Agile Business Processes: Blueprint for the Digital Economy

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Summary

This paper first deals with the question of how efficiency and sustainable success of a business model can be ensured in the digital economy. The key to this is agile business processes that serve as a blueprint for the digital economy.

The mapping of business processes in models then allows for rapid implementation processes, in which the technical specifications are implemented using standardized SaaS offerings from the Oracle Public Cloud into productive enterprise application systems. A look into the future shows how these methods can also be applied in enterprise spanning process networks.

Introduction

Novel digital technologies or simply unprecedented ways of using known technologies, or sometimes just immense increases in performance of proven technologies form the space needed to drive the digital economy. Here, motivated entrepreneurs with ingenious - or sometimes downright strikingly simple - ideas will find the soil to thrive on. If then potent and ideally patient risk capital providers come into play, the rising star of the digital economy seems to have been born. But how it can be prevented that this star does not burn up in the fire of scorched millions after a short time? How can a business model’s efficiency and sustainable success be ensured?

We believe that such an occurrence requires a blueprint, which is commonly understood and formulated in a way that is easy to communicate, but which holds so much agility that it can adapt quickly and resiliently to changing markets and environmental conditions at any time. The blueprint must allow different views of the digital economy: A consistent strategic corporate vision with business objectives, strategies and an objective risk assessment as well as a comprehensive definition of business processes with process context, processes, business rules, business objects, competences and responsibilities as well as the relevant corporate structures (see [SVO12]).

Such a blueprint of the digital economy may not be rigid, as it would fail. It must rather be agile by being stretched from a lot of “conceivable” business processes, which constitute an agile character themselves. The mapping of business processes in semiformal models then allows rapid implementation processes, in which the technical requirements of the business process models are implemented into productive enterprise software systems using standardized Software as a Service (SaaS) offerings from the Public Cloud. Especially the Oracle Platinum Partner and award winning Specialized Partner PROMATIS (www.promatis.com) offers very sophisticated methods for the entire Oracle SaaS portfolio, which are briefly addressed in this article.

However, these are currently only the first phases of the digital economy, where this method has
been proven. Further phases will follow, in which singular business processes must be connected to enterprise-wide process chains and process networks. Seamless integration and best usability for all users involved are required just as much as an optimal tapping of the potentials of the Internet of Things (IoT). These aspects are briefly discussed in this article as well.

A Well-Tilled Field ...

The fact that a digital transformation is in full swing in our economy and administration, in the highly developed economies of the world, is evident everywhere. This is the source of the digital economy of the future. Indicators are the proliferation of digital devices up to the electronically managed data volume (keyword: Big Data). The novelty, however, is that the boundaries between business and private life are disappearing and the digital transformation extends even to the developing countries of the world.

In the Zero Marginal Cost Society, as it is described in [Rif14], more and more people can participate in services spread on the internet. And in addition to this human need to participate, megatrends can be identified, which drive the digital transformation (see [Oxf15]): Mobile technologies, Business Intelligence incl. Big Data (see [Vos13]), Cloud Computing and Social Media. Then there is the ever-increasing use of the Internet of Things, where cyber-physical systems communicate and collaborate with each other and with human users. Valuable statements can be found in [BrM14].

This large number of drivers of the digital transformation leads in many companies to a sprawl of information technology, especially when introducing new technologies in the context of "Me-Too Strategies", as described in [Sch15a]. The companies are then further away than ever from efficiency and long-term success of the business model. No doubt: The winners of the digital economy proceed differently.

But what exactly distinguishes these winners of the digital economy? We believe that they simply tilled their fields well (see [Sch14a]). The aim is not to introduce as many new technologies as quickly as possible in the company. It is more like in good agriculture: It all boils down to bringing high-quality seeds - the high-performance digital technologies - into a well-tilled field, only to be rewarded with a good harvest after a reasonable maturing period. And this well-tilled field is an optimized network of business processes, in which the value chains of a company are mapped and which reflects the business model.

This relationship can be represented graphically with a parable from the Bible (Matthew 13: 3-8):

The parable of the fourfold farmland

Then he told them many things in parables, saying: “A farmer went out to sow his seed. As he was scattering the seed, some fell along the path, and the birds came and ate it up.

Some fell on rocky places, where it did not have much soil. It sprang up quickly, because the soil was shallow. But when the sun came up, the plants were scorched, and they withered because they had no root.

Other seed fell among thorns, which grew up and choked the plants.

Still other seed fell on good soil, where it produced a crop - a hundred, sixty or thirty times what was sown.

Digital Transformation as an Organizational Change Process

Although the parable of the fourfold farmland can be applied aptly to the digital transformation, practice is often different: Ultra-modern technologies are put to use in inefficient business processes and there they do not lead to more efficiency, but to making the wrong things even worse than before. And they meet unprepared business users who are overwhelmed with the use of new technologies or simply refuse to use them and sometimes even sabotage their use.

We advocate to basically understand the digital transformation as an organizational change process...
that can only be successful when the affected business users can participate in this process of change, and to take them along on the journey to become part of the digital economy. However, in line with the digitization we must expand the group of company’s key users by business users from the value chain, that is the users of partner businesses and, ideally, by experts and experienced employees who also have an impact on the change process with their knowledge. With reference to [SVO12], we call this group in its entirety the business community.

Figure 1 outlines the digital transformation as a change process, which is controlled by the strategic business management. The efficiency of this change process arises primarily from the quality and scope of the values and knowledge base on which the process is implemented. It reflects the values and knowledge of the business community and the performance of organizational learning, which leads to the continuous expansion of the base.

The aim must be to grasp the context of the entire business community in the values and knowledge base. In practice today, this often succeeds insufficiently. With Horus®, [SVO12] therefore proposes a method that enables to integrate the entire business community in the change process and making use of the community’s values and knowledge base in its entirety.

The Horus Method is based basically on building social networks within the business process management where passive business users from the business community turn into active experts who are actively involved in both the process design as well as in the execution and continuous improvement (see Figure 2).

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1 Horus® is a method and a family of software tools for Business Process Engineering made by Horus software GmbH, Ettlingen, Germany.
Rapid Implementation of Oracle Software as a Service (SaaS)

The digital economy thrives on a high level of agility in business processes, which is a basic requirement for the ongoing adjustment of the business model to changing markets. Agility must then also be extended into the implementation of the information systems to be used to support the business processes. Practice has taught us that it is very difficult to achieve such agility with conventional on-premise enterprise applications and only at unreasonably high costs and with a lot of time. Therefore, Cloud Services increasingly ace when it comes to realizing managerial tasks in the digital economy. Here, Oracle has established itself as a global leader in providing a broad service spectrum from the Oracle Public Cloud. In addition to an ever-growing portfolio of ERP and EPM services, Oracle also offers a complete portfolio for Customer Excellence (CX) and Human Capital Management (HCM). The services are purchased for a corresponding fee from the Oracle Public Cloud. For this purpose, Oracle operates computing centers around the world, including the Netherlands, Scotland and Germany (Frankfurt, Munich). This ensures the full adherence to rules and regulations on managing and processing company data.

In [Sch15] the services from the Oracle Applications Cloud are initially evaluated for their suitability for modern business solutions. In addition to the breadth and depth of functionality the granularity of services is an essential aspect of the survey. Overall, Oracle takes a market-leading position due to the variety of functions, which reflect in more than a decade of experience in successful on-premise application business with market-leading ERP, CRM, EPM and HCM products (E-Business Suite, JD Edwards, Primavera, Hyperion, Siebel, PeopleSoft, etc.). However, the paper comes to the realization that the granularity of services offered has yet to be further reduced for future-oriented applications in the Internet of Things (keyword: industry 4.0).
The Key to Rapid Implementation: Business Process Reference Models

In the digital economy, speed and profitableness are particularly important when implementing cloud services. Because in the digital economy, agile business processes are only agile when they can be implemented really fast in ready-to-use solutions.

As a global pioneer in the process-oriented implementation of Oracle applications, Oracle Platinum Partner PROMATIS has developed the procedure model IQPM™ (Integrated Quality Process Model). IQPM has been developed in the course of 20 years of successful project work in IT and organizational projects including Oracle enterprise applications, technologies and cloud services. It combines proven project processes and project standards with best practice solutions, innovative methods and software tools. IQPM represents the best project governance, a high level of quality for project processes and project results, work efficiency and effective risk management.

A key feature of IQPM is the intensive use of best-practice solutions and reference processes that are available with the Horus® business process products. PROMATIS offers a range of tested and fully documented system modules that are seamlessly integrated into the customer solution, e.g. German financial reporting, the German E-balance, and migration tools. There are also well-documented reference business process models that are available for all common Oracle application modules in the product lines E-Business Suite and Fusion Cloud (ERP, CX, HCM, EPM). An example of a hierarchically organized reference model is shown in Figure 3.

The models are used in all phases of project work; moreover, also in user training and the subsequent productive operation. By abstaining from the need to "reinvent the wheel", significant improvements in terms of cost and project duration can be expected. Moreover, the quality in project processes and project earnings increase while the project risks decrease.

Classification of Business Processes

Not all business processes are equally suitable for implementation by means of Software as a Service. In practice it has therefore proven sensible to classify processes before implementing a SaaS introductory project. A suitable base is a business process architecture model, as presented in the Horus Method (see [SVO12]). The individual business processes are then basically rated based on three criteria:
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- **Competition:**
  Is the business process critical in terms of competitiveness? In other words, do customers acknowledge quality and performance of the processes and do they influence them directly or indirectly in making their purchasing decisions?

- **Value:**
  In terms of value added, is it a core process of the company?

- **Quality:**
  How does the business process affect the quality of products and services offered by the company?

As a result of this review, the business process’s profitability can be classified and it can be implemented following different priorities and using various methods. At the generic level, two classes can be distinguished:

- **Business-critical (mission-critical) business processes:**
  Business-critical business processes play a prominent role in competition. Usually they define the unique selling points of the company. Their influence on product and service quality is significant. In addition, a high value is achieved with them. In the following, we also make a distinction between critical business processes, which to a large extent are designed specifically for a company, and less specific processes with a more or less high degree of standardization, as for example common for industry-specific processes.

- **"Commodity" business processes:**
  Business processes that achieve a low value and have little to no effect on the product and service quality or are of little to no importance in competition are called "Commodity" business processes.

It is clear that the classification of business processes greatly depends on the industry; it may even vary from company to company within the same sector. Some simple examples make this clear: For a forwarding agent, fleet management is a mission-critical process to a great extent, while it will not be an issue for a financial services provider. For a financial service provider, business is all about customer relationship management, while a supplier in the automotive industry will attach significantly less importance to marketing and sales.

**3-Speed SaaS Implementation**

The process classification provides a sound basis for the preparation of the solution concept for a cloud-based enterprise application system. Starting from the Oracle product portfolio, typical considerations in the solution design are presented below. For a preferably practical representation, we choose the implementation method provided by the PROMATIS procedural model IQPM for Oracle Software as a Service. We like to speak here of a "3-Speed SaaS Implementation", as shown in Figure 4.
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Figure 4: 3-Speed SaaS Implementation according to IQPM™

At the top, the figure shows the 'assets' that PROMATIS as an experienced Oracle Platinum Partner contributes to projects. It initially involves the services from the Oracle Public Cloud: Software as a Service in the areas of Enterprise Resource Planning (ERP), Enterprise Performance Management (EPM), Human Capital Management (HCM) and Customer Experience (CX) and platform services (Platform as a Service, PaaS) for Business Intelligence, Business Process Management, Service-Oriented Architecture (SOA), Document Management, Java and Databases. From the Horus Cloud, business process tools are available for modeling, simulation and documentation, Knowledge Management, Governance, Risk, Security and Compliance Management as well as an extensive amount of pre-made, quality-assured business process model contents (Reference Business Processes). From the PROMATIS Best Practice Cloud, ready-to-use auxiliary components for Oracle standard services are incorporated into the solution, or the customer accesses the pre-made PROMATIS Kickstart™ solutions, which are available for all major commodity processes.

The procedure according IQPM is mapped at the bottom of the figure. After a strategy analysis in which, inter alia, also a classification of business processes is made, the 3-Speed Implementation can be seen very nicely. The kick-start implementation with a particularly short implementation time convinces with its cost structure and the low participation requirements for the customer's key users. For business-critical processes with a high degree of standardization, there's a process available that intensively uses reference business process models and PROMATIS best practices. These quality-assured and continuously further-developed ingredients ensure high quality results and efficiency, without having to restrict the flexibility of adaptation to company-specific conditions in an unacceptable manner.

In highly customized processes for which no matching application services can be found, powerful platform services, again from the Oracle Public Cloud, can be used. In addition to the database, the SOA services in combination with Java services provide a solid basis for a cloud implementation of customized services. Oracle Process as a Service and Oracle Documents as a Service are recommended for a fast implementation of process- and document-oriented services. Business Intelligence services are used for comprehensive analysis and reporting functionalities.

In complex projects these three different implementation methods are integrated with each other according to the policies of IQPM, meeting all demands. Big bang implementations are also possible,
where all solution components to be introduced are rolled out, transitioned and commissioned in all intended target environments at once. But there are also flexible implementation strategies, such as "Country-by-Country", "Entity-by-Entity", "Service-by-Service" or "Process-by-Process" (please see [SVO12] on different strategies) and appropriate mixed forms.

Innovations for Business Processes and Services in Social Networks

In many industries, markets today show a volatility, which we at most have only experienced in some segments of the financial industry up until a few years ago. Business models with a half-life of only a few years or even months are no longer uncommon. This is also a characteristic of the digital economy. Drivers are in many cases business processes or service innovations that are made possible by new digital technologies or through new uses of technology.

For innovations to be successful in the digital economy, more than ever speed and consistency are crucial for competitiveness when asserting a market. It is also important to use the knowledge of the entire business community for innovation management. For this reason, more and more companies have started to anchor their innovation management directly within the business community. The provision of the entire knowledge and creativity present in the community creates an ideal basis for generating a continuous stream of innovative customer services and business processes.

For innovation management, we propose a method that is based on the above-described Horus Method for Social BPM (see also [Sch14] and [ScO13]). In the business community, this forms social innovation networks where domain specialists, experts from different disciplines, ideally potential customers and external partners in the value chain, as well as opinion leaders and idea givers are connected to each other in a social network: the innovation community. The community works on a web-based collaboration platform, on which, next to popular social media, intuitive software tools are used to graphically model processes and services. The active participation in the community work adds each individual's creativity and knowledge, which is then connected and amplified in group dynamic processes and leads to process and service innovations. The quality of the innovation process depends on that community members contribute relevant knowledge, experience, creativity and inspiration openly and unconditionally and that they are prepared to link these ingredients to the other members in a way that benefits the community.

Figure 5 shows how services can be provided for the entire innovation lifecycle around the social collaboration platform. So not only the actual generation of innovation can be promoted, but also the learning process leading to innovation or during the generation process, or as part of the market assertion, the accompanying research, the development and marketing innovation.
**Figure 5:** Social innovation management in the innovation lifecycle

Collaboration then becomes the lifeblood of innovation management and the driver for agile business processes as a blueprint of the digital economy.
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