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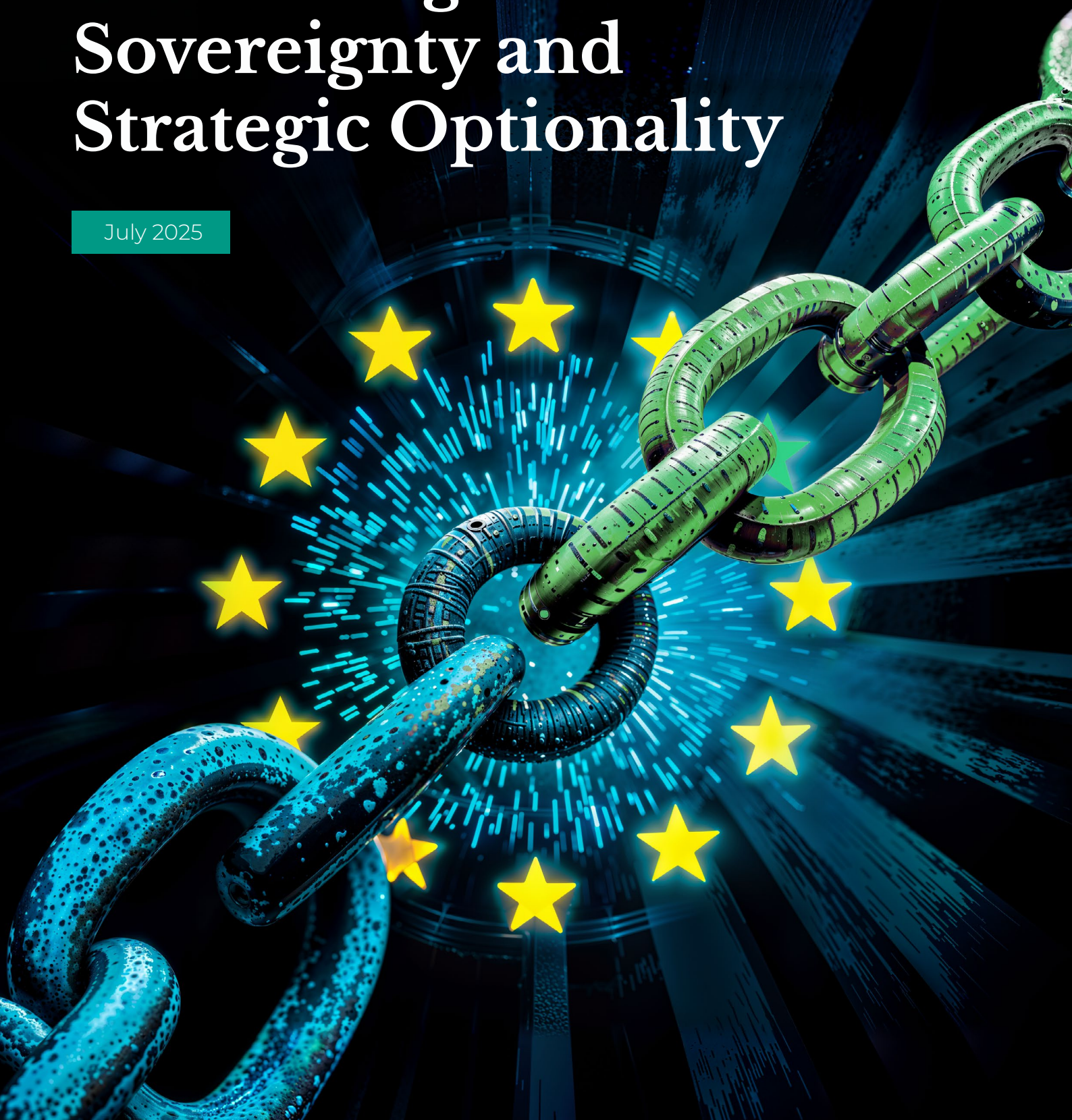
GFTN
GLOBAL FINANCE & TECHNOLOGY NETWORK

Unchaining the Stack:

Europe's Discourse around Digital Sovereignty and Strategic Optionality

July 2025

About

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Executive Summary

In recent years, digital sovereignty has become a key policy concern in Europe, with dependence on digital imports emerging as a strategic weakness for digital infrastructure. This whitepaper presents strategies and best practices for reframing the concept of digital sovereignty and for reimagining European innovation ecosystems to better build digital capacities within Europe. The paper also extends the digital sovereignty lens to digital payments, and highlights steps that Europe can take to drive greater autonomy in the field of digital payments. Drawing insights from discussions at a roundtable held at Point Zero Forum 2025, the report synthesises key themes and recommendations essential for advancing strategic autonomy and resilience in the European technology landscape.

Contents

> **"Everyone has, from their own perspective, the feeling that things are wrong in our relationship with big tech."**

❶ Introduction

In the early 2000s, Skype was synonymous with the Internet's potential for long-distance, low-cost communication – a household name for video-calling everywhere from Hong Kong to Alaska. Founded by a group of Estonian, Swedish, and Danish developers, the application leveraged the peer-to-peer networking made possible by the proliferation of the Internet to corner the international call market.

Its meteoric rise soon caught the attention of large technology players, and Microsoft acquired Skype Technologies for US$8.5 billion in 2011 – its second-largest acquisition. Reaching a peak in international call market share in 2014, Skype would slowly fade into irrelevance as more advanced forms of digital telephonic communication emerged, culminating in Microsoft announcing Skype's retirement in May 2025.

The dramatic rise and fall of Skype represents many of the promises, tensions, and pitfalls of the digital age – from the initial promise of technology to connect across borders, to the increasing emergence of large tech players, now termed Big Tech, largely based out of Silicon Valley and the U.S., and the platformisation of the Internet, wherein large platforms have occupied an increasingly dominant role in the way users access information and digital services through processes of vertical integration, infrastructuralisation, and cross-sectorisation (Van Dijck, 2020).

It is against this backdrop that concerns over digital sovereignty have emerged in Europe. Europe, which historically led in research and development in middle technologies such as the automotive industry, has trailed behind in emerging "high technology" fields such as artificial intelligence and software services (Dietrich, et al., 2024).

In turn, this has led to concerns around Europe's increasing strategic dependence on software and technology supplied by the U.S.. A 2025 report by Germany's digital association, Bitkom, that surveyed more than 600 companies from all sectors, found that 81% of German companies see themselves as dependent on digital imports from the U.S., and only 3% of companies could survive beyond two years without digital imports (Bitkom, 2025).

The 2019-2024 European Commission highlighted the need to achieve sovereignty in critical technologies, including next-generation hyperscalers, blockchain, and high-performance computing, a call that has only garnered more urgency since (von der Leyen, 2019). In 2024, the landmark Draghi report noted that more than 80% of Europe's digital technologies are imported and called for Europe to close the innovation and productivity gap between Europe and the U.S., particularly in the tech sector (Draghi, 2024).

The EuroStack concept has emerged as a key strategy that has galvanised the energies building around digital sovereignty. The initiative refers to a proposed independent, common, multilayered tech stack for the European Union that reflects European values, such as transparency and privacy, and can enable Europe to lead in next-generation technologies. Rather than a call for isolationism, the project calls for forming strategic partnerships with global allies, as described in a 2025 EuroStack report (Bria, et al., 2025).

The initiative was backed by a cross-party coalition in the European Parliament at a parliamentary event in September 2024, as well as the French and German governments in 2025. It complements prior efforts such as the EU Chips Act, the EU AI Act, and the GAIA-X initiative, which sought to bolster Europe's digital independence in specific verticals – semiconductors, artificial intelligence (AI), and cloud technology respectively.

At the fourth Point Zero Forum in 2025, an annual policy-technology dialogue held in Zurich, Switzerland, the Global Finance & Technology Network (GFTN) convened tech practitioners, researchers, and policymakers from Europe, India, and beyond at a roundtable to discuss strategies needed to achieve the EuroStack vision. The roundtable extended the EuroStack concept to the field of digital payments, where digital sovereignty concerns have emerged, and explored strategies to achieving greater autonomy within digital payments. This report synthesises the key discussion points raised during the roundtable, which was moderated by Martin Hullin, Director of the Bertelsmann Stiftung's Digitalisation and the Common Good programme, which commissioned the EuroStack report in 2025.

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Clarifying, Challenging, and Reframing Digital Sovereignty

"It's going to be incredibly difficult for Europe to decouple in any meaningful way from the core technology stacks and supply chains... you cannot separate digital sovereignty from the full tech supply chain, which starts literally with critical minerals and rare earths."

The quote above reflects a central theme that emerged at the roundtable: the difficulty of achieving a "decoupled" model of digital sovereignty, given the complex interdependencies and supply chains that comprise today's technological stack. Today's AI models also benefit from access to global cloud computing infrastructure and global datasets – attempts to decouple wholesale will only minimise the effectiveness of AI developed in strictly regulated environments, shared one participant. Within that context, efforts to build closed tech stacks are bound to struggle, and to fare poorer than systems that take full advantage of current tech supply chains.

Participants also highlighted the possibility that attempts to seriously disentangle Europe's technological infrastructure from global systems could be met with increased tension with the United States at a sensitive geopolitical moment, resulting in a more adversarial relationship. Beyond that, European companies may be unwilling to switch to local alternatives and lose access to the benefits offered by leading cloud and AI providers.

The discussion prompted participants to debate what a useful model of digital sovereignty could be. Past definitions of digital sovereignty in the European context include statements such as "the ability for Europe to develop, provide, protect, and retain critical technologies... and the ability to act and decide independently in a globalised environment" and "our ability to act independently in the digital world and... safeguard our values," proposed by the European Parliament and the European Commission, respectively (Ramahandry, et al., 2021; SWD., 2023).

These definitions highlight the role of digital sovereignty in enabling countries to make their own decisions about their digital environment. Likewise, the roundtable participants noted that digital sovereignty should not be an end unto itself, but a lever through which states can build resilience and deepen their capacity to make decisions and implement them. Rather than rejecting collaboration and instigating economic warfare, participants agreed that the digital sovereignty drive should be harnessed towards reducing overreliance on digital imports, supporting local innovation, and building trust through open collaboration with strategic partners.

2.1

Strategic optionality and techno-diplomacy

One participant suggested a reframing of digital sovereignty, with strategic optionality as a core framework:

"Countries should reserve the ability to make decisions based on domestic interests and values, and not because you're locked into someone else's infrastructure... How do you decouple without provoking retaliation from the U.S.? You don't. You don't decouple. The focus should be on strategic optionality."

In this context, **strategic optionality** refers to ensuring that states and organisations have multiple options for their technology infrastructure and can flexibly switch vendors based on domestic interests. This recommendation is similar to provisions set out in the EU's Digital Operational

Resilience Act (DORA). The act is aimed at improving the resilience of financial institutions and stipulates that financial institutions must maintain robust exit strategies for critical ICT vendors and avoid over-reliance on single providers.

The participant shared that such optionality could be achieved through encouraging stronger interoperability between closed-source and open-source systems; distributed participation across academics, civil society and public interest groups, regulators and innovators; as well as encouraging sandboxing of new solutions to support homegrown innovation alongside existing large providers.

For instance, India's Unified Payments Interface (UPI), a mobile-first interoperable payments network, was built as a set of open payments rails through which banks and third-party apps, such as Google Pay, can offer payment services to customers. The system enables users to make payments to anyone within the UPI network, regardless of the user's provider, and aims to limit market concentration with a proposed market cap of 30% for large providers. The structure of UPI prevents the emergence of monopolies and ensures that India's digital payments networks are insulated from economic sanctions imposed by foreign states, with the cost of switching to alternative UPI apps negligible for users (Hariharan & Natarajan, 2025).

Building on this, another key suggestion by a participant was for Europe to engage in a strategy of techno-diplomacy, founded on building partnerships with other governments and businesses globally based on common strategic interests. Diversified partnerships could help Europe secure access to key technologies and develop resilient tech supply chains. Public-private partnerships with leading tech startups and large players can also create critical feedback loops between governments, businesses, and research and development teams, and ensure that Europe can expand its options.

2.2

The European edge

Participants also discussed how Europe's unique geopolitical position and historical context could set the region up for success not just in achieving stronger resilience and sovereignty over its critical systems, but also to reimagine the way tech ecosystems operate, both regionally and globally.

Participants spoke candidly about the positive opportunities presented by the current moment of reflection, particularly when it comes to stimulating new business models that can drive innovation while forefronting privacy, transparency, and ethical practices. While American tech companies have embraced a platform approach to drive profits that has resulted in what critics have termed a state of surveillance capitalism characterised by privacy invasion and democratic harms, European companies could develop new business models in partnership with civil society organisations that remain profitable while steering away from the harms caused by Big Tech surveillance.

> "Innovation is about the societal change we want [to effect]… We don't want European platforms that do the same harm as American platforms do. Can we come up with a business model that does not do such harm to our societies?"

While some participants were hopeful about Europe's prospects in doing so, others were more sceptical. One highlighted Europe's history in engendering regional cooperation as a potential asset in building more resilient and ethical tech ecosystems, while another cautioned that European tech companies should focus on achieving competitiveness in the initial stages of development, before worrying about values, standards, and regulations.

Others also noted the powerful influence that EU regulations have on international technology norms via the Brussels effect as a unique advantage. Not only has this borne out through international standards setting, such as the diffusion of the General Data Protection Regulation (GDPR) across borders, but has also begun playing a pivotal role in opening closed Big Tech ecosystems up. In 2024, an EU regulation mandated that all new electronic devices sold in the EU must have a USB-C charging port, compelling Apple to switch over from its proprietary ports not just in the EU, but globally as well. Likewise, the new Digital Markets Act is slated to further push Apple to open its ecosystem and improve interoperability with third-party devices.

The European Commission's power may be Europe's most effective tool in influencing tech's trajectory when it comes to levelling the playing field and pushing Big Tech companies to move away from anti-competitive platformisation practices, noted one participant.

> "In the field of retail payments, we can achieve a higher degree of strategic autonomy and resilience. Complete decoupling in our connected world is neither desirable nor realistic."

3

The Case of Payments

The final section of the roundtable focused on the emerging contestations surrounding digital sovereignty in the space of digital payments. The topic has taken on greater urgency in 2025, with Europe's increasing wariness of the U.S.'s ability to leverage payments systems as a tool of economic coercion. In 2014, the United States imposed economic sanctions on Russia, compelling Mastercard and Visa to halt payments services in Russia – at a time where 90% of payments flowed through the American credit card providers, prompting Russia to develop indigenous credit card solutions (Hariharan & Natarajan, 2025).

Today, Visa and Mastercard dominate cross-border card payments in Europe. It is not lost to leaders that the global dominance of American card payment providers serves as potential leverage for an increasingly erratic America. In the face of Trump's global tariffs and increasingly unpredictable foreign policy, European Central Bank's President Christine Lagarde recently warned that Europe will need to develop its own sovereign payments system to ensure critical payments infrastructure remain resilient (Sandman & McKey, 2025).

In effect, digital payments has emerged as the latest frontier within digital sovereignty discourse. As long as digital payments infrastructure is largely owned by foreign providers in external jurisdictions, there will be a strategic risk that these infrastructures can be switched off, effectively bringing national economies to a standstill. Some European countries have successfully introduced their own instant payment and domestic card systems – Spain, Portugal, France, Germany, and Switzerland for instance – but these endeavours are relatively isolated and disconnected from the rest of Europe, participants pointed out.

Beyond the infrastructure component, digital sovereignty in payments also includes the frontend, such as digital wallets, which are currently dominated by Apple Pay and Google Pay. Hardly any banks in Europe offer their own digital wallet frontend, and though the market-based European Payments Initiative has developed Wero, which aims to be a pan-European wallet, participants expressed that take-up is currently limited and will take years to mature.

Finally, as one participant highlighted, the issue of payments sovereignty extends to the monetary dominance of the U.S. dollar and, increasingly, the role that dollar-denominated American stablecoins developed by private companies play in instant payments. The American dollar has long served as the bedrock of the global economy as the default international currency that countries transact in, but emerging concerns around the use of the dollar as a tool of sanctions have led BRICS countries to push for the de-dollarisation of the global economy (Proano & Hümmrich, 2025).

Likewise, the emergence of dollar-backed stablecoin transfers as an alternative form of instant and cross-border payments, has revitalised the urge for Europe to de-dollarise and develop its own form of digital currency – such as the digital Euro – to ensure monetary sovereignty and financial resilience (Kretschmer, 2025). A wholesale, cross-border Digital Euro will enable European central banks to bypass U.S. dominated rails, such as SWIFT, that could serve as chokepoints in moments of geopolitical tension, said a participant.

3.1

For profit set ups

Participants shared that for Europe to build strategic autonomy in the realm of digital payments, it will be crucial to combine public governance with market mechanisms that can compete on the same ground as payments juggernauts, such as Mastercard, Visa, and PayPal. This means building sovereign instant payments systems that are genuinely competitive and offer incentives for all stakeholders. As digital payments is a two-sided market, organisations will need to develop platforms that have unique incentives for both buyers (consumers) and sellers (merchants) to drive adoption.

One pathway to accomplish this would be through bringing various private sector led ecosystems together, as Australia Payments Plus has done with Australia's leading domestic payments players. Similarly, while India's UPI infrastructure is owned by NPCI, a non-profit company set up by India's central bank, the payments infrastructure processes millions of transactions annually via its private sector payments providers, such as GooglePay, ApplePay, and India's RuPay. This structure enables India to drive digital payments adoption via entrepreneurial market energies, while maintaining strategic optionality and domestic sovereignty via public sector oversight.

One speaker cautioned that providers should be careful when assuming that upholding European data privacy standards will be sufficient as a unique selling point. Though consumers may indicate that data privacy is critical in surveys, they are likely to vote with their feet and opt for choices that provide better user experience. Similarly, while building platforms for interoperability is important for cross-border connectivity, such platforms will still need to be domestically competitive for any cross-border projects to succeed.

> "If you put a lot of sick people in a room, it will not make a fitness studio."

Another participant highlighted the value of indirect policy measures in driving positive impact within the digital payments space. For instance, if the European Union were to successfully create an integrated capital markets union, this could unlock significant funding to support the development of private sector led cross-border payments initiative. Deeper capital markets could help support stronger fintech and startup innovation to match that of the U.S., and support Europe in developing strategic optionality in the space of digital payments, noted a participant.

3.2

End-to-end digital sovereignty

Others highlighted the importance of end-to-end approach to digital sovereignty within payments, rather than tackling the separate aspects of sovereignty in silo, while recognising that complete decoupling is unrealistic. This means embracing a more holistic, multilayered approach to digital infrastructure that accounts for every step of digital adoption, from ensuring business Requests for Proposals (RFPs) do not favour Big Tech providers, to accounting for tech infrastructure for payments rails and implementing a Digital Euro.

This can start with turning to open-source technology as a foundation, as open-source technology can enable countries to create a modular, plug-and-play infrastructure and adopt a 360-degree view of technology beyond payments. This can enable integration with other public digital infrastructures, such as digital identity and data exchange layers. When such tech is built in alignment with global open-source standards, this can enable Europe to tap on innovations emerging from other parts of the world. Europe has also long been a key player within open-source communities, and the EuroStack initiative champions an open-source approach towards fostering digital sovereignty and a European tech stack (Bria, et al., 2025).

Global South countries are increasingly adopting open-source software, such as Mojaloop, to develop national instant payments systems. In part, this is due to the cost-effectiveness of such solutions, highlighted one participant, as these systems are cheaper to implement than domestic card schemes. For example, Brazil's instant payments system, Pix, is free for individuals, and is significantly cheaper for merchants as compared to card payments. Once these systems have won over customers by virtue of cost, ease-of-use, transparency, and trust, it is easier to drive adoption, noted participants.

Likewise, the openness of these platforms means that countries can fully own the system and make it their own, without being reliant on proprietary systems developed by private companies. However, unlike the Global South, Europe will have to tackle existing legacy payments and cards systems if they wish to tap on existing open-source solutions for digital payments, noted participants.

Beyond the technological infrastructure, it is critical that Europe invests in deepening local tech skills to ensure a strong core of digital talent. Digital sovereignty "is a journey with no end", noted one participant, and new use cases will continue to emerge that European leaders will have to continue tackling.

4

Conclusion

Extending the conversation on digital sovereignty to digital payments clarifies the stakes: without greater sovereignty, critical infrastructures face heightened risk from geopolitical tensions. Yet, the digital payments conversation also highlighted one key tension when it comes to digital sovereignty. While the pursuit of technological independence is unrealistic, aiming for greater resilience across key verticals will be critical.

Throughout the discussion, the concept of strategic optionality emerged as particularly resonant, speaking to the core of digital sovereignty: the freedom of choice in uncertain times. Strategic optionality clarifies this critical aspect of the conversation and nudges policymakers to consider the areas of strategic importance where optionality – choice – will be vital, including chokepoints that could stifle national systems. Once identified, states should encourage the development of alternatives within the market, and regular resilience testing should be carried out.

"For much of Europe, it's about ensuring that you have continuity and resilience in payments systems."

One participant also noted that Big Tech should not be seen as the enemy. Rather, the main obstacle to sovereignty and optionality is unchecked market concentration, and efforts to engender sovereignty should look to cultivate reciprocity and interdependence between local innovation ecosystems and Big Tech players. This would support the development of alternatives – not replacements – that can in turn enable states and markets to have a wider range of choices.

For instance, speakers discussed the value of defining a European open-source governance model to encourage cooperation on open-source software and align open-source with European values. As a recent opinion piece exploring a proposal to develop an open-source, Linux-based EU operating system pointed out, open-source projects with input from Big Tech developers could help realise tech sovereignty without fostering isolationism (Bowrey, 2025).

As local innovation ecosystems flourish, policymakers and business alike must prioritise resilience-testing and actively explore local alternatives as serious options for adoption. The conversation also brought forth the importance of fully engaging with civil society concerns to ensure that local innovation resonates with European values and aspirations, leveraging the current moment as a unique opportunity to responsibly reimagine technology's role in Europe's economic and social fabric.

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