

Scoping and aligning CRM strategy in Higher Education Institutions: practical steps

Article

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Scoping and Aligning CRM Strategy in Higher Education Institutions: Practical Steps

Abstract

Higher Education Institutions (HEI) management are often uninformed as to how Customer Relationship Management (CRM) can best support current university business strategy. Our study is extending a previous study undertaken by Khashab et al. (2018) who iteratively developed a high-level CRM implementation framework to support HEI management by provided Strategy Orientation Support (SOS). Although their framework introduced the high-level steps that are required to link business priorities to implementable CRM functionality, no sub-steps and/or practical approaches were described. In our paper, we consider practical approaches to help in the scoping and alignment of CRM strategy. By considering use of practical approaches, we highlight numerous issues that must be considered to ensure that CRM efforts align with HEI strategy, and that CRM strategy supports the activity of the HEI business.

1. Introduction

In a fast-changing educational environment, characterised by growing globalisation, funding cuts and ever-changing customer expectations, use of Customer Relationship Management (CRM) technology solutions is becoming a strategic must-have in HEIs; especially those that want to compete internationally, are being forced to restructure their organisations, adjust their business models, and modernise their processes to align with customer needs (De Juan-Jordán, 2018). Despite confused and often conflicting understandings within HEIs, interest in CRM has soared. Implementing CRM in HEIs can help universities better manage applicant interaction, ensure more consistent application of processes, and can help raise student engagement and focus; subsequently increasing student retention, loyalty and satisfaction (Seeman and O'Hara, 2006). Biczysko (2010) highlighted that use of CRM allows HEIs to conduct frequent surveys to measure the students' satisfaction, allowing the university to react immediately to student demands - increasing student retention which is of significant financial value to HEI management. Thus, effective adoption and use of CRM is of increasing importance to the running of HEIs (De Lima et al, 2020). To date, however, there has been confusion, in both commercial and academic domains, as to exactly what CRM includes, and many highlight the difficulty of using just one CRM definition (Saren, 2006; Buttle, 2009). Payne and Frow (2005) showed a significant variation in perception. Although some participants considered CRM to be related to management of call centres, help desks, e-mails, and/or loyalty schemes, others envisaged CRM as purely use of a database for sales force automation, data mining and E-commerce tools. CRM means different things to different people, however, a comprehensive definition for CRM systems is not universally recognised.

Rigby et al., (2002) defined three components within CRM, i.e. customer strategy, processes, and supported software, which together aim to improve customer loyalty and consequently enterprise profitability. Gartner's definition of CRM, states that CRM is a business strategy that maximises profitability, revenue and customer satisfaction by organising customer segments, and fostering behaviour, which gratifies customers and implements customer-centric processes (Scott, 2003). Gummesson (2009) and Bligh and Turk (2004) also defined CRM as a business strategy approach. Poornima and Charantimath (2011), Buttle (2009), and Thakur et al. (2006) all consider CRM as a core business strategy, which maximises revenue, profitability, and customer satisfaction; and openly rejects the perspective that CRM is nothing other than a technical solution (Payne and Frow, 2005). Bligh and Turk (2004), Zikmund et al. (2003), Stone and Jacobs (2008), and Rigby et al. (2002) all recognise the core CRM systems characteristics as being i) business strategy, ii) people, iii) business processes and iv) IT (i.e. technology).

In this paper we define CRM as a core business strategy that integrates internal processes and functions, and external networks, to create and deliver relevant value to targeted stakeholders. CRM is dependent on high quality data and enabled by information technology (Buttle, 2009). If HEIs hope to use CRM more in the future, then they need to ensure that they fully appreciate and align CRM – as a strategy – with the existing strategy within the HEI; and ensure effective introduction of people, processes, and technologies to support the CRM solution. Our paper is based on the Customer Relationship Management - Strategy Orientation and Support (CRM-SOS) framework (Khashab et al. 2018), and we are considering extending the previous work of Khashab et al. (2018) by proposing practical approaches to help in the scoping and alignment of CRM strategy with the strategy of HEI.

2. CRM-SOS framework in HEIs

Khashab et al. (2018) introduced the CRM-SOS framework, which was produced to support HEIs in development and orientation of CRM strategy. They applied design science to iteratively develop the CRM-SOS framework for use within the context of HEIs; via transition through problem awareness, suggestion, development, evaluation and conclusion process steps (Vaishnavi & Kuechler, 2004).

Although grounded on a generic theoretical framework, the evolution of the prototype highlighted significant implications for our understanding of how the CRM should be utilised in practice in HEIs. CRM-SOS contributes to CRM knowledge, particularly in context of HEIs, by considering CRM Strategy Scoping and Alignment (Stage 1); identifying CRM components (i.e. processes, roles, events, activities, communication channels and Technology (PRE-ACT)), analysing stakeholder desires, expectations, and needs, and mapping them to the CRM components using client interaction life cycle

technique (Stage 2); defining requirements for selection of a modelling language when modelling CRM components in HEIs (optional); defining different CRM quality dimensions, for different HEIs areas i.e. business to business (B2B), knowledge transfer partnerships (KTPs), placements, marketing, current student activity, and alumni support (Stage 3); and providing a methodology for matching CRM types with prioritised gaps, and formulation of SMART CRM goals within HEIs (Stage 4) – see Figure 1.

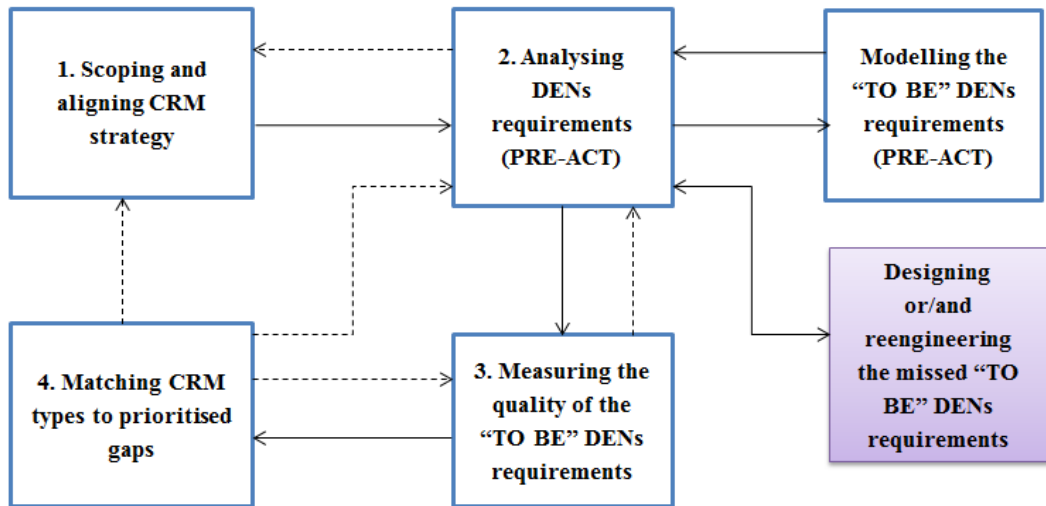


Figure 1: CRM Strategy Orientation and Support framework (CRM-SOS) - Khashab et al. 2018

Although Khashab et al. (2018) presented high-level stages, consideration of sub-steps, and / or practical methods was not effectively considered. Thus, in our study the practical steps for the first stage (i.e. scoping and aligning CRM strategy) will be developed and discussed in the coming sections.

3. Research methodology and steps

The scoping and aligning CRM strategy stage was developed for use within the context of HEIs; via iterative transition through design science stages – i.e. problem awareness, suggestion, development, evaluation and conclusion process steps (Vaishnavi & Kuechler, 2004), to identify the best or ideal solution that would meet the defined problem until a satisfactory design was reached (Vaishnavi and Kuechler, 2004).

To addresses **the problem** of alignment between bottom-up customer needs and top-down strategic goals, we have **suggested and developed** prototype 1 (P1) as generic theoretical prototype for the scoping and aligning of CRM strategy. Then, ten participants were interviewed at six different universities (please see S4.1 for more information) to **evaluate** P1 steps (Khashab et al.,2018), and facilitate **developing** P2 to fit the HEI context. However, the development of P2 has been

iteratively reviewed until final design was concluded (including relevant developed / adapted methods and techniques), by integrating feedback from the IS expert focus group and HEIs interviews

All participants completed an ethical approval via email. Participants were informed that their responses would be analysed anonymously and kept secure. Both structured and open questions were used to guide participant discussion; ensuring that all significant issues were covered. The authors played the role of facilitators, to prevent participant discussion from moving away from the defined objectives. Balancing question's type allowed the author to generate new and unexpected understandings (Bryman and Bell, 2011).

Thematic analysis was employed to analyse the gathered qualitative data (i.e. from interviews and focus groups across all prototypes) since it can capture the details of meaning from textual data (Guest et al., 2011). The analysed data was integrated to facilitate the evaluation, restructuring, refining and development of a more HEIs focused iterative. We hoped the final prototype would answer the main research question "What steps and methods need to be considered to flexibly and practically support scoping and aligning CRM strategy in Higher Education Institutions?"

4. Scoping and aligning CRM strategy, practical developing steps

When considering Stage 1 (scoping and aligning CRM strategy) in Figure 1, it must be noted that no CRM solution can be proposed unless the current activity and/or problems are properly understood. Situational analysis and problem analysis are thus important to CRM strategy definition (Chen and Popovich, 2003; Payne and Frow, 2005; Buttle, 2009). Performing situation analysis ensures that the organisation can make an informed decision concerning the type of CRM that needs to be implemented within the organisation. Khashab et al. (2018) describes the iterative development of the high-level 'Scoping and Aligning CRM Strategy' stage, yet to properly consider use of practical approaches within stage 1, it is important that the reader to fully appreciates how the 'Scoping and aligning CRM strategy' stage was developed, and what must be included within it.

4.1. Prototype 1 (P1) – Generic Theoretical Prototype

To gain a better understanding of HEI CRM activity, we conducted semi-structured interviews with a number of stakeholders identified from JISC documents (entitled Relationship Management Programme, which studied CRM implementation in UK HEIs), as critical HEI CRM implementation stakeholders. By tapping into the knowledge of the experience of implementers, we sought to gain an in-depth understanding of CRM implementation success and failure in HEIs. Purposeful sampling was

used to ensure capture of information from the three main HEI CRM domains (i.e. marketing/current students, business, and alumni). Focus was placed on acquiring experts, with CRM experience, within the pre-implementation stage. Ten participants were interviewed at six different universities identified from JISC case studies, including: one pro-vice chancellor (PA1); four project managers - two concerned with Business to Business (B2B) projects (PA2 and PA3); one concerned with current student projects (PA4); and one concerned with marketing projects (PA5); two IT managers (PA6 and PA7); and three CRM marketing managers (PA8 - PA10). Eight of the ten participants mentioned that having a CRM strategy at the pre-implementation stage is an essential factor; thus, indicating that CRM strategy and CRM goals should be developed before implementation; i.e. “It’s important for both the CRM provider and the university to know what the strategy is” (P1.PA3). “For success, HEIs should use specific CRM systems for specific functions. Say, alumni specific; careers specific; student specific” (P1.PA1). Participants stated that understanding the required time, resources, effort, and change management limitations, is critical to the definition of the CRM implementation scope within a specific functional area. Small scope CRM strategies result in fast, low risk, simple, manageable outcomes, by minimising the change required to organisational structures and customer relationships. Large scope CRM projects are often complex, costly, and risky, often resulting in changes to organisational structure and customer relationship cultures, however they can be significantly more impactful if managed successfully.

A B2B project manager mentioned that during their CRM implementation processes, no senior level manager was willing to drive the change, and/or facilitate the implementation by ensuring allocation of the required resources. “We didn’t have anybody at a senior level who was trying to push it through” (P1.PA3). Another participant stated “It needs heads of college and heads of department to push the academics and the administrators to use the system and to sell the benefits of the system” (P1.PA2). Hence, having senior level stakeholder buy in, i.e. someone who has the power to drive change and (if required) to mandate the use of the system, increases the chance of long-term CRM project success.

One of the key factors, defined as critical by seven out of the ten participants, was the scoping of CRM strategy to have relevant domain specific CRM solutions, which highlight a need to develop a method that addresses the problem of alignment between bottom-up customer needs and top-down strategic goals. Inclusion of a ‘Scoping CRM Strategy’ stage was critical for use in HEIs due to the diversity in the outputs within HEIs (i.e. teaching, knowledge transfer, etc.) and between HEI (i.e. primary and secondary models), which drives a need for flexibility in the scoping approach. Effective CRM scoping in HEI will also ensure that CRM strategy aligns with HEI strategy, and that service delivery is specifically tailored for the wide range of different beneficiary recipients found in HEIs (e.g.

prospective applicants, current student (UG and PG), businesses, research councils, academic staff, alumni, etc.).

4.2. Prototype 2 (P2) – Theoretical HEI CRM Strategy Prototype

Considering the above, P1 was dramatically developed to include consideration of scope, ensuring orientation and alignment of CRM strategy with HEI strategy. To support this, functionality was broken down into 4 steps. Step 1, which aimed to define the problem domain / outputs, thus ensuring a CRM implementation, focuses on areas perceived to be of importance to management, i.e. initialised by top management; this step also includes consideration of “buy in” by both top management, faculty, and administrative staff. Step 2 defines, and analyses stakeholder involved in the specific domain / output, in order to understand the scope of influence. The outcomes of this step should be a tabulated stakeholder list considering roles and responsibilities. In step 3, we segmented/ broke down clients into semantically relevant groups (e.g. students could be UG, PG; alumni; KTPs), which supports us to identify strategically important clients. Within step 4, we define the stakeholders’ Desires / Expectations / Needs (DENs) of strategically important clients (i.e. the output of step 3), which allows us to i) identify differences between bottom-up and top-down priorities, and ii) concerns related to providing the service. Needs were defined as essentials, without which the output would be deemed to be faulty. Expectations relate to benefits, attributes and/or outcomes that are expected as part of the output, however expectations vary significantly between customer segments (Boradkar, 2010). Desires relate to benefits that are desirable, and may impact the purchase decision, but do not necessarily impact the key function of the focal output.

To evaluate prototype 2 and facilitate the development of prototype 3 (P3), an expert focus group was used. Five expert participants were included as part of the expert focus group. Purposeful and convenience sampling were used to ensure the capture of enough practical information from the five experts, including one consultant / researcher in the field of technology usability and enterprise architecture (P2.PA1), a university academic with extensive knowledge in enterprise systems and human computing (P2.PA2); a researcher with extensive knowledge of MIS, E-commerce, customer experience, and technology acceptance (P2.PA3); a researcher with experience in business processes, MIS, and human computer interaction (P2.PA4); and lastly a university academic / consultant with extensive knowledge in practical tools, processes mapping, modelling languages, and enterprise systems (P2.PA5). All experts had an extensive understanding of both HEIs and information systems implementation in business.

Some participants did not understand what was meant by ‘HEIs output’. “Can you give an example of outputs?” (P2.PA1). “Is it the same as HEIs requirements” (P2. PA2). Accordingly, we highlighted a

need to define the output scope properly, giving relevant examples to practitioners. Suggestions included describing the focal output as the final goal, i.e. the thing that your CRM should improve your customer experiences. “Does it mean why you are doing this?” (P2. PA3). “Is it the final target that CRM should focus on achieving” (P2.PA4). Despite confusion over wording, all participants understood the reasoning behind scoping, and agreed its significance as the first stage. “CRM strategy should align with the university strategy, so that the scope is defined where you want to focus, i.e. achieving university strategy through CRM strategy” (P2.PA3).

In terms of stakeholder identification and analysis, the question was raised “how will you define and analysis the stakeholder?” (P2.PA2). “How do we define customer and how do you decide that?” (P2.PA2). “Who do you speak to initially to define the focal output?” (P2. PA1). One suggestion implied that “top management should ultimately decide whether they are going to implement CRM” (P2.PA5). All five experts were happy about this.

Participants questioned, “how the strategic clients can be defined and how they are prioritised?”. We proposed the use of Thakur et al. (2006), i.e. top, middle and low, in order to maximise the customer’s value and serve them efficiently; with use of the Newell’s (2000) definition - top group (upper 10 per cent); middle group (the next 40 to 50 per cent), and the lower groups (bottom 40 to 50 per cent). Participants liked the idea, however, they stated that “in HEIs, every university will have a diverse range of criteria for prioritising their clients” (P2.PA3). Participants were interested to understand “what is the difference between desires, expectations and needs” (P2.PA2), and “how can we alignment between CRM strategy and university strategy” (P2.PA3). A participant suggested that additional information is needed to support practitioners using the ideas. “It would be good if you integrate the steps with examples concerning different HEIs clients” (P2.PA2). All participants highlighted that this stage was important to support CRM strategy scoping and alignment. Participants liked that inclusion of this stage can answer questions, such as: What is the university trying to achieve? Which HEI customers should be the CRM focus? Answering such questions helps the practitioners to practically align between customer and university needs.

4.3. Prototype 3 (P3) – HEI CRM Strategy Orientation Prototype

Feedback showed that scoping and aligning CRM strategy is critical to all CRM focused HEI domains, including B2B, KTPs, placements, marketing, current student activity, student services and alumni support. By investigating the flow, concepts, and steps required to scope and align university strategies

and customer needs, and as a result of focus group feedback, the following five P3 steps were defined as essential to support scoping and alignment of CRM Strategy (see figure 2):

- **Prototype 3 Step 1:** Define the strategic focal outputs, i.e. Specify CRM domain (e.g. KTP products/target numbers of placements/alumni numbers/ alumni).
- **Prototype 3 Step 2:** Define and analyse stakeholder groups including the HEIs clients. This step will help the HEI define the main people that impact, or are impacted, by system outcome.
- **Prototype 3 Step 3:** Contextualise output's clients, with a focus on "Strategic criteria" as filtering mechanism to target HEIs clients that are seen as most desirable.
- **Prototype 3 Step 4:** Define Clients/Senior people Desires/Expectations/Needs (DENs) of the output context.
- **Prototype 3 Step 5:** Quantify and evaluate, in the context of the business model, the output D/E/N.

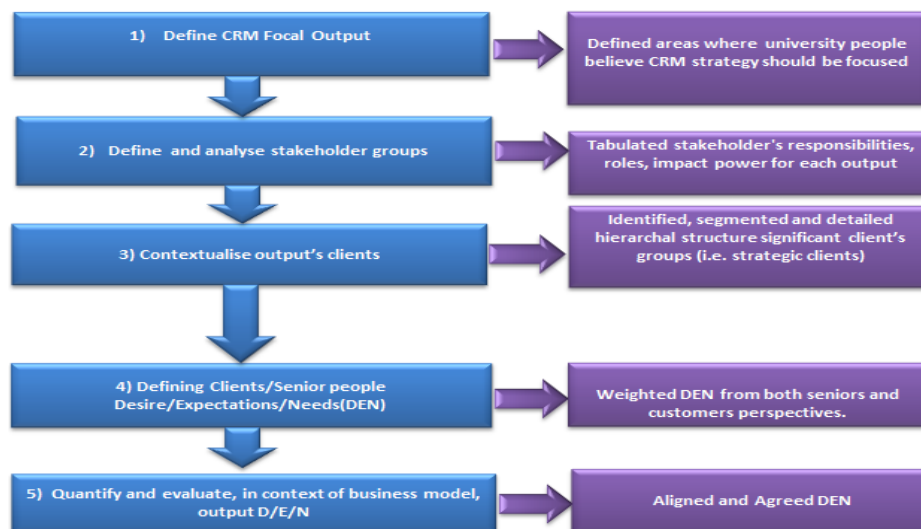


Figure 2: Breakdown of Scoping and Aligning CRM strategy stage

4.4. Prototype 4 (P4)- Expanding Practical Methods

A concern, defined in the original problem description, and raised by PA1 and PA2 participants, is “how” HEIs practicably implement strategy defining sub-steps? It seems that literature highlights theoretically steps/requirements, but definition concerning adoption of tools and techniques, i.e. to facilitate steps in the real-world, is rarely considered - “Lots of people come with high level implementation steps, but they don’t know how to do them in practise” (P2.PA2). In order to address this statement, we propose a fourth Prototype relating to strategic scoping and aligning CRM strategy, which explicitly considers possible actionable / practical supportive methods.

4.4.1. P4, Step 1- Define the CRM focal output (i.e. specify CRM domain)

During P1 feedback, seven out of the ten participants stated that top management should initiate CRM strategy, however numerous studies describe the significant importance of segmentation on the successful implementation of a CRM strategy (e.g. O'Regan, 2010; Bligh and Turk, 2004; Rigby et al., 2002). With ubiquitous cuts across UK universities, it is increasingly necessary to rationalise the allocation of available resources in areas that maximise value. Participants pointed out that, in order to achieve this, it is essential to have "a very detailed understanding of the corporate business requirements" (P1.PA2)). Interestingly, one of the key factors, identified by seven out of the ten interview participants, was the need to have "a different strategy for different customer groups", e.g. teaching, research, knowledge transfer outputs, degree levels, etc.); suggesting that in HEI a one-for-all CRM strategy is no appropriate.

Literature implies that CRM strategy and system requirements will vary across the institution. Accordingly, to achieve implementation success, each CRM strategy should have a clear focus. Top HEI management are therefore required to strategically prioritise what outputs are critical to the university, i.e. the focal outputs, which represent the outputs that senior management are interested in strategically improving. If management identifies multiple focal outputs, then multiple, perhaps distinct, CRM strategies should be created to consider each need.

To translate this into practicable/actionable steps, we propose: i) getting senior managers to determine strategic university focus areas, i.e. whether management aim to improve customer relationships in all faculties and departments or just within particular departments, or programmes; ii) define high level staff within the focus areas and ask senior staff to define what outputs the customer relationships management system implementation should complement. By focusing on a specific output area, project implementers are able to determine the level and scope of the implementation within the university, i.e. whether the functionality needs to support teaching, research, or business/community activity. Moreover, the implementation of change can be focused, thus minimising project complexity and cost. This sub-step therefore helps the university strategically focus development of its CRM, i.e. the top-management perspective of where value needs to be added to customer interaction/relationships.

4.4.2. P4, Step 2- Define and analyse the stakeholder groups

Renner (2000) argued that maximising customer relationships requires a full understanding of customers' value and scope; in order to manage business processes around each segment and treat them separately according to their values and needs. Greenberg (2010) showed that a major factor of failure in CRM is the lack of user involvement within pre-implementation phases. It is critical, therefore, that our CRM pre-implementation framework sub-steps considers the extensive definition of stakeholders

in order to understand the current situation impacting all relevant stakeholder. This identification will help the HEI determine the key individuals that influence, or are influenced by, system outcomes. Accordingly, HEIs should determine who is impacted by each CRM strategy, and how they should be served. If separate CRM strategies need to be defined for specific HEI outputs, it is important to define what stakeholders relate to that output. In framework stage A4, we propose the use of the Organisational Semiotics (OS) method for stakeholder identification to facilitate stakeholder capture and categorisation. This proposed method has six stakeholder categorisations, i.e. actors, clients, providers, facilitators, governing bodies and bystanders (Liu et al., 2007) – see Figure 3.

Actors are stakeholders that directly influence and/or are influenced by the outcome (i.e. they have a primary relationship with the client), e.g. heads of school, lecturers on a programme etc. Clients receive the consequences of the outcomes and are potential service users or consumers of the product or service, e.g. students. Providers provide the conditions to facilitate the deliverables of the outcome (i.e. they have a secondary relationship with the client), e.g. financial departments, administrative staff. Facilitators are the initiators and enablers of an output, and are the ones who solve conflicts, ensure continuity, and steer the team towards its goals, e.g. supervisors, admissions. Governing bodies take part in project planning and management planning and supply the legal framework (policies, regulations, etc.). Bystanders are not part of the project but influence the outcome, e.g. business organisations, community institutions, policy movements (human rights, environment protection), etc. Some stakeholders can have overlapping roles and responsibilities, e.g. the financial department might be an actor to verify the customer's account and at the same time may be a facilitator by auditing budget accounts. The proposed method has been designed to overcome this problem and allows different roles to be allocated to the same stakeholder. Moreover, this method shows which stakeholders are nearest the core (i.e. the focal output); and are therefore most affected or influenced by this output.

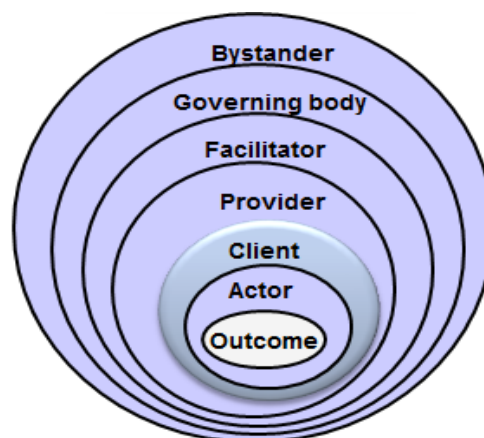


Figure 3: CRM roles influencing HEI output (adapted from Liu et al, 2007)

Categorisation of stakeholders, which could practically involve post-it notes with stakeholder names being placed in category areas, allows us to define direct and indirect customer groups (i.e. beneficiaries of the given output) and identify roles and responsibilities involved in achieving the focal CRM output (Maye et al, 2017). The results from the stakeholder analysis can be tabulated for each output (see table 1). The “weight/ importance” column prioritises the stakeholders’ responsibilities importance using, for example, a ten-point Likert scale. “Own the client’s data” column has been added as a result of analysis from the expert interviews, to make it clear who owns client’s data across the university; i.e. in order to provide better data migrating and maintenance. Table 1 contains a column entitled ‘Interaction significance value’. This column relates to prioritisation of stakeholders by the number of times they interact with the customer, thus enabling the formulation of a requirement prioritisation plan. For example, if the main output was to “deliver high quality teaching for the digital marketing course”, then the applying the technique shows that the key stakeholders to focus on in relation to this output are in order S5, S3, and S2. Using a stakeholder identification table (Table 1) for each stakeholder, for each output, can help implementers to identify relevant stakeholders, and/or map stakeholder activities.

Table 1: Stakeholders identification and analyses criteria for specific output

Stakeholder	Role	Responsibility	Weight/ importance (out of 10)	Own the client’ s data (Yes/No)	Interaction significance Value (High/Medium/Low)
S1	Governing body	Set and supply the legal policies and regulations of the course	3	No	Low
S2	Facilitator / Actor	Facilitate course	7	No	High
S3	Actor / Client	Deliver course materials	8	No	High
S4	Client	Source for the course quality information	2	No	Low
S5	Provider / Actor	Deliver course materials and provide the conditions to facilitate the deliverables of the course	9	Yes	High
S6	Bystander	Student union to protect students’ rights	3	No	Medium

4.4.3. P4, Step 3- Contextualise output’s clients

Expert interviews highlighted that the CRM strategy should be designed around the strategic functional needs of specific focal CRM outputs (defined in Stage 1, Step 1). To deliver target functionality for specific customer groups, it is important to map all client groups (i.e. segments) in the context of the focus output (supported by Step 2). In the HEI sector, we recommend CRM profiling of groups in order to gain a detailed comprehension between clients, which allow prioritisation of criteria for CRM use in HEI. Accordingly, in order to prioritise segments around the specific output clients, we propose that actors should first be questioned to define client prioritisation criteria. This allows us to scope the CRM strategy in the context of specific KPIs, e.g. retention/churn rates, loyalty measures, etc.

There have been many approaches developed to classify customers. Peppers and Rogers (1997), for example, developed a customer classification technique based on the customer lifetime value, with the categorisation including: Most valuable customers (MVCs); Second-tier customers (STCs) -customers that potentially could be developed into valuable customers; and below zero customers (BZs) - customers whose value is less than service costs. Newell (2000) defines three different types of customers: the top customer group (top 10 percent), who are loyal and bring revenue to the university ; the middle customer group (the next 40 percent), who can bring revenue to the university , yet represent potential growth / loss market; and the lower customer group (the bottom 50 percent), who are of limited value and are not the target focus. Once prioritisation criteria are qualitatively defined by strategic stakeholders, we propose using table 2, which was formed as a practical tool to quantitatively add weights to stakeholders' criteria in terms of the agreed selective criteria in order to prioritise their clients and sub-clients.

Table 2 enables consideration of clients and allows the sum weights to be determined. The output of Table 2 is a contextual classification of clients, in terms of specific HEI criteria from key stakeholders (S) and allows the definition of significant clients using the sum total of all stakeholder's weights for each criterion. We suggest using Newell's (2000) segmentation categorisation, i.e. top, middle, and low customers as his tool will enable us not only to classify the clients to three groups, but also can help to quantify the strategic client's importance as a key element in our proposed method. Table 2 provides actors with a clear indication about, which clients in the context of the HEI are most important (e.g. the top and middle groups as strategic clients). Such knowledge empowers managers and implementers to prioritise CRM activity around Strategic Clients (SCs). The HEI strategy can, therefore, concentrate on adding high business value to SC (Gordon, 2002). Since HEIs' customers are complex, for testing purposes this research focused on three main customer types: i) learners as prospective/current students, ii) partners who interact with the university as part of the business engagement community, and iii) alumni, using the generic term as "clients" to express the primary HEIs service beneficiary recipients instead of "customers".

Table 2: Stakeholder valuations

Stakeholders Criteria(S)	S1(role)	Weight	S2(role)	Weight	S3(role)	Weight	Sn (role)	Sum
Criterion 1	Clients (C)		Clients (C)		Clients (C)			
	C1		C1		C1			
	C2		C2		C2			
	Ci		Ci		Ci			
Criterion 2	Clients		Clients		Clients			
	C1		C1		C1			

	C2		C2		C2			
	Ci		Ci		Ci			
Criterion 3	Clients		Clients		Clients			
	C1		C1		C1			
	C2		C2		C2			
	Ci		Ci		Ci			
Sum								

4.4.4. P4, Step 4- Define clients/senior managers' Desires / Expectations / Needs (DENs)

The core concept of most HEI CRM strategies is to deliver value to strategic customers, which means understanding customers' needs and seeking to meet their requirements (Seeman and O'Hara, 2006; Kumar, 2010). Accordingly, the more a HEI knows about customer groups, the more likely that the HEI can enhance business performance by improving customer satisfaction and loyalty (Kirkby, 2002). If clients' needs and expectations are not delivered as part of the final output, then the customer will, if left unmanaged, suffer a feeling of disappointment; from which a feeling of discontentment will result (Kano, 1995). Galbreath and Rogers (1999) argued that businesses who consistently fail to meet their customers' needs and expectations, will not survive. HEIs accordingly need to understand their customers' needs, expectations, and desires to ensure that outputs meet (or surpass) SC expectations.

The authors suggest a need to explicitly capture and distinguish strategic client (SC) Needs, Expectations and Desires; termed DEN in our work. The explicit distinction of DEN allows HEI managers to compare SC DEN against the university DENs of HEI senior managers; this is critical, as senior HEI staff expectations of the customer may be wrong. Without an explicit definition of DEN, the university risks focusing resources on customer desires, yet fails to meet SC core expectations and needs; which are essential to retention. Thus, explicit classification of desires, expectations, and needs, particularly incorporating client and management perspectives, is important to consider both bottom-up (customer) and top-down (management) views (see Figure 4). This tool can be used easily as elicitation and "buy in" method using post-it-notes with stakeholder names being placed in category areas, which enables us to define strategic clients' and senior managers' DENs.

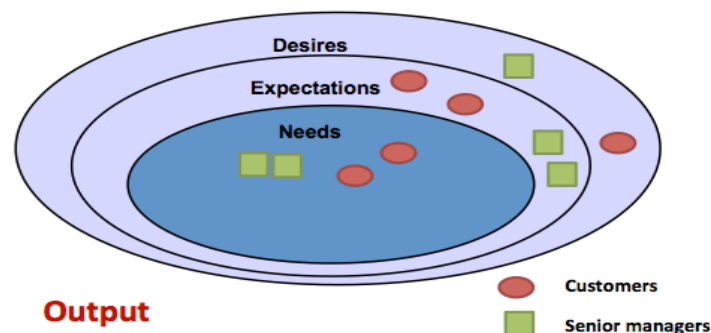


Figure 4. Customer / Management DEN definition tool

In order to implement this process practically, we propose the use of a customer/management DEN definition tool. Firstly, by applying the tool shown in Figure 4, we suggest capture of senior management DEN; supporting initial top-down DEN definition qualitatively. Secondly, SC should be asked to assess top-down management DENs quantitatively, e.g. using a Likert scale in terms of the Client Importance (CI), and Client Performance (CP). Thirdly, we suggest that SC groups define additional DEN, which they believe to be missing from the original top-down management DEN list; allowing bottom-up DEN to be added to the list. SC should provide quantitative values, concerning their importance (i.e. CI) and performance (i.e. CP), using the same Likert scale, to all new bottom-up DEN. Finally, senior managers should be asked to quantify Business Importance (BI) and Business Performance (BP) for all DEN on the final DEN list (including top-down and bottom-up DEN) using the same Likert-type scale. This final step allows us to quantify the senior management perspectives.

4.4.5. P4. Step 5: Quantify and evaluate university services in context of DEN's KPIs

Chalmers (2006) claimed that value only exists if customers perceive it to exist. Delivering value to the customer, therefore, is a crucial driver of successful CRM strategy (Thakur et al, 2006). Traditionally, senior managers would expect to define business services, however for the sake of customer acceptance, senior managers should consider customer feedback. We propose that capturing SC's bottom-up Desires, Expectations and Needs in HEI is essential to the development of a successful CRM strategy, however the customer perspective has to be balanced against that of HEIs' managers. Gaps in output DEN, between managers and strategic clients highlight conflict areas that if unmanaged, risk customer disillusionment. If a client's DEN is perceived by the HEI as being too high, the university must decide to either i) change its strategy and internal expectations to meet the customer expectations, or ii) risk losing the customer. It is, therefore, essential to assess this gap to understand and realise customer DENs, reformulate or modify the CRM strategy in line with customer DENs, in order to meet the expectations of selected customer segments. Accordingly, a step is needed in our approach to identify: i) what DEN will be taken forward from the full DEN list (both top-down and bottom-up), and ii) what quantifiable measurement KPI should be assigned to each DEN. To identify each DENs gap, we need a step that practically compares university managers' and strategic clients' DENs. To practically identify and prioritise DEN gaps, we propose the use of Equation 1 and 2, adapted from Cheng et al. (1998):

$$\text{Business Value Performance (BVP)} = (\text{CP} - \text{BP}) \text{ (Equation 1)}$$

$$\text{Business Value Importance (BVI)} = (\text{BI} - \text{CI}) \text{ (Equation 2)}$$

BVP is the business value performance, which should be calculated for every DEN. BVI is the business value importance, which should be calculated for each DEN. BP is the business performance score

related to the particular DEN. CP is the client performance score related to the particular DEN. CI is the client's importance score related to the particular DEN. BI is the business importance score related to the particular DEN. The difference between business and customer perceptions of performance, i.e. equation 1, highlights problems between business and customer perceptions of current Desire / Expectation / Need delivery. For example, Table 3 presents two potential agreed needs from both strategic clients and university managers as 1) courses with flexible structure and 2) library facilities. If the university score (i.e. BP), concerning current assessment of a need/expectations/desire performance (courses with flexible structure in our example) , is more than the client score concerning performance (i.e. CP) (5-6), then the BVP value will be negative (-1); implying that customers do not perceive current performance to be as perceived by the university managers. But for the library facilities, if the university score (BP) is less than the client's score (CP) (6-5) , then the value will be positive (+1); implying that university has a harsh assessment of current performance, and that customers actually perceive current performance to be better than intended. The difference between university and client perception, concerning the importance of needs / expectations / desires, i.e. equation 2, highlights problems in the prioritisation of DEN. For instance, if the university importance score (i.e. BI), for adding more library facilitations is less than the client score (i.e. CI) of the same need (5-7), then the BVI value will be negative (-2), which means that the university has failed to understand how important the DEN is to the customer - a significant risk! If the university score (BI) for having courses with flexible structure is more than the client score (CI) (7-6), then it is clear that management perceived this DEN to be of more importance than the client. Awareness of gaps (both positive and negative) can support HEIs' managers in directing their perception. If both BVP and BVI are equal or greater than zero, then the university focus on, and current delivery of, DEN is retrospectively as expected, or better than expected. If either BVP or BVI is negative, then changes may be needed in the delivery of services. The goal of this step is not to explicitly define prioritisation of CRM, but to highlight perceptual misalignment. If for example, from a list of twenty DEN, two have a negative BVP and BVI value, then senior HEI management should perhaps focus on these DENs first; channelling limited resources into areas that offer the highest value-adding potential. If BVP is negative, yet BVI is positive, then continued change should be sought to improve current services. In such cases, however, we suggest that senior staff practically link DEN to SMART (quantifiable) KPIs; thus allowing clear and understandable changes to DENs. KPIs can be used to define an acceptable level of service, against which service development and process change can be measured. If BVP is positive, yet BVI is negative, then perception focus is certainly needed.

Table 3: BVP and BVI example in HEIs

Output's DEN	CP	BP	BVP = (CP – BP) Out of 7(Likert scale)	Interpretaton	BI	CI	BVI = (BI – CI) Out of 7(Likert scale)	Interpretaton
Courses with flexible structure	5	6	5-6 = -1	Students do not perceive current performance to be as intended by the university managers	7	6	7-6 = +1	Changes may be needed like resource allocation
Library facilities	6	5	6-5 = +1	University focus on, and current delivery of, DEN is better than expected	5	7	5-7= -2	University has failed to understand how important the DEN is to the students – which is of significant risk

4.5. Evaluating P4 / Defining scoping and aligning CRM strategy 5 (P5) – Feedback from HEI-based MIS experts

To evaluate P4 steps, and facilitate development of P5, an expert focused group was used. Same five IS expert participants from the authors' university who were interviewed to evaluate P2 were invited again as part of an expert focus group. Therefore, we have only changed their unique identification for P4 and keep same expert participants order as following are (P4. PA1); (P4. PA2); (P4. PA3); (P4. PA4); and (P4. PA5). P4 Stage 1 steps were presented to them. Feedback concerning the A4 steps, and proposed changes, are described in following sections.

4.5.1. P4, Step 1 - Feedback: Define the CRM focal output (i.e. specify CRM domain)

All participants found the two proposed methodological steps (i.e. getting senior managers to determine strategic university focus areas, and define high level staff within focus areas and ask senior staff to define areas where customer relationships management system implementation should complement) to be useful and were pleased with the proposed improvements to define the focal output using examples. "It is good to start by asking the senior people, i.e. as these are the people who are going to decide whether to implement the CRM" (P4. PA2). No changes were made to proposed to Stage 1/ Step 1 at this time.

4.5.2. P4, Stage 1, Step 2- Feedback: Define and analyse the stakeholder groups

Although participants supported the idea of using the six stakeholder categories (as defined in figure 4), they suggested changes to table 1. "What do you mean by H/M/L?" (P4. PA3). "It would be clearer if you say please weigh the stakeholders using numbers like "out of 10" (P4. PA4). P4.PA5 identified

that multiple stakeholder roles are not supported in Table 2. “If I am a researcher, staff member and student at the same time, the roles I play are different, the responsibilities are different, and the weighting will be different as well” (P4. PA5). “You should have separated rows related to different roles of the same stakeholder” (P4. PA2). P4-PA1 raised the issue of “who owns the data?”. The idea was discussed when considering easy and quick access when needed. P4-PA1 suggested marking stakeholders who create client’s data as “C”, those who access them as “A”, and those who own the data as “O”. Participants' feedback additionally raised a concern relating to the definition of ‘client data’. When we talk about the client’s data, we mean the current “as is” client’s data stored in the university databases. Accordingly, the table was amended to add (C/A/O) to include who create, access and own the client’s data and replace H/M/L with ten-point scale as shown in Table 4.

Table 4: Modified stakeholders identification and analyses criteria for specific output

Stakeholder name	Individual Role	Role Type	Responsibility	Weight/ importance (out of 10)	Own the client’ s data (Yes/No) (C/A/O)	Client’ s Interaction significance Value/times at specific date (out of 10)
		Governing body				
		Facilitator / Actor				
		Actor / Client				
		Client				
		Provider / Actor				
		Bystander				

4.5.3. P4, Step 3- Feedback: Contextualise output’s clients

When considering client contextualisation, i.e. for a specifically defined output, there was a consensus among all five IS experts towards decomposing clients into small groups; facilitating stakeholders to define the prioritisation criteria; and using a three tier classification, i.e. high (top 10 per cent), medium (the next 40 per cent) and low (the bottom 50 per cent). Participants supported the concept of having a sum calculation when defining the strategic clients, stating, “it is good to have a calculation and sum for the clients’ prioritisations” (P4. PA2).

4.5.4. P4, Step 4- Feedback: Define output’s Desire / Expectations / Needs (DENs)

Participants had no concerns with this step. However, one participant highlighted that “a need for one client may be an expectation or desire for another client, so how you can you compare them and define that is needed? How do you define ‘expectation’, ‘desire’, ‘need’ and link this to sub-clients? (P4. PA2)? To solve this dilemma, we suggested that both client and management assess importance and performance of DEN without reference to DEN definitions.

4.5.5. P4, Step 5- Feedback: Quantify and evaluate output's DEN

All participants liked this step. “Lots of people come with implementation steps, but they do not quantify success / failure ... it is quite difficult to come up with one model that fits all HEIs clients, but the use of appropriate KPIs would support this” (P4.PA3).

4.6. Evaluating P5/Defining Prototype 6 (P6): Feedback from HEI CRM focus groups

4.6.1. Focus group agenda and analysis

The CRM-SOS framework P5 was evaluated by applying the focus group method with 17 HEI practitioners (see Table 5). The aim of choosing a diverse range of participants was to gather the diverse CRM experiences / data / opinions from UK HEIs experts across different HEI areas, i.e. across teaching / research / business activity areas. Each participant had different practical experience and was therefore able to express a unique point of view concerning the CRM-SOS framework practical steps; i.e. whether it can practically be used in their specific context of HEI. The main goal of the focus groups was to evaluate the applicability of the proposed CRM-SOS P5 framework, including practical methods, to determine whether the served particular CRM activity areas. Discussion considered the feasibility of using the proposed P5/Stage 1 sub-steps. Each session lasted between one hour and a half and two hours.

The following sections contain feedback concerning the three main HEIs areas, i.e.: business to business (B2B) (numbered from P5.PA1 to P5.PA9), prospective and current student activity - including academic, marketing and current student support (numbered from P5.PA10 to P5.PA16), and alumni (P5.PA17).

Table 5: Individual's roles in the focus group

Number of Participants	Roles/ areas of Investigation
9	Business to Business and Knowledge Transfer Areas: <ul style="list-style-type: none"> • P5.PA1: Knowledge Transfer partnership manager (CRM planner i.e. middle manager) • P5.P5.P2: Knowledge Transfer and Commercialisation Manager (CRM expert planner, middle manager) • P5.P5.P3: CRM academic researcher • P5.P5.P4: CRM academic researcher • P5.P5.P5: Corporate CRM – “Supporting Business Engagement” (Analyst in business area, operational manager) • P5.P5.P6: Quality Manager and Employer Engagement (middle manager, CRM planner) • P5.P5.P7: KTP manger (top manager, CRM planner) • P5.P5.P8: Employer engagement and Alumni manager (researcher and middle management) • P5.P5.P9: CRM expert in postgraduate research experience manager (middle manager)
7	Prospective/current student’s area: <ul style="list-style-type: none"> • P5.P5P10: Academic (Marketing Enquiries, CRM planner, CRM user, post implementation) • P5.P5P11: Academic, CRM planning office • P5.P5P12: Marketing Manager (top management, CRM planner and user, /pre-post implementation) • P5.P5P13: Head of Student Recruitment & Outreach (CRM planner and user, /pre-post implementation, middle manager) • P5.P5P14: CRM academics staff/ Strategic marketing director (CRM planner, top manager) • P5.P5P15: IT Manger (CRM planner, designer, /pre-post implementation top manager) • P5.P5P16: Current student focus, student advice and wellbeing manager (CRM planner and user, /pre-post implementation middle manager)
1	Alumni: <ul style="list-style-type: none"> • P5.P17: Alumni Manager (CRM planner and user, middle manager)

4.6.2. Focus group feedback

P5, Step 1- Define the CRM focal output (i.e. specify CRM domain)

Business participants agreed that Stage 1, Step 1 would work in context of university activity. They agreed that the step would help re-orient and align CRM strategy with the university business strategy. Participants don’t have a problem with the flow of theoretical steps or with concepts introduced. One participant claimed “This was exactly what we went through” (P5.P8). One participant, however, commented “At very top level I think that is ideal” (P5.P5).

Participants agreed that scoping of the CRM strategy is specifically significant for B2B, as B2B is different from CRM activity impacting students activity; and the framework allows separate CRM strategies to be defined. Examples of agreements were: “A business strategy can be defined for business clients, and a student strategy can be defined to deal with student activity – this separation is great!” (P5.P2). “I think it is interesting that you are talking about CRM - it might need to have an “s” at the end of it - CRM’s strategy because we need more than one strategy (and maybe more than one CRM).

One for the students and one for business” (P5.P2). Participants affirmed the need to start at a high level to define the DENs strategically and invest rationally in areas that are vulnerable within the university; with multiple strategies linking to different outputs and clients. By applying the detail of the Step 1 (i.e. by defining the strategic focal outputs), participants agreed that HEIs top management would more likely initiate a CRM strategy that aligned with existing business client needs and university perspectives. Participants agreed that the focal output has been defined first by top management, and the strategic university drivers should be supported by the defined CRM strategy. “the CRM strategy defines how we, as a very externally facing group, fit into university activity – making sure that our activities are supporting the HEI’s strategic drivers” (P5.P6).

When prospective and current student activity participants were asked about the ‘Define the CRM focal output’ step, all agreed that senior managers should first be asked where CRM should focus. “By mapping it in that way, it allows you to define high level strategic objectives.” (P5.P11). However, initially the prospective and current student activity participants prefer to use the term customer relationship improvements rather than using the term ‘CRM’; “since ‘CRM’, as a term, is often misinterpreted as a technical tool” (P5.P12). Although managers believe that the framework is important and workable, most participants suggest having an internal business analyst, project manager, and /or project team implement the framework in the HEI; rather than giving the responsibility to an external consultant. “If you can I think it’s always useful to have the expertise in-house. I think University stakeholders need to be involved in the project management” (P5.P12).

Finally, B2B and prospective/current student participants see engagement, communication, buy in, and conflicts as the critical factors. This makes HEIs very different from other commercial industries.

P5, Step 2- Define and analyse the stakeholder groups

There was a sense of agreement amongst P5 participants that the defined stakeholder identification was important and was perceived as helpful to overcome the challenges of defining and involving stakeholders. Identifying and analysing in advance the HEIs stakeholders, and the link between stakeholders, was seen as being important for prospective and current student activity participants.

Business participants stated that having the stakeholders identified and analysed can help to ensure that all stakeholders are defined at the beginning; and are therefore involved throughout the whole CRM implementation process. “Stakeholder identification definitely needs to be covered in the first stage. If you’re missing half the people that should actually be involved right at the beginning, then the likelihood is that they will be missed throughout the whole journey.” (P5.P5). Interestingly B2B participants argue that internal stakeholder engagement is much more important than external

stakeholder engagement; because internal stakeholders interlink the business units across numerous departments. Participants stated that ideally we should also define the collaborative and communication relationships between specific stakeholders at this time. One participant stated that appreciation of these relationships was “Very critical.” (P5.P9). Moreover, when analysing stakeholder responsibilities, it was advised that we must consider “who is involved in delivering that responsibility, who do stakeholders interact with, when / where do they interact, and who has the responsibility of coordinating that interaction” (P5.P3). Accordingly, there is a need to define the communication in more details at project team level. “Understanding how people work together is really important, i.e. to involve those people that work and interact together to make sure they are involved at the initial CRM stage” (P5.P5).

Participants highlighted the challenge of convincing HEI staff to share information / contacts. Academic staff were highlighted as the most resistant, since they fear losing control of projects if all information is disclosed centrally. B2B participants claimed that academic staff would support the implementation of a CRM, to help them perform their tasks, and to help share their information, but information governance and security is a deal-breaker. “We were trying to get all the academics to give us their external contacts. If a member of staff is working with external partners then they’re supposed to tell us who they’re working with - which companies and organisations. But many people won’t do this.” (P5.P8). “People don’t want to give up their contacts because they feel they were their own. It is their research – they ask me ‘why should I share my personal research with you?’” (P5.P1). One of the suggestions given to overcome the difficulty was improvement of CRM training. “Once you start showing people that there is mutual benefit of sharing information with the CRM, then people are more likely to come on board.” (P5.P1). “If you can show people a future that could actually help them do their role then they are more likely to buy-in to that future.” (P5.P8). “Showing them the benefits, and giving them the opportunities to be involved in the process, is really important.” (P5.P7). Subsequently all HEI stakeholders needs to be effectively educated in the benefits of CRM; to help persuade them that CRM acceptance will ultimately help their day-to-day activities. Participants concluded by agreeing a need for a controlled communication plan, i.e. to define the relationships and interlinked responsibilities between stakeholders. Disconnection in the interaction with significant clients, at different levels of HEIs, was perceived as resulting in mismatched expectations held by clients, operational staff, and strategic management.

Management buy-in was also highlighted as being critical to project success. “There is no point in doing all the other stuff, the “as is” and the “to be” if senior managers aren’t buying into it.” (P5.P13). Encouraging buy-in, therefore, was stated as something that should be a critical activity. “It is important to have senior stakeholder engagement otherwise the project will never gain any traction” (P5.P8).

Supporting stakeholder buy in all levels was also defined as imperative to convincing HEIs stakeholders to sharing their information.

Finally, feedback highlighted that in the alumni domain use of the term “client” was not generally accepted. “It’s not a transactional relationship. We prefer to say consumer of the product” (P5.P17). It was advised that in A 6, Stage 1, when defining the outputs and strategic clients, the framework should define the proper use of the terms so that language fit most appropriately within the given domain. It was also decided to add two additional sub-steps, relating to respectively formation of a communication and a buy-in plan should be added between current steps 1.2 and 1.3.

P5, Step 3 - Communication plan

P5 feedback highlighted a need for a controlled communication plan, which defines the relationships and interlinked responsibilities between stakeholders. Defining a detailed communication plan, at the start of the project, will hopefully help define key communication responsibilities / expectation.

P5, Step 4 – Buy in and educate stakeholders

P5 participants consistently highlighted the need for stakeholder “buy in” and education; especially senior staff. “you need buy in from senior managers. The problem with senior managers is that they don’t have a broad and deep understanding of what CRM actually is” (P5.P13). Accordingly, it is essential to consider, as an explicit sub-step, how to maximise stakeholder buy-in via appropriate contextual education / incentivisation.

P5, Step 5- Contextualise output clients

Definition of significant clients was discussed by five of the nine business to business (B2B) participants; with participants agreeing that the criteria defining significant clients should be strategically defined by the HEIs top management. Participants stated that B2B selection criteria would vary from one university to another. Criteria used by focus group participants included: company size, turnover, potential revenue, type, growth rate, interaction level, history, and product types. Participant discussion, however, highlighted a number of key criteria (i.e. interaction level, potential revenue, and history) that should also be considered. Consideration of “interaction” is key, yet definition of interaction in discussion was often broken down to consider interaction size, nature of interaction, and interaction domain. Consideration of ‘revenue’ is seen as essential to business selection, and adaptation of university level B2B focused CRM strategy. “What we need to do is to have something in our CRM system which identifies all companies that are of the right nature to be involved in KTP. We will then approach all SMEs or we will approach all people in terms of size, etc., and the type and the area.” (P5.

P2). As every faculty/department has different criteria to select their strategic clients. Thus identifying strategic client selection criteria in business-to-business activity is key.

The contextualisation of output clients was also defined as being key to alumni activity. “Alumni obviously range from very young to very old, and can be found in all different parts of the world. The experience that had with the University is often unique depending on: when they came, what they studied, what they did, what they went on to do, when they did both of those things, and where they are in their particular lives” (P5.P17). Interestingly, primary focus from alumni was put on the alignment between alumni’s DENs and university’s DENs. Discussion highlighted that, in context of alumni activity, one key criteria to alumni focus is interaction frequency; as it is easier to appreciate the needs of people with whom we interact. Since the alumni do not exist in the university, defining strategic clients, and their DEN is more difficult than other HEIs clients who interact with the university frequently. Feedback was positive concerning our technique to conceptualise output clients. “That’s exactly what needs to happen” (P5.P17).

P5, Step 6- Define Clients/Senior Desires / Expectations / Needs (DENs)

When we asked about the alignment process, all B2B participants agreed that strategic management DENs should be captured first, and that only once strategic DEN is captured should we focus on, and align this, with client’s DENs. “That’s a really interesting” (P5.P3). B2B interviewees liked that the proposed framework supports the capture of both senior and client perspectives, and aligns them together using a clear method, and allows definition of numerous strategies for different business domain and levels. Feedback from prospective and current student activity participants confirms the need to align CRM strategy with the university strategy. “It is very true what you were saying about aligning university strategy to the students DEN” (P5.P14). One participant, however, pointed out “we find that wants, needs and desires across each different faculty is very different” (P5.P11).

When asked who should implement the framework, participants agreed that involving external consultants at the beginning of the project led to failure. Moreover all participants refused the concept of involving an external consultant to CRM deployment in teaching and business areas; as they don’t have knowledge about the university culture and requirements. One important factor of concern, raised by participants, relates to the level of knowledge transfer to system users. “This is another problem of using external consultants and providers. In the past, if we had a problem, we’d phone our IT. But now IT staff claim such systems are nothing to do with us – they don’t know the system, which results in us bringing in external technical expertise. This is not efficient!” (P5.P12). One approach, to overcome the challenge, i.e. of who should implement the framework, was to get HEIs middle managers (i.e. directors), IT managers, and operational staff to work as internal consultants. “we decided not to go for

an external consultancy initially, so we've already got the knowledge of how the University works" (P5.P11).

P5, Step 7- Quantify and Evaluate university Services in context of DEN's KPIs

B2B participants appreciated the definition of KPIs in the last step, i.e. for use as a benchmarking when later implementing the system. "Unless you put those KPIs down at the beginning you go through this whole strategy piece, yet you can't see that progress is made. Success is achieved only when we are hitting our predefined KPI levels; I think that is important" (P5. P6). No changes were suggested to P5, Step 5.

4.7. P6 – A Practical HEI CRM Strategy Alignment Model

As a result of P5 feedback, changes were made, which formed framework A6. A6 Sub-steps 1.3 and 1.4 were added to respond to the expert feedback to P5.

- **P6 Step 1:** Define the strategic focal outputs, i.e. Specify CRM domain (e.g. KTP products/target numbers of placements/alumni numbers/ alumni).
- **P6, Step 2:** Define and analyse stakeholder groups including the HEIs clients. This step will help the HEI define the main people that impact, or are impacted, by system outcome. In this framework, participants believed that using Organisational Semiotics (OS) stakeholder identification method is practically viable.
- **P6, Step 3:** Define a controlled communication plan that defines the relationships and interlinked responsibilities between stakeholders.
- **P6, Step 4:** Actively seek stakeholder "buy in" and education, especially senior staff.
- **P6, Step.5:** Contextualise output's clients, with a focus on "Strategic criteria" as filtering mechanism to target HEIs clients that are seen as most desirable. This step was identified as critical to alumni, and B2B participants more than marketing participants.
- **P6, Step 6:** Define Clients/Senior people Desires/Expectations/Needs (DENs) of the output context.
- **P6, Step 7:** Quantify and evaluate, in the context of the business model, the output D/E/N.

By iteratively redesigning, adapting, and re-evaluating, we were able to define seven clear sub-steps that can practically support HEIs in CRM strategy alignment (see figure 5). Although, in this paper, we do not explicitly suggest a practical method for A6 Stages 1.3 and 1.4, we believe that development of the communication plan, and/or seeking buy-in via education and incentivisation, is highly contextual. As such, as long as both sub-steps are considered, then the authors consider the use of method to be somewhat flexible.

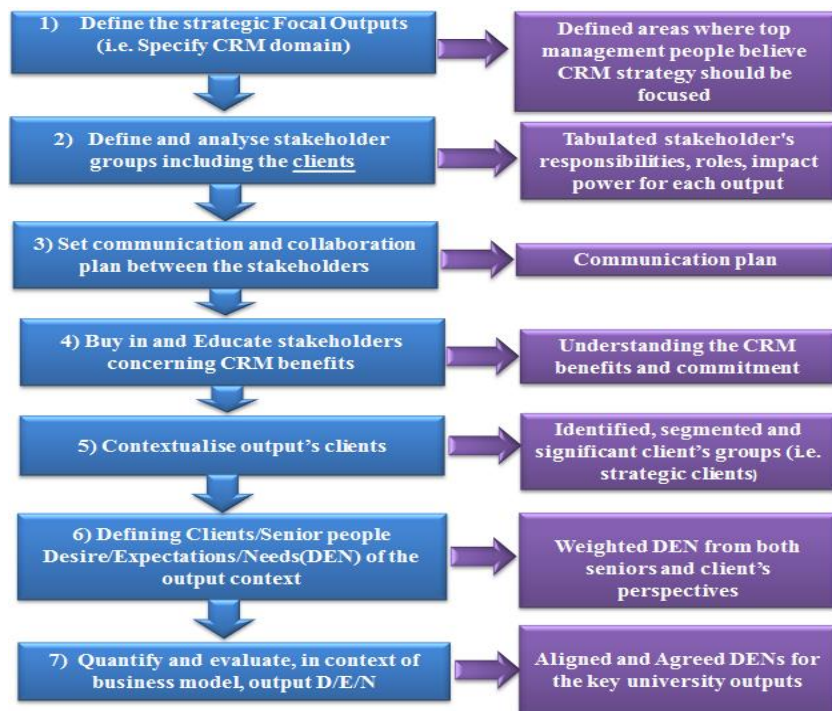


Figure 5. Prototype 6, Stage 1 - Scoping and aligning CRM strategy

5. Conclusion

Although CRM solutions are increasingly being adopted within HEIs, to maximise the value of implementation it is important that universities align development of customer solutions to maximise business strategies. As HEIs increasingly compete within an international / global market, the effective use of CRM is critical advantage to ensure ongoing excellence and efficiency; resulting in increased student retention, loyalty and satisfaction (Seeman and O'Hara, 2006).

Within this paper, we expanded on the work undertaken by Khasab et al. (2018), who iteratively developed a high-level CRM implementation framework (see Figure 1), which consisted of four compulsory stages (i.e. 1. Scoping and aligning CRM strategy; 2. Analysing desire / expectation / needs requirements; 3. Measuring the quality of 'To Be' desire / expectation / needs requirements; and 4. Matching CRM types to prioritised gaps) and one optional stage (i.e. Modelling the 'To Be' desire / expectation / needs requirements). In this paper we iteratively justified the need for practical sub-steps, and methods, to help the 'scoping and alignment of CRM strategy' with the HEI business strategy. By extending upon the design science iteration presented within Khashab et al. (2018), this paper was able to, by focusing purely on Stage 1, justify the need for 7 explicit sub-steps (see Figure 5); with practical methods suggested for five of the seven sub-steps. Progressive prototypes were evaluated by a range of relevant experts; i.e. A4 was tested by a range of management information systems experts, to check that developed methods were practically implementable; P5 was tested by a series of focus groups

involving participants involved primarily in B2B, current student activity, and alumni services. By considering critical feedback, we have expanded a much greater understanding concerning what is practically required to support CRM strategy definition and alignment within HEIs.

This paper proposes that, by clarifying areas where CRM development is required (both in terms of scope and measurable KPIs), by effectively defining and ensuring engagement of all relevant stakeholders (i.e. by defining stakeholders, and setting clear communication and education plans to support information sharing and buy-in), and by systematically highlighting the differing needs of HEI management and HEI Clients, we believe it is possible to ensure - before requirement analysis – a CRM strategy that can maximise value for the HEI.

Although existing CRM implementation frameworks, including Khashab et al. (2018), define at a high-level ‘what’ needs to be done, our Stage 1 sub-steps are, to the best of our knowledge, the first attempt to critically and systematically examine, not just the detail of ‘what’ must be done (i.e. the definition of sub-steps), but ‘how’ specific sub-steps might be practically achieved (i.e. practical methods highlighted in P4). This paper not only expands the theoretical work of Khashab et al. (2018), but also highlights considerable methods and issues, which are of considerable practical value when undertaking HEI CRM implementations. Although additional iteration is always possible, we feel confident that the definition of the seven sub-steps (see P6), and explicit consideration of five methods (see P4), provides a considerable contribution to our understanding of this increasingly important and valuable area within the HE community.

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