2013 CDS Executive Summary Report
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Introduction

Since 2002, the EDUCAUSE Core Data Service (CDS) has been providing higher education CIOs and senior IT leaders with the benchmarks they need to make strategic decisions about information technology at their institutions. Each year, more than 750 institutions (both within and outside the United States) participate in a survey about IT financials, staffing, and services. Survey participants are rewarded for their time and effort with access to CDS Reporting, a self-service tool that enables institutions to benchmark their IT organizations against those of their peers. This report provides a glimpse into the breadth of CDS data and summarizes the most important findings from this year's survey.

The CDS 2013 survey concluded with 798 participants. The information presented in this report is based on a subset of the 788 institutions that had participated by October 31, 2013. Several trend analyses in this report are based on a matched-set of 526 institutions that participated in CDS 2011, 2012, and 2013. A list of CDS 2013 participants can be found on the CDS website (http://www.educause.edu/coredata).

The metrics discussed in this report focus primarily on FY2012/13 central IT financials, staffing, and services at U.S. institutions. Non-U.S. institutions from 19 different countries participated in this year's survey; however, small sample sizes from each of these countries preclude meaningful aggregate analysis. In addition, central IT funding, expenditure, and staffing data are only one component of the full IT resource picture at institutions with significant distributed IT resources. Data on distributed resources, however, remain elusive. A year-over-year analysis of the CDS data collected about distributed IT resources revealed low data reliability, an indication that current methods for gathering these data are ineffective. For this reason, data on distributed IT resources have been excluded from this report but can be found in CDS Reporting. Efforts are under way to improve the quality of these data for future years.

Although this report uses CDS data to summarize the state of higher education IT, CDS is primarily a benchmarking service. Metrics and benchmarks contained within should be considered in relation to your institution. Findings that differ from your experience should inspire questions, not answers. When questions do arise, CDS Reporting can facilitate your investigation (if your institution participated in CDS 2013). If your institution did not participate, consider adding your data to the next CDS survey, launching in July 2014.

Key Findings

- Recent central IT budget increases appear to compensate for cuts in FY2008/09 and FY2009/10.
- IT spending patterns differ by Carnegie Classification, control, institution size, and CIO reporting line.
- Increased spending on compensation and staff training indicate that institutions are investing in their workforce.
- Staffing models reflect a focus on top IT issues.
- ITIL process deployment and increased presence of service catalogs reveal a continued trend toward service management.
IT Financials

The economic downturn of recent years has led to greater scrutiny of institutional IT budgets. “Making the case” for IT is easier with a firm understanding of money coming in (funding) and how it’s being spent (expenditures).

Core Metrics

*Use institution size and Carnegie Classification to predict central IT funding.*

As with FY2010/11 financial data from CDS 2012,¹ about three-fourths (74%) of the institutional variability in FY2012/13 central IT funding levels can be explained by institution size (students and employees)² and Carnegie Classification. A prediction model fitting FY2012/13 central IT funding on these institutional characteristics can be used to estimate benchmarks for central IT funding (see Figure 1).

Figure 1. Funding per Institutional FTE, by Carnegie Class

Lines represent a prediction of funding/FTE, and clouds behind them represent the 90% of survey responses closest to the prediction.
FY2012/13 central IT funding for most U.S. institutions (AA, BA, and MA) can be estimated by a single line with a slope of about $620 per FTE—that is, after accounting for fixed costs, a community college with 10,000 institutional FTEs is predicted to have had roughly $8 million in FY2012/13 central IT funding. For doctoral institutions, the slope is steeper, between $1,200 and $1,700 per institutional FTE. For example, a private doctoral institution with 10,000 institutional FTEs is predicted to have had roughly $18.5 million in FY2012/13 central IT funding. Predicted central IT funding for DR public institutions is somewhat different from that of DR private institutions, due to differences in fixed costs.

Get a balanced view of institutional investment in IT with dual-expenditure metrics.

Given the variety of institutional missions, strategies, and priorities, no single metric provides a comprehensive benchmark of IT’s value to an institution. For example, total central IT spending as a percentage of institutional expenses can be used to evaluate the role IT plays in terms of institutional spending patterns. Alternatively, total central IT spending per institutional FTE (students and employees) can be used to estimate the amount of IT support individuals at an institution receive.

For U.S. institutions, median percentage of the institutional budget spent on IT ranged from 3.2% to 5.2% in FY2012/13. This level of spending translates to a range of $497 to $1,465 per institutional FTE (see Figure 2). Evaluating these metrics in isolation can lead to faulty assumptions. For example, benchmarking against a U.S. median of $925 spent per institutional FTE suggests that community colleges aren’t fully supported by IT—only about $497 per institutional FTE was spent in FY2012/13. In terms of the slice of institutional budget devoted to IT, however, it appears that community colleges are investing heavily in IT (4.8% vs. 4.4% for all U.S. institutions). In contrast, the $1,465 spent per institutional FTE at private doctoral institutions is substantial; however, only 3.6% of their institutional budget is spent on IT.
Figure 2. Central IT Spending vs. Institutional Expenses and Institutional FTE, by Carnegie Class
A New Generation of IT Assessment Tools

A new culture of data-driven decision making and rising pressure from boards and legislatures to measure institutional performance are feeding demand for better, cheaper, and faster ways to assess IT. With support from the Lumina Foundation, EDUCAUSE is developing a new generation of IT assessment tools to help institutions understand the relative efficiency and productivity of their IT services and to help IT leaders communicate the value and relevance of IT to non-IT leaders.

These new online services include:

- The IT Assessment Report Service, which will offer a comprehensive, semi-customizable assessment of an institution’s IT operations
- Maturity indices, which examine the multiple dimensions of progress (e.g. infrastructure, skills, culture, policy) needed to deliver a service at a high level of capability
- Deployment indices, which enable institutions to benchmark stages of deployment for specific technologies and services

These online services will build on the CDS database and reporting tools and leverage other EDUCAUSE data and analytical frameworks to create a snapshot of internal performance and allow comparison with peer institutions or other desired comparison groups. Development and prototyping of the new services will proceed through 2014, and the services will enter production in the first quarter of 2015.

In addition, EDUCAUSE will begin a new series of Executive Research Briefs, which will present EDUCAUSE research findings in a format relevant to higher education executives outside the IT unit, including presidents, provosts, and chief business officers. Publication of the new briefs begins in early 2014.

Findings

Central IT budgets are increasing at most U.S. institutions.

From parking systems to enterprise applications, information technology has become integrated into virtually every aspect of higher education. As the value of IT to the institution grows, so does optimism about IT funding. CDS data indicate that this optimism is based on reality. More than half (58%) of U.S. institutions reported FY2012/13 funding amounts that were more than 3% larger than reported FY2010/11
We see an increase in IT spend in three areas: investing in analytics to identify at-risk students sooner and improve graduation rates; preparing and implementing digital content for online education tools like Desire2Learn, MOOCs, and iTunes U; finally, addressing unfunded state and federal mandates that require investment in programs and technologies such as secure research computing environments and ADA compliance."

—Anna Biggers, University of Oklahoma


With budgets on the rise, why then do we continue to hear about financial pressures and doing more with less? One hypothesis is that increases in demand are out-pacing increases in budget. In today’s service-oriented culture this imbalance would create a tension between needs and the resources available to meet them. This could be why the 2014 ECAR report Today’s Higher Education IT Workforce found that even amid budget increases, IT employees still do not believe that their financial situation has improved. The “doing more with less” mantra could be changing, however. The ECAR study also found that employees are increasingly optimistic about the institutional economic climate.

Alternatively, institutions may still be feeling the pinch because budgets are only now catching up to where they might have been without the economic downturn. In FY2008/09 and FY2009/10, most institutions experienced large budget cuts. Using CDS 2005 through CDS 2013 data we can look at the trend in median funding per institutional FTE for FY2004/05 through FY2012/13 (see Figure 4). Funding for U.S. institutions increased steadily from FY2004/05 to FY2008/09, when funding per institutional FTE flattened until an increase in FY2010/11. Had funding levels continued to increase through this period, it is possible that funding per institutional FTE would be higher than the $925 metric we saw for FY2012/13.
“For community colleges, we have seen an incredible enrollment growth during the economic recession, which, while it translates to additional budget, also translates to increased services….”

—Joy Hatch, Virginia Community College System

“We took budget cuts in 2009 that were pretty deep. We put off some critical needs that we are now funding. This would account for increases in budgets over the past two years.”

—Jennifer Sparrow, Virginia Tech

Figure 4. Changes in Central IT Funding per Institutional FTE, FY 2004/05 to FY 2012/13³
**Budget surplus may be the norm.**

A comparison of FY2012/13 funding amounts to FY2012/13 expenditures indicates that median spending tends to be a bit less than the initial central IT budget amount (about 2% less for all U.S. institutions). Private institutions tended to show larger differences from budget to spending than public institutions (expenditures 2.7% less than funding vs. expenditures 0.6% less than funding). The variance between funding and spending could be an indication of mid-year budget cuts; however, it is more likely to be an indication of an allowance for carry-over spending. Data from the CDS 2012 survey show that in FY2010/11 final central IT funding amounts did not differ from original funding amounts for 65% of institutions. An estimated 37% of institutions, however, were allowed to carry over a budget surplus.

**New data on spending reveals differences in where institutions are investing their IT dollars.**

The 2013 survey marks the first time central IT expenditure data were fully captured in CDS. Expenditure data are useful in assessing the value of IT to the institution and how institutions are using their IT resources. Four primary breakdowns of spending provide a comprehensive view into investment in IT: spending by capital and operating expenditures; spending by IT domain area; spending by run, grow, transform activities; and spending by institutional mission.

**Secondary Funding Sources**

Most institutions receive the majority of their funding from two institutional sources: operating appropriation and capital appropriation. In FY2012/13, operating appropriations made up a median of 70% of the budget for U.S. institutions. An additional 5% of the budget came from capital appropriation. These are not the primary sources of funding for all institutions, however. The composition of central IT budgets differs vastly by institutional type.

At public doctoral institutions with chargeback funding (revenue from the sale of services—network services, computer repairs—to institutional colleges, schools, departments, etc.), 22% of the budget came from this funding source (vs. 10% at all institutions with chargeback funding). At community colleges and public bachelor’s institutions with student IT fees, a sizeable portion of the central IT budget comes from those fees (32% and 33% respectively). The importance of these funding sources in terms of proportion of the overall central IT budget has not changed significantly since FY2009/10.
Spending by Capital and Operating Expenditures

IT spending can be divided into three primary categories: compensation, non-compensation operating expenditures, and capital expenditures. Non-compensation operating expenditures typically represent the resources it takes to maintain a base level of operation for the organization. Capital expenditures are significant, one-time investments (e.g., infrastructure upgrades or developing new services). Due to the intermittent nature of capital expenditures, a year-over-year comparison of capital and operating expenditures provides insight into IT’s focus during a given time period. For example, institutions that show increased capital expenditures in a particular year compared to that of previous years exhibit an investment in either growing or upgrading their IT operations.

In FY2012/13, approximately 50% of central IT spending at U.S. institutions was for compensation, another 33% was spent on non-compensation operations, and 12% was for capital investments. This breakdown varies significantly by institution type (see Figure 5). Private institutions tended to allocate more than public institutions to capital improvements (14% private vs. 10% at public institutions). Institutions with 15,000 or more FTE tended to allocate more to “running the trains” (37% vs. 33% for all U.S.). A year-over-year analysis of these metrics will be possible as CDS continues to collect data on capital and operating expenditures.

Figure 5. Percentage of Capital and Non-Compensation Operating Central IT Expenses at U.S. Institutions
Spending by IT Domain Area

Also new to CDS 2013 was the definition of 10 IT domain areas. These domain areas cover the breadth of IT services provided by an institution. In order to understand the investment priority across these domains, expenditure and staffing data were collected according to this breakdown structure. The IT domain areas are as follows:

- Administration and Management of IT
- IT Support Services
- Educational Technology Services
- Research Computing Services
- Data Center Services
- Communications Infrastructure Services
- Enterprise Infrastructure and Services
- Information Security
- Identity Management
- Information Systems and Applications

For three of these IT domain areas, FY2012/13 spending was consistent across Carnegie Classification. For all U.S. institutions, spending on information systems and applications was around 17% of the central IT budget, spending on administration and management of IT was around 10%, and spending on data center services was around 4%.

What differentiates institutions is their spending in the other seven areas, primarily their relative spending on IT support, educational technology services, communications infrastructure, and enterprise infrastructure (see Figure 6). For example, public master’s institutions contributed more of their budget to IT support (18% vs. 15% for all U.S. institutions) and educational technology services (13% vs. 10% all U.S.), while public doctoral institutions allocated less to IT support (11%) and much more to communications infrastructure (25% vs. 13% all U.S.). The emphasis on communications infrastructure at public doctorals is likely a result of the traditionally larger campus footprints, which lead to higher spending on infrastructure and bandwidth.
Capital investments contributed to these differences. For example, higher spending on educational technology at public master’s institutions (13% of the overall budget vs. 10% for all U.S.) was due in part to their larger capital allocation to this domain area (18% of the capital budget vs. 10% for all U.S.); public doctorals spent a larger proportion of their capital budget on communications infrastructure upgrades (42% vs. 21% all U.S.). A comparison of capital spending is tricky, however. Some infrastructure and technologies are subject to steep fixed costs, which result in institutions with smaller budgets allocating a larger percentage of their budget to accomplish the same amount of work.
Spending by Run, Grow, and Transform Activities

Inspired by Gartner,\textsuperscript{13} the CDS run/grow/transform expenditure breakdown provides a view into institutional vision and the role of IT in achieving that vision. Run (or ongoing operations) spending is a necessity, while grow spending (spending to accommodate incremental growth and improvements) and transform spending (spending to plan and implement transformative change) serve to improve an institution in ways that may result in competitive differentiation. An analysis of total, operating, and capital expenditures allocated to these three categories helps discern which institutions are frontrunners on the changing landscape of higher education and which are more focused on keeping the lights on.

In terms of total expenditures, the spending model breakdown by run, grow, and transform activities (79% run, 13% grow, and 6% transform for U.S. institutions in FY2012/13; see Figure 7) does not differ significantly by institution type, institution size, central IT staff size, or CIO reporting line (i.e., to whom the CIO reports). An analysis of run, grow, and transform activities by capital and operating expenditures does reveal some differences, however. And, while there is no difference in effectiveness between CIOs who report to the president and those who don’t,\textsuperscript{14} CDS data reveal that CIO reporting line may play a role in how capital dollars are spent.

Figure 7. Percentage of Total Central IT Spending by Run, Grow, Transform Activities
CIOs reporting to top academic officers allocated more capital spending to grow the institution (25% of capital spending vs. 20% for all U.S. institutions). Institutions with CIOs reporting to the top business officer allocated a smaller proportion of capital expenditures to grow the institution (10% vs. 20%) and more on running the institution (71% vs. 60% for all U.S. institutions; not statistically significant). Although collaboration between business officers and academic officers is growing, CDS data point to a continuation of isolated decision making, with academic officers placing more focus on expanding teaching and learning capacity and business officers prioritizing operational efficiency.

**Spending by Institutional Mission**

A fourth view into institutional investment in IT is the distribution of expenditures across the administrative, academic, and research missions of the institution (see Figure 8). CDS survey results suggest that spending in support of institutional mission differs across institution type, size, and CIO reporting line. Private institutions spent more than public institutions (53% vs. 49%; 50% for all U.S. institutions) on administration. Research is more common at doctoral institutions and larger institutions. For all U.S. institutions, the median percentage spent in support of the research mission is zero (thus excluded from Figure 8). For institutions that traditionally conduct research, however, a small proportion of the central IT budget is dedicated to supporting the research functions of the institution (7% for public doctoral, 1% for private doctoral, and 4% for institutions with 15,000+ institutional FTE).

Figure 8. Percentage of Total Central IT Spending by Institutional Mission
Spending to support the academic and administrative functions of the institution is closely tied to CIO reporting line. CIOs who report to the head of the institution (i.e., president) or the top academic officer tended to spend more in support of the teaching and learning mission (42% and 44%, respectively) than their peers who report to the top administrative or business officer (36% and 39%, respectively). Inversely, CIOs who report to the head of the institution or the top academic officer spent less in support of administration than CIOs reporting to the top administrative or business officer (49% and 47%, respectively, vs. 52% and 54%, respectively). This finding is important to note for institutions that are having a difficult time aligning IT strategy with institutional strategy; perhaps the roadblock lies in reporting structure.

What about Outsourcing?

In an effort to reduce costs, institutions are leveraging economies of scale with centralization, collaboration, and outsourcing.* In FY2012/13, about half of institutions had at least some outsourcing expenditures. At these institutions, the median amount of total central IT budget spent on outsourcing was around 4.1%. This number is expected to grow as institutions continue to experiment with alternative sourcing strategies.

Spending on outsourcing did not differ by Carnegie Classification; however, there is some evidence that outsourcing spending might be higher for private institutions (5.4% vs. 3.1% for public institutions) as well as for smaller institutions (8.3% for institutions with less than 2,000 FTE). In terms of where the money goes, the IT domain areas most likely to have some outsourcing spending were information systems and applications (32% of CDS participants reported spending in this area), communications infrastructure services (27%), and enterprise infrastructure and services (27%).

One component of the outsourcing budget is staff augmentation. In FY2012/13, one-fifth (22%) of CDS participants had a staffing model that included supporting central IT staff with outsourced staff. At these institutions, about 4.6% of staff were outsourced; this is similar across all institution types. There was some alignment between the areas that saw the most outsourced staffing and the most outsourced spending. The top-three IT domain areas with outsourced staff were information systems and applications (12% of CDS participants reported some outsourcing of FTE in this area), IT support services (10%), and communications infrastructure services (9%).

IT Staffing

Across all institutions, more than half of the central IT budget is dedicated to human resources. Depending on the institution, an investment of this magnitude may be considered an opportune area for cost savings or a valuable asset that must be grown and strengthened. A shift in the staffing model (via outsourcing or improved operational efficiency) could lower costs; a commitment to staff development or acquiring more qualified staff may lead to increased spending. Peer data on staffing models and compensation spending can be used to identify exemplars and help institutions right-size their staffing strategy.

Core Metrics

*Estimate the amount of IT support individuals at an institution receive by comparing central IT staff to institutional staff.*

In addition to spending per institutional FTE, an alternative view into the level of IT support an institution's people receive is the number of central IT staff per 1,000 institutional FTEs. This metric can be used to quickly estimate a benchmark for total central IT staff FTE. For example, in FY2012/13, U.S. institutions had a median of 7.8 central IT staff FTEs per 1,000 institutional FTE (see Figure 9). Thus, an institution with 10,000 institutional FTEs would have had roughly 78 central IT staff members. That said, depending on institution type, central IT staff may be as small as 47 or as large as 100 because this metric varies significantly across Carnegie Classification. Community colleges tended to have fewer central IT staff (4.7 IT FTEs/1,000 institutional FTEs) while private bachelor's institutions tended to have more (10 IT FTEs/1,000 institutional FTEs).
Figure 9. IT FTE per Thousand Institutional FTEs

The inverse metric, the number of institutional FTEs supported by one central IT FTE, can help provide an estimate of load on IT staff. In FY2012/13, the median number of institutional FTEs supported by one central IT staff member in the United States was 128. This varied from 100 at private bachelor’s institutions to 215 at community colleges. Because not all IT workers directly support individuals on campus, it is also valuable to note the number of institutional FTEs supported by one central IT FTE working specifically in the IT support services domain area (i.e., help desk and desktop support). At U.S. institutions this metric ranged from 303 institutional FTEs supported by one central IT support worker at private bachelor’s institutions to 681 at public doctoral institutions (median for all U.S. was 452).
Findings

Staffing models differ by Carnegie Classification.

Not only does the size of central IT staff differ across institution type; with unique strategies and customer needs, the composition of staff varies significantly as well. These differences can be observed through the analysis of two fundamental breakdowns of central IT staff: the proportion of student FTE to full-time FTE, and the distribution across IT domain areas.

Staff FTEs vs. Student FTEs

On-campus employment provides students with a valuable opportunity to gain hands-on job experience before they hit the real world. For on-campus employers this means an opportunity to increase capacity via a captive workforce that’s willing to trade time for experience and modest pay. As Quinnipiac University has learned, central IT organizations can turn this into a win-win-win situation by leveraging student workers to provide the campus with excellent customer support.16

On average, in FY2012/13, student FTEs made up 17% of total central IT staff in U.S. institutions. Community colleges had a smaller proportion of student FTEs (7%), while public master’s institutions had a relatively high proportion (24%; see Figure 9).

Staff by IT Domain

A staffing model centered on support, teaching and learning, and enterprise applications is optimal for tackling today’s most pressing IT challenges; U.S. institutions are positioned well. In FY2012/13, the top-three areas for central IT staff were IT support (31%), educational technology services (15%), and information systems and applications (15%, see Figure 10).
Differences in staffing models indicate that institutions are at varying stages in addressing top IT issues like access demand, consumerization, the role of online learning, and business process optimization. Community colleges and public bachelor’s institutions are focused on addressing consumerization and bring-your-own-device concerns, while doctoral institutions have addressed wireless and device explosion issues and are currently more focused on improving operational efficiency. Backing this relative prioritization, in FY2012/13, community colleges and public bachelor’s institutions had higher proportions of IT support staff (37% each vs. 26% private doctoral and 24% public doctoral); doctoral institutions had slightly higher proportions of information systems and applications staff (18% private doctoral, 17% public doctoral vs. 12% each at public bachelor’s and community colleges).
Likewise, public master’s institutions have recently been focused on the role of online learning, while public doctoral institutions attended to access demand issues. These priorities may have contributed to a staffing model at public master’s institutions with a slightly higher proportion of educational technology services staff (18% vs. 15% for all U.S. institutions) and a staffing model at public doctoral institutions with a higher proportion of communications infrastructure services staff (13% vs. 9% for all U.S. institutions).

**Increases in total central IT staff at some institutions balance decreases at others.**

The number of central IT FTEs per 1,000 institutional FTEs has not changed significantly since FY2010/11. This stable trend could lead to a false assumption that staffing levels overall are stable at institutions. The reality is that staffing levels are on the rise at some institutions, while they’re decreasing in similar proportion at others.

From FY2011/12 to FY2012/13, 43% of U.S. institutions had an increase in total central staff. The median increase for these institutions was 12%. The extent of increases in staff sizes differs significantly by Carnegie Classification. Public doctoral institutions had an increase of 9%, while public bachelor’s institutions had an increase of 25% (at institutions with an increase). A similar proportion of institutions had a decrease in staffing levels from FY2011/12 to FY2012/13 (48%). The median decrease for these institutions was 11%. Although increases are a sign of growth, decreases are not necessarily a sign of cutbacks. The ECAR study on workforce found that decreases in 2013 were more likely to be due to turnover than layoffs.

**Increases in compensation and training spending indicate that institutions are investing in their IT workforce.**

In FY2012/13, median compensation spending per central IT FTE at U.S. institutions was $64,902. This is an 8% increase over the same metric in FY2010/11 (vs. +1% from FY2009/10 to FY2010/11; see Table 1). Compensation spending per central IT FTE was generally higher at larger institutions ($73,331 at institutions with 15,000+ institutional FTEs vs. $56,938 at institutions with less than 2,000 institutional FTEs). Private doctoral institutions also had higher spending levels ($80,956). Higher spending could be the result of differing staffing models and/or higher salaries.
Table 1. Median Compensation Spending per Central IT Staff FTE

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Albeit small, the proportion of budget spent on travel, training, and seminars is also increasing. In FY2010/11, approximately 0.65% of the budget was spent training staff. In FY2012/13 this increased to 0.78%. Public institutions are the primary contributors to this trend. From FY2010/11 to FY2012/13, training spending at public master’s institutions increased from 0.50% to 0.77%. At public doctoral institutions, training spending increased from 0.61% to 0.77%.

In terms of training dollars per IT staff FTE in FY2012/2013, increases in median investment ranged from 4% at public master’s institutions (from $939 per IT staff FTE in FY 2010/11 to $972 in FY 2012/13) to 22% at public doctoral institutions ($974 in FY 2010/11 to $1,186 in FY 2012/13; see Table 2). Given the finding of turnover in the workforce, this proportion may not be increasing quickly enough. The ECAR study on workforce found that although CIOs feel that professional opportunities are important in maintaining the workforce, half of IT staff have not recently attended a conference or taken a class. In addition, not all institution types saw an increase in this metric. Median training spending per IT staff FTE at private master’s institutions, for example, was 17% less in FY2012/13 than it was in FY2010/11.

Table 2. Median Training Spending per Central IT Staff FTE

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IT Services

Benchmarks on IT financials and staffing are best understood in the context of institutional IT service offerings, delivery levels, and processes. At a granular level, information about IT service offerings and delivery levels provides insight into service characteristics and aids interpretation of IT domain area spending and staffing benchmarks. At a high level, information about an institution's service management processes can provide insight into overall resource allocation and efficiency.

Findings

**ITIL presence is substantial but differs greatly by institution type.**

Through the cultivation of operational efficiency and effectiveness, service management frameworks such as ITIL can help an organization “do more with less.” The implementation of standard processes like those found in ITIL indicates organizational maturity in the area of service management. From Wake Forest University’s “evolutionary” implementation of a single process to Yale University’s “whirlwind” implementation of most processes, institutions are at varying stages of maturity.

Overall, approximately 40% of U.S. institutions had at least one ITIL process partially or fully deployed in FY2012/13. This is in line with Gartner’s estimate of 20–50% adoption of ITIL practices. Private doctoral institutions led the pack, with 61% indicating an ITIL presence. On the other end of the spectrum, only 15% of private bachelor’s institutions had at least one ITIL process. With more customers, staff, infrastructure, etc., larger institutions are more in need of process standardization and tended to have more instances of ITIL than smaller institutions (59% at institutions with 15,000+ FTEs vs. 19% at institutions with less than 2,000 FTEs).

Full ITIL process implementation is not the norm. This echoes Gartner’s finding that although the education sector is implementing ITIL, it is doing so slowly and less maturely. The compartmentalized structure of ITIL allows for institutions to start where they can, implement processes as they go, and exclude components that aren’t right for them. Most organizations find that it’s easiest to start at the service desk with processes like incident management and problem management. In FY2012/13, the most deployed ITIL processes at U.S. institutions were incident management, change management, and problem management.

The most commonly considered but not pursued ITIL processes among institutions with some ITIL processes deployed were availability management, capacity management, and finance management. ITIL finance management focuses on costs at the service level. Although a majority of IT leaders feel that their institution is effective at financial management, less than half of institutions measure IT service cost.
**Service portfolio use continues to grow.**

A component of ITIL, service portfolios and service catalogs help to define service offerings, surface them to the customer, and provide the organization with a sense of identity. From FY2011/12 to FY2012/13, the use of service portfolios or service catalogs at U.S. institutions rose from 25% to 39%. The largest increases in the use of service portfolios were at public bachelor's institutions (from 12% in FY2011/12 to 47% in FY2012/13) and community colleges (from 7% in FY2011/12 to 32% in FY2012/13), perhaps indicating that they are catching up with the rest of higher education. With more of everything and a greater need to clearly communicate a multitude of services to a large customer base, larger institutions reported a higher prevalence of service portfolios (48% at institutions with 8,000–14,999 FTE; 68% at institutions with 15,000+ FTE).
Conclusion and Recommendations

The landscape of higher education is changing. As a facilitator of process change, efficiency gains, and enriched learning, information technology is clearly a valuable part of this evolution. Institutions are demonstrating their understanding of this value in the form of larger budgets. In return, IT is preparing to deliver by investing in staff, pursuing efficiency through service management, and exploring new service models. The metrics and benchmarks provided by the EDUCAUSE Core Data Service inform and reinforce decision making in this journey. To take full advantage of CDS and support EDUCAUSE efforts in providing the premier higher education IT benchmarking service, please consider the following recommendations:

Measure distributed IT. To make informed decisions about IT, institutional leaders need a full picture of IT, not just of the central IT organization. However, data on distributed IT remain elusive. CIOs are encouraged to work with institutional leadership, including HR, to develop practices for gathering more reliable information about distributed IT resources.

Participate. From IR to HR, comparative data about resources are being collected at all levels of the institution. Stay ahead of the game and in control of the IT benchmarking at your institution by participating in CDS.

Use the data. Participating in the CDS survey requires a significant investment of time. Institutions that use CDS data get the most value out of their investment. Anyone at participating institutions can use the data found in CDS Reporting to inform their planning. Find out how at the CDS website (http://www.educause.edu/coredata).

Encourage peers. The CDS database is only as strong as the number of institutions that contribute data each year. The benchmarking capability of the data is maximized with robust peer groups. Encouraging peers to participate in the survey and use the data ensures a rich database for all.

Stay informed. For information about survey open and close dates, completing the survey, using CDS data, and much more:

- Subscribe to our monthly newsletter to keep up with important dates, tools, and resources: http://net.educause.edu/apps/coredata/news/get_email.asp.
- Join the CDS discussion list to discuss CDS with other participants: http://listserv.educause.edu/cgi-bin/wa.exe?SUBED1=CDS-COMMUNITY&A=1.
- Attend CDS Office Hours to learn about CDS and get answers to specific questions: http://www.educause.edu/research-and-publications/research/core-data-service/about-core-data-service/cds-forum-office-hours.
- Explore the CDS website: http://www.educause.edu/coredata.

“While aggregation of data puts a reasonable framework around large data sets and often helps to suggest conclusions or findings, the importance of looking at the raw data themselves cannot be overestimated.”

—Ted Bross, Princeton University
Methodology

EDUCAUSE invites more than 2,400 institutions to contribute their data to the Core Data Service each year. Invitees include EDUCAUSE member institutions plus nonmember institutions with a record of interaction with EDUCAUSE. Any nonmember institution may request to be added to the CDS sample.

Response by Year

The CDS 2013 survey collected data about FY2012/13 and was conducted from July 2013 to September 2013. This was the 11th CDS survey. Since 2002, survey participation has ranged from 641 to 1,023 institutions. Approximately 60% of invited institutions have participated in at least one CDS survey. Nine out of ten CDS 2013 survey participants have participated in at least one other CDS survey. Trend analyses in this report are based on 526 institutions that participated in all three CDS surveys between 2011 and 2013.

CDS data about the prior fiscal year have traditionally been captured in the winter months. Due to long survey windows and lag-time in data production, this resulted in the release of year-old benchmarks at best. With fiscal years that end in June for over 80% of CDS participants, the timeline for CDS 2013 was shifted to the summer months to collect data on the most recent fiscal year. In addition, prior surveys contained questions about financials for the prior fiscal year and service delivery for the current fiscal year. To increase the relevancy and quality of CDS data, the CDS 2013 survey was aligned to collect data for only one fiscal year.

<table>
<thead>
<tr>
<th>CDS Survey</th>
<th>Year of Data Collection</th>
<th>Fiscal Year Data</th>
<th>Number of Participating Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDS 2002</td>
<td>2003</td>
<td>FY2001/02–FY2002/03</td>
<td>641</td>
</tr>
<tr>
<td>CDS 2003</td>
<td>2004</td>
<td>FY2002/03–FY2003/04</td>
<td>840</td>
</tr>
<tr>
<td>CDS 2004</td>
<td>2005</td>
<td>FY2003/04–FY2004/05</td>
<td>921</td>
</tr>
<tr>
<td>CDS 2005</td>
<td>2006</td>
<td>FY2004/05–FY2005/06</td>
<td>957</td>
</tr>
<tr>
<td>CDS 2006</td>
<td>2007</td>
<td>FY2005/06–FY2006/07</td>
<td>962</td>
</tr>
<tr>
<td>CDS 2007</td>
<td>2008</td>
<td>FY2006/07–FY2007/08</td>
<td>1,023</td>
</tr>
<tr>
<td>CDS 2008</td>
<td>2009</td>
<td>FY2007/08–FY2008/09</td>
<td>954</td>
</tr>
<tr>
<td>CDS 2009</td>
<td>2010</td>
<td>FY2008/09–FY2009/10</td>
<td>917</td>
</tr>
<tr>
<td>CDS 2011</td>
<td>2011</td>
<td>FY2009/10–FY2010/11</td>
<td>826</td>
</tr>
<tr>
<td>CDS 2012</td>
<td>2012</td>
<td>FY2010/11–FY2011/12</td>
<td>787</td>
</tr>
<tr>
<td>CDS 2013</td>
<td>2013</td>
<td>FY2012/13</td>
<td>798</td>
</tr>
</tbody>
</table>
Each year the CDS survey is kept open beyond the formal data collection period to allow institutions that missed the survey period the opportunity to add their data and gain access to the CDS database. For this reason, the final number of participating institutions in a given year may differ from the number of institutions analyzed for the purposes of this summary report. For example, this report is based on 788 institutions that participated in the survey by October 31, 2013. However, the final number of participants for CDS 2013 was 798.

Response by Carnegie Classification

As in prior years, survey response across Carnegie Classification was highly variable in CDS 2013. Due to differences in population sizes across institutional types, the number of participating institutions for a particular type of institution may be deceiving. For example, only 61 private doctoral institutions participated in CDS 2013; however, this accounts for 62% of private doctoral institutions that were invited to complete CDS 2013. In contrast, 106 community colleges participated in CDS 2013, but this accounts for only 17% of community colleges that were invited to participate in CDS 2013. We lack enough information about international institutions to be able to calculate response rates; however, international participation spanned 19 countries.

<table>
<thead>
<tr>
<th>Carnegie Classification</th>
<th>Participating Institutions</th>
<th>Response Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>AA</td>
<td>106</td>
<td>17%</td>
</tr>
<tr>
<td>BA Private</td>
<td>147</td>
<td>44%</td>
</tr>
<tr>
<td>BA Public</td>
<td>20</td>
<td>17%</td>
</tr>
<tr>
<td>MA Private</td>
<td>112</td>
<td>37%</td>
</tr>
<tr>
<td>MA Public</td>
<td>107</td>
<td>42%</td>
</tr>
<tr>
<td>DR Private</td>
<td>61</td>
<td>62%</td>
</tr>
<tr>
<td>DR Public</td>
<td>123</td>
<td>72%</td>
</tr>
<tr>
<td>Other U.S.</td>
<td>53</td>
<td>17%</td>
</tr>
<tr>
<td>International</td>
<td>69</td>
<td>N/A</td>
</tr>
</tbody>
</table>
Response by Module

The CDS survey is divided into eight modules. CDS survey participation status is based on the completion of the required Module 1: IT Organization, Staffing, and Financing. The remaining seven modules in the survey are optional and cover details about service delivery in the IT domain areas. Some of the optional modules ask about services run at most institutions (e.g., communications infrastructure), while others ask about services run at some institutions (e.g., research computing); thus, response to optional modules varies.

<table>
<thead>
<tr>
<th>CDS 2013 Module</th>
<th>Participating Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>M1: IT Organization, Staffing, and Financing</td>
<td>798</td>
</tr>
<tr>
<td>M2: IT Support Services</td>
<td>671</td>
</tr>
<tr>
<td>M3: Educational Technology Services</td>
<td>623</td>
</tr>
<tr>
<td>M4: Research Computing Services</td>
<td>388</td>
</tr>
<tr>
<td>M5: Data Centers</td>
<td>560</td>
</tr>
<tr>
<td>M6: Communications Infrastructure Services</td>
<td>576</td>
</tr>
<tr>
<td>M7: Information Security</td>
<td>585</td>
</tr>
<tr>
<td>M8: Information Systems and Applications</td>
<td>579</td>
</tr>
</tbody>
</table>
Acknowledgments

The CDS and this report would not be possible without the contributions of many individuals.

The CDS Advisory Group provides advice on service strategy and content.

Members of the 2012-2013 CDS Advisory Group

- Kathy Bergsma, University of Florida
- Malcolm Brown, EDUCAUSE
- David Consiglio, Bryn Mawr College
- Geoffrey Corb, The Johns Hopkins University
- Joy Hatch, Virginia Community College System
- Lori MacMullen, CUCCIO
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- David E. Trevvett, Consultant
- Sue Workman, Indiana University

Susan Grajek acts as project sponsor for CDS and provided valuable input on this report. The EDUCAUSE statistical team of Pam Arroway, Mike Rodema, and Ben Shulman provide the analytic and statistical support needed to develop survey questions and logic, produce CDS Reporting, and investigate primary research questions for this report. Matthew Milliron oversees all IT development and IT administrative support needed to conduct the CDS survey and host CDS Reporting. Ashlan Sarff and Lisa Gesner work tirelessly to promote the EDUCAUSE Core Data Service. Tammy Burkhart, Mai Vang, Cyndi Pasma, and Jody Tracy provide invaluable customer support to members at every stage of the CDS process.

Contributions specific to this report include: “A New Generation of IT Assessment Tools” contributed by Ronald Yanosky; consultation on visual display of data from Eden Dahlstrom; assistance with editing and content changes from Gregory Dobbin and Anita Kocourek; and graphics stylized by Kate Roesch.
Notes

1. For CDS 2013, the timeline was shifted to the summer months to collect data on the most recent fiscal year. Previously, data were collected in the winter months, resulting in benchmarks based on data that were often more than a year old. The CDS 2012 report was based on data from FY2010/11, for example, whereas the CDS 2013 report uses data from FY2012/13.

2. Estimates of institutional FTEs are calculated using IPEDS data. Institutional FTE is calculated as: total full-time student enrollment + 1/3 × part-time student enrollment + total staff FTEs. For more on IPEDS data, see http://nces.ed.gov/ipeds/.

3. FY2012/13 central IT funding for AA, BA, and MA is approximately $1,881,646 + ($619.83 × institutional FTEs).

4. Central IT funding for DR private institutions is approximately $1,308,383 + ($1,719.45 × institutional FTEs).

5. For DR public institutions, central IT funding is approximately ($1,214.06 × institutional FTEs) – $4,140,811. Negative fixed costs for DR public are attributed to higher FTE counts at this type of institution.


8. This trend analysis excludes funding for FY2011/12, inflation adjustments, and average tuition increases. An analysis including inflation adjustment had little effect on final results. Because tuition increases outpace inflation at most institutions, it seemed most appropriate to present reported dollars for this analysis.

9. Only 20 BA public institutions participated in CDS 2013. Due to low response, estimates for this group have large margins of error. Where possible, for the purposes of analyses in this report, responses from BA public institutions were combined with MA public institutions.

10. A remainder of funds were spent on “other” expenditures.

11. IT domain areas are further defined at the Core Data Service website, http://www.educause.edu/research-and-publications/research/core-data-service/about-core-data-service/it-domain-definitions.

12. An analysis of research computing services spending and staffing was excluded from this report because median spending and staffing levels across all U.S. institutions for research computing services was 0%.


18. Ibid.

19. The ECAR study *Today's Higher Education IT Workforce* shows a median salary of $84,000. The median salary reported by CDS is $64,902. The difference is attributed to the fact that CDS metrics are reported for the entire IT organization, while the data gathered for ECAR were based on survey responses by individuals about their salaries. The workforce survey respondents were mostly CIOs and managers. The median salary calculated for non-managers in the workforce survey was closer to the CDS benchmark.

20. Service-level data are collected in the optional portions of the CDS survey, Modules 2–8. Data from these modules are available via CDS Reporting, http://www.educause.edu/research-and-publications/research/core-data-service/access-data.

21. Service management data are collected in the required portion of the CDS survey, Module 1. Data from this module are available via CDS Reporting, http://www.educause.edu/research-and-publications/research/core-data-service/access-data.


28. Based on a matched set of 2013 and 2012 CDS respondents. As reported in the CDS 2012 Executive Summary Report, about 31% of CDS 2012 respondents had a service portfolio.