

IT Financing and Management

Section two of the 2005 core data survey focused on capturing financial data about information technology on campus for fiscal year 2004–2005 as well as IT management practices, many of which have financial implications. There are six major areas of analysis and discussion in this section, including sources and amounts of funding for IT, IT personnel compensation, decentralized support costs for IT, technology fees, equipment and replacement planning, and outsourcing and service level agreements.

Sources and Amounts of Funding for IT

Understanding the funding and expenditures of IT organizations on college and university campuses has long been a challenge. One of the biggest hurdles in defining the parameters of the Core Data Service was coming up with a methodology that would be relevant for all types of institutions so that a common questionnaire could be used.

The 2005 survey requested data for eight sources of funding (plus an “other funding” option) for the centralized IT organization thought to be applicable to most higher education institutions. In Tables 2-1 and 2-2, these sources are listed with the median values for each of the Carnegie classes presented in thousands of dollars. Median values are used because they present a more accurate reflection of actual campus averages than statistical means, which provide much higher values (especially for doctoral campuses) due to the

impact of having megacampus values in the data set. As was the case for the 2004 survey, respondents were required to enter \$0 for a source if they did not have any funding from that source (except for “other funding”), to ensure that a value was entered into each field.

Table 2-1 shows median values for all campuses, irrespective of the value entered for each source, including \$0. Since many campuses do not have all of the IT funding sources listed, a great number of \$0 values appear in this first table. In Table 2-2, the values in each cell are the medians of those respondents who reported revenue other than \$0 in a category, thus excluding from the data set the campuses that have no funding from a source. Keep in mind that in the Web-based interactive database component of the CDS (available to all who completed the survey), means, medians, highs, and lows are available, and ranges are not as distorted when a more narrowly defined peer group is examined.

Not surprisingly, as institutional complexity increases, so does the amount of funding from each source for the centralized IT organization. The dollar amounts for most of the funding sources are significantly greater for doctoral institutions compared to the other groups, while the amounts reported for AA and BA schools are generally the lowest. The relationship between Carnegie class and the dollar amount received by the centralized IT organization from these various funding sources is probably due primarily to differ-

Table 2-1
Median Amounts of Funding for the Centralized IT Organization
(in 1,000s of Dollars) by Funding Source for All Responding Institutions

Funding Source	ALL	DR	MA	BA	AA	OTHER
Operating appropriation to centralized IT organization	\$2,446	\$10,591	\$2,292	\$1,435	\$1,140	\$3,739
Capital appropriation to centralized IT organization	\$201	\$332	\$160	\$146	\$100	\$600
Revenue generated from student technology fees	\$0	\$0	\$0	\$0	\$6	\$0
Revenue from sale of centralized services (chargeback) to departments	\$0	\$3,783	\$0	\$0	\$0	\$0
Revenue from sale of centralized services to external entities	\$0	\$0	\$0	\$0	\$0	\$0
Net revenue from resale of products to departments, staff, students ...	\$0	\$0	\$0	\$0	\$0	\$0
Net revenue from resale of products to external entities	\$0	\$0	\$0	\$0	\$0	\$0
Proportional share of dollar equivalent for system/services provided at system or district level	\$0	\$0	\$0	\$0	\$0	\$0
Other funding	\$200	\$500	\$56	\$148	\$120	\$346

ences in overall institutional resources. However, Carnegie classification is still a reliable predictor of the amount of money allocated to the IT organization from the campus operating budget, a source of IT funding reported by nearly 100% of all respondents. This may indicate that, for this most common funding source, the actual dollar amount provided to the centralized IT organization may not only be due to level of overall campus resources but also to different practices in money allocation among institutions in the various Carnegie classes.

Tables 2-1 and 2-2 reveal that doctoral institutions reported higher values for capital appropriations than all other groups, and MA higher than BA or AA. This same pattern was also true for operating appropriations and revenue generated from student fees and sale of centralized services. Table 2-3 shows the per-

centages of campuses that have funding from the various sources, indicating that more doctoral than other types of institutions reported funding sources beyond operating appropriations. Particularly, these schools appear to rely much more heavily than schools in all of the other Carnegie groups on charging for centralized services and, to a lesser degree, resale of products to generate revenue for the centralized IT organization.

Means and medians for total centralized IT funding appear in Table 2-4, with dramatic differences between Carnegie groups, as expected. (Note that the total was computed by summing the dollar values entered by respondents for all funding sources.) For comparable types of institutions in the matched data set, there was a 5.5% average increase, compared to an increase of 6.4% last year.

One of the goals of the CDS is to allow for

Table 2-2
Median Amounts of Funding for the Centralized IT Organization
(in 1,000s of Dollars) for Institutions Not Reporting \$0

Funding Source	N =	ALL	DR	MA	BA	AA	OTHER
Operating appropriation to centralized IT organization	931	\$2,475	\$10,591	\$2,292	\$1,435	\$1,141	\$3,870
Capital appropriation to centralized IT organization	609	\$503	\$1,012	\$425	\$296	\$300	\$1,446
Revenue generated from student technology fees	324	\$582	\$1,382	\$640	\$305	\$385	\$500
Revenue from sale of centralized services (chargeback) to departments	407	\$717	\$4,501	\$330	\$61	\$57	\$1,875
Revenue from sale of centralized services to external entities	120	\$283	\$498	\$45	\$169	\$13	\$200
Net revenue from resale of products to departments, staff, students...	123	\$90	\$240	\$27	\$12	\$0	\$102
Net revenue from resale of products to external entities	51	\$48	\$51	\$25	\$19	\$0	\$83
Proportional share of dollar equivalent for system/services provided at system or district level	123	\$500	\$2,177	\$515	\$433	\$300	\$372
Other funding	148	\$400	\$599	\$325	\$350	\$200	\$775

the exploration of these data to see if various business ratios can be found that would be both stable and useful. One ratio that we explored uses data reported through IPEDS¹ for FTE students and total centralized IT funding reported through our survey to derive the ratio of dollars spent per FTE student. These ratios, shown in Table 2-5, increased nearly 7% from the 2004 to 2005 survey.

Centralized IT Personnel Compensation

In Table 2-6, the median total compensation (including benefits) paid by or through the centralized IT organization is shown for four categories of personnel (plus an “other” category) in

thousands of dollars. Note, again, that median values of all respondents are presented here, rather than data only for those respondents who did not report \$0 for a category of personnel. Thus, as explained earlier for the first question in this section, there are many cells in which \$0 is the median because of the great number of respondents who do not employ all of these categories of personnel. Table 2-7 presents data for those institutions that reported compensation other than \$0 by category of personnel.

The total compensation numbers for fiscal year 2004–2005 differ significantly by Carnegie classification. As expected, the median compensation paid to each of these personnel types

Table 2-3
Percentage of Central IT Organizations Reporting Various Sources of IT Funding

Funding Source	ALL	DR	MA	BA	AA	OTHER
Operating appropriation to centralized IT organization	99.8%	100%	100%	100%	99.4%	99.3%
Capital appropriation to centralized IT organization	65.3%	61.5%	63.0%	66.3%	60.7%	78.2%
Revenue generated from student technology fees	34.7%	44.0%	42.0%	16.3%	50.3%	15.5%
Revenue from sale of centralized services (chargeback) to departments	43.6%	85.7%	43.1%	31.0%	12.9%	42.3%
Revenue from sale of centralized services to external entities	12.9%	35.7%	8.0%	3.8%	1.2%	17.6%
Net revenue from resale of products to departments, staff, students ...	13.2%	33.0%	8.4%	9.2%	0.6%	16.2%
Net revenue from resale of products to external entities	5.5%	12.1%	5.0%	4.3%	0.0%	5.6%
Proportional share of dollar equivalent for system/services provided at system or district level	13.2%	11.0%	22.1%	7.6%	14.1%	5.6%
Other funding	15.9%	25.3%	13.4%	13.0%	12.9%	15.5%

Table 2-4
Means and Medians for Total Centralized IT Funding (in 1,000s of Dollars)

	Mean	Median
ALL	\$8,635	\$3,900
DR EXT	\$30,184	\$26,617
DR INT	\$10,941	\$9,775
MA I	\$5,181	\$4,000
MA II	\$2,040	\$1,544
BA LA	\$3,102	\$2,604
BA GEN	\$1,719	\$1,320
AA	\$3,089	\$1,775
OTHER	\$10,688	\$7,100

Table 2-5
Centralized IT Funding per FTE Student

	ALL	DR	MA	BA	AA	OTHER
Mean	\$2,859	\$1,461	\$836	\$1,343	\$672	\$13,365
Median	\$831	\$1,136	\$760	\$1,093	\$583	\$803

Table 2-6
Median Total Compensation for Various Types of Centralized IT Personnel
(in 1,000s of Dollars) for All Responding Institutions

	ALL	DR	MA	BA	AA	OTHER
Staff	\$1,724	\$8,723	\$1,631	\$909	\$710	\$3,064
Students	\$71	\$377	\$103	\$50	\$11	\$20
Consultants	\$2	\$37	\$0	\$0	\$0	\$20
Contractors	\$0	\$7	\$0	\$0	\$0	\$0
Other	\$0	\$0	\$0	\$0	\$0	\$0

Table 2-7
Median Total Compensation for Various Types of Centralized IT Personnel
(in 1,000s of Dollars) for Institutions Not Reporting \$0

	N =	ALL	DR	MA	BA	AA	OTHER
Staff	933	\$1,724	\$8,723	\$1,631	\$909	\$710	\$3,064
Students	786	\$97	\$381	\$125	\$60	\$38	\$53
Consultants	484	\$48	\$144	\$30	\$17	\$30	\$70
Contractors	365	\$75	\$195	\$58	\$39	\$25	\$125
Other	28	\$195	\$470	\$62	\$31	\$154	\$331

Table 2-8
Percentage of Centralized IT Organizations That Employ
Various Categories of Personnel

	ALL	DR	MA	BA	AA	OTHER
Staff	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Students	84.2%	97.3%	93.1%	92.4%	65.6%	62.0%
Consultants	51.9%	61.5%	46.9%	46.2%	46.0%	62.7%
Contractors	39.1%	52.2%	30.2%	35.9%	34.4%	48.6%
Other	3.0%	8.2%	1.9%	2.2%	0.6%	2.1%

increases with institutional complexity; in each case, either AA or BA schools reported the lowest compensations and doctoral schools the greatest. This is consistent with the finding above for overall centralized IT funding, likely for the same reasons with respect to level of overall campus resources, and related to campus complexity, not merely size of the campus. Table 2-8 shows the percentages of campuses that employ each category of personnel.

In exploring ratios that might be helpful to campuses in managing their IT resources, we calculated the total of expenditures reported for centralized IT staff as a function of total centralized IT funding, derived from the earlier question about allocations/revenues from the

nine funding sources. (Note that by staff we mean specifically staff and not all types of personnel; that is, student employees, consultants, contractors, and other types of personnel are not included in this number.) The ratio of staff compensation to total funding showed no differences across Carnegie groups and is remarkably consistent, with a little less than half of the total funding being spent on IT staff costs, as shown in Table 2-9. Maintaining a proper balance between people and technology has long been known to be important. The ratio developed from these data appear to provide some quantitative information about what is most common, irrespective of the nature of the institution, and might suggest an appropriate

Table 2-9
Percentage of Total Centralized IT Funding Spent on Centralized IT Staff Compensation

	ALL	DR	MA	BA	AA	OTHER
Mean	47.1%	47.4%	48.3%	45.8%	47.0%	46.0%
Median	46.6%	46.5%	47.9%	47.0%	45.7%	45.2%

Table 2-10
Centralized IT Funding as a Percentage of Total Campus Expenses

	Mean	Median
ALL*	5.2%	4.6%
DR EXT	4.0%	3.6%
DR INT	4.6%	4.2%
MA I	5.3%	4.8%
MA II	5.2%	4.7%
BA LA	4.8%	4.5%
BA GEN	5.3%	4.6%
AA	7.1%	6.6%
OTHER	4.7%	4.5%

* N = 482

or acceptable balance. These values were very similar to those reported for the 2004 survey.

Because of the addition to the 2005 survey of an optional question about total campus expenditures, we are able to present a new ratio that was provided by the COSTS Project in the past, that is, centralized IT funding as a percentage of total campus expenditures. This is roughly equivalent to the ratio of centralized IT funding as a percentage of the educational and general (E&G) budget, a calculation that hasn't been possible since E&G stopped being reported to IPEDS. Calculating this ratio is still problematic in that, depending on which campuses one uses in the comparison group, one may be mixing apples and oranges because of the differences between GASB and FASB reporting practices (Governmental Accounting Standards Board versus Financial Accounting Standards Board).² Furthermore, this new, optional data point is self-reported by respondents to the survey.

This was once a very important ratio to help campuses understand their spending habits related to information technology. Even with these cautionary notes taken into consideration, we believe the ratios are worth reporting. Table

2-10 shows relatively consistent results, with ratios for the largest, most complex institutions being somewhat lower because of the enormous size of their denominators. The ratios are highest for AA schools, which are far less complex, focused on instruction, and more cognizant of the critical need for the transformative role of IT in their institutional strategies. Note that the ratios are reported for fewer schools than most of the other data in this summary because the question was optional and nearly half the respondents chose not to provide the data.

Decentralized IT Expenditures

This year's survey again sought to capture data about estimated compensation (including benefits) for IT personnel and other IT-related expenditures (hardware, software, and so forth) outside the centralized IT organization, that is, in administrative offices and academic departments. Such decentralized expenditures vary dramatically based on the type of institution.

As shown in Table 2-11, of ALL responding campuses, nearly three-quarters were able to make a reasonable estimate about what was spent on distributed IT staff compensation and about 62% were able to make a reasonable

Table 2-11
Percentage of Institutions That Cannot Estimate IT Expenditures
Outside the Centralized IT Organization

	ALL	DR	MA	BA	AA	OTHER
IT compensation	26.8%	37.4%	24.8%	23.4%	19.6%	29.6%
Other IT expenditures	37.4%	46.7%	37.8%	33.7%	33.1%	34.5%

Table 2-12
Mean IT Expenditures
Outside the Centralized IT Organization (in 1,000s of Dollars)
for Institutions Where Such Expenditures Are Known

	N =	ALL	DR	MA	BA	AA	OTHER
IT compensation	683	\$2,161	\$10,140	\$536	\$118	\$181	\$1,737
Other IT expenditures	584	\$2,479	\$10,353	\$819	\$117	\$233	\$2,908

estimate about what was spent on IT outside their centralized IT organizations (including reporting \$0 spent) for all other IT-related expenditures. Note that 250 institutions reported that the total compensation paid to IT personnel outside the centralized IT organization is unknown, and 349 reported not knowing the amount spent on other, nonpersonnel expenditures. The group most frequently reporting not knowing these amounts was doctoral institutions, in all likelihood because of their complexity and distributed nature. Our assumption is that campuses reporting \$0 are essentially completely centralized, with all IT personnel being employed within the centralized IT organization and all IT-related expenditures made at the institutional rather than departmental level.

The average total compensation reported for IT personnel employed outside the centralized IT organization differs considerably by Carnegie class, as seen in the first row of Table 2-12. In fact, comparisons revealed significant differences among all groups except between AA and BA. The second row in this table reflects the expenditures by units outside the centralized IT organization on equipment and all other nonpersonnel items. As with other IT financing data points, the average of IT expenditures outside the centralized IT organization for the most part increased with institutional complexity. The sum of these two numbers

(personnel compensation plus all other expenditures) is an estimate of how much is being spent on average by institutions outside their centralized IT organizations, where such expenditures are known or can be estimated.

With the increased specialization in IT, especially in academic computing, it is likely that the relative extent of decentralized versus centralized computing will only increase. To see what trends might occur in the future, we developed two ratios as a baseline for such comparisons.

The first of these ratios has to do with centralized IT personnel compensation as a percentage of total campus IT personnel expenditures, with the latter derived by combining all centralized and decentralized IT compensation numbers reported for schools where such decentralized expenditures were known or could be estimated. As shown in Table 2-13, this percentage is quite high for BA and AA schools, which appear to have predominantly centralized IT operations. This percentage is significantly lower for MA and OTHER institutions than for BA and AA schools, and the percentage for doctoral institutions is significantly lower than all other groups. This is essentially an indicator of the extent of decentralization occurring in these types of schools. There were no significant changes in these ratios for the various Carnegie groups over the past two years.

Table 2-13
Centralized IT Personnel Expenditures
as a Percentage of Total Campus IT Personnel Expenditures

	ALL*	DR	MA	BA	AA	OTHER
Mean	82.9%	60.5%	86.1%	91.9%	90.4%	79.2%
Median	88.9%	58.7%	90.9%	94.1%	97.2%	81.9%
* N = 683						

Table 2-14
Total Centralized IT Funding
as a Percentage of Total Campus IT Expenditures

	ALL*	DR	MA	BA	AA	OTHER
Mean	81.7%	61.5%	84.3%	91.7%	87.3%	77.7%
Median	87.5%	62.8%	90.6%	94.2%	90.1%	81.1%
* N = 535						

Table 2-15
Percentage of Campuses That Charge General Technology Fees

	ALL	DR	MA	BA	AA	OTHER
Yes	51.2%	56.0%	62.1%	34.8%	68.7%	26.1%
No	48.8%	44.0%	37.9%	65.2%	31.3%	73.9%

The second ratio looks at total centralized IT funding as a percentage of total campus IT expenditures, with the latter derived from adding total centralized IT organization funding to estimated IT-related personnel and other IT expenditures outside the centralized IT organization, for schools reporting such known expenditures (including \$0). The mean and median percentages are shown in Table 2-14. There were no significant changes in this ratio for the various Carnegie groups over the past two years.

Technology Fees

The percentage of schools that reported charging a general student technology fee differs significantly among Carnegie classes, as seen in Table 2-15. The highest percentage was found among AA and MA schools, with about 69% and 62%, respectively, of these institutions charging a general student technology fee. Fifty-six percent of doctoral institutions charge such a fee, while about 35% of BA schools reported doing so.

Not only does the percentage of schools charging a technology fee differ by Carnegie class, but so does the basis for charging the fee, as seen in Table 2-16. Charging a flat fee per semester was the most common method for all Carnegie classes except for AA institutions, for which basing the fee on credit hours was by far the most popular strategy. Overall, the practice of charging technology fees was consistent with the pattern found for the 2004 survey.

The total of dollars generated by student technology fees also differs significantly as a function of Carnegie classification, as seen in Table 2-17, which shows the mean and median total dollars collected per campus from technology fees for those schools that charge a technology fee. Obviously, with more students on campus, larger schools (for example, doctoral institutions) would be expected to generate a larger amount of money from a general student technology fee. However, after controlling statistically for indicators of campus size (FTE students, headcount employees), Carnegie class was still a reliable predictor of

Table 2-16
Methods of Charging a General Technology Fee

	ALL*	DR	MA	BA	AA	OTHER
Flat fee per year	13.0%	8.8%	11.1%	28.1%	1.8%	40.5%
Flat fee per semester	43.2%	46.1%	53.7%	46.9%	25.9%	35.1%
Flat fee per quarter	2.7%	3.9%	4.3%	1.6%	0.9%	0.0%
Percentage of tuition	3.6%	2.0%	6.8%	1.6%	2.7%	0.0%
Flat fee per credit hour	29.8%	31.4%	15.4%	9.4%	65.2%	16.2%
Other	7.8%	7.8%	8.6%	12.5%	3.6%	8.1%
* N = 477						

Table 2-17
Total Dollars Generated per Campus from General Technology Fees
(in 1,000s of Dollars) for Institutions That Charge Such Fees

	ALL*	DR	MA	BA	AA	OTHER
Mean	\$1,397	\$3,374	\$1,198	\$456	\$678	\$628
Median	\$650	\$2,223	\$703	\$345	\$406	\$391
* N = 477						

Table 2-18
Separate Residence-Hall Network Connection Fee for All Respondents

	ALL	DR	MA	BA	AA	OTHER
Yes	13.9%	22.5%	16.4%	1.6%	2.5%	27.5%
No	65.0%	76.9%	78.6%	95.7%	13.5%	43.7%
No network connections	2.5%	0.5%	0.4%	0.0%	6.7%	7.0%
No residence halls	18.6%	0.0%	4.6%	2.7%	77.3%	21.8%

the total amount of money generated from the technology fee. Thus, differences in this dollar amount across Carnegie classes cannot be fully explained by differences in campus size.

Comparing 2004 and 2005 data for institutions that completed both surveys and reported charging a general technology fee, no significant changes were found in the total dollars reported.

Another form of technology fee we examined has to do with whether a separate fee for residence-hall network connections is charged (see Table 2-18). Overall, charging such a fee is not a widespread practice, with only about 14% of ALL responding institutions reporting doing so. The charging of such a fee is strongly related to Carnegie class. This is not surpris-

ing, given the dramatic differences among Carnegie classes in the percentage of institutions with residence halls, shown in the fourth row of this table.

Examining only those schools with residence halls that have network connections (see Table 2-19) similarly revealed that the practice of charging a separate fee for residence-hall network connections is significantly related to Carnegie class. This practice is most common among institutions in the OTHER group (38.6%), followed by DR institutions (22.7%), and least common among BA schools (1.7%). Overall, only about 18% of ALL institutions that have networked residence halls reported charging a separate network connection fee.

Table 2-19
Separate Residence-Hall Network Connection Fee
for Institutions with Networked Residence Halls

	ALL*	DR	MA	BA	AA	OTHER
Yes	17.7%	22.7%	17.3%	1.7%	15.4%	38.6%
No	82.3%	77.3%	82.7%	98.3%	84.6%	61.4%
* N = 736						

Table 2-20
Percentage of Institutions Owning/Leasing
Various Numbers of Computers

Number of computers	ALL	DR	MA	BA	AA	OTHER
Up to 500	9.3%	0.0%	3.8%	22.3%	9.2%	14.8%
501–1,000	19.7%	1.1%	19.1%	35.9%	31.3%	10.6%
1,001–2,000	24.7%	2.7%	34.7%	32.1%	35.6%	12.0%
2,001–3,000	11.6%	9.3%	19.8%	8.7%	11.0%	3.5%
3,001–5,000	12.2%	16.5%	16.4%	1.1%	7.4%	19.0%
5,001–10,000	13.4%	33.0%	6.1%	0.0%	4.9%	28.9%
More than 10,000	9.1%	37.4%	0.0%	0.0%	0.6%	11.3%

Table 2-21
Number of Campus-Owned/Leased Computers

	ALL	DR	MA	BA	AA	OTHER
Mean	4,459	12,604	2,295	1,060	1,713	5,565
Median	1,800	8,000	1,800	863	1,300	4,050

Equipment and Replacement Planning

As institutional complexity increases, so does the number of computers owned or leased by the institution, as shown in Table 2-20. Approximately 23% of the MA, just over 40% of the AA, and about 60% of the BA schools responding to our survey reported owning or leasing 1,000 or fewer computers, while about 70% of doctoral schools reported owning or leasing more than 5,000 computers, with more than half of this group reporting owning or leasing more than 10,000 computers. An examination of the means and medians of total number of campus-owned or campus-leased computers similarly illustrates this pattern, as seen in Table 2-21. In looking at the data in the matched data set, we see an across-the-board increase in number of computers owned or leased by institutions in all groups.

In an attempt to better understand the total

number of computers owned or leased by a campus and to be able to make more relevant comparisons, we calculated a ratio of the number of computers per student FTE (see Table 2-22). The number of computers owned or leased by an institution per FTE student also varies significantly across Carnegie classes. This pattern of ratios across the Carnegie groups was nearly identical with the pattern found last year.

While the number of computers may be of interest to those who manage information technology, the biggest challenge faced by all IT managers is assuring that this equipment is replaced in a systematic fashion in order to capitalize on the newer technologies and to reduce support costs. Therefore, the core data survey explored a variety of issues related to computer replacement.

The planned replacement cycle for campus

Table 2-22
Number of Campus-Owned/Leased Computers per FTE Student

	ALL	DR	MA	BA	AA	OTHER
Mean	0.99	0.72	0.41	0.81	0.42	3.43
Median	0.43	0.53	0.37	0.54	0.38	0.47

Table 2-23
Percentage of Campuses Using Various
Computer Replacement Cycles in their Planning Efforts

Replacement Cycle	ALL	DR	MA	BA	AA	OTHER
None	11.5%	21.4%	11.5%	7.6%	4.3%	12.0%
< 3 years	0.8%	1.1%	0.8%	0.5%	0.0%	1.4%
3 years	15.1%	17.6%	15.6%	12.0%	11.7%	19.0%
3–4 years	27.4%	29.1%	27.5%	23.9%	23.3%	34.5%
4 years	20.3%	9.3%	16.4%	28.3%	31.9%	17.6%
> 4 years	5.1%	1.1%	7.3%	7.1%	5.5%	3.5%
Different cycles for different computers	19.8%	20.3%	21.0%	20.7%	23.3%	12.0%

Table 2-24
Percentage of Campuses with Replacement Funding in the Budget
for Various Percents of Computers

% Computers with Funding	ALL	DR	MA	BA	AA	OTHER
0%	11.8%	11.5%	12.6%	8.7%	12.3%	14.1%
Up to 19%	9.5%	23.1%	5.7%	4.3%	7.4%	8.5%
20–39%	16.3%	21.4%	17.6%	12.5%	14.1%	14.8%
40–59%	7.9%	9.3%	8.4%	6.5%	6.1%	9.2%
60–79%	12.0%	14.8%	11.5%	7.6%	16.0%	10.6%
80–100%	42.4%	19.8%	44.3%	60.3%	44.2%	43.0%

computers reported by respondents varies by Carnegie class, as seen in Table 2-23. Nearly 63% of all responding institutions endorse a replacement cycle of 3 years, 3–4 years, or 4 years. This percentage ranges from a low of about 57% (DR) to a high of nearly 73% for schools in the OTHER group. However, the percentage of doctoral institutions (21.4%) reporting no planned replacement cycle is significantly greater than that for all other groups

It is one thing to have a plan for replacement of computers and quite another to have the funds for this replacement embedded (that is, actually funded) in the budget. Table 2-24 presents a profile of each Carnegie group relat-

ed to the percentage of computers actually funded in the budget. An alternative presentation of these data is shown in Table 2-25, which provides the mean and median percentages of campus computers that have replacement funding in the budget. For those institutions in our matched data set, the estimated percentage of campus computers with replacement cycles funded in the budget remained constant for BA and OTHER schools, but increased for DR and MA institutions and for associate's colleges.

Nearly 55% of ALL institutions reported that at least 60% of their campus computers are on a funded replacement cycle, and this

Table 2-25
Estimated Percentage of Campus Computers with Funded Replacement Cycles

	ALL	DR	MA	BA	AA	OTHER
Mean	56.9%	40.4%	58.7%	68.5%	60.1%	55.9%
Median	70.0%	25.0%	70.0%	85.0%	70.0%	65.0%

Table 2-26
Percentage of Campus Computers Replaced in Previous Fiscal Year

% Computers Replaced	ALL	DR	MA	BA	AA	OTHER
0%	1.1%	0.5%	0.4%	2.2%	0.0%	2.8%
Up to 5%	3.2%	2.7%	2.3%	5.4%	3.1%	2.8%
6–10%	7.5%	6.6%	6.9%	6.5%	8.6%	9.9%
11–15%	8.3%	7.7%	9.2%	8.2%	10.4%	4.9%
16–20%	22.5%	24.7%	22.5%	21.2%	22.7%	21.1%
21–25%	26.2%	30.2%	24.0%	26.6%	24.5%	26.1%
26–30%	15.3%	16.5%	16.4%	13.0%	16.6%	13.4%
31–35%	10.4%	9.9%	10.7%	10.3%	10.4%	10.6%
36–40%	2.4%	0.5%	4.2%	1.1%	0.6%	4.9%
More than 40%	3.2%	0.5%	3.4%	5.4%	3.1%	3.5%

Table 2-27
Comparison of Actual Computer Replacement to the Expressed Plan for Institutions with Replacement Plans

	ALL*	DR	MA	BA	AA	OTHER
On plan	61.8%	61.3%	62.1%	65.2%	61.9%	57.4%
Behind plan	29.2%	34.0%	27.7%	25.8%	28.8%	31.5%
Ahead of plan	9.0%	4.7%	10.2%	9.1%	9.3%	11.1%

* N = 641

was at least the case for all Carnegie groups except for doctoral institutions, only 35% of which reported at least 60% of computers with a funded replacement cycle. More than 60% of BA schools reported that 80–100% of their campus computers are on a funded replacement cycle, whereas about 20% of doctoral schools reported that level of funded replacement cycles.

Having a replacement plan and having the replacement funds actually budgeted tells part of the story, but the rest of the story is told by looking at data about how many computers were actually replaced the previous fiscal year. These data are shown in Table 2-26. The results were essentially the same as those found on last year’s survey.

For those campuses that reported a plan for computer replacement, the data for the number of computers actually replaced were compared with the expressed plan. If the actual replacement numbers were within 5% of the plan, campuses were grouped into a category called “on plan.” If they replaced more than this percentage, they were labeled “ahead of plan,” and if they replaced less than this percentage, they were labeled “behind plan.” These data are presented in Table 2-27. Although this methodology is not perfect, it does give one a sense that about 70% of campuses that have a plan are either on or ahead of that plan, despite economic hardships in higher education. There were no differences among the Carnegie groups for this variable,

Table 2-28
Campuses with a Funding Model That Includes Renewal of the IT Capital Plant

	ALL	DR	MA	BA	AA	OTHER
Yes	51.9%	53.8%	50.8%	52.2%	48.5%	54.9%
No	48.1%	46.2%	49.2%	47.8%	51.5%	45.1%

Table 2-29
Percentage of Campuses Using External Suppliers to Run Various IT Functions

IT Function	ALL	DR	MA	BA	AA	OTHER
Administrative systems—transaction systems operation	14.4%	11.0%	19.5%	15.2%	9.2%	14.1%
Administrative systems—application development	9.4%	4.9%	9.5%	5.4%	9.2%	20.4%
Administrative systems—project management for implementations	6.4%	6.6%	5.7%	2.7%	6.1%	12.7%
All centralized IT staff and services	1.6%	0.5%	2.7%	0.0%	3.1%	1.4%
CIO/top IT administrator	1.5%	0.5%	2.3%	0.0%	3.1%	1.4%
Computer and network security	1.7%	1.1%	1.5%	1.1%	3.1%	2.1%
Computer operations	2.4%	1.1%	3.8%	0.5%	3.1%	2.8%
Data center	3.5%	1.1%	7.3%	1.1%	2.5%	4.2%
Desktop computer installation, maintenance, and/or repair services	9.5%	12.1%	6.9%	4.9%	5.5%	21.8%
Distance education	4.9%	2.2%	7.3%	2.7%	8.0%	3.5%
Help desk	4.9%	3.3%	6.9%	1.6%	5.5%	7.0%
Instructional/course management system	10.7%	9.9%	14.9%	3.8%	15.3%	7.7%
Multimedia services	1.6%	1.1%	1.9%	1.1%	2.5%	1.4%
Network services	3.8%	3.3%	3.1%	1.1%	4.9%	7.7%
Portal	2.9%	1.1%	4.6%	0.5%	4.9%	2.8%
Print services	7.4%	7.1%	8.0%	4.9%	6.7%	10.6%
Remote access to network services	4.6%	6.6%	3.4%	2.7%	4.3%	7.0%
Resnet (student residential networks)	3.1%	1.1%	5.7%	2.7%	0.6%	4.2%
Telephone services	17.8%	15.4%	17.2%	19.6%	14.7%	23.2%
User support services	2.1%	1.1%	3.1%	0.5%	3.1%	2.8%
Web development and/or hosting	15.8%	13.2%	14.5%	20.1%	12.3%	19.7%
Other IT service	12.9%	20.3%	10.3%	10.3%	11.0%	13.4%
No external suppliers	43.4%	41.2%	40.1%	48.4%	52.1%	35.9%

Table 2-30
Percentage of Campuses Using Written Service Level Agreements
for Various IT Services

IT Service	ALL	DR	MA	BA	AA	OTHER
Academic/research support	11.6%	20.3%	11.5%	4.3%	7.4%	14.8%
Administrative systems support	23.5%	28.6%	23.7%	17.4%	20.2%	28.2%
Computer and network security	6.5%	7.1%	6.5%	3.8%	8.6%	7.0%
Data center services	20.4%	40.7%	18.3%	6.0%	12.9%	25.4%
Desktop/user support services	30.8%	49.5%	26.7%	15.8%	25.8%	39.4%
Instructional technology support	13.3%	18.7%	14.5%	7.1%	13.5%	12.0%
Multimedia services	8.1%	11.0%	7.6%	3.8%	11.0%	7.7%
Network services	22.6%	30.2%	21.8%	13.0%	19.6%	30.3%
Print services	9.6%	9.9%	8.4%	4.9%	10.4%	16.9%
Telephone services	20.3%	25.3%	22.9%	10.9%	16.0%	26.1%
Web support services	1.8%	1.6%	1.5%	0.0%	3.7%	2.8%
Training	13.6%	23.6%	10.7%	4.9%	11.7%	19.7%
Other IT services	7.0%	14.8%	9.2%	2.2%	1.2%	5.6%
No SLAs	51.7%	30.2%	51.9%	67.9%	65.0%	42.3%

although the doctoral group had the highest percentage of campuses behind plan.

Finally, we examined the data related to capital replacement of the IT infrastructure other than computers, including renewal of the wiring, electronics associated with the network, and so forth. More than half of ALL institutions reported that the current funding model of their campuses includes renewal of the capital plant, as seen in Table 2-28 (previous page). The proportion of schools reporting this did not differ significantly across Carnegie classes, nor were there any notable changes in results from last year's survey.

Service Level Agreements and Outsourcing

The use of external suppliers to run a campus IT function appears not to be a common practice overall. About 43% of ALL institutions reported that they do not outsource any functions or use application service providers (ASPs), as shown in Table 2-29 (previous page). There was a non-significant difference by Carnegie class when comparing the percentages of schools that reported no outsourcing,

with AA and BA schools more often and MA and doctoral institutions less often reporting no outsourcing arrangements. Overall, the percentage of institutions in the matched data set that reported using external suppliers to run various IT functions increased over the past year, from 53% to 57%, the second year in a row that a significant increase has been found.

The use of service level agreements (SLAs) was also analyzed, with results shown in Table 2-30. About 48% of ALL responding institutions reported some use of SLAs, with the percentage of institutions using no SLAs varying across Carnegie groups. The percentage of institutions using such agreements was significantly related to Carnegie class, with more BA and AA schools reporting no use of SLAs. Looking at the matched data set, the percentage of schools using no written service level agreements decreased about 2% over the previous year.

Notes

1. The Integrated Postsecondary Education Data System (IPEDS) is a single, comprehensive data collection program designed to capture data for the National Center

for Education Statistics (NCES) for all institutions and educational organizations whose primary purpose is to provide postsecondary education in the United States. IPEDS collects institution-level data in such areas as enrollments, program completions, faculty, staff, and finances.

2. For more information, see the discussion on page vii of the introduction to this summary report about use of IPEDS data as well as the CDS Announcement, "Caution Advised in Using IPEDS Data for Ratios," dated March 2, 2004, at <http://www.educause.edu/apps/coredata/news/>.