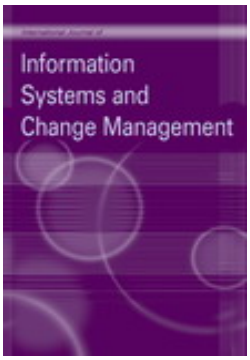

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Developing a multi-perspective capability model for organisational business process management maturity assessment in digital era

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Abstract: Many research studies have identified business process management (BPM) as the top business priority. Several opportunities and challenges have arisen due to digitisation, including a shift in how BPM initiatives are managed, and the development of new capabilities businesses should incorporate for BPM success. Various BPM capability assessment models have been discovered in the literature to date. However, these models must be revised to include digital BPM advancements to fit with the organisational contexts in the digital age. This study aims to determine the fundamental components of BPM capacity evaluation in current organisational environments. A new BPM capacity assessment model with 21 capability elements was established based on the findings of this study. Future implications of this research study can empirically evaluate the developed model and expand the identified capability elements to a model for assessing organisational BPM maturity.

Keywords: business process management; BPM capability assessment; BPM maturity; qualitative data analysis; thematic data analysis.

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1 Background

Organisations today seek to oversee their business processes, products, services, suppliers, and customers as one group to improve their business processes in real-time and respond to external environmental changes. Business process management (BPM) enables a company to constantly watch what is going on while identifying chances for process improvement and enhancement (De Bruin and Rosemann, 2007). BPM brings together the goals, structures, processes, and tools proposed in many disciplines, such as process innovation, business process automation, and process reengineering (Roeglinger et al., 2017). The success of BPM projects is determined by how far an organisation's BPM capabilities have progressed (Dumas et al., 2018). BPM maturity models can assess an organisation's BPM capabilities (Zelt et al., 2019).

Philip Crosby proposed the term 'maturity' in 1979 to describe the state of being complete or ready (Fryt, 2019). Maturity models usually include stages that constitute a logical progression from a starting state to maturity (Tarhan et al., 2016). The literature describes a maturity model as "a conceptual model that consists of a sequence of discrete maturity levels for a class of processes in one or more business domains and represents an anticipated, desired, or typical evolutionary path for these processes" (Tarhan et al., 2016). The capability maturity model (CMM) is recommended for evaluating an organisation's present maturity level based on its capabilities in a particular field (Paulk et al., 1993). CMM was proposed by Carnegie Mellon University's Software Engineering Institute in 1993, and in 2002 it was improved to capability maturity model integration (CMMI) (Team, 2002). CMM was initially created to assess and enhance the quality of software development processes, and hundreds of companies worldwide have subsequently adopted it. CMM has progressed and been extended into various approaches, including BPM, knowledge management, IT infrastructure management, and enterprise architecture management (Fisher, 2004; Hammer, 2007; Harmon, 2004; Lee et al., 2007; McCormack et al., 2009; Rosemann and De Bruin, 2005).

As a result of digital breakthroughs such as the internet of things (IoT), process mining and monitoring, blockchains, and artificial intelligence, the ability and motivation of businesses to implement these components into their operations have expanded (Mendling et al., 2018). As a result, BPM initiatives must focus primarily on integrating digital advances into business processes. Although the literature sufficiently discussed the core components and guidelines of BPM capability assessment of organisations, there is still space for advancement regarding an organisation's digital innovation capabilities measurement aspects (Roeglinger et al., 2017; Rosemann, 2014).

Accordingly, the study that underpins this paper attempts to create a novel BPM capability model suitable for today's digitalised organisations. The study focuses on the following research questions.

1 What key capability factors must be applied to measure BPM maturity in present-day organisations?

2 As per the domain experts' perspective, are those factors appropriate?

The structure of the paper is as below. Section 2 describes the literature review, Section 3 describes the process followed to develop the capability assessment model, Section 4 explains the findings of the research, and Section 5 introduces the conclusion and implications of the research study.

2 Literature review

BPM is a research domain that receives constant attention from academia and the public (Dumas et al., 2018; Harmon, 2018). Matured and new technologically enabled tools are currently applied for performing all the phases of BPM projects (Kerpedzhiev et al., 2021).

Academics have established over two hundred maturity models since CMM's successful introduction to the context of organisational capability maturity evaluation (Curtis and Alden, 2007). Those maturity models span three primary application-specific goals (Rosemann and Brocke, 2010; Hammer, 2007; Fryt, 2019):

1 Descriptive: This model is applicable to examine the as-is evaluation, which assesses the entity under investigation's current capabilities.

2 Prescriptive: This model aids in the identification of existing maturity levels as well as the recommendation of improvement methods; to-be evaluation.

3 Comparative: This model aids in the evaluation of external and internal benchmarking.

As a result, while business process maturity models (BPMM) can be mapped to CMM and CMMI, they focus on improving business processes that are distributed across the enterprise rather than the project-based focus of CMMI. Project and program management, vendor management, complexity management, standards management, and strategy management are examples of the uses of BPMM (Rosemann and Brocke, 2010). Different BPM-related maturity models have established numerous core capability factors of BPMM based on the uses mentioned above.

The process and enterprise maturity model (PEMM) was introduced by Hammer (2007), and it is one of the most widely used models in the literature. This model identifies nine capability factors that influence maturity: five factors that enable the process to be implemented and four organisational skills. Organisational and process maturity levels will be examined using these characteristics and compared to the identified four maturity levels.

The object management group's business process maturity model (BPMM-OMG) is another maturity model that has been addressed in the literature. This model is built on the same assumptions as CMMI, but it was created especially for analysing intra-organisational business processes (Weber et al., 2008). Determining the current process enhancement level and supporting business process improvement are two different uses of this model.

Fisher's (2004) BPMM consists of five 'levers of organisational transformation' with five maturity levels. They highlight that aligning processes with those five drivers of change by building an enterprise-wide environment that encourages and rewards acceptable behaviour is the ideal method to solve organisational difficulties. This approach merely provides targets, with no guidance to attain these targets due to the high level of abstraction on activities (Lee et al., 2007).

Rosemann and De Bruin (2005) proposed the business process management maturity model (BPMMM), which includes six capacity components contributing to organisational change and five maturity levels. Organisations can use this model to examine the capabilities of their 'as-is' business processes and make improvements to help them

achieve the 'to-be' process states. BPMMM divides components and maturity levels into two hierarchical levels. This hierarchical structure enables the analysis to be performed at various levels of granularity.

Kerpedzhiev et al. (2021) presented an enhanced capabilities framework to BPMMM introduced by Rosemann and De Bruin (2005) by aligning BPM fundamental elements to updated technological organisation's characteristics. Moreover, a dependency matrix of the capability factors included in BPMMM is suggested by Dharmawan et al. (2019) by identifying the process capability dependencies and introducing a guideline for the practical application of BPMMM.

McCormack et al. (2009) created the business process orientation maturity model (BPOMM), which includes three organisational capabilities and four maturity stages. This model demonstrates how organisations can improve their overall organisational performance by implementing business-process orientation (BPO) concepts.

Harmon (2004) proposed the business process maturity ladder, a generic and straightforward method for assessing the maturity of the organisational business processes. This model has five maturity levels that are lightly based on CMMI but are a less formal approach to determining how well an organisation performs. Unlike other rigorous methodologies, such as CMMI, the researchers want to restrict the maturity evaluation procedure to a few days of work with this methodology. Although this model emphasises the importance of including values in the BPM maturity evaluation, it does not specify how to reach them (Becker et al., 2009).

The BPMM (Lee et al., 2007) was developed based on CMMI's general principles, terminologies, maturity levels, and key process areas (KPA). These KPAs are based on the input, mechanism, control, and output (IMCO) perspective of business processes.

One of the most exciting study areas in the BPM domain is the application of CMM to BPMM (Fryt, 2019). Although there is a large number of maturity models available, these models have limitations such as a lack of consistency in the model building process, limited scope of each aspect of BPM, absence of adequate strength in the evaluation levels, and absence of empirical validations (Stravinskiene and Serafinas, 2020; Waszkowski and Kowalski, 2017). Essentially, the capability evaluation criteria addressed in those models must be updated to reflect contemporary digital concepts and activities.

3 Research method

The methodology used to build the suggested organisational capabilities model is discussed in this section.

3.1 Identification of the key BPM capability factors

BPM maturity models and process maturity models are the two types of maturity models described in the BPM field (De Bruin and Doebeli, 2009; Roeglinger et al., 2012). Process maturity models discuss a way to assess the creation of different process instances and perform and manage those processes (Rosemann and De Bruin, 2005). In contrast, BPM maturity models explain how to measure BPM capabilities of an organisation (De Bruin and Rosemann, 2007). The BPM capability factors included in BPMMM (Rosemann and De Bruin, 2005), PEMM (Hammer, 2007), BPMM by Fisher

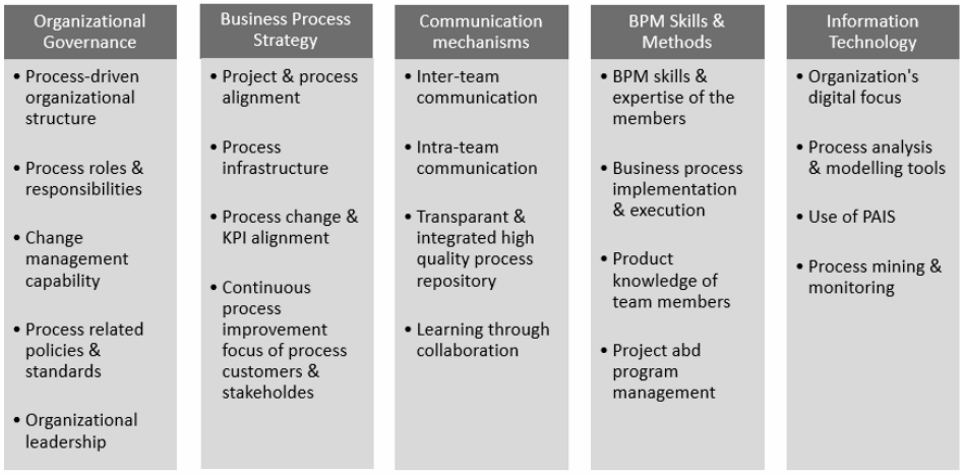
(2004), and BPMM-OMG (Weber et al., 2008) are applied as the basis of capability factors discussed in this study. Those maturity models were chosen because they include many BPM capability criteria and are widely used in the literature for maturity assessments (Niehaves et al., 2014). Moreover, these models can assess and enhance an organisational business process (BPMM-OMG), BPM capabilities (BPMMM, BPMM by Fisher), or both (PEMM). They are designed to be helpful for both descriptive and prescriptive purposes. The BPMMM and BPMM both claim to support the comparative purpose of usage. Table 1 shows the capability factors included in those models.

Table 1 The capability factors consist of the selected BPM maturity models

Maturity model	*The capability factors*	
BPMMM	• Strategic alignment	
	• BPM governance	
	• Method	
	• IT	
	• Culture	
	• People	
BPMM by Fisher	• People	
	• Process	
	• Technology	
	• Strategy	
	• Control	
Business process orientation maturity model (BPOMM)	• Process	
	• Structure	
	• Culture	
BPMM-OMG	• Process management	
	• Business management	
	• Work management	
	• Work performance	
	• Organisational support	
PEMM	For individual process:	For organisation:
	• Process design	• Leadership
	• Process performers	• Culture
	• Process owners	• Expertise
	• Process metrics	• Governance
	• Infrastructure	
Process maturity ladder (PML)	• Basic attributes of the business process	
BPMM by Lee	• Measurement and analysis	
	• Focus of KPAs	
	• Influence on process improvement	
	• Control	

Similarities in the findings of research studies discussed above were identified by comparing all the factors. For instance, Hammer (2007), De Bruin and Rosemann (2007), McCormack et al. (2009) and Kerpedzhiev et al. (2021) have identified 'culture' as a shared capability factor in their models. Alternatively, the concept discussed by Fisher (2004) as 'control' is explained by both Kerpedzhiev et al. (2021) and De Bruin and Rosemann (2007) as 'governance'. Incorporating these findings, five factors were identified, see Figure 1, as the essential core capability factors for assessing organisational BPM maturity in present-day organisations.

Figure 1 Basic BPM capability factors



Each capability factor is described below.

- Organisational governance: The association among organisational structure aspects, for instance, organisational hierarchy, organisational leadership support for the BPM initiative, and the budget allocation for the BPM project, are discussed in this factor.
- Business process strategy: This factor discusses the association between organisational priorities, features of the business process, and the BPM project.
- Communication mechanisms: The intra-team communication strategies and inter-team communication strategies used by BPM project participants are described by this factor.
- BPM skills and methods: This factor discusses the technical and management abilities required from individuals or groups who engage in the BPM project team and the different approaches used during the project.
- Information technology: This factor discusses the hardware infrastructure, software, and information systems that facilitate and control business processes.

After identifying these factors, their applicability and validity in real-world occurrences were evaluated. The expert interview method was chosen among many alternative research methods, such as the Delphi method and case study method. The following section focuses on the planning and execution of the expert interview series.

3.2 Evaluation of the validity and applicability of identified basic capability factors

The expert interview series had two explicit goals:

a decide a standard definition for each element

b distinguish the application concerns for each capability factor in real-world BPM projects.

In order to provide 'shared grounds' for the model's applicability in multiple industries/ domains, it was necessary to agree on a standard definition for each element as part of the model validation process.

3.2.1 Selection of expert interview technique

The common data collection method in qualitative research is interviews (Jamshed, 2014). The literature explains that "qualitative interview is a type of framework in which the practices and standards be not only recorded but also achieved, challenged and as well as reinforced" (Oakley, 1998). Unstructured, semi-structured, or standardised interviews are commonly used methods in qualitative research approaches.

The unstructured interview method is commonly applied in long-term field research because it allows interviewees to react in their own way and at their own pace. Furthermore, an unstructured interview is much more similar to a controlled discussion focused on the interviewer's interests than a formal interview (Mathers et al., 2000). In the standardised interview method, the same questions in the same format are asked from each responder. This method aims to apply a quantitative data analysis method; hence, it involves a closely structured set of questions, similar to a questionnaire (Creswell and Poth, 2016). A semi-structured interview, in contrast, allows respondents to react to predefined open-ended questions (Jamshed, 2014). Nevertheless, depending on the questions answered by each respondent, the responses may differ slightly. Most notably, semi-structured interviews are a good data collecting approach when the researcher wants to collect qualitative and open-ended data and study respondents' thoughts, experiences, and opinions on a specific issue.

The semi-structured interview approach was chosen for this study as the data collection method since this study also aims to collect industry experts' experiences and opinions regarding the identified capability factors.

3.2.2 Selection of the interview participant's sample

A common principle for defining sample size (N) in a qualitative study is that N should be sufficiently large and varied to interpret the study's aims (Kuzel, 1992; Marshall, 1996; Malterud et al., 2016). According to Malterud et al. (2016) the larger information power the sample holds, the lower N is needed, and vice versa. They explain the information power based on

a study aim

b sample specificity

c use of established theory

d quality of dialogue

e analysis strategy.

> "A study will need the least amount of participants when the study aim is narrow, if the combination of participants is highly specific for the study aim, if it is supported by established theory, if the interview dialogue is strong, and if the analysis includes longitudinal in-depth exploration of narratives or discourse details." [Malterud et al., (2016), p.1756]

Following the same approach this study identified that less than ten participants are sufficient, thus selected seven BPM specialists.

Six top Sri Lankan companies were chosen, each of which operates in one of four fields: apparel, IT, business consulting, and ERP consulting. IT-BPM domain specialists from the selected companies' IT departments were identified as potential participants in this study. The interviewees' professional domains were identified as ERP consulting, business technology consulting, and business analysis. The ERP consulting domain generally includes either technology consulting or process consulting, whereas business analysis includes either business process analysis or information systems analysis. Hence, business process analysis experts were selected from business analysts and process consultancy professionals from ERP consultants. Seven domain experts were chosen as the sample for this study from a possible group of domain experts. The demographic information of the selected individuals is shown in Table 2.

Table 2 Description of the selected sample of interviewees

Interviewee	*Expertise area*	*Designation*
R1	ERP consultation	ERP consultant
R2	Information technology	Lead business analyst
R3	ERP consultation	Senior ERP consultant
R4	Apparel	Senior manager – technology consulting
R5	Business consultation	Senior manager – technology consulting
R6	ERP consultation	Head of consulting (ERP)
R7	Apparel	Assistant manager – ERP consulting

3.2.3 Collection of data

Multiple cycles of semi-structured interviews were performed with selected industry experts to gather their perspectives on the applicability of identified BPM maturity building blocks. There were primarily two types of questions raised: leading and follow-up questions. Leading questions were used to cover the questions listed in the interview protocol. The interviewee's response prompted the follow-up questions.

3.2.4 Analysis of collected data

The qualitative data analysis method was chosen to analyse the interview responses. The thematic data analysis method was selected since it is an effective qualitative analytical technique. Braun and Clarke (2012) describe that thematic data analysis is applicable to identify practices, behaviours, or opinions in datasets acquired from interviews, questionnaires, social media platforms, or surveys.

Braun and Clarke's (2012) six-stage framework is the most extensively used method for thematic analysis research studies. The same procedure is followed in this research study. The following sections describe each phase of this analysis.

- Stage 1: being familiar with data

  The first step is to transcribe the gathered data. The complete dataset was evaluated for this purpose in order to become familiar with the content. Because all of the interview responses were initially being saved as audio files, the essential contents of these responses were transformed into text files.

- Stage 2: producing initial codes

  Following stage 1, the initial codes for the complete dataset were discovered. This was accomplished by methodically discovering exciting patterns in the dataset.

- Stage 3: Exploring the themes

  This phase entails arranging codes into possible themes. The two widely used methods to identify themes are the deductive and inductive methods (Fereday and Muir-Cochrane, 2006). The deductive method focuses on analysing the dataset with predefined themes generated based on existing theory or prior knowledge, whereas the inductive approach identifies the codes based on obtained data. The literature evaluation guided the theme generation process in this study; hence a deductive approach was followed. The following are the topics that were chosen.

  1 Governance of the respective organisation.
  2 Strategies and controlling mechanisms applied in business process.
  3 Communication mechanisms used by the BPM project members.
  4 BPM project members' BPM skills and ability to apply BPM methods.
  5 Use of information technology in the BPM project.

- Stage 4: revising the themes

  The association between the themes and collected data is assessed by inserting the coded data into appropriate themes. The initially identified themes were continued for the following stages because neither sub-theme nor new topics formed.

- Stage 5: specifying theme names

  This phase involves naming each theme in a way that accurately describes its content, labelling the themes that have been identified, and explaining the information they include. Each theme identifies an organisational BPM capability factor and its significance to the success of a BPM project. The themes were labelled as below because each theme illustrates the significance of BPM capability factors to the success of a BPM project.

  1 Importance of the organisational BPM governance to the success of BPM projects.
  2 Importance of process strategies and control mechanisms in the success of BPM projects.

3 Importance of the BPM project team's communication strategies to the project's success.

4 Importance of BPM project team's ability to apply BPM methods to the success of BPM projects.

5 Importance of using Information Technology in the BPM projects to its success.

- Stage 6: reporting the findings

  The findings of this analysis are presented in the following sections.

4 Findings of the research

All the interviewees stated that measuring organisational BPM capacity at the early stages of a project is critical to the project's success. Measuring the alignment between the functional capabilities of the introducing product or product suite and the underlying business process/processes in the client organisation is a common approach for assessing organisational BPM capacity. Such a functional assessment is merely one element of the multi-dimensional evaluation required for a thorough organisational capabilities study. Below sections explain the respondents' perspectives on the proposed multi-dimensional BPM capability evaluation approach, according to the themes identified.

4.1 Importance of the organisational BPM governance to the success of BPM projects

Proper governance defines the appropriateness and transparency of the decision-making processes of organisations. Process governance and BPM are highly contextual techniques in the digital age (Roeglinger et al., 2017). Below questions were raised to the interviewees to collect responses related to assess the availability of governance structures that lead, coordinate, and support process efforts of the organisation.

1 Does the support of organisational management (top level to ground level management) enable successful business process improvement?

2 Do successful process improvements are facilitated by the availability of well-defined roles and responsibilities of key players of the process?

3 Does availability of process change management procedures (related to process activities and people) affect the process management initiatives' success?

4 Does availability and use of process control policies and standards lead process improvement initiative's success?

5 Does availability of process oriented organisational structure enable success of process improvement initiatives?

Most interviewees explained that organisations with a process-oriented organisational structure, where process-related knowledge is stored in the system rather than in people, are more likely to succeed with BPM projects. Furthermore, the interviewee 1 stated that "the roles and responsibilities of BPM project stakeholders should be well-defined", and interviewee 3 stated that "the process' policies and standards must be accessible to all

stakeholders of the process." As stated by the interviewee 4, "the availability of change management strategies is critical because BPM is closely linked to change circumstances." According to the responses received, with the working models and cooperation models in today's highly digitised contexts, support of the organisational governance8 has become a fundamental requirement for BPM success.

4.2 Importance of process strategies and control mechanisms in the success of BPM projects

The synchronisation of priorities and processes of the organisation to support the accomplishment of business goals is referred to as process strategy and control. Process strategy in the digital age is mainly focused on the value proposition of BPM (Roeglinger et al., 2017). Below questions were raised to the interviewees to collect responses regarding the alignment between process strategy and process improvement initiative's success.

1 Does the alignment of BPM initiative's objectives and underlying process objectives enable success of BPM initiative?

2 Does the availability of appropriate process infrastructure leads BPM project success?

3 Does the alignment of process changes with the organisational KPIs affect the BPM project success?

4 How does the readiness of process customers and stakeholders for continuous process improvement support BPM project success?

According to the interviewee 2, "organisational strategy and objectives should be closely aligned with the goals of their business processes and BPM requirements." Therefore, the contribution of business processes to organisational goals was identified as one measurement for prioritising processes based on their need for change. Interviewee 5 mentioned that "retaining visibility of association among business processes and the entire enterprise architecture is a requirement for prioritising business processes." Furthermore, the interviewees emphasised the need to determine how many business activities contribute to inter-organisational and intra-organisational value networks.

Another topic highlighted by the respondents was aligning newly implemented process changes with process KPIs. Interviewee 6 mentioned, "it is very important to keep the process customers' and stakeholders' focus on continuous process improvement practices." Moreover, interviewee 7 highlighted that "a digitally enabled organisational infrastructure, which supports the use of innovative technological solutions in the BPM project, such as data analytics and collaborative tools is also important for BPM success."

Furthermore, governance of process data and availability data analysis standards also identified as important factors. Interviewee 4 mentioned that "the availability of organisational governance-defined standards on data analysis and infrastructure management of the processes is critical for BPM's success." Interviewee 5 stated that "business processes contain sensitive data about the organisation, and because outsiders will have access to this data during a BPM project, governance of process data is critical."

4.3 Importance of the BPM project team's communication strategies to the project's success

BPM requires a high level of communication and collaboration mechanisms. According to Niehaves and Plattfaut (2011) BPM effectiveness is primarily determined by the organisation's communication strategies. Below questions were used during the interview to measure the alignment between BPM project success and regular communication of process information, easy consumption throughout the organisation, and availability of a focal point for collaboration and change.

1 Does the availability of effective inter-team communication mechanisms lead BPM project success?

2 How do you describe the alignment of effective intra-team communication (specially with requirement signoffs) with BPM project success?

3 Does maintaining transparent and integrated high quality process repository help to succeed BPM initiatives?

4 Does learning through collaboration practices of the BPM team members leads BPM project success?

Interviewee 2 highlighted that "inter-team and intra-team communication is critical for streamlining BPM tasks and corresponding deliverables." They also highlighted how a pre-determined communication plan could help recognise these stakeholders and their communication requirements. Interviewee 1 explained that "the ability to obtain the relevant information on time and distribute it to the proper recipient is a cause for the BPM initiative's success." Interviewee 3 explained that "the process data repository with transparent, integrated, and a high-quality data will the effective communication among the BPM team." Furthermore, most of the interviewees highlighted the importance of an organisational culture that encourages learning through collaboration as critical to the success of the BPM project.

4.4 Importance of BPM project team's ability to apply BPM methods to the success of BPM projects

Methods describe the strategies that enable consistency of process actions and outcomes, whereas skills highlight the competence or abilities necessary for BPM project team participants to fulfil their roles successfully. To assess the alignment between availability of necessary process management skills and resources at organisation and BPM project success following questions were raised during the interviews.

1 Does successful BPM projects are facilitated by having BPM skills and expertise among the team members?

2 Does business process implementation and execution knowledge help to succeed in BPM initiatives?

3 Are there any additional skills or knowledge required by the BPM team to make a BPM project success?

As highlighted by most interviewees, all team members should establish experience in BPM skills, including process analysis and business process modelling skills. Interviewee 5 stated that "the team should have experience in business process implementation and execution and knowledge of the project's tools and processes." Interviewee 6 mentioned that "effective project management in terms of timeframes, staff availability and workload assignments, and delivering project outcomes on time are also important to the BPM success."

Knowledge of BPM methodologies and tools was highlighted as critical for all project participants. Interviewee 7 stated that "knowledge of data analytics, data security, and data management approaches can be identified as a facilitator for the BPM initiative's success in today's digital contexts." Furthermore, most of the interviewees emphasised that apart from IT content, team members' knowledge of digital business models and the digital economy.

4.5 Importance of using information technology in the BPM projects to its success

The hardware infrastructure, software applications, and information systems that support and enable business processes and BPM projects are referred to as tools and technologies. To collect details about the usage of necessary BPM tools to drive consistent and positive BPM outcomes following questions were raised during the interviews.

1 Does organisation's digital focus and its alignment with process management strategy facilitate BPM project success?

2 How the availability and use of process analysis and modelling tools support BPM project success?

3 Does the availability of process aware information systems for process implementation help BPM project success?

4 Does the use of process mining and monitoring mechanisms lead successful BPM initiatives?

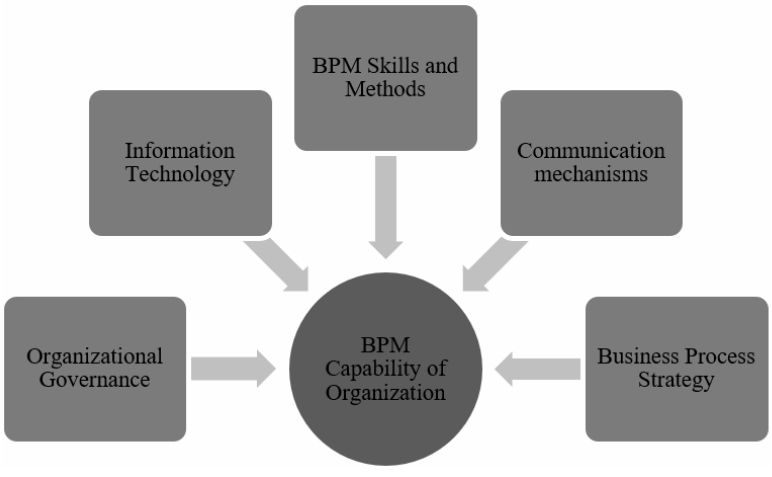
According to interviewee 7, "the use of IT-supported methodologies helps to increase the efficiency of all phases of the BPM lifecycle." Process analysis and process modelling tools, including business process management suits (BPMS) and business process visualisation tools, were highlighted as particularly useful. Interviewee 4 mentioned that "the availability of process-aware information systems (PAIS) is significant because they support the smooth running of the business process that the BPM project is focusing on." As interviewee 5 explained, "process mining and monitoring approaches are easier to integrate with BPM activities, for instance, process analysis and process modelling." Process mining, or the visualisation and analysis of event logs using algorithms and mathematical techniques, is becoming more popular among today's BPM and business optimisation professionals (Turner et al., 2012).

All of the interviewees stated that selecting and customising the methodologies and tools that would be used in the BPM project based on the organisational settings is critical. This rationale is that IT-supported methodologies are used in all phases of a BPM project, including process analysis, process modelling, process improvement, and process monitoring. Furthermore, interviewee 7 stated, "IT-based solutions should be aligned

with standard task management approaches, for instance, transactional, automated, and exploratory applications."

According to the research findings, 21 capability factors were discovered under the five fundamental capability factors. The multi-perspective BPM capability model, presented in Figure 2, was constructed incorporating these findings.

Figure 2 The multi-perspective BPM capability assessment model



5 Discussion and conclusions

Business processes that are well-defined and well-managed are critical to an organisation's success (Abdolvand et al., 2008). BPM aims to enhance the execution of cross-functional organisational activities and guarantees that the entire business process is managed effectively (Vombrocke and Rosemann, 2015). Over the last few years, the integration of digital innovations with organisational implementations, for instance, IoT, artificial intelligence, blockchains, and process mining, has expanded (Kerpedzhiev et al., 2021; Oruthotaarachchi and Wijayanayake, 2021). Those innovations are designed to support process automation and enable innovative business process models. As a result of these innovative business process models being more data-driven, complicated, and real-time data evaluations nowadays, decision-making of business processes has become more effective (Roeglinger et al., 2017). The traditional problem-driven BPM methodologies are not suitable in a setting with digitised process design alternatives and extensive automation. Unstructured and context data should be explored using digital technologies, allowing for unexpected, fragmented, knowledge-intensive, and cross-organisational business operations (Nfuka and Rusu, 2011).

The extent to which an organisation's BPM capabilities have improved determines the success of BPM initiatives (Ravesteyn et al., 2012). The BPM initiative's success can be determined by the advancement of the organisation's BPM capabilities (Reijers et al., 2010). BPM maturity assessment allows organisations to assess their BPM capabilities. Researchers have generated over 200 maturity models to date, but in today's computerised contexts and working practices, those models should incorporate additional

digital scope and focus. Accordingly, this research aimed to identify the critical building blocks of BPM maturity in today's digital organisational environments and measure the appropriateness of those elements from the perspective of domain experts.

After a comprehensive literature review, seven BPM maturity models were selected to apply in this study. By comparing and contrasting the capability factors included in those models, five core BPM maturity factors: organisational governance, business process strategy, BPM skills and methods, communication mechanisms, and information technology were then identified. The validity and application of each component in real-world situations were determined based on the suggestions of seven BPM practitioners attached to six major BPM-related organisations in Sri Lanka. An expert interview series was conducted to collect data, and the data was analysed using the thematic analysis method. Five themes were determined using a deductive thematic analysis approach based on related literature.

The validation reveals that the selected core factors comprise a wide range of BPM capacity assessment perspectives that should be conducted for today's digitised organisational contexts. The analysis produced 21 sub-capability factors to guarantee that the factors were used consistently in various real-world phenomena. The multi-dimensional capability assessment model was designed based on these findings.

Even though several BPM maturity models are available in the literature that discusses BPM capabilities, their validity and applicability to the Sri Lankan context are not assessed. Moreover, these models have limitations such as missing rigor in the model development process, the limited scope of each facet of BPM, the lack of sufficient depth in the assessment levels, and the lack of empirical validations for these models. The BPM capability assessment model introduced by this study is developed to address such limitations as much as possible. Additionally, it incorporates the experiences and insights of Sri Lankan BPM practitioners, thus introducing a novel addition to Sri Lankan BPM research and practice domain.

The applicability of the proposed BPM capability assessment model can be further evaluated through an action research study in which the model is deployed in ongoing BPM initiatives. Such a research study could be a potential implication that enables empirical validation of the research findings. Because this study was focused on the Sri Lankan BPM domain, testing the validity of the discovered capability factors in other countries could be another future implementation. Such implementation would highlight two potential study directions:

1 finding a versatile BPM capability factors collection applicable to any geographical location of the world

2 discovering combinations of BPM capability factors focused on distinct geographical locations.

Furthermore, the findings of the study are applicable to improving existing BPM maturity models. Development of maturity measurement techniques and methods, and identification of application best practices, are all part of this process. These updated BPM maturity measurement models would help industry practitioners to perform various tasks, including

1 analysing organisational fit/gap and the BPM project

2 developing organisational BPM capability enhancement approaches

3 ranking investments to determine the organisation's success through BPM initiatives with a digital focus.

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