Appendix 4a Academic Literature Review – New Sources

Publication number (cited as ANR1 -30 in the report) and authors	Year	Publication	Source	Q.1 What is the contribution to the 'state of the art' in measuring benefits?	Q. 1 Normative guidance (n), description of practice (d)?	Q. 1 Guidance applied at project (pt), program (pm), portfolio (po) levels?	Q. 2 At what point(s) in the project (program, portfolio) are outcome benefit (OB) measures developed, defined and selected?	Q.2 Focus on intermediate benefits (IB) too? (Yes/No)	Q.2 Focus on Interdependencies between IB and OB?	Q.2 Links to specific stakeholders?	Q. 3 Who assesses the benefits and at what point during the project are they assessed?	Q. 3a Are measures added over the life of the project and/or beyond? e.g. recognition of emergent benefits?	Q. 3b How far after the close-out of the project are benefits continued to be assessed, and at what intervals?	Q. 4 Targeting of guidance/ subject matter of description. By project type, industry, project size, potential social impact, customer?	Q. 5 What kinds of measures are typically used to assess benefits, and which are more frequently used?	Q. 5 Quantitative financial (Qnf), Quantitative non-financial (Qnnf) and/or Qualitative (Ql)
1. Ababneh, H., Shrafat, F., & Zeglat, D. (2017).	2017	*International Journal of Business Information Systems*, *24*(1), 1-30	Approaching information system evaluation methodology and techniques: a comprehensive review.	How to articulate the benefits for IT projects. A review paper to show different approach in projecting benefits of the IT projects	N	Project	Project	Not specified	N	Initiators, Evaluators, Users, Interested Parties	Shall be assessed but not specific role stated	Yes	Continuous but not clear intervals. Only mentioned after the project delivery	IT project (a review paper)	Examples cost, efficiency, performance, strategic fit, satisfaction	All
2. Ashust, Crowley, Thornley	2016	Conference paper – Maynooth University	Building the Capability for Benefits Realisation: Leading with Benefits	This paper is a retrospective over the past 20 years and makes the case that BRM must be a mind set and is primarily about people. Within this argument, there are points made about the role of measures.	Draws on 2 longitudinal studies	Mainly pt and po	Reference to 'starting with the end in mind' being valuable for one interviewee (P7)	Not specified	No	Involve all known and potential stakeholders early in the determination of benefits (P5)	No specified	'there is a strong emergent element to any significant change programme and it is foolish to assume that all benefits can be identified in advance.' P14 A more mature approach reflecting the craft of benefits management knows both that change is emergent and that measures drive behaviour, so that the vital element is a small set of clear, well communicated benefits and measures that will help build	Not specified	Benefits from investments in IS/IT	Advocates a small number of measures, and that benefits focus as a mindset needs to be the primary objective, not measurement in itself. The important elements of shaping the vision, building engagement of people, and focusing on a small set of well-chosen measures to help with the change process, are pushed into the background or lost entirely. P4	Not specific

Publication number (cited as ANR1 -30 in the report) and authors	Year	Publication	Source	Q.1 What is the contribution to the 'state of the art' in measuring benefits?	Q. 1 Normative guidance (n), description of practice (d)?	Q. 1 Guidance applied at project (pt), program (pm), portfolio (po) levels?	Q. 2 At what point(s) in the project (program, portfolio) are outcome benefit (OB) measures developed, defined and selected?	Q.2 Focus on intermediate benefits (IB) too? (Yes/No)	Q.2 Focus on Interdependencies between IB and OB?	Q.2 Links to specific stakeholders?	Q. 3 Who assesses the benefits and at what point during the project are they assessed?	Q. 3a Are measures added over the life of the project and/or beyond? e.g. recognition of emergent benefits?	Q. 3b How far after the close-out of the project are benefits continued to be assessed, and at what intervals?	Q. 4 Targeting of guidance/ subject matter of description. By project type, industry, project size, potential social impact, customer?	Q. 5 What kinds of measures are typically used to assess benefits, and which are more frequently used?	Q. 5 Quantitative financial (Qnf), Quantitative non-financial (Qnnf) and/or Qualitative (Ql)
												engagement and encourage change. P16				
3.Badewi et al,	2018	Business Process Management Journal 24 (1), 266-294	ERP Benefits Capability Framework: Orchestration Theory Perspective.	Interdependence between operational, planning, and innovative benefits.	N	Pt	Pt	Yes	Yes	No	Sponsor	Over the life of the project. I.e. the project starts by targeting operational and IT benefits, Once these benefits are matured enough (self-relizable). Sponsor and owner shall think of investing to realise planning and innovative benefits	Assessment interval is based on maturity and KPI levels	ERP projects (IT)	IT, Operational, Planning and innovating benefits	Quantitative (Financial and Non-financial)
4. Cha, J H.	2016	PhD Thesis submitted to University of Manchester	Thesis linked to No. 23 in the original sources list, title 'Performance of public sector information systems projects: the case of UK central government	In brief, the aim of the study was to contribute to a deeper understanding of why public sector IS projects are so challenging; to do this, the study explored 31 IS project cases in the UK public sector and adopted content analysis (mix of quantitative and qualitative	D with implications for practice	pt	Uses Cranfield model	No	No	Focus on client – supplier relationships	Focus on the role of the 'project owner'- from the client side (see p55-56), and the dymanic capabilities required for the role, to accelerate post-implementation benefits after a project	Not specified	Not specified, but training and skills development and knowledge and experience transfer are key back-end skills p200 +	Government IS projects	Not specified	Not specified

Publication number (cited as ANR1 -30 in the report) and authors	Year	Publication	Source	Q.1 What is the contribution to the 'state of the art' in measuring benefits?	Q. 1 Normative guidance (n), description of practice (d)?	Q. 1 Guidance applied at project (pt), program (pm), portfolio (po) levels?	Q. 2 At what point(s) in the project (program, portfolio) are outcome benefit (OB) measures developed, defined and selected?	Q.2 Focus on intermediate benefits (IB) too? (Yes/No)	Q.2 Focus on Interdependencies between IB and OB?	Q.2 Links to specific stakeholders?	Q. 3 Who assesses the benefits and at what point during the project are they assessed?	Q. 3a Are measures added over the life of the project and/or beyond? e.g. recognition of emergent benefits?	Q. 3b How far after the close-out of the project are benefits continued to be assessed, and at what intervals?	Q. 4 Targeting of guidance/ subject matter of description. By project type, industry, project size, potential social impact, customer?	Q. 5 What kinds of measures are typically used to assess benefits, and which are more frequently used?	Q. 5 Quantitative financial (Qnf), Quantitative non-financial (Qnnf) and/or Qualitative (Ql)
				analysis) by examining the NAO reports. As a reminder, the specific research questions were: What are the common issues and difficulties in managing IS projects in the UK public sector (RQ1)? Which dynamic capabilities are required by a project owner for IS projects in the public sector (RQ2)? How can owner dynamic capabilities contribute to realising post-implementation benefits of IS projects in the public sector (RQ3)?p235							is completed					
5. Dalcher,D (Editor)	2016	Publisher : Taylor & Francis,	Book 'Further advances in project management: Guided explorati	The most relevant chapter is Ch. 14, on 'Users' with an introduction by Darren on 'For whose	N, with examples of PRUB measures	Pt, pm example given of programme to improve health of young people and projects within it	Indicators need to be developed for all parts of PRUB, but start identifying them at the benefits end - start with the end in mind (P172).	Reference to leading and lagging indicators in the different parts of	Benefits is a single category	Use and benefits measurement can only be done outside the organisation that created the	Not specified	Emphasis on users linked to agile methods P166 (Dalcher)	Handover is not the end of the process and longer term perspective is needed P167 (Dalcher). Suggestion that	Generic, but examples are food labelling project and young people's health programme.	Claims that many claimed benefits aren't actually benefits – deliverables or too vaguely expressed. Benefits from a	Benefits must be valued by users. Most examples Qnnf.

Publication number (cited as ANR1 -30 in the report) and authors	Year	Publication	Source	Q.1 What is the contribution to the 'state of the art' in measuring benefits?	Q. 1 Normative guidance (n), description of practice (d)?	Q. 1 Guidance applied at project (pt), program (pm), portfolio (po) levels?	Q. 2 At what point(s) in the project (program, portfolio) are outcome benefit (OB) measures developed, defined and selected?	Q.2 Focus on intermediate benefits (IB) too? (Yes/No)	Q.2 Focus on Interdependencies between IB and OB?	Q.2 Links to specific stakeholders?	Q. 3 Who assesses the benefits and at what point during the project are they assessed?	Q. 3a Are measures added over the life of the project and/or beyond? e.g. recognition of emergent benefits?	Q. 3b How far after the close-out of the project are benefits continued to be assessed, and at what intervals?	Q. 4 Targeting of guidance/ subject matter of description. By project type, industry, project size, potential social impact, customer?	Q. 5 What kinds of measures are typically used to assess benefits, and which are more frequently used?	Q. 5 Quantitative financial (Qnf), Quantitative non-financial (Qnnf) and/or Qualitative (Ql)
			on in unfamiliar landscapes.	benefit? Reclaiming the role of users' and a paper from Phil Driver and Ian Sneath entitled 'There are no short cuts from projects to benefits' on their PRUB model (Projects, results, uses, benefits).		(P170)		PRUB.		results – engaging users. P173			Sponsors understand this less than project and program managers. (D&S, p169)		programme to improve the health of young people – higher achieving young people (due to better health), healthier young people, fewer youth suicides. Benefits for food labelling example, for company – healthy and happy customers because they are eating better, our company is sustainably profitable because people are more consistently buying our products, and also, % of 5-10 year olds with healthy weight, number of people free from Coronary Heart Disease,	
6. Ghanbaripour, A. N., Ghoddousi, P., & Yousefi, A.	2015	*Indian Journal of Science and Technology* 8, no. 35	A Framework for Evaluating Project Managers' Performance-Identification	3 KPIs were identified to have the greatest influence on the success of construction projects: communication management	(d) (empirical) with a view to formulate (n) recommendations	(pt)	Not discussed	No	Not discussed	Briefly mentions Project Manager, Client and Other key stakeholders	Not discussed	Not discussed	Not discussed	Construction Projects	Not discussed	Not discussed

Publication number (cited as ANR1 -30 in the report) and authors	Year	Publication	Source	Q.1 What is the contribution to the 'state of the art' in measuring benefits?	Q. 1 Normative guidance (n), description of practice (d)?	Q. 1 Guidance applied at project (pt), program (pm), portfolio (po) levels?	Q. 2 At what point(s) in the project (program, portfolio) are outcome benefit (OB) measures developed, defined and selected?	Q.2 Focus on intermediate benefits (IB) too? (Yes/No)	Q.2 Focus on Interdependencies between IB and OB?	Q.2 Links to specific stakeholders?	Q. 3 Who assesses the benefits and at what point during the project are they assessed?	Q. 3a Are measures added over the life of the project and/or beyond? e.g. recognition of emergent benefits?	Q. 3b How far after the close-out of the project are benefits continued to be assessed, and at what intervals?	Q. 4 Targeting of guidance/ subject matter of description. By project type, industry, project size, potential social impact, customer?	Q. 5 What kinds of measures are typically used to assess benefits, and which are more frequently used?	Q. 5 Quantitative financial (Qnf), Quantitative non-financial (Qnnf) and/or Qualitative (Ql)
			and Analysis of KPIs in Subway Construction Projects in Tehran.	, procurement management, HR management												
7. Gordon, A. J.	2017	*International Journal of Recent Technology and Engineering (IJRTE) ISSN: 2277-3878, Volume-6 Issue-3,*	The application of information technology portfolio management in an academic sector	IT portfolio managers shall study finance and risk planning to be able helping in identifying and setting the benefits and to link between new KPIs with the organisation objectives	D	Portfolio management	Portfolio	Yes	Benefits of different programmes shall be aligned through the portfolio management	Not specified. But studying stakeholder is critical	Portfolio Management by integrating KPIs to the organisatoin control systems	Not specified	Continuous process led by portfolio manager (beyond project and programme scope)	IT in Academic sector (conceptual paper)	Not specified	Not specified
8. Kagioglou, M., and Tzortzopoulos, P.	2016	In *Proc. 24th Ann. Conf. of the Int'l. Group for Lean Construction, Boston, MA, USA*, pp. 183-192. IGLC	Benefits Realisation: An Investigation of Structure and Agency	The paper is concerned with the relationship between new Product Development (NPD) in construction and benefits realisation and introduces a new perspective on the relationship between	N based on d	Pt, pm	Reference to 'progressive fixity', and 'fuzzy front end of design processes, where there is ambiguity over what needs to be realised (P185).	Not specified	Not specified	NPD involves outcomes being derived from identification of stakeholder needs and wants P184.	Not specific, but focuses on the role of the researcher in encouraging different perspectives	Implicitly, measures will change, and NPD and BRM should be designed not only to incorporate emerging changes but to encourage 'fixed solutions' to be opened up and revalidated to embed a culture of continuous	Significantly, the rate of change and the insistence of measuring benefits based on initial requirements should be, largely, rejected. Could the same apply to initial client requirements, specifically when long timescales and in-experienced	Construction	Not specified, but identifies from the development of NPD that the nature of a building as a means to achieve organisational objectives in a business case is increasingly recognised.Outputs v outcomes P186.	Not specific

Publication number (cited as ANR1 -30 in the report) and authors	Year	Publication	Source	Q.1 What is the contribution to the 'state of the art' in measuring benefits?	Q. 1 Normative guidance (n), description of practice (d)?	Q. 1 Guidance applied at project (pt), program (pm), portfolio (po) levels?	Q. 2 At what point(s) in the project (program, portfolio) are outcome benefit (OB) measures developed, defined and selected?	Q.2 Focus on intermediate benefits (IB) too? (Yes/No)	Q.2 Focus on Interdependencies between IB and OB?	Q.2 Links to specific stakeholders?	Q. 3 Who assesses the benefits and at what point during the project are they assessed?	Q. 3a Are measures added over the life of the project and/or beyond? e.g. recognition of emergent benefits?	Q. 3b How far after the close-out of the project are benefits continued to be assessed, and at what intervals?	Q. 4 Targeting of guidance/ subject matter of description. By project type, industry, project size, potential social impact, customer?	Q. 5 What kinds of measures are typically used to assess benefits, and which are more frequently used?	Q. 5 Quantitative financial (Qnf), Quantitative non-financial (Qnnf) and/or Qualitative (Ql)
				structure and agency in process. Quotes Tillman,2009 one of the reasons for BRM being Vagueness of benefits definition, tracking and allocating responsibility for delivery P187								improvement P185.	clients are involved? This area can have significant implications on how project and programme success is measured, in that benefits need to be tracked continually and post-project and post-occupancy evaluations change their focus from measuring what was originally conceived to what have emerged through practice in NPD. The implications for how infrastructure policy (say in social housing, regeneration, health and schools programmes, etc.) is evaluated and measured are also significant P190.			
9. Keeys, L. A., & Huemann, M.	2017	*International Journal of Project Management* 35, no. 6 (2017): 1196-	Project benefits co-creation: Shaping sustainable development benefits.	"Given the benefits focus of sustainable development (SD),benefits realisation hels to understand how SD can	N	Programmes	This realm is a hierarchical one where goals and objectives traditionally cascade from organizational strategy to portfolio, program and then	No	No	Stakeholder identification process is continuous, adaptive, and iterative. (Figure 3.1 Conceptual Framework	Not specified	Yes, it is a continuous and emergent process based on continuous identification of sakeholders	Not specified – but continuous review is important. not specified to a certain period	Sustainable Development Projects (Agriculture projects)	Social, economic, and environmental Examples transfer of knowledge, positive representation of the products,	All

Publication number (cited as ANR1 -30 in the report) and authors	Year	Publication	Source	Q.1 What is the contribution to the 'state of the art' in measuring benefits?	Q. 1 Normative guidance (n), description of practice (d)?	Q. 1 Guidance applied at project (pt), program (pm), portfolio (po) levels?	Q. 2 At what point(s) in the project (program, portfolio) are outcome benefit (OB) measures developed, defined and selected?	Q.2 Focus on intermediate benefits (IB) too? (Yes/No)	Q.2 Focus on Interdependencies between IB and OB?	Q.2 Links to specific stakeholders?	Q. 3 Who assesses the benefits and at what point during the project are they assessed?	Q. 3a Are measures added over the life of the project and/or beyond? e.g. recognition of emergent benefits?	Q. 3b How far after the close-out of the project are benefits continued to be assessed, and at what intervals?	Q. 4 Targeting of guidance/ subject matter of description. By project type, industry, project size, potential social impact, customer?	Q. 5 What kinds of measures are typically used to assess benefits, and which are more frequently used?	Q. 5 Quantitative financial (Qnf), Quantitative non-financial (Qnnf) and/or Qualitative (Ql)
		1212		be integrated in the management of projects, linking it to strategy. " Benefits co-creation as a strategy for identifying emergent and new benefits. Abstract Definition of benefits is "outcome of change that produce positive, advantageous increment in value, as perceived by broad group of stakeholders, regarding economic, environmental, and social dimensions of sustainable development, commensurate with the societal SD Goal" P1204			projects in a linear planned fashion (P 1999)			– Table 3.1. costructs).					improve the citizens' productivity, citizens' improvement in the income	
10. Lecoeuvre, Laurence (Editor)	2016	Publisher: Routledge	Book 'The performance of projects and project management' (2016)	This edited book is mainly about the performance of projects within the constraints of resource use, and	Ch. 1 mainly n.	Pt, pm, but content mainly about projects	Under requirements, dimensions of results, specification, business plans (include expected benefits), success and model. Key success criteria will	Not specified	Not specified	Stakeholders have key role in VIO, but not specified in relation to benefits.	Not specified	Not specified	Normally, goals indicators should be measured several years after the end of the project, but often this is not done because of lack of	generic	Not specified	Not specified, but measurability important.

Publication number (cited as ANR1 -30 in the report) and authors	Year	Publication	Source	Q.1 What is the contribution to the 'state of the art' in measuring benefits?	Q. 1 Normative guidance (n), description of practice (d)?	Q. 1 Guidance applied at project (pt), program (pm), portfolio (po) levels?	Q. 2 At what point(s) in the project (program, portfolio) are outcome benefit (OB) measures developed, defined and selected?	Q.2 Focus on intermediate benefits (IB) too? (Yes/No)	Q.2 Focus on Interdependencies between IB and OB?	Q.2 Links to specific stakeholders?	Q. 3 Who assesses the benefits and at what point during the project are they assessed?	Q. 3a Are measures added over the life of the project and/or beyond? e.g. recognition of emergent benefits?	Q. 3b How far after the close-out of the project are benefits continued to be assessed, and at what intervals?	Q. 4 Targeting of guidance/ subject matter of description. By project type, industry, project size, potential social impact, customer?	Q. 5 What kinds of measures are typically used to assess benefits, and which are more frequently used?	Q. 5 Quantitative financial (Qnf), Quantitative non-financial (Qnnf) and/or Qualitative (Ql)
				there is not a great deal about benefits – no mention in index. Main contribution to measuring benefits is in the chapter by Daniel and Turner – Ch. 1, Vision – Implementation - Organization (VIO for complex projects and programs.			vary – may be acceptance by stakeholders, making a profit, oenig on a specific day (P6-8) Suggestion that indicators at strategic level should be as specific as possible (P11)						funding for it (P11)			
11. Lips, M., Flak, L. S., & Gil-Garcia, J. R.	2017	In *Proceedings of the 50th Hawaii International Conference on System Sciences*.P2922	Introduction to Transformational Government: Governance, Organization, and Management Minitrack.	Refers to papers being welcome on many different topics, including E-Government business models and benefits realization from e-Government initiatives	n/a	n/a	Not specified	Not specified	Not specified	Not specified	Not specified	Not specified	Not specified	Not specified	Not specified	Not specified
12. Madeira, B., Gomes, J., & Romão, M.	2017	*International Journal of Strategic Decision Sciences (IJSDS)* 8, no. 1	Applying Benefits Management to the Implementation of a Copy Point: A Case	A case study which suggests that BM "applied to IS/IT radically changed the way an internal printing process was	Not Known	Not Known	Not Known	Not Known	Not Known	Not Known	Not Known	Not Known	Not Known	Not Known	Not Known	Not Known

Publication number (cited as ANR1 -30 in the report) and authors	Year	Publication	Source	Q.1 What is the contribution to the 'state of the art' in measuring benefits?	Q. 1 Normative guidance (n), description of practice (d)?	Q. 1 Guidance applied at project (pt), program (pm), portfolio (po) levels?	Q. 2 At what point(s) in the project (program, portfolio) are outcome benefit (OB) measures developed, defined and selected?	Q.2 Focus on intermediate benefits (IB) too? (Yes/No)	Q.2 Focus on Interdependencies between IB and OB?	Q.2 Links to specific stakeholders?	Q. 3 Who assesses the benefits and at what point during the project are they assessed?	Q. 3a Are measures added over the life of the project and/or beyond? e.g. recognition of emergent benefits?	Q. 3b How far after the close-out of the project are benefits continued to be assessed, and at what intervals?	Q. 4 Targeting of guidance/ subject matter of description. By project type, industry, project size, potential social impact, customer?	Q. 5 What kinds of measures are typically used to assess benefits, and which are more frequently used?	Q. 5 Quantitative financial (Qnf), Quantitative non-financial (Qnnf) and/or Qualitative (Ql)
		(2017): 13-26.	Study	carried out" [sic]. BM can increase the degree of BR. Above is from the abstract only UNABLE TO ACCESS THE REMAINDER OF THE ARTICLE												
13. Marnewick, C., & Marnewick, C.	2017	*International Journal of Managing Projects in Business*, *10*(1), 167-184.	The reality of adherence to best practices for information system initiatives.	Benefits management practices are not well known to the project managers and programme managers. BM steps proposed are benefits identification, benefits analysis and planning, benefits delivery, benefits transition and benefits sustainment	N	Pt and Pm	Programme level	Yes	Shall be identified and clarified in the benefits identification. organisations performance shall be linked with the benefits identification	Project managers, programme manager	Not specified	Not specified	It is ongoing closing out. there is no clear specification of the "last" review	IT discipline	86% of the interviewees define financial benefits only.	Mainly quantified benefits. Authors argue for the importance of considering qualitative non-financial benefits, but after being quantified.
14. McCarty, A., & Skibniewski, M.	2017	*Journal of Engineering, Project, and Production Manage*	The Impact of PMIS Training: Patterns of Benefit Realizati	Improves the understanding of project management software toolset training practices and outcomes.	(d) (empirical) with a view to formulate (n) recommendations	(pt)	Not discussed	No	Not discussed	Project Managers	Not discussed	Not discussed	Not discussed	Project Management Information System (PMIS) training	Benefits of PMIS training are assessed based on effectiveness and impact-per-hour efficiency. PM Information Systems	Quantitative non-financial (Qnnf)

Publication number (cited as ANR1 -30 in the report) and authors	Year	Publication	Source	Q.1 What is the contribution to the 'state of the art' in measuring benefits?	Q. 1 Normative guidance (n), description of practice (d)?	Q. 1 Guidance applied at project (pt), program (pm), portfolio (po) levels?	Q. 2 At what point(s) in the project (program, portfolio) are outcome benefit (OB) measures developed, defined and selected?	Q.2 Focus on intermediate benefits (IB) too? (Yes/No)	Q.2 Focus on Interdependencies between IB and OB?	Q.2 Links to specific stakeholders?	Q. 3 Who assesses the benefits and at what point during the project are they assessed?	Q. 3a Are measures added over the life of the project and/or beyond? e.g. recognition of emergent benefits?	Q. 3b How far after the close-out of the project are benefits continued to be assessed, and at what intervals?	Q. 4 Targeting of guidance/ subject matter of description. By project type, industry, project size, potential social impact, customer?	Q. 5 What kinds of measures are typically used to assess benefits, and which are more frequently used?	Q. 5 Quantitative financial (Qnf), Quantitative non-financial (Qnnf) and/or Qualitative (Ql)
		ment 7, no. 1 P1-23	on in Project Management Information Systems Training.												facilitate enhanced planning, tracking, reporting capabilities, improved decision-making, reduced costs, streamlined operations, more consistent project outcomes, and improved performance. These tools can enhance effectiveness, efficiency, and productivity in project managers. Improved resource scheduling, issue management, and change management capabilities help keep projects on budget. Advanced portfolio planning and management capabilities enable organizations to better prioritize projects, eliminate low value projects, and reduce project failure rates.	

Publication number (cited as ANR1 -30 in the report) and authors	Year	Publication	Source	Q.1 What is the contribution to the 'state of the art' in measuring benefits?	Q. 1 Normative guidance (n), description of practice (d)?	Q. 1 Guidance applied at project (pt), program (pm), portfolio (po) levels?	Q. 2 At what point(s) in the project (program, portfolio) are outcome benefit (OB) measures developed, defined and selected?	Q.2 Focus on intermediate benefits (IB) too? (Yes/No)	Q.2 Focus on Interdependencies between IB and OB?	Q.2 Links to specific stakeholders?	Q. 3 Who assesses the benefits and at what point during the project are they assessed?	Q. 3a Are measures added over the life of the project and/or beyond? e.g. recognition of emergent benefits?	Q. 3b How far after the close-out of the project are benefits continued to be assessed, and at what intervals?	Q. 4 Targeting of guidance/ subject matter of description. By project type, industry, project size, potential social impact, customer?	Q. 5 What kinds of measures are typically used to assess benefits, and which are more frequently used?	Q. 5 Quantitative financial (Qnf), Quantitative non-financial (Qnnf) and/or Qualitative (Ql)
15. Musawir, Serra, Zwikael, Ali,	2017	*International Journal of Project Management*, *35*(8), 1658-1672.	Project governance, benefit management, and project success: Towards a framework for supporting organizational strategy implementation	Evidences the measurability of the value created to the organisation as a strong influencer for strategic project success.	d	project	Project start	n	n	Project manager, project owner and project funder may have different perceptions / interests and the funder has more interest in benefit realisation	Project manager, project owner and project funder, but with more emphasis by the funder	n	It starts after integration of project outputs into the business routine	theoretical paper	Not mentioned	All
16. Neilsen, P. A. And Persson, J. S.	2017	*European Journal of Information Systems*, *26*(1), pp.66-83.	Useful business cases: value creation in IS projects.	Business case development and benefits definition shall be closely linked to value creating activities Benefits are defined based on motivations and goals (P17)	N	Pt	Pt	no	No	Yes, benefits owners and others (e.g. citizens, and other municipals)	Not specified	Yes (it is done by business case manager)	Not specified	IS projects (Governmental projects)	Quantified benefits.	All (but author advises to avoid qualitative benefits, even its importance, because they are not easily targeted (P20)). Otherwise, all qualitative benefits shall be quantified through questionnaire)
17. Nogeste (Paper + PhD Thesis)	2008	Int. J. of managing projects in business, 2008, vol. 1 No.2	Doctor of project management Thesis RMIT Australia, title	The purpose of the research study (Nogeste, 2006) was to develop a method for improving the	D, with implications for guidance	Pt, pm	Early on	Distinction between intangible and tangible project outcomes	No	Individuals were recruited for action research	This study explore benefits from the point of view of a variety of	Examples of expected and unexpected project outcomes are provided	Not specified	Government projects and programmes – health, police etc.	Examples of intangible outcomes, p255 Expected and unpected outcomes for individual participants	Qnf, Qnnf, Ql

Publication number (cited as ANR1 -30 in the report) and authors	Year	Publication	Source	Q.1 What is the contribution to the 'state of the art' in measuring benefits?	Q. 1 Normative guidance (n), description of practice (d)?	Q. 1 Guidance applied at project (pt), program (pm), portfolio (po) levels?	Q. 2 At what point(s) in the project (program, portfolio) are outcome benefit (OB) measures developed, defined and selected?	Q.2 Focus on intermediate benefits (IB) too? (Yes/No)	Q.2 Focus on Interdependencies between IB and OB?	Q.2 Links to specific stakeholders?	Q. 3 Who assesses the benefits and at what point during the project are they assessed?	Q. 3a Are measures added over the life of the project and/or beyond? e.g. recognition of emergent benefits?	Q. 3b How far after the close-out of the project are benefits continued to be assessed, and at what intervals?	Q. 4 Targeting of guidance/ subject matter of description. By project type, industry, project size, potential social impact, customer?	Q. 5 What kinds of measures are typically used to assess benefits, and which are more frequently used?	Q. 5 Quantitative financial (Qnf), Quantitative non-financial (Qnnf) and/or Qualitative (Ql)
		279-287	'Development of a method to improve the definition and alignment of intangible project outcome and tangible project outputsand article in	definition and alignment of intangible outcomes and tangible outputs. It was prompted by a preliminary study comprising a limited literature review and interviews with a mixed sample of 15 experienced project managers, program managers and project sponsors which identified two key issues. Firstly, that the delivery (or even acknowledgement) of intangible project outcomes was a "point of difference" between good and better project managers (and projects) and secondly, that intangible project outcomes could be							different individuals at various points over the project life-cycle.					

Publication number (cited as ANR1 -30 in the report) and authors	Year	Publication	Source	Q.1 What is the contribution to the 'state of the art' in measuring benefits?	Q. 1 Normative guidance (n), description of practice (d)?	Q. 1 Guidance applied at project (pt), program (pm), portfolio (po) levels?	Q. 2 At what point(s) in the project (program, portfolio) are outcome benefit (OB) measures developed, defined and selected?	Q.2 Focus on intermediate benefits (IB) too? (Yes/No)	Q.2 Focus on Interdependencies between IB and OB?	Q.2 Links to specific stakeholders?	Q. 3 Who assesses the benefits and at what point during the project are they assessed?	Q. 3a Are measures added over the life of the project and/or beyond? e.g. recognition of emergent benefits?	Q. 3b How far after the close-out of the project are benefits continued to be assessed, and at what intervals?	Q. 4 Targeting of guidance/ subject matter of description. By project type, industry, project size, potential social impact, customer?	Q. 5 What kinds of measures are typically used to assess benefits, and which are more frequently used?	Q. 5 Quantitative financial (Qnf), Quantitative non-financial (Qnnf) and/or Qualitative (Ql)
				directly related to tangible project outputs, despite the absence of a known clear method for doing so p279												
18. Pedersen, K.	2017	*Transforming Government: People, Process and Policy*, *11*(2), pp.262-285.	Realizing e-government benefits with minimal capabilities.	The purpose is to increase our understanding of the requirements for public sector organizations to implement benefits realization practices. The research compares benefits realization practices as suggested by the literature with actua l practice with the goal of identifying both insufficiencies in the current literature and challenges in practice that must be overcome to improve the current situation. There are	D leading to n	Mainly pt and po	Not specified , but At central government level No examples of use of formal benefits practices as defined in Ashurst et al.(2008) could be identified, but looking at capability level, some activities related to benefits planning, delivery, review and exploitation could be identified p272 At local government level There were very little benefits planning in any sense p274	Not specified	Not specified	Benefits planning focused on the stakeholders in the political process such as political parties, unions, employer organizations and patient organizations and were concerned with the consequences for citizens, companies and society, but not with practica lissues in theJob Centers p272	In the literature, governance issues are primarily dealt with by insisting on appointing benefits owners(Ward and Daniel,2006).The literature doesnot reflect the organizational and technical complexity involved in this case.This point will be	Not specified	Not specified	Case study of government in Denmark at different levels, in relation to e-government initiatives.	Three kinds of benefits were identified: (1) citizen benefits,e.g.related to financial security during illness; (2) societal benefits in terms of getting citizens faster back in work;and (3) administrative benefits in terms of increased efficiency and reduced costs based on e-government solutions, improved resource prioritization in Job Centers such that most resources are used on complicated cases and simplification of the process used in Job Centers.p272	all

Publication number (cited as ANR1 -30 in the report) and authors	Year	Publication	Source	Q.1 What is the contribution to the 'state of the art' in measuring benefits?	Q. 1 Normative guidance (n), description of practice (d)?	Q. 1 Guidance applied at project (pt), program (pm), portfolio (po) levels?	Q. 2 At what point(s) in the project (program, portfolio) are outcome benefit (OB) measures developed, defined and selected?	Q.2 Focus on intermediate benefits (IB) too? (Yes/No)	Q.2 Focus on Interdependencies between IB and OB?	Q.2 Links to specific stakeholders?	Q. 3 Who assesses the benefits and at what point during the project are they assessed?	Q. 3a Are measures added over the life of the project and/or beyond? e.g. recognition of emergent benefits?	Q. 3b How far after the close-out of the project are benefits continued to be assessed, and at what intervals?	Q. 4 Targeting of guidance/ subject matter of description. By project type, industry, project size, potential social impact, customer?	Q. 5 What kinds of measures are typically used to assess benefits, and which are more frequently used?	Q. 5 Quantitative financial (Qnf), Quantitative non-financial (Qnnf) and/or Qualitative (Ql)
				some major insufficiencies in the literature in terms of not addressing major challenges from the perspective of thi specific case: Benefits realization is not just an organizational capability, but also an interorganizationa lcapability. Coordination of benefits realization across organizational units, local and central government and internal organizational levels is both essential and very challenging. Managing benefits realization includes much more than integrating benefits realization practices in ITprojects. Different benefits							illustrate with a small example .A highly recommended technique to plan benefits realization is to use a benefits dependency network (Peppar detal.,2007).When the central government decides on a new JobCenter ERP system to be used by the 94 local Job Centers, the task of defining such a network will be practically impossible. P281					

Publication number (cited as ANR1 -30 in the report) and authors	Year	Publication	Source	Q.1 What is the contribution to the 'state of the art' in measuring benefits?	Q. 1 Normative guidance (n), description of practice (d)?	Q. 1 Guidance applied at project (pt), program (pm), portfolio (po) levels?	Q. 2 At what point(s) in the project (program, portfolio) are outcome benefit (OB) measures developed, defined and selected?	Q.2 Focus on intermediate benefits (IB) too? (Yes/No)	Q.2 Focus on Interdependencies between IB and OB?	Q.2 Links to specific stakeholders?	Q. 3 Who assesses the benefits and at what point during the project are they assessed?	Q. 3a Are measures added over the life of the project and/or beyond? e.g. recognition of emergent benefits?	Q. 3b How far after the close-out of the project are benefits continued to be assessed, and at what intervals?	Q. 4 Targeting of guidance/ subject matter of description. By project type, industry, project size, potential social impact, customer?	Q. 5 What kinds of measures are typically used to assess benefits, and which are more frequently used?	Q. 5 Quantitative financial (Qnf), Quantitative non-financial (Qnnf) and/or Qualitative (Ql)
				realization practices are needed at central government level, local management level and case worker level. Different uses of technology require different levels of benefits realization capabilities and different practices. P280												
19. Pereira & Teixeira	2015	*The International Journal of Business & Management*, *3*(3), p.47.	Pereira Diamond: Benefits Management Framework	Classifies benefits into four dimensions: business increase, efficiency increase, costs reduction and legal compliance	D tending to n	pt	Business case	y	Y – any benefit on a primitive status must be transformed into an instantiated benefit to become able to be quantified.	n	Not mentioned	Not mentioned	Not mentioned	theoretical paper	a) Business Increase: Increase market share, Increase cross-selling, Increase up-selling, Increase customer loyalty; b) costs reduction: cost decrease, cost avoidance; c) efficiency increase: time decrease, time avoidance; d)legal compliance: penalty from regulators, penalties from organisation.	all

Publication number (cited as ANR1 -30 in the report) and authors	Year	Publication	Source	Q.1 What is the contribution to the 'state of the art' in measuring benefits?	Q. 1 Normative guidance (n), description of practice (d)?	Q. 1 Guidance applied at project (pt), program (pm), portfolio (po) levels?	Q. 2 At what point(s) in the project (program, portfolio) are outcome benefit (OB) measures developed, defined and selected?	Q.2 Focus on intermediate benefits (IB) too? (Yes/No)	Q.2 Focus on Interdependencies between IB and OB?	Q.2 Links to specific stakeholders?	Q. 3 Who assesses the benefits and at what point during the project are they assessed?	Q. 3a Are measures added over the life of the project and/or beyond? e.g. recognition of emergent benefits?	Q. 3b How far after the close-out of the project are benefits continued to be assessed, and at what intervals?	Q. 4 Targeting of guidance/ subject matter of description. By project type, industry, project size, potential social impact, customer?	Q. 5 What kinds of measures are typically used to assess benefits, and which are more frequently used?	Q. 5 Quantitative financial (Qnf), Quantitative non-financial (Qnnf) and/or Qualitative (Ql)
20. Prater, J., Kirytopoulos, K., & Ma, T.	2017	*International Journal of Managing Projects in Business*, *10*(2), pp.370-385.	Optimism bias within the project management context: A systematic quantitative literature review.	One of the major challenges for any project is to prepare and develop an achievable baseline schedule and thus set the project up for success, rather than failure. The purpose of this paper is to explore and investigate research outputs in one of the major causes, optimism bias, to identify problems with developing baseline schedules and analyse mitigation techniques and their effectiveness recommended by research to minimise the impact of this bias. P370 33 papers were reviewed	D leading to n	pt	Not specified, but assumptions that baseline is established at start of the project	Not specified	Not specified	One area for further research would be 'the investigation of "coercive" optimism bias put on the project manager by unrealistic expectations of the sponsor, project team and other stakeholders' p381.	Not specified, just refers to 'the estimator' . *This would be an additional potential research area RB*	Not specified	Not specified	Reference class forecasting has only been evaluated for engineering projects, but most of the papers reviewd were for non-engineering projects. One area for future research 'would be to investigate the effect of optimism bias across different industries, education levels, cultural and social background of the estimators as well as the environment in which they operate'. P381	Optimism bias applies to benefits as well as costs, but examples of the types of benefit which are inflated are not given.	Assume Qnf, Qnnf

Publication number (cited as ANR1 -30 in the report) and authors	Year	Publication	Source	Q.1 What is the contribution to the 'state of the art' in measuring benefits?	Q. 1 Normative guidance (n), description of practice (d)?	Q. 1 Guidance applied at project (pt), program (pm), portfolio (po) levels?	Q. 2 At what point(s) in the project (program, portfolio) are outcome benefit (OB) measures developed, defined and selected?	Q.2 Focus on intermediate benefits (IB) too? (Yes/No)	Q.2 Focus on Interdependencies between IB and OB?	Q.2 Links to specific stakeholders?	Q. 3 Who assesses the benefits and at what point during the project are they assessed?	Q. 3a Are measures added over the life of the project and/or beyond? e.g. recognition of emergent benefits?	Q. 3b How far after the close-out of the project are benefits continued to be assessed, and at what intervals?	Q. 4 Targeting of guidance/ subject matter of description. By project type, industry, project size, potential social impact, customer?	Q. 5 What kinds of measures are typically used to assess benefits, and which are more frequently used?	Q. 5 Quantitative financial (Qnf), Quantitative non-financial (Qnnf) and/or Qualitative (Ql)
				from 4 project management journals One finding was that there is a lack of research on the impact of optimism bias on project outcomes.												
21. Torres et al	2017	*The Journal of Modern Project Management* 5, no. 2	The hot potato game: roles and responsibilities for realizing IT project benefits.	The focus is the relationship between portfolio, programme and project in identifying, planning, measuring, and reviewing benefits	N	All levels	Portfolio for developing and monitoring benefit governance of the organisation. they define how benefits should be defined, prioritized, planned, evaluated, and controlled. Program management level is to identify the benefits	No	No	No	Portfolio management level p79		Continuous review (using benefits progress reports) P 79	IS Project	Financial and non-financial benefts	Quantified only.
22. Sales et al,	2017	*Procedia Computer Science*, *114*, pp.73-82.	Improper Program Management Induced System Archetypes	Using system dynamics to model and simulate the relationship between capabilities and benefits	N	Project and Programme	Benefits shall be realised on the programme level.	Yes	Yes, using system dynamics	Yes, different department and citizens	Not specified	Not specified	Not mentioned	IT project in Multi-million Brazilian Government Initiative	Improve in capabilities which can improve the performance (e.g. efficiency, and satisfaction)	Quantitative financial and non-financial. No Qualitative
23. Sanchez, O. P., & Terlizzi, M. A.	2017	*International Journal of Project Manage*	Cost and time project management success	It confirms and extends the main aspects of Project Success	(d) (empirical) with a view to formulate (n)	project (pt) and portfolio (po) levels	Not discussed	No	Not discussed	Not discussed	Not discussed	Not discussed	Not discussed	Information Systems (IS) Projects	Project Success is assessed from two perspectives. One is directly associated to	Not discussed

Publication number (cited as ANR1 -30 in the report) and authors	Year	Publication	Source	Q.1 What is the contribution to the 'state of the art' in measuring benefits?	Q. 1 Normative guidance (n), description of practice (d)?	Q. 1 Guidance applied at project (pt), program (pm), portfolio (po) levels?	Q. 2 At what point(s) in the project (program, portfolio) are outcome benefit (OB) measures developed, defined and selected?	Q.2 Focus on intermediate benefits (IB) too? (Yes/No)	Q.2 Focus on Interdependencies between IB and OB?	Q.2 Links to specific stakeholders?	Q. 3 Who assesses the benefits and at what point during the project are they assessed?	Q. 3a Are measures added over the life of the project and/or beyond? e.g. recognition of emergent benefits?	Q. 3b How far after the close-out of the project are benefits continued to be assessed, and at what intervals?	Q. 4 Targeting of guidance/ subject matter of description. By project type, industry, project size, potential social impact, customer?	Q. 5 What kinds of measures are typically used to assess benefits, and which are more frequently used?	Q. 5 Quantitative financial (Qnf), Quantitative non-financial (Qnnf) and/or Qualitative (Ql)
		ment, *35*(8), pp.1608-1626.	factors for information systems development projects.	from a multilevel perspective, but it has focussed on project management success, whereas the quality of the ultimate software artifact is to be analyzed to evaluate the overall project success.	recommendations										benefits (e.g. financial, quality, flexibility, and innovation). However, from the perspective of the IS projects literature, the concept of PS is massively employed as synonymous to the second perspective, wich is Project Management Success (scope, time and cost).	
24. Shahrokhi, N., Nasserabadi, H. D., & Babaei, A.	2017	Pal. Jour. V.16, I.2, 2017, 241-250	Survey and Analyzing Strategic Role of Project Management in Mass Production Projects	Identifies 5 criteria for project objectives: The Aim must be clear; The aim must be realistic and achievable; The aim should be quantitative and measurable; The aim must generally be accepted; Responsibility in achieving the goal must be clear	(d) (empirical) with a view to formulate (n) recommendations	(pt)	Not discussed	No	Not discussed	Not discussed	Not discussed	Not discussed	Not discussed	Construction projects	Not discussed	Not discussed
25. Silvius,	2017	*Journal of Cleaner Production*, *166*, pp.1479	Sustainability as a new school of	Concept of project management can be sustainable if benefits are	N	Project	Project	No	N	No	Project sponsor (P1490)	Not specified	Benefits realisation is a continuous process. Project handed over to sponsor/user	LR paper	Different benefits (but) the paper argue for different project benefits shall be based	Not clear from the paper

Publication number (cited as ANR1 -30 in the report) and authors	Year	Publication	Source	Q.1 What is the contribution to the 'state of the art' in measuring benefits?	Q. 1 Normative guidance (n), description of practice (d)?	Q. 1 Guidance applied at project (pt), program (pm), portfolio (po) levels?	Q. 2 At what point(s) in the project (program, portfolio) are outcome benefit (OB) measures developed, defined and selected?	Q.2 Focus on intermediate benefits (IB) too? (Yes/No)	Q.2 Focus on Interdependencies between IB and OB?	Q.2 Links to specific stakeholders?	Q. 3 Who assesses the benefits and at what point during the project are they assessed?	Q. 3a Are measures added over the life of the project and/or beyond? e.g. recognition of emergent benefits?	Q. 3b How far after the close-out of the project are benefits continued to be assessed, and at what intervals?	Q. 4 Targeting of guidance/ subject matter of description. By project type, industry, project size, potential social impact, customer?	Q. 5 What kinds of measures are typically used to assess benefits, and which are more frequently used?	Q. 5 Quantitative financial (Qnf), Quantitative non-financial (Qnnf) and/or Qualitative (Ql)
		-1493.	thought in project management	integrated into projects definition (P1488)									who is responsible for realising benefits from it.		on the industry (P1490)	
26. Steinfort, P.	2017	*International Journal of Project Management*, *35*(5), pp.788-801.	Community and post-disaster program management methodology.	The article is concerned with the relationship between projects and programs in a disaster response context, and contrasts the PPM methods used in international development with those used in the PPM discipline.	N, d	Pt, pm	An example is provided of a Work Breakdown Structure, which is similar in this instance to a dependencies table, with an outcome being linked to key values/measures from the BSC and deliverable benefits (p796)	Logical framework includes 'intermediate results' P793.	Link are made between different levels in the logical framework	Many references to stakeholders, and the need to work closely with them in disaster response contexts	Benefits located with program level, but in disaster response the distinction between projects and program can get blurred	Not specified	Balance has to be struck between short and long term aims in disaster response – sustainability and resilience p 793	Disaster response projects and programs	Program management seen as having a mixture of tangible and intangible outcomes, which need to be translated into deliverables for projects. The three benefits tests of the Balanced Scorecard if properly evaluated can lead to the best ROI for the program/project. p. 794.	
27. Terlizzi & Albertin	2017	*International Journal of Project Management*, *35*(5), pp.763-782.	IT benefits management in financial institutions: Practices and barriers	Bonuses are linked to benefits, PMO is responsible for developing an organisational process, Net present value is used for selecting projects, goals are set before approval, executive committee approves	N	Pt	Benefits are identified at programmes but realised, and audited at portfolio level (767- 768)	No	Not specified	No	Portfolio level (Portfolio management office)	Yes	Continuous	IT Projects in financial sector (In Brazil)	Only financial benefits are considered (or can be measured the financial impacts of).	Mainly Net present value (NPV) (which evaluates all benefits into monetary terms) P776

Publication number (cited as ANR1 -30 in the report) and authors	Year	Publication	Source	Q.1 What is the contribution to the 'state of the art' in measuring benefits?	Q. 1 Normative guidance (n), description of practice (d)?	Q. 1 Guidance applied at project (pt), program (pm), portfolio (po) levels?	Q. 2 At what point(s) in the project (program, portfolio) are outcome benefit (OB) measures developed, defined and selected?	Q.2 Focus on intermediate benefits (IB) too? (Yes/No)	Q.2 Focus on Interdependencies between IB and OB?	Q.2 Links to specific stakeholders?	Q. 3 Who assesses the benefits and at what point during the project are they assessed?	Q. 3a Are measures added over the life of the project and/or beyond? e.g. recognition of emergent benefits?	Q. 3b How far after the close-out of the project are benefits continued to be assessed, and at what intervals?	Q. 4 Targeting of guidance/ subject matter of description. By project type, industry, project size, potential social impact, customer?	Q. 5 What kinds of measures are typically used to assess benefits, and which are more frequently used?	Q. 5 Quantitative financial (Qnf), Quantitative non-financial (Qnnf) and/or Qualitative (Ql)
				projects , benefits are measured after deployment												
28. Turner, D	2017	DBA Thesis, Sheffield Hallam University	Variations of the Project Sponsor Role and Benefits Realisation: A Phenomenographic Study	The study addresses a research gap for the Project Sponsor role in terms of how the role is experienced and what is understood by the senior managers who undertake the role, and, what if anything do they understand of benefits realisation. It does not address questions of measurement of benefits, but does cover accountability for benefits	d	pt	Not specified	Not specified	Not specified	Not specified	The study identified 3 conceptions of the project sponsor role. In 'just doing the day job no awareness of a role in realizing benefits was experienced. In 'the capable manager' benefits are identified as part of delivering projects. In the 'wearing two different hats' role' there is an understanding	Not specified	Not specified	Acute hospital	Not specified	Not specified

Publication number (cited as ANR1 -30 in the report) and authors	Year	Publication	Source	Q.1 What is the contribution to the 'state of the art' in measuring benefits?	Q. 1 Normative guidance (n), description of practice (d)?	Q. 1 Guidance applied at project (pt), program (pm), portfolio (po) levels?	Q. 2 At what point(s) in the project (program, portfolio) are outcome benefit (OB) measures developed, defined and selected?	Q.2 Focus on intermediate benefits (IB) too? (Yes/No)	Q.2 Focus on Interdependencies between IB and OB?	Q.2 Links to specific stakeholders?	Q. 3 Who assesses the benefits and at what point during the project are they assessed?	Q. 3a Are measures added over the life of the project and/or beyond? e.g. recognition of emergent benefits?	Q. 3b How far after the close-out of the project are benefits continued to be assessed, and at what intervals?	Q. 4 Targeting of guidance/ subject matter of description. By project type, industry, project size, potential social impact, customer?	Q. 5 What kinds of measures are typically used to assess benefits, and which are more frequently used?	Q. 5 Quantitative financial (Qnf), Quantitative non-financial (Qnnf) and/or Qualitative (Ql)
											of a responsibility for realizing benefits.					
29. Wang, L., Kunc, M., & Bai, S. J.	2017	*International Journal of Project Management*, *35*(3), pp.341-352.	Realizing value from project implementation under uncertainty: An exploratory study using system dynamics	Evolving strategy, new technology and resource conflicts "have impact on project implementation and force the deviation of perceived value from expected goals" p341 Takes an "open systems" approach to projects.	Theoretical paper pointing towards the reaction of project managers to unforeseen events and the level of reporting and escalation.	pt	Implication of the paper is that the value of a project is not "well-known in advance". Quotes Engwall (2003) and Ahern et al (2014) in this regard. P 342. However, project managers "intend to maintain equilibrium between the value expected to be created and the [actual] value that is being created" p342. Expected values and realised values are key concepts for this theoretical paper. These can be evaluated by a single target measure or by multiple indicators,	Focus on interdependencies between project components but not benefits per se.	Not specified	Not specified	Not specified	By the very nature of the theoretical perspective taken by article "goals and implementation status" are "evolving" p341. But no tangible benefits are discussed save EV and RV	Not specified	Not specified	Not specified	Qnf
30. Williams, S., & Schubert, P.	2017	Proceedings of the 50th Hawaii International Conference on System	Connecting Industry: Building and Sustaining a Practice-based Research Community.	Proposes a practice-based research approach to investigate the design of the digital workplace and the use of enterprise collaboration systems.	(d)	Not discussed	Not discussed	No	Not discussed	Not discussed	Not discussed	Not discussed	1) eXperience Case Studies: writing research cases of IT implementations. cases are structured into parts describing the background of the company, the reasons for the implementation of a technology,	Enterprise collaboration systems	Workshops identify drivers, barriers, motivation und painpoints, but there is no specific mention of benefits	Qualitative (Ql)

Publication number (cited as ANR1 -30 in the report) and authors	Year	Publication	Source	Q.1 What is the contribution to the 'state of the art' in measuring benefits?	Q. 1 Normative guidance (n), description of practice (d)?	Q. 1 Guidance applied at project (pt), program (pm), portfolio (po) levels?	Q. 2 At what point(s) in the project (program, portfolio) are outcome benefit (OB) measures developed, defined and selected?	Q.2 Focus on intermediate benefits (IB) too? (Yes/No)	Q.2 Focus on Interdependencies between IB and OB?	Q.2 Links to specific stakeholders?	Q. 3 Who assesses the benefits and at what point during the project are they assessed?	Q. 3a Are measures added over the life of the project and/or beyond? e.g. recognition of emergent benefits?	Q. 3b How far after the close-out of the project are benefits continued to be assessed, and at what intervals?	Q. 4 Targeting of guidance/ subject matter of description. By project type, industry, project size, potential social impact, customer?	Q. 5 What kinds of measures are typically used to assess benefits, and which are more frequently used?	Q. 5 Quantitative financial (Qnf), Quantitative non-financial (Qnnf) and/or Qualitative (Ql)
		Sciences – P 5400											the four eXperience views (business, process, application, technical), the actual implementation project, the experiences of the participants since go-live and a final assessment of the key lessons learned from this project. 2) Milestories: a situation is observed and "measured" at multiple points in time that are planned at regular intervals during a project .			