Quickly replace a legacy application with OutSystems

LINKIT
BUILDING IT TOGETHER

Introduction
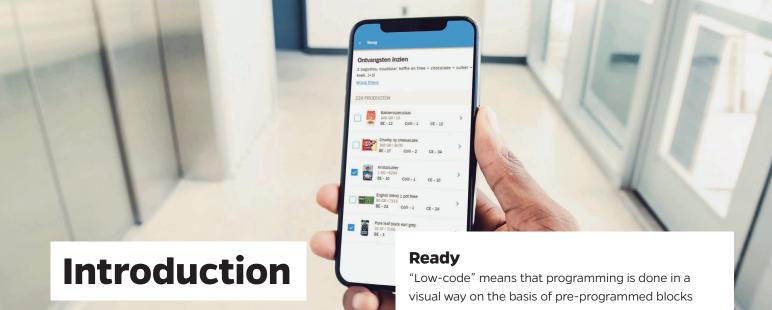
Why bother with the hard way if there is an easy way. That could be the slogan of low-code development platform OutSystems. The company, founded in 2001, has definitely put low-code programming on the menu worldwide as an alternative to classic programming languages when it comes to developing an application.

Ready

"Low-code" means that programming is done in a visual way on the basis of pre-programmed blocks that are put in the right place with "drag-and-drop" functions. This applies not only to "simple" features such as blocks, buttons and forms, but also to complete dashboards and templates. Building an app with OutSystems is like browsing the grandma's candy store looking for the best combination. On top of that, custom work can also be done to tweak things to your liking.

OutSystems as the opposite

It's not difficult to get convincing results with OutSystems. Not even when it comes to very extensive, complex and sometimes legacy applications that are decades old. Where these legacy systems can often be described as cumbersome, unmanageable and incompatible with the cloud, OutSystems is the quite the opposite.

Content

In this white paper, we will show why OutSystems is by far the best option to replace an old legacy application. In the second part, we'll show you a little bit about how such a solution is implemented and finally, in part three, we conclude by illustrating these solutions by looking at a case carried out by LINKIT when they implemented a new logging system for Ahold.

01.

5 reasons why OutSystems is ideal for replacing legacy applications

1. Almost complete flexibility for the optimal result

The word "flexibility" is a term that you see in IT almost every day, but what does it actually mean? Do not be surprised if that turns out to be different for each situation. In the context of this white paper, flexibility means that you are not stuck with and/or punished for your original plan.

In addition to looking at OutSystems as a development platform, the working method is also important. OutSystems is ideally combined with an Agile way of working, in which results are achieved based on 'sprints'.

Benefit from Agile working

With traditional programming languages, it can often take a long time before you actually see any results. The major advantage of an approach such as Scrum, for example, is that you, as a product owner can make adjustments as the project goes on and also stay well informed about the progress of the project. This greatly increases the chance that the final result, after many sprints, will match what you want. At the same

time, the end users will only be addressed if at least the MVP (minimal viable product) is ready for use.

Front end first

OutSystems offers the unique opportunity to start with the front-end of an application. In fact, because the development time is much shorter, you can have the user sitting next to you while tinkering something. After building the main lines at lightning speed, you can use the development time to work out the finer details.

Targeted programming

Real programming in the back-end only commences in the second phase, when all functionalities are clear. By also doing this in an Agile way, you as an end user have maximum influence on the result. Moreover, as a client you will not have major concerns if you still want to make changes during the process. In OutSystems it is much easier to adjust certain elements and functionalities, so that this costs much less time and money. In other words, this offers a large degree of flexibility.

2. Integrate for immediate results

A question you may have is ''how it is possible to build a new front-end on top of an existing database''? Well, it is possible and there a number of reasons for it. The most important is that OutSystems works with web services, or via standard web protocols. Most applications have standard connections to web services, making them easy to connect. OutSystems has connectors available for the large, widely used databases such as SAP and Oracle. Due to the integration possibilities, the data can be manipulated by the new front-end.

Fast results

This is a huge advantage for a legacy application. Especially with large, heavy and complex applications. It can sometimes take up to a year or two years before a cloud transition is complete. All this time, both the end users and the business have been little to no of the final result.

The reverse approach with OutSystems allows you to achieve immediate results, whereby existing functionalities can be optimized in a short time. More on that later in the "how" chapter.

3. Future-proof and easy to maintain

Ideally, you want to convert a legacy application only once in your life. It takes a lot of time, effort, and resources. Of course it also delivers a lot, not only technologically, but also in converting old, worn-out thinking and working processes. Nevertheless, the intention is that you get optimal profit from your investment, which is often substantial. The main objective is that your new application never has to revert into a legacy application again. However, even with OutSystems this is not guaranteed, although it does offer all possibilities to stay up-to-date. The real guarantee lies with the knowledge and skills of your developers. An OutSystems application is not only

built on the development platform of OutSystems, but can also run on it (in addition to on-premise or other cloud providers). This has an important advantage.

A new version every year

With OutSystems the infrastructure is maintained for you, so you don't have to put in time and effort. In addition, OutSystems releases a new version or update every year, on which you can find the latest features and technological possibilities. So it never stands still. Furthermore, developing your old application to a new version costs relatively little time and money in a low-code manner. It also follows that the larger the application, the more advantage you get compared to other programming languages.

Key issues

You can compare issues with an app to a car. In this scenario, Python or Java are equal to a conventional petrol car. That is certainly not bad, just look at the road until you end up in the garage with defects. If you are unlucky, half the engine must be taken apart to replace just that one bolt, nut or hose. The part itself is not expensive, but because of the integration and labour requirements it is difficult and costly to repair.

Using that analogy, OutSystems is the equivalent of a Tesla, with an electric motor. There are much fewer parts and it is also much easier to access them. The big difference with the real car: in this case the Tesla is cheaper.

4. Fast time-to-market

Creating an application with OutSystems is much, much faster. A factor of six on average. Where you normally need six months, with OutSystems you are done in one month. The time-to-market is therefore much shorter, with all the advantages that entails.

Business critical but clumsy

For many legacy applications, they are often business-critical. It is precisely because of this indispensability that they are patched up year after year to last a little longer. An important reason to eventually replace it are things like flexibility, future-proofing and especially functionality. If users become annoyed at the functionality of an app and have to check four screens before they get anything done, that starts to raise the need for a new application.

Fast time-to-market necessary

It often takes little effort to come up with improvements. When there is a mock-up, it is based on current technology and development trends. One or two years later, these can already be completely different. It is also not useful from a business strategy point of view to wait that long. Innovating on time, in accordance with the demands of the market, is a basic principle of good entrepreneurship.

The short time-to-market that OutSystems entails is therefore an ideal side effect for legacy applications. The time between design and execution is minimal and that brings great benefits

5. Deliver quality quickly

Finally, with OutSystems you not only bring you application to the market faster, you also do it correctly. Simply put, you get what you need and not what you ordered. That may sound a bit strange, but it always occurs in practice. Almost no design that crosses the finish line looks the same as it did at the starting point. If that were the case, the app is far from correctly delivered. Many insights only arises during the process of building and testing and you must be able to be flexible based on these insights. The delivery method of OutSystems provides this in detail. How exactly? More about that in the next chapter.

02.

How to optimally use OutSystems to replace a legacy application?

1. Pick the low hanging fruit... and take away your frustrations

Legacy applications are undoubtedly the least user-friendly, most annoying and most complicated pieces of software you can come across. Sometimes they are so old that you have to go back decades in the archives to find out why that one functionality works the way it works. Working in four screens simultaneously to perform one operation is certainly no exception.

Asking end users to come up with improvement proposals is the same as asking a 5-year old what he would like to receive from Sinterklaas. It rarely takes much effort.

Rapid profit

Asking users for feedback yields an enormous amount of insight. Employees feel taken seriously and also see actual improvements in their work and tools they use. By automating certain actions in the background, work is taken off their hands and they can use their time better for other things.

For the time being, no new functionality has been added yet. That is the low hanging fruit.

As you can easily build a screen or function with OutSystems and link it to an existing database or existing functionalities, you can take away a lot of frustration -often to the delight of everyone who has to work with the application. At the same time, it also offers the opportunity to quickly discover opportunities for new functionalities and improvements.

2. Testing, designing, testing, designing

With classical programming you often deliver part of the product and then see if it works, while with OutSystems you go all-in. You immediately design the entire app and quickly discover where the problems arise and where the opportunities lie.

Target the back-end

At the backend you still work in the "normal" way and data is transferred bit by bit. Provided you want that, of course. You can also keep your old SAP or Oracle database. The user does not notice this. The big advantage of this way of working is that you have much less risk of errors at the back, if you have already crystallized exactly how it should work at the front.

Develop correctly

If you make an improvement in the backend, you can make it immediately visible to the end user. He can immediately test in practice whether the new functionalities work and whether they are satisfactory. By implementing this cycle of testing and design you can not only develop quickly, but also correctly. The result is a better and more in-line with the needs of the users.
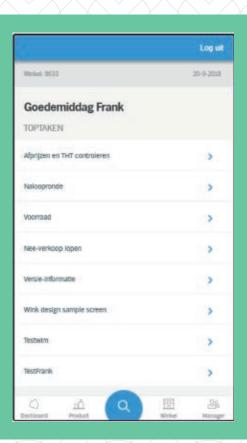
3. Shop till you drop

OutSystems ready-to-use packages require business processes to be adapted to use the packages. By developing an application yourself, without restrictions in your data model and functionality of your systems, your systems will support the business processes instead of the other way around. This is a major change.

From our experience we see that nine out of ten companies choose to adjust their data model, because the package they have chosen requires this.

03.

Revolution in the supermarket with the new OutSystems app

The challenge:

Roughly 80,000 employees in the Albert Heijn stores did not have an easy time doing their work. For their daily activities, such as keeping track of stock, managing prices and replenishing the shelves, they used nine different apps. A large part of those apps were also clunky and outdated. It was due time that this process and way of working had to be changed entirely. With OutSystems, all functionalities were combined in one new, flexible and all user-friendly app: WINK

Easy connecting with Oracle

Frank Boldingh and Wim van den Brink were flown in from LINKIT to help with this operation. Their challenge was to link the Oracle database to WINK. Wim: "We immediately opted for OutSystems. Especially because of the easy connection with Oracle. Almost everything could be linked directly and quickly, with a few exceptions such as add-ons in the app browsers. "

Ninja level version management

The biggest challenge for both of them was keeping track of all the fast-moving versions. Frank explains; "We gradually replaced old functionality with new ones. The point is that we did that in an app that was already running, all day with an increasing number of users. Throwing old code in the trash was not possible, because it was still used by external processes that were set up for it. It was kind of ninja level version management to be honest. We had to be very precise in pushing through functionalities and code. Very nice for the users, but a big challenge for us! "

The result

However, the end result is impressive. As Wim said; "WINK's Albert Heijn's logistics system has really improved. For starters, 20 percent fewer people are now needed for the same job and the automation of certain tasks has significantly reduced the risk of errors. At the same time, the existing database maintained all the same functionality as before. There was a redesign of the processes where a new mobile application was built that supported the existing processes. "

Better than expected

"But perhaps the biggest advantage is the significantly reduced lead time. That is the time it takes to process changes in inventory and shelves, and order new inventory. The original goal was to reduce the lead time from three weeks to five days. But once our users started testing, it turned out that much more was possible. Many manual steps could be easily automated. Currently, the average turnaround time is just over 2 days, with 66 percent processed within 1 day and 39 percent fully automated within five minutes. You can imagine that the commercial managers are very happy with that! "

Dutch Interactive Gold Award

According to Wim, AH is absolutely satisfied with WINK. The shop staff can now do their work twice as fast. To top it off, we even won a prize with it! The Dutch Interactive Gold award. A beautiful crown on top of a beautiful piece of work!

Do you have questions?

Or would you like to talk to an expert from LINKIT? Feel free to call our expert. Check the contact details below.

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