

> HOW TO PLAN
A **SUCCESSFUL**
CUSTOM
SOFTWARE
PROJECT



LOTATECH

BUILDING A **DIGITAL** **ECOSYSTEM** – WHY COMPANIES TURN TO CUSTOM SOFTWARE DEVELOPMENT

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As a company grows, development of systems and processes is crucial. In the early stages of a business, unless it's an online self-service type of business, investing in custom software isn't typically on the front burner. However, as a company grows beyond a few dozen employees, managing processes becomes much more difficult.

Managing in and of itself can become non-efficient, with a lot of manual labor involved. And before you know it, you're relying on a lot of people. So you don't have the flexibility to develop the business further. You become stuck. You end up with a chain of command and a lot of data to support the quality of the work.

Many managers try to optimize their processes by hiring more people. They do whatever they can to try to solve the problems. But you know that something just isn't right – something's missing.

So you start to look at existing Software as a Service (SaaS) solutions. You look for software companies where you can simply sign up for a subscription and be off and running. And maybe that will work for you. But it could also be very costly, especially as the need to upgrade the software to higher levels comes into play.

But when your company is growing fast, you may need to find a more efficient and cost-effective solution. What was once a few hundred dollars per month turns into over \$5,000 per month, and you're not happy. And because your business is relatively unique, the software is not right for you any longer.

Before you walk away from the SaaS company, you might reach out to them and ask about custom features. Is this something the SaaS company could simply build for you to add on to your software? That would certainly be easier, right?

Customizing SaaS programs can start from \$100 to \$300 per hour. So now your price is going up and up. Then you find out that there are a lot of dependencies. You thought you could just add a simple feature. Not so fast! The feature you want to add will impact another feature, which impacts another feature, and so on.

And this is where custom software projects come in. Custom software is not the fastest way to solve your problems, but it is the most efficient.

In this eBook, you'll learn why companies turn to custom software development and how you can plan a successful custom software project.

COMPLETE HIGH-QUALITY PROJECTS ON TIME AND ON BUDGET

Are you currently working with software where you face constant limitations? Do you have your business processes well-defined, but your software can't support your company's needs?

While SaaS companies develop one-size-fits-many applications, every software project is unique. There is no magic wand or general methodology for a universal type of software solution. Each project needs to be treated individually, thinking through dependencies and stakeholders.

How are processes done today? Are your current processes manual and labor intensive? What functionalities are you missing? Are you using one single software platform? Do you have multiple software applications that you're trying to get to work together?

Before you can start a software project, you need to first understand how the business operates.

- What type of business are you in?
- What problems do you face in your business?
- What is the ideal situation for your business processes?
- Are you planning significant staff growth?
- Are you planning to expand into new territories or new locations?

Next, develop a unique approach and methodology specifically for your company. Rather than focusing only on time and budget, break your needs down further.

The business analyst, the software architect, and the UI/UX specialist will create a working prototype for the software so you can understand and see the full functionality of the software. Your main point of contact will review the business requirements document (BRD) and make sure everything is captured. Key stakeholders from your sales, marketing, and production teams should also be involved.

Figure out who your single point of contact will be for the company – the person who coordinates your internal stakeholders, similar to an onsite project manager. With this complexity, consider creating a RACI chart that defines who’s Responsible, Accountable, Consulted, and Informed.

- **Responsible** – Those who do the work to complete the task.
- **Accountable** – The one who ensures the prerequisites of the task are met and who delegates the work to those responsible.
- **Consulted** – Those whose opinions are sought, typically subject matter experts.
- **Informed** – Those who are kept up-to-date on progress, often only on completion of the task or deliverable.

This document will include responsibilities such as reviewing, advising, and approving.

Responsibility Assignment Matrix – RACI Chart

Project Deliverable	Dmitriy F.	Michael	Anna	Alek	Dmitriy R.
Planning/Schedule	R	A	I	C	
Risk Management		I	I	Q	
Quality Management			R	C	
Procurement				R	
1. Specifications Listing			A		
2. Site Requirements		C		R	Q
3. Call for Tenders				Q	A
4. Budget Approval				A	Q
5. Contract Negotiations			A		Q

* R - Responsible (works on) A - Accountable C - Consulted I - Informed Q - Quality Reviewer

PARTICIPATE IN PROTOTYPE CREATION TO BUILD CONSENSUS AND SPREAD YOUR VISION COMPANYWIDE

As you think through how the software project will change your company, having the right vision is critical to set your company up for success.

In order to be successful, align team members around what you're trying to achieve and make it a priority. It is no small task. Your software project must be led from the top down – whether that's the internal champion, the project owner, or the contract signer.

The leader, or company visionary, needs to focus on the prototype and make sure all key stakeholders from all departments are involved at the right time. Your stakeholders need to take part in designing the software, avoiding assumptions, and providing their opinions on different features.

One of the most significant problems is visualizing the solution. While staff members can show you where the problems are, they can't always explain why it's a problem. And the software company will say, "sure we can solve that for you." But when you have a one-hundred-page requirements document that tells you what the software is going to solve and how it's going to solve it, you still may not have a connection between the problem and the solution.

With a prototype, you'll be able to view and experience the solution that will be built. Prototyping is critical since 65% of people are visual learners. Your prototype can be easily shared among team members, so they will have a better understanding of how the software solves their problems.

Without a prototype, there will be a disconnect. While your planned software project may make sense from a practical standpoint, you have no idea if your project will provide your company with a concrete solution to your unique problem.

The prototype shows how the problem is solved and helps to manage expectations. Those expectations carry through not only with the developer and the client's primary point of contact but also internally among company stakeholders.

Other reasons for using a prototype for your custom software project include flexibility, cost of changes, user involvement, and predictability. Let's look at each of those in a little more detail.

- **Flexibility:** The prototype does not use real data or databases. If users aren't happy with the concept (even the entire concept), redoing the prototype from scratch wouldn't be a problem. If you are in development and the entire concept needs to be replaced, redoing this could take days or weeks. Also, the impact to the business would be critical, possibly to the point of closing down and restarting the project.
- **Cost of Changes:** With one to three people involved in creating the prototype versus six to ten people involved in development, the time required to create a prototype and make changes is about three to four times less compared to development. Along the same lines, making changes before development begins will save a substantial amount of time and money.
- **User Involvement:** With a prototype, staff in different roles can experience their part of the software like it's already built. Actual user experience promotes much better participation. Software bugs can be found early and necessary changes can be made efficiently. Having everyone participate in the prototype and getting their feedback helps to create a strong product that everyone is eager to use.
- **Predictability:** A prototype helps the user know the product before a single line of code is written. It gives the user confidence to know how the custom software will work for them. The process becomes much less stressful. And with the budget guarantee, they know what the costs and timeline will be which is rare for the software industry.

DEVELOP RELATIONSHIPS

A custom software project should work towards a particular goal. The investment should help your company improve relationships with internal and external stakeholders.

Employees should communicate well internally and externally, including with vendors and channel partners. Without proper communication, companies can suffer from reputation damage. So what can custom software do to help strengthen relationships with people in your ecosystem?

If software is automated and prompts users to do different things, a report to management can show who is and who is not doing what they're supposed to do. Automation allows for one department's tasks to progress automatically through to another department without waiting for a person to intervene. The output for both departments is controlled through the software. With all of the requirements in place, everything gets done in the right format which keeps management happy.

Reminders can also help keep users better organized and make sure that tasks are completed on time.

For instance, a company whose employees have licenses or certifications needs to track renewal dates. Without custom software in place with reminders, you would need to have an employee (possibly more than one) who manually tracks renewals and follows up with employees individually with reminders. Custom software automates this process.

If you understand and can formulate your company's problems, then you can solve those kinds of problems with custom software.

SaaS software is made to satisfy general users, typically users that fit the company's buyer personas. It's not made for you personally or your company. SaaS providers don't use your unique business flows as their assumptions. If you really want to differentiate and gain a competitive advantage, custom software is the best option.

Custom software can solve many unique business problems. There are no limitations. And that's the biggest advantage. For example, SaaS may not allow you to track your field technicians using the smartphone's GPS, but this functionality can be added. Or when you decide you need to reach your customers or internal users by text, this new requirement can be added into the queue of changes or updates.

OPTIMIZE AND IMPROVE PROCESSES

Custom software helps companies improve and optimize business processes.

Every business model is evolving and dynamic, but never static. Competition changes, so you have to keep your business processes up to date. When a critical mass of users start complaining about something going wrong on a SaaS platform, the SaaS company may do an update, but you don't have any control over that.

When you have custom software, you control the whole process. You create your own backlog of items. You decide when items are delivered, how fast they're delivered, when they're delivered, and how they're implemented internally.

If you have manual business processes or use a SaaS application, the flexibility and efficiencies you gain with custom software make you more competitive. This helps your company implement new features and develop new business processes without being at the mercy of your SaaS provider.

Let's look at an example. To send a holiday card to your clients, do you extract the data from your CRM software into an Excel spreadsheet? Do you then need to deduplicate the data? In custom software, you might instead simply press a button, and the data would be made available to you in a ready-to-use format.

Another common problem is when a manager or a CEO needs a specific type of report that their SaaS program is unable to generate. They have to jump through hoops to piece together the information they need. With custom software, generating a report can be one simple click.

Whenever you come across a problem or a manual task, add that to your backlog list to automate in a future update.

When considering advantages of custom software, data consolidation is often a top priority. When you have properly accumulated sales data, you can send out messages very easily, taking only a few minutes to set up an email campaign. With proper reports, you can make faster business decisions. It all comes back to how you've collected this data, where you're keeping it, and how easy it is to obtain. Custom software allows you to consolidate the data the way you want. And when data is properly consolidated, the sky's the limit.

BE MORE VERSATILE

Leaders face challenges around making companies more versatile. Ideally, your company's leaders like to be more flexible so your company can move into other geographies or possibly other industries. Have you ever felt like your business has hit a wall? Do you feel terrified to open another location due to lack of automated business processes? Fear like that can put you out of business!

So what can custom software do to help? Custom software can take over your manual processes, so routine tasks become easier or even completely automated.

For example, to open a new location:

1. You would need to hire competent people to manage the location.
2. Next, determine which employee is going to be in charge of human resources and who is in charge of training. Through a custom software program, you would add employee names and positions.
3. Locations could automatically be assigned by position.
4. The software would invite the employee to join as a user and automatically provide them with documentation unique to their position. Employee paperwork, like documents, checklists, and disclosures could be delivered instantly, with reminders set to go out for acknowledgments and other necessary actions.
5. The software could also help with onboarding new employees. Internal checklists defined by job position could be assigned to an internal resource. For instance, Accounting would know to set up payroll for the new employee, Human Resources would know to provide paperwork for signatures, IT would know what permissions and applications to provide, and a manager would know what training was needed.

With custom software, something that would have taken 100+ hours in the past can be reduced to as little as one hour. And as you can imagine, costs go down drastically too.

Consider how a company manages their product inventory. You have 50+ employees who install residential alarms. In the past, installer's product inventory was tracked manually in an Excel spreadsheet.

The installers came into the office to pick up inventory. Then an employee in charge of inventory has to check a box in Excel manually to note the part and who took it. If the

item is returned later in the day, the inventory clerk adjusts the Excel spreadsheet. As you can imagine, with all of this manual intervention and with 50+ installers, the possibility for human error is enormous. In the end, inventory tracking is a nightmare!

With custom software, the installer can check out their own inventory and return items with ease, possibly just with a quick scan of a barcode. And inventory is tracked and recorded with little to no human error.

Similarly, let's look at managing vacation days and personal days for a few dozen employees. With each employee having one to three weeks of vacation and five personal days, managing this in Excel introduces the opportunity for human error. Employees would be left with fewer (or more!) days off.

Custom software can automate that. Now the employee logs into the system to request days off and the human resources department is notified for approval. Vacation and personal days are tracked and recorded, again, with little to no potential for human error.

Oftentimes, software packages have limitations where they only narrowly focus on certain tasks. For example, inventory tracking, CRM, and timesheets would be sold as separate solutions. However, with custom software, you won't have those types of limitations.

DIGITIZE PROCESSES TO IMPROVE QUALITY

To remove the potential for human error and improve quality, your company will almost certainly need to digitize processes.

From a CEO's perspective, reporting is a very big issue. If data is not consolidated properly, getting a report can be a very painful process. Some Fortune 100 companies will spend days generating reports for large divisions of their companies. They might even have to contract with a separate company that generates reports for them. If processes were improved and a report could be generated faster, possibly millions of dollars could be saved over just a few years.

Sometimes, certain data is not available for reporting. Either it is not collected, or it's not possible to extract because you're using a SaaS platform.

Along the same lines, missing data costs your company a lot of money. It creates inefficiencies because CEOs are unable to make quick decisions when data is missing.

Another reason to digitize processes is so that important documents, like contracts and disclosures, are acknowledged and completed. If a contract or disclosure is not signed, the system can send a reminder or warning message. Doing this manually could put the company in a terrible position, exposing your company to liability and possible lawsuits when it slips out of compliance.

If a company sends out lengthy questionnaires or applications on paper, the probability of human error can be tremendously high. By digitizing these forms and adding data validation, human error decreases and may even be eliminated. Not only would this be a huge time saver, but the cost savings of processing manual questionnaires or applications could be in the six- to seven-figure range depending on the size of the company.

THE BOTTOM LINE

Investing in custom software becomes an integral part of your company's growth as you go beyond a few dozen employees. Custom software adds efficiencies while it removes the probability of human error.

SaaS solutions can only take you so far. When you need software that is more efficient and cost-effective, and allows you full access to your data, custom software many times is the only viable solution for your company's unique needs.

KEY TERMINOLOGY FOR SUCCESS

Backlog List – A list of items you would like to automate in the future.

BRD Document – The Business Requirements Document (BRD) captures all of the details for the custom software project and helps to manage needs and expectations.

Prototype – Used during design and development of a custom software project to build feedback into the development process. It also ensures the custom software is responsive to user's needs.

RACI Chart – RACI stands for Responsible, Accountable, Consulted and Informed and is used during a custom software project to determine roles and assign tasks. It includes responsibilities such as reviewing, advising, and approving.

SaaS – Software as a Service (SaaS) is a method of software delivery and licensing through a subscription model.

ABOUT THE AUTHORS



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TAKE THE NEXT STEP

For a company that's exploring whether a custom software development project makes sense, this initial Exploratory Meeting reviews needs, problems, challenges, and the overriding business goal to be optimized.

During the Exploratory Meeting, you'll learn about how other companies similar to yours use custom software to solve meaningful business problems.

BOOK TIME ON THE CALENDAR FOR YOUR
FREE EXPLORATORY MEETING

Schedule