

## Foreword

Business intelligence is made possible by the existence of Information Technology. Business intelligence aims to support better business decision-making. To use agile methodologies and to develop Information Technology faster and cheaper is to put an icing on the cake. I doubt that Hans Peter Luhn was aware of the consequences of Business intelligence when he coined the term in 1958. Today, 50 years later, “Business Intelligence and Agile Methodologies for Knowledge-Based Organizations: Cross-Disciplinary Applications” is coming out.

The book is comprised of fifteen chapters and is a collaboration work of 29 scholars from 8 different countries and 11 different research organizations. The end product is made possible by the use of the impossible ideas dreamt by visionaries, where the first two chapters discuss the body of knowledge of both business intelligence & agile software, followed by chapter 3 and 4, which discuss knowledge management and discovery in relation to agility essence. Subsequently, Business intelligence agile methodologies, agile modeling, agile approach, and governance are discussed in chapters 5, 6, 7, and 8. Business intelligence & adaptive software development are covered in chapter 9, followed by chapter 10, which covers *yahoo* experience in brand lifting. Throughout the next three chapters, the authors tackle issues like: risk management in business intelligence and agile methodology, business intelligence governance in e-government system, and business intelligence in higher education. Ultimately, the last chapter discusses Web engineering and business intelligence.

The 1<sup>st</sup> chapter, *Business Intelligence: Body of Knowledge*, attempts to define Business Intelligence body of knowledge. The chapter starts with a historical overview of Business Intelligence stating its different stages and progressions. Then, the authors present an overview of what Business Intelligence is, architecture, goals, and main components including: data mining, data warehousing, and data marts. Finally, the Business Intelligence ‘marriage’ with knowledge management is discussed in details.

The 2<sup>nd</sup> chapter entitled: *Agile Software: Body of Knowledge*. The chapter explains agile methodologies, its general characteristics, and quick description of the famous agile methods known in the industry and research.

The 3<sup>rd</sup> chapter with the topic: *Knowledge Management in Agile Methods Context: What Type of Knowledge is Used by Agilests?* Provides an overview on the knowledge management techniques used in different software development processes with focus on agile methods. Then tests the claim of more informal knowledge sharing, and see the mechanisms used to exchange and document knowledge.

The 4<sup>th</sup> chapter: *Knowledge Discovery Process Models: From Traditional to Agile Modeling*, provides a detailed discussion on the Knowledge Discovery (KD) process models that have innovative life cycle steps. The chapter proposes a categorization of the existing KD models. Furthermore, the chapter

deeply analyzes the strengths and weaknesses of the leading KD process models, with the supported commercial systems and reported applications, and their matrix characteristics.

The 5<sup>th</sup> chapter *Agile Methodologies for Business Intelligence* explores the application of agile methodologies and principles to business intelligence delivery. The practice of business intelligence delivery with an Agile methodology has yet to be proved to the point of maturity and stability; the chapter outlined Agile principles and practices that have emerged as best practices and formulate a framework to outline how an Agile methodology could be applied to business intelligence delivery.

Likewise, the 6<sup>th</sup> chapter has the title of: *BORM: Agile Modeling for Business Intelligence*, whereby BORM (Business and Object Relation Modeling) method is described and presented through an application example created in Craft a CASE analysis and modeling tool. The chapter begins by introducing fundamental principles of BORM method. Then the chapter goes on to highlights most important concepts of BORM. In order to further enhance the understanding of BORM, the chapter applies BORM on a simple, descriptive example. .

The 7<sup>th</sup> chapter entitled: *Agile Approach to Business Intelligence as a Way to Success* presents an overview of several methodological approaches used in Business Intelligence (BI) projects, as well as Data Warehouse projects. In this chapter, the authors show that there is a strong relationship between the so-called Critical Success Factors of BI projects and the Agile Principles. As such, with basis on sound analysis, the authors conclude that successful BI methodologies must follow an agile approach.

In this context, the 8<sup>th</sup> chapter, with the title: *Enhancing BI Systems Application through the Integration of IT Governance and Knowledge Capabilities of the Organization*, cites a study reports the results of an empirical examination of the effect of IT governance framework based on COBIT and Organizational Knowledge Pillars in enhancing the IT Governance framework (Business / IT Strategic alignment, Business value delivery, risk management, Resource management, performance measurement) to improve the Business Intelligence Application and Usability within the organization. Quantitative method is adopted for answering the research questions.

The 9<sup>th</sup> chapter: *ASD-BI: A Knowledge Discovery Process Modeling Based on Adaptive Software Development Agile Methodology* proposes a new knowledge discovery process model named “ASD-BI” that is based on Adaptive Software Development (ASD) agile methodology. ASD-BI process model was proposed to enhance the way of building Business Intelligence and Data Mining applications.

While the 10<sup>th</sup> chapter: *Measurement of Brand Lift from a Display Advertising Campaign*, describes an Advanced Business Intelligence System have been built at *Yahoo!* to measure the lift in brand awareness driven from the display advertising campaigns on Yahoo network. It helped us to show to the advertisers that display advertising is working in lifting awareness and brand affinity.

Whereas, the 11<sup>th</sup> chapter entitled: *Suggested Model for Business Intelligence in Higher Education*, describes a data mining approach as one of the business intelligence methodologies for possible use in higher education. The importance of this model arises from the fact that it starts from a system approach to the university management, looking at the university as input, processing, output, and feedback, and then applies different business intelligence tools and methods to every part of the system in order to enhance the business decision making process.

The 12<sup>th</sup> chapter: *Business Intelligence and Agile Methodology for Risk Management in Knowledge-Based Organizations*, discusses and explores the role of Business Intelligence and Agile methodology in managing risk effectively and efficiently. It explores the risk management traditional tools that are commonly used, the role of Business Intelligence in risk management, and the role of agile methodology in risk management.

The 13<sup>th</sup> chapter: *Towards a Business Intelligence Governance Framework within E-Government System*, will take E-Government project in Syria as case study to explore, empirically, the main barriers of E-Government project in developing countries; how to take benefits from business intelligence (BI) to build a framework, which could be adopted by developing countries in their E-Government projects.

In the same context, the 14<sup>th</sup> chapter: *Business Intelligence in Higher Education – an Ontological Approach*, presents an ontology-based knowledge management system developed for a Romanian university. The starting point for the development knowledge management system is the classic Information Management System (IMS), which is used for the education & training and research portfolio management. .

In conclusion, the last chapter entitled *Web Engineering and Business Intelligence: Agile Web Engineering Development and Practice* highlights the main issues related to Web engineering practices and how they support business intelligence projects, the need for Web engineering, and the development methods used in Web engineering. Web Engineering is a response to the early, chaotic development of Web sites and applications as well as recognition of the deference between web developers and conventional software developers. Viewed broadly, Web Engineering is both a conscious and pro-active approach and a growing collection of theoretical and empirical researches.

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