

Digitization and Business Intelligence at the Heart of a Business Strategy Within African Industries Founds

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Abstract: This paper focuses on the possibility of collecting information and with a view to the digitization of business processes with the strategic thought of identifying private investment opportunities in the provinces entities which would allow it: - To better collect information on the collection of resources in order to enable it to replenish its fund and meet management and financing needs in the provinces entities ; - Improve the decision-making process at all organizational levels with the help of digitization. This study is based on the application of the knowledge management organizational capacity maturity model (Booto Ekionea, 2012) in the context of African industries Founds to identify the current state of knowledge management organizational capacities towards an ideal model which facilitates the appropriate recommendations.

Keyword: Digitization, business intelligence, business strategy, knowledge management capabilities.

1. Introduction

The objective of this paper is to propose a plan for the progressive digitization of the management tasks of African Industries Founds (AIF). As a public company, it is called upon to achieve performance according to the mission and objectives assigned to it, namely: to promote industrial development. To intervene in its field, it uses resources from the tax for the promotion of industry (TPI). The lack of technology to support good decision-making at all organizational levels makes it difficult to make good decisions and complicates the work of senior management and other decision-making. This demonstrates the lack of leadership, which should be filled as soon as possible, at the level of information systems management to steer the new orientation of information systems. Added to this list are the technical and management skill limits of the current IT team, which needs to develop technical and managerial capabilities to support the implementation of the digitization of business processes.

The AIF digitization plan is the result of diagnoses established during in-depth investigations by university experts in information systems. The implementation of this plan aims to align the AIF Information System with the standard of Financial Institutions while guaranteeing security, availability, reliability, data integrity, integration of business processes and the differentiation of each actor in the action as well as in making good business decisions. In addition to the introduction and the conclusion, this article discusses the literature review, the organizational context, the challenges of digitization, the challenges of business intelligence, the challenges of knowledge management, the methodology, data collection, results, discussions, strategic reorientation: towards digitization.

2. Literature review

2.1 Digital transformation

Digital transformation is the use of technology to radically improve business performance (Karekla et al, 2021).

Certainly, the digital strategy provides business benefits, such as competitive advantage and high performance, easily accessible through digital technologies while providing unique and integrated business functions in a way that can adapt to changing conditions (Becker and Schmid, 2020). By digital connectivity we refer to the ability of companies to access and use technologies to connect to the internet and share digital information. While by digital penetration, we refer to the share of digital in economic activities, transactions, and policies, through the development of online, interconnected, and automated systems. This makes digital transformation a major issue affecting businesses in sub-Saharan Africa.

2.2 Digitization and business intelligence in the public sector

The development of organizational capabilities specific to information systems is defined around three dimensions: infrastructure of information systems, processes of information systems and skills in information

systems (Abou-Zeid, 2003; Chang & Ahn, 2005). Regarding the typical technological infrastructures of the AIF, such as organizational capabilities of information systems, they can be subdivided into a set of systems that support: 1- customer service; 2- administrative and regulatory processes; 3- decision making and quality improvement. All these categories are, technologically speaking, supported by 1- a good network architecture; 2- physical components (hardware components); 3- data architecture and software connectivity. To these ends, a good technological architecture should (Gargeya & Sorrel, 2005, p.58): 1- be ubiquitous, reliable, scalable, manageable and secure; 2- be able to support the transmission of data in the form of document, channel and multimedia, including applications such as teleconferencing; 3- use industry standard protocols and topologies, 4- be able to support various network infrastructure requirements associated with customer services, training and administration; 5- be less expensive both for implementation and operationalization. Because information technologies can improve the speed of integration and application of knowledge by automatically codifying organizational routines. Moreover, in terms of physical and logical security (Gargeya & Sorrel, 2005, p.58), a good technological architecture for the management of data, information and knowledge should: 1- use optical fibers in the cabling and install all electronic equipment in secure premises; the use of other means of protection, such as firewalls, would also be desirable; 2- use servers for authentication, security services, remote access, e-mail management (e-mail Gateway). Because certain safety rules must be respected (Gargeya & Sorrel, 2005, p.59): 1- administrative procedures; 2- physical security; 3- security configuration management; 4- technical security services; 5- technical security mechanisms; 6- electronic signature, etc.

3. Business Intelligence

Business intelligence (BI) is a process that consists of exploiting the internal and external data of companies to strengthen their capacities and help them improve in making good decisions (Veilleux, 2020). This in the same vein that Loshin (2012, p.10) argues that the concepts of business intelligence and analytics include tools and technologies that support a set of user communities in an organization, to the continued collection and organization of multiple sources of data to support decision-making at the operational, tactical, and strategic levels, with the goal of improving organizational performance. Gudfinnsson (2019). He adds that decision-makers who use information extensively with the help of information technology make decisions faster compared to decision-makers who use less information or even less information technology (Gudfinnsson, 2019). However, making decisions quickly is particularly known to increase organizational efficiency (Davenport, 2010).

3.1 The business intelligence and digital transformation relationship

The digital transformation enabled by BI solutions presents a huge opportunity to drive the growth and profitability of organizations. Moreover, when digital infrastructure and business strategy are merged, this ability for rapid scalability becomes a dynamic ability of the business to adapt to the dynamic requirement of the digital market (Bharadwaj et al., 2013; Turnali, 2017). Hence, the digital business strategy to be opted for will require understanding how to develop organizational capacities to better exploit the huge amounts of heterogeneous data, information and knowledge continuously generated (Bharadwaj et al., 2013).

3.2 Challenges of digitization

First, we would like to recall that digital transformation is a phenomenon that is implemented by a digital strategy that helps organizations govern the transformations from traditional strategies to digital strategy that result from the integration of digital technologies, as well as than in their exploitation after processing (Matt et al., 2015). Second, this transformation which is done through digital technologies makes it possible to improve the performance or the scope of organizations and allows them to remain competitive in the business ecosystem overwhelmed by digital technologies (Karekla et al, 2021; Verhoef et al., 2021; Venkatraman, 2017). However, research has shown that the technology itself is only part of the complex puzzle that must be solved and aligned with the organization's strategic goals for organizations to remain competitive and successful in a digital world (Matt et al., 2015; Vial, 2019; Venkatraman, 2017).

3.3 Business intelligence challenges

It should be added, however, that ensuring the sustainability of quality data is a major challenge for business intelligence systems (Gudfinnsson, 2019), since making decisions based on good data and precise and reliable is recognized as particularly important for companies (Guarda et al, 2018). Hence, the importance of successfully implementing this BI system, which will support the AIF's information systems, in the collection, storage, processing and dissemination of huge amounts of data/Information increasing exponentially. At the strategic level, support the continued development of new business and decision-making support strategies. Without

forgetting that knowledge management must be effective within the organization to clearly distinguish and choose what is useful and which will produce relevant data for decision-making, to achieve the strategic objectives of the organization. and those of the IT implemented.

3.4 Knowledge Management Challenges

Today's business ecosystem is particularly characterized by unpredictable and unprecedented changes, which means that contemporary companies must constantly seek innovation and knowledge management, as these are considered a vital factor for successful growth. Businesses and an efficient way to survive in the particularly complex and unpredictable ecosystem (Škudienė et al., 2021). Moreover, the ability of organizations to improve their performance increasingly depends on their ability to acquire and develop knowledge. Therefore, knowledge is considered the most important asset than other types of inputs or resources (Booto Ekionea and Fillion, 2021). Very often, knowledge management is essential for organizations to generate values from intellectual capital in the form of knowledge (Hassan et al., 2021).

3.5 Organizational context

The provincial entities encounter, among other major problems: - The inconsistency between the data entered in the provinces and those recorded and processed at the level of the General Directorate in Kinshasa; - The lack of equipment and access of provincial officials to software to produce the situations within their jurisdiction and verify the work done at the local level; - The difficulty of exhaustively associating the productions carried out by their respective entities to assess their performance; - The lack of training for leaders, managers and professionals on the management tools of their entities or the lack of follow-up for agents trained several years ago; - The obsolescence of the work tool and the unavailability of the computer network.

3.6 Vision and strategic axes of the AIF digitization and business intelligence plan

The achievement of organizational objectives implies: - A clear strategic choice on the part of the AIF; - The alignment of technologies and tools to be acquired with the strategic choice of the AIF; - Developing and strengthening organizational capacities to support strategic alignment; - Finally, the strengthening and development of business intelligence at all levels by implementing technologies and tools essential to decision-making. The strategic choice of a company develops according to whether the company opts for any strategic profile and the literature (Miles and Snow, 1978) in information systems proposes three types of business strategy scenarios: defenders, analyzers and/or prospectors. For the AIF, improving the quality of departmental services involves, among other things, providing them with tools that contribute to strengthening collaboration between departments, with customers and with partners. The AIF is an analyzer, that it is both a defender because it must develop robust infrastructures and prospectors because it must continue to seek new business opportunities with new promoters from of various sectors of national industrial activity.

3.7 Simplification of procedures thanks to e-government and strengthening of interdepartmental collaboration

The benefits of this project are numerous: - Make the forms made available more visible; - Clearly inform on the procedure required for each credit application as well as the necessary documents relating thereto; - Accelerate the processing of credit applications; - Allow partners and companies to formulate their requests outside the opening hours of the administration, and even remotely; - Digitization of documents; - To address the strategic objectives by improving the performance of each department; - Ensure the performance of the hardware infrastructure, the application system and ensure the performance of IS processes through the use of information and communication technologies; - Have integrated IS that ensures availability, accessibility and a standardized quality of service for strategic management by dashboard in order to move from one-off statistical monitoring to generalized monitoring of all the activities of the business departments and AIF support; - Guarantee the security of the hardware, application and data infrastructure of the AIF. Figure 1 below presents the vision and strategic axes of the target IS of the AIF. With this overall objective, four specific objectives are associated with it: - To bring back servicing and pre- servicing investments with structuring and propagating effects on the agro-industrial; - Financing the investment objectives of the private sector by favoring the approach of value chains; - Fund applied research projects likely to have an impact on local industry; - Modernize the governance of the AIF and comply with international standards. In this vision, the DSI is one of the actors in the process of modernizing the governance of the AIF and the information system is the support in the governance of the AIF.



Figure 1: Vision, strategic axes of the target IS of the AIF

Its particular specific objective is to “Improve the information and communication system of the company to guarantee: - Business intelligence and instantaneous decision-making; - The circulation and security of information; - Reinforcement of the organizational system of the AIF. The digitization plan of the AIF constitutes a compass in the implementation of the strategic objectives of the information system contributing to the materialization of the overall and specific objectives of the Establishment. Thus, four main activities should be carried out over the next five years, namely: - The effective implementation of business intelligence and instant decision-making; - The fluidification of the flow of information horizontally and vertically; - Securing the information system and the communication of the Company; - Strengthening of the organization system of the AIF; - Capacity building of AIF staff. These three areas are divided into 3 categories: 1 - Support for businesses: - Strengthen inter-departmental collaboration; - Facilitate interactions with partners (Client, partners, etc.); - Streamline the application landscape; 2 - Technical support: - Improve service to users; - Strengthen the security of information systems; - Continuous improvement of performance; 3 – Infrastructures: - Optimize the infrastructure; - Facilitate the use of tools.

4. Methodology

This model being an idealistic model, the definition of a target for the new information system will follow. The development of a multi-year action plan - or resource mobilization strategy - then guarantees the means for the implementation, monitoring and updating of the digitization and business intelligence plan. Approach by processes and the digitization plan and business intelligence: what links? The process approach makes it possible to specify the roles and responsibilities of each, to identify areas of overlap in terms of tasks, to make information circuits more fluid. The map of actors, as data collection techniques, to identify the stakeholders in the digitization plan and business intelligence. As well as the questionnaire for general management, directors, and professionals for AIF. There were also individual interviews which were necessary to deepen and understand certain subjects. The focus groups were also necessary to converge and validate the expectations at the level of each business line and at the level of general management. The organizational capability maturity model

questionnaire in information systems and knowledge management (Booto Ekionea, 2012) was administered across the organization.

4.1 Role of actors and organization

Role of the actors: - The information systems steering committee: defines the general policy of the digitization and business intelligence plan and appears as guarantor of the IS and controls the costs; - The group of users: has experience in the field, expresses the needs and the constraints to which they are subject and makes it possible to verify the realism of the proposals formulated; - The project group: brings together information systems professionals (computer specialists) specializing in the implementation of the digitization plan who propose solutions and work in close collaboration with other departments of the organization. They can be helped by external reinforcements.

Organization: Conducting a digitization plan project requires working structures: - Information systems management committee; - User group; - Project group. Standard scenarios: Thus, we can have several types of scenarios in a process of the digitization plan: - Trend scenario: proposes the reinforcement of the existing means to achieve the objectives; is part of the continuity of the organization's IS; - Innovative scenario: it relies on technological innovations and proposes a redefinition of the IS; - Compromise scenario: proposes an intermediate solution between the two trend scenarios – innovative. Action plans: Make it possible to specify the methods for implementing developments; are in principle limited to the first three years; provide for the studies and works to be undertaken. Monitoring procedures: Consist of using the values provided by various indicators and keeping an up-to-date directory of applications, projects, studies and reconciling observed activity with forecasts specific to the chosen scenario. Checkpoints make it possible to verify that all actions have been carried out.

4.2 Data collection and results

This study aims to better understand the process of developing organizational capabilities specific to organizational information systems in the context of a public finance company, in this case the AIF, to assess its impact on organizational performance. This process is part of the learning school (Cyert & March, 1963; Nelson & Winter, 1982; Burgelman, 1988; Cohen & Levinthal, 1990) which promotes a process of organizational learning and accumulation knowledge that can be spread over time and in several levels of maturity. Thus, using the maturity model of organizational capabilities specific to knowledge management (CSKM) which presents five levels of maturity (Booto Ekionea, 2012), this study presents a diagnosis of the digitization and intelligence of as shown in Figure 2. Thus, using a questionnaire of the maturity model of organizational capacities specific to knowledge management (CSKMMM), the results of this study present a summary diagnosis of organizational capacities specific to knowledge management. The maturity model recommends five levels of maturity and is based on two hypotheses inspired by Venkatraman (1994): 1- the lower the level of maturity of the organizational capacities specific to the knowledge management of an organization, the more the expected benefits are low, while 2- the higher the level of maturity of the organizational capacities specific to the knowledge management of an organization, the higher the expected benefits. The levels of maturity of the organizational capacities of the information systems of an organization are divided into two main categories: 1- levels of evolution (level 1: localized operation, and level 2: internal integration); 2- levels of revolution (level 3: reengineering, level 4: network redesign, and level 5: redefining the business mission). Thus, to better understand each level of the CSKMMM, we will use the three main dimensions as presented in the previous section. Also, to better understand each level of maturity of the CSKMMM, Table 1 describes the characteristics of each level of maturity of the organizational capacities of the information systems. The questions asked were inspired by the definition of the CSKM concept as developed by (Abou-zeid, 2003; Chang & Anh, 2005). The scale of five sub-questions to each of the 9 questions (characteristics) was inspired by the five levels of maturity that an organization can achieve (see also Annex 3 where the AIF questionnaire is contained). The following took part: 1- AIF general management staff at the decision-making level; 2- decision-makers and managers at the intermediate level; 3- the professionals of each department at the operational level. Table 1 presents the profile of the respondents to the questionnaire.

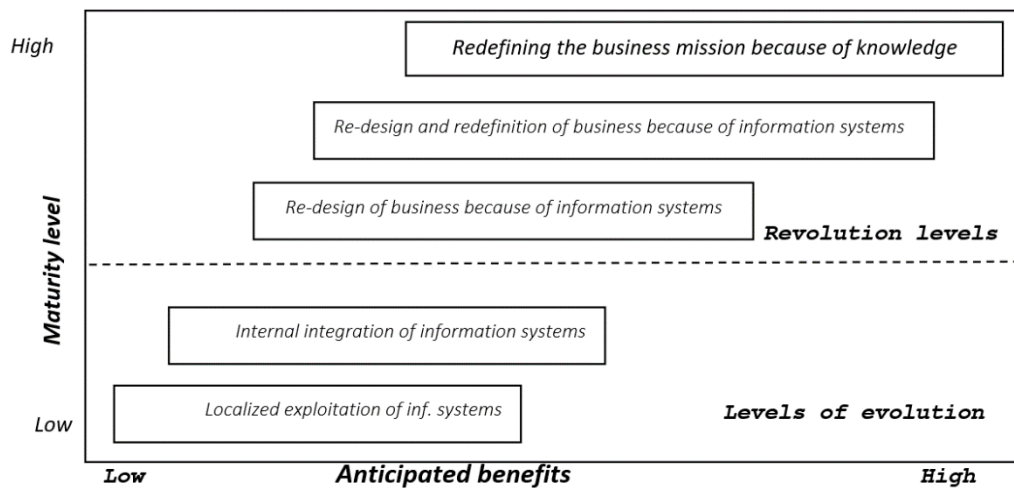


Figure 2: Maturity levels of inf. System within organizations (adapted from Venkatraman, 1994)

5. Discussions and strategic reorientation: towards digitization

The strategic orientations of the future information system come from the diagnosis of the MMCOSI. These orientations will relate to the infrastructures, processes, or applications (software) and human skills to be highlighted to implement and use information technologies.

Table 1: Profile of survey respondents for the AIF case study

No	Function/position	Direction
1	Decision Maker/ Professional	Executive management (DG)
2	Decision Maker/ Professional	Financial Department (DFI)
3	Decision Maker/ Professional	Information Systems Department (DSI)
4	Decision Maker/ Professional	Human Resources Department (HRD)
5	Decision Maker/ Professional	Provincial Coordination Directorate (DCP)
6	Decision Maker/ Professional	Legal Department (DJR)
7	Decision Maker/ Professional	Supervisory Department (DSU)
8	Decision Maker/ Professional	Directorate of Heritage and Logistics (DPL)
9	Decision Maker/ Professional	Department of Studies (DET)
10	Decision Maker/ Professional	Audit Department (managerial rank)
11	Decision Maker/ Professional	Tax Mobilization Directorate (DMT)
12	Decision Maker/ Professional	Projects Department (DPR)
13	Decision Maker/ Professional	Portfolio Management Department (DGP)

P.S.: Pseudonyms are assigned to respondents to maintain their anonymity.

5.1 The capacities of the information systems infrastructures

The capacities of the infrastructures of the information systems relate to the technological infrastructures, the specific structures of the information systems and the capacities of use of the information systems. In fact, for an organization to claim to develop organizational capacities specific to the management of information systems infrastructures, it must present the following characteristics: (1) at the technical level, exploitation of information technologies (IT) dedicated to the management of information and knowledge specific to the operations of the AIF, operation of the IT infrastructure and systems for managing information and knowledge of the operations of the AIF, customers and business partners, the emergence of IT as an asset to support the information and knowledge management of AIF's operations and AIF's business vision; (2) in terms of organizational structures, the existence of specific and effective structures or positions for information and knowledge management. Table 2 presents the characteristics of each CSKMMM maturity level.

Table 2: Characteristics of each CSKMMM maturity level

Maturity level	Characteristics
1 st	- IT-infrastructure: 1-at-the-technical-level: localized-and-limited-exploitation-of-IT (Venkatraman, 1994); IT-does-not-emerge-as-an-asset-to-support-business, misunderstanding-between-IT-and-business (Luftman-et-al., 2004); 2-in-terms-of-structural-infrastructures: absence-or-non-functioning-of-IT-specific-structures. ¶ - Data-processes: 1-at-the-level-of-data-generation-processes: localized-exploitation (Venkatraman, 1994); 2-Data-manipulation: initial-process, unpredictable-and-weakly-controlled (Dekleva-and-Drehmer, 2001), initial-process: ad-hoc-and-chaotic-organizational-capacity-expressed-and-implemented-in-processes-that-are-not-defined (St-Amant-and-Renard, 2004); 3-data-application-process: no-formal-process, reaction-on-a-case-by-case-basis (Luftman-et-al., 2004). ¶ - KM-people: 1-capacities-to-facilitate-continuous-data-management-process: people-apply-their-knowledge-locally (Peppart-and-Ward, 2004); 2-abilities-to-develop-the-human-infrastructure: little-motivation-or-reward (Luftman-et-al., 2004); 3-ability-to-use-available-technologies: success-depends-on-the-efforts-and-skills-of-individuals (St-Amant-and-Renard, 2004); 4-knowledge-management-culture: absence-of-an-organizational-culture-and-vision-aimed-at-encouraging-the-capture, conservation-and-sharing-of-data, information-and-knowledge (Armbricht-et-al., 2001). ¶
2 nd	- IT-infrastructure: 1-at-the-technical-level: internal-integration-of-IT (Venkatraman, 1994), data-management-emerges-as-an-asset-to-support-business-MAIF-misunderstanding-between-the-DSI-and-the-business (Luftman-et-al., 2004); 2-in-terms-of-structural-infrastructures: specific-IT-structures-but-isolated-and-not-integrated. ¶ - Data-management-process: 1-at-the-level-of-knowledge-generation-processes: internal-integration-of-KM-processes (Venkatraman, 1994); 2-manipulation-of-knowledge: structured-and-reproducible-process (Dekleva-and-Drehmer, 2001); 3-knowledge-application-process: organizational-capacity-expressed-and-implemented-in-defined-and-documented-processes (St-Amant-and-Renard, 2004; Harigopal-and-Satyadas, 2001; Kaner-and-Kanj, 2004; Siemens, 2001; Klimko, 2001). ¶ - IT-management-people: 1-ability-to-facilitate-continuous-IT-process: people-integrate-their-knowledge (Peppart-and-Ward, 2004); 2-skills-to-develop-the-human-infrastructure: improvement-of-efforts, skills-and-knowledge-of-individuals-and-the-organization (St-Amant-and-Renard, 2004); 3-ability-to-use-available-technologies: success-depends-on-efforts-and-organizational-skills; 4-IT-and-knowledge-management-culture: data-is-perceived-as-a-support-for-transactions-and-the-various-business-functions-for-good-decision-making (Luftman-et-al., 2004). ¶
3 rd	- IT-infrastructure: 1-at-the-technical-level: internal-integration-of-IT-across-the-organization, IT-supports-businesses, understanding-between-IT-and-business (Luftman-et-al., 2004); 2-in-terms-of-structural-infrastructures: creation-of-IT-specific-structures-throughout-the-organization. ¶ - Data-management-process: 1-at-the-level-of-data-generation-processes: reengineering-of-business-processes-because-of-IT (Venkatraman, 1994); 2-data-manipulation: relevant-and-integrated-IT-processes-across-the-organization (Luftman-et-al., 2004), standard, consistent, defined-and-well-understood-processes (Dekleva-and-Drehmer, 2001); 3-knowledge-application-process: definition-and-repetition-of-processes-to-improve-the-organization's-capacities (St-Amant-and-Renard, 2004). ¶ - People-in-IT-management: 1-capacities-to-facilitate-continuous-data-management-process: people-interact-with-others (Peppart-and-Ward, 2004); 2-skills-to-develop-the-human-infrastructure: definition-of-an-organizational-policy-for-rewarding-and-motivating-employees; 3-skills-to-use-available-IT: development-of-technical-skills-specific-to-IT-supporting-business; 4-Knowledge-management-culture: IT-strategies-are-aligned-with-business-strategies (Abou-Zeid, 2002). ¶
4 th	- IT-infrastructure: 1-at-the-technical-level: the-IT-vision-and-architecture-are-integrated-with-the-partners (Luftman-et-al., 2004); 2-in-terms-of-structural-infrastructures: creation-of-a-department-and-a-position-of-IT-vice-president-within-the-management-committee. ¶ - KM-processes: 1-at-the-level-of-knowledge-generation-processes: re-design-of-KM-networks (Venkatraman, 1994); 2-knowledge-manipulation: mastered, measured-and-controlled-process (Dekleva-and-Drehmer, 2001); 3-knowledge-application-process: the-practices-are-documented-and-their-results-are-quantitatively-controllable-and-measurable (St-Amant-and-Renard, 2004). ¶ - IT-management-people: 1-abilities-to-facilitate-continuous-IT-management-process: people-coordinate-their-activities (Peppart-and-Ward, 2004); 2-skills-to-develop-the-human-infrastructure: risks-and-rewards-are-shared (Luftman-et-al., 2004); 3-skills-to-use-available-KM-technologies: the-organization-identifies-skills, knowledge-and-best-practices-and-integrates-them-into-its-action-processes (St-Amant-and-Renard, 2004); knowledge-management-culture: knowledge-management-systems (KMS) facilitate-and-drive-business-strategies. ¶
5 th	- KM-infrastructure: 1-at-the-technical-level: IT-infrastructure-and-CMS-are-extended-to-external-partners; 2-in-terms-of-structural-infrastructures, creation-of-a-specific-structure-within-the-organization-to-manage-the-integration-of-IT-and-CMS-between-the-organization-and-its-external-partners. ¶ - KM-processes: 1-at-the-level-of-knowledge-generation-processes: re-design-of-KM-networks (Venkatraman, 1994); 2-knowledge-manipulation: mastered, measured-and-controlled-process (Dekleva-and-Drehmer, 2001); 3-knowledge-application-process: the-practices-are-documented-and-their-results-are-quantitatively-controllable-and-measurable (St-Amant-and-Renard, 2004). ¶ - IT-management-people: 1-ability-to-facilitate-continuous-IT-process: redefining-the-business-mission-because-of-IT (Venkatraman, 1994), process-in-continuous-improvement (Dekleva-and-Drehmer, 2001); 2-skills-to-develop-the-human-infrastructure: the-business-vision-and-the-IT-processes-are-developed-with-the-partners (Luftman-et-al., 2004); 3-skills-to-use-available-IT: optimization-and-continuous-improvement (St-Amant-and-Renard, 2004); knowledge-management-culture: the-business-vision-and-the-IT-infrastructure-are-adapted-between-the-organization-and-its-partners (Luftman-et-al., 2004). ¶

The answers to the questionnaire provided the mapping of what are the organizational capacities in information systems (OCIS) within the AIF by highlighting the different levels of maturity reached by the AIF for each dimension and characteristic of the OCIS. At the end of the survey, and according to the format of the questionnaire submitted to the AIF (see Tables 3), the following results were observed. **Information systems**

5.2 Process capabilities

The capabilities of information and knowledge generation processes concern the processes of handling information and knowledge, the processes of applying information and knowledge. Indeed, for the AIF to claim to develop organizational capacities specific to the management of information and knowledge in the process of information systems, it should meet the following characteristics: (1) at the level of knowledge generation processes, there is re-engineering of business processes because of information and knowledge management with re-design of information systems networks (Venkatraman, 1994) with its partners; (2) at the level of knowledge manipulation, there is the existence of relevant, integrated, mastered, measured and controlled processes of knowledge management across the organization (Luftman et al., 2004), management systems processes information standards, consistent, defined and fairly well understood (Dekleva and Drehmer, 2001), (3) knowledge translation processes: definition and repetition of processes for the improvement of

organizational capacities, practices are documented and their results are quantitatively controllable and measurable (St-Amant and Renard, 2006).

Table 3: Application of OCISMM within the AIF

Dimensions studied	Characteristics	Maturity level in OCIS reached by the AIF
Knowledge management infrastructure	Technological infrastructure	The AIF is at the 1st level of maturity of the OCISMM: the exploitation of technological infrastructures is absent or limited and localized. (Luftman et al., 2004).
	Specific structures	The AIF is at the 2nd level of maturity of the OCISMM: there is emergence of structures specific to information systems but isolated and not integrated into all the operations of the AIF.
Knowledge management process	Knowledge generation process	The AIF is at the 2nd level of maturity of the OCISMM: there is emergence of processes for generating new technologies and knowledge at the level of internal entities with the exchange of data and information.
	Knowledge manipulation process	The AIF is at the 1st maturity level of the OCISMM: the process of handling information and knowledge is unpredictable and weakly controlled and is initial: ad hoc and chaotic organizational capacity expressed and implemented in processes that are not defined.
	Knowledge translation process	The AIF is at the 1st level of maturity of the OCISMM: there is no formal process for applying new technologies and knowledge: ad hoc reaction.
Knowledge management skills	Knowledge management culture	The AIF is at the 1st level of maturity of the OCISMM: there is an absence of an organizational culture favoring the sharing of knowledge and there is an absence of an organizational vision aimed at encouraging the capture, conservation and sharing of information and knowledge.
	Information and Knowledge Facilitation Skills	The AIF is at the 2nd maturity level of the OCISMM: people integrate their data, information and knowledge but are not sufficiently motivated by management.
	Skills to develop human resources in information and knowledge management	The AIF is at the 1st maturity level of the OCISMM: there is very little motivation or reward for those who share their data, information, and knowledge.
	Skills to use information and knowledge management technologies	The AIF is at the 2nd maturity level of the OCISMM: the success of processes, operations and organization depends on the efforts and skills of individuals because people and entities are not encouraged to systematically share their data, information and knowledge with others.

5.3 The capabilities of information and knowledge management skills

Capacities on the culture of information systems and knowledge management concern the facilitation of information and knowledge management through motivation, the development of human resources for information and knowledge management and the skills to use information and knowledge management technologies. Indeed, for an organization to claim to develop organizational capacities specific to the management of information and knowledge in information systems skills, it must meet the following requirements: 1- on the cultural level, it makes sure to an organizational culture and vision aimed at encouraging the capture, retention and sharing of knowledge (Armbrrecht et al., 2001); 2- it has the ability to facilitate continuous processes of information systems: people apply, integrate their knowledge and interact with others (Peppart and Ward, 2004) (redefinition of the business mission by the management of information and knowledge, Venkatraman, 1994); 3- it has the skills to develop the human aspects: motivation and reward of employees, definition of an organizational policy of reward and motivation of employees, sharing of risks and rewards, development with partners of the business vision and information system processes (Luftman et al., 2004); 4- it has the skills to use the technologies of the information systems available and to acquire: improvement of the efforts, skills and knowledge of individuals and the organization, identification of skills, knowledge and best practices, integration from these to its action processes, optimization and continuous improvement (St-Amant and Renard, 2006), development of technical skills specific to technologies supporting knowledge management.

6. Conclusion

The main contribution of this paper is the application of the KMMM in the context of AIF. That application shows the AIF maturity level in Table3. So the contribution of this paper is to show the current maturity level of the organization and, to predict where Organization could go if she needs to improve her capabilities in the terms of three dimensions: infrastructures of information systems, processes of information systems and skills in information systems. Indeed, its operation, the AIF has 22 representative offices across the country. Data is the raw material available to the AIF for its business strategy and it must be processed in real time to produce information and knowledge that can contribute to decision-making. Indeed, information systems transform business through their ability to support the daily conduct of business by integrating into the practices and organizational activities of companies as well as business strategies in order to: - Acquire a sustained competitive advantage; - Support for new business models; - The opening of new markets; - Increasing the performance of organizations; - Overhaul and improvement of business processes; - Increasing efficiency and effectiveness in business processes; - The information system of the AIF must first be the product of strategic thinking; - From this strategic reflection, it is necessary to highlight the choice of technology (software, database, network, etc.); - Decision makers will focus on sustainable technology that takes into account environmental realities while

developing a risk management system in all AIF business processes; - The AIF will be obliged to seek information on the technology used by its competitors, and whether it is efficient or not in order to adopt it (business intelligence); - Acquire sustainable IT infrastructure, while selecting pilot users; - Define the process to be followed by all. This study had the merit of understanding the phenomenon of digitization and business intelligence. Other studies could focus on the implementation of an instrument for measuring organizational capacities for knowledge management and business intelligence.

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