

Preface

PREAMBLE

Information Systems and Information Technology (IS/IT) play a vital role as promoters of new ways to communicate, work, do business, relate, act, manage and lead in modern day organizations. Along the route, evolved expressions like e-/m-commerce (electronic/mobile), e-/m-markets, e-/m-business, e-/m-tourism, e-/m-governance, e-/m-learning, e-democracy, e-/m-collaboration, crowdsourcing, intermediation and many other new terms that have emerged in recent years, conveying IS/IT that influence the way individuals and organizations see within themselves, among others with possibilities for vibrant interactions.

At the same time, the Web technologies and various IT applications such as *decision support systems*, *workflow management systems*, *enterprise systems*, *value-chain management systems*, *document and content management systems* have allowed to increase organizational productivity, bring the organization closer to its stakeholders (market, consumers, suppliers) and create new forms of competition and inter-organizational collaboration. A large number and variety of theories, methods, best practices and tools have been developed and improved in different scientific areas in order to support the design and implementation of initiatives aimed in promoting organizational learning, organizational memory and the transformation of organizational identity thus leading to organizational well-being.

Organizational well-being, in its various dimensions, includes a wide range of concerns relating to financial, social and environmental accomplishment of the organization. It covers aspects that can be described as deeply dependent on the cognitive ability of the organization (attitudes, processes, practices and technologies that enable memory, perception, meaning, attention, communication, coordination, reasoning, learning, imagination, innovation and action by the entirety of its members). IS and IT are adopted to promote the intelligent behavior of groups and communities to enhance organizational performance, gain competitive advantage and, in broader aspect, to ensure organizational well-being. Concerning organizational well-being through the utilization of information systems and technology (IST), this book has emphasizes on three parameters, such as organizational agility, organizational intelligence and organizational resilience.

ORGANIZATION OF BOOK CHAPTERS

The book is comprised of fourteen chapters and divided into four sections, namely “Information Systems and Technologies in Organizations,” “Emerging Issues in IST in Organizations of Various Industrial Sectors,” “The IST Focus and Cases in Organizational Well-Being,” and “Case Studies from Various Business Sectors and Organizations.”

The first section has four chapters. Chapter 1 discusses a new concept of the emergence of the growing of long tail that has added complexity in organizational leadership. It has been observed that the trends affecting the individual come from social, economic and technological sources and affect leadership behaviors and this in turn affects the society. In order to understand this interconnection, lower level influences and how they affect the higher-level visible signs are being discussed in the chapter. This chapter begins with a discussion of causes for related phenomenon and concludes with ways to work with the long tail, either from within as a member, or externally as a leader.

In order to build organizational resilience through the use of IST, Chapter 2 presents an approach to the strategic role of information and information technology in enterprises through alignment with organizational strategic planning and the contribution in building organizational resilience. It discusses the importance of companies realizing the deployment of strategic planning on organizational strategic planning of information and information technology, with the aim of identifying information needs, actions and solutions that will contribute to the monitoring and tracking of defined strategic objectives, and also in building organizational resilience. The chapter also discusses the contribution of information technology to the information systems of companies, through the resources and solutions currently available, such as business management systems - ERP, Sales Force Automation - SFA, Business Intelligence - BI and calculating the need for productive resources - MRPII. Based on a survey conducted in firms located in an industrial Brazilian shoe industry, this study develops a framework for the analysis and deployment of strategic planning on organizational strategic planning information and information technology.

In search of social intelligence, Chapter 3 tries to answer questions about the newly developed concepts around the concept of intelligence. Towards this end, the chapter seeks to establish a consistent track on the various uses of the term intelligence in today’s organizations. It takes the seminal concept of intelligence as its starting point and adapts it in an organizational sphere, the so-called business intelligence (BI), in all its apparatus of technologies and associations. Afterwards, it seeks to establish a visible and viable relationship between both business intelligence and organizational intelligence, anchored in knowledge management. Once architected a connection between these “intelligences”, the chapter redirects itself towards the subject of collective intelligence, one that is born from individuals, groups and organizations supposedly intelligent, and is in a transfer process to the collective use of information technology featured in social communities.

Chapter 4 presents a proposal of digital mediation for direct public participation during electoral periods. The proposal includes a conceptual and functional model and the corresponding proof of concept, which is a web application namely, *iLeger*. This application supports collaborative interactions such as questions, answers, suggestions, ratings, comments and live debates, and was specifically designed to gather, in a single neutral deliberative and regulated space, the main stakeholders in an electoral campaign, fostering multidirectional communication (synchronous and asynchronous) and sharing between them. This study also includes the results obtained from the use of the *iLeger* platform in the electoral campaign for the Portuguese Parliamentary and Local Elections held in 2009, the 2010 election of the Head of the Portuguese Medical Association and the Presidential and Parliamentary Elections held in 2011 in Portugal.

While talking about the emergence of new IST, such as the Internet, Chapter 5 argues that for many businesses, the new IST has become as invaluable as human resources, equipment and distribution channels. Continued current use and implementation of new Internet tools will further enhance business and continue to improve the business model and the return on investment. A good web strategy works with an organizations' business strategy to design and implement a website that meets the goals of its business strategy. After building a web presence, the thought process is on continuous improvement of the business model and its value chain. The web strategy includes enhancement of the online community, personalization, content, ecommerce, extranets, and intranets.

Chapter 6 mentions that in today's competitive business environment, information systems are not a luxury; rather they are vital for survival. However, the study further mentions that high costs of licensing, implementation issues, and missed opportunities in legacy systems led to the development of a new generation of Information System platforms called "Cloud" domain. It is argued that Cloud, if not understood properly by managers, has many shortcomings. Moving toward cloud is not the goal and even competitive advantage may suffer. Managers and change agents should undertake deep study over Cloud Information Systems and Software as a Service (SaaS) before deciding to move toward migration. In this chapter, the main elements and features in which CEOs and IT managers should consider in evaluating the SaaS migration option has been provided, and emphasizes that enterprises may be acquainted with the concept, goals, and theoretical foundations of SaaS as a main Cloud-based service in the business environment.

Chapter 7 argues that open source software systems have poor or inexistent documentation and contributors are often scattered or missing. The reuse-based composition and maintenance of open source software systems, therefore, implies that program comprehension becomes a critical activity if all the embedded behavior is to be preserved. Program comprehension has traditionally been addressed by reverse engineering techniques which retrieve system design models such as class diagrams. These abstract representations provide a key artifact during migration or evolution. However, this method may retrieve large complex class diagrams which do not ensure a suitable program comprehension. This chapter attempts to improve program comprehension by providing a model-driven reverse engineering technique with which to obtain business processes models that can be used in combination with system design models such as class diagrams. The technique is fully developed and tool-supported within an R&D project about global software development in which collaborate two universities and five companies. The automation of the approach facilitates its validation and transference through an industrial case study involving two open source systems.

The dependence of businesses on properly functioning information systems to allow organizational personnel and outside investors to make important decisions has never been more pronounced. Information systems are constantly evolving due to operational and security requirements. These changes to information systems involve a risk that they could occur in a way that results in improper processing of information and/or security issues. Along these contexts, Chapter 8 considers related guidance provided in a Global Technology Audit Guide (GTAG) from The Institute of Internal Auditors in conjunction with current change and patch management literature in order to assist internal auditors and organizational personnel in better understanding a process that leads to efficient and effective information system changes. It describes how internal auditors and information technology professionals can work together with organization management to form a mature approach in addressing both major information system changes and patches.

Providing IST focus and cases in organizational well-being, Chapter 9 mentions that organizations have suffered a large revolution at the social, economic and technological levels. A transformation of paradigm in what comes to IST used in day-to-day life of every citizen, by itself, does not sustain such a transformation. The study suggests that it is necessary to make a change of culture and behavior. The use of IST in an appropriate and integrated way with the organization's processes will depend on an individual and collective effort. The younger generation, accustomed to sharing, often through mobile devices, personal information on Facebook, Twitter, among others, enters the job market looking for similar tools. These new "social tools" allow the production, sharing and management of information and knowledge within the organization between peers and other stakeholders, eliminating the barriers of communication and sharing. Towards this end, this chapter provides a comprehensive view of a new context of labor faced by traditional organizations i.e. social business supported by mobile IST, namely m_CSDT in order to improve the well-being of these organizations through the collective intelligence and agility dimensions.

Nowadays, the major challenge to organizations managers is that they must make appropriate decisions in a turbulent environment while it is hard to recognize whether information is good or bad, because actions resulting from wrong decisions may place the organization at the risk of their survival. That is why organizations managers always try to avoid making wrong decisions. In order to improve the situation, managers should use collective knowledge and experiences shared through Organizational Memory (OM) effectively to reduce the rate of unsuccessful decision making. In this sense, Business Intelligence (BI) tools allow managers to improve the effectiveness of decision making and problem solving.

In the light of these motivations, Chapter 10 aims to understand the role of BI systems in supporting OM effectively in a real context of crowdsourcing academic initiative called CrowdUM.

Chapter-11 emphasizes that one of the important technologies that deliver more effective and efficient services to students, lecturers, administrators and universities is electronic portfolio. It is defined as a student collection of learning progress, accomplishments and reflections. Nowadays most of the universities have joined to use e-Portfolio, due to the advantages provided for their organizational success. Despite of their large investment in e-Portfolio, its utilization is not continued. A major challenge is "how to increase the continuous use of e-Portfolio". Most of the literature has ignored the role of motivation in its continuance usage. Regarding these issues, the main goal of this chapter is to highlight the importance of motivation in e-portfolio context to sustain its utilization.

Illustrating case studies from business sectors and organizations, Chapter 12 discusses the use of social media tools in research. The study mentions that every day one witnesses new tools appearing or new features being added to already existing tools. Their characteristics allow one to communicate and collaborate without time and space constraints. Moreover, they also help in the development and creation of new content as well as in the sharing and publishing of it. Since they are so popular, the study questions, as whether researchers can also use them in the research workflow process? The study further questions, as if they use them, what are the most commonly used tools and their reasons for use? These are some of the questions addressed in this chapter. The study analysed responses given by a higher education institution to a questionnaire on the use of social media tools. These findings contribute to a greater understanding of the importance of these tools for research purposes.

Making a comparative analysis on the usage of business information systems among Portuguese and Hungarian small and medium-sized enterprises, Chapter 13 argues that it became obvious that corporate management, administration, planning, cash flow and other business activities could hardly function without information technology in the organization of society. Relationships between human activities and the people themselves are reliant more and more broadly on electronic devices. In terms of using

information technology devices and services, the development of enterprises are significantly different in the European Union. It also leads to a strong and significant relationship with the added value created by micro, small- and medium-sized enterprises.

Chapter 14 discusses the subversive uses of mobile technology in Brazil. It mentions that in Brazil, for every 100 inhabitants there are 130 mobile phones. It further mentions that, despite the euphoria that those numbers bring to business, the social uses of mobile technology in Brazil tells a lot about Brazilian society and culture itself, and show a more complex picture than merely a marketing phenomenon. The study examines subversive cell phone use in Brazil against the background of the cell phone use worldwide and the social implications of that cell phone use. This chapter addresses three subversive uses of mobile technology, namely, strategies of mobile phone coding; SIM card management; and criminal uses of mobile phones.

CONCLUSION

One may argue that IST does not guarantee organizational well-being, but IST has an important role in enhancing the overall performance of the organization. IST can be of pivotal importance to organizational well-being in leveraging collective and distributed cognition, behavior and identity processes and supporting learning and innovation needed to improve organizational traits; thus assisting the planning and management of complex organizational interventions; and finally enabling the diagnosis of problems in organizational intelligence, agility and resilience.

Furthermore, with the emergence of various social networks and on-line communities, more and more organizations are utilizing tools and techniques to improve their performances through utilization of these new media to reach out to their clients. At the same time these new forms of communication channels are also being utilized to learn about their client base. Learning the consumer behavior, their patterns of consumption, and patterns of on-line transactions can be observed and thus tools can be developed by using predictive models for the organizational well-being.

However, the fundamental concept of organizational well-being introduces organizational learning, information orientation, and entrepreneurial awareness issues that can be improved through utilization of technology, a knowledgeable system of management, and a social community with perceived values and norms. In these cases, the enhancement requires not only elevation of knowledge at the supply side, but also require knowledge enhancement at the demand side. This book put forwards those issues in relevance to strengthen the organizational well-being by upholding the essential elements in relation to this emerging arena. The book includes concepts, theories, cases and practices around the niche market, especially focusing the current economic barriers. It is expected that the book will emerge as a potential resource material in the contemporary market, not only for academic research, but also for the practitioners.

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