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# Definition of key drivers for project success regarding the General Data Protection Regulation (GDPR)

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## Abstract

In the context of the General Data Protection Regulation (GDPR), organisational governance must consider data privacy concerns and regulations. This will avoid illegal situations, the related fines, damage to organisational reputation or, even, temporary/definitive limitation on processing activities. An innovative conceptual model is proposed to deliver the necessary change that addresses GDPR concerns based on the enablers concept. Moreover, project success is (re)examined to include stakeholders perceptions, in addition to organisational effectiveness, which is defined by the respect for legal requirements and by demonstration of compliance with the Regulation at an acceptable cost, i.e. the typical internal deliverables.

**Keywords:** General Data Protection Regulation (GDPR); project success; privacy by design and by default.

## Introduction

The purpose of this research is to define the key drivers for project success regarding the General Data Protection Regulation (GDPR).

Scheduled to be enforced from 25 May 2018, the European Union's GDPR will demand that organisations, i.e. data controllers and processors "implement appropriate technical and organisational measures" to safeguard the "ongoing confidentiality, integrity, availability and resilience of processing systems and services" (Regulation EU, 2016), in relation with the management of personal information of EU citizens.

In order to do this, it is fundamental at the outset to define what are the drivers that "motivate" (Lee and Klassen, 2008) organisations for successfully achieving the GDPR

requirements. We argue that those drivers are the principles outlined in the Regulation, and therefore, they are the motivators to start action through projects that implement what needs to be done regarding the Regulation. The terms of reference coming from the Regulation to set what should be done are designated as the permanent enablers (see Figure 1).

The authors recommend that this Regulation should be addressed as part of a GDPR programme (Room, 2018) to “deliver their intended benefits primarily through component projects” (PMI, 2017). A “program is defined as a group of related projects, subprograms, and program activities managed in a coordinated way to obtain benefits not available from managing them individually” (PMI, 2017). Thus, a GDPR programme and their compliance project(s) aim to deliver the necessary effective and efficient change that ensures that organisations are “able to demonstrate the compliance of processing activities with this Regulation” (Regulation EU, 2016) in a continuous and sustainable manner.

Therefore, it is argued that, whilst effectiveness is defined as the expected organisational satisfaction of the Regulation requirements (permanent enablers), efficiency refers to the assessment of the assets (i.e. “any resource or capability” (TSO, 2012)) utilization to achieve a certain purpose (i.e. to be effective).

The results of this reasoning “assume an enormous array of forms, and variations in these forms are related in the outcomes and behaviours” (Tolbert and Hall, 2016) and expected success.

Nevertheless, project success is no longer understood only by the long-established perspective of accomplishing the implementation of the permanent enablers on the appropriate timescales, by respecting the agreed costs, and with the desired quality, which will be just considered as the internal view. Considerations whether the project delivers, are clearly expressed and properly understood as also important; then, the “satisfaction” (Pinto and Slevin, 1988) of all the interested parties (Sheikh and Muller, 2014) expressed by their positive perceptions is also required. This will be considered the external view of the project evaluation, where most of the project value is generated. For instance, for a project addressing data privacy being successful, it is a necessary condition that the right technical procedures are implemented, within the budget, but if the controller entities do not have a good perception of the project outcomes because these entities are influenced by a competitor or because some procedure is illegal, then the project might very well be considered as a failure. Other situation could be citizens being suspicious (i.e. having a negative perception) that their data could be misused, despite the law forbidding it, and despite the security technical assurances, like it happens when information of a not yet closed judicial proceeding, i.e. before the final decision, is leaked to the media (*vide* Figure 1). To sum up, the perceptions of the interested parties (external view) are key to the assessment of the project success (condition of sufficiency), in addition to the effectiveness and efficiency implementation ratios (internal view, necessary but not sufficient condition) (*vide* Figure 1).

After drivers have been defined (Regulation principles) as well as project success (internal assessment and external perceptions), this paper is also concerned with describing *how* the initial drivers are linked with project success. This is the third part of the conceptual model designed to fulfil the GDPR requirements (*vide* section ‘Proposal of a conceptual model’). Thus, the following section adopts a holistic and multidisciplinary organisational perspective to pursue the construct of the proposed conceptual model. Then, the components of the model are detailed; and followed by a description of the interrelationships among them. Finally, the theoretical, practical and managerial implications of the model are examined.

## Proposal of a conceptual model

Organisations need to adapt to face the required change and so, they need to strengthen themselves and improve their structures in order to incorporate the GDPR requirements.

This section describes a conceptual model for introducing change in the permanent organization through a temporary one (*vide* REF for definition), i.e. a project, in order to achieve the desired result, i.e., Regulation compliance.

Thus, a holistic and multidisciplinary organisational perspective is relevant, insofar, it focus on the requirements of the Regulation, considering the degree of change that must be delivered to permanent organisations, at the agreed levels to businesses and respective users, bearing in mind how those changes will be transitioned into the operational environment to help improve the effectiveness of the permanent organization (TSO, 2012) as regards data privacy, in an efficient way.

Therefore, since “conceptual models are generally informal and typically graphic depictions of systems that quickly and easily convey the overall functionality of a system” (McKenzie, 2010), the proposed model resulting from this literature review is a graphical representation of all relevant components necessary to depict and apply the GDPR requirements in organisations (*vide* Figure 1).

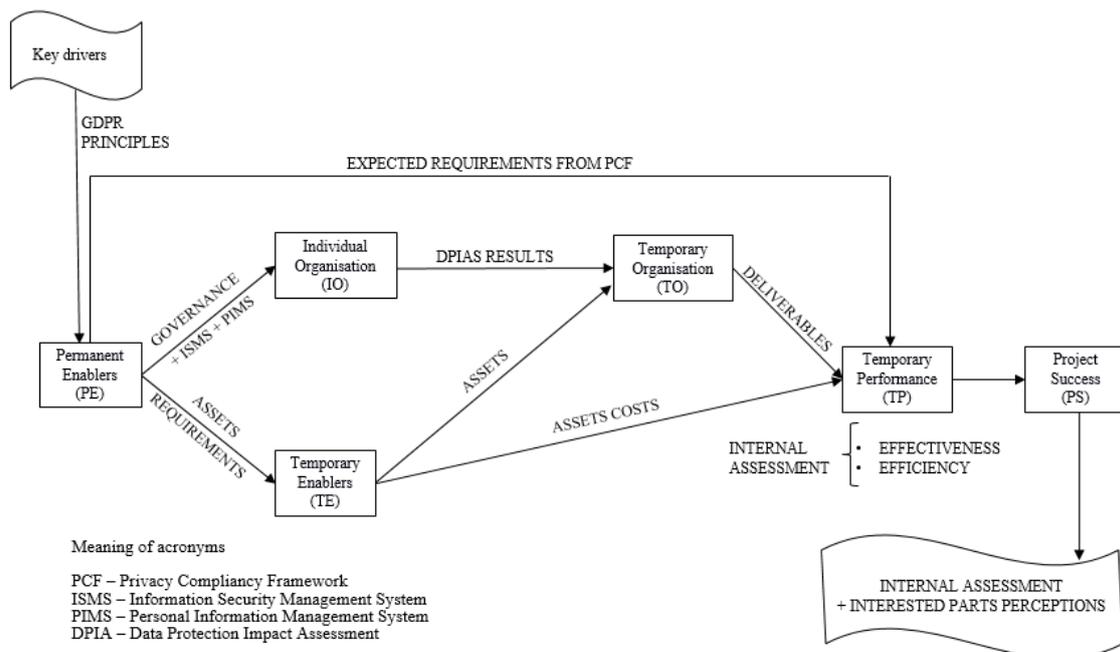


Figure 1 – Conceptual model (Adapted from Costa et al., 2017)

Thus, a meaningful conceptual model will have the following essential components:

### Drivers

A driver is a cognitive (Bandura, 1986) variable “that initiates and motivates” (Lee and Klassen, 2008) people for achieving something successfully, whether individually or as part of a group of individuals. It is argued for the key drivers as being the principles outlined in the Regulation, namely, (a) lawfulness, fairness and transparency, (b) purpose limitation, (c) data minimisation, (d) accuracy, (e) storage limitation, (f) integrity and confidentiality, and (g) accountability (Regulation EU, 2016). These dimensions set the scope for “convincing” organisations to data privacy requirements. It is not only about

going legal, fair and transparent, because business might be lost in partnerships that are lost due to the

*Permanent enablers (PE)*

Permanent enablers are the “ones who give power, strength, or competency sufficient for the purpose” (Lee and Ventres, 1981) and its constituent parts, i.e. process facilitators and discursive abilities (Müller et al., 2016). It is argued for the permanent enablers as being (a) governance, (b) Information Security Management System (ISMS) and (c) Personal Information Management System (PIMS) (BS10012:2017). These are the expected requirements to be implemented in the organizational structure.

Therefore, a GDPR Privacy Compliance Framework will consist in the following four fundamental aspects, as summarised in Table 1.

*Table 1 – Fundamental aspects of a GDPR Privacy Compliance Framework (PCF)*

<b>Components</b>	<b>Fundamental aspects</b>	<b>Source</b>
Drivers	1. GDPR Principles	– Regulation EU, 2016 – BS10012:2017
Permanent Enablers	2. Governance	– Regulation EU, 2016
	3. Information Security Management System (ISMS)	– ISO27001:2013
	4. Personal Information Management System (PIMS)	– BS10012:2017

The GDPR Privacy Compliance Framework resulting from the permanent enablers sets the requirements for conformance in terms of data protection.

*Individual organisations (IO)*

Individual organisations are the controllers and the processors. The controllers are “the natural or legal person, public authority, agency or other body which, alone or jointly with others, determines the purposes and means of the processing of personal data” (Regulation EU, 2016). Fundamental to this explanation “is the ability to decide how and why personal data is processed. When this decision is made jointly by different entities, those entities are joint controllers” (Westbrook, 2018). The processors are “a natural or legal person, public authority, agency or other body which processes personal data on behalf of the controller” (Regulation EU, 2016), “acting on the instructions of the controller” (Westbrook, 2018).

These organisations must conform with the GDPR PCF. According to Kerzner (2017) “to move forward, it is crucial that we understand the current state”. Thus, the *as-is* state has to be determined representing the current situation that might need to be changed according to the PCF requirements.

Data Protection Impact Assessment (DPIA) will assess any “privacy and data protection impacts of any products they [the organisations] offer and services they provide” (Pothos, 2018), by considering the Principles, Governance, Information Security (IS) and Personal Information (PI).

### *Temporary enablers (TE)*

Temporary enablers are all that contribute and seek to construct the purpose in a positive-sum manner. Thus, it includes “any resources or capabilities” (TSO, 2012) (assets) that could contribute to the delivery of project requirements.

These assets can be the project manager, privacy experts, information and technology (IT) experts, legal experts, organization experts. Moreover, it is important to highlight that these assets have an associated cost, in order to deliver value. This cost will be allocated to the project (i.e. temporary organization) in which they participate, contributing to the computation of the project cost. The efficiency is effort put (project cost) to achieve a certain level of deliverables (effectiveness) by the projects (temporary organisations).

### *Temporary organisation (TO)*

Temporary organisations are the projects, i.e., a “temporary endeavour undertaken to create a unique product, service, or result” (PMI, 2017), thus, aiming at covering the gaps of the permanent organisation found in the Data Protection Impact Assessment (DPIA).

Therefore, with the appropriate conditions and support, (i.e., with the proper empowerment), leadership and governance can be exercised at all levels of the organisation.

So, “empowerment is supported by vertical leadership exercised by the project manager” (Drouin et al., 2017), and once in place, the organization of the different elements, to work together efficiently and effectively, are "enabled through learning dialogs that allow the development and maintenance of shared mental models" (Drouin et al., 2017).

Finally, it is important to highlight that projects require the specific “application of knowledge, skills, tools, and techniques to project activities to meet the project requirements” (PMI, 2017) and to “deliver change” (Turner and Muller, 2003). So, they consume assets as previously stated.

### *Temporary performance (TP)*

Temporary performance, i.e., the project performance aims at checking conformance between project deliverables and expected and planned requirements arising from the needs identified in the Data Protection Impact Assessment (DPIA). These needs should be satisfied, in order to be implemented a relevant GDPR Privacy Compliance Framework (PCF).

This aspect is specifically concerned with an internal assessment that is related with the monitoring and control of the effectiveness obtained at an acceptable cost, i.e. in an efficient way. Therefore, the main privacy requirements summarized in Table 2 should be delivered. There are measures associated with these requirements that can be obtained from the Regulation, the BS10012 and the ISO27001.

*Table 2 – Main privacy requirements leading to the effectiveness of the project deliverables*

	<b>Main privacy requirements considered in assessing deliverables effectiveness (high-level)</b>	<b>GDPR</b>	<b>BS10012</b>	<b>ISO27001</b>
1	Establish the necessary processes to incorporate privacy into the organization's governance structure and culture, e.g., policies, codes of conduct.	✓	✓	✓

2	Create a privacy record management system, e.g., to collect and "maintain records of privacy information" (BS1012:2017).	✓	✓	✓
3	Create a service that internally and externally deals with the communication of privacy information, e.g., policy updates, privacy notices.	✓	✓	✓
4	Create a data subject access request (DSAR) service.	✓	✓	
5	Create a legal service, e.g., to identify and document legal basis for processing, contracts review, conditions for consent, transfers of personal data to a third country.	✓	✓	
6	Create an incident management service.	✓	✓	✓
7	Create service level agreements (SLAs) and define roles and responsibilities, e.g., through a RACI model (responsible, accountable, consulted, and informed).	✓	✓	✓
8	Implement data protection concerns in the organisational risk management (ISO31000:2018).	✓	✓	✓
9	Designate the data protection officer (DPO), e.g., the DPO informs and advises the controller or processor, regarding issues concerning the requirements of the Regulation (Regulation EU, 2016).	✓	✓	
10	Preserve the confidentiality, integrity and availability of information.	✓	✓	✓
11	Create a document classification plan. Define retention and destination schedules for personal information.	✓	✓	
12	Implement privacy by design and by default (Cavoukian, 2013).	✓	✓	
13	Create training and awareness programs.	✓	✓	✓
14	Create service for systematically assess performance.	✓	✓	✓

### *Project success*

The answer to what constitutes project success is not simple, because "success may be measured differently in different types of projects, success can be measured in different perspectives, at different stages, and in absolute or relative terms" (Samset, 1998). Therefore, different stakeholders have different perceptions of project success (Chou and Yang, 2012; Davis, 2014) and "not all the criteria will be appropriate on all projects" (Wateridge, 1998).

Moreover, the perception of what constitutes project success cannot be valued only by the conventional triple constraint of time, budget, and scope (internal assessment, as the necessary condition), but also by the achievement of organisational objectives and benefits that it brings to stakeholders over different timescales (external perceptions as the sufficient condition).

At the same time, "reaching agreement of what constitutes project success among different stakeholders may be challenging to achieve, and it will require constant communication and negotiation to align stakeholder's expectations, and to achieve their interests" (Muller, 2013). However, it is also "important to realize that not all of the stakeholders may want the project to be successful" (Kerzner, 2017).

Therefore, formal internal assessments must be done to "seek to minimise variation and to deliver results that meet defined stakeholder requirements" (PMI, 2017). With this in mind, interested parties may include:

- natural persons, i.e., citizens, clients, employees. The Regulation doesn't define the concept of natural persons; however, "Recital 27 states that the Regulation does not apply to the personal data of deceased persons or organisational data, which may

be protected through standard contractual confidentiality clauses” (Macmillan, 2018);

- Supervisory authorities;
- Other controllers and processors.

To sum up success appears to be a more robust construction if the requirements from the GDPR Privacy Compliance Framework are met (effectiveness) in economic conditions (efficiency) and if the concerns of interested parties expressed by their perceptions are addressed in a satisfactory way being brought in to the data privacy discussion.

### **Discussion and conclusions**

In the context of the General Data Protection Regulation (GDPR), the future organisational states must include data privacy concerns and regulations. This will avoid an illegal situation, and so the related fines or even survival threats, in more extreme situations. It will also improve the ability of the organization to be in business by setting an adequate environment to build up partnerships. This is a current critical condition to be accomplished by organisations, which have a high level of organisational maturity (SEI, 2010). Therefore, they should "engage in rationally designed service interactions that can consistently lead to win-win value cocreation outcomes", by being able to construe "models of the past (reputation, trust), present, and future" (Spohrer and Kwan, 2009).

Moreover, the organisational enablers of the required change projects (Temporary Organisations), which are set to assure compliance with the GDPR Privacy Compliance Framework, were found different from those ones that support the Permanent Organisations individually.

Furthermore, the organisational enablers (whether temporary or permanent) were found as both context and institutional dependent, exhibiting a non-linear relationship. This means that each enabler assumes a different importance in different organisations being guided by the principles of the General Data Protection Regulation.

For the purpose of specifically defining the key drivers for project success regarding the GDPR, the following motivation factors (drivers) were identified:

1. The principles relating to the processing of personal data as outlined in the Regulation, namely, (a) lawfulness, fairness and transparency, (b) purpose limitation, (c) data minimisation, (d) accuracy, (e) storage limitation, (f) integrity and confidentiality, and (g) accountability (Article 5) (Regulation EU, 2016).
2. Security of processing (Article 32) (Regulation EU, 2016).
3. Administrative fines (Article 83(4) and 83(5)) and financial loss (Recital 75) (Regulation EU, 2016).
4. Damage to the organisational reputation (Recital 75) (Regulation EU, 2016).
5. Limitation on processing (Article 58 (2)(f)). Often, people “see the risk of financial penalties as the major regulatory risk, but being ordered to stop data processing could be a much more dramatic outcome” (Room, 2018).

As stated in the article, the project’s role is to apply the requirements and to ensure that they are delivered as set out in the Regulation, thus contributing, to achieve project success.

This assignment operationalised an exploratory research to address the expected deliverables of the Data Protection Regulation by considering a contribution coming from the PMI body of knowledge put within the scope of an original conceptual model previously introduced by the authors (*vide* Costa et al., 2017).

It is believed that this might be considered as a contribution to the research in the area, because guidance to a more systematic implementation procedure might come out, as an orientation to the practitioner. Perhaps, the merge of several knowledge areas to support an innovative approach to the phenomenon might be considered as a potential contribution to theory. Thus, after this conceptual exercise, a few research questions might be formalised, as follows:

RQ 1 – What are the drivers of the permanent organisation (PO) to be GDPR compliant?

RQ 2 – What are the enablers of both permanent and temporary organisations?

RQ 3 – How is success regarding the GDPR defined?

RQ 4 – How is explained the correlation between permanent and temporary enablers, i.e. how might causality be established?

In summary, it is believed that there is room for further progress by refining the pursued path, which are good news for arguing for the success of the exploratory exercise presented in this paper. Thus, the definition of concepts and relationships should be deepened, by the refining of the semantics supported by a focused literature review. As a consequence, it is expected that the research questions might be transformed into propositions or hypotheses and that a process of inquiry may come out to support a confirmatory research, which should also be concerned with both the usefulness and feasibility of the outcomes.

As an instance of further complementary developments, one might quote the consideration of the service science principles. For example, by drawing on existing theory, it is proposed to develop the conceptual model in a realistic way, by considering the requirement to evaluate stakeholders' perceptions by putting their concerns together using the "Interact-Serve-Propose-Agree-Realize (ISPAR) model of service systems interaction" (Spohrer et al., 2008).

Another significant recommendation for further work concerns establishing a key regulatory element of the conceptual model. This will be defined from the enablers  $nXm$  matrix introduced by Costa et al. (2017), which correlates permanent and temporary enablers by providing what is expected to be the cornerstone of a more robust explanation for the performance of the GDPR compliance projects.

It is argued for this paper as outlining the first step of a significant contribution to both theory and research by presenting the design of an innovative and integrative approach to position and investigate the performance of GDPR projects in the real world. It is expected that addressing a GDPR project in this way could improve its success and, therefore, promote a relevant contribution to practice, in the future.

In this way, to investigate the definition of key drivers for project success regarding the GDPR appears to be confirmed as a significant research gap with scientific interest and as one of the main conclusions of this exercise. To sum up, it is believed that the chosen holistic innovative way that was reported to address the identified gap also appears to have potential for a relevant return to the Project Management area.

## References

- Bandura, A. (1986), *Social foundations of thought and action: A social cognitive perspective*, Englewood Cliffs, NJ: Prentice-Hall.
- BS10012:2017, *Data protection - Specification for a personal information management system. Specification for a personal information management system*, The British Standards Institution.
- Cavoukian, A. (2013), "Privacy by design", *Information and Privacy Commissioner of Ontario*, Canada, Available at: <https://www.ipc.on.ca/wp-content/uploads/2013/09/pbd-primer.pdf>. Date of latest Access: 11/04/2018.

- Costa, N., Vilas-Boas, J., Almeida, I. (2017), "Key drivers of project management success when applied to temporary multi-organisations", in *Proceedings of 24th EurOMA – Inspiring Operations Management*, Heriot Watt University, Edinburgh, Scotland, 1st - 5th July.
- Chou, J., S., Yang, J., G. (2012), "Project management knowledge and effects on construction project outcomes: an empirical study", *Project Management Journal*, Vol. 43, No. 5, pp. 47–67.
- Davis, K. (2014), "Different stakeholder groups and their perceptions of success", *International Journal of Project Management*, Vol. 32, No. 2, pp. 189–201.
- Drouin, N., Muller, R., Sankaran, S., Vaagaasar, A., L., Nikolova, N. (2017), "Balanced Leadership in Projects: the concept of socio-cognitive-space to support the building of organizational capabilities. The "Project Hat"", in *Proceedings of IRNOP Conference*, Boston, MA 11 -14 June 2017.
- ISO/IEC27001:2013, *Information technology - Security techniques - Information security management systems - Requirements*, ISO/IEC, Switzerland.
- ISO31000:2018, *Risk management -- Guidelines*, ISO.
- Kerzner, H., (2017), *Project Management Metrics, KPIs, and Dashboards: A Guide to Measuring and Monitoring Project Performance*, Third ed. John Wiley & Sons, Inc., Hoboken.
- Lee, D. K., Ventres, S. (1981), "The Nurse: The enabler", *American Journal of Nursing*, Vol. 81, No. 3, pp. 506-508.
- Lee, S., Y., Klassen, R., D., (2008), "Drivers and Enablers That Foster Environmental management Capabilities in Small- and Medium-Sized Suppliers in Supply Chains", *Production and Operations Management*, vol. 17, No. 6, pp. 580.
- McKenzie, F. D. (2010), "Systems Modeling: Analysis and Operations Research in Sokolowski" in Sokolowski, J., A., Banks, C., M. (Ed.), *Modeling and Simulation Fundamentals. Theoretical Underpinnings and Practical Domains*, John Wiley & Sons, Inc., Hoboken, New Jersey, pp. 148.
- Müller, R., Adersen, E., S., Kvalnes, Ø., Shao, J., Sankaran, S., Turner, J., R., Biesenthal, C., Walker, D., Gudergan, S. (2013), "The Interrelationship of Governance, Trust, and Ethics in Temporary Organizations", *Project Management Journal*, Vol. 44, No. 4, pp. 26-44.
- Müller, R., Shao, J., Pemsel, S. (2016), *Organizational Enablers for Project Governance*, Newtown Square, USA, Project Management Institute.
- Photos, M. (2018), "Accountability Requirements", in Ustaran, E., Lovells, H. (Ed.), *European Data Protection Law and Practice*, IAPP Publication, pp. 207.
- Pinto, J. K., Slevin, D. P. (1988), "Project success: Definitions and measurement techniques", *Journal of Project Management*, Vol. 19, No. 1, pp. 67-72.
- PMI (2017), *A Guide to the Project Management Body of Knowledge (PMBOK GUIDE)*, Sixth edition, Project Management Institute.
- Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation). Available at: <http://data.consilium.europa.eu/doc/document/ST-5419-2016-REV-1/en/pdf>. Date of latest Access: 03/01/2018.
- Room, A. (2018), "Security of Personal Data", in Ustaran, E., Lovells, H. (Ed.), *European Data Protection Law and Practice*, IAPP Publication, pp. 180.
- Room, A. (2018), "Supervision and Enforcement", in Ustaran, E., Lovells, H. (Ed.), *European Data Protection Law and Practice*, IAPP Publication, pp. 244.
- Samsø, K. (1998), *Project management in a high-uncertainty situation: Uncertainty, risk and project management in international development project*, Ph.D. Thesis. Norwegian University of Science and Technology. Faculty of Civil and Environmental Engineering. Department of Building and Construction Engineering, Trondheim.
- Sheikh, R., A., Muller, R. (2014), "The Relationship between Culturally Endorsed Leadership Theory (CLT)", *KSBL working paper series, Karachi School for Business & Leadership*, No. 16.
- Spohrer, J., Kwan, S. K. (2009), "Service science, management, engineering, and design (SSMED): an emerging discipline -- outline and references", *Management Information Systems*, Vol. 1, No. 3, pp. 1–31.
- Spohrer, J., Vargo, S., Maglio, P. M., Caswell, N. (2008), "The service system is the basic abstraction of service science", in *Proceedings of the 41st Hawaii International Conference on System Sciences*, Vol. 1, No. 14, pp. 6.
- Tolbert, P., S., Hall, R., H. (2016), *Organizations Structures, Processes, and Outcomes*, Tenth Edition, Routledge.
- TSO (2012), *ITIL Foundation Handbook*, The Stationery Office and IT Service Management Forum UK.
- Turner, R., Müller, R. (2003), "On the Nature of the Project as a Temporary Organisation", *International Journal of Project Management*, Vol. 21, No. 7, pp. 1-8.

- Wateridge, J. (1998), "How can IS/IT projects be measured for success?", *International Journal of project Management*, Vol. 16, No.1, pp. 59-63.
- Westbrook, N. (2018), "Internet Technology and Communications", in Ustaran, E., Lovells, H. (Ed.), *European Data Protection Law and Practice*, IAPP Publication, pp. 319.