Reconfiguring a Business Model: An Analysis of Component Hierarchy in an ISO 9001 Certified Public Organization

La reconfiguration d'un modèle d'affaires : une analyse de la hiérarchisation des composantes dans une organisation publique certifiée ISO 9001

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ABSTRACT

Innovation in public management has multiple paths such as the import of a quality management system. This system, which has become the initial business model, has tended to reconfigure the components of a business model through its activity. This research focuses on the hierarchical configurations of the components of a business model in a public organization after fifteen years of ISO 9001 type certification practices. Begining from a singular case in West Africa, a mapping is established between the activity theory and the business model. The data are analyzed using the Procrustean method to highlight the hierarchical reconfiguration of the components. The results show that priority is given to strengthening networks with clients, the distribution of benefits between management and agents, the co-production of value between management and clients, and finally the organization of a percolation at the interfaces between agents and clients.

Key-words

Business Model; Quality management system; Public organization, Procustean Configuration

RÉSUMÉ

L'innovation dans le management public s'offre de multiples voies comme l'importation d'un système de management de la qualité. Ce système devenu le modèle d'affaires initial, a eu tendance à reconfigurer par le biais de l'activité les composantes d'un modèle d'affaires. Cette recherche qualifie les configurations hiérarchiques des composantes d'un modèle d'affaires dans une organisation publique après quinze ans de pratiques de certification de type ISO 9001. Partant d'un cas singulier en Afrique de l'Ouest, un repérage est établi entre la théorie de l'activité et le modèle d'affaires. Les données sont analysées par la méthode procustéenne pour ressortir la reconfiguration hiérarchique des composantes. Les résultats montrent une priorité accordée au renforcement des réseaux avec les clients, ensuite des modalités de répartition des retombés entre la direction et les agents, puis la coproduction de la valeur entre direction et client et enfin l'organisation d'un percolât aux interfaces entre agents et clients.

Mots-clés
Modèle d'affaires ; Système de management de la qualité ; Organisation publique ; Configuration Procustéenne

INTRODUCTION

The context of public action is changing, oriented exogenously on the roles of interested parties inclined to political processes (Mazouz *et al.*, 2015), and endogenously on the entrepreneurial modalities of improvement through the margins of maneuver (Alford & Yates 2014). According to Osborne (2018, p.5), the task of public service organizations is to establish the service offer and to facilitate the process of value creation. This represents a discontinuity with the past since it leads to the introduction of new knowledge, new organization and new skills, and more generally to innovation (Pupion, 2018). The internal challenge for the actors is to organize these processes in such a way that the users of the service perceive that their objectives are being met (Grönroos, 2018) and that value is emerging for them (Grönroos, 2018; Osborne, 2018). Indeed, innovation goes far beyond the service or the process to also extend to the revenue architecture. This need for innovation implies the existence of a business model whose strategic challenge is the ability to go beyond its boundaries and to base its value proposition on its interactions with a market environment that it helps to configure (Johnsen, 2015). The analysis of business models in this innovation situation by Cavalcante *et al.* (2011) shows that tensions emerge in an incremental or radical way. The first key components of this environment are the customers, with whom it seeks to develop the most intimate relationship possible and whose role can go as far as the co-production of value with the organization (participation in the design of products/services, information to other customers, etc.) (Dahan *et al.*, 2010). The second component includes partners, whose nature (suppliers, competitors, independents, service providers, distributors, customers, etc.) and role (contribution of resources, skills, complementarity of the offer, access to the customer, contribution to the network effect, etc.) can be constantly reinvented to improve the value proposition. In this sense, business model strategy is based on the continuous management of the market ecosystem and the co-production of value within this ecosystem (Attour & Burger-Helmchen, 2014).

The business model configuration literature focuses on (1) describing the dyadic relationships among business model components (Ranerup *et al.*, 2016; Spieth *et al.*, 2014); (2) embodying it as a central element of operational implementation (Yunus *et al.*, 2010; Zott & Amit, 2007); (3) representing in typologies and taxonomies the operating models (Baden-Fuller & Morgan, 2010); (4) revealing the emergence and generation of operating models (Chesbrough & Rosenbloom, 2002; Johnson *et al.*, 2008); and finally (5) showing their implications for business performance (Casadesus-Masanell & Ricart, 2010; Teece, 2010). This last configuration allows public resources to be combined in light of and sometimes in concert with private resources to achieve public and social objectives (Ranerup *et al.*, 2016). In particular for public health organizations, Nobre (2013) perceives the transformation of their managerial practices following an institutional and a dynamic establishment. Observation of certain public health organizations shows that, in addition to the injunctions of the supervisory authorities, other innovative approaches such as process-based management (Dagou, 2019; Pascal, 2003; Poister & Harris, 1996) are being undertaken. In this case, it is key players (directors of ¬establishments, functional directors, members of the medical profession) who are ¬behind these initiatives. They base their actions on their deep conviction of the need to introduce new approaches and methods to transform the functioning of public health organizations (Dagou, 2019). In such case, the business model conveys innovation while interacting with it,

since the logic of value creation is not new but must not neglect the logic of reinventing it. The challenge is then to find a relevant business model, which may involve designing a new system of activities, to ensure the success of innovation. The challenge for public organizations is to explore the components of the new business model while exploiting the current one, and then to lead the transformation once the exploration has led to the desired reconfiguration. To this end, the nature of the interactions between the components needs to be clarified, especially in a kind of hierarchy for a competitive and sustainable business model (Casadesus-Masanell & Ricart, 2010; Spieth *et al.*, 2014; Teece, 2010).

This supports the finding of Teece (2010) that the essence of a business model is to define how value is delivered to customers, convinces them to pay for the value produced, and converts it into profits. He highlights on the one hand the key points of the resource, the organization and on the other hand that of the value for their target, the customer contrary to what it propose. The new approaches of Lecocq *et al.* (2006) and Al-Debei and Avison (2010) placed more emphasis on collective problems and their public treatment (Bernier *et al.*, 2013). Under these conditions, a strong vision on the part of the administrator (Chappoz & Pupion, 2013), the initiator of this approach, is essential. The approach by the structures of the business model in public action makes it possible to highlight this ambiguity of the place of creation of value related to the first group. For the second group, customer focus is the ultimate expressed goal. Zott and Amit (2007) show that the customer-centric business model has a positive effect on performance, while a mix of model components is detrimental. Chesbrough and Rosenbloom (2002), Yunus *et al.* (2010), and Johnson *et al.* (2008) consider the management value proposition component as the first step, while Panagiotopoulos *et al.* (2012) consider the network component. These examples highlight one of the ambiguities, namely the hierarchy of stages in configuring a business model. This research aims to contribute to the literature based on the order of importance of the components of the business model mixing bureaucratic and managerial constraints, and by scrutinizing the reconfiguration brought by the certification to the quality management system of the ISO 9001 standard. If this system allows us to anticipate the behavior of a business model due to the processes, it can also lead the business model to adopt trajectories, proving to be contrary to the principles that initially founded it. Starting from an illustrative case of a business model, the research aims to qualify the recompositions that occurred in its trajectory, the origin of which was the structure of the quality management system. The question this research attempts to answer is: *what are the configurations of the components of a business model in a public organization that has implemented a quality management system?* Consequently, the research is structured into four (4) parts. The first part presents the state of the business model in public organizations by mobilizing the activity theory. The second part presents the case of the business model and uses Procrustean analysis to process the data. The third part explains and analyzes the different reconfigurations of the business model formulated. The last part makes proposals on the action levers for each hierarchical level.

1. THE BUSINESS MODEL ACTIVITY IN PUBLIC ORGANIZATIONS

1.1. The Business Model in Public Organizations

The business model is defined by the way in which the content, structure, and governance of the transaction are designed to create value through the exploitation of business opportunities. The content of a transaction refers to the goods or information exchanged and the resources and capabilities required. Structure refers to the parties involved, their relationships and the way they choose to operate. Finally, governance refers to how the flows of information, resources and goods are controlled by the parties involved, the legal form of the organization, and the incentives of the participants. Later, Zott and Amit (2010) define the business model as a system of interdependent activities that transcends the organization and spans its boundaries. On his part, Teece (2010) stated that whenever an organization is established, it explicitly or implicitly uses a particular business model that describes the architecture of the value creation, delivery, and capture mechanisms it employs. Although there is little consensus among different researchers on the precise

definition of the business model, there is agreement that it covers both internal operations and external interfaces (Schneider & Spieth, 2013) and must take into account both value creation and value capture aspects (Baden-Fuller & Haefliger, 2013; Baden-Fuller & Mangematin, 2013). Subsequently, trends such as service orientation (Ranerup *et al.*, 2016), customer centricity (Teece, 2010), and open innovation (Chesbrough, 2007) have led to the integration of innovation into business models. It is defined as the process of designing a new, or modifying the existing business system (Zott & Amit, 2010) in a fundamentally different way. It thus aims to renew consciously and in an unrestricted way the non-market logic for the public or market logic for the private business model (Janssen & Zuiderwijk 2014). We can retain that a business model is a logic of activities of internal and external customer value, with the integration of innovation and a viable organization on the market.

Although the term "business model" is traditionally associated with the business world, its use in the public sector context does not imply broader ideas of transferring business practices (Ranerup *et al.*, 2016). Subject to the necessities of a results-oriented culture and driven to use private sector tools, the public sector is exploring new avenues. Thus, the usefulness of the business model concept in sector research is more oriented toward electronic platforms (Janssen & Kuk, 2007; Janssen *et al.*, 2008; Janssen & Zuiderwijk, 2014) and secondarily in NGOs (Dahan *et al.*, 2010). This concept can be useful in the public sector to describe service arrangements and identify elements for future improvements. Indeed, as in the private sector, the public sector business model involves defining service offerings, internal functions, and external collaborations. The public sector business model therefore attempts in its own way to describe the means of delivering value to citizens, from service delivery to political participation. To this end, the need to improve public services and foster new ideas and collaborations is particularly relevant (Chappoz & Pupion, 2013). Grönroos (2018) argues that value can only be created by the service user, with the service organization only able to provide a value proposition for the user. It is how this offering is used and how it interacts with the customer's life experiences that create value. Thus, the public service logic starts with the service user as the basic unit of analysis and explores how their organizations might be designed to facilitate the creation of value by customers, not the other way around (Osborne. 2018, p.5). According to Boyne and Walker (2010), this is the reason a source of inspiration for the ISO 9001 standard, used by public services, illustrates how the quality management system works.

The quality management system, in the sense of a business model, is an approach that mobilizes and involves all the actors of an organization to continuously improve the value for all stakeholders (partners, suppliers, end customers, investors, employees, government and civil society...) by reducing waste and taking into account the risks (Poister & Harris, 1996, p.85). It has as its focal point the process, which is part of a collaborative and transversal approach to the functioning of the organization (Pimentel & Major, 2015). A process, according to Lorino and Tarondeau (2006), is a set of activities organized in a network, in a sequential or parallel manner, combining and implementing multiple resources, capacities, and competencies to produce a result that has value for the client. The representation of public services as a set of processes allows for the coherent deployment of indicators on the different activities of the business model. Indeed, optimizing the processes means optimizing the interfaces and therefore an overall vision of the service provided (Yu *et al.*, 2012). The processes therefore identify the input elements and the necessary resources and then ensure their availability as well as the expected output elements (*value*). They then determine the sequences and interactions of activities (*organization*). Next, the processes apply the criteria and methods necessary to ensure the operation and control the activity (*network*). Finally, they evaluate these service activities by implementing the changes and improvements required to ensure that they produce the expected results (*impact*).

1.2. Business Model Perspectives

Panagiotopoulos *et al.* (2012) and Al-Debei and Avison (2010) propose an ontology that attempts to unify the concepts of business model in both the public and private sector. It illustrates that this is neither a simple transfer of a private model, nor a recreation of the public model, but a matter of crossing heterogeneous practices and articulating different issues in the

public policy cycle. Seen in this light, the ISO 9001 quality management system breaks down its business model into four perspectives. These are management responsibility for the value proposition; the provision of resources to structure that value; the realization of the service through the value outputs; and finally the monitoring, measurement, analysis, and improvement to maintain the value network. These perspectives, broken down into processes whose cornerstones are the selected indicators, encapsulate the relevance and reliability of the quality management system. They form the black box of the public sector business model, which is understood as the set of value activity logics that confer the ability to meet legal, technical, and political requirements in order to satisfy the expressed and implicit needs of the client, or even the community.

The first component of the business logic of the business model perspective is the value proposition. It is a description of the services the organization offers, the elements that intend to add value to it, and the needs of the target individuals and the organization. This helps the business model designers understand the services and their needs in order to communicate and deliver them to the target segments. The public organization, long conceived as a closed, self-referential system, has gradually become more open to its customers (Emery, 2009). In addition, the business model has tended to describe the value elements embedded in the offering, as well as the nature of the target community segments and their preferences (Osborne, 2018). This openness has led to a form of confrontation between internal requirements (technical, views of public agents) and external needs and perceptions of customers (Tomaževič *et al.*, 2016). This customer orientation is a trend that has led public organizations to better identify their beneficiaries and to carry out satisfaction surveys with these beneficiaries, by using methods validated in private organizations such as SERVQUAL. These strategies are well known to ISO 9001 standards in terms of competitive advantage through costs (Yu *et al.*, 2012) and differentiation through the deployment of new technologies (Panagiotopoulos *et al.*, 2012).

The second component of the business model perspective is the value organization. It is a general plan that specifies the necessary technological and organizational arrangements in terms of resources and their configurations, as well as the available competencies (Attour & Burger-Helmchen, 2014). In this logic, the relevant concepts are resources, configurations, and competencies. Resources may already be available within the organization or acquired by the actors. They can also cover regulatory, financial, and competence-related aspects, whether tangible or intangible (Stephen & Mohamad, 2015). In this regard, Lorino (1999) already pointed out that we were moving from a steering based on the binomial hierarchical power – endowment of resources to a steering based on the binomial "*competence steering of value chains and action processes*" of the public organization. According to Alford and Yates (2014), steering by process thus becomes a tool for change to represent an organization's resources, their configurations, and their core competencies. In this context, Chesbrough (2010) states that in order to effectively serve the market, the organization needs resources and inputs that could take human, physical, and organizational forms. They also argue that these resources must be structured in a way that facilitates a competitive value proposition in the marketplace. This management of resources according to the ISO 9001 standard is expressed in terms of job satisfaction and respect of specifications (Tomaževič *et al.*, 2016) and ethical rules for medical, medico-technical or administrative staff (Dagou, 2019).

The third component of the activity logics of the business model is the value network. It is a description of the collaborations that an organization makes and maintains, as well as a description of the actors and their communication flows. Today, the social demand addressed to public organizations is both highly differentiated (personalization) and rapidly evolving (Lorino 1999). Under these conditions, traditional management methods do not provide services that are totally relevant to needs and do not ensure a satisfactory economy of resources. The logic of (administrative) authority and the market having both proved insufficients, bureaucracy is turning to that of networks (Emery, 2009). The network allows three types of relationships that mark the shift from a "product" approach to a "process" approach namely the influence of the environment on the performance of activities (Schneider & Spieth, 2013), the interaction between activities involving cause and effect relationships (Disle *et al.*, 2016), and the channeling of value flows to interested parties (Bernier *et al.*, 2013). The concepts identified in this dimension are machines,

network, databases, space, people's working time, energy and effort, communication, and governance. In terms of ISO 9001, the socioeconomic dimensions are cost control for state, local, and health agencies.

The final component of the business model perspective is the value stream. It describes how the benefits are captured and distributed among the various stakeholders. These public benefits may be a description of the results-based management arrangements (Mazouz *et al.*, 2015). In the sense of the quality management system, the public organization plans and implements the necessary monitoring, measurement, analysis, and improvement processes. Four types of impact are therefore covered. Improved monitoring of the organization's strengths helps guide action in the department. This provides an understanding of the context, changes in the organization, and the production and improvement of the service (building on what has been learned, addressing deficiencies, and broadening commitments). The diversity of the results of the value of the public organization is to be considered as a richness that gives it its civic character, marked by the diversity of the parties interested in its operation (Johnsen, 2015). The control of strategies, for its part, gives the required flexibility that allows it to offer a satisfactory service. The practice of management makes it possible to deliver the service and, by doing so, to serve the purpose of the organization. As for continuous learning, especially in terms of continuous improvement for care structures and continuity of care, it allows the progression of the system towards global performance (Alford & Yates, 2014).

1.3. The Business Model Activity

Broadly speaking, two perspectives can be distinguished in business model research. This include an activity-based perspective, conceptualizing the business model as a system of activities that firms use to create and capture value (Casadesus-Masanell & Ricart, 2010; Zott & Amit, 2010), and a cognitive perspective, conceptualizing it as a cognitive instrument that represents these activities (Baden-Fuller & Haefliger, 2013; Furnari, 2015). Inscribed in the former, activity theory is concerned with human activity and is seen as a socially-situated activity. Engeström (1999) highlighted that human work is essentially cooperative and the meaning given to the activity becomes shared by the actors who pursue the same goal. To analyze the activity of the business model is to consider a system that includes the individual, the material or conceptual tools that he uses, his relations with the community that surrounds him and the product that he proposes to produce, the interactions that take place there, and the transformations that take place while maintaining a global vision of the system. Mediatization is characterized by the division of labor and the establishment of rules that frame the interactions between individuals who are part of the activity system and who share the same objectives. The entities necessary to represent human activity in a systemic model occupy different functions. The main actants are the subject, the community, and the object that give motricity to a pole of the activity system. The intermediate actants instrument, division of labor and rules connect a pole of activity with a main actant. The poles of the activity system are related to each other to illustrate that activity is socially motivated and that different categories of actants are involved. However, it is added that actants and activities are related to learning experiences and the resolution of contradictions. This contributes to the dynamics of the system to move toward the outcome. Transposing this decomposition to the activity of the quality management system to public organizations, we found *listening to the patient* (object) for information and *evidence-based decision making* (instrument), *involvement of care professionals* (community) with enhanced autonomy, the patient journey as a *process* (rules), the principle of continuous improvement (subject), and *mutually beneficial relationships* (division) with interested parties through a dialogue between professionals, institutions, and public authorities. Table 1 provides a definition of each of the entities in the basic activity theory model.

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Entities of the model	Description
Subject	Individual or collective entity with a conscious intention on a particular object through specific instruments for a desired result.
Instrument	Material or symbolic entity seen as operations or actions, used to transform an object into a result.
Object	Raw material or problem space where the action is directed to shape or transform the tangible or intangible object.
Division	Horizontal sharing of tasks in a community, taking into account the vertical hierarchy of status and power among members.
Community	A group of individuals or groups of individuals who share a common goal, motivating the action of its members.
Rule	A set of regulations, habits and implicit or explicit conventions that coordinate the interaction between the entities of the system.

Table 1 – The description of the entities of the basic model of activity theory
Source: Engeström (1999)

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2. THE METHODOLOGY OF THE CASE OF BUSINESS MODEL in Public Organization

2.1. *Presentation of the Case of Business Model*

The Abidjan Heart Institute is a national public institution responsible for providing care and examinations, participating in preventive health actions, and conducting training and research. The reasons for selecting this case are presented according to the role of

the three main variables, namely: the profile and behavior of the manager, the size of the institution, and finally the presence of a competitive context. The director, the initiator of this innovation, is a professor in medicine with a solid background in hospital management, twice decorated for achieving the objectives of mobilizing the financial resources of his institution. Moreover, with the change of political regime, the agents have demonstrated for his retention as director, as he inspires by his exemplarity. Concerning the size of the institution, it is one of the three public centers specialized in cardiology in West Africa with the rank of university hospital center for 90 beds. Receiving patients only by referral or in case of emergency, the Abidjan Heart Institute had a staff of 387 at the time of the study for 13 medical, medical-technical, and administrative departments combined. Each of the 13 departments is headed by a manager, 8 of whom agreed to participate in this study. Its business model, based on certification to the quality management system, includes 3 management processes, 11 implementation processes, and 7 supports processes and outsourced processes[1]. The presence of the competitive context reminds the transformation of the managerial practices (Nobre, 2013). If we refer to their extreme variability by the available resources, the competences and the mood of the actors, the production of care confine to processes whose result is not repetitive and which use a variable methodology (Angelé-Halgand & Garrot, 2014; Pascal, 2003). Thus, opting for a process innovation focused on the technological or administrative core (Pupion, 2018), to drive its business model with standardization, is a challenge that this institution has encountered. It became the first and only public hospital to obtain ISO 9001 certification in 2005 after committing to a quality[2] management system, with renewals in 2008, 2012, 2015, and 2018.

These certifications are punctuated by changes in the standard from ISO 9001: 2000 to ISO 9001: 2008 and then ISO 9001: 2015, reflecting the dynamism of its business model. This dynamism can be illustrated by the medical information service (SIM) and the autonomous service of control and evaluation (SACE). They ensure that the data from the quality management system is fed back to them and that it is of high quality, thereby contributing to the optimal recording of activity. Healthcare professionals are called upon to design a value network that requires each of them to consider his/her intervention in close relation with his/her colleagues, in order to aim better value for the patient. The actors in this value network would be jointly responsible for the service and results provided to a given type of patient, and would be called upon to assume the cost-value relationship, not only from the point of view of the patient concerned, but also from that of the community (Angelé-Halgand & Garrot, 2014, p.22). During management meetings or management reviews, each process manager justifies the planning of these interventions, the input resources he/she needs for the medical acts, the safety and risks he/she is sure to control, and the results he or she can improve. The presentation of this care cycle makes it possible for the Medical and Scientific Department to evaluate the medical staff and for the Administrative and Financial Department to evaluate the resources consumed, thanks to the indicators on the process sheets. At a date agreed with the management, 8 heads of department evaluated the management of their respective processes according to the criteria grouped in Table 2.

The four clusters formed by each entity in the activity theory (Table 1) shed light on some of the value-adding points of the care cycle in Table 2. The first cluster, Subject-Instrument-Object, relates to how processes are used by management to meet the needs of customers (patients). For this cluster, according to the 2016 activity report, a total of 37 complaints were made by patients, including long waiting time: 56% (32% in 2011); poor reception: 31% (45% in 2011); procedures not performed: 13% (19% in 2011). All of these complaints (92%) were addressed by implementing corrective measures, such as contractual staff only for

1 **The management processes** are: Managing through quality, Managing projects and Carrying out control and evaluation. **The processes of realization** are: Carrying out medical consultations, Carrying out medical explorations, Carrying out biological analysis, Ensuring the dispensing of pharmaceutical products, Ensuring cardiological emergencies, Carrying out cardiac surgery, Carrying out thoracic surgery, Ensuring hospitalizations in Cardiopediatrics, Ensuring hospitalizations in Medicine, Ensuring hospitalizations in medical intensive care, Ensuring hospitalizations in surgical intensive care. **Support processes** are: Manage medical records, Provide continuing education, Manage purchasing, Provide staffing needs, Maintain infrastructure and equipment, Manage IT, Provide hospital hygiene. **The outsourced processes** are: Catering, Hygiene and maintenance of the premises, Contract labour, Laundry and Security of the premises.

2 *Official Journal* of the Republic of Côte d'Ivoire, Fraternité Matin of Friday, February 3, 2006.

LABELS	CODING
1. The proposal (Subject-Instrument-Object): Business model planning	
Is the service process planned?	Prop_Val1
Are the process steps, review, and validation activities identified?	Prop_Val2
Are responsibilities and interface authorities being managed?	Prop_Val3
Are internal and external resource requirements determined?	Prop_Val4
2. The organization (Community-Division-Object): The inputs of the business model	
Are the inputs to the service requirements determined and records kept?	Orga_Val1
Are functional and performance requirements taken into account?	Orga_Val2
Is previous similar organizational information incorporated?	Orga_Val3
Do the input elements include legal requirements, regulations, applicable standards or internal rules of the art?	Orga_Val4
3. The network (Subject-Community-Object): Mastering the business model	
Are the expected results of the process activities under control and are reviews conducted to assess the ability to achieve these results?	Reso_Val1
Do you verify compliance and/or measure variances between output items and input requirements?	Reso_Val2
Are validation activities implemented to ensure that services meet the intended requirements prior to implementation?	Reso_Val3
When results are not achieved at the time of reviews, verifications and validations, are actions implemented?	Reso_Val4
4. Spin-offs (Subject-Rules-Community): Outputs of the business model	
Are there records of the input requirements and the consequences of a potential failure?	Reto_Val1
Is documented information on the proper functioning of the process maintained?	Reto_Val2
Are changes verified and validated before implementation?	Reto_Val3
Is information about these changes kept?	Reto_Val4

Table 2 – Topics on the report card with departmental heads
Source: Author based on ISO 9001:2015

reception, consultation in the local language, and activity-based pricing after 2:00 pm. The second pole, Community-Division-Objective, ensures that patients are taken care of in the services by the agents using all the requirements of the profession. This care can be translated into a problem resolution request form of which 79 were issued in 2016 compared to 153 in 2016, almost 2 times less. 80% of them were treated with a level of satisfaction of the personnel over 90% after treatment. Among the problem resolution requests, interface problems (58%) and hardware problems (25%) are the critical points, together representing 83% of the problems encountered by the staff. The third cluster, Subject-Community-Object, attests the fact that management has given staff the resources to ensure that medical procedures are consistent with what the client has the right to expect. Taking only the example of profit-sharing for this pole, where nurses in other UHCs received about 40,000 F CFA[3] in annual bonus, the minimum bonus amount for 2016 is 237,000 F CFA. In addition, the doctor with a specialty certificate in cardiology, who has neither a registration number nor a salary slip, receives an incentive bonus of 497,822 F CFA. The last pole, Subject-Community-Rules, ensures that management, through the satisfaction of the patients obtained, coordinates the relations between the agents and itself. This pole allows own resources to go from 7 million in 2000 to 54 million CFA francs in 2006 and 70 million in 2013 with a regular increase to date. The agents, in addition to what is due to them, receive special allowances and incentive bonuses which rises from 20 million in 2000 to nearly 100 million in 2006.

The themes of the scorecard emanate mostly from the guides for performing operational activities (Chapter 8 of ISO 9001: 2015) and more specifically from "service design and development", used by the department heads. These criteria are formulated as questions as in the previous table and grouped under the four components of the business model and activity theory. For each criterion, the department head evaluates the process he/she is managing according to the following ten themes: formalizations, records, indicators, information, monitoring, interfaces, risks, capitalization, skills, and improvements. For these ten themes, a score was given from 1 to 10, depending on whether the process they are managing is in basic operation (1-2), defined (3-4), under control (5-6), optimized (7-8) or under improvement (9-10). The rating form was pre-tested before being administered to the department heads. It was mainly given to the process manager who could

	Formalization	Registration	Indicator	Information	Watch	Interface	Risk	Capitalization	Competence	Improvement
Prop_Val1	7,00	8,00	7,00	1,00	1,00	4,00	3,00	7,00	7,00	4,00
Prop_Val2	9,00	4,00	8,00	3,00	3,00	6,00	5,00	3,00	6,00	7,00
Prop_Val3	5,00	7,00	9,00	2,00	3,00	3,00	7,00	3,00	4,00	5,00
Prop_Val4	8,00	8,00	8,00	4,00	3,00	3,00	5,00	2,00	5,00	3,00
Orga_Val1	6,00	6,00	9,00	1,00	8,00	6,00	5,00	5,00	6,00	8,00
Orga_Val2	4,00	9,00	9,00	3,00	3,00	3,00	5,00	3,00	3,00	6,00

Table 3 – An excerpt from the Head of Department's report card1
Source: Author from rating sheet

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involve his/her co-master to fill it in. Thus, the table below presents an extract from a rating form.

The number "7" in the first column and first row means that in terms of formalization, the level of planning of the service process is optimized. The number "6" in the last column and last row means that in terms of improvement, the level of functional and performance requirement is under control. The average completion time was about two hours, depending on the availability of the department manager. After that, the rating sheet was processed.

2.2. The Data Analysis Method

The research aims to highlight the relative evolution of the business model, from the 2005 certification to the 2015 certification, by erasing the 2008 and 2012 certifications. The analysis method must therefore, allow the 2005 business model to be adjusted to the 2015 target configuration in order to deduce the relative trajectory of the variables in relation to each other and to know the typology of their dynamics. The inadequacy of factor analysis to take time into account and the unsuitability of the data for time series or panel analysis lead to the use of Procrustean analysis. It is used for deformation so as to make it as much as possible similar to a reference, leaving only authorized transformations such as translation, scaling, and rotation (Morand, 2007; Tenenhaus & Vinzi, 2005). This reference is the consensus business model or the consensus configuration. It starts with the simultaneous study of the scorecards of the 8 department heads, considering that each configuration represents the value of the process for which it is responsible (Gower 1975). After then, we build superimposed representations that highlight the common features of these different configurations: partial business models. The superimposed representation of the initial partial configurations is done, *thanks to the translation*, which will move the variables to the reference shape; *the scaling*, which will change the size of the variables so that they are equal to the size of the reference shape; and finally *the rotation*, which will find the most comfortable position for the variables. Finally by iteration, we reduce, by a sequence of transformations, the distance of the partial business models to the consensus configuration. This reconfiguration or consensus configuration (*business model of 2015*) is the reference representation and barycenter of the partial configurations (*business model of 2005 and their evolutions*).

3. RECONFIGURATION OF THE PUBLIC BUSINESS MODEL

The results show a reconfiguration of this basic structure. They show the evaluation of this reconfiguration, the consensus configuration and its reconfiguration.

3.1. Evaluation of the Reconfiguration

The first result of the variances due to configuration scaling, rotation, and translation gives the relative efficiency of the different transformations. It shows that only scaling is not significant (ddl=7; F=1.1 678; Pr = 0.319 0). It does not have a preponderant impact on the reduction of the variability of the configurations, contrary to rotation (ddl=315; F=3.2 812; Pr = 0.0001) and translation (ddl=70; F=3.3 563; Pr = 0.0 001). Next comes the distribution of the residual variance by object (Table 4). This allows us to identify the objects that differ from the consensus pattern. For this purpose, a principal component analysis helps in the optimal visualization of the two or three dimensions of the post-transformation configurations and the consensus configuration.

The second table gives the residuals by object after the transformations. The lowest residuals are for responsibilities and authorities between interfaces (Prop_Val3), resource requirements (Prop_Val4), design planning (Prop_Val1), identification and retention of input element requirements (Orga_Val1), and expected elements of process activities (Reso_Val1). This indicates that the value proposition is more of a consensus and the payoff is moving away from it. To verify this, a consensus test is then performed on the consensus configuration, perceived as the average perception of the business model. After 500 permutations, it shows a total explained variance of 59.26%. Therefore, we can conclude that the reduction in variance is significant.

The proposal		The organization		The network		Spin-offs	
Object	**Residue**	**Object**	**Residue**	**Object**	**Residue**	**Object**	**Residue**
Prop_Val1	**28,3271**	**Orga_Val1**	**28,5848**	**Reso_Val1**	**28,5132**	Reto_Val1	38,0985
Prop_Val2	43,2810	Orga_Val2	39,7387	Reso_Val2	36,5245	Reto_Val2	37,7786
Prop_Val3	**26,7620**	Orga_Val3	35,0240	Reso_Val3	47,3267	Reto_Val3	33,5663
Prop_Val4	**26,7877**	Orga_Val4	37,8126	Reso_Val4	32,4906	Reto_Val4	36,2256

Table 4 – Residuals by object
Source: Author based on data

3.2. The "Consensus" Configurations of the Business Model after the Initiative

The first consensus configurations are observed after scaling for each configuration. Table 5 gives the distribution of the residual variance by configuration and the scaling factors for the different configurations in order to identify the configurations that differ most from the consensus configuration. In total, there are three possible groupings for all configurations. The first (╦) includes the department heads "Department Heads1", "Department Heads4" and "Department Heads8", with the particularity of equipartition of variances on all four factors and a scaling smaller than 1. This indicates that these department heads tend to vary their scores on the business model components more than the other heads.

The second group (╧) includes "Headservice3", "Headservice5", and "Headservice7" with very high variance on F1 and the lowest residuals. The last group (╥) includes "Heads2" and "Heads6" with medium residuals and large variances on the first three factors.

Configurations	Residue	Putting to the scale	Variant per unit	Variance by factor (%)			
				F1	F2	F3	F4
Headservice1╦	71,6539	0,9763	0,0237	22,9583	17,5059	15,7089	5,7557
Headservice2╥	71,6896	0,9226	0,0774	17,6383	18,1186	14,7853	9,0217
Headservice3╧	64,7653	1,0609	-0,0609	30,2444	14,1268	8,6677	10,9228
Headservice4╦	74,6166	0,9151	0,0849	15,8343	16,759	20,8711	18,8639
Headservice5╧	64,8361	1,0841	-0,0841	32,7235	14,740	14,5416	18,8028
Headservice6╥	69,0669	1,0672	-0,0672	21,6492	16,5885	13,9407	6,0706
Headservice7╧	63,1008	1,1052	-0,1052	34,2371	16,2674	9,1018	8,7783
Headservice8╦	77,7936	0,8991	0,1009	18,0403	14,1501	12,4045	13,7136

Table 5 – Residue characteristics and variances by configuration
Source: Author based on data

3.3. Results for the "Consensus" Reconfiguration of the Business Model

The four selected axes explain 69% of the variance. From an exploratory point of view, the usual limit of the elbow test is just exceeded since the rounding of the fourth factor is almost 1 and after this axis, the eigenvalues fall sharply. These results allow us to observe the reconfiguration of the items of the original business model. In Table 6, all items have been projected and are significant on one factor.

The F1 factor is composed of five indicators, including planning the service design (Prop_Val1), determining and maintaining the requirements of the input elements (Orga_Val1), verifying the discrepancies between the output elements and the input requirements of the design (Reso_Val2), practicing validation activities of the requirements planned by services (Reso_Val3), and implementing actions when the results are not achieved at the time of the reviews (Reso_Val4). This first factor therefore starts from the planning of the value to be proposed to the customers, ensures the input elements, and checks the deviations from the output and the initial specifications. The

	F1	F2	F3	F4
Eigenvalue	2,2431	1,3591	1,1987	0,9970
Variability (%)	26,7539	16,2101	14,2974	11,8915
Cumulative	26,7539	42,9639	57,2613	69,1528
Prop_Val1	**-3,1547**	-0,1536	1,2453	-0,4144
Prop_Val2	1,1923	-0,7621	0,4427	**-1,3418**
Prop_Val3	0,7114	**1,8130**	-0,4495	0,8402
Prop_Val4	0,2732	-1,5060	1,2509	**1,9102**
Orga_Val1	**-1,6227**	1,1472	0,8612	0,0011
Orga_Val2	0,5457	-0,2147	-0,1601	**-1,5525**
Orga_Val3	1,1162	**1,6648**	-0,1118	0,5859
Orga_Val4	0,1464	0,0238	1,4735	**1,8810**
Reso_Val1	1,6033	**-1,6817**	-1,5135	0,7761
Reso_Val2	**2,0530**	0,3020	0,8674	-0,8431
Reso_Val3	**-1,7594**	1,5950	-1,0219	-0,1078
Reso_Val4	**-2,0817**	-0,5433	-0,9756	-0,2649
Reto_Val1	0,7660	0,4989	**2,1089**	-0,8395
Reto_Val2	0,2794	0,8310	**-1,9509**	0,1711
Reto_Val3	-0,7093	**-1,8314**	-1,5909	0,2637
Reto_Val4	-0,7021	**-1,1828**	0,8671	-1,0651

Values in bold are different from 0 at significance level alpha=0.05

Table 6 – Eigenvalue and coordinate of objects after PCA

Source: Author based on data

second factor F2 includes the definition of responsibilities and authorities at the interfaces (Prop_Val3), the integration of learning effects into the design (Orga_Val3), the expected elements of the process activities (Reso_Val1), the conservation of information on learning (Reto_Val3), and the validation of modifications before application (Reto_Val4). This second factor identifies the pilot's area of influence, the renderings of these processes, the updating of the process and their conservation, and concludes with the validation of this updating.

The third factor F3 groups combines together the recording of input requirements and the consequences of a potential failure (Reto_Val1) and the retention of information relating to the service processes (Reto_Val2). This third factor focuses on the retention of security and prevention measures. The last factor F4 considers the determination of design, reviews and validations (Prop_Val2), the delineation of internal and external resource requirements (Prop_Val4), the integration of functional and performance requirements (Orga_Val2), and the consideration of various institutional requirements in the input elements (Orga_Val4). This last factor relates to the stages of integration of resource needs and requirements of all kinds related to interested parties into the service.

The object projection defines four factors of the consensus business model. Table 7 specifies the correlations between the ten criteria of the department heads' judgment and the factors. They correspond to the correlations between the objects of the initial business model and the criteria after reconfiguration to the new consensus. These results show that overall the original business model criteria are significant on only one factor. The grouping of the criteria indicates the new attribution of the four factors composing the business model.

The first factor F1, with 26.76% variance, relates to the concepts of registration, information, interface, and competence. It relates to the relationships between management, agents, and customers. For this trio, the recording of activity traces is important (0.915 2) even if the flow of information is opaque (0.166 5). The front office relationship between clients and agents and between different departments is average (0.542 2). However, the agents seem qualified to perform the services (0.631 4). This dimension

	F1	F2	F3	F4
Formalization	0,3681	0,3956	-0,0482	**-0,5579**
Registration	**0,9152**	-0,0874	-0,0448	-0,2440
Indicator	0,4304	**0,5456**	-0,2226	0,1379
Information	**0,1665**	0,0888	0,0603	-0,0682
Watch	0,5326	0,1304	**-0,5998**	-0,0491
Interface	**0,5422**	0,3887	0,5369	-0,2906
Risk	0,3363	**0,5419**	-0,0120	0,1114
Capitalization	0,0661	**0,3587**	-0,0877	-0,2299
Competence	**0,6314**	0,0816	0,1010	0,2697
Improvement	0,0944	-0,4071	**0,5807**	0,1929

Values in bold are different from 0 at significance level alpha=0.05

Table 7 – Correlations between the initial consensus configuration and the factors

Source: Author based on data

tends to regulate the relationship between the subject (the management), the community (the agents of the services), and the object (the clients). According to Ranerup *et al.* (2016), it can be related to the *network* based on the concepts of "*value creation, revenue model, e-commerce, tacit design and relationship management, and co-opetition*". With 16.21% variance, factor F2 refers to process indicators, risks involved, and capitalization of experiences. The evolution of activities, measured by the consumption of resources, is average (0.545 6) in spite of control points and management reviews. The risk of misspecification is also medium (0.541 9) with procedures established by management for agents and process pilots and as a result of services. The capitalization of the experience of the agents is necessary, but not very important (0.358 7) in this case. This dimension seems, according to Johnsen (2015) and Disle *et al.* (2016), to distinguish the subject from the community by regulatory mechanisms under the emblem of the rules. This can be called the *fallout*. Factor F3 combines, with 14.29% of information, monitoring, and improvement. The first one does not seem to be contributory, as it is opposed to the design of the services (-0.557 9). This may be due to the standardization effect of dynamic need with public procedures. However, a positive average contribution (0.580 7) from improvement counteracts this effect. This improvement relates to master plans, processes, and activity targets. It appears to better capture the review of management strategies (subject), the transmission belts of processes (instrument), and the internal and external customers to whom the organization listens (object). This is for the value *proposition* according to Alford and Yates (2014) and Emery (2009). With 11.89% variance, the fourth factor F4 speaks of formalizing procedures, especially writing down everything that is done and doing everything that is written down. This is the credo of quality, which is achieved through the distinction of roles and responsibilities of designers, resource needs and functional requirements, and coordinates front office relationships. This dimension establishes the division of labor between the community at large (for all agents including management) and the internal and external customers (the objects). It is therefore suitable for the organization of the business model (Furnari, 2015).

4. DISCUSSION AND CONCLUSION OF THE PUBLIC BUSINESS MODEL

The values inherent in the rationality of the procedures of the ISO 9001 standards have driven the business model, whose adaptation efforts according to our results must be directed towards four axes.

The F1 dimension, and that of the network, aims to unite the competing worlds. The management of the public organization seems to bridge the competing demands in the Subject-Community-Object relationship. The quality management system allows the CEO to exercise his/her responsibility by bridging the gap between the healthcare professional and the administrative professional. The public management corresponds, according to Johnsen (2015), with a mixture of ideas and interests which constitutes a hybridization (Dagou, 2019). Due to these competing demands, the study of Schirmer and Silke (2018) required the head of this network to present the attributes of marginality as the ability to integrate points of view of doctors and medico-technical and then that of the administrative in the decisions. As confirmed, the roles of different stakeholders and the coherence between their interests and motivations (even if contradictory) are important for public sector collaborations. It is a development of participation while retaining an element of prioritization that allows for planning the execution of activities. This network embodies the movement that explores an antagonism between the subject and the management with one or more alternative approaches to the community and the agents (Gibert, 2008). The idea is to be open-minded de facto and to be able to analyze as well as form coalitions to inform the agents of the strategy to bridge the competing worlds (Alford & Yates, 2014; Furnari, 2015).

Secondly, it involves a development of individual performance while keeping a part of collectivism to better satisfy the customers. The F2 dimension of the Subject-Community-Rules relationship allows influence to be exerted through customer listening, internal auditing, management reviews, and improvement sessions. Indeed, the success of the public business model seems, according to Tomaževič *et al.* (2016), to depend on the object of monitoring, the method of measurement, the timing of analysis, and the avenues

for improvement. However, the networking between management, subject and community, and agents needs different levels of regulation because the expected benefits still do not come to the end of the barriers (Chesbrough, 2010). The set of processes and associated indicators sounds like an imperative to justify its professional conduct for the agents and the obligation to account for the way in which the management has fulfilled its responsibility. The choice of operative and incentive rules between the subject and the community belonging to the same network, improve their value propositions, and perceive public management as an agility (Baden-Fuller & Morgan, 2010).

The F3 dimension involves the Subject-Instrument-Object relationship for the development of high value-added activities with a tolerance for uncertainty and polychrony of time in decision making. In the achievement of good patient health (the object), management and processes influence each other in the *subject-instrument-object* relationship. Boyne and Walker (2010) stated that the mode of legitimization for the public organization is based on its performance or achievement of medical acts for the ISO 9001 standard. Gibert (2008) argued that an organization is legitimate because it achieves its goals with relatively little consumption of resources. If policy decisions and emergent strategies allow public organizations to better respond to customer needs, they are likely to be more effective than rigid processes (Cavalcante *et al.*, 2011). The influence of the subject, from the perspective of public management, is then oriented towards *accountability* to interested parties (Gueret-Talon, 2004; Mazouz *et al.*, 2015). This orientation of the subject on the object or of the management of the client sees public management as a mode of legitimization. The 11 indicators of the cardiac procedure process are factual examples of this *accountability*. The F4 dimension relates the articulation of the Community-Division-Object relationship. It should therefore aim for a gradual change in mentalities while at the same time moving towards a culture of competitiveness that establishes a permanent questioning of achievements. According to Lecocq *et al.* (2006), it allows us to embrace the same reflection elements (agents, services and clients) that are generally disjointed by the functional divisions that are made. This part of the business model identifies and provides the necessary resources, implementation, maintenance, and continuous improvement of the quality management system. While the strategic process tends to be emergent and more open to exogenous influences, flexibility and adaptability seem to be necessary for public managers (Chesbrough, 2007). Gibert (2008) stated that this is an analytical approach emphasizing the use of the division of labor by the community (agents) to the object. This orientation of the community conceives public management as a science aiming at the study of the problems encountered in the functioning of strategic processes (Lorino & Tarondeau, 2006).

To what extent can research help to develop new elements of understanding about business models in general, and in public management in particular? First, existing knowledge about the relationships among the components of the business model is fragmented. This research deconstructs the four perspectives of the business model under the entities of activity theory. It represents these perspectives at a scale where the contribution of each entity (managers, agents, customers, processes...) to performance (to public management) can be perceived. The four dimensions thus offer a reading grid to capture four managerial tensions that pave the way for future research on managing antagonism in public-private networks (Bitar & Hafsi, 2007), individual-collective (Grönroos, 2018), customer-procedure orientation (Stephen & Mohamad, 2015) in uncertainty and routines-flexibility (Cavalcante *et al.*, 2011; Chesbrough, 2007). Secondly, the themes do not simply appear as declared notions; there is an explanation of their relationship to the actual configuration of the business model, especially since the themes must be known for recertification audits. The quality management system, based on ISO 9001 standardization, offers in this case a solid coherent corpus for the clarification of the concepts used by the 8 department heads. Similarly, the activity theory allows for the structuring of the coherence of the factors through these dimensions. This should reduce ambiguity in the typologies, and the taxonomies make it particularly easy to synthesize ideas. Third, existing categorizations of operational business models are only partially complementary and generally lack a clear methodology, often developed ad hoc. Using Procrustean analysis, this research makes the bet of inference by starting from the experiences of a process innovation (Pupion, 2018), such as the quality management system to detect business model reconfigurations. Finally, the chronological order of the steps to generate a business model is clear. It joins the study of Panagiotopoulos *et*

al. (2012) and Janssen and Kuk (2007) in the context of the quality management system, which show that leadership and customer focus are much more important to the business model. The emphasis on tangible benefits and customer improvements of business models, such as the quality management system, are accompanied by a normative and ideological charge that makes them seem inevitable and unquestionable. By shifting the focus to front-office activity, these business model reconfigurations encourage a closer involvement of private sector organizations in injecting process innovations into public sector organizations, which need to be identified and understood.

BIBLIOGRAPHY

AL-DEBEI, M.; AVISON, D. (2010). "Developing a unified framework of the business model concept", *European Journal of Information Systems*, 19, p.359-376.

ALFORD, J.; YATES, S. (2014). "Mapping public value processes", *International Journal of Public Sector Management*, 27, 4, p.334-352.

AMIT, R.; ZOTT, C. (2001). "Value creation in e-business", *Strategic Management Journal*, 22, 6-7, p.493-520.

ANGELÉ-HALGAND, N.; GARROT, T. (2014). "Les biens communs à l'hôpital: De la "T2A" à la tarification au cycle de soins", *Comptabilité-Contrôle-Audit*, 20, 3, p.15-41.

ATTOUR, A.; BURGER-HELMCHEN, T. (2014). "Écosystèmes et modèles d'affaires: introduction", *Revue d'économie industrielle*, 146, 2, p.11-25.

BADEN-FULLER, C.; HAEFLIGER, S. (2013). "Business Models and Technological Innovation", *Long Range Planning*, 46, 6, p.419-426.

BADEN-FULLER, C.; MANGEMATIN, V. (2013). "Business models: A challenging agenda", *Strategic Organization*, 11, 4, p.418-427.

BADEN-FULLER, C.; MORGAN, M.S. (2010). "Business Models as Models", *Long Range Planning*, 43, 2-3, p.156-171.

BERNIER, L.; HAFSI, T.; DESCHAMPS, C. (2013). "Positionnement institutionnel et innovation dans le secteur public", *Télescope: Revue d'analyse comparée en administration publique*, 19, 2, p.38-56.

BITAR, J.; HAFSI, T. (2007). "Strategizing through the capability lens: sources and outcomes of integration", *Management Decision*, 45, 3, p.403-419.

BOYNE, G.; WALKER, R. (2010). "Strategic management and public service performance: The way ahead", *Public Administration Review*, 70, 1, p.185-192.

CASADESUS-MASANELL, R.; RICART, J.E. (2010). "From Strategy to Business Models and onto Tactics", *Long Range Planning*, 43, 2-3, p.195-215.

CAVALCANTE, S.; KESTING, P.; ULHØI, J. (2011). "Business model dynamics and innovation: (re)establishing the missing linkages", *Management Decision*, 49, 8, p.1327-1342.

CHAPPOZ, Y.; PUPION, P.-C. (2013). "La quête de la performance", *Gestion et management public*, 1, 1, p.1-2.

CHESBROUGH, H. (2007). "Why companies should have

open business models", *MIT Sloan Management Review*, 42, 2, p.22-28.

CHESBROUGH, H. (2010). "Business Model Innovation: Opportunities and Barriers", *Long Range Planning*, 43, 2-3, p.354-363.

CHESBROUGH, H.; ROSENBLOOM, R. (2002). "The role of the business model in capturing value from innovation: evidence from Xerox Corporation's technology spin-off companies", *Industrial and corporate change*, 11, 3, p.529-555.

DAGOU, D.H.W. (2019). "The Structuring Role of Network Actor in the Mechanistic – Organic Hybridization of the Quality Approach in Public Hospital", *Global Journal of Management and Business Research: D Accounting and Auditing*, 19, 3, p.57-68.

DAHAN, N.; DOH, J.; OETZEL, J.; YAZIJI, M. (2010). "Corporate-NGO Collaboration: Co-creating New Business Models for Developing Markets", *Long Range Planning*, 43, 2-3, p.326-342.

DISLE, C.; PÉRIER, S.; BERTRAND, F.; GONTHIER-BESACIER, N.; PROTIN, P. (2016). "Business Model et normalisation comptable: quelle intégration du modèle économique par les IFRS?", *Comptabilité – Contrôle – Audit*, 22, 1, p.85-119.

EMERY, Y. (2009). "Apports essentiels du management de la qualité au renouveau du modèle bureaucratique", *La Revue de l'innovation dans le secteur public*, 14, 3, p.1-24.

ENGESTRÖM, Y. (1999). "Activity theory and individual and social transformation", *in* ENGESTRÖM, Y.; MIETTINEN, R.; PUNAMÄKI, R.-L. (éd.), *Perspectives on Activity Theory,* Cambridge University Press, Cambridge, p.19-38.

FURNARI, S. (2015). "A Cognitive Mapping Approach to Business Models: Representing Causal Structures and Mechanisms", *in* BADEN-FULLER, C.; MANGEMATIN, V. (éd.), *Business Models and Modelling (Advances in Strategic Management)*, Emerald Group Publishing Limited, p.207-239.

GIBERT, P. (2008). "Un ou quatre managements publics?", *Politiques et Management Public*, 26, 3, p.7-23.

GOWER, J.-C. (1975). "Generalized Procrustes Analysis", *Psychometrika*, 40, p.33-51.

GRÖNROOS, C. (2018). "Reforming public services: does service logic have anything to offer?", *Public Management Review*, 9, 4, p.1-14.

GUERET-TALON, L. (2004). "Management par la Qualité: et si le service public devenait une référence sur le marché?", *Politiques et management public*, 22, 2, p.39-54.

JANSSEN, M.; KUK, G. (2007). "E-government business models for public service networks", *International Journal of E-government Research*, 3, p.54-71.

JANSSEN, M.; KUK, G.; WAGENAAR, R. (2008). "A survey of Web-based business models for e-government in the Netherlands", *Government Information Quarterly*, 25, 2, p.202-220.

JANSSEN, M.; ZUIDERWIJK, A. (2014). "Infomediary business models for connecting open data providers and users", *Social Science Computer Review*, 32, 5, p.694-711.

JOHNSEN, A. (2015). "Strategic Management Thinking and Practice in the Public Sector: A Strategic Planning for All Seasons?", *Financial Accountability & Management*, 31, 3, p.243-268.

JOHNSON, M.W.; CHRISTENSEN, C.M.; KAGERMANN, H. (2008). "Reinventing your business model", *Harvard business review*, 86, 12, p.57-68.

KIMBERLY, J.; EVANISKO, J. (1981). "Organizational Innovation: The influence of Individual Organizational and Contextual Factors on Hospital Adoption of Technological and Administrative Innovations", *Academy of Management Journal*, 24, 4, p.689-713.

LECOCQ, X.; DEMIL, B.; WARNIER, V. (2006). "Le business model, un outil d'analyse stratégique", *L'expansion management review*, 123, 4, p.96-109.

LORINO, P. (1999). "À la recherche de la valeur perdue: construire les processus créateurs de valeur dans le secteur public", *Politiques et management public*, 17, 2, p.21-34.

LORINO, P.; TARONDEAU, J.-C. (2006). "De la stratégie aux processus stratégiques", *Revue Française de Gestion*, 160, 1, p.307-328.

MAZOUZ, B.; ROUSSEAU, A.; SPONEM, S. (2015). "Les gestionnaires publics à l'épreuve des résultats", *Revue française de gestion*, 251, 6, p.89-95.

MORAND, E. (2007). "Analyse factorielle multiple procustéenne", *Journal de la société française de statistique*, 148, 2, p.65-97.

NOBRE, T. (2013). "L'innovation managériale à l'hôpital: Changer les principes du management pour que rien ne change?", *Revue française de gestion*, 235, 7, p.113-127.

OSBORNE, S. (2018). "From public service-dominant logic to public service logic: are public service organizations capable of co-production and value co-creation?", *Public Management Review*, 20, 2, p.1-7.

PANAGIOTOPOULOS, P.; AL-DEBEI, M.; FITZGERALD,

G.; ELLIMAN, T. (2012). "A business model perspective for ICTs in public engagement", *Government Information Quarterly*, 29, 2, p.192-202.

PASCAL, C. (2003). "La gestion par processus à l'hôpital entre procédure et création de valeur", *Revue Française de Gestion*, 146, 5, p.191-204.

PIMENTEL, L.; MAJOR, M. (2015). "Key success factors for quality management implementation: evidence from the public sector", *Total Quality Management & Business Excellence*, 27, 9-10, p.997-1012.

POISTER, T.; HARRIS, R.H. (1996). "Service Delivery Impacts of TQM: A Preliminary Investigation", *Public Productivity & Management Review*, 20, 1, p.84-100.

PUPION, P.-C. (2018). "L'innovation dans le secteur public", *Gestion et management public*, 6, 4, p.6-8.

RANERUP, A.; HENRIKSEN, H.; HEDMAN, J. (2016). "An analysis of business models in Public Service Platforms", *Government Information Quarterly*, 33, 1, p.6-14.

SCHIRMER, F.; SILKE, G. (2018). "Power relations in organizational change: an activity-theoretic perspective", *Journal of Accounting & Organizational Change*, 14, 1, p.9-32.

SCHNEIDER, S.; SPIETH, P. (2013). "Business model innovation: Towards an integrated future research agenda", *International Journal of Innovation Management*, 17, 1, p.1-34.

SPIETH, P.; SCHNECKENBERG, D.; RICART, J.E. (2014). "Business model innovation-state of the art and future challenges for the field", *R&D Management*, 44, 3, p.237-247.

STEPHEN, M.; MOHAMAD, F. (2015). "Building boundary capabilities at the base of the pyramid", *Journal of Entrepreneurship and Public Policy*, 4, 1, p.111-133.

TEECE, D. (2010). "Business Models, Business Strategy and Innovation", *Long Range Planning*, 43, 2-3, p.172-194.

TENENHAUS, M.; VINZI, V.E. (2005). "PLS regression, PLS path modeling and generalized procrustean analysis: a combined approach for PLS regression, PLS path modeling and generalized multiblock analysis", *Journal of Chemometrics*, 19, p.145-153.

TOMAŽEVIČ, N.; SELJAK, J.; ARISTOVNIK, A. (2016). "TQM in public administration organisations: an application of data envelopment analysis in the police service", *Total Quality Management & Business Excellence*, 27, 11-12, p.1396-1412.

YU, B.; TO, W.; LEE, P. (2012). "Quality management framework for public management decision making", *Management Decision*, 50, 3, p.420-438.

YUNUS, M.; MOINGEON, B.; LEHMANN-ORTEGA, L. (2010). "Building Social Business Models: Lessons from the Grameen Experience", *Long Range Planning*, 43, 2-3, p.308-325.

ZOTT, C.; AMIT, R. (2007). "Business model design and the performance of entrepreneurial firms", *Organization science*, 18, 2, p.181-199.

ZOTT, C.; AMIT, R. (2010). "Business Model Design: An Activity System Perspective", *Long Range Planning*, 43, 2-3, p.216-226.