8-2010

Critical Success Factors for Multi-Channel Service Delivery (MCSD)

Marijn Janssen
Delft University of Technology, m.f.w.h.a.janssen@tudelft.nl

Critical Success Factors for Multi-Channel Service Delivery (MCSD)

Marijn Janssen
Delft University of Technology
m.f.w.h.a.janssen@tudelft.nl

George Kuk
Nottingham University, Business school
g.kuk@nottingham.ac.uk

ABSTRACT

Multi-channel service delivery is increasingly used in the interactions with citizens and businesses. Some projects have been undertaken successfully, whereas others failed and the reasons for success are not entirely clear. In this paper we focus on success factors for the development and implementation of multi-channel service delivery strategy. The factors are derived based on a document analysis and expanded and validated by public sector staff working in this field. In total 21 CSF were found and the top eight critical factors concern especially institutional and macro issues related to managing the interdependencies of strategic decisions, lobbying for strong political support and management buy-in, harnessing scarce resources, determining the right channel and services mix, enhancing inter-organizational integration and coordination, and managing clients' perceptions. The findings should help to improve the development of service delivery strategies.

Keywords (Required)

E-government, Critical Success Factors, Integrated Service Delivery, Strategy, Multi-channel management

INTRODUCTION

In the past few years, governmental agencies have been using multi-channels to deliver their services. In the commercial sector, the whole process of developing, integration and managing multiple service delivery channels can be called *multi-channel management* (MCM) (e.g. Easingwood et al. 1996). We prefer to use the term multi-channel service delivery (MCSD) over MCM as this term refers to the way of interacting with citizens and businesses and to the internal processes within organizations. MCSD increases the number of access points for interacting with the governments as customers can select their preferred channels given their needs and circumstances (Janssen et al. 2008). In the Western countries, the most preferred channels for accessing services include the Internet, telephone and front-desk (Deursen et al. 2006; Ebbers et al. 2008). There are obvious benefits associated with MC, yet realizing MCSD is difficult. Governments are seeking for ways to guide citizens to use electronic channels as a way to reduce costs (Ebbers et al. 2008). Channels are often competing for scare resources and some of the channels can only be maintained at the expense of high cost in addition to the coordination overheads accrued to managing the interdependencies across channels (Janssen et al. 2008). Furthermore, the adoption of a specific MC strategy might either constrain or enable a different product/service mix for each channel, and notably, the success rate of completing a specific service delivery is dependent upon the channel inputs/transactions across different governmental departments (Janssen et al. 2008). There are continuing problems with delivering ICT on time, on budget, having the desired functionality. Implementing MC can be risky as critical success factors (CSF) have neither been researched sufficiently nor document adequately (Rosacker et al. 2008). This research focuses on the identification of CSF for MCSD. These findings should help governments who want to implement multi-channel management as part of their service provisioning strategy.

Rockart (1979) first introduced the term *critical success factor* in his efforts to help CEO's develop systems for gathering information critical to them by specifying what exactly was their need for information in achieving the desired objectives. Rockart defined CSFs as the few key areas in which things must go right for an organization to thrive and these are 'areas of activity that should receive constant and careful attention from management' (Rockart 1979). If one of these areas fails, or results are insufficient, the efforts will fail and not resulted in the expected benefits. These critical areas must be identified and acted upon to ensure success. Ever since then research in CSF has been carried out in many different fields of business and research and the definition of what constitutes a CSF has evolved (e.g. Gil-Garcıa et al. 2005; Leidecker et al. 1984). For Leidecker and Bruno (1984), *"Critical Success Factors (CSF's) are those characteristics, conditions, or variables that when properly sustained, maintained, or managed can have a significant impact on the success of a firm competing in a particular industry"*. CSF are often seen to drive or break a project. In this paper we view CSF as those areas of activity that need to be addressed to develop a MCSD service delivery strategy.

RESEARCH APPROACH

The identification and validation of the CSF was conducted using three research steps. First, literature about CSF was investigated and documents related to MCSD practices in the Netherlands were investigated in the period from December 2008 till March 2009. Two researchers identified the CSF independent of each other, then results were compared with each other to derive one united set of CSF. This iterative process stopped once two independent coders reached the same CSF taxonomy. Next, the CSFs were validated using public sector staff working in the field of multi-channel management in January 2009. We wanted to know which CSF are considered as more important as others, as the idea of CSF is that they identify a few key areas. Participants included persons from various large governmental agencies, and municipalities which had experiences with MCSD or where in the process of introducing MCSD. The representatives consisted of mainly public managers, account managers, decision-makers and others at the management level or involved in realizing MCSD in organization. The results resulted in a further detailing of the CSF and a prioritizing of the importance of the CSF. The relative importance of the CSF identified from the literature review was explored in a survey using Likert type of rating scale questions. The scale has been used in prior research on CSF (Li et al. 2005). Next, the data was analyzed using the interrater reliability to look at the level of consistency among respondents of the same organization.

OVERVIEW OF CSF

A large number of studies have been conducted over the years to categorize and generate models of the factors which influence information systems development success (DeLone et al. 1992; Gil-García et al. 2005; Lu et al. 2006; Wixom et al. 2001). In the field of e-government Gil-Garcia and Pardo (2005) found information and data, information technology, organizational and managerial, legal and regulatory and institutional and environmental type of factors. Most CSF studies focus on certain domain like data management (Guynes et al. 1996), data warehouses (Wixom et al. 2001) interorganizational information systems (IOS) (Lu et al. 2006), information centers (IC) (Guimaraes et al. 1994), risk in software development (Lyttinen et al. 1999) or Enterprise Resource Planning (ERP) (Holland et al. 1999). Yet none of them focused on developing CSF for multi-channel service deliver strategies. We follow the domain orientation by identifying CSF in the field of MCSD.

MCSD differs from these areas as the focus on having multiple channels to serve the client base. As such, we put the multiple channels central in our model and label this as 'serving the clients'. The channels should be developed, organized, coordinated and management which provides the second category labeled as 'organization'. Finally, the client plays a central role, as the client should be willingly to use new service delivery channels and some client segments might need to be motivated to abandon the old physical channels to accomplish both a more efficient government and to better serve client group by letting them use channels that are available anytime and anyplace Figure 1 shows the classification in which the clients, the organization and the interactions between client-related and organizational aspects of MCSD.
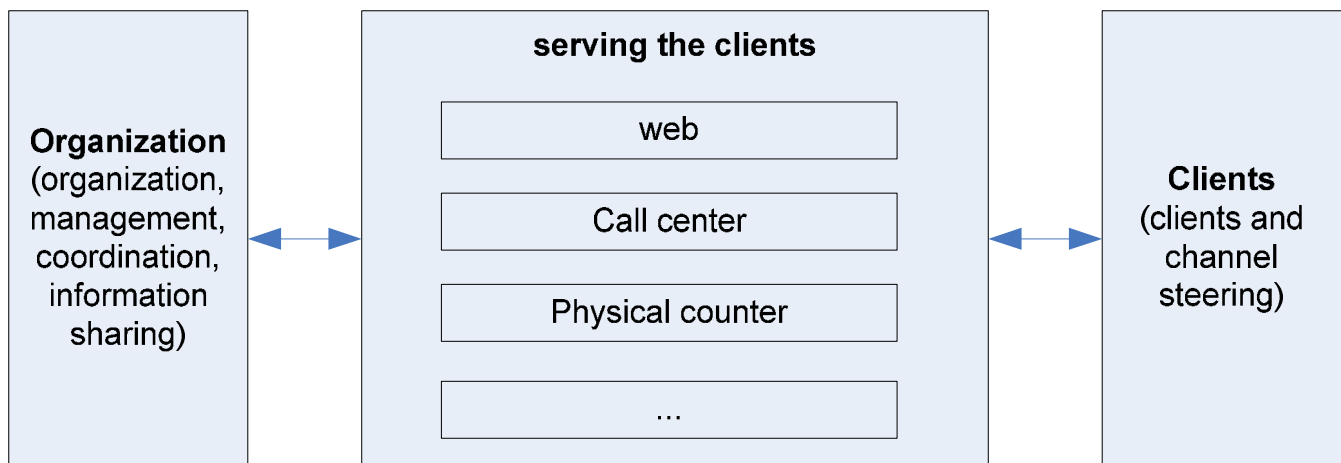

Figure 1. Classification of CSF for multi-channel service delivery

In this research we view CSF as the areas that need to be given attention when developing a MCSD service delivery strategy. We refrain from how these areas should be filled in as various types of strategies can be taken. Furthermore a strategy should be coherent and one CSF can influence the execution in other channels.

The CSF identified in this paper are Based on the coding the following three main categories of CSF were identified.

1. *Clients*. these CSFs concern the factors relating to the understanding of clients. This is treated as a separate category as many government organizations treat their clients not as customers and customers are not given any other options apart from dealing with the destined organizations through the given channels.

2. *Organization*; these CSFs concern the organizational factors that need to consider to successfully forming and implementing the MCSD strategy within an organization.

3. *Client steering*; these CSFs concern which factors to use for steering clients towards the preferred channel of the organization. It focuses on what should be known about the client in order to enact behavioural switching from the clients.

Six CSF factors were identified in the first category of clients; ten in the second category; and five in the last category. This distribution shows the significance of the organizational factors in MCSD. This is not surprisingly as organizational restructuring is often needed to create an effective MCSD service delivery strategy (e.g., Ebbers et al. 2008; Holland et al. 1999). Table 1 provides an overview and brief explanation of these factors. The 21 CSF concern the areas that need to be addressed and some illustrative example are given that might give some direction for strategy implementation. We did not analyze these directions and whether they were or were not successful. As such the CSF should not be viewed as a set of capabilities which are necessary to excel in MCSD strategy development, instead they should be viewed as areas that need attention.

Table 1. Overview of factors

	Name	Description
Category: Serving the client		
1.	Adjust MCSD to client preferences	Optimal MCSD needs to consider the reasons underlying the choice of a specific channel including ease of use, speed, user prior experience, security and habit.
2.	Understand client perceptions	Clients might simply not know potential channels, the services available per channel and clients typically stick to their habits. It is essential to understand the clients' perceptions on the various channels and services.
3.	Services per channel	Informing clients of the types of services offered in a specific channel but internally managing specific services per channel.
4.	Personal factors and channels	Different types of target groups require for different types of channels. For example, services aimed at serving young clients can rely more heavily on the use of web-based channels than groups with low incomes and no online access. The personal factors and segments should be analyzed.
5.	Situational factors and channels	Situational factors like time and place of accessing services should be taken into consideration. For example, clients tend to resort to the traditional physical channels while they are in the neighbourhood, or phone services while travelling.
6.	Unpredictable client behavior	Often it seems that clients do not consistently select channels, as other factors might attribute to the selection of channels. Therefore the linking of the use of services to certain channels requires in-depth analyses.
Category: Organization		
7.	Strong political and management support	Top management support is one of the most important critical success factors for project success (Younga et al. 2008)
8.	Monitor implications of MCSD strategies	The selection of service channels is interdependent as they may be competing for same resources. Whether the intended implications do or do not occur once a strategy is implemented should be monitored and might in turn influence the MCSD strategy.
9.	Number and type of channels	Different businesses and different target groups require different numbers and types of channels available. Some businesses can suffice in having just a small number of channels available in having an optimal communication with its clients. Whereas other companies might need a larger and more varied assortment of channels available to them for this. Whereas '5 situational factors and channels' focus on understanding the clients, this factors focus on the selection of the number of types of channels based on certain input.

	10. Insight into client channel choice	Strategies might be formulated without taking into account the client perceptions, although these might be (partly) now as indicated by the second CSF, understand client perceptions. The underlying reasons of clients' preferred choice should contribute to strategy making. This does not automatically mean that the strategy needs to be based on the client needs, as the strategy can consciously ignore client needs and perceptions or assume that they will change once new service delivery channels are introduced.
	11. Scarce resources and allocation	Resources are limited and especially small organizations cannot develop and maintain all possible service delivery channels. Furthermore, the introducing of multiple service channels can start in the back office, making the organization ready for the use of new channels, or in the front office, first introducing new channels and at a later stage creating a back office that is able to handle these channels in an efficient way.
	12. Sound coordination framework	Service channels might not necessarily be consistent and might provide different or even opposing information. The services, information and processes within the channels should be coordinated in such a manner that information is available on every channel.
	13. Coordination responsibility	Typical MCSD responsibilities are fragmented over many departments and it is not clear who has the overall responsibility. Persons within the organization made it a personal mission to organize the channel coordination. The sound coordination framework should not only be on paper, someone needs to be making sure the coordination is upheld.
	14. Organization wide Integral approach	Having MCSD for a single process or services is too limited. An integral approach assures results in the long run, especially the choice concerning when which services will be made available in which service delivery channel. Sometimes a service needs to be available in all channels at the same time, whereas in other cases new service can be introduced gradually.
	15. Information sharing among channels	Up-to-date and timely information is essential. If somebody reaches the business by phone with a question about a just submitted online enquiry, information on that inquiry should be available to the person on the pone. Information should be shared and synchronized among service channels.
	16. Technical feasibility	Many organizations have legacy systems in which information cannot be easily accessed.
Category: Client and Channel steering		
	17. Change client perceptions	Whereas the second CSF is focussed on manage client perception, this factor concerns the influencing of clients' perception. To achieve actual cost reductions organization there might be a need to ensure that clients use these channels that consume the least resources. Communication actions to create awareness or price differentiating per channel are possible actions to influence perception.
	18. Make use of often used channels	Often used channels can be used to inform the client on the other channels that are available in satisfying their needs. For example if somebody calls and the answer is on the web, they caller might be directed to the internet. In this way the caller learns to use a new channel (which should result in less calls and more efficiency).
	19. Monitor implications of client steering	By steering the client towards a specific channel cost reductions and customer satisfaction can be achieved. However steering does not perform as envisaged or could lead to overload on a single (or multiple) channels. Therefore the implications of steering should be monitored beforehand and afterwards.
	20. Correct choice of steering instruments	Choices on steering instruments can also have adverse effects on clients channel perceptions. For example, using financial instruments to raise the cost for a specific channel, could lead to negative reactions including disregarding the channel that the steering was intended towards.
	21. Sufficient and correct channel information	it is more difficult to steer clients towards a preferred channel without making sufficient and correct information to the clients, as they are reluctant to use this channel as they do not know what to expect

Results analyses and discussion

CSF are often viewed as a few key areas, therefore we wanted to know whether the set of 21 CSF could be further reduced. The 21 CSF as presented in Table 1 were evaluated by surveying persons from various large governmental agencies, and municipalities to score the factors on a 5-scale Likert scale. The average score for each of the CSF are shown in the 'average' column of Table 2. The highest score is 4.5 for 'Monitor implications of MCSD strategies'' whereas the lowest score is 2.33

for "make use of often used channels'. The latter factor is the only one that is below the middle (2.5) on a 5-points Liker scale. There are six factors have a score of 4 or higher and all are in the organization category, these factors are

1. Strong political support

2. Monitor implications of MCSD strategies

3. Insight into client channel choice

4. Scarce resources and allocation

5. Coordination responsibility

6. Organization wide integral approach

Analyses of the scores show that the CSF in the organization category showed higher than the CSF in the clients and channel steering category. This might be explained from the fact that many MCSD are initiatives are driven by efficiency-related objectives to reduce the administrative burden, and are hardly driven by a need for improving customer-orientation. As budgets are reduced, most governmental organizations have an internal focus on increasing efficiency. Furthermore, the risk averse behavior of the pubic sector might result in a focus on realizing MCSD and avoiding risks and not on more customer orientation. Furthermore the organizational factors need to be addressed before anything can be realized, whereas the client and channel steering factors can more easily be ignored.

Organizations that were successful in terms of their MCSD strategy were compared to their less successful counterparts. The latter will be denoted as 'mediocre'. Our next question is whether there is any substantial difference between the successful and the mediocre organizations. Following James et al. (1993), we calculated the interrater reliability (r *wg*) score for each critical success factor. The results of this analysis are shown in the last four columns of Table 2. For the successful organizations, there were strong disagreements (below 60%) on nine critical factors, seven of which are related to clients and channel steering, and two related to organization and strategy. For the mediocre organizations, disagreements were found among eleven factors, eight of which are related to clients and channel steering. The disagreements can be attributed to the fact that the exogenous nature of the factors. For example, these factors include 'manage client perceptions', 'personal factors and channels', 'situational factors and channels' and unpredictable client behaviour'. They underline the performative aspects of organizational routines in dealing with the possible variations in managing multiple service channels. Whereas strong agreements were found with more macro and endogenous factors, including 'strong political and management support', 'scare resource and allocation', 'coordination responsibility' and 'organization wide integral approach'. There are less variations as the endogenous factors are mainly used in guiding, accounting for and referring to the performative aspect of routines (Feldman et al. 2003).

Table 2. The averaged importance scores and interrater reliability

	Average	Successful	r wg	Mediocre	r wg
Clients					
1 Adjust MCM to client preferences	3,60	3,40	60,00%	4,00	81,94%
2 Understand client perceptions	3,41	4,00	**40,00%**	2,92	**35,45%**
3 Services per channel	3,61	3,17	71,67%	3,83	**31,82%**
4 Personal factors and channels	3,50	2,83	**31,67%**	3,83	**49,09%**
5 Situational factors and channels	3,06	3,00	**0,00%**	3,08	**0,00%**
6 Unpredictable client behaviour	2,83	3,17	**31,67%**	2,67	**16,36%**
Organization and strategy					
7 Strong political and management support	4,39	4,33	86,67%	4,42	87,27%
8 Monitor implications of MCM strategies	4,00	4,50	65,00%	3,75	**39,09%**
9 Number and type of channels	3,78	4,17	**0,00%**	3,67	76,36%
10 Insight into client channel choice	4,06	3,50	65,00%	4,33	69,09%
11 Scarce resources and allocation	4,33	4,33	86,67%	4,33	87,27%
12 Sound coordination framework	3,33	4,00	60,00%	3,27	75,00%
13 Coordination responsibility	4,11	4,17	71,67%	4,08	81,82%
14 Organization wide integral approach	4,00	4,33	66,67%	3,75	80,00%
15 Information sharing among channels	3,44	3,33	66,67%	3,50	**26,36%**
16 Technical feasibility	3,39	2,83	**0,00%**	3,67	**0,00%**
Channel steering					
17 Change client perceptions	3,50	3,50	65,00%	3,50	**47,27%**
18 Make use of often used channels	2,78	2,33	**0,00%**	3,00	71,82%
19 Monitor implications of channel steering	3,39	3,33	**6,67%**	3,42	**57,27%**
20 Correct choice of steering instruments	3,00	3,33	**6,67%**	3,09	**45,45%**
21 Sufficient and correct channel information	3,67	3,00	80,00%	4,08	77,27%

NB. Factors with r wg lower than 60% were bolded.

Table 3 shows the rank orderings among the twenty-one critical success factors by contrasting between the successful and the mediocre organizations. For the successful organizations, the top eight critical factors concern institutional and macro issues related to managing the interdependencies of strategic decisions, lobbying for strong political support and management buy-in, harnessing scare resources, determining the right channel and services mix, enhancing inter-organizational integration and coordination, and managing clients' perceptions. It is likely that the macro-orientation allows the successful organizations to develop a more coherent MCSD strategy. All elements are related to each other and trade-offs in developing their strategy are made. On the contrary, despite some of the similarities, the mediocre organizations concern relatively more with the operational and micro issues related to clients' demands and preferences which are likely to dilute their strategic focus and inadvertently increase the level of complexities associated with MCSD. It is much difficult to manage the level of increased information and inputs from multi-channels, and synergize a coherent strategy when dealing with factors including 'insight into client channel choice', 'sufficient and correct channel information', 'adjust MCSD to client preferences', 'services per channel', and 'personal factors and channels'. This partly explains why the mediocre organizations have not been successful in implementing the MCSD.

Table 3. The rank order difference between the successful and the mediocre organizations

Rank Order	Successful	Score	Mediocre	Score
1	Monitor implications of MCM strategies	4.50	Strong political and management support	4.42
2	Strong political and management support	4.33	Scarce resources and allocation	4.33
3	Scarce resources and allocation	4.33	Insight into client channel choice	4.33
4	Organization wide integral approach	4.33	Coordination responsibility	4.08
5	Number and type of channels	4.17	Sufficient and correct channel information	4.08
6	Coordination responsibility	4.17	Adjust MCM to client preferences	4.00
7	Understand client perceptions	4.00	Services per channel	3.83
8	Sound coordination framework	4.00	Personal factors and channels	3.83
9	Insight into client channel choice	3.50	Monitor implications of MCM strategies	3.75
10	Change client perceptions	3.50	Organization wide integral approach	3.75
11	Adjust MCM to client preferences	3.40	Number and type of channels	3.67
12	Information sharing among channels	3.33	Technical feasibility	3.67
13	Monitor implications of channel steering	3.33	Change client perceptions	3.50
14	Correct choice of steering instruments	3.33	Information sharing among channels	3.50
15	Services per channel	3.17	Monitor implications of channel steering	3.42
16	Unpredictable client behaviour	3.17	Sound coordination framework	3.27
17	Situational factors and channels	3.00	Correct choice of steering instruments	3.09
18	Sufficient and correct channel information	3.00	Situational factors and channels	3.08
19	Personal factors and channels	2.83	Make use of often used channels	3.00

CONCLUSIONS

In this paper we viewed critical success factors (CSF) as those areas of activity that need to be addressed to develop a multi-channel service delivery (MCSD) strategy. First, we identified 21 areas of success that need to be addressed when developing a MCSD strategy. The factors were divided into 3 categories 1) client, 2) organization, and 3) client behavior. Next, a survey was held to determine the most important CSF, which showed that especially the CSF in the organization category are considered as important. There are six factors have a score of 4 or higher and all are in the organization category, these factors are 'Strong political support', 'Monitor implications of MCSD strategies', 'Insight into client channel choice', 'Scarce resources and allocation', 'Coordination responsibility', and 'Organization wide integral approach'. The comparison between the scores of successful and mediocre organizations showed that the successful organizations found especially macro and endogenous factors are of importance. The top eight critical factors concern institutional and macro issues related to managing the interdependencies of strategic decisions, lobbying for strong political support and management buy-in, harnessing scare resources, determining the right channel and services mix, enhancing inter-organizational integration and coordination, and managing clients' perceptions. In contrast, the mediocre organizations focus on operational and micro issues related to clients' demands and preferences. As such this analysis indicates that organizational functioning is a requirement for being able to have a multi-channel service delivery strategy.

The CSF found in this research can serve as useful checklist and practical guide for the development of service delivery strategy. Furthermore, it shows that organizations should focus on organization-related CSF to be successful and should

avoid the pitfall of focusing in micro issues. One limitation of this research is that the CSFs are viewed as those areas that need attention when developing a MCSD service delivery strategy. Recently, the notion of interdependencies among factors and strategies to deal with these interdependencies was introduced (Lyttinen et al. 1999). In further research we recommend to investigate the interdependencies among these factors and the mapping the factors on successful and non-successful strategies. Furthermore, we recommend further generalization of these findings based on larger samples and cross-country comparison.

REFERENCES

1. DeLone, W.H., and McLean, E.R. "Information Systems Success: The Quest for the Dependent Variable," *Information Systems Research* (3:1) 1992, pp 60-95.
2. Deursen, A.v., and Pieterson, W. "The Internet as a service channel in the Public Sector," Proceedings of the ICA Conference, Dresden, Germany, 2006.
3. Easingwood, C., and Storey, C. "The Value of Multi-Channel Distribution Systems in the Financial Services Sector " *The Service Industries Journal* (16:2) 1996, pp 223-241.
4. Ebbers, W.E., Pieterson, W.J., and Noordman, H.N. "Electronic government: Rethinking channel management strategies," *Government Information Quarterly* (25:2) 2008, pp 181–201.
5. Feldman, M.S., and Pentland, B.T. "Re-theorizing organizational routines as a source of flexibility and change," *Administrative Science Quarterly, 2003* (48:1) 2003, pp 94-118.
6. Gil-Garcıa, J.R., and Pardo, T.A. "E-government success factors: Mapping practical tools to theoretical foundations," *Government Information Quarterly* (22:2) 2005, pp 187-216.
7. Guimaraes, T., and Igbaria, M. "Exploring the relationship between IC success and company performance," *Information & Management* (26:3) 1994, pp 133-141.
8. Guynes, C.S., and Vanecek, M.T. "Critical success factors in data management," *Information & Management* (30:4) 1996, pp 201-209.
9. Holland, C.P., and Light, B. "A Critical Success Factor Model for ERP Implementation," *IEEE Software* (16:3) 1999, pp 30-36.
10. James, L.R., Demaree, R.G., and Wolf, G. "rwg: an assessment of within-group interrater agreement," *Journal of Applied Psychology* (78) 1993, pp 306-309.
11. Janssen, M., Klievink, B., and Kuk, G. "A Practice-based Approach for Orchestrating Service Delivery Channels," WEB2008, Paris, 2008.
12. Leidecker, J.K., and Bruno, A.V. "Identifying and using critical success factors," *Long Range Planning* (17) 1984, pp 23-32.
13. Li, B., Akintoye, A., Edwards, P.J., and Hardcastle, C. "Critical success factors for PPP/PFI projects in the UK construction industry," *Construction Management and Economics* (23:5) 2005, pp 459–471.
14. Lu, X.-H., and Heng, L.-H.H.M.S.H. "Critical success factors of inter-organizational information systems. A case study of Cisco and Xiao Tong in China," *Information & Management* (43:3) 2006, pp 395-408.
15. Lyttinen, K., Mathiassen, L., and Ropponen, J. "Attention shaping and software risk: a categorical analysis of four classical risk management approaches," *Information Systems Research* (9:3) 1999, pp 233-255.
16. Rockart, J.F. " Chief executives define their own data needs," *Harvard Business Review* (2) 1979, pp 81-93.
17. Rosacker, K.M., and Olson, D.L. "Public sector information system critical sector factors," *Transforming Government: People, Process and Policy* (2:1) 2008, pp 60-70.
18. Wixom, B., and Watson, H. "An empirical investigation of the factors in data warehousing success," *MIS Quarterly* (25:1) 2001, pp 17-24.
19. Younga, R., and Jordan, E. "Top management support: Mantra or necessity," *International Journal of Project Management* (26:7) 2008, pp 713-725.