

# LAGOS INNOVATION & TECHNOLOGY MASTERPLAN:







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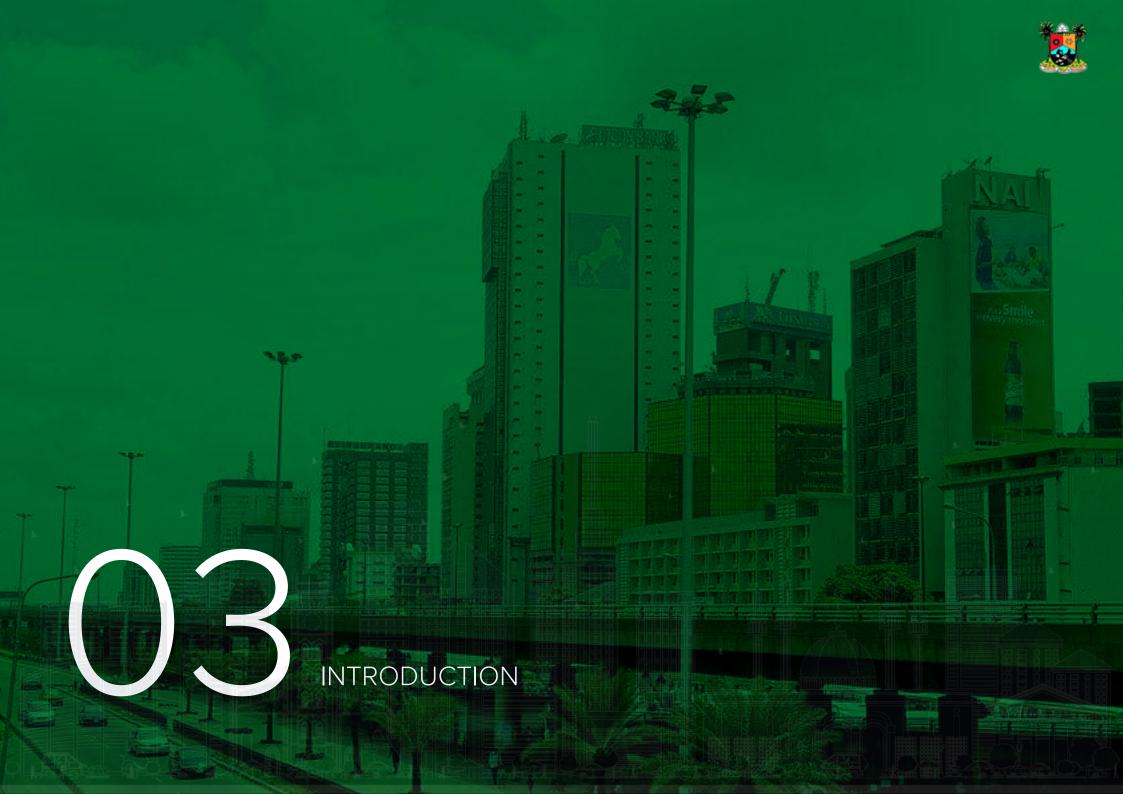
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## **INTRODUCTION**

#### The Governor's Vision

Economically vibrant cities are characterized by a culture of problem solving that encourages an innovation ethos. It is our intention to make Lagos State a 21st century economy that is collaborative, works, empowers and delivers on higher standards of living for all its citizens through the use of technology by 2030. True wealth must be evident in the quality of life of citizens.

To achieve this vision, it is imperative to facilitate a world-class innovation and technology ecosystem that drives Lagos State into its potential as the most dynamic and technically advanced economy in Africa.

This means a mutually beneficial symbiosis between Government and the technology private sector that unlocks critical value, bringing all hands (private sector, funders, tech talent, other stakeholders and resources persons) on deck.

We are committed to co-creating a safe, healthy, economically vibrant, green and sustainable city, predominantly driven by existing and new types of technology developed locally. In addition to the fact that innovation allows organizations to stay relevant in the competitive market, it also plays an important role in economic growth.

The ability to resolve critical problems depends on our ability to encourage and turbocharge innovation in Lagos. No one but us in Lagos with the mutual goal of taking this state to the next level can achieve this. We are thoroughly committed and determined to achieve this.

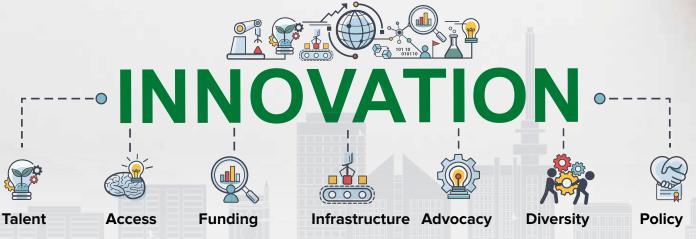
**Babajide Sanwo-Olu**Governor of Lagos State



# THE VISION OF INNOVATION

This Innovation Masterplan contains a vision of innovation in the near future. This vision takes into account societal, as well as economic and technological trends.

The purpose of this vision is to serve as a practical framework in which citizens can develop new ideas for their future innovations. The speed at which technology – with all resulting trends – appears and evolves is so high that we are truly under pressure. Innovation is not easy to manage, nor is it easy to implement and effective innovation doesn't happen by accident. This Master Plan focuses on the 7 critical performance areas that are essential to the success of every innovation practice and provides a sound and proven basis for sustained innovation improvement.



Each component has different trend flows and each trend flow presents several models with different levels of impact. These models provide a specific description of what the implications could be to the state, when taking into account its context and the level of ambition present. The plan would enable Lagos State to align its strategy with innovation investments and create a culture of innovation throughout the state. I trust this plan can help us to expand our horizons and, above all, that it will give us an opportunity to discover lots of practical ideas.



#### Mr. Hakeem Popoola FAHM

Honourable Commissioner for Science and Technology



# THE MISSION OF INNOVATION

Nigeria and by extension, Lagos State is faced with a myriad of challenges, ranging from low living standards to stunted human capital development. To solve the intractable challenges faced by our nation and our state, mutually beneficial symbiosis between public administration and the innovation and solutions ecosystem must exist.

Innovation and technology are enablers that raise the standard of living, deliver vibrant economies, increase efficiency levels and make industrial activities more climate friendly. This Administration is intentional about building the long-term future of this State by investing in Science, Education and Research.

Public institutions must identify and turbocharge the levers that allow the local innovators and problem solvers proffer innovative solutions. This Administration is committed to unlocking value by enabling the solutions ecosystem to create value.

With enabling policies such as the proposed Lagos State Science and Research Act, a significant portion of Lagos State's budget has been dedicated to solve issues of national significance through research and development. This signals the Government's readiness to unlock the potential wealth hidden in our nascent solution industry.

Recognizing that collaboration and network-building are key to meaningful innovation and creativity, our doors are open to partnerships. This is evident in our approach to make Lagos State continue to work for all with increased investment in research and development resulting last year in 1 registered patent in collaboration with University of Lagos for a locally developed ventilator that eases the impact of COVID on patients, encouraging work from home (WFH) by adopting remote working tools and the refinement of the innovation and technology masterplan.

We invite you to partner with us as we unlock and turbocharge the key drivers to innovation and deliver a more productive, efficient and sustainable State.

#### Olatubosun Alake

Special Adviser on Innovation and Technology to the Governor



# ROM ISSUE

# O OUTCOME

# **SUMMARY**

As part of Lagos State Government's vision to create an enabling innovation and technology ecosystem supported by a collaborative culture amongst its citizens, she desired to refine her innovation and technology masterplan to support and accelerate her emergence as the dominant location for attracting technology investments to enable innovative products and services development in Nigeria and Africa

The innovation and technology masterplan is expected to serve as a catalyst for improving Lagos State's global and regional competitiveness through partnerships, investments, collaboration, job creation, policies and talent development

The Office of Innovation and Technology sought technical assistance to review and refine the current masterplan into a viable model and approach that will fast-track innovation and technology development, growth and sustainability within Lagos State

Verraki has created a refined masterplan comprising current trends, an innovation framework and funnel for selecting projects and initiatives that will deliver the government's vision, partnership and governance frameworks, detailed projects/initiatives with responsibilities, KSFs and risks mitigation, and an implementation roadmap that will continue to support the growth, development and sustainability of the innovation and technology ecosystem in Lagos State

Continuous effective and efficient programme execution, partnership and stakeholders' management are also envisaged in actualising the vision





## **GLOBAL TRENDS**

INNOVATION AND TECHNOLOGY

Technology advancements continue to have profound effects on human development and the way we live

### Going Green



- Environmental, Social, and Governance (ESG) investing, or impact investing as it's sometimes known, is one of the top trends of 2020, with investors pouring 12% (\$45.6 billion) of the total funding in the first quarter of 2021, compared to outflows of \$384.7billion for the overall fund universe.
- The Venture Capital space has experienced a similar ESG fever, with investors being forced to think about, not only the downsides of investing in companies that go against ESG principles but also the huge positives of investing in those businesses that are solving the biggest macro issues we face as a planet not least climate change.

## Distributed Ledger Technology (DLT)



- Distributed ledgers also known as blockchains are an emerging technology that has drawn considerable interest from energy supply firms, startups, technology developers, financial institutions, national governments and the academic community. Numerous sources coming from these backgrounds identify blockchains as having the potential to bring significant benefits and innovation with numerous use cases ranging from emerging peer-to-peer (P2P) trading and Internet of Things (IoT) applications, to decentralised marketplaces, electric vehicle charging and e-mobility.
- With crypto getting more mainstream approval during 2020 from organizations such as PayPal and Square, as well as corporates, more innovative use-cases are expected to emerge in 2021, particularly incthe payments space, and in some cases working in tandem with the banks. An example to observe is Wiredirect, which uses cryptocurrency to facilitate cross-border payments. Paxful and Binance have also made cryptocurrency accessible to Nigerians.

  GetEquity.io is another platform that makes blockchain-based equity investments a reality in Africa.

# FinTech's exponential growth

- Globally, Fintech play across the payments, banking, investments and insurance value chains with an emerging shift to B2B models; there is a growing emergence of big tech companies focused on providing one stop solutions to customers through their developing ecosystems.
- The advent of FinTech was also heavily reliant on underlying technologies such as mobile phones; there were 5.261 billion mobile device users globally in 2021, up from 1.13 mobile users in 2012.
- Other underlying technologies/infrastructure that have further enabled/bolstered Fintech include cloud computing and storage, 2FA verification, among other prominent technologies.
- The recent COVID-19 pandemic further underscored the advantage of FinTech operations and relatedly the pitfall of the brick-and-mortar operations.



## **GLOBAL TRENDS**

INNOVATION AND TECHNOLOGY

Technology advancements continue to have profound effects on human development and the way we live

### Digital health



- The market for digital health was already established at the start of the decade. As pioneers in healthcare, Nordic countries have long been offering telehealth services, as part of their social healthcare.
- The use-case for digital health is the protection of frontline workers. Combine it with the latest technology developments of 5G and Al and you have the next generation of digital health providers.
- The combination of ultra-low latency networks and autonomous search engines accessing billions of medical records instantly can bring us a revolution in healthcare.

### Digital Education



- Improved accessibility to school, lessons and even degree programs for students of all ages. Students who may have impairments that hinder their ability to access certain types of information will find that technology can go a long way in removing these barriers.
- Personalized learning approaches have also been an important component of the digital education revolution. Rather than trying to fit everyone into the same metaphorical box, many schools and programs have begun to realize the value of offering adaptable solutions for students based on their own strengths and weaknesses.
- Virtual reality can provide students with the chance to 'experience' the material they learn before they actually move into real-world applications exemplified by the hospitality industry where students can observe different potential work environments, without even leaving their classroom.

# Digital Mobility



- According to the World Economic Forum, electric car registrations increased 41% in 2020 despite a 16% decline in overall car sales worldwide. The ramping up of EVs can be seen in the United States, Europe, and China, the three biggest global car markets with China remaining the leading EV market.
- Modern digital solutions is revolutionizing the way cars get around as well as the infotainment experience, and investors believe that fully autonomous vehicles for mass transportation are one of the most bankable mobility trends for the future considering that the public benefits of fully adopted autonomous vehicles could exceed \$800 billion a year by 2030, the financial backing of the technology is an easy sell.



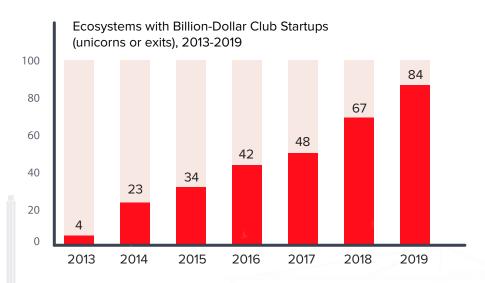
# **GLOBAL TRENDS**

#### STARTUP/VENTURE INDUSTRY

... and more startups continue to join the prestigious "Tech Unicorns" club amidst changes in the global cities' rankings for start-up ecosystems

#### Global Cities Ranking - Start-up Ecosystem (2020)

RANK	CITY	COUNTRY	2019
1	San Francisco Bay	United States	-
2	New York	United States	-
3	London	United Kingdom	-
4	Boston area	United States	+1
5	Los Angeles area	United States	-1
6	Beijing	China	+11
7	Tel Aviv area	Israel	-1
8	Berlin	Germany	+1
9	Moscow	Russia	+1
10	Shanghai	China	+21



The name **"Tech Unicorn"** alludes to the rare and nearly mythical quality of these companies. But while still powerful they are not so rare anymore.

When companies in the billion-dollar club are analysed - exits or private companies in technology with over \$1 billion in valuation - in 2013-2019, we see that in 2013 only four ecosystems produced unicorns or billion-dollar exits. In 2019, a cumulative 80+ ecosystems have done so, astoundingly.



## **REGIONAL TRENDS**

#### STARTUP/VENTURE INDUSTRY

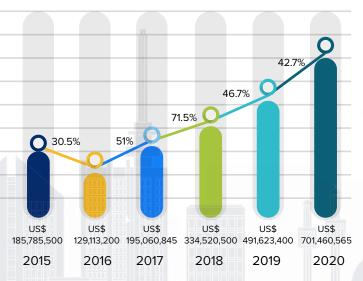
The African Private Equity and Venture Capital Association (AVCA) says the venture capital (VC) and entrepreneurial landscape in Africa is experiencing rapid growth. Emanating from the continent's robust macroeconomic progress from 2000-2016 which helped develop a favourable economic environment, the combination of a growing consumer base, external inflows of investment, and entrepreneurial business solutions addressing African consumer needs and structural problems has accelerated VC investments in Africa to record highs in 2021 which recorded over **\$4bn** in African startups investments

#### Growth in number of funded startups, by year

#### Growth in total funding, by year







Disrupt Africa, African Tech Startups Funding Report 2020

Number of funded startups, by sector



FINTECH - 99 24.9%



E-COMMERCE & RETAIL-TECH -55 13.9%



**E-HEALTH - 41** 10.3%



**LOGISTICS - 29** 7.3%



**ENERGY - 22** 5.5%



**RECRUITMENT & HR - 18**4.5%



**ED-TECH - 17** 



AGRI-TECH-16



TRANSPORT-15



ENTERTAINMENT-10



ALL/IoT-10 25%



PROP-TECH-10



MARKETING-6



# **LESSONS LEARNT**

#### CASE STUDIES & GLOBAL/REGIONAL TRENDS

Innovative cities tend to be driven by foundational pillars which are key to sustainable and successful growth by enabling the identification of new opportunities, projects and initiatives to help align the masterplan's priorities.



#### **INFRASTRUCTURE**

Provide specialised hubs for support and development of specialised talent



# **LOCAL TRENDS**

#### STARTUP/VENTURE INDUSTRY

- By country, Nigeria is the top African market for start-up Fintech funding; in 2020, its Fintech start-ups attracted US\$89mn (56% of total in Africa) over 37 deals (37% of total in Africa).
- Nigerian tech startups (currently 253 in number) received \$663.24 million out of the overall \$1.34 billion raised in funding in Africa. The funding, which came in the form of equity, grants/prizes and debt financing, represents **50.5%** of the total funds raised in the continent.
- Foremost among the Nigerian-focused startups are **Interswitch**, **Flutterwave**, **OPay**, **Andela and Palmpay** which accounted for most of the top venture deals on the continent in 2020.
- Fintech was the top recipient sector, with US\$160mn deal-flow in 2020, over half of which went to Nigerian start-ups





# GROWTH OF INNOVATION AND TECHNOLOGY

Nigeria remains a major destination attracting global technology investment and financing and producing 5 Unicorns (Jumia, Interswitch, Flutterwave, Andela and Opay)

#### **E-commerce explosion attracts strategic buyers**



Rise in remote work



- In 2020, online commerce in Africa grew 75% faster than the global average (even if that was from a low base).
- Fintech companies need small and mid-size enterprises (SMEs) to adopt their platform, they want to seed the e-commerce ecosystem wherever it's growing.
- Companies like Jumia, proved to the market in 2020 that they can reduce operating costs and seed the broader continental e-commerce ecosystem. Fintech (Payments, Lending, Savings, Investment, ID verifications), e-commerce, logistics and health could witness major activities in 2021.

- Turning the page on what has been a challenging past 18 months with COVID-19, ensuing layoffs and office closures, Andela's developer training academies will benefit from a world where staffing and development need not be "on prem".
- Building on its acquisition of Skillbridge, Toptal the world leader in connecting businesses with software engineers – could see Andela as an interesting opportunity to expand its talent marketplace business in the world's fastest growing market.



## **COVID-19: ECONOMIC FALLOUT**

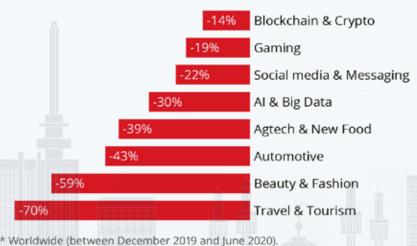
#### Overview

The COVID-19 pandemic has had a devastating impact on many world economies. According to the World Bank, COVID-19 has plunged the Sub-Saharan region into its first recession in over 25 years, with activities contracting by nearly 5% on a per capita basis. This situation could push 40 million people in the region into extreme poverty. **COVID-19 has had a significant impact on household income** which is a critical metric for technology-based solutions relying on subscription or outright purchase of their solutions.

The global start-up scene was also impacted by the COVID–19 pandemic. To position Lagos as a resilient city in the event of another pandemic outbreak of COVID-19's nature, the government needs to put mitigating measures in place, provide support to affected businesses and establish measures to limit the impact of a re-occurence.

## How Covid-19 Has Impacted The Global Startup Scene

Change in revenue of selected startup sectors since the start of the pandemic\*



\* Worldwide (between December 2019 and June 2020 Source: Startup Genome











# LOCAL TRENDS & COVID-19: KEY TAKEAWAYS

#### COVID-19 IMPACT ON FRAMEWORK PILLARS AND LOCAL TRENDS

The COVID-19 has had a tremendous economic impact on almost all the countries in the world. According to the IMF, \$1tr has been facilitated in lending capacity to meet the demands of 90 member countries seeking emergency funding. As a result of the lockdown and travel bans imposed, many businesses were unable to operate for the most part of 2020. The Lagos State government has to overcome the impact of COVID-19 on its four framework pillars before it can make progress on the innovation masterplan.

#### Access

- Local businesses working remotely has become default mode of operation.
- Businesses shifting focus to survive
- Local businesses lacked capacity to build solutions.
- Increased digital access to products and services by consumer market

#### **Funding**

- Focus of government funds for mitigation measures.
- VCs focused attention on start-ups building solutions in sectors not impacted by the pandemic to reduce the impact of COVID-19.
- Funding to start-ups decreased overall from international and local sources.

#### **Talent**

- Skilled talent started working remotely for businesses locally and abroad.
- New ways to measure and ensure productivity implemented.
- Reduced quality of education due to students being out of school and learning remotely

#### Infrastructure

- Public Wi-Fi not accessible due to lockdown.
- Employers having to invest in more remote work tools.
- Infrastructure overload ensued as more companies and processes go digital e.g. poor internet connection.
- Stable power supply became more paramount.

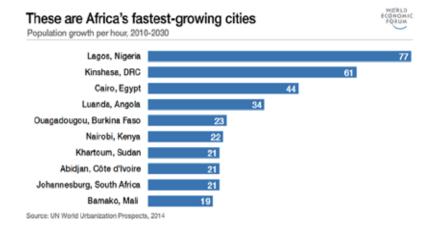




## **ECOSYSTEM ASSESSMENT**

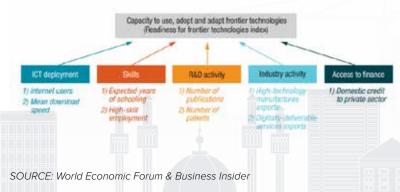
#### Overview - Technology Use And Infrastructure In Lagos

- According to the Nigerian Communication Commission (NCC) Nigeria hit 140.488 million internet users, of which 104.132 million are GSM mobile as of May 2021. Internet penetration in January 2021 stood at 50%.
- Furthermore, there were 187.9 million mobile connections in Nigeria in January 2021; equivalent to 90% of the total population and a 10% increase from January 2020.
- Lagos alone according to the Nigerian Bureau of Statistics had 18.9 million active internet subscribers by Q4 2020.
- As of 2018, the Nigerian consumer electronic segment raked in revenue totaling \$1.8 billion, equivalent to 38.4% of the market's overall value.
- The software industry in Nigeria is also booming. Nigeria has an estimated 114,536 software developers ranking third in Africa. In addition, global tech giants including Microsoft have invested over \$100 million into the country's software development.
- However, Nigeria ranks tenth in number of developers per million population at 556 in comparison to South Africa at Number 3 with 2,234 (and 133,195 developers in total at number 1).
- Nigeria also ranked 10th in Sub-Saharan Africa in UNCTAD's 2021
   Frontier Technologies Readiness Index.
- The Lagos State innovation masterplan will further drive this market and foster economic growth for the state.



## A Frontier Technologies Readiness Index







## **ECOSYSTEM SUMMARY**

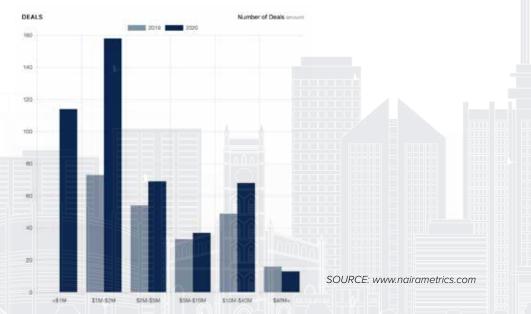
# However, there is room for further growth and improvement for Lagos to sustain its current trajectory

- Nigeria is now ranked **3rd in Africa's start-up ecosystem** and saw a notable increase from 68th spot to now rank 63rd globally. This was made possible because of its massive consumer market with over 1100 active start-ups which is one of the largest in Africa. In total, Nigeria has 7 cities in the global top 1000
- and continues to have the highest number of ranked cities of any African nation.

Lagos surpassed Nairobi and is now the highest-ranking city in Africa from

ranking 127th to 122nd. Lagos has also ranked in the global top 50 cities for E-commerce & Retail Technology and in the global top 100 for both Transportation Technology and Education Technology.

Notable start-ups and ecosystem players that helped the growth of Nigeria in this ranking include Flutterwave, VerifyMe and Mono.



#### Start-up growth since the establishment of the Office of Innovation has been encouraging and progressive

- The Nigerian populace are digitally primed and involved, consuming/utilizing and producing a great number of digital products and services. However, the cost of accessing digital platforms and services per capita remains one of the highest in the world with gaps in the infrastructure to produce and consume.
- There are several options for upcoming startups and innovations to receive funding, but access and quantity remains an issue
- Traditional talent development methods need to be further supplemented by online and physical resources that will enhance practicality.
- Nigeria, Lagos in particularly, is highly regarded as a start-up ecosystem both within Africa and globally, but this is as a result of the sheer size of the consumer market despite its considerably difficult operating environment.
- There's already proof of what collaborative and concerted empowerment efforts can do to further grow the ecosystem (for example efforts by Eko Innovation Center, LASRIC and LSETF), but more needs to be done to unlock the true potential of the ecosystem.

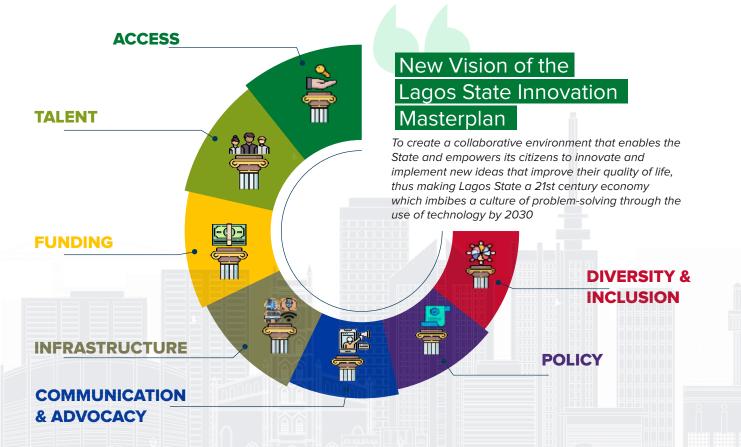
SOURCE: www.startuplagos.net





## **REFINING THE MASTERPLAN**

- To address the opportunities and issues confronting Lagos State, a mutually beneficial and symbiotic relationship between public administration and the innovation and technology ecosystem is required.
- Innovation and technology are enablers that enhance living standards, create dynamic economies, boost efficiency, and make industrial operations more environmentally friendly.
- Lagos State set out to invest in science, education, research and innovation in order to develop the State's long-term future.



The masterplan now focuses on 7 important performance areas critical to the success of any innovation practice, and it provides a solid and established foundation for long-term Innovation progress.



# PILLARS



#### **INTRO:**

- Bridging the gap between available resources and potential innovators is the driving force of access creation.
   Accessibility to data, markets & equipment will serve as an innovation enabler that drives the development of the technology and innovation ecosystem.
- Leveraging on the kinetic potential, Lagos State can utilize its resources to enable access in different dimensions to grow and catalyse locally developed solutions to solve civic challenges and create new sources of wealth in the State.

Access development is categorised into 3 main sections:

- 1. Data Access
- 2. Market Access
- 3. Equipment Access

#### **PROJECT**

- Open Government
- Connect Government
- Utilize Locale (Supply)
- Connect Locale
- Startup Lagos
- Maker Spaces
- Establish Lagos ease of doing business (EODB) platform

- Fast tracking involvement and innovation
- Expanding LSETF Coverage
- Device Access
- Access to shared infrastructure
- Establish a Digital Marketplace
- Innovation Competitions



#### **INTRO:**

Talent is the oil of the innovative world. When choosing a location, proximity to available technical talent is one of the most important considerations for founders when evaluating location. Nearly 25% of founders stated "talent availability" as the most important factor for their location choice, just after overall evaluation of a city's ecosystem and culture. Talent is now Global and enabled for remote working. Talent availability was followed by funding availability, industry connections, value for money and business regulation.

Talent development is categorised into 3 main sections:

- 1. Employability
- 2. Developers' academy
- 3. Knowledge transfer

#### **PROJECT**

- Employability
- Developers Academy
- Knowledge Transfer
- Attract global talents (I)
- Networks and Collaboration (I)
- Upgrade Tertiary Institutions (I)
- STEM/Digital Training Programmes (P)
- Improved education curriculum
- Dispersed Talent Centres



# PILLARS



#### **INTRO:**

Funding is the most important framework for the innovation masterplan, without which, all the other pillars cannot be executed. It is also the primary issue even at the global stage. According to the World Economic Forum, there is a \$2.5 trillion yearly funding deficit in developing countries, a severe absence of sustainability initiatives, and a low level of private sector participation at the root of the problem.

Funding is categorised into 2 main sections:

- 1. Impact Investment Capital
- 2. Patient Capital & Low Interest Rate Loans

#### **PROJECT**

- Impact Investment Capital
- Patient Capital & Low Interest Rate Loans
- Attract more global capital/investment funds
- Develop grants for enabling LASG businesses
- Offer tax breaks to startups and SMEs
- Tap into domestic capital
- Nigerian Stock Exchange (NGX) Support
- Enable financial funnels



#### **INTRO:**

In order to successfully implement the Lagos State Innovation Masterplan, there has to be an enabling environment that allows for effective execution. According to the World bank, Nigeria needs \$3 Trillion committed to infrastructure to cover the infrastructure deficit it currently has.

Infrastructure is categorised into 2 main sections:

- 1. Internet Infrastructure
- 2. Technology Zoning/Districts

#### **PROJECT**

- Internet Infrastructure
- Technology Zoning/ Districts
- Encourage the development of innovation and technology facilities
- Scale up Infrastructure
- Implement effective cyber security measure state-wide
- Improve Internet Access
- Develop government-owned facilities e.g. sandboxes
- Mobility



# **PILLARS**



#### **INTRO:**

- Policies seek to encourage innovation and investment through tools such as:
  - Collaboration with industry, academia, and other key stakeholders; empowered CIOs and senior city government leadership
  - Cross-sector vision and the facilitation of procurement processes
  - R&D investment across vertical sectors
  - Review of existing laws and regulations and exercising caution before adopting new ones to protect against inadvertently or unnecessarily impeding the emergence of smart cities
- Policies should promote the use of smart technologies to measure and monitor government progress. They should also promote public access to government data for use in building new services and solutions to the benefit of all citizens.
- Potential Focus Areas Government Data, Ease of Doing **Business, Incentives**

#### **PROJECT**

- Domesticate the Start-up act
- Local Procurement Policy
- Enforce Data Privacy
- Advisory Council

- Establish Lagos ease of doing business (EODB) platform
- Open Government

- A lack of diversity is a problem that currently plagues various ecosystems around the world, from Silicon Valley to the UK. Studies from McKinsey & Co show that companies in the top quartile for gender or racial and ethnic diversity are "more likely to have financial returns above their national industry medians." Addressing the root cause of the issue requires affirmative action for inclusion at all stages through the value chain from STEM education to leadership.
- Potential Focus Areas Gender, Religion, Physically Challenged

#### **PROJECT**

**INTRO:** 

- Promote gender diversity
- Promote Inclusion
- Enablement

According to Stears Business, there is a gap between the citizens and the State. In order for the innovation masterplan to succeed, the Lagos State Government needs to partner with trusted organizations already working in the sectors the innovation plan addresses to adequately inform its citizens.

The two categories of communication this project contemplates are:

- 1. Communication
- 2. Networking

#### **PROJECT**

- Transparency & DialogueYouth-driven awareness
- Re-branding campaign
- Networking & Collaboration Events





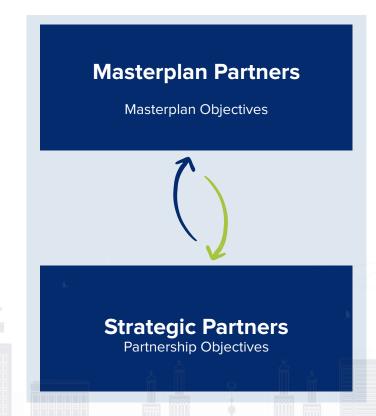


# PARTNERSHIP & COLLABORATION

What are strategic partnerships? And what role will it play in the execution of the Innovation masterplan?

Strategic partners, in the context of the Innovation Masterplan, are a sub-set of the overall larger coalition of participants in the Lagos Innovation Ecosystem.

The overarching purpose of strategic partnerships is to mobilize and execute on projects and initiatives as set by the strategic objectives of the pillars within the masterplan and the partnership specific objectives. Establishing these partnerships are all in a bid to enhance the speed and impact of the Masterplan as well as deepen accountability of its execution.

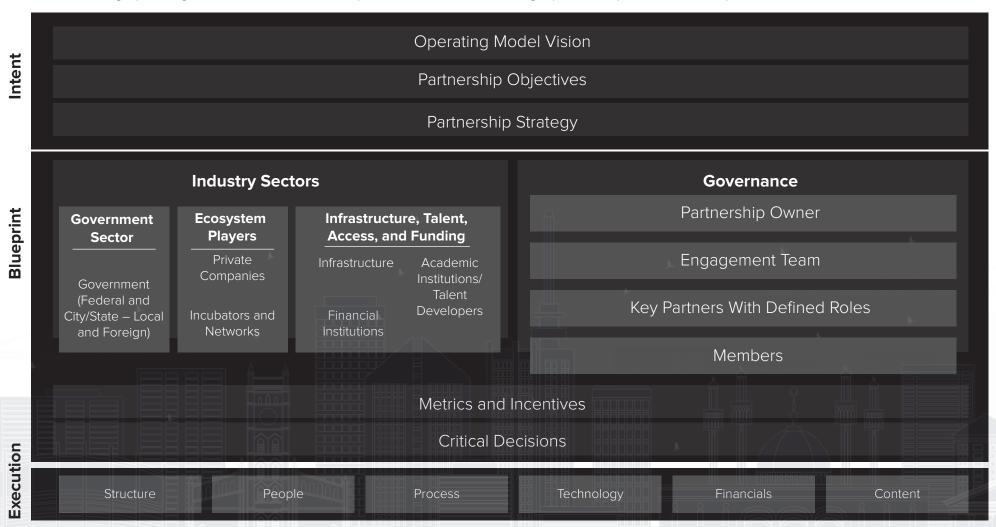


Developing a partnership strategy for potential local, regional and global collaboration, leveraging existing relationships, is foundational for the ecosystem's growth and sustainability. Successful innovative cities identify the right partners and engage them early, to create an effective ecosystem.



# PARTNERSHIP OPERATING MODEL

The following operating model vision defines an optimal framework for strategic partnerships for the Masterplan.





# PARTNERSHIP FRAMEWORK

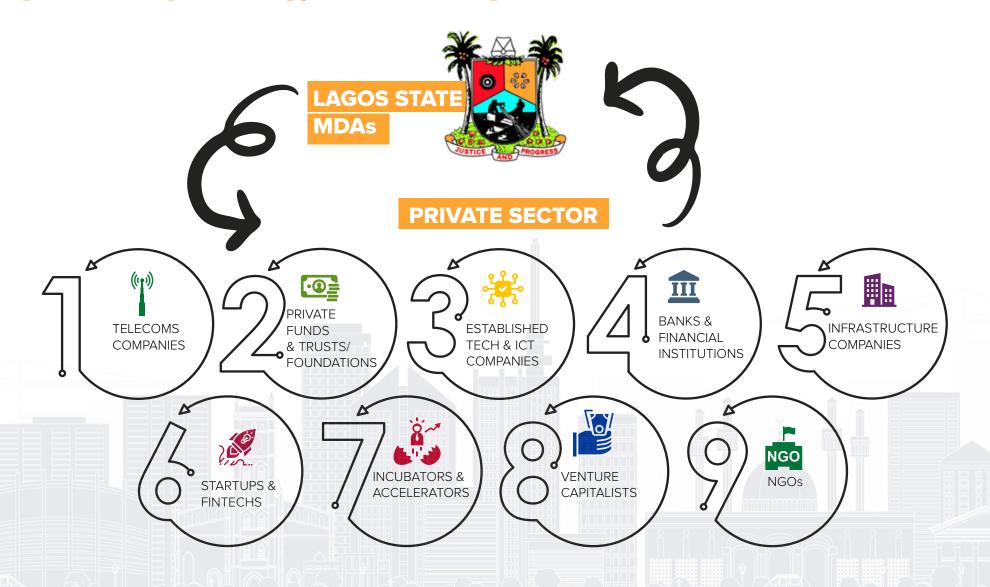
In the cross-sector partnership framework, each industry sector is engaged through different investment structures and value models

**NON-EXHAUSTIVE** 

Government		Ecosystem Players		Infrastructure, Talent, Access, and Funding		
	Federal and City (Local & Foreign	Private Companies	Incubators and Networks	Infrastructure Developers	Academic Institutions	Banks and VCs
Investment Structure	<ul><li>Government grants/loans</li><li>Tax Breaks</li><li>Commitment of Resources</li></ul>	<ul> <li>Build and ownership of infrastructural assets</li> <li>Project based funds</li> <li>Commitment of resources</li> </ul>	<ul><li>Membership fees (usually structured in tiers)</li><li>Project based funds</li></ul>	<ul><li>Performance based contracts</li><li>Build and ownership of infrastructural assets</li></ul>	<ul><li>Membership Fees (usually structured in tiers)</li><li>Resource-based contracts</li></ul>	■Loans ■Project based funds ■Investments
Partner Incentives	<ul> <li>Increased GDP</li> <li>Improvement in jobs and wages</li> <li>Competitive market-place</li> <li>Enhanced city brand</li> <li>Advancement of Global Agenda</li> <li>Lessons learnt</li> </ul>	<ul> <li>Ownership of key assets</li> <li>Collection of data, and credentials</li> <li>Collaboration with masterplan partners</li> <li>Prime access to talent</li> </ul>	<ul> <li>Opportunity to pilot innovations and scale rapidly</li> <li>Collection of data, IP, and credentials</li> <li>Collaboration with partners</li> </ul>	<ul> <li>Control of supply for resources or shared services</li> <li>Ownership and revenue generation from key assets</li> </ul>	<ul> <li>Collection of data, IP, and credentials</li> <li>Jobs for students or faculty members</li> <li>Collaboration with partners</li> </ul>	<ul> <li>Capital gains from loans and investment</li> <li>Collaboration with partners</li> </ul>
Value for Project	<ul> <li>Secured funding or loans</li> <li>Legislative support and access to government stakeholders</li> <li>Financial incentives from tax breaks and decreased barriers for development</li> </ul>	<ul> <li>Competitive market- place and synergies across companies Security of real estate occupancy</li> <li>Job creation Access to skill</li> </ul>	<ul> <li>Talent development, utilization and refine- ment</li> <li>Sustainable innovation</li> <li>Culture (re)definition</li> </ul>	Expansion of infrastructure or shared services at a discounted rate	Thought capital Access to skills Opportunity to pilot or scale on campus	Quick access scale capital



# POTENTIAL LIST OF STAKEHOLDERS/PARTNERS





Mobility: Tackling Lagos Traffic Innovation Competitions
Upgrade Tertiary Institutions
STEM/Digital Training
Programmes

Re-branding Campaign

# THEMES

**E-Waste Marketplace** 

Fast Tracking Involvement & Innovation
Ease of Doing Business (EODB) Platform
Device Access
Innovation & Tech Facilities

Tech Advisory Council
Domesticate Start-up Act
Implement effective state-wide cyber
security measures
Local Procurement Policy

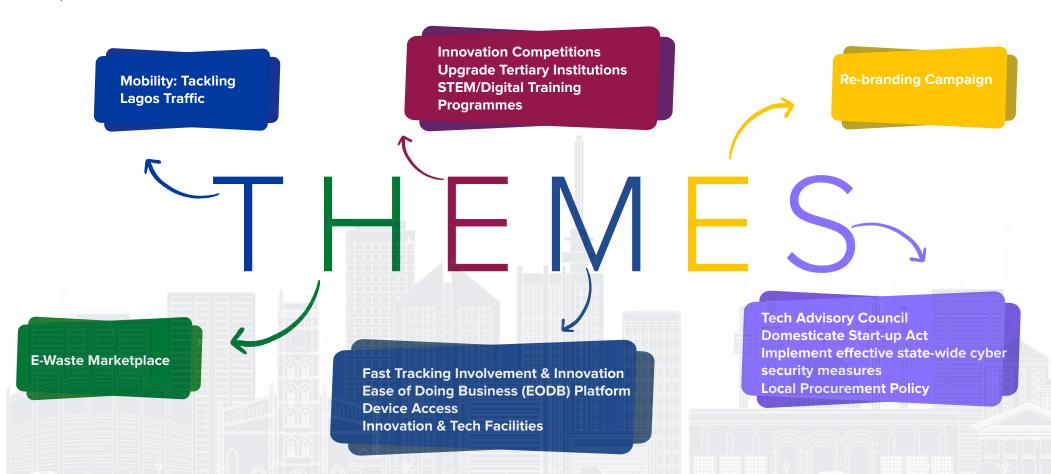
# FULFILLING THE THEMES AGENDA



# PROJECTS FULFILLING THEMES AGENDA

**THEMES** - Represents **T**raffic Management and Transportation, **H**ealth and Environment, **E**ducation and Technology, **M**aking Lagos a 21st Century State, **E**ntertainment and Tourism, **S**ecurity and Governance

- is the guiding agenda for the current LASG administration. The LSITM projects that contribute towards the constituent parts of **THEMES** are as follows:







# MEETING GLOBAL GOALS/KPIs

The UN has laid out **17 goals** geared towards sustainable development, 9 of which the masterplan's projects and initiatives can contribute towards





































Some of the **Sustainability Development Goals (SDGs)** that the masterplan addresses include:



The global poverty rate is projected to be 7% in 2030. As of April 2021, 118 countries reported national and/or local disaster risk reductions strategies, up from 45 in 2015. Government worldwide have put in place 1,600 short term social protection measures in response to COVID-19. But 4 billion people are still not covered by social protection.

The following masterplan projects are expected to significantly alleviate Lagosians of the woes of poverty and thrust them into prosperity:

- Network Catalyst Program
- Expanding LSETF Coverage
- Local Procurement Policy



Although participation in organized pre-primary education increased from 65% in 2010 to 73% in 2019, COVID-19 has wiped out 20 years of education gains. An additional 101 million or 9% of children in grades 1 through 8 fell below minimum reading proficiency levels in 2020. Basic school infrastructure to build back better is also lacking in many countries.

The following masterplan projects should ensure inclusive and equitable quality education and promote lifelong learning opportunities for all in Lagos

- Innovation Competitions
- Upgrade Tertiary Institutions
- STEM/Digital Training Programmes
- Improved education curriculum
- Dispersed Talent Centres



Some of the **Sustainability Development Goals (SDGs)** that the masterplan addresses include:



There are still gross inequalities in work and wages, lots of unpaid "women's work" such as child-care and domestic work, and discrimination in public decision-making. But there are grounds for hope. More girls are in school now compared to in 2000. Most regions have reached gender parity in primary education. The percentage of women getting paid for their work is on the rise. The Sustainable Development Goals aim to build on these achievements to ensure that there is an end to discrimination against women and girls everywhere.

Taking it a step further, the masterplan intends on implementing affirmative action for women in the innovation via the following projects:

- Promote gender diversity



An important part of economic growth is that people have jobs that pay enough to support themselves and their families. The good news is that the middle class is growing worldwide—almost tripling in size in developing countries in the last 25 years, to more than a third of the population. But today, job growth is not keeping pace with the growing labour force. Things don't have to be that way. We can promote policies that encourage entrepreneurship and job creation.

To promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all in Lagos State, the following projects are proposed:

- Market Connect Program
- Ease of Doing Business (EODB) Platform
- Device Access
- Tax breaks to startups and SMEs
- Digital Tech City (KITE@Yaba Project)



Some of the **Sustainability Development Goals (SDGs)** that the masterplan addresses include:



Technological progress helps address big global challenges such as creating jobs and becoming more energy efficient. Manufacturing of medium-and high-tech products fuelled the economic recovery in late 2020 – 4% growth compared to the same period in 2019 (4th quarter 2020). Enhancing rural road connectivity helps reduce poverty, and almost 300 million out of 520 million rural dwellers lack good access to roads in 25 countries. Increased investment in R&D is essential to finding solutions for crises such as COVID-19; about \$2.2 trillion was invested in R&D globally in 2018 and there were 1,235 researchers per million inhabitants in the same year.

The masterplan attempts to build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation through the following projects:

- Maker Space
- Research Grants
- The Metro fibre-optic Initiative
- Public Wifi Projects
- Attract more global capital/investment funds
- Start-up Act



The proportion of the global population who are refugees has more than doubled since 2010 - for every 100,000 persons, 311 are refugees (as of 2020). Remittance costs are also at an all-time low at 6.5% as of 2020 but further progress is needed to reach the 3% target. In **2020, 4,186 deaths and disappearances** were recorded on migratory routes worldwide.

The masterplan attempts to encourage inclusion via the following projects:

- Enablement (Diversity & Inclusion)
- Promote Inclusion



Some of the **Sustainability Development Goals (SDGs)** that the masterplan addresses include:



In 1990 there were ten "mega-cities" with 10 million inhabitants or more. In 2014, there were 28 mega-cities, home to 453 million people. Mega-cities are centers of culture and business and life. Unfortunately, they are also often centers of extreme poverty. as of 2018, the majority of the more than 1 billion slum dwellers reside in 3 regions: 370 million in eastern and south-eastern Asia, 238 million in sub-Saharan Africa, and 226 million in central and southern Asia. Furthermore, only half of the world's urban population have convenient access to public transport as of 2019. And as of 2020, the average global share of urban area allocated to streets and open public spaces at 16% fell short of the target (30% streets and 10-15% open public spaces).

To make Lagos State a more inclusive, safe, resilient and sustainable, the following masterplan projects have proposed:

- Digital Tech City (KITE@Yaba Project)
- Mobility



The global "material footprint" increased by 70% between 2000 and 2017 – 1 million plastic drinking bottles are purchased every minute and 5 trillion single-use plastic bags are thrown away each year. Electronic waste continues to proliferate and is not disposed of responsibly, with the average person generating about 7.3 kg of e-waste but only 1.7 kg per person is recycled (as of 2019). Developing countries still have vast untapped potential for renewable energy and despite progress, fossil fuel subsidies continue to threaten the achievement of the Paris Agreement and the 2030 agenda.

As part of efforts to ensure sustainable consumption and production patterns, the masterplan proposes:

- E-waste marketplace



Some of the **Sustainability Development Goals (SDGs)** that the masterplan addresses include:



The world is more interconnected today than ever before, thanks to the internet, travel and global institutions. There's a growing consensus about the need to work together to stop climate change. And the Sustainable Development Goals are no small matter either. 193 countries agreeing on these goals is a major feat. The final goal lays out a way for nations to work together to achieve all the other goals.

The masterplan proposes to implement sustainable projects/initiatives that will enable economic, social, innovation and technological development in Lagos through meaningful partnerships

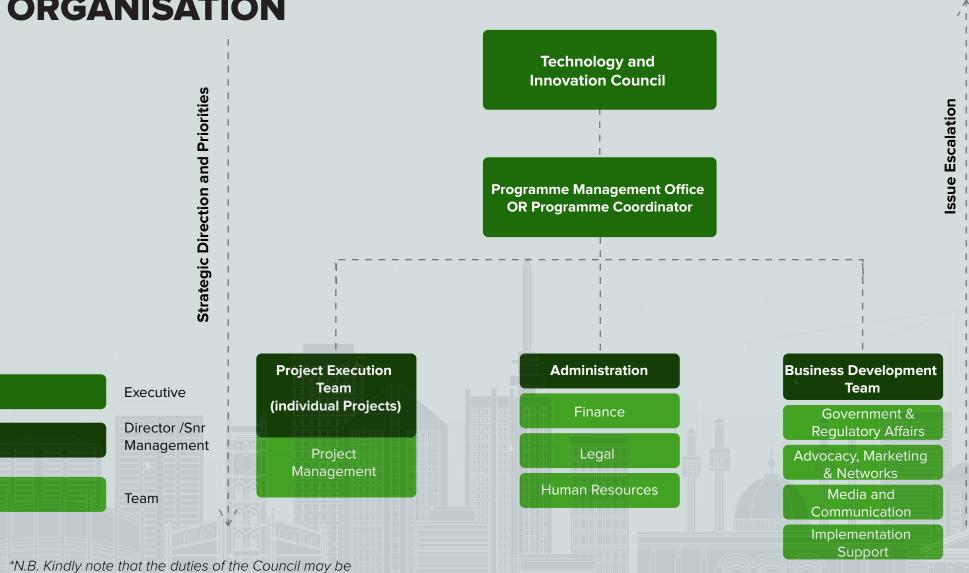






## LSITM GOVERNANCE ORGANISATION

outsourced to approved 3rd party vendors





### TECHNOLOGY AND INNOVATION COUNCIL

The council provides leadership and key guidance for the development of the innovation and technology ecosystem in Lagos

#### **Mandate**

Spearheading the execution of all initiatives in the masterplan as well as making keys decisions regarding strategy and direction for the improvement of the ecosystem

#### **Key Responsibilities**

Oversee the execution of the Masterplan strategy to attain set goals and aspirations

Review and finalize the masterplan's budget, funding sources, and ensure alignment of investments/initiatives with masterplan goals.

Make key decisions regarding the mitigating, avoiding, and acceptance of risks and issues.

Establish strategic partnerships with similar cities

Report to the Governor on the progress, milestones and plans of the Innovation Masterplan

If need be, revise and agree on revised details of the masterplan

#### **Key Outputs**

- Council meeting decisions
- Progress report to Governor

#### **Key Members (Suggested)**

- Commissioner for Science and Technology/Permanent Secretary
- Special Adviser to the Governor on Technology and Innovation
- Special Adviser to the Governor on Education
- Commissioner for Education/ Permanent Secretary
- Special Adviser to the Governor on Sustainable Development Goals and Investment
- Special Adviser to the Governor on Transformation, Creativity, and Innovation
- Ministry of Justice Representative
- •2 VC Representatives Funding
- Tech city SME
- 2 established private sector/industry organizations (e.g. Microsoft, Google) representatives
- 2 successful startups (e.g. Flutterwave, Andela, OPay, PiggyVest, Jumia) representatives
- Verraki PMO
- NGO Representative (Bill and Melinda Gates foundation)

**Meeting Frequency** 

Bi-monthly



**ACCESS** 

01

01

MARKET ACCESS

**Startup Lagos** 

Q4 2021

Start-up Lagos (https://www.startuplagos.net/) is a repository for connecting funders, start-ups, and other platform providers – a mapping and directory of the entire tech and innovation ecosystem in Lagos. The platform can be utilized to create value through its investor-startup synergy and rich market insights

01

#### DATA ACCESS

**Open Government** 

Q12023

- The Lagos State government announced the release of "Eko 360" in May 2021. In line with its open data agenda. The project will collect and make education, health and economic affairs data easily accessible to everyone. The project is being sponsored by the Bill and Melinda Gates Foundation and being principally implemented by the Lagos Bureau of Statistics
- The Lagos digital cabinet and Open Government portal + Data leaders can be a vehicle to implement a shared source for high quality across Lagos.

#### **EQUIPMENT ACCESS**

**Maker Space** 

Q4 2022

Partnering with local maker and engineering institutions, the administration intends to encourage the growth and proliferation of Maker Space programs. The Lagos Innovates initiative features a workspace voucher programme that has benefited over 100 startups across industries since its creation.

In 2021, Lagos Innovates partnered with the engineering and environmental marker space in Alimosho.



### **TALENT**

Developers Academy

01

### The Open-Source Government Framework

Q3 2022

The Open Source framework is a collaborative initiative that strives to deliver democratized software solutions for Lagos. This initiative intends to pair civic issues with civic problem solvers. The open-source government framework will also serve as a development learning centre for developers to hone their development skills. This will also constitute the Lagos State development Sandbox.



### INFRASTRUCTURE

01

#### INTERNET INFRASTRUCTURE

**The Metro Fibre-Optic Initiative** 

Q3 2022

- The Metro-fibre optic initiative is one of the largest public-sector infrastructure projects in West Africa. It seeks to increase connectivity penetration in Lagos by connecting all Lagos public sector buildings including public schools and hospitals to the fiber-optic network. The first phase of 300km of fiber-optic network project will be completed in Q3 2022.
- The UNDP Open Lagos Data Portal + Data leaders with CDO initiative Project can be a vehicle to implement this to create a shared source for high-quality data across all agencies



### **FUNDING**

01

#### RESEARCH AND INNOVATION:

Lagos State Reasearch and Economic Council (LASRIC)

LASRIC is on a mission empower research and innovation initiatives in Lagos State by supporting innovators through funding and network access. LASRIC's targets ideas across various sectors including Agriculture, Tourism, Housing and Health, Environment, Education, Security, Financial Inclusion, Transportation, and Energy/Power. Thus far, LASRIC has given out about \$600k in grants to 35 entrepreneurs & startups. LASRIC has funded research, innovation and STEM projects, including 17 patent pending research initiatives.



# PROPOSED PROJECTS AND INITIATIVES

	SHORT TERM			
S/N	PROJECT/ INITIATIVE	DESCRIPTION	RESPONSIBILITY	COMPLETION DATE
	ACCESS			
1	Innovation Competitions	Support organization of innovation events & encourage innovation competitions e.g hackathons, start-ups exposition and fests, start-up talk shows and programs.  The UNDP Smarter Together challenge/innovation Programme can serve as a vehicle to organize challenges for startups ideating and solving local problems like health insurance, recycling, power and public transport with awards to participants	Multistakeholder	Q2 2022
2	Fast tracking involvement and innovation	Fast tracked patent application Fast-tracked registration and processing of business permits	Domesticated Start-Up Bill	Q3 2022
3	Establish Lagos ease of doing business (EODB) platform	A single-source of truth, resource site for existing and potential businesses looking to operate in Lagos. Provides information and facilities for adherence to taxes, permits, registration, licenses and expectations.  Startup Lagos platform should be accessible from the EODB platform	Domesticated Start-Up Bill	Q3 2022
4	Establish a Digi- tal Marketplace	A platform that connects businesses and allows for contracting and transaction between SMEs, startups, customers, suppliers and partners.	Investment framework for Lagos championed by SDG Office.	
5	Establish E-Waste Marketplace	A platform that reflects and gives transparency to e-waste recycling ecosystem, with the intention of standardizing processes of recycling and value of recyclable e-waste. Platform should be able to facilitate for transactions between key players in the ecosystem: Recyclers, Aggregators (Local), and Suppliers (individuals and scavengers)	LAWMA	TBD
6	Device Access	The <b>UNDP Smartphones for All – Device Financing Program</b> is a worthy opportunity to increase access to local solutions and deepen the digital economy. Potential scheme with OEMs and MNOs	UNDP Partnership program	TBD



## PROPOSED PROJECTS AND INITIATIVES

	SHORT TERM			
S/N	PROJECT/ INITIATIVE	DESCRIPTION	RESPONSIBILITY	COMPLETION DATE
	TALENT			
1	Networks and Collaboration	Establishing and utilizing relationships with Global Networks	Multistakeholder	Q3 2022
FUNDING				
1	Offer tax breaks to startups and SMEs	Encourage tax breaks for technology and innovation focused startups and businesses	Lagos State board of internal revenue (LIRS)	Q3 2022
2	Attract more global capital or investment funds	Incentivizing and appealing to global investors to invest in local startups and R&D Raise awareness to entice institutional investors to fund local projects that support the Masterplan	Office of SDG and Investments	Q3 2022
3	Tap into domestic capital	Encourage and advocate for more local business funding by local investors	Office of Innovation and Technology	Q3 2022
4	Develop grants to enable LASG businesses	Facilitate project development, business and specialized inclusive grants Private and government funding to increase patent filing, research and development. Conversations with the Dutch Gov on plans for startup co-funding projects can serve as an implementation vehicle for this project – ONGOING AND ACTIVE	Multistakeholder	Q3 2022
	POLICY			
1	Advisory Council	Engaging industry leaders, startups and private sector tech stakeholders before the revision of existing and development of new policies that may affect the discourse about the innovation and technology ecosystem e.g. sovereign wealth, growth, economic zone related policies	Office of Innovation and Technology	Q2 2022
2	Domesticate the Start-up act	Domesticate law/bill solely for the purposes of enabling start-ups, and clusters like Yaba to be become special zones with economic incentives among other enabling traits.	Multistakeholder	Q3 2022



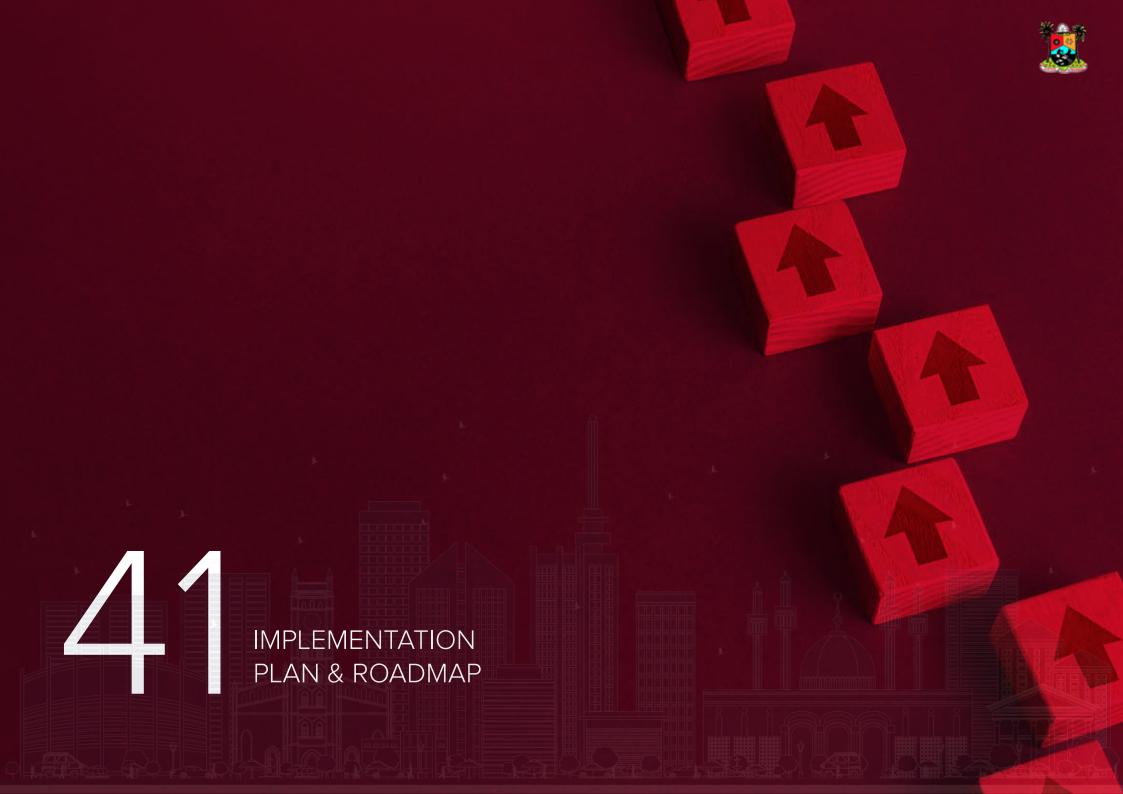


	SHORT TERM				
S/N	PROJECT/ INITIATIVE	DESCRIPTION	RESPONSIBILITY	COMPLETION DATE	
	ADVOCACY				
1	Transparency & Dialogue	Freely exchange and disseminate information through targeted communication, orientation campaigns and bi-directional communication platforms that will encourage dialogue and enable citizenry participation in innovation development as well as providing feedback	Multistakeholder	Q3 2022	
	TALENT				
1	Attract Global Talents	Incentivize and appeal to Nigerian talent in diaspora as well as foreign talent.  The UNDP Smarter Together challenge/innovation Programme can serve as a vehicle to	Ministry of Science and Technology	Q4 2022	
		organise challenges for startups ideating and solving local problems like health insurance, recycling, power and public transport with awards to participants	Securities and Exchange Commission (SEC)		
	FUNDING				
1	Enable Financial Funnels	Alternative funding options should be made available in the State, such as the safe use of pensions to invest in startups, government tax incentives, and international or corporate funds.	Securities and Exchange Commission (SEC)	TBD	
2	Nigerian Stock Exchange Support	The NGX to be more involved in the tech/startup/innovation ecosystem	Securities and Exchange Commission (SEC)	TBD	
	INFRASTRUCTURE				
1	Encourage the development of innovation and technology	Support the development of more hardware labs/hubs, tech hubs, coworking spaces and maker spaces in LGAs and LCDAs for grassroots access and collaboration and encourage experimentation, invention, and general hands-on upskilling of the interested public A tech-based partnership program between the Ministry of Youth Development and the University of Pittsburgh to build a maker space to be known as the <b>Manufacturing</b> assistance centre at LASU Epe Campus	Multistakeholder	Q4 2022	
	facilities	Potential utilization of maker spaces to spur the manufacturing of car parts which auto manufacturers and assemblers can adopt in their production line.			



# PROPOSED PROJECTS AND INITIATIVES

	SHORT TERM			
S/N	PROJECT/ INITIATIVE	DESCRIPTION	RESPONSIBILITY	COMPLETION DATE
1	Improve Internet Access	Ensuring the continuous laying of the fiber cables to increase access to stable internet connections.  To create free access to WIFI statewide, <b>the UNDP Project on Statewide Mobile</b> Broadband can serve as a vehicle for creating both a statewide broadband plan and network performance monitoring system		Q4 2022
	ADVOCACY			
1	Youth-driven awareness	The second secon		TBD
2	Re-branding campaign	Targeted publicity and advocacy of projects and initiatives to spur a mindset shift  Multistakeholder		TBD
	MEDIUM TERM			
S/N	PROJECT/ INITIATIVE DESCRIPTION		COMPLETION DATE	
	DIVERSITY & INCLUSION			
1	Enablement	Pass and enforce diversity laws and secondments, as well as diversify the tech hubs concept across the State	Ministry of Justice Lagos State House of Assembly	TBD
2	Promote gender diversity	Raise awareness, encourage and involve more female participation in the tech ecosystem's decision-making processes and programmes	Office of Innovation and Technology	Q3 2022
3	Promote Inclusion	Create intervention programmes targeting physically challenged and individuals on the spectrum across the State to diversify the outlook of technology hubs, encourage inclusion and attract funding	Office of Innovation and Technology	TBD





### **IMPLEMENTATION PLAN**

Key implementation enablers provide the right support for implementing the identified projects and initiatives

#### **ACCESS**

- Executive Orders
- Extracurricular activity/ curricular requirement at pre-tertiary educa tion levels
- Synergy between State Government, Electricity Distribution Companies (DISCOS) & Telcos

#### **TALENT**

- Incentive programs for talent development in Government
- Benchmarking code for jobs and career matching. Curriculum change or updates
- Upgraded education facilities
- Global outreach to reverse the brain drain

#### **FUNDING**

- Improved macro-economic environment.
- Government guarantees
- Access to financial information about the ecosystem and its opportunities
- Tax breaks and subsidies for Research agencies, SMEs and startups

### INFRA-STRUCTURE

- Lagos State's infrastructure deployment framework
- Physical planning Laws
- Government intervention and Executive Orders

#### **POLICY**

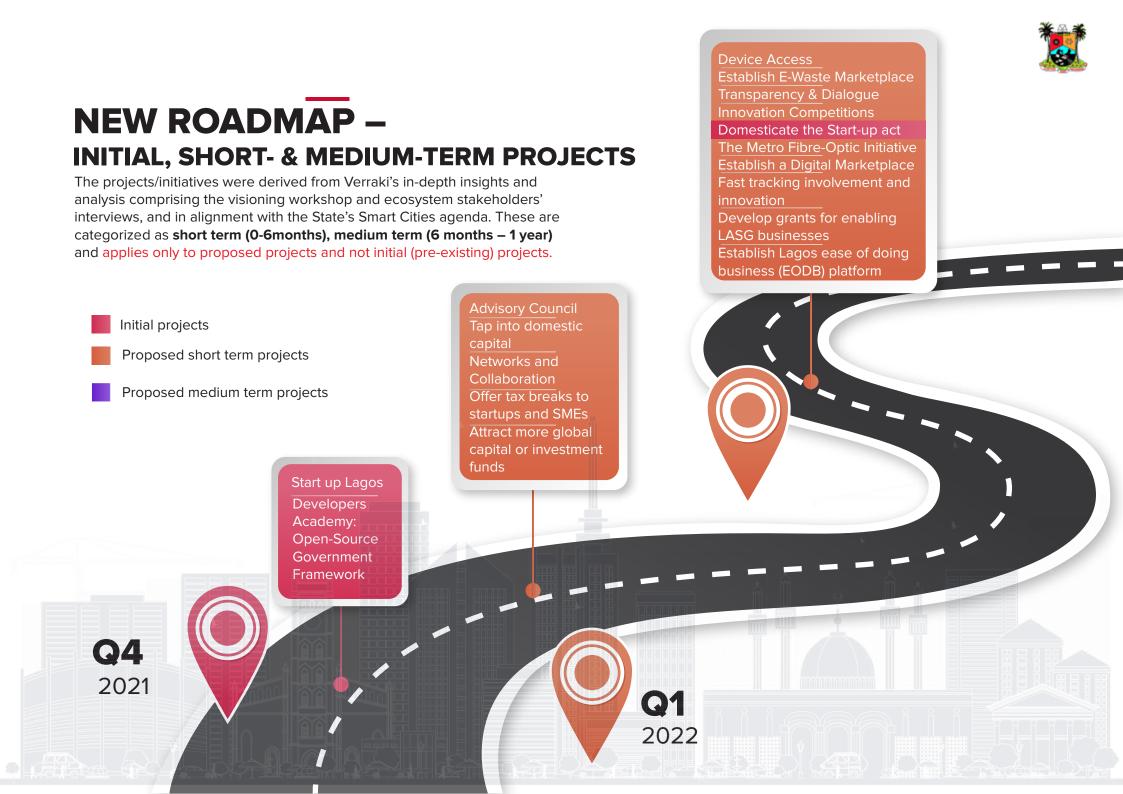
- Public Data Policy for Lagos State
- LASRIC policy
- Local content policy
- Domesticated Start-up Act
- Executive Orders
- Lobbying Lagos State House of Assembly

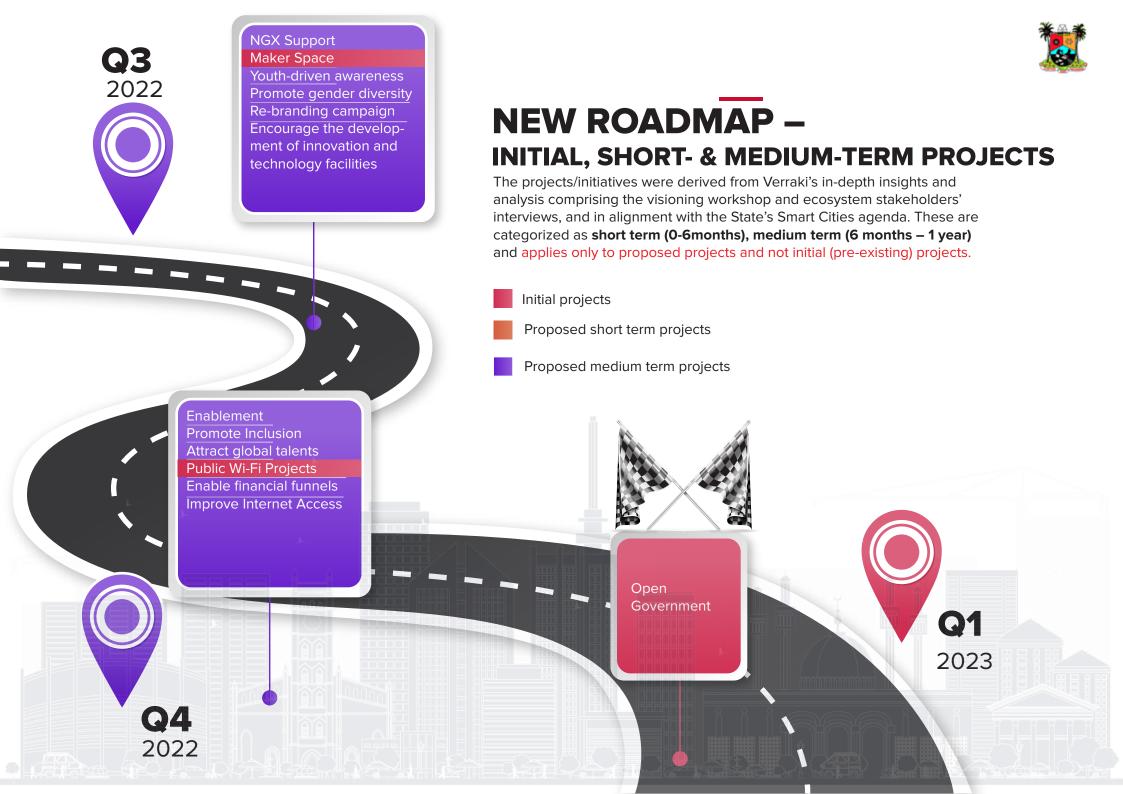
### COMMUNICATION/ ADVOCACY

- Widespread and effective media (partners, agencies and tools)
- Grassroots & experiential marketing/outreach Dedicated ecosystem SMEs and advocates (enterprise marketers)

#### **DIVERSITY**

- In-depth knowledge (records) and research about the State's diversity landscape.
- Policy and enforcement of "Affirmative Action" aimed at increasing workplace or educational opportunities for underrepresented sections of the ecosystem.
- Update of building code standards







## PERFORMANCE MANAGEMENT APPROACH

#### **Evaluation Framework**

We mapped key questions to four evaluation areas and defined detailed indicators for each category

А

**Relevance:** Did the projects respond to the priorities and did they align to the masterplan's objectives?

B

**Effectiveness:** Did the projects achieve their objectives as defined in the Strategic Intent?

C

**Efficiency:** Did the projects have the appropriate structure and management capabilities in place to deliver on their objectives?

D

**Sustainability:** Will the results and outcomes of the projects continue after funding or will support end?

#### **Performance Management and KPI's**

Each group within the management council will be responsible for achieving present goals and metrics, and work with executive management and the strategy team to set budgets and KPIs.

Programme Management	KPI's will be dependent on the programmes identified at the time
Finance & Administration	Focus on reaching invest- ment goals, budget variation, revenue generating master- plan members, etc.
Business Development	Focus on marketing communications, innovation within start-ups, partnerships effectiveness, etc.





### CONCLUSION

- The refined Lagos State Innovation and Technology Masterplan has captured numerous projects and initiatives as well as an **implementation** roadmap focused on making Lagos State a most attractive destination for technology investments, talent development and job creation all geared towards increased prosperity for the State and Nigeria as a whole.
- It is expected that much value will be created and success achieved by implementing the masterplan supported by effective **governance and partnership frameworks**, and adequately measured by a **performance management approach** for accountability purposes
- The Lagos State Government is seeking execution partners to attain quick wins in the following focus areas:

Improved internet infrastructure,

cybersecurity deployment,

Talent and skills development (in cybersecurity, data science with focus on mid-tier and seniors),

Data centres and cloud computing offerings,

Circular economy (e-waste), and the general promotion of techpreneurship and the start-up economy.

The Lagos State Government is looking forward to working with the private sector and other stakeholders to create a prosperous and innovative state for its constituents and partners.







