eCommerce replatforming: 6 technical considerations

A crucial list of IT decisions you cannot ignore

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Introduction

Moving your online business to another platform is a huge decision, but one that is usually long overdue when it is finally made. It makes no sense to work with an eCommerce platform that stands in the way of your growth ambitions or to the success of a new product line - yet this is exactly what a lot of eCommerce businesses do.

There is never a single reason why re-platforming becomes inevitable, and this is not the question we address in this whitepaper. When a BC2 or B2B business begins to ask itself if it might need a new eCommerce platform, the answer is almost always 'yes'.

There will be technical issues. The current platform is too long in the tooth to cope with peak traffic. Its catalog database is groaning under the strain of the SKUs that have been added to it over the years. New features are developed slowly, if at all, and a traffic jam of projects is destroying the morale of IT.

Technical problems lead to financial strain as maintenance costs rise, not to mention the hidden cost of IT and marketing wasting time with complicated 'workarounds'. Marketing has better things to do: it wants to personalize, optimize SEO, implement an omnichannel strategy and increase brand presence on social media. If your eCommerce platform lacks the features to support such a strategy, it is time for a change.

This whitepaper assumes that you have all but made up your mind to re-platform and now need to review the key technical decisions that need to be taken before you commit yourself to a project. To help guide you through this process, we have outlined the 6 main technical considerations for scoping your re-platforming. We shall start with the most important fork in the road: the choice between an Open Source and SaaS eCommerce platform.

1. Open Source or SaaS?

In the Open Source model, the responsibility for installing the platform on a server and managing the technical details around hosting, securing and running the store rests on your shoulders, or on those of an implementation partner acting on your behalf. The source code of the platform is freely downloadable and accessible at any time, giving the business more control — or so it appears at first glance.

In the SaaS model, the backend code belongs to a vendor who decides what happens to it, and how the platform is modified going forward. The vendor also takes care of hosting, support and the strategic roadmap for the platform, making SaaS a more costly alternative as an upfront investment.

The question of pay or not-to-pay is seldom so clear-cut in practice, however, because many eCommerce businesses choose to run an enterprise version of Open Source software, and pay an annual license and maintenance fee to do so. This can be successful, but there is a sting in the tail:
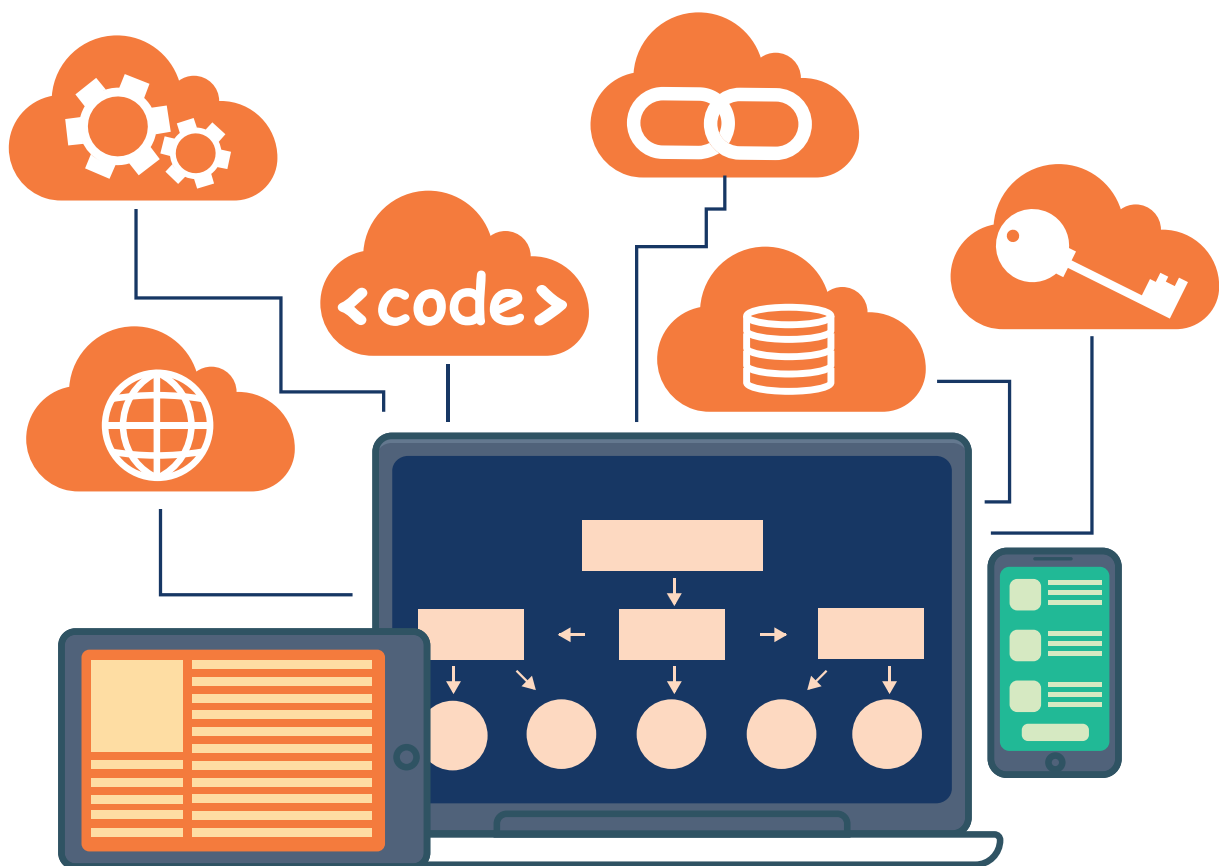
the higher your turnover, the higher the licensing and maintenance cost. Effectively, you are being penalized for your achievements. Nevertheless, enterprise Open Source can appear a safer or easier option, because you avoid the hard work and distraction of development, whether you undertake this yourself or contract external developers to adapt the Open Source code.

Many businesses also use a third party to host their eCommerce platform, which introduces additional costs as well as an element of uncertainty around performance and security.

With an SaaS platform, performance and security are guaranteed and you are not dependent on technology partners to host, customize or develop the platform. True, you are "locked in" with a vendor, but Open Source is typically no more agile because it commits you to a number of third parties, especially if you host the platform on an Open enterprise solution such as Magento.

This brings us to a very important – and often overlooked — consideration. If you want a degree of control over the future development of your platform, the Open Source route is much more problematic than the name suggests because you are reliant on the platform licensor (e.g. Magento) and your implementation partner. In the SaaS model, you have no ownership or access to the backend code, but because of your relationship with the vendor you are in many cases much better placed to influence the roadmap of the platform.

Another potential Achilles heel of Open Source is customization. Businesses invariably need to extend the Open Source platform with custom functionalities. This adds to the cost of the project. The real danger, however, is the development cycle of the platform itself. With each new release of the Magento platform (and for its 2.0 version, Magento plans a fairly hectic schedule of point releases and security patches), plug-ins and customizations may have to be adapted – or entirely re-written if the update is significant.

A truly "agile" platform is one that can be developed very rapidly because the user-base deploys the same set of functionalities.

2. Best-of-breed or Full Suite?

The term best-of-breed is sometimes misunderstood. It is not a complete system, but a collection of à la carte solutions — each considered the best of its type — which together make up an eCommerce platform that is optimal for your business. The word 'together' is a red flag for most IT professionals, yet it is easy to see why best-of-breed became such a buzzword. You avoid the potential compromises of a one-size-fits-all tool, and are free to pursue the best solution for each of your department or business processes.

However, this advantage hides a very important disadvantage. These separate solutions have to work seamlessly together or the term "best-of-breed" becomes meaningless. eCommerce businesses have to offer an integrated experience for all their customers on every channel and device, so a collage of solutions, no matter how effective individually, may not be the ideal starting point. You could be mired in a complex integration project before the real work begins: that of embedding a coherent eCommerce platform in your IT infrastructure (see Chapter 4).

Separate solutions also means different vendors, each with their own contractual quirks and conditions, license structure, support arrangements and so on. Best-of-breed commits you to maintaining multiple relationships — and contacting several support centers in case of a problem.

A Full Suite solution offers one point of contact and, technically, a one point of view. The platform is coherent, and your use of it defined by a single contract. These advantages really come into play when anything goes wrong. In Full Suite, it is much easier to identify the source of a technological problem because whatever has gone wrong, it has gone wrong in one place. And you reach out to one point of contact to get the problem resolved. With best-of-breed, this is much more of a needle in a haystack.

IT has to consider not only the glittering business benefits of a particular solution, but also the pitfalls ahead. The consistent user experience of a Full Suite eCommerce platform does not appear to be a very decisive advantage — not until it is too late anyway, when the business is confronted with the irritations and disruption of a fragmented UI.

The disadvantage of a Full Suite approach is that individual functionalities may not be best-of-breed. Businesses have to weigh carefully whether any such compromises are serious enough to give up on the benefits of a cohesive platform.

3. API-driven eCommerce

Forrester was the first analyst to remark that we are living in an API-economy. The buzz around headless or API-driven eCommerce has been deafening and for good reason. There are many advantages.

In headless eCommerce, the frontend is decoupled from the backend and removed. In other words, the presentation layer — the shop where B2C and B2B customers view and hopefully order your products – is not part of the platform.

The advantages of headless are well-rehearsed. It is an agility play because front-end developers can adapt or refashion the customer experience without having to modify the databases in the backend. All that is required is to make a simple API call.

The time to market for innovations and additional websites is much reduced. Updates are rolled out in a manner of minutes, or less: Amazon deploys updates at an average interval of 11.7 seconds — an astonishing statistic.

Headless means you do not have to re-architect your platform to publish across any channel – and that includes channels that have yet to emerge. If omnichannel is a must, then headless eCommerce is the most pain-free and future-proof approach.

In pure headless, marketers are shut out, because they need IT not just to build the presentation layer, but also to update it and populate it with content — and that's clearly not a sensible idea for eCommerce

A hybrid 'decoupled' architecture does not entirely remove the frontend and so restores the necessary autonomy and initiative to the marketing department.

Either way, headless does have negatives. The ongoing cost of ownership tends to escalate because those amazing frontend presentation layers still have to be built and managed. Management can also be an issue for the system as a whole because by fragmenting it you are creating different moving parts that need expert monitoring.

Headless has many attractions and is very popular at the moment — but that in itself is not a reason to adopt an API-driven approach.

In general, headless is best suited to (large) businesses with many brands, complex ordering processes, unique integration needs or eCommerce businesses with a lot of constantly changing content.

FRONT END DEVELOPMENT

4. Integration with the IT environment

The eCommerce platforms on your shortlist - and the chosen vendors - must support an integration with the Enterprise Resource Planning (ERP) system that is simple as these projects can ever be. The benefits of this are overwhelming, and far outweigh the effort and disruption of a successful integration with the backend. Businesses are scared of integration projects because they have seen too many of them fail, so it falls on IT to make the case that this is manageable. Indeed, the need to integrate with ERP may be one of the reasons why you are re-platforming in the first place.

The business case is easy to make. ERP integration avoids:
1. A lot of data duplication
2. Human error
3. Improves the accuracy of catalog data
4. Customers visiting the webshop get real-time information about the pricing and inventory position of the product they need — and are presented with viable alternatives if what they searched for is out of stockDelivery information is also real-time, which is vitally important for B2B businesses that are part of a supply chain
5. Personalization is optimized because real-time visitor behavior can be linked with customer data in the ERP. As you would expect, every eCommerce/ERP integration leads to a surge in conversions.

The question really isn't: should we integrate? It is: what is the best way to integrate?

The most scalable and flexible integration is achieved with a type of middleware architecture known as the Enterprise Service Bus (ESB). In ESB, applications are decoupled and then distributed to application adaptors that carry out the middleware tasks of data transformation and routing. Because the ESB architecture is modular, new applications can be slotted in quickly, reducing the time to market of your innovations.

5. Security

Not a week goes by without some catastrophic data breach hitting the headlines. Facebook in particular has been seriously exposed, and the brand is suffering as a result. But Facebook offers a service that is free; the only customers are its advertisers. B2B and B2C businesses cannot afford to alienate their customer base in this way. Bank accounts, credit/debit card details, passports, and driving licenses cannot be left vulnerable to hackers who will sell this information and sell it on the dark web.

So the need to re-platform to a secure eCommerce system is a huge open door and a much more stringent legal requirement since the introduction of GDPR.

Considerations of security feed into the choice of Open Source vs an SaaS platform. The great thing about Open Source is that it is free to download, install and use - but that also means that everyone has access to your source code. But that is not all. Open Source platforms have to be extended and customized with plug-ins - which can be another weak link in the chain.

All this can be mitigated, of course. A team of developers can be hired to install upgrades and security patches, as well as run normal maintenance processes, and migrate to the latest version of the software. But this comes at a cost. According to Forrester, 80% of on-premise Open Source spending goes towards maintenance.

6. Is the new platform future proof?

You are re-platforming to a new eCommerce system because your current solution proved to be insufficiently future-proof; you do not want to re-platform again in five years' time. We already alluded to several aspects of your choice that will impact its longevity. API-driven eCommerce means the platform can more readily absorb change. Open Source would appear to offer a similar advantage because you would be able to customize with each technological innovation. But this is much easier said than done. You rely on your implementation partner to build new features, but what if they are unable to do this — or do it to the standard and with all the functionalities that you require? That means you depend on the vendor, who may have other ideas about where it wants its platform to go. You could wait a long time for the desired feature.

In the SaaS model, vendors are continually developing the platform and some offer regular, even monthly, releases as standard to their customers. This has the effect of democratizing development, because customers can ask for a feature to be added. If this the vendor goes ahead and builds this feature, it would then be rolled out as standard to the entire customer base.

In Open Source, you are either on your own, or reliant on a huge vendor with its own timetable for development.

Even if you do eventually get the features that you want, the Open Source code will be freighted down with so many plugins, performance is impacted – and that is where the future stops.

Two other important considerations are also important: performance and scalability. We shall look at each.

Performance monitoring and SLA

Consumers are impatient, and that applies as much to B2B buyers as to a teenager making an impulse purchase while she is on the train. The statistics are extraordinary. A one-second delay in loading leads to a loss in conversion of up to 7%. For Amazon, that would mean a loss of $1.6 billion in annual sales. Another famous finding is that 40% of consumers move on from a website that is taking three seconds or more to load.
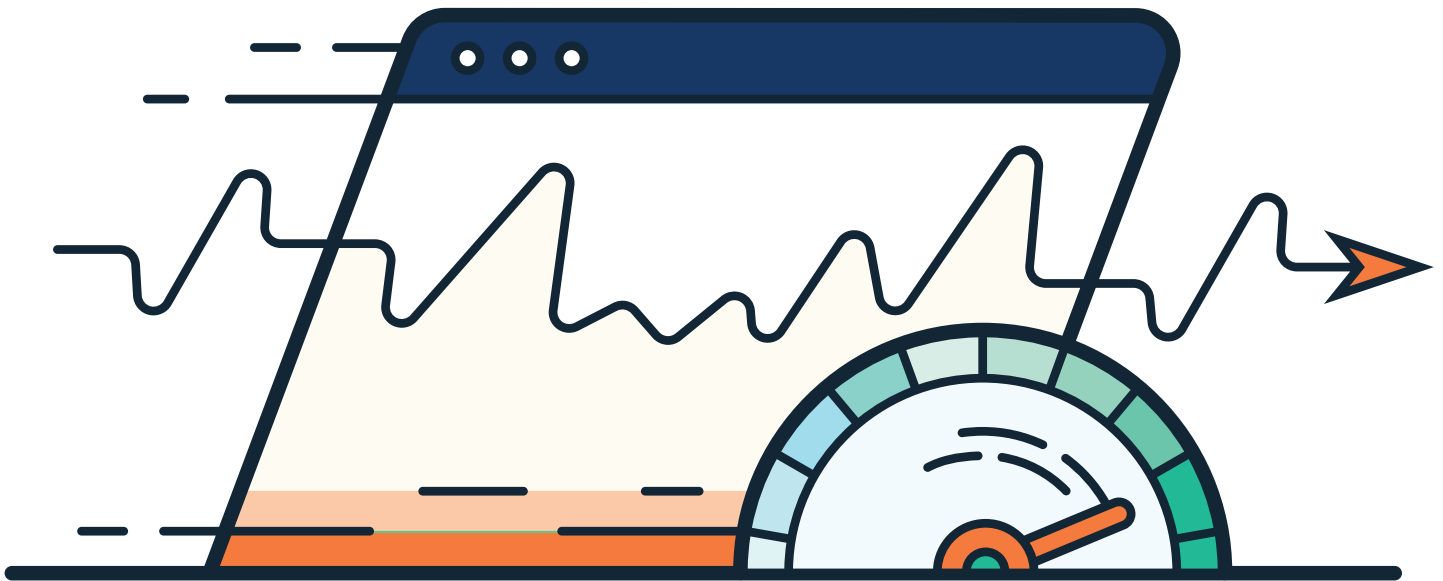
IT has to do what it can to maximise site performance, and to guarantee that performance does not deteriorate over time (by having too many plug-ins in an Open Source platform, for instance). Using fast and reliable hosting is key. The platform has to feel as effortless and robust on Black Friday as it does at 3am on a rainy Tuesday.

You want your eCommerce vendor (or the platform host) to guarantee a certain level of performance, as set out in the Service Level Agreement (SLA).

There are many tricks of the trade to speed up performance, such as using Google Tag Manager to reduce the number of required outside calls. Performance has to be monitored constantly and consistently across all delivery channels. You want assurances that your vendor offers a high level of support if there is an issue. A list of tips and gripes from a community of 300,000 Open Source users does not help you when a performance issue has to be resolved quickly and effectively.

Scalability

One of the main reasons why businesses re-platform is that their current eCommerce platform is struggling to keep up with the growth. A related issue is that of eCommerce platforms being hosted on physical servers that respond poorly to peaks in demand and cost the same when demand drops. Cloud-based eCommerce platforms can accommodate spikes in page loads at the click of a mouse.

Modern, scalable eCommerce platforms leverage the latest integration techniques to create low-overhead integrations, and so additional features can be added with relative ease.

This matters if you want to grow. Scalability means you can extend your operations to (more) international markets or introduce a new brand with technological problems standing in your way. A modern platform should have a multi-shop engine from which you can run multiple webshop from a single admin environment.

In short, scalable gives you much more flexibility to adapt to future technological advances and innovations. And that is what you need your eCommerce platform to do.
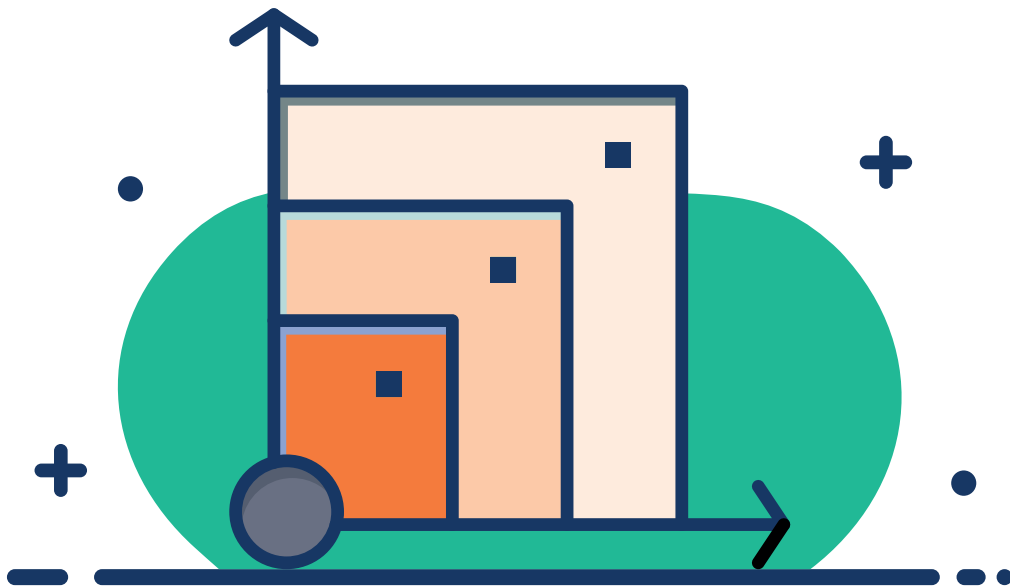
Conclusion

Big Data makes many demands on the versatility and staying power of an eCommerce platform. Exponentially more data has to be ingested from a growing number of sources and what comes out at the other end has to be a cohesive, always up-to-date and accurate narrative about the brand, and its products - down to the very last detail.

That is not all. The technologies of Artificial Intelligence and Machine Learning are reaching critical mass and are finally poised to make a meaningful difference to the dialogue the eCommerce business has with its customers - or with first-time visitors to the site as predictive analysis is making its presence felt.

In the era of hyper-connectivity, the eCommerce platform is much more than a product catalog, a shop window, an online order form - rather, it presents a different product universe, a differently designed shop window, and different price and ordering structures for each individual customer.

It is all about that unique customer experience, changing dynamically to align with what the buyer wants and needs. If your present eCommerce platform, or the new solution in your sights, does not support you in constructing these adaptive customer journeys, you are not fully leveraging the technology available to you in eCommerce.

The role of IT in laying the groundwork for a choice of eCommerce platform is enormous, because the technological issues described above have a decisive impact not only on the project of re-platforming itself, but on the future progress of the business.

It is important that IT disabuses senior management of two things: its fear of vendor lock-in, and its aversion to integration projects. The first seriously limits the options open to the business, and unnecessarily so, because SaaS may in the long run give more room for maneuver than the Open Source alternative.

Integration with the ERP system is a must - and it is up to IT to scrutinize eCommerce platform vendors for the way that they facilitate such integrations.

Perhaps there is a third myth - that best-of-breed is always better. IT is unlikely to share such a view (or such a prejudice) and will always prefer the cohesion of a single point of view, a single architecture and a consistent UI.

The instinct of IT will always be to select the best full suite eCommerce platform.

The cornerstone of your eCommerce strategy

CloudSuite is an e-commerce platform for B2B and B2C. It was built from the ground up by a group of digital obsessives who had set themselves the task of reinventing B2B, and make it fit for the digital era. We did not make a single decision – nor write a snippet of code – that did not get us closer to an e-commerce platform that drove innovation, rivalled B2C for customer experience, and had a smart back-end.
Our work is never done, but the CloudSuite platform is ready to support and implement any e-commerce strategy – ground-breaking for B2B, broad and flexible enough for B2C and B2B2C

CloudSuite has three core competences. It is agile. It creates great shopping experiences. It is smart.

Business agility

CloudSuite changes the way you work – not only with your customers, but also with each other as a team, where everyone has ownership of your eCommerce strategy. CloudSuite drives innovation – whether you want to take your products global, sell through marketplaces or acquire a rival B2B or B2C business. Agility means nothing more or less than to be open to change, and make change happen fast. And if you aren't agile, you will soon be overtaken by the competition.

Shopping experience

B2B has been 'digital' for a long time, but its mindset has been stuck in analogue. For a long time, e-commerce sites were little more than a long, detailed product catalogue that you could access on your PC. The thinking was: 'We are B2B. We don't need these frills'. But design is never merely window dressing, it is a way of communicating your brand identity. With CloudSuite you create shopping experiences that are as elegant and frictionless as the best of B2C. You can personalize your product catalogue, capture complex pricing structures, increase spend per basket and speed up payment. If you don't deliver these, you make yourself irrelevant.

Smart performance

An eCommerce platform is only as smart as the IT behind it. For both back- and front-end, CloudSuite delivers complexity that is transparent and simple to manage. Through our API Connect module, our eCommerce platform integrates seamlessly with your existing ERP system, payment providers, shopping feeds, accounting tools and email marketing software. CloudSuite lets you set up and run multiple webshops from a single server. The platform is stable and secure, but has the virtuosity to put you in control. The CloudSuite eCommerce platform is there for just one reason: to showcase your brand and to make your vision of it come alive in eCommerce.

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