

How Denmark digitized its ministries: Three decades of learnings

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Why digitizing bureaucracy itself, not just systems, made all the difference

Across the world, governments have invested heavily in digitalization to support its work. New systems have been procured, services have been moved online, workflows automated, and data migrated - yet many core processes remain fragmented, and in some cases still partly paper-based. And yet, many ministries today experience a paradox: despite more technology, administration feels slower, less coherent, and harder to control. Digital layers have multiplied, but the underlying administrative architecture remains fragmented - leaving some core processes inconsistent, and in some cases still partly paper-based.

Senior officials recognize the symptoms. Documents and cases are scattered across systems. Compliance depends on individual behavior. Integrations multiply. Transparency becomes harder, not easier. Digitalization has improved access - but often at the cost of coherence.

Against this backdrop, Denmark stands out.

For the past eight consecutive years, Denmark has ranked number one in the United Nations' global e-government index. But rankings alone do not explain success. The more interesting question is not that Denmark succeeded - but how, and whether the same logic can be applied elsewhere in other countries.

The answer does not lie in a single reform or system, but in a thirty-year journey that fundamentally reshaped how ministries work. Denmark's digital success did not emerge overnight. It unfolded across three distinct decades, each with its own lessons - including failures. In this paper we will not only take you through the history, but we will also give our suggestion on how other countries can repeat, what Danish government institutions have been doing, in a much faster pace.

Decade one (1996–2006):

From ambition to fragmentation

Denmark was an early mover. Already in the mid-1990s, the Danish government recognized that the internet would become critical to public administration. In 1996, a national action plan was launched with a clear focus on national registers, standards, and the digitization of government case processing.

The ambition was sound. And in many respects, the strategy worked: paper processes were replaced, documents were digitized, and productivity improved.

But ten years later, a new problem emerged.

Digitization had fragmented the administrative landscape. Shared drives, document management systems, email inboxes, local file servers, and digital archives all coexisted - poorly integrated and inconsistently used. Documents were copied, forwarded, versioned, and stored in multiple places.

As a result, control eroded.

Ironically, the paper-based world had been simpler. There was one physical document, one version, one trail. Digital tools multiplied versions instead of eliminating them. Compliance became an additional task - and under political pressure and tight deadlines, it was often neglected.

This pattern will feel familiar to many governments today. Best-of-breed systems are procured and integrated, yet the overall architecture remains fragmented. As the saying goes: software does not marry.

By the mid-2000s, Denmark had learned a hard lesson: digitization of paper without architectural coherence increases complexity rather than reducing it.

Decade two (2006–2016):

Building the digital back office

The breakthrough came in 2006 - not through another IT program, but through a fundamental redesign of digital administration itself.

Working closely with the Ministry of Social Affairs, a new generation of administrative systems were developed around two core principles.

- First, compliance had to be automatic. Archiving, traceability, and record-keeping could no longer depend on individual discipline. They had to happen as a natural

by-product of daily work. When civil servants are under political pressure and tight deadlines, compliance cannot be optional - it must be embedded.

- Second, all data had to reside in a single authoritative database. Documents, cases, records, emails, and attachments needed to be searchable, findable, and consistently governed at all times - creating a single source of truth.

This marked a decisive shift: from compliance-first thinking to users-first design. Instead of forcing users to adapt to compliance systems, the system was designed around how government actually works - and ensured compliance automatically as a result.

The underlying logic became known as the Digital Bureaucracy Model, supporting four fundamentals:

1. Government data was organized according to the nature of public administration: records grouped into cases, with attachments such as letters, files, notes, minutes, memoranda and emails. Each element had a unique identity, versioning, metadata, access control and audit trail. There was now one authoritative version of the truth.
2. Formal and informal communication took place within the same structure. Informal exchanges could become formal when relevant, without losing traceability. Compliance followed the work, rather than interrupting it.
3. Organizational control was managed through mirroring way organizations actually worked- hierarchy, units, roles, and access rights. Who could see what, edit what, and approve what reflected the formal decision-making rules. Full auditability ensured transparency, privacy by design, and GDPR compliance.
4. Processes, not just data, were also embedded in the model. Generic government workflows - such as requests, approvals, and hearings - were standardized across organizations, while specialized, legislatively defined processes like permitting or grant management could

be configured as needed. This allowed ministries to adapt the platform to their mandates without fragmenting the administrative structures.

This was not simply a system. It was a digital representation of bureaucracy itself.

Leadership played a decisive role. Permanent secretaries and senior administrative leaders adopted the system from day one, using it in their own daily work. Together, administrative authority and digital leadership moved side by side.

As other ministries followed - including the ministries of transport, climate, energy, and ecclesiastical affairs - a shared digital backbone quietly emerged. By 2011, four ministries were operating on the same platform, an achievement that was more than a decade ahead of its time.

An interesting anecdote tightly connected to this period, is the link to the works done by German philosopher Max Weber. His studies about bureaucracy and bureaucratic models of organizations, have inspired how governments have implemented digital solutions. To keep a high level of trust in democracy among citizens, strong and stable government institutions are the way to fight erosion and regain trust (if necessary) through highly efficient, transparent and fair service delivery.

This is possible by using digitalization as a means, and it is possible because all government organizations fundamentally work in the same manner. Based on the organization and production model called "Bureaucracy", as described by German philosopher Max Weber. Digitalization, if used correctly and with care, offers enormous power. It offers government institutions the opportunity to rethink and transform themselves into a next generation of digitally based institutions, highly efficient and transparent.

Decade three (2016–2026):

From system to platform

Once the digital back office and internal system support was firmly in place, the logic could extend outward.

In the late 2010s, the platform expanded beyond ministerial administration to support citizen-facing services and specialized agency processes. Configurability became critical: domain-specific workflows such as permitting, grants, and regulatory processes could be modeled without

custom development, while still adhering to the same administrative backbone.

Agencies, municipalities, and universities were onboarded. Today, more than 75 Danish public organizations run on the same foundation. New ministries can go live in a few weeks.

What had begun as a solution had become infrastructure. What had begun as a genuine interest among a few dedicated people now had become the example to follow.

Over time, the accumulated experience - twenty years of governance logic, best practices, and technical refinement - was embedded in a commercial off-the-shelf digital platform. That platform is now used by more than 100 government organizations across five continents.

Why this matters now

Many governments today face the same crossroads Denmark faced twenty years ago. Fragmentation is rising. Compliance pressure is increasing. Expectations for transparency and service delivery are growing. Trust is at risk.

The Danish experience suggests a clear lesson: sustainable digital government is not achieved by digitizing services alone. It requires digitizing bureaucracy itself - the underlying backbone of public administration.

This is no longer an experiment. It is proven on a national scale. And it is now possible for other countries to adopt.

Across Europe, North America, and Africa, ministries and government organizations are exploring this approach by starting small: running focused, platform-based pilot projects that mirror how governments actually work. These pilots are typically limited in scope, time-bound, and led jointly by administrative and digital leadership.

Rather than committing to large-scale reform up front, ministries use pilots to experience a different way of working, test assumptions, and assess impact - often within weeks rather than years.

Leadership insight from Denmark

This realization was not theoretical. It emerged from lived experience at the highest administrative level.

As Lars Frelle-Petersen, Permanent Secretary at the Danish Ministry of Climate, Energy and Utilities, reflects on Denmark's digital journey:

"We spent years believing that every ministry was fundamentally different. In reality, we

discovered that public administration is 99 percent the same across organizations.

Once we accepted that, everything changed. Today, almost all Danish ministries work on the same digital platform. We work in the same way - and that allows us to implement faster, at lower cost, and improve continuously.

From my experience globally, public organizations operate very similarly.

The real question is: why wouldn't we adopt solutions built for that shared reality?"

This shift - from perceived uniqueness to shared administrative reality - became a turning point. It allowed Denmark to move away from fragmented systems and toward a common digital backbone built for government as such.

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From national experience to adoptable model

A striking aspect of this development is its adoptability. Solutions originally developed in one national context are now being adopted and used in very different institutional environments - demonstrating that the underlying logic of digital bureaucracy travels far beyond Denmark.

What once took Denmark decades to develop can now be adopted elsewhere in months.

The Danish experience suggests that the path to sustainable digitalization does not begin with technology procurement or large reform programs. It begins with a practical exploration of a digital backbone purpose-built for government - which is now available commercial off-the-shelf.

Because of the underlying support of the Digital Bureaucracy Model, the platform is applicable to governments in many countries. Whether it be with requirements such as e-Akte and OZG in Germany, Archiefregeling in The Netherlands, Digital Governance Code in Greece or the Real Decreto 203/2021 in Spain. Even European legislation such as the NIS2 and GDPR (DSGVO in Germany) are supported.

This makes it manageable to adopt the platform in other countries, even if the work of ministries on national, regional and local level is divided in different ways from country to country.

Exploring the Danish approach

The remaining question for ministries is not whether the model works - but whether they are ready to explore it.

For ministries interested in learning more about best practices from the Danish ministries, or discuss the approach, please reach out to the authors:

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