How to Secure Your Web Product Development

Learn how to build your next web product with minimal effort and optimal return
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## Summary
Challenges of Web Development Projects

The reality check

The modern world of quickly-evolving markets is highly competitive. To grab the opportunity and start generating revenue quickly, you should release a new web product really fast while limiting expense.

But today user expectations are extremely demanding; web solutions should be not only highly-functional, easy-to-use, and modern-looking, but also flawless and fault-free. To deliver such a product on time, experienced teams start with developing a Minimum Viable Product, or the acronym MVP.

Building an MVP is the best way to avoid releasing an uncompetitive solution.

Eric Ries says that 95% of all new businesses fail in their ventures. With an MVP, any failure is not a dead end, but a way to collect users’ feedback and update your product while it's still inexpensive and quick.

Many giants like AirBnb, Zappos, and Groupon all started their businesses with an MVP. Such a version of your product will have essential functionality to hit the market and allows you to:

- reduce the time and initial costs of building a market-ready product
- focus on the product’s core value proposition and critical business functions;
- gather users’ feedback and improve your product with minimum effort;
- avoid the risk of overbuilding your product with unnecessary features;
- quickly enhance and polish your product while it continues to attract new users.
Everlasting challenges of web development

The more complicated your product, the more experts you'll need to deliver and maintain it. The easiest and most obvious way to hire them is to gather an in-house team. But this is where troubles arise.

- If your product is expected to be built using technologies that are either obsolete or completely mainstream at the moment, finding the right people becomes even harder.

StackOverflow’s 2016 survey reveals: only 18% of web developers code in AngularJS, so finding them may turn out to be hard.

- Middle or junior specialists bring risks for the quality of the future product, as it requires time for them to dive into your project.

- Developers often think of themselves as artists who want to implement their vision of the product and forget about requirements.

- Developers may deny responsibility in case of a product’s failure. And you may discover it when it’ll be too late to fix.

Add to this commitments, companies undertake to employ a development team, the risks of recruiting specialists with low expertise, and the budgets required to keep a few more professionals in-house, and you’ll see why

90% of German CTOs and CIOs find it difficult to hire suitable IT staff.

- IT staff has been one of the most difficult job openings to fill over the last decade according to The 2015 Talent Shortage Survey by ManpowerGroup.

- Qualified and experienced developers are a better investment, but the demand for them is high.
Is there any workaround?

While in-house development provides the best team interaction and communication, many companies use other ways to cut expenses and avoid troubles related to staff recruitment and employment.

“Body shopping” vs Outsourcing

“Body shopping” implies working with off-shore specialists recruited with the help of a consulting company and brings the following advantages:

› you get resources within your financial expectations (e.g., developer rates in Asia are 75% lower than in the U.S., etc.);
› you may hire people on a part-time basis in case you can’t provide them with a full-time job;
› you can remove or add people to your team depending on the project workload;
› you minimize efforts on finding appropriate specialists and checking their availability, skills, and motivation.

Outsourcing implies transfer of not just work, but responsibility for it to outside suppliers. In the case of web development, you usually hire a whole team to deliver your web product. Outsourcing has the following advantages:

› it helps save money and efforts on recruiting people and keeping them in-house;
› you can access skills and expertise your staff doesn’t have or cannot obtain quickly;
› outsourced teams provide flexibility in increasing or decreasing the delivery speed;
› it includes not only developers to implement your idea, but also designers, QA specialists, system architects, DevOps engineers, and other experts.

Consider “Body shopping” for low-priority projects which don’t have high requirements and strict deadlines.

Outsourcing appears to be the most appealing option for most customers wanting to bring a new web product to the market.

Great outsourcing teams have established workflows, build your product efficiently, and may provide you with technical and project management expertise to help you launch a successful web solution.

The downside of “body shopping” is people management. It may become challenging due to differences in time zones (especially if they work part time) and culture; often they may not speak English well, which is an additional obstacle in communication.
IT Outsourcing in Germany

What to outsource

Up to 20% of all businesses in Europe outsource, and in 2015 IT outsourcing was estimated to represent 80% of the European service outsourcing market.

OUTSOURCING OF SERVICES PER COUNTRY

<table>
<thead>
<tr>
<th>Country</th>
<th>Outsourced</th>
<th>Inhouse</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denmark</td>
<td>9%</td>
<td>91%</td>
</tr>
<tr>
<td>Finland</td>
<td>19%</td>
<td>81%</td>
</tr>
<tr>
<td>Germany</td>
<td>15%</td>
<td>85%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>13%</td>
<td>87%</td>
</tr>
<tr>
<td>Norway</td>
<td>10%</td>
<td>90%</td>
</tr>
<tr>
<td>Sweden</td>
<td>9%</td>
<td>91%</td>
</tr>
<tr>
<td>Spain</td>
<td>17%</td>
<td>83%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>17%</td>
<td>83%</td>
</tr>
</tbody>
</table>

Application development outsourcing is #1 on the market among IT outsourcing services, and 27% of all European firms requiring IT services turn to it.

<table>
<thead>
<tr>
<th>Service</th>
<th>Outsourced</th>
<th>Inhouse</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application development</td>
<td>9%</td>
<td>91%</td>
</tr>
<tr>
<td>Other ITO services</td>
<td>19%</td>
<td>81%</td>
</tr>
<tr>
<td>IT helpdesk and support</td>
<td>15%</td>
<td>85%</td>
</tr>
<tr>
<td>Infrastructure and data center service</td>
<td>13%</td>
<td>87%</td>
</tr>
<tr>
<td>Testing</td>
<td>10%</td>
<td>90%</td>
</tr>
<tr>
<td>Application management</td>
<td>9%</td>
<td>91%</td>
</tr>
<tr>
<td>Desktop and workplace management</td>
<td>17%</td>
<td>83%</td>
</tr>
</tbody>
</table>

55% of companies in Germany that picked outsourced software development were satisfied with the outcome.

63% of outsourced projects are related to web development.

52% of German companies outsource IT functions to other vendors, according to IT Sourcing Europe’s 2013 report.
Onshore vs nearshore vs offshore

When companies pick the teams to outsource their projects, the top five factors they analyze are:

- Positive reviews from other companies
- Geographical proximity
- Language skills
- Available resources
- Cultural proximity

You can outsource development onshore (within your country), nearshore (up to 2 time zones away) or offshore (2+ time zones away). German companies prefer to work with their German colleagues. The same situation takes place in all European countries, according to the survey conducted by Ernst & Young.

**LOCATION OF OUTSOURCED SERVICES PER COUNTRY**

<table>
<thead>
<tr>
<th>Country</th>
<th>Onshore</th>
<th>Nearshore</th>
<th>Offshore</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denmark</td>
<td>59%</td>
<td>26%</td>
<td>16%</td>
</tr>
<tr>
<td>Finland</td>
<td>74%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Germany</td>
<td>65%</td>
<td>21%</td>
<td>14%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>76%</td>
<td>11%</td>
<td>13%</td>
</tr>
<tr>
<td>Norway</td>
<td>80%</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>Sweden</td>
<td>87%</td>
<td>9%</td>
<td>5%</td>
</tr>
<tr>
<td>Spain</td>
<td>86%</td>
<td>11%</td>
<td>3%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>77%</td>
<td>10%</td>
<td>14%</td>
</tr>
</tbody>
</table>

In Europe, companies find nearshore and onshore outsourcing the most effective approach for developing high-quality web products.

Nearshore and onshore outsourcing indeed brings significant advantages:

- Cultural fit, which helps to share your product’s vision;
- A shared market (important if your product is tailored for a local audience);
- Effective communication, avoiding lack of clarity in the work process;
- Higher trust and responsibility.
Outsourcing: your new best option

Why it really beats any other way of making a web product

The main idea behind outsourcing is to help you achieve your business goals through minimizing expenses and maximizing your profit. How does this happen?

Outsourcing provides unrivaled flexibility in the case of limited budget and time for implementing your web product.

In-House Development

- Implementing a new team requires time and effort;
- You need to keep your in-house specialists motivated and trained;
- Your specialists may have inadequate expertise to take on new challenges;
- Full-time employees are often not 100% loaded with work, making your money unwisely spent;
- After the release, you may find you don’t need the entire team to maintain it;
- Expanding your team wisely with junior specialists or system architects to achieve optimal ROI will require expertise;
- If your in-house team is small, its effectiveness may fail due to someone’s illness, vacation, or retirement.

Outsourcing

- Outsourced teams have established workflow and deliver the highest effectiveness from day one;
- Keeping developers motivated becomes your outsourcing provider’s task;
- Teams have experts with diverse experience you can take advantage of;
- With outsourcing teams, you pay only for the job done (hours spent on work);
- Efficient expansion of the team is your outsourcing provider’s responsibility;
- You can easily have specialists replaced in case of unexpected situations.

Outsourcing provides unrivaled flexibility in the case of limited budget and time for implementing your web product.
It’s also about the technologies to use

If you’re building a modern web product, you expect developers to know particular technologies, but do you know which will perform best in your case?

Back-End: Java or Node.js?

For a long time, Java was the best option for huge and long-term projects, but it needed developers skilled in high-level languages. Node.js was claimed to fit smaller companies best as it requires 3x less effort and the knowledge of JavaScript (that is used in frontend development as well) only.

New Java frameworks like Spring Boot have made Java comparable to Node.js in terms of development effort. Now, to pick the best tool developers must first study the specifics of your project.

Front-end: Which JavaScript Framework to Use?

Using JavaScript libraries and frameworks instead of pure JavaScript can speed up the development process. But what fits your needs best, the easy-to-use yet efficient React.js library or somewhat sophisticated but powerful Angular.js framework?

When your app is huge, React.js coupled with server rendering will be your best choice, while Angular.js fits best for small and medium single page applications. And if your project is expected to be long-term, consider using Angular 2.0 right from the start.

To decide which technology’s best for your product, consider not only its trendiness or performance but also development speed, capabilities and ease of scalability.
The world of mobile

In case you’re planning to have a mobile client for your web application, another global decision to make is whether you want to make it hybrid or native.

The more expertise your outsourcing team has in different web and mobile technologies, the less effort will be required for them to help you make this choice and do the job best.

You can build a native app for every single mobile OS where you want your product to run. Uniquely tailored for every mobile platform, such an application will require a huge amount of effort to be delivered.

In a hybrid app, the code is written only once to run on several platforms. For business-oriented applications turn to hybrid solutions to decrease the MVP development and hit the market within 816 weeks. PhoneGap/Cordova and Ionic frameworks make mobile app implementation 5x more cost-effective, not mentioning the highest level of reliability and performance they ensure.

In 2016 the most efficient technologies for rapid development of mobile apps are PhoneGap/Cordova and JavaScript-enabling React Native.

Native apps turn out to be effective when you need the first version of your product to be perfect in terms of its quality and look-and-feel.
There are teams, and then there are real teams

According to Assembla’s and Usersnap’s world survey, primary factors that differentiate outsourcing teams from others for most companies are mainly expertise and reputation.

To avoid hiring inexperienced outsourcing teams (which may miss deadlines and deliver poorly performing products with bugs), follow the next advice:

1. Request detailed info about the members of the desired team. An honest team leader or project manager will provide you with details and names of every team member assigned to your project to help you make the final decision.

   Senior developers on the team will work much more efficiently than junior specialists and will provide valuable feedback and insights on the product.

2. Learn the product delivery workflow in the team. Will team members help you with bringing up acceptance criteria for your MVP? Who will design the product’s architecture and look-and-feel? How the faultlessness of your product will be ensured?

   More clarity means more control of the product delivery process, more trust to the team, and lower risks of missing deadlines.

3. Review their portfolio to estimate the complexity of the projects they have completed before. Does it correspond to your expectations and the product’s requirements?

   Experienced teams often use their previous pieces of work to deliver common functionality quickly and have a set of unique best practices.

Sometimes outsourced teams can be distributed, with different members located in different parts of the world. Such diversification, if done wisely, can make the business even more productive, as proven by companies like Buffer, WooThemes, or 37signals.
Top reasons for you to consider hiring distributed outsourcing teams:

People in such teams work in a more productive manner since they must progress according to schedule and meet strict deadlines and budgets.

Communication becomes even more effective due to the use of relevant tools and scheduled virtual meetings and calls.

When working with distributed teams, outsource providers can look for truly the best experts in the field, without the limitation of office proximity.

This is what makes K&C special: we choose only the best people in the industry to work on your projects and then do our best to motivate them when they are doing their job.
To use a platform or not: that is... yet another question

However unique your product is, technically most products are similar to previously developed ones and can be built using existing constructions, content management systems, and platforms.

Most new media develop their sites on top of CMSs like WordPress. And if you build a digital experience platform, you may want to look at Liferay.

But how to decide on whether to build your product from scratch or not?
In addition to evaluating your outsourcing team’s expertise and advice, also consider these points:

**Building a product from scratch**
- Designing an entirely new product will take significantly more time and resources;
- The code of a custom solution is in your full control;
- Every new function will require implementation from scratch;
- You take full responsibility for your product’s security;
- Improving and updating your solution will need less time in the long term, as it won’t have unnecessary functionality.

**Using a ready-made platform**
- Faster initial time to market since you only need to customize an existing solution;
- Regular updates of ready-made platforms require additional maintenance efforts;
- Usually, such platforms also have lots of useful plugins, libraries, and extensions;
- Maintenance is required to keep open-source platforms highly secure

The more unique and sophisticated your product is, the better it is to build it from scratch. But again — consider time and money required for your solution to hit the market ASAP.
Thinking about your product’s future

If your product is going to be used by tens of thousands of users, you will need appropriate server infrastructure to handle it. So check if your developers have experience scaling and maintaining similar projects and how it's going to be implemented in your case.

If you’re not sure about the popularity of your web app or service, the best approach here is to make the product easily scalable from the very beginning.

To make your product 100% secure, study your audience’s security requirements and discuss it with your team as well.

Decide and specify such aspects of your product as authentication, data encryption, code protection, vulnerability prevention, etc.

Finally, what will happen when your product is finally released? Most probably, you will want to have staff available for its maintenance and upgrade every now and then. Check if the team of your choice is ready for this or will be able to teach your inhouse specialists to do this job.

Another scenario is when your product is expected to evolve continuously (like social networks or collaboration tools), so it’s worth checking if your team is reliable enough to stay with you for the coming years if needed.

In a few years today’s technologies will become outdated and difficult to support, so if your team is ready to support your product for years and has previous similar experience, that’s great.

Maintaining dozens of web solutions for Bosch, METRO Lufthansa, and other clients, we at K&C perfectly know how to keep our developers motivated even when it comes to supporting and updating legacy projects.
Summary

You can use various approaches for delivering your next web product to the users, but outsourcing outdoes them all thanks to the unrivaled flexibility and best time to market. Knowing that, it is no wonder that 55% of companies outsourcing web development services plan to increase the amount of work they currently outsource, according to IT Outsourcing Statistics 2015/2016 collected by Computer Electronics.

Such data proves that outsourcing is indeed not only about expense saving, but also about building web products more effectively, quickly, and smartly. But even if you decide to turn to outsourcing teams, there's still a lot that you should know, and we hope this paper helped you learn the most common challenges you'll face.

And if you're looking for a web development company to build your next groundbreaking product or update an existing one, we'll be glad to help you with that.

kruschecompany.com/it_outsourcing