

Improve your business processes with smart business rules

USOFT WHITEPAPER

Business rules make your business software robust, flexible and future-proof

Do you know why companies like Google or, closer to home, Adyen, are so successful? An important reason for their success? They support their business operations with smart business rules. Fortunately, the use of business rules for better business operations is feasible for any organization. Yours as well.

Business processes can often be better, smarter and more efficient. In our changing, customer-driven economy, it is even essential to continuously innovate critical business processes. But who really dares to put the knife in the underlying core systems? Many organizations do work on supporting business functions, but not on the core of their business operations.

Shift the innovation power of your organization into the highest gear by using intelligent business rules! Working with business rules is the solution that allows you to innovate critical business processes, without endangering core operations. Even better, they allow you to further strengthen them.

In this whitepaper, we will help you on your way with a number of practical tips.

Table of contents

1. What are business rules and how do they work? 3
2. The importance of business rules 5
3. The power of business rules 7
4. The benefits of automation based on business rules 9
5. Get to know low-code based on business rules 10
6. Freedom to innovate and exploit business opportunities 12



1 What are business rules and how do they work?

Where business processes mainly describe how activities are related and in what order they must be carried out, business rules deal with what must be done within those processes, which criteria apply and within which policy. Therefore, a business rule is specific and concrete by nature and has a single, clear message: the desired behavior when an organization acts in a certain context. That's why business rules and processes aren't separate from each other; they complement one another and create unity.

In practice, we often see that process design is in the foreground while there is no clear view of the related rules. Or that those rules are not consciously present at all. With all its consequences, such as inefficiencies or even costly errors, it is better to formulate business rules that are so explicit and concrete that all processes automatically benefit from them.

> **Business rules and processes are not separate from each other; they create unity.**

A good example of how business rules work is the aviation industry. Universal rules determine whether passengers can board an aircraft:

- Do they have a valid ticket and ID with them?
- Are they checked in and on time?
- Has their baggage been delivered?
- Have they been checked by security and customs?

Anyone who doesn't comply with one of these rules will interrupt the process and cannot travel. Safety aspects are, of course, very important at an airport. After all, nobody wants to be responsible for a hijack or terrorist attack.

The rules are robust: they must be complied with no matter what. This requirement forces us to define binary (yes / no) rules. That makes the processes clear and predictable. Many organizations can improve their business operations by looking closely at such examples from aviation. Where can you apply more concrete busines rules in your processes, and consider a good combination between the necessary binary rules and supporting more flexible rules?

Business rules in practice

An example from the same domain can be found at car rental companies that offer discounts to travelers who book a flight. By merging information and using business rules, you can immediately see which travelers are eligible for a discount. Such clear and explicit business rules are also easy to process in software and other applications. The result is higher productivity, turnover and customer satisfaction.

Also, within an organization, business rules play a business-critical role. Companies with thousands of employees, whose work is scheduled daily, often find that their core system is becoming too complex. Such core systems are usually very data-intensive. So there are great opportunities here. By managing those core systems at the data and control level, you can greatly simplify them. This does require letting go of thinking primarily at the level of procedural software functions, which is still common in many organizations.

Opportunities are in the core systems of organizations; by managing them at the data and control level, they are greatly simplified.



2 The importance of business rules

At a time when competition is more fierce than ever, intelligent innovation is a must. The world around us is constantly evolving and organizations have to adapt to new circumstances every time. In addition, every customer expects a personalized approach.

To stay ahead of the competition, intelligent innovation is a must!

The real value in an organization is created in the core activities. Managers often easily adjust the efficiency of, for example, HR, marketing or other functional departments, while there is a lot of untapped potential in the core processes. Can you organize business-critical processes smarter, making them more responsive to individual customer needs? Does the data in production systems provide information about possible cost savings? These questions demand greater agility and control over everything an organization does. At USoft, we call this the "Act-Now transition" and it is in full swing.

Act-Now!

The Act-Now economy always responds quickly and works in real time

The world around us is constantly evolving and organizations have to adapt to new circumstances every time. Besides, every customer expects a personalized approach. This requires increasing agility and control over everything an organization does.

Next-level digital transformation

The Act-Now economy is all about NOW. What is happening now and how can we make it easier for everyone around us? Privacy, customer experiences and real-time decision-making are central to this. So it isn't just about gaining insight into the situation. Above all, it is about being able to act directly on what is happening. In this way you make a big difference.

Nowadays, everyone wants to solve the problems they run into as quickly as possible. If you, as an organization, can show that you are knowledgeable and are willing to do everything you can to realize your customers' wishes (and even prevent potential problems before they arise), then you create loyal customers. By developing yourself as an Act-Now organization, you also contribute directly to this important end goal of every organization.

By first properly formulating the business rules and then automating them, you can prevent the fear that often accompanies the renewal of the core processes. The concept of business rules is very suitable for automating complex processes. Many organizations have an enormous amount of data. It is, of course, valuable to make that data accessible, but it is even more efficient to add intelligence to it with business rules. A major additional advantage is that the error rate in the use and processing of the data drops sharply. At the same time, the shorter processing time also improves the quality of the data. This in turn means that companies can more easily keep up with the developments in the market, in which time-to-market is essential for taking advantage of business opportunities.

Proper business rules certainly do not look like a standard decision tree in software. A layer of intelligent business rules automatically responds to a variety of processes. This layer manages the data on behalf of those processes, which is ultimately the most important asset in business-critical applications.

The concept of business rules is very suitable for automating complex processes, making it easier for companies to keep up with market developments.

Business rules are also able to make predictions about actions and procedures, with the help of artificial intelligence. This way, abnormalities in a population can be detected at the earliest possible stage. This limits the risk of failure. In addition, proper business rules ensure that the input and output of AI algorithms remain much more traceable and comparable. Unfortunately, in their enthusiasm for new AI applications, many organizations overlook the administrative embedding. And that is essential for an optimal result. To apply AI effectively in operational processes, not the result of a test phase and, for example, controlled data are leading, but the quality and consistency of this data during operations.

In order to apply AI effectively in operational processes, it is not the result of a test phase and, for example, controlled data that is leading, but the quality and consistency of this data during the operational application.



3

The power of business rules

Business rules, in contrast to processes, are more stable in the long term. That is precisely why business rules are so ideal as a basis for developing business software. They make the software easier to manage and quicker to adapt to changing circumstances and requirements.

In short, business rules form the best foundation for future-proof business software.
USoft provides insights through the Rules Engine, the piece in the software that effectively converts your business rules into automation. Building a Rules Engine is best done in close connection with well-structured underlying data.

> **In contrast to processes, business rules are more stable. They form the foundation for future-proof business software.**

The special thing about a business rule is that it contains a small piece of unshakeable logic.

For example:

An organization wants to deploy a certain type of consultants on a client project and has a set of business rules for this. These rules prescribe which consultant with which characteristics can be deployed for which project client. They are an aspect of your business operations that you want to comply with in any case; namely who further takes which action at what point in which process. You can easily adjust or even delete those specific business rules, while all other business rules around them are guaranteed to continue to work. This makes it possible to design the business processes surrounding the deployment of consultants much more freely. A business rule in itself creates value wherever you come across it. The result is business software that is more flexible and more future-proof. In turn, it saves a lot of time and money in the long run

Another major advantage of proper business rules is that they form the ideal basis for the architecture of the business software. This is based on the principle of "separation of concerns". The data, rules and even the more peripheral aspects, such as, interfaces and APIs, are each stored in its own layer.

You may have experienced this yourself: you want to adapt a process in an existing business automation platform. Unfortunately, this requires a radical change in architecture. And that is costly and risky.

Every business process has many internal and external dependencies. Before you know it, you have to figure out manually what consequences the desired change will have in many other systems and processes. This is usually very costly and time consuming.

Business software, however, which is based on the principle of the separation of concerns is much less affected by this. If a business rule changes in one layer, all other layers remain relatively intact, as do the related rules. The change follows the atomic principle: as long as the business rule is applied atomically, it can also be adjusted atomically.





4

The advantages of automation based on business rules

The development of business-critical software is no longer possible without recognizing business rules. This not only strengthens business strategy and process design, but it also simplifies decision-making about how applications are set up and increases the productivity of organizations. But there are even more advantages:

Agility

The Rules Engine with business rules makes automation and digitization processes more robust, qualitative and agile. This helps in decision-making and can be applied in any organization.

Transparency

Because the code corresponds to atomic, concise business rules drawn up in natural language, transparency is created and the operation of the software is not obscured by technical code.

Traceability

Data and data structure are almost always easier to locate and understand than the behavior of programmed software code. Therefore, the operation of a data-oriented Rules Engine is more transparent than the operation of code.

Controllability

Software with more traceable operations is easier to maintain with less risk and lower costs.



Get to know low-code based on business rules

5

USoft is the most powerful low-code platform based on business rules management. We help organizations in industries like transport & logistics, production and services, such as Schiphol, Philips, FrieslandCampina and governments, to make their business-critical software manageable. We distinguish ourselves with:

Low-code application development

The USoft platform applies the principle of low-code at all levels. This makes it quicker to develop and adapt business applications. With a minimum of code, the time-to-market is reduced and an organization can test prototypes in a short time. With low-code software, it is easy to reuse components within and between applications. That makes it less dependent on manpower and the maintenance of the applications becomes easier, which leads to lower IT costs. Thanks to low-code, IT and business also come closer together and strengthens them as a team.

Description in natural language

Also prominent in the USoft platform is the option to explicitly describe the behavior or outcomes of a business process. Users describe in a combination of natural language, clear diagrams and non-technical data structures what needs to be done. While in traditional environments the business rules are programmed in code, the business rules in the USoft platform function separately from the programmed logic. This makes it easy to consistently describe and deploy the combination of knowledge and data in the form of rules of the game that "lie on top of the data".



Web user interface

If desired, USoft places a web user interface on top of the business rules so that these can be managed via a web browser. This is a unique method, because it is often started from the user interface side.



REST API interfaces

You can generate a REST API as a gateway to the Rules Engine so that other software can automatically talk to the Rules Engine, and therefore your business rules can be deployed from one central point.



Identity check

In addition, you can work with an IDP (identity provider) so users are guaranteed to be able to safely use the Rules Engine and the underlying company data. The increasing unsafety on the internet is a growing theme and this IDP carefully checks who the user is when logging in. With the USoft platform, a user only has to log in once and he or she can switch between web applications with the same password. This ensures that USoft works even better with other software builders on the web.



Freedom to innovate and take advantage of business opportunities

6

At USoft, we know that organizations want the freedom to choose their own way of organizing their business operations. Software should not be an obstacle - it should remove barriers. Our motto:

'Explore new possibilities'

> **"We enable our users to make better use of their powerful core systems"**

USoft combines optimal management of business rules with the freedom and ease of use of web technology. With this, we offer a complete proposition for everything an organization needs in the field of automation and digitization. Our vision to be a complete proposition for everything an organization does in automation and digitization, has become a reality.

USoft's CEO Hans Canisius: "There are two things that are important to know: Firstly, at the core, we have always worked from the power of business rules. This is because we have seen again and again how stable the software is, developed based on these business rules and how well it can be maintained.

Secondly, through web technology, we enable users to better utilize their powerful core systems. These systems are often still made with legacy software and are very complex in terms of architecture and complicated to use. However, end users today are used to web browsers and the convenience that comes with them. At USoft, we want to help organizations improve their core administration. We prove that this can be done safely and efficiently with the power of business rules in the USoft platform."

Colophon

The information in this whitepaper has been compiled with care. However, USoft cannot accept any liability for the consequences of the incompleteness or inaccuracy of the material in this whitepaper.

No part of this document may be reproduced in any form without written permission from USoft B.V.

Authors:
Rob van Haarst
Maarten Witvliet
Hans Canisius
Text and editing:
Copy Robin
Petra Halenbeek
Concept and design:
Loyals
Photography:
Loyals

Do you want to know more?
Curious about what business rules can mean for your organization and how you can put this into practice? Feel free to contact us. Call us on +31 35 699 0699 or send an email to info@usoft.com.



This is a publication of USoft B.V. © 2020 USoft B.V. | All rights reserved

About USoft

At USoft we understand that organizations desire the freedom to design their own business operations. We believe that software may never pose an obstacle and should instead clear that path. USoft offers organizations a low-code development platform for developing and redesigning business-critical systems.
The intelligent, flexible low-code platform is the perfect solution for clients who want to innovate fast and adapt to the needs of the market. Our technology is engineered around the power of business rules so that your organization's context is always at the heart of everything you do. To achieve the best result, USoft always immerses itself in the essence of the client's business operations and has a great track record for client satisfaction and excellent service.
USoft's low-code platform is used worldwide in government, aviation, education, financial services, transportation and logistics.

Explore new possibilities. For more information, visit usoft.com

USoft B.V.
IJsselmeerweg 1
1411 AA Naarden
The Netherlands
+31 35 699 0699
info@usoft.com
www.usoft.com



Explore new possibilities