Preface

Globalization and digital & information technologies are radically changing the business landscape. Internet and e-business innovations can be considered among the biggest forces that contribute to change in businesses. Consumer spending is also shifting online. The number of consumers making purchases online continues to increase. According to the Forrester report, US and European e-commerce sales are expected to grow 62 percent and 78 percent, respectively, by 2016 (Trendwatching.com, 2012). More and more consumers are buying items online, because online shopping is convenient and offers many advantages and different options.

E-commerce is evolving and will continue to evolve. Previously, buying something that can’t be seen, touched, or tested was seen as a barrier for the growth of e-commerce, and many consumers have some concerns about shopping online. Businesses spend a lot of effort constantly upgrading their technology to overcome security problems, and it plays a huge role in fostering online shopping. As a result of advances in Internet security over the years, many people who once feared online shopping are now very comfortable with it. Moreover, with new technologies and the right website infrastructure, all the barriers initially holding growth of e-commerce back have been significantly reduced. A recent Forrester report says much of the growth in e-commerce sales comes from online retailers that improve their websites by integrating new technologies and rich selling tools (Rueter, 2012). Therefore to overcome barriers for the growth of e-commerce and shoppers’ concerns about online shopping, businesses have to adopt new technologies to their website infrastructure.

New Online Technologies Reshaping the E-Business Landscape and Fostering Online Shopping

Most internet users are now fairly comfortable with shopping online. Aggressive merchandising and discounting activities of flash sale and daily deal retailers can be considered among the factors that contribute to fostering the online shopping. Many consumers prefer the Web to brick-and-mortar retailers in large part because of online deals, and the Forrester report indicates that 70 percent of holiday shoppers last year made purchases online rather than in stores because online retailers offered better deals (Rueter, 2012). According to Nielsen’s monthly survey (2011), 87 percent of app downloaders have used flash sale and daily deal retailers, like Groupon or Living Social. Flash-sale sites find and negotiate the best deals on behalf of consumers; however, the success of these models to support long-term sales remains unproven. Daily deals and flash-sales can often boost traffic to the website, but it can also make consumers wait to buy again until business offers a similar bargain. Due to the advantages for the consumers, daily deals and flash-sales models will be another popular trend for e-commerce.
Several trends have the potential to significantly impact e-businesses in the near future. Recent developments include: semantic technologies, artificial intelligence, cloud computing, mobile business models (e.g. location based services), social media, mobile media applications, software agents for e-commerce, and information retrieval shaping entrepreneurial opportunities in the e-business domain. Entrepreneurial opportunities for e-business will be affected by technological innovations, and e-entrepreneurs need to be ready to embrace innovative advancements in order to stay competitive.

E-businesses are looking for new ways to attract and retain customers. E-businesses need to build a loyal customer base by competing on value and providing high quality customer service. Businesses have to focus on offering a great customer service, because an effective online customer service can drastically change the face of online shopping. Businesses that want to create customer satisfaction and maximize online business have to make the user experience as simple and efficient as possible by infusing effective new technologies and features into their websites. There are endless business innovations that help enterprises to offer great online customer services such as assisting customers by live online chats and connecting consumers with other consumers to get better recommendations. Live video interaction is one of the new trends, and by using live video interaction technology, consumers ask live questions to the company so consumers have a better understanding of products and services. In live video interaction guided selling, the company assists customers in choosing products that best fulfill their needs by analyzing user requirements and generating buying recommendations. Virtual advisors may facilitate customers to make a purchase decision and also increase the perception of employee presence.

Moreover, video technology replaces usage of the traditional poor quality static pictures. Consumers can not be sure what they are buying by looking at poor quality pictures. Video can bring the product to life in ways unattainable through text and pictures. Product videos provide a much better understanding of the product and create a rich visual experience for consumers. Businesses can use video to display new products, product features, instruct consumers on how to use, etc. Usage of innovative technologies is especially important for the online clothing retail stores because customers can not check the size of the items. For better customer experience, businesses can use innovative technologies that allow users to try on the product online through dummy pictures or avatars. Shoppers can virtually try on clothes and see how they will fit on their body shape. The integration of video technologies into retail websites will improve consumers’ online experiences.

Combined use of internet, wireless, and video technologies is being considered the next wave of e-business innovations. As internet, wireless, and video technologies are combined and used to conduct e-business, the industry may likely change over the next years. Therefore, e-retailers need to invest in creating and maintaining effective social media channels with customers if they want to stay competitive in the future. Social networking is increasingly popular on mobile devices. Android smartphones and iPhone users spend much of their time engaging with the Facebook application on their phones than any other mobile applications. Sharing on social media is becoming more and more important in promoting the products. Therefore, e-commerce sites have to add social bookmarks to their sites to facilitate sharing among consumers. Based on the shared customer experiences, consumers obtain recommendations and information about products, prices, and deals that would be difficult to get from an offline environment. Blogging can be considered as another trend that help small enterprises to compete with big enterprises. Blogging generates more traffic and potential customers for the small enterprises by helping them to be stand out at the top of the search engines.

Multimedia will play a central role in future e-business systems and processes. E-business applications may use multimedia to provide additional services or an enhanced user interface. Consumers seek
out novel and exciting goods, products, and experiences. E-businesses may use new technologies and tools to enhance the customers’ experience and make e-shopping more fun. Hence, brands can use games to inject a sense of fun into their products in order to better engage with customers and to attract and reward loyal customers. Playing games with your customers, or even better, allowing them to play with one another, enhances the relationship between the brand and consumers.

Today, consumers own multiple devices to access internet. Most mobile devices are now Web-enabled, and millions of people are using mobile devices to get online every day. Google’s latest research study (2012) indicates that 38 percent of daily media interactions occur on a smartphone screen, and mobile devices are fast becoming the preferred method of accessing the Web. On the other hand, 24 percent of daily media interactions occur on PCs, and 9 percent of daily media interactions occur on tablets. Therefore, businesses should understand all of the ways that people access internet, because consumers shop differently across devices and it is important to optimize the shopping experience across all devices.

According to Nielsen’s monthly survey of 25,000 mobile consumers (2011), 44 percent of U.S. mobile subscribers now own a smartphone device, and these advanced devices are changing the way consumers interact with their phones. The number of smartphone subscribers using the mobile internet has grown 45 percent since 2010. This means that mobile consumers are social, always connected, and rely on their phones more than ever before. Mobile phones have played a very important role in communication technology through their versatility and superiority to landlines. As consumers spend more of their lives online, the digital and physical worlds are increasingly coming together.

With increasing adoption of smartphone worldwide, smartphones are becoming indispensable to our daily lives and also transforming everyday shopping behavior. The increase in smartphones and tablet devices usage also means that shopping is never far from consumers’ fingertips. Smartphones allow consumers to shop both at home and when they are on the go. Consumers armed with smartphones or tablets embrace innovative new applications and technologies to shop wherever and whenever. Nielsen’s report (2011) indicates that 54 percent of smartphone owners claim to use their mobile handsets frequently while shopping. According to the Think Mobile with Google, 79 percent of smartphone users use their smartphones for shopping related activities such as locating retailers, comparing prices, reading product information and reviews, comparing product features, or finding and using promotions and discount coupons (Google/IPSOS OTX MediaCT, 2011). Besides, mobile shoppers take pictures of a product and send details to friends and family while at a store or mall.

Google’s research also indicates that 27 percent of smartphone shoppers purchase through mobile websites and 22 percent of them purchase through applications. Mobile shoppers spent roughly $300 on smartphone purchases in 2010 and entertainment items (48%), electronics (45%), clothing/apparel (45%), and wireless or cell phone service are among the top purchases made on smartphone. Smartphone shoppers are willing to purchase through mobile websites; therefore it is evident that developing a comprehensive cross-channel strategy and having a mobile-optimized website is very important for the future success of businesses (Google/IPSOS OTX MediaCT, 2011). Consumers are mobile, and companies have to be mobile and use mobile to their advantage. Going mobile has become a business imperative. Businesses that want to benefit from mobile opportunities have to make mobile part of their marketing plan and give consumers a great mobile experience when they visit the company’s site on their mobile phone. Companies have to build a mobile site that is easy to use and take action.

According to the Think Mobile with Google, a vast majority (82%) notice mobile advertising when they are using their smartphone, and half of those take an action as a result of noticing mobile ads (Google/IPSOS OTX MediaCT, 2011). Considering this fact, companies have to invest in mobile and
integrate mobile ads into their communication strategies. Moreover, consumers use their smartphones to help with all aspects of their daily lives. The advances of Internet technology are making significant changes in the way people access online information and communicate each other. Consumers constantly strive to better understand the world around them, and want to have some level of control by having the right information at the right time. With new technologies, consumers now expect to access information anytime, anywhere, and in real-time. Consumers regularly use their phones to find and act on information; therefore, businesses have to extend online advertising strategies to mobile and be found through mobile search.

All new smartphones come with GPS. GPS is very helpful, because consumers’ phones can send their location information, which allows businesses to target their offers for specific geographic areas. The promise of mobile marketing is its ability to reach the right consumer, at the right time, and in the right place including at the point of purchase. As a business, if you’re trying to reach a mobile consumer, understanding geo-targeted communication strategies is very critical, because mobile users have a higher tendency to be doing searches with a local intent. People are searching locally, on the go, when they require any type of local product or service. People are looking for information on a mobile device when they intend to act on it. This means they are ready to purchase. Google’s study reveals that after looking up a local business on their smart phone, 61 percent of users have called, and 59 percent have visited the business (Google/IPSOS OTX MediaCT, 2011). Consumers regularly use their phones to find and act on information. If users intend to act quickly on the information they find on mobile, they’re more likely to take action somewhere near their locations. E-business sites that are mobile optimized, or that have a streamlined mobile application, will get more sales. Therefore, businesses have to optimize their local visibility on mobile devices for local searches and make it easy for the user to take action from mobile site.

Today’s electronic marketplace presents a highly challenging environment for entrepreneurs and organizations. In order to create effective strategies, companies must be able to identify change and trends. Identifying new trends and opportunities associated with modern entrepreneurship can be critical in staying competitive in the marketplace. The aim of this edited book is to create a forum for the discussion of the future impact of e-business innovations on modern entrepreneurship. “Modern Entrepreneurship and E-Business Innovations” provides an overview of the current state of conceptual and empirical research about the use of e-business innovations in modern enterprises.

The papers collected in this edited book are therefore essential reading material for students, academics, managers, entrepreneurs, and political decision makers interested in applying and fostering e-business innovations in an entrepreneurial environment. This edited book is organized as three sections, which include the experiences, ideas, and results of the studies of many international experts on this topic. Section 1, New Trends in E-Businesses, discusses the trends and future developments related to e-business. Section 2, Adaptation of e-Business Innovations, focuses primarily on various e-business innovations and technologies and their adaptation to the enterprises. Finally, Section 3, ICT Based Systems in Modern Enterprises, presents the use of ICT based systems in enterprises especially in micro enterprises. In the following paragraphs, the main contribution of each chapter in “Modern Entrepreneurship and E-Business Innovations” will be briefly given and discussed.

It is important and worthwhile to analyze the trends related with e-business and their impacts on enterprises; otherwise, enterprises will miss a number of entrepreneurial opportunities and significant developments that may affect their competitive situation. “Innovative Electronic Business: Current Trends and Future Potentials,” by Tobias Kollmann and Patrick Krell, aims to create a clearer understanding of
the three development stages of the Internet as well as to define current trends and discuss their future potentials for electronic business. Kollmann and Krell analyze the development of the Internet from Web 1.0 to Web 2.0, and the future Web 3.0. In this study, the Web 1.0 in particular is characterized by supply-oriented systems that focus on the supply of items or services. Accordingly, private and commercial businessmen use the Internet as another distribution channel to offer their products to the market. Kollmann and Krell associate the Web 1.0 primarily with business models that build around electronic procurement, electronic shops, and electronic marketplaces. Contrastingly, Web 2.0 is characterized by network systems that connect private and commercial users through the Internet and therefore build up a network of relationships. Authors argue that entrepreneurial opportunities in the Web 2.0 result primarily from electronic communities. However, the Web 3.0 is in particular characterized by demand-orientated platforms where demand-driven products and services are provided and authors say that the future Web 3.0 will be characterized by electronic customization and electronic request platforms.

In “Megatrends in Electronic Business: An Analysis of the Impacts on SMEs,” Marko Ovaskainen and Markku Tinnilä discuss the importance of trends and megatrends from the viewpoint of small and middle-sized enterprises (SMEs) in electronic business. The chapter first gives literature review about the development of electronic business in SMEs. Then, the paper identifies the most important four significant trends and the four trends that are analysed in this study are respectively integration of technologies and business processes, evolution of business models, multi-channel solutions and channel management, and networking and new kinds of cooperation. Authors focus on the analysis of the mentioned four significant trends, and discuss their contents and implications, especially from the viewpoint of SMEs and their entrepreneurial opportunities in e-business. Finally, they sum up the results of the discussion, draw conclusions, and make suggestions for future research.

Ina Kayser examines the future entrepreneurial opportunities from a different perspective by focusing on electronic government and the resulting consequences for entrepreneurial opportunities in her study called “Change for Entrepreneurial Chances? E-Government in the European Union 2020 and 2040.” Trends about information technology not only have impacts on private enterprises but have also impacts on governments. Governments and related organizations across the globe are also bearing considerable investments to foster the implementation of innovative technologies into public services. This research aims at finding a feasible answer to the question what entrepreneurial opportunities occur through e-government in the European Union in 2020 and 2040. The analysis involves two scenario analyses and identifies different possible trajectories of the European Union and corresponding entrepreneurial opportunities. From an analysis of the possible trajectories of the European Union, Kayser deduces the effects on e-government in the European Union. Building on the evaluation of resources and market circumstances as well as political grounds, she identifies the implications for the occurrence of entrepreneurial opportunities and benefits for entrepreneurs arising from e-government in the European Union.

Today, many online retailers are trying to create social presence by adopting media-rich technologies. In “Adoption of Social Media by Online Retailers: Assessment of Current Practices and Future Directions,” Farhod P. Karimov and Malaika Brengman focus on the instruments that generate social presence in e-commerce websites. The aim of this chapter is to provide an understanding of how the adoption of different social media features can affect online sales and also to assess the current deployment of diverse social presence enhancing technologies among top e-retailers in order to reveal opportunities for other e-commerce businesses and to speculate about future developments in this area. Karimov and Brengman first discuss different social media features that can be applied by e-retailers to enhance perceptions of online social presence: photo cues, video cues, assistive interfaces (avatars), online product review and
rating, recommendation agents, instant help (live help features), online social networks, support weblogs, and user customization features. Then, they investigate the current adoption of such social media features by top business-to-consumer online retailers. Based on a content analysis of 210 top business-to-consumer websites, authors also examine more specifically how e-commerce websites differ in their utilization of these social media cues depending on the monetary and symbolic value of the products they sell. According to the Karimov and Brengman, understanding how top e-retailers differ in their utilization of social media cues, depending on the monetary and symbolic value of the products they sell, will contribute to a better understanding of social media diffusion among the variety of e-retailers and will allow to make better predictions about the future. The findings of this study indicate that while some social cue features seem to be readily adopted by online retailers (such as facial photographs, customer reviews & ratings and some online social networks such as Facebook and Twitter); however, more advanced social cues (such as video-streams, avatars, recommendation agents, live-help, and support blogs) are not yet used to their full potential and consequently authors conclude that these social media instruments will rise in importance over the years to come.

Mobile commerce is an attractive research area due to its relative novelty, rapid growth, and great potential in business applications. According to the Xining Li and Jiazao Lin, M-commerce applications have become very popular; however, the research in this area is still in very early stages. They argue that due to various mobile devices, evolving wireless and telecommunication technologies, heterogeneous platforms, and existing and emerging business models, there is still a long way to go in terms of developing the right user-friendly devices and interfaces and specifying the right M-commerce models and services. In order to face these challenges, in their study, “Call U Back: An Agent-Based Infrastructure for Mobile Commerce,” Li and Lin propose a new M-commerce infrastructure, Call U Back (CUB), to handle bigger and sophisticated transactional activities. In this chapter, the authors present the design and architecture of the CUB system which integrates agent technology and context-aware workflow analysis to accommodate intelligent M-commerce applications. Li and Lin first give a brief overview about intelligent agents and context awareness. Then they explain architecture of the CUB system and discuss design considerations of some key system components, such as mobile portal, business model, Web services, service discovery, as well as functionalities of the middleware. They also give information about the context-aware model, the workflow analysis scheme, and the security mechanism adopted in the CUB system. Finally, they give concluding remarks as well as future works.

Technology innovations, including wireless internet access, enable banking transactions to be conducted using a mobile device such as a mobile phone, personal digital assistant (PDA), or smartphones. “Mobile Banking Innovations and Entrepreneurial Adoption Decisions,” by Vanessa Ratten, tries to find out how a person processes and adopts technological innovations like mobile banking. Ratten reviews the literature on technological innovations and technology adoption processes with a focus on behavioral learning models. She discusses the theory of reasoned action, the theory of planned behavior, the technology acceptance model, and social cognitive theory in order to explain technology adoption behavior. Ratten argues that mobile banking requires a person to learn about a technological innovation; therefore, the social cognitive learning perspective is adopted in this paper in order to understand how a person processes and adopts technological innovations like mobile banking. The conceptual model in this chapter examines the antecedents of adopting mobile banking. Five variables (advertising, experience, perceived risk, learning inclination, and entrepreneurial proclivity) are included in the theoretical framework as being the most important antecedents that affect a person’s intention to adopt mobile banking. The theoretical framework and propositions stated in this paper have important managerial
implications for the banking industry. Ratten concludes that financial institutions around the world can capitalize of the innovativeness and newness of mobile banking by focusing their marketing efforts on how people adopt the technology innovation.

A business’s ability to sense and respond to new technology developments is critical. Businesses have to leap from one generation of technology to the next and adapt their business models on the basis of new technologies. Businesses that do not adopt technologies fail to survive in the marketplace. Technology innovations have generated a growing new business opportunities for e-entrepreneurs.

There are some mobile applications that make personalized and local suggestions. These applications use smartphone GPS to locate the consumer and suggest real-time updates, offers, coupons, and activities based on factors such as location. Use of location based service and geolocation technologies also provide many business opportunities. Montes, Gutiérrez, Fernández, and Romeo focus on the business opportunities linked to the development of technologies such as Geolocation and Location Based Services (LBS) in their study called “Reality Mining, Location Based Services, and E-Business Opportunities: The Case of City Analytics.” Authors first define the concept of geolocation and give information about the requirements and evolution of geolocation systems. Then, the authors provide a literature review about the current and future applications of location based services. In this study, characteristics of geolocation applications focus on two main areas of interest: those emerging from individual needs, such as geosocial networking, and those that arise to improve the functioning of society and public interest, like collaborative mapping and augmented reality. The authors also describe an example of an e-enterprise –City 2020 Ltd– that uses geolocation sources of opportunities. The objective of this e-enterprise is to become one of the first sensor networks for gathering information on what happens in the physical environment. The information collected is transformed into meaningful knowledge that can improve and optimize the decision made by the users of the application. Finally, the authors analyze the main socio-ethical problems (such as geoslavery, security, and privacy) and some opportunities of location based services.

Lim, Tan, and Talib propose a low-cost method for generating panoramic views on mobile platform in their chapter, “Low-Cost Methods for Generating Panoramic Views for a Mobile Virtual Heritage Application and its Application to the Heritage Zone of George Town Malaysia.” Virtual heritage is one of the computer technologies that creates explicit visual representation of a structure. With virtual heritage, people can have an overall imagination of the heritage sites although they might have not visited some of the places before. Virtual heritage applications combine real and virtual objects. Authors argue that cylindrical panorama is one of the most suitable techniques to be adopted in developing virtual heritage applications because it is possible for the users to navigate a 360 degree horizontal walkthrough. Therefore, users can experience the heritage sites. The objective of this paper is to present a low-cost method of capturing and producing cylindrical panoramas for a mobile virtual heritage application. The proposed method in this study stores finite images in an array in order to generate a 360 degree panoramic view from different angles of the heritage sites. This method can be supported by all kinds of platforms, and therefore, it can be installed in any mobile devices without having to use any intermediate software to convert the image file format. The outcome is 360 degree cylindrical panoramic views, which allows the user to gain a 360 degree clear vision around historical monuments with standardize iOS interface design on a mobile platform using lower computational cost but with similar quality of production. The virtual heritage area chosen in this study is the UNESCO heritage area of George Town, Penang in Malaysia, and the results indicate that the application was successfully implemented.

With the advancement in mobile phone technology, it is possible to create a mobile game that incorporates virtual reality techniques. Virtual reality (VR) means computer-simulated environments that can
simulate physical presence in the real world. In virtual heritage, VR brings a sense of reality to the users and provides the users with a clearer and more immersive view of the surroundings of a heritage building or site. In “Mobile Virtual Heritage Exploration with Heritage Hunt with a Case Study of George Town, Penang, Malaysia,” Tan, Lim, and Talib present a virtual heritage application called M-Heritage Hunt that integrates virtual reality and games for mobile platforms. According to the authors, VR technology is becoming unavoidable in the new emerging digital visualization fabric, but it is still relatively unexplored on mobile device platforms. In this chapter, the authors present an application of VR in virtual exploration of heritage sites on mobile platform that incorporates a game called M-Heritage Hunt. M-Heritage Hunt is a novel game which is a hybrid of the traditional games of monopoly and treasure hunt. The main objective of this game is to create an environment that provides panoramic view of various heritage sites in order to promote a particular heritage area and to increase the learning experience of George Town, Penang, Malaysia. In the evaluation of M-Heritage Hunt, findings indicate that many respondents think that the content is interesting and they agree that M-Heritage Hunt has the ability to successfully deliver the educational content such as the history of the heritage sites. Moreover, the majority of the respondents find that the interface of M-Heritage Hunt is user friendly for game playing and can be an excellent guide for them when they visit the city. Finally, the majority of the respondents request to install M-Heritage Hunt in their mobile device.

ICTs have become so widely used and they are essential for doing business. They enable and trigger new ways of managing business relationships, and new models for doing business in the advancing digital economy. ICTs improve the transparency of processes and information management and also facilitate planning and decision making processes. ICTs play a critical role for developing new business models and processes.

There is an extensive body of research about information and communication technology (ICT) usage in small and medium sized enterprises (SMEs); however relatively few studies have examined ICT usage specifically in the subset of SMEs known as micro-enterprises. In “ICTs in the Micro-Enterprise: An Examination of Usage, Benefits and Firm Growth in Hawaii’s Agricultural Sector,” Kelly Burke examines the use and benefits of website and other Internet ICTs among micro-enterprises. The study compares ICT use among micro-enterprises (MEs) in the agricultural sector. Burke first defines the concept of micro-enterprises and reviews the literature about factors that affect ICT adoption in small businesses. This chapter proposes a research model applying the stage theory of organizational complexity and factors influencing ICT adoption. The study examines the relationship of firm size (exhibiting characteristics of a developmental stage) with the adoption of a variety of ICTs including computers, email, websites, online research, and several emerging Internet technologies. The study also seeks to determine whether the firm CEO’s education level and the type of crop produced impact the firm’s ICT adoption. A survey is conducted to determine which farming micro-entrepreneurs are currently making use of or intend to make use of Internet technologies, including e-commerce, in support of their business operations. Results of the study indicate that as MEs grow, they employ the use of more types of ICTs and, to some extent, the more innovative ICTs. These ICTs support the micro-enterprise in managing the increasing complexity of intra-firm and inter-firm coordination and transactions. This study also finds that to some degree, micro-entrepreneurs who possess more education exhibit a tendency of engaging in a greater degree of Internet use. Similarly, results indicate that MEs producing different crops find themselves needing the same types of ICTs to support business growth. By better understanding current adoption patterns and intentions, this research hopes to provide a framework for planning future educational and support services for micro-agribusinesses.
Technologies like mobile, social, and cloud are creating a new wave of innovations for businesses. There is continuous change and transformation in the marketplace. The organization’s agility plays an important role in obtaining the strategic advantage and the market success in the highly changing business environment. Business agility means the ability of a business to adapt rapidly and cost efficiently in response to changes in the business environment. As a result, businesses need to adapt applications, processes, decisions and services to meet the new requirements. For enterprises to become agile, a lot of things have to become more flexible. The role of IT is one of the most important factors in enabling business agility.

Knowledge management in modern enterprises requires an infrastructure capable of supporting the creation of knowledge and facilitating knowledge sharing. Organizations that succeed in knowledge management are likely to view knowledge as an asset and to develop organizational norms and values which support the creation, retention, and sharing of knowledge. Due to the complexity associated with knowledge sharing, a culture of learning and knowledge sharing needs to be instilled and cultivated within the organization.

Traditional Business Intelligence (BI) architecture does not provide enough flexibility to respond to the needs of the business. Indeed, there is growing awareness that a new approach to BI is needed. Companies must think of ways to make their processes more flexible in order to survive and thrive in turbulent times. Technology can play an important supporting role in enabling organizations to become more agile.

“Building the Agile Enterprise with Service-Oriented Architecture, Business Process Management and Decision Management” analyzes the connection between the Service-Oriented Architecture (SOA), the Business Process Management (BPM), and the Decision Management, as well as the way in which these modern approaches contribute to obtaining organization agility. In this study, Marinela Mircea argues that the agile enterprise entails agile architecture in order to react rapidly to the changing requests. She emphasizes three major technologies: Business Process Management (BPM) for independent functions orchestration, Service-Oriented Architecture (SOA) for the projection and implementation architecture of these functions, and Decision Management (DM) for the organization’s decision management. The author points out the connection between the three approaches and the way they may lead to obtaining a superior level of organization agility and flexibility. The chapter also analyzes the changes generated by SOA on the enterprise, with a special focus on management, and it presents the elements of service-oriented enterprise architecture, with a special focus on the agility feature. Mircea concludes that a SOA-based solution may be considered a response to rapid changes and the use of SOA in combination with cloud computing may be a feasible solution to the challenges of the economic crisis. Through such a solution, the small, middle-sized, or large enterprises may speculate market opportunities that under normal conditions would not be accessible. Moreover, from the perspective of service characteristics, she argues that the adoption of solution based on SOA, BPM, and cloud computing in business may be a prerequisite for the transition to a new form of innovative enterprises – the service-oriented virtual enterprise.

Enterprise resource planning (ERP) system is a software application that integrates internal and external management information across an entire organization, embracing a large spectrum of business areas such as manufacturing, operations, sales and marketing, customer relationship management, etc. Enterprise Resource Planning (ERP) systems were initially destined to large companies in order to standardize and streamline their key business processes. Recently, they have been also increasingly adopted by Small and Medium Enterprises (SMEs). ERP software consists of many enterprise software modules that are individually purchased, based on what best meets the specific needs and technical
capabilities of the organization. Depending on the organization’s size and needs, there are many ERP software alternatives. If the ERP implementation is successfully done, enterprises can gain many benefits from using integrated applications to manage the business. However, it should be noted that not all ERP implementations have given satisfactory results. Given the cost of the investment required to acquire, implement, and operate an ERP system, enterprises have to identify the best alternative that would cover their business requirements. “Semi-Structured Methodology for ERP System Selection Based on MACBETH and Choquet Integral Applied to Small and Medium Sized Enterprises” by Abdelilah Khaled and Mohammed Abdou Janati Idrissi addresses the question of how to choose an ERP solution that best suits a given SME. This chapter intends to develop a structured methodology for ERP selection applied to the SMEs’ context. The proposed methodology has the advantage of dealing with interdependent selection criteria and generalizing the decision maker’s preferences in order to make an optimal and justifiable decision. The authors first define and identify a set of selection criteria related to SMEs’ context. Then they introduce a new iterative learning based approach for ERP selection based on the defined selection criteria. This approach is based on The Measuring Attractiveness by a Categorical Based Evaluation Technique (MACBETH) to make enlightened decisions through the consideration of interdependencies among the adopted selection criteria and to express the decision maker’s preferences about the adopted criteria. The authors conclude that owing to enterprises’ dynamic and flexible nature, the adopted selection criteria are generic and practically adaptable to a wide range of enterprises.

Information technology products have an influence over all areas of business activities. Business intelligence (BI) is the ability for an organization to collect, maintain, and organize knowledge. Business Intelligence is a set of methodologies, processes, architectures, and technologies that transform data into meaningful and useful information in order to develop more effective strategies and support decision-making. BI technologies provide historical, current and predictive views of business operations that can help identifying new opportunities. BI applications include the activities of decision support systems, reporting, online analytical processing, statistical analysis, forecasting and data mining. “Visualization and Simulation for the Analysis of Business Intelligence Products,” by Milena Janakova, analyses information technology products architectures and compares the BI applications with Customer Relationship Management (CRM) and database & operating systems. Janakova first explains the information technology products and argues that database systems have a fundamental influence on data processing, data management, and data search. BI and CRM products use stored data for further analysis and support of customer service. These products often co-operate with database systems. Operating system is default required by all applications to work optimally with memory, CPU (Central Processing Unit), disks, LAN (Local Area Network), and printers. The main architecture components are tools for end users, analysis, database, data integration, and system source. The effective analysis of the adopted solution has been realized by Petri Nets via places and transitions. In this study, analysis is based on a multidimensional methodology with object access. The benefits of the realized analysis are options to compare the complexity and scope with other products, such as openSolaris, Oracle database system, and SugarCRM. Results of comparison show that the BI solution architecture takes a broader view in contrast with selected systems. Operating systems need only two components, CRM architecture use three components, and Oracle database systems need four components for architecture definition. Janakova concludes that the optimal innovation is to merge the system source with available methods for data integration, and tools for end users with component data analysis.

ICT systems are used in all industries, but the reasons for their use, as well as their focus, can differ widely across industries. This depends on the nature of a company’s offer, the scale of the market and
the marketing strategy. In the transport and logistics industry, larger companies can use sophisticated ICT systems to manage their operations, while smaller companies may prefer to use more traditional communication tools.

“Intelligent Agent for Modeling and Processing Decisional Workflows in Logistics,” by Thomas Tamisier and Fernand Feltz, develops a collaborative expert system aimed at processing regulation and operational rules related to multimodal freight transportation and involving the European and national contexts. Tamisier and Feltz discuss the project ATLAS (Assistance to Transportational Logistics by Automated System), which is concerned with the use of Decision-Support Systems to sustain the growth of the Grand-Duchy of Luxembourg as a prominent logistics place. The authors argue that ATLAS seeks to offer tailored solutions for transport management, and dedicated to all economic actors of the supply chain, whether seeking the best way to comply with administrative, legal, and business constraints, or willing to improve on important features such as secure collaboration, traceability, or multimodality. ATLAS allows an efficient processing and the system checks the coherence of the knowledge and produces a justification of the decision with respect to relevant operational procedures. Tamisier and Feltz deduce that the decision system will help dealing with the EU-shaped freight framework, notably characterized by the development of multimodality, aids to take off road transport, and new working rules for truck drivers.

In conclusion, the articles of “Modern Entrepreneurship and E-Business Innovations” contribute to an enhanced understanding the significance impact of e-business innovations and technologies on the modern entrepreneurship. E-business technologies not only will become smarter and faster, but could completely transform the way of doing business.

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