



Endorsed by
The Australian Procurement and Construction Council

A Survey on the Antecedent Conditions of e-Procurement Adoption and Use and the Impact of e-Procurement on Procurement Performance

by

The School of Mathematics, Statistics and Computer Science of the University of New England in collaboration with



Dear Participant,

You have been identified as an expert in the area of electronic procurement/supply chain implementation and management. As such, we are writing to ask for your help with an important and interesting study being conducted by the e-Procurement research team at the University of New England. We strive to better understand the antecedent conditions of e-Procurement assimilation and the impact of e-Procurement on the procurement performance. Your valuable response will help to provide managerial insight to successfully influence and manage the e-Procurement systems in light of the research findings. As a token of our appreciation for your participation, we will be very happy to send you a managerial summary of the main findings and trends in your industry, including a general discussion of the factors related to successful e-Procurement practices.

Your voluntary completion of our questionnaire will signify your informed consent to participate in our research. Please rest assured that all individual responses will remain confidential and the findings will be reported in the aggregate only so that information provided by you about your organisation cannot be ascertained or deduced by the readers of the report. The survey should take no more than 15-20 minutes to fill out.

This project has been approved by the Human Research Ethics Committee of the University of New England (Approval No. HE04/195, Valid until 20/12/2005). Should you have any complaints concerning the manner in which this research is conducted, please contact the Research Ethics Officer at the following address: Research Services University of New England Armidale, NSW 2351. Telephone: (02) 6773 3449 Facsimile (02) 6773 3543 Email: Ethics@pobox.une.edu.au.

This project has been sponsored and administered by the Australian Procurement and Construction Council. The Australian Procurement and Construction Council Inc (APCC) is the peak council of departments responsible for procurement and construction policy for the Australian, State and

Territory governments. Founded in 1967, the Council adds value and promotes excellence in the way government delivers services to the community. It provides leadership to industry on procurement and asset management and is the national reference on policy advice, principles and best practice initiatives. For more information about the activities of APCC, please visit: www.apcc.gov.au.

If you have any queries regarding the completion of the questionnaire, please send us an e-mail to kishor@turing.une.edu.au or contact our Research Associate on 02 6773 2302 or by postal mail as indicated below. Thank you very much for your kind assistance in this study.

Sincerely,

[Professor A.S.M. Sajeey](#) (*Associate Dean (Sciences) and Chair of IT/Computer Science*)

[Mr. Kishor Vaidya](#) (*Research Associate*)

[Dr. Junbin Gao](#) (*Senior Lecturer*)

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Note: Electronic Procurement (e-Procurement), in this study, refers to the use of web-based information and communication technologies (especially the Internet) in order to support the individual or all stages of the operational and strategic procurement activities, such as catalogue search, item requisition request, approval, purchase order, delivery receiving, payment, after-sale support, identifying sourcing opportunities, supplier negotiation and contract. Now, please cross (X) the appropriate statements. Please respond to each question with regard to the particular division/unit of your organisation. If any of the item in the questionnaires is irrelevant or not applicable to your organisational context, please mark N/A

PART A: ABOUT YOUR ORGANISATION AND E-PROCUREMENT ACTIVITIES

Q1. Please enter the name of your organisation (or division/agency if applicable).

Q2. Please cross (X) one of the followings. Is your organisation best characterised as:

- Private, for profit
- Private, not for profit
- Public, federal level
- Public, state level
- Public, local level

Q3. Please cross (X) one of the followings. In which functional area of the organisation is your position classified?

- Procurement
- Information Systems
- Finance
- Other (Please specify)

Q4. Please cross (X) one of the followings. Which of the following best describes your position in the company?

- Top executive
- Senior manager

- Middle-level manager
- Purchasing officer or specialist

Q5. Years in the current position. Please enter.

Q6. Please indicate your organisation’s annual procurement expenditure (including direct and indirect procurement) for the last financial year. Please cross one.

- Less than \$10 million
- \$10 million ~ \$100 million
- \$100 million ~ \$500 million
- \$500 million ~ \$1 billion
- More than \$1 billion

Q7 From an overall organisational level perspective, to what extent has your organisation used e-Procurement? Please cross the one that best describes the organisation's level of e-Procurement use in terms of overall procurement transactions.

- **No intention to use** - our organisation does not intend use e-Procurement within the next 12 months (or in the near future).
- **Intention to use**- our organisation has an e-Procurement implementation strategy in place or is preparing plans to investigate e-Procurement within the next 12 months (or in the near future).
- **Evaluation or Pilot use** - our organisation has purchased `trial' capabilities or implemented `pilot' projects and is currently evaluating the possible use of e-Procurement.
- **Commitment** - our organisation has specific plans and made formal commitments to utilise e-Procurement.
- **Limited deployment** - our organisation has established a programme of regular but limited use of e-Procurement.
- **Generalised deployment** - our organisation has deployed one or more forms of e-Procurement in its generalised capacity and integrated e-Procurement in the majority of information systems.
- **Rejection** - our organisation has evaluated and rejected the use of e-Procurement.

Note: If your answer was "No intention to use" or “Rejection” please go to Q22 at the end of this survey. Otherwise, please continue to Q10.

Q8: To what extent does your organisation use the following e-Procurement technologies in the conduct of procurement functions/activities in terms of overall procurement transaction? Please click on the appropriate button that best describes the level of e-Procurement use for each technology as it applies to your organisation.

	No intention to use (1)	Intention to use (2)	Evaluation or Pilot use (3)	Commitment (4)	Limited deployment (5)	Generalised deployment (6)	Rejection (7)
e-Procurement system (an e-Procurement system is a web-based software application (third party e.g. Oracle, SAP, Ariba etc. or an in-house solution) that enables buying organisations to purchase goods and services from approved suppliers)	1	2	3	4	5	6	7
Electronic catalogues (e-Catalogues are the web-based representations of supplier information (such as scanned pictures, servicing information and links) about the products and/or services that may or may not be incorporated into the buyer's e-Procurement system)	1	2	3	4	5	6	7
Electronic marketplace (an e-Marketplace is a web-based application facilitating electronic trade between one	1	2	3	4	5	6	7

or more buying organisations and supplier organisations)

Electronic auction/reverse-auction (an e-Auction or Reverse auction is an electronic auction where suppliers bid online against each other for contracts against a published specification) 1 2 3 4 5 6 7

Electronic tendering (e-Tendering is the complete web-based tendering process from the advertising of the requirement through to the placing of the contract) 1 2 3 4 5 6 7

Other (Procurement card/e-Payment, e-Invoicing, Web-based ERP module, Web-based EDI, Consortia markets etc. - please specify) 1 2 3 4 5 6 7

Q9. Among the e-Procurement technologies through which your organisation uses (or plans to use) to conduct procurement in terms of overall procurement transactions, please indicate the FOCAL (predominant) e-Procurement technology. When answering the questions below, please take into account this FOCAL e-Procurement technology ('e-Procurement' hereafter) unless otherwise stated.

Q10: How long has it been since your organisation first adopted e-Procurement? Please click cross one.

- 0-6 months
- 7 to 11 months
- 1 to 2 years
- 3 to 4 years
- over 5 years

11. Are the following transactional and strategic procurement activities/practices assisted by e-Procurement in your organisation?

Information Search	Yes	No
Requisition Request	Yes	No
Approval	Yes	No
Purchase Order	Yes	No
Delivery Receiving (Tracking)	Yes	No
Payment	Yes	No
Identifying Sourcing Opportunities	Yes	No
Negotiate	Yes	No
Contract	Yes	No
Other (Please specify)	Yes	No

PART B: ABOUT YOUR PROCUREMENT PRACTICES AND E-PROCUREMENT ADOPTION/USE

TRANSACTIONAL PERSPECTIVE: Please rate each item from Strongly disagree (1) to Strongly agree (5) by clicking on the appropriate button for each statement. If the item is not applicable to your organisational context, please click on the 'N/A' button

Q12. With respect to the adoption and use of e-Procurement, please indicate the extent to which you disagree or agree with the following statements. If the item is not applicable to your organisational context, please click on the 'N/A' button.

Strongly Disagree Disagree Neutral Agree Strongly Agree N/A

12.1 Our organisation's procurement practices are tailored to fit the nature of our business operations (processes).	1	2	3	4	5	N/A
12.2 A majority of the products/services purchased using e-Procurement need to be tailored specifically to our needs before we buy.	1	2	3	4	5	N/A
12.3 A majority of the products/services purchased using e-Procurement are of value to only a small number of buyers.	1	2	3	4	5	N/A
12.4 For a majority of the products/services purchased through e-Procurement, it will be costly (in terms of time and resources) to switch to a different supplier.	1	2	3	4	5	N/A
12.5 The underlying skills associated with e-Procurement are rapidly changing in our organisation.	1	2	3	4	5	N/A
12.5 The underlying skills associated with procurement are rapidly changing in our organisation.	1	2	3	4	5	N/A
12.6 The optimal configuration of hardware and software required for e-Procurement is rapidly changing in our organisation.	1	2	3	4	5	N/A
12.7 A majority of the products/services purchased using e-Procurement involve frequent purchases.	1	2	3	4	5	N/A

TECHNOLOGICAL PERSPECTIVE: Please rate each item from Strongly disagree (1) to Strongly agree (5) by clicking on the appropriate button for each statement. If the item is not applicable to your organisational context, please click on the 'N/A' button

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	N/A
Q13. With respect to the adoption and use of e-Procurement, please indicate to what extent you disagree or agree with the following statements.						
13.1 The financial benefits (e.g. ROI) of using e-Procurement are apparent to our organisation.	1	2	3	4	5	N/A
13.2 Using e-Procurement has allowed our organisation to focus on our strategic procurement activities (e.g. strategic sourcing).	1	2	3	4	5	N/A
13.3 Changes in work procedures associated with using e-Procurement are compatible with our organisation's procurement policies and guidelines.	1	2	3	4	5	N/A
13.4 Using e-Procurement facilitates the information sharing among various existing information systems (e.g. Finance, Accounting).	1	2	3	4	5	N/A
13.5 Using e-Procurement is easy to transmit, integrate and process data from	1	2	3	4	5	N/A

suppliers/trading partners.						
13.6 e-Procurement is conceptually difficult to understand from a business perspective.	1	2	3	4	5	N/A
13.7 e-Procurement is conceptually difficult to understand from a technical perspective.	1	2	3	4	5	N/A
13.8 Using e-Procurement is difficult.	1	2	3	4	5	N/A
13.9 Using e-Procurement is difficult to understand and visualise the whole process of procure-to-pay (P2P).	1	2	3	4	5	N/A

ENVIRONMENTAL PERSPECTIVE: Please rate each item from Strongly disagree (1) to Strongly agree (5) by clicking on the appropriate button for each statement. If the item is not applicable to your organisational context, please click on the 'N/A' button.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	N/A
Q14. With respect to the use of e-Procurement, please indicate to what extent you disagree or agree with the following statements.						
14.1 Our main competitors/trading partners that have adopted and used e-Procurement have benefited greatly.	1	2	3	4	5	N/A
14.2 Our main competitors/trading partners that have adopted and used e-Procurement are perceived favorably by suppliers.	1	2	3	4	5	N/A
14.3 Many of our suppliers that are currently using the Internet-based systems are demanding us to use e-Procurement.	1	2	3	4	5	N/A
14.4 Significant pressure is placed on our organisation to participate in the e-Procurement by our parent organisation/government.	1	2	3	4	5	N/A
14.5 Our organisation actively participates in industry/government, trade, or professional associations that promote adoption and use of e-Procurement (e.g. APCC, AGIMO).	1	2	3	4	5	N/A

ORGANISATIONAL PERSPECTIVE: Please rate each item from Strongly disagree (1) to Strongly agree (5) by clicking on the appropriate button for each statement. If the item is not applicable to your organisational context, please click N/A.

Q15. With respect to the adoption and use of e-Procurement, please indicate to what extent you disagree or agree with the following statements. Click on the appropriate button for each statement.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	N/A
15.1 The senior management of our organisation actively participates in establishing the business case,	1	2	3	4	5	N/A

formulating e-Procurement implementation strategy and documenting formal action/communication plan for the organisational use of e-Procurement.

15.2 The senior management of our organisation actively participates in documenting operational and management controls that measure, monitor and report on the progress of e-Procurement implementation and procurement performance.	1	2	3	4	5	N/A
15.3 The senior management of our organisation actively participates in providing user training and encouraging organisational learning on the use of e-Procurement.	1	2	3	4	5	N/A
15.4 The senior management of our organisation actively participates in launching supplier adoption campaigns (e.g. educating suppliers, providing incentives etc.) to encourage larger as well as SME and indigenous suppliers to adopt e-Procurement.	1	2	3	4	5	N/A
15.5 The senior management of our organisation actively participates in identifying/acknowledging the key risk/barriers to e-Procurement and in documenting the risk mitigation/barrier elimination plan.	1	2	3	4	5	N/A
15.6 Our internal customers are concerned about the change in the job content because of e-Procurement.	1	2	3	4	5	N/A
15.7 Our internal customers are concerned about the loss of the status because of e-Procurement.	1	2	3	4	5	N/A
15.8 Our internal customers are concerned about the alteration of relationships with the suppliers because of e-Procurement.	1	2	3	4	5	N/A
15.9 Our internal customers are concerned about uncertainty/unfamiliarity/misinformation because of e-Procurement.	1	2	3	4	5	N/A
15.10 Our internal customers are concerned about job insecurity because of e-Procurement.	1	2	3	4	5	N/A

16. Please rate each item from Strongly disagree (1) to Strongly agree (5) by clicking on the appropriate button for each statement. If the item is not applicable to your organisational context, please click on the 'N/A' button

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	N/A
16.1 Authentication arrangements (i.e. the process of identifying the entity that sends or receives information) for e-Procurement meet our organisation's	1	2	3	4	5	N/A

needs.

16.2 The interoperability framework adopted by our organisation encourages the adoption of a consistent approach to e-Procurement.	1	2	3	4	5	N/A
16.3 The existing legal framework is technology-neutral and supports the use of e-Procurement.	1	2	3	4	5	N/A
16.4 The e-Procurement framework adopted by our organisation supports the use of open standards (e.g. XML).	1	2	3	4	5	N/A
16.5 Our internal customers feel comfortable regarding security and privacy when using e-Procurement.	1	2	3	4	5	N/A
16.6 Our suppliers/trading partners have Internet-based systems to engage in e-Procurement.	1	2	3	4	5	N/A
16.7 Our suppliers/trading partners feel comfortable (regarding security, privacy etc.) engaging in e-Procurement.	1	2	3	4	5	N/A
16.8 Our suppliers/trading partners are willing to share information electronically with our organisation.	1	2	3	4	5	N/A
16.9 Our suppliers/trading partners consider it important to engage in electronic business.	1	2	3	4	5	N/A

PART C: ABOUT THE IMPACT ON PROCUREMENT PERFORMANCE MEASURES

Please indicate the % benefits gained or the level of impact in the following procurement performance measures *after* using e-Procurement in your division/agency. It is suggested that you refer to the baseline performance measures if available in your organisation. If the item is not applicable to your organisational context, please click on the N/A button.

Q 17. To what extent has the implementation of e-Procurement affected the performance of the following measures in your organisation?

17.1 Reduction in purchasing cycle time	<20%	20%~40%	40%~60%	60%~80%	>80%	N/A
17.2 Increase in throughput (number of transactions during the given time period)	<20%	20%~40%	40%~60%	60%~80%	>80%	N/A
17.3 Decrease in number of staff in purchasing department (or number of staff responsible for purchasing)	<20%	20%~40%	40%~60%	60%~80%	>80%	N/A
17.4 Reduction in matching (e.g. invoice, inventory) costs	<20%	20%~40%	40%~60%	60%~80%	>80%	N/A
17.5 Reduction in overall search (e.g. goods/services, supplier) costs	<20%	20%~40%	40%~60%	60%~80%	>80%	N/A
17.6 Reduction in communications costs	<20%	20%~40%	40%~60%	60%~80%	>80%	N/A
17.7 Reduction in information processing costs	<20%	20%~40%	40%~60%	60%~80%	>80%	N/A
17.8 Reduction in negotiation costs	<20%	20%~40%	40%~60%	60%~80%	>80%	N/A
17.9 Reduction in monitoring (or enforcement) costs	<20%	20%~40%	40%~60%	60%~80%	>80%	N/A
17.10 Reduction in maverick (off-	<20%	20%~40%	40%~60%	60%~80%	>80%	N/A

contract) purchasing						
17.11 Reduction in the number of suppliers	<20%	20%~40%	40%~60%	60%~80%	>80%	N/A
17.12 Reduction in the purchase price of goods and services (e.g. because of supplier competition and volume aggregation)	<20%	20%~40%	40%~60%	60%~80%	>80%	N/A

Q18. To what extent has the implementation of e-Procurement affected the performance of the following measures in your organisation?

18.1 Reduction in errors and mismatches (re-keying and duplications)	<20%	20%~40%	40%~60%	60%~80%	>80%	N/A
18.2 Reduction in administrative tasks (paperwork and manual filing etc.)	<20%	20%~40%	40%~60%	60%~80%	>80%	N/A
18.3 Improvement in the quality of products/services	<20%	20%~40%	40%~60%	60%~80%	>80%	N/A
18.4 Improvement in delivery reliability	<20%	20%~40%	40%~60%	60%~80%	>80%	N/A
18.5 Improvement in information sharing with internal customers and suppliers	<20%	20%~40%	40%~60%	60%~80%	>80%	N/A
18.6 Increase in reliability of management information and analysis (e.g. spend profile) capabilities	<20%	20%~40%	40%~60%	60%~80%	>80%	N/A
18.7 Increase in flexibility to user/buyer's changing needs (e.g. customisation and volume of product/service)	<20%	20%~40%	40%~60%	60%~80%	>80%	N/A

Q19. To what extent has the implementation of e-Procurement affected the performance of the following measures in your organisation?

	Negative (1)	No impact (2)	Moderate impact (3)	Great impact (4)	Significant impact (5)	N/A
19.1 Increase in availability of public information on bids/offers and their depth	1	2	3	4	5	N/A
19.2 Increase in transmission of timely public information on contract awards on price, volume and execution time	1	2	3	4	5	N/A
19.3 Increase in availability of audit trail information	1	2	3	4	5	N/A
19.4 Increase in visibility of management reporting processes and overall procurement performance	1	2	3	4	5	N/A
19.5 Increase in ability to identify responsibilities and duties for significant purchases	1	2	3	4	5	N/A
19.6 Increase in compliance with relevant delegations in procurement	1	2	3	4	5	N/A

Q20. If you would like to suggest to us further performance measures or provide additional comments on the antecedents of e-Procurement initiatives and impact on performance measures, please do so below. Please also feel free to offer your overall comments on this survey research. Please attach another page if necessary.

Part D (Optional): ABOUT YOUR CONTACT DETAILS (Optional): The objective of this optional part is to know your contact information in order to send you the summary of

our research results.

Q21. Finally, as a token of appreciation, we will send a summary report as soon as all survey responses are collected and analysed. Your contact information will be recorded in a separate file from your responses, and will not be known by anyone outside of this research project.

Please enter your e-mail address:

Or, your regular mail address:

Q22. We would very much appreciate if you could forward the link <http://turing.une.edu.au/UNESurvey/eProcurement/> to e-Procurement experts inside or outside your organisation or suggest the contact details. If you know of somebody who could be interested to participate in this research, please enter the e-mail address/es.

This concludes the UNE survey on e-Procurement. We would like you to know that your efforts are very much appreciated. Only with the responses of professional like you, knowledge in the field can be advanced. Please save your responses and send us as an e-mail attachment at: kishor@turing.une.edu.au or post us your responses to: UNE e-Procurement Research Group, School of Mathematics, Statistics and Computer Science, University of New England, Armidale, NSW 2350. Alternatively, you can also fax your responses at: **(02) 6773 3312**.

Once again, thank you very much for your participation in this research.

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