

How Custom Software Development Can Help Your Business

Your first approach

Change

```
1 require 'memcached'
2 require 'failbot'
3 class Memcached::Error
4   attr_accessor :memcached_key
5 end
6
7 class Memcached::ValueTooBig < Memcached::Error
8 end
9
10 module Github
11   module Cache
12     # A variety of exceptions may be raised by the memcached library when
13     # unmarshalling fails. This method wraps the mess of checking for them.
14     # boom - An exception to check.
15     # Returns true if the exception is likely due to an unmarshalling error.
16     def self.unmarshal_error?(boom)
17       when ArgumentError
18         msg = boom.to_s
19         msg.include?("undefined class") ||
20         msg.include?("dump format error")
21       when TypeError
22         msg = boom.to_s
23         msg.include?("needs to have method '_load'") ||
24         msg.include?("needs to have method 'marshal_load'") ||
25         msg.include?("exception class/object expected") ||
26         msg.include?("instance of IO needed")
27       end
28       Github.stats.increment('cache.unmarshal_error')
29     end
30
31     # Mixin for Memcached::Rails that adds error swallowing and
32     # server failover. When a connection, read, or write error occurs
33     # the memcache operations take the following actions:
34     # - Retries the operation on the same server up to the configured
35     #   server_failure_limit times (2 by default).
36     # - If the retry limit is exceeded and the server was marked dead,
37     #   the operation is attempted once more under the new server list.
38     # - If the retry limit was exceeded and the server configuration
39     #   did not change (e.g. only one server is available), nil is
40     #   returned and the error is swallowed.
41   end
42 end
43
44 lib/github/cache/failover.rb 20:22 (1,4)
```

LEAWARE

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INTRODUCTION

The impact of technology on business life has led to an increase in software requirements. Companies want to develop software for their businesses to cut costs and control processes to compete with other businesses. Each company has its own way of working and has specific processes depending on the sector in which they operate and the work they do.

Bespoke software tailored to the needs of a company has become necessary to increase competitiveness. Therefore, it is necessary to develop software in line with the growth of the company and to rely on custom software development. This software, crucial to achieving business goals, must meet certain criteria such as ease of use, high performance, and get the job done.

WHAT IS CUSTOM SOFTWARE DEVELOPMENT?

Custom software development is the design of software applications within an organization for a specific user or group of users, designed to precisely meet their needs compared to more traditional off-the-shelf software. Custom software is usually created by a third-party contract or an in-house team of developers and is not packaged for resale.

The Custom Software Development Process

-Defining the Problems that We Want to Solve

Prior to beginning custom software development, it is critical to define the problems that the custom software will address. Businesses are frequently confronted with a variety of issues that are both diverse and complex. Customized solutions are required here because standard software is unable to perform the required functions. Many businesses require custom software development to enhance the functionality of their applications by modifying, integrating, or customizing their existing software.

In addition, custom software helps companies grow their business to meet customer needs and the changing needs of the market. Perhaps, a main concern of yours is ascertaining whether the new software works with existing apps. You can save money by having custom software made and integrating it with other business apps.

-Analysis Stage/Gathering Required Information

The analysis stage includes gathering specific details for a new system and determining the initial concepts for prototypes that will be used in the development stage. Developers may:

- Define any prototype system requirements.
- Evaluate alternatives to existing prototypes.
- Perform research and analysis to determine the needs of end-users.
- Create a software requirement specification (SRS) document.

This information gathering will bring together the software, hardware, and network specifications for the system they intend to build. This will protect them from exceeding their budget or resource allocation when working with other development teams.

-Design Stage / Designing a Solution

Designing a solution is a vital step before moving on to the key development stage of the project. In the beginning, developers explain the specifics of the entire application, in addition to specialized aspects, such as:

- User interfaces.
- System interfaces.
- Network and network requirements.
- Databases.

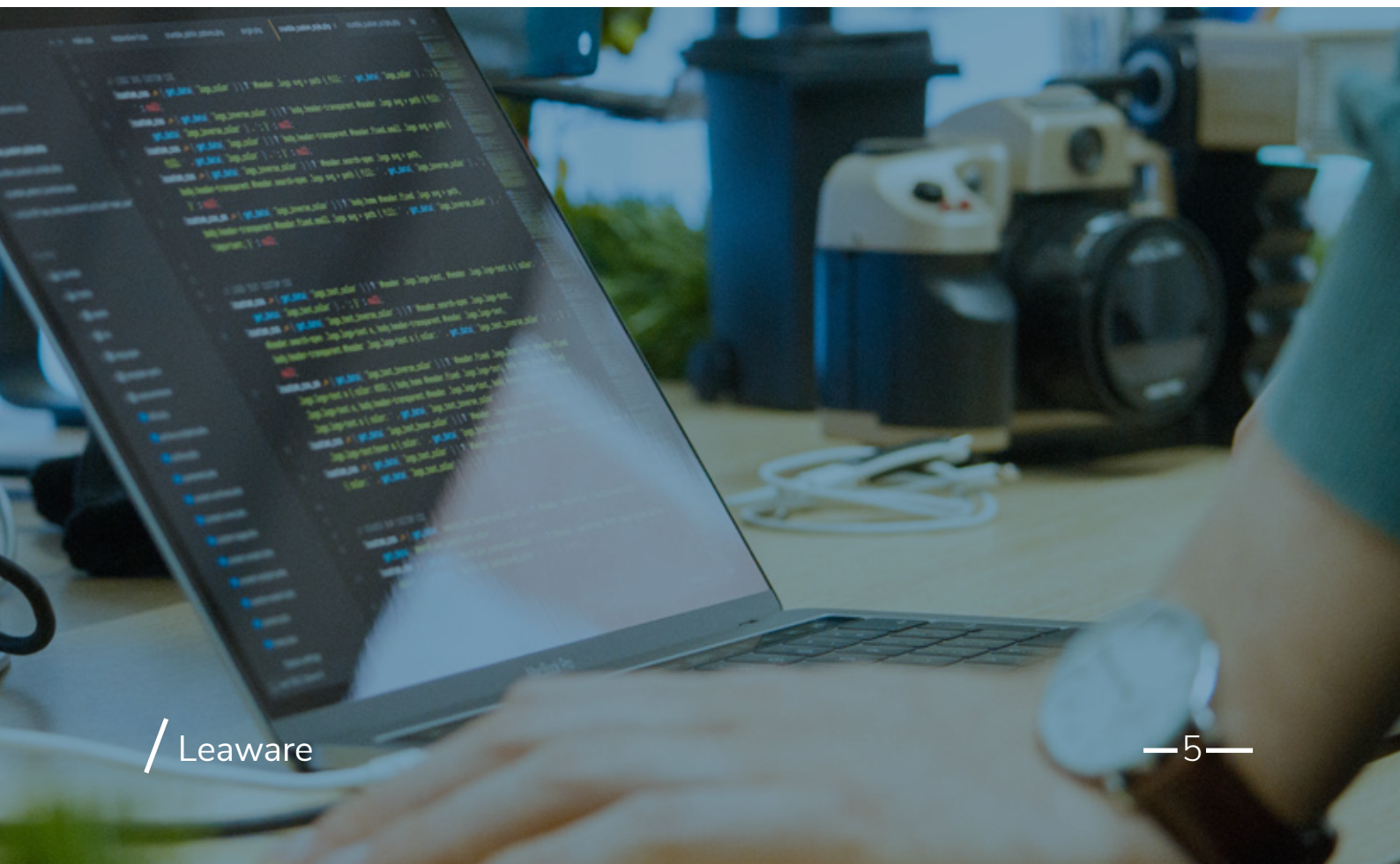
Developers put the SRS document into a logical structure that may be programmed later. Plans for operation, training, and maintenance will be created so developers know what to do at each point of the cycle. Once finished, development managers will create a design document that will be used across the software development life cycle (SDLC).

-Development Stage

This stage is the part of the process where developers write code and construct the application in accordance with the prior design documents and specifications. The product program code is developed according to the design document specifications.

It is intended that the planning and preparation will make the development phase reasonably uncomplicated.

Developers will use tools including compilers, debuggers, and interpreters to code according to the organization's rules. Programming languages include C++, PHP, and others. The developers will choose the appropriate programming code based on the project needs.



-Testing Stage

Making software isn't enough. Once the software has been developed, it must be tested to ensure that there are no issues and that the end-user experience is not affected. During testing, engineers scrutinize the software, looking for flaws or defects that need to be tracked, corrected, and retested.

It is critical that the software meets the quality requirements outlined in the SRS document. Testing can either be a very quick or very long process, depending on the developer's skill, the software's complexity, and the end-requirements.

-Maintenance Stage

The SDLC doesn't end when the software is released. Developers must now go into maintenance mode and practice resolving bugs reported by users. Developers are also accountable for any post-deployment changes to the product.

This can include handling residual bugs that were not able to be patched before launch or resolving new issues that crop up from user reports. Larger systems may require a longer maintenance stage compared to smaller systems.



DIFFERENT TYPES OF CUSTOM SOFTWARE DEVELOPMENT AND HOW THEY CAN BE APPLIED

Application Development

Choosing the best type of custom software application depends on your needs and what industry your business operates in. An experienced custom software application development company can help you decide which custom software application is appropriate.

Web Applications

Advanced web applications can reduce costs, are highly responsive, and do not need to be installed or updated by individual users. Scalable and highly accessible, these options provide high levels of efficiency.

Mobile Apps

Mobile apps are extremely practical ways to develop solutions to customer problems and needs. Many people have mobile phones and using apps establishes an easy way to access the tools that can be developed.

Enterprise Applications

Enterprise applications integrate existing departmental software into one user-friendly interface to better manage and share data across the company. They are built to grow with the company.

SaaS Applications

SaaS applications are developed with a user-friendly interface which promotes sales, integrates with almost any platform, and are highly secure to prevent costly data breaches.

E-Commerce Applications

E-Commerce software solutions allow for an online store to be integrated into a company's existing website so they can sell goods with a customized storefront, track payments, and organize products with ease.

Application Development

Software development should be automated to the extent that it does not require the creative thinking, strategy, deftness of hand, and organizational power of a brilliant developer. Developers should automate the repetitive, dull, and uninteresting portions of the job that cause people to become disinterested. The following qualities distinguish the automated software development process from other approaches:

- Every developer provides code to the repository. Git is the most common version control system. The repository contains the entire project's software. No extra scripts, programs, or code is delivered.

-The build process is automated. Getting the latest software version does not need a lot of manual work. Ideally, the build process is another script or software versioned in the code repository. A developer downloads the newest code from the repository, starts the build process (via a script) and gets the application to a usable state. The same script should be used for all testing tools, environments and demo builds.

-The process of building the software package is quick, which enables testing and fixing.

-The team completes updates daily or many times each day. The working code is continuously pushed to the version control system's master branch.

-The testing environment should resemble the production environment as closely as possible. In an ideal situation, it would be a direct copy of a production environment.

-Putting software into production is automated. Pushing new changes to production should be as simple as clicking a button or running a script.

By achieving the tasks listed above, you gain many benefits that make the software development process more ordered.

Integration of Different Applications and Systems

A variety of modules or designs will be merged into the core source code as a result of developer efforts, which will typically involve the use of training environments to identify additional faults or defects.

A process of integration and final installation will take place as the information system is brought online. The program is theoretically ready for market after this step and can be made available to an end-user who requests it.

Who Benefits From Custom Software Development?

Employees

It is one of the most sought-after solutions because it allows you to launch your own unique product or software. When launching a workflow management system for IT employees, the software will be supplied with the necessary features and solutions, as well as those that are specific to the company's brand.

Clients

Each client's business is unique. Custom software is built for your client's requirements, meets their needs, and is designed to serve a specific purpose. There's no one-size-fits-all solution as far as business processes are concerned. Having software tailor-made to suit your client's unique requirements will complement your working model.

HOW CUSTOM SOFTWARE DEVELOPMENT HELPS YOUR COMPANY TO IMPROVE

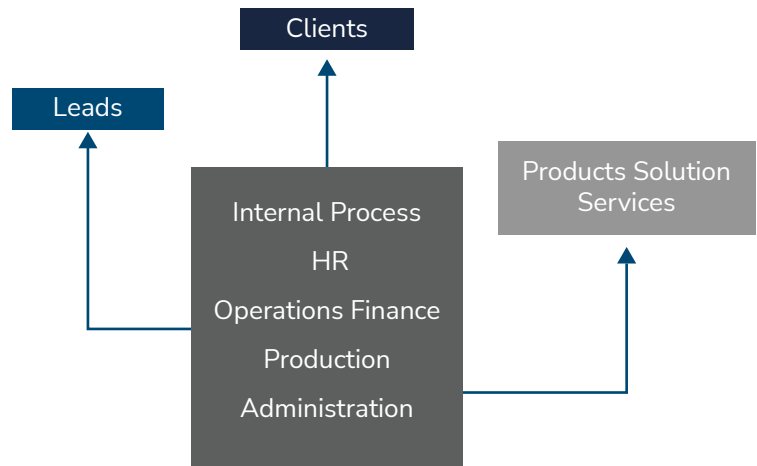
Never has the significance of software been more apparent as it is right now. Not only are critical business systems almost entirely powered by software, but mobile apps and other digital touchpoints that rely on software are increasingly being deployed to improve efficiencies and customer satisfaction, simplify work, open new opportunities, and facilitate customers.

There are several reasons why opting for bespoke software development can be an important investment in the dynamism and efficiency of a company's core systems. By developing custom software, the company gets a tool specifically designed for its activities, as opposed to classic bundled software or templates that the company must adapt to.

The decision to invest in custom-made software can be the best way to increase efficiency and establish a trusting relationship with a professional software development company from development to maintenance of the application. Custom software development allows you to create an integrated system, which can manage multiple processes. In this way, you can manage the business from a centralized system, achieving better results which can be controlled.



Examples of uses of custom software development



Automate Lead Generators

Ways to manage customers:

- Direct mail.
- Mail advertising.
- Phone calls.

Those who can potentially enter:

- SEO generation systems in all your input and output channels.
- Content marketing.

This helps to automate leads throughout the life of the digital product. Managing connections the core the key to success.

There are three aspects to follow:

- Prioritize which prospects to find.
- Nurture those prospects.
- Track progress.

In this way, a client who is interested in continuing with their experience in your digital product is assured.

Automate Sales Processes

Automating the sales and promotion of your digital product through controlled tools helps a lot to process each entry process of your potential customers more effectively. The right tool being implemented in the right way helps you to control sales statistics and offers in a more honest way, consequently, evaluating them more objectively and being able to take actions to improve this process.

Automate Client and User Support

Making use of tools that allow you to automate processes helps you better manage your organization and your digital product. One aspect that customers and users can perceive easier is the response time and its effectiveness. Automating technical support for any issue they have about the functionality of the digital product will give them a good experience. More importantly, Leaware will ensure that this automated help is efficient and manages to solve problems and respond promptly to customer concerns.

Understand Your Clients and Users Better

One way to manage automated processes for the development of digital products is to understand the requests of potential customers. Making sure that you don't leave ambiguities or any open loops that could bring inconveniences that affect the user experience will help. The clearer you are about customer requirements and goals, the smoother your software development will be.

Build a Digital Product

This stage of execution is the response to extensive research on the most important aspects that users expect to find when using the digital product that you have developed. It is important to consider the shape, colors, and the functional characteristics of the software's interface, ensuring that it is consistent with the client's brand, logo, and meets the client's expectations.

Digitalize Your Product

When the product is already conceived, the coding continues. The elimination of bugs and failures that could hinder the functionality of the digital product and the customer experience must be underway. The more satisfying the user experience, the more assured is the success of your digital product.

Add Technology to Your Product

The process of innovation and updating is essential to ensure the success of your digital product. You must ensure that you are aligned with current trends and thus your users will be in constant evolution with your application. The customer's needs will vary as the functionalities of your digital product grow.

Digitalize Internal Processes

While you seek to automate your processes, the information you evaluate about them will be truthful and timely. With this, you can capture more opportunities for improvement so that your digital product grows and becomes successful.

Integrate Internal Systems

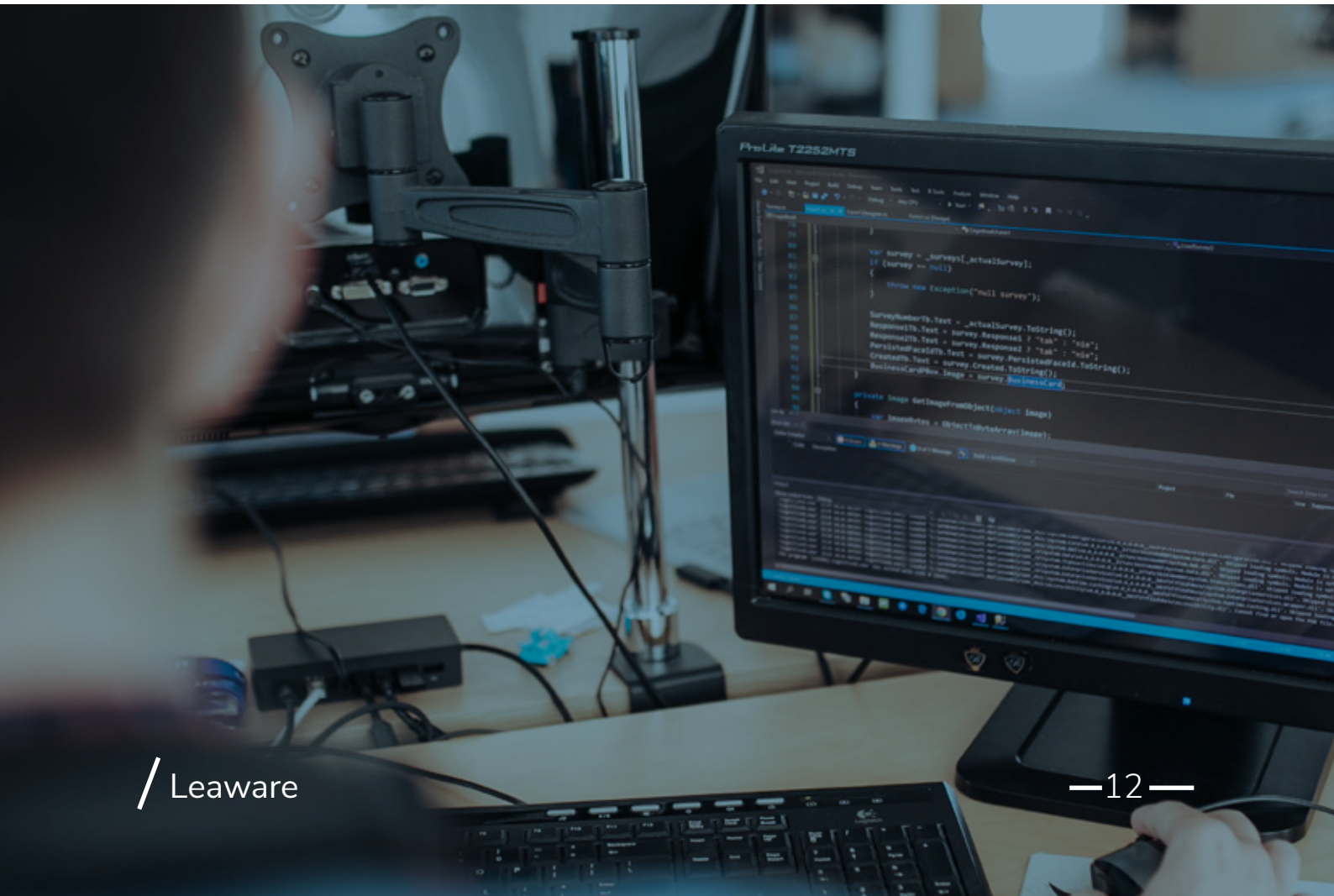
You must find a way that the processes and activities that are being executed are integrated. This is important so that everything is processed in an orderly system and growth can be measured.

LARGE COMPANIES REQUIRE THE MOST BESPOKE SOFTWARE

Custom software is used by businesses for most of their tasks, including content management, inventory management, customer management, and human resource management.

A lot of enterprise-level software products, such as customer relationship management (CRM) and enterprise resource planning (ERP) are custom designed for the companies' needs.

In addition, custom software aids with the successful integration of important systems, supports the collection of data for analysis, facilitates regulatory compliance and other external transactions, and allows companies to respond to events and situations in a proactive manner.



WHY IS CUSTOM SOFTWARE DEVELOPMENT IMPORTANT?

Many companies require custom software development to enhance the functionality of their applications by modifying, integrating, or customizing their existing software. Furthermore, bespoke software assists you in scaling your organization to match the wants of your customers as well as the ever-changing market expectations. See below some of the advantages that can be benefitted from custom software development services:

Efficiency

Custom software helps to increase productivity by making the processes swift because now it is tailored to your business needs. You won't have to spend time or change your business processes to adapt to standardized software.

Easy Integration

If you are planning to invest in commercial software, perhaps one of your concerns is determining whether the software will work with existing applications. You can save this further investment by getting custom software built and leveraging integration with your other business applications.

Increase Profitability

Custom software can solve many of your business problems. Wouldn't it be great if you could make money from your custom-built software? You can license it or sell the software to other organizations depending on the terms and conditions of your business projects.

Scalability

As your organization grows, the business processes will become more complex. With custom software development, this is not an issue as you can scale your software in line with business growth. Therefore, you will not incur costs on additional licensing or subscriptions for additional features.

Independence

Many lags happen just because of dealing with the software vendor. With custom software development services, you will save a lot of time that can be utilized in a more productive way. Additionally, you won't have to worry about price hikes or getting a license for your packaged software.

Increase Security

Another advantage of bespoke software is that the security more superior than boxed software. This means that any custom-built software is less susceptible to security issues depending on the terms and conditions of your business projects.

THE CHALLENGES OF IMPLEMENTING CUSTOM SOFTWARE FOR SMALL AND MEDIUM BUSINESSES



For all the benefits that custom software offers, there is a high up-front cost. It is common for companies to end up paying more for unnecessary features and functionality. There may also be delays in using the modified software. However, this is not a universal issue. With customized software, it is important that the company pays only for the use of needed technology.

Businesses should consider the total life cycle cost and net worth offered. Tailored solutions save money by improving efficiency over the long term. While off-the-shelf software may have a lower price, custom software is an investment. Over the lifecycle of the custom software there is increased efficiency, productivity, and in turn revenue. Custom software fully optimized for its goals and would allow things to be done much better than generic non-commercial software.

Businesses become agile with customized software.

For example, software bugs can be fixed in-house immediately instead of waiting for the next update to be released, which can take months. With ready-made software, the company risks a system with vulnerabilities. For custom software, small and medium-sized companies can get in touch with the developer and ensure a transparent flow of information between the company and the development partner. This allows for regular maintenance improvements without impacting normal business operations.

Streamlining business processes to run smoothly and seamlessly through custom software provides multiple benefits that transform the organization. Highly functional, bespoke software helps the company have more control over all operations and takes control of the growth process, which can be turbulent. A digitally focused company enables a cultural shift towards a more open and proactive company, which is seen as the key to success in today's challenging economy.

Custom Software Development vs. Commercial Tools

Customized applications are designed to meet the specific needs of the customer. This is the primary distinction between bespoke software and commercially available tools off-the-shelf. Below are instances of customized software that are inspiring and practical:

- Application for remote diagnosis of hearing loss.
- Application for a media service platform.
- Mobile application for managing health plans.

It is important to consider the maintenance and growth of the respective applications. There are limited possibilities for customization and progress when it comes to readily available off-the-shelf tools. As part of the custom software service, the team that developed the application can provide maintenance services for the application.

IT Outsourcing Solves Customer Problems

It is frequently the case that an organization has a certain set of requirements that an application or system should meet but does not have the necessary expertise or resources to put these requirements into action. A recent survey found that 32% of managers say that finding qualified software developers is the most challenging difficulty they face. 57% of the companies polled stated that they have had prior experience with outsourcing to a software development company.

Employees of the service provider may work as an extension of the customer's existing team or work independently. In addition, an IT partner can provide guidance on the technology to be used and the appropriate methodology to follow in relation to the project. The question is which technology should be chosen. This will almost certainly be determined by the answer you choose. The service provider will tell you whether Java, PHP, .NET, Python, or other types of developers are required. There are a variety of methods to choose from: Scrum, Kanban, Agile, and Lean.

HOW TO DIVERSIFY A PORTFOLIO TO DIGITALIZE A BUSINESS PROCESS / PRODUCT

Creating a digital product is usually a long, multi-year process that will require commitment and funds. Fortunately, this venture does not need to be self-funded.

No matter what stage of digital product development you're at, you can always look to outside funding to diversify your portfolio. Whether you're just starting out with your startup, working on the first version of your product, or just beginning to scale, any time is a good time to arrange additional funding for your venture.

If you are running a startup in the European Union (EU), the first and natural direction of your interest should be the numerous EU funds that are available. For example, Horizon is the EU's key funding program for research and innovation. Under this program, projects are selected through a competition, the quality of projects is assessed by independent experts, and funding can range from 60-100%.

Apart from structural funds, you can research national programs supporting startups, scaleups, and creators of digital solutions. In an age where research, innovation, and cutting-edge digital solutions are playing an ever-increasing role in our lives, it's only a matter of time before public funding comes around. In addition to central programs, it's also worth contacting universities for similar opportunities. If you do not have access to public funds, you can find other opportunities. You can raise adequate funds with the help of crowdfunding.

There are four types of crowdfunding:

- [Reward crowdfunding](#) – you can find this type of crowdfunding on sites like [Kickstarter](#) or [Indiegogo](#). Members who lend money to a new company are usually given incentives, like free products or early access to new services.
- [Equity crowdfunding](#) – funding is provided in exchange for ownership or equity in the company.
- [Debt or microlending crowdfunding](#) – minibonds, peer-to-peer lending, and invoice financing are common in this type of funding.
- [Donation-based crowdfunding](#) – the process is similar to reward crowdfunding, but supporters do not receive incentives (except for the creation of the business).

Private funding is another way to raise funds. This is slightly more difficult, but it can result in significant development of your idea due to the experience and financial capabilities of the investor. Venture capitalists (VC) are investors who look for startups and small businesses to invest in. They provide the firms with investment for equity and can provide investment as the company grows. Often, they will assist with the development of business plans, product development, and other consulting services as part of their investment.

HOW TO TELL WHETHER A COMPANY CAN DEVELOP GOOD SOFTWARE

The process of evaluating the quality of software is complex. The approach of knowing whether a company develops software with good standards depends on many factors and indicators that are objectively measured over time. One such aspect is whether the company is growing continuously and rapidly and that its applications or digital products are constantly innovating. These products need to innovate not because they are obsolete, but because the need of users is being satisfied and is evolving.

There are many aspects that value the good performance of a software development and services company:

- [Fast customer support.](#)
- [Continuous improvement and updating.](#)
- [Constant innovation.](#)
- [Variety in services offered.](#)

It is also clear that the evaluation of the performance of the software and the company that develops it is measured through the opinions of the users and it is therefore very important to have the tools to obtain information on the experiences of the users and evaluate them.

A feedback panel that can be rated on a scale is invaluable information. Although reactions will not always be positive, negative reactions and suggestions should be channeled as opportunities for improvement to correct issues.

From an operational point of view, the good performance of the software can be evaluated by the same developers where the functionality of the digital product and its continuity without failures in normal operating conditions in the market are measured.

The agility, their skills, and competency of the developers will also translate into an analysis of the effectiveness of the software. The right staff with well-defined responsibilities translates into digital products that perform well and operate smoothly.

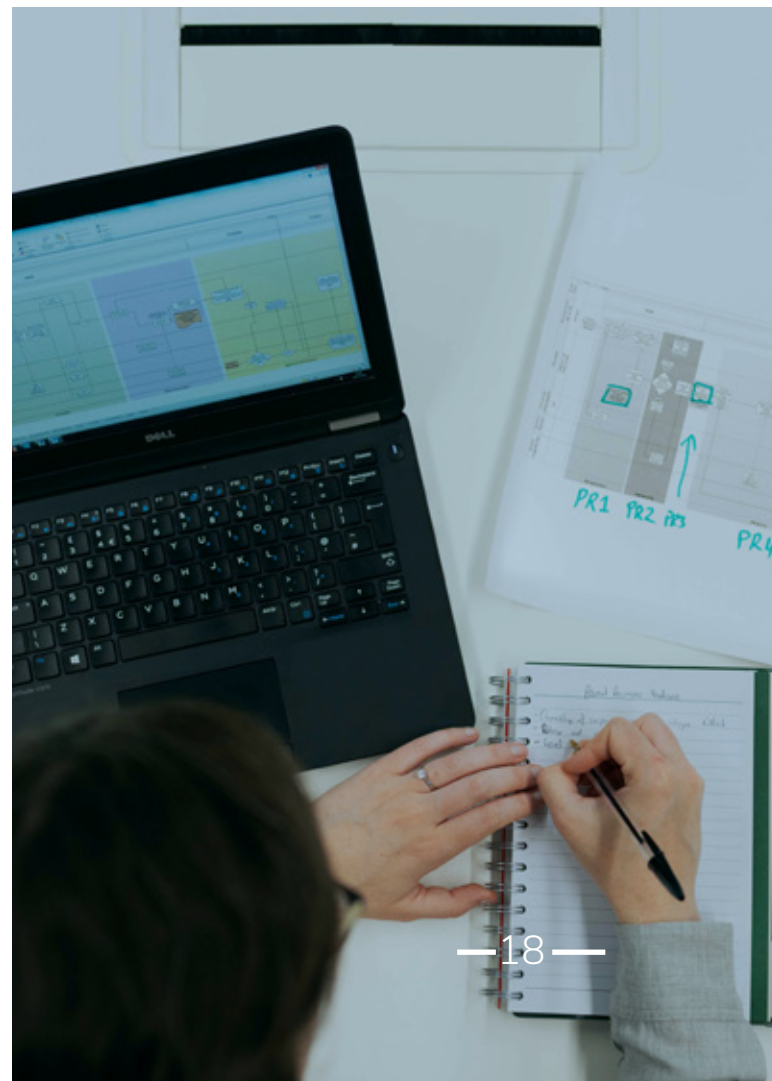
WHY TECHNOLOGY AND SOFTWARE ARE THE MILESTONES FOR THE FUTURE MARKET

Technological change has continuously been the key to economic, social, and cultural development in the last 20 years. The response to these changes in society has been progressive. At present, we are seeing a very fast and accelerated potential advance where customers quickly adapt to new technologies and go with them during the innovation and updating process of technological advances.

Artificial intelligence (AI) is a milestone in technological advancement as the technology not only executes tasks and thinks, but also learns. The possibilities of automating work can be expanded to unimaginable limits. There are jobs in which automation complements the worker and helps them improve productivity to the point where less work is done and more is produced. It must be taken into account that training workshops must be designed, developed, and established so that people can more progressively digest this change in the workplace and make them understand that it is not intended to replace them, but rather to complement their work.

The applications of new technologies are constantly developing. Positioning your company in the market using technologies and software no longer seems like a special condition, but rather a necessity. Economic growth is focused on the development and exploitation of many branches of technology and regardless of what the business is destined for, it is necessary to implement a product or service that is based on the development and control of software.

Companies must align themselves with this so that they can grow and innovate their processes in a controlled and continuous way. Today, the success of an organization is linked to the level of commitment it has to technological changes.



CONCLUSION

Having custom software development creates software that fits your business needs. You won't have to worry about fitting your business model into a standard software framework. So, leverage bespoke software to focus more on your organization's growth. Software solutions perfectly adapted to customer needs should inspire, increase our standard of living, and offer a unique user experience.

Therefore, before deciding whether to hire an external service provider, consider the above aspects. The key to success when it comes to custom software development is recognizing that talent implementing disruptive solutions today is as exclusive as bespoke goods.



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Since 2010, LEAWARE has been helping start-ups and already established companies build and develop their digital solutions, making them grow, boost their businesses, and succeed.

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