



DrupalCon

EUROPE 2021
OCTOBER 4-7





DrupalCon
EUROPE2021
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Drupal for European Universities

Data-based Perspectives

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Nice to meet you (again)!



Hi, I'm Andrea.

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Adjunct Professor of Web Communication, Web Consultant, University of Parma, Italy.

DrupalCon regular, lately focusing on Drupal with a touch of data science.



Please meet Nuvole



Originated from ESN, an international student network.

First big project: a Drupal 6 template for use in HEIs.

Now doing complex projects for large NGOs and public institutions (World Food Programme, European Commission, OECD, World Bank).

Drupal pioneers, core contributors, DrupalCon trainers.

See nuvole.org for the full story.





Drupal in Universities: Exploring the Data

Born at a University



Drupal was famously started by [Dries](#) in a dormitory room at the University of Antwerp.

The first Drupal site thus came into existence within a University context.

This happened even before it was named Drupal, actually.



Powering Top Universities



Now, ~20 years later, an unsourced [quote on drupal.org](#) says 71 out of the 100 top Universities use Drupal.

It probably includes usage on secondary or non-public websites.



A quick heuristic check on the top 10 Universities according to the popular QS ranking shows indeed that 4 out of 10 use Drupal for their main website.

So Drupal is surely well-positioned in Education.

Getting the Real Data



We analyzed current data from 1830 European Universities listed on the Unirank website - used merely as a directory of world Universities, for lack of a usable official list.



Then we got the main website link from each University profile and processed it.

Drupal or not Drupal?



We detected the CMS in use for each website.

For non-Drupal, we just report the CMS name.

For possible Drupal, we determine the version too; we do circumvent popular techniques such as protecting CHANGELOG.txt or install.php



About 30% of sites remain undetected; it is expected and unavoidable: Universities like home-made stuff.

Methodology: Scoping



The analysis was run in late September 2021 and focused on HEIs, so Higher Education Institutions in general, from the 30 EEA (European Economic Area) countries.



We chose Europe since this is DrupalCon Europe, and the EEA subset as these states commit to common policies, useful for crossing with other data.

Want the world? It's one line of Python away. Just ask.

Methodology: Tools



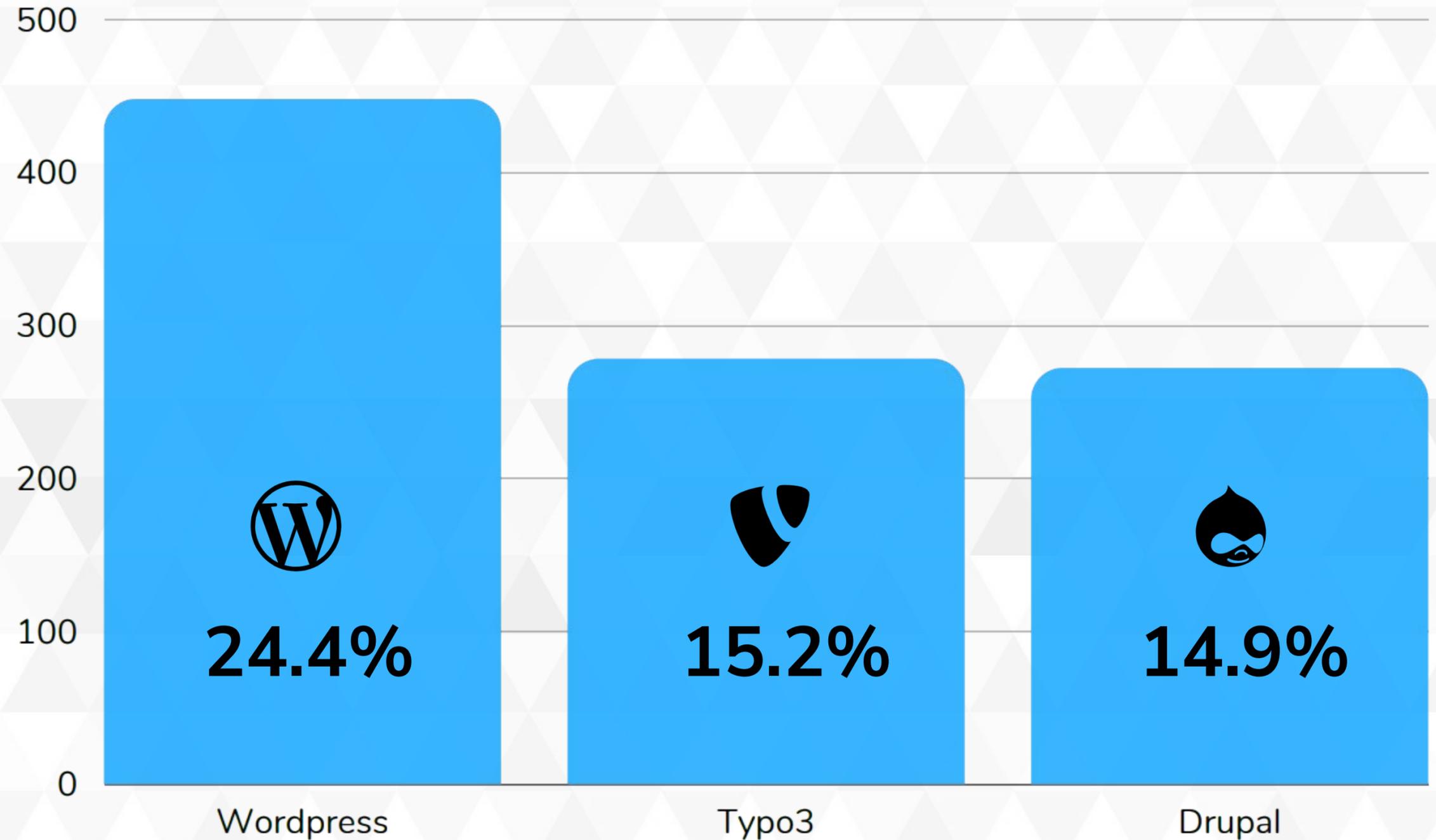
All the initial scraping was done with Python standard libraries.

The CMS detection algorithm was implemented with a short custom Python script.



We ensured we wouldn't send more than 4 page requests to each site, to avoid excessive traffic and gather only the information we needed.

And the winner is...



And the takeaway is...



Drupal is probably not as popular as one would expect.

WordPress is dominant, 1.65 times Drupal.

Typo3 is a surprise. The margin on Drupal is very small and dependent on geography (EEA countries).



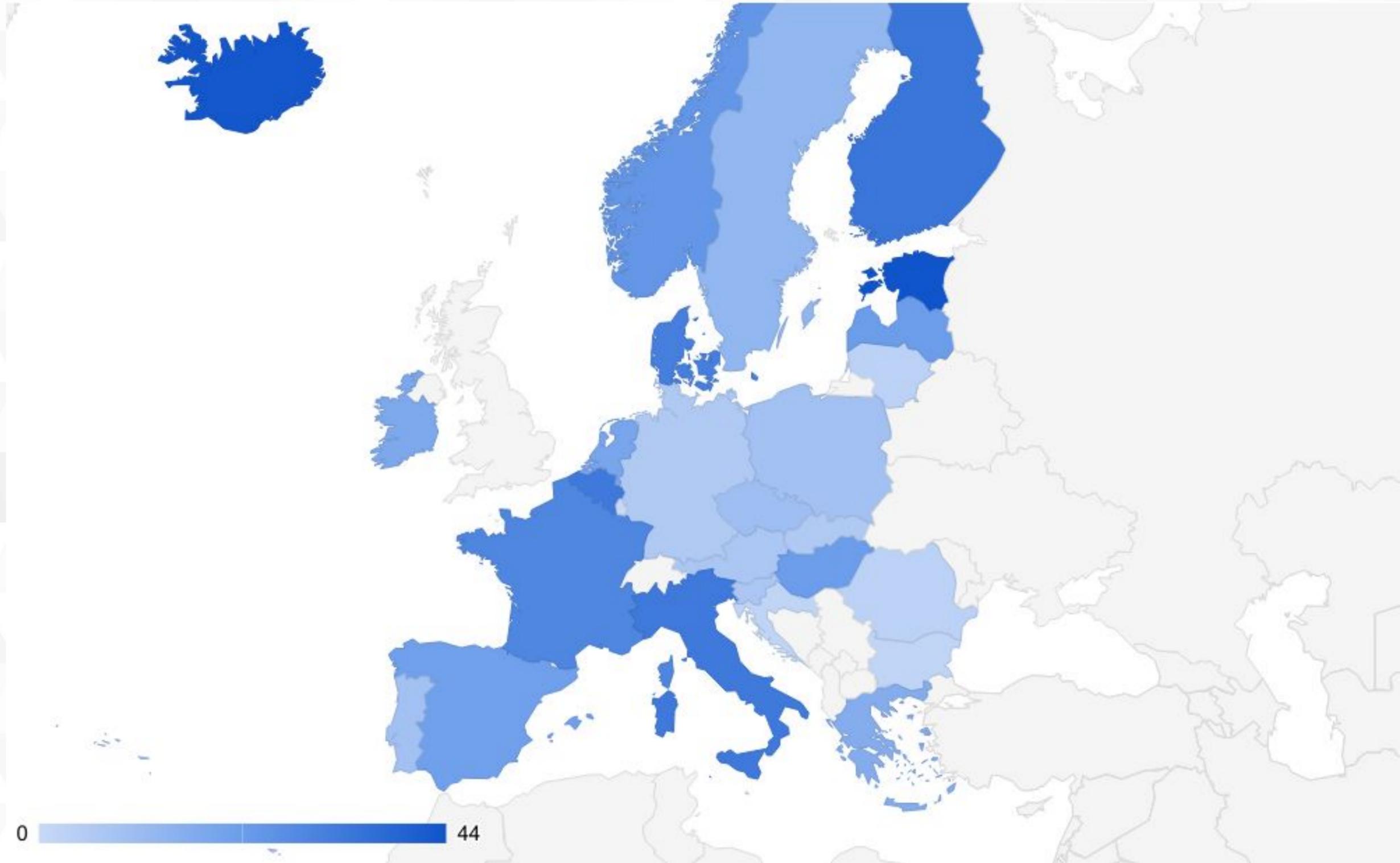
Joomla is a distant fourth with 5%, then there's a "<1%" long tail containing a bit of everything: Plone, K-Sup, Ametys, SharePoint, Wix, Notepad++, you-name-it.

The Most Drupalized Countries

Percentage of Drupal sites in each country (number of Drupal sites over total number of websites analyzed for that country).

Values range between 0% and 44%.

The analysis was run on EEA countries only.



Dominant CMS by Country

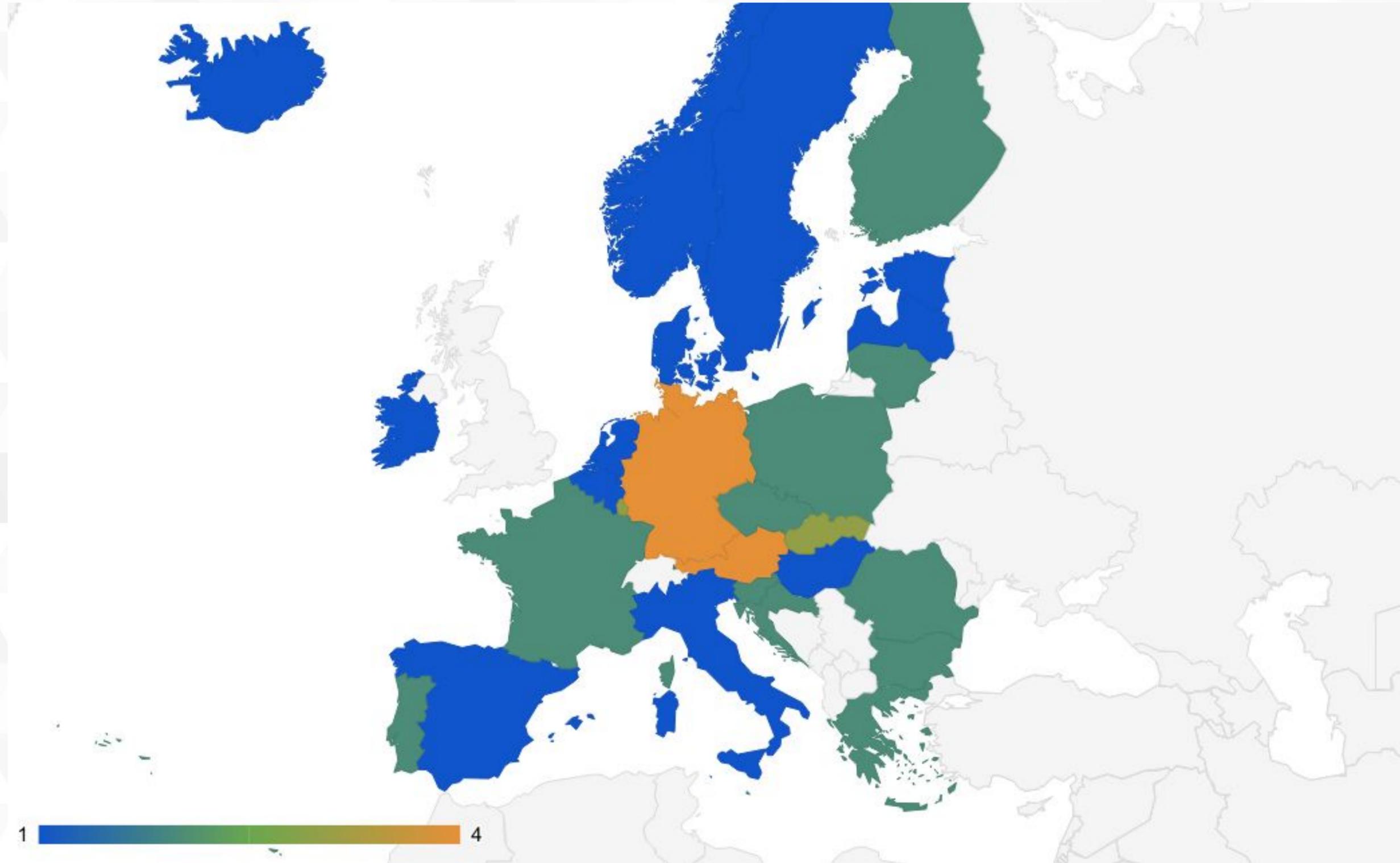
The most popular CMS in each EEA country.

Legend:

- Green** Wordpress
- Blue** Drupal
- Orange** Typo3
- Olive** Joomla

Ranking:

Wordpress	15/30
Drupal	12/30
Typo3	2/30
Joomla	1/30



By Country: Key Figures



The most Drupalized countries are Estonia (44% of the country's surveyed websites) and Iceland (43%); both have a limited number of Universities though.

Then a few bigger countries follow, namely Finland with 34%, Belgium with 33% and Italy with 33%.



Wordpress leads in 15 out of 30 countries, Drupal in 12, Typo3 in 2. Local glory for Joomla in Slovakia.

By Country: Takeaways



Country is a key factor: nationwide Higher Education management, national vendors, imitation.

Wordpress is very popular, but it's the leading CMS only in half of the countries.



Drupal is still a solid contender: good popularity in many countries; expansion opportunities.

Typo3, on the other hand, is extremely popular in a few countries; limited expansion.

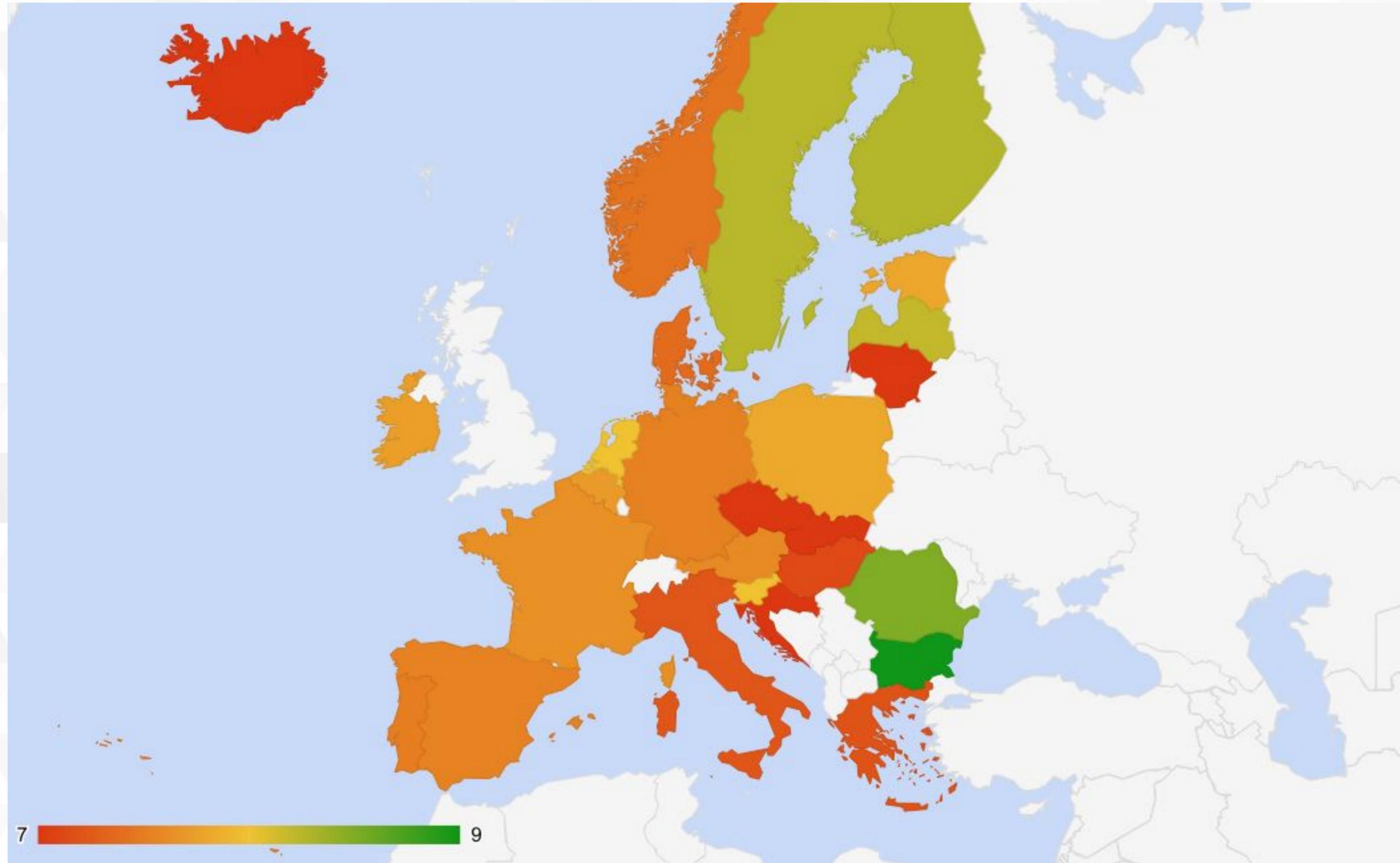
By Version: Countries

Each country is colored so to represent the average Drupal version used in that country.

Example: a country with 4 D7 sites and 1 D8 site has an average of 7.2.

Colors:

Red	7.000
Orange	8.000
Green	9.000

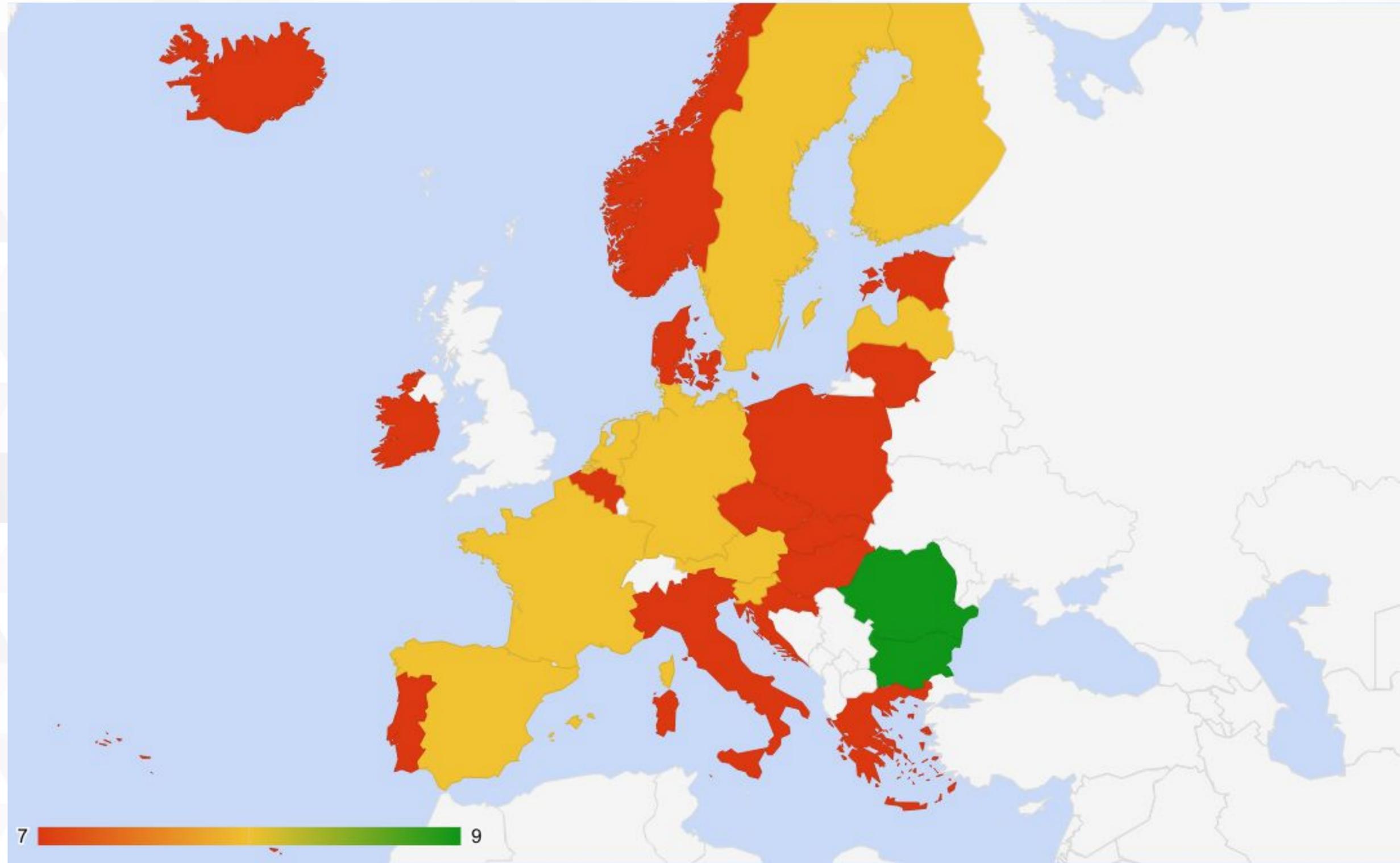


Dominant Version by Country

The most popular
Drupal version (D7,
D8 or D9) in each
EEA country.

Legend:

Red	D7
Orange	D8
Green	D9



By Version: Key Figures



Europe (EEA) runs Drupal **7.597** on average.

Drupal 7 still beats Drupal 8: 116-105.

Drupal 9 adoption is still very low.

Drupal 6 is more (or same) popular as Drupal 9 in CZ, DE, HU, IT.



Out of 253 sites with a reliably identified Drupal version, 111 will be outdated ~1 month from now, 227 in ~1 year.

By Version: Takeaways



The market for migrations is very significant.

After 6 years of Drupal 8 and 1.5 years of Drupal 9, Drupal 7 still enjoys a comfortable leadership.



People using those old sites are facing decade-old issues that have already been solved years ago by the Drupal community.

There is a risk for Drupal reputation in terms of security if those sites are not properly maintained.



Drupal in Universities: the Good and the Bad

Drupal's Reputation in Universities



Drupal *excels at managing complex content ecosystems*. [Pantheon's [blog](#)]

Drupal is a professional CMS, and thus expected to be more expensive than other solutions.



Drupal is flexible enough to accommodate all needs.

Drupal is hard to configure properly and moderately hard to manage.

Universities Influence Perception



On one side, Universities are prestigious use cases: Drupal's name is associated with MIT, Oxford, Cambridge and other top names.



On the other hand, institutional sites have the usual perception issue: students fail to identify as “cool” a technology powering an institutional site, by the mere fact that they associate it with boring stuff.

Outdated Design



Many University sites have an outdated design simply because they were designed years ago.

Responsive versions have flaws as mobile-first was not a priority for the client at that time, and vendors probably didn't enforce it enough.



Images on the site were meant to be mostly decorations and not as impactful as they are on current sites, where they are the main source of inspiration.

Outdated Information Architecture



Most current websites reflect the organizational structure of the University (a menu for each administrative division) rather than the visitor perception.



The information architecture tends to be heavy and boring, huge megamenus that require a lot of cognitive effort from the visitor and dozens of content types that leave site editors puzzled on what the best choice is.

Drupal's Current Real Strengths



Easy site templates (via multisite, distributions or config management), e.g., same template for 10 Departments.

Fine-grained user permissions, with support for editorial workflow and accessibility aids.

Excellent and mature multilingual support.

Integration with enterprise-grade search systems (lots of content).

Open source solution with strong focus on security.



Drupal's Current Real Weaknesses



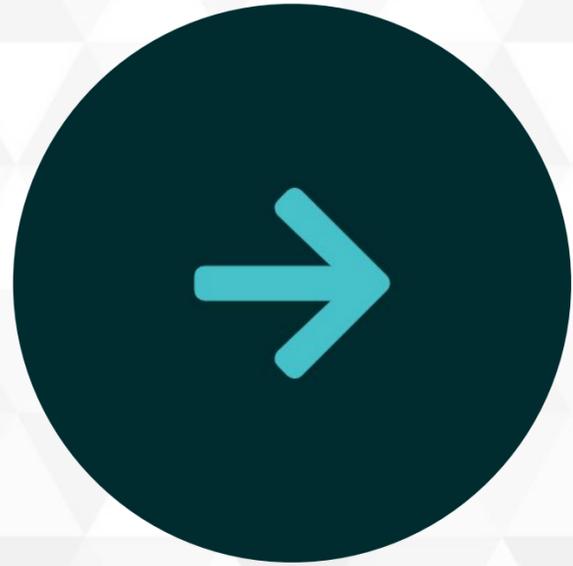
No real LTS (Long-Term Support) concept, and Universities are slow.



Maintenance is a burden: you are supposed to keep updating to recent minor versions, but this is not meant to be a security-only update of a stable codebase.

Self-hosted infrastructure, popular in Universities, is harder to manage and depending on more tools (e.g., composer).

Technology: Forward



Universities need integration with many systems, and this is way easier in modern Drupal.

Composer allows to easily reuse the entire PHP world.

Deployment pipelines, and excellent command-line tools like Drush, enable safe mass deployments.



A decoupled approach is possible, enabling Drupal to work with mobile apps.

Caching is very powerful and supports high-traffic sites.

Technology: Backward



Module readiness cannot be taken for granted: many Drupal 7 University sites use Rules or OG for example, and a stable D8 version hasn't been published yet.

Universities want to preserve old content but both ways (migration and staticization) still require significant work if one starts from D7.

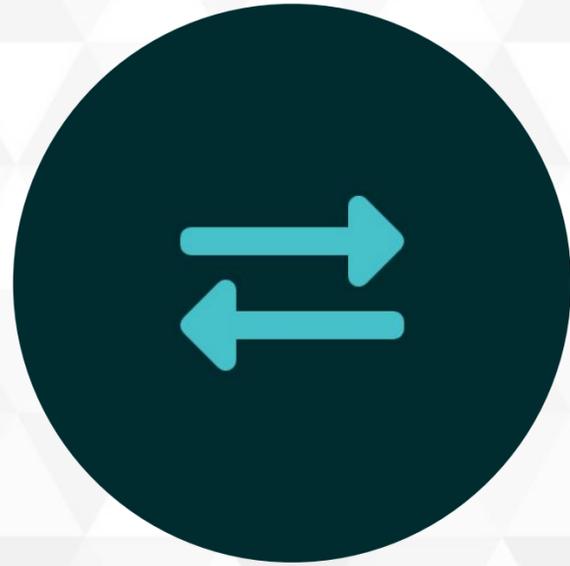


A few quirks, like access to `/node` or to taxonomy term pages, construct the idea of a CMS that is not completely under control.



Drupal in Universities: Doing it Right (Case Study)

Changing Requirements



University websites are getting simpler, not more complex.

The primary user personas for the site shift from the internal users (University staff and faculty) to external users (citizens and prospective students).



The main focus is communication rather than institutional information.

Attracting Visitors



We are still in a period when travelling has become much more difficult than it used to be.

The website is the only way left to HEIs to attract and engage their prospective students and make an impact on them.



A University website must be attractive to young people, who won't spend time sifting through a 100-item menu to find what they need.

Initial Rejuvenation Attempt



The University of Parma, Italy, had decided to renew their Drupal 7 web site at the end of 2019.

The initial idea was to go for a minor refresh: stay on D7, just put a new theme on it and do minor revisions of the information architecture for a nicer homepage.



A migration to Drupal 8 or 9 was seen as a possible later option, with the possibility to switch to another CMS at that stage.

Wrong Approach Exposed



Going for a new theme only would have been just a waste of effort (and, ultimately, money): the entire theme implementation would have been short-lived and need to be redone for Drupal 8.



Then the pandemic struck, IT had to refocus and the entire discussion started again in 2021, this time with the aim to evaluate Drupal 9 for an entire new generation of the University websites (100+ sites).

A New Design



A new design was created and implemented as static HTML and, later, as minimal PHP.



This could be done by a separate vendor without any knowledge of Drupal, to get a result that would be CMS neutral, i.e., equally suitable for any choice of CMS, while the selection was in progress.

It also helped a lot in getting feedback from the many stakeholders who don't care much about technology.

A New Information Architecture



In the meantime, the Information Architecture was significantly revisited and simplified: easier menus, fewer content types, less content in homepage.



This was life-tested in a decoupled way, with a Drupal 9 backend that exposed content via the new JSON API for consumption by the design template.

Editors could thus test the layout with real content instead of placeholder text, and get a feeling of what the Drupal 9 backend looks like.

A New Approach to Integrations



All integrations that in Drupal 7 relied on sharing database tables with other applications were entirely redesigned using web services.



The ecosystem was reorganized around 4 main websites (central; courses; staff; legal) sharing the same base theme and specialized subthemes.

The four sites communicate between them through web services and shared JSON resources, and share a common search.

A New Role for Internal Staff



The internal staff used to have some Drupal knowledge, but was limited by the vendor to content editing only, due to risks that things would break in a hard-to-diagnose way in Drupal 7.



Drupal 9, with exportable and versioned configuration, removes these risks and allows to give full site control to the internal staff, resulting in much shorter response times for support tickets.

Is Drupal the Best Tool for HEIs?



Drupal is not necessarily the best tool for everything; but you can surely find places in the ecosystem of any University where Drupal 9 indeed is the best tool available on the market.



Switching to Drupal 9 is a fantastic opportunity for both the internal staff and the vendor(s) to embrace new ideas and build something that is really new.

What's Drupal Future Role in HEIs?



Drupal 9 is an extremely versatile CMS, able to cover all needs a University has in terms of communication.

It can integrate with other systems a University uses, to avoid disrupting existing and tested workflows.

It supports modern and safe deployment processes.

So Drupal 9 is an option that any University should evaluate, independent of their previous experiences with Drupal 7.





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Thanks for watching!

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@nuvoleweb

Join us for contribution opportunities

4-7 October, 2021

Online on <https://drupalcontributions.opensocial.site/>

Mentored Contribution

7th of October: 14:00 - 17:00

First Time Contributor Workshop

5th of October: 14:00 - 17:00

General Contribution

4th of October: 9:00 - 12:00
5th of October: 14:00 - 17:00
6th of October: 9:00 - 12:00
7th of October: 14:00 - 17:00

#DrupalContributions

What did you think?

Have a look at the session description below
and take the survey for each session:

<https://events.drupal.org/europe2021/schedule/all>



Thank you!