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Building a digital single market: From the EU to Africa

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Summary

As the EU aims to expand its global digital footprint, particularly in Africa, it is exploring how to put together an offer that meets African demand. This brief takes a look at the EU's experience with building digital public infrastructure (DPI) to support interoperable digital services across its digital single market (DSM), and touches on African ambitions and needs in this regard.

Under the Global Gateway strategy, the EU plans to build digital connectivity and support African governments in their efforts to develop digital governance and regulatory frameworks to boost the wider digital economy. But for such investments to have an impact and benefit end users, digital infrastructure needs to lead to greater

uptake of digital public and private services. These services depend on DPI – an intermediate layer of infrastructure that is scalable and interoperable – which includes data exchanges, digital identity (e-ID) and digital payment systems. The EU has gradually built interoperable DPI as part of its digital single market, ensuring smooth cross-border digital interactions by individuals, businesses and governments within the EU. Africa, which aspires to build its own DSM as part of the African Continental Free Trade Area, will too require this infrastructure.

This brief argues that while the EU may not be the only player that offers this kind of infrastructure, it does have unique experience in developing interoperable DPI across borders. In addition, it offers an interesting example of the wider regulatory approach that is a necessary complement. Such DPI and regulatory support can be part of a holistic EU offer to Africa – alongside basic connectivity, digital skills and wider support to the digital economy.

Introduction

With the digital component of the Global Gateway strategy, the European Union (EU) aims to support the roll-out of safe, secure and sustainable digital infrastructure in Africa and across the world, demonstrating what it can offer. As we and others have already argued, the EU will need to develop a holistic offer, comprising not just hard digital infrastructure, but a combination of hard and soft infrastructure, regulatory support and digital skills (Teevan and Domingo 2022). Ensuring that digital transformation truly impacts individuals and businesses entails not just digital connectivity in the traditional sense of building cables and data centres, but also

ensuring that governments and businesses have the infrastructure in place to allow end users to take advantage of digital services like e-governance or e-commerce.

These public and private digital services depend on what can be referred to as digital public infrastructure (DPI), systems that are scalable and interoperable, such as data exchanges, digital identity (e-ID) and inclusive digital payments systems. A key aim of the EU's digital single market (DSM) has been to harmonise both public and private services across the EU, and while the DSM is still very much a work in progress, the EU has developed considerable expertise when it comes to developing interoperable cross-border DPI. This includes the EU Interoperability Framework for public administrations, the Single Euro Payments Area (SEPA) in the financial sector, and the electronic identification and trust services for electronic transactions in the internal market (eIDAS regulation). While each of these is in the process of being updated (for example, eIDAS is due to shortly be replaced by a new European digital identity as the basis for a personal digital wallet), the EU is, without doubt, the leading example of a multi-country bloc building interoperable cross border systems that provide the basis for the smoother functioning of its single market. Alongside this, the EU is of course well known for its wider role as a regulatory actor, providing common regulation across the single market and even influencing regulation beyond its own borders.

Africa's digital transformation strategy (DTS) lays out ambitious aims in terms of building digital infrastructure, but also DPI and related services in areas such as e-governance, e-payments and e-health. These services will be essential in offering the basis to build the African Continental Free Trade Area (AfCFTA) and an African DSM, and building interoperable DPI will be key to enabling smooth

cross-border interactions by individuals, businesses and governments. The EU can play an important role in supporting these goals by sharing its own experience of building quality DPI across its own single market and supporting Africa in building its own systems adapted to its very different context. Doing this in a smart manner can demonstrate the EU's value as a strategic partner to Africa as it develops the AfCFTA. As we previously explored in a paper on cross-border interoperability of digital financial services in Africa, there are already efforts underway to build some of this infrastructure, offering the EU the opportunity to engage with these efforts in the spirit of true partnership (Domingo and Teevan 2022).

This brief starts to articulate the EU's experience in building its own digital single market, including its strengths in building interoperable DPI, and brings this into conversation with some of Africa's needs as articulated in African policy documents. It begins to look at how the EU can use some of its own experiences to play a developmental role in Africa, and at the same time demonstrate its strategic value as a partner to Africa. It argues that by adopting a holistic approach to digital infrastructure under the Global Gateway – integrating DPI alongside basic connectivity and regulatory support – the EU could simultaneously support key elements of the African Union (AU)'s DTS and the roll-out of the AfCFTA, contribute to the Sustainable Development Goals (SDGs) and encourage more human-centric governance on the African continent.

In Section 1, this brief looks at why cross-border DPI matters, focusing particularly on Europe and Africa. Section 2 gives a basic overview of what the EU has done regarding interoperable cross-border DPI as it works towards completing its own DSM, and why it has a specific added value in this regard. Section 3 explores how this approach to

DPI has been complemented by its wider regulatory approach. Section 4 it looks at what the AU hopes to achieve in the area of interoperable digital services. In the final section, this brief offers some recommendations for how the EU can begin to engage in this area, matching its strengths with Africa's needs in a Team Europe approach.

This is the first piece of research in this area as ECDPM plans to build on this with further work looking in more detail at various aspects of DPI in Africa and at lessons learned from the EU's ongoing experience building its DSM.

1. Why interoperable cross-border digital public infrastructure matters

DPI refers to the building blocks – such as data exchanges, e-ID and digital payments systems – that offer the basis for the roll-out of a wide range of e-services, e-government and e-commerce. They can be built on the basis of digital public goods, such as open-source software and open standards that can be customised and rolled out in multiple contexts (Mukherjee and Maruwada 2021). However, it is also vital to note that while these systems can lead to greater efficiencies and easier access to public and private services, if not well designed they can also open the door to multiple problems and abuses.

COVID-19 demonstrated just how vital DPI could be, with e-payments allowing for the roll-out of social payments, e-health solutions playing a vital role in fighting the pandemic and e-education becoming vital to the continuation of basic schooling during

lockdown (Sergejeff and Veron 2021; Sergejeff et al. 2022). This was true in rich and poor countries alike. Countries that had these systems in place better managed to counter the pandemic's adverse impact on human development. For example, Togo was able to target social payments using a newly built digital cash payments system, NOVISSI, and integrate an AI-targeting approach (Chowdhury et al. 2022). Similarly, COVID-19 highlighted the potential of e-commerce across the world.

Cross-border digital public infrastructure has been an essential element in the construction of the EU's DSM, and efforts are still underway to improve the interoperability of various types of DPI between EU countries in order to facilitate better service provision across the EU. Thus, the EU is currently in the process of updating the European Interoperability Framework (EIF), which allows for the interoperability of public administrations across the EU, facilitating better communication and better service delivery across borders. In the area of payments, efforts are still underway to improve SEPA and to complement it with interoperability of instant payments across the EU, while, as mentioned in the introduction, efforts are also underway to expand and reform e-ID across the EU so as to have a functional cross-border system in place.

As Africa works towards building the AfCFTA, including the planned protocol on e-commerce, and developing a more advanced African DSM, this will require putting in place interoperable customs and payment systems (Domingo and Teevan 2022). Further, promoting the kind of industrial transformation that the DTS envisages will also require that data can be exchanged and used at a continental level (Teevan and Tadesse 2022). An interoperable e-ID would also play an enabling role in cross-border trade, allowing for faster verification

of legitimate trade. These priorities are gradually being put into action, including with the commercial launch of [the Pan-African Payment and Settlement System \(PAPSS\)](#) in 2022 that aims to facilitate payment, clearing and settlement for cross-border trade across Africa. The AU Interoperability Framework for Digital ID and the AU Data Policy Framework were [endorsed at the February 2022 AU Summit](#), and include essential guidance regarding how to build interoperability into the DNA of both digital ID and data policies. These continental initiatives are also being complemented at the national and regional level by a vast number of bottom-up initiatives that will form the basis for building these interoperable systems.

Yet, more investment is necessary – together with technical support, capacity building, and better regulations on cybersecurity and data protection – to ensure the quality of these public goods, and that they adhere to high levels of privacy and security. Countries and regions will also need investments and support in order to be able to adapt these technologies to their specific needs and to ensure that interoperability is built in from the beginning.

African countries and regional institutions are already working with a number of partners to build DPI, and it is clear that different partners have potentially very different kinds of added value in this area. The World Bank has notably been very active in the areas of e-ID through its [ID4D](#) initiative, and is an established player on this front in several parts of Africa. The Gates Foundation, together with France and Luxembourg, have actively partnered with the African Development Bank (AfDB), setting up the [Africa Digital Financial Inclusion Facility \(ADFI\)](#) to support the roll-out of DFS in Africa with a view to supporting financial inclusion. The Indian government has important experiences to share as a developing country that has developed

one of the world's most advanced e-ID systems, Aadhaar, and the wider [India-stack](#), a unified software platform that aims to promote financial and social inclusion through a unified approach to e-ID, data, and payments. A number of global initiatives bringing together multiple international donors also have the potential to play an important role in Africa; [Govstack](#) aims to develop software components that will act as 'building blocks' allowing governments across the world to roll out e-government services, while [Co-Develop](#) hopes to be a catalyst bringing governments together to support the wider roll-out of DPI.

In addition to the participation of European governments in ADFI (France and Luxembourg) and in the Govstack Initiative (Estonia and Germany), the European Investment Bank (EIB) supported a major [e-ID project in Nigeria](#) with €250 million in funding. Estonian organisations, such as the e-Governance Academy (eGA) and Cybernetica, have also built on Estonia's own unique experience developing one of the world's most advanced e-governance systems, and now work with governments around the world to develop interoperability frameworks, smart government and e-ID systems. This has included several projects in Africa, including in Tunisia, Namibia, Uganda and Benin in the case of eGA. Yet, on the whole, EU actors are still a relatively minor partner in this area despite the EU's somewhat unique experiences of building cross-border interoperability in the framework of its own DSM. We will turn to this in the next section.

2. The EU's domestic digital public infrastructure

The EU has developed a number of different elements of interoperable DPI as it has gradually developed its own DSM. The EU's experience provides a potentially interesting example for partners around the world – and notably African partners – to draw on as they develop their own DPI. Taken alongside the experiences of India, Taiwan and others, the European experience is undoubtedly an interesting one given its cross-border nature. This is particularly true for countries that aim to build a free trade area and DSM, as in the case of Africa. It is important to note that the EU DSM is still in evolution, and many of these interoperable technologies are still being improved and further developed. At present, there continues to be major variations in the domestic exploitation of these technologies, but improvements are constantly underway.

In this section, we will look at important advances that the EU has made, or is in the process of making in three different areas of DPI – interoperability of public administrations, interoperable digital payments and interoperable digital identity – touching on why it matters, and their gradual evolution. These developments are essential elements in building the basis for a DSM and allowing greater access to government services, e-commerce and wider e-services across the EU. They also highlight the long journey that developing cross-border interoperability entails, and the importance of integrating 'interoperability by design' in the initial roll-out of DPI systems, where possible. As Africa works towards building its DSM, the European experience can thus offer some interesting examples of what can be done, but also of what should be avoided.

Firstly, at the heart of building public services' interoperability in Europe is the **EIF** (European Interoperability Framework). The Digital Single Market Communication in 2015 called for greater

interoperability of e-government services in order to enable better communication between services so that they would not develop in isolation. It called for the 2010 "European Interoperability Framework" to be "updated and extended." (EC 2015) This led to the updating of the EIF in 2017, providing guidance on how to set up interoperable digital public services and includes four levels of interoperability: legal, organisational, semantic and technical. E-government interoperability is essential due to the public sector's importance as a regulator, service provider and employer. Indeed, within the EU, the public sector represents approximately 25% of employment and 20% of the EU GDP through public procurement (EC 2017a).

A further update is now in the works, the Interoperable Europe Act, proposed by the Commission in November 2022 to strengthen interoperability in the public sector. It aims to build a "secure cross-border exchange of data and agree on shared digital solutions, such as open-source software, guidelines, checklists, frameworks, and IT tools." It also sets out to further improve information sharing and public service delivery across borders, as well as to stimulate innovations in the public sector and through public-private partnerships. By further reducing administrative burdens, it hopes to reduce the time and cost for EU citizens, companies and the public sector itself (EC 2022a).

The EIF is thus an evolving framework and by no means a perfect model. Researchers in some areas, such as health, have pointed to the potentially very positive outcomes in terms of "sharing of health and illness experiences, coordinated care and research for citizen empowerment and improved health outcomes" (Kouroubali and Katehakis 2019). However, civil society organisations working on migration have raised issues regarding the uses of the EIF in border

management, arguing that it is extending the uses for which data was collected (Tagliapietra 2022).

Yet, the EIF offers a solid example of how 27 different countries have managed to begin to integrate interoperability into their public services, and notably, highlights the importance of “interoperability by design” in the elaboration of new systems across the EU, meaning that public services follow certain interoperability and reusability requirements when developing new systems. Reusability is a driver of interoperability because it recognises that public services should “reuse information and services that already exist and may be available from various sources inside or beyond the organisational boundaries of public administrations” (EC 2017b).

While it may be some time before African countries move towards the same level of interoperability, integrating “interoperability by design” into their national public administration frameworks can save them a lot of time and trouble at a later stage. This is reflected in the AU’s Digital Transformation Strategy for Africa, which recognises the importance of building on “internationally recognised standards” for e-government (AU 2020). The EU can play a role in supporting the adoption of these standards, particularly in the context of a potential future Team Europe Initiative (TEI) on e-governance and e-ID, that the European Commission (EC) and member states may develop with African partners in the coming year or so.

Secondly, the **Single Euro Payments Area (SEPA)** has played an important role in extending banking interoperability across the EU and with a number of neighbouring countries in Europe, creating a single market for euro bank transfers. In 2017, the SEPA Instant Credit

Transfer (SCT Inst) scheme, which is supposed to allow real-time cross-border payments, was also introduced (European Payments Council n.d.). A new retail payments strategy, proposed in 2020, and the subsequent 2022 legislative proposal on instant credit transfers aims to extend the usage of instant payments and drive innovation in the fintech sector, thereby challenging the monopoly of certain international big-tech and credit card actors (EC 2020; EC 2022b). However, interoperability remains elusive in the area of card payments, where many EU countries have their own separate non-interoperable banking card schemes. Thus, while the EU has led the way on interoperable bank transfers and hopes to also do so on instant payments, the EU payments union also remains a work in progress.

SEPA has provided an interesting model and is in many ways one of the successes of the digital single market. It laid out some of the necessary steps towards building banking interoperability that are relevant elsewhere and has provided the basis for wholesale banking transfers in other regions of the world. It highlighted the steps necessary to build such interoperability in the European context, including the development of a common scheme, interoperability of clearing and settlement, and introducing legislation to ensure that all stakeholders play by the same rules. It is also interesting due to the fact that it is built on a wide consultation of relevant actors, providing a good example of the EU's multistakeholder approach to developing frameworks and policies.

Yet, SEPA still faces several issues. Notably, the SSCT Inst scheme, that aims to facilitate instant euro payments between the 36 members of SEPA (EU + EEA + UK), has been imperfectly rolled out. It was noted that in some countries the percentage of banks offering both

schemes was as low as 3-5% in mid-2022. Another critique was that some banks are adding surcharges for instant transfers, thereby encouraging customers to stick with the slower traditional transfers ([PYMNTS 2022](#)). In response to these issues and acknowledging the fact that only 11% of credit transfers in euro in the EU were instant in early 2022, the EC adopted a legislative proposal in October 2022 that aims: “to make instant payments in euro, available to all citizens and businesses holding a bank account in the EU and in EEA countries.” This obliges EU payment service providers that offer traditional non-instant payments to also offer instant payments and to offer them at the same price as non-instant payments. It also aims to increase trust and continue to fight financial crime (EC 2022b).

This legislative proposal follows on from the 2020 Retail Payments Strategy that aims to make important steps to continue to develop the European payments landscape, encouraging innovation and combatting fragmentation. It notably takes aim at domestic payment solutions that do not work cross-border – whether bank cards or instant payments – and highlights that this situation advantages global players. It points out that while a number of innovations are underway, the only real digital payment solutions available that allow retail payments both in shops and online across Europe are those offered by worldwide payment card networks and large technology providers. This highlights the degree to which further developing the EU payments market, and supporting the interoperability of instant payments is essential to the competitiveness of European fintech companies and their ability to compete with the likes of Mastercard, Visa and PayPal.

The EU has gradually responded to changes in the payments landscape and the demands of consumers, and its payments

strategy lays out an ambitious vision. It might be criticised for being slow-moving with regard to instant payments, but its legislative proposals do open the door to a potentially integrated instant payments system across the EU. While African countries face very different payment landscapes to their European counterparts, the question of cross-border interoperability will be key in developing cross-border trade and e-commerce under the AfCFTA.

For this reason, e-payments are an essential element of the ongoing negotiations around the digital trade protocol of the AfCFTA. The recently launched PAPSS also aims to do much of what the EU has done all in one go, including offering solutions for both large wholesale payments and smaller instant retail payments. It remains to be seen whether this is feasible. However, PAPSS is complemented by a host of regional initiatives that have already made considerable progress on larger wholesale payments and are moving towards building interoperability for smaller instant retail payments.

New systems focused on low-value cross-border transactions include Transactions Cleared on an Immediate Basis (TCIB) in the Southern African Development Community (SADC) and the Digital Financial Services Interoperability Platform in the eight-member West African Economic and Monetary Union (WAEMU). Other initiatives are also being developed in COMESA and the EAC, while North African countries are participants in [BUNA](#), a cross-border payments initiative launched by the Arab Monetary Fund. Taken together with the strengthening of existing regional systems for wholesale payments, these new interoperable systems for instant payments could in future provide the building blocks that will ultimately allow PAPSS or a similar pan-African system to work (Domingo and Teevan 2022).

Thus, the route to interoperable payments in the much more complex African market may be a little longer than in the European context, but there are nonetheless interesting lessons to be learned and synergies to be explored. Given the dynamism of the African payments landscape and the vital importance that interoperable payments will play in the future operationalisation of the AfCFTA, this is also an area worth paying attention to.

A third area where the EU has advanced in developing its own interoperable digital public infrastructure is the **European Digital Identity**, where a major reform is currently being discussed. A 2014 regulation on electronic identification and trust services for electronic transactions in the internal market (eIDAS regulation) established the foundations for safe access to public services and online transactions across borders throughout the EU. A later 2021 proposal from the Commission put forward a framework that would build on this to offer a European digital identity to EU citizens, residents and businesses. This would allow them to identify themselves or confirm certain personal information when accessing public and private services in different EU countries. The new proposal would require member states to offer a digital wallet “under a notified eID scheme, built on common technical standards, following compulsory certification.” The proposal also recommends the development of a Union toolbox defining the technical specifications of the wallet to provide guidance to member states, thereby speeding up implementation and ensuring technical standards are met (CoEU 2022; EC n.d.). The proposal is still making its way through the EU institutions but is likely to be debated (and amended) in the European Parliament this year.

This proposal is designed to meet some of the issues that existed under the eIDAS regulation, whereby member states with strong govtech frameworks complained that while in theory their e-ID should be accepted across the EU, in practice this was extremely problematic. This was in part due to the fact that only 14 EU member states had operational e-ID systems and not all of these are currently interoperable across borders (Walsh 2022). Indeed, some larger EU member states, including [Germany](#), were still developing their own national e-ID, making it difficult for their public administrations to process those of other countries.

Privacy activists will be closely monitoring the development of EU proposals to ensure that they adhere to the General Data Protection Regulation (GDPR) and do not allow for a growth in surveillance practices. For example, Thomas Lohninger at epicenter.works identified a number of issues with the initial proposal, including how it might be used by private companies, which would be allowed to check the identity and other attributes of their customers or users. He argued that the system did not sufficiently safeguard against tracking, profiling or targeted advertising, and that a proposed lifelong unique identifier would be a huge mistake (epicenter.works 2022). The proposals are now likely to be negotiated between the European institutions, and it can be expected that amendments will be introduced to further safeguard the data of European citizens and ensure that the proposal does not see an infringement of citizens' privacy. Indeed, MEP Romana Jerkovic has already proposed changes to ensure that the proposal adheres to EU cybersecurity standards and privacy by design (Walsh 2022).

As African countries increasingly roll out e-ID systems, the question of interoperability will also be an essential one in an African context. An

AU framework for digital ID [not yet published] should offer important guidance for African countries in terms of the design of e-ID systems and the need for interoperability. The European proposal, when finally accepted, may offer interesting lessons on this front. On both continents, major challenges remain in terms of how to ensure that systems are efficient and smooth running while respecting citizens' privacy and responding to their needs. However, by and large, the European multi-stakeholder approach offers opportunities for civil society and other interested actors to push for better adherence to existing protections and regulations such as GDPR, providing a strong example of an inclusive approach.

European DPI is thus still very much a work in progress, but advances continue to be made towards greater interoperability. The examples of the EIF, SEPA and European Digital Identity all highlight the complexity of building cross-border interoperability, particularly when different systems are already in place and need to be updated. In some African contexts, interoperability might be built into the design from the beginning, saving on the process of updating over time. It is also important to note that in the EU context, DPI does not exist in a vacuum and indeed the EU is well-known for its very developed approach to regulating the single market, including notably the digital sphere. We will touch on this in the next section.

3. Keeping it human-centred: Challenges and opportunities

An essential part of the EU DPI architecture is that it is accompanied by a significant body of wider regulation, including notably around data protection, but also around other essential elements like

consumer protection and competition policy. Building well-designed, safe and secure DPI is just one part of the journey, while these wider frameworks ensure trust and affordability and are essential to wide usage. Similarly, regulation can play an essential role in enabling the next generation of digital innovation, notably in the area of digital financial services. The EU continues to work on finding the right balance between regulatory control and openness so as to ensure strong protections while leaving the door open to innovation.

The EU has increasingly adopted the language of democratic values and 'human-centric' digital governance to describe the guiding principles behind its regulatory approach. While the term 'human-centric' digital governance is somewhat loosely defined, it is broadly understood as an effort to protect citizens from abuses both by the private sector and the state, protecting democratic values and human rights. In the context of DPI, this should include high standards of cybersecurity and a high level of data protection for example, ensuring that citizens' private data is used appropriately both by the state and private sector actors. At the same time, the EU DSM, like the wider EU single market, is based on a conception of a competitive liberal market, where the principle of the level-playing field is guaranteed through competition policy. This is at the heart of the Digital Markets Act, which aims to make up for the failures of traditional competition policy with regard to digital platforms, preventing large platforms from acting as 'gatekeepers' that engage in unfair practices that stymie competition (EC 2022c).

Yet just as good regulation is the essential backdrop to enabling the efficient use of DPI, safe and secure DPI can also ensure better adherence to data protection regulation. Indeed, in an African context, data protection regulation needs to be coupled with secure

and interoperable services that ensure the integrity of that data. Only then will such regulation ensure that citizens' data is protected, while also being made available for the development of a data economy. Indeed, as already alluded to, these systems allow for numerous abuses if not well designed, or indeed if designed with a security-first approach. For example, a number of civil society organisations and academic studies have highlighted the dangers of poorly designed e-ID systems, including the threats to personal data protection, risks of exclusion of vulnerable populations and the risk of such systems being used for surveillance and control (Access Now 2022; van der Spuy 2021; Cioffi et al. 2022). The AU Data Policy Framework addresses some of these issues, highlighting the opportunity for "decentralised, functional identity to be embedded in data protection frameworks," thereby reducing the risks of personal data being abused (AU 2022). However, it will now be essential that the Framework is actually implemented. The AU is currently developing an implementation plan.

While Africa's model of digital governance and regulation is still very much in the making, for now, many African countries are ultimately drawing on the experiences of others, including the EU, to put in place important regulations, such as data protection, at the national level. The implementation plan of the AU's Data Policy Framework should henceforth play an important role in helping to gradually support African countries in developing, updating and implementing data protection and sharing policies, and in ensuring interoperability. Furthermore, negotiations are ongoing regarding many of the foundational aspects of the AfCFTA, including the digital trade protocol, which will also integrate negotiations around data sharing. The AU is thus taking steps towards practical implementation of a common data approach for Africa, and while it will be essential that

these are adapted to African needs, the EU's support, including via the TEI on data governance and other future initiatives, can play an important role.

Nonetheless, it will be important that such regulatory and governance reforms are accompanied by investments in rolling out safe, secure, inclusive and efficient systems that can play a role in ensuring better standards of data protection and cybersecurity. Without this infrastructure, much of the data collected will be insecure, unprotected and not readily shareable. Yet, just as DPI can support better data protection and cybersecurity, it will be essential that any projects the EU supports related to DPI integrate an analysis of the potential risks and abuses that such systems might allow if poorly designed, or designed with an overly security-oriented perspective in mind.

4. Building interoperable DPI in African contexts

Africa's digital transformation strategy (DTS) lays out the objective of building an African digital single market (DSM) by 2030 as the first of its specific objectives. This objective will ultimately depend on major developments in all four of the foundational pillars that the strategy identifies – infrastructure, skills, innovation, and policy and regulation – as well as across the selected critical sectors and cross-cutting themes. It is unsurprising that cross-border interoperability is mentioned repeatedly throughout the strategy, including in reference to e-Governance services, e-ID, e-money and e-health. For example, it mentions that e-governance services should be “based on internationally recognised standards,” using common standards and open standard software tools to allow for “regional and continental

integration of public eServices” (AU 2020: 30). This, therefore, provides opportunities for further EU-AU cooperation given the EU’s own experiences in this area.

At the operational level, there are already a wide array of initiatives taking place that aim to build cross-border interoperable DPI. As we noted in an earlier paper that focused on interoperable payments in Africa, there are a wide array of projects that aim to develop the payments landscape. Payments are also being considered as an essential element of the AfCFTA Digital Trade Protocol that is currently being negotiated, while a number of continental and regional initiatives are already underway to advance interoperable cross-border payments. A number of organisations, such as AfricaNenda and the UN Better than Cash Alliance, are championing instant and inclusive payments in Africa, while continental organisations like Smart Africa and a number of regional organisations are also spearheading projects (Domingo and Teevan 2022). AfricaNenda produced the first comprehensive report looking at Africa’s instant payments ecosystem, the State of Instant and Inclusive Payment Systems in Africa (SIIPS) report, examining both the overall state of these systems, but also looking in depth at a number of countries and regional initiatives (AfricaNenda 2022). The organisation plans another such study for this year, including analysis of another group of countries and regional initiatives.

There are also a number of ongoing efforts to develop digital public services and e-ID systems in different African countries. For example, Benin has made major advances in developing its e-governance architecture, supported by the Estonian e-Governance Academy. Benin’s national interoperability framework uses the EIF as a model, integrating the principle of ‘interoperability by design’ into the project. While Benin still has a long way to go to fully establish its

e-governance and e-ID systems, these first steps offer the potential to develop cross-border projects and potentially to build further integration in future.

One example of a project that hopes to harness the potential of cross-border interoperable e-ID is the Smart Africa Trust Alliance (SATA) that is focused on rolling out the Smart Africa blueprint for digital identity. It aims: “to establish institutional ownership and accountability combined with a trust framework based on standards and trust assurance mechanisms to facilitate cross-border interactions” (Smart Africa n.d.). The aim is to ultimately create agreed data-sharing rules and technical standards, supported by a system of certification and evaluation, so as to allow member states to interconnect national e-ID systems. An initial pilot project would aim to interconnect e-ID systems in West Africa (Great Rwanda Jobs 2022). The EU is considering supporting this project financially, but in light of its own experiences detailed in this brief, it also potentially has some interesting experiences to share with regard to developing such common standards.

ECDPM plans to do further work to understand the state of play regarding the regional interoperability of payments systems and the development of e-ID across Africa. However, it is clear that while Africa has taken some important steps, there are still many more to go and that the AU will need to work with a variety of partners in order to continue to develop its digital public infrastructure and to ensure interoperability. The EU can be an important partner, and certainly has interesting experiences to share. These can be coupled with the experiences of developing countries, such as India and its ‘India stack’, consisting of the Aadhaar e-ID system and related digital payments and other services.

Conclusion and recommendations

The EU is a clear leader on interoperable DPI, even as it continues to take steps to improve its own frameworks as part of its quest to complete its digital single market. It has gradually developed the European Interoperability Framework to allow public administrations across the EU to communicate and share information effectively, and further changes are envisaged to increase the efficiency of this system. Similarly, SEPA showed the potential for simple cross-border transfers across its 36 members and is gradually being improved so as to integrate instant payments, including those from non-banks. The European digital identity could allow for great improvements in terms of access to digital services across the EU. The EU also has clear expertise in complementary areas of digital regulation that go hand-in-hand with this infrastructure, setting the conditions necessary for the safe sharing of data and the protection of consumers. Further, the methods that the EU uses in designing and implementing new digital solutions are essential, allowing for multiple stakeholders to input throughout the process, and evaluating whether implementation has been successful later on.

Understandably, the EU has been very focused on the hard infrastructure dimension of the Global Gateway, and on the potential impact that it hopes to have in the area of digital governance. Yet, if the EU wants its investments to have real impact on the lives of people in those countries where investments are made, it will be essential that it also increases its focus on reaching end users. Investing in digital public infrastructure, alongside support to the necessary regulatory changes, will be essential to playing an impactful role in digital transformation in Africa and across the world.

By investing in digital public infrastructure across Africa that is scalable and interoperable, the EU could in one fell swoop support key elements of the AU's DTS and the roll-out of the AfCFTA, while contributing to the SDGs and a more human-centric governance on the African continent.

A potential TEI on e-ID and e-governance is being considered for the coming years. This would be the perfect first opportunity to begin to develop the EU's footprint in this area. Nevertheless such an initiative will need to find its niche and not replicate existing projects. It should also learn from some of the critiques that have been targeted at those projects, notably around the failure to sufficiently consult stakeholders or to safeguard citizens' privacy. The EU, with its long history of multi-stakeholder engagement, should bring these methods to bear in any projects that it supports in an African context (Abah et al. 2022). Projects should not be a copy-paste of EU models and must be integrated into local contexts. Most importantly, local digital rights activists and experts should be consulted and their expertise truly integrated into projects. The TEI should also build bridges with the work taking place on the rollout of the AU Data Policy Framework under a separate TEI.

Alongside this, there is the potential for the EU to play a much larger role in the area of digital financial services in Africa, and to link with some of the interesting work already taking place on this topic across the continent. There are a number of reasons why this is potentially an interesting area for the EU to step up its engagement. Firstly, the EU is keen to support Africa in developing its own single market under the AfCFTA, and alongside that to develop its own DSM. Given the EU's own experiences in developing interoperability in financial services, including notably in the area of payments, it can offer real support

here. Integrated digital payments will be essential to allowing cross-border trade. Secondly, this is a dynamic area, with potential for real partnership to support African priorities. There are a number of exciting African organisations working in this area supporting 'African solutions to African problems', and offering real solutions. Thirdly, this is also a highly competitive area, where African innovators are developing innovative solutions, and African unicorns are emerging. International actors are also beginning to be attracted by the dynamism of Africa's digital payments space, with US investors playing a vital role in this space, while Chinese companies, such as Alibaba, are also increasingly developing partnerships to support SMEs in adopting digital payments. The EU might begin to support solutions in this area by developing use cases demonstrating how DFS could potentially be used as part of the TEI on data governance in SSA and the potential TEI on e-ID and e-governance. But ultimately the EU and member states should consider being more ambitious on this topic.

This brief has laid out a very basic sketch of the EU's efforts to scale up interoperability of public services, build and scale up interoperable payments and roll-out an interoperable e-ID. These are just some of the things that the EU has managed to do in rolling out interoperable digital public infrastructure, and to begin to think about how it might use these experiences in its foreign and development policy. There is a clear demand for more investment in these topics, and the EU has the potential to play an important role, drawing on its own experience, but also by championing multi-stakeholder engagement. Yet, there is a lot more groundwork to be done on these topics. ECDPM plans to continue working on these topics, including through more in-depth work looking at the needs, opportunities and

risks that countries across Africa face in rolling out e-ID and digital financial services.

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