

## **Title**

Multi-channel delivery: e-Commerce Adoption Strategies for Micro-Businesses

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## **Abstract/Summary**

This discussion paper represents a preliminary draft of a submission by the authors to IPAA. The submission has been accepted for a collection of papers presenting development issues for e-Government in Australia. Here we explore aspects of e-Business take-up by micro business in Australia and its significance for government policy development. We begin by highlighting a number of underlying assumptions that underpin multi-channel delivery strategies but which have not been given adequate attention in the literature. For example, we question whether *all* businesses are committed to electronic interactions with government. As a number of multi-channel approaches are currently being trialled by government agencies we refer to a case study of a recent implementation of a multi-channel G2B approach.

This paper represents a preliminary overview of a larger study, which will draw on case study and survey data. These instruments will enable us to explore the differing perceptions of multi-channel delivery by users representing business 'customers' (G2B) in contrast to individual 'customers' (G2C). We conclude this discussion paper by indicating some implications of our preliminary findings for government agencies intent on building sustainable online communities.

## **Keywords**

Multi-channel delivery, micro-business sector, G2B approaches, channel rivalry and coordination issues

## **Body of Paper**

### **Introduction**

In this discussion paper we begin with the rationale for this paper and its relationship to an IPAA research project funded by NOIE. This is followed by a brief discussion of the concept of e-Business outlining developments in the study of e-Business take-up of online technology. The paper then leads into the key research questions the authors intend to investigate in the full paper for IPAA, which will explore aspects of e-Business take-up by micro-business in Australia and its significance for government policy development. We conclude by offering some preliminary findings related to our two research questions for discussion.

### **Rationale for paper**

This paper outlines some key points the authors are currently developing from a successful submission to NOIE. The conference draft offered here sets out the framework from our submission. When completed the submission is expected to form part of a collection of papers presenting development issues for e-Government in Australia.

### **E-Business and multi-channel offerings**

Australia has consistently emerged in global surveys and reports as a leader in the implementation of e-government [1,2]. *'E-business can help companies reach new customers, deliver savings in their dealings with suppliers and be more efficient in their relationships with banks, accountants and other service providers'* [3]. E-commerce is becoming increasingly essential as a business tool for gaining competitive advantage and to access global markets [4]. For smaller firms, online uptake offers unique opportunities, enabling open and free trade and lessening the impact of geographical distances and time. Electronic trading can open up opportunities for smaller firms in new and niche markets removing much of the burden of tariffs and taxes [5]. For example once a firm has the capacity to receive and fulfil orders electronically, transaction costs are reduced. This in turn

allows smaller shipments to become more cost effective and offers these smaller operators access to trade with larger supply chains [6].

However whilst innovative firms are able to profit from being technological enabled, opportunities for business may only be apparent and not necessarily actual. In fact, with the global reach of E-business and with the accelerating consolidation and integration of global supply chains, SMEs specifically, are no longer in control of their traditional markets [7].

SMEs are notably innovative in their overall business strategies. By contrast, their uptake of ebusiness is typically conservative and slow. In fact, the SME approach toward e-commerce adoption has been shown to be more reactive than proactive, generally doing just enough to meet their buyers or suppliers' needs [8] Consequently, the appropriate role for government in stimulating uptake of E-business by smaller firms remains in question.

### **Research Questions addressed in this paper**

Enabling multi-channel access for all citizens so they can interact with government online as well as face-to-face has led to a focus on government-to-citizen (G2C) activity – a focus, we suggest that may have distorted the nature of the debate. For example where important issues - such as overcoming adoption constraints - have been placed under scrutiny, the discussion has been couched in terminology related to personal characteristics such as, language, disabilities or long-held preferences. Multi-channel approaches are frequently presented as key to closing the 'digital divide'.

The G2C focus in multi-channel enablement policies, has led to the facile assumption that by contrast, business 'customers' are willing, able and committed to adopting an electronic channel. Studies cited in policy documents frequently rely on data collected from very large enterprises, which have then been used to advocate adoption of e-Business by smaller firms [9]. Overall, multi-channel considerations have not sought to distinguish micro-businesses as a customer group.

But are all businesses committed to electronic interactions with government? How do SMEs use electronic business in practice? What is the strategic potential of e-Business applications in these very small firms? Actual usage of e-Business, especially amongst smaller firms, appears to be an area where research has been largely anecdotal or only exploratory in nature [7].

There are a variety of definitions as to what constitutes a small business; these range from quantitative (number of staff) to qualitative (mode of operation) perspectives [9]. One feature common to many micro and small businesses is the owner/CEO/head of family. As a consequence, the business may exhibit preferences for interaction with the government that are more closely related to the requirements of a particular individual than to some 'faceless' bureaucracy in a larger organisation. If this is so, then the requisite multi-channel approach will be similar to the G2C model. We suggest, that there remains an unmet need for determining whether attitudes towards G2B in micro and small businesses correlate with the personal preferences of the owner/CEO/head of family to G2C.

*Research question 1: Do attitudes towards G2B in micro and small businesses correlate with the personal preferences of the owner/CEO/head of family to G2C*

Our contention that this question remains unanswered is supported by a recent survey of international research on SMEs. The survey found a lack of detailed knowledge about the owners of small businesses and the process of running small businesses as well as insufficient insight into the penetration of e-business into smaller firms, the nature and extent of the needs of these types of firms or the mechanisms for delivering support effectively [9].

*Preliminary finding: a lack of research on the role of owners in the selection process and penetration of e-Business.*

Another issue we consider in this study is the fact that small businesses frequently rely on third party providers such as computer services, accountants, lawyers. In these situations the real interaction is one step removed from government. Further research is also required to establish how small business reliance on such third parties affects the micro-business channel preference.

*Research question 2: Does reliance on third parties affect channel preference?*

Our full paper for the IPAA publication will investigate the consequences of a multi-channel approach to government-to-business (G2B) and in what ways the multi-channel approach for business differs to that aimed at individuals, if at all. The investigation will include a literature review of multi-channel electronic government identifying current thinking in both the G2C and the G2B realms (*not included in this conference paper*). Interviews will be conducted with major Australian G2B sites such as Business Entry Point to identify what multi-channel approaches are being trialled and with what success. We also refer to some of the issues encountered in cross-sectoral multi-channel G2B initiatives such as the successful phased implementation of EXDOC by AQIS (for producers requiring a health or phytosanitary certificate to export).

The completed research paper will then present a review of recommended approaches for multi-channel electronic government targeted at micro-business customers (*not included in this conference paper*).

We have outlined two major research questions that guide our investigation. These two questions led us to consider an issue of considerable significance for government policy development. Namely:

*How can government as a stakeholder positively influence e-business uptake in SMEs and develop successful multi-channel G2B business models?*

In the following section of this paper we review an example of government practice that responds to this question and refer to some findings that emerged in the case study.

#### **A cross-sectoral multi-channel approach implemented by a government agency**

At present a number of multi-channel approaches are being trialled by government agencies. In this section of our paper we summarise some of the findings from an in-depth case study of a multi-channel approach by an Australian federal government agency. The case study describes how the Australian Quarantine Inspection Service (AQIS) undertook a phased cross-sectoral implementation of EXDOC, an online G2B system designed to facilitate access to documentation for producers requiring a phytosanitary or health certificate to export.

EXDOC was introduced to support the preparation of export documentation for primary produce. The system accepts details of proposed exports from exporters, links these with the results of inspection of product and, where product is eligible, issues export permits, health certificates, certificates as to condition and Phytosanitary certificates to enable export. The central documents involved are the Request for Permit (RFP) provided by the exporter, and the Export Permit Number (EPN) and export documentation, both provided by AQIS.

Once printed, the certificates are ready for authorisation by an AQIS veterinarian, after which they are available to the exporter. EXDOC is now capable of printing the paper certificate (on secure, accountable paper) in the exporter's office for most commodities. Figure 1 below sets out the complete process as described here.

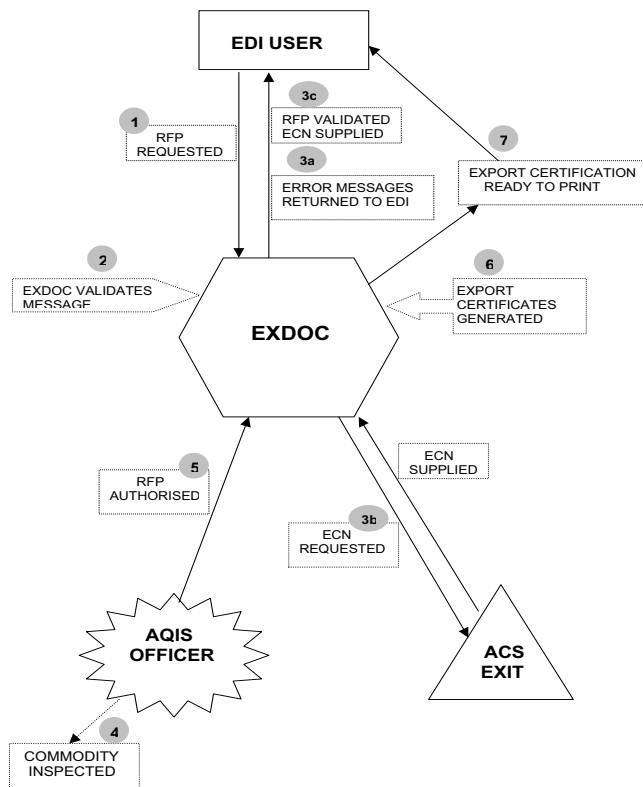


Figure 1: EXDOC Process Flow Chart (AQIS, October 2002)<sup>1</sup>

EXDOC represents a particular example of a cross-sectoral implementation by Government designed to offer online access to all exporters requiring documentation from AQIS in each sector from sole proprietor to billion dollar enterprises.

The EXDOC implementation has now been formally assessed as a *'technically robust and innovative export documentation system that will perform reliably for the duration of its expected 10 year useful life'* [10]. The implementation has been referred to as an exemplar of moves to Supply Chain Management principles and practice<sup>2</sup>.

Although both government and industry view the outcomes from EXDOC very positively, the implementation did experience a number of problems at various stages any one of which could easily have resulted in EXDOC becoming unsustainable. These problems have been discussed in detail in a number of other publications [11,12].

In this paper we highlight one issue in particular – that of Channel Rivalry and Coordination Issues. Within government agencies such as AQIS there are significant structural constraints and disincentives where senior management are required to coordinate G2B implementations such as EXDOC. Diffusion of cross-sectoral implementations depends on coordination of management across and between sectors. However in many agencies, the structural inducements for the move away from traditional management practices have not been put in place.

For example, within AQIS, promotion and salary for senior managers with EXDOC responsibilities remain linked solely to outcomes *within* the particular commodity sector (N Scott, AQIS, personal communication, 22

1 2003, saw the introduction of e-Cert, a united Australia/New Zealand web-based electronic certification system for agricultural exports. Adoption of the new E-cert system by most Asia-Pacific countries is expected in the next 12-18 months and by late 2003 by the US and Canada, establishing a world standard for export documentation. Certificates can be viewed on-line and data can be downloaded in XML format for integration into import management systems. The introduction of E-cert is intended to strengthen the security of traded food and lower the risk of forged documentation and fraudulent activity.

2 M. Stanton, the Department Head of AQIS saw the role of EXDOC as follows: 'In AQIS there is a risk of operating in silos – you tend to have people operating in fish or dairy or horticulture ..I am very keen to get the learnings from one area to spread across to another. EXDOC is an ideal example of that.' (M Stanton Executive Director, AQIS, May 19 2001)

July 2002). Earlier recommendations such as those of the Nairn Report (1997) did stimulate a move to a more facilitative management approach between government agencies such as AQIS and industry sectors. However, reviews of the EXDOC post meat implementation suggest that despite such stimuli, changes have been implemented only sporadically and inconsistently<sup>3</sup>. Lack of progress may well be related to the difficulty of changing established practices. Defined as *channel rivalry*, structural constraints represent a well-recognised and generic barrier to technology innovation uptake.

### **Discussion of Preliminary Findings:**

*Research question 1: Do attitudes towards G2B in micro and small businesses correlate with the personal preferences of the owner/CEO/head of family to G2C*

*Research question 2: Does reliance on third parties affect channel preference?*

To date we have found no direct evidence that indicates whether application software providers (ASPs) or other third parties such as legal advisors or accountants specifically influence channel preference in micro-businesses. However, the significant influence of external or third parties on small business decisions regarding selection of computer technology is well documented. For example, [9: p.379] found that, whereas larger firms call upon the technical expertise of their IS department to supplement vendor support, smaller businesses are totally reliant on the vendor, prior and subsequent to purchase of computer technology and the expertise and support of the vendor can significantly affect a small business's ongoing ability to implement new systems for specific users as well as its ability to manage staff charged with technical support.

### **Conclusion**

Electronic business has been defined as *'the complex fusion of business processes, enterprise applications and organisational structures necessary to create a high performance business model'* [13]. The challenge of E-business is the requirement for the organisation to institute fundamental changes. A firm will gain the strategic benefits offered by e-business only if it is capable of making the required major changes. Decisions must be made on how the firm chooses to communicate with its external stakeholders and through which media it sells. These decisions impact on such fundamental issues as established supplier/buyer relationships externally and management structures internally – survival issues for smaller firms, so highly susceptible to environmental forces. As a consequence, identifying the significant contexts for successful uptake of G2B offerings by micro-businesses is important to both policy makers and practitioners.

Multi-channel access between government, business and consumers has been widely promoted as a win/win for all stakeholders. In this paper we suggest that there are a number of assumptions about appropriate adoption strategies for business 'customers' underlying these expectations that have not been adequately explored to date. Our case study also supports the finding that a major problem in IS development is limited learning or the limited capability to reflect upon and reframe the institutional and cognitive grounds that support habitual ways of doing things. Developing best practice in G2B multi-channel delivery surely requires policy makers to move beyond these limitations.

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3 Defensive processes invoked by key stakeholders can serve to undermine IS implementations. Whereas facilitation relies on trust and cooperation, a top down management style is frequently invoked as a defensive process when stakeholders cannot agree on key issues (see Wastell, 1999; Ciborra and Lanzara, 1994; Lyytinen and Hirshcheim, 1987)

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