A CRM initiative in the Public Sector using a Benefits Management Approach

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Abstract

Organisations tend to approach their IS/IT (Information System and Information Technology) investments only from a cost perspective. They tend to justify and approve expenses, instead of focusing on the identification, planning and realization of the potential benefits. Benefits Management deals with the systematic identification, planning, execution and control of the IS/IT investments to achieve the intended benefits. In this paper, we analyse the application of the Benefits Management approach from the Cranfield School of Management to a case study in a European public organisation, describing an investment in a Customer Relationship Management (CRM) initiative. The lessons learned, as well as recommendations for future research, are also identified.

Introduction

In order to improve their effectiveness and efficiency and to face a context of increasingly demanding organisational goals, organisations make significant investments in Information Systems and Technology Systems (IS/IT). This is due to the considerable importance of IS/IT in the organisations' strategies and operations [1, 2]. Often, despite the high potential of IS/IT, the benefits resulting from their implementation fall below expectations. The statistic according to which more than 70% of projects in the area of information technology do not achieve the expected benefits is well known within the management and information technology communities [3, 4].

The argument that the implementation of information technologies is easily translated into competitive advantage for organisations is quickly being cast aside. There is in fact a growing consensus regarding the higher importance of organisational concerns, when compared to technological ones. The introduction of new IS/IT entails organisational changes that require appropriate management, in order to attain the desired objectives [1, 5]. IS/IT has been a key pillar of successive programs and improvement initiatives in the Portuguese Public Administration, specifically at the processes improvement and inefficiencies reduction, as also analysed in [9]. This paper aims to analyse, through a case study, how Benefits Management (BM) can be considered part of the good practices of public funds investments.

This paper is organized in five sections. The section 2 provides the theoretical background and the main concepts behind the BM approach. Section 3 presents a

methodology and section 4 presents the case study. Section 5 discusses the lessons learned and outlines the final remarks of this study.

Benefits Management in IS/IT investments

The success of IS/IT investments is complex and often illusive [6]. Despite the potentialities of IS/IT, the organisational benefits resulting from their implementation fall frequently below expectations. Generally, the success is not measured according to the way the business actually explores IS/IT nor to whether these do in fact realise the intended benefits [7-11]. A high rate of IS/IT implementation projects fails in at least one of the following aspects: time; cost; fulfilment of all requisites [12, 13].

On its own, IS/IT has no intrinsic value, that is, they do not generate benefits, only make them possible. In other words, real benefits are not in IS/IT but rather in the organisational changes they enable [14]. The potential benefits of IS/IT investments, in order to assess their effectiveness, must be observed, measured and quantified [1]. It is therefore necessary use practices that enable to follow the entire IS/IT development process and to determine whether the expected benefits are in fact realised, bearing in mind that the intended benefits must transcend a merely financial perspective [8, 9]. These practices should provide tools to managers that allow them to assess the viability of IS/IT investments and mechanisms capable of guaranteeing the realisation of the expected benefits [3, 15, 16].

According to Ward and Daniel [3], Benefits Management in IS/IT investments is "the process of organizing and managing such that the potential benefits arising from the use of IS/IT are actually realized." A benefit, in turn, is the advantage obtained in the organisation by an individual stakeholder or a group of stakeholders [3]. Ward and Daniel [3] consider two categories – tangible and intangible – and four kinds of benefits kinds – financial, quantifiable, measurable and observable. The tangible benefits can be quantified through a financial measure (e.g. ROI) or a quantitative one. The intangible benefits, are subjective and tend to employ qualitative measures. They can take the form of strategic gain, competitive advantage, intellectual capital or organisational advantage, and it is difficult or even impossible to quantify them in financial terms. However, these benefits can be measured with performance indicators, that is, business measures, metric measures or ratios meant to assess the performance of an organisation as regards its fulfilment of strategic goals [17].

BM has been used not only to increase the investments' value but also to prevent the employment of financial resources in projects incapable of assuring the desired benefits. Both the research results and the experience of several organisations show that BM increases significantly the probability of realising the expected benefits in IS/IT investments, the ultimate purpose of those investments [14]. According to Ward et al. [4], organisations with the highest success rates in the realisation of benefits in their IS/IT investments, that is, those that tend to achieve the benefits initially planned, exhibit a comprehensive approach of BM. On the other hand, without an appropriate BM strategy, benefits hardly will be achieved [18].

Benefits Management Process

The *Cranfield School of Management*'s approach was developed by Ward and Daniel [3]. It is considered a pioneering approach, having boosted the research on the subject and the development of other approaches [19, 20]. It is grounded upon an iterative process comprising five different stages.

The first stage "identification and structuring of benefits" is the most important and complex stage of the entire process [1]. It enables the analysis of possible benefits (tangible and intangible) and the determination of whether these are relevant and attainable. It is also

during this stage that the IS/IT is classified in regard to its expected business contribution (portfolio) [3]. This stage aims to produce an initial business case meant to justify the investment, which will be concluded in stage 2. If the realized benefits are clearly insufficient, the project must be stopped [3, 18]. In short, stage 1 comprises the following activities: analysing drivers and establishing objectives; identifying the benefits related to those objectives; establishing the owners and the benefits measures; identifying the necessary changes and implications for stakeholders and producing an initial Business Case.

The Benefits Dependency Network is an important tool that allows the explicit association of all the investment objectives and expected benefits with the necessary changes (ways) to realise those benefits and the IS/IT enabling capacities (means) [14]. Stage 2 of the process, plan benefits realisation, entails the complete description of each benefit and the organisational changes to be carried out, as well as the corresponding responsibility (ascribed to and accepted by the stakeholders). It also comprises the definition of the benefits indicators/measures and the estimation of each one's "value" at the end of the investment, as well as the establishment of criteria or evidence enabling the assessment of the transformations' fulfilment. The plan must also include tasks destined to follow the project's progress, so that changes occur in the right moment, and to monitor the project's realisation and the expected benefits. The stakeholders' commitment to this plan is determinant, especially in what concerns their role and responsibility in the changes to be carried out and in the benefits realizations. The output of this stage is the Benefits Plan and the investment's justification (final Business Case) [3].

Ward and Daniel [3] mention the realisation of two workshops as a success factor for the first two stages. The first one takes place after the identification of the key-stakeholders and aims to evaluate the investment's viability. The second workshop takes place after the benefit analysis and change management. Its main goal is to decide whether it is worth it to go ahead with the investment. For that purpose, the Business Case's best estimate, the technical feasibility (IS/IT) and the viability of the business changes must be considered.

The Benefits Plan execution (stage 3) is carried out in parallel with the IS/IT technical implementation. In this stage, the project evolution is reviewed by comparing it with the Benefits Plan. The execution is primarily focused on the change management, more specifically on the changes necessary to the benefits realisation. It is important to assure that the organisational changes occur in the planned moments that are considered ideal [1, 3].

The stage 4 – review and evaluate results, focuses on the benefit's realisation and enclose a comparison between potential benefits and the ones actually realized. Some benefits only occur later, often after a long period of time. It must therefore be assured that the capacities provided by the system are achieved, enhancing the expected benefits realization. Other potential benefits may be identified in any other stage and must be explored and integrated within the process. Expected benefits that were not achieved require analysis, particularly in regard to the causes, possible recovery actions and lessons for future projects [1, 3, 10].

Considering the complexity of many IS/IT projects, it is not always possible to identify all benefits at the beginning of the process. Some benefits only arise once the system is implemented or in use for some time, with all business changes already in place. While reviewing the process, after the implementation, it is possible and equally important to identify the possible improvements that have become available. These benefits can be realised resorting only to additional business changes or to further investments. In these case, the potential benefits represent the starting point to the investment, according to the steps included in stage 1 of the process [3].

Research Methodology

The research method adopted was the case study [22]. The case study started with the requirements analysis of the investment proposal and all project documentation, from inception phase through project execution deliverables and intermediate outcomes.

Meanwhile, we conducted semi-structured interviews with two relevant senior managers, representatives of the business and information systems areas, and also with two key-users (heads of two face-to-face customer service stations). The managers' interviews were carried out to compare their strategic and operational perspectives and to validate the documented information on the intermediate project outcomes (data triangulation).

The users' interviews were carried out to ascertain their perspective concerning the adequacy of the available information, their participation and role in the project, as well as their degree of involvement in the project. The interviewees' role in the organisation is: Business area manager - Manager who followed all the stages of the CRM project; Information Systems manager - Head of the IS area responsible for the CRM; Head of face-to-face customer service station (2) - Coordination of the live customer service stations' activities. As mentioned before, to insure the coherence and reliability of the research results, the different data sources were triangulated (e.g. investment justification and roadmap, the various project documents, and the outcomes from interviews). Case Study

This section presents a case study of the application of the Benefit Management approach to a concrete organization and process. This application was made a posteriori, after the actual deployment of the CRM system.

The organisation: The studied organisation integrates the Public Administration, in an European country, a sector that has gone through several steps of modernization in the scope of e-government development. The relationship with the customer is particularly important for most of its business processes. In the last years it has modernised itself in response to its increasing customers' demanding expectations. This kind of initiative has been called as CzRM (Citizen Relationship Management) - a public organizations strategy that seeking to improve the relationship between the government and citizens [21]. As a consequence, the majority of its business processes is increasingly computerised and integrated. Besides, its internet site offers a wide range of services for customers. For more than ten years this Portuguese Public organisation adopted its own project management methodology and tools. This effort led to a significant maturity in the solutions/software lifecycle production and customer services.

The CRM initiative: With the objectives of increasing customers' knowledge, improving its service quality and reducing the customer service costs, the organisation decided to invest in a CRM solution. The idea was to reach an integrated management of the different communication channels, more specifically face-to-face meetings, phone calls and emails with its customer base. The CRM solution/system has therefore been progressively integrated with other applications, namely the ones that support customer's processes, knowledge database, waiting lines management (face-to-face channel) and electronic contact forms (web portal). As a result of these integrations, the customer service processes have been optimised. The comprehensive knowledge gained from this intensive data treatment enabled the introduction of improvements in the customers' service processes.

Investment type: The CRM investment objectives (ends) are known and it is possible to identify and quantify its benefits. Through the ways/forms of execution of processes or business activities and the facilitating features of the IS/IT (means), the organisation seeks to eliminate the problems and the limitations of previous customer service processes. The investment is therefore oriented towards the resolution of previously known problems (problem-based).

Case study approach

The following business drivers, which are important aspects to the future of the organisation, in a given timescale, were identified in the case study: D_1 Governmental Decisions (External) / D_2 Customers' demands and expectations (External) / D_3 Service processes' effectiveness (Internal) /D_4 Technological availability (Internal) / D_5 Economic/budget constraints (Internal). The investment objectives are organisational targets agreed for the investment and must be coherent with the drivers. The following investment objectives were then identified: O_1 Increase customer's knowledge / O_2 Improve customer service quality / O_3 Reduce service costs. The identified benefits were grouped within macro-benefits: MB_1 Client's service information turned into knowledge / MB_2 Improved communication and customer support / MB_3 Improved working conditions of employees / MB_4 Higher customer service efficiency / MB_5 Increased customer satisfaction / MB_6 Improved entity image. The Benefits Dependency Network (figure 1) has been designed in order to have investment objectives and their resulting business benefits linked in a structured way to the business changes, organisational and IS/IT enablers, and IS/IT artefacts required to achieve those benefits [3].

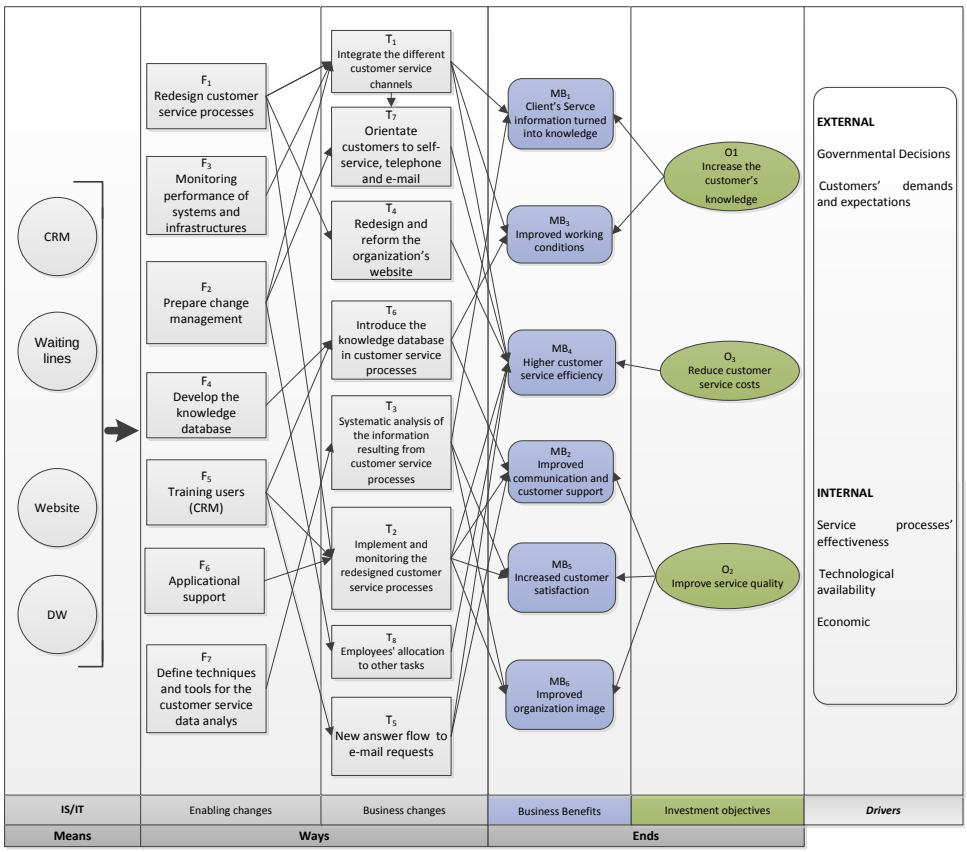

Figure 1: The Benefits Dependency Network.

Table 1 shows how the business benefits can be structured and measured.

Table 1: Structure of business benefits.

	Benefit	Type[1]	Measure	Expected result
MB1	$B_{1.1}$ Knowing the subjects that lead the customer to contact the organisation	M	Number of customer contacts: By subject (different levels) By channel By time period By segment (customer)	-
	$B_{1.2}$ Knowing the average time lengths necessary to satisfy demands	M	Medium customer contact time By subject (different levels) By channel By time period	-
	$B_{1.3}$ Increased precision in determining customer service costs	M	Operational costs inherent to the service (segmented)	-
MB2	$B_{2.1}$ Increased customer orientation: contributing to the simplification, dematerialization and automation of administrative procedures	M	Number of improvements proposed and carried out in administrative procedures	3 per business area
	$B_{2.2}$ Anticipating information needs (to be provided in the organisation's website and/or knowledge database)	M	Number of new information needs identified	5 per business area
	$B_{2.3}$ Increased answers' uniformity	O	Answers' uniformity (before and after)	-
	$B_{2.4}$ Average time length of answer to information requests	Q	Average time length of answer to information requests (in days)	↓ 5%
MB3	$B_{3.1}$ Increased satisfaction of customer service employees (users)	M	Level of satisfaction of customer service employees	↑ 10%
	$B_{3.2}$ Increased customer responsibility	O	Number of overlapping requests	-
MB4	$B_{4.1}$ Reduced number of face-to-face customer contacts	Q	Number of live customer contacts By subject (different levels) By time period By segment (customer)	↓ 10%
	$B_{4.2}$ Reduced number of face-to-face customer service employees	Q	Number of face-to-face customer service employees	↓ 10%
	$B_{4.3}$ Reduced face-to-face customer service operational costs (human resources equipment, buildings, etc.)	F	Operational costs inherent to face-to-face service	↓ 15%
	$B_{4.4}$ Increased answer's accuracy	O	Answer's accuracy (before and after)	-
MB5	$B_{5.1}$ Reduced average waiting time for service	Q	Average waiting time	↓ 5%
	$B_{5.2}$ Reduced number of complaints regarding service	Q	Number of complaints regarding the service	↓ 10%
	$B_{5.3}$ Reduced average time length to answer service complaints	Q	Average time length to answer service complaints	↓ 5%
	$B_{5.4}$ Increased customer satisfaction	Q	Level of customer satisfaction	↑ 5%
MB6	$B_{6.1}$ Improved entity image (customers)	M	Perceived customer's image	-
	$B_{6.1}$ Improved entity image (employees)	M	Perceived employees' image	-

A Benefits Dependency Network's stream analysis

The BDN analysis can be better understood through a specific flow (stream) of the various components associated with an objective. Considering the current general situation of

[1] Type: F - Financial; Q - Quantifiable; M - Measurable; O - Observable.

a tighter public sector budget control needs, higher processes efficiency is strongly encouraged. So, objective 3 – reduce costs of customer service - was chosen for a closer analysis (figure 2). This analysis focused on the benefits previously grouped within macro-benefit 4 – Higher customer service efficiency.

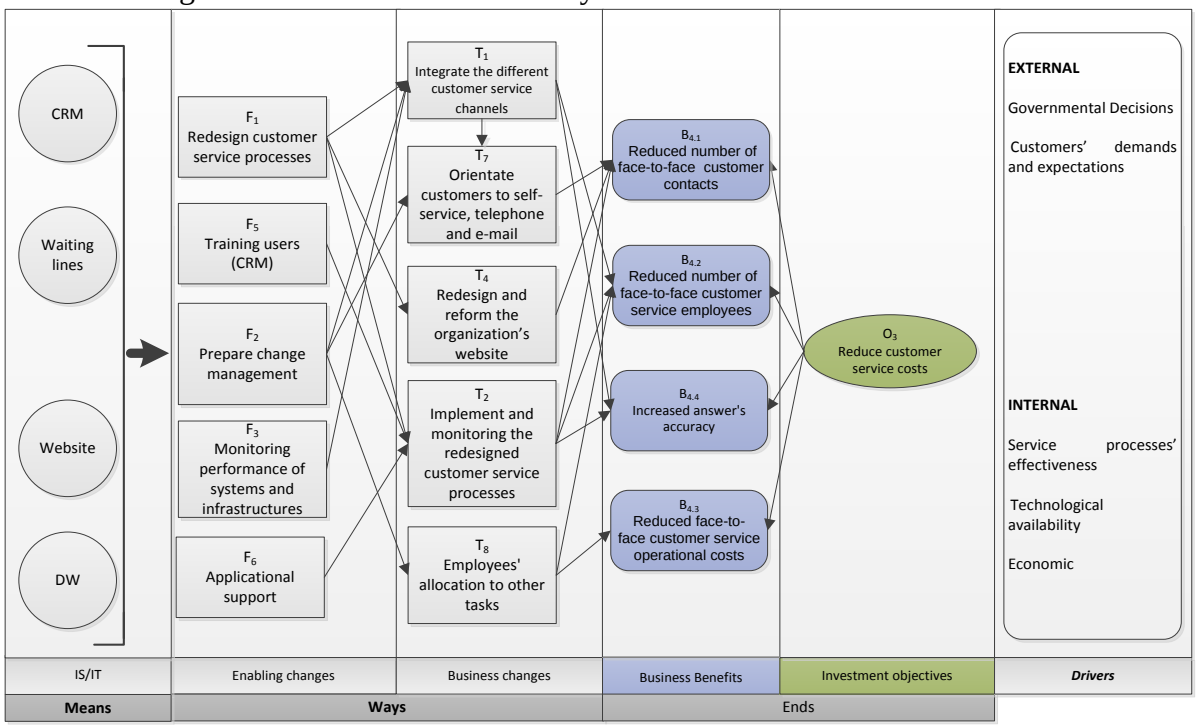

Figure 2: A Benefits Dependency Network's stream - objective 3.

The benefits can be structured according to the degree of explicitness/tangibility of their contribution (table 2). Within this scale, one can say that a "financial benefit" is the more explicit and tangible type of benefit.

Table 2: Classifying the benefits by the explicitness of the contribution.

Degree of explicitness	Do new things	Do things better	Stop doing things
Financial		$B_{4.3}$ Reduced face-to-face customer service operational costs	$B_{4.3a}$ Reduced face-to-face contacts with customers, some procedures can be handled preferentially through electronic channels
Quantifiable		$B_{4.1}$ Reduced number of face-to-face customer contacts $B_{4.2}$ Reduced number of face-to-face customer service employees	
Measurable	$B_{4.2a}$ New functions for former face-to-face customer service employees (ex. telephone assistance)	$B_{4.2b}$ Decreased number of overlapping information requests	
Observable		$B_{4.4}$ Increased answer's accuracy	

Risk identification and assessment

The decision to IS/IT investments must consider a risk identification and assessment task. There are three risk types to consider: technical, financial and organisational.

The following risks were identified in the investment under analysis:

- Technical risks: system performance below expectations, inadequacy of the available informatics computer network and risks associated with the systems interoperability;
- Financial Risks: the project's delay may generate additional unplanned and undesired costs;
- Organisational risks: user resistance to CRM; insufficient resources for customer service's data analysis (in due time).

In order to minimise the identified risks it is therefore necessary to assure:

- An adequate stakeholder and change management;
- An efficient communication, capable of conveying the achieved progress;
- Adequacy of technical resources (informatics computer network);
- Systems' monitoring and an adequate application support to users.

Stakeholder analysis

The BM approach emphasises the need for an assessment of the capacity each group of stakeholders to carry out the identified changes [16]. After identifying stakeholders groups with concerns (practical and perceived) about the project such that their views could led to failure to achieve some or all benefits, actions need to be defined in order to reduce the correspondent risks [3]. Table 3 contains a partial description of these issues: each individual stakeholder or group of stakeholders, identified as responsible for the most significant changes, should lead adequate actions plans.

Table 3: *Stakeholder* analysis.

Stakeholder	Benefits perceived (disbenefits)	Changes needed	Perceived resistance
Business Unit Managers	Improving communication and customer service Increased workload (1st stage)	Developing and maintaining the knowledge database; Training; Respond to information requests - adaptation to new procedure through CRM	Additional work Use of CRM (unknown system)
Customer	Decreased need to visit a customer face-to-face service station Increased service quality	Communication plan	Complaining against the decreased availability of face-to-face customer service stations
Customer Service Manager (face-to-face)	Access to information resulting from customer service; Possibility of using the knowledge database	Information Involvement Training	Dealing with users' dissatisfactions Increased responsibility Loss of influence's perception
User (face-to-face and e-mail)	Increased workload	Communication plan Training Motivation Incentive to the presentation of improvement proposals	Dissatisfaction Discouragement Additional work Increased responsibility

Final Remarks

The implementation of an IS/IT systems/solutions tends to rely more on technologically oriented methods. However, it is acknowledged that the changes in organisational processes and personnel involvement are the more critical ones, with higher potential to bring more benefits to the business. This paper enabled to analyse how the benefits of the CRM's investment can be identified, measured and achieved. It was shown how the BM process allows for a structured definition of the investment, and more specifically of the necessary business and enabling changes and the IS/IT enablers. The description of the stakeholders' responsibility, in regard to the benefits realisation and monitoring of the planned actions, heightens the probability of realizing those benefits.

Another important contribution, resulting from the adoption of the BM approach, regards the introduction of workshops. The knowledge sharing from the key-stakeholders, when defining the drivers and business goals, not only clarifies the organisation objectives but also contributes to the decrease of the classic distance between the business areas and the information systems initiatives. From the second workshop results the business case that allows supported decision as to whether it is worth it or not to proceed with the investment. It was demonstrated that the success of IS/IT investments transcends the technological exercise and that it is crucial to consider aspects such as the stakeholders management, the processes' business changes and the management of change.

As it was shown, IS/IT investments can materialize into tangible benefits, like the reduction of costs. On the other hand, they can also materialize into intangible benefits (e.g. increase of customer satisfaction, improvement of the organisation's notoriety), to which it is not possible to apply traditional economic-financial methods. The stakeholder's management enables the determination of the corresponding perspectives and expectations, with special emphasis on those subject to more significant changes or with lower benefits (or even with negative effects). Knowing in advance the perceived resistances, it is possible to define the necessary and adequate changes.

In order to insure the benefits realization, it is possible to use part or all of the existing measures or indicators. Apart from the costs minimisation, this option allows the integration of BM within the organisation improvement cycles. The BM approach can complement other methodologies like the IS/IT requirements and project management. The combined use of those would enable a greater focus on the potential benefits realization and, therefore, on the achievement of the investment's objectives. A gradual adoption of the BM approach is recommended, complementing the identification of IS/IT needs with the respective benefits identification and structuring. This stage gives rise to the initial business case, allowing for the evaluation of the investment's viability. BM adoption also makes it possible to learn from the successful and unsuccessful results, contributing to the improvement of the BM process itself. Carrying out a study analysing the application of BM practices to IS/IT investments in the Public Administration constitutes an interesting baseline for future research.

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