Optimising the Value Chain in the Automotive Industry Using B2B Portals

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Abstract

Successfully implementing ICT projects is a significant challenge for ICT managers. This paper addresses this problem by adding insights regarding critical success factors of B2B portals in the automotive industry to the existing knowledge in the field of ICT. It might be argued that if a company can become a leader and be more competent than other companies in using B2B portals in optimising the value chain, it should obtain a competitive advantage. ICT managers can potentially use the critical success factors identified in this paper as useful indications of what is critical when implementing or managing a B2B portal.

Keywords: B2B portals, automotive industry, value chain, critical success factors.

Introduction

During the recent recession the South African automobile market has been under pressure. Even though the motor industry remains a very strong component of the overall economy, the total number of vehicle sales in South Africa decreased.

As a result of the pressures in the industry, the need for motor manufacturers to be on the alert is apparent. Motor manufactures should ask themselves what they could do to stay in or move into a favourable competitive position.

For a company to be competitive it should perform a series of activities to deliver cost-effective or differentiated products. The functions that execute these activities are referred to as a firm's value chain (Porter 1985; Afuah & Tucci 2003). The value chain disaggregates a company into its strategically relevant activities, which allows for a systematic way of examining all the activities of a company for creating value and how they interact with each other. It contains primary activities such as logistics, marketing, sales, operations, service, and support activities such as human resource management, technology development, and procurement. Yet, the elements inside a company are not the only factors that will affect its competitiveness.

A manufacturer's value chain is embedded on a larger stream of activities and will have an effect on a company's competitiveness; this larger stream of activities is referred to as a value system (Porter & Millar, 1985). The value system is about optimising processes and depends not only on the processes within a company, but extends to those of its suppliers, its distribution channels and its customers. Hence, the value system of a company is closely dependent on the suppliers' value chains (upstream) and buyers' value chains (downstream). ICT is a strategic tool that plays a role not only in every single point in the value chain, but also in all of the linkages among individual activities including the activities between upstream and downstream value chains. Since the topic of the paper pertains to inter-organizational information systems, it will focus on the information delivery between different value systems through ICT.

The commonly used term for the enabler of improvement of value systems is electronic commerce (e-commerce). E-commerce refers to business transactions that take place over telecommunication networks (King et al., 2002). Although currently e-commerce has many forms such as business-to-customer (B2C) or customer-to-customer (C2C), traditionally it focused on business-to-business (B2B) transactions. This was done by making use of electronic data interchange (EDI) and led to increased efficiency in order processing and enabled just-in-time (JIT) delivery capabilities. JIT capabilities allowed for "lean" supply chain management.

Froehlich et al. (1999) emphasise the value that e-commerce, specifically B2B portals, can offer companies. Internet-based e-commerce and B2B portals in particular allow for new types of transactions that older technology such as EDI does not cater for. These portals offer a whole new way of doing B2B commerce and in return will lead to the need for companies to be informed on the factors that are critical to success (Afuah & Tucci, 2003).

There is a wide body of literature about critical success factors (CSF) which can be traced to the 1960s when Daniel (1961) discussed "success factors" for companies operating in particular industries. Based on Daniel's concept, Rockart (1979, p.85) formulated CSF as "the limited number of areas in which results, if they are satisfactory, will ensure successful competitive performance for the organization." Hence, Rockart further argues, CSFs should receive constant attention in order for the organisation to flourish. The critical success factors of B2B portals in enabling value systems would therefore be the areas or functions that must be executed correctly to ensure that the objective of the B2B portal is attained. In this case the objective of the B2B portal is to enable value systems.

Eid et al. (2002) divided the critical success factors of B2B commerce into five categories. Although these categories are not focused on B2B portals specifically, they can be used as a basis for determining the critical success factors for B2B portals.

This paper gives an understanding of the critical success factors of implementing B2B portals in the South African automotive industry as an enabler of value systems. Successfully implementing ICT projects is a significant challenge for ICT managers. This paper adds insights regarding critical success factors of B2B portals in the automotive industry to the existing knowledge in the field of ICT. It might be argued that if a company can become a leader and be more competent than other companies in using B2B portals in optimising the value chain, it should obtain a competitive edge. ICT managers can potentially use the critical success factors identified in this paper as useful indications of what is critical when implementing or managing a B2B portal.

The rest of the paper is organized as follows: The next section describes the research methodology employed. It is followed by the section that elaborates the previous writings about CSF of B2B portals. The next section is the in-depth description of a case suggested in the topic of this paper. This section also contains the discussion about the lessons learned from this case. The final section concludes the paper.

Research methodology

This paper focuses on how technology (B2B portals) can enable value systems. Although it touches on technological needs, the focus is more on managerial and organisational issues. The objective in terms of outcome is to highlight critical managerial and organisational issues for successful utilisation of technology. A qualitative research approach has been chosen to get an insight for the topic in question.

Qualitative research is categorised into "three categories based on the underlying research epistemology: positivist, interpretive and critical" (Myers, 1997, p. 2). One of the researchers was extensively involved in the implementation of the B2B portal which is the subject of this research. This involvement facilitated experience and knowledge about B2B portals, enabling the authors to subjectively understand and explain the social phenomena in the research. Thus, the main tenet of this

research is an "attempt to understand phenomena through accessing the meanings that participants assign them" which is the definition of interpretive research by Orlikowsky and Baroudi (1991, p.5).

As stated, this paper is based on a case of developing a B2B portal in an automobile production plant in South Africa. Thus, it involves the case study research method. Case study method is commonly used in information systems as well as other social sciences. It involves in-depth investigation of a single event with the aim of generalizing the knowledge obtained from that particular case. On the positive side such an empirical inquiry based on a real-life context is useful for getting an insight to the events as well as the reasons that formed them and their consequences. However, generalization of a single or a few cases may be problematic. Case study research can be positivist (Yin, 2002), interpretive (Walsham, 1995), or critical (Richardson, 2003).

Since one of the authors of this paper has actively been involved in developing the portal one might think that this is an example of action research. However, this is not the case in this research, because an important precondition in action research is the clear distinction of the research scientists and practitioners (Baskerville & Wood-Harper, 1996). This condition is not satisfied in this research since the author involved in the case is an employee of the company.

In order to explore the possible critical success factors, a short literature review is presented below. This constitutes secondary sources of material. The primary source of data comes from a case study on a South African motor manufacturer's B2B portal. This was done to evaluate the findings from the literature review. Because one of the researchers had extensive experience in the case study, the context of the case study is explained. Although a questionnaire was used in this paper its usage was only for the purpose of getting more insight to the case study. In other words, the survey instrument was designed only as an auxiliary to the qualitative case study research. The questionnaire addressed both internal (employees of the automotive manufacturer) and external users (automotive suppliers). Twenty questionnaires were sent out and eleven completed questionnaires were received back. These completed questionnaires were used to verify the findings of the literature study. To allow for interpretive methods of analysis, the questionnaire included mostly open-ended questions. Beyond the involvement in the portal development and the survey instrument company documents were used as a third source of knowledge in this research.

Previous writings about critical success factors of B2B e-commerce

There has been a wide body of literature about electronic commerce which has become increasingly common in the last decade. Some part of this literature is about the B2B portals which is one of the facilitators of e-commerce. Since the success of an e-commerce system is largely dependent on the success of the infrastructure it is based on, determinants of the B2B success have been a favourite research topic in this area.

Yet, there is little agreement about the CSFs of e-commerce and its infrastructure among the researchers. Huff et al. (1999) identified nine CSFs for e-commerce. Analyzing the existing literature, Angeles and Nath (2005) determined twelve variables for e-procurement. Based on the responses for a survey instrument, the authors performed factor analysis on those variables which yielded four CSFs: "the rationalisation of the firm's management of its supplier"; "redesigning affected business processes and influencing end-user/employee procurement-related behaviors"; "orchestrating an e-procurement technology planning process with one's suppliers and using intelligence in designing the software and mining the data it produces"; and "selecting an e-procurement solution and/or simultaneously participating in a number of electronic environments supporting e-procurement" (Angeles and Nath, 2005, p.15). Through a literature review and interviews with managers in EC firms, Sung (2006) compiled sixteen CSFs about e-commerce. In a recent article Cullen and Taylor (2009) identified five factors that influence successful e-commerce use in the health sector of the UK where the factors are "system quality," "information quality," "management and use," "world wide web - assurance and empathy," and "trust."

Eid et al. (2002) divided the critical success factors of B2B commerce into five categories, namely marketing strategy-related factors, website-related factors, global factors, internal factors, and external factors. Below, these categories are used as the baseline and are enriched by other literature in order to define the critical success factors of B2B commerce and its role in the enhancement of value systems. Mainly this approach was adopted for the purposes of this research.

Unlike the other types of e-commerce like B2C and C2C where customers can run into the millions, the B2B usually involves a smaller number of large business partners that perform high volume transactions in terms of amount or numbers. Due to the inter-organizational nature of the B2B commerce the alignment of partners is extremely important in this type of e-commerce. Hence, Aggestam and Söderström's (2006) "partner alignment" was adopted as the sixth category in this paper.

Categories for CSFs for e-commerce

Category A: Marketing strategy-related factors

Top management support, commitment, setting strategic goals, objectives and project management: One of the critical success factors identified by Remus (2006) is the support of top management. Sutherland (2006) backs up this claim by pointing out that there needs to be leadership and a champion to drive the process of implementing a B2B portal.

Eid et al. (2002) argue that the success of the B2B implementation is determined by the clarity of the strategic goals. Citing Davydow (2001), Remus (2006, p.543) agrees and states that "a portal can only be successful if the corresponding portal strategy, which outlines the development, introduction and evolution of the portal, is aligned with the e-business and overall corporate strategy." Top management should set strategic goals. The highest-level objective of a B2B portal strategy should therefore be to improve a company's position in the market.

Evaluating and understanding a company's current level of supply chain maturity and of e-commerce integration is a good starting point in the development of a strategy for using the extended value chain in order to obtain a competitive edge (Sherer, Kohli, & Wu, 2004). On a slightly lower level, top management should ensure that normal project management is carried out for portal projects, which are similar to other IT projects and the resource requirements should also be determined early in a B2B portal project (Remus, 2006).

Integrating the Internet with marketing strategy: In the case of B2B portals, the B2B portal as such would not be included in the marketing strategy of the company, but the need for the portal must be marketed to stakeholders. The success of a portal is partly dependent on all parties having a common interest and a stake in the outcome (Sutherland, 2006). This can only be achieved when the portal is marketed through higher levels within the company. The focus is not so much on marketing the portal, but on marketing the concept or benefits that the portal can offer the supply chain.

Collaboration and potential audience: Collaboration emphasises the important partnership between trading partners and stakeholders (Eid et al., 2002). Value systems should strive to improve not only the internal processes of a company but also all the chains that are linked to it (Handfield & Nichols, 2002). Collaborative efforts should ideally result in gains for all parties (Sutherland, 2006). In the supply chain the major stakeholders are the buyers, suppliers and service providers (transporters). B2B portals should therefore have collaboration as an objective.

Category B: Website-related factors (website design, development, growth and marketing)

The B2B portal must have a good user interface foundation, which is a mechanism for monitoring and controlling the workflow (Froehlich et al., 1999). The design of a user interface should also be

derived from business activities and processes, and it should be intuitive and structured according to general design principles (Remus, 2006).

It should go further than that, however. Website design must strive to allow for information sharing and transaction integration. A B2B portal is in essence a system that makes a number of web applications available via a single entry point. These applications allow for communication between companies by means of information sharing and transaction integration (Clarke & Flaherty, 2003).

The portal's information architecture should be defined for navigation, structure, role concept and personalisation. Open and flexible integration architecture has to be developed that is capable of bundling services from several applications in one portal and also those that are dispersed across various organisations (Remus, 2006).

The 5Ds approach – define, design, develop, deliver and defend – can be used as a guideline for portal development (Clarke & Flaherty, 2003). Business environments – and even more so the Internet environment – are characterised by rapid and radical change. To succeed, information systems should therefore be agile, flexible and adaptable (Remus, 2006).

If the system does not adapt to meet the user's requirements (soft issues), the system will fail (Malhotra, 2002). If the system meets business requirements and the advantages are evident, the B2B system will almost market itself.

Category C: Global factors

Findings suggest that e-commerce is strongly linked to regional issues (Almeida et al., 1999). B2B portal managers must note that portal users may come from different regions and time zones. Because B2B portals can be open to an international market, the system possibly requires 24 hours a day, 7 days a week accessibility (Froehlich et al., 1999). Other variables to consider are language and cultural issues, national customs, currency conversions and logistical issues.

Category D: Internal factors

Technological infrastructure: B2B interaction has a tendency to become overly complex in nature. This tendency can be avoided by a well-constructed portal that offers simpler, but effective solutions (Bodorik et al., 1999).

Using the Internet does not require specific client software other than a web browser and accessibility to the Internet (Froehlich et al., 1999). Even though it is easy to access portals through the Internet, the required technical infrastructure should be of the appropriate quality.

Internal culture / Sales force / Business processes: ICT does not create business benefits merely through its implementation. Business processes should be changed in conjunction with ICT to effectively utilise and improve value systems (Sherer & Kohli, 2004). The prevailing business processes should be understood. Only then can enhancements be implemented. To achieve maximum benefits from B2B portals, the processes and activities within the organisation have to be aligned with the newly implemented system (Remus, 2006). Organisations should be aware that the use of portals will change the working environment and sometimes even the culture of their staff. Organisations should be sensitive to the impact this may have on working relationships in the organisation (ibid.).

End-user involvement / Training program: The success of B2B portals is heavily dependent on user acceptance and practice (Remus, 2006). Because implementing B2B portals will result in change in the organisation and its people, this change should be managed and communicated. People in organisations have become tired of hearing about change after the fact, and tend to focus on earlier negative experiences of change (Eriksson, 2004). These experiences may influence the user's acceptance and usage of a portal. To ensure that all parties are informed of the future change, there

should, therefore, be strong communication inwards and outwards (Remus, 2006). The success of B2B portals is linked to the involvement of all parties and the appropriate training of portal users (Eid et al., 2002). McGaughey (2002) states not only that end users should be involved in development and training, but also that internal and external users should participate in the evaluation of a B2B site.

Category E: External factors

Trust, security and successful relationships: One of the critical success factors of a system (Eid et al., 2002) is that users must be able to trust it. In other words, a system's success is subject to the trust of users in it (Sutherland, 2006). Trust is important because stakeholders may become vulnerable to the actions of another party. Certain actions might even affect the whole supply chain (Shen et al., 2006). For example, if a freight forwarder did not enquire at a portal to obtain information regarding deliveries, this would result in the breakdown of supply. The security of systems has a direct relationship with trust. A system cannot be trusted if the appropriate security is not in place. To build trust there should be successful inter-organisational relationships throughout a value system (Eid et al., 2002). Champions can be used to facilitate change and build and maintain relationships (Woodside et al., 2004).

Internet affordable access: The users of a system obviously must have access to the system. B2B portal users must therefore have access to the Internet (if required) and the appropriate connection speed must be available (Eid et al., 2002).

Customer acceptance: Special efforts should be made to motivate users to use an online environment (Eid et al., 2002). This can be accomplished by ensuring that the B2B system will be beneficial to the supply chain as a whole (Handfield & Nichols, 2002). The benefits should also be communicated to the parties. To increase the probability of success, a portal must include the three major drivers of portal user acquisition and retention: customisation (customised for a specific user); flexibility (adapting to changing environments); and relevance (pertinent and value-adding content) (Clarke & Flaherty, 2003). The implementation of portals can cause resistance, and this means that change management must be applied to facilitate the change (Remus, 2006).

Category F: Partner Alignment

Although partner alignment is a closely related with the internal and external factors it is not exactly the same as those. Internal and external factors are mainly for either smaller business partners or for partners whose transactions are not voluminous in amount or numbers. If the B2B portal is designed for a small number of partners that perform an important volume of business transactions, then those partners' special requirements should be taken into consideration. In other words, the partner alignment category involves strategic, rather than tactical, partnerships.

Being a strategic inter-organization system, a B2B portal is quite different than an information system that involves the activities of a single company. Aggestam and Söderström (2006) argue that common goals and the responsibilities and commitments of the parties should be determined through a Trading Partner Agreement (TPA). The TPA should not only identify the boundaries of the parties' goals, responsibilities, and commitments, but it should also determine the boundaries of the entire system. Such a determination would prevent possible future disagreements and frictions between the parties.

Case study

The case study involves a fairly well received B2B portal (SupplierNet). SupplierNet is an SAP-based B2B portal made available by a motor manufacturer to its suppliers. The company is based in South Africa. It is part of a German automotive manufacturing group and during normal production hours produces approximately 250 cars a day.

The suppliers do not need any special software installations other than Internet access. SupplierNet provides suppliers with an easy to use platform for accessing the plant's communication functions/applications. SupplierNet acts as a single point of entry for suppliers, and more or less fifty suppliers access SupplierNet each day. It also provides authorisation and authentication to manage access to functions and provide confidentiality to the supplier. SupplierNet enables suppliers to obtain access to live data at the plant. The system is role-based; i.e. functions are assigned to roles, which are then assigned to SupplierNet users. SupplierNet is hosted within the SAP system and was developed in-house using SAP NetWeaver functionality. SupplierNet is programmed in business server pages (BSP). BSPs use ABAP (a computer language used in the SAP environment) and hypertext mark-up language (HTML) in order to allow for programming of web pages.

One of the most used functions of SupplierNet is the "Call-off" function. It is a key function in enabling the value system. This function permits suppliers to view information regarding deliveries that must be made to the plant and lets them to send early notifications to the plant that they are dispatching goods. It allows the plant to ensure that all necessary paperwork is included in the delivery. The function also gives transparency to both the plant and the supplier regarding the status of deliveries, from the dispatch of goods until the payment is made to the supplier.

Global factors

The first of the five sections for critical success factors that were identified in the literature study was global factors (Eid et al., 2002). For example, process partners from other regions might see a B2B portal differently. Because B2B portals can be open to international markets, the portal should probably be available 24/7 (Froehlich et al., 1999). The connection speed of the portal users must also be considered. The respondents confirmed that the global factors are critical for them, and recommended that all value chain partners should be involved when addressing aspects of B2B portals.

Marketing strategy-related factors

The second section consisted of marketing strategy-related factors. The literature study pointed out that it is important to have a leader and a champion to drive the process of implementing a B2B portal (Sutherland, 2006). There should therefore be a leader to communicate the advantages of collaboration to all parties that are involved (Eid et al., 2002). The respondents were aware of the importance of effective value systems; top management support; leadership; clear goals and strategy; understanding of current scenario; project management; marketing of the portal; collaboration between the stakeholders of the portal; and advantages for all parties. All elements identified in the literature study were confirmed by the case study as important.

Website-related factors

In the section on website related factors, all items identified in the literature study were seen as important by the respondents of the case study. The participants confirmed the statement by Froehlich et al. (1999) that a good user interface foundation is important. It corroborated the findings by Clarke and Flaherty (2003) that the system should be designed in such a way that it allows for sharing of information and transaction integration. It also substantiated the findings by Froehlich et al (1999) that B2B portals enable "live" transactions that EDI does not support. In the case study it was also suggested that integration should be possible later via system-to-system communication and not only through B2B portals. B2B portals are system-to-human applications that require a user to enter data into the B2B portal. The next evolution step would be to allow for "live" system-to-system applications without a user in the middle, actually moving away from website logic and also more "live" than EDI. This can be done when one system can execute a live transaction in another system. This form of technology is already used in systems such as automatic teller machines (ATM). (You can withdraw money from an ATM that is not the one that you bank with and this involves a system-to-system transaction between the banks.) Future research can be directed into using this technology

in the automotive industry in order to allow for system-to-system live transactions, for example the use of Remote Function Calls (RFCs) between two SAP systems. This will be an important step in further automating the business transactions and reduce human workload and possible errors. The case study also identified that even though the SupplierNet was seen as a very successful B2B portal, it could be developed further in order to meet future business functionality needs. This supports the statement that in order to succeed, information systems should be agile, flexible and adaptable (Remus, 2006). In general, good design principles should be followed to allow for a system that is user friendly and that the system should also be developed with a focus on meeting users' needs.

Internal factors

The internal factors are items within the organisation that might be critical in ensuring the success of a portal (Eid et al., 2002). The participants agreed that elements identified in the literature study are indeed critical for B2B portals. It was confirmed that portals must have the correct infrastructure, thereby allowing the portal to be accessible when required. The focus is on the user, and the infrastructure should be applicable to the user's needs. For example, it was found that the SupplierNet is not always available, but that this "lack" of availability did not affect the users in such a way that they became negative about the portal. Therefore to have the appropriate infrastructure is important.

The statement that business processes should be changed in conjunction with ICT to effectively utilise and improve value systems (Sherer & Kohli, 2004) was not well received by all participants. Some respondents, all of whom came from the user department, thought that the business processes should not be adjusted to fit the portal, but that the portal must support the business processes. It is therefore important not to misunderstand the statement by Sherer and Kohli (2004). A portal will be implemented to support business processes, but the business processes must change to include the portal within the steps of the process. This goes hand in hand with the statement that the success of B2B portals is heavily dependent on user acceptance and usage (Remus, 2006). One form of easing the process of user acceptance is to involve and train users (Eid et al., 2002). The participants of the case study supported this statement and some highlighted its importance with statements such as: "The co-operation from all parties involved is needed", and "Proper user training is important" when asked to comment on the most critical success factor regarding B2B portals.

External factors

In addition to internal factors certain external factors might be critical to the success of a B2B portal (Eid et al., 2002). In the literature study it was found that the success of a system is subject to the trust that users have in the system (Sutherland, 2006). This finding was supported in the case study. One participant included this as one of the most important critical success factors of B2B portals. Because B2B portals are available to external users, it is important to ensure that these users trust the system. The case study did not identify what would ensure this, but pointed out that it is a critical success factor.

Because a B2B portal will be used by external parties, it is obviously necessary that it should be accessible to the outside (Eid et al., 2002). This point was not highlighted by the result of the case study, but it is a requisite that the portal must be accessible to its users.

Another requisite is that not only internal users/customers must accept the system but also the external ones. This was also confirmed in the case study as being a critical success factor. As with internal user acceptance, certain things can be done to aid it, but some aspects are more applicable to external users. For example, ensuring that the B2B system is beneficial for the supply chain as a whole (Handfield & Nichols, 2002) and communicating this benefit to the users will allow them to realise the advantages of the system and therefore be more likely to accept it.

Partner alignment

As stated, partner alignment is very important for strategic partners and SupplierNet accomplishes this task effectively. For example, in the survey instrument one of the users states that he uses the system for

> *"payment reconciliations and to check that all info given by contractors corresponds with what I have on record, e.g. payments and hours worked."*

Another user comments that although the system makes a good job for integration there is still room for its development:

> *"There is going to be so much integration between logistics and the supplier and we require a tool that will support our vision. The SupplierNet is still in its infancy, but it is so good already."*

When asked for stating the CSFs of such portals another user comments:

> *"Cooperation from all parties involved."*

Enabling value systems

Items that the case study identified as important, but which were not identified in the literature study, were elements specific to an enabling value system. The case study identified that portals should provide valuable functions and supporting tools (e.g. printing labels) for the business. Portals should support business processes and process integration. To be able to do that, a B2B portal should allow for live two-way sharing of relevant and valuable information. Live two-way communication is exactly the new type of transactions that Froehlich et al. (1999) mentioned in the literature. Because a manufacturer's value chain is embedded in a larger stream of activities (Afuah & Tucci, 2003), the main objective of a B2B portal should be to support and enable the business by allowing for communication and integration between all affected process partners within the whole value system.

By combining the findings from the literature study and the case study certain elements were identified as critical success factors of B2B portals enabling value systems in the South African automotive industry. These are summarised in Table 1 below.

Table 1. Critical success factors of B2B portals enabling value systems.

Global factors
• Users of various demographics must be catered for
• All value chain partners should be involved
Marketing strategy-related factors
• The importance of effective value systems must be known
• Top management support is imperative
• Leadership in implementing a portal is a necessity
• Clear goals and strategy for a B2B portal are critical
• A clear understanding of the current business scenarios and requirements should be obtained
• Project management principles should be followed
• The marketing of the portal is a requirement
• Collaboration between the stakeholders of the portal will be an advantage
• There should be advantages for all parties and these advantages should be known

Website-related factors
• Good website design is a requirement
• Quick information sharing will increase the effectiveness of a portal
• The portal must constantly grow in order to respond to constant change
• The portal must meet user requirements
• For better process integration, the portal should be integrated with the ERP system
Internal factors
• An appropriate technological infrastructure should be in place
• A portal should be developed to support business processes
• Acceptance by users is a requirement. If a business process requires a process to be followed on the portal, the person responsible should follow this process, for example by printing labels
• End-user involvement and training should be conducted
External factors
• It should be ensured that the system/portal can be trusted
• Appropriate accessibility of the portal should be available
• Ensuring customer acceptance is an important factor
Partner alignment
• The most important aspect in an inter-organizational environment
• Mutual determination of tasks and responsibilities is crucial
Enabling value system
• The portal should provide valuable functions and supporting tools
• The portal should allow for live two-way share of relevant and valuable information. The portal must support business processes and process integration

Conclusion

This paper focused on determining critical success factors for B2B portals to enable value systems in the South African automotive industry. Six groups were highlighted as critical to success: global factors; enabling value system; marketing strategy-related factors; website-related factors; internal factors; external factors; and partner alignment. Some scenario-specific requirements that will be critical to success might not have been included. These critical success factors indicate to managers, system analysts and value chain partners the elements that are important for B2B portals if they are to be used to enable value systems.

There are as many sets of CSFs as the number of articles in the B2B literature and this indicates that a contingency approach is needed for determining and analysing the CSFs in this area. However, B2B portals, by definition, are inter-organizational systems which necessitate the alignment of the partners. This is very important, because such an alignment is a prerequisite for the satisfaction of parties which is, in turn, the *sine qua non* for the continuation of partnership. This has been emphasised by many users from all partner organizations in this research.

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