on performance in discrete areas; Cabinet and senior leadership are primary ‘clients’ of data 	<ul style="list-style-type: none"> Multiple users access data and use analytics to increase performance; Measures are used for performance funding, executive compensation/performance review and for program review; Provosts, budget analysts, faculty, presidents/chancellors are ‘clients’
<ENTER RATING HERE>: <ENTER COMMENTS HERE>			
Topical coverage/integration of data/indicators.	<ul style="list-style-type: none"> Quantitative in focus; Primary focus of IR is student-related reporting (enrollments, credit hours, graduation rates, ethnicity, attrition); Stovepiping of topics between offices supporting students/personnel/finances 	<ul style="list-style-type: none"> Some cross cutting aggregations and analytics around graduation rates, attrition, remediation and costs of remediation; Some qualitative information (student learning outcomes) 	<ul style="list-style-type: none"> Cross-functional evaluation of performance; cost per student; faculty workload; economic impact; student debt levels; Measures are benchmarked in comparison to other institutions
<ENTER RATING HERE>: <ENTER COMMENTS HERE>			

Staff capacity/professional development and support	<ul style="list-style-type: none"> ▪ IR staff are chronically behind, little time for deeper analysis; ▪ No resources for professional development, including networking with campuses, access to tutorials to learn new technology, participation in IR meetings; ▪ IR staff tend to be good data stewards and analysts, may not have translation, writing, public speaking, or visual presentation knowledge 	<ul style="list-style-type: none"> ▪ IR staff have a good blend of skills ▪ Staff is stable; ▪ Staff have good project management skills, and have an established protocol for addressing new projects or ad hoc requests; ▪ Staff are provided with PD resources to attend AIR/other meetings; provide with period PD courses to upgrade skills 	<ul style="list-style-type: none"> ▪ Staff have a good array of complementary skills, including coding, statistics, communication, visualization; ▪ Is engaged in available networks for IR/IT staff, supported via regular meetings, webinars, conference calls; encouragement of staff to do original research and to publish results; ▪ Professional development and support for continuous upgrading of skills provided
<ENTER RATING HERE>: <ENTER COMMENTS HERE>			
Translation/contextualization	<ul style="list-style-type: none"> ▪ High premium placed on accuracy, auditability, and using IPEDS definitions 	<ul style="list-style-type: none"> ▪ Aggregate indicators used to look at averages, changes over time, and to put information into context, 	<ul style="list-style-type: none"> ▪ Visuals, web access, strong presence of analytics (articles by staff and others using data, data used for performance funding and for rewarding improvements)
<ENTER RATING HERE>: <ENTER COMMENTS HERE>			
Accessibility of data from IR	<ul style="list-style-type: none"> ▪ Spread sheets are posted on the web; ▪ Most products are made public as part of Board agenda book 	<ul style="list-style-type: none"> ▪ Some power point presentations and analyses are posted on the web 	<ul style="list-style-type: none"> ▪ Visualizations of data using multiple formats – Prezis, power points, graphics, webinars.
<ENTER RATING HERE>: <ENTER COMMENTS HERE>			
IR relation to other campus offices	<ul style="list-style-type: none"> ▪ IR is a unit separate from its supporting IT functions or strategic planning; ▪ Reports to academic vice president, IT resources supporting IR reports to other vice president 	<ul style="list-style-type: none"> ▪ IR and its supporting IT resources report to the same VP, are separate offices; ▪ Business/personnel/finance/budget have their own offices performing reporting functions 	<ul style="list-style-type: none"> ▪ IR and its IT supporting resources are in one office; ▪ Do most of the financial/budget/personnel analysis; ▪ Will provide technical expertise to other researchers (faculty learning analysis typically separately done)
<ENTER RATING HERE>: <ENTER COMMENTS HERE>			

III. Data quality/IR-IT interactions, accessibility of data			
IR & IT Dynamic	<ul style="list-style-type: none"> IR/IT competing for resources, not well connected 	<ul style="list-style-type: none"> IR/IT work together well, but IR office operates own IT systems outside of central IT, 	<ul style="list-style-type: none"> Strong relationships, may be in one unit of strategic analytics, report to same people and understand priorities and resources
<ENTER RATING HERE>: <ENTER COMMENTS HERE>			
Data Governance	<ul style="list-style-type: none"> Common data definitions and common elements for data storage are lacking; Data from separate functions are unevenly structures, creating multiple 'truths' 	<ul style="list-style-type: none"> Some areas have standardized data definitions; Protocols for sharing between system and campus 'in progress'; Data is considered reliable but cannot be used until it is certified, which compromises timely access to information 	<ul style="list-style-type: none"> Well-established data definitions; Established governance procedures for collaboration and sharing; Data are considered accurate, linked, tailored and timely
<ENTER RATING HERE>: <ENTER COMMENTS HERE>			
Data Stewardship	<ul style="list-style-type: none"> Sharing of data elements between system and system institutions is through flat-file transfers; No web interface exists; Sharing of data requires significant efforts by staff to manually clean data up upon data transfer between parties; Some manual data conversion is required upon data transfer between parties due to a lack of standardized data definitions for the data that is shared; There is no Enterprise Resource Planning (ERP) system or data warehouse structure that can integrate disparate data systems 	<ul style="list-style-type: none"> Sharing of data is performed mostly between systems and campuses via flat-file transfers; A web interface for collection exists; No capacity for user-generated reports Sharing of data requires some efforts by staff to manually clean data up upon data transfer between parties; Little or no manual data conversation is required as data shared is based on standardized data definitions for the data that is shared; The function has begun planning for the creation of an Enterprise Resource Planning (ERP) system or data warehouse 	<ul style="list-style-type: none"> Sharing of data is performed by automated database to database transfers; Established data definitions and data integrity are enforced by automated rules checking upon data transfer; Minimal data cleanup is required; if required it is generally only for a limited number of exceptions; Discrete information from multiple data sources and format efficiently interact and aggregate, creating 'one truth' that stems from a centralized source; There is an optimal Enterprise Resource Planning (ERP) system or data warehouse that manages and integrates data
<ENTER RATING HERE>: <ENTER COMMENTS HERE>			

Institution IR Function Assessment Summary		
Category	Overall Assessment	Summary Rationale
I. Campus level organizational dynamics: Board, President, system/campus dynamics		
II. Role of IR within the Institution		
III. Data quality/IR-IT interactions, accessibility of data		



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