E-commerce **Platform** Selection
Painting by Numbers

Avoid critical e-commerce infrastructure pitfalls through proper planning

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Contents

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Overview

The development of a successful digital channel involves many critical decisions. Chief among them is the selection of a mature, scalable, highly configurable e-commerce platform. Though a digital channel is composed of many elements – online marketing, operations, fulfillment, a contact center, security, and IT infrastructure to name a few – the core technology of the e-commerce platform is undoubtedly the glue that holds the other elements together.

The unfortunate state of e-commerce technology is that there are few, if any, one-size-fits-all systems that can handle the budgets of both the small- and medium-sized businesses (SMB) as well as Enterprise organizations. Due to this wide variation in platforms, trade-offs in feature-set and scope must be made if you wish to match your needs. A mature e-commerce platform is generally composed of four primary systems – a content management system (CMS), a catalog, order management system (OMS), and customer relationship management system (CRM).

The platform selected should be the end-result of your organizational planning and not the starting point. With each organizational need and with each feature a platform offers, a complex set of dependencies emerge. Knowing your own organization is paramount.

The purpose of this document isn't to answer exactly which platform to buy or to discuss individual e-commerce providers in detail. Our purpose is to raise important discussion points to guide you in the selection process. A mistake in platform selection can be disastrous for your customers, your bottom line, and your brand. Answering the questions posed below will allow for much greater accuracy in selection and success post-implementation.

The available e-commerce platforms can be best described in four primary categories:

SAAS Model – SAAS (Software as a Service) providers typically trade the ability to customize and integrate with other systems for predictability in cost (typically a pay-as-you-go monthly fee), a speedy onboard process, and a transfer of labor to the individual organization. While certainly not sexy, they are the platform of choice for many SMBs. Generally, these sites are considered "starters." You or your organization will typically do 100% of the setup and management of this platform. These systems tend to do one thing very well – allow for e-commerce – and may not have a mature feature-set in CMS, OMS, or CRM.

Examples: Shopify, Volusion, BigCommerce, Magento Go

Open Source – Typically free (or low-cost) and community-sourced, there are both positives and negatives to absorbing an Open Source platform. Open Source platforms can be mature or immature and can come in a variety of languages. With any Open Source platform, you'll typically need to arrange the majority of the platform infrastructure yourself or through a vendor, and be intimately involved in the community created around the open source project to gain support. You'll need development resources of your own (vendor or in-house) capable of maintaining the system with as much help as can be garnered from the platform's community. Many times, such Open Source platforms begin life as a CMS and are later paired with a well-developed Catalog/OMS to make a complete e-commerce platform offering.

Examples: Drupal + Ubercart, Joomla + Virtuemart, DotNetNuke + SmithCart, Umbraco + TeaCommerce

Managed Platform – Also delivered in a variety of languages, these systems have a for-profit business structure behind them. Typically, a license will provide for a year or more of patches, updates, and releases. The primary differentiators between an Open Source platform and a Managed platform are a larger base feature-set, a more predictable roadmap, and a more defined support structure. Many Managed platforms execute their installations through partners and may or may not require further customization to fill an organization's needs.

Examples include both SMB and large Enterprise platforms: Kentico, Ektron, Sitecore, EpiServer, Magento Enterprise.

Managed Framework-based Platform – Generally providing an enterprise-class feature-set, these systems are backed by for-profit business and typically require a buy-then-build mindset rather than a focus on buy-then-customize. Expansive in features, your e-commerce platform is developed out of a base framework of (usually) pre-compiled code. These systems are typically adopted by larger enterprises with mature development staff and strong governance, where the desired e-commerce experience is completely tailored to organizational requirements. Worth mentioning as holding a position in the platform market, the selection process for this type of platform is beyond the scope of this document, though many principles detailed below would certainly assist any organization.

Examples: Microsoft Commerce Server, Mediachase G5

Whether you are a brick and mortar chain wishing to create a digital channel, or an online-only SMB ready to replace your existing sagging e-commerce infrastructure, the selection of an e-commerce platform centers on fully understanding your organization's strategic goals, your organizational capabilities, and the resources available to you – regardless of size or budget.

Understand Your Strategic Goals

The technology decisions behind e-commerce platform selection begin with understanding the overall strategic direction of your organization. Several questions are pertinent to determining what technology to purchase and why.

Where do you see your digital channel within three years? Within five? Your organization must be committed to the development and operation of the technology necessary to develop your digital channel. Without the commitment of senior management, any technology purchase will languish in limbo. Establish ownership of the digital channel and establish accountability for technology underneath the umbrella of the larger digital corporate strategy. Knowing where you're going is central to any technology purchase.

How many transactions do you expect? Rely on metrics, if they exist, and attempt to predict transaction growth according to the execution of the overall digital strategy. Your existing pageview/transaction ratio is the primary metric to pay attention to. Small transaction volumes require considerably less management, less operational funding, and a much less robust e-commerce platform. If large seasonal spikes or extreme growth are likely, a larger, more robust e-commerce technology infrastructure is necessary. Establish how quickly you'd like these transactions to grow. This expected growth contributes to platform discussions.

What are your brand goals and organization goals? The goals of your business must allow for a smooth transition into management of a digital channel or e-commerce platform. If your brand is moving into a niche market or is entering a vertical that does not lend itself to online sales, your mid- to long-term goals for your platform may already be compromised. Be cognizant of the larger desires of the brand and assess if your organization will be stable enough to establish a consistent digital infrastructure over the span of several years, as any platform, after implementation, will take time to be fully leveraged by your team. This adoption process could take months depending on the complexity of the systems involved. Join the e-commerce goals to the general organizational strategy discussion and you'll see enormous benefits in all aspects of planning.

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What platform conclusions can be drawn from understanding organizational goals?

Organization size and budget notwithstanding, the three-year expected transaction growth and the overall commitment of an organization to the success of the digital channel dictate a great deal about your platform selection. If an organization isn't committed to a digital channel, a SAAS e-commerce platform is most logical where minimal management can still provide maximum payoff. For organizations with strategies centering on maximum growth potential and maximum marketing/content/e-commerce customization, either Open Source or Managed platforms will provide the most punch, as internal organizational forces will drive considerable development into these platforms.

Examine Your Organization's Capabilities

After strategic goals are developed, reviewing a snapshot of your current organizational state can help decide the type of e-commerce platform on which to base your digital channel.

What is your organization good at? Your choice of tech stack and the features it represents should complement your organization's existing skill set or bolster areas where you are deficient. As an example, extraordinarily deep CRM tools within an e-commerce platform may not pay off for companies without a long history of customer service. Similarly, an extensive workflow feature-set won't aid a team without existing operational procedures in place. Understanding your organization's culture can help identify important features or differentiators in rival e-commerce platforms.

What typical e-commerce leadership roles are present in your organization? A mature e-commerce site requires many different skill sets. Examine the team with which you plan to select, implement, and operate your website. Though many roles exist in e-commerce, the most pivotal for your success are those of a Chief Marketing Officer (CMO), an E-Commerce Director or Manager, and a technology specialist. Any of the aforementioned roles could be either a single person or a large team, depending on your organizational reality. Your CMO must be able to push your brand digitally. The E-Commerce Director must be web savvy and able to grasp the big picture both strategically and tactically. Your technology specialist must be able to fully support your infrastructure and plan for its long-term growth. Without a clear understanding of the division of labor and who is leading CMS, catalog, CRM, and OMS on the website, your technology may work against you, not for you. Predetermine your full e-commerce management team on paper and determine how that division of labor is expressed in all platforms under consideration. Afterward, understanding the breadth of your team, determine executive/managerial accountability and goals for that team.

What is your operational capacity? Similar to the understanding of executive roles, operational capacity focuses on accountability as it relates to execution. Discuss, understand, and commit to paper your organization's most common internal use (read: not customer-facing) cases before you begin a quest to acquire technology to fully understand what your team is capable of producing tactically. For example, ensure that members of your team have the resources and capability to handle tier 1 and tier 2 support for internal and external users of your website, and that you have the ability to generate production artwork for landing pages and promotional emails. After establishing common use cases, examine how the features within the desired e-commerce platform may provide you with additional operational efficiency. Regardless of whether you are considering a SAAS model platform or plan to license a managed platform, ask the sales representative if all of your expected use cases are covered with functionality from your desired e-commerce tech stack. The platform in question may have operational roles/needs you'll want to fill.

How custom is your business logic? This question goes hand in hand with the build vs. buy debate. Not all e-commerce platforms are created equal in terms of what non-standard business logic they might handle out of the box. Use case development prior to a platform search is extraordinarily important for determining whether a platform can support your needs. Determine in advance if your e-commerce model is fairly standard or will require additional business logic developed during implementation. Know in advance the capabilities of your target e-commerce platform and how it might be affected by the logic your business model presents. Custom logic such as user segmentation, multiple regions, multiple product catalogs, purchase order submission, stored value cards, and product options can all change the scope of implementation greatly. A small deficiency in a platform could be an extraordinarily expensive logic hole to fix. A competent salesperson should be able to answer your questions regarding the majority of your custom business logic.

How trained is your customer? If replacing an existing e-commerce platform, understand how married your existing customer base is to the functionality on the current platform and how a new experience is likely to affect them. Use focus groups or internal polling of customer-facing staff to determine if a customer's experience might be improved. Seek data from your desired platform about conversion rates for other organizations in a vertical similar to yours with similar sales volumes. Understanding that other organizations are successful on the target platform isn't an indicator of your success, only that you can be successful on that platform.

What is the budget to establish your platform? This is, of course, the figurative (and perhaps literal) million-dollar question. After going through appropriate processes to develop overall platform strategy, tactical responsibilities, and requirement/use case development, determine if the allotted platform budget allows for success. If yes, it's time to shop for a platform. If no, then reexamine your overall strategy. Budget and strategy must be aligned prior to taking on any technology.

What platform conclusions can be drawn from understanding your organization?

Knowing your organization's strengths and weaknesses is key to platform selection. Provided strategy is aligned with budget and clear ownership of the platform is accounted for, we can make some generalizations.

For organizations where platforms will be operated by someone as a secondary role, a single-purpose SAAS model platform is often best. These organizations lack the structure and time to fully utilize the power of a Managed platform or fully develop an Open Source platform. Organizations that have dedicated resources for platform management/updating/execution may be able to fully exploit the more-advanced feature-set found in Managed platforms or long-standing Open Source platforms.

For basic e-commerce business logic, nearly every type of platform will fill your needs. In this case, a closer examination of CMS, order management, and CRM are in order to be sure that those areas fit your organizational needs. Typically, the more custom the business logic, the more you'll need to rely on an e-commerce platform's framework to add customization – something you will not find in SAAS model platforms.

Budget may be the de facto driver for many e-commerce platform decisions – cost cannot be ignored. SAAS model platforms may be the best choice for small budgets and organizations with standard sales models and organizational needs. For organizations requiring customization with in-house development teams, Open Source platforms can be extremely cost effective in the short term if your organization is capable of operating and extending your chosen tech stack with little outside support (your team plus infrastructure is your cost). If the constraints of your business model or the aspirations of your organization require an advanced roadmap, greater support, and more power, a Managed platform is your likely target. Prices for Managed platforms range widely from an SMB space (Kentico licensing starts at several thousand dollars) to true enterprise-class installations (Sitecore licensing can easily run $200,000). Similar to Open Source platforms, in-house development and infrastructure are often necessary for Managed platforms.

Plan for Current and Future Resources

Answering these common pre- and-post-selection questions can aid in selection itself.

Do I need a Development Partner? Know in advance, pre-selection, who will be the responsible party for implementation of the desired platform and whether or not this will be handled in-house. If an in-house team is not available, examine the prices of a likely vendor who specializes in the desired platform. As a long-term relationship with this vendor will often be necessary for larger implementations, be sure that both your budget and your organization are comfortable with this dependency. Know also if the vendor in question is capable of handling your digital creative needs, your business requirements, and your desired implementation timeline. Not all development shops can produce the creative or the marketing strategy necessary to create an effective site. Assuming that your organization will handle initial requirements gathering and use case development, understanding who will handle the creation of the UI/UX, the creative, and the implementation of the system can aid in the selection of an implementation vendor, and in some cases may change the selection of the e-commerce platform entirely.

Do I need an Operational Partner? Modern e-commerce requires extensive marketing, content creation, and customer support on a tactical, daily basis. Determine in advance who will handle the day-to-day operation of your site and determine if this will be handled in-house or via a vendor. If your needs cannot be met in-house, an operational partner to handle some or all of your organization's deficiencies may fit your strategy and budget. It is important to note that your development partner, if you have one, is rarely the organization that is capable of operating your platform on a day-to-day basis; the same developer who is extending the functionality of your shopping cart is not the same person that will be assisting a customer with a question about their order. Know the limits of your budget for site operations and how support-based vendors fit into the feature-set of your desired platforms. Operational partners will need extensive familiarity with your CMS, CRM, catalog, and OMS once created. Many times, additional development is necessary to allow external vendors access to specialized views in the above systems. Using case-based process development for operational partners is very important for finding, pricing, and training any organization that will be operating your e-commerce platform on your behalf.

What is my long-term resource strategy? If a development partner or operational partner is necessary, determine your organization's long-term strategy, if any, for bringing appropriate resources in-house. Though long-term vendor relationships work for many organizations, it may be desirable to your organization to invest in acquiring resources to establish an in-house team. Understand the learning curve of your chosen platform and the availability of operational or development resources in your area to help craft this strategy. Familiarity with the base technology of the platform as well as predicting the cost/benefit of in-house resources over time can help drive fundamental decisions about your selection. Ask questions of trusted recruiters in your area for an understanding of what it might take to build a knowledgeable team of your own. If possible, pairing an employee of your own with a development vendor or operational partner can ease the learning curve an in-house team might experience when assuming control of a platform. A focus on the end-state of your organization's e-commerce platform is necessary to determine the viability of your platform long-term.

What platform conclusions can be drawn from understanding what help you may need?

For any platform installation, be warned that complex software may be difficult for your in-house team to implement, configure, and operate successfully without training. This learning curve, beyond the feature-set of the platform itself, and the lack of competent vendors during implementation or post-implementation operation may direct your selection. If purchasing your e-commerce platform via a traditionally non-technical organization (such as an advertising or marketing agency), determine if they are themselves outsourcing development or operations.

Most SAAS providers will have in-house account managers capable of walking you through the setup process, though they may require an additional support contract to do so. Many SAAS model providers will not take operational responsibility for day-to-day maintenance of the site and will push this onto the organization itself. Be sure you are able to execute your organization's daily needs.

Many mature Open Source platforms have organizations that specialize in the development of particular platforms. Prices may vary widely for these services, as many Open Source model platforms have little to no regulation of implementation partners. These organizations may or may not be able to assist you in post-implementation operations. Closely examine the portfolio and reference sites of a potential development or implementation partner to determine their true capabilities.

Managed platforms typically offer high-level consulting services directly, though they push platform implementation to partners or value added resellers (VAR). Oftentimes, these partners are categorized as "certified," "gold," "platinum," or other levels that demonstrate competency in their platform. For development or operational staff, many Managed platforms offer certifications in their particular methodologies or technology.

The availability and cost of your chosen vendor, the availability and cost of a potential in-house workforce, as well as the long-term resource strategy of your organization can change the nature of your selection.

Conclusions

Whether the end result of the search for an e-commerce platform targets a SAAS model platform, an Open Source modular system, or a robust Managed tech stack, platform selection is primarily a study of your own organizational goals and capabilities in an attempt to match them with a platform. The great majority of what's recommended above is not a study in technology, but rather of one's own organization. Each type of platform has significant advantages and disadvantages that must complement your organization. The all-too-familiar business stereotype of the infrastructure/platform-implementation-gone-bad is no less prevalent now than it was in the infancy of e-commerce. The primary drivers of a quality e-commerce experience are no different now than they were in 1997 – goals, organization, and partners. Your platform should be a reflection of your organization.

Platform **Recommendations**

Though highly generalized, the more quantifiable questions asked in the body of the document have been asked here with some sample answers and sample point values. Again, the purpose of these questions and their associated recommendations is to spur thought based on your organization.

Know Your Strategic Goals

Where do you see your digital channel within three to five years?

    a)   Immature, with slow growth and lacking organizational focus – 1

    b)   Operational, but not a primary focus of the organization – 1

    c)   Established, and one of several primary drivers of the organizational strategy – 2

    d)   Mature, and the lynchpin of the organization – 3

How many transactions do you expect (year)?

    a)   < 5,000 – 1

    b)   < 10,000 – 1

    c)   < 50,000 – 2

    d)   < 100,000 – 3

What are my brand goals and organizational goals?

    a)   Have a basic e-com offering – 1

    b)   Create niche market e-com offering – 1

    c)   Gain online market share, but remain second-tier online player in vertical – 2

    d)   Be major online player in target vertical – 3

Now, average your score for this section.

Point Total 1.0 – 1.75: Your organization doesn't appear to be ready to invest in an in-house e-commerce platform, or your goals won't require the power Open Source and Managed platforms can provide.

Point Total 1.76 – 2.5: Your organization has specific goals and needs that will require development and customization to meet performance goals. Open Source providers or Managed providers will both likely fill your needs, depending on budget.

Point Total 2.51+: Your organization is interested in a major splash in the market. Support, development and operational resources, as well as a defined roadmap are likely necessary. A Managed platform is your likely e-commerce platform target.

1	1.5	2	2.5	3
	SAAS	Open Source	Managed	

Examine Your Organization

*Several less quantifiable questions removed

What typical e-commerce leadership roles are present in your organization?
- a) One or two overburdened people filling all roles – 1
- b) A dedicated e-commerce team, but small (1-2 people) – 1
- c) A dedicated team with all major roles filled (4+ people) – 2
- d) An entire department dedicated to e-commerce – 3

What is your operational capacity?
- a) We're not all that familiar with e-commerce operations – 1
- b) We can do the basics, but much of the technology is over our heads – 1
- c) Our team is experienced in operating e-commerce websites – 2
- d) We have dedicated in-house marketing, operational, and development staff – 3

How custom is your business logic?
- a) Simple e-commerce flow – 1
- b) Registration is optional and we have some proprietary logic – 2
- c) We require registration and have an account-specific rule set – 2
- d) We have complex logic baked in to our business model – 3

What is your budget to establish your platform?
- a) < $5,000 – 1
- b) < $10,000 – 1
- c) < $30,000 – 2
- d) > $50,000 – 3

Now, average your score for this section.

Point Total 1.0 – 1.75: Your team, operational capacity, and budget aren't likely to support more than a SAAS model platform can provide.

Point Total 1.76 – 2.5: Your organization has skills or a budget that may make operating an Open Source or Managed platform feasible.

Point Total 2.51+: Your organization is interested in a major splash in the market. Support, development and operational resources, as well as a defined roadmap are likely necessary. A Managed platform is your likely e-commerce platform target.

1	1.5	2	2.5	3
SAAS		Open Source		Managed

What Do You Need Help With?

Do you need a Development partner?

    a)   We're restricted by budget or other factors and plan to figure out this puzzle all on our own – 1

    b)   We can't afford a partner or in-house developers, but are pretty savvy otherwise – 1

    c)   I have a small-budget development partner lined up or a small in-house development team – 2

    d)   I have a certified development partner or a well-established in-house development team – 3

Do you need an Operational partner?

    a)   We're restricted by budget or other factors and we're going to find a way to make it work – 1

    b)   We're restricted by budget or other factors, but we're pretty competent operationally – 1

    c)   We have most operational skill sets in-house or via a small vendor – 2

    d)   We have a very competent partner or dedicated operational staff – 3

**What is your long-term resource strategy?**

    a)   We won't be able to bring someone on for quite a while – 1

    b)   We have a rough understanding of what we need but timing is really murky – 1

    c)   We have a clear understanding of our resource usage and long-term needs – 2

    d)   We have pre-established authorization and methodology for resource procurement – 3

Now, average your score for this section.

Point Total 1.0 – 1.75: You're not likely to have much help, so it's best to get a simple SAAS platform.

Point Total 1.76 – 2.5: Your team understands your present resources and what you lack, and you have the capacity to take on a more powerful platform.

Point Total 2.51+: Your organization has the people and capacity to fully exploit a Managed platform.

1	1.5	2	2.5	3
SAAS		Open Source		Managed
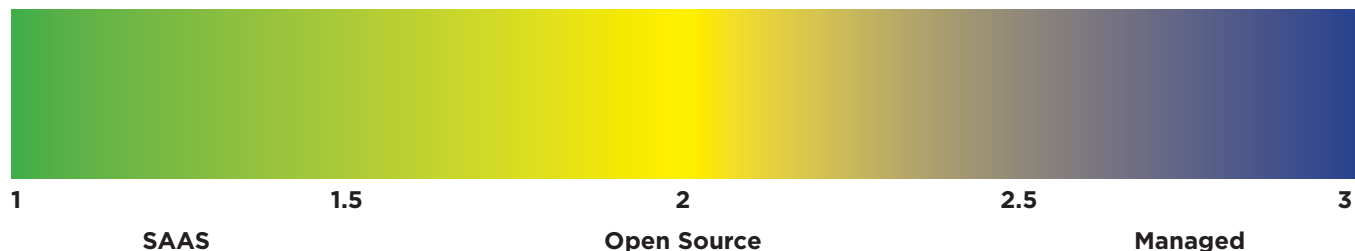
About the Author

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