PERSONAL AGENTS DELIVERING PROCUREMENT TO YOU: THE APPLICATION OF PERSON CENTRIC TECHNOLOGY

This paper considers the limitations of existing technologies and introduces the concept of 'Person Centric Technology' (PCT). We believe this concept has the potential to change the way outsource services in general, not just procurement, are deployed. PCT, along with highly personalised approach to systems, process and information delivery, will open up new opportunities for outsourced services. Although this paper only analyses one business area, procurement, the likely impact and potential of PCT is of course much broader.

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Procurement Innovation – a Brief History

The procurement function has evolved from various waves of technological and process innovation such as eProcurement, Strategic sourcing and eSourcing, all of which have incrementally contributed to enhancing procurement performance. The following observations can be made:

- eProcurement was viewed by many as a 'magic bullet' trying to resolve the complex and long entrenched high volume/low value procurement problems evident in many enterprises;
- The same observation could be made about strategic sourcing where the suspicion of the initial rewards was impressive, but could not be sustained long-term, and finally;
- There has been some success with eSourcing, but also raised concerns about the increasing reliance upon auctions, its economic sustainability, and the relationship impacts with suppliers.

There is now a suggestion, based on the emergence of a number of software tools designed to assist procurement, that procurement has now become an outsource opportunity. Whilst we agree with the observation that procurement could be delivered by an external service provider we question the current generation of software technologies and its capability in delivering a sustainable outsourced framework for the effective management of procurement across multiple silo environments.

Procurement Design and Systems

Based on anecdotal evidence and research about the benefits of technological and process innovation, we believe that there is a requirement to revisit how procurement services can be delivered 'from within' and 'to' the enterprise. Our philosophy is to adopt a new approach that replaces the emphasis on fragmented systems and processes, with one that places the human being at the center of all procurement activities.

One serious obstacle imposed by the current generation of information systems[1] is that they lack intelligence. Such systems are purely rule based and do not include sophisticated human interactive concepts. Because those systems cannot 'understand' what an end user requires, they cannot actively seek, analyse, learn, and then push information back to its owner based on his/her day-to-day activities and requirements.

One reason for this problem is that innovation has been driven by a technology focus that has produced islands of automation with respect to business processes. Consequently, this has created many disconnected 'point' solutions within

the procurement function as illustrated in Figure 1 below.

In short, our current generation of information systems have been designed to automate process transactions which offer very little contribution to the tactical, operational and strategic knowledge workers within the procurement function.

Those limitations are a significant issue if we intend placing the human being at the center of procurement decision-making. It is important to resolve this dichotomy as individuals within a large enterprise operation are increasingly required to:

- Make and implement procurement decisions taking into account the bigger picture; and
- Respond to an increasingly dynamic business environment within constrained time limits.

The lack of 'agility' and integration of multiple 'point' solutions across the procurement function increasingly forces procurement decision makers to work outside the boundaries of their supporting procurement technologies. Essentially, the current generation of information systems forces staff to think in the same way the software thinks, rather than having an information system supporting and contributing to our own way of thinking.

Challenge

As previously mentioned, the limitations imposed by the current generation of information systems provide a barrier to maintaining, enhancing and sustaining procurement performance through flexible technology and process innovation.

Sustaining procurement transformation can only occur in an environment that supports and sustains best practices, continually captures sourcing methodologies, learns from past experiences, manage by exception, and enables the procurement team to operate as a highly integrated virtual team across the enterprise, no matter what the role and location of each procurement team member, or the complexity of the enterprise.

Some of the issues that a procurement team may have to deal with and resolve are summarised as follows:

- Enable the empowerment of a virtual procurement operation that is both strategically directed from the center and tactically enabled locally while supported by a well thought mix of strategies, tactics and operational responsibilities;
- Enable consistent procurement policies, procedures, methodologies and accountabilities to each procurement team member based on their role within the organisation; and
- Move to exception reporting in real time to rapidly identify and act upon variances from procurement strategies and tactics.

A Personalised Approach

A personalised approach must resolve two issues. The first is to operate procurement so that performance is constantly maintained and improved over time. The second issue is to overcome information systems limitations.

How can this be achieved? The breakthrough to resolving the aforementioned challenge is the application of PCT. PCT enables:

- A virtual procurement team that has information delivered to them in real time to assist and enhance decision making; and
- An environment that makes sense (to each end user) of the multitude of supporting point solutions and processes associated with procurement.

The application of PCT can deliver knowledge sharing, effective information management and provides a highly personalised user experience. And, for the first time, information systems will be able to provide a framework that will aid operational and strategic knowledge workers.

The PCT approach combines the concepts of Neural Net and Personal Agent (PA's) technology. The PA represents the interests of its one human 'owner' and the wider business environment as it interacts with other PA's. The PA has 'embedded rules' and acts as a 'counter party' to its human owner by gathering and delivering information that can advise, aid decision-making, and encourage team/collaboration by sharing each other's 'brain.' The PA acts to:

- Personalise knowledge (procurement in this particular case) for its human owner;
- Builds a memory of past interactions, current interests, future needs and desires;
- Communicates in free-flowing dialogues with its owner;
- Prioritises information, actions and recommends proactively to its human owner; and
- Works collaboratively within its human owner and other PA's in a learning environment

PCT allows the enterprise to build an expert Procurement Knowledge Domain that provides a framework to manage the whole procurement lifecycle and enable the

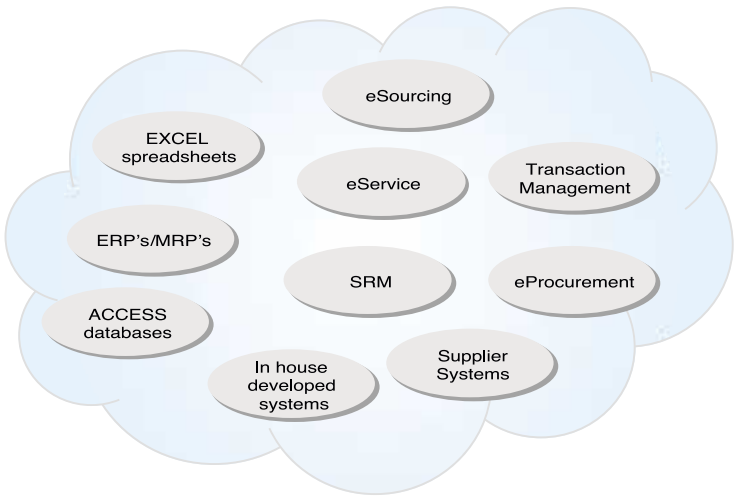

Figure 1. Procurement – Fragmented Systems and Process Landscape

procurement team members to be interlinked in order to:

- Manage business priorities – the PA point out what is important to each procurement team member so as to link procurement direction with vision;
- Manage sourcing projects – managing the sourcing process through the tracking of activities and progress;
- Increase procurement process efficiency – the real time capture of information via a PA's enables procurement performance to be monitored;
- Induce cultural change – creating iterative feedback loops and mechanisms to influence and guide procurement and cultural behaviors.

Collaboration and Teamwork

The PCT approach has been developed with the specific purpose of enabling groups of individuals to work together virtually, dynamically and in real time to make decisions, respond to opportunities and minimise risks. This is suited very much to the operation of the procurement function that manages the commercial interaction with both suppliers and internal customers operating across multiple geographies.

The business literature has widely commented that for a group of people (procurement) to achieve success together, they must have a unifying vision and they must know and understand the individuals who have the power to contribute to, block or judge their success (their stakeholders).

Our considered view is that without the application of PCT it will be very difficult to address and manage the following issues:

- Central vs local procurement operation;
- Commercial boundaries between procurement, suppliers and internal customers (product development for instance);
- Posess relevant relevant knowledge to hand in order to make more effective business decisions.

The application of PCT environment enables multiple sources of information to be leveraged to geographically dispersed individuals so that they can share knowledge and operate within a guiding framework. Without this framework, there is the danger of:

- Not being able to support and project the appropriate business behaviors and culture required for success;
- Having things 'fall through the cracks", or;
- Having to waste time searching for information or validating a decision.

With the introduction of PCT supported by PA's, there is the benefit of introducing 'multiple feedback loops'. These ensure that sourcing and other procurement decisions are made on an iterative basis, which in turn ensures that they are made within a specific set of framework and guidelines for that particular individual which meets the overall objectives of the procurement team and business.

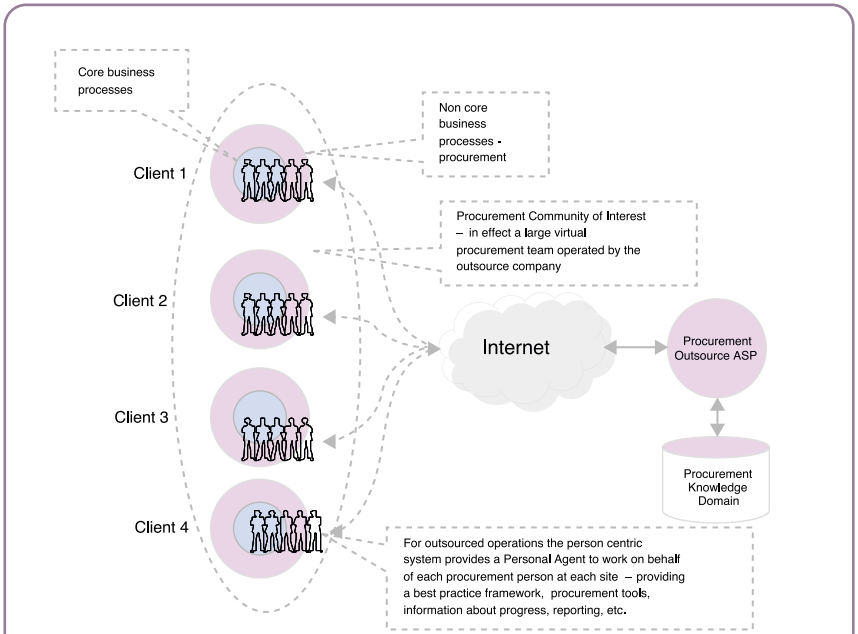

Figure 2. Enabling a Virtual Procurement Team

Why the Relevance for Outsourcing

Now you may be asking what is the relevance of this new technology to the outsourcing of procurement? With the exception of very large corporations such as IBM, GE, Walmart, etc, that have large internal markets and high levels of supply market spend, the vast majority of enterprises find sustaining best practice procurement difficult. In many cases, Procurement is not and never will be regarded as a core business process. Additionally, maintaining multiple supporting procurement technologies behind the firewall has proved to be cost prohibitive for many smaller companies.

An outsource company, through the application of PCT, has an opportunity to deliver a new business model by delivering a high quality hosted procurement service that leverages best practice procurement techniques and services to many enterprises simultaneously. Such techniques and services may prove too time consuming and difficult to maintain individually.

However, the many systems that support such procurement model excellence are fragmented and difficult to maintain and implement. As such, a 'holistic' approach is required to make sense of the fragmented systems and process landscape.

The emergence of PCT offers through an outsourced Supply Management Centre (SMC) a powerful enabler that facilitates the delivery of procurement services to each new procurement team member. This enables the delivery of tailored and performance driven procurement services to each buyer across the Internet, very much like having a dedicated personal trainer (Personal Agent) that encompasses all aspects of procurement expertise to support that individual.

Therefore, the opportunity for the SMC is to

be able to deliver a truly holistic procurement outsourced service that meshes together the many fragmented procurement technologies and delivers a 'plug and play' outsourced procurement services[2]. The value of this approach is that the outsource company would quickly become the source of best practice procurement competence. This would be enhanced by a 'network effect' as more and more enterprises transfer their procurement operations to the SMC in order to realise a combination of headcount reduction, sourcing and transaction process cost savings.

With PCT supporting the SMC, the outsource company can rapidly open up individual and highly personalised 'brains' to each new procurement team member. The individual can then immediately starts operating in a best practice and learning environment, and he or she immediately becomes part of a much larger virtual procurement team within the SMC operated by the outsource company.

In this way, the outsourcer using a PCT approach can quickly accommodate the level of procurement expertise within the team that has been outsourced, and also immediately deliver tailored procurement reporting services that validate the service level agreements that underpin a procurement outsource arrangement.

Conclusion

The application of PCT enables the following:

- Deliver highly focused holistic procurement services to enterprises of all sizes with different levels of procurement competence;
- Provide a new approach that delivers best practice procurement tools and methodologies via real time personalised user experience;
- Assimilate and leverage clients' existing processes, systems (eProcurement, sourcing, etc.) investments and informational sources.

PCT makes information systems serve their human users to deliver major performance benefits to every enterprise in which decision-makers are striving to improve the productivity of their procurement team. It does this by supporting the number of people within procurement that are doing the right thing at the right time in the right way by strategic thinking and individual contribution to a company's bottom line.

This new wave of intelligent technology offers new opportunities for outsource providers to offer not only highly tailored procurement, but many other value added business services.

Other potential applications of PCT:

A large U.S. Defence and Security Government body was looking for better ways to facilitate knowledge exchange. It needed a solution to improve the connection between its people and their ideas in order to improve the flow of knowledge and encourage the diffusion of innovation. A major problem was dealing with the relevance and volume of information each person received, its security, and stimulation of pro-active communication.

A leading global financial services firm's challenge was to accurately and dynamically capture core program management data, integrating it with its diverse internal systems, and ensuring that strategic management decisions be made with accurate real-time aggregations of headcount and cost computations. The benefits were an operational cost savings of $US500,000 per annum, and displaced development cost of $3 millions.

A private group of hospitals in Thailand wanted to develop a new organisational structure and direction, and establish a medium to clearly communicate performance and quality objectives throughout its operations in a highly relevant and value adding way. As a result, an objective setting and tracking system linked to organisational goals, best practice achievement, and performance reward was developed.

About the Authors

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Christophe is the founder and managing director of BvW Global, a global management consulting firm operating out of Australia.

Christophe has been consulting with Fortune 100 clients for the last 10 years in the United States, South America, and the Asia Pacific regions.

He has built his experience from working and partnering with worldwide consulting organisations such as Andersen Consulting (now Accenture), PricewaterhouseCoopers, Arthur Andersen, EDS, and AT Kearney. He was instrumental in developing consulting offerings and best practices in procurement, supply chain, e-procurement and digital market for several of these firms.

Christophe is also doing research for his Doctorate degree, "Collective Intelligence Level: Profit Maximisation through Artificial Intelligence Systems."

Iain Wicking

Iain has worked for a number of large UK organisations where he specialized in procurement and Supply Chain Management and then spent a number of years working in the UK's power sector. In 1994 Ernst and Young recruited Iain from the UK to work in Australia and New Zealand.

In 1996 Iain moved to PricewaterhouseCoopers and contributed to the development of the procurement and supply chain practice and specialized in electronic systems to support the operation of procurement. Iain has a high level of experience in general business operations, Project Management, Procurement, Supply Chain and the application of eCommerce systems.

Iain has a special interest in the application of technologies to enable knowledge sharing, enhance decision-making and the delivery of holistic approaches to business and procurement management.

About BvW Global

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[1]Information systems are good at storing information about objects but hit difficulties in describing processes, progression and change. There are layers of knowledge beyond the simple rational data held by the information system, be it a simple databases, or Intranet. This arational knowledge lends complexity to the organisational system – Neil McBride – Chaos Theory and Information Systems – De Montford University (UK).

[2]The delivery of services would have to be flexible enough to accommodate the existing procurement operation and the types and range of procurement systems already is use.