

## "QRIS, Platform Merdeka Mengajar, and SATUSEHAT: How Digital Products are Supporting Indonesia's SDG Progress"

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### I. Introduction

The rapid advancement of digital technologies has had a profound impact on the world, and Indonesia is no exception. In the wake of the COVID-19 pandemic, the government of Indonesia has developed and implemented several digital policy products to navigate the challenges posed by the pandemic and drive progress towards the Sustainable Development Goals (SDGs)<sup>1</sup>

#### *Digital technologies and the SDGs*

Digital technologies have the potential to support the achievement of the SDGs in a number of ways. For example, they can be used to:

1. **Improve access to education and healthcare:** Digital technologies can be used to provide educational and healthcare resources to people in remote areas, where access to these services is limited. For example, the Platform Merdeka Mengajar provides teachers with access to online resources and training, and the SATUSEHAT platform provides information and services related to COVID-19.
2. **Promote economic growth and development:** Digital technologies can be used to boost economic activity by making it easier for businesses to operate and for people to make payments. For example, the QRIS standard for QR codes has made it easier for people to make payments, which has helped to boost economic activity in Indonesia.
3. **Reduce poverty and inequality:** Digital technologies can be used to provide people with access to opportunities, which can help to reduce poverty and inequality. For example, the Platform Merdeka Mengajar has helped to improve the quality of education in Indonesia, which has the potential to reduce poverty and inequality in the long term.
4. **Protect the environment:** Digital technologies can be used to reduce the environmental impact of human activities. For example, digital technologies can be used to monitor and manage natural resources, and to promote sustainable transportation.

#### *The three digital products from Indonesia*

This paper discusses three key digital products that have been launched by the government of Indonesia and its collaborators during the COVID-19 pandemic: Quick Response Code Indonesian Standard (QRIS), Platform Merdeka Mengajar (PMM), and SATUSEHAT (formerly known as PeduliLindungi).

**QRIS** is a national standard for QR codes that can be used for electronic payments in Indonesia. It was launched in 2019 and has since been adopted by over 20 million merchants. QRIS has

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<sup>1</sup> Digital Technologies for Sustainable Development: <https://sdghelpdesk.unescap.org/knowledge-hub/thematic-area/digital-technologies-for-sdgs>

made it easier and more convenient for people to make payments, which has helped to boost economic activity<sup>2</sup>

**Platform Merdeka Mengajar** is an online platform that provides teachers with resources and support. It was launched in 2020 in response to the COVID-19 pandemic, which disrupted traditional teaching methods. Platform Merdeka Mengajar has helped teachers to continue teaching and learning even during the pandemic.

**SATUSEHAT** is a health platform that provides information and services related to COVID-19. It was launched in 2020 and has since been used by over 1 million people. SATUSEHAT has helped people to stay informed about the virus and to access healthcare services.

### **Thesis statement**

**This paper argues that digital technologies can be used to drive sustainable development in Indonesia.** The case studies of QRIS, Platform Merdeka Mengajar, and SATUSEHAT demonstrate the potential of digital technologies to improve people's lives and to advance the SDGs.

## **II. Overview of Digital Products in Indonesia**

### **A. QRIS**

The Quick Response Code Indonesian Standard (QRIS) is a nationwide interoperable QR code payment system introduced by Bank Indonesia, the country's central bank. Launched in 2019, QRIS aims to streamline digital transactions by unifying various electronic payment methods under a single QR code standard. Prior to QRIS, Indonesia's payment landscape was fragmented, with multiple competing e-wallets and digital payment platforms. QRIS revolutionized the payment ecosystem by enabling consumers to make cashless transactions seamlessly across different payment providers, promoting financial inclusion and enhancing convenience. The system's technical specifications and operational guidelines are established by Bank Indonesia, ensuring its widespread adoption and interoperability across various financial institutions, merchants, and consumers. By encouraging digital payments, QRIS contributes to the country's efforts to accelerate financial modernization and drive economic growth.

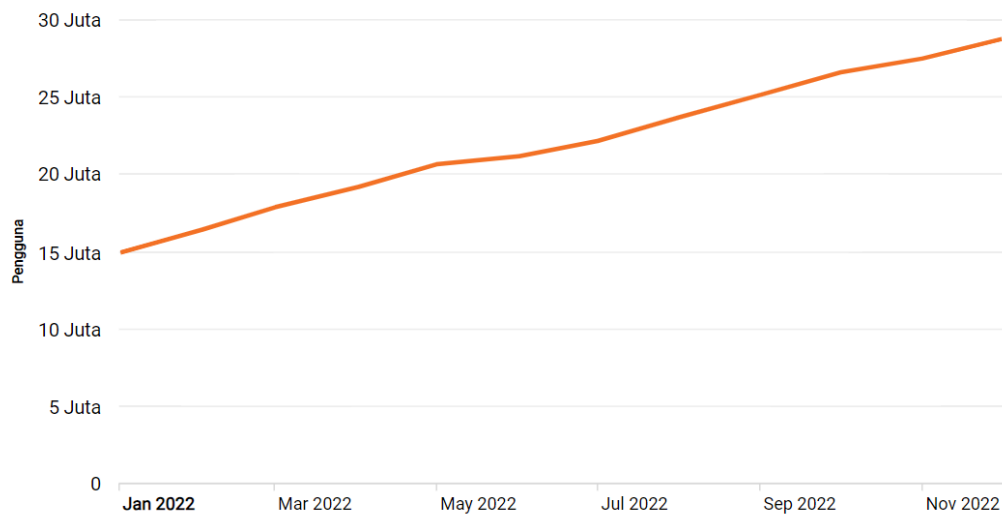
QRIS has brought numerous benefits to Indonesia's economic and financial sector, leading to significant socio-economic advancements and progress towards Sustainable Development Goals (SDGs). Firstly, QRIS enhances the efficiency and transparency of transactions, reducing the reliance on cash and informal payment methods. This reduction in cash transactions not only lowers the cost of handling physical money but also fosters formal financial inclusion by bringing previously unbanked or underbanked individuals into the formal banking system. As a result, more Indonesians gain access to essential financial services, such as credit, savings, and insurance, thereby promoting economic empowerment and poverty reduction.

Secondly, the widespread adoption of QRIS has bolstered consumer spending and boosted business activity, particularly among small and medium-sized enterprises (SMEs). The ease of digital transactions has attracted more customers to businesses accepting QRIS payments, expanding market reach and increasing revenue opportunities. This growth in economic activity

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<sup>2</sup> <https://alto.id/alto-update/detail/news/bank-indonesia-bi-officially-launched-qr-indonesia-standard-qr>

leads to higher employment rates and greater economic resilience, reinforcing Indonesia's journey towards becoming an emerging market economy.



Moreover, QRIS contributes significantly to Indonesia's progress on several Sustainable Development Goals. By promoting financial inclusion and digital payment adoption, it supports SDG 1 (No Poverty) and SDG 8 (Decent Work and Economic Growth). Additionally, the system's eco-friendly nature, which reduces the need for physical cash and receipts, aligns with SDG 12 (Responsible Consumption and Production) by promoting sustainable financial practices. Lastly, by enabling easier and faster fund transfers, QRIS supports SDG 17 (Partnerships for the Goals), encouraging collaboration between financial institutions, fintech companies, and the government to foster economic growth and achieve sustainable development.

## B. Platform Merdeka Mengajar

The Platform Merdeka Mengajar (PMM), developed by the Ministry of Education, Culture, Research and Technology (MoEC/RT), serves as an educational companion for educators to actualize the concept of Pancasila Students and Merdeka Belajar, offering learning, teaching, and creative features. Accessible through a web browser via <https://guru.kemdikbud.go.id/>, educators can log in using their belajar.id account (a paid Google account provided by MoEC/RT). PMM encompasses six main menus to support educators in various aspects.

The first menu is dedicated to student assessment, allowing educators to grasp the essence of the Kurikulum Merdeka independently, through training, or by seeking insights from colleagues. Furthermore, PMM offers a repository of teaching materials and references for the effective implementation of Kurikulum Merdeka in schools. The second menu, teaching tools, facilitates educators in gauging student learning progress through a diverse set of questions that can be shared both online and offline.

The platform's third menu, self-training, serves as a valuable resource for educators seeking inspiration and teaching materials structured according to the Kurikulum Merdeka. The fourth menu, proof of work, encourages active learning about Kurikulum Merdeka and related subjects by offering concise, relevant, and practical study materials accessible anytime, anywhere. Engaging educators in collaborative efforts, the fifth menu provides a community forum to share best practices and foster discussions on Kurikulum Merdeka implementation.

Lastly, PMM presents a collection of inspirational videos in the sixth menu, providing educators with valuable references for comprehending and effectively implementing Kurikulum Merdeka, while enhancing their teaching competence. With its comprehensive offerings, the Platform Merdeka Mengajar (PMM) exemplifies the commitment of Kemendikburistek in supporting educators to create a transformative and impactful learning environment for the Pancasila Students of Indonesia.

As a further effort of the MoEC to implement Merdeka Curriculum, in 2023 all schools who are adopting the Curriculum should then use Platform Merdeka Mengajar to register. The Q1 of 2023 helped increase the numbers of adoption and up until now we can find several good insights from the end-users regarding this product.

#### Testimony from Users

*"I can easily change the method to be more student-centered than before. A lot of teaching tools references from colleagues are available for me to use."* - **Yoki Iskandar, Karang Pucung**<sup>3</sup>

*"I can use the diagnostic assessment to understand how far my students understand my teachings. It is indeed helpful."* - **Susilo Windriyatno, Yogyakarta**<sup>4</sup>

The Platform Merdeka Mengajar (PMM) plays a crucial role in advancing Indonesia's Sustainable Development Goals (SDGs) efforts by empowering educators and enhancing the quality of education. By providing a comprehensive range of resources and tools, PMM contributes to SDG 4: Quality Education, through its focus on student assessment, teacher training, and the dissemination of relevant teaching materials. Through the platform, educators gain access to curated teaching materials aligned with the Kurikulum Merdeka, fostering innovative and effective teaching methods that align with SDG 4's aim to ensure inclusive and equitable quality education for all. Additionally, PMM's community forum cultivates knowledge-sharing among educators, aligning with SDG 17: Partnerships for the Goals, as it encourages collaborative efforts to improve education outcomes. By equipping educators with the necessary tools and support, the Platform Merdeka Mengajar contributes significantly to Indonesia's sustainable development agenda, fostering a well-rounded and empowered generation of Pancasila Students, capable of driving positive change in society.

### C. SATUSEHAT

The SATUSEHAT platform, formerly known as PeduliLindungi, is a groundbreaking mobile application developed by the Ministry of Health of the Republic of Indonesia. Initially launched as PeduliLindungi, the app was created as a comprehensive health solution in response to the challenges posed by the COVID-19 pandemic. It played a crucial role in supporting Indonesia's efforts to curb the spread of the virus and protect public health.

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<sup>3</sup> KEMENDIKBUD RI, Youtube: <https://youtu.be/xA0Wjj14Nrk>

<sup>4</sup> Larasati, Citra, 2022, Platform Merdeka Mengajar, Ini Testimoni Guru Setelah Menggunakannya, <https://www.medcom.id/pendidikan/cerita-guru/GNIWgpPK-platform-merdeka-mengajar-ini-testimoni-guru-setelah-menggunakannya>

PeduliLindungi was designed as a multifunctional app to aid in contact tracing, COVID-19 testing registration, and notification of potential exposure to the virus. Its primary purpose was to empower users to play an active role in preventing infections and breaking the chain of transmission. Through the app, individuals could receive real-time updates about COVID-19 cases, access relevant health information, and receive notifications to take necessary precautions based on their potential risk of exposure.

As the pandemic situation evolved and the needs of the population changed, the Ministry of Health recognized the opportunity to expand the app's scope beyond COVID-19 response. Thus, the transformation from PeduliLindungi to SATUSEHAT took place. SATUSEHAT retains the original functionalities of PeduliLindungi related to COVID-19 prevention and response, while also incorporating a broader range of health services and features.

At its core, SATUSEHAT is a dynamic and user-friendly mobile application designed to cater to the diverse healthcare needs of Indonesia's population. The platform offers a multitude of features, ranging from personalized health profiles and virtual health consultations to health education resources and disease tracking tools. By seamlessly integrating telemedicine services into the platform, SATUSEHAT enables individuals, regardless of their geographical location, to access timely medical advice and care, reducing the burden on traditional healthcare facilities and increasing the efficiency of healthcare delivery. Moreover, the platform's emphasis on health education and preventive care ensures that users are well-informed about health risks and proactively take measures to maintain a healthy lifestyle, leading to reduced healthcare costs and improved overall well-being for the nation. As the SATUSEHAT platform continues to evolve and expand its reach, it exemplifies the Ministry of Health's commitment to leveraging technology for the betterment of public health, paving the way towards a healthier and more resilient Indonesia.



*The previous UI of PeduliLindungi Application<sup>5</sup>*

SATUSEHAT plays a pivotal role in advancing Indonesia's Sustainable Development Goals (SDGs) efforts by fostering a healthier and more resilient nation. Through its comprehensive digital health platform, SATUSEHAT contributes to several key areas of the SDGs. Firstly, in the

<sup>5</sup> Setyowati, Desy. 2022. Tampilan Baru Pedulilindungi: Ada Fitur Layanan Isoman Telemedicine, <https://katadata.co.id/desysetyowati/digital/621b42b9093b8/tampilan-baru-pedulilindungi-ada-fitur-layanan-isoman-telemedicine>

realm of Good Health and Well-being (SDG 3), the app empowers citizens to proactively monitor their health, access relevant health information, and stay informed about COVID-19 cases in their vicinity. By encouraging regular health check-ups and promoting preventive measures, SATUSEHAT supports efforts to reduce disease burden and improve overall well-being.

Secondly, SATUSEHAT contributes to Quality Education (SDG 4) by disseminating critical health information and educational resources to the public. The app enhances health literacy and awareness, empowering individuals to make informed decisions about their health and that of their communities. Moreover, through community engagement features, SATUSEHAT fosters a culture of shared learning and knowledge exchange among users, promoting a more informed and health-conscious society.

In alignment with SDG 9 (Industry, Innovation, and Infrastructure), SATUSEHAT showcases Indonesia's technological advancements in healthcare. Its transformation from PeduliLindungi to a comprehensive health platform exemplifies the country's commitment to leveraging digital innovation for public health solutions. The app's sophisticated features, including contact tracing, COVID-19 testing registration, and health service bookings, demonstrate how technology can be harnessed to build more efficient and resilient health systems.<sup>6</sup>

Lastly, SATUSEHAT's emphasis on community and public engagement corresponds with SDG 17 (Partnerships for the Goals). By fostering collaboration between the government, private sector, and citizens, the app promotes a collective effort towards achieving health-related SDGs. SATUSEHAT's user-friendly interface and widespread accessibility also enable more inclusive participation in health initiatives, ensuring that no one is left behind in Indonesia's pursuit of a healthier and more sustainable future. Overall, SATUSEHAT serves as a powerful tool in advancing Indonesia's progress towards the SDGs, laying the foundation for a healthier and more prosperous nation.

### **III. Challenges and further opportunities**

#### **A. Challenges**

Building the QRIS (Quick Response Code Indonesian Standard) and implementing it across various sectors in Indonesia posed several challenges in the realm of SDGs. Firstly, the sheer scale and diversity of the Indonesian economy presented a formidable obstacle. Indonesia is a vast archipelago with a wide range of economic activities, from large cities to remote rural areas. Creating a standardized QR code system that could be universally adopted and seamlessly integrated into diverse payment systems required extensive coordination and collaboration among various stakeholders, including government agencies, financial institutions, businesses, and technology providers. Ensuring equitable access to digital payments and financial services, especially in underserved regions, was a crucial aspect of the QRIS implementation.

Similarly, the development and expansion of the Platform Merdeka Mengajar to enhance education in Indonesia were met with unique challenges concerning SDGs. One of the primary challenges was bridging the digital divide and ensuring equitable access to educational resources. While urban areas often had better access to digital infrastructure and internet connectivity, rural and remote regions faced infrastructure gaps that hindered the seamless adoption of the platform.

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<sup>6</sup> Prasetyo, Yoyok Bekti. 2022. Sudahkah Indonesia Sehat?, <https://www.kompas.id/baca/opini/2022/11/11/sudahkah-indonesia-sehat>

Addressing these disparities required investment in digital infrastructure and efforts to train educators and students in effectively utilizing the platform's features. Additionally, aligning the platform's curriculum with national educational standards and ensuring its relevance and applicability across diverse contexts were critical to promoting inclusive and quality education (SDG 4). Overcoming these challenges required collaborative efforts among the Ministry of Education, technology partners, educators, and local communities, underpinning Indonesia's commitment to SDG 17 (Partnerships for the Goals) and the goal of leaving no one behind in educational development.

The transformation from PeduliLindungi to SATUSEHAT also faced multifaceted challenges. One of the foremost challenges was to ensure public trust and confidence in using the app, particularly concerning data privacy and security. As the platform collected sensitive health information and played a crucial role in COVID-19 response measures, ensuring robust data protection frameworks and transparent communication with users was essential. Building such trust required open dialogue and strong partnerships between the Ministry of Health and various stakeholders, including the private sector and civil society. Moreover, promoting digital health literacy among the population was crucial to maximize the app's potential impact on SDG 3 (Good Health and Well-being). Educating users about the app's features and benefits, particularly in remote and underserved areas, was vital to encouraging widespread adoption and utilization.

## **B. Opportunities and closing**

Amidst the challenges, building the QRIS, expanding the Platform Merdeka Mengajar, and transforming PeduliLindungi to SATUSEHAT also present significant opportunities to accelerate progress towards Indonesia's SDGs by 2030.

In the case of QRIS, the widespread adoption of digital payments can foster financial inclusion, particularly for the unbanked and underbanked populations. By leveraging technology and innovative financial services, such as mobile banking and digital wallets, Indonesia has the potential to advance towards SDG 1 (No Poverty) and SDG 8 (Decent Work and Economic Growth). Encouraging micro, small, and medium-sized enterprises (MSMEs) to adopt the QRIS can empower them to access formal financial services and facilitate economic growth. To expedite this process, public-private partnerships can play a vital role. Collaborations between government agencies, financial institutions, and technology companies can help streamline QRIS implementation, enhance user education, and develop tailored solutions for different sectors.

Similarly, the expansion of the Platform Merdeka Mengajar provides a unique opportunity to enhance the quality and inclusivity of education in Indonesia, thereby contributing to SDG 4 (Quality Education). By fostering a supportive digital learning environment, the platform can bridge the education gap between urban and rural areas. To accelerate its impact, investing in digital infrastructure and providing access to devices and internet connectivity in remote regions will be critical. Moreover, promoting partnerships between educational institutions, non-governmental organizations, and private enterprises can enrich the platform's content and pedagogy, ensuring it remains relevant and adaptable to various learning needs.

The transformation of PeduliLindungi to SATUSEHAT presents an opportunity to strengthen Indonesia's public health response and advance progress towards SDG 3 (Good Health and Well-being). By optimizing the app's capabilities, such as contact tracing, health monitoring, and vaccination registration, SATUSEHAT can support the government in efficiently combating health crises. To expedite its adoption, comprehensive public awareness campaigns and digital health literacy initiatives are essential. Collaborating with local leaders, community organizations, and

healthcare providers will help reach underserved populations, making them aware of the app's benefits and encouraging active participation.

To speed up progress towards 2030, a multi-faceted approach is required. Firstly, fostering an enabling regulatory environment that encourages innovation and digital transformation is crucial. Policymakers can promote investment in digital infrastructure and incentivize businesses and individuals to adopt digital technologies aligned with the SDGs. Secondly, establishing strong public-private partnerships will enhance resource mobilization, knowledge sharing, and expertise utilization. By leveraging the collective strengths of government, businesses, academia, and civil society, Indonesia can drive progress across various SDGs effectively. Thirdly, continuous monitoring, evaluation, and data-driven decision-making are paramount. Robust data collection and analysis will enable policymakers to identify gaps, measure impact, and fine-tune strategies to accelerate progress. Lastly, inclusivity and equity should remain at the forefront of all initiatives. Engaging with marginalized communities, ensuring digital accessibility, and addressing disparities will ensure that the benefits of these initiatives are widespread and truly transformative for all Indonesians. By harnessing these opportunities and accelerating collaborative efforts, Indonesia can chart a course towards achieving its SDGs and building a more sustainable, equitable, and prosperous future by 2030.



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