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IT'S ALL ABOUT DIGITAL INNOVATION

ePaper

Software Development

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Software Development

It is definitely no secret that digital solutions and products run our days. The first thing that comes to one's mind are applications, smartphones, tablets etc. What many seem to forget though: in the backend of said devices a software gives them instructions.

The computerized system needs to be conceptualized and developed in six phases of the software development process.

The process' result is a program that determines laptops', smartphones' and other devices' functionality, and that serves as an 'embedded system' in many other systems and devices – like washing machines, navigation systems, on-board computers etc.

The software's purpose is to fulfill users' needs in the best way possible by fulfilling tasks in an efficient and effective manner.





Private consumers use software especially with applications that entertain and inform. For that reason, users expect the same level of added value when it comes to business apps that companies launch in order to promote their products and services.

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In order to develop such a software, you can rely on an in-house team or on the expertise of external software and digital companies. In fact, companies increasingly rely on outsourcing the software development process – start-ups as well as established, major corporations.

In the following pages you will find out why launching an app or managing internal processes with a customized software is so crucial for businesses that want to stay relevant in the future. How can you use customized software, and which phases does the software development life-cycle actually consist of? We will explain these topics in more detail in this e-paper.¹

Software Solutions For Businesses

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➤ Software Solutions For Businesses

Idea Management, Development,
Implementation

Dinnova – Your Professional Digital Agency

Whether you need it as a solution for internal challenges, for process optimization or in order to implement an innovative business model: more often than not, the development of a customized software is the solution to the problem.

And quite often external software development businesses or digital agencies are hired to conceptualize and develop the software. Developing it in-house is not an option that is able to keep up with outsourced development.



After all, the in-house option requires the recruitment, training and initial training of the internal programmer team – which needs to be paid even after successful software development and when there are no further development projects scheduled. The high fix costs involved are due, even when the current workload is low.

As a matter of fact, once the software is developed, it only requires an occasional update or maintenance and service work. By hiring an external team of developers, you can finalize projects faster and at a lower cost, and scale them. By hiring external workers depending on the current workload, you can keep your fix costs low – and still provide your clients and employees with professional programs.

Those might be software for customer service, internal software or interactive programs. There are different types of software to choose from that differ greatly from each other in numerous characteristics. Firstly, due to their data storage: a distinction is made between **cloud and desktop software**. Using the latter, you store data on local computers – their storage does not require any sort of internet connection.

Cloud based software on the other hand stores data on external servers, which is why they require a high degree of trust. This also includes SaaS (Software as a Service) – a software that Dinnova develops for their customers, too.



Did you know that in 2019 more than 26 billion Euro were generated with software?²

Furthermore, a distinction is made between **standard, industry** as well as **individual software**. The former is software used across industries – just like programs for digital invoicing or accounting.

On the contrary, industry software is individually developed for specific industries, and contains modules and elements that would be of no use to other companies. Individual solutions are customized programs that have been developed for one user or company only.

Developing such a custom software involves high development costs, yet really pays off for companies that expect it to provide a competitive advantage over other businesses. These companies also go for a customized solution in order to provide a better service and better functionalities, or to structure processes more efficiently.³



Useful Software Solutions For Businesses:

Software solutions that target specific internal problems are ideal for most businesses. Especially the ones below:

CRM-Software:

thanks to this kind of software, you can provide tailor-made solutions for your customers, strengthen your customer relationships, run analyses and organize data.

Did you know that 81% of companies use CRM software?



ERP Software:

this system is used for the so-called Enterprise Resource Planning, hence the optimization of business processes, internal communication, warehouse management, digitalization and centralization.

Operational resources like production resources, personnel, or capital can be monitored and managed via ERP systems.

Project Management Software:

a project management software combines solutions for successful project management. Thanks to this software, decision makers and project members can monitor project resources like personnel, budget and timely resources.

Special software solutions for quality, risk management, project budgeting and accounting are also available.

Social Software:

social software are interactive tools and platforms that primarily serve as a means for communication and data transfer. These include classic e-mail correspondence, chat rooms, instant messaging services and web blogs.

Did you know that since 2013 about 83% of all companies have been using social software?

Accounting Software:

an accounting software helps structure internal processes and enables the effective organization of customer data. Furthermore, you can process your entire accounting, send dunning notices and delivery notes. Herewith you can make sure that your invoices are legally watertight, comprehensive, professionally designed and error-free.

Travel And Expense Management Software:

a travel expense accounting software serves as a tool for the management, booking and invoicing of your business trips. Processes can be automated and receipts can be managed centrally.

Time Tracking Software:

are you still tracking time using time stamp clocks and time sheets? Then you are also familiar with the many disadvantages involved: time sheets can be lost, project managers have to sign every single one of them, and other employees have to enter the information into the system – manually.

These process loops hold many sources of errors that you could avoid using a digital time tracking system. With just a few clicks working hours, break time, leaves and absences can be recorded with the greatest accuracy and are available on all devices.

Example:

Zytrack – the digital time tracking app and software for progressive Swiss companies.

As you can see for yourself: there is a perfect software solution for different business areas – for marketing as well as accounting, sales, human resources, e-commerce or the business as a whole.

Corporate software can optimize processes that are crucial for the scalability and success of a company. Identify those areas that are most time and cost-intensive, as well as the core element of your business.

When choosing the new individual software, also ask those employees for their opinions who perform the tasks concerned every day. If you would like to develop an application instead of a business software, a systematic software development process is definitely also a must.⁴

Software Development: Idea Management, Development, Implementation

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Software Solutions For Businesses

**➤ Idea Management, Development,
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For software development, dealing with ideas in a systematic way is a basic prerequisite.

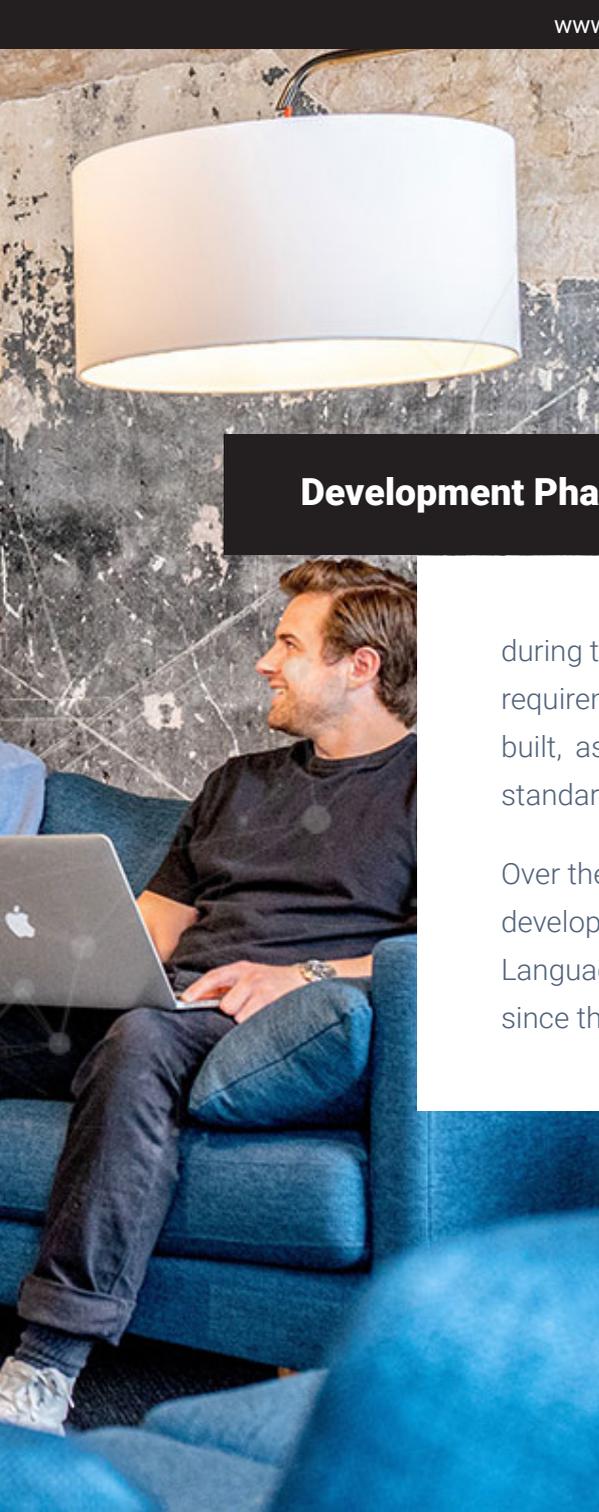
As in the case of every other development process, the software development process starts with an idea.

Development Phase

1

over the course of the first phase, a detailed analysis is performed to identify the problem that needs to be solved as well as the appropriate digital product to do so. For that purpose, the problem needs to be described in detail and technical specifications need to be gathered in a document for requirement specification.

The latter can also specify a first prioritization of the tasks, as well as a first draft of the new program. The client gathers their information and requirements in a separate document.



Development Phase

2

during the second stage, the software design is prepared – on the basis of the previous requirement analysis. For a first rough design, the software architecture needs to be built, as well as non-physical components. A program can be conceptualized as a standard, individual or hybrid software, as a standard or custom version.

Over the course of the following design process, a detailed design concept needs to be developed. Developers use object, class diagrams or diagrams of the Unified Modeling Language. Class diagrams in particular play a big role in the next development phase, since the first structure of the source code needs to be deduced from them.

Development Phase

3

during the third stage, the developers start the actual software development process. Subsequent to their design the implementation of the coding language follows. In doing so, developers need to abide by programming guidelines, as well as further formatting rules that the style guide covers.

Dinnova creates the latter at the beginning of the project in close collaboration with the client, in order to ensure that the result meets their requirements. The style guide therefore provides fonts, logo versions, color palettes, ready-made templates, images and elements like icons and buttons.

Development Phase

4

the testing phase then follows, during which individual software components are tested. Thanks to numerous different tests we make sure that the software meets the clients' requirements. Those can be defined as functional and non-functional tests.

The latter check the system's safety, usability and performance. Furthermore, our quality management performs manual and automated tests. As a result, we make sure that your software meets the highest standards even from an objective perspective, that errors are being detected and fixed.

We therefore believe in the principle that every module and component of the new software needs to be tested independently. Tests performed with independent modules are referred to as 'module tests', whilst those who test the system as whole are referred to as 'system tests'.

Then the acceptance test follows (User Acceptance Test UAT): in this process, the software is being used assuming the perspective of a user, the client or consumer.

Development Phase

5

eventually, the final version of the software solution is being delivered to the customer. In this phase, the software needs to be adapted to the target platform. In addition, 'old data' needs to be transferred to the new system, the so-called conversion takes place and thus the replacement of the old system.

If external teams have been assigned the development of the software, they will also carry out preventive maintenance work and develop updates. In this phase, our team gathers customer feedback and user experiences, tracks errors, tests and fixes bugs.

The basic requirement for this procedure is a healthy error culture: it enables the immediate assessment and correction of errors, and relies on constant optimization – just like it is the case in so many other business areas.⁵



Dinnova – Your Professional Digital Agency

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Software Solutions For Businesses

Idea Management, Development,
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➤ Dinnova – Your Professional Digital Agency

Whether it is a standard, hybrid or an individual software – we develop the appropriate programs for your business processes.

We see the process through – from its idea to the actual development of the software.



Our experienced software developers and designers realize digital projects that are tailor-made solutions for individual scenarios. Thanks to our innovation potential and our comprehensive knowledge we develop high-performance software solutions that are the perfect fit for your corporate personality, corporate culture and target group.

We offer a wide range of services including software maintenance and support. This allows us to update your systems according to your company's growth and current requirements, and to ensure the software supports, facilitates and optimizes your business processes in the best way possible.

Furthermore, we develop mobile and desktop applications that are the foundation of your business model, or that help you exploit a new distribution channel.

You would like to know more? Then we are looking forward to hearing from you soon and to collaborating in the near future!!

Footnotes

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Contact Us

Learn how we can help your business and schedule a free consultation today!

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