



## Cover Sheet

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These tools represent many hours of hard work and we intend to develop more of them as a contribution to the higher education community. They have been left unprotected to serve as an example of the impact that open-source tools can have on higher education networks. Please take a minute to read the Creative Commons rules if you're uncertain about how open-source sharing can benefit you and your organization.

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# 1. Institutional Data Readiness Assessment Tool

## INSTITUTIONAL DATA READINESS ASSESSMENT TOOL

This inventory is organized around three key elements that experience has shown to be pivotal in determining whether institutions of higher education can effectively engage in data-driven decisions. These elements are people, process, and data management. The People dimension refers to the expertise, receptivity, and commitment to using data among administrators, faculty, and staff. The Process dimension explores the interactions among people and guidelines necessary to ensure that data are shared widely and processes are in place to produce information that the institution can use. Data Management refers to storing and retrieving information and how information that is critical to the institution becomes transparent with good management.

This tool also makes use of the term actionable data or data that has been structured to answer "what if questions." Most institutional data seldom rises to this level.

This tool is intended to help institutions determine whether observable practices contribute or detract from that goal. It is not intended as a checklist or a source for benchmarking. Rather, it is intended as a tool for prompting institutional review, reflection, discussion – and, ultimately, action aimed at improvement in evidence-based decisions. It is also expected that no one person at the institution will know all the answers to the items in this tool but that collectively the search for these answers will lead to improved data readiness.

### INSTRUCTIONS

Base your responses to the inventory on the following response scale:

- 0 = No implementation. There is no evidence that this practice has been implemented in the institution.
- 1 = Under discussion. This practice is being discussed or is in the planning stages.
- 2 = Marginal implementation. There are isolated examples of this practice in the institution.
- 3 = Partial implementation. This practice is being implemented in some areas of the institution in a visible and substantial way.
- 4 = Full implementation. This practice has been fully implemented across the institution.

### ACKNOWLEDGMENTS

This tool specifically honors its precursors. The sources below are in wide circulation and can be accessed through most search engines.

- Gerry McLaughlin and Rich Howard's People, Processes, and Managing Data, the first work to highlight these critical connections for institutions.
- Karen Paulson's A Data Audit and Analysis Toolkit to Support Assessment of the First College Year, a comprehensive look at the challenges that institutions face on the road to data-based decisions.
- Kay and Byron McClenney's Community College Inventory, an excellent example of a tool that institutions can use to improve their performance in student persistence, learning and attainment.
- Rich Howard served as editor for Institutional Research: Decision Support in Higher Education a book that highlights the organizational knowledge needed to link technology with new ideas in higher education.
- The Data Management Association's Data Management Body of Knowledge a brief framework isolating the issues faced by professionals in the data management field.
- Davis Jenkin's pioneering efforts to create frameworks that institutions can use to measure their

progress toward institutional transformation.

- The author's own work with institutions of higher education over three decades in attempting to develop appropriate questions to answer "what if" questions.

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## 2. PEOPLE

People are one component to ensuring that the institution has the capacity and willpower to act on data. The expertise in place and the ability to develop expertise speaks volumes about institutional readiness.

1. This section probes the vital connections between people and institutional readiness to use data.

	0 = No implementation	1 = Under discussion	2 = Marginal implementation	3 = Partial implementation	4 = Full implementation
a. The institution has developed a strong history of using data to make decisions.	jñ	jñ	jñ	jñ	jñ
b. The president and senior leadership emphasize the importance of data and actionable information to the health of the institution.	jñ	jñ	jñ	jñ	jñ
c. The president and other institutional leaders frequently use data about student outcomes, especially persistence and learning, to make decisions.	jñ	jñ	jñ	jñ	jñ
d. Top leadership is able to see how data systems (internal and external) might be combined to answer "what if" questions.	jñ	jñ	jñ	jñ	jñ
e. The institution's governing board requests and receives routine data on institutional performance, especially student outcomes.	jñ	jñ	jñ	jñ	jñ
f. Faculty are receptive to research on the effectiveness of the institution's programs and teaching methods.	jñ	jñ	jñ	jñ	jñ
g. Faculty meets at least once a term within and across departments and divisions to examine course and program outcomes and to develop strategies for improving student success.	jñ	jñ	jñ	jñ	jñ
h. Faculty, staff, and administrators see a clear and visible connection between data, institutional planning, and resource allocation.	jñ	jñ	jñ	jñ	jñ
i. There is a common commitment to using data to guide institutional improvement.	jñ	jñ	jñ	jñ	jñ
j. Staff, faculty, and administrators understand the difference between data that is routinely collected and reported and data that is strategic in nature.	jñ	jñ	jñ	jñ	jñ
k. If not titled, "Institutional Research," a specific unit has been charged with responsibility for this function.	jñ	jñ	jñ	jñ	jñ

l. There are sufficient Institutional Research staff to contribute to the institution's need for data and information.	jñ	jñ	jñ	jñ	jñ
m. Institutional Research are an indispensable part of the institution's commitment to strategic information.	jñ	jñ	jñ	jñ	jñ
n. Institutional Research staff are adequately trained in data analysis, especially in student cohort tracking.	jñ	jñ	jñ	jñ	jñ
o. Institutional Research staff are seen as responsive to requests for information from administrators, faculty and staff.	jñ	jñ	jñ	jñ	jñ
p. Institutional Research staff are skilled at converting data to actionable information and can clearly communicate those results to key audiences.	jñ	jñ	jñ	jñ	jñ
q. Institutional Research staff actively educates stakeholders on effective use of data and research.	jñ	jñ	jñ	jñ	jñ
r. State, federal, and local reporting is viewed as important, but compliance reporting does not consume all the energy and time of Institutional Research.	jñ	jñ	jñ	jñ	jñ
s. Institutional Research takes an active role in identifying "big picture" issues facing the institution and in helping the institution define the range of questions that address those issues that it should be asking.	jñ	jñ	jñ	jñ	jñ
t. Institutional research takes the lead in reducing large scale databases by helping users make sense of large amounts of data.	jñ	jñ	jñ	jñ	jñ
u. Institutional Research is able to use a range of analytical techniques, from simple to sophisticated, to meet institutional information needs.	jñ	jñ	jñ	jñ	jñ
v. Institutional Research is viewed as an unbiased source for information and presents information fairly and accurately.	jñ	jñ	jñ	jñ	jñ
w. Institutional Research helps users make decisions about the quality of data and information.	jñ	jñ	jñ	jñ	jñ
x. Institutional Research fairly identifies shortcomings and limitations its work products so as not to sway opinions of end users.	jñ	jñ	jñ	jñ	jñ
y. Information Technology (sometimes referred to as "Computer Services") routinely prepares data for decision-making.	jñ	jñ	jñ	jñ	jñ
z. Information Technology is centrally involved in discussions with other units about increasing the strategic value of data.	jñ	jñ	jñ	jñ	jñ
aa. Information Technology seeks to put data tools, e.g., software and hardware, in the hands of end-users.	jñ	jñ	jñ	jñ	jñ
ab. Information Technology has adequate programming expertise to meet the institution's demand for data.	jñ	jñ	jñ	jñ	jñ
ac. Information Technology trains end users	jñ	jñ	jñ	jñ	jñ

how to access data.

ad. Informational Technology staff participate in training to bring the latest IT industry practices and techniques to the institution.	jn	jn	jn	jn	jn
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ae. Training opportunities provide all end-users the opportunity to learn to create actionable information from routine data.	jn	jn	jn	jn	jn
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af. Top leadership promotes collaboration between Information Technology, Institutional Research, and end-users.	jn	jn	jn	jn	jn
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### 3. PROCESSES

1. Processes or the way in which the institution organizes data-related work are critical to success. Process is at once a mindset and a mutual understanding about what data are needed, how they are organized, and the shared responsibility for data and information.

0 = No implementation      1 = Under discussion      2 = Marginal implementation      3 = Partial implementation      4 = Full implementation

a. Data are shared widely regardless of whether they are "good news" or "bad news" information.	jn	jn	jn	jn	jn
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b. There is frequent dialog among faculty, staff, and administrators about what information is critical for the institution to know, including quantitative and qualitative data.	jn	jn	jn	jn	jn
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c. The institution routinely assesses its ability to use data to make decisions.	jn	jn	jn	jn	jn
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d. Decision-making is viewed by most stakeholders as a logical process.	jn	jn	jn	jn	jn
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e. Data at the institution are typically viewed as being reliable for decision making.	jn	jn	jn	jn	jn
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f. The institution recognizes that data from various offices and departments and data collected at different times may not agree. Accordingly, it has instituted a process for reconciling competing information.	jn	jn	jn	jn	jn
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g. There is an understanding of the difference between "official" data (maintained by the entire institution) and "unofficial" data (maintained by one or more individual offices or units)	jn	jn	jn	jn	jn
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h. Data collected by different offices are combined to present a comprehensive picture of institutional performance.	jn	jn	jn	jn	jn
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i. User groups for institutional databases exist and contain a variety of end-users (staff and faculty), analysts, technical people.	jn	jn	jn	jn	jn
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j. Cross-sectional teams from across the institution work to edit and clean up data to ensure its reliability.	jn	jn	jn	jn	jn
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k. Regular audits of data and databases are	jn	jn	jn	jn	jn
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conducted to ensure data quality.

l. Faculty are consulted when needed to ensure that the dimensions of academic practice are not overlooked in research projects.

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m. Data depicting student persistence, learning, and attainment are routinely disaggregated and reported by student characteristics including gender, race/ethnicity, income level.

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n. The institution routinely collects, analyzes and reports longitudinal data on cohorts of students to chart student progress through its programs.

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o. The institution regularly conducts surveys and focus groups with students, faculty and staff to identify weaknesses in programs and services and opportunities for improvement.

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p. Data are collaboratively shared with secondary schools, higher education institutions, workforce boards and other outside entities.

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q. Faculty is centrally involved in using data to evaluate academic programs and teaching strategies.

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r. The institution regularly collects, analyzes, and reports data on basic student outcomes (degrees, progression, persistence, transfer rates, etc.).

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s. Those individuals who lead student outcomes work meet regularly with Institutional Research personnel.

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t. The institution has a strategic plan that uses data and converts that data into actionable information.

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u. The institution has a strategic plan that uses data to clearly and succinctly states its goals for future development.

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v. Members of the campus community participate extensively in the planning and priority-setting using data to formulate strategies and measure success.

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w. Resources are consistently allocated and re-allocated to address priorities identified through the planning process.

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x. Operational planning arising from strategic planning is guided by measurable objectives (sometimes called "success factors") and success (or lack thereof) is reported to the college community.

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y. Institution uses data on program effectiveness to guide budget and resource allocation decisions.

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z. Baseline data are established and targets periodically set.

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aa. Reports inform the user about limitations of the data and/or research processes which

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might limit generalizations.

ab. Data users see data as unbiased and reputable.

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ac. There is a periodic review of which routine reports are actually used by those for whom they are prepared.

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ad. There is recognition in each decision process that some elements of that decision will be unanswered.

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ae. Findings of studies and reports are summarized into a "bottom line" so that detail does not cloud the ability to make decisions.

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af. In general, data are used to guide discussion and as appropriate to close off unproductive dialog.

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ag. Institution provides training to faculty and staff on using data and research to improve programs and services.

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ah. Routine training occurs to assist users to make the best use of existing data systems.

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ai. There is a concentrated effort to improve user knowledge about what data exist and where they can be obtained.

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## 4. DATA MANAGEMENT

1. Data Management is the third area probed by this tool. It refers to how the institution has organized itself to produce accurate and timely information.

0 = No implementation      1 = Under discussion      2 = Marginal implementation      3 = Partial implementation      4 = Full implementation

a. Data requests are meet quickly and efficiently.

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b. Data are available before decisions are made, not after.

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c. The institution has constructed a "dashboard" that permits administrators and others to see, at a glance, the status of key indicators.

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d. The institution has constructed a data warehouse or data mart that combines information from its databases to permit customized analysis to address complex questions.

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e. The institution has constructed an Executive Information System that permits quick retrieval of pre-defined data.

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f. Longitudinal data are routinely assembled so that the institution has a sense of its history.

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g. An institutional factbook provides a comprehensive view of the institution and it's recent history.

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h. Historical data are routinely combined with current data to allow stakeholders to view and

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analyze trends.

i. Program enrollment trends are available to all stakeholders.

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j. Informational Technology manages data outside of routine databases.

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k. Requests for data are known to other units within the institution so that groups or individuals working on similar questions have the opportunity to share data and expertise.

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l. Institutional data systems are linked to other internal data (e.g., student survey data, outcomes assessment data, etc.).

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m. Institutional data systems are linked to external data sources (census data, labor market databases, etc.).

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n. Student databases are combined with external data (e.g., surveys such as CCSSE, GIS maps, psychographic profiles) to form a holistic picture of the customers served by the institution.

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o. Institutional priorities drive decisions about what new databases should be developed.

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p. User-friendly software makes it possible for non-Informational Technology users to access administrative databases, e.g., course files, student databases, financial aid, etc.

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q. Available software supports statistical analysis and can produce graphical displays of data.

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r. Software systems allow non-sophisticated users to create cohort data.

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s. Customized extracts of databases are readily available for non-Informational Technology users for whom access to large databases is not feasible.

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t. An official data dictionary is available to all users of data.

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u. A flowchart depicting the relationship of various institutional data systems and decisions that can be informed by these systems is available for end-users.

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v. A schedule of routine data reports is shared throughout the institution

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w. Documentation exists on the structure of databases and the format in which elements are maintained in those databases.

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x. An inventory of all databases assembled by the institution including those assembled by non-Informational Technology offices is available.

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y. Data are routinely "frozen" as snapshots at pre-defined times and are archived for creating consistent historical reports.

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z. New initiatives in data management are adequately planned and sequenced for success.

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aa. Clear policies and procedures that guide Information Technology operations are shared throughout the institution.	jñ	jñ	jñ	jñ	jñ
ab. Data are captured using the same categories and codes regardless of who is responsible for collecting those data.	jñ	jñ	jñ	jñ	jñ
ac. Databases are monitored to ensure that contents are accurate. When problems are found, data are cleaned, edited, and checked to ensure accuracy.	jñ	jñ	jñ	jñ	jñ
ad. Standard roles and responsibilities have been assigned for data management.	jñ	jñ	jñ	jñ	jñ
ae. There are standard written procedures for extracting, editing, auditing, merging, and altering data.	jñ	jñ	jñ	jñ	jñ
af. Procedures exist to ensure that key data elements are not overwritten or lost as new information becomes available	jñ	jñ	jñ	jñ	jñ
ag. Policies and procedures provide for the storage and retrieval of archival data including electronic data and paper data.	jñ	jñ	jñ	jñ	jñ
ah. Responsibility for data custody is assigned to key staff and they are evaluated on their support of this responsibility.	jñ	jñ	jñ	jñ	jñ
ai. Informational Technology policies and procedures ensure privacy, confidentiality, and appropriate access to institutional data	jñ	jñ	jñ	jñ	jñ
aj. Procedures exist for ensuring that no personally-identifiable data are shared with inappropriate personnel or others outside the institution.	jñ	jñ	jñ	jñ	jñ