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Compass Guide to WCM, Q1 2019
Evaluation of dotCMS Enterprise 5.1

By: Tony White

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Product Evaluation

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ARS LOGICA POSITION

dotCMS Enterprise is a moderately-priced WCM platform and DX foundation that offers robust functionality across a range of technical criteria. The product boasts excellent ease of system administration and performs well in the areas of scalability, flexibility, and enterprise tech-stack leverage. OSGi-based extensibility and low-code tooling are among the best in the market, as are the high ratios of scalability and flexibility to price, while lack of market awareness and basic content marketing tools are the notable shortcomings. dotCMS provides a good potential fit for those seeking franchise or multi-tenant solutions.

NOTES & RESOURCES

Sources of Information
Some company and product information contained in this report was collected via Ars Logica's 172-item vendor questionnaire. Vendor responses were independently verified through customer interviews, implementation monitoring, product documentation, Ars Logica's knowledge base, and/or hands-on product testing.

Platforms Included
The Compass Guides include the platforms that Ars Logica considers to be the most significant in the WCM market. While scores on our business and technology scorecards vary widely, each platform evaluated will be a best-fit given the right use case, and may therefore prove worthy of shortlisting.

Customer Interviews
Ars Logica has interviewed users of every product covered in the Compass Guides, including dotCMS Enterprise.

Implementation Monitoring
Since the 1990s, Ars Logica founder Tony White has kept close tabs on ongoing WCM implementations. Some of this knowledge is represented in the Compass Guide reports.

No Vendor Influence
Ars Logica retains complete editorial control over the Compass Guides and receives no funding in their production.

dotCMS Vendor Overview

Founded in Miami in 2003, dotCMS is a small technology vendor that experienced steady organic growth as a professional services firm for its first six years, but which has marketed its content management software since 2010 in the form of both open source and commercial offerings. Although dotCMS counts only 130 customers in its installed base, they span a wide range of verticals and sizes, from small liberal arts college to Fortune 100 healthcare conglomerate -- new customers in the past year tending toward the larger end of the spectrum. Because of the vendor's origins, dotCMS Enterprise has always attracted more technologists than business users, but a just-finished three-year overhaul of the product has produced leaps forward in feature-functionality of interest to non-technical users. This will likely accelerate over the next 12-24 months. The platform represents a technically robust enterprise-tier WCM platform, which because of its flexible and extensive architecture, also credibly serves as a solid foundation for digital experience (DX) projects. With the 5.x versions, dotCMS demonstrates a sharpened product strategy, continued platform improvements, and respectable sales performance that combine to help the vendor keep pace with an evolving market.

Company Profile

Year Founded: 2003
Headquarters: Miami, FL
Employees (or FTE equivalents): 45
Geographies: North America, Europe
Revenue: $12 million
Product Types Offered: WCM, DXP foundation
Commercial or Open Source: Both
Strategic Implementation Partners: APD Group,
      Architech, Building Blocks (DEPT),
      Cnetric, diva-e, Dynamit, Ethode, HCL,
      ISAAC, MyPlanet
Top Competitors: Magnolia, BloomReach,
      Liferay, Adobe, Acquia
Key Vertical Industries: Financial services, retail,
      manufacturing, consumer brands,
      healthcare

Product Profile

Product Name: dotCMS Enterprise
Version: 5.1
Next Version Release Date: Q3 2019 (v5.2)
Market Segment: Mid-market, enterprise
Average Sales/Subscription Price: $54,000/year
Technology Platform: Java
Key Strengths: Ease of system administration,
      OSGi-based extensibility, speed/straight-
      forward nature of implementation, high ratios
      scalability/flexibility to price, low-code tooling,
      full containerization
Key Limitations: Limited market awareness,
      basic content marketing tools compared to
      market leaders
Highest-Value Use Case: Midsize-to large enterprise
      leveraging multiple third-party marketing and
      transactional platforms that underlie a mission-
      critical digital presence

Vendor History & Product Evolution

From Ars Logica's perspective, dotCMS's corporate history can be divided into three parts: (1) 2003-2009. In these years, the company was a CMS service provider and implementation firm. Since this era preceded the release of publicly-available software, Ars Logica did not then cover dotCMS. (2) 2010-2016. These years witnessed the introduction of a lower-to-mid tier, respectable-but-unremarkable technology platform and saw it evolve -- starting with the release of v3.0 -- into a competitive enterprise-tier product. (3) 2017 onward. Having gotten the product into competitive shape, dotCMS decided that it *really* wanted to be a software vendor, and began adding senior leadership in key areas -- CEO, CMO, CSO -- to make this happen. The plan's executive and marketing components suffered critical setbacks in the first half of 2018, but the company's sales performance proved commendable -- ARR grew by 98%.

dotCMS product offerings and functionality have evolved over time as follows:

2010: **dotCMS v1.9** -- Developer release (Q1) and launch of first publically-available platform (Q3). First CMS to be CMIS-compliant. **dotCMS v1.9.1** -- Multi-lingual backend. New administrative UI. Lucene-based search. Change tracking. Velocity integration. In-context editing. E-commerce integration/plug-in. Multi-tenancy enhancements. Scalability improvements. SEO. // **2011**: **dotCMS v1.9.2** -- Inline content and image editing. Multiple enhancements to caching functionality. Improved granularity of metadata. Batch content import. Improved audit trails. // **2012**: **dotCMS v2.0** -- Parallel workflow. Metadata auto-indexing. Full-text indexing. Elasticsearch. Improved content-locking model. UI enhancements. Code Share repository (community sharing of best-practice coding). URL-addressable "files-as-content." Introduction of OSGi. **dotCMS v2.1** -- New Site Search functionality. Workflow scheduling. Improved visibility into system performance. Built-in Section 508 compliance checking. Integrated Help System. **dotCMS v2.2** -- Dynamic Plugins (back-end hot swapping). Responsive/Bootstrap Starter Site. Front-end content forms. CMIS library update. Improved index management. // **2013**: **dotCMS v2.3** -- Support for fully responsive design. New Template Builder. Link checking. Dynamic portlet deployment. Site rollback. **dotCMS v2.5** -- Push publishing. // **2014**: **dotCMS v3.0** -- *Complete technical overhaul of the platform*. Cluster auto-scaling. Containerization. // **2015**: **dotCMS v3.5** -- Introduction of Rules engine. Visitor behavior-based personalization. User personas. // **2016**: **dotCMS v3.6** -- Significant new localization/globalization functionality. Caching/scalability improvements. Elasticsearch update. // **2017**: **dotCMS v3.7** -- Introduction of SaaS model. Friendly URLs. **dotCMS v4.0** -- New UI. Device-specific mobile previews. **dotCMS v4.1** -- REST-API and OSGi enhancements. Hazelcast caching. **dotCMS v4.2** -- Layout-as-a-Service. **dotCMS v4.3** -- Content-retention and workflow enhancements. // **2018**: **dotCMS v5.0** -- Introduction of basic-but-important content marketing tools. Improvements to UI and Google Analytics/Data integration. Full containerization. // **2019**: **dotCMS v5.1** -- LowCode REST endpoint builder. Ongoing UI/UX enhancements.

Profiling the Ideal Buyer

A number of descriptions apply to ideal dotCMS buyers. The following are a few that might help companies that should shortlist dotCMS recognize themselves: (1) Those seeking a technical foundation upon which to build a DX platform whose services will be provisioned throughout a large enterprise or to a number of discrete customers. (2) Those for whom the digital experience of customers is of strategic, rather than tactical importance. Evidence often includes multiple digital-first initiatives, dedicated digital budgets, and presence of a chief digital officer. (3) Companies whose products are primarily B2B web services. (4) Companies with IT organizations seeking to build a custom DX platform rather than consume a wide range of DX components from a single vendor. (5) The IT organization pursuing a phased replacement of ageing, expensive legacy Java WCM products at a reasonable cost.

- **Midsize or large company whose customers' digital journeys dictate sales and retention rates**
  dotCMS Enterprise is well-suited to best-of-breed integration scenarios. The platform will be of interest to midsize and large enterprises whose mission-critical digital presence relies upon multiple third-party marketing and transactional platforms.

- **Customers seeking a franchise or multi-tenant WCM solution or DX platform**
  Modularity, OSGi-based extensibility, and containerization are among the real strengths of dotCMS, which make franchise and multi-tenancy models a natural fit.

- **Companies of any size that do business only digitally**
  When "digital" is mission critical because the DX platform is the primary or only vehicle for customer interaction, companies will spend a disproportionately large amount of revenue on technology and technical resources, making dotCMS a potential fit even for small companies.

dotCMS Will Not Be a Good Fit, If...

Because dotCMS's specific technical profile, descriptions of customers for whom the product will not be a good fit abound. Generally speaking, for organizations to which even one of the descriptors in either Category A or Category B apply, dotCMS will likely not be a good fit. Category A: Digital is still immature in either the company or industry. // Company whose customers' experiences are shaped largely outside the digital realm. // Website is predominately brochureware. // Not using digital to drive sales – prospects already know to get in touch. // Company for whom dotCMS's lack marketshare represents too much risk. Category B: IT, marketing, or executive leadership prefers DX suites to best-of-breed. // IT lacks technical expertise to integrate hetereogenous infrastructure. // Enterprise is not adept at or standardized on Java development.

Key Product Strengths

dotCMS Enterprise is a WCM platform that demonstrates consistently strong technical performance in those areas relating to modularity, flexibility, integration, and extensibility. From its inception, the system was designed as a product to be integrated into heterogeneous technical ecosystems, or a foundation upon which a wide range of enterprise applications could be integrated. Versions 5.x also add the option for full containerization. It is – in the truest sense of the word – a platform. As such, it gives users a wide range of options of what and how to build, customize, and integrate. Also worth of note are the NoCode capabilities of v5.1, which reduce the dependency of marketers on IT resources.

dotCMS Enterprise demonstrates excellent ease of system administration (ranked fourth among all platforms evaluated). This comes as no surprise, given the product's design goals, but what is worthy of note is the nearly flat slope of the line from the ease of administration score to the scalability and flexibility scores in Figure 3. Normally, the easier products to administer demonstrate lower scalability and flexibility, and those with scalability and flexibility scores of 7.0 or higher tend to be unwieldy.

In interviews with dotCMS customers, the speed of system implementation was mentioned repeatedly, as was the fact that dotCMS was often replacing what the market perceives to be more complex or sophisticated platforms. This was especially true among customers seeking franchise or multi-tenancy

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FIGURE 1   dotCMS Enterprise 5.1, Key Product Strengths and Limitations

Below are several key product strengths and limitations that potential buyers should keep in mind when assembling vendor shortlists.

KEY STRENGTHS	KEY LIMITATIONS
Excellent ease of system administration (co-ranked fourth among all platforms evaluated)	Ongoing limited market awareness
Speed of implementation	Basic content marketing tools compared to market leaders
High ratios of scalability and flexibility to price	
OSGi-based extensibility	
Full containerization	
NoCode capabilities	

Source: Ars Logica, Inc.

Sources of information: product testing, product updates, customer interviews, vendor questionnaire

models – the large bank with a central-services offering across the enterprise or an application service provider providing turnkey technical solutions to a range of companies within the same industry. To be sure, there are other architecturally clean WCM platforms on the market, but dotCMS's OSGi capabilities do differentiate it. Those seeking the most modular or containerized of WCM platforms may do well to shortlist dotCMS.

Next, dotCMS demonstrates extraordinarily high ratios of scalability and flexibility to price. Ars Logica estimates that average price for platforms with similar scores in these categories would be four to five times that of dotCMS – an estimate confirmed on calls with dotCMS customers replacing top-tier legacy systems. It should also be noted that, while the Compass Guide Flexibility category does not refer to content-delivery or deployment models, dotCMS Enterprise provides options here too. Content delivery can be structured as native, content-as-a-service, or a hybrid of the two -- any of which can be combined with the product's layout-as-a-service functionality in headless CMS scenarios. As for deployment options, dotCMS Enterprise can be installed on-premise or consumed via platform-as-a-service.

Finally, Ars Logica has not come across a happier set of customers. They commonly make statements such as, "The relationship with dotCMS is our favorite thing about our product decision – it is extremely positive in every way." The vendor claims a respectable churn rate of four percent.

Key Product Limitations

There is normally a trade-off between the complexity and scalability of a technology platform on the one hand, and ease of system administration and long-term TCO on the other. Extreme performance on either side usually adversely impacts the other. dotCMS takes a balanced approach. With uncommonly good ease of system administration (co-ranked fourth of all platforms evaluated), dotCMS also performs respectably and evenly across the technical categories of Scalability, Flexibility, and Development Tools – varying by only -0.4/+0.3 from an average score of 6.8. This limitation is relative to the market's upper extremes, but those come at the price of both initial cost and ongoing resource intensity.

A second shortcoming comes in the "momentum" part of the Momentum & Strategic Vision category. dotCMS's new strategy -- while clear and executable -- is only now being launched, and the market knows little or nothing of it yet. Marketshare and mindshare thus remain negligible.

Next, while some components of the Content Marketing Tools category are well-represented in dotCMS Enterprise -- such as personalization, segmenting, targeting, site optimization, and mobile support -- other key areas of functionality prove fairly basic when compared to market-leading platforms, chief among them analytics and testing.

Vendor/Product Report Cards

The features, functions, and technical underpinnings of WCM products vary considerably, as do the customer requirements they are intended to satisfy. For this reason, the only reliable way to assure the best product fit for a particular client is to spend anywhere from several weeks to several months assessing the client's specific needs and analyzing product capabilities line by line. Still, Ars Logica is frequently asked to rate products in categories such as those in Figures 2 and 3. In using these ratings, please take care to weight each category in accordance with its importance to your needs. While the average scores across these categories might be the same for two products, proper weighting will likely cause the scores to diverge -- often significantly.

**FIGURE 2**   dotCMS Report Card for the Business User

Figure 2 shows Ars Logica's rating of dotCMS Enterprise 5.1 in four WCM categories of critical importance to business users. Refer to Page 11 for an explanation of the evaluation criteria.
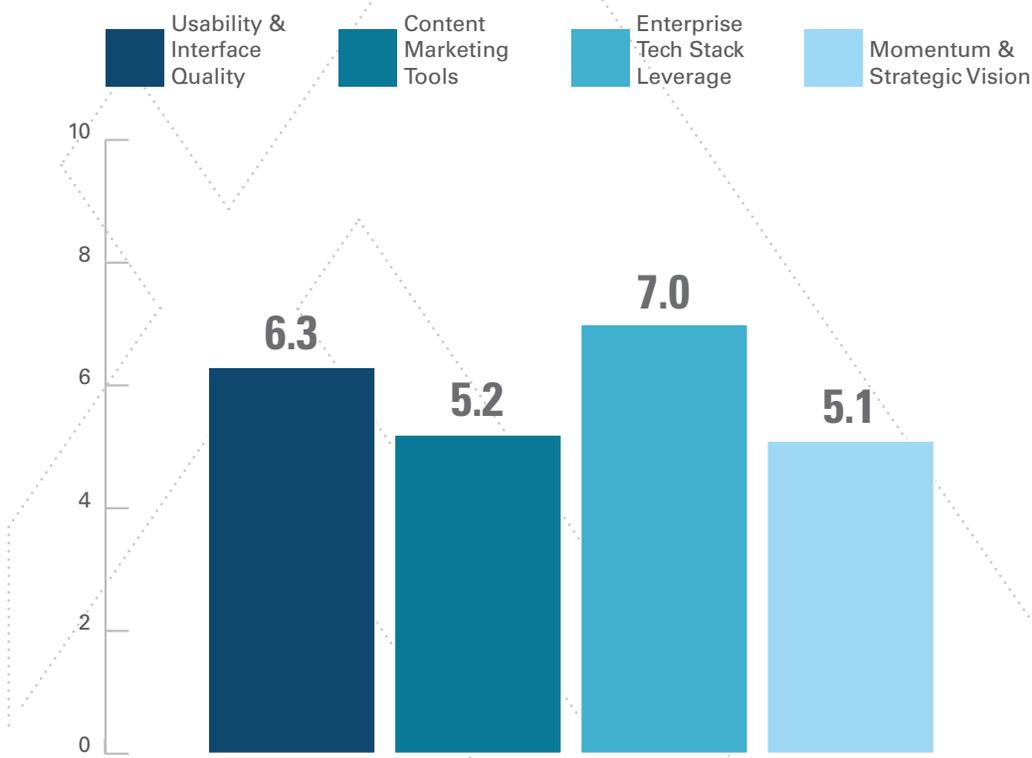
Sources of information: product testing, product updates, customer interviews, vendor questionnaire

FIGURE 3   dotCMS Report Card for Technologists

Figure 3 shows Ars Logica's rating of dotCMS Enterprise 5.1 in four WCM categories of critical importance to technologists. Refer to Page 12 for an explanation of the evaluation criteria.
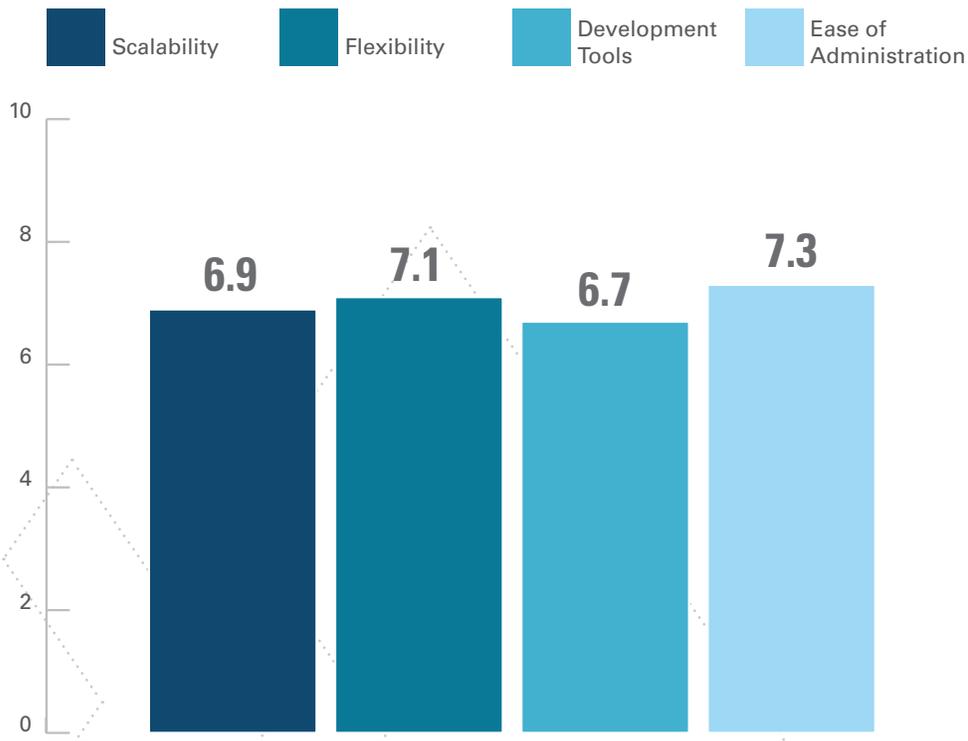
Sources of information: product testing, product updates, customer interviews, vendor questionnaire

Report Card Evaluation Criteria

In the process of analyzing WCM solutions, Ars Logica has established a set of evaluation criteria, which at the highest level can be separated into four categories for non-technical business users and four categories for technologists. Scores in these categories represent averages of a large number of detailed criteria, and are meant to be used as a means of quickly comparing products within the same market segment.

Criteria for Business Users

- **Usability & Interface Quality**
  Usability refers to the relative ease of learning and using a WCM application. For non-technical business users, factors contributing to high scores in this category include intuitive and consistent user interfaces, streamlined task completion (i.e. minimal number of steps to complete a task), integration with the desktop and between product modules, contextual editing capabilities, and documented high user adoption rates among a vendor's customers.

- **Content Marketing Tools**
  Marketers needs tools within WCM platforms to improve sales conversion rates, increase average transaction amounts, draw customers back to their websites, analyze online behavioral patterns, and deliver unique customer experiences. This category rates the presence and quality of such tools, including segmenting, targeting, testing, personalization, site optimization, and mobile support.

- **Enterprise Tech Stack Leverage**
  This category assesses a product's ability to integrate with and leverage the data and functionality of essential enterprise technology platforms such as CRM, ERP, marketing automation, e-commerce, portal, analytics, and social media management.

- **Momentum & Strategic Vision**
  This category represents a combination of a vendor's market momentum (current market share adjusted for accleration or deceleration over the past 24 months) and the completeness of its market strategy, which includes commitment to technology and implementation partners, meaningful evolution of WCM products, and support for marketing programs.

Criteria for Technologists

- **Scalability**

  Scalability refers to the ability of a product to function well as system demands increase. Factors contributing to scalability are database size, query efficiency, bandwidth consumption, ease of system management, caching efficiency, load balancing, and mass content deployment capabilities.

- **Flexibility**

  Flexibility denotes a product's ability to integrate easily with existing enterprise infrastructure, including operating systems, Web servers, databases, directories, development tools, and other enterprise applications such as ERP, CRM, e-commerce systems, search, portals, and so forth.

- **Development Tools**

  This category describes the quality of a product's integrated development environment (IDE), the technologies that the IDE incorporates, and overall ease of customized application development. Although this category refers primarily to development frameworks, other ad hoc tools are also included, such as page- and site templating, alternate interfaces, scripting tools, configuration utilities, pre-defined coding functions, mobile development accelerators, and any other functionality that enables or eases the installation, development, and customization of WCM implementations.

- **Ease of Administration**

  Some WCM products require significantly more work to administer than others. This category rates the relative resource intensity required to keep the system running smoothly, where higher scores reflect less work. Roughly speaking, higher scores also indicate better coordination of application components due to more methodical system design.

SERVICES

Advisory Services

Ars Logica is a vendor-neutral analyst firm helping companies evaluate their digital experience requirements and select appropriate software. To address clients' questions and concerns that arise throughout the year, Ars Logica offers unlimited direct analyst access through its Analyst Anytime advisory services. These annual, subscription-based services provide guidance by phone or e-mail within 24 hours on a wide range of issues. The number of inquiries submitted throughout the year is not limited.

Software and Technology Selection

In our technology selection engagements, Ars Logica maps clients' functional, technological, and strategic requirements to potential software solutions and identifies the vendors whose products best satisfy these requirements. We maintain a continuously-updated comprehensive matrix of the feature-functionality of most digital experience vendors' products and solutions. We receive frequent briefings from these vendors and have in-depth conversations and consulting engagements with their customers, ensuring that we always understand the actual state of vendors' offerings as well as their forward-looking strategic directions.

Custom Engagements

Ars Logica's expertise in technologies such as web content management, digital experience management, digital asset management, marketing campaign management, enterprise search, and portals, gives us the open-ended ability to help clients on a wide range of projects, including: building internal business cases, assessing technology requirements, analyzing software products and vendors, selecting and assembling software solutions, crafting digital strategies, and running corporate educational seminars. We also assist vendors in developing strategic roadmaps, and we present our view of the digital experience market at industry conferences and end-user events.