



A Stakeholder Engagement Model for Process Improvement Initiatives

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Abstract. Despite cries from practice and academia, stakeholder engagement in Business Process Management (BPM) is an under-explored area of research. Developing a comprehensive understanding of what factors influence stakeholder engagement is the first step towards addressing this. While diverse factors are briefly mentioned in prior literature, there has not been any holistic synthesis nor empirical investigation to this. This study presents the first empirically supported framework of stakeholder engagement factors for process improvement projects. The framework was built with a synthesis of literature applying Kassin's [1] social psychology framework as a theoretical lens, and empirical insights from a rich case study conducted at an Australian Financial service provider. The framework presents five levels namely; 'micro', 'meso', 'exo', 'macro', and 'chrono' which represents different 'systems' that host a range of factors that influence stakeholder engagement in process improvement projects. It provides an invaluable point of reference for BPM practitioners when designing stakeholder engagement and intervention programs, especially to develop sustainable strategies for change that enables successful outcomes. It also is a solid foundation and springboard for further academic research.

Keywords: Process improvement · Stakeholder engagement · Stakeholder theory · Case study · Robotic Process Automation · RPA · Organizational change

1 Introduction

Business Process Management (BPM) is rapidly growing, and its impact has exponentially increased in the digital age. As BPM initiatives involve rapid organisational changes [2] it is important that employees and other stakeholders are fully engaged and supportive of the proposed process changes, for them to succeed. Involving employees in the change and doing so early improves long term outcomes in three ways; through a psychological commitment to the end processes and systems; improved project requirements

identification; and success of the implementation [3]. Despite this, the factors influencing stakeholder engagement, even in broader stakeholder literature are under-explored [4]. Within BPM literature itself, the importance of effective stakeholder engagement is mentioned by many [e.g. 5, 6], and some directly and/or indirectly mention certain aspects that may contribute to the engagement of stakeholders [e.g. 7, 8], however, no research to date identifies a comprehensive set of factors which is vital to design impactful interventions.

This study aims to address this gap by exploring the question: “What factors influence the engagement of stakeholders when undertaking BPM projects?” In the context of this study the definition of the term ‘stakeholder’ is adopted from Freeman [9], and is defined as ‘any group or individual who can affect or is affected by a business process management project’. The definition of ‘engagement’ was adapted from Kahn [10]. Employee engagement is ‘when stakeholders are ‘physically, cognitively and emotionally’ involved in the BPM project’. This view of stakeholder engagement is supported by literature such as de Waal, Batenburg [3].

The remainder of the paper first presents the theoretical background, followed by the case study design. The case study findings are then presented, and the paper concludes with a summary discussion. A separate ‘Ancillary Material’ file is made available which contains information that supplements the main paper (see: <https://tinyurl.com/nbmymj3>).

2 Background

A multi-phased hermeneutic literature review (following [11]) was conducted. The aim was to produce a *Theoretical* review Paré et al.’s [12] that would result in an a priori framework of process improvement engagement factors. This process was iterative. In the first iteration, literature specifically from the BPM field was reviewed. The study results of the first phase confirmed that there was limited research which had attempted to specifically address the issue of stakeholder engagement in a BPM context. While stakeholder engagement was recognized widely as an important facet for BPM success with some scholars mentioning potential contributing engagement factors, no research to date identified a comprehensive set. The search was next extended to broader domains recognized as relevant to BPM. Examples included searching within the domains of change management and employee engagement. Factors identified from the literature analysis were used to generate an initial set of codes. These codes were then used for a round of axial coding to identify key themes [30, 31]. Further details on the conduct of the literature review is presented in Sect. 1.1 of the Ancillary Material.

A series of potential stakeholder engagement factors emerged from this (see Column 2 of Table 1). These were initially grouped into five high level themes (Column 1 of Table 1), namely; 1) Individual, 2) Environmental, 3) Project-related, 4) Interpersonal, and 5) BPM lifecycle. Individual factors related specifically to particular stakeholders (e.g., prior history of change). Environmental factors pertained to factors that influence the stakeholder group from their surroundings and are outside their own control (e.g., location). Project-related factors related to the specific qualities of the Business Process Management (BPM) project. Interpersonal factors included communication from the

project to the stakeholder group, and interpersonal relationships between stakeholder groups. Finally, the ‘BPM lifecycle’ theme captured the continuous cycle for managing processes across the phases of the project. This was central and cut through the other four themes. Part 1.2 of the Ancillary Material provides a rich overview of these themes and factors and they are also revisited below as the case study findings are presented.

Next, we sought for a meta-theoretical lens that could assist to: (i) better structure the emerging literature results, (ii) provide a theoretical base, and (iii) provide ‘sense-making’ support. A closer look at the extracted factors pointed to complex relationships between them. For example, the factors were operating at different levels, with complex interrelationships between different groups of factors, potentially influencing engagement in different directions (both positively and negatively) thus forming complex ecosystems. Within stakeholder literature, the complexity of stakeholder ecosystems has been acknowledged widely (e.g. [13, 14];) and is recognized to be underexplored [4]. The complex ecosystem of BPM engagement factors and layers we saw from the literature analysis, suggested a theory that captured a ‘systems’ perspective, as a potential meta-theoretical lens to further systematize and strengthen the conceptualization stemming from the literature review.

Given that BPM projects are social exercises that occur in the workplace, prior systems models that related to understanding engagement was looked at. We particularly tried to see if the literature-based themes and factors ‘made sense’ when applied to these theoretical views. The systems theory lenses of Bone [15] and Kassin et al. [1] were seeming fits. Both are based on similar theoretical foundations, provide a holistic overview of their topics, and are similarly structured. However, the various levels and

Table 1. Summary results: Literature review findings mapped to Kassin et al. [1]’s (2015) model

Literature review			Adapted definitions	Kassin et al. [1]’s model	
Themes	Resulting factors [#]	Supporting literature		Levels	Definitions (from p. xi)
Individual ⁱ	History of change ⁱ	[16, 17]	Personal factors affecting engagement of individuals or specific stakeholder groups	Micro	“The intra-individual level that considers the characteristics of the individual”
	Organisational role ⁱ	[18]			
	Personality ⁱ	[19]			
	Age ⁱ	[20]			
	Type of role ⁱ	[8]			
	Gender ⁱ	[7]			
	Length of service ⁱ	[17]			
Interpersonal <>	Office politics <>	[21]	Interpersonal interactions between stakeholder (s) or factors influencing those relationships, in which they play a direct role	Meso	“The interpersonal networks – the people that they share their lives with and those they interact with”
	Communication <>	[22]			
	Trust relationship between stakeholders <>	[16]			
	Supportive leadership <>	[23]			
	Principle of involvement <>	[6]			

(continued)

Table 1. (continued)

Literature review			Adapted definitions	Kassin et al. [1]’s model	
Themes	Resulting factors [#]	Supporting literature		Levels	Definitions (from p. xi)
(Organisational level) Environmental [^] and project ⁺	Staff workload [^]	[21]	Environmental factors which influence stakeholder(s) at a project or organisational level	Exo	“The environments in which they live, work and interact”
	Location [^]	[17]			
	Project type ⁺	[24]			
	Resourcing ⁺	[25]			
	Cultural alignment ⁺	[26]			
	Length of time project takes ⁺	[23]			
	Number of projects in progress ⁺	[21]			
	Project objectives ⁺	[25]			
(Macro level) Environmental [^]	Culture [^]	[27]	Environmental factors beyond the organisation	Macro	“The institutional patterns of culture (such as customary practices and beliefs) that help to define them and their behaviours”
	Economy [^]	[21]			
BPM lifecycle	Lifecycle stages e.g., identification, discovery, analysis, redesign, implementation, monitoring and control ^{###}	[18]	The changing importance of different factors over the lifecycle of the project	Chrono	Kassin et al. [1] defines this as; “The socio-historical context in which they live”. However, the original studies that Kassin adopts from [i.e. 28] defines this in terms of events and transitions over time which aligns with the BPM lifecycle changes

[#]The mapping of the factors to their themes is denoted by superscripts as follows: Individual = ^I, Interpersonal = ^{<>}, Environmental = [^], Project = ⁺

^{###}These lifecycle stages can change depending on which BPM lifecycle model adopted

their definitions presented by Kassin et al. [1] resonated more closely with our literature-based results, and was hence selected.

Table 1 presents a multi-level conceptual model of BPM stakeholder engagement factors, that maps the literature findings with the Kassin et al. [1] model. The original levels and definitions from Kassin et al. [1] are presented in Column 6 and the definitions as adapted in this study presented in Column 4. Taking a Systems view necessitated the original groupings to be reconfigured. Column 2 depicts the related factors (derived from the literature) pertaining to the revised groupings.

3 Case Study Design

A single in-depth case study approach was applied. Single case studies are known to provide rich insights and be well-suited for exploring novel and under-researched topics [29]. The unit of analysis was a single process improvement project. A suitable case candidate would; (i) be a clearly identifiable ‘BPM project’ - with clear objectives and an identifiable start and end; (ii) can be an internal or external process- but where the end-to-end process has been improved; (iii) multiple teams have been impacted or were involved with the improvement initiative; and (iv) the full project (or a recognizable phase) has been completed within the past six months of data collection.

The case study was undertaken in ABC Finance¹ an ASX listed, regional Australian Company. The Finance industry, in which the company operates, is constantly evolving and is challenged, with pressures from industry and regulatory changes. This drives the company’s own ambitions to meet stakeholder needs and remain competitive. A Robotic Process Automation (RPA) optimization project was selected. This project sought to improve the performance of an RPA process which prepared new finance requests to be ready for a Credit Manager to assess; a process which involves many administrative activities and has varying impacts across different teams within the organization.

The predominant source of evidence was interview data. Other evidence from a demographic questionnaire and project related documentation were used to augment the interviews. Nine participants were recruited voluntarily across a broad spectrum of project and organisational² roles they held (see Table 2).

Table 2. Interviewee overview

	Project role	Organisational level
1	Project Manager	Team Leader
2	Project team member (business representative)	Senior Management
3	End user	Team Leader
4	Project team member	Individual Contributor
5	End user	Middle Manager
6	Project team member	Individual Contributor
7	End user	Individual Contributor
8	End user (external)	Individual Contributor
9	Project sponsor	Senior Management

¹ ABC Finance is a pseudonym to protect the anonymity of the organization and participants.

² The organisational level represents the reporting hierarchy within the case study. *Senior Management*, reports to an executive (a category not included in the sample respondents); a *Middle Manager*, has team leaders report to them; a *Team Leader* has individual contributors report to them and; an *Individual Contributor* have no direct reports.

Stakeholder engagement is a mature topic in many business domains, even though its investigation within the BPM project context has been limited. Therefore, it is likely that many factors affecting stakeholder engagement will have been investigated previously. In this study we used a hybrid approach between confirmatory and exploratory analysis to coding and theory development. This approach acknowledges that a “*fine line exists between interpreting data and imposing a pre-existing frame on it*” [30].

In the first round of coding, open codes were generated without reference to our a priori codes derived from literature [31]. After this initial round, we integrated our codes with the pre-existing codes and themes we had previously derived from research literature. Following this, we considered the remainder of the data that was not adequately explained by any existing theory. In this round we adopted a more grounded approach for the remainder of the data. Our emergent and unexplained findings were coded inductively and new codes were generated. Finally, theoretical coding [30, 32] was carried out on **both** the existing and emergent codes to identify relationships between categories and generate a new theoretical framework. The coding approach was governed by guidelines set by a pre-defined coding rules [38] and supported by the NVivo tool. The coding-quality was maintained - with a second coder reviewing the coding and regular corroboration sessions where the coding was discussed, challenged and improved.

4 Findings

The in-depth insights from the single case study were used to further re-specify and validate the literature-based synthesis (presented in Table 1). This resulted in a total of 36 engagement factors across five levels as visualized and summarized in Fig. 1 and Table 3. 21 factors identified in the literature were instantiated in the case data, 3 did not, and 12 new factors emerged from the case data. The bracketed numbers in Table 3 represent the number of interviewees who mentioned the factor and the number of times the factor was mentioned overall. Engagement factors newly identified from the case data, are displayed in bold and italics. An asterisk “*” denotes factors influencing a subset of a stakeholder group (remaining factors were found to influence all stakeholder groups). The greyed rows with the “^” symbol denotes engagement factors mentioned in literature but not instantiated in the case study data. Further supporting evidence is made available in Part 2 of the Ancillary Material.

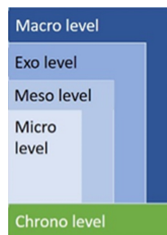


Fig. 1. Multi-levels of BPM engagement factors

Table 3. Engagement factors evidenced through the case study

Levels		Engagement factor*	
Micro	Personal factors affecting engagement of individuals or specific stakeholder groups	History of change (7_28)	The impact of prior change experience on the individual
		Organisational role* (4_4)	Role played within the organisation
		Personality (9_41)	The character traits of the individual
		Age (3_4)	The chronological age of the individual
		Type of Role^ (-_-)	If the stakeholder role is for a specialist or generalist
		Gender^ (-_-)	If the stakeholder is male, female or other
		Length of service (3_7)	How long the stakeholder has been in the role
		<i>Impact on day-to-day role*(7_54)</i>	How the project has changed daily responsibilities or impacted their responsibilities
		<i>Impact on role status*(8_22)</i>	How the project has impacted how the person perceives their role's security and standing in the organisation
		<i>Prior role experience (6_15)</i>	Experience from previous role(s)
		<i>Experience with the domain (8_33)</i>	If stakeholders have experience with the domain (RPA)
<i>Interest in the domain (7_10)</i>	If stakeholders have an interest in domain (RPA)		
Meso	Interpersonal interactions between stakeholder (s) or factors influencing those relationships, in which they play a direct role	Supportive Management (8_32)	Providing supportive actions and psychological support to subordinates

(continued)

Table 3. (continued)

Levels		Engagement factor*	
		Office politics* (2_3)	Actions which promoted a particular area/person's self interest
		Relationships between stakeholders (9_46)	Interpersonal business relationships between two or more individuals or groups
		Trust (7_19)	To be able to rely on the information provided or the behaviour of someone being correct and honest
		Communication (9_130)	Exchange of information either face to face or in writing, delivered to individuals or groups
		Principle of involvement* (4_4)	Stakeholder being involved with tasks within the project
		Respect* (3_10)	Perception of being treated with (or affording) people respect
		Sharing success (6_11)	Celebrating project successes
		Vested interest/KPI (7_27)	Motivation to succeed, driven by personal performance metrics
		Education/training (9_46)	Knowledge building and sharing about the project technology
Exo	Environmental factors which influence stakeholder(s) at a project or organisational level	Project type (9_165)	The category of project, including its characteristics
		Resourcing (8_40)	How many people are available to complete required tasks
		Location (3_15)	Where the stakeholder/s are physically located

(continued)

Table 3. (continued)

Levels		Engagement factor*	
		Cultural alignment (3_5)	If the project is aligned with the company's culture
		Length of time project takes (8_29)	Total time the project takes from commencement to completion
		Number of projects in progress (6_16)	How many other projects are being undertaken at the same time as the case study project
		Project goal (9_58)	Whether the project goal is incremental or transformational change
		Staff workload (1_1)	The amount of work required to be completed by stakeholders
		Organisational priorities (7_40)	The perception of what the organisation is focused upon
		Infrastructure (9_33)	The IT infrastructure, or organisational capability to deliver the project
Macro	Environmental factors beyond the organisation	Culture (9_46)	Team, Organisational or national culture, including shared values and assumptions
		Economy^ (-_-)	The country's production and consumption of goods & services
		Industry (7_15)	A group of companies with similar purposes
Chrono	The changing importance of different factors over the lifecycle of the project	BPM/Project lifecycle (9_84)	Stages of the BPM or project lifecycle

4.1 Micro Level Findings

There is strong support for the micro level of the engagement model, with five (5) of the seven (7) a priori factors instantiated (but two (2) did not), and five (5) new factors identified. Overall, micro level factors appear to be more important to stakeholders at the individual contributor level than to senior stakeholders (see Sect. 2.1 of Ancillary

Material). This suggests that the more senior your role, the less you are impacted by, or aware of, the micro level factors that influence engagement.

A priori factors supported by the case data: **History of change** Bordia et al. [16] and Chun, Davies [17] found the history of change to be highly influential on people's engagement. Seven (7) of the nine (9) interviewees also mentioned this factor. The investigated case was an optimisation project for a prior RPA implementation, with the aim of reducing the RPA exceptions. It is possible that the original project impacts the way people think about the subsequent one. Past experiences mentioned by interviewees were both positive and negative and could reasonably be expected to influence engagement similarly. **Organisational Role** also had support with four (4) interviewees mentioning this factor. Roles do play a crucial part in influencing other people's engagement; "*if I don't have an optimistic outlook then those people sitting underneath me definitely won't as well*" (interviewee #5). Herzig, Jimmieson [18] shared similar findings related to the middle managers' role. The **Personality** factor was very strongly supported, with all interviewees referring to some aspect of personality, specifically traits and characteristics. In particular, seventeen (17) quotes support the personality trait 'openness to experience', and nine (9) to 'conscientiousness'. This confirms the findings presented by Devaraj et al. [19]. Both **Age** and **Length of service** were supported. As expected, being younger was associated with greater engagement than being older. Cordery et al. [20], also found older persons were less open to change: "*Perhaps I do just like plodding along*" (an over 55 interviewee). 'Length of service' was similar, comparable with Chun, Davies [17] who identified stakeholders with a longer tenure (+10 years) appear less engaged.

A priori factors not instantiated by the case data: The lack of supporting evidence for 'type of role' and 'gender' may be due to the way in which this data was collected. Information regarding specialist roles and gender were collected in a demographic survey, with the intent that the analysis of any differences would be drawn out in the analysis, as it was deemed unlikely that interviewees would recognize the impact of the type of role they had or how their gender impacted their engagement. In addition, with only three female interviewees, if and how gender played a role was not mentioned nor probed to avoid raising potential gender bias.

New Factors: **Impact on day-to-day role** was well supported with fifty-four (54) references. The impacts of this factor are likely to be of particular importance in projects where the outputs are delivered iteratively. Earlier iterations change the impacted stakeholder's role and could potentially change their level of engagement. This is demonstrated in the quote "I've lost control over the process" Interviewee 7 **Impact on role status** was mentioned by a majority of interviewees, but with significantly different interpretations of the 'impact'. Middle and senior managers believed that the team were concerned about being made redundant as a result of robots being introduced; while the individuals themselves were not concerned, as they understood the project to be about assisting with growing the business. **Prior role experience** is similar to '*history of change*', but refers to experience in previous positions, rather than to specific change projects. Experience gained from working in other roles, either within or externally to the organisation, could result in changes in engagement, either positively or negatively.

Two new engagement factors were more specifically related to the technology being implemented, in this case; RPA. Experience with the domain enabled people to know what was expected from the process improvement initiative, which can influence engagement, as can a lack of experience with RPA, both of which can be included within this factor. Eight (8) of the nine (9) interviews indicated that experience with RPA tended to increase engagement, whereas a lack of experience with RPA appeared to lower engagement. For example “we had a lot of knowledge of RPA..so, we had an expectation that we need to do it [optimize].. and the results showed that it was good that we had done it.” Interviewee 1. Interest in the domain could have the potential to impact engagement as shown in the quote “I was very much excited about robotics”. Interviewee 2. Where a technology influences people to be excited about it, they could be highly engaged with its deployment. If the technology does not live up to expectations there is also the possibility of disillusionment, which would have the opposite effect. This factor could interact with factors at other levels too, for example if there are many competitors with high profile cases of RPA this may increase stakeholders’ interest in the technology. Meso level findings.

All six (6) engagement factors identified in the literature were identified within the case data, with four (4) additional factors recognized. The data also indicated that the majority of the meso level factors could impact people at all levels of the organization (see Sect. 2.2 of Ancillary Material). Exceptions were ‘respect’ and the ‘principle of involvement’ which appear to be more relevant to stakeholders at lower levels of the organisation. Also, these factors are tightly linked to each other.

A priori factors supported by the case data: **Supportive management** is an important factor in successful change [23] and was confirmed in eight (8) of the nine (9) interviews including both mentions of practical and emotional support. Conversely, a lack of support from a manager also was a factor, negatively impacting engagement. **Office Politics** was linked with this factor appearing in two (2) interviews, confirming the findings of Nicholds, Mo [21]. **Relationships between stakeholders** was a factor raised by every interviewee. Stakeholder relationships are important particularly across levels. Jones, Van de Ven [23] referred specifically to the relationships between employees and their managers. As expected, **trust** impacts engagement, with seven (7) interviewees, referring to trust. Bordia et al. [16] also found ‘*trust*’ an important factor for BPM success.

Communication, was strongly supported and mentioned on average fourteen (14) times in every interview. Finney [22], recognised different stakeholders require different types of ‘*communication*’ with different levels of detail. Kotter [33] suggests *communication* is a critical success factor when implementing any type of change. The **principle of involvement** [6] was also supported. Although this factor was only mentioned once in four (4) separate interviews the impact of the factor appeared to be substantial. For example, interviewee #7 said “*I felt very excluded, and I would be in tears quite a bit [as.....] nobody came and sat with me to see how the [the process] worked*” (Interviewee 7), whereas, interviewee #3 stated “*I’m excited by it because I’m involved in it*”. Both of these examples demonstrate the power of this factor.

New Factors: Four (4) additional engagement factors were identified at this level, the first of which was **Respect**. The importance of respect was established in one third of the interviews. Moreover, the impact of this factor appeared high. Engagement was

reduced where people felt they did not have the ‘respect’ of others, especially if they believed their voice was not being heard. For example, interviewee #3 said: *“I didn’t quite feel respected for my skill set anyway, and then they wanted me to push changes, and communicate some of these robot back-end changes”*. This factor appears most relevant to individual contributors and team leaders as they are most likely not to feel excluded by a change process. Another important new engagement factor found in this case was **Sharing Success**, mentioned in two thirds the interviews. The Senior Managers instigated the sharing of the successes. These successes were designed to encourage sharing behaviours within the team, i.e., improved accuracy which assisted in improving the robot’s completion rates, as demonstrated in this quote; *“having small wins and celebrating those small wins, and then also making sure that they’re aware that we’ve got those small wins”* (Interviewee #2). However, dependent on the individual’s micro factors the sharing of success may not always positively impact engagement and may be met with some cynicism.

Another factor with a substantial impact on engagement levels was **Vested Interest/key performance indicators (KPIs)**. This was mentioned in most of the interviews (7 out of 9). Examples such as: *“Well, I am frustrated [...] we are getting pressure from different areas to achieve different things, but they conflict each other”* (Interviewee #3), demonstrate how stakeholders can face challenges around this, often hidden, aspect of engagement. The engagement factor ‘vested interest/KPIs’ was mentioned by most interviewees across all levels of seniority and types of project role, demonstrating its widespread relevance. However, there is a stronger focus for more senior employees. As individual KPIs drive behaviour [34], this is something which should always be attended to as part of a BPM project and may impact stakeholders at any level of the organisation. The final additional factor was **Education/training**. This factor was discussed in every interview. Evidence indicates that not only is it important that stakeholders at all levels of the organisation be educated about the technology, but also, it is possible to see the consequences of stakeholders not being educated/trained. This was demonstrated by Interviewee #9 who said; *“I don’t care that people feel aggrieved or whatever, but just feel aggrieved for the right reason.... It actually made me realise that people really don’t understand”*.

4.2 Exo Level Findings

All eight (8) exo level engagement factors were identified with two (2) additional engagement factors confirmed. The engagement factors of this level were strongly supported in equal measure by people across all levels within the organisation with more senior employees having mentioned the exo engagement factors more often (see Sect. 2.4 of Ancillary Material).

A priori factors supported by the case data: **Project type** was the most strongly supported engagement factor across all 9 interviews. This is a broad category and includes the reason for the project. In this case the project was one aimed at growth so the project was viewed in a very positive way. This supports the findings of Bandara et al. [24]. **Resourcing** was also supported across eight (8) of the nine (9) interviews. This supports the finding of vom Brocke et al. [25], who explain how resources, including personnel, are important in

BPM practice as it impacts the ability to collaborate and innovate. **Location** was found to impact engagement with remote-based people expressing frustration being in a different location. This confirms the findings of Chun, Davies [17] who found remote employees had a more negative attitude towards change, in the case of a company merger. **Cultural Alignment**, was discussed in three (3) interviews., supporting Latta [26], who found both content and process need to be culturally aligned. Further, Jones, Van de Ven [23], found that the longer the change went on the more resistance to change was evident, confirming the **length of time the project took** was an important engagement factor. **Number of projects in progress** was also supported as an engagement factor in six (6) interviews. Nicholds, Mo [21] also note there is a limit to the amount of change that people can cope with.

Project goal was a factor identified in all interviews supporting the findings of vom Brocke et al. [25] who suggest that exploitation (i.e. incremental improvement) and exploration (i.e. radical change/innovation) change the context of BPM projects. **Staff workload** was found to be an engagement factor, although only supported in one interview, the impact on engagement noted was substantial. This supports the findings of Nicholds, Mo [21] who identified that workload, like the ‘*number of projects in progress*’ impacted people’s capacity for change.

New Factors: Two new factors were found including: **Organisational priorities** and **Infrastructure**. ‘*Organisational priorities*’ was mentioned in seven (7) of the nine (9) interviews. This factor, which is related to the perception of organisational focus is linked to engagement. For example, if stakeholders believe the outcomes are important to the organisation they may be more engaged, as expectancy theory³ supports. This may be explicitly communicated or a perception, as was the case in the following quote:

“As an organisation, I don’t know whether we’re really behind RPA... If I didn’t know any better I’d say we were getting out of robotics as we were trying to get in as a business” (Interviewee #2).

The second new factor, ‘*Infrastructure*’, was also well supported across all nine (9) interviews. This is another engagement factor which may be more relevant in projects which deliver iteratively. In sequential phase management of projects, where the product is delivered at the end of the project, infrastructure issues may not be evident throughout the project and unlikely to substantially influence engagement. This factor may potentially influence engagement for all stakeholders as they are likely to spend more time dealing with issues which arise from this factor, e.g. managing customer expectations, productivity impacts and time spent trying to resolve the issues. Within the case study this was expressed in the following quote: *“That’s part of the issue that we’re having now with network slowness; they [applications] go in [to the robot] and they don’t go out”* (Interviewee #5).

³ Expectancy theory posits that individuals will only make an effort if they believe that the amount of effort result in a particular performance and they will only exert a particular behaviour (performance) if they expect to achieve a certain outcome (McShane et al., 2010).

4.3 Macro Level Findings

The macro level findings supported in the case study appear to operate less explicitly than factors at other levels. Overall support for the a priori Macro level engagement factors was mixed, with one, namely *culture* instantiated with the case data; and the other, *economy* not. However, an additional factor was evident, which does have links to *economy* (hence are described together below).

A priori factors supported by the case data: Evidence of '*culture*' impacting engagement was found throughout the case study, from all interviewees. It was apparent from the interviews that the introduction of the RPA technology had impacted the team culture, as stakeholders openly discussed how the project had changed the norms of operation. This finding supports De Bruin, Rosemann [27] who found '*culture*' to be a critical component of BPM success.

A priori factors not instantiated by the case data, and new factors: Although there was no support in the case study for the factor of *economy* [21] a new factor - *industry* - was evident. We see this being related to the original factor '*economy*' - as a more concentrated aspect of it (i.e., Industry being a 'part of' economy) with seven (7) interviewees, recognising the factor. Respondents were not able to explicitly relate to or differentiate to these. However, it was evident that, whilst the interviewees were not conscious of the influence on them, that industry developments did impact people at all levels of the organisation. This is supported with comments such as: "*big [companies] are shedding people. They're going away from non-core activities, and they're all trying to automate, and all our competitors have robotics*" (Interviewee # 9).

4.4 Chrono Level Findings

At this level, the BPM lifecycle is not an engagement factor itself, but is important as to how this interacts with the factors at the other levels. Many of the comments made by interviewees were generalised but some were more specific: "*I think educating and getting people on board with the ideas of robotics is that it is not a perfect thing was probably more important to the start*" (Interviewee #1), which specifically mentions a period of time and the impact this had on the stakeholder. In a further example, one of the interviewees explained how their confidence grew over time, which is likely to have increased their engagement; "*I think I just got more confident with it, and I was like, 'oh yeah, I can do this'*" (Interviewee #6). This quote demonstrates an interaction with '*experience of the domain*', because as that grew over time, so did the confidence of the interviewee.

The importance of managing people's engagement at different points during the BPM project was understood by members of the project team and managers, with one interviewee stating: "*the other key is the people because you need their buy-in, but on top of that is what I include in the people, say it's taking them through the journey*" (Interviewee #2). This quote indicates the changing needs of stakeholders at different points in the project and the need to respond to them differently. In a further example the impact of the iterative nature of the project is revealed: "*So, as we've gone through that optimisation, we've changed the way things worked, and it makes perfect sense when*

you look at from a process perspective. So, to say, 'look, this sounds great, but it's not one piece. You're impacting a lot of people.' It's very difficult to communicate" (Interviewee 5). This quote not only shows how the project changed the process over time but also the importance of '*communication*' and the complexity of communicating the message repeatedly over time. It is critical that the communication strategy is carefully considered during planning and execution Kotter [33]. The chrono level is important, irrespective of the lifecycle model used (as situations and the engagement of stakeholders change over time irrespective of which model is used) and is applicable to all levels of the organisation.

5 Summary Discussions

Overall, we established that important BPM stakeholder engagement factors exist at many levels. Our model identifies five levels; namely; 'micro', 'meso', 'exo', 'macro', and 'chrono' which represents different 'systems' that host a range of factors (36 in total, 33 supported with case data) that influence stakeholder engagement in process improvement projects. There were a considerable number of individual differences of the influencing factors across the levels. While this is not surprising in itself, the degree to which these differences affect engagement was interesting. It seems that BPM projects of different types might generate different levels of stakeholder engagement, even within the same group of people. New technologies such as RPA generated interest, although they also have the potential to be disappointing and to reduce stakeholder engagement if they do not live up to expectations. Taking a slightly wider perspective, BPM projects do not occur in isolation, but take place within organizational and technical environments, that can have either a positive or negative effect on the project and the degree of engagement. The exo-level factors suggest that the program management approach in the organization, which encompasses things like number of projects and organizational priorities should be considered. Stakeholders may "zone out" if they are expected to give their attention to too many projects simultaneously, or if their workload is too high. Even more broadly, organizational culture and industry factors can affect the way stakeholders engage with a specific project.

5.1 Theoretical Implications

From a theoretical perspective, we offer a number of primary contributions. This includes: (i) confirmation and positioning of literature based and empirically derived stakeholder engagement factors in the context of business process improvement, (ii) harmonization and integration of these factors in a multi-layered system model, and (iii) identification of new factors at multiple levels.

Theoretical contribution to a domain can take a number of forms, including "*introducing new constructs*" and "*better conceptualizing of existing constructs*" [35]. Although many of our factors have been individually acknowledged in a range of studies, this is the first study, to our knowledge, to organize them into a conceptual framework. Therefore, the study aligns with the theory building concepts of discovery, description, mapping and relationship building [36]. The multi-level nature of our study is a first in

BPM stakeholder research. We demonstrate that it is not simply factors in the immediate environment of the BPM project that influence stakeholder engagement. BPM projects tend to have broad impacts in an organization, affecting multiple staff members and their work practices. The projects may be part of organizational programs of work, which may be managed with varying degrees of effectiveness. While our factors have been analyzed as engagement factors, it is not too much of a stretch to suggest that factors that might have an adverse impact on the *success* of the project, such as inadequate infrastructure or unclear organizational priorities would tend to have a negative impact on engagement. It would not be an exaggeration to say that our study suggests that ambitious BPM projects require sound management and a supportive organizational environment at multiple levels in order to sustain stakeholder engagement.

This study offers a number of avenues for further research, including investigating in more detail the interactions between factors, and developing instruments to evaluate levels of stakeholder engagement and the factors that contribute to them. Since it is well recognized that stakeholder involvement is essential to project success, our framework could also be used to develop an “early warning system” for identifying waning stakeholder engagement in a project and the factors that have contributed to it.

5.2 Practical Implications

Our study also has implications for practice. Better theorizing can help to bridge the perceived gap between industry and academia [37]. In consideration that project success is a desired outcome for any BPM initiative, the conceptual model presented in this study provides practitioners with a framework to analyze the factors which may influence stakeholder engagement at various levels. This is important as developing a better understanding of these factors allows a practitioner to more effectively design and manage interactions, perspectives and expectations of differing stakeholder groups. This enhanced process management capability (though not the only influence) should provide a practitioner with additional insight and ability to engage with and better meet the differing needs of stakeholders through the process improvement lifecycle. In the future, our framework can be deployed to develop a series of tools designed to assist practitioners in enhanced BPM stakeholder engagement. These could include stakeholder analysis questionnaires, summaries of the stakeholder groups to be considered during the BPM project, and practical methods to deal with the most common and impactful factors at the various stages of the project lifecycle. The model could also be used to provide analysis of the overall landscape of the organization and be used to aid the prioritization of BPM projects, targeting the ones which are most likely to succeed (with predicted higher engagement levels) in that particular organization.

6 Conclusion

Stakeholder engagement is critical to BPM project success, however research into what influences engagement has been limited. The case study confirmed (21 of 24) known engagement factors across different domains and discovered 12 additional factors. As discussed above, two of the factors (‘type of role’ and ‘gender’) seen in literature and not

instantiated in the case study may be due to study design rather than the non-relevance of the factor. The third that was not completely instantiated ('economy') was linked to a new factor ('industry'), which was a more specialist 'part of' the original factor.

The holistic model presented in this paper provides a framework for further consideration of factors influencing stakeholder engagement in BPM projects. It provides a broad 'landscape' (i.e., a holistic view showing different layers of systems) of stakeholder engagement for BPM projects which could be consulted by the practitioner to ensure all relevant system levels have been considered. The model provides a basis upon which the important factors can be considered, understood by both academics and practitioners alike. This understanding of BPM stakeholder engagement will enable BPM projects to better address the human-centric challenges and progress towards BPM project success.

References

1. Kassin, S.M., Fein, S., Markus, H., McBain, K.A., Williams, L.: *Social Psychology: Australian & New Zealand*, 1st edn. Cengage Learning, South Melbourne, VIC (2015)
2. Nambisan, S., Lyytinen, K., Majchrzak, A., Song, M.: Digital innovation management: reinventing innovation management research in a digital world. *Mis Q.* **41**(1), 223–238 (2017)
3. de Waal, B.M.E., Batenburg, R.: The process and structure of user participation: a BPM system implementation case study. *Bus. Process. Manag. J.* **20**(1), 107–128 (2014)
4. Griffin, J.J.: Tracing stakeholder terminology then and now: convergence and new pathways. *Bus. Ethics: Eur. Rev.* **26**(4), 326–346 (2017)
5. Thennakoon, D., Bandara, W., French, E., Mathiesen, P.: What do we know about business process management training? Current status of related research and a way forward. *Bus. Process. Manag. J.* **24**(2), 478–500 (2018)
6. vom Brocke, J., Schmiedel, T., Recker, J., Trkman, P., Mertens, W., Viaene, S.: Ten principles of good business process management. *Bus. Process. Manag. J.* **20**(4), 530–548 (2014)
7. Gorbacheva, E., Stein, A., Schmiedel, T., Müller, O.: The role of gender in business process management competence supply. *Bus. Inf. Syst. Eng.* **58**(3), 213–231 (2016)
8. Trkman, P.: The critical success factors of business process management. *Int. J. Inf. Manage.* **30**(2), 125–134 (2010)
9. Freeman, R.E.: *Strategic management: a stakeholder approach*. Vol. Book, Whole. Boston, MA, Pitman (1984)
10. Kahn, W.A.: Psychological conditions of personal engagement and disengagement at work. *Acad. Manag. J.* **33**(4), 692–724 (1990). <https://doi.org/10.2307/256287>
11. Boell, S.K., Cecez-Kecmanovic, D.: A hermeneutic approach for conducting literature reviews and literature searches. *Commun. Assoc. Inf. Syst.* **34**(1), 257–286 (2014)
12. Paré, G., Trudel, M.-C., Jaana, M., Kitsiou, S.: Synthesizing information systems knowledge: a typology of literature reviews. *Inf. Manage.* **52**(2), 183–199 (2015)
13. Freeman, R.E.: Stakeholder theory: 25 years later. *Philos. Manage.* **8**(3), 97–107 (2015). <https://doi.org/10.5840/pom20098310>
14. Mitchell, R.K., Agle, B.R., Wood, D.J.: Toward a theory of stakeholder identification and salience: defining the principle of who and what really counts. *Acad. Manag. Rev.* **22**(4), 853–886 (1997)
15. Bone, K.D.: The bioecological model: applications in holistic workplace well-being management. *Int. J. Workplace Health Manag.* **8**(4), 256–271 (2015)
16. Bordia, P., Restubog, S.L.D., Jimmieson, N.L., Irmer, B.E.: Haunted by the past: effects of poor change management history on employee attitudes and turnover. *Group Org. Manag.* **36**(2), 191–222 (2011). <https://doi.org/10.1177/1059601110392990>

17. Chun, R., Davies, G.: The effect of merger on employee views of corporate reputation: time and space dependent theory. *Ind. Mark. Manage.* **39**(5), 721–727 (2010). <https://doi.org/10.1016/j.indmarman.2010.02.010>
18. Herzig, S.E., Jimmieson, N.L.: Middle managers' uncertainty management during organizational change. *Leadersh. Org. Dev. J.* **27**(8), 628–645 (2006)
19. Devaraj, U.S., Easley, R.F., Michael, C.J.: How does personality matter? Relating the five-factor model to technology acceptance and use. *Inf. Syst. Res.* **19**(1), 93–105 (2008). <https://doi.org/10.1287/isre.1070.0153>
20. Cordery, J., Sevastos, P., Mueller, W., Parker, S.: Correlates of employee attitudes toward functional flexibility. *Hum. Relat.* **46**(6), 705–723 (1993)
21. Nicholds, B.A., Mo, J.P.T.: Estimating performance from capabilities in business process improvement. *Bus. Process. Manag. J.* **22**(6), 1099–1117 (2016)
22. Finney, S.: Stakeholder perspective on internal marketing communication: an ERP implementation case study. *Bus. Process. Manag. J.* **17**(2), 311–331 (2011)
23. Jones, S.L., Van de Ven, A.H.: The changing nature of change resistance. *J. Appl. Behav. Sci.* **52**(4), 482 (2016). <https://doi.org/10.1177/0021886316671409>
24. Bandara, W., Indulska, M., Chong, S., Sadiq, S.: Major issues in business process management: an expert perspective. In: *The 15th European Conference on Information Systems*. St Gallen, Switzerland, University of St. Gallen (2007)
25. vom Brocke, J., Zelt, S., Schmiedel, T.: On the role of context in business process management. *Int. J. Inf. Manage.* **36**(3), 486–495 (2016)
26. Latta, G.F.: Modeling the cultural dynamics of resistance and facilitation interaction effects in the OC3 model of organizational change. *J. Organ. Chang. Manag.* **28**(6), 1013–1037 (2015). <https://doi.org/10.1108/JOCM-07-2013-0123>
27. De Bruin, T., Rosemann, M.: Towards a business process management maturity model. In: Bartmann, D., Rajola, F., Kallinikos, J., Avison, D., Winter, R., Ein-Dor, P., et al. (eds.) *The Thirteenth European Conference on Information Systems*. Verlag and the London School of Economics, Germany, Regensburg (2005)
28. Bronfenbrenner, U.: *The ecology of human development experiments by nature and design*. Harvard University Press, Cambridge, MA (1979)
29. Yin, R.K.: *Case study research: design and methods*. 5th ed., SAGE, Los Angeles (2014)
30. Charmaz, K.: *Constructing Grounded Theory*. Sage (2014)
31. Corbin, J., Strauss, A.: *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*, 3rd ed., Sage Publications, Inc, Thousand Oaks, CA, US (2008)
32. Glaser, B.G.: *Advances in the Methodology of Grounded Theory: Theoretical Sensitivity*. University of California (1978)
33. Kotter, J.P.: *Leading change: why transformation efforts fail*. Harvard Bus. Rev. (2007)
34. Spitzer, D.R.: *Transforming Performance Measurement Rethinking the Way We Measure and Drive Organizational Success*. American Management Association, New York, (2007)
35. Barki, H.: Thar's gold in them thar constructs. *ACM SIGMIS Database: DATABASE Adv. Inf. Syst.* **39**(3), 9–20 (2008)
36. Handfield, R.B., Melnyk, S.A.: The scientific theory-building process: a primer using the case of TQM. *J. Oper. Manag.* **16**(4), 321–339 (1998)
37. Lynham, S.A.: Theory building in the human resource development profession. *Hum. Resour. Dev. Q.* **11**(2), 159–178 (2000)
38. Charmaz, K.: *Constructing grounded theory: A practical guide through qualitative analysis*. Sage, London (2006)