

Testing Organizational Maturity in S.R.C.F. GALAȚI

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Abstract: *On the basis that organizational work in an extremely dynamic business environment is difficult, change is a subject of great interest. Both a deductive and an inductive approach are needed to cope with the changes at organizational level due to influence factors specific to the Romanian railway sector. For these reasons, we considered it relevant to highlight methods for testing organizational maturity within a company in the public domain of Romanian railway transport.*

Managerial field: *Complex Management Systems - Knowledge Based Management.*

Keywords: *Organizational maturity; organizational performance; business intelligence architecture; the maturity matrix; organizational culture.*

I. General knowledge about the Romanian railway transport sector

Restructuring the rail transport industry has started relatively shy at European level. In Romania, this restructuring process started in 1998 when there were major changes at the level of the National Railway Company. This big national owned company split into three other companies that wanted to be autonomous: the Freight Company, the Passenger Transport Company and, last but not least, the Infrastructure Company, of which S.R.C.F. is part of.

As a result of this restructuring appeared at the level of the central management of the Romanian railway sector, the management bodies whom were established according to the geographical position were replaced by a regional management structure, regional branches that required the management of the most important lines and the most profitable commercial routes who were able to obtain superior financial performance.

The international dynamics of business climate, driven by stronger competition in the rail transport sector, forced organizations to define very well what they are capable of producing and to offer end users to integrate what the most relevant knowledge, in order to achieve a consistent competitive advantage over the main regional, national and international competitors.

Thus, organizational management had to create procedures, methods and good practice guides in order to support a sustainable competitive advantage by initiating proper knowledge management processes.¹

The speed of business changes has led to a substantial reduction of the amount of time allocated so far to organizations for acquiring relevant experience and creating new content.

The fierce competition of the business environment forced managers from organizations in this sector to reduce their overall costs. The preferred method at the level of the head office, that was used, involved the reduction of the labor force, leading to early retirement and increasing labor mobility, leading to irreplaceable losses to organizational knowledge.²

II. Business intelligence architecture - precursor for organizational performance

The structure of the information system is defined as the way they design their internal organization, and expresses its principles of realization based on the fundamental elements that define the field of activity and the particularities of the economic system for which it performs, using the automatic data processing function. The structure of the computer system for a certain field of activity and a certain economic system is unique because it is determined by the functional particularities, the specific management rules and the legislation in force in that sector.

The architecture of the information system is its constructive model. It is not unique because there are more technical solutions for the implementation of the information system for a certain field of activity and a certain economic system. The architectural components are made up of the computing system, the communication system, the human resources system and the organizational system. Since most organizations have to make changes to their structures, we can appreciate the fact that the architecture of the IT system will also need to undergo variations in order to better adapt to the business context in which the organization operates.

The business intelligence system of an organization that wants to be competitive is defined as being made up of all the technological means that collects, analyzes and diffuses systematically secure internal information to users who have access to it. When discussing a business intelligence system, it is necessary to keep in mind those people in the organization who choose to make a decision only after they have taken into account the most important data, after they have been carefully selected. It is essential to understand that it is not enough just to collect and structure the data in a highly professional manner, for it to be used efficiently it is necessary that they help to focus the efforts of the managers on making the most appropriate decisions, even if they are essentially just reactionary.

Business intelligence systems are typically supported by the existence of data whose main characters are novelty and innovation. Business intelligence systems are those that offer particular, specific and essential data to that organization and only in the way they are systematized (advertising and competition data). These business intelligence systems have

¹ Servin, G., De Brun, C., *ABC on Knowledge Management* (London: NHS National Library for Health, 2015).

² *Knowledge management – An Overview*, http://www.providersedge.com/docs/km_articles/km_an_overview.pdf (last time accessed: March 20, 2018).

different users depending on the form in which end-user data is provided, although they can be accessed by any person in the organization, they are not really useful to everyone.³

Large organizations, sometimes even the smallest in size, have a type of system developed within their own organizational framework, such as digital libraries that collect, store, and report in simplistic form in a systematic manner or at the request of users. But these are not intelligent business systems, organizations that own such infrastructure, and technologies through which they carry out systematic evaluations, as well as departments specialized in doing so.

The ultimate product of such a smart business system is also known as the intermediary through which the information is tailored to the needs of each organization and can be assimilated at an organizational level in a competitive and intelligent way⁴. The real nature of informational needs coming from other sectors of activity than the current one of the S.R.C.F. Galati determines precisely the structure of such a system, and the understanding of the nature of this information is critical for these efforts to be successful.

Ideally, two major types of information are needed within S.R.C.F. Galati: one is related to the scientific side, the other refers to the business one. Owning relevant information from your own field of activity contributes to effective information management at the local level; It is also necessary to provide ways of integrating information from related fields but also those of the European rail transport sector, at whose standard the organization must report its services in order to be competitive.

An overall relevant picture for the organization should have a far greater perspective and should transmit meaningful data according to the three information areas: specific, more widespread and contextually oriented data. The organization's management needs to take into account the fact that there is the following situation: significant data compiled by an organization are collected from external sources, there is a danger that those organizations that are appropriated by the organization are prone to the same errors or uncertainties as data Source, which is an extremely serious threat to the future of S.R.C.F. Galati.

III. IRIS – C.F.R. S.A.'s business intelligence architecture

A traditional business intelligence architecture implies the existence of an analytical processing of data in a virtual warehouse. Within a business intelligence architecture, data reaches end-users through a variety of data organization and structuring methods, each of which is tailored to the type of end result desired by the user who needs that information.

A modern and competitive business intelligence architecture has the ability to analyze a huge amount of data from as many sources as possible, and is a much better platform that enables efficient data alignment, consistency, and last but not least flexibility of the predictive analysis capacity. A business intelligence architecture enables the user to simultaneously access ascending and descending data streams to meet the most demanding reporting and analysis requirements.

Achieving a perspective that is uniform despite the heterogeneity of data arrangements is not an extremely simple matter. It takes a lot of enormous energy, money, and perseverance from analysts and department heads, elements that are out of reach of any organization.

³ Balfe, N., Wilson, J., Sharples, S., Clarke, T., "Development of design principles for automated systems in transport control" *Ergonomics* 55 (2010): 37-54.

⁴ Biotechnology, N., *Competitive business intelligence gathering and analysis* (Nature Publishing Group, 2010).

In organizations, especially those in the public sector, the tendency is to use open source software on-line but not necessarily suited to their needs. It is preferable to use any tool that is very accessible and completely free of charge or very cheap, these avid intelligent customers will create their own rudimentary data processing systems that will theoretically make their work more efficient. In the long run, all these attempts to avoid spending that the managers of the organization considered inappropriate will have a negative effect on organizational performance as they will have to invest so much money and energy in the process of collecting and incorporating, Which should have been geared towards the dissemination process, thus undermining their future profits.

Modern business intelligence architectures that want to be competitive create an analytical ecosystem to incorporate the activity and action of primary users into the entire process of collecting, analyzing and reporting the entire data library that the system uses. The existence of this architecture will allow the organization to perform true predictive and exploratory analyzes and also promote the development of analytical applications using the memory of the various component departments' tools. A feature of this vision is that users can not predict what queries they will use for the various data they will use, or even data that will be able to answer their questions, because often the necessary data do not yet exist in data warehouses, in the form in which they deem it necessary.

The combination of these two visions is as achievable as challenging as it implies a much greater commitment from end users.

Depending on the size and needs of the organization, a business intelligence system consists of one or more people already engaged, with additional costs being associated only with the purchase or development of the required software and nothing more. This would be an example of an essential and relevant business intelligence system, as there is no need for separate hiring of full time specialists. The system thus created would not require more than two days per month dedicated solely to generating the necessary reports and analyzes. Because the essential component of this process is the provision of decision-making information, this responsibility should be taken up by one or two persons with seniority and experience in the organization's field of activity. This system, in this form, can easily be put into practice by any organization regardless of its size.

In order to develop the existing business intelligence architecture at C.F.R S.A., it was used a point-based design method based on the principle of object-oriented programming, given that there are more areas of activity within the organization. This special type of programming combines data structures with their functions to create reusable software objects, even if major input data changes are made. Point-to-Point Design methods lead to the most advanced IT systems today, due to its advantages of decomposing complexity into less complex elements, creating reusable modules using a unitary notation accessible to all those involved in a development process software.

IRIS is a very complex computer system that belongs to C.F.R. SA, its design costs amounted to \$ 30 million, being financed by the World Bank as part of the restructuring program for the Romanian rail transport system, this is particularly important as it reveals the considerable effort Which the organization has done to modernize its services in the collisions of a precarious financial situation.

The necessity of designing and implementing such a system is due to the fact that Romania's rail transport services must rise to the level of those in the European Union countries and should therefore be harmonized with its requirements from a legislative, Procedural and last but not least technical. The IRIS project aimed at developing an information system, aimed at procedural and technical harmonization, should be seen as a bridge between organizations - C.F.R. S.A., C.F.R. Freight, C.F.R. Travelers and end-users, to whom these organizations must provide the highest quality service.

From the technical point of view, IRIS construction has adopted cutting-edge solutions that consist of client applications, ORACLE central database server, multiple databases, and use specialized transaction management software. The IRIS system, viewed as a whole, can be presented as an integrated collection of diverse applications, each of which is complex information systems. The main functions covered by these applications are: management of commercial activities, contract management, customer management, etc.

Given the very high pressures faced by end-user rail transport companies through the implementation of this complex information system, they expect to see a visible improvement in the quality of the services they offer.

Adaptation of the architecture of this complex computer system is not very easy because these applications have been developed by interdisciplinary teams with members of C.F.R. S.A., C.F.R. Freight, C.F.R. Travelers, to which were added specialists of the railway intelligence service and a number of specialists from the UK who had extensive experience in such projects. Experimenting and implementing changes to this system's applications has been a great challenge because it contains over 2,000 PCs and servers interconnected in a network, plus several thousands of people who had access to the connected terminals network. Also, as a real-time work system, the implementation of the new changes was made even harder because the system could not be interrupted - the train movement never stops.

IRIS must therefore be regarded as a condensation of the combined intelligence of IT and rail specialists, who worked together, their efforts being all the more special because it should be mentioned that the railway specialists involved were an additional activity - they dealt with The changes brought to the system alongside the other service tasks they had in the companies they are employed with.

The adoption of this complex information system has been attributed to the predominant commercial character of rail transport activities, in the sense that railway activities cannot be made at a loss, they have to cover their costs and make a profit. The IRIS architecture consists of five distinct applications (Figure 1).

The ATLAS application involves activities related to the preparation, adaptation and launch of the traffic program. With this help, they can put into circulation the traffic program for the next period depending on the work to be done on the railway infrastructure. This program requires permanent adaptations because it is known in real time which trains are not running, why, if additional trains are introduced, therefore, with this instrument, the railway infrastructure traffic program prepares before the start of the next working day.

The CRONOS application allows reporting of traffic and managing deviations from the program and the provisions to regulate traffic. The occurrence of delays in the movement of trains entails the obligation to dispatch some provisions for traffic regulation. The provisions have already existing text in the system, and normally they are much simpler and faster to send, they are propagated in a e-mail-like system in a protected way, being visible only to the users of the application.

The FOCUS application facilitates real-time tracking of trains. All reports are, of course, recorded in the system database and appear in five forms of visualization, on screens available to operators in the central regulator and the central traffic dispatcher. Thus, there is a graphical form of movement with which employees are accustomed, having a tabular format but is also presented as a geographical scheme with flags showing the position of each train at any time of the day.

The ARGOS application monitors exploitation activities in technical and shunting stations and is mainly addressed to employees whose work involves the transport of passengers and goods on railway infrastructure. This application shows on the monitor

screen the schematic map of the station as it is represented in the station's technical plan of operation, which is represented by different symbols for the types of wagons and locomotives, as well as the trains existing in the station.

Similarly, the last IRIS component application, namely - MERCUR, which addresses the management of uploading and unloading activities related to the commercial component, is achieved. Here, the user has to enter all wagon orders, which generates in the computer system electronic consignment letters which, to the satisfaction of the orders, are filled in with actual data, and when the wagons are loaded and handed over to the station at which point The customer's representative comes to the cashier, charging and billing can be done automatically. Thus, the chances of double records for such financial transactions are almost null.

The main advantages of this architecture are:

- eases the work of its users by providing real-time information
- streamlines the calculation of transport charges, making it easier to collect correctly and on time;
- regulates the movement of trains to reduce delays;
- inform real-time end-users about the location of their goods.

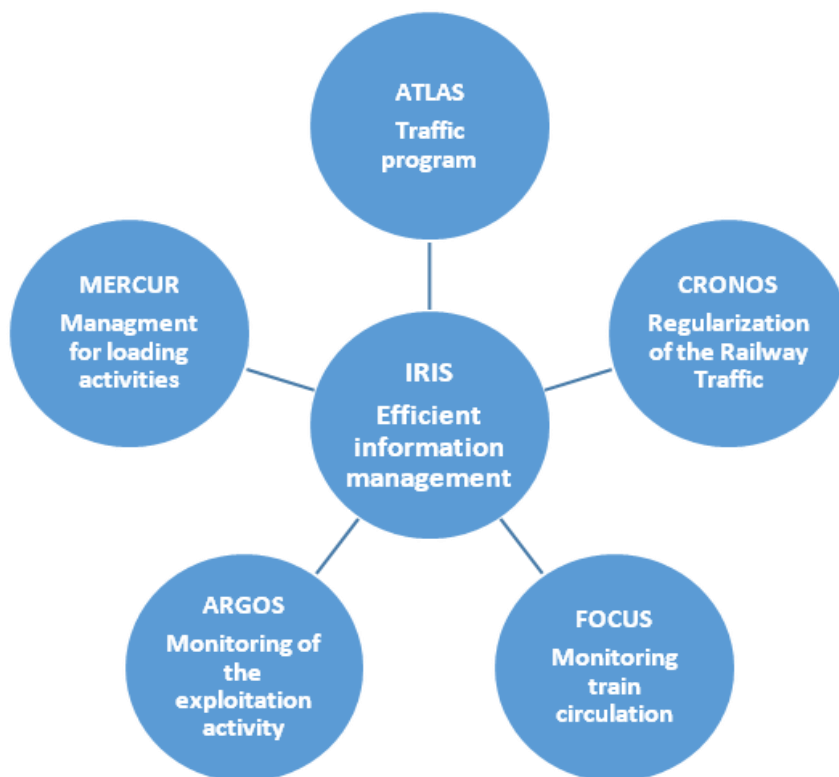


Fig. 1. C.F.R. S.A. Business intelligence architecture. Source: the authors, 2016

IV. Testing organizational maturity

Organizational maturity is a concept of major importance for companies' activity, it is the component that enables the organization to achieve stability, prosperity, and a sustainable competitive edge to the detriment of its competitors, and achieves this by standardizing the implementation of knowledge, skills And through appropriate management methods and techniques.

Maturity of the organization describes the skills and abilities of the human resources of the organization and their capabilities to apply these skills to improve the performance of their work. In other words, organizational maturity introduces special skills and expresses the relationships between these abilities and some variables such as job satisfaction, leadership styles, efficiency and productivity, etc., and ultimately provides better strategies and methods to meet the needs of the organization.

Testing organizational maturity within the compartments and units of S.R.C.F. Galati is performed by comparing the results obtained with an existing model - the maturity matrix, which is used as a comparative framework for improving the existing situation at the organizational level or for avoiding the lower levels of maturity.

The maturity matrix provides a brief description of four different organizational (basic, incipient, improved and advanced) maturity levels related to the five areas of the knowledge management capability model (leadership and strategy, organizational culture, networks and practice communities, experiential learning and knowledge base). It can be used by organizations to understand where they start and on which areas they need to focus to enhance their knowledge management capacity. It is also a useful document for review before completing the self-assessment.

Capability Area 1: Leadership and Strategy

A strong leadership and a set of strong strategies are essential to the success of the organization.⁵ Moving from working with tangible assets to predictable environments, focusing on mobilizing knowledge to cope with complexity and change requires a change in the organization's perspectives and values, as well as the tools and practices used.⁶ In other words, this is a change initiative that requires vision, direction and energy to be started.

Using knowledge is not a mechanical process.⁷ It involves relationships, trust and connections across the organization's borders, organizational culture, social systems and free will. To a leader who can clearly perceive the need to use their knowledge and value, it is recommended that they support an environment conducive to effective collaboration, which can have a great impact on changing organizational culture.⁸ In organizations with high performance, leaders clearly communicate the value of existing organizational knowledge.⁹

⁵ Kong, E., *The future of knowledge: increasing prosperity through value networks: Verna Allee, Knowledge and Process Management* (2003), 137-138.

⁶ Pasher, E., *Strategic Renewal - The Key Link Between KM and Organizations, Association of Knowledgework* (2009).

⁷ Bontis, N., Chua, W., "Intellectual capital and business performance in Malaysian industries," *Journal of Intellectual Capital* (2000): 85-100.

⁸ Gillingham, H., Roberts, B., "Implementing Knowledge Management: A Practical Approach," *Journal of Knowledge Management Practice* (2006).

⁹ Gibby, P.J., Milton, N., Palen, Hensley, S.E., "Implementing a Framework for Knowledge Management," *Society of Petroleum Engineers, Knowledge Management Research and Practice* (2006).

Leadership and Strategy capability area had a total of 7 questions that could get a minimum of 7 points and a maximum of 49 points. The score was divided by the 4 maturity levels according to Table 1.

Table 1. Division into organizational maturity levels according to the individual score achieved in capability zone 1: Leadership and Strategy. Source: the authors, 2016

Organizational Maturity Level								
ZONE	BASIC - A		INCIPIENT - B		IMPROVED - C		ADVANCED - D	
ZONE 1	7	12,25	12,26	24,5	24,51	36,75	36,76	49

We noted with VD1X the level of each individual of organizational maturity for Capability Area 1: Leadership and Strategy, and Table 2 illustrates the number of cases corresponding to each level of organizational maturity identified within that area.

Table 2. Identification of the number of cases falling within each organizational maturity level for Capability Area 1: Leadership and Strategy. Source: the authors, 2016

	A	B	C	D
VD1X	0	21	33	47

Corresponding to the Leadership and Organizational Strategy capability area, the image of the organization in the minds of the respondents is a very good one overall, leading to better individual and organizational development.

Capability Area 2: Networks and communities of practice

Networks and practice communities can enhance mobility and knowledge sharing between distinct units within the company and between organizations.¹⁰ Organizations should strive to stimulate network ownership and encourage their staff to be part of the 'cross-border knowledge' groups through which they can share their experience and ideas with the aim of generating new knowledge.¹¹

All effective leaders have networks of different types.¹² These networks communicate each other to share their experiential learning and react as reciprocal sonar to solve problems.¹³ Even if organizations have large systems of storage and knowledge recovery, people continue to go to their contacts because conversations provide them with a sense of timeliness and trust in the information they get.¹⁴

¹⁰ Anklaam, P., "Net Work: A Practical Guide to Creating and Sustaining Networks at Work and in the World," *Making networks work at work and in the world* (2009)

<http://www.pattianklam.com/network.html> (last time accessed: 21 March, 2018).

¹¹ Cross, R., Parker, A., Prusak, L., Borgatti, S., *Knowing What We Know: Supporting Knowledge Creating and Sharing in Social Networks. Organizational Dynamics* (2001).

¹² Reinelt, C., *Leadership Learning Community* (2008) <http://leadershiplearning.org/blog/claire-reinelt/2008-05-22/social-network-analysis-and-evaluation-leadership-networks> (last time accessed: 21 March, 2018).

¹³ Snowden, D., "Complex Acts of Knowing: Paradox and Descriptive Self-Awareness," *Journal of Knowledge Management* (2002): 100-112.

¹⁴ Wenger, E., White, N., Smith, J. D., *Digital Habits: Stewarding Technology for Communities* (Portland: CPsquare, 2009).

Networks and Practice Communities Capability Area had a total of 5 questions at which a minimum of 5 points and a maximum of 35 points could be obtained. Score that was divided by the 4 maturity levels according to Table 3.

Table 3. Division into organizational maturity levels according to the individual score obtained in capability area 2: Networks and Communities of Practice. Source: the authors, 2016

Organizational Maturity Level								
ZONE	BASIC - A		INCIPIENT - B		IMPROVED - C		ADVANCED - D	
ZONE 2	5	8,75	8,76	17,5	17,51	26,25	26,26	35

We noted with VD2X the level of each individual of organizational maturity for Capability Area 2: Networks and Communities of Practice, and Table 4 illustrates the number of cases corresponding to each level of organizational maturity identified within this area.

Table 4. Identification of the number of cases falling within each organizational maturity level for Capability Area 2: Networks and Communities of Practice. Source: the authors, 2016

	A	B	C	D
VD2X	3	32	40	26

The image of the organization, in the opinion of the respondents, is a very good one overall, but poorly developed networks and communities of practice may mean a real threat to the future of S.R.C.F. Galați.

Capability Area 3: Experiencing Learning

Management in capable organizations needs to recognize that experiential or ad-hoc learning is essential to sustaining innovation and continually improving organizational performance¹⁵. If in an organization all attention is directed to doing things as it has always done, it is very unlikely that innovations and improvements will be identified leading to an increase in organizational performance.¹⁶

Experiential learning is based on formal education programs¹⁷. Trainers have realized that it is difficult to transfer learning from the classroom to work processes at workplace¹⁸. At least 70% of workplace learning is informal, ad hoc and not facilitated by the organization.

¹⁵ Bailey, T., *Cultivating an Organizational Storytelling Culture* (2009), <http://www.slideshare.net/whatidiscover/tell-us-your-story> (last time accessed: 21 March, 2018).

¹⁶ Bailey, T., *The Experience of the Storyteller: Moving from the Personal to the Collective*, PhD Dissertation Fielding Graduate University (2007).

¹⁷ Booker, C., *The Seven Basic Plots: Why We Tell Stories* (New York: Continuum, 2004).

¹⁸ Brown, J. S., Denning, S., Groh, K., Prusak, L., *How We Found Ourselves in the World of Storytelling, Storytelling Passport to the 21st Century* (2009), <http://www2.parc.com/ops/members/brown/storytelling/Intro4a-How-Larry&JSB.html> (last time accessed: 21 March, 2018).

"Learning before, during and after" model created by British Petroleum has been adopted by many organizations as an easy way to apply experiential learning¹⁹. Experiential learning involves deliberate processes of knowledge absorption at different stages of initiating new employees. The framing of these "learning before, during and after" tools and processes provides the necessary structure and simplification of the way of thinking and action of the various working environments.²⁰

Experiential Learning capability area had a total of 5 questions that could achieve a minimum of 5 points and a maximum of 35 points. Score that was divided by the 4 maturity levels according to Table 5.

Table 5 Division into organizational maturity levels according to the individual score obtained in the capability area 3: Experiential Learning. Source: the authors, 2016

Organizational Maturity Level								
ZONE	BASIC - A		INCIPIENT - B		IMPROVED - C		ADVANCED - D	
ZONE 3	5	8,75	8,76	17,5	17,51	26,25	26,26	35

We noted with VD3X the level of each individual of organizational maturity for Capability Area 3: **Networks and Practice Communities** and Table 6 illustrates the number of cases corresponding to each level of organizational maturity identified within that area.

Table 6. Identification of the number of cases falling within each organizational maturity level for Capability Area 3: Experiential Learning. Source: the authors, 2016

	A	B	C	D
VD3X	2	16	33	50

Having an extremely high number of specialists who are at an optimal level of functioning with a rich knowledge base and extensive experience leads to the conclusion that as far as the organizational maturity of experiential learning can be synonymous with the profitable future for economic activity of S.R.C.F. Galati only if there are going to be new hiring and therefore the relevant experience will not be lost.

Capability Area 4: A tacit and explicit knowledge base

Some knowledge assets have the ability to be captured and stored.²¹ These tend to be explicit, relatively stable assets (eg. documents that include company policies).²² However, the systems and technologies needed to capture, share and use knowledge must not be

¹⁹ Callahan, S., *The Vital Role of Business Storytelling*, Anecdote Whitepapers (2009), http://www.anecdote.com.au/papers/VitalRoleOfStorytelling_1.pdf (last time accessed: 21 March, 2018).

²⁰ Garvin, D., *Seizing the Chance to Learn*, The U.S. Army's After Action Reviews (2009), http://www.wildfirelessons.net/documents/Garvin_AAR_Excerpt.pdf (last time accessed: 21 March, 2018).

²¹ Beasley, H., Boenish, J., Harden, D., *Continuity Management* (New Jersey: John Wiley and Sons, 2002).

²² Callahan, S., *Harnessing Tacit Knowledge with Communities*, Anecdote Whitepapers (2006), <http://www.anecdote.com.au/papers/AnecdoteTacitKnowledge.pdf> (last time accessed: 21 March, 2018).

limited to documents.²³ Also management in the organization needs to consider the ways in which elements of tacit knowledge can be shared (eg. lessons learned or specific expertise).²⁴ Frequently used knowledge bases often include stories, photos, video clips, and contact information about recent innovations²⁵. With the new Web 2.0 information technology, such as wiki, social networks and blogs, there is a great potential that can be geared towards improving knowledge sharing and improving knowledge management adaptation.²⁶

Experiential Learning capability area had 8 questions that could get a minimum of 8 points and a maximum of 56 points. Score that was divided by the four maturity levels according to Table 7.

Table 7. Division into organizational maturity levels according to the individual score obtained in the capability area 4: Tactical and Explicit Knowledge Base. Source: the authors, 2016

Organizational Maturity Level								
ZONE	BASIC - A		INCIPIENT - B		IMPROVED - C		ADVANCED - D	
ZONE 4	8	14	14,01	28	28,1	42	42,1	56

We noted with VD4X the level of each individual of organizational maturity for capability area 4: The tacit and explicit knowledgebase, and Table 8 illustrates the number of cases corresponding to each level of organizational maturity identified within this area.

Table 8. Identification of the number of cases falling within each level of organizational maturity for the capability area 4: Tactical and Explicit Knowledge Base. Source: the authors, 2016

	A	B	C	D
VD4X	1	25	47	28

Although at the level of the Regional Branch CF Galati there is an extremely large number of specialists who are at the optimal level of functioning, with a rich knowledge base and a vast experience, they form the knowledge base but it seems is not is The relevant knowledge is still in the minds of those experts in the organization, and there is a great risk that when they hide the organization and the knowledge base disappear with them. A relevant knowledge database can turn into organizational memory, essential for the future of S.R.C.F. Galati.

Capability Area 5: Organizational culture

Culture is described as the whole complex that includes knowledge, beliefs, art, morals, law, personality, and any other capabilities and skills acquired by the individual as a member of

²³ DeLong, D. W., *Lost Knowledge: Confronting the Threat of an Ageing Workforce* (Oxford: Oxford University Press, 2004).

²⁴ Dixon, N., *Common Knowledge: How Companies Thrive by Sharing What They Know* (Brighton: Harvard Business School Press, 2000).

²⁵ Tapscott, D., Williams, A. D., *Wikinomics: How Mass Collaboration Changes Everything* (London: Penguin, 2006).

²⁶ Dictionary. *The TechTerms Computer Dictionary* (2009), <http://www.techterms.com/definition/wiki> (last time accessed: 21 March, 2018).

society.²⁷ Although this definition is not specific to organizations, all of these elements have been an important aspect of organizational culture studies.²⁸

In many ways, culture is the result of adopting practices presented in other areas of capability. But it is also a critical success factor, and cultural issues or challenges will always have an impact on the effectiveness of other initiatives.²⁹ So if the leadership is the one who makes the "spark" available, organizational culture is what keeps the "fiery fires." It is very difficult to try to change the culture of an organization directly.³⁰ However, by thinking and acting in a way that cognizance is appreciated, and if the benefits gained by the organization as the use of knowledge are recognized, organizational cultures can change.

Organizational Culture Capability Area had 8 questions to which a minimum of 9 points and a maximum of 63 points could be obtained. Score that was divided by the 4 maturity levels according to Table 9.

Table 9. Division into organizational maturity levels according to the individual score obtained in the capability area 5: Organizational Culture. Source: the authors, 2016

Organizational Maturity Level								
ZONE	BASIC - A		INCIPIENT - B		IMPROVED - C		ADVANCED - D	
ZONE 5	9	15,75	15,76	31,5	31,51	47,25	47,26	63

We noted with VD5X the level of each individual of organizational maturity for Area 5: Organizational Culture, and Table 10 illustrates the number of cases corresponding to each level of organizational maturity identified within this area.

Table 10. Identification of the number of cases that fall within each organizational maturity level for Capability Area 5: Organizational Culture. Source: the authors, 2016

	A	B	C	D
VD5X	7	34	36	24

Responses have been divided when talking about the organizational culture specific to the structure of the labor force and whether it is connected and work on the basis of mutual trust, because there are jobs that are more of an individual character and that do not involve cooperation but also due to reluctance Employees, and the habit of doing every job his workpiece without asking or appealing to another because he does not seem to know.

Following the analysis of the results obtained regarding the organizational maturity of the individuals within CF Galati Regional Branch, we have divided them according to the scores obtained on the 5 areas of capability, which are potentiators or inhibitors of the organizational change. (Table 11)

²⁷ Callahan, S., Schenk, M., White, N., *Building a Collaborative Workplace*, Anecdote Whitepapers (2009), http://www.anecdote.com.au/papers/AnecdoteCollaborativeWorkplace_v1s.pdf (last time accessed: 21 March, 2018).

²⁸ Callahan, S., *Connecting People with Content*, Anecdote Whitepapers (2006), <http://www.anecdote.com.au/papers/Callahan2005ConnectingPeoplewithContent.pdf> (last time accessed: 21 March, 2018).

²⁹ Davey, N., *Knowledge Board*, Stephen Convey on empowering employees (2009), <http://www.knowledgeboard.com/item/3033/23/5/3> (last time accessed: 21 March, 2018).

³⁰ Kaye, B. L., Jordan-Evans, S., *Love 'em' or Lose 'em: Getting Good People to Stay* (Oakland: Berrett-Koehler, 2005).

Table 11. Centralization leveling of organizational maturity. Source: the authors, 2017

Organizational Maturity Level								
ZONE	BASIC - A		INCIPIENT - B		IMPROVED - C		ADVANCED - D	
ZONE 1	7	12,25	12,26	24,5	24,51	36,75	36,76	49
ZONE 2	5	8,75	8,76	17,5	17,51	26,25	26,26	35
ZONE 3	5	8,75	8,76	17,5	17,51	26,25	26,26	35
ZONE 4	8	14	14,01	28	28,1	42	42,1	56
ZONE 5	9	15,75	15,76	31,5	31,51	47,25	47,26	63

Table 12. Ranking of capability zones according to the obtained scores. Source: the authors, 2016

	Capability Area	Differentiated score		Organizational maturity level framing
		Obtained	Maximum possible	
1	Leadership and Strategy	33.38614	49.00	C
2	Networks and Communities of Practice	20.70297	35.00	C
3	Learning Experience	24.43564	35.00	C
4	Knowledge base: tacit and explicit	35.54455	56.00	C
5	Organizational culture	35.9901	63.00	C

As it can be seen in Table 12, according to the scores identified for all capability areas, we have an improved level of organizational maturity. Following the testing of organizational maturity, Leadership and Strategy is the most important issue, followed by Experiential Learning being a technical field in which the most knowledge is acquired at the workplace, on the third position as a level of importance we have A tacit and explicit knowledge base that, although having a tremendous potential, is not properly exploited and developed, risking the loss of this essential knowledge with the departure of employees within the organization; the fourth level as an importance within the organization is the Networks And the Practice Communities, which are insufficiently developed in some departments or even nonexistent in others, the last place of importance given at the organizational level as could be expected is the Organizational Culture, this being the hardest thing to change within an organization , Whose activities take place within the public railway sector, since the mentality of the individual as well as the collective mentality, especially after a certain age, is extremely difficult to change, and it is advisable to consider that the majority of the employees in This organization is well over 40 years old.

To support the increased managerial relevance of knowledge management solutions, we consider it relevant to collaborating with the organization's management in order to design the most appropriate schemes for identifying, adopting or generating practices to improve anticipatory capacity. Co-operation with the managers of the Regional Branch of CF Galati requires a permanent contact that will generate extremely important feedback, through

which they will refine and establish the best practices and methods of implementation of knowledge management strategies. Within these frequent meetings, the current organizational practices will be examined through the knowledge management perspective and considering the objectives of the optimal industrial organization in the Romanian railway sector, we propose a review of the strategic decision guidance practices (re-examining the processes of improving the decision-making assistance).

The knowledge base and the experimental knowledge management module make up a heterogeneous picture of causal factors, thus exposing the difficulties of elaborating standard schemes - adoptable contextually and embedded in managerial practice.

V. Minerva - the new component of the IRIS business intelligence architecture

As a result of organizational maturity testing within S.R.C.F. Galati, I believe it is timely and necessary to introduce Minerva - a new component within IRIS - the existing business intelligence architecture and the development of a good practice guide for its implementation taking into account the first Line of guidance and rankings in the organizational maturity levels of the adopted source model.

For successful implementation of the newest component of the IRIS Business Intelligence architecture, it is necessary to map the most relevant information with the potential to transform them into knowledge captured, processed and shared with organizational employees in order to further transform the knowledge in collective intelligence using the working tools and best practice code of the LEScanning method.

The main function of this new component is to capture the relevant knowledge from the outside and the inside of the organization, knowledge as a strategic facilitator of managerial decisions, but which will also serve users who have not been included in existing thinking, all of which lead to the development and consolidation An organizational memory that will ensure a sustainable future for the organization.

The activities through which the new component will prove useful and efficient are: researching the informational environment, analyzing, filtering and selecting important information of the organization's activity and transforming them into knowledge relevant to it, filtering them and categorizing them on important levels, storing and managing Their efficiency and, last but not least, the facilitation of access for all those interested in obtaining this knowledge and directing the necessary knowledge to the end users in the departments that need them, all these processes eventually contribute to gaining added value for all employees of C.F.R. S.A. including S.R.C.F. Galati, implicit for the Romanian railway transport sector, the expertise acquired by them transforming into a sustainable competitive advantage for the organization.

Based on the guidance of the decision support and of the functions of collecting, selecting and creating intellectual capital, unexpected possibilities will be explored for S.R.C.F. Galati. We hope that through the implementation of the new Minerva component, the expected long-term anticipative capacity of the organization will be created.

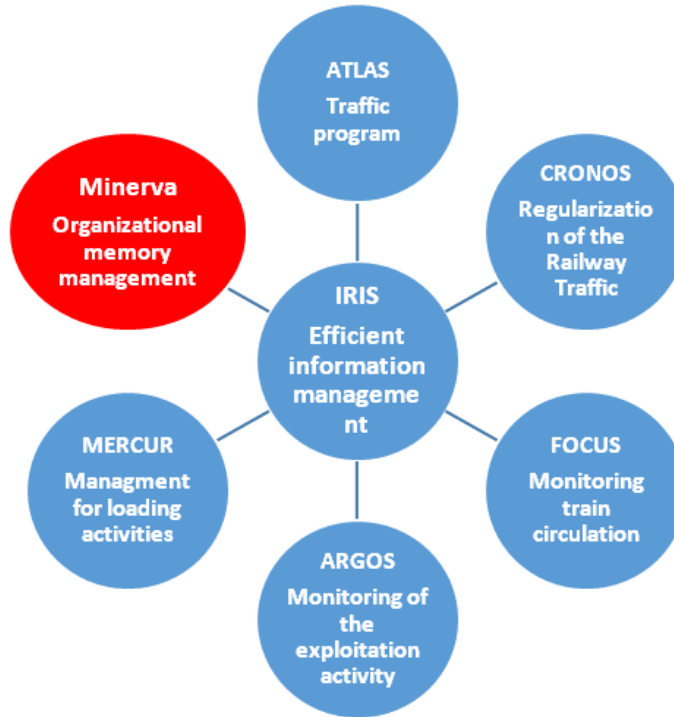


Fig. 2. Proposed Business Intelligence Architecture. Source: the authors, 2016

VI. Conclusions

The advantage of developing and strengthening organizational memory is by providing valuable data to financial professionals and potential investors when they want a very safe alternative for their investment. In the new strategic context, managerial thinking must be geared toward seeing the organization as a conglomerate of knowledge and the flow between them. Financial flows are a result of the use of knowledge flows, knowledge flows ahead of profits.

There is not yet a very significant progress in the work of organizations towards adapting their structures around this important advantage, nor in the attempt to evaluate organizational memory.

In the future, organizations will have to cope with more and more varied requirements from end-users, they can create and sustain competitive advantage by initiating appropriate knowledge management processes.

The need for successful implementation of an adapted system of business intelligence is due to the fact that the Romanian rail transport services have to go up to those of the European Union countries and therefore have to be harmonized with its requirements from the point of view Legislative, institutional, procedural and, last but not least, technical.

A business intelligence architecture allows the user to simultaneously access data streams to meet the most demanding reporting and analysis requirements.

Managers within the organization must highlight throughout the organization, at all hierarchical levels, the importance of the management role based on the exploration and exploitation of knowledge in shaping strategic behavior.

Managerial vision of the organization involves changing the classical, hierarchical types of organizational structures as a means of implementing a strategy tailored to the dynamics of the competitive environment, with an emerging of the flexible, hybrid, network type.

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