

SYSTEMATIC LITERATURE REVIEW “ENTERPRISE SYSTEMS CHARTERING” – REVIEW PROCEDURE AND ANALYSIS RESULTS

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Literature Review Procedure

Table 1. Stages of Grounded Theory Literature-Review Method (Wolfswinkel et al., 2013)

Stage	Description
1. Define	In the define stage general conditions for the search process are set. To ensure appropriate quality, only the top 15 ranked publications of the MIS Journal Rankings and the publications included in the Senior Scholars' Basket of Journals (AIS, 2011, 2013) were considered ¹ . Conferences that fit our scope were identified using the ERA Ranked Conference List (ARC 2011) ² .
2. Search	In the search stage we leveraged the databases Web of Science, IEEEExplore Digital Library, and AIS Electronic Library. The search string is shown in Table 2 and was applied to titles, abstracts and keywords. The final search on February 25, 2014 yielded 689 publications in the area of BI&A and BPMS. For ERP literature it turned out that the qualified results of the systematic literature review from Seddon et al. (2010) are appropriate for our purposes. Therefore, regarding ERP we decided to draw on this identified literature instead of querying the research databases by our own.
3. Select	Within the select stage, the initial result set was checked for doubles and then refined by excluding literature that didn't fit inclusion/exclusion criteria. Afterwards, a forward and backward search was conducted to further enrich the quality of the literature review. In a final quality assessment, the remaining publications were checked for clear research goals, a clear statement of the research method and whether useful recommendations were given.
4. Analyze	82 publications remained as input for the analyze stage. In the analysis qualitative research methods, rooted in grounded theory, were used to extract valuable knowledge. Specifically we systematically engaged in “open coding”, “axial coding” and “selective coding” (Strauss and Corbin, 1990, 1998). The qualitative data analysis software MAXQDA was used to support the coding process.

Table 2. Search String

AND	OR	Project, Implementation, Transformation, Scope, Scoping, Requirement, Goal, Objective, Selection, Planning, Chartering, Risk, Benefit, Value, Cost, Business Case, Success
	OR	Business Intelligence, BI, Business Analytics, Big Data, Operational Intelligence, Business Process, Process Improvement

¹ ACM TODS, AI Magazine, Artificial Intelligence, Com. ACM, Decision Sciences, Decision Support Systems, European J. of IS, Harvard Business Review, IEEE Software, IEEE Transactions on SE, Inf. & Management, ISJ, ISR, J. of IT, J. of MIS, J. of Strategic IS, J. of the AIS, Management Science, MISQ

² AMCIS, ACIS, ECIS, HICSS, IEEE SCC, BPM, CoopIS, ICIS, PACIS

Literature Classification

Table 3. Number of Publications by System Type and Focus Area³

Theme	Primary Focus Area	ERP	BPMS	BI&A	TOTAL
Projects	Implementation projects overall	8	1	6	15 18%
	CSFs	19	7	8	34 41%
	Project risk factors & challenges	4	0	1	5 6%
Impacts	Factors affecting variance in organizational benefits	3	1	18	22 27%
	Organizational benefits from ES	3	0	3	6 7%
Total		37 (45%)	9 (11%)	36 (44%)	82 100%

Table 4. References per Primary Focus Area and System Type

Primary Focus Area	ERP	BPMS	BI&A
Implementation projects overall	(Mabert et al., 2003a, 2003b; Markus and Tanis, 2000; Markus et al., 2000; Parr and Shanks, 2000; Rajagopal, 2002; Somers and Nelson, 2003; Wei et al., 2005)	(Ravesteyn and Versendaal, 2009)	(Hawking et al., 2006; Marjanovic, 2010; Nemati and Udiavar, 2012; Otyepka et al., 2013; Ranjan, 2009; Shanks and Bekmamedova, 2013)
CSFs	(Akkermans and van Helden, 2002; Al-Mashari et al., 2003; Bradley, 2008; Chen et al., 2009; Dezdar and Sulaiman, 2009; Hong and Kim, 2002; Loh and Koh, 2004; Motwani et al., 2002, 2005; Nah and Delgado, 2006; Nah et al., 2001, 2003; Ram et al., 2013; Robey et al., 2002; Sarker and Lee, 2003; Snider et al., 2009; Somers and Nelson, 2001, 2004; Umble et al., 2003)	(Bai and Sarkis, 2013; Bandara et al., 2005; Hajiheydari and Dabaghkashani, 2011; Ravesteyn and Batenburg, 2010a, 2010b; Ravesteyn and Versendaal, 2007; Trkman, 2010)	(Arnott, 2008; Hawking and Sellitto, 2010; Hwang and Hongjiang, 2007; Mungree et al., 2013; Olbrich et al., 2012; Olszak and Ziemba, 2012; Shanks et al., 2012; Yeoh and Koronios, 2010)
Project risk factors & challenges	(Aloini et al., 2007; Huang et al., 2004; Scott and Vessey, 2002; Sumner, 2000)	-	(Clavier et al., 2012)

³ Focus area classification is based on Seddon et al. (2010).

Primary Focus Area	ERP	BPMS	BI&A
Factors affecting variance in organizational benefits	(Davenport et al., 2004; Seddon et al., 2010; Skok and Legge, 2002)	(Poelmans and Reijers, 2010)	(Arnott and Gibson, 2005; Dinter et al., 2011; Isik, 2009; Isik et al., 2013; Kulkarni and Robles-Flores, 2013; Popovic et al., 2010, 2012; Schieder and Gluchowski, 2011; Seddon et al., 2012; Shanks and Sharma, 2011; Shanks et al., 2010, 2011; Someh and Shanks, 2013; Tamm et al., 2013; Tona et al., 2012; Williams and Williams, 2003; Wixom and Watson, 2001; Yogev et al., 2012)
Organizational benefits from ES	(Schubert and Williams, 2011; Shang and Seddon, 2002, 2000)	-	(Elbashir et al., 2008; Scholz et al., 2010; Watson et al., 2002)

Table 5. Support of CSFs in Literature

Critical Success Factor (CSF)	[C1] ERP Context	[C2] BPMS or BI&A Context	[C3] Chartering Context
	N=27	N=28	N=7
[CSF 1.1] Top management commitment & support (Nah et al., 2001; Umble et al., 2003)	56%	68%	100%
[CSF 1.2] Goals & objectives definition (Somers and Nelson, 2001; Umble et al., 2003)	33%	32%	71%
[CSF 1.3] Project champion (Nah et al., 2001; Umble et al., 2003)	44%	11%	57%
[CSF 1.4] Team composition & skills (Markus and Tanis, 2000; Umble et al., 2003)	63%	61%	43%
[CSF 1.5] Change & culture (Hong and Kim, 2002; Umble et al., 2003)	63%	57%	43%
[CSF 1.6] Communication, cooperation & collaboration (Al-Mashari et al., 2003; Nah et al., 2001)	48%	25%	29%
[CSF 1.7] Scope Management (Parr and Shanks, 2000; Umble et al., 2003)	30%	14%	14%
[CSF 2.1] Strategic alignment & organizational fit (Hong and Kim, 2002; Markus and Tanis, 2000)	15%	57%	0%
[CSF 2.2] Data related factors (Umble et al., 2003; Wixom and Watson, 2001)	30%	43%	0%
[CSF 2.3] User involvement & participation (Mabert et al., 2003a; Wixom and Watson, 2001)	15%	39%	0%
[CSF 2.4] Performance measurement & control (Markus and Tanis, 2000; Umble et al., 2003)	33%	39%	0%
[CSF 2.5] Integration & alignment of systems (Al-Mashari et al., 2003; Nah et al., 2001)	22%	32%	0%
[CSF 2.6] Technology infrastructure & legacy systems (Nah et al., 2001; Wixom and Watson, 2001)	22%	29%	0%
[CSF 2.7] Implementation approach (Nah and Delgado, 2006; Wixom and Watson, 2001)	11%	25%	14%
[CSF 3.1] PM (Nah et al., 2001; Umble et al., 2003)	63%	36%	14%
[CSF 3.2] System & process adaptation (Hong and Kim, 2002; Nah et al., 2001)	59%	25%	0%
[CSF 3.3] Training & education (Nah et al., 2001; Umble et al., 2003)	48%	21%	0%

Critical Success Factor (CSF)	[C1] ERP Context	[C2] BPMS or BI&A Context	[C3] Chartering Context
	N=27	N=28	N=7
[CSF 3.4] Software package selection (Hong and Kim, 2002; Umble et al., 2003)	41%	0%	29%
[CSF 3.5] Business plan & vision (Al-Mashari et al., 2003; Nah et al., 2001)	30%	14%	43%

Publication Years

Figure 1. Number of Publications per Year per System Type

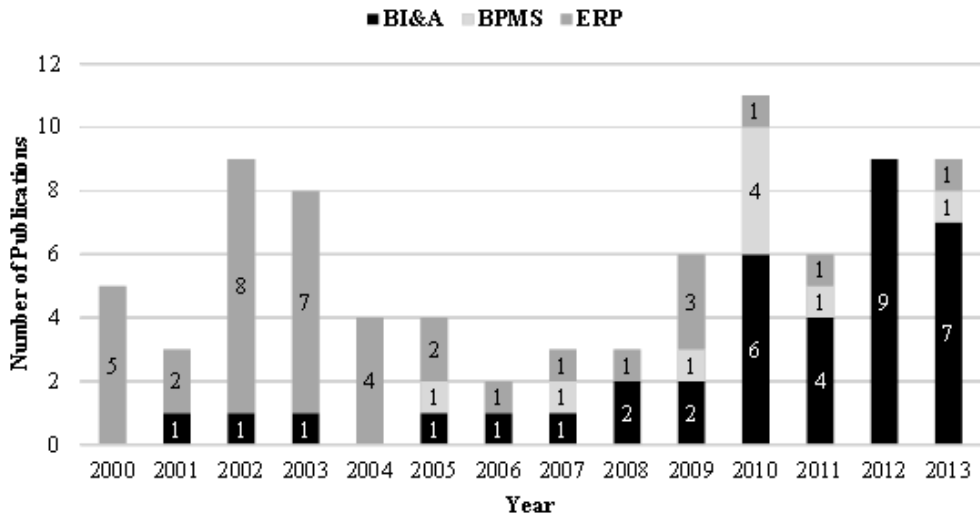
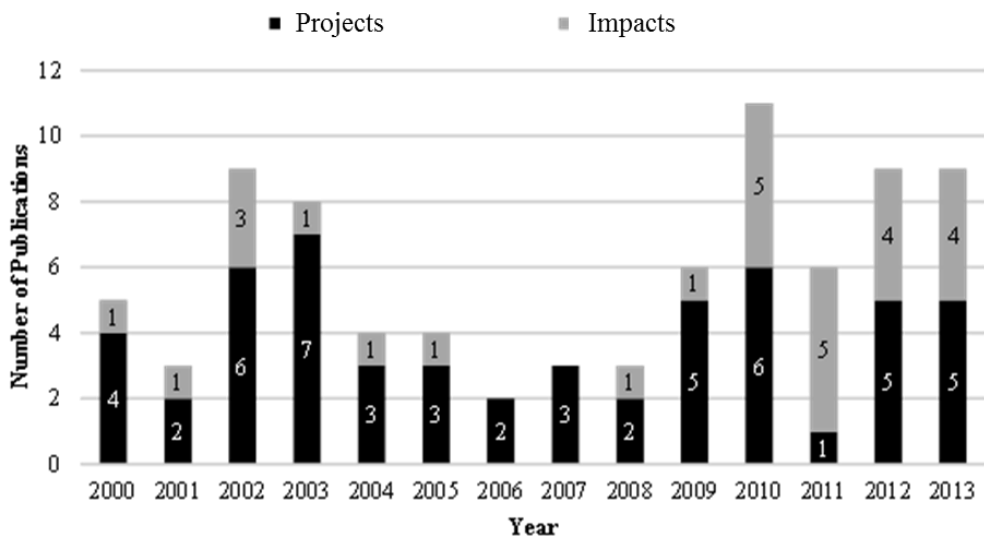


Figure 2. Number of Publications per Year per Theme



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