eBoks

Copenhagen Economics

The Case for a Universal Postal Digital Mailbox

A POLICY WHITE PAPER

Preface

The purpose of this study is to assess whether a universal digital mailbox can emerge as a shared infrastructure for essential digital communication, and what role postal operators and policymakers may play in its development. This is an important topic as digital communication increasingly replaces physical letters as the primary channel for official and legally significant interactions between citizens, businesses, and public authorities.

Despite this shift, digital communication systems remain fragmented across multiple platforms, including email, proprietary portals, and public sector inboxes. This raises the question of whether a universal digital mailbox can replicate the reliability and accessibility of the traditional postal system, and is therefore highly relevant for policymakers, regulators, postal operators, and large senders.

The purpose of this study is not to provide a technical blueprint for implementing a universal digital mailbox. Instead, the aim is to support readers in understanding the structural challenges and opportunities associated with digital communication systems. In particular, the study seeks to enable readers to:

- Understand the societal costs of fragmented digital communication and the potential benefits of a universal mailbox as a shared infrastructure.
- Assess the capabilities of postal operators to provide such a solution, based on their institutional position, infrastructure, and experience with secure communication.
- Evaluate the incentives of key stakeholders, including senders, postal operators, and policymakers, and how these incentives shape the likelihood of a universal system emerging.
- Consider broad policy options that can support the development of a more universal, trusted, and accessible digital communication infrastructure.

By bringing together evidence from interviews, case studies, and international experience, the study provides a framework for assessing when a universal digital mailbox is likely to develop and what role policy may play in supporting or shaping this outcome.

The study was conducted by Copenhagen Economics in collaboration with eBoks. All findings and conclusions are those of the authors.

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Introduction

Historically, the physical mailbox served as a universal access point for written communication. Postal services were treated as essential and governed by a universal service obligation. The designated provider had to collect and deliver mail to all households, including those in sparsely populated or commercially unattractive areas,[1] under minimum service standards.[2] This ensured that citizens, businesses, and public authorities could reliably send letters to any recognised address, with delivery to a single mailbox per recipient.

This 'one mailbox per address' model, embedded in a postal network governed by universal service obligations, created strong system-level benefits. It concentrated trust, predictability, and interoperability in a single infrastructure. Senders could assume delivery, and recipients knew where official and personal mail would arrive. The result was a standardised and widely trusted communication system available to all.[3]

Digital communication has since become the primary channel for official and legally significant interaction in many countries. However, it lacks the universal structure that governed physical mail. Instead of one recognised delivery point per recipient, digital communication now operates through parallel systems, including email, proprietary customer portals, and public-sector inboxes, each governed by different standards and frameworks. The system has shifted from a single, shared infrastructure to a fragmented model. Senders now determine the channel, format, and availability of communication, while recipients must navigate and monitor multiple platforms to access their messages.

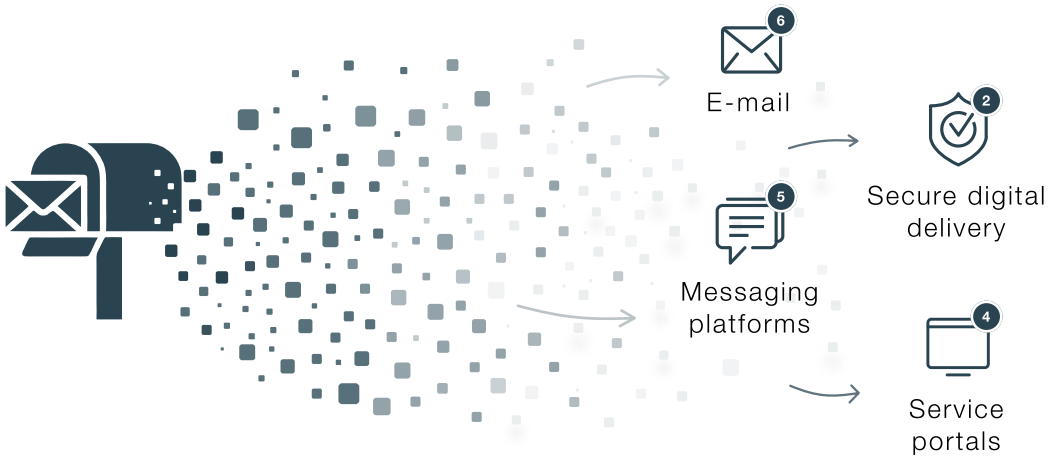
1 The 1992 Green Paper states the key social requirement for postal services to be the maintenance of the universal service and demands equality of treatment of users of universal services, see Commission of the European Communities (1992): Green Paper on the development of the single market for postal services, link.

2 For an overview of quality-of-service standards in Europe, see Copenhagen Economics (2022): Main developments in the postal sector (2017-2021), link.

3 For a deeper dive on the economic and social contribution of the postal infrastructure, see Borsenberger (2020): The Economic and Social Utility of the Postal Infrastructure, Above and Beyond Postal Items Delivery, link.

Figure 1.

From a universal mailbox to fragmented digital communication channels



This fragmentation is also driven by the absence of shared technical and operational standards. Platforms apply different approaches to identity, authentication and security, and messages are exchanged in formats that are often not interoperable. At the same time, legal frameworks differ across channels, as sector-specific and horizontal rules apply unevenly in an effort to protect citizens in their roles as users and consumers. This creates uncertainty around what qualifies as a “durable medium” for official communication, even though the concept is central: information must be delivered, capable of being stored, and remain accessible and unchanged over time. Email is often presented as a solution, but it does not verify the identity of the sender or recipient, cannot ensure delivery or receipt, and does not provide a controlled environment for long-term storage and data integrity. As a result, digital communication still falls short of the predictability, legal, certainty and trust that characterised the physical letter.

The market has not delivered a truly universal digital mailbox because few structural forces encourage consolidation around a single solution. Large senders often operate their own digital platforms, and adding communication functions requires limited additional investment while offering a cost-efficient channel. As a result, firms and public authorities tend to develop bespoke systems tailored to their operations, branding, or legacy infrastructure, rather than compete to establish a shared access point. Smaller senders, by contrast, may rely on external mailbox providers, either physical or digital, as they do not have the traffic to justify the investment to develope in-house communication platforms. Chapter 3 examines these incentive structures in more detail.

This pattern is reflected in our index of digital fragmentation, which provides a simple but informative comparison of how communication systems are structured across countries.

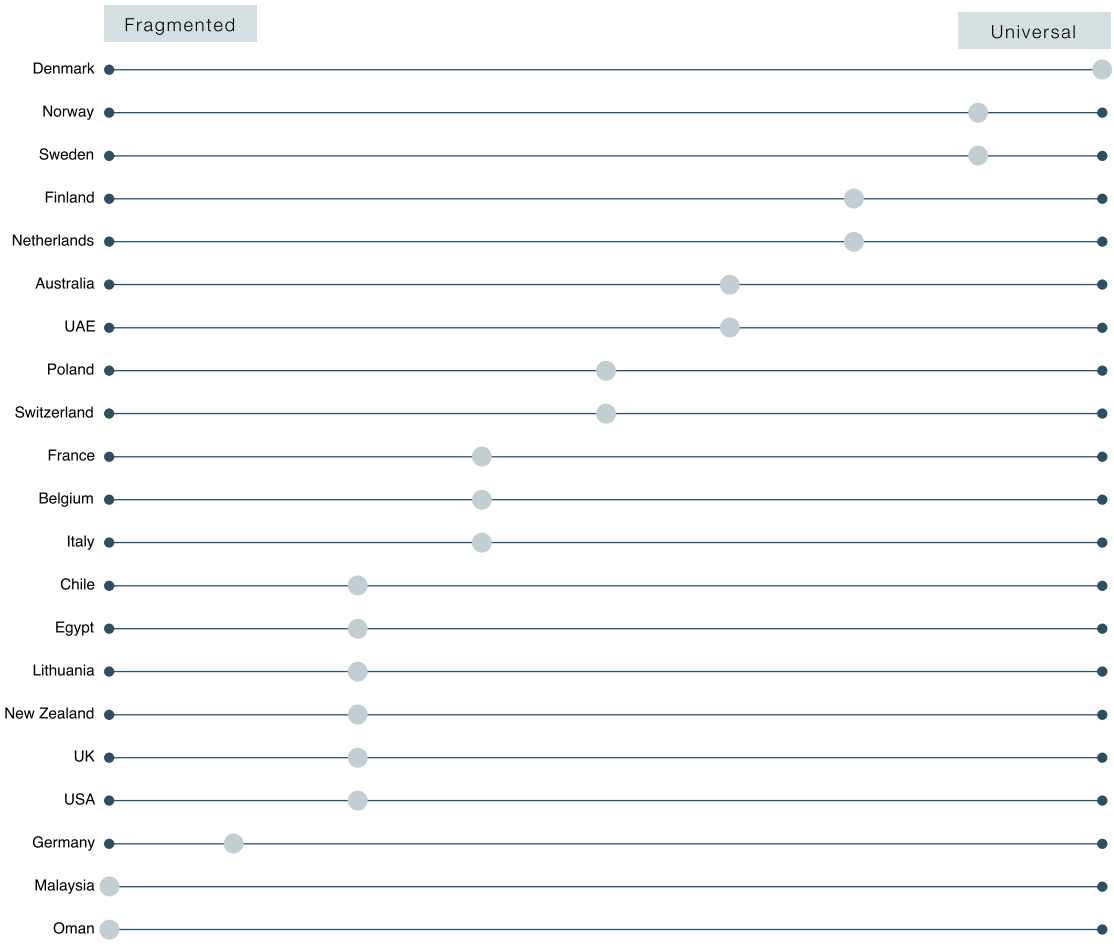
While it does not capture all dimensions of digital communication in detail, it offers a useful indication of the degree to which communication is concentrated or dispersed across channels, see Appendix A for details about the index. The index shows that no country has fully replicated the universality of the physical mailbox, see **Figure 2.**

While some countries have moved closer to a coordinated system with widely used digital mailboxes, fragmentation persists across all markets.

In most cases, users must still navigate multiple channels to receive important communication, as parallel systems continue to coexist. Even in countries such as Denmark, where a universal digital mailbox is established, fragmentation persists due to the continued use of parallel digital communication channels. The index therefore highlights that, despite different levels of digital maturity, the absence of a single, universal access point remains a common structural feature of digital communication systems.

Figure 2.

Fragmentation varies, but exists in all countries. Relative index



Note: The overall score is based on a ranking of three components. #number of channels ranking explained: Level 3: One universal mailbox. Level 2: Primary mailbox + alternatives. Level 1: Multiple competing channels. “Usage of the channel” based on the E-Government Development Index. “Electronic ID verification” based on an assessment of a combination of quantitative indicators and qualitative insights.

Source: See appendix 1.

The absence of a universal digital mailbox challenges the principle of equal and predictable access to official communication. When no default channel exists, responsibility for managing communication shifts increasingly to the individual recipient. As digital interaction becomes central to public and economic life, this structural fragmentation raises fundamental questions about accessibility, coordination, and the future design of digital governance.

Against this background, this paper examines whether digital communication could replicate the universality once provided by physical letter exchange, where every citizen has access to a single, trusted mailbox. We explore the potential role of national postal operators in ensuring that official digital communication remains both reliable and easily accessible. By analysing the incentives and capacities of public authorities, postal operators, and major senders, the paper offers policymakers a framework to assess when a universal digital mailbox system is likely to emerge and endure. It also examines what targeted interventions may be required to support its development.

This report draws on interviews with postal operators, policymakers, and large senders, backed by desk research on how digital mailboxes have evolved in different countries across Europe, MENA, North America, and Southeast Asia. It spans markets where official digital communication is still tentative and markets that went digital more than a decade ago. Together, these perspectives and case studies provide the basis for judging how postal operators and other players are likely to act towards a universal digital mailbox.

The paper is structured as follows. Section 2 assesses the need for a universal digital mailbox by contrasting the costs of fragmented systems with the benefits of a universal solution. Section 3 examines whether incumbent postal operators can provide such a mailbox, drawing on their existing capabilities and institutional position. Section 4 maps the incentives of postal operators, policymakers, and senders to develop and use it. Finally, Section 5 discusses the policy implications of our findings.

2

Do we need a universal mailbox for digital communication?

Without a universal mailbox, digital communication is fragmented, inconvenient, harder to trust, inefficient, and reduces digital uptake

This chapter examines whether societies should strive to move towards a universal mailbox for essential digital communication. It shows how scattered channels can shift effort and risk onto citizens, strain vulnerable users and blunt the gains from digital government and commerce. It then sets out how a universal mailbox, recognised in law and open to all, might restore a sense of universality to essential communication, while enabling faster, cheaper and more reliable exchanges. Finally, it considers the trade-offs: the risks of centralisation, the limits of digital-by-default, and the safeguards needed when one system becomes critical national infrastructure.

2.1 The cost of fragmentation

Fragmentation in digital communication channels can impose societal costs. When important information is dispersed across uncoordinated digital channels, the benefits of digitalisation weaken, and cohesive digital governance becomes harder to sustain.

First, fragmentation can weaken coordination by shifting responsibility from institutions (senders) to individuals (recipients). Without a shared default channel, recipients must monitor and reconcile messages across multiple inboxes and platforms. This often results in the same communication being delivered through several channels.[4]

This increases cognitive and administrative burdens, especially for individuals with limited digital skills or access. Research from the UK Government shows that a person managing a long-term condition or disability may interact with more than 40 separate services.[5] As a result, access to written communication becomes uneven, challenging the principle of universal and predictable delivery that characterised physical mail.

Second, fragmentation can create inefficiencies and raise societal costs by limiting interoperability.[6] Digital channels often operate as closed silos, relying on different authentication methods, interfaces, data formats, and notification practices, where it is only possible to communicate with one sender per platform.[7] These silos restrict interoperability and can raise privacy risks, particularly when sensitive communication depends on email notifications or inconsistent security standards.[8] Users must repeatedly adapt to new systems, while senders face parallel compliance and integration requirements across platforms.[9] These structural frictions increase administrative costs and reduce the efficiency gains digitalisation is expected to deliver.[10]

4 Interviews with senders indicate that when communication is delivered through a proprietary platform, they often also send notifications via email and SMS. In some cases, the same message is sent both digitally and physically.

5 UK Government (2025): State of digital government review, link.

6 Note that some large senders may benefit from operating in-house communication platforms, if they can absorb the fixed costs of establishing and maintaining such systems. For these actors, high volumes of communication may lower average costs, making proprietary solutions beneficial.

7 Commsroom (2025): Email remains dominant despite rise of digital workplace tools, link.

8 In response to such challenges, the European Interoperability Framework (EIF) was adopted as common EU-level guidance to promote interoperability in the public sector. See European Commission (2017): New European Interoperability Frame-work, link.

9 See World Bank (202): Digital public infrastructure and development, A world bank group approach, link.

10 See World Bank (2024): Interoperability: Towards a Data-Driven Public Sector, link, which identifies efficiency gains as a primary benefit of interoperable digital public services and notes that the lack of interoperability keeps administrative burdens and costs high, limiting expected efficiency improvements.

Third, fragmentation can undermine trust and reliability in digital communication. Multiple inboxes and notification systems contribute to message overload, increasing the risk that important communications are missed.[11] The absence of a single trusted access point also makes it harder to distinguish legitimate messages from fraudulent ones, raising exposure to phishing and impersonation. Recent statistics show that multi-channel phishing campaigns have success rates up to 85 per cent higher than single-vector attacks, illustrating how fragmentation amplifies security risks.[12] In such environments, overall security is determined by the weakest link, as one vulnerable platform can compromise the wider ecosystem. Over time, these dynamics weaken trust, slow adoption, and impose broader social costs as individuals and institutions invest more in verification and safeguards.

Fourth, fragmentation can create lock-in effects that increase switching costs. When communication is tied to proprietary portals, historical correspondence accumulates within each platform. This creates data-related switching costs, as users may lose convenient access to past communications if they change providers. Such costs reduce user mobility and weaken competitive pressure, while raising questions about data ownership and long-term control over personal and business records.[13]

2.2 Benefits of a universal digital mailbox

A universal digital mailbox can create value for both senders and recipients by providing a shared and reliable infrastructure for important communication. For senders, it reduces fragmentation, supports compliance, and simplifies delivery through a recognised channel. For recipients, it offers a predictable point of access that lowers uncertainty and cognitive burdens, and may improve accessibility for vulnerable groups. Legal recognition, common standards, and verifiable records strengthen clarity and accountability, while standardisation and embedded functionalities can support more streamlined and actionable digital interactions.

First, a universal mailbox can strengthen coordination in digital communication by establishing a shared default infrastructure. For senders, a common channel reduces the need to identify and adapt to multiple platform-specific solutions and lowers the risk of misdirected or undelivered messages. This can reduce duplication in communication systems and limit the need for parallel distribution strategies. At a system level, a shared infrastructure helps align expectations between actors and mitigates inefficiencies associated with fragmented digital environments.

11 Poppulo (2023): Hidden Costs of Email Overload & The Benefits of an Improved IC Strategy, link.

12 PhishDef (2025): Phishing Statistics: Current Trends and Data Analysis, link.

13 Squaring the Net (2024): Understanding Personal Data Ownership: Control and Privacy in the Digital Age, link.

Second, consumers may prefer a universal digital mailbox because it offers a trusted and predictable point of access for important communication. For recipients, knowing where official messages will appear can simplify everyday interaction and reduce uncertainty.[14][15] Unlike fragmented systems that require users to manage multiple accounts or interfaces, a universal mailbox can lower cognitive and practical burdens. By reducing dependence on digital literacy, platform familiarity, or financial resources, such a system may also help limit exclusion, particularly among older users and other vulnerable groups.[16]

Third, legal recognition and common standards can strengthen legitimacy and interoperability. This benefits both senders and recipients. When recognised in law, the mailbox becomes an authoritative and binding channel for important communication. Senders and recipients can rely on it as a valid means of delivery, reducing ambiguity around notice, receipt, and responsibility. Standardised rules for delivery, authentication, and retention support predictable outcomes across public and private actors, reduce sender uncertainty, and reinforce message legitimacy.

Box 1. Case examples where digital letters receive the same legal status as physical letters

Egypt[17]

Electronically registered letters sent through Egypt Post's designated e-delivery service have the same legal status and evidentiary value as physical registered mail with acknowledgement of receipt, as described in Article 57bis (c): *"The electronic registered mail service shall have the same level of trust as the registered mail service and shall ensure the integrity and accuracy of the data, verifying the identity of the sender and recipient, and providing legal proof of the date and time of sending and receiving data"*

The service is provided and governed exclusively by Egypt Post, which acts as the sole operator of the state-backed electronic registered delivery channel, as described in Article 57bis (b): *"The National Postal Authority shall exclusively provide, develop, and manage the electronic registered mail service in the Arab Republic of Egypt…"*

Poland[18]

The Act on Electronic Delivery grants public registered electronic delivery (PURDE) the same legal effects as a traditional registered letter, including proof of sending and receipt in communications with public authorities. Poczta Polska acts as the designated operator of the PURDE and public hybrid services, but private providers may offer qualified registered electronic delivery services.

Switzerland

Swiss legislation recognises "eGov registered mail" via approved delivery platforms, whose receipts can serve as proof of timely transmission in administrative and court proceedings.[19] The Federal Council has also decided to incorporate Swiss Post's digital letter service into the statutory universal service obligation, allowing customers to choose between physical and digital delivery within a regulated framework. Further regulatory steps are underway to clarify the legal status and implementation of the service.[20]

14 OECD (2020): One-Stop Shops for Citizens and Business, link.

15 A consumer survey in Denmark shows that 81% are satisfied with Digital Post (the official digital mailbox), citing that it is easy to use as one of the advantages. In addition, 82% find perceive Digital Post as safe and secure, link.

16 OCAD University (2025): Understanding the cognitive burden of digital interactions for users aged 60 and older, link.

17 Egypt, Ministerial Decision No. 250/2024. Shared with us by Egypt Post.

18 Based on conversations with the Polish regulator, and KG Legal (2023): New rules for e-delivery – Polish and EU provisions, link.

19 Federal Administrative Court: Electronic submission by parties, link. (Accessed 11/03/2026).

20 Swiss Post (2025): Swiss Post to deliver digital letters in future – further regulatory steps required, link.

Legal certainty is further strengthened by digital features that provide verifiable evidence of communication. This is an additional benefit to recipients. Proof of receipt, time-stamped delivery records, and audit trails reduce ambiguity around transmission and access and strengthen accountability.[21] Standardised authentication and official sender markers help users identify legitimate messages, supporting trust and limiting exposure to fraud.[22] Secure long-term storage in a lifelong digital archive enables structured, searchable, and compliant record-keeping within a regulated environment for individuals and organisations.

Fourth, a universal digital mailbox may generate operational efficiency gains by enabling greater standardisation and scale in digital communication. For senders, integrating with a single, widely adopted infrastructure can reduce the need to maintain multiple delivery solutions, bespoke interfaces, or parallel compliance systems. Recipients may benefit indirectly where communication processes become more streamlined, for example through faster processing of notifications or documentation. A common infrastructure can also facilitate automation of routine workflows. This allows communication to be more closely integrated into existing digital systems rather than handled as a separate administrative task.

Moreover, a digital mailbox enables action within the communication environment itself. Embedded features, such as integrated digital signing, payment options or direct response mechanisms, allow recipients to respond, complete transactions, or fulfil obligations without switching platforms. This benefits both senders and recipients. For example, Swiss Post's ePost app allows users to receive invoices in their digital mailbox and pay them directly within the app via a linked bank account.[23] This transforms the mailbox from a passive delivery endpoint into an active interaction interface.[24]

2.3 Risks associated with a universal digital mailbox

While a universal digital mailbox can generate structural benefits, it also entails important limitations and trade-offs. It may strengthen coordination and efficiency, but it can also create risks related to inclusion, competition, resilience, and cybersecurity.

First, reliance on a single universal provider may raise competition concerns as it would create a monopoly. A dominant access point for legally significant communication could increase market concentration and dampen innovation. It may also create barriers to entry for alternative providers or adjacent digital services if access conditions are restrictive or technically complex.[25]

21 DSwiss: Secure digital document dispatch – compliance meets efficiency, link. (Accessed 09/02/2026).

22 e-Boks: What is a Digital Postbox platform? Benefits and use cases, link. (Accessed 09/02/2026)

23 Swiss Post (2021): Swiss Post launches ePost App to give the public mobile access to their own letter box, link.

24 e-Boks (2024): Actions on document, link.

25 OECD (2021): Data Portability, Interoperability and Digital Platform Competition, link.

Second, a universal digital mailbox would become critical infrastructure, increasing the importance of resilience. As public and private actors rely on a single channel for essential communication, its systemic importance rises. This creates single-point-of-failure risks and raises questions about oversight, operational resilience, and crisis management.

Third, concentrating sensitive communication in a single system heightens data protection and cybersecurity risks. A universal mailbox would aggregate large volumes of legally and commercially sensitive information, increasing its attractiveness as a cyber-target.[26]

In sum, a universal digital mailbox's overall value depends on how it is designed and governed. Many of the identified risks can be mitigated through appropriate regulatory and policy measures. Chapter 4 assesses these policy recommendations.

Finally, we note that a universal digital mailbox is unlikely to eliminate the need for physical mail. Some legal or operational contexts may still require physical delivery.[27] Also, not all citizens can or will rely exclusively on digital communication due to age, disability, limited digital skills, or lack of secure digital identity. Evidence from 17 European countries shows that 51 per cent of people aged 50 and older do not use the internet, underscoring the continued relevance of non-digital channels for a substantial share of the population.[28] However, a single universal digital mailbox could increase the digital adoption rate. In Denmark, the share of residents formally exempt from Digital Post fell from around 10 per cent in 2015,[29] where digital communication became the default channel, to 4.9 per cent by the end of 2024.[30] As a result, public authorities and private actors would likely need to maintain parallel physical channels, limiting cost savings and structural simplification.

26 Cremer et al. (2022): Cyber risk and cybersecurity: a systematic review of data availability, link.

27 For example, in Sweden certain judicial documents, including writs of summons in civil cases, must be formally served. The most common method is service by post with a signed receipt, while electronic service is permitted only where it is considered appropriate under the applicable legal standard. See e-justice: Service of documents: official transmission of legal documents: Sweden, link. (Accessed 25/02/2026).

28 König et al. (2018): Internet use among older Europeans: an analysis based on SHARE data, link.

29 The Copenhagen Post (2015): Quarter of a million people ignoring their digital post, link.

30 Digitaliserings-styrelsen: Statistik om Digital Post, link. (Accessed 19/02/2026)

2

Key takeaways

Fragmentation increases costs, complexity, and risk across the system

When communication is spread across disconnected platforms, it shifts the burden to users, reduces interoperability, raises administrative costs, and weakens trust, which makes digital communication less efficient, less secure, and less reliable.

A universal mailbox creates a shared, trusted, and efficient communication infrastructure

A single recognised access point improves coordination, reduces complexity, strengthens legal certainty and trust, and enables more efficient, secure, and actionable digital interactions for both senders and recipients.

A universal mailbox introduces centralisation risks that require strong governance

While improving coordination, a single system can create risks related to market concentration, system resilience, cybersecurity, and digital exclusion, making careful design, regulation, and parallel access channels essential.

3

Postal operators have comparative advantages to provide a universal digital mailbox

Grounded in public trust, institutional position, and nationwide presence

Postal operators have a distinctive combination of capabilities that makes them well placed to provide a universal digital mailbox. Interviews with operators show that trust and brand legitimacy, strong relationships with large senders, existing digital infrastructure, experience with sensitive communication, nationwide service networks, and regulatory anchoring together give them a robust institutional base for operating universal digital communication services.

In the rest of this section, we explain how each of these capabilities can be used in practice.

3.1 Trust and brand legitimacy

Trust is a core asset for postal operators and a major advantage in providing a universal digital mailbox. It stems from three channels:

First, trust is anchored in the national postal operators' **close link to the state**. Historically, the national postal operator was a government body and, therefore, perceived as a public authority. While the liberalisation of the postal market has implied that many national postal operators are now private companies, in some countries, the majority state ownership further reinforces this credibility. When a postal operator is publicly owned or closely linked to the state, citizens and companies may be more willing to trust it with sensitive data and critical communications than a purely private provider.

Second, national postal operator's trust is enhanced from a **longstanding mandate to handle official and sensitive communications**. For decades, postal operators have delivered government notices, voting bulletins, court documents, tax letters, socialsecurity correspondence, and other highstakes material. Senders and recipients, therefore, expect postal delivery to be reliable, timely, and backed by clear legal safeguards.

Third, over time, the national postal operator's role has created **strong brand recognition and institutional legitimacy**. The postal brand is familiar across almost the entire population, including people who rarely use newer digital platforms. The post is often viewed as part of basic civic infrastructure, which makes it a natural candidate to host a universal digital mailbox.

High trust **strengthens the legitimacy of the universal digital mailbox** provided by the national postal operator. Trust lowers the psychological and behavioural barriers associated with shifting important communications from physical to digital formats. When users recognise the provider as a familiar and credible institution, they are more confident that messages will be handled securely, delivered reliably, and managed in their interest. As a result, citizens and businesses are more likely to accept digital delivery of documents by a universal digital mailbox provider that is a well-known and trusted brand.

3.2 Relationships with large sender

Relationships with large institutional senders are a second major asset for postal operators. Governments, courts, banks, utilities, and other big organisations have long relied on the post to reach citizens at scale, making the national postal network the default channel for many types of official and transactional communication. This translates into two key benefits that position postal operators as the provider of a universal digital mailbox:

First, long-standing ties with large senders give postal operators a **close view of their operational needs**, legal obligations, and communication patterns. They know what senders expect in terms of reliability, delivery times, proof of receipt, and data protection. That knowledge is directly useful when designing and running digital communication services that must meet the same requirements as physical mail.

Second, these relationships **lower switching costs from physical to digital** and allow rapid onboarding of senders. Existing contracts, billing arrangements, and technical interfaces for letter delivery can often be extended to cover digital services rather than built from scratch. This helps postal operators bring a critical mass of senders onto a digital mailbox quickly, making the service more attractive for recipients and strengthening network effects. As one operator said, *"We've been there long … part of our offering to sending customers … we can help them with the digitalisation … directing messaging to all possible digital channels or then we can print it and deliver it physically"*

The lower switching cost is further reinforced by the way **hybrid mail already embeds postal operators in many senders' digital workflows**. In many countries, large senders no longer hand over stacks of printed letters but send their communications digitally to the operator or a partner print house, which then prints, envelopes, and injects the letters into the physical mail network. Thus, the message exists in digital form long before it lands on the doormat. Because the operator already receives and processes these messages digitally, the shift from hybrid mail to fully digital delivery is small. Instead of printing and transporting the document, the same content is routed straight to a digital mailbox, which cuts implementation complexity for senders and allows postal operators to scale digital delivery on top of existing workflows and interfaces.

In Switzerland, this pattern is evident in the development of Swiss Post's systems and product range. Large companies and government senders were already able to submit their mail digitally via external providers or their partners, with Swiss Post subsequently collecting the items from these providers and delivering them physically. With the further development into the digital area, companies can now submit mailings directly to Swiss Post from their ERP systems via an API interface or another user interface. Swiss Post determines whether the mailing can be delivered physically or digitally. If the mailing is delivered digitally, the contents are encrypted and delivered to a certified digital mailbox of Swiss Post. If the recipient cannot be reached digitally, Swiss Post and its partners print out the item and then deliver it physically. Thanks to this technical continuity, a provided API interface or a user interface, senders incur only very low conversion costs and were able to switch to digital delivery with minimal operational changes.

3.3 Existing digital infrastructure

Existing digital infrastructure is a third asset. We find that many postal operators possess two key existing digital infrastructure assets that lower entry barriers and support scale for them in digital communications.

First, **established apps and online interfaces reduce customer acquisition costs** for a universal digital mailbox. Many postal operators already maintain widely used digital channels, such as mobile apps and online customer portals, which citizens use for services like parcel tracking, delivery management, and change-of-address requests. Because these platforms already have large user bases, a digital mailbox can be integrated into existing interfaces rather than launched as a completely new service. This lowers the cost of reaching and onboarding users, as citizens can access the mailbox through digital channels they already know and use.

Second, **authentication systems and secure-messaging tools** developed for digital postal services. In some countries, postal operators manage e-identity or national e-delivery schemes. These systems are often used to verify users, manage access to personal accounts, and send secure notifications related to parcel deliveries or other postal services.

Such capabilities can form part of the technical backbone of a universal digital mailbox, ensuring that users can log in securely, receive notifications when new documents arrive, and access sensitive communications in a protected digital environment.

By building on these existing security and messaging capabilities, postal operators can deploy digital mailbox services more efficiently while maintaining high standards of data protection and reliability.

Some postal operators may not yet have all of this digital infrastructure in-house, but they can acquire it rather than build it slowly from scratch. By buying established platforms, technology providers, or specialist subsidiaries, they can plug in readymade capabilities and user bases. This route allows them to scale a digital mailbox more quickly than relying solely on organic development of new systems and channels.

Box 2. e-Boks expands capabilities through acquisition and existing user base

Rather than developing all capabilities in-house, e-Boks in Denmark has strengthened its digital infrastructure through acquisition, most notably by integrating DEWA's digital identity and authentication capabilities. This has enabled e-Boks to expand beyond secure messaging into identity and trust services, with wallet functionality emerging as a natural extension. The development takes place within the broader context of the European eIDAS framework, which governs electronic identification and trust services across the EU.

By combining these capabilities with an already established and trusted user base of more than 5 million Danes, e-Boks was able to roll out a digital identity proposition within a matter of weeks. New services can be deployed directly within a familiar environment of existing users, interfaces, and trusted interactions, reducing friction in uptake and accelerating scale.

This case illustrates how postal operators with an existing digital user base can leverage this foundation to accelerate the rollout of a digital mailbox and adjacent services. Whether capabilities are developed in-house or acquired, building on established platforms, interfaces, and trusted user relationships can significantly reduce time to market and support rapid scaling of new digital services.

Swiss Post illustrates how operators can buy, rather than build, digital capabilities. In recent years it has acquired several digital and software firms to strengthen secure communication, data exchange, and cybersecurity services for business and public sector clients. By adding readymade platforms and user bases through acquisitions instead of developing everything in-house, Swiss Post managed to scale its digital services more quickly and support new offerings such as digital letter delivery.

Oman Post illustrates a different, but similar approach, to how postal operators can partner, rather than build digital capabilities to accelerate development. As part of its ambition to establish a national digital communication capability, Oman Post has partnered with e-Boks to lay the technological and operational foundations for a digital mailbox. The collaboration is not only focused on deploying new technology, but also on transferring knowledge related to operating models, governance, and long-term sustainability. By leveraging e-Boks' existing platform and experience, Oman Post can move forward more efficiently while retaining full responsibility for the service and its role within the national digital ecosystem.

3.4 Experience with sensitive communication

Experience with sensitive and official communication is a fourth asset. Postal operators have organisational capabilities, procedures, and compliance cultures built around strict confidentiality, standardised workflows, and robust documentation of delivery events.

This stems from physical mail operation processes for proof of delivery, identity checks, and traceability, designed to provide legal certainty and protect both senders and recipients. This capability can be used in the development of a universal digital mailbox in two ways.

First, it can underpin **legally valid electronic delivery**, secure archiving of messages, and robust audit trails. Postal operators can design the mailbox to mirror the reliability and evidential value of registered mail, giving courts, regulators, and other authorities confidence that digital communications sent via the mailbox can carry the same weight as physical letters.

Second, it supports that postal operators are widely perceived as a neutral and service-oriented institution, which may make **citizens more willing to accept the digital mailbox** as a default or standard way of receiving official communications. This perception helps establish the system as part of the country's basic communication infrastructure rather than just another digital platform.

3.5 Nationwide service network

Postal operators' nationwide networks give them **a physical presence that few other communication providers can match**. Post offices and delivery routes cover almost all communities, including rural and sparsely populated areas that are less attractive to purely commercial operators. In many countries, the local post office is a basic point of contact with public services and markets, especially for people with limited access to private transport or high-speed internet. Staff in branches and delivery staff know local communities and are used to handling practical issues, explaining procedures, and helping people complete administrative tasks. In some countries, post offices already offer identity verification, basic financial services, and assisted access to government services, reinforcing their role as local service hubs rather than simple mail counters.

The same nationwide network can make a digital mailbox universal in three ways:

First, post offices and delivery **staff can handle in-person onboarding:** helping citizens and small firms set up accounts, verify their identity, and learn how to use their mailbox. This is particularly important for people who lack skills, means, or trust in adopting digital services.

Second, nationwide physical coverage also helps **bridge the gap between digital and nondigital users**. Postal operators can combine digital delivery with options to receive physical copies, and provide a clear escalation path when users cannot solve problems online.

Third, the network allows **hybrid solutions that reach digitally inactive households**, for example by pairing a digital mailbox with printed summaries, notifications, or full physical copies, so important messages still reach all recipients while gradually encouraging more people to engage with the digital mailbox over time.

3.6 Regulatory anchoring

Regulatory anchoring is a final asset that sets postal operators apart from most digital platforms. Universal service obligations and sector rules set minimum standards for coverage, quality, pricing, and consumer protection, and postal operators are accustomed to operating under this framework and to answering to regulators and governments.

USO rules for physical letters give both regulators and postal operators a ready-made model for regulating digital letters. Policymakers can take concepts they already use for the physical network and apply them to a digital mailbox, for example rules on continuity of service, fair access for senders, interoperability, and protection of vulnerable users. Postal operators are used to working under this type of supervision, so they are well placed to meet similar digital obligations. This regulatory anchoring helps ensure the mailbox is run in the public interest, not just for profit. It also gives governments a clear governance and accountability framework when they assign postal operators a central role in national digital communication infrastructure.

[4]

Postal organisations are, by design, compliant and auditable entities, with governance frameworks that ensure transparency, accountability, and regulatory alignment.

Petros Galides, Deputy Commissioner for Communications, Cyprus

3

Key takeaways

Postal operators have a strong trust and institutional position

Their historical role, public trust, and regulatory anchoring make them credible providers of secure and legally significant communication, supporting the legitimacy of a universal digital mailbox.

They can leverage existing assets to scale a digital solution

Established relationships with large senders, existing digital infrastructure, and experience with secure communication reduce entry barriers and enable efficient and scalable rollout.

Their nationwide presence supports universal access and inclusion

Physical networks and service capabilities enable onboarding, support, and hybrid solutions, helping ensure accessibility for all users, including those with limited digital access or skills.

4

Commercial incentives for market participants to develop a truly universal digital mailbox are ambiguous

This helps explain why a truly universal digital mailbox has not emerged on the market terms

In this section, we assess whether the incentives of market participants are aligned with the universal digital mailbox. From the recipient's perspective, incentives are generally favourable and align with the rationale for a ubiquitous digital mailbox outlined in Chapter 2. A universal access point provides a predictable place to receive important communications, reducing uncertainty and cognitive burdens and potentially improving accessibility for vulnerable groups.

By contrast, our interviews reveal economic and strategic incentives for postal operators, policymakers, and senders to develop proprietary – and therefore fragmented – digital communication solutions. This helps explain why a truly universal digital mailbox has not emerged on market terms. It also provides insights for policymakers seeking to replicate in the digital sphere the universality that has historically characterised physical communication channels, see the next chapter.

4.1 Incentives of senders

Senders have strong incentives to digitalise communication, but more ambiguous incentives when choosing between a proprietary channel and an external mailbox. Based on our interviews with senders and postal operators, we find five main incentives that impact the decision between using external mailboxes and in-house proprietary channels.

First, senders' cost savings related to the price of digital letters between in-house and external mailboxes are ambiguous.

Moving from physical to digital channels significantly reduces per-item distribution costs. However, the savings between in-house portals and external digital mailbox providers depend on the scale of the senders. For large senders, in-house solutions can potentially deliver even greater savings when volumes justify the required CAPEX and OPEX. For example, PFA, a large Danish pension provider, has moved all communication to its proprietary platform, My PFA.[31] Smaller senders, however, may find proprietary systems too costly to build and maintain, making external solutions more attractive.

Second, senders can have incentives to use an external digital mailbox rather than their own channels to ensure that their mail is read by the recipient. When senders rely on proprietary apps or platforms, they depend on customers actively logging in and checking messages. In a fragmented digital landscape, many recipients will not monitor every separate channel, so important messages risk going unread. When recipients do not open or act on digital messages, senders may incur additional costs from repeated notifications, parallel communication channels (e.g. SMS or physical letters), and increased customer support enquiries. These costs can exceed the per-message cost of sending a digital letter via a third party.

To avoid this, senders are drawn to an external mailbox that users already trust and that functions as a widely recognised access point.

31 PFA: Everyday administration, link. (Accessed 02/03/2026).

In some cases, external channels achieve higher opening rates than in-house systems, suggesting stronger engagement in certain contexts. On the other hand, if large senders have a strong customer platform with active users, they are less dependent on using an external universal mailbox to make sure that their customers are reading their mail.

Third, the choice between proprietary and external mailboxes depends on whether external providers can offer comparable capabilities to strengthen customer engagement. Unlike physical mail, digital mail enables interactive communication and ongoing engagement, which is a key benefit for senders. Some external mailboxes and proprietary portals embed functions such as direct payments, subscription changes, and messaging. For example, Swiss Post has made it possible for recipients to pay invoices/bills directly within the digital box.[32] This not only increases the likelihood that invoices are being paid on time but also reduces the need for senders to send follow-up physical mail with reminders. If external providers cannot offer comparable functionality, senders have stronger incentives to rely on their own portals.

Fourth, transparency over recipient engagement may incentivise senders to develop in-house channels. Digital channels allow senders to observe whether messages are opened. This reduces uncertainty about delivery and attention, and improves follow-up where messages remain unread. However, data ownership of digital mail can create incentives for senders to develop proprietary channels instead of relying on external providers.

These channels allow senders to collect and control detailed interaction data, such as response times and payment patterns. Firms can integrate this data into CRM systems to improve risk assessment, targeting, and customer management. If senders use external providers of digital communication, they may lose these options. This can create a barrier for the development of a universal digital mailbox that senders are using.

Fifth, security and compliance concerns create mixed incentives between in-house and external digital communication systems. Well-designed digital channels can offer secure login, encryption and proof of delivery, cutting legal and operational risks compared with paper post. Building such systems in-house is costly and complex. Senders must fund secure infrastructure, manage digital identities, maintain encryption and monitoring, and keep up with changing rules on data protection and cybersecurity. Using an external provider can therefore be more efficient.

A universal digital mailbox spreads the fixed costs of security and compliance across many users and transactions. By offering standard safeguards, certified procedures and proven identity checks, the platform can deliver high security at a lower average cost for each sender. This lets organisations rely on a trusted, compliant channel for sensitive messages without having to develop and run their own security-heavy systems.

32 Swiss Post (2021): Swiss Post launches ePost App to give the public mobile access to their own letter box, link.

However, large senders may still prefer to keep digital communication in-house. Proprietary systems give them more control over authentication, data governance and system design, and reduce reliance on external providers. When security and compliance are strategically important, this strengthens the case for internalising digital communication. Direct control can limit operational and reputational risks, especially in sectors that handle sensitive financial or personal data.

Two recent examples from Denmark highlight how attributes such as security and broad user reach influence large senders' decisions to use e-Boks for digital communication.

Andel Energi (energy utility company) illustrates how security and trust considerations can drive senders to use an external digital mailbox. The Danish energy company shifted from primarily email-based communication to an external, widely used digital mailbox to improve both security and reach. The decision was driven by the need to provide customers with a trusted and recognisable channel in a context of increasing phishing and digital fraud risks. As CEO Marlene Holmgaard Fris explains, *"We have chosen e-Boks because security and data protection must come first"*, emphasising that customers must be able to trust the authenticity of messages. At the same time, using e-Boks allows Andel Energi to reach customers where they already receive important digital post, supporting higher engagement and ensuring that critical information is seen and acted upon.[33]

AP Pension (pension company) illustrates how user engagement and high opening rates can motivate senders to rely on an external digital mailbox. As part of a broader shift towards digital and paperless communication, the company expanded its use of e-Boks to complement its own channels. A key driver is customer behaviour: recipients prefer receiving and managing communication in one place, rather than across multiple platforms. As noted by AP Pension, *"there is a strong desire among our customers to receive communications digitally and to be able to manage everything in one place"*.[34]

4.2 Incentives of postal operators

Postal operators face mixed incentives when deciding whether to offer a digital mailbox, which helps explain the wide variation in the development of digital communication systems across countries, as described in the introduction. Based on our interviews with postal operators, we find five key incentives influencing their decision to invest in digital communication.

First, investing in a universal digital mailbox presents a mixed business case. On the one hand, digital letters cannibalise revenues from physical mail, as their price is often only a low fraction of the price of a physical letter.[35] This shrinks the short-term revenue base and weakens incentives to invest in digital communication systems.

33 See Andel Energi vælger e-Boks til vigtig kundeinformation til over 1 mio. kunder, Link.

34 See Flere pensionsselskaber går mod papirløs kommunikation, Link

35 Based on our interviews with postal operators and senders, the price of a digital letter is often less than ten per cent of the price of a physical letter.

On the other hand, digital delivery cuts operating costs sharply, because physical delivery is costly and becomes more expensive as volumes fall. As a result, profit margins on digital letters can exceed those on physical letters, so a shift to digital can still improve the bottom line even if revenues decline.

Further, the short-term business case also depends on current letter volumes. Universal service providers with high letter volumes per capita have weaker incentives to move from physical to digital delivery, as the economies of scale drive down unit delivery costs. In the longer term, however, digitalisation is likely to keep pushing down physical letter volumes and revenues, regardless of whether postal operators develop a digital mailbox themselves. This means that operators will lose scale and thereby face higher delivery costs, which can increase the business case for digital letters.

Second, competition in the letter and communication markets pushes postal operators to invest in digital communication. Most of our interviewed operators now treat digitisation as inevitable because senders want cheaper, faster and more convenient digital channels. Incumbent postal operators that fail to build credible digital systems risk losing key clients to rivals that do invest, or to new digital-only entrants. Large mailers add further pressure by using their own IT platforms to move communications from paper to digital.

As a result, postal operators have strong incentives to invest in digital communication if they want to remain relevant, or they risk being outcompeted by other players that do so. As one operator indicated, it is better to retain 8 digital letters out of 10 physical letters than to lose all 10 physical letters to competitors.

Third, competition in the parcel markets creates mixed incentives for postal operators to develop digital communication channels. Being the provider of secure digital communication can strengthen a postal operator's brand in the parcel market. When customers already trust an operator to handle sensitive digital information, such as official correspondence or secure mailboxes, they are more likely to view it as a safe pair of hands for e-commerce deliveries too. This reputational edge can help the operator stand out and defend margin in a crowded parcel market.

Digital services can also create practical synergies with parcel operations. Electronic identification can support identity or age checks at the door for specific products. Digital mailboxes can store receipts and warranties, remind customers when coverage is about to expire, and keep records in one place. Over time, combining delivery data with stored digital records can support data-driven, AI-enabled services that help shoppers track purchases, resolve problems, and manage returns more easily.

However, strong competition in parcels can also pull investment away from digital communication. Faced with tight margins and aggressive rivals, operators may give priority to expanding parcel capacity and services, and delay spending on new digital systems. For example, an operator might choose to fund new parcel sorting machines and extra delivery routes rather than invest in secure digital mailboxes or identity services.

Fourth, network effects create coordination risks that may slow investment. A digital mailbox is a two-sided platform: its value depends on uptake by both senders and recipients. As more users and institutions join, the platform becomes more valuable as it increases the digital letter volumes. However, reaching critical mass requires both sides to adopt at the same time. This creates demand uncertainty for operators considering entry. If the market is not yet mature, and users are not ready or willing to rely on digital communication, early investment carries significant risk. However, Postal operators can use their institutional assets, above all their installed base of senders and recipients, to coordinate adoption on both sides of the market and reach critical mass faster, which in turn lowers the commercial risk of early deployment.

Moreover, network effects also imply that there can be a potential first-mover advantage in developing a digital mailbox. This can create an incentive for developing digital communication systems even before the market is mature.

An example is Posti, which already started developing digital communication systems back in 2001 as Netposti, which functioned as a free electronic mail.[36] However, if all providers of digital communication systems gained a first-mover advantage and secured a large installed base, it could reduce the incentives for postal operators to develop their own digital communication system.

Fifth, postal operators also have stronger commercial reasons than in-house government platforms to sign up as many senders as possible. With sales teams and account managers already in place, they are set up to promote digital mailboxes to big public and private senders and to grow volumes over time, rather than treating digital post as a mere compliance tool. Purely government-run channels rarely have an equivalent function tasked with “selling” the service to private users, which makes it harder to reach the scale needed for a universal mailbox.

4.3 Incentives of policymakers

Policymakers play a central role in shaping the development of digital communication systems. Public authorities are among the largest senders of important communications to citizens, including tax notifications, healthcare information, benefits decisions, and regulatory correspondence. Given the scale and importance of these messages, government choices about digital communication infrastructure strongly influence which channels become widely used.

36 Posti (2019): The highly popular OmaPosti replaces Netposti in June, link.

At the same time, policymakers must safeguard broader public interests, including accessibility, reliability, and fairness. Their decisions, therefore, play a key role in determining whether digital communication evolves towards a coordinated system or a fragmented landscape of channels.

Across Europe, governments increasingly prioritise the digitalisation of their services. The EU's Digital Decade framework identifies the digitalisation of public services as a core objective and targets 100 per cent online availability of key public services by 2030.[37] Several countries have adopted explicit "digital-by-default" strategies. Denmark is one of the most prominent examples,[38] but similar approaches are visible in countries such as Norway[39] and the United Kingdom.[40] Outside the Nordic and the UK, countries such as Chile[41] and Estonia[42] have pursued similarly ambitious "digital-by-default" agendas, with long-term whole-of-government strategies that aim to make virtually all key public services available online.

Digital communication sits at the heart of digital government because it is the infrastructure that makes fully online public services possible.[43] It is the primary channel through which citizens, businesses, and public authorities exchange information, documents, and formal decisions in a secure and timely way.

By using digital communication, governments can send notifications, receive submissions, and keep verifiable records of every interaction with citizens.

However, without coordination, public institutions may develop their own communication systems. Individual bodies such as tax authorities, healthcare systems, municipalities, or social security agencies seek to improve efficiency, reduce administrative costs, and communicate more quickly with citizens. If no common platform exists, each institution may establish its own portal or messaging system. These solutions also provide greater control and flexibility to tailor communication tools to specific institutional needs.

Public institutions often face incentives similar to those of commercial senders, which can lead them to develop their own digital communication channels. Individual public bodies such as tax authorities, healthcare systems, municipalities, or social security agencies seek to improve efficiency, reduce administrative costs, and communicate more quickly with citizens. If there is no common platform for this, each public institution may create its own portal. Moreover, own portals also provide each public institution with greater control and customisation to tailor their digital communication systems more closely to their specific need.

37 Interoperable Europe (2024): 2024 Digital Public Administration Factsheet, link.

38 Agency for Digital Government: The Danish Digital Journey, link. (Accessed 09/03/2026)

39 Norway had a 'One Digital Public Sector' strategy from 2019-2025 which had the aim of creating a coordinated, user-centric digital public sector. This has now been replaced by a new, broader, 'National Digitalisation Strategy 2024-2030', see European Commission (2025): Digital Public Administration Factsheet 2025 – Norway, link.

40 UK Government Digital Service (2026): Our roadmap for modern digital government, link.

41 See, Chile Digital 2035 Strategy, Link

42 See, e-Estonia, Link

43 The OECD's review of Norway's public-sector digital transformation highlights national 'joint solutions' such as secure digital messaging as part of the core digital public infrastructure underpinning seamless digital services across channels. See OECD (2024): The Digital Transformation of Norway's Public Sector, link.

The result can be a fragmented landscape of digital communication channels across the public sector. Citizens and businesses must navigate multiple platforms and interfaces to receive messages from different authorities, which increases complexity and reduces the effectiveness of digital communication.

Central government leadership can mitigate this fragmentation by coordinating communication systems across institutions. Our interviews with postal operators and policymakers, together with a review of national digitalisation strategies, suggest that policymakers have two main incentives to establish a centralised communication solution.

First, a centralised system reduces duplication across agencies. Without coordination, multiple public institutions may invest in parallel communication infrastructures, increasing costs and reducing efficiency. One of the key pillars behind Denmark's early digital government strategy was therefore to establish a common infrastructure that could be used across the public sector.[44]

Second, a centralised system simplifies the customer journey for citizens and businesses by providing a single, widely recognised channel for official communication. As governments represent the interests of users, they have an incentive to design public services that are simple and easy to navigate.

A common digital mailbox reduces the friction of navigating multiple systems by offering a single access point for official correspondence across government.This makes interaction with public authorities more intuitive and user-friendly and supports the broader digitalisation of government services.

Despite these incentives, policymakers may refrain from actively centralising digital communication. Two main barriers can limit such efforts.

First, digital communication reforms can be politically sensitive. In many countries, physical letters remain a trusted communication channel, particularly among older citizens. Policies that shift official communication towards digital channels may therefore be perceived as excluding individuals who struggle with digital services. Concerns about digital exclusion, accessibility, and the continued availability of non-digital alternatives can make governments cautious about introducing strong digital mandates, which may allow fragmented solutions to persist.

Second, reliance on a single provider for a critical communication channel may raise competition concerns related to vendor lock-in and reduced market innovation, as discussed in Section 2.3. However, these concerns can be mitigated through appropriate regulatory frameworks. Two examples illustrate how governments have addressed this issue.

44 Digital Forvaltning (2002): På vej mod digital forvaltning, link.

In Denmark, ensuring competition in digital communication has been a key consideration in the development of a digital infrastructure: *"…deliver a simple communication solution for all of Denmark, whilst securing market competition"*.[45]

While Digital Post initially relied on a single commercial platform (e-Boks), the system has gradually evolved towards a more plural architecture. Several developers and service providers are designated, and services are regularly tendered to ensure competition and value for public funds.[46] The recent 'new Digital Post' reform also introduced multiple access points, allowing public-sector messages to be delivered across platforms.[47] This reduces dependence on a single provider while strengthening resilience and user choice.

In Poland, the governance model for electronic letters aims to keep core public communication secure while allowing competition in the wider market. The state maintains a central database of digital mailboxes, the Baza Adresów Elektronicznych (BAE – Electronic Address Database), managed by the minister responsible for digitalisation, who assigns e-Delivery addresses and links them to specific inboxes. Users (companies, authorities, citizens) can then send registered electronic letters via two types of providers:[48]

- A public provider, Poczta Polska S.A., which is designated as the sole operator of the Public Registered Electronic Delivery service for communication with public entities, and the Public Hybrid Service which combines electronic and paper communication for recipients without an electronic delivery address.[49]
- Several Qualified Service Providers that offer qualified registered electronic delivery under eIDAS for digital communication between companies, individuals, and authorities, a market segment where Poczta Polska also competes.

This model centralises critical state communication in one trusted operator, while leaving room for competition in the broader market for electronic delivery services. Moreover, the system avoids fragmentation of addresses (one unique ADE per entity), but the mailbox environment is not physically in one place: it sits on the infrastructure of whichever provider currently serves that address.

45 Agency for Digital Government: Digital Post, link. (Accessed 09/03/2026).

46 Agency for Digital Government: Suppliers of Digital Post, link. (Accessed 09/03/2026).

47 Danish Agency for Digital Government (2023): Digital Post – Secure digital mail for businesses in Denmark, link.

48 ITwiz, e-Delivery – a practical guide, link

49 PURDE and the Public Hybrid Service (PUH) must be provided by the designated operator, which is Poczta Polska S.A., appointed under postal law, but their scope and standards come from the Act on Electronic Deliveries and the government "Standard publicznej usługi rejestrowanego doręczenia elektronicznego.", Link

4

Key takeaways

Senders face ambiguous incentives between proprietary channels and shared mailboxes

While external mailboxes can improve reach, trust, and efficiency, senders can prefer in-house solutions to retain control over costs, data, and customer engagement, limiting the shift towards a universal system.

Postal operators face mixed incentives between protecting existing revenues and investing in digital transition

While digital mailboxes can offer long-term efficiency gains and be seen as necessary to remain competitive, short-term revenue trade-offs, investment uncertainty, and coordination challenges can slow their development.

Policymakers can enable coordination but face trade-offs that may sustain fragmentation

While governments have strong incentives to centralise digital communication to improve efficiency and user experience, concerns around inclusion, competition, and political feasibility can limit intervention and allow fragmented systems to persist.

5

Policy options

The development of a universal digital mailbox will depend on whether policy frameworks and market incentives can align towards the same goal

In this study, we examined whether digital communication could replicate the universality once provided by physical letter exchange, where every citizen has access to a single, trusted mailbox. The analysis highlights that fragmented digital communication systems can impose coordination burdens on individuals, weaken interoperability, and undermine trust in important messages. A universal digital mailbox could address these challenges by establishing a recognised and trusted access point that improves accessibility, efficiency, and security for both senders and recipients.

However, the analysis also shows that the emergence of such a system is not guaranteed by market forces alone, as postal operators, policymakers, and large senders face mixed incentives regarding investment, control, and competition. As a result, the development of a universal digital mailbox will depend on whether policy frameworks and market incentives can align to support a trusted and widely adopted digital communication infrastructure.

Based on these findings, we outline five policy options to support the development of a universal digital mailbox. The options are grouped into three categories:

- measures to strengthen the commercial incentives for operators by building scale and trust;
- measures that consider regulatory mandates if market incentives remain insufficient; and
- safeguards to address potential risks related to inclusion and competition.

First, ensuring broad usage of a single digital mailbox can strengthen the commercial case for national postal operators to develop and maintain such services. When a large share of important communications is sent through one platform, its value increases for both senders and recipients. This scale can create stronger incentives for postal operators to invest in secure and reliable digital mailbox solutions. Policymakers can help align incentives among key market participants and support this development through the following policy options.

Policy option 1: *Develop a digitalisation strategy centred on a single universal mailbox*

This option recognises that the value of a universal digital mailbox depends on broad participation from both public authorities and private senders. As discussed in previous chapters, digital communication systems exhibit strong network effects: the platform becomes more useful to recipients when more senders use it, and more attractive to senders when it reaches a large share of users. However, individual actors may have incentives to rely on proprietary communication channels rather than a shared infrastructure, which can lead to fragmentation and limit the development of a common digital communication standard.

Policymakers can help overcome this coordination challenge by adopting a digitalisation strategy centred on a single mailbox, see examples in **Box 3**. In particular, governments can lead by example by encouraging—or where appropriate requiring—public authorities to use the same digital mailbox for official communication with citizens and businesses. As public authorities collectively represent one of the largest senders of important communications, consolidating this traffic in a single mailbox can help build the scale and visibility needed for the system to become a widely used channel.

To ensure that the mailbox evolves into a truly universal solution, it should also be accessible to private senders. Governments can support this by establishing common technical standards, interoperability requirements, and governance arrangements that allow multiple actors to participate under clear and transparent conditions.

By promoting participation from both public and private senders within a shared framework, policymakers can help create the scale necessary for a universal mailbox to emerge as a trusted and widely used channel for essential digital communication.

Box 3. Case examples of a digitalisation strategy centred on a universal mailbox

Denmark

In Denmark, the national digitalisation strategies adopted between 2000 and 2010 laid the foundation for a unified digital public sector. A central focus during this period was to standardise and centralise government communication.[50]

Sweden

In Sweden, a clear digitalisation strategy has steered official communication into digital mailboxes, making them the default channel for important messages. Most citizens and firms now receive key information in a single mailbox of their choice, even though several certified providers compete, and recipients are free to pick between Kivra, Billo, Min myndighetspost and others.[51]

Norway

In Norway, the government has pushed almost all official post into digital mailboxes, so that citizens and firms now receive public letters in a single secure inbox. Users pick one of two approved providers, Digipost or e-Boks, which then becomes their universal channel for tax notices and other government correspondence. By mandating that public bodies use this shared infrastructure, while letting private firms compete to run it, Norway concentrated essential communication in one trusted system without creating a state monopoly.[52]

UAE

In the United Arab Emirates, the authorities have built their digital strategy around a national digital identity and a shared document vault rather than a postal-style inbox. Through UAE Pass, residents use a single login to access thousands of public and private services and to sign transactions electronically, while the integrated Digital Vault stores official documents from government entities in one secure place that can be shared digitally when needed. Though it is not branded as a mailbox, this setup effectively channels important official information into a single, widely used digital channel, creating the scale, standardisation, and trust that a universal mailbox is meant to deliver.[53]

50 See Digst.dk, 25 års fælles digitaliseringsstrategier, Link

51 See verksamt.se, Get a digital mailbox, link.

52 See regjeringen.no, Digital agenda for Norway in brief, Link

53 See UAE Pass: The digital identity solution unlocking thousands of services in the United Arab Emirates, Link

Policy option 2:
Strengthen trust in the digital mailbox through security, identity verification, and privacy-by-design

This option recognises that the success of a universal digital mailbox depends not only on participation by senders but also on users' willingness to actively rely on the platform. For recipients to regularly check and use the mailbox for important communication, they must perceive it as a trusted and secure channel. If users doubt the authenticity of messages or the safety of their personal data, they may avoid the platform or revert to alternative communication channels.

A strong framework for cybersecurity, identity verification, and privacy protection can therefore play a central role in encouraging usage. Robust security measures reduce the risk of breaches and cyberattacks, while secure identity management helps ensure that users can confidently distinguish legitimate communications from fraudulent messages. Privacy-by-design principles further strengthen confidence by ensuring that sensitive information is handled in compliance with data protection requirements.

Maintaining this trust also requires preserving the purpose of the mailbox. To remain credible, the channel should be reserved for important and relevant communications rather than advertising or other low-value messages.

If the mailbox becomes cluttered with promotional content, trust in the channel may erode, reducing user engagement and undermining the concept of a universal mailbox.

To safeguard trust in digital communication, it is also important that messages are stored on a durable medium that cannot be altered after dispatch. This ensures that digital letters retain their evidential value over time in the same way as a signed paper document or a physical registered letter. By guaranteeing that content and timestamps cannot be retroactively changed, such a solution provides a reliable record for both senders and recipients in the event of disputes, audits, or legal proceedings. In practice, this calls for technical and governance arrangements that prevent unilateral modification or deletion of messages, while still allowing users to retrieve and manage their correspondence over the long term.

Embedding these safeguards into the design and governance of the system can reinforce the credibility of the mailbox as a reliable channel for essential communication. When users trust that the platform is secure and that messages originate from verified senders, they are more likely to use it as their primary channel for receiving important information.

Second, while the previous policy options aim to strengthen the commercial incentives for developing a universal digital mailbox, these measures may not always be sufficient to ensure investment and provision. In such cases, policymakers may consider introducing a regulatory mandate requiring postal operators to provide digital mailbox services.

Policy option 3: *Clear government mandate on postal operators to provide digital mailbox services*

This option recognises that postal operators are well positioned to develop and operate a universal digital mailbox due to their high levels of public trust, nationwide reach, and established relationships with major senders. However, despite these advantages, postal operators may not always have sufficient commercial incentives to invest in digital mailbox infrastructure. Uncertainty about future usage, coordination challenges linked to network effects (policy options 1 and 2 aims to reduce this challenge), and competing investment priorities may limit voluntary investments in such services.

A clear regulatory mandate for postal operators to provide digital communication systems can help address this challenge. By requiring operators to develop and maintain digital mailbox infrastructure, policymakers can ensure that the necessary capabilities are in place to support a universal digital communication channel.

Such a mandate can also strengthen confidence among senders and users that the platform constitutes a recognised and stable channel for important communication. By providing regulatory clarity and long-term commitment, policymakers can support the establishment of a reliable digital communication infrastructure that complements the traditional role of postal operators in delivering essential communications.

A digital mailbox mandate follows a familiar logic as the traditional postal USO mandate. Postal operators in many countries already have a universal service obligation to provide basic communications nationwide, even if this sits in a separate legal instrument. Extending their public service role to include a digital mailbox can build on that experience rather than create a wholly new type of obligation. The same organisational capacity, governance and oversight that support the postal USO can inform how digital services are provided on fair, transparent and non-discriminatory terms, without needing to rely on the exact same regulatory framework. In this sense, the mandate is a natural evolution of the operator's public service function, not a departure from it.

Finally, we note that mandating a universal digital mailbox also carries risks. A rigid obligation could freeze the market around one technical solution, dampen innovation and limit competition from alternative channels. If poorly designed, the mandate might impose disproportionate costs on smaller senders or operators or push users into a system that does not meet their needs, undermining trust in digital communication more broadly.

In Switzerland, Swiss Post has been given a clear public mandate to develop and operate a digital letter service as part of its universal service obligations. This mandate positions Swiss Post as the trusted national provider of secure digital communication between citizens, businesses, and public authorities. By integrating digital letters into its service portfolio, the government ensured that digital correspondence remains accessible, reliable, and anchored in the same public trust that underpins traditional postal services.

Third, while the previous policy options focus on enabling the development and adoption of a universal digital mailbox, policymakers may also need to address potential risks associated with such a system, including digital exclusion and market concentration.

Policy option 4: *Promote digital inclusion by integrating physical channels as onboarding and support points*

This option accepts that a fully digital communication system will not work for everyone. Some citizens, especially older people and those with limited skills or access, struggle to rely only on digital channels, so a universal digital mailbox could otherwise deepen exclusion. The three previous policy options entail a risk of digital exclusion of certain recipients.[54]

Using physical channels as onboarding and support points can mitigate this risk. In-person access points (post offices) can help with registration, identity verification, and everyday use of digital services. Postal operators' nationwide postoffice networks are well placed to provide this help in accessible locations.

By complementing digital infrastructure with physical support, policymakers can make the shift to digital communication more inclusive and easier to use for all.

In Switzerland, post offices help citizens register for and use the digital mailbox, including digital identity checks and features such as bill payment and document storage, so users with low digital confidence can still participate.

Policy option 5: *Prevent vendor lock-in through data portabilityand common standards*

This option recognises that a single provider of a universal digital mailbox can deliver coordination and scale. However, it also raises concerns about long-term dependency if governments later need to replace that provider or introduce additional ones.

Over time, digital communication systems accumulate historical correspondence, integrations with public and private IT systems, and operational routines around a single platform. This makes it harder for policymakers to shift the service to a new provider, even if performance deteriorates or market conditions change.

Clear rules on data portability, common technical standards, and interoperable system architectures can mitigate these risks. They ensure that messages, records, and system interfaces can be transferred to another provider without major loss of functionality or costly re-engineering of public-sector systems.

54 See Universal Postal Union, 'Connect.post: leveraging an overlooked physical infrastructure for inclusive digital transformation', UPU Blog, 4 December 2025, Link

By keeping the core capabilities of the universal digital mailbox transferable between providers, policymakers can preserve strategic flexibility and bargaining power, while still benefiting from the coordination advantages of a single national platform. In economic terms, this means that policymakers must ensure that there is competition for the market, which differs from competition in the market.[55]

In Denmark, the Digital Post model for the public sector was redesigned in 2022 to reduce dependence on a single provider while preserving the principle of a single, universal digital mailbox.

Specifically, the state established a common, secure infrastructure accessible to all approved providers, ensuring that public-sector messages remain universally available through any approved interface. This preserves continuity for users, who continue to receive all official communication in one place, regardless of the provider they use.

At the same time, competition is enabled at the service layer, where providers offer their own interfaces and compete to attract users.

Private-sector communication follows a different logic. Documents from banks, utilities, and other companies are distributed through proprietary integrations and remain tied to the provider that delivers them, meaning they cannot be accessed across competing platforms.

The result preserves a single, universal mailbox for public communication, complemented by competitive, provider-specific ecosystems for private-sector services.

Despite these changes, usage remains concentrated. Several years after the reform, e-Boks still serves the majority of users, with 95%+ of Danes accessing public-sector messages through its interface and a similarly strong position in private-sector communication. This reflects the importance of trust, scale, established user bases, and existing integrations. At the same time, it ensures that the market remains contestable over time, as alternative providers can enter and compete without requiring migration of the underlying infrastructure or disruption to users.

In Finland, reforms are moving in a similar direction by allowing private operators to handle official documents for public authorities under an approved framework. Instead of relying on a single state-run channel, authorities would be able to use certified private providers to deliver secure digital letters that meet common legal and technical rules. Such a model can strengthen data portability and curb lock-in, because any provider's role depends on complying with shared standards rather than on holding an exclusive grip over official communication. It also supports universal access by enabling citizens to receive and read important communications from both public and private[56] senders in a single, recognisable place.

55 Competition for the market means companies compete to win the right to serve the whole market (for example through a contract, license, or tender), rather than many companies competing side-by-side within the market at the same time.

56 See Private digital mail services should be enabled to receive notifications from public authorities, Link

Appendix A

Digital fragmentation index - methodology

To assess the degree of fragmentation in digital communication systems across countries, we construct a simple comparative index. The index provides a structured and transparent way to compare how digital communication is organised and the extent to which it approximates a universal mailbox model.

The index captures three key dimensions of digital communication:

- B.1 The number of digital channels through which users receive important messages
- B.2 The extent to which a primary channel is used in practice
- B.3 The adoption of electronic identification to support secure and reliable communication

Each component is assessed using a three-level scoring scale, where countries are assigned a score from 1 to 3 based on predefined criteria.

This approach ensures consistency and comparability across countries while keeping the index transparent and easy to interpret. A limited number of categories captures meaningful differences in system structure without introducing unnecessary complexity or relying on highly granular data that may not be comparable across countries.

The overall index score is calculated as a weighted average of the three component scores and therefore ranges from 1 to 3:

$$Overall\ score = \frac{1}{2}B.1 + \frac{1}{4}B.2 + \frac{1}{4}B.3$$

The overall score gives the highest weight to the B.1. as we find that this is the main indicator of fragmentation in the digital communication. The other two components are supporting elements of universal digital communication system.

Given this approach, multiple countries may receive similar scores, reflecting that they fall within the same broad level of digital fragmentation. At the same time, differences may still exist within these groups that are not fully captured by the index. Importantly, a score of 3 across all components does not imply that a country has achieved a fully universal digital mailbox. Rather, it indicates that the country is closest to such a model within the scope of this framework, while fragmentation may still persist due to the continued use of parallel communication channels.

The index is designed as a relative and high-level indicator. It compares how countries perform against each other rather than against an absolute benchmark, and does not capture all institutional, technical, or behavioural aspects of digital communication systems. However, it provides a consistent and comparable framework for identifying differences in fragmentation and highlighting broad structural patterns across countries.

Table 1

Digital fragmentation index

RANK	COUNTRY	OVERALL SCORE	B.1 NUMBER OF DIGITAL CHANNELS	B.2 USAGE OF DIGITAL CHANNELS	B.3 ELECTRONIC ID ADOPTION
1	Denmark	**3,0**	3	3	3
2	Norway	**2,8**	3	2	3
2	Sweden	**2,8**	3	2	3
4	Finland	**2,5**	2	3	3
4	Netherlands	**2,5**	2	3	3
6	Australia	**2,3**	2	3	2
6	United Arab Emirates	**2,3**	2	3	2
8	Poland	**2,0**	2	2	2
8	Switzerland	**2,0**	2	2	2
10	France	**1,8**	1	2	3
10	Belgium	**1,8**	2	1	2
10	Italy	**1,8**	2	1	2
13	Chile	**1,5**	1	2	2
13	Egypt	**1,5**	2	1	1
13	Lithuania	**1,5**	1	2	2
13	New Zealand	**1,5**	1	2	2
13	UK	**1,5**	1	3	1
13	USA	**1,5**	1	2	2
19	Germany	**1,3**	1	2	1
20	Malaysia	**1,0**	1	1	1
20	Oman	**1,0**	1	1	1

Source: Copenagen Economics and e-Boks

1.1 B.1 Number of digital channels

This component assesses the extent to which important digital communication is concentrated in a single mailbox or distributed across multiple channels. It captures whether users can rely on one primary access point or must navigate several parallel systems.

Countries are assigned a score from 1 to 3 based on the following criteria (where a higher score reflects a lower degree of fragmentation):

- Score 3: A single digital mailbox is widely and consistently used for important communication across both public and private senders.
- Score 2: A primary digital mailbox is defined and commonly used for government communication, but multiple channels remain in use for private communication.
- Score 1: Important communication is distributed across multiple digital mailboxes or platforms, with no clearly dominant or widely adopted access point.

The assessment is based on a combination of desk research and interviews with stakeholders in the relevant countries.

1.2 B.2 Usage of digital channels

This component assesses the extent to which digital communication channels are actively used in practice. It captures whether digital communication has become the default channel for interaction between users, businesses, and public authorities.

As direct cross-country data on usage of digital mailboxes is limited, we use the United Nations E-Government Development Index (EGDI) as a proxy.[1] The EGDI reflects the maturity and adoption of digital public services, including the extent to which citizens interact with public authorities through digital channels. A higher EGDI score is therefore indicative of more widespread use of digital communication and a greater likelihood that important communication is delivered and accessed digitally.

Countries are assigned a score from 1 to 3 based on the distribution of EGDI scores across the sample, using quantile thresholds:

- Score 3: Countries in the top quartile (above the 75th percentile), reflecting high levels of digital adoption and usage.
- Score 2: Countries between the 25th and 75th percentiles, reflecting moderate levels of digital adoption and usage.
- Score 1: Countries in the bottom quartile (below the 25th percentile), reflecting lower levels of digital adoption and usage.

1 https://data360.worldbank.org/en/dataset/UN_EGDI

The use of quantiles ensures a consistent and data-driven classification across countries, while cap-turing meaningful differences in the extent to which digital communication channels are used in practice.

1.3 B.3 Electronic ID adoption

This component assesses the availability and adoption of electronic identification (e-ID) as an enabling infrastructure for secure and reliable digital communication. It captures the extent to which individuals actively use eID systems to be uniquely and consistently identified across digital services. Adoption is inherently linked to the availability and maturity of such capabilities within each country.

A widely adopted and interoperable e-ID system is a key enabler of a universal digital mailbox model, as it allows senders to verify and authenticate recipient identity and ensures that users can securely access their communications across both public and private services.

Based on our research, we have identified two key data sources to inform the level of eID adoption across the world. First, Eurostat's includes data on individuals who have used their eID to access online services for private purpose in the last 12 months for most EU countries.[2] Second, the World Bank's Identification for Development (ID4D) dataset includes data on whether online digital ID has been used on phone or computer to confirm identity online for a range of countries.[3]

However, the two data sources does not collectively cover all of our investigated countries. We have therefore complemented these with national studies and stakeholder insights, such as the UK Digital Identity Sectoral Analysis (2025) and the UAE Pass adoption data (2024) as well as discussion with stakeholders in different countries.

Based on the combination of quantitative indicators and qualitative insights, we assess each countries and assigned them a score from 1 to 3 based on the following criteria:

- Score 3: A national or widely recognized eID solution is implemented and used by the majority of the population across both public and private digital services.
- Score 2: An eID solution is available, but adoption remains partial or its use is limited.
- Score 1: No widely adopted eID solution exists, or usage remains low and fragmented across multiple systems.

2 https://ec.europa.eu/eurostat/databrowser/view/isoc_eid_ieid/default/table?lang=en

3 https://databank.worldbank.org/source/identification-for-development-(id4d)-data