



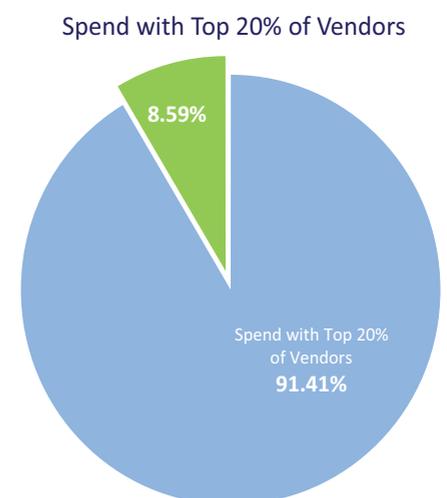
BENCHMARKING SPEND ANALYTICS AND PROCUREMENT SAVINGS OPPORTUNITIES IN HIGHER EDUCATION

A forward by Doreen Murner from NAEP

Data is a requirement for an institution to survive, much less thrive. It is useful to know and understand data at your specific institution. But that data only tells part of your story. How do you measure yourself against similar institutions from across the region or the country without the appropriate data points? This report focuses on the broad spend in higher education as a whole.

In planning both short and long-term strategic objectives, the value of appropriate data becomes very clear. Reviewing and understanding the broad trends in higher education spend can inform your decisions as you create your institutions' road map to success and identify savings opportunities. The data in this report can help you prepare benchmarks across a variety of spending categories as well as efficiently manage vendor contracts and monitor ongoing progress.

The value of procurement departments at higher education institutions and systems across the country cannot be understated. This report delivers clear, concise data to help you foster a culture of collaborative purchasing across all of departments and within your administration. The application of the data analysis in this report will help your institution thrive in an increasingly complex and strategic world.



An Introduction by Luke Spikes from Spikes Cavell

Over the past 10 years we have cleansed, categorized, enriched, aggregated and visualized more than 3,000 public sector spend datasets valued at close to half a trillion dollars: admittedly not a great conversation starter at a dinner-party or an event, but a useful vantage point from which to observe procurement practitioners achieve remarkable results for their institutions by being better informed. Data (whatever its size) is definitely making a difference.

This may explain why executive management teams appear to be increasingly interested in what their institution spends on goods and services. Procurement is no longer something that someone, somewhere in the organization just 'takes care of'. Executive interest is inevitably accompanied by questions that include; 'how are we performing relative to others?' and 'what are others doing in procurement to deliver value that we're not?'

But addressing questions like these is significantly hampered by there being little spend intelligence of any real value in the public domain - benchmark metrics against which to facilitate comparison of an institution's spend profile or performance relative to others simply don't exist. Together with the NAEP we hope to change that. This report is but a first step on that journey - a few facts, figures and findings that, at the very least, we hope will help you get a data-driven conversation at your institution started.

About the Data

The data used in this whitepaper comes directly from one year of financial transactions and purchasing card records of 42 higher education institutions from across the United States. The datasets used cover a range of institutional sizes and types to provide the best available representative sample of spend in the HE sector available today. From those 42 organizations, an average dataset was created which was then used to build the majority of the charts, graphs and tables in this document. Where it wasn't possible to use the average dataset, an individual institution's data which was similar to the average dataset was anonymized so that the identity of the source could not be determined and used to create some charts and graphs. Through NAEP's partnership with Spikes Cavell, as more institutions carry out spend analysis projects with Spikes Cavell, their data will be aggregated, anonymized and included in this average in future publications.

"I wanted to have the ammunition that would help me get better control over the University's spend and in particular identify maverick spend. When I looked into using spend analysis, it was clear that it was a very cost effective way to help me do that and a lot more besides."

Don Buffum, Mississippi State University

STEP ONE: UNDERSTANDING YOUR SPEND

To know how to save money, you need to know where it is spent. But the reality for Higher Education (HE) procurement teams is that spend and contract information is often incomplete. HE institutions are complex, with information distributed across multiple systems, making it difficult to access. The information that does exist may not be classified appropriately for procurement purposes. Departmental end-users may not always adhere to institutional purchasing policies.

Getting visibility of the right information, in the right format is the first step in the spend analysis process. This is the precursor to identifying procurement savings, improving efficiency and adding value to your organization.

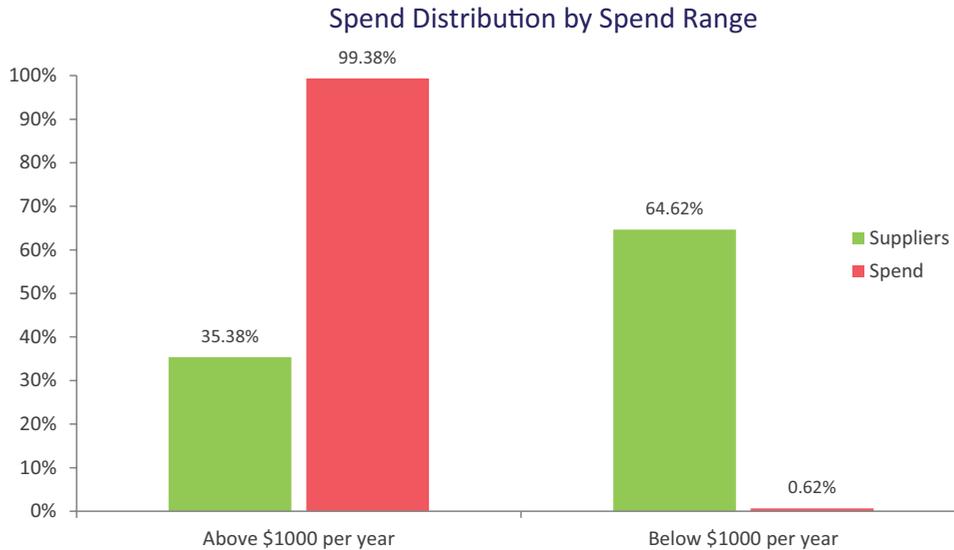
Summarizing your spend

This summary table below is based on aggregated data from 42 HE institutions and shows an average annual expenditure of over \$70 million. Following the techniques and activities detailed in this white paper, most institutions were able to identify savings of between 2%-6% of total spend through cost management, purchasing efficiencies and increased productivity within the procurement and accounts payable teams. Some of these savings can be defined as cash releasing: savings such as reduced prices can be easily defined in cash terms, and that cash will be available to spend elsewhere in the organization. Other savings are harder to define but still have value to the institution; process improvements can enable staff to work on more strategic projects, or efficiency improvements such as reducing invoice volumes and automating contract renewals can improve financial control and prevent losses. The starting point for all saving projects is to have access to summary data as shown below.

This data starts to reveal typical patterns of spend and from there can be used to point out savings opportunities. On average, the 91.41% of spend is with the top 20% of vendors. On the other hand, this shows that institutions typically have around 1,000 separate vendors with whom they are spending less than 10% of the annual total (known as a 'long tail' when plotted on a chart according to spend). Procurement teams are likely to have the most information about their top 20% of vendors, but know very little about the 'long tail' of 1,000 or more. Even within the top 20%, the quality of information can be variable as this represents more than 200 vendors. There are likely to be opportunities for improved terms with the top vendors, and for consolidation, reduction and process improvements amongst the remainder.

Summary Statistics	HE Average Institution
Total Spend	\$ 72,851,553.50
Number of Vendors	1230
Spend with top 20%	\$ 66,593,605.06
% spend with top 20% of vendors	91.41%
Number of vendors in top 20%	246
Average spend per vendor	\$ 59,228.91
Number of transactions	31289
Average value per transaction	\$ 2,328.31
Base: All HE institutions (42)	

Looking at the ‘long tail’ another way, this distribution chart shows that around two thirds of vendors (around 800 vendors on average) account for less than \$1,000 each per year, again signposting an opportunity for savings and efficiencies. If departmental buyers are empowered to use pCards for low spend items, the work involved in setting up the vendors in the AP system and processing transactions from them is avoided.



Spend on pCards

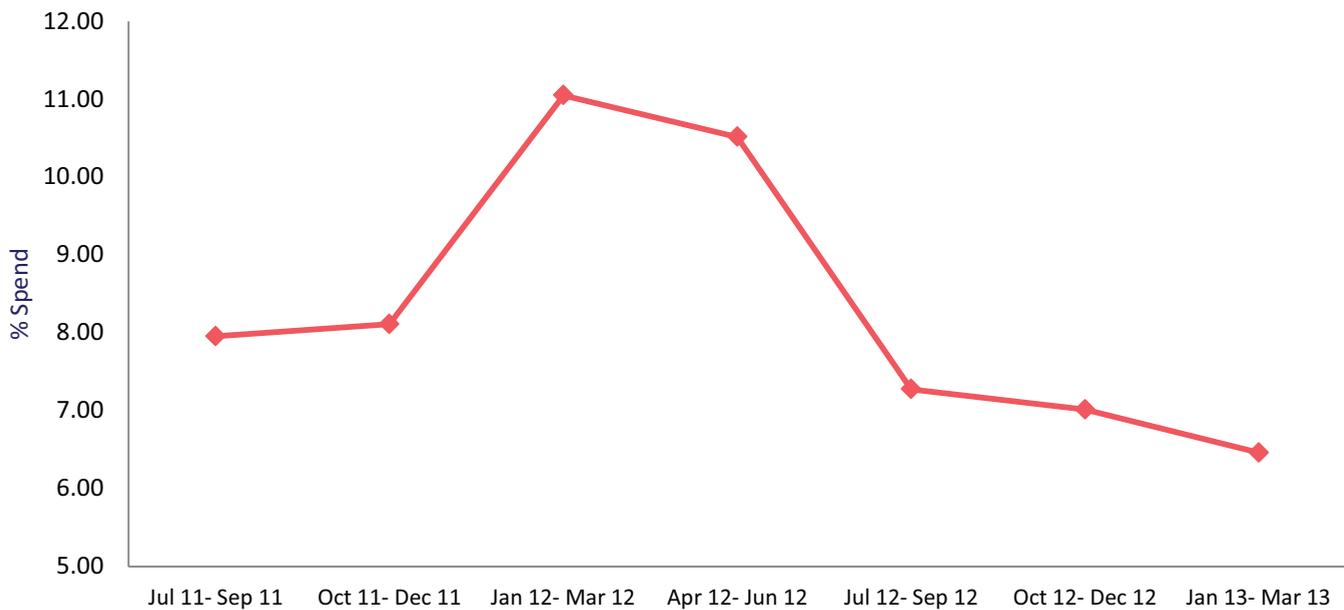
pCards can be a valuable tool for keeping procurement and accounts payable administration costs under control. As the table shows, in the average HE institution they account for over a third of transactions, but less than 10% of spend, indicating that they are used mostly for small value items. Extending the use of pCards under the control of the procurement team can increase efficiency and also generate cash where rebates are available. However there can also be issues with getting clear data on pCard spend for use in procurement planning. For example, goods bought from different branches of the same store can show up in pCard spend data as being with separate vendors. This means that multiple end users each spending a few hundred dollars at different branches, many times a year, adding up to an expenditure of tens of thousands could go undetected by the system. If this spend were centralized, the supplier could potentially be brought under contract and better pricing or terms could be arranged. Additionally, there can be risks associated with the distributed buying that pCards enable: goods are unlikely to be standardized which may affect price and quality. pCard data needs to be appropriately cleansed, and aggregated with all other sources of spend data to give the clear overview needed to identify savings.

Summary Statistics	HE Average Institution
Total Spend	\$ 72,851,553.50
% of spend on pCards	8.33%
% of transactions on pCards	37.55%

Spend with contracted vendors

Spend with contracted vendors is another key statistic, as every dollar spent is important and savings opportunities can be missed through off-contract purchases. Developing contractual relationships with suppliers can result in more competitive prices and improved payment terms. Bringing spend under contract reduces the number of suppliers overall, cutting administration overhead and concentrating purchases with contracted vendors. This in turn increases buying power, as well as contributing to a culture of compliant purchasing within the organization. Tracking this percentage over time enables you to see if spend under contract is moving in the right direction. The chart shows data in a typical institution and highlights a key issue for procurement teams: At face value, the low proportion of spend under contract seen here – between 6% and 12% - offers a great opportunity for improvement. The reality is likely to be more complex. Contracts start and end at different points during the financial year and run for varying lengths of time and, with on average 1,230 live vendors in any one year, keeping track of contractual relationships can be a daunting task.

Quarterly Spend With Contracted Vendors



Organizing your spend by industry category

Categorization by industry is an important part of the spend analysis process. Internal account codes can be used for analysis but this is dependent on the quality and completeness of coding within the financial management system. Often, purchases can be categorized incorrectly, inconsistently, or be missing entirely. If you can allocate vendors to consistent and meaningful categories, an overview of spend, suppliers and transactions makes it possible to identify outliers, providing the basis for further investigation. Industry categories can be grouped to form industry sub-sectors, which can, in turn, be grouped to form top-level industry sectors. For example, the industry category 'IT Resellers' is part of the industry sub-sector 'IT Hardware & Software', which is part of the top-level industry sector 'Information Technology'. This gives you three levels at which to view the data, depending on what decisions you need to make.

Industry SubSector	Avg Spend	Avg Transactions	Avg Vendors
General Contractors	\$ 9,337,978.57	127	12
Financial Services	\$ 4,926,513.01	420	12
Utilities	\$ 4,436,803.00	850	5
IT Hardware & Software	\$ 4,261,356.43	2138	79
Systems Integration & Services	\$ 3,917,934.96	447	67
Insurance Services	\$ 3,098,178.48	81	8
Construction Trades	\$ 3,066,291.22	492	45
Laboratory Equipment & Services	\$ 2,668,964.50	3027	72
General Facilities Management	\$ 2,051,517.24	407	7
Construction Consultants	\$ 1,966,808.73	146	13

Categories of spend with large numbers of vendors, but low spend per vendor can be indications of maverick purchasing (buying in an ad-hoc fashion, outside of organizational guidelines or processes, and usually at higher prices) or undermanaged categories. Invoice processing takes time, so more efficient purchasing in categories with relatively high invoice volumes presents opportunities to increase productivity in the finance, accounts payable and procurement teams and to enable team members to work on more strategic tasks

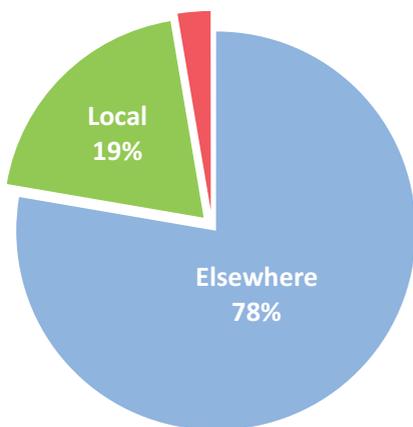
Here, three sub-sectors stand out as most likely to offer savings: IT Hardware & Software, Laboratory Equipment & Services and Systems Integration & Services. However, the industry level view also allows you to start making sense of the numbers. For example, whilst with 72 vendors, Laboratory Equipment & Services is a prime candidate for review, there will likely be specialist suppliers within this category that can't easily be replaced. We'll look at the IT Hardware & Software category in more detail in step three (Building a detailed category analysis).

Spend by business type and location

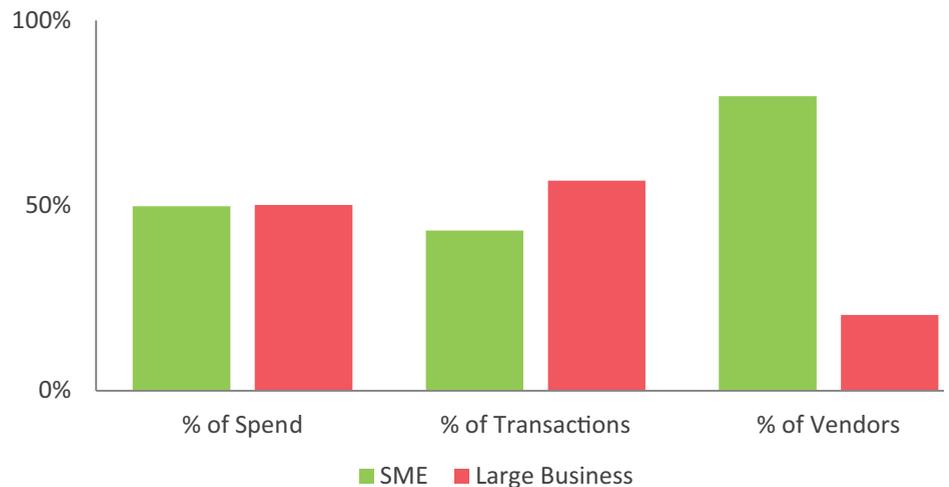
Finally, it is beneficial to understand what type of businesses supply your organization. There can be a perception that little is spent with small, local, minority owned or sustainable ‘green’ businesses. Again this is data that can be hard to collate. Businesses need to be accurately and consistently categorized within the procurement system which can be challenging: what constitutes a ‘green’ business? How near is local?

Accurate, up-to-date, consistently defined data can help in dealing with calls to increase spend with these businesses, demonstrating compliance with statutory or institutional policy, and making policy decisions such as implementing preferential spend initiatives. For example, the chart shows 19%, on average, is spent locally; if you know this figure you can start the debate about whether this is the right level for your organization. There are both costs and benefits in supporting these businesses as they may not be as competitive on price as larger national suppliers, however they may offer better terms, local support, faster delivery and intangible benefits such as contributing to the overall ethical position of the institution which may in turn attract more students, staff and funding.

Local Spend vs Elsewhere



Spend with Small and Medium Sized Businesses



Step one summary

A full understanding of the current situation requires:

- Spend and contract data collated and summarized** ✓
- Data categorized in meaningful industry codes** ✓
- Business type and location tracked** ✓

Once you have a clear view of your organization’s expenditure, you will be ready to move to step two, identifying opportunities for savings and efficiencies.

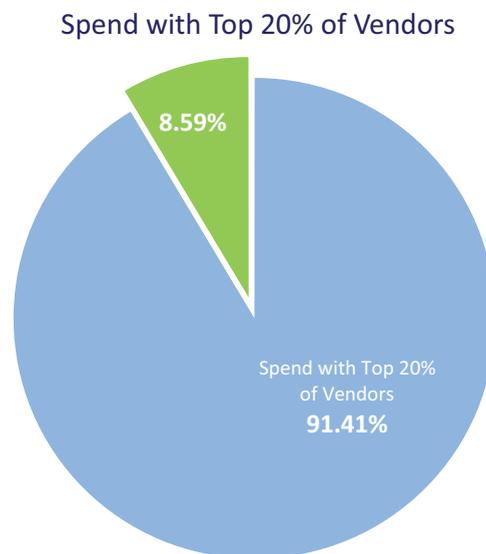
STEP TWO: IDENTIFYING OPPORTUNITIES FOR SAVINGS AND EFFICIENCIES

The second step takes the clear view of expenditure produced in step one and uses it to identify and pursue opportunities for savings and efficiencies. Having improved visibility of how much is spent, on what and with whom, can raise as many new questions as it answers. There may already be savings initiatives underway, which you can review and prioritize in the context of any other opportunities that arise from step one.

Step two details six activities routinely used to identify savings and efficiencies in the HE sector and what those opportunities look like using the average institution’s data shown in Step One.

i. Improved Terms

Who are your largest and most important vendors and can you use that information to ensure that you are getting the best pricing and terms based on your spend? Typically in HE, as the chart shows, the majority of spend is with a small group of vendors. It is likely that your organization is seen as an important customer by those top vendors, which gives you leverage when managing the relationship. There are a number of ways you can negotiate to derive savings for your institution, such as reduced prices, avoiding price rises, rebates, extended or flexible payment terms or added value – additional products or services included at no cost. When entering into negotiations for these savings, the more information you have, the stronger your bargaining position. Your vendor knows how much you spend with them and uses this information in business planning and to set your price. If you have information which is not available to the vendor about how much you spend with competitors, and in the category as a whole, this gives you leverage and can guide you as to what you can offer in order to get the best terms.



ii. Category rationalization

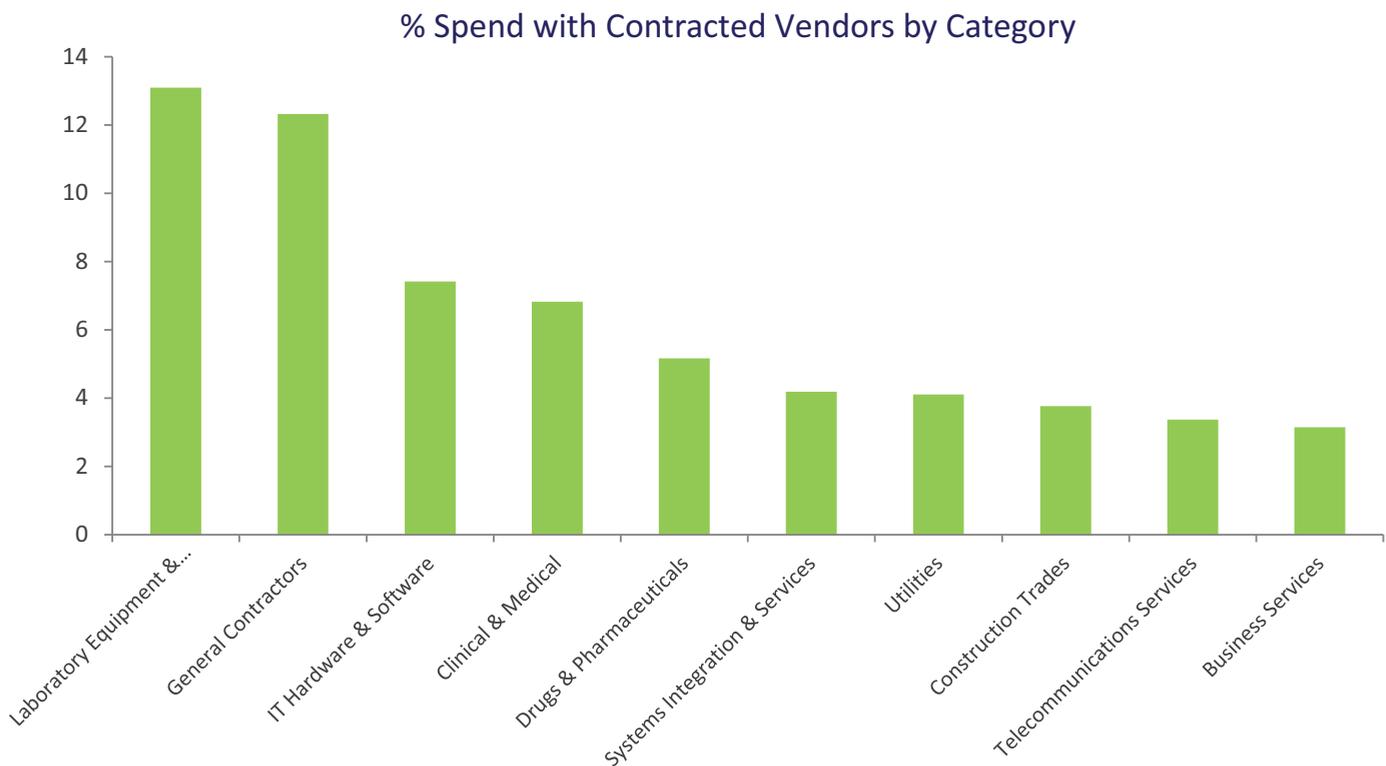
In which categories do you have too many vendors, where aggregation could help drive down costs? We will look at how to drill further down into categories in step three; this step takes an overview as the starting point in identifying categories for further investigation. The clear candidates are categories with the highest number of vendors, such as IT Hardware & Software and Business Services. Consolidating spend with fewer suppliers will allow for negotiation of better terms and reduce invoice processing. However savings may also be possible in categories with fewer vendors, where goods and services are generic. For example, does one HE institution really need twelve separate Grounds Maintenance suppliers? Or ten Stationery suppliers? This diversity suggests that this could be maverick spend, or that these categories of spend may not be actively managed. Another question is to what extent are purchasing policies, such as a requirement to choose lowest cost vendors, resulting in multiple suppliers, and to what extent can this be resolved?

Number of vendors per category

Industry SubSector	Avg Vendors	Industry SubSector	Avg Vendors	Industry SubSector	Avg Vendors
IT Hardware & Software	79	Farming	11	Beverages	4
Business Services	76	Telecommunications Services	11	Vehicle Fuels & Lubricants	4
Laboratory Equipment & Services	72	Logistics	11	Economic Development	4
Systems Integration & Services	67	Stationery	10	Other Energy Sources	4
Marketing	64	Environmental Services	10	Catering Equipment	4
Machinery and Electronics	46	Education Service Providers	9	Children's Support Services	3
Construction Trades	45	Broadcasting	9	Charity & Voluntary	3
Construction Materials	41	Insurance Services	8	Road Transportation Management	3
Information Services	36	Recreation Services	8	Energy Management	3
Clinical & Medical	35	Cleaning & Janitorial Services	7	Other IT Services	3
Educational Equipment	35	Construction Equipment	7	Security Services	2
Sports & Playground	34	Food	7	Accounting & Auditing	2
Hotels and Other Accommodation	30	General Facilities Management	7	Religious Activities	2
Retail	21	Technical Consultants	7	Wholesale	2
Eating Establishments	20	Advertising	7	Other Vehicles	2
Travel	20	Training	6	Document Storage & Management	2
Road Vehicles	20	Waste Disposal	6	Government	2
Fittings	17	Data Communications	6	Adult Support Services	2
Business & Management Consultants	16	Healthcare Services	6	Administration Services	2
Other Goods & Services	15	Mail Services	6	Boats	2
Furniture	15	Chemicals	6	Other Transportation Management	1
Events and Event Facilities	14	Employment Services	5	Waste Management	1
Security Equipment	13	Cleaning & Janitorial Equipment	5	Metal & Metal Products	1
Clothing & Footwear	13	Catering Services	5	Emergency Services	1
Construction Consultants	13	Animals	5	Aircraft	1
General Contractors	12	Other Social Care & Services	5	Human Resources Consultants	1
Financial Services	12	Utilities	5	Recycling	1
Arts	12	Property and Real Estate Management	5	Personal Care Services	1
Grounds Maintenance	12	Drugs & Pharmaceuticals	5	Community Development	1
Legal Services	12				

iii. Contract compliance

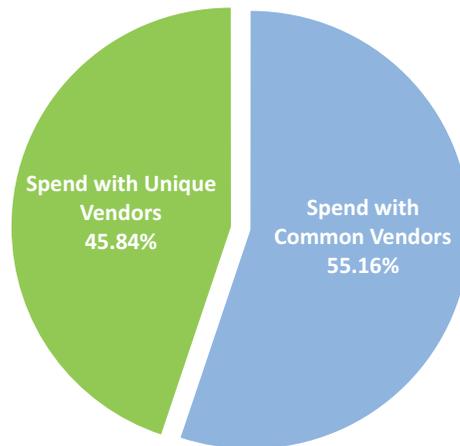
As discussed, bringing spend under contract has the potential to deliver considerable savings, not just from improved terms with contracted vendors, but also from efficiencies within the procurement and accounts payable teams and from reducing maverick spend. Drilling down into key categories can show where off-contract spend is occurring and help to identify which vendors should be brought under contract. Where goods and services are bought under contract, they will have been competitively evaluated and judged as providing the best fit for the needs of the institution. Through contract negotiations, price and terms will be more favourable than those offered on the open market and recourse is available for inadequate performance or poor quality goods. Combining spend data with information about the competitively bid contracts you have in place can help identify and reduce maverick expenditure, but also point out vendors and categories where competition and a formal contracting process could yield lower prices, better or more consistent service, and greater compliance with procurement policies.



iv. Cooperation with other institutions

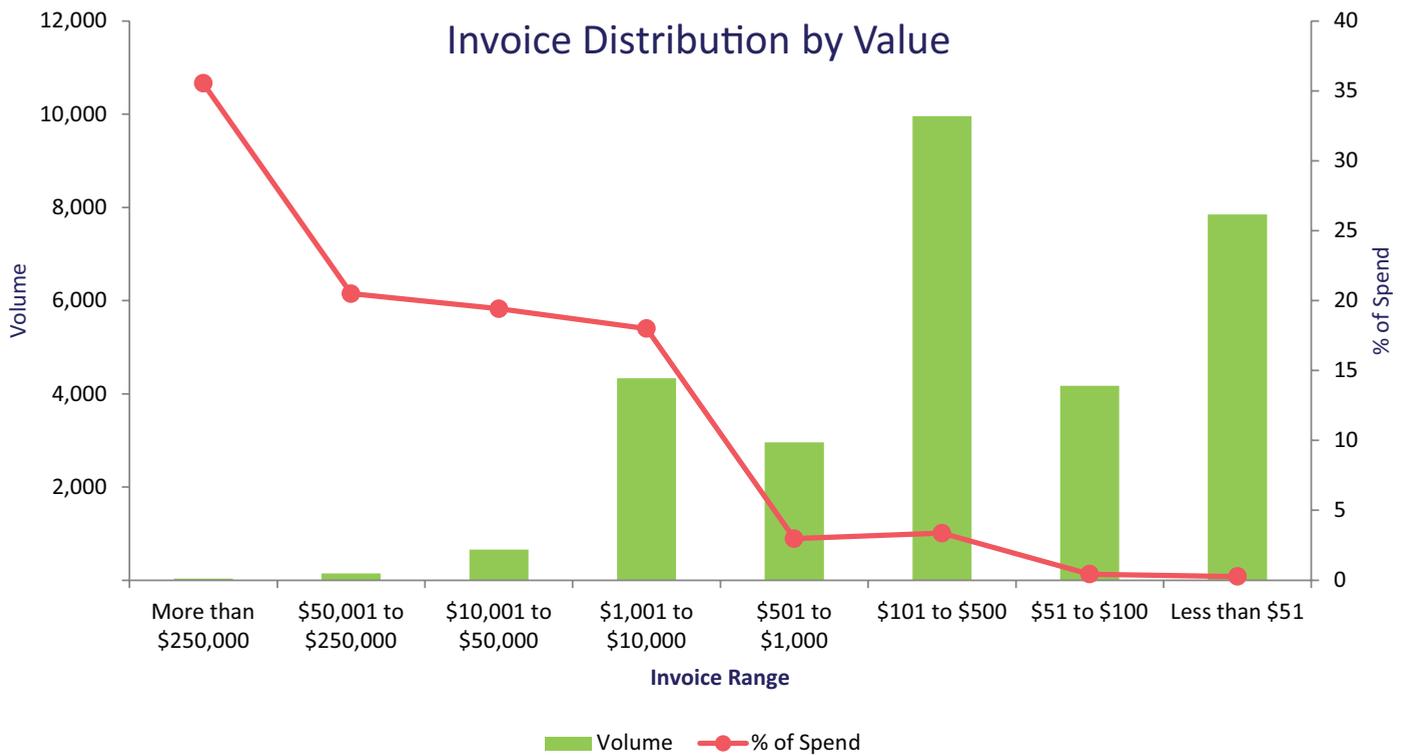
Whilst HE institutions differ in many regards, each is likely to have similar needs for certain common non-specialist products and services, such as vehicles, cleaning supplies, waste collection, furniture and stationery. This means there are considerable opportunities to save time and money by cooperation with other institutions. The chart shows that the typical HE institution has more than half of their vendors in common with other institutions. Where you are working with the same vendors as other public organizations, there is the potential to save time and money through aggregation, improved terms, and streamlined bid and contracting processes. Cooperation can be extended to other public bodies such as cities, counties and K-12 school districts where statutory regulation allows.

Spend with Common / Unique Vendors (all institutions)



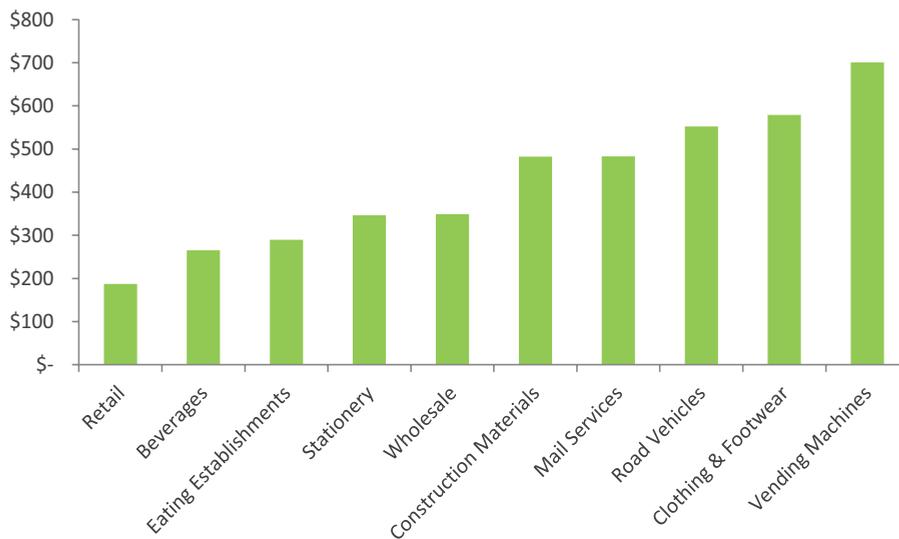
v. Invoice consolidation

The chart shows that on average, HE institutions process around 8,000 sub-\$51 invoices a year, and this figure does not include pCard transactions. If you can reduce the number of transactions that the AP and Procurement teams handle through greater use of pCards or consolidated invoicing, those people can be focussed on more strategic tasks, such as identifying further efficiencies, refining procurement policies, preparing for competitive procurement processes and negotiating contracts, all of which deliver savings in turn.

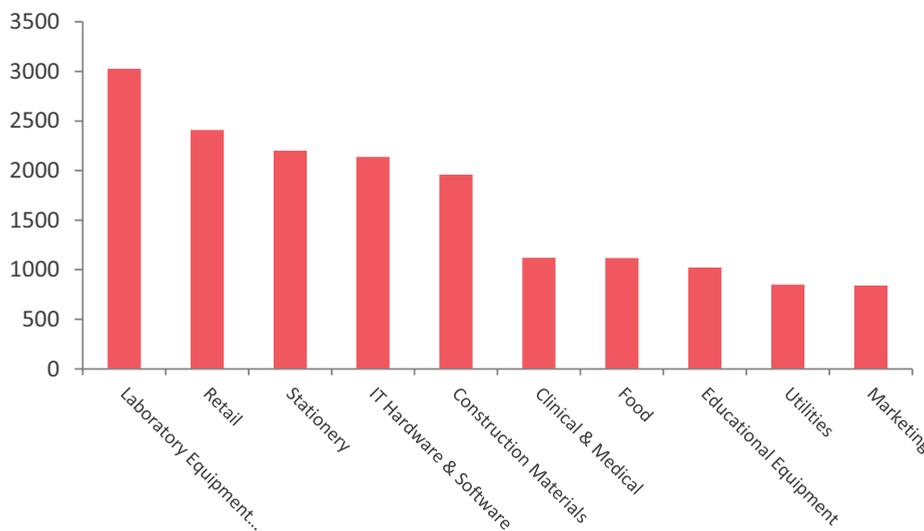


An overview of invoice value and transactions by category can again show where to focus attention on invoice consolidation. The ‘sweet spot’ for savings is where invoice values are low and transaction numbers are high. Categories that appear in both charts, such as retail, construction materials and stationery are prime candidates for attention. Analyzing transactions within categories, as well as by individual vendors, enables you to understand which product and service types are most susceptible to frequent transactions. Invoicing frequencies and procedures can be written into contracts in these areas to avoid this issue in future.

Lowest Average Invoice Value by Category



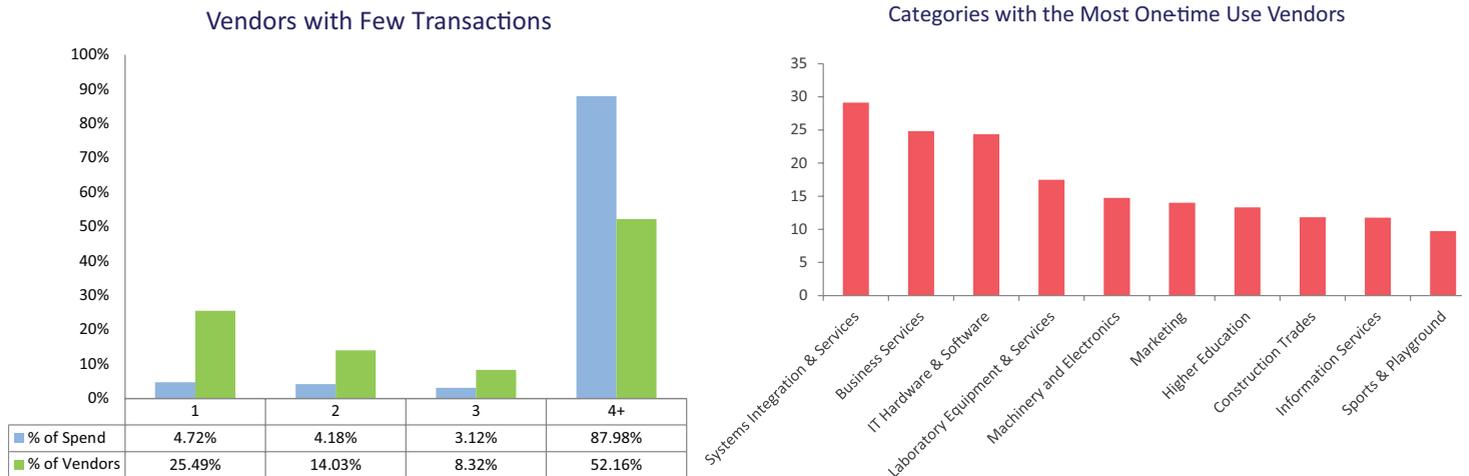
Highest Average Number of Transactions per Vendor by Category



vi. ‘Long tail’ consolidation

Vendors with whom you spend very little are usually vendors you can do without or don’t need to closely manage. If they are paid through the Accounts Payable system, those vendors represent a cost to set up and administer that is likely to be disproportionate to the value they deliver.

In particular, you can set a target to reduce one-time vendors as they create unnecessary procurement and accounts payable administration and may also be indicators of maverick spend. The chart shows that on average in the HE sector, more than a quarter of vendors are used only once per year and almost half have fewer than three transactions. Looking at one time vendors by category shows where the majority of these vendors can be found. Here, the Systems Integration & Services, Business Services and IT Hardware & Software categories are the most compelling candidates for review.



Step two summary

There are six key savings opportunities you can identify using spend analysis:

- i. **Improved terms** ✓
- ii. **Category rationalization** ✓
- iii. **Contract compliance** ✓
- iv. **Cooperation with other institutions** ✓
- v. **Invoice consolidation** ✓
- vi. **Long tail consolidation** ✓

Once you have explored these options, you are ready to move to the next step: drilling down into the vendor categories that offer the greatest savings potential.

STEP THREE: BUILDING A DETAILED CATEGORY ANALYSIS

The next stage of the process is to analyze spend by category at a more detailed level. A category management approach in procurement marks a distinct organizational change between departmental budget holders ‘going shopping’ and well-organized, planned procurement efforts which offer better value and efficiency, leveraging the institution’s buying power. As discussed in steps one and two, categories with high numbers of vendors and transactions, low levels of contracted suppliers and a high proportion of one-time vendors should be targeted for further analysis. Which categories are chosen and which projects are undertaken will be based on a number of criteria such as need to increase internal collaboration, need to deliver cash releasing savings, strategic importance to the organization, impact on staff or operations and level of risk. Alternatively, it can be pragmatic to choose the most under-managed category identified.

The top-level industry sector ‘Information Technology’ is often seen as a high priority because of the large amount of spend and its distribution across the organization. We have used the IT Hardware & Software sub-sector to illustrate how to approach a detailed category analysis.

Top 10 Sub-Sectors by Spend

Industry Sub-Sector	Avg Spend	Avg Transactions	Avg Vendors
General Contractors	\$ 9,337,978.57	127	12
Financial Services	\$ 4,926,513.01	420	12
Utilities	\$ 4,436,803.00	850	5
IT Hardware & Software	\$ 4,261,356.43	2138	79
Systems Integration & Services	\$ 3,917,934.96	447	67
Insurance Services	\$ 3,098,178.48	81	8
Construction Trades	\$ 3,066,291.22	492	45
Laboratory Equipment & Services	\$ 2,668,964.50	3027	72
General Facilities Management	\$ 2,051,517.24	407	7
Construction Consultants	\$ 1,966,808.73	146	13

Drilling down into the IT Hardware & Software Sub-Sector

First, you need an overview of spend, vendor, and transaction numbers by industry category within IT Hardware & Software. Again, you are looking for outliers. For example, in the Information Technology Spend by Category chart below, the high number of transactions within the Printers, Copiers & MFD Suppliers category stands out. Are Departments within the institution buying consumables such as printer cartridges frequently, as needed and from retail stores? If so, there may be issues with standardization and quality across the organization, as well as the likely high cost of the supplies. Additionally, printer warranties can be invalidated if the wrong consumables are used. Where you can identify these issues and work to bring them under control, you and your team will contribute not just to cost management, but also to supporting your organization’s IT strategy.

Information Technology Spend by Category

Industry Category	Vendors	Spend	Transactions
Software Developers	47	\$ 1,998,660.04	227
Computer Hardware Suppliers	13	\$ 1,987,447.15	665
Computer Systems Integrators	16	\$ 894,945.99	120
Managed & Outsourced IT Service Providers	3	\$ 864,977.81	22
Networking Service Providers	4	\$ 860,601.28	39

Breaking the category down by internal department starts to build a picture of which sub-categories offer the greatest opportunity for internal collaboration. Typically, the table shows, IT Resellers are most widely used and a coordinated approach across the institution could be more efficient and yield savings.

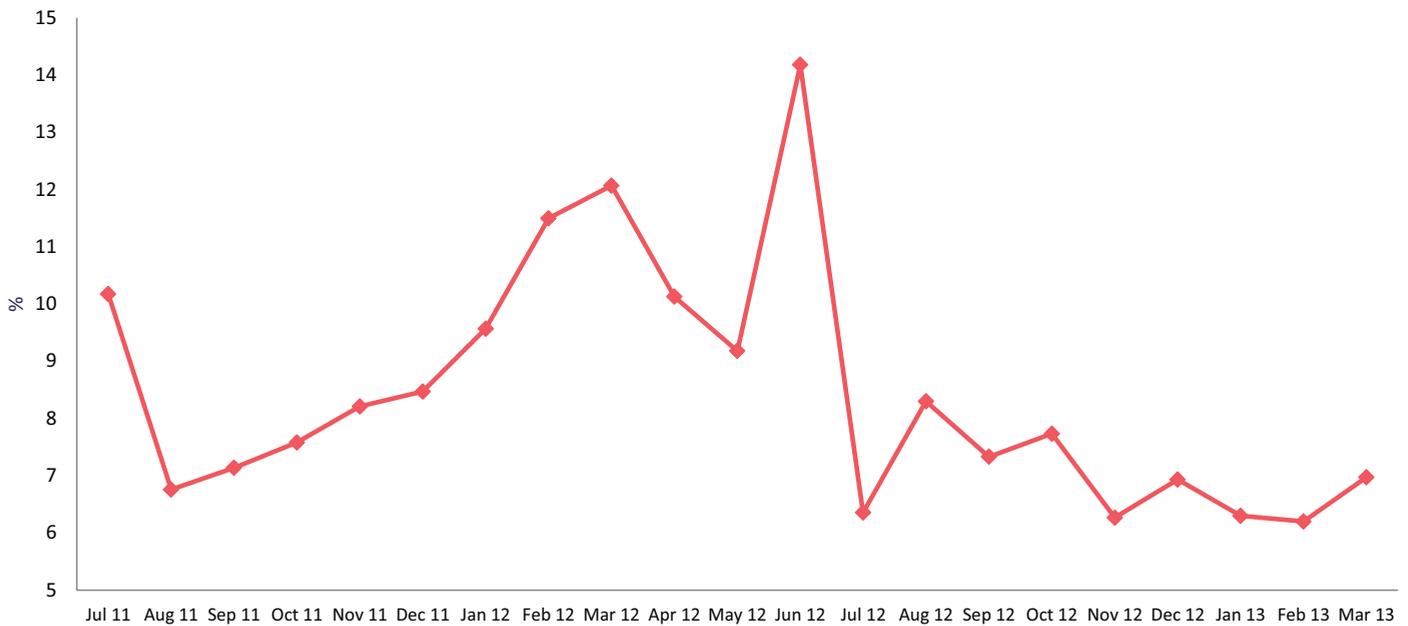
Information Technology Spend by Department

Industry Vendor Category	Departments	Total Spend	Total Transactions
IT Resellers	121	2,049,680.49	960
Software Developers	47	1,225,809.81	170
Computer Hardware Suppliers	46	886,678.14	516
Computer Systems Integrators	33	766,960.07	138
Audio & Visual Equipment Suppliers	31	203,102.13	91
Photographic Equipment Suppliers	30	138,187.74	159
Software as a Service Providers	29	793,527.23	91
Printers, Copiers & MFD Suppliers	17	495,941.91	88
Radio Communications Equipment Providers	15	365,754.21	101
Managed & Outsourced IT Service Providers	9	496,027.32	34

It is also important to track spend in the category over time to understand how the situation is developing and to see how particular phases in the life of your institution have affected spend. This is particularly important within the Information Technology Sector, where there is constant pressure to change and upgrade.

Monitoring spend under contract over time in the category can help to identify patterns and highlight reasons for non-compliance. For example, the average institution shows a dip in spend with contracted vendors at year end (typically June in HE) in 2012, which is a familiar pattern as buyers often wish to take advantage of any budget not spent earlier in the year. Bringing this year-end spending peak under contract is advantageous for budget holders too as it typically results in improved pricing, terms and standardized equipment. This is an extremely busy time for procurement teams but steps could also have been taken to ensure that where contracts are aligned with the financial year, renewals or re-bids occur on time. For example contracts could be extended on the same terms for a short period to allow for later negotiations, and to stagger large contract renewals throughout the year. This longitudinal view will also be essential moving into step five where we will look at the spend analysis data you will need to start reducing off-contract expenditure.

Monthly % Spend with Contracted Vendors



Step three summary

With access to detailed information on spend by category, you'll be able to determine priorities and allocate resources to deliver the highest return on investment for the level of effort involved in conducting the spend analysis.

- Spend within sub-categories** ✓
- Spend by department** ✓
- Spend on pCards** ✓
- Summary spend over time** ✓
- Spend under contract over time** ✓

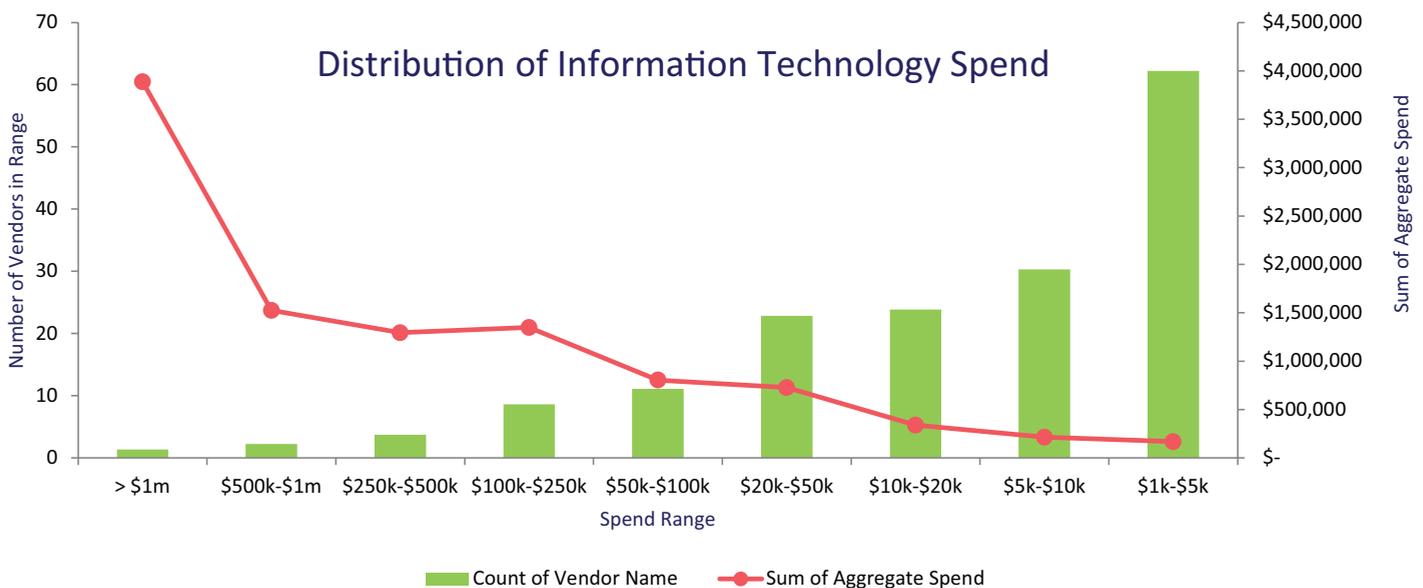
The next step is to gather the data you will need to improve your proportion of spend under contract.

STEP FOUR: PREPARE FOR THE CONTRACTING PROCESS

This step demonstrates how spend analysis can help you prepare for the contracting process by having a thorough understanding of spend in a specific category (we have chosen IT Hardware & Software again). This includes knowing which stakeholders need to be engaged, and whether there is the opportunity to cooperate on contracts owned by other organizations.

Distribution of spend in the category

Firstly, how is the spend spread across vendors used in the last year? It appears that there is a reasonable amount of one off, low dollar spending going on in this category which might present an opportunity for consolidation into contracts. Bringing spend under contract delivers savings through improved prices and terms and process efficiencies and reduces risk through standardizing products and services and assuring quality.



The next task is to drill down to the more detailed category level, and to look for opportunities for internal collaboration. In this typical example, there are 121 departments using IT Resellers, so there is potential for departments to work together to reduce the number of vendors and transactions in this category. Departments may not know which vendors are being used elsewhere in the organization and whilst individual end-users may wish to retain the freedom to choose their own suppliers, they are also likely to want to maximize their departmental budgets. Effective engagement with stakeholders will be key in driving these efficiencies.

Information Technology Spend

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Printers, Copiers & MFD Suppliers	17	495,941.91	88
Radio Communications Equipment Providers	15	365,754.21	101
Managed & Outsourced IT Service Providers	9	496,027.32	34

Engaging with stakeholders

To bring spend under contract and foster a culture of collaborative purchasing, you need to engage with departmental buyers throughout your organization. Your procurement specification will need to consider who has recently bought in the category, their service needs, and their preference for a particular vendor. The more you engage stakeholders and cover their requirements in the preparation phase, the more you will increase use of contracted vendors and reduce maverick buying. The chart below shows the breakdown of spend by department within a typical HE institution. In this case, the obvious choice is the Facilities and Operations department because they use 47 different vendors in the same category, but it is also worth engaging with the College of Engineering and School of Medicine too. The long term goal is to increase compliance throughout your organization; this analysis shows where to start.

Department Spend in Information Technology

Department Name	Total Spend	Vendors	Transactions
Network Services	\$ 669,185.14	17	77
College of Engineering	\$ 540,200.79	18	166
Career Services	\$ 519,011.78	5	23
Electronic Learning	\$ 449,006.26	2	46
College of Science	\$ 383,168.30	4	9
Facilities and Operations	\$ 324,777.94	47	845
School of Medicine	\$ 299,517.10	13	108
Graduate Program	\$ 279,040.63	12	40
College of Business	\$ 275,247.80	5	45
University Police	\$ 268,417.74	6	27

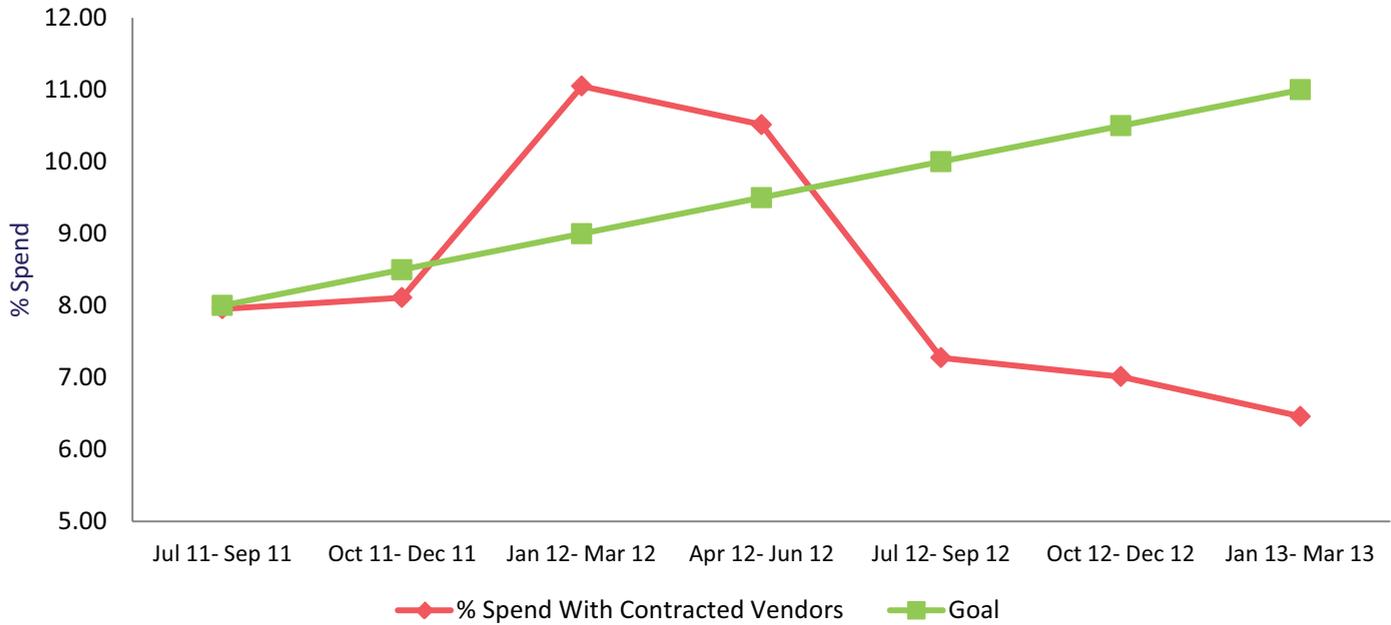
Current contracting situation

You also need to understand what contracts are already in place and when they are due to expire. Is there a short, medium or long term opportunity to consolidate spend with contracted vendors, leading to a higher discount? Are there any contracts that have recently expired that have caused the organization to become non-compliant with their own procurement regulations? Are there any opportunities to piggy-back on collaborative contracts which might save time, effort and money?

Vendor Name	Contract Owner	Description	Assumed Expiry Date	Industry Vendor Category
AT&T	Local Contract	Wireless Phone Handsets and Service	11/29/2013	Fixed Telecommunications Service Suppliers
DELL	Cooperative	Computer Equipment, Software, Peripherals, and Related Services	04/30/2016	Computer Hardware Suppliers
GovConnection Inc	Local Contract	Computer Equipment, Software, Peripherals and Service	12/15/2016	IT Resellers
Hewlett Packard Govt.	Local Contract	Computer Equipment, Software, Peripherals and Service	06/29/2016	Computer Hardware Suppliers
UNISYS Corporation	Local Contract	Data Center Hosting Support Services	06/29/2016	Managed & Outsourced IT Service Providers
Xerox Corp	Cooperative	Digital Imaging Products, Accessories, Suppliers, and Services	11/29/2013	Printers, Copiers & MFD Suppliers

The final task in step four is to revisit current spend with contracted vendors in the category. Here you can set an aspirational target of the proportion of spend to bring under contract. This goal will need to be monitored over time, which takes us into step five of the spend analysis process where we look at how to monitor your progress.

Quarterly Spend With Contracted Vendors



Step four summary

Access to the right data will make bringing more spend under contract easy and efficient.

- Distribution of spend in the category** ✓
- Spend by number of departments** ✓
- Transactions by department** ✓
- Current contract situation** ✓
- Spend under contract over time** ✓

The next step is to monitor progress towards savings goals over time.

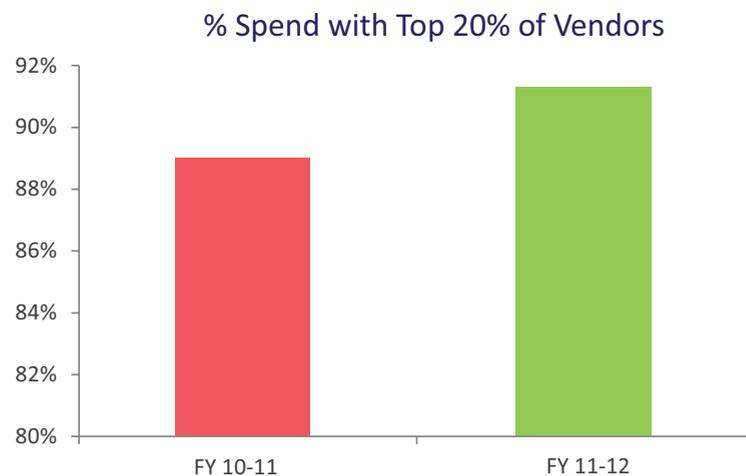
STEP FIVE: MONITORING PROGRESS

Almost as important as identifying and delivering savings for your institution is tracking how your efforts are paying off. Monitoring your progress enables you to fine-tune your savings and efficiency projects to keep them on track and to measure your achievements.

Year-on-year summary

Procurement professionals within the HE sector are under continual pressure to look for savings and this data shows that teams within the HE institutions whose data was used in this white paper are working hard to be more efficient whilst managing increased institutional expenditure. These summary statistics show that whilst spend has increased year-on-year, vendors have been reduced, spend per vendor has increased, and expenditure has been further concentrated within the top 20% of vendors. Despite these successes, transaction volumes have increased, so this could be a focus for efficiencies in the coming year.

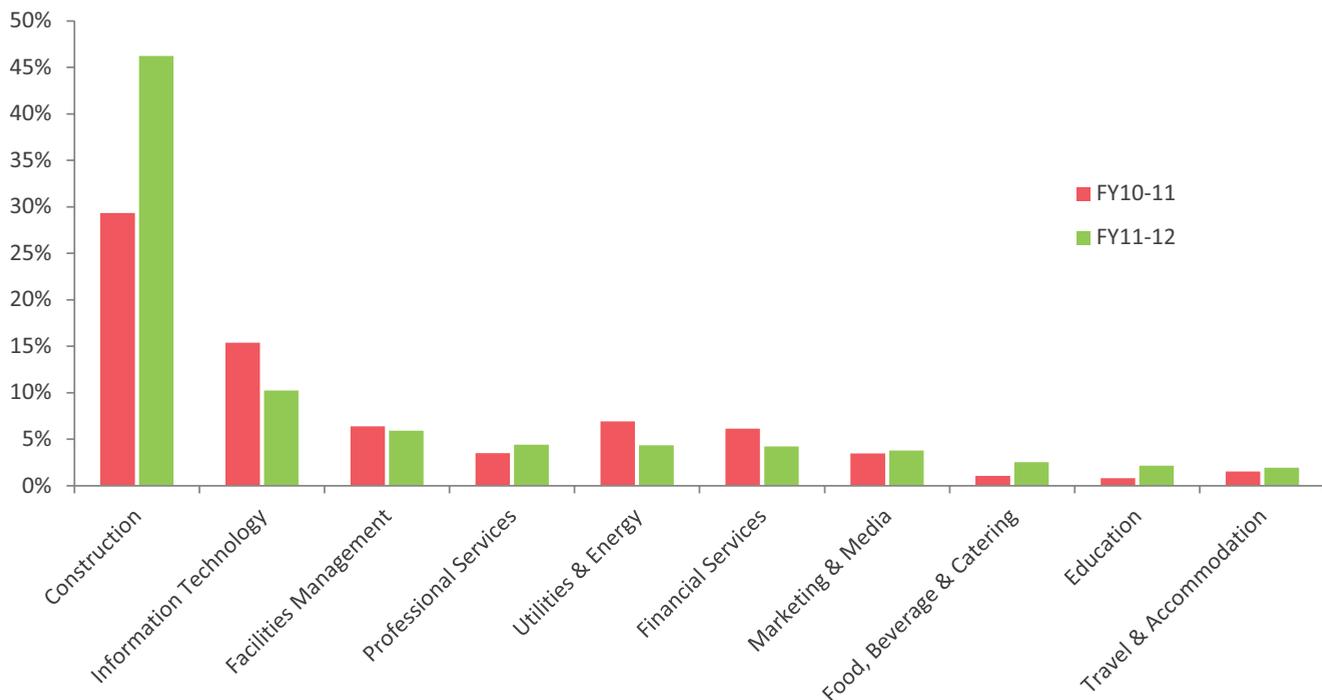
	FY 10-11	FY 11-12
Spend of Goods & Services	\$ 51,108,687.44	\$ 77,382,184.57
Number of Vendors	1235	1151
Number of Invoices	25794	29335
Average Spend per Vendor	\$ 41,383.55	\$ 67,230.39
Average Invoice per Vendor	\$ 1,981.42	\$ 2,637.88



Top spend categories over time

Large year-on-year differences in spend across categories, for example in Construction and Information Technology, could be evidence of efficiencies implemented, lack of control over spending, particularly in categories where spend is widely distributed across the organization, or simply that budgets have increased as the economy recovered. Again, the category view gives you a focus for your investigations and drilling down into sub-categories will allow you to uncover more specific areas of concern.

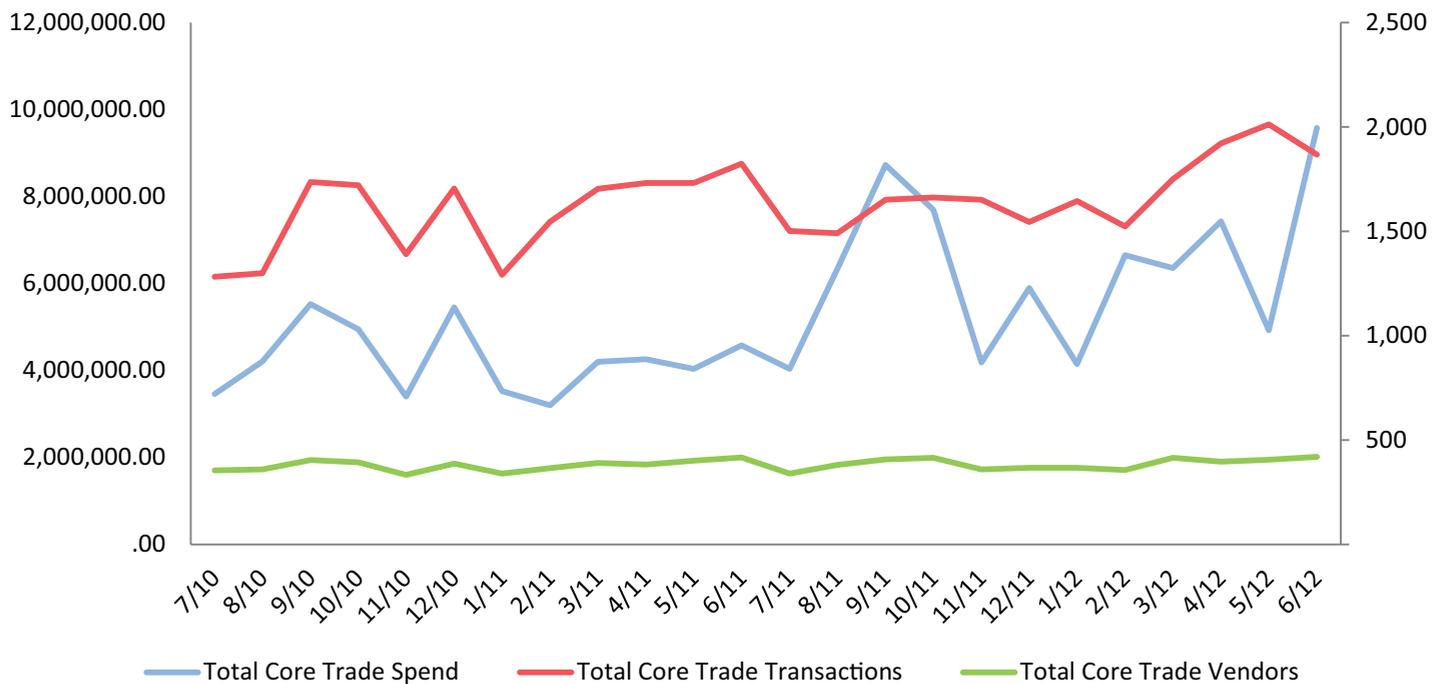
% Spend in Top Categories



Monthly spending pattern

Does the pattern of spend over time show any trends? Looking at this information by category or department will highlight specific areas where there may need to be more control. For example, in 2011, there was a sharp increase in spend between July and August which is early in the new financial year (typically July-June), suggesting that perhaps 2010 budgets were constrained and purchases were delayed. In 2012 the picture is different as the sharp increase occurs between May and June, suggesting that there is a rush to spend surplus budgets. This can be problematic as this type of spending is not likely to comply with organizational policies, and also gives a skewed picture of budgetary requirements. Access to accurate monthly data will enable you to predict where problems may occur and to spread spend more evenly across the year, avoiding uncontrolled year-end spending and reducing pressure on the finance and procurement teams.

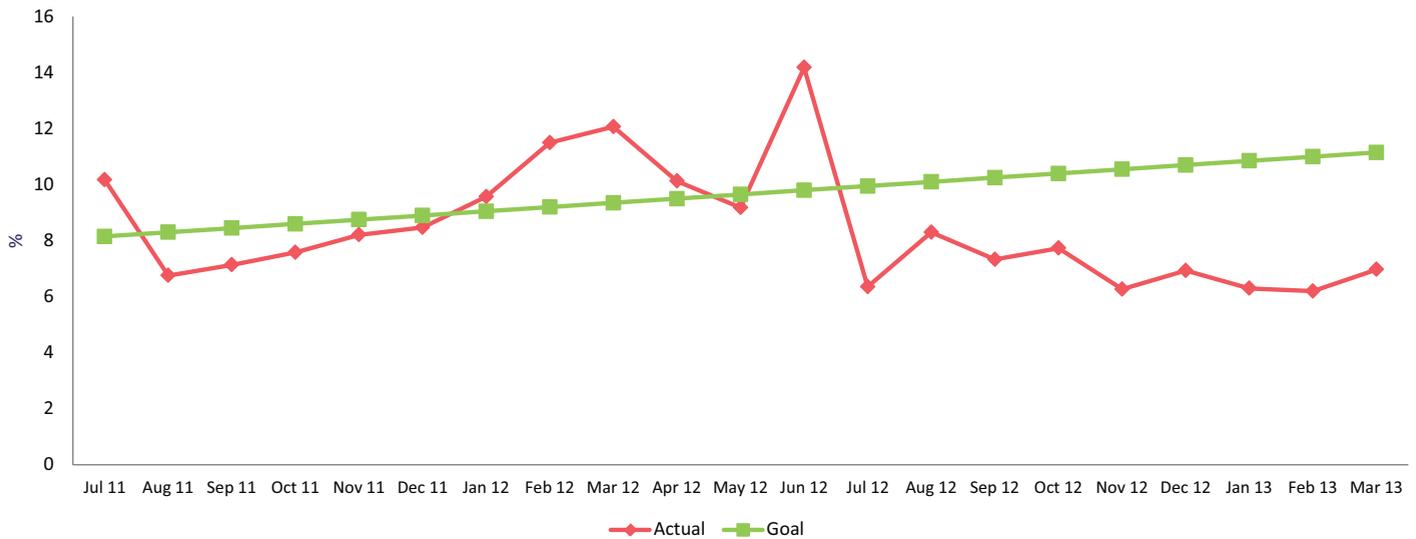
Monthly Spend Pattern



Contracted spend and contracts falling due

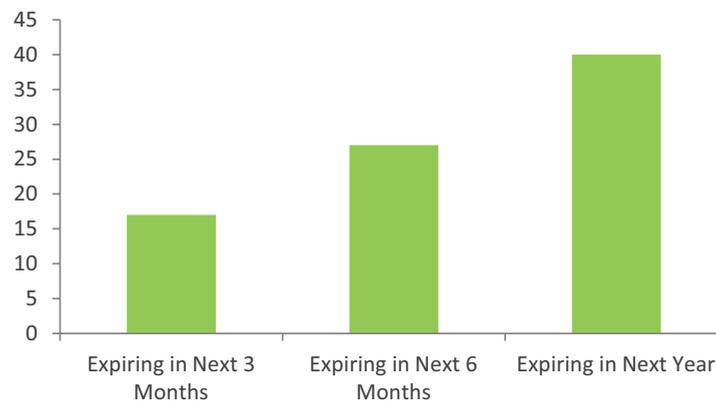
Tracking contracted spend as part of the organization’s monthly or quarterly Key Performance Indicators (KPIs) provides evidence of whether buying is increasing with contracted vendors over time. Having the evidence of performance against an aspirational target makes this visible to all heads of department who can influence buying behavior in their departments. Again, stakeholder engagement is key, and evidence of budgetary savings through spend under contract will be important in gaining buy-in from across your organization.

% Monthly Spend With Contracted Vendors



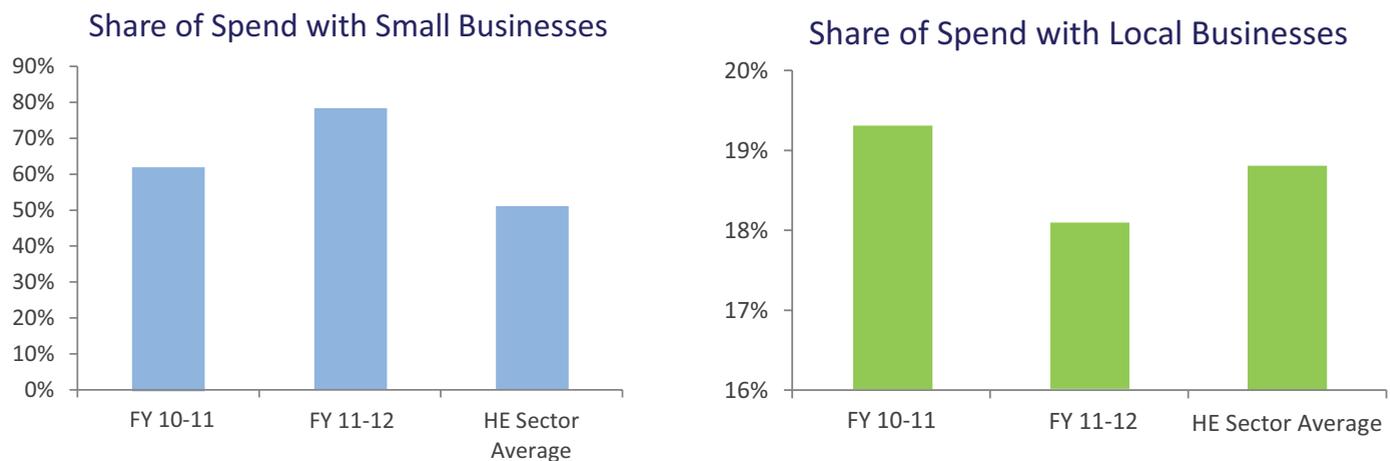
Knowing which contracts are due to expire in the next 3 to 6 months is critical in meeting goals for contracted spend and helps with procurement resource planning, ensuring that contracts that fall due are renewed, renegotiated or re-competed in a timely fashion.

Contracts Due to Expire



Small and local businesses

Finally, monitoring the progress of local, small or medium-sized, minority or sustainable business preference initiatives ensures you are moving in the right direction and provides evidence, especially where there is a statutory requirement or institutional mandate in place. There is a balance to be struck between supporting (and being seen to support) these types of businesses, and the costs of doing so. Benchmarking against industry norms helps with setting goals and demonstrating your organization’s performance. The example HE institution shown has increased its share with small businesses year-on-year, to a level above the HE sector average, but at the same time, has reduced spend with local businesses. This highlights that there is no ‘correct’ proportion of spend but that having the right information will enable you to set a proportion that is right for your particular institution and track changes over time.



With monitoring data in place you are ready to move to the sixth step: recording and reporting the savings that you and your team have delivered.

Step five summary

Having the right data to monitor progress over time ensures you meet your savings objectives.

- Year-on-year summary ✓
- Top spend categories over time ✓
- Monthly spend pattern ✓
- Contracted spend and contracts falling due ✓
- Small and local businesses ✓

The next step is to monitor progress towards savings goals over time.

STEP SIX: RECORDING AND REPORTING SAVINGS DELIVERED

The final, critical step is to record and report your savings. Reporting savings provides evidence of the return on investment that effective procurement has delivered. Being able to present this evidence to senior managers in universally understood 'dollars and cents' language, means that your department is more likely to get the resources it needs to operate most efficiently in the future.

The key to producing clear and credible reports is to capture detailed information whilst savings projects are underway. Savings may take the form of reduced expenditure or improved processes that reduce overheads. Some savings may not be obvious in financial terms, nevertheless they do have a worth and, where possible, a financial value should be attributed to that worth and included. The simplest way to determine if a saving should be recorded is to ask:

What would have happened had the procurement team not been involved in the purchasing process?

There is no definitive way of calculating savings and efficiencies; individual procurement teams are best placed to know what is appropriate for their particular institution. Step six shows some of the most commonly used methods of recording and reporting savings in the HE sector.

One of the best ways of thinking about how to record savings is to look at the savings projects you have identified and implemented as a result of steps one to five.

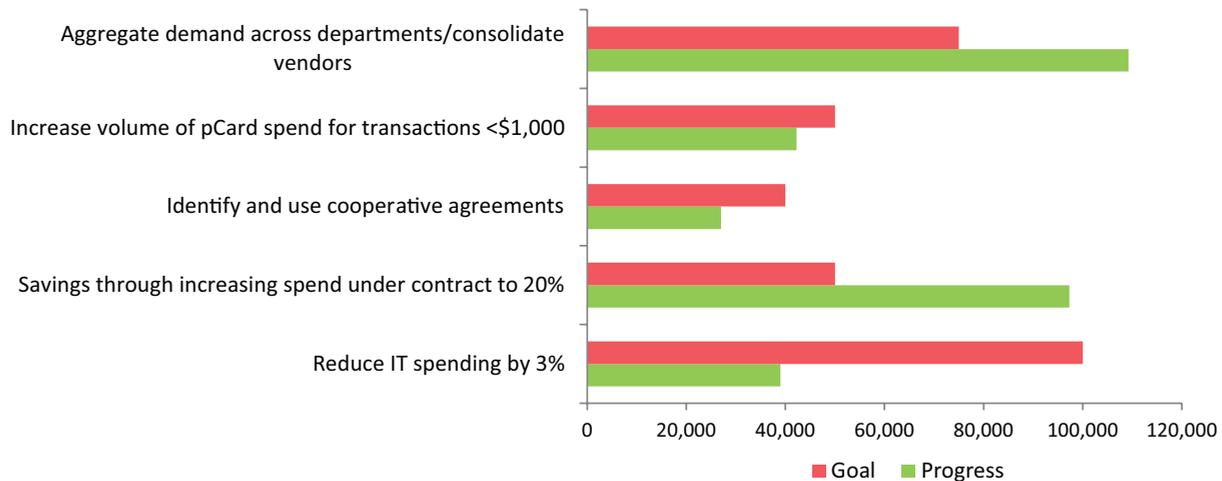
Savings by objective

Once you have identified the areas you consider to offer the most easily recognized savings opportunities you can set specific goals and work with your team to implement savings projects; tracking your progress allows you to adjust your efforts as required. A chart of performance against a goal is a powerful way of communicating to senior management and ensuring that your team’s contribution is recognized.

The chart shows goals that have been set by our typical institution, as a result of following the processes outlined in this white paper. Knowing the categories and departments in which there is a ‘long tail’ of vendors allows a realistic target to be set for consolidation and for the procurement team to set up a project to review specific vendors and engage with departments. A target for savings through the efficiencies of pCards or for spend under contract can be communicated to all end-users to reinforce the need for compliance.

Where goals have been exceeded, such as in aggregating demand, this may indicate that this is a goal that is relatively easy to achieve and a more aggressive goal can be set for the following year. Where progress is slow, such as in reducing IT spend, more analysis may be required. Is there resistance from end-users, have there been extraordinary requirements for investment, was the goal unrealistic and should more effort be applied?

Savings by Objective



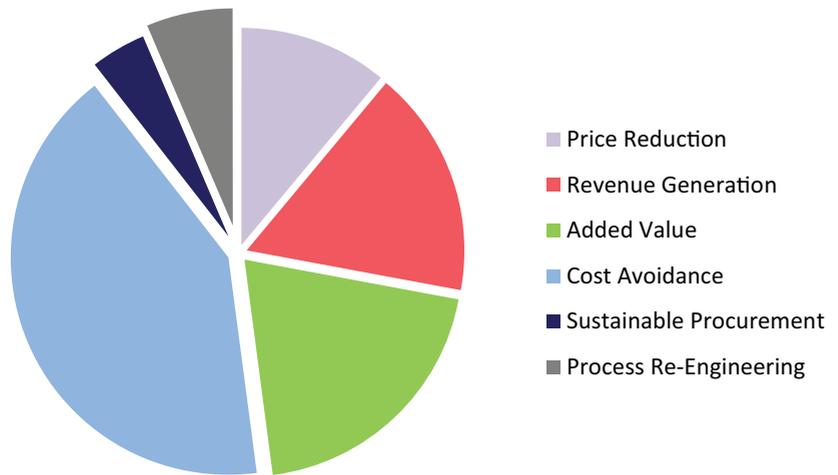
Savings by how they were achieved

Another useful way of reporting is to classify savings by how they were achieved.

Added value typically includes services that were previously direct costs and are now included in the price of the contract. For example, a vendor agrees to train additional staff, at no extra cost. Added value efficiencies can be either cash-releasing (i.e. negotiating an extra year’s warranty means that you don’t have to pay an annual maintenance charge in year 2) or non-cash releasing (i.e. the training of an additional member of staff or two for “free” provides the organization with additional expertise).

Cost avoidance, as the name suggests, is where some sort of cost has not been paid. This could be financial (i.e. by negotiating an extension to current prices when increases are announced) or in resource terms (i.e. the use of cooperative arrangements mean your organization “avoids” the time and work involved in completing a bidding or contracting exercise). Cost avoidance efficiencies can be either cash releasing (an expected price increase is delayed) or non-cash releasing (reflecting the opportunity costs of time saved from having to do a bidding/contracting exercise).

Savings by how they were achieved



Price reduction is also self-explanatory, although there are some challenges in determining what the price would have been had the procurement team not been involved in the purchase. If the quotation is to renew a previous contract, the saving is simple to compute if a reasonably similar specification continues to apply. If the bid is for a new contract with no prior history, it may be fitting to take the difference between the price paid and the published list or general market price. In such cases, the value recorded should be realistic and not an inflated theoretical list price that was then heavily discounted.

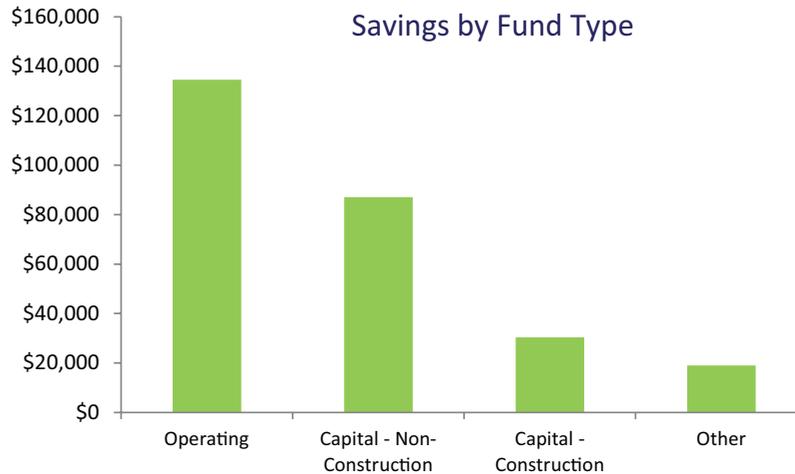
Sustainability is often thought of as recycling and reducing consumption and waste, but can encompass broader environmental, economic and social issues. Where changing goods, services or processes improves the working environment and reduces workloads and stress levels, this can also be considered as sustainability. A reduction in waste results in a reduction in disposal and landfill costs, and in an intangible benefit to the institution in terms of reputation. The challenge here is to be able to allocate a realistic monetary amount to sustainability. It could be that this environmental approach is used to help attract new students or qualify the organization for additional grant funds, and so a value should be assigned to these benefits and recorded where possible.

Process re-engineering captures the benefits of changes to procedures and working practices. In particular, initiatives that free staff from repetitive and time-consuming tasks will have a direct impact on organizational costs while often improving services to end-users.

Revenue can be generated in some cases when the institution receives fees, rebates or grant funding or sells surplus property, providing funds to spend on additional goods and services. Revenue may be a negotiated fixed sum over a specific period, or be based on a variable factor such as a rebate on procurement card transactions.

Savings by budget

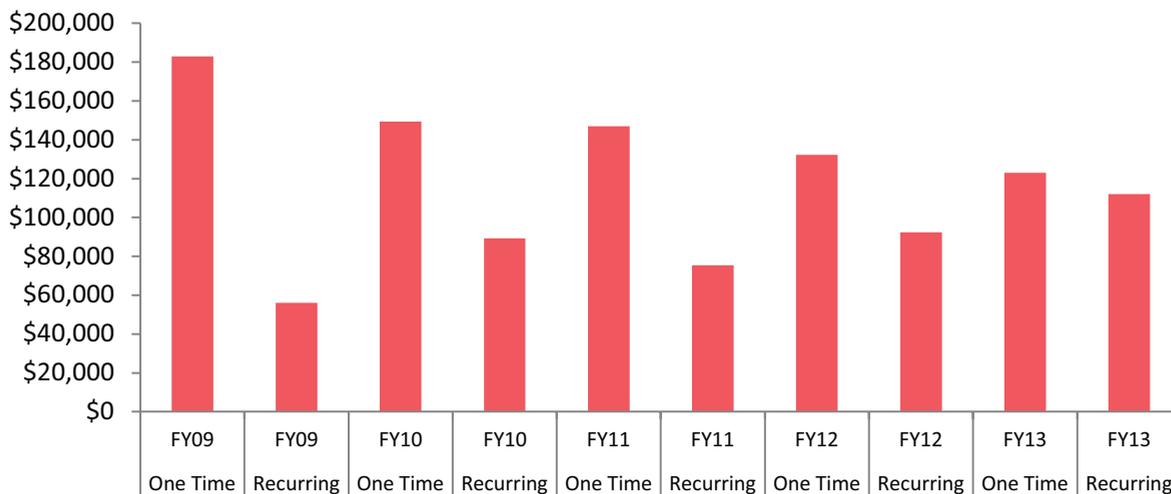
It can also be useful for senior management to see whether operational or capital budgets have benefited most from savings as, viewed in the context of wider organizational strategy, this will have an impact on financial planning and budget setting.



Savings by recurrence

Are the savings being generated repeatable or are they mainly on one-off purchases? It may be that one-off savings (such as a price reduction on a capital item) are much easier to accomplish in the short term, and that recurring savings (such as reductions over a two year period in fuel prices) are more difficult, but actually lead to a greater value of savings over time. The effort and resource involved in attaining recurring savings needs to be weighed against the value of the saving over time.

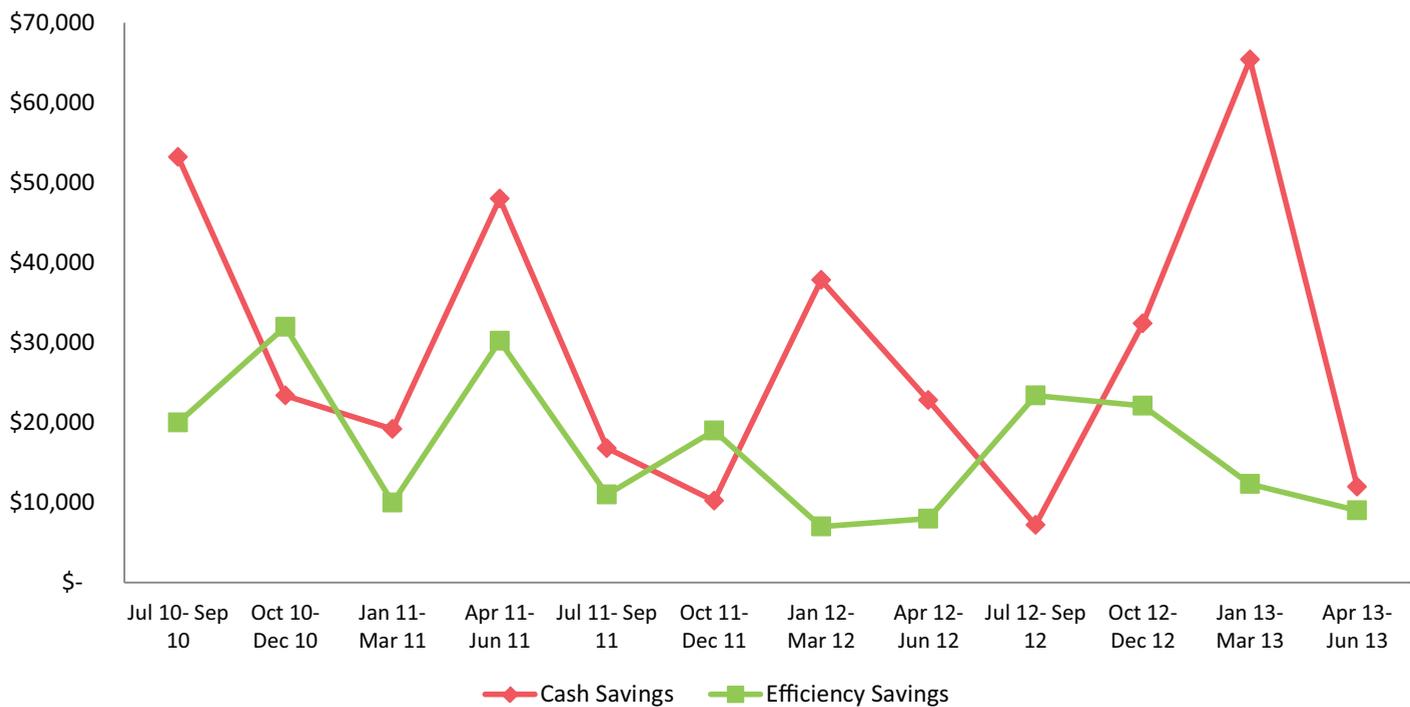
Savings by Recurrence



Total quarterly savings

In many cases, the procurement function simply wants to be able to put an overall dollar figure on the amount saved and to show that information over time. This is likely to be the key chart that you will share with senior management on a regular basis, to demonstrate the efficiency and effectiveness of your team. Again here, there is no right or wrong way of calculating this figure, but taking a consistent approach will allow you to benchmark against your own performance. As discussed above, a useful way of thinking about savings is to distinguish between those that release cash for use elsewhere and those that derive from operational efficiencies.

Total Quarterly Savings



Savings project reports

Last but certainly not least, when savings figures are reported they are often questioned. Recording savings in a consistent and robust fashion automatically creates the audit trail, should you or your team be challenged to back up the savings figures presented with real examples. Consistency is key; being able to allocate savings to the correct budget, vendor category, and internal savings objective will be crucial in enabling you to demonstrate how savings have been achieved.

<i>Project Reference</i>	123 Sample Road
<i>Project Title</i>	Training Facility - Fit Out
<i>Total Actual Gain</i>	\$14,500.00
<i>Total # Efficiencies</i>	4
<i>Contracting Authority</i>	My Organization
<i>Department</i>	Facilities
<i>Project Type</i>	Capital - Non-Construction
<i>Project Category</i>	Furnishings and Related Services
<i>Source of Funds</i>	My Organization
<i>High Level Objective</i>	Providing Value
<i>Internal Objective</i>	Savings through increasing spend under contract to 20%
<i>Project Start Date</i>	02/15/2013
<i>Project End Date</i>	05/30/2013

Step six summary

Reporting savings provides evidence of the return on investment that effective procurement has delivered. Key reports include:

Savings by objective	✓
Savings by how achieved	✓
Savings by budget	✓
Savings by recurrence	✓
Total quarterly savings	✓
Savings project reports	✓

By identifying, implementing and reporting savings projects to senior management, procurement professionals in HE demonstrate the value of their contribution, not just to the administrative workload, but to the strategy of the institution as a whole.

CONCLUSION

This Benchmarking Spend Analytics and Procurement Savings report brings together NAEP's and Spikes Cavell's expertise and many years of experience in helping HE institutions to manage spend and improve operational efficiency.

By following the six steps you will be able to:

1. Understand your expenditure
2. Identify opportunities for savings
3. Build a detailed category analysis
4. Prepare for the contracting process
5. Monitor progress
6. Record and report savings delivered

Some of the examples and ideas may not be appropriate in your institution, some you may already be using, but we hope that others are new to you and will have inspired you to further the use of spend analysis, deliver savings and enhance the reputation of the procurement function throughout your organization.



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