

2019



dotCMS Product Brief

# Product Brief: Headless dotCMS

The New Standard For A  
Modern CMS

dotcms





## Inside the Brief

With the release of dotCMS 5.1, a new standard has been set for both marketing and IT teams when it comes to the content foundation in their digital eco-system to deliver a connected, trusted and continuous customer experience, regardless context or touchpoint along their journey.

**dotCMS 5.1 is particularly focused on new tools for both marketing teams as well developers, who wish to leverage a headless CMS.** Bridging existing pain points and capabilities gaps in the industry, headless dotCMS will help to reduce Total-Cost-of-Ownership, and increase Return on Investment for brands taking their next step into their digital maturity.

**...deliver a connected, trusted & continuous customer experience, regardless context or touchpoint along their journey.**



## Into The Wild

In today's day and age, it's not just a number of websites that brands leverage to engage with their targeted audiences. With the rise of mobile devices, social channels and IoT devices, the number of digital and physical touchpoints between organizations and their constituents has exploded. In order to **deliver a consistent brand experience, digital marketers initially had to support all these touchpoints with multiple solutions** outside their legacy CMS, which in return created technological, organizational and experience siloes. In order to mitigate this, and getting control back on the experiences, headless CMS solutions became very popular in the last few years. It allowed for IT teams to leverage **more modern and agile technology frameworks**<sup>1</sup>, independently from vendor-specific stacks. A huge downside of most headless CMS vendors, is the disrupted editor experience, due to the lack of some key marketing tools like preview, inline-editing, page template editing,



and drag & drop. Most vendors also support a limited number of front-end technologies and therefore locking into a specific stack, which limits near term and future flexibility. **Headless dotCMS 5.1 mitigates these restrictions out-of-the-box, and offers best-in-class tools** for the key pillars of Content Management, and bring the best of all worlds together for business & IT teams.

# Content Management for Marketing Teams

Regardless the type of CMS (headless, head-optional, hybrid), **content needs to be created, curated and managed.** There is a number of marketing tools that have to be in your set.

## Content Modelling

In order to transform a interaction design/ UX to engage your brand prospects and customers, you have to create a content model that allows you to support the customer experience you want for the each persona during the entire customer journey

they follow. Two key **(NoCode) tools** that stand out in dotCMS:

### 01. Content Type Builder:

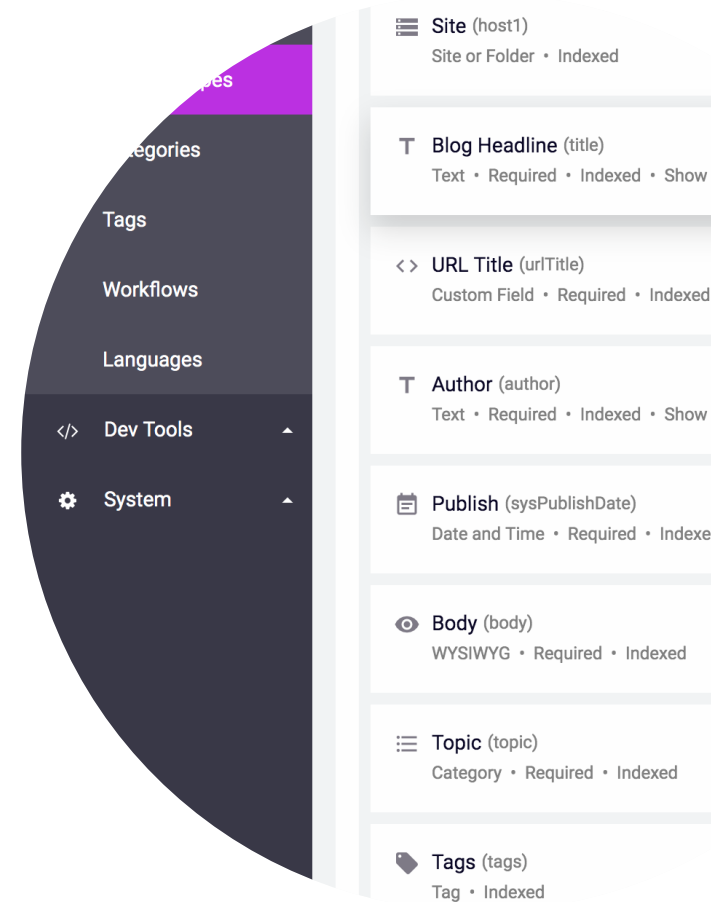
An intuitive tool with **drag & drop capabilities** that allows marketers to create any content type they want, with a single line of development.

[Watch Video >>>](#)

### 02. Content Relationships:

Building a comprehensive content model can get complicated quickly. With a solid **Content Relationship tool**, this takes away any barrier to make this a **fun and easy task**, as well keeping it maintainable as your model evolves. Again, no developer needed at all.

[Watch Video >>>](#)



# Content Approval

Building a comprehensive governance model around content is already a task in itself, but making it reality in dotCMS isn't with the content marketing tools we bring to the table.

## 01. Workflow Module:

Creating multi-step complex content approval workflows, with **personalized notifications, and have immediate visibility** on governance in your process. Without a single line of code.

## 02. Versioning & Roll-back:

**Every piece of content is versioned and can be rolled back** at any given time without engaging technology teams or upload a back-up. Just a couple of clicks will get you there.

## 03. TimeMachine:

When creating customer experiences, it's important to preview content before it gets published, even if it's in the future. **Also, going back in time can help you to create current and future experiences.** The TimeMachine will bring you there.

[Watch Video >>>](#)

## 04. WYSIWYG:

Having full control (permission-based) on standard and advanced **editing capabilities with the TinyMCE editor** that is shipped in the core.

## 05. Built-in Compliance:

dotCMS offers built-in compliance to make sure you **meet the WCA standards** you want to check against and comply with.

[Webinar >>>](#)

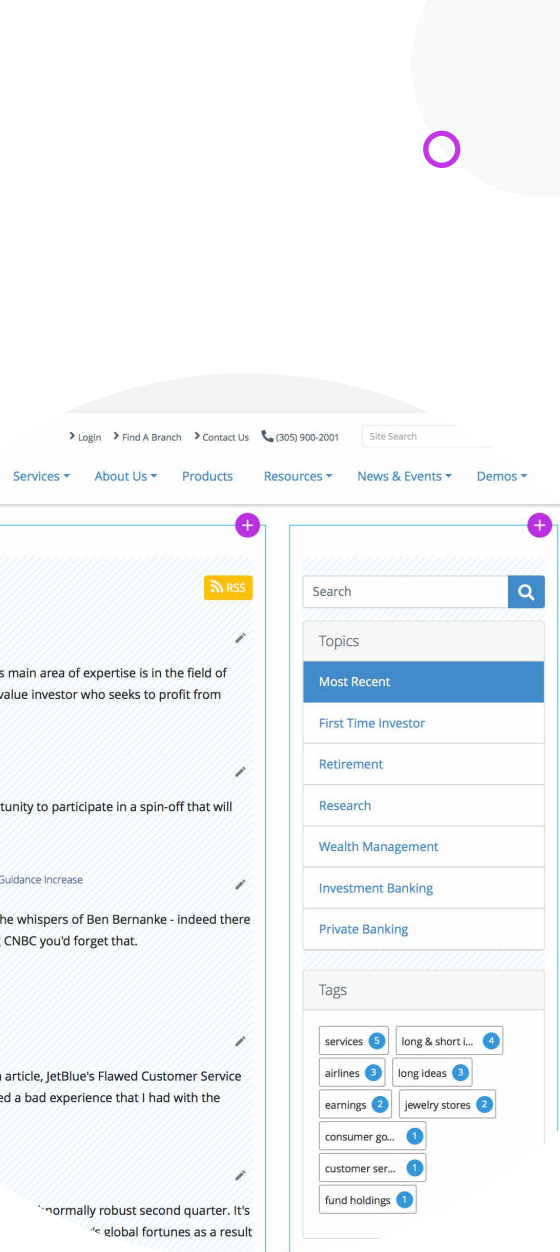
[Read White Paper >>>](#)

## 06. Edit Mode Anywhere

When using the CMS in a headless scenario, the editor experience can be disrupted, by not having the option to preview, in-line editing and drag & drop content before publishing. Edit Mode Anywhere overcomes this burden in full. Regardless where content is exposed, editors will continue to have the full capabilities:

- **Preview content**
- **In-line Editing**
- **Drag & Drop page composition**
- **Page Template management**

This capability enhances the hybrid CMS<sup>4</sup> model that dotCMS supports from its inception, **without compromising any editorial experience** for marketing teams, **and increasing possibilities for technology choices** in the digital ecosystem.



More details on Edit Mode Anywhere can be found in the product brief.

[Here >>>](#)

[Watch Video >>>](#)

## 07. Headless Personalization

Creating hyper-personalized experiences is one of the key differentiators of headless dotCMS. Digital marketers continue to have the content targeting & personalization tools at their disposal when running headless dotCMS to power their websites and applications. While technology teams have the freedom of driving innovation with the latest and cutting edge technologies, digital marketers have undisrupted access to drive customer experiences. dotCMS 5.2 brings enhanced personalization capabilities

[Watch Video >>>](#)

## Content Delivery

Delivering content to the presentation tier of your application is a critical function. For the business user this means a simple 'publishing' trigger in the UI, but under the hood, a number of powerful capabilities bring great value.

### 01. Publishing:

Once approved, content has to be published (directly or scheduled), and potentially to multiple environments, using Push Publishing<sup>2</sup>. **Offering both static and dynamic publishing** completes the flexibility any marketer and technologist should expect<sup>3</sup>.



# Content Management for IT Teams

## Edit Mode Anywhere

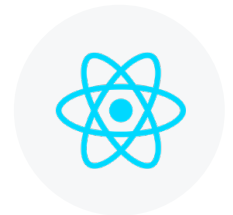
Where this new capability brings undisrupted editor experience for marketing teams, the value for IT teams is equally exciting.

First, IT teams can choose the front-end framework/programming language of their liking for building applications that are content-driven by dotCMS. **Any**



framework will work seamlessly with the **Edit Mode Anywhere** tool in the authoring environment, which gives technology teams freedom of innovation and technology agility.

Secondly, legacy applications can be utilized going forward in order to leverage their proven value, while the **technology teams accelerates innovation with new and modern technologies**. dotCMS is not a limitation from an IT perspective and support IT in this scenario, while marketing teams continue to have an undisrupted editor experience.





## Content Delivery

### 01. REST API:

In dotCMS, everything is content, and all content can be exposed over **flexible REST API end-points**<sup>5</sup>. This is not only a must-have for modern headless CMS solutions, it's quintessential for building a digital experience platform with the content foundation as-a-service it needs.

### 02. GraphQL:

Starting with dotCMS 5.1, the **GraphQL API and GraphQL query language are supported out-of-the-box by dotCMS**. dotCMS GraphQL support exposes the dotCMS content repository as GraphQL and provides an API that allows developers to query and

return specific properties of content and shape the API response at call time. Coupled with our new content relationships, this makes delivering custom views into the content repository simple and allows developers to traverse the content graph based on content relationships and other properties.





### 03. API tools:

Building REST endpoints in dotCMS was already easy, but with the addition of two new tools, it will **reduce the level of effort for web developers** to build REST endpoints even further.

### 04. Scriptable API endpoints:

In this release it is possible to define and deliver scriptable REST endpoints, which is a more solid and scalable pattern.

[Watch Video >>>](#)

### 05. Scripting-as-a-Service:

In addition, permissioned users can control responses by using PUTting and GETting Velocity script in the requests.

[Watch Video >>>](#)

This has a direct impact on the integrations (of any kind) with adjacent system and technology. No Java coding is required to build REST endpoints using this tool<sup>6</sup>.

```
curl -v -u admin@dotcms.com:admin -XGET
http://localhost:8080/api/vtl/dynamic/37f93fcb-6124-46af-83b4-9ece6c1c5380 -H
"Content-Type:application/json" -d '{
  "velocity":
    #set($employeeList = [$dotcontent.find($pathParam)])
    #set($resultList = [])
    #foreach($employee in $employeeList)
      #set($person = {})
      $person.put(\firstName\", $employee.firstName)
      $person.put(\lastName\", $employee.lastName)
      $person.put(\jobTitle\", $employee.jobTitle)
      $person.put(\profilePicPath\", ${employee.photo.shortyUrl})
      #foreach($department in $employee.departments)
        #set($departmentName = $department.departmentName)
        $person.put(\department\", $departmentName)
      #end
      $resultList.add($person);
    #end
  }'
```

## Content Presentation

This is taken care of by your delivery tier and not a capability of a pure headless CMS. If your content-driven applications are a limited number of apps that your technology team supports & maintains, this can work. The downside of a pure headless play, is that for every single application you want to expose to the world, whether it's a landing page, micro-site etc., you rely on others as a marketer.

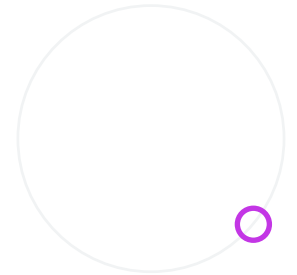
That is where a hybrid CMS can take away this downside: for standard & simple web properties, use the presentation capabilities of the CMS, and go headless for your flagship applications.

**dotCMS is one of the few hybrid CMS solution currently out there<sup>7</sup>**

## Security

Being an open source CMS, dotCMS is exposed to security vulnerabilities, if any.

**It allows our customers to control the security of the platform in their own terms** by conducting penetration test periodically, as well as line-by-line code inspection, because they can, unlike closed-source solutions. Since our customers build business-critical applications, security is one of our key priorities and has a dedicated team to fix security breaches immediately<sup>8</sup>.



## Performance & Scalability

Based on a solid foundation of enterprise-grade frameworks and a decoupled architecture<sup>9</sup>, makes dotCMS auto-scalable in any direction and performant for a multitude of application types. The performance of any digital experience platform is merely as good as the content foundation at its core.























# Headless dotCMS Versions at a Glance

## For Business & Marketing Users



Tools & Capabilities	CMS industry	Headless dotCMS
Mobile & Persona Preview	✓	✓
Layout as a Service	✓	✓
Edit Mode	✓	✓
• Page Editing	✓	✓
• In-line Editing	✓	✓
• NoCode Page Template Editing	✗	✓
• NoCode Content Type Builder	✗	✓
• Improved Content Type Builder	✗	✓
Headless Personalization	✗	✓
Edit Mode Anywhere	✗	✓
NoCode Content Relationships	✗	✓
NoCode Advanced Workflow Management	✗	✓
Hybrid CMS	✗	✓

## For Business & Marketing Users

Tools & Capabilities	CMS industry	Headless dotCMS
De-coupled CMS Architecture		
Plugin Architecture		
REST APIs		
Docker Images & Reference Implementation		
Lightweight REST Builder & Scripting-as-a-Service		
Native GraphQL API & Query Language Support		
Support for front-end frameworks/technologies:	Maybe	
• SpringMVC	Maybe	
• ASP. Net	Maybe	
• Php	Maybe	
• EmberJS	Maybe	
• NodeJS	Maybe	
• React	Maybe	
• Angular	Maybe	



## Complimentary Evaluation Support

dotCMS offers a variety of tactics to test-drive and proof out your key use-cases around your personalization strategy. It is our investment and helps you to evaluate dotCMS effectively, way beyond shiny product demos and slick sales presentation.

More on our evaluation support

[Here >>](#)

## The Very Near Future of Headless dotCMS

dotCMS continues to evolve innovative capabilities of headless dotCMS that enables digital marketers and technology teams to increase their agility and drive business outcomes.

Check the very near future of headless dotCMS and how it is going to support your teams

[Here >>](#)



## About dotCMS

**dotCMS is a leading, open source content and customer experience management platform** for companies that want innovation and performance driving their websites and other content-driven applications. Extensible and massively scalable, both small and large organizations can rapidly deliver personalized and engaging content across browsers, mobile devices, channels, second screens and endpoints -- all from a single system.

Founded in 2003, dotCMS is a privately owned US company with offices in Miami, Florida; Boston, Massachusetts and San Jose, Costa Rica. With a global network of certified development partners and an active open source community, dotCMS has generated more than a half-million downloads and thousands of implementations and integration projects worldwide. **Notable dotCMS customers include:** Telus, Standard & Poors, Hospital Corporation of America, Royal Bank of Canada, DirecTV, Thomson Reuters, China Mobile, Aon, and DriveTest Ontario.

### Miami

3059 Grand Av.  
Miami,FL,33133  
U.S.A

### Boston

200 Portland St.  
Boston,MA,02114  
U.S.A

### Heredia, Costa Rica

Eurocenter  
Primera Etapa, 2nd Floor  
106 Heredia, Costa Rica

ON-DEMAND DEMO



[dotcms.com](https://dotcms.com)



+1-305-900-2001



[sales@dotcms.com](mailto:sales@dotcms.com)



## References

- 1 dotCMS – Building Apps with dotCMS  
<https://dotcms.com/reports/building-single-page-applications-with-dotcms>
- 2 dotCMS – Push Publishing Content  
<https://dotcms.com/docs/latest/push-publishing-content>
- 3 dotCMS – Static and dynamic publishing  
<https://dotcms.com/docs/latest/dynamic-and-static-publishing>
- 4 dotCMS – Your Hybrid CMS  
<https://dotcms.com/reports/dotcms-your-hybrid-cms>
- 5 dotCMS – REST APIs  
<https://dotcms.com/docs/latest/rest-api>
- 6 dotCMS – Lightweight Endpoints in dotCMS  
<https://dotcms.com/blog/post/lightweight-endpoints-writing-custom-rest-endpoints-without-java>
- 7 dotCMS – Hybrid CMS  
<https://dotcms.com/reports/dotcms-your-hybrid-cms>
- 8 dotCMS – Security Guidelines  
<https://dotcms.com/reports/dotcms-security-guide-security-for-dotcms-enterprise-and-dotcms-cloud>
- 9 dotCMS – Product Architecture  
<https://dotcms.com/product/technology/architecture>