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www.oga.gm

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### **Foreword**

As Gambia is currently on its path of digital Transformation, the need to harness technology as a powerful enabler and design solutions tailored to our local context has never been more pressing. Our lives are being subtly reshaped by digital innovation across diverse sectors, with the digitization of commerce emerging as a pivotal transformation that holds the potential to fuel economic growth. It promises to empower small businesses, foster youth employment, expand consumer choices, and ensure the inclusion of often-overlooked segments of our population. The emergence of digital public infrastructure (DPI) and Open Networks that unlocks digital inclusion and economic participation - at population scale - presents an opportunity and the "Open Gambia" initiative is an important step in that journey.

The "Open Gambia" (OGa) initiative is an ambitious attempt to reimagine digital commerce in Gambia in line with our Digital Transformation efforts. Our initial focus lay in building on ground capacity and enabling a team of young experts who can not only engage with technology but actively build context specific solutions. Taking forward our mission in collaboration with an empowered-on ground task force, we are now establishing an open transaction network for commerce, as we aspire to transform Gambia into a knowledge and innovation-driven economy. OGa will enable our citizens to access food and groceries online and pay for the products digitally. The open network will enable a fair and transparent digital commerce ecosystem, empowering small businesses, enhancing user convenience, ensuring competitive pricing, and enabling a wide range of choices to the end consumers. In this concept paper, you'll read more about exciting use cases that the "Open Gambia" initiative could unlock in the Gambia. This is not only a glimpse into the future but also an exploration of the benefits and opportunities it can bring to consumers, small and local businesses, delivery and logistics companies, NGOs, startups, among many others.

Yet, this merely scratches the surface of the "Open Gambia" network. As Gambia moves forward in its journey of complete digital transformation, our goal extends far beyond the Commerce sector; we aim to revitalise critical growth sectors such as Urban Mobility, Agriculture, Tourism and Hospitality, Health & Wellness, and many more. Our vision is to create an innovation-first economy that is fair, inclusive, and equitable, and this foreword marks the beginning of our journey toward this ambitious aspiration.

Ousman Bah

Hon. Minister of Communication & Digital Economy

The Gambia



### INTRODUCTION

Throughout the history, societies and governments have constructed physical infrastructure, such as roads, railways, institutions, schools, etc driven by the overarching goal of advancing economic growth and fostering all-inclusive development, firmly rooted in the principle of unrestricted accessibility. Public Infrastructure has further allowed governments, private organisations, and civil societies to drive innovation.

Let's take an example of roads - Development of roads from villages and peri urban areas to urban centres not only enables easy mobility of people but also opens up commercial opportunities, thus creating value.

Development of rails enables faster mobility and transport of goods and services, thus triggering a cascade of benefits stemming from the initial infrastructure investment, benefiting all stakeholders and facilitating regional development.

Nevertheless, we find ourselves in an increasingly digital world, where the locus of interactions between individuals and businesses is steadily shifting towards the digital. With technological advances increasingly proliferating our daily lives, it is essential that we now focus our attention on building open digital infrastructure or digital rails to enable greater market participation and propel economic growth in alignment with the paradigm shift.





### **SOLUTION**

The solution lies in setting up "Digital Public Infrastructure(DPI)" designed to establish an equitable and competitive environment, facilitated by transparent and supportive policies that can leapfrog innovation and inclusion. Countries must set up their own digital infrastructure to safeguard sovereignty, foster innovation, encourage competition, and stimulate local economic growth. Governments have traditionally favoured a policy and regulatory strategy to enhance market competitiveness and innovation. Central to this endeavour are the concepts of interoperability and openness, that level the playing field and drive innovation while preserving digital data sovereignty.



Photo Credits: Desola Lanre-Ologun on Unsplash

Digital Public Infrastructure
(DPI) is a set of technology
building blocks powered by
interoperable open
standards/specifications
operated under a set of enabling
rules having open, transparent,
and participatory governance
to drive innovation, inclusion,
and competition at scale



The world has seen limited efforts in building DPIs since the adoption of ones like the internet, email, and telecom networks. The Internet for example is an open infrastructure but in the digital world powered by open protocols and standards - not owned by any specific government, state, or private entity yet serves public interest - and that has unlocked massive amounts of growth, fosters innovation and creates enormous value through the digital and physical economy. Innovation such as instant messaging & video-conferencing, learning & skilling, ride-hailing, e-commerce, logistics, travel & hospitality, telehealth, government-tech services and much more, is a natural consequence of the open digital infrastructure of the internet.

With the focus of the Gambia Ministry of Communications and Digital Economy on setting up the infrastructure for Digital IDs, payment gateways, e-Government Services and Gambia Online Portal, it is evident that the country is already on its course to address the digital needs through Digital Public Infrastructure.

Additionally, in the framework of Gambia's e-government strategy for 2021-2024, one of the objectives is to establish a unified digital infrastructure. This involves ensuring that the Government's ICT systems, encompassing networks, platforms, applications, and data, are not only interoperable but also enhanced with collaborative applications and integrated ICT systems management. Furthermore, the strategy emphasises the use of ICTs and e-Government services to ensure universal access, enabling all citizens to participate and benefit equitably from ICT resources.



The digital economy in The Gambia is still in its early stages, but promising developments have emerged in domains such as mobility and ecommerce, owing to the efforts of startups and innovators. The country has already started its journey towards complete digital transformation, but it is imperative to take a step back and focus on creating an ecosystem that is open, decentralised and interoperable thus enabling grounds up innovation and growth, and supplementing Govt's effort in formalising digital initiatives across sectors and industries.

## LAYING THE FOUNDATION BLOCKS

As in digital economies world over, current digital platforms in The Gambia that connect consumers and provider too operate as closed loop systems. These systems create platform silos which results in consumers switching through multiple applications to find the local restaurant, ride option, etc - thus creating a broken user experience. Furthermore, providers have to list themselves on multiple platforms to enable their offering to a large pool of consumers, while dealing with high commission charges, non-transferability of ratings and reviews and lack of choices.



What if there was a simple mechanism that can enable interoperability between businesses and transactions across platforms as Gambia builds its digital economy?

It would open up a significantly larger market access for sellers and increase choice for consumers. Creation of a network of platforms will not only significantly increase market access of platforms and enable more interconnected choices for consumers but also trigger exponential growth transcending boundaries.



Open Networks are open, peer to peer decentralized networks for pan sector economic transactions. To deep dive into Open Networks, it is prudent to recall the design of the internet and email to bring out the underlying principles of interoperability & decentralisation in place of intermediation. In the case of email, the sender can be on any platform and the receiver can be on any other platform, yet they can discover each other based on a simple email address through an underlying protocol called Simple Mail Transfer Protocol (SMTP). What if we were to replicate this for digital transactions? One way is to unbundle the traditional, monolithic platform structure with central intermediaries, and enable buyers and sellers to be on any platform of their choice; and still discover, transact with each other (e.g. booking a ride, booking a stay, order groceries, etc.). But for this, there is a need for a protocol, like SMTP, which can enable two platforms to talk to each other and carry out economic transactions.

And this is the core purpose that the open source effort called Beckn protocol serves. So, what is Beckn Protocol?

**Beckn protocol**<sup>1</sup> (or Beckn in short) is a set of lightweight open specifications to enable dynamic discovery of any type of resource (taxis, restaurants, stay, people services, medical services, various types of products and services), engage, and conduct digital transactions between a consumer and providers of such resources. It enables creation of a peer-to-peer decentralised network consisting of independent buyer-side and seller-side platforms.

Beckn Protocol is fully an open source specification (licensed under Creative Commons) available in a public workspace (GitHub), and collectively governed by a global community of volunteers and participating organisations.

¹https://becknprotocol.io/



When multiple Beckn-enabled applications come together, it creates interoperable open networks which enables unlocking massive flow and exchange of value across many connected platforms. It allows combinatorial bundling of experiences across categories, e.g. booking a cab and getting a coffee delivered to the moving car, or buying multi-modal single-ticket for a combination of cab, metro and an e-bike. It also redistributes the cost and risk across the value-chain, improving the efficiency and throughput of the overall system. With open networks, for the small businesses, the cost of customer acquisition and servicing goes down multifolds.



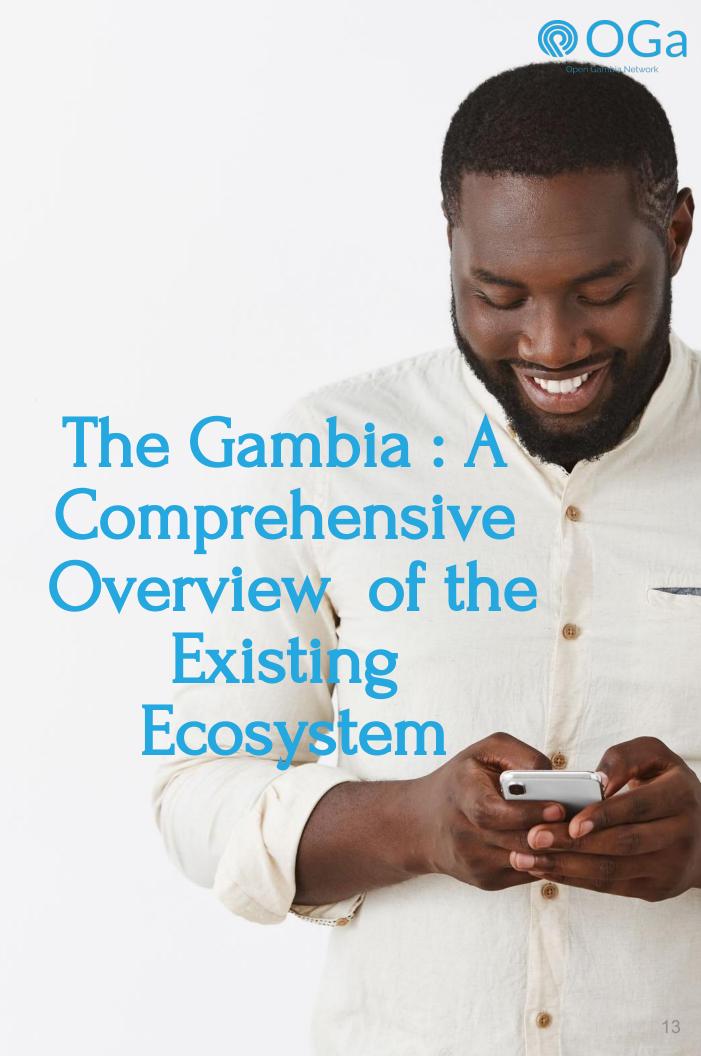
India, in particular, has adopted Beckn to build open networks primarily in mobility and hyperlocal commerce. Of these, Namma Yatri and Open Network for Digital Commerce (ONDC) are witnessing early signs of success. Beckn, being a global open source effort, is also being explored by implementers in other parts of the world. Further details are added in the annexure.



To initiate digital transformation in The Gambia, the first crucial step is enabling existing players in sectors like food & beverage, groceries, and logistics to become Open Network compliant and set the stage for innovation to thrive through a collaborative entrepreneurial ecosystem. This approach allows the people of The Gambia to directly experience the advantages of an open network in their everyday activities, such as food ordering and grocery delivery. Once this model is established, it can serve as a compelling example, encouraging the community and local entrepreneurs to replicate similar efforts across other sectors such as mobility, healthcare, and tourism.



This highlights the need for The Gambia to embrace digital transformation initiatives such as DPI and Open Networks and set the foundation that will set a clear pathway for multi-sectoral, country-wide transformation. By adopting open networks, Gambia can facilitate interoperable digital commerce, allowing individuals and communities across the nation to engage in digital transactions seamlessly, regardless of the platforms they choose. This move not only fosters inclusivity but also empowers communities in The Gambian to participate actively in shaping the digital landscape sustainably. This model can then by further replicated by neighbouring countries in the West Africa which can enable creation of an Open Digital Zone across the region, thus enabling countries to participate in cross border economic transactions.





### A look into the current state of Gambian economy

In the dynamic landscape of today's global economy, eCommerce stands as a pivotal force shaping consumer behaviour and lifestyles. While select nations have adeptly harnessed its potential to propel economies, there are still many countries yet to leverage its power fully, such as The Gambia. eCommerce not only acts as a medium for transactional exchange and seamless shopping experiences but also drives local businesses to participate in the digital ecosystem, fostering a culture of innovation and entrepreneurship.

The Gambia. country located on the western coast of Africa, is home to a population of approximately 2.64 million people. In 2021, with a GDP of 2.08 billion US Dollars. retail and wholesale contributed to about 25%2 of the GDP, while transport, storage and communication sector contributed to 11%3, which are both significantly lower predominant than the agriculture sector.



Although sectors like commerce and mobility have largely remained ignored, they are expected to grow in the next few years. By 2027, the eCommerce market volume is projected to be US\$84.0 million<sup>4</sup>, whereas the shared mobility market is projected to reach a market volume of US\$19.43 million<sup>5</sup>. This highlights a potential for growth in digital commerce that can be expedited by a Digital Public Infrastructure (DPI) enabled ecosystem.

<sup>&</sup>lt;sup>2</sup> https://www.wto.org/english/tratop\_e/tpr\_e/s365\_sum\_e.pdf

https://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/AfDB - Gambia - Transport sector diagnostic study.pdf

<sup>4</sup> https://ecommercedb.com/markets/gm/all

<sup>5</sup> https://www.statista.com/outlook/mmo/shared-mobility/gambia



### Gambia's current Digital Commerce Ecosystem

Gambia's eCommerce sector is still in its nascent stages but it shows significant potential for growth, driven by the increasing mobile phone penetration rate and internet connectivity. With a 40%<sup>6</sup> average annual growth in mobile phone users over the past several years, and an internet penetration rate of 51% in 2022<sup>7</sup>, eCommerce shows a promising opportunity in the country. Additionally, digital financial services have also gained prominence, with banks and mobile companies offering e-banking and mobile money options respectively.

Gambia has seen an 40% annual growth in mobile phone users, and an internet penetration rate of 51%

A key factor propelling this growth is a gradual, but much awaited rise in digital financial services in the country. Banks and mobile companies have recently begun to offer digital services such as e-banking and mobile money services. This transition towards digital transactions has laid a robust foundation for the eCommerce sector, which can now enable smoother and more secure online payment methods.

However, despite these advancements, the current state of eCommerce in Gambia is characterised by websites that primarily function as digital storefronts for businesses, lacking integrated transactional capabilities. In essence, most of these websites serve merely as online advertising platforms, necessitating in-person transactions, which limit the potential of online commerce. While there is a rising demand for online goods, the high costs associated with delivery pose another significant challenge for online shoppers, making the prospect of eCommerce less accessible and more expensive for consumers



Photo Credits: ipopba on Freep



Furthermore, there exists a significant gap in awareness and understanding of the need for digital commerce, tools and the process of digitising businesses, which has hindered the widespread adoption of comprehensive eCommerce solutions across the country. To bridge this gap, it is imperative to create a more accessible and user-friendly eCommerce experience for both consumers and businesses in Gambia. This highlights the need for a digital ecosystem that enables access to different kinds of services through a decentralised platform, taking away the hassle of switching between multiple platforms and the inconvenience it brings with it for both consumers and providers.





### Gambia's current Mobility Ecosystem



Shared mobility in The Gambia is evolving rapidly, with an expected annual growth rate of 3.00% between 2023 and 2027<sup>8</sup>. Although gradual, this shift reflects changing transportation preferences as people embrace options like ride-sharing and carpooling.

According to the African Infrastructure Country Diagnostic Study, an investment of USD 35.0 million per annum<sup>9</sup> (7.75% of GDP) is needed to meet connectivity and mobility needs in the country. This presents an opportunity to invest in shared mobility for last-mile connectivity in Gambia.

In the current landscape, accessing reliable transportation in Gambia poses a significant challenge, primarily owing to the limited integration of technology and infrastructural deficiencies. The predominant local transit options comprise Yellow Taxis and Bush Taxis (Minibuses). However, these modes of transport bring forth a myriad of challenges for commuters.

In the current landscape, accessing reliable transportation in Gambia poses a significant challenge, primarily owing to the limited integration of technology and infrastructural deficiencies. The predominant local transit options comprise Yellow Taxis and Bush Taxis (Minibuses). However, these modes of transport bring forth a myriad of challenges for commuters.

<sup>8</sup> https://www.statista.com/outlook/mmo/shared-mobility/gambia

<sup>&</sup>lt;sup>9</sup> THE GAMBIA: Transport Sector Diagnostic Study





Firstly, inflated fares are a common challenge. Many commuters find themselves burdened by higher-than-necessary costs for their journeys. Unfair treatment<sup>10</sup> is another issue, with passengers occasionally subjected to unprofessional conduct by some drivers who engage in disputes over fares. Furthermore, there is a noticeable lack of reliable information concerning bus routes and schedules, leaving commuters uncertain and often stranded with no choice but to walk to other bus or taxi-hubs, especially in unfamiliar areas.

On the other side of the spectrum, Gambian taxi drivers are grappling with their own set of challenges. They face financial pressure due to commissions<sup>11</sup> owed to middlemen and high rental fees for the vehicles they operate. These factors make it increasingly difficult for taxi drivers to earn a decent income, despite the long hours that they put in.

Additionally, the penetration of ride-sharing platforms in Gambia remains limited with a few players who have emerged over the past few years. Gambian taxi companies exist and they operate in silos. They have their own websites, which are mainly targeted towards tourists, which further reduces options for daily commuters of the country.

<sup>&</sup>lt;sup>10</sup> https://thepoint.gm/africa/gambia/article/unfair-treatment

https://www.chronicle.gm/hand-to-mouth-why-taxi-driving-in-the-gambia-is-no-picnic/



## How can open networks provide a more collaborative and alternate solution?

**Discovery of Services:** Open networks facilitate the discovery of products and services such as food, beverages, groceries, ride sharing services and much more across any application that is compliant with the Beckn Open Network Protocol. This enables consumers to easily find products and services regardless of the platform they are using, eliminating the hassle of switching between multiple platforms.

**Interoperable platforms:** Open networks enable seamless communication and data exchange between different ecommerce platforms and digital services. For instance, it enables seamless communication between a food ordering app, payment app and a delivery app, taxihailing app and an app to book buses, trains and so on, ultimately promoting a unified digital ecosystem.

**Enhanced Access:** Open Networks enable local businesses to have an online presence and transact digitally, enhancing their access to a vast user base without the substantial marketing expenses. This in turn also increases consumer access to a wide variety of locally available options for their shopping and mobility needs.

**Autonomy:** Open networks grant businesses more control over their digital presence and earnings. By eliminating intermediaries and enabling direct transactions between buyers and sellers, businesses can offer competitive prices, and consumers can enjoy cost-effective products and services.

**Inclusivity:** Open networks provide equal opportunities for all businesses, including small and local entrepreneurs, to participate in the digital economy. This inclusivity allows businesses of all sizes to thrive and reach a wider consumer base.

**Innovation:** Open networks foster innovation by allowing startups and entrepreneurs to build upon existing platforms With open APIs and collaborative frameworks, newer, innovative and sustainable solutions can be developed, addressing specific challenges faced by diverse sectors in the Gambia.





OGa is a pioneering Open Network mission in The Gambia which aims to establish a countrywide, multi-sector Open Network for digital commerce. Enabled by the Beckn Protocol, OGa aims to facilitate discovery of services, service fulfilment, and payments within this network. OGa's initial focus is on the retail sector, ensuring every business, small or big, can offer services and transact digitally. Other sectors such as mobility, hospitality, healthcare and more are envisioned to join, expanding the network's reach and benefits.

OGa will enable B2B & B2C discovery and transactions of food and beverages, groceries, mobility services and more, by enabling platform-agnostic interoperability.

By eliminating the need for individual contracts among network participants, various ecommerce platforms, logistics providers, and payment gateways will be seamlessly connected through OGa.

This means that local businesses that offer food, beverages, groceries and mobility services will be able to establish an online presence and transact digitally, without any hassle.



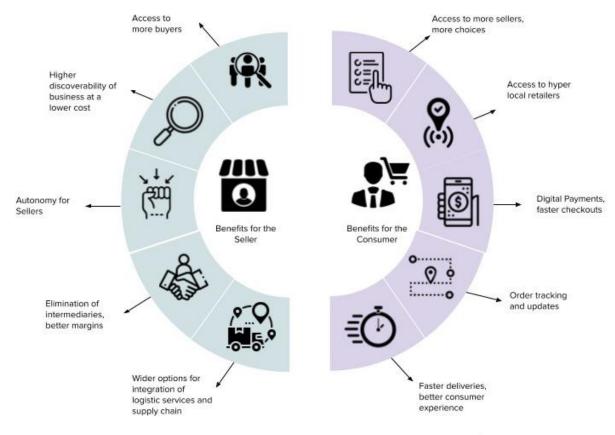
Photo Credits: F



## Food, beverages and groceries with Open Gambia

Food, beverages and groceries delivery, as the first mission under the Open Gambia initiative, aims to create an interoperable and accessible platform that fosters openness and decentralisation. This network will facilitate local food, grocery and logistics providers to discover each other, exchange services, and enable hyperlocal deliveries. Open Gambia will enable interoperability across multiple food-ordering, grocery-delivery and logistics platforms via a "set of standardised protocols" for platforms to discover and transact amongst themselves seamlessly agnostic of the technology used to enable access or provide services to the consumers. This will ultimately allow users to access a wider pool of providers quickly and allow providers to reach a large pool of consumers with limited marketing costs.

Photo Credits: Freepik



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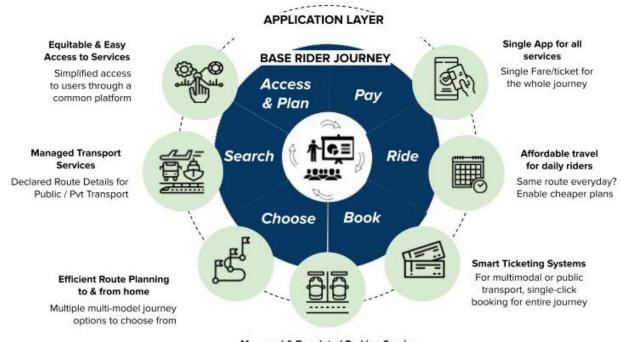
### Mobility with Open Gambia

Mobility is in the pipeline for Open Gambia's vision for 2024. This shows a promising potential to reshape the mobility landscape for both cab drivers and consumers, bridging the gap between the supply and demand for transportation across diverse locations in Gambia.

For cab drivers, this move opens doors to a vast pool of potential customers, which can significantly increase their earning potential. Conversely, consumers gain access to a wide network of drivers and public transportation options, along with transparency of prices, eliminating the need for haggling with drivers.

Moreover, the integration of public transportation within this network will enable consumers to effortlessly access information about bus routes, timings, and even book public transport services. This seamless integration of various modes of transportation into a single app guarantees a cohesive, multi-modal journey, fostering sustainable mobility practices. The concept of last-mile connectivity becomes a reality, offering a holistic transportation experience from start to finish. With this comprehensive mobility solution, commuters can book a hassle-free, stitched-together experience that optimises time, energy, and resources.

Photo Credits: diegothomazini on Free



Managed & Regulated Parking Services For pvt. vehicle users, book, park and pay through digital systems

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### Who will benefit from OGa?

An open network for food delivery, grocery delivery, logistics and mobility in The Gambia could benefit various stakeholders:

01

**Consumers** can enjoy a wider variety of choices and improved convenience in accessing food and grocery delivery services, as well as local transportation. Open networks can lead to increased competition among service providers, resulting in better services and lower prices for consumers.

02

**Small and local businesses**, including restaurants, grocery stores, and local farmers, can reach a larger customer base through open networks with minimum marketing expenditure. This expanded market access can boost their sales and revenue.

03

Open Gambia network can enable more job opportunities for **delivery agents**, **drivers and gig workers**, creating a more flexible job market where individuals can choose when and how much they want to work.

04

An open network can provide valuable data on consumer behaviour, supply and demand patterns, helping the **government** make informed policy decisions. Additionally, by facilitating transparent economic transactions and fostering healthy market competition, the open network can contribute significantly to boosting the local economy, promoting entrepreneurship, and creating sustainable employment opportunities.



05

Improved food and grocery delivery services, as well as efficient mobility options, can enhance the overall experience for tourists, potentially boosting the **tourism industry** in The Gambia.

06

Companies providing technology solutions, and **start-ups** can leverage the ease of integration of their platforms onto the open network, providing these companies with a unique opportunity to develop and deploy innovative solutions.

07

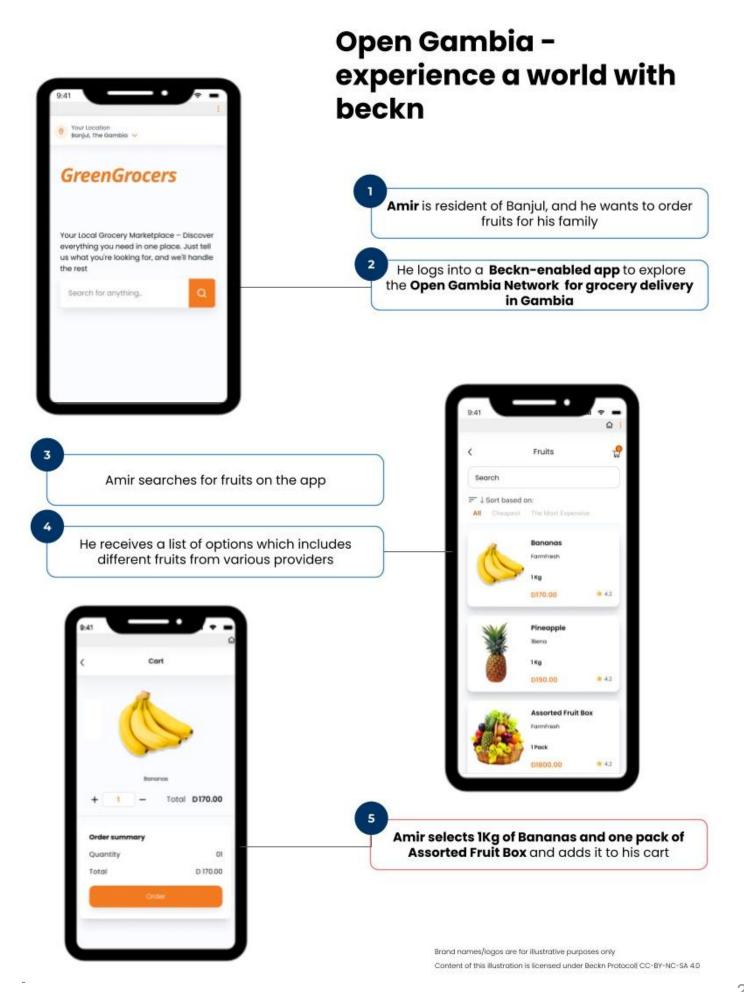
Non-Governmental Organisations (NGOs) and Social Enterprises working on food security, poverty alleviation, and social welfare in The Gambia can leverage open networks to ensure that essential supplies reach vulnerable populations efficiently.

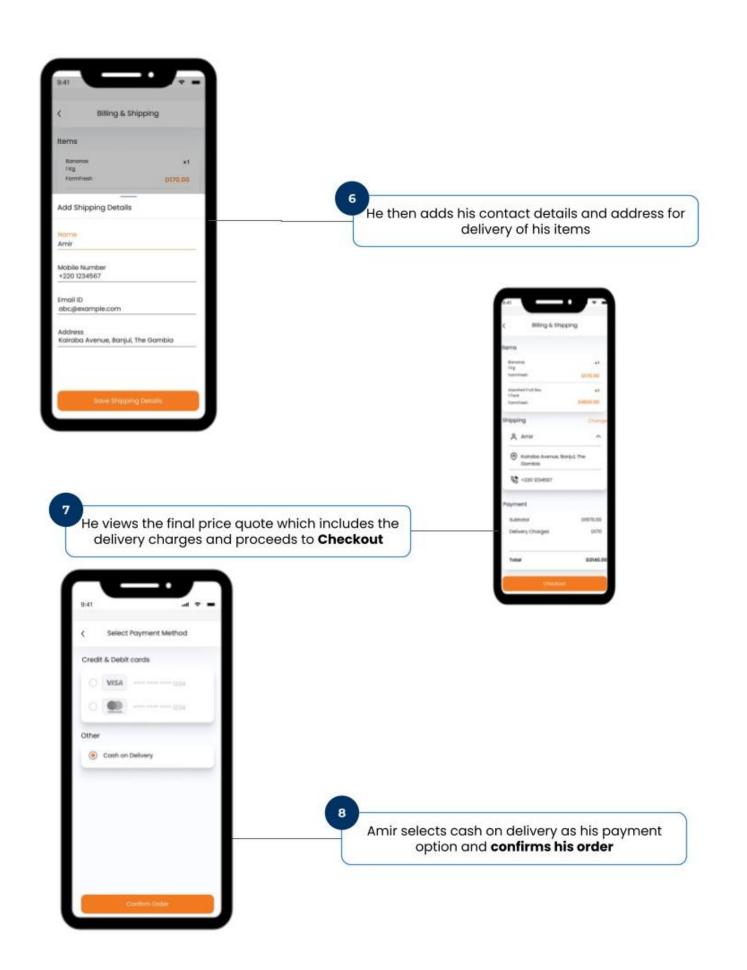
### Who will facilitate this network?

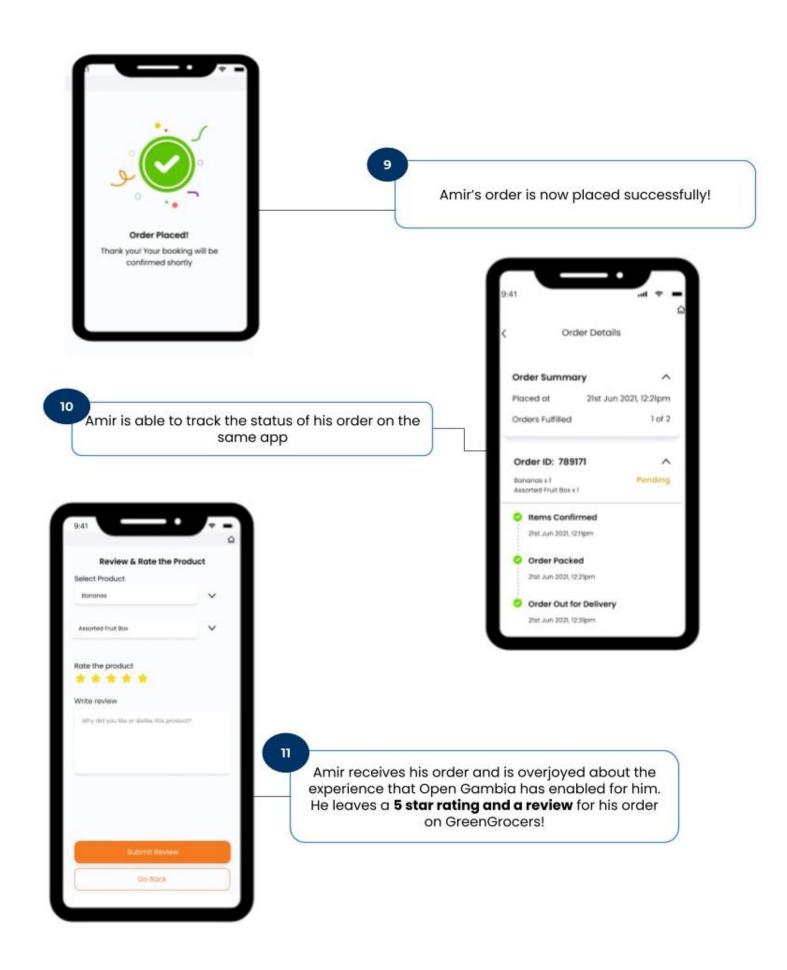
OGa is a community-led initiative in The Gambia, intended to benefit local businesses across all sectors as well as the consumers. The mission is incubated and led by Foundation for Digital Economy (FoDE), along with Beckn Open Collective as the Open Network Protocol Partner.

FoDE, as the lead, will help bring together interested participants on both provider and consumer sides to kick-start the pilot, after which it will be a community driven mission, where participants can join the network directly.











## Has an Open Network Initiative been established anywhere else in the world?

### Success Stories from India

India's experience with open networks has been transformative, fostering inclusivity and interoperability in the digital ecosystem across sectors. The *Open Network for Digital Commerce (ONDC)*<sup>12</sup> stands out as a prime example, experiencing remarkable growth within a short period. By 2030, ONDC has the potential to multiply digital consumption by five times and result in a sevenfold<sup>13</sup> increase in MSMEs' participating in digital commerce. This, in turn, could contribute to a remarkable growth in self-employed workers on digital platforms.

Moving beyond digital commerce, India has also embraced open networks in the mobility sector. *Kochi Open Mobility Network*<sup>14</sup> is the world's first open mobility network, which focuses on creating an open platform for shared mobility services. By integrating different types of urban mobility solutions, it not only enhances convenience for commuters but also optimises the utilisation of transportation resources, leading to reduced traffic congestion and environmental impact. The network has more than 1200+ taxi drivers onboarded to serve 3 million citizens in Kochi.

Another open mobility initiative is **Namma Yatri**<sup>15</sup>, in the city of Bengaluru. By leveraging open networks, Namma Yatri enables commuters to book auto rides by providing a direct-to-driver application, without any middle-men, offering seamless last mile connectivity with government prescribed fares. As of October 2023, almost a year since their inception, they have achieved a significant milestone by completing their 11 millionth ride. Furthermore, in one year, they have onboarded 97,900 drivers catering to over 2.07 million registered commuters and are clocking nearly 90,000 completed trips everyday.

https://ondc.org/

<sup>&</sup>lt;sup>13</sup> Democratising Digital Commerce in India: ONDC - Report by McKinsey & Company https://ondc-static-website-media.s3.ap-south-

<sup>1.</sup>amazonaws.com/res/daea2fs3n/image/upload/ondc-website/files/democratising-digital-commerce-in-india-april-2023.pdf

https://openkochi.net/

https://nammayatri.in/







### Tourism and Hospitality

In an increasingly digital world, most tourists arrive already accustomed to utilizing digital mobility platforms in their home countries. Recognizing this trend, the OGa can tap into this latent demand, bridging the gap between eager travellers and local services. OGa will facilitate seamless discovery, connecting tourists with an array of services and experiences tailored to their preferences.

However, the true potential of this open network will be fully realized when various service providers, such as tour guides, shops, hotel vendors, and home-stay families, join the platform. As these diverse entities come on board, the network's offerings will expand exponentially, enriching the choices available to tourists. This expansion not only benefits service providers by increasing their visibility but also amplifies the overall appeal of The Gambia as a tourist destination.

Furthermore, an open network can enhance the sense of community and collaboration among local businesses. This collaborative spirit not only benefits individual enterprises but also collectively elevates the quality of services offered and enhances the Gambian tourism brand as a whole.





### Skilling & Education

In The Gambia, unemployment rate among individuals aged 15-35 is a staggering 41.5%<sup>16</sup>. The literacy rate is below 60%<sup>17</sup>, restricting the pool of skilled workers, despite the presence of numerous skills training centers and academies in the market. Challenges contributing to low employment rates include emigration due to lack of opportunities, financial barriers leading to low literacy. The country also faces challenges with the quality of education, with only 12.5% of children aged 7-14 years demonstrating solid reading skills and 3.5%18 having sufficient numeracy skills further emphasizing the need for an educational reform.

In response to these challenges, Open Gambia aims to facilitate the discovery of various educational programs, trainings, learning materials, mentorship, financial assistance, scholarships, grants, and job opportunities. This will be achieved through partnerships with educational technology companies, recruitment platforms, sponsors, and donor organizations, in collaboration with prominent public-private entities, governments, and international organizations. By addressing the gaps in education and employment, Open Gambia seeks to create a pathway for individuals to enhance their skills and access meaningful employment, ultimately contributing to the economic development of the country.



<sup>&</sup>lt;sup>16</sup> The Gambia Labour Force Survey 2018, https://mpra.ub.unimuenchen.de/113516/1/MPRA paper 113516.pdf

<sup>&</sup>lt;sup>17</sup> https://www.trade.gov/country-commercial-guides/gambia-market-challenges

<sup>18</sup> https://www.unicef.org/media/100141/file/Gambia-2020-COAR.pdf



### Agriculture

By leveraging Open Networks, Gambia can transform its agricultural ecosystem. Transitioning from traditional farming methods, the open network serves as a catalyst for the adoption of smart farming practices. It facilitates the seamless discovery of machinery, equipment, seeds, and fertilisers required to improve current farming practices.

Furthermore, it enables access to credits, loans, and other forms of financial support, empowering farmers to invest more in their livelihood. It enables farmers to connect with skilled gig workers, enhancing efficiency and productivity. Farmers can also stay informed through expert-guided courses on innovative farming techniques and crucial data services such as weather forecasts, soil conditions, and crop disease management.

They can also access essential information such as expert-guided courses on newer farming techniques and vital data services like weather forecasts, soil conditions and crop disease management. Furthermore, the Open Gambia Network will enable discovery of special services like assaying, certification, warehousing, and cold storage, while connecting them with diverse buyers, from retailers to factories.

With easy discoverability and access to these services, an open network can streamline agriculture, making it more technologically advanced and sustainable within

the Gambian economy.

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As Open Gambia gains traction, The Gambia can look forward to a flourishing digital commerce that not only benefits businesses but also enhances the overall consumer experience, driving economic growth and digital inclusion across the nation. For this, collaborations between businesses, government entities, and technology providers can further enhance the development of user-friendly platforms, making eCommerce an integral part of Gambia's economic landscape.

By embracing the open networks and drawing inspiration from successful implementations, The Gambia can usher in a new era of seamless digital commerce solutions across various sectors such as retail, mobility, education, hospitality, healthcare and more. This not only facilitates digital transactions across these sectors but also promotes entrepreneurship, enhances market access, and fosters an environment for innovation in The Gambia. A local grocery shop, restaurant, cab driver, tech startup, or any other small business owner will all be able to find themselves on equal footing through the Open Gambia initiative.

In essence, this step towards adopting Open Networks and DPIs represents more than a technological shift; it embodies a profound socio-economic transformation. It demonstrates that The Gambia is not merely adapting to the digital revolution but actively shaping it from the ground up. Through these efforts, the nation lays the foundation for a future where innovation knows no bounds, empowering every citizen to participate and thrive in the digital economy of tomorrow.



oto Credits: wirestock on Freepik





Public opinion and participation are vital for creating Digital Public Infrastructures (DPIs) that operate effectively on a large scale. Communities empower people by putting control back in their hands.

Community-driven DPI initiatives empower individuals to craft solutions for their challenges. Community involvement and governance are essential for open-source projects, fostering collaboration, inclusivity, transparency, and accountability. These principles are crucial for the vitality and durability of open-source technologies, as they distribute decision-making authority and cultivate a sense of ownership among contributors and users.

Community-led open networks offer numerous benefits, including:

- 1. Collaboration and Development: Developers and contributors from the community collaborate voluntarily, enhancing the technology's features and robustness.
- 2. Testing and Feedback: Users and developers within the community provide valuable feedback, identifying and resolving issues, resulting in more stable software.
- 3. Documentation and Support: Communities maintain documentation, tutorials, and support forums, easing the learning curve for new users.
- 4. Adoption and Advocacy: Engaged communities promote open technologies, encouraging others to explore them through recommendations and success stories.
- 5. Diversity of Use Cases: Diverse communities lead to adaptable technologies catering to various applications.
- 6. Cost-effectiveness: Open source solutions are cost-effective, avoiding expensive licensing fees.





- 7. Customization and Flexibility: Developers collaborate to create customized solutions to meet specific requirements.
- 8. Trust and Transparency: Transparency builds trust, as anyone can inspect the source code for security.
- 9. Longevity and Sustainability: Communities ensure the long-term viability of open technologies, even as original developers may change.

In summary, community involvement is paramount for the successful, resilient, widespread adoption of open technologies and DPIs.



Scan the QR code to be a part of the Beckn Open Collective Community!