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Bridging the Gender Digital Divide: Africa's Imperatives

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Introduction

The digital transformation represents significant opportunities for economies across the Global South, particularly in Sub-Saharan Africa. However, without a well-defined gender strategy, such transformation can exacerbate existing digital divides. In this context, the two articles collated in this report explore the challenges and opportunities for empowering women in Africa through digital technologies. The two articles present case studies from Kenya and Nigeria to illustrate key barriers and successful interventions.

In Sub-Saharan Africa, women face multiple barriers to accessing and utilising digital technologies, including limited educational opportunities, restrictive cultural practices, and insufficient financial resources. The challenges are more pronounced in rural areas, where women's engagement in the digital economy is even more constrained. Despite these barriers, digital technologies hold promise for improving economic opportunities for women by enhancing job opportunities and reducing poverty. For instance, studies from Tanzania and other African countries highlight the positive impact of mobile internet access on employment, particularly among vulnerable populations. However,

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women experience largely marginal benefits compared to men, underscoring the need for targeted interventions, such as digital literacy programmes, microfinance initiatives, and policies that could foster women's technology-oriented entrepreneurship.

The articles raise the importance of digital skills development in addressing the skills mismatch that hinders the growth of Africa's labour force, particularly among youth and women. A significant gap in integrating digital literacy into educational curricula contributes to underemployment and limited participation in formal labour markets. This gap is particularly acute for women, who face compounded challenges due to cultural and socioeconomic barriers. In Nigeria, despite rapid expansion in the digital economy and widespread mobile phone ownership, the lack of access to digital training resources and mobile internet continues to impede women's meaningful engagement with digital platforms.

The case studies from Kenya and Nigeria demonstrate promising efforts to overcome the obstacles. In Kenya, government initiatives such as the Women Enterprise Fund (WEF) and digital infrastructure programmes have empowered women by providing financial support and access

to mobile technology, helping them engage in business and digital entrepreneurship. In Nigeria, meanwhile, gender-focused digital skills training programmes have equipped women to engage with the digital economy. These initiatives leverage mentorship, mobile learning, and local language resources to enhance accessibility and participation, particularly among women in rural regions. Imperatives include scaling these initiatives and creating more robust monitoring and evaluation frameworks to assess their long-term impact.

Reducing the existing gender digital divide in Africa is achievable, but it requires efforts to foster public-private partnerships supporting inclusive digital skills training, particularly within the Technical and Vocational Education and Training (TVET) sector for women. Policies should incentivise digital skill acquisition and create labour market opportunities for women in emerging digital sectors, such as freelancing and remote work. Governments and the private sector must collaborate to subsidise mobile technologies, expand internet access, and develop gender-sensitive policies that support women's participation in the digital economy. Bridging the gender digital divide is not only a path to economic empowerment; it is also a step toward achieving sustainable development in the continent.

A Note on the Essays

The two essays in this report share similarities regarding themes and focus on addressing the gender digital divide in Africa.

Both essays explore the transformative potential of digital technologies in empowering women in Africa, delving into the challenges and opportunities surrounding digital inclusion in the region. While addressing similar themes, each article presents a unique perspective on how digital technologies can catalyse women's economic empowerment.

The first piece, *Harnessing Digital Technologies for Women's Economic Inclusion in Africa*, underscores the barriers to accessing digital technologies, such as limited educational opportunities, cultural restrictions, and financial constraints. These challenges are especially pronounced in rural areas, where women often lack the skills and resources necessary to benefit from the digital economy. At the same time, the article highlights the transformative potential of digital technologies in creating economic opportunities, especially through mobile broadband and digital literacy programmes. The article stresses the importance of targeted interventions, including subsidised mobile phones, free internet hotspots, and affordable data plans. Moreover, it makes a case for policy reforms that promote gender equality, secure land and resource rights, and offer digital literacy training.

The second article, *A Gendered Case Study of Digital Upskilling in Nigeria*, examines the country's struggles to bridge the digital skills gap, particularly for women. It highlights the inadequacies in the educational system, which has failed to integrate technology into curricula, leaving a large proportion of the population underprepared for the opportunities presented by the digital economy. In Nigeria, cultural and socioeconomic barriers further limit women's access to education and employment, compounding the digital skills gap. The article underlines the importance of targeted digital upskilling programmes, including mobile-based and in-person training initiatives, to equip women with the necessary skills to thrive in the digital workforce. It also advocates for public-private partnerships to revamp the technical and vocational education system, ensuring long-term sustainability and scalability.

Both essays agree on the critical role of digital technologies in fostering women's economic empowerment in Africa. They highlight the importance of closing the gender digital divide through focused efforts in education, resource accessibility, and support for women entrepreneurs. The first article advocates for a broader approach, involving policy reforms, infrastructure development, and financial support for women. The second article focuses on the need for a more localised approach, emphasising targeted digital skills training programmes and a stronger alignment between the educational system and the digital economy's demands.

Ultimately, both essays suggest that the digital economy presents unparalleled opportunities to empower women in Africa, but realising this potential requires strategic and coordinated efforts from governments, the private sector, and civil society. By addressing the barriers to digital inclusion and upskilling women for the digital age, Africa can unlock the full potential of its population, ensuring that women are integral to the region's digital transformation.

I

Harnessing Digital Technologies for Women's Economic Inclusion in Africa

Caroline Kathure Gatobu

Globally, investments in digital technologies are central to advancing sustainable development. However, digital transformation is still a new concept that many African countries are grappling with, alongside other challenges. The African Union's *Digital Transformation Strategy for Africa* aims to achieve digital inclusion for every African by 2030.¹ The bigger goal is to achieve the 'Agenda 2063',² which envisions a science-, technology-, and innovation-driven skills revolution, emphasising the empowerment of women and girls. To accomplish these goals, concerted efforts must be made to eliminate the barriers preventing African women

from contributing to the digital economy and to create an enabling environment for technology-oriented entrepreneurship.

The Gender Digital Divide in Sub-Saharan Africa

The gender digital divide in Sub-Saharan Africa is a multifaceted issue. Women in the region face numerous obstacles to accessing and utilising digital technologies, such as limited educational opportunities, insufficient financial resources, and cultural practices that restrict their involvement in the digital economy.³

These challenges are more pronounced in rural areas, where women often lack access to education and financial support. Despite these barriers, there are promising opportunities to bridge the gender digital divide in Sub-Saharan Africa. Specialised digital literacy programmes that can empower women with essential technology skills, while microfinance initiatives specifically for women can provide the financial means to invest in technology and businesses, fostering economic independence. By capitalising on these opportunities, various stakeholders can work together to close the gender digital divide and empower women throughout Sub-Saharan Africa to fully engage in the digital economy.

Opportunities for Digital Inclusion

Research indicates that digital technologies can transform economies worldwide and create more job opportunities. Digital technologies enable women to work more efficiently, enhance their learning experiences, and boost productivity in their roles. A World Bank study in Tanzania examined the effects of mobile internet availability

(3G or 4G coverage) on employment, particularly among vulnerable populations.⁴ It found that mobile broadband coverage positively influenced consumption and reduced the incidence of poverty, a result consistent with findings in Nigeria and Senegal. The study reinforces the welfare benefits of mobile broadband, particularly through improved labour outcomes.

However, these benefits disproportionately favour men, particularly younger and educated men. While educated women with 3G access often transitioned from agricultural work to other employment opportunities, they did not experience the same level of benefits as men. This underscores the fact that, although mobile technology can enhance livelihoods, certain socioeconomic and demographic groups still encounter significant barriers to realising the potential advantages of connectivity. It emphasises the need to equip these underserved groups, especially women, with the necessary skills and resources to capitalise on the economic opportunities that digital technologies can provide.

Digital Technologies and Job Creation: Impact on Lower-Income and Lower-Skilled Populations

Evidence suggests that both internet access and the adoption of new digital technologies can create more and better job opportunities for lower-income and lower-skilled individuals, contributing to poverty reduction. In regions with internet access, labour force participation and wage engagement have significantly increased over time compared to areas without coverage. For instance, digital tools like local language videos and smartphone decision support apps can offer tailored advice, helping women farmers achieve higher crop yields. Although mobile internet access has grown substantially, Africa's overall internet coverage still falls short compared to other continents.⁵

Women's economic empowerment over the years has been identified as a critical driver for sustainable economic growth and development.⁶ However, women in Africa face constrained resources, including education, employment opportunities, and credit. They also bear the disproportionate burden of household duties that limit their time for productive economic activities, and experience discriminatory cultural practices that hinder their access to capital and markets.

The growing gender digital gap further magnifies socioeconomic disparities, highlighting the need to bridge the digital divide to provide unmatched development opportunities.

Case Study: Digital Access for Women in Kenya

The Kenyan government has achieved milestones aimed at mitigating inequality and promoting gender equality by supporting the economic empowerment of vulnerable groups, including women, youth, and persons with disabilities. One such initiative is the Women Enterprise Fund (WEF), which provides financial support through mobile money transfers. These funds are allocated to women's groups that come together, register with the Department of Social Services, and apply for loans. The WEF also focuses on capacity building for women entrepreneurs through a volunteer programme. Volunteers, stationed at the constituency level, are responsible for recruiting women, delivering training, and monitoring project progress and loan repayments. This training encompasses various topics, including business skills, market access, and basic information and communication technology skills.

A 2022 study found that the communication channels and media (used to disseminate information about the WEF) played a crucial role in helping women access financial resources.⁷ These channels ranged from traditional media to modern information technologies. Furthermore, effective sensitisation and information dissemination by fund managers and government officials enabled beneficiaries to access, utilise, and benefit from the funds and the programme.

The Kenyan government has advanced women's empowerment through digital technologies by integrating them into programmes such as the National Government Affirmative Action Fund and WEF. Digital technologies have facilitated group operations by enabling fund disbursements among its members through MPESA, a mobile money transfer platform, and by planning meetings through WhatsApp. Through these initiatives, digital access has significantly impacted and changed women's lives in Kenya by cutting expenses in commuting to markets through mobile banking.

Kenya's Ministry of Information, Communication and the Digital Economy has introduced several digital infrastructure programmes to bring all government services online. This is supported by the Kenya National Digital Master Plan 2022-2032, which aims to establish hotspots in public installation in rural areas and other public spaces.⁸ Currently, there are 61 hotspot installations in various parts of Kenya, primarily in public markets.⁹ This initiative has impacted market traders, most of whom are women, enabling them to sell their items online and conduct business through digital platforms.

Conclusion

The digital divide remains a challenge in Sub-Saharan Africa, where women are disproportionately affected by limited access to digital technologies.¹⁰ Formulating strategies to include women in the digital economy in Africa will present vast opportunities to reduce inequality, achieve development and economic growth, and accelerate business and market integration in the region. By bridging the gender divide and

promoting digital inclusion, African countries can empower women economically and advance gender equality in the region. Governments and the private sector should include initiatives to close the gender digital divide, focusing on securing land and resource rights, finding alternative livelihoods, and fostering gender equality. The private sector can also promote digital literacy.

For Africa to empower its women economically through digital technologies, there should be initiatives to subsidise mobile phone costs, free internet hotspots, and reasonably priced data plans to ensure women can contribute meaningfully to the digital world. There should be programmes that provide women with basic digital skills training and technology-relevant applications to unlock opportunities to improve their livelihoods. Girls in schools should have access to quality education, particularly in the science, technology,

engineering, and mathematics (STEM) fields, to build the next generation of women entrepreneurs who can positively contribute to Africa's economy.

African governments should also provide an enabling policy and legal environment for digital technology to be embraced for economic empowerment. This includes integrating women into digital platforms for networking and providing technical support on utilising the digital platforms, with the goal of changing community-level practices. Finally, African governments should strive to build capacity for the relevant institutions and individuals engaged in digital literacy initiatives to enhance women's empowerment. This can be achieved through grassroots-level technical skills training for financial and non-financial services.

II

A Gendered Case Study of Digital Upskilling in Nigeria

Raymond Onuoha

Digitalisation and its complementary technologies are disrupting the socioeconomic context of societies through the innovative production and delivery of goods and services while creating new livelihood opportunities. For developing countries, this transition offers great opportunities to boost their economic positions within the global market. However, the foundational requirements for sustainable digital transformation remains a massive challenge.¹¹ A cog in this wheel is the workforce; Africa's, however, remains comparatively lacking in digital skills. In Africa, the main underpinning factor for this gap is a skills mismatch within the educational sector, leading to underemployment and a wider labour market participation in informal sectors for its mostly youthful population.¹²

Africa's educational sector has yet to fully embrace and integrate technology into its curricula and teaching methods—this has had profound consequences for the workforce. In an era where digital literacy and technical skills are critical for success, particularly in sectors such as information technology, digital marketing, and financial services, the lack of tech-driven education leaves many workers ill-prepared. The slow pace of technology adoption in schools and universities across the continent creates a yawning skills gap. While the global economy shifts towards automation, artificial intelligence, and other digital innovations, many African workers are underqualified for new job opportunities. This limits their career advancement and economic participation, exacerbates unemployment rates, and hinders national development.

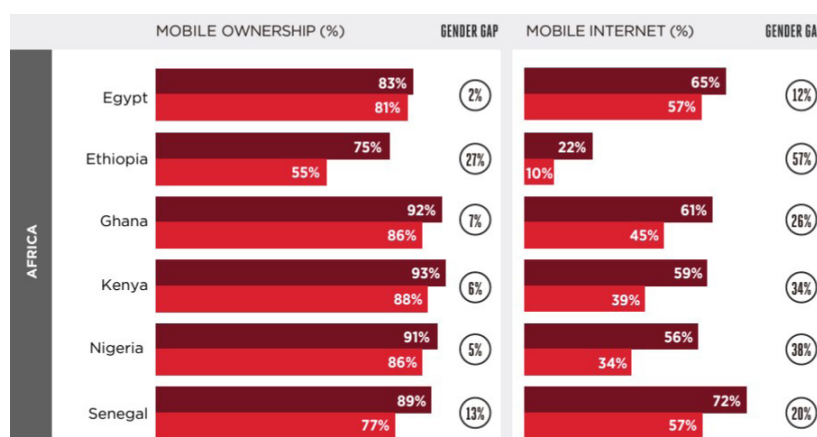
Women experience the disproportionate impact of the technological lag. Cultural and socioeconomic barriers restrict their access to education and employment opportunities, and the lack of digital upskilling within educational institutions further marginalises them. Without targeted interventions to bridge the divide, more women will likely be left behind as the continent attempts to transition to a digital economy. This is especially concerning in Nigeria, a country with a rapidly growing population and increasing demand for tech-savvy professionals.

The Nigerian Experience: A Case Study

Nigeria has over 500 operational digital platforms across several sectors, including financial services, transport, logistics, e-commerce, health, agriculture, and education.¹³ These digital platforms have created livelihood opportunities for the youthful

population, especially women. Their impact is, however, limited. A fundamental barrier in this domain is the government’s persistent policy focus on the formal sector, even as women continue to dominate key economic sectors such as agriculture, small-scale commerce, and the informal sector—a grey labour area within which platform livelihoods broadly fall.¹⁴ A key constraint hindering women’s active participation in Nigeria’s evolving digital ecosystem is inadequate access to digital skills. In developing countries like Nigeria, mobile phones are the most ubiquitous platform to connect to the digital economy,¹⁵ yet mobile internet access is still inadequate (see Figure 1).

Figure 1: Mobile Phone Ownership and Internet Access, Select African Countries



Source: GSMA¹⁶

Instructively, mere access to mobile technology is insufficient for effective participation; users must also be equipped with complementary skills and knowledge resources to facilitate their meaningful engagement within the digital ecosystem.

Delivery Models and Digital Skills Focus

The delivery model adopted by gender-focused digital skill suppliers in Nigeria is via summer camp programmes, usually lasting two to three weeks. The training programmes typically consist of two phases: the recorded online component, which focuses on conceptual and theoretical elements, and the more practical-oriented physical delivery sessions. The range of digital skills being provided comprises basic to intermediate skill levels, including social media selling (digital projects portfolio building, content creation, WhatsApp for business), mobile videography, and web design (via WordPress, Wix, Canva, and personal domains).

Training Scaling Strategies

The suppliers are implementing some specific strategies to drive a scaled adoption of these gendered digital skills training programmes. One of these is via women mentorship—leveraging successful women within the technology ecosystem

to influence the participants based on their own ‘real’ career stories. Some suppliers also use ‘accountability coaches’ who provide guidance and technical support to the learners within smaller groups regarding training elements. To foster inclusivity, some suppliers adapt training resources into local languages, benefiting participants with limited formal education and English proficiency. The suppliers also use female trainers to encourage female participation, as this approach appears safer and more relaxing for the learners.

Impact

Although the digital skills programmes have trained thousands of women and girls across the country, detailed measurement and evaluation impact assessment frameworks are absent. A few providers have taken initial steps of feedback collation via pre- and post-evaluation of participants, parents, and other stakeholders. These preliminary assessments indicate that most trainees have been getting jobs, some directly through the skill providers and others through indirect means, such as on freelancing platforms, including Fiverr and Upwork.

Long-Term Sustainability

In scaling the preliminary impacts of the digital skills initiatives and ensure their longer-term sustainability, there are some key leverage points. One of these is the criticality of re-enforced public-private partnerships, especially concerning regenerating the country’s technical and vocational education and training (TVET) sub-sector—a key institution for driving the scaling of gendered digital skills education, given the significant gaps in access to formal education in Nigeria.¹⁷ According to a 2022 UNESCO report,¹⁸ “In Nigeria, 87 percent of TVETs have not yet digitalised any part of their training programme and 82 percent of TVETs do not have an adequate digital teaching infrastructure. While the National TVET Policy¹⁹ advocates aligning curricula with ICT, the practice is different.” Within this constraint, the private sector and other non-state actors can provide complementary support to the public funding of TVET institutions with respect to teacher training, the construction of digital hubs, the development of ed-tech platforms, and so on.²⁰

Conclusion and Recommendations

This essay has shed light on contextual developments within the digital skills supply system for women and girls in Nigeria, covering their engagement and reach, delivery models, scaling strategies, impact, and the challenges to sustaining training initiatives within the Nigerian platform economy. Within the purview of the issues discussed, the essay outlines the following recommendations:


- Partnerships across ecosystem players should be accelerated in the appropriate design, development, and implementation of the gendered digital skills programmes within the local context, especially with respect to evolving a regenerated TVET system incorporating substantial online platforms and mobile learning components.

- To incentivise adoption at scale, gendered digital skills training needs to be complemented with more labour opportunities, especially at the basic to intermediate skill levels. This proposition will require a comprehensive and coherent institutional and policy framework that supports equitable livelihoods for women in emerging work forms, such as online work, crowd work, and other types of virtual work.
- Optimal monitoring and evaluation frameworks to facilitate a more holistic understanding of the short- and long-term impacts of gendered digital skilling policies and training initiatives. This mechanism will provide an evidence-based approach to defining, identifying, recruiting, and enrolling programme participants to ensure that the training reach them with the right opportunities.

Conclusion

The two articles contained in this report both underscore the need to bridge the gender digital divide in Africa, advocating for improved access to digital technologies, education, and skills development. They highlight the disproportionate challenges women face, particularly in rural and underserved areas, where limited access to digital tools and skills hinders their economic empowerment. Both articles call for a comprehensive, multi-sectoral approach involving governments, the private sector, and educational institutions to ensure that African women can actively participate in the digital economy.

Key to this is targeted interventions such as digital literacy programmes, mobile technology initiatives, and gender-specific digital training. Both articles emphasise the need for policy support and public-private partnerships, focusing on providing digital skills and mentorship for women to close the gender digital divide.

There is a need to foster partnerships between governments, the private sector, and educational institutions to ensure sustainable digital inclusion for women. Governments should prioritise policies that address the gender digital gap. At the same time, initiatives like mobile technology access and gender-specific training will be crucial to empowering women, enhancing economic participation, and driving inclusive development across Africa. 

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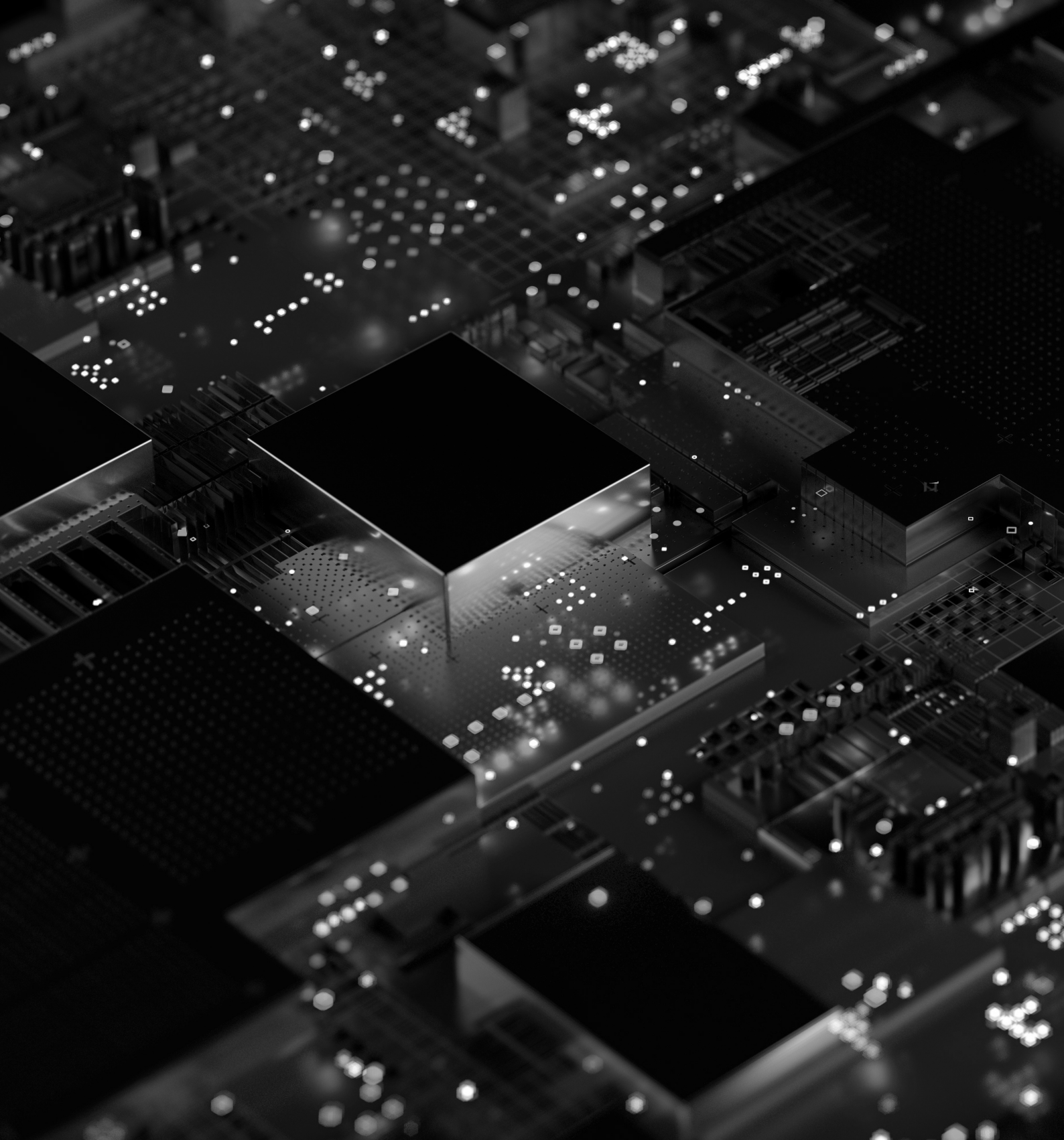
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