

Government Website Standardization Handbook

Digital public infrastructure with governance,
sovereignty, and long-term sustainability.
Fueling local business and serving citizens' needs.

Anatomy and impact of website standardization

Strengthening institutional trust and authenticity	3
A practical implementation guide	3
Strong, coherent, and clear — three dimensions of website standardization	5
Economic impact at home: predictable work for local companies	7

Creating and implementing a standard

A website standard at a glance	8
Measuring success with practical KPIs leaders understand	9
A 12-month implementation plan that retains momentum	11

Retaining independence with open-source platforms

Enhanced control and ownership of digital infrastructure	12
Wide-ranging benefits of open source	13

TYPO3 — content management for public sector institutions

TYPO3's four-pillar project model	15
About TYPO3	18
TYPO3's governance	19



TYPO3 CMS is a verified Digital Public Good approved by the Digital Public Goods Alliance, a multi-stakeholder initiative endorsed by the UN Secretary-General. Our work supports the Sustainable Development Goals.

Anatomy and impact of website standardization

Strengthening institutional trust and authenticity

Government websites provide fundamental services to citizens and businesses. They are the front door to digital public services and a window to a country's international image. A standardized web presence signals trust and authenticity across the public sector.

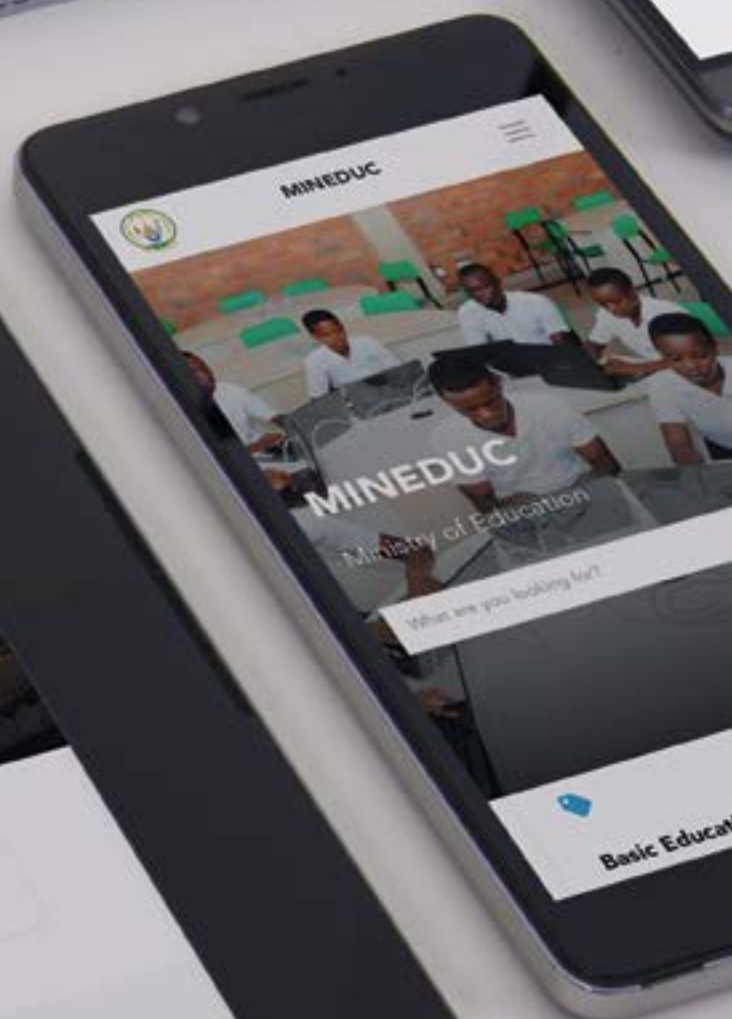
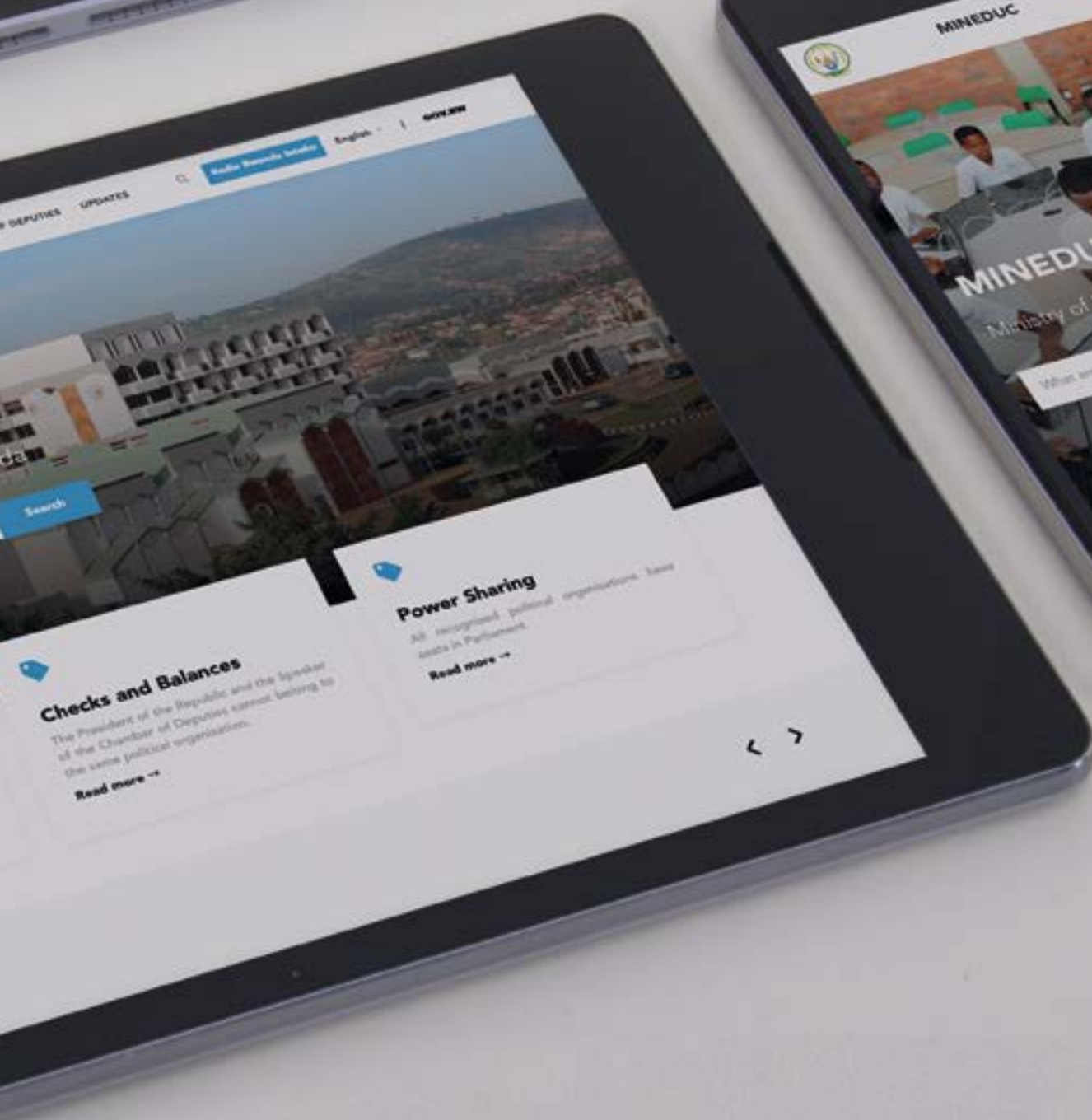
A predictable information architecture combined with a shared way of writing and presenting content across all your government websites communicates a feeling of *official*, *accessible*, and *safe*. Shared conventions reduce friction, prevent fraud, speed up service adoption, and strengthen institutional credibility nationwide.

A practical implementation guide

This handbook is a practical guide for anyone involved in the creation, implementation, or management of government websites.

It enables you to deliver websites with more confident cost prediction, streamlined maintenance processes, and clear, centralized guidelines that ensure long-term sustainability and value.

This is not a bureaucratic rulebook. Instead, it provides actionable advice, real-world examples, and step-by-step guidance to help you fast-track the implementation of a standardized web presence. Whether you're starting from scratch or refining an existing platform, you'll find clear, easy-to-follow strategies designed to help you succeed.



Strong, coherent, and clear — three dimensions of website standardization

In order to launch 10, 50, or 500 websites with cost control, consistent quality, and reliable timelines, standardization is a necessity. Reaping the full benefits requires equal attention to these three dimensions:

One strong technical foundation — A standardized, secure, scalable, and interoperable content management system (CMS) that can support many websites from the same codebase. This approach avoids the runaway maintenance costs of diverging systems. Feature investments, security patches, and upgrades are made once and instantly benefit all stakeholders.

One coherent user experience — A standardized national design system and content model with consistent menus, page templates, language options, accessibility rules, and editorial guidelines. Citizen adoption is faster when best practices are followed and users don't have to spend time learning a unique logic for each website.

One clear way of working — Governance, roles, processes, budgets, and service-level agreements (SLA). Everyone knows who owns what, how releases happen, and how support is delivered.

An robust content management foundation¹

A content management system (CMS) is a tool for managing and publishing content on websites and other digital platforms. Many CMSs are built for small websites, and perform poorly when managing larger amounts of data. Governments should look for a CMS designed for organizations with growing and complex content management needs.

Choosing the right CMS can mean a lot to the success of your digital strategy. While you could use almost any content management system to run almost any website, the financial impact of a poor choice often reveals itself too late, through maintenance costs and support overhead.

When a website inevitably shows signs of aging, the right CMS should allow you to replace or renew the design, without changing the content. Likewise, your content should not be dependent on the website's design. This decoupled and modular CMS model allows content, design, and CMS to be kept up-to-date independently and with less effort.

¹ typo3.com/choosing-ecms



A user experience that feels inclusive and builds trust

Citizens don't think in ministries, authorities, or agencies, they think "the government." When every institution publishes its own website with different colors, layouts, menus, and rules, people experience the state as fragmented. They wonder: "Is this page official? Can I trust this form? Why does the same service look different on three sites?"

A common web identity solves that confusion by defining a national graphic standard and design system (colors, typography, components), a predictable information architecture, and a shared way of writing and presenting content. From the first moment on a page, visitors see familiar signals of trust and authenticity.

Accessibility is also important. Although around 20% of users have difficulties using the web, accessible websites benefit people without disabilities too. It ensures that no one is excluded and improves the overall user experience for everyone. It is an opportunity to create inclusive, user-friendly, and future-proof digital experiences.

To effectively build accessible websites, standardization is essential. Web developers and designers can collaborate within a design system with established guidelines and reusable components. This means accessibility is integrated from the start of the development process. It prevents issues down the line — and leads to more efficient and sustainable digital products.²

Building a lasting digital infrastructure

A resilient standard is grounded in institutional foundations that endure, even when management changes. In this way, sustainability must be integrated into the strategic core, not treated as a series of isolated initiatives.³ This is what transforms a successful project into national digital infrastructure.

- **A permanent platform owner** institution with a clear legal mandate.
- **A community and an advisory board** of institutions and local industry to guide innovation.
- **A published roadmap** and release calendar that outlives annual budgets.
- **Transparent metrics** that make value visible regardless of political shifts.
- **Capacity inside the government** so knowledge is persisted both in the public and the private sector.

Standardization changes the shape of spending, driving down the average cost per site while allowing quality, security, and accessibility to rise.

- **Increased reuse** — Avoid duplicated expenses for similar templates and components.
- **More shared operations** — Hosting, monitoring, backups, patching, and upgrades are centralized.
- **Fewer emergencies** — Consistent website technology and predictable release cycles can reduce bugs, conflicts, and failures.
- **Smarter procurement** — Framework contracts with clear deliverables improve competition and value for money.
- **Local market benefits** — A higher share of the budget goes to domestic companies for real, reusable work.

Economic impact at home: predictable work for local companies

Standardization is not just a technical choice,
but an industrial policy for a digital service market.
It organizes demand, clarifies expectations,
and rewards quality.

A standardized platform with long-term plans of
rebuilding and maintaining the public sector's
websites creates a predictable pipeline of projects
for the local IT sector: migrations, new sites, training,
content support, accessibility audits, feature
improvements.

Instead of flowing offshore or into scattered
bespoke projects, money can circulate between
the government and domestic suppliers. Local
businesses can compete on value and quality
founded on their in-house expertise and
understanding of the national context.
A competent local workforce can respond
rapidly when priorities change.

Creating and implementing a standard

A website standard at a glance

The government website standard should be well-structured, easy to read, and easy to adopt. Writing it in plain language will allow it to be used and understood by everyone. Managing it and steering its processes should not be limited to technical staff.

The standard is a living document, updated regularly (ideally, twice a year) to remain relevant and effective.

A typical standard includes these topics:

- **Identity and design system:** Logo usage, colors, typography, spacing, grid, responsive behavior, icons, component library (headers, footers, menus, breadcrumbs, cards, tabs, accordions, notifications, tables, charts), and photography/illustration guides.
- **Content model:** Mandatory pages (About, Services, Contact, Legal, Data Protection), content types (news, events, documents, FAQs, advisories), metadata rules, language policy, and editorial style guide.
- **Accessibility and inclusion:** WCAG target (e.g., 2.2 AA), language switching, mobile behavior, contrast ratios, alt text rules, accessible forms, and plain-language guidelines.
- **Platform and operations:** Multi-site structure, release cadence, extension governance, CI/CD pipeline, environments (development/testing/production), monitoring, and backup/restore procedures.
- **Security:** Authentication and roles, least-privilege principles, patch timelines, incident response, content approval workflows, HTTPS/HSTS, content security policy, and regular audits.
- **Data and integration:** APIs for search, open data, and, when ready, integration with service back-ends (e.g., workflow, registries, identity, payments).
- **Governance:** Organizations and roles responsible for the standard, including design system decisions and approval, platform maintenance, support providers, editor training and certifications, and budget flow.

Measuring success with practical KPIs leaders understand

Standardization creates strength in numbers, especially when tracking progress. Every small success from hundreds of website projects adds points across key performance indicators (KPI). When made available on a public dashboard, they build confidence across government and among citizens and partners.

- **Coverage** — Number and percentage of public institutions launched on the standardized platform.
- **Consistency** — Adherence to the design system. Automated checks for headers, footers, menus, and templates.
- **Accessibility** — WCAG audit scores and remediation speed.
- **Performance** — Page load times, core web vitals, uptime.
- **Security** — Time-to-patch from published security advisory to deployment in production. Results of periodic security tests.
- **Findability** — Search success rate as the percentage of users who find target pages or services within two clicks.
- **Service conversion** — Completion rate for top online services started from the website.
- **Economics** — Average implementation cost per site over time (lower is better). Total domestic spend retained. Number of editors and developers trained and certified on the standard.
- **Satisfaction** — Citizen feedback on clarity and trust. Editor satisfaction with tooling and training.



Common questions from stakeholders

Will institutions lose their voice?

No. Institutions keep control over their content, priorities, and publishing cadence. The standard dictates how websites are built and secured, not what and when content is published.

Can we add special features for a sector?

Yes, as long as they respect the shared governance of design and security. Sector-specific features can be developed for health, education, tourism, etc. Once mature, they can be shared with other sectors.

What if we already have a site we like?

Proven content and other existing features can be migrated and mapped into the national design system. The payoff is long-term: easier upgrades, stronger security, and a consistent citizen experience.

Month 3–4 — Stand up the platform

- Deploy the CMS multi-site instance with CI/CD, monitoring, and a curated extension set.
- Launch a helpdesk for editors and a support ticket and task workflow for institutions.

Month 1–2 — Mandate and mobilize

- Appoint a sponsoring authority (e.g., Ministry of ICT or Government Communication Office)
- Approve the national CMS platform
- Publish Version 1.0 of the design system and the content model
- Announce the support structure and onboarding plan

Month 5–6 — Train and prove

- Run bootcamps for editors and developers.
- Launch a central portal as a reference site demonstrating the new identity, accessibility, and performance standards.

A 12-month implementation plan that retains momentum

Implementing a standard is an iterative and cumulative process. Through clearly defined implementation steps, each site launched will strengthen the platform, improve the component library, and grow expertise, user base, and community.

Month 7–9 — First rollout wave

- Onboard a cluster of sites (e.g., 20–40 ministries or municipalities).
- Use a repeatable migration playbook: content inventory → clean-up → templated migration → review → launch.
- Measure accessibility and performance continuously.

Month 10–12 — Scale and stabilize

- Launch the next cluster of sites.
- Publish the Year Two roadmap and upgrade calendar.
- Publicly showcase results and publish a dashboard with metrics.



Retaining independence with open-source platforms

Enhanced control and ownership of digital infrastructure

Open source software has emerged as an essential tool for organizations — and even entire countries — seeking digital autonomy. Organizations benefit from the transparency, flexibility, and vendor neutrality inherent in the licensing, distribution, and collective development models of open source software. In practical terms, open source:⁴

- **Reduces reliance** on external technology providers
- **Enables you** to maintain and contribute to the software you use
- **Increases control** over digital infrastructure, securing operational autonomy

Instead of relying on a single vendor with controlling rights to the product, open-source software is often the result of a collaborative effort within a worldwide community, enabled by universal access and distribution. The community contributes features and bug fixes for the common good and ensures product quality.





PIXABAY / PEXELS

Wide-ranging benefits of open source

Beyond its direct users, free and open-source software can benefit society at large in many different ways.

Financial independence

Open-source software carries a low initial investment cost. Even though there may be a cost related to initial development and making the software available to the user, the right to redistribute the software means it is made available without paying a (recurring) license cost.

Anyone with access to the software source code can use the software for their own financial gain from day one, drastically reducing the initial investment required to start a business benefiting from the software.

Non-exploitative and anti-colonial

Open-source software is not without cost: IT staff, infrastructure, and system maintenance are still required. However, open-source software gives greater control over where to spend and invest budget, enabling the fostering of non-exploitative and local economies. It reduces or entirely prevents dependencies on foreign businesses and can be maintained without the transfer of money abroad. Local tax revenue can be reinvested into the local economy rather than sent to foreign corporations.

Lowered barriers to knowledge building

Just as open information can make educational material available to more people, open-source software allows IT students to learn by using, inspecting, and changing the software.

Educational institutions can base their management and curriculum on the use of open-source software to lower the cost per student, while giving them access to peer-to-peer knowledge sharing with leading global software experts in the open source community.

Security

It's natural to wonder whether an open system might be more vulnerable to exploitation. However, the very openness of open-source software can be a powerful advantage. It allows anyone to identify vulnerabilities, suggest improvements, and contribute fixes without delay.

In contrast, closed-source software limits external audits, making it harder to ensure the integrity of the code. Without external scrutiny, resources can be diverted from essential security improvements to non-critical cosmetic features, leaving vulnerabilities unchecked.

Support of civil society

Owing to its reliance on open knowledge exchange and collaboration, open-source software is the basis for numerous national and international, formal and informal civil society organizations.

The user groups formed around open-source projects differ from those formed around proprietary software in that they are a part of the consensus-driven decision-making process of the project itself. Any person or group can contribute opinions or direct change to the project.

Democracy-building and peaceful coexistence

A factor often overlooked when describing an open-source project's contribution to civil society is the role such organizations can play in developing democratic structures and practices. Just like a country, an open-source project benefits from inner stability, recognition of the needs of minorities, good governance, broad participation, and consensus-driven decisions. Therefore, a successful open source community is a platform for learning democracy skills and understanding the foundations of peaceful coexistence.

TYPO3 — content management for public sector institutions

TYPO3's four-pillar project model

Knowledge transfer projects backed by the TYPO3 Association employ a generic and reusable four-pillar model that increases the chance of success.

Pillar 1: Local commitment

Commitment to standardization and a common technical platform by an entity with sufficient size to create sustainable demand in the market, such as a central government or major enterprise.

Pillar 2: Financial capacity

Financial capacity funds the development, maintenance, and hosting of the new websites and gives local businesses the financial and human-resource capacity to support expertise building. The funding source can be found internally or through international development cooperation.

Pillar 3: Local skilled workforce

The presence of a skilled local workforce capable of learning and using the technical platform is crucial. Private employers must be willing to adopt the technical platform as part of their business strategy.

Pillar 4: Technical platform and knowledge transfer

Backed by a not-for-profit association, a platform like TYPO3 gives access to an international network of experts who can train the local workforce without the creation of financial ties or dependencies outside the country.



Examples of government website standardization with TYPO3

Canada

The Quebec government runs over 50 TYPO3 sites, including the provincial government's portal: *quebec.ca*. During the Covid-19 pandemic, the website was the official source of information for the province's 8-million-strong population, making its performance critical. The site handled spikes of traffic smoothly, with no downtime — even with more than 4 million page views in a single day.⁵

Germany

Over 35% of the German government's digital infrastructure runs on TYPO3, from local municipalities and public-sector businesses to state and federal governments.⁶ The Government Site Builder (GSB) 11 is a TYPO3-based project and a key component of the German federal government's service consolidation program. It represents a strategic shift in their approach to web content management. Publishing many results in open source repositories and involving a consortium of 17 German web agencies, the initiative's standardization effort saves resources while contributing to job creation.⁷

Rwanda

Until 2019, the Government of Rwanda's websites followed a pattern common to many countries: separate vendors, multiple hosting contracts, fragmented content structures, and misaligned upgrade cycles. The result was expensive to maintain, with inconsistent quality, duplicated effort, and elusive security vulnerabilities.

The turning point was a simple shift to build once, use everywhere. Rwanda chose TYPO3 and defined a national standard around it: a shared platform, a common design system, and a consistent way of working. Through a knowledge transfer project with the TYPO3 Association, supported by GIZ, government teams and local companies were trained to build and maintain sites on that standard.

The results arrived quickly and then compounded: Rwandan professional talent quickly implemented and relaunched 250 standardized websites for all ministries and other government entities. Rwanda's decision provided business opportunities for local software development companies, new local jobs, and positive economic prospects for the country's citizens.



Somalia

From 2024 onward, Somalia has moved along the path described in this handbook, supported by international partners including ITU and GIZ. The approach is pragmatic: Start with a shared platform,

publish a clear design system, train editors and developers together, and roll out clusters of sites in waves. Each wave strengthens local capacity and reduces the marginal cost of the next.



About TYPO3

TYPO3 is an open source CMS that has emerged as the trusted choice for government authorities worldwide. Many government entities, from local municipalities to national agencies, have already adopted TYPO3 as their preferred content management system. The reason behind this widespread adoption is TYPO3's unwavering reliability and sustainability, particularly suited for government websites.⁸

- **Fast** — Industry-leading content delivery speed for increased civic engagement
- **Trusted** — Over 35% of the German government's digital infrastructure runs on TYPO3
- **Reliable** — Update cycles and Core team that runs 200,000 daily tests to ensure high performance
- **Scalable** — Capable of supporting large installations of over 1 million content items⁹

Ensuring dependability

Reliability is paramount for government authorities when it comes to disseminating critical information to the public. TYPO3 ensures that information remains available and up-to-date through its predictable release cycles. This commitment to timeliness, combined with adherence to data privacy and compliance standards, makes TYPO3 a dependable platform for government organizations. Furthermore, TYPO3 offers multisite functionality, allowing consistent information delivery across various sites and platforms.

Prioritizing security

In addition to reliability, TYPO3 places a strong emphasis on security. Government websites must inspire trust, and TYPO3 achieves this by safeguarding sensitive data, providing granular user access permissions, and adhering to built-in privacy and security standards. Its self-service tools simplify citizen interactions, enabling them to access government services efficiently. With TYPO3, government authorities can effectively manage complex interactions, ensure compliance with regulations, and foster citizen engagement.

Sovereignty and predictability

Moreover, TYPO3 understands the unique challenges faced by government organizations, such as data privacy compliance and unpredictable funding. It offers up to seven years of long-term and extended support for its feature-rich core. TYPO3's adaptability and sustainability makes it the ideal choice for government authorities seeking a reliable, secure, and enduring solution for their digital presence.

Free and open source software

The TYPO3 project is a collaborative effort within a worldwide community, enabled by universal access and distribution. The community contributes features and bug fixes for the common good and ensures product quality.



The software is released as Free and Open-Source Software under the GNU General Public License (GPL).¹⁰ This popular software license uses regular copyright principles to grant copy-holders the right to freely modify, copy, share, and redistribute the software, as long as new releases use a compatible license. Importantly, you are not required to share your code, so sensitive information can be kept safe when necessary.

Aligned with GovStack

GovStack Global¹¹ is an initiative backed by ITU, GIZ/BMZ, and the Government of Estonia. It defines reusable building blocks for digital government. The CMS Building Block reflects the same principles as large-scale TYPO3 deployments: shared components, strong governance, and interoperability with service backends.

Recognized as a Digital Public Good

TYPO3 has been verified by the Digital Public Goods Alliance and included in their list of software that it meets criteria for openness, quality, and safe reuse — exactly what governments seek when standardizing critical web infrastructure.¹²



TYPO3's governance



TYPO3 Association

The TYPO3 Association is a Swiss not-for-profit association founded by members of the TYPO3 Community in November 2004 that provides software to the public free of charge. It has its headquarters in Baar, Zug, Switzerland. The TYPO3 Association

is non-partisan and denominationally neutral. The association has approximately 1,100 members and coordinates and funds the long-term development of TYPO3 CMS. It is the owner of the TYPO3 trademark. Find more information at typo3.org/association.

TYPO3 Company

In 2016, the TYPO3 Association established TYPO3 GmbH as a fully-owned service company to provide support services and take on the development of the TYPO3 CMS software. The company is headquartered in Düsseldorf, Germany. TYPO3 GmbH offers commercial services, such as extended support plans, service level agreements, and partnerships

to support, extend, and enhance TYPO3 CMS. The company does not compete with TYPO3 agencies and service providers, but rather provides additional supporting services, such as presales services, project reviews, and marketing for the content management system. Find more information at typo3.com/typo3-gmbh.

⁸ typo3.com/solutions/industry-vertical/public-sector/government-site-builder-typo3

⁹ typo3.com/solutions/industry-vertical/public-sector-cms ¹⁰ gnu.org/licenses/licenses.html#GPL

¹¹ govstack.global ¹² digitalpublicgoods.net/r/typo3

Many governments lack a standardized strategic approach to secure, performant, cost-efficient, attractive, and user-friendly websites.

Based on hands-on experience and filled with practical advice, this handbook is not a bureaucratic rulebook. It demonstrates how to fast-track the implementation of a standardized web presence, including a strong technical platform, coherent user experience, and clearly defined governance and practice.

Governments can adapt it to their context and scale at their pace, whether beginning with ministries, municipalities, embassies, or sector portals like health, education, or tourism.

With local leadership, the standardization program can produce wide-ranging benefits:

- Business opportunities for local companies.
- New employment perspectives for young talent.
- Sustainable, non-exploitative local economic cycles.
- Authenticity and trust in public sector communication.
- Civil-society initiatives and democratic practice.



Read more online at
typo3.com/standard-handbook