

**Managing the Postsecondary Education to Workforce Pipeline:  
An Institution-Level Data Integration Approach  
Presentation Summary and Resources**

Higher education institutions have management information systems which may have some similarities among participating universities in this seminar. They may have important differences. The systems may be products of private vendors, a broader governing association data collection for all institutions, or the result of institution-level innovation. They may include such things as student applications, finance reporting, enrollment forms, and transcripts. It can be expected that there are varying levels of automation, differences in definitions, and technical disparities. It is also assumed that HEI staff have reports and data use experiences that will have high value. Generally though, as in other places, the systems are likely designed and deployed with relatively narrow administrative purposes.

An objective of this seminar would be to produce customized reports and information tools early in this process. But it is important to understand that the perspective may eventually require adjustments in information system design, content, and certain technical considerations. It may necessitate linking institutional data resources to other systems to improve content and capabilities. In some cases, it may require the collection of new information through mechanisms such as tracer studies, student interviews, and/or follow-up surveys, and/or employer outreach.

A key to the success of this effort will be the continuous, iterative engagement of stakeholders. "Stakeholders" is intended to be broad, as the audience who would collect and use such "pipeline data" would also be broad. Another key will be to adopt a logical, common framework that will be used to identify important data resources and deploy them during the life of HECD project. This should include what is available and what is not. Yet another key is setting the stage for future improvement after the project ends. Six steps are proposed.

1. Identify and pursue continuous engagement strategies involving key stakeholders including policy makers, administrators, analysts and researchers, career counselors, students, employers, and others as appropriate.
2. Propose and adopt a data integration framework or "pipeline model."
3. Use the framework as a visual map to identify and sequence applicable data resources and identify key resources that are missing- the so-called called "information gaps."
4. Collaborate with data owners and managers to fully document available, and relevant data resources. Documentation includes collection instruments, frequency, content, definitions, data dictionaries, meta data, course taxonomies, and technical specifications. Documentation includes institutional and/or national protocols concerning access to and use of data including security and confidentiality.
5. Identify strategies to fill data gaps including any changes to existing systems and any new systems such as surveys.

6. Begin a life-of-the-project integration process by bringing select resources together, adding new ones as they come available, and producing reports

### **HEI Data System collection, management, and Use**

***As you prepare for the seminar, please consider the following data -related questions:***

1. How is your institution currently gathering and managing student data?
2. How is this data being used, is it being used for improving decision-making processes?
3. Does the institution collect data related to students entering the job market and/or pursuing further education after they graduate?
4. How are these data analyzed and used within the institution?
5. What gaps or weaknesses in the institution's management information systems would you like to strengthen?
6. Can data management in your institution be better organized, improved, and shared across all university departments?

### **References**

In addition, some references are provided below that you may find informative.

The National center for Analysis of Longitudinal Data in Education Research (CALDER)  
[www.caldercenter.org/publications](http://www.caldercenter.org/publications)

(Cited the publications section suggest perusing for higher education topics of interest)

State Higher Education Executive Officers Association  
See publications, "The State of State Postsecondary Data Systems"  
[https://postsecondarydata.sheeo.org/wp-content/uploads/2019/04/SHEEO\\_StrongFoundations\\_18.pdf](https://postsecondarydata.sheeo.org/wp-content/uploads/2019/04/SHEEO_StrongFoundations_18.pdf)

(Cited a particular section providing detail about higher ed data systems in the U.S. and the types of systems they connect to.