

# ie Domain Profile Report 2023.



## **Foreword**

New domain registrations represent a forward economic indicator and are therefore a good barometer of digital intentions, particularly of SMEs. These good intentions don't always bear fruit, hence we observe a level of non-renewals and churn annually. We are proud to bring you this annual ie Domain Profile Report with data and insights which you may find interesting and useful.

In this edition, we assess the full year of 2023. We analyse .ie domains in the database, the counties and countries where they were registered and take a look at the broader .ie ecosystem, with some visuals illustrating how Ireland's urban-rural digital divide continues to parrow

In 2023 there were 48,689 new domain registrations, a modest increase of 0.34% on 2022. The extraordinary levels of growth experienced during the Covid years have tapered off and registration levels have returned to more regular patterns. The percentage of domains that were not renewed increased slightly to 15% (from 14.8% in 2022). At the end of 2023, the database of .ie domains was 328,245, a small net reduction compared to December 2022 (329,265).

A significant percentage of the .ie domain database comprises businesses, ranging from solopreneurs to SMEs to larger companies. Businesses of all sizes are now embracing digitalisation, clearly reaping the benefits in terms of efficiency, productivity and cost-saving. The digital transformation journey is being supported by government policy and implemented by government agencies. As SMEs make up 99.8% of the Irish economy, helping them achieve growth and scale is a pressing imperative.

The benefits of digital to time-poor SMEs will pay huge dividends, especially to those planning expansion by boosting exports so it is encouraging to see higher levels of digital adoption.

GNP is a significant driver of domain growth, so it is unfortunate that the current macro environment remains challenging for businesses. In 2023 SMEs bore the brunt of inflation and higher interest rates, even as Covid-related government supports tapered off, and many now face the prospect of repaying Revenue warehoused debts. Nationally, a **Deloitte report** shows that business insolvencies increased in 2023 by 25%, with the hospitality sector being particularly impacted. Internationally, the war in Ukraine shows no sign of ending soon, with continued impacts on energy and food supplies. Global uncertainty is also influenced by the US presidential election in 2024 as well as the Israel/Gaza conflict.

Despite this drag effect on domain growth, we are pleased that a .ie domain is still the online digital identity of choice for Ireland, with independent research showing .ie with 54.3% of Ireland's hosted domains, with .com in second place having 29.3% market share (page 11).

Cyber crime and online fraud continue to be a drag on digital adoption and risks undermining consumer confidence in e-commerce and digital business.

A Banking & Payments Federation Ireland report estimates that fraudsters stole nearly €85 million through online frauds and scams in 2022, an increase of 8.8% on 2021. At .ie, we are working closely with our partners to reduce the level of security threat to .ie websites and domains. This includes manually reviewing .ie applications; continuous security scanning the .ie database; and consumer protection protocols with national regulators and agencies. As a result, Spamhaus, and others, report that the incidence of malware and other forms of technical abuse are considerablu lower in .ie than in other top level domains, such as .com.

In a special chapter, we set out why we believe that Ireland's digital services companies and regulators are ill-prepared for the the approaching tsunami of EU cyber regulations (page 3).

We also explore what happened to the 115,812 domains registered during the 21-month Covid period and ask "where are they now?" (page 5). We would welcome hearing about your experiences.

#### **David Curtin**

Chief Executive, .ie

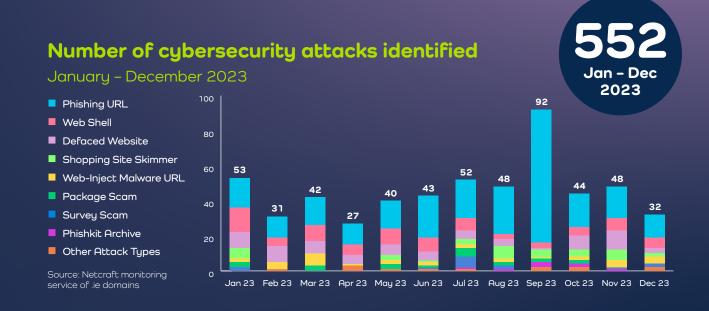
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# Cybersecurity - a key focus for the .ie namespace



Under the Network and Information Systems (NIS) Directive ie is designated as an Operator of Essential Services (OES). As one of the auardians of Ireland's national **critical internet** infrastructure, the .ie namespace, we are acutely aware of helping to protect Irish consumers and SMEs from cuber criminals.

We take a number of steps to keep the .ie domain as safe as possible and this ensures that the level of securitu threat to lie websites is a lot lower than other top level domains, such as .com. The SpamHaus Project, an international non-profit organisation that tracks spam and related cuber threats such as phishing, malware and botnets, collates a Badness Index for top level domains. The Badness Index of .ie is 0.1% / 0.00 compared to .cn China of 18.2% (score 1.64)...

### Proactively respond to online abuse

We employ **Netcraft**, who provide internet security services, including cybercrime disruption.

These services allow us to proactively respond to online abuse issues, such as websites that are hosting malware, phishing or botnets. Netcraft notifies our Registrars (companies that sell and manage .ie domains on our behalf) and the .ie domain holder. The domain holder can then, with the help of their Registrar or hosting provider, take the required corrective action. Netcraft will continue to monitor the website after the fix to ensure the issue is resolved. This service is invaluable as it helps innocent victims, such as SMEs who might be unaware that they have experienced a cuberattack and can take the required remediation action.

### Enforcing consumer protection protocols

We have established protocols with regulators to address online illegality and to permit 'take-down' of .ie websites under certain circumstances. There is a Regulatory Authority Protocol for dealing with illegal content on .ie websites. The regulatory authorities with whom we engage include the Corporate Enforcement Agency, the Competition and Consumer Protection Commission. the Central Bank and the Garda National Cyber Crime Bureau, amongst others.

### Manuallu review .ie applications

Only individuals and businesses with a provable connection to Ireland can register a .ie domain, and applications from new customers are manually reviewed to ensure that they meet this requirement. This process keeps the .ie domain largely free from registrations by bad actors for their quick-moving scams and other illegal activities that unmanaged domains cannot control as easilu.

70%

of content-rich .ie websites are secured with a security certificate

954

ie domains are secured. with DNSSEC (+26% YoY)

ie domains are secured. with Registry Lock (+30% YoY)

### **Promoting domain** security features

We are continuing to monitor the use of security for email and websites in the .ie namespace. This allows us to identify each domain, their capabilities, and potentially, their weaknesses. Our plan is to continue doing these collections on a regular basis so as to keep the community informed, via our blogs, with different level of details. In the future we will use these results to further engage with key stakeholders so as to help drive industry best practice when it comes to the ie namespace and the usage of TLS within it.



Security certificates encrypt the communication between the website and its visitors. This means that cuber criminals cannot intercept a customer's data. Websites with a security certificate have URLs that begin with https://

Our data analytics indicated 70% (109.399) ie domains with websites with working security certs (HTTPS). This is extremely welcome and encouraging, from the perspective of consumer protection.

Of the 30% of lie websites which did not have working HTTPS, (expired / invalid certificates or no certificate at all), it would be bordering on negligent if the website has e-commerce, a Cart function or a Payment function.

It is imperative for every business and every service provider to improve standards of cubersecurity.

DNS Security Extensions (DNSSEC) uses cruptography to add an extra layer of security to a .ie domain.

This strong increase is welcome. albeit from a low base.

Registry Lock is a service which requires a passphrase, thereby preventing unauthorised or unwanted changes to a lie domain. The aim of the service is to provide peace of mind to domain holders, and reduce the risk of disruption caused by unauthorised changes.

Secondly, during probing, we checked if a .ie domain supports more than one secure protocol, from the old SSL 2.0 to TLS 1.3. **Transport Layer** Security (TLS) refers to cryptographic protocols that protect encrypted Internet communications, It is good practice not to support SSL 2.0. SSL 3.0 and TLS 1.0/1.1 as they are considered deprecated. Attackers could take advantage of weaknesses in both SSL and TLS 1.0/1.1 to compromise encrypted communications. Instead, all sites should preferably use TLS 1.3 or TLS 1.2.

In our blogs, we regularly examine how things have changed over time - see May '22 here and October '21 here. At the last review, it was refreshing to discover that most of the .ie domains support modern TLS versions like 1.2 and 1.3, but it was concerning to observe the 40,923 domains supporting TLS 1.0 which was deprecated in March 2020.

Those domains are showing a disregard for good security hygiene as best practices indicate the minimum should be TLS 1.2 and ideally TLS 1.3.

# EU cyber regulations may overwhelm Ireland's regulators and service providers



Ireland's digital services companies are ill-prepared for the approaching tsunami of EU cuber regulations. These regulations include:-

- Digital Services Act (DSA) and the Digital Markets Act (DMA) which applu to platforms and search engines, initially those with more than 45 million customers each
- Digital Operations Resilience Act (DORA) for the fintech sector
- ► EUID (digital wallets) and eIDAs which are relevant for e-certificate providers
- NIS2 and the Critical Entities Directive (CER), which apply largely to important or critical infrastructure providers.

It has been estimated that the scope of NIS2 could encompass up to between 2.500-3.000 entities in Ireland. The scale and scope has the potential to overwhelm regulators in Ireland, and the companies in the 15 sectors with 8 new sectors soon to be regulated for the first time. With less than 10 months until the mandatory implementation date of October 2024, preparations for NIS2 will be intensive, expensive and resource-heavu.

In essence, NIS2 aims to protect critical organisations and infrastructure within the EU from cuber threats with the goal of achieving a high level of common security across the EU. To fulfil its objective, the NIS2 Directive focusses on organisations that operate in critical sectors, as they are essential for the proper functioning of society and, for this very reason, are often the primary target of cuber attacks. The ransomware attack which disabled Ireland's health services in 2021 is just one example.

The cubersecurity measures included in the Directive are designed to help organisations to protect their data, systems and processes. Compliance will not merely prevent sanctions, but also guide organisations towards achieving a cubersecurity maturity that will shield them from cyber attacks, which could have devastating effects on the company and on its customers.

The objectives are laudable and essential, given the scale and impact of cuber-attacks, especially ransomware.

Some of the main provisions of NIS2 include:

- 10 cybersecurity risk management measures required for essential and important entities to prevent or minimise the impact of cuber incidents (Article 21)
- New measures for registrars and registries to verify domain name registration data (Article 28)
- ► There will be enhanced corporate responsibilities for top management in relation to cubersecurity
- A harsher penalty regime will be introduced
- A stricter **supervisory regime** must be implemented to ensure compliance
- Stringent reporting requirements will be imposed for notification of incidents.

The international consultancy firm **EY** advises organisations which will be regulated by NIS2 to prioritise several practical steps in preparation for the upcoming requirements. For instance:

- 1. Perform an inventory or audit of its entire architecture and systems landscape
- 2. Implement a risk management framework ensuring that threats against its data are continuously identified, assessed, evaluated, and treated
- 3. Initiate crisis management activities to limit the impact and duration of a crisis
- 4. Define and establish business continuity and disaster recovery procedures to ensure that the organisation's critical processes continue to operate during a disruption
- 5. Make sure top management is involved in the cybersecurity strategy of the organisation
- 6. **Identifu supplu chain risks** bu including service providers in the risk assessments
- 7. Define a structured incident management process to deal with anticipated cubersecurity incidents..



These practical steps will, not only guide an organisation towards NIS2 compliance, but also strengthen its cubersecurity position and build its resilience against the ever-increasing cubersecurity threat landscape.

As the national domain registry, .ie is already designated by the Irish government as an operator of essential services (OES) under NIS1, the predecessor Directive to the imminent NIS2. Diligently following NIST Guidelines, along with its ISO 27001 certification ensures that .ie is already compliant with the cybersecurity requirements of the new Directive. In addition, the company has long-established DNS abuse protocols with many national regulators to assist them in tackling issues with .ie domains that are alleged to engage in technical abuse or criminal activitu.

The impact of NIS2 risks bringing severe unintended consequences, particularly for small companies in Europe. The scope of NIS2 will apply to all top-level domains for the first time - including .com .net. and .org and to all of the country code top level domains (ccTLDs) across Europe. Accordingly, Ireland's registrars and resellers which operate cross-border, will need to comply with NIS2 legislation applicable in all of those countries.

For example, they will need to have a dedicated database of complete and accurate information on any registrant that signs up for a domain name. This also means that registries and registrars will need to have verification processes. One particular concern is how to provide 'Legitimate Access Seekers' with access to the requested registration information on data held by them within 72 hours.

Because of the risk that NIS2, specifically Article 28, poses to Europe's domain name sector, the Council of European National Top-Level Domain Registries (CENTR) has developed a series of nine recommendations for national legislators in Member States and for the NIS Cooperation Group on how Article 28 should be implemented.

For Ireland's EPRSs - entities



### Conclusion

At .ie we are committed to demonstrating leadership for our sector and providing good governance. This includes meeting all .ie's regulatory requirements, including NIS2.

It is not an easy task for the channel, but .ie has a multi-stakeholder Policy Advisory Committee that ensures its technical and registration policies and procedures are consensus-driven and will help the channel to navigate the rough regulatory waters ahead.

A dedicated working group is focused on advocacy, alignment and awarenessbuilding. On this matter, .ie will leverage its established relationships with government departments to advocate for its stakeholders with national policymakers. Through its international partnerships, the company will continue to liaise and coordinate with cross-border partners and CENTR officials in order to ensure that the concerns of registrars, resellers and internet users are aligned within Europe's implementing acts and Ireland's national legislation.

# Covid period domain registrations – where are they now?

It's generally accepted that domains are a forward economic indicator of digital intentions. Most often, a domain is registered first, then the holder may decide to activate the domain with a website or e-mail. Some are intended for a short term purpose - for a specific project, or a marketing campaign.

Less frequently, a domain is registered for speculative purposes, for portfolio building, or to protect intellectual property, or perhaps to block a competitor from using a similar name or indeed just to hold a family name for posterity.

At .ie we wanted to understand more about domains which were newly registered during the 'Covid period' which brought government-imposed travel restrictions, and work from home obligations. The extent of digital transformation during the period is well documented and we could observe in real time that many domain holders realised that to be found during Covid they needed to be online. The starting point

for many was to use websites and email for communicating with customers - and many more hoped to enable e-commerce functionality on their new websites. For SMEs their first step was to register their preferred domain name as a digital identity for their business.

We were curious to see how many succeeded with their initial digital intentions, and in particular for those Covid period domains-

- What is their status? Are they still in the database? Are they being used?
- If still registered, did they get a website,? Did the website have some published content?
- Was the original digital intention still alive, specifically was it labelled 'coming soon/under construction'?
- Were they registered by new or existing customers? Does it make a difference to the domain churn ('stickiness') if the new registrant already owned other .ie domains?

### Current status

The number of domains created during this 21-month period was 115,812.

Figure 1 below is the distribution of the 115,812 Covid domains based on their current status in Q4 2023.

- Active 57,496 domains, which is 49.65 % of the total created in the Covid period
- Deleted 57.033 domains (49.25 %)

- Suspended domains 1,130 domains (0.98%)
- Pending delete 153 domains (0.13%)

Out of 57,033 domains deleted, it appears that the good intentions at the time of registration never came to fruition. At the time of deletion we observed that only 6% had mail server capability present (even that may have been part of a bundled set of services when purchased initially).

Figure 1 - Covid period domain report



Key:- Web usage categories for .ie domains:

- High Content: is defined as a website with meaningful custom content.
- Unknown: no web page was fetched, due to a variety of reasons.
- Parked: domain has an active website with a holding page indicating the domain is registered, available to sell, etc
- Not used: the page obtained represents a default web page for a specific type of software.
- Upcoming: site under construction / default page.
- Blocked: the page fetched indicates this is a suspended account.

### Current usage

We analysed the websites and mail records of the Covid creates that were still registered in Q4 2023. Figure 1 on the previous page shows the web usage and mail server response of the domains.

- ▶ Web usage of 57,496 active domains -
  - 41% of the domains have websites with high content
  - 27% returns an error like "no DNS found"
  - 23% of the domains are in parked or upcoming categories
  - around 9% are not using domains for websites or blocked the response
- ▶ eMail usage of 57,496 active domains -
  - 63% of the domains have mail server present (being email capability, not necessarily in use).

### Analysis on the basis of domain activity

The next task was to find what has been the activity on the Active Covid domains. We used the activity on the entire .ie domain during one month in Q4 2023 We ranked all domains on popularity from 1 to 330,000.

For simplicity, we created five bands of activity: Very High (1), High (2), Medium (3), Low (4) and No Activity (0) per day. The activity indicator in a month is the average of the daily activity during that month.

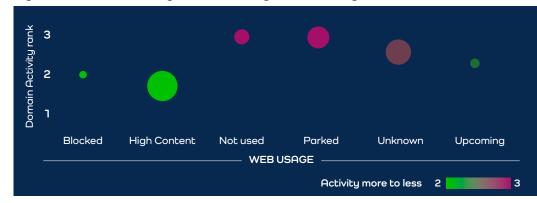
Analysis of our DNS traffic data shows that out of the 57.496 domains -

- 25,509 domains had very high activity which is ranked between 1 and 2
- ▶ 14,731 domains had moderate activity ranked between 2 and 3
- 17.212 domains had less activitue ranked between 3 and 4
- 44 domains had no activitu over last month

The activity for these domains was checked based on their web usage and the results were as follows -

- The high content domains average ranking for domain activity is between 1-2.5 which is expected
- There are some domains that. blocked the crawler and their domain activitu is veru hiah ranked in between 2-2.5
- Not used and parked domains rank between 3-4

Figure 2 - Domain activity\* and web usage of remaining active domains



- \* Activity means that the domain is being actively used, for receiving email or by those visiting its website. This activity is determined from our DNS traffic data.
- ▶ There are 15,069 domains with web usage as unknown and ranked 3 which is moderate to low activity
- Surprisingly, 704 domains which are listed under upcoming category have high domain activity as shown in the illustration above

### Conclusion and key findings

Around 50% of the domains registered during the Covid period have either been deleted or are on the verge of getting deleted. More than 49% of the domains are still active in Q4 2023.

It is interesting that 69,005 domains  $(\sim 60\% \text{ of the total } 115,182) \text{ were}$ created by existing .ie domain holders, meaning these returning customers were already digitally engaged, and therefore unlikely to be digital neophytes. By Q4 of 2023, the data shows that out of the original 69,005 domains with an existing domain holder, around 54% of the registrations are still active. This means that around 46% were deleted - which does not prove domain stickiness of domains which are registered by existing domain holders. We can speculate that some of the domains may have been for a special marketing purpose, or perhaps time-based events (for 2021, 2022) and therefore no longer needed.

It will be interesting to monitor the longevity of the active 57,496 Covid period domains over the years to come.

# Analysis of .ie domain database and growth

#### Growth in 2023 marginally ahead of 2022

In 2023 there were 48,689 new domain registrations, a modest increase on 2022. The extraordinary levels of growth experienced during the Covid years have tapered off and registration levels have returned to more regular patterns. The percentage of domains that were not renewed increased slightly to 15% (from 14.8% in 2022). The net database was lower in 2023, albeit based on a small number of just 176 domains. However, when looking at a five-year view (2023 vs 2019), there has been a 16.8% increase in the total database.

A large proportion of new registrations in 2023 came from existing .ie customers who were able to avail of our express registration process. Returning customers do not need to be re-validated.

#### TOTAL DATABASE



#### **NEW REGISTRATIONS**



-0.31%

change in .ie database (2023 v 2022)

+0.34%

new .ie registrations (2023 v 2022)



# Analysis of .ie domains by geography

Registered .ie domains on the island of Ireland

Ireland

293,133



Northern Ireland

4,914

Island of Ireland

298,047

There was a marginal drop of 0.44% in the number of .ie domains registered in the island of Ireland.

Great Britain accounts for the majority of internationally registered ie domains. However, new registrations from Great Britain decreased by a modest 2.5% year-on-year in 2023.

Bulgaria registered the second-highest number of new .ie domains in 2023 (318), followed by the Germany (83) and France (69).

Individuals or organisations that register a ie domain from overseas either have business. operations and customers in Ireland or can prove another type of professional or personal connection to Ireland. The registered owner is traceable, due to the pre-registration checks on corporate identity and connection to Ireland.

90% of .ie domains are registered on the island of Ireland

new .ie domains

45,938

new .ie domains registered on the island of Ireland in 2023

+1.4%

on 2022

2,751

new .ie domains registered internationally in 2023

-14.6%

on 2022

Total number of internationally registered .ie domains

International

30,198

Top 3 international registrant countries





Great Britain

**United States** 

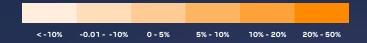
10,714 5,150

Germany 2,618



# Analysis of .ie domains by county

% difference in new .ie registrations 2023 v 2022



### Donegal

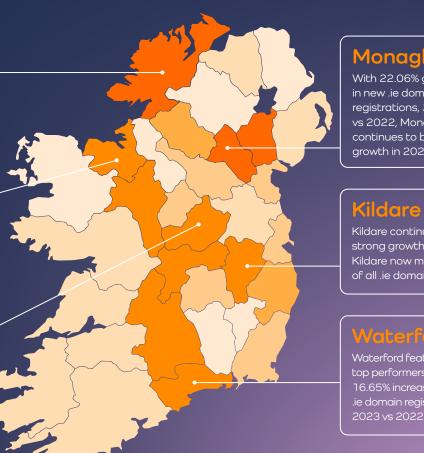
Donegal recorded the largest percentage growth (+34.55%) in new .ie domain registrations compared to 2022.

### Sligo

Amongst the border counties, Sligo has shown strong growth of 16.91% in .ie domain registrations 2023 vs 2022.

#### Westmeath

In Leinster, Westmeath leads the way with 18.72 % YoY growth compared to 2022.



### Monaghan

With 22.06% growth in new .ie domain registrations, 2023 vs 2022, Monaghan continues to build on its growth in 2022 (+8.4%).

Kildare continues its strong growth of 13.14%. Kildare now makes up 5% of all .ie domains in Ireland.

Waterford features in the top performers with a ie domain registrations. 2023 vs 2022.

County	Island of Ireland database % share	New registrations 2023	% difference v 2022
Antrim	0.47%	214	-21.90%
Armagh	0.17%	79	27.40%
Carlow	1.36%	627	-13.60%
Cavan	1.07%	491	2.51%
Clare	1.66%	761	-3.06%
Cork	8.72%	4,008	-1.67%
Derry	0.19%	87	-5.43%
Donegal	2.33%	1,071	34.55%
Down	0.44%	202	-9.42%
Dublin	39.43%	18,112	1.38%
Fermanagh	0.07%	31	6.90%
Galway	4.97%	2,285	-0.78%
Kerry	2.13%	977	-8.69%
Kildare	5.02%	2,308	13.14%
Kilkenny	1.59%	730	-14.62%
Laois	1.22%	561	3.70%
Leitrim	0.4%	185	-14.75%
Limerick	2.69%	1,238	-7.89%
Longford	0.56%	257	1.98%
Louth	2.27%	1,042	3.68%
Mayo	1.97%	903	-16.00%
Meath	3.74%	1,720	-5.23%
Monaghan	0.72%	332	22.60%
Offaly	1.08%	494	11.01%
Roscommon	0.91%	417	13.01%
Sligo	1.05%	484	16.91%
Tipperary	2.51%	1,154	10.75%
Tyrone	0.13%	59	-56.93%
Waterford	2.21%	1,061	16.65%
Westmeath	1.78%	818	18.72%
Wexford	3.29%	1,513	0.60%
Wicklow	3.84%	1,762	7.83%
Total	100%	45,938	

# Analysis of .ie domain ecosystem

### The long and the short of it

One of the longest .ie website addresses is:

thearnoldfelixgravestechnologicaluniversityofdublin.ie





### .ie domain usage

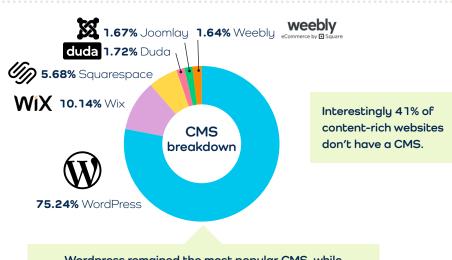
Website

47.69%

of all .ie domains have a content-rich website

Website content management system (CMS)

of .ie domains with a content-rich website use a CMS.



Keywords in 2023 new registrations

Identity with 'Place' continues to be very popular

24 counties had their countu name and / or 'Ireland' as one of their top 3 keywords in 2023.

**KEYWORD** 'Ireland' 2nd: **'Dublin'** 3rd: 'Irish'

Other top keywords



Themes when looking at word pairing in new domain names

**Dublin** was popular with... was coupled with...

Clinic

Design was linked to...



clinic







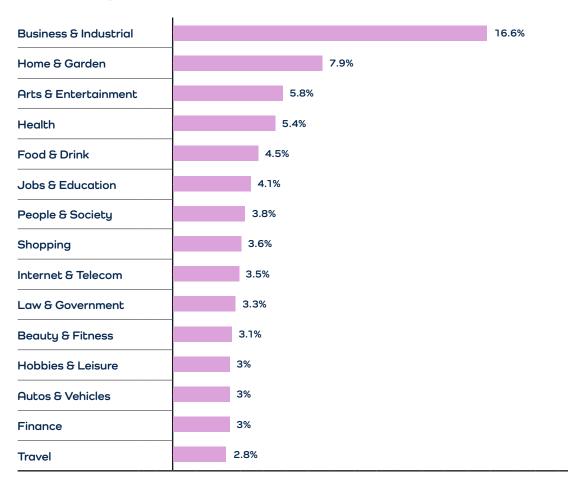
dental



Wordpress remained the most popular CMS, while Wix grew its share of the total, followed by Squarespace.

### .ie websites by content categorisation

### **Top categories 2023**



% share of .ie websites 2023

The biggest increases were in Home & Garden, Internet & Telecom and People & Society.

ie domains with a content-rich website were analysed using Google Natural Language Processing. classification. The analysis counts one domain per category, the most probable category.

### Other ecosystem facts

### Market share



- **.com** 29.3%
- .uk 7.3%
- **eu** 2.3%
- **.net** 1.9%
- org 1.8%
- Others 3.1%

Source: HosterStats Dec 2023



### E-commerce

11.43%

have e-commerce functionality



88.57% do not have e-commerce

functionality

Number of new .ie registrations with a fada

2023 -> 106

Down from 127 in 2022

## About .ie

As the trusted national registry for 330,000 domain names, .ie protects Ireland's unique online identity and empowers people, communities and businesses connected with Ireland to thrive and prosper online.

A positive driving force in Ireland's digital economy, ie serves as a profit for good organisation with a mission to elevate Ireland's digital identity by providing the Irish online community with a trusted, resilient and accessible ie internet domain.

Working with strategic partners, ie promotes and invests in digital adoption and advocacy initiatives - including the .ie Digital Town Blueprint and Awards for local towns, communities and SMEs.

We are a designated Operator of Essential Services (OES) under the EU Cyber Directive, and we fulfil a pivotal role in maintaining the security and reliability of part of Ireland's digital infrastructure.

For more information visit weare.ie

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