IT procurement goes big time

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Now that roughly half of the IT budget goes to vendors of hardware, software, telecommunications and services, CIOs and other IT decision-makers should ask how they can leverage this vast ongoing expenditure to meet their most pressing objectives: cutting costs, improving service, reducing complexity, and lowering risk. With so much of the IT budget going to external suppliers, IT procurement emerges as the key lever for implementing IT strategy.

IT procurement can be the active force behind the execution of today's IT strategy

With the rapid proliferation of technologies and the speed with which the enterprise has embraced them, the IT organisation has reached a watershed of sorts. IT now spends more on its vendors than it does on its own people, and the products and services it buys are more significant than those it develops in-house. This shift has brought new challenges for IT decision-makers. In order to implement their IT strategy, they must influence the procurement of products and services by people outside of their direct control. Frequently, technology procurement occurs wherever and however a project need (or departmental whim) expresses itself, resulting in a diffuse and fragmented IT portfolio that is often in conflict with the architecture and technology required by IT strategy (not to mention the financial leverage lost in the process).

By contrast, a holistic approach to planning, sourcing, selecting, contracting and managing IT products, services and vendors delivers a portfolio-based IT strategy along with the goods and services that embody it. Moreover, by harnessing procurement as a strategic tool, CIOs and other IT decision makers gain influence as well as a more effective architecture and delivery capability.

It makes financial sense as well. When the entire IT portfolio is viewed as a whole, many vendors are exposed as superfluous and can be asked to leave the building. Those that remain can be offered a better place at the table in exchange for cost and service concessions.

IT procurement leadership can only come from the vantage point of the CIO

IT procurement is often embedded within many more visible processes, such as business change programmes, individual projects and financial budgets. Large (and infrequent) procurement transactions such as data centre or business process outsourcing engage senior executives, but little, if any, senior management attention goes on smaller transactions – and if it does, it is focused on the necessity and efficacy of the individual purchase.

But when IT procurement is aggregated and the IT portfolio seen as an asset to be optimised, enterprise architecture and vendor leverage can be realised. IT portfolio management operates just like financial portfolio management: it establishes sound procurement strategy that responds to business decisions.

Holistic IT procurement involves, at least, the technology, application and vendor portfolios. The complex relationships between vendors and what we buy from them impact architecture, IT portfolios and ROI. Viewing the vendors horizontally across all procurements and throughout their lifecycles provides opportunities for leverage, improved governance, and reduced risk and architectural complexity.

Only the CIO has the necessary perspective, and the authority to implement holistic IT procurement. Realistically, this will happen in stages. Our research has revealed five stages in IT procurement management, each adding capabilities that progressively increase the chances of good IT procurement decisions.

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FIVE STAGES OF IT PROCUREMENT MANAGEMENT

Stage One: Buying

IT buying decisions are distributed throughout the enterprise, often driven by local needs and projects and influenced by locally favoured vendors. Employees get the technology they want, but it is not aligned with evolving IT strategy and architecture, and enterprise-wide buying power cannot be leveraged. CIOs recommend products rather than manage portfolios.

Stage Two: Procurement

There is an IT procurement process with a full cycle of planning, buying, negotiating, vendor selection and contracting. Asset management systems may track hardware and software assets, but while supporting individual decisions on rationalisation, retirement and replacement, they provide no leveraging perspective. Assessments help to select appropriate technology, but not to recognise longer-term architectural and cost issues and to consider the full extent of the enterprise's dealings with each vendor. Furthermore, IT procurement continues to be executed by individual business units. There is no enterprise-wide consolidation. E-procurement, while well intentioned and highly promising, managed in its initial implementation to automate procurement processes, but likewise ignored broader inter-portfolio issues.

Stage Three: Vendor Management

IT procurement starts to address overall expenditure with each vendor, the patterns of spending across vendors, and how consolidation of buying could reduce costs and extract additional services. Vendors are targeted for cost savings and performance improvements. The CIO assesses each vendor to understand the alignment of its products and services with IT strategy, and focuses on strategic relationships.

Stage Four: Portfolio Management

Harry M. Markowitz invented portfolio management in the 1950s and shared a Nobel memorial prize for it in 1990 with William F. Sharpe and Merton H. Miller. (See Portfolio Selection, *The Journal of Finance, Vol VII, No. 1,* March 1952). His Modern Portfolio Theory is the most rigorous form of portfolio management, using a set of specific mathematical equations for measuring risk versus return, quantifying the decision-making process and determining value. In its extended form portfolio management embraces programme and project endeavours, vendor and IT portfolios, as well as human and information resources. (Many popular references refer only to project portfolio management.) It extends scrutiny to planned investments, and connection with business needs, priorities, goals and imperatives, allowing balanced judgements to be made about where to spend. Effective portfolio management guides investment decisions, for example ensuring they are not dominated by non-discretionary elements. It exposes IT procurement opportunities to rationalise, commoditise, and simplify technology, application and vendor portfolios. It also encourages the removal of obsolete and obsolescent components that inhibit agility.

Stage Five: IT-Business Supply Chain

IT procurement is constantly realigned with changing business process needs. The CIO is ahead of or leading the effort to enable business change. This stage is exemplified by an emerging best practice, business technology management (see, for example, www.enamics.com/home/), which links business units, processes, applications and technology to support scenario planning as well as manage enterprise-wide capabilities and intentions. Mature IT procurement management prioritises vendors on the basis of their technologies' contribution to improving business processes.

Moving IT procurement practices forward is not easy. Project goals and expediencies constantly challenge broader-based initiatives. There is resistance to the matrix-management complexities introduced by holistic procurement. Rationalising vendor selection in terms of the entire vendor portfolio may be seen as needlessly bureaucratic.

Overcome these barriers by educating IT and user management, as well as buyers, on the need for broader considerations and approaches, and on portfolio management and post-purchase issues in particular. Enhance project management methodologies to address the broader issues, supplementing projects with standardised procurement and vendor management activities.

Drive the IT portfolio towards commoditised products and services

While portfolio management is the key to effective procurement, commoditisation is the key to economic IT procurement. It also reduces risk due to vendor vagaries.

True commoditisation means products or services from different sources can be fully substituted for each other. IT products and services are rarely true commodities, so IT organisations must understand the extent to which commoditisation is available and exploit what there is. They must apply the concept broadly and push its edges as best they can. Commoditisation should drive the design of IT solutions.

IT commoditisation depends on total cost of ownership

IT products and services are increasingly viewed as commodities, encouraged by the adoption of standards and the 'Open' movement as well as advances in supply-market mechanisms, opportunistic 'spot' sourcing, reverse auctions and process automation. The rapid development of service offerings from web-based suppliers is expanding the concept to IT architectures and services.

Success in pursuing and exploiting commoditisation depends on the extent to which IT organisations understand and manage TCO (total cost of ownership). Post-purchase consequences and costs vary significantly. The more products and services become self-serviced and self-supporting, the closer they are to true commodities.

Yet many IT procurements represent just the reverse – the greater proportion of the lifetime cost occurs post purchase. There is significant downstream support cost, and TCO factors are unlikely to be profoundly understood. Profound knowledge requires no more than one or two main suppliers; significant efforts to understand the quality, reliability and TCO of their products; and taking advantage of the vendors' own maintenance knowledge. (W. Edwards Deming, the renowned quality guru, was tireless in pushing 'profound' knowledge – understanding variability in order to manage well, particularly as it applied to raw materials.)

Commoditisation is affecting architectures and applications

Commoditisation should be a strategic intent that reaches widely across enterprises, guiding business and IT process design, architecture and technology choices, and application acquisition and development choices. IT needs to ring-fence the unique components of systems solutions, while driving architectures towards commoditised products and services. This maximises the commodity potential by not allowing generic solutions to be muddied by unique requirements. The increasing adoption of design 'patterns', both at architectural and program levels, is another form of commoditisation – in this case of skills, as well as of solutions.

Most enterprises have significant legacy portfolios of unique technology solutions, and package procurements have not reversed this pattern. Dealing with legacy has been a subject of past research (see CSC's Research Services Foundation report

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Strategies for Dealing with Legacy Systems), and those principles remain relevant today. Translating applications into XML form is a recent example of opening up architectures in a commoditised manner, and paves the way to easier exploitation of others', and future, product offerings.

IT service commodities – the utilities of the future

Service-based procurement is likely to account for more than 50 percent of IT external expenditure within five to seven years. IT services are becoming the utilities of the future – much as electricity utilities replaced 'departments of electrification' in early 20th century companies.

Most enterprises have to strengthen, standardise and master their service procurement processes. Mature procurement focuses on the quality not quantity of service level agreements (SLAs); on expectation and value management; on understanding and sharing knowledge about the drivers of cost, especially where they originate with the buyers; and on exploring – during the negotiating process – how the service, and improvements to it, will be delivered.

IT should focus on value-creating procurements

In many enterprises IT procurement is viewed as a technically demanding activity requiring IT ownership and execution. However, enterprises are waking up to the scale of IT procurement, and the need to engage corporate procurement, legal and finance functions, to exploit such skills as negotiation and vendor evaluation to reduce sourcing risk and increase value added. Involving corporate procurement in IT also offers opportunities to rectify past failings: the fragmentation of IT procurement with the consequent loss of overall buying power, and variable procurement practice. These multi-disciplinary developments make sense, whoever owns or drives the processes.

What we buy determines how we buy

The processes used to procure IT products and services need to match the extent to which they are commodities: the more commoditised products and services can be procured through efficient corporate procurement channels, while IT focuses its procurement energies on strategic initiatives and the value-creating buys.

Commoditisation at one end of the IT procurement scale and complex purchases at the other mean that what we buy should determine how we buy, which influences involvement in, and ownership of, the processes.

There are four procurement processes or 'channels' – Strategic, Custom Fast Track, Opportunistic and Instantaneous. These need to be honed to match the characteristics of the products or services being acquired, and automated to aid decision making, improve control, lower administrative cost and cut cycle time. They must be explicitly recognised and properly resourced and managed.

IT should focus on value creating procurements

As enterprises commoditise their IT portfolios, procurement becomes an increasingly commodity function, requiring less and less IT skill to execute. However, some IT procurement (such as strategic procurements and IT service outsourcing) will remain complex and require high IT engagement and sanction, if not control.

IT organisations need to master the value creating application of technology. Most enterprises are still hard pressed to find value creating investments. A recent McKinsey & Company study ('Deepening Wrinkles in the New Economy', Louis Uchitelle, *The New York Times On The Web*, October 17, 2001) found only six of 59 US business sectors accounted for the national surge in US productivity between 1995 and 2000, and that "IT investment had a significant impact on productivity in some industries and virtually none in others".

Many IT professionals are reluctant to give up less strategic procurement responsibilities. However, sharing IT procurement activity should not mean the loss of the IT-vendor relationships necessary for the transfer of knowledge on product and process innovation.

Automate IT procurement to establish good process and reduce cycle time

Enterprises are increasing their use of automated purchasing processes with supply chain automation, e-markets, e-catalogues and e-auctions. Commoditisation of IT creates more opportunities for using such capabilities and making much IT procurement a consistently well-managed and efficient process. IT needs to learn what these automated capabilities can do and exploit those that have proved beneficial.

Process enhancement alone will not suffice. Enterprises need to measure the IT procurement process, as well as setting goals for cost savings and achievements. Measurement should cover TCO factors and drivers, and purchase-cost versus support-cost trade-offs. Automation is essential to sustained measurement. Packages may help. An alternative approach is to exploit the typically better information capabilities of vendors. Arranging with principal vendors to provide and maintain such information is the ideal, and could be made a condition of future business.

A SMALL SAMPLE OF PROCUREMENT AUTOMATION PRODUCTS

➔ Oracle iProcurement, a component of Oracle Procurement, is an Internet based procure-to-pay solution. With a web browser to access Oracle iProcurement, users can find goods and services, add them to the shopping cart, and follow a simple checkout process to make purchases. (See *'Compaq Saves $50 Million Using Internet Procurement'*, Mitch Wagner, http://activeanswers.compaq.com/activeanswers/)

➔ Cardonet Inc. of Santa Clara, California offers the E-Catalog Automation Platform for creating and managing electronic catalogues. It has two main modules: the Catalog Manager for data extraction, transformation, aggregation, and taxonomy management; and the Channel Manager for channel definition, customisation, catalogue loading and syndication.(See *'Cargill launches internal online catalog'*, Mark Hall, *Computerworld*, 9 July 2001)

➔ ABC Technologies' Oros® Value Chain Analyzer for Collaboration™ delivers detailed cost analysis information that helps trading partners to establish common data, view shared information, and manage costs and profits collaboratively. (See *'OMI and ABC Technologies Offer Supply Chain Profitability Tool'*, ABC Technologies press release, 24 May 2001, www.abctech.com/company/press/default.asp)
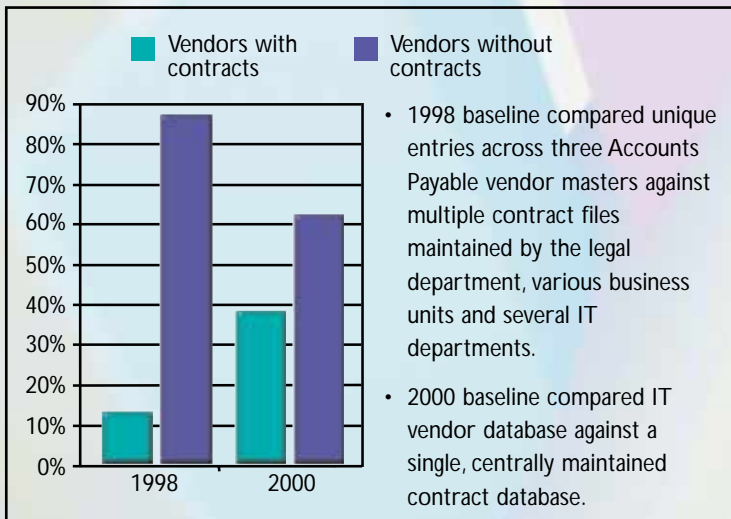
PORTFOLIO-BASED IT PROCUREMENT

In 1998 a global $10 billion services company with $150 million in external IT supplier spend initiated a four-year programme to overhaul its IT procurement practices. The IT organisation had conducted a baseline study of its technology portfolio to find that the architectures implicit in the portfolio were not consistent with those anticipated.

THE TECHNOLOGY BASELINE

Technology Element	Count
Operating systems	32
Database management systems	39
Development environments	28
Processors/servers	25
PC/Workstation manufacturers	16
Dedicated networks	3
Dial-up networks	7
Voice mail systems	4
Office automation suites	5
Help desks	16

(In some cases counts refer to multiple hardware or software versions)

It also discovered it was buying technology and services from six times the number of vendors it had supposed. Further, the majority of vendors were operating without current contracts while those with contracts were not being measured against them. The

organisation reviewed its procurement and vendor management practices to determine how it could control and reshape the portfolio. It found the same lack of standardisation and discipline manifested by its eclectic technology portfolio and overgrown vendor base.

Action was taken to create an IT-wide Vendor Management programme. The baselines suggested to IT that it could save $12 million over a two-year period and $40 million after four years. The savings were expected to be in 'hard dollars', while additional soft savings were anticipated from streamlined processes and cycle times.

Year One

The charter for the Vendor Management Group was to leverage the vendor portfolio for architectural and financial advantage by developing and disseminating world-class IT procurement practices. These practices were to span the whole of IT procurement.

As progress against the financial aspects of the charter would likely determine the long-term viability of the programme, the Group looked first at the financial leverage that could be quickly gained by improving IT procurement. Because of the shorter purchasing cycles involved, the most obvious opportunity for early cost savings appeared to be the consolidation of vendors surrounding the desktop: hardware manufacturers, hardware and software resellers and after-sales support providers. A programme was launched to standardise on a single desktop platform, on a standard desktop image, and on a single vendor to act as hardware and software reseller, and one-stop service provider. First-year savings of $6 million attributed to this single consolidation activity more than met the financial goal for the year.

A project was launched to review and streamline the vendor selection process. The review revealed that multiple, inconsistent and low buyer-leverage

Vendors with contracts / Vendors without contracts

- 1998 baseline compared unique entries across three Accounts Payable vendor masters against multiple contract files maintained by the legal department, various business units and several IT departments.
- 2000 baseline compared IT vendor database against a single, centrally maintained contract database.

procurement processes existed throughout the IT organisation.

The Group developed a team approach to vendor selection that performed in parallel the several selection steps that were previously taken sequentially – all key stakeholders were included. Besides shortening the elapsed time, the parallel approach kept multiple vendors in the decision loop deeper into the process, allowing for more thorough investigation as well as broader team awareness of industry practices and capabilities. Combining final vendor selection with directed negotiation increased buying leverage since finalist vendors were made to compete with each other right up to contract signing.

Near the end of year one, the Vendor Management Group helped launch a programme within the Human Resources Department to consolidate the contractor portion of the vendor portfolio.

As the entire IT vendor portfolio shrank (the overall number of vendors decreased from over 3,000 to under 2,000 during the two-year period), efforts were initiated to improve the quality of the relationships with remaining vendors. Near the end of year one, a Vendor Relations department was formed within the Vendor Management Group to watch over the vendor portfolio with an eye towards rationalising enterprise architecture, enforcing vendor governance and reducing aggregate spending.

Year Two

In year two, Vendor Relations began what would eventually lead to a Supplier Relationship Management (SRM) decision support system, by drilling deeper into the vendor portfolio.

After much manual intervention (and some help from Dunn & Bradstreet), a spending profile began to emerge.

Just knowing where the money was going was not enough. With over a thousand vendors still vying for their share of $150 million, more needed to be known about IT goals and about which vendors were the most likely to cooperate in

The IT vendor portfolio
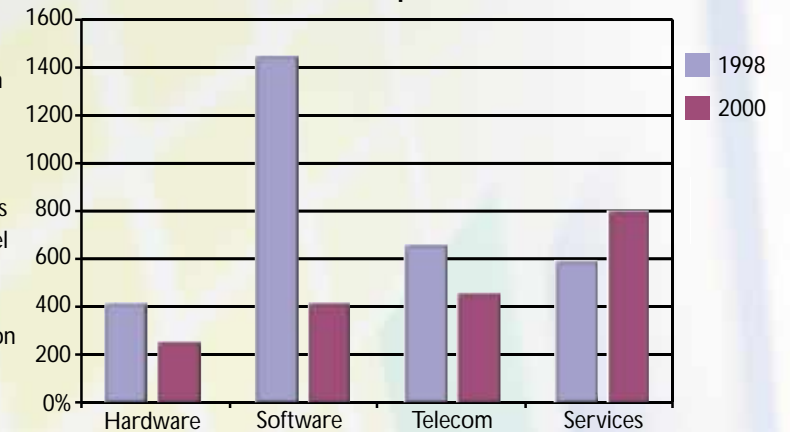
targeted efforts. Using detailed spending data from the technology portfolio baseline, vendors were mapped to the products and services in the portfolio. Links were then built between vendors, their products and services, and all active projects. This matrix formed the basis for a sourcing strategy exercise used to guide further portfolio consolidation and to align an ideal portfolio with architectural direction.

Continuing to reap benefits from financial gains initiated in year one, vendor consolidation, performance improvement and replacement during year two brought savings of $18 million, surpassing the $12 million target, and bringing the combined two-year savings to $27 million (9 percent of external supplier spending) against a two-year target of $12 million.

Lessons Learned

During its first two years, the Vendor Management programme had met its financial goals but was still a great distance from meeting its objectives concerning the architectural aspects of the IT portfolio. Although hundreds of vendors (and their products and services) had been eliminated, and dozens more were under formal contract for the first time, the portfolio still numbered about 2,000 vendors. Much work was still to come and many lessons learned were still to be incorporated into the Group operations.

Citing architectural and financial concerns, a sourcing strategy was developed to reduce the number of vendors in the portfolio from over 3,000 to under 2,000. The reduction took two years to effect and is still ongoing. Note: While the number of product vendors (hardware, software, telecom) decreased dramatically, the number of service vendors actually increased.

Savings were calculated using previously contracted prices for the same or similar products or services. Cumulative two-year savings totalled $27.98 million on an external supplier spend of about $300 million.

SAVINGS EVENT	YEAR ONE SAVINGS ($ MILLIONS)	YEAR TWO SAVINGS ($ MILLIONS)
Reseller consolidation	2.74	4.50
Hardware standardisation	2.11	2.10
Telecom renegotiations	2.00	2.00
Software license renegotiations	.37	.31
S/W agreement consolidations (6)	1.58	1.58
Commodity consolidation	.24	.25
Supplier replacements (2)		6.70
"True-up" license dispute resolution		1.50
Total	$9.04	$18.94

LESSONS LEARNED

➡ For the entire IT portfolio to be refreshed to align with IT strategy, every IT procurement must be made with a common architectural vision.

➡ To ensure all projects comply with new procurement guidelines, financial approval to launch and continue the project must be made contingent on process compliance.

➡ Standards definitions must be granular enough to guide vendor selections but not so specific as to dictate them.

➡ Economic and service concessions gained from vendor consolidation far outweigh any perceived advantage gained from pitting vendor against vendor within the same portfolio.

➡ A Vendor Management function should not get in the way of personal relationships between buyers and vendors. What diplomacy cannot accomplish, sound process, good information, common sense and time will ultimately achieve.

➡ Sometimes there may be intangible reasons for selecting a new vendor or staying with an incumbent vendor when all other indicators point to an alternative decision. The value of such intangibles can and must be quantified by determining at what cost or performance level the intangible fails to hold.

➡ The value of incumbency must be determined before launching any vendor selection involving an existing vendor. This can be done using weighting factors tempered by performance measures.

➡ Weighting criteria must NEVER be changed after the results of applying them yield a decision if the reason for the change is solely to alter decision results.

➡ Once the 'top 40' vendors have been identified, they should be made to provide a monthly, written, status report to the CIO. Until a more robust vendor management system can be put in place, this report can highlight critical issues and actions to be taken.

➡ The contract management function need not be completely cleaned up to be an effective vendor management tool. A little order can go a long way with the top 40 vendors.