African Union

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JICA

Programme for Infrastructure Development in Africa (PIDA):
First 10-Year Implementation Report

A Decade of Transforming Africa's Infrastructure

PIDA
INTERCONNECTING
INTEGRATING & TRANSFORMING

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Message from His Excellency Abdel Fattah El-Sisi

President of the Arab Republic of Egypt,
Chairperson of the AUDA-NEPAD Heads of State and Government Orientation Committee (HSGOC)

On behalf of the Heads of State and Government Orientation Committee (HSGOC), I am pleased to present this Report on the Programme for Infrastructure Development in Africa (PIDA), marking the remarkable progress achieved over the past 10 years. As we celebrate the collective efforts of our continent in advancing infrastructure development, a crucial pillar for Africa's sustainable and inclusive growth. Recognising the pivotal role of infrastructure in driving progress, the African Union Heads of State and Government adopted PIDA in 2012. Today, as we take a moment to look back, we are filled with pride, acknowledging the remarkable milestones accomplished and the profound positive changes experienced throughout Africa.

I extend my heartfelt congratulations to the leadership of the African Union Development Agency-NEPAD (AUDA-NEPAD) for their commendable efforts in steering PIDA toward success. Under the Agency's stewardship, PIDA has evolved into a comprehensive framework, effectively addressing Africa's infrastructure challenges and nurturing the continent's development.

Over the past decade, PIDA has served as a catalyst for change, fostering regional integration, enhancing competitiveness, and unlocking Africa's immense potential. Through targeted investments in transport, energy, transboundary water, and Information & Communication Technology (ICT) sectors, PIDA has created an enabling environment for economic development, job creation, and poverty alleviation. The achievements of PIDA are a testament to the dedication, collaboration and effective partnership and coordination among all stakeholders involved, including AUDA-NEPAD, the African Union Commission (AUC), the African Development Bank (AfDB), and the United Nations Economic Commission for Africa (UNECA). Today, we acknowledge and appreciate the unwavering commitment of these esteemed institutions in driving the PIDA agenda forward.

PIDA's Priority Action Plans have been instrumental in fast-tracking regional priority projects and propelling Africa towards a more connected and prosperous future. During PIDA PAP1 (2012-2020), significant strides were made, with the development of 16,066 km of roads and 4,077 km of railway lines, the establishment of One-Stop Border Posts (OSBPs), and 7 GW of hydroelectricity power production and 3,506 km of transmission lines. These achievements have laid a solid foundation for our continued progress.

Looking ahead, PIDA PAP2 (2021-2030) builds upon these successes, aligning projects with our collective aspirations for regional integration, industrialisation, and the realisation of Agenda 2063. We reaffirm our commitment to ensuring the efficient implementation of the PIDA Priority Action Plan, promoting sustainable development, job creation, and poverty reduction across the continent.

However, as we celebrate our accomplishments, we must also recognise the challenges that lie before us. Financing infrastructure development remains a significant hurdle, with an estimated investment of $360 billion required to implement all PIDA projects by 2040. While substantial commitments have been made, including contributions from AU Member States, International Financial Institutions, and other sources, we must explore additional avenues to mobilise the necessary resources.

In this spirit, I call upon our esteemed development partners to join us in supporting PIDA's noble mission. The African continent is ripe with opportunities, and by investing in our infrastructure, we are investing in a brighter future for all. Let us seize this moment to galvanise international support, leveraging the expertise and resources of our partners to accelerate the implementation of PIDA projects.

Infrastructure development is a top priority for achieving our intra-Africa trade goals, as articulated in the African Continental Free Trade Area (AfCFTA) agreement. We recognise that a well-connected and efficient infrastructure network is essential for facilitating the movement of goods, services, and people, enabling increased trade and economic integration across the continent, and ensuring a decent life for Africa in fulfilment of its peoples aspirations.

I extend my deepest appreciation to all stakeholders who have contributed to the success of PIDA. Together, we have made tremendous strides in transforming Africa's infrastructure landscape. Let us forge ahead with renewed vigor, united in our commitment to realising PIDA's vision of a prosperous, interconnected, and integrated Africa.

Together, let us mobilise the necessary resources and support from our development partners to propel PIDA forward and pave the way for a future where Africa's infrastructure serves as the backbone of our continent's growth and development. Together, we can build a stronger Africa for generations to come.

Message from Her Excellency Nardos Bekele-Thomas,

Chief Executive Officer, African Union Development Agency-NEPAD

It is with immense pride that I present the Programme for Infrastructure Development in Africa (PIDA) 10 Years Progress Report. This remarkable milestone marks a decade of relentless dedication, transformative action, and unwavering commitment to unlocking Africa's vast potential through infrastructure development.

Infrastructure lies at the heart of sustainable progress and prosperity for any nation or continent. Recognising this, PIDA has emerged as a beacon of hope and progress, driving Africa towards a future characterised by economic growth, regional integration, and improved livelihoods for millions of Africans. As we delve into this report, we witness the profound impact that PIDA has had on shaping the infrastructure landscape across the continent.

Africa's journey towards achieving its ambitious goals, as enshrined in the African Union Agenda 2063, necessitates world-class infrastructure that can support its burgeoning population and rapidly evolving economic landscape. The magnitude of this undertaking cannot be overstated. Closing the infrastructure gap demands significant investments, strategic planning, and unwavering determination. It is in this context that PIDA has emerged as a catalyst for change, orchestrating a collaborative effort that involves the African Union Commission (AUC), the African Union Development Agency (AUDA-NEPAD), the African Development Bank (AfDB), the United Nations Economic Commission for Africa (UNECA), and the Regional Economic Communities (RECs).

PIDA's overarching framework, spanning from 2012 to 2040, is a testament to the continent's collective resolve to address infrastructure deficits in key sectors: Energy, Transport, Water, and Information and Communication Technology (ICT). With an estimated cost of approximately US$360 billion, this framework outlines a comprehensive roadmap for progress, delivering tangible results and ushering in a new era of connectivity, sustainability, and opportunity.

As we reflect on the first phase of PIDA, encapsulated in the PIDA Priority Action Plan 1 (PIDA PAP1), we bear witness to an extraordinary array of achievements. Over the past ten years, PIDA has facilitated the construction of 16,066 kilometres of roads and 4,077 kilometres of railway lines, enhancing connectivity and bolstering intra-African trade. The development of 3,506 kilometres of transmission lines has strengthened interconnectivity within Africa's power networks, while the Lesotho Highlands Water Project (LHWP) Phase 1 has transferred nearly 17,990 million cubic meters of water to South Africa, addressing crucial water needs. Additionally, PIDA has spearheaded the digital revolution, with 17 countries achieving digital connectivity through optical fibre cables, surpassing initial targets and fuelling the continent's ICT capacity.

Beyond the tangible infrastructure advancements, PIDA has been instrumental in fostering economic growth, reducing inequality, and promoting inclusive development. The projects and programs implemented under PIDA have generated 112,900 direct jobs and 49,400 indirect jobs, created meaningful employment opportunities and transformed lives across the continent. By channelling resources and expertise into sustainable infrastructure, PIDA has empowered communities, stimulated economic activity, and paved the way for a brighter future for all.

Despite these milestones, we know that there are challenges and opportunities for improvement in the next phase, these include the lack of capacity for early-stage project preparation, the need to strengthen the engagement of the private sector in priority infrastructure projects across Africa, the need to create a robust enabling legal, policy and regulatory environment to enhance transboundary infrastructure project bankability; the lack of finance for project development and lack of bankable projects. As we embark on the next phase, PIDA PAP2, we are armed with invaluable lessons and tools to tackle these challenges.

We stand on the precipice of a consolidation phase, where projects will be chosen with deliberate precision, leveraging an integrated corridor approach to maximise efficiency and synergy in cross-border infrastructure planning and construction. With each passing year, we draw closer to the realisation of PIDA PAP3. This milestone will further propel Africa's infrastructure development and bring about significant positive change in alignment with Agenda 2063.

The PIDA 10 Years Progress Report stands as a testament to Africa's determination, resilience, and unwavering spirit. It inspires future generations, demonstrating what can be achieved when nations unite, collaborate, and prioritise infrastructure as a catalyst for sustainable development. With each milestone surpassed, we edge closer to our vision of "The Africa We Want" – an integrated, prosperous, and peaceful Africa driven by its citizens, representing a dynamic force on the global stage.

Lastly, I extend my deepest appreciation to all the stakeholders, partners, and individuals who have contributed to PIDA's remarkable journey. Your unwavering support and tireless efforts have propelled Africa towards a brighter future. As we delve into the pages of this report, let us celebrate the progress made thus far and recommit ourselves to the monumental task that lies ahead.

Together, we will unlock Africa's full potential and shape a prosperous, inclusive, and sustainable future for all.

Message from Mr. YANASE Naoki

Director General, Africa Department, Japan International Cooperation Agency (JICA)

I would like to express my heartfelt congratulations on completing the PIDA 10-Year Progress Report. In this Report, AUDA-NEPAD, the right arm of the AU and the facilitator of PIDA implementation, provides a comprehensive analysis of PIDA's achievements and challenges, as well as a roadmap for the future of PIDA. JICA is honoured to have been able to support PIDA for many years, including the preparation of this Report.

Based on the basic philosophies of "Ownership" and "Partnership" promoted through the Tokyo International Conference on African Development (TICAD), JICA has been supporting African-led initiatives, including PIDA. Regarding infrastructure development in Africa, JICA has been promoting a corridor development approach since TICAD V in 2013 and is committed to promoting local economic and social development along major trunk roads (corridors) with an integrated approach combining physical infrastructure development and institutional capacity development.

For example, in the West Africa Growth Ring region, which includes the Abidjan-Lagos Corridor covered by the PIDA PAP2 projects, JICA has provided extensive support, including the formulation of corridor development plans and urban development plans, support for trade facilitation at borders, and strengthening connectivity through hard infrastructure development.

With AUDA-NEPAD's vital initiatives, corridor development has become mainstream as a regional economic development approach that promotes African integration and intra-African trade and leads to sustainable and inclusive economic growth. Since 2021, the "Integrated Corridor Approach" has been established as a basic concept of PIDA PAP2, which underpins the development of strong intra-regional supply chains in Africa.

This Report highlights the progress and challenges of PIDA. It contributes to advancing PIDA PAP projects by providing helpful information to stakeholders, partners, and investors involved in infrastructure development in Africa. We hope the Report will reach a wide audience and lead to further development of PIDA.

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Executive Summary

PIDA Background

Infrastructure development drives progress for the African continent and is a key enabler of sustainable and inclusive economic growth. Its pivotal role in improving the continent's competitiveness and integration into the global economy is unquestionable. While inadequate infrastructure can be a significant obstacle to Africa's long-term growth, it also represents a significant opportunity, as infrastructure development is supported by intra-Africa trade.

Despite progress in interconnecting regional infrastructure on the continent since the creation of the African Union and the launch of its NEPAD programme in the early 2000s, Africa still faces serious infrastructure gaps in all sectors, both access and quality. In response to these challenges, in July 2012, African Union Heads of State and Government adopted the Programme for Infrastructure Development in Africa (PIDA), which is the continental master plan for infrastructure development in transport, energy, transboundary water, and Information & Communication Technology (ICT) for the period 2012-2040.

PIDA provides a strategic framework for priority projects to transform Africa by constructing modern infrastructure to strengthen Africa's competitiveness and integration into the global economy. Under the auspices of the African Union, PIDA is jointly coordinated by the African Union Commission (AUC), AUDA-NEPAD, the African Development Bank (AfDB), and the United Nations Economic Commission for Africa (UNECA).

PIDA stands out from previous regional infrastructure integration initiatives because it is based on a shared vision of regional integration and long-term goals. It consolidates continental infrastructure initiatives and fills gaps by providing practical and affordable priority projects aligned with Africa's long-term development goals. PIDA emphasises the importance of local ownership, diverse financing, and sound implementation strategies to ensure effective investments.

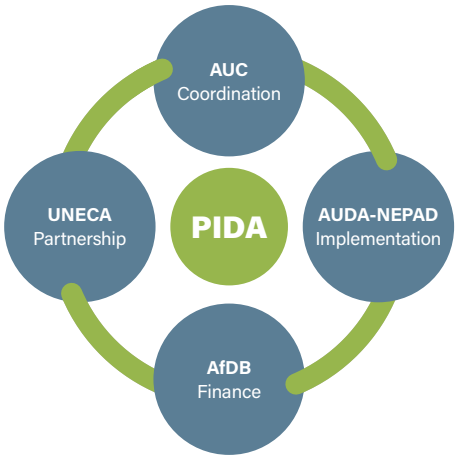


Figure 1: PIDA Coordination Mechanism

Institutional Architecture for Infrastructure Development in Africa (IAIDA)

Due to the scope, geographical coverage, resource requirements and coordination, it was clear that the successful implementation of PIDA projects required an elaborate institutional architecture. The PIDA implementation and coordination mechanisms were drawn up prior to its commencement, and the structure established is the Institutional Architecture for Infrastructure Development in Africa (IAIDA). IADA contains the PIDA institutional framework and describes the various roles and responsibilities of the key stakeholders, both in decision-making and implementation processes, for its efficient and effective steering and coordination.

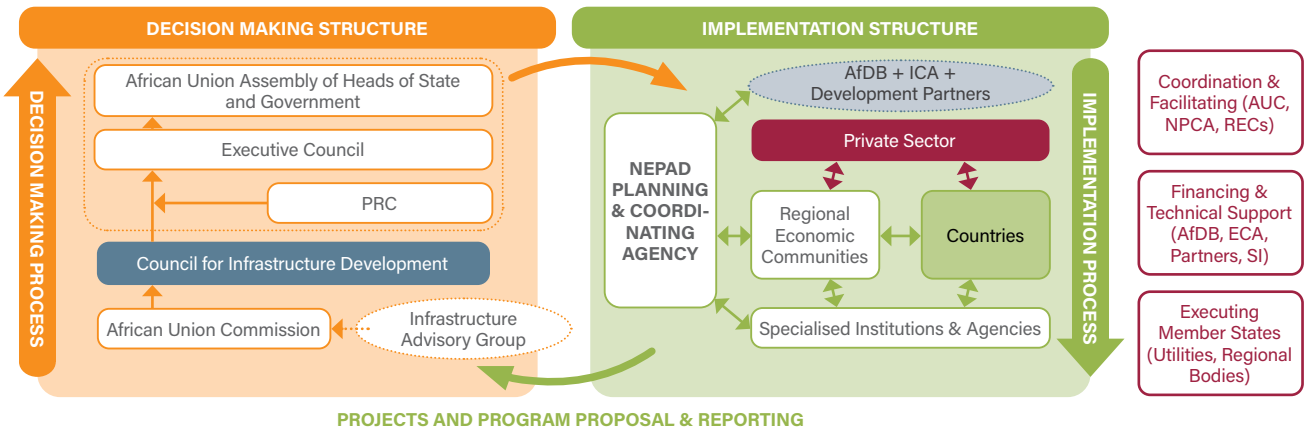


Figure 2: Institutional Architecture Framework

PIDA Priority Action Plan

PIDA Priority Action Plan Phase 1 (PIDA PAP1) contained regional priority projects for implementation during the period 2012-2020. PIDA PAP1 aimed to fast-track the implementation of programmes and projects for regional integration. Projects were prioritised based on eligibility, regional integration; feasibility and readiness; and development impacts. Fifty-one cross-border infrastructure programmes were unbundled into just over 409 individual projects.

PIDA PAP2, covering the period 2021-2030, includes projects that promote regional integration and industrialisation towards the realisation of Agenda 2063. Project prioritisation was based on the Integrated Corridor Approach and other factors such as rural-urban connectivity, job creation, gender, and climate friendliness. Its projects span the entire African continent, both the mainland and the islands, and leverage lessons from PIDA PAP1. It also employs more elaborate strategies and tools.

Figure 3: PIDA Priority Action Plan (PAP)

PIDA Financing Requirements

The estimated cost of implementing all PIDA projects to address anticipated infrastructure needs by 2040 is **USD 360 billion**. PIDA PAP1 required an investment of **USD 67.9 billion** for its projects to be realised by 2020. PIDA PAP2 includes 69 transport, energy, transboundary, and ICT projects, with an investment value of **USD 160.7 billion**.

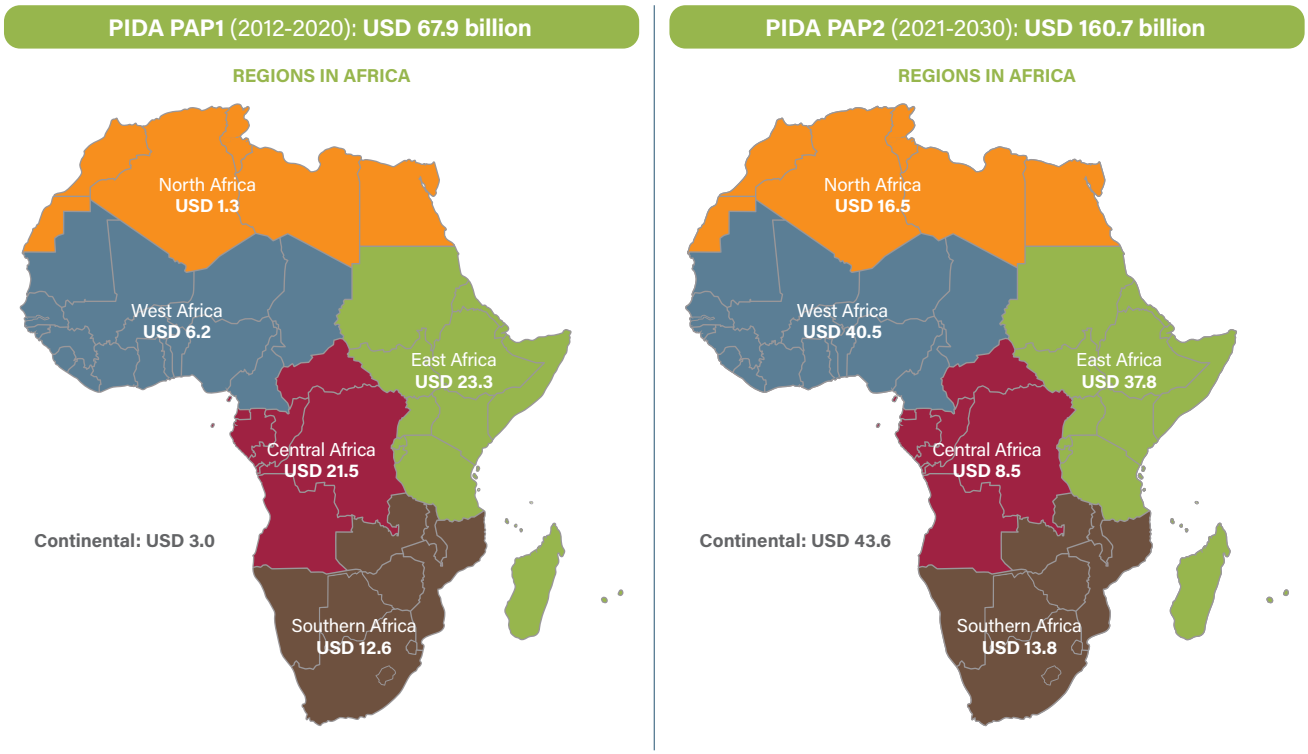


Figure 4: Financing Requirements for PIDA PAP1 and PIDA PAP2

PIDA Target for the period 2012-2040

The primary objective of PIDA is to address the ubiquitous regional and intra-regional connectivity challenges in Africa through infrastructure development. In its broadest scope, PIDA is intended to provide not just an adequate stock of infrastructure but a transformational infrastructure that will spur Africa to the next level of development and position it as a recognised player in the global economy. Through its various phases, PIDA is geared to enhance connectivity across the continent and thus facilitate the growth of intra-Africa trade in goods and services and the movement of persons. This will be achieved through, among other things, the reduced cost of conducting business and the unrestricted flow of financial and human capital across the continent. The following physical infrastructure needs to be built under PIDA between 2012 and 2040:

Figure 5: PIDA Target from 2012-2040

Key Achievements and Impact

Achievement for PIDA Implementation

There is a growing effort to make the implementation of PIDA projects the primary role of AUDA-NEPAD. 67 projects are in operation, 65 are under construction, 26 are at tendering stage, and 15 are at the transaction support stage and working towards financial close. **73%** of projects have moved from conceptualisation and early stages. Most PIDA PAP1 projects are operational, under construction, or in financial transaction or structuring phases.

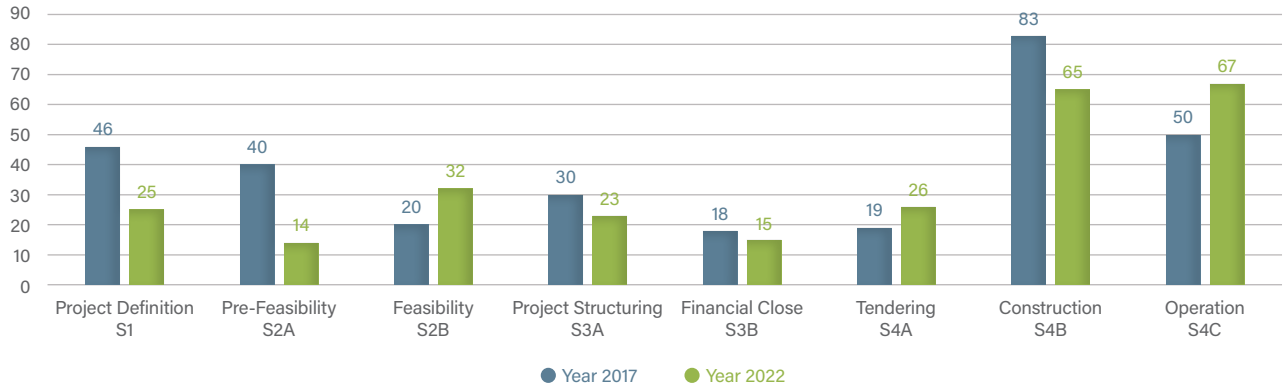


Figure 6: Trends in PIDA Project Stages between 2017 and 2022

Key infrastructure development resulting in PIDA implementation

During the last ten years, PIDA has experienced significant increases in transport, energy, ICT and transboundary water resources infrastructure.

Transport

In an increasingly changing global landscape, boosting intra-African trade is a credible and achievable path for Africa's economic sovereignty. As a continent, it has made considerable progress with the AfCFTA. However, to become the game-changer we desire, it must put in place the necessary infrastructure to be the critical enabler of intra-African trade. In line with this objective, **16,066 km of road** and **4,077 km of railway lines** have been developed since the inception of PIDA. One-Stop Border Posts (OSBPs) are essential to connecting this cross-border infrastructure. So far, practically **120 OSBPs** have either been planned or implemented.

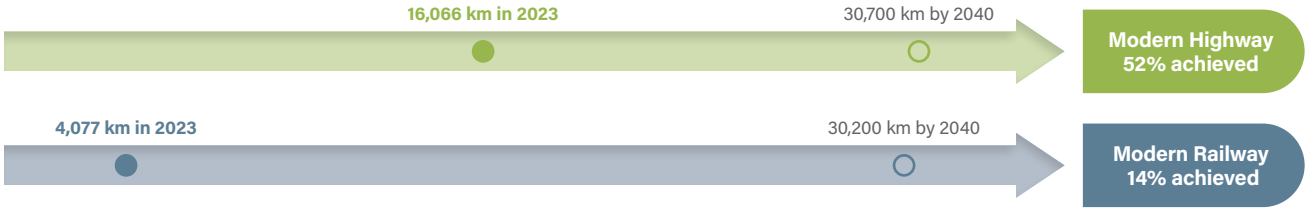


Figure 7: Kilometres of Roads and Railways Constructed

Energy

The energy sector in Africa faces challenges that include low generation capacity, high costs, unstable energy supplies, and low access rates, among others. The **African Continental Power Systems Master Plan (CMP)** is therefore planned within the context of the ongoing effort to set up the **African Single Electricity Market (AfSEM)** - one of the largest electricity markets in the world. It creates a long-term continent-wide planning process for power generation and transmission involving all five African power pools. So far, **3,506 km** of transmission lines have been developed to deliver **232 GW** of electricity to increase the linkage between African electricity networks. With over 54 shared river basins in Africa, cooperation in managing and developing transboundary water resources is crucial for regional and economic integration. Hydro-electricity is the most dominant renewable energy in the African electricity sector, with an installed capacity of **7 GW** through PIDA projects.

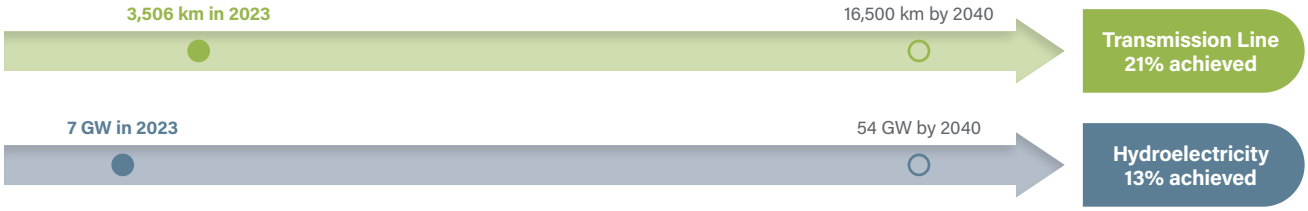


Figure 8: Kilometres of Transmission Lines and GW Generated

Transboundary Water Management

By the end of PIDA PAP1, 1.33 % of the 9 Water projects had reached implementation status. About **17,990 million cubic metres** of water have been transferred to South Africa since the Lesotho Highlands Water Project (LHWP) Phase 1 was commissioned in 2004. Two PIDA PAP1 projects successfully concluded include the joint development of the Strategic Action Programme for the Nubian Sandstone Aquifer System (NSAS) by four countries (Chad, Egypt, Libya and Sudan) and the Multisectoral Investment Opportunity Studies for the Cubango-Okavango basin (C-O MSIOA). The number of water infrastructure projects in the PIDA Portfolio has increased to 16 under PIDA PAP2. However, funding for the delivery of water infrastructure across Africa remains below the target of USD 30 billion annually to realise Sustainable Development Goal 6. The Continental Africa Water Investment Programme (AIP) International High-Level Panel on Water Investments for Africa has developed a report with actionable pathways for countries to mobilise at least USD 30 billion annually by 2030. In addition, the AIP-PIDA Water Investment Scorecard will mobilise political leadership, enhance mutual accountability and track progress towards accelerating water investments on the continent.

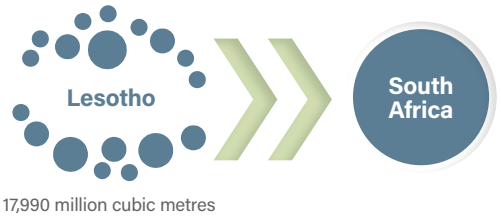


Figure 9: Lesotho Highlands Water Project

ICT

Many ICT projects have been successfully implemented, pushed by a pressing demand for a digital economy. Most PIDA PAP1 ICT projects are being implemented, and **17 countries** have achieved digital connectivity through optical fibre cables. ICT capacity is currently about **9 Terabits** against a target of 6 Terabits by 2020. Cybersecurity is of rising significance on the continent. As part of PIDA, the **AU Convention on Cyber Security and Personal Data Protection (AUCC)** was established as a credible framework for cybersecurity in Africa by organising electronic transactions, protecting personal data, promoting cyber security, e-governance and combating cybercrime**.** The AUCC has been **signed by 18 Member States** and **ratified by 14** states.

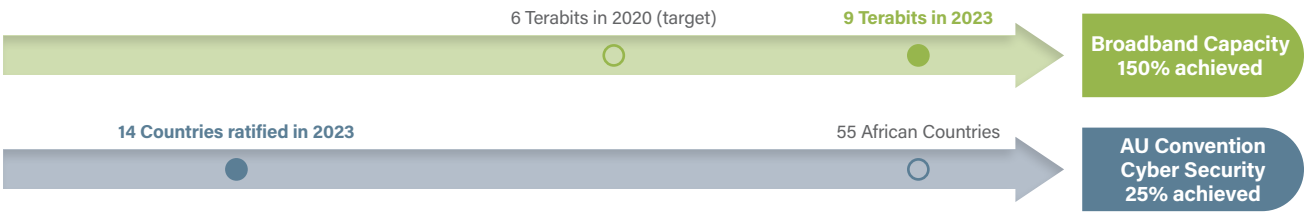


Figure 10: ICT Capacity

Transport

- Road: 16,066 km
- Railway: 4,077 km
- One-Stop Border Posts (OSBPs): 120 OSBPs

Energy

- Transmission Lines: 3,506 Km
- Hydro-Electricity Generation: 7GW
- African Continental Power Systems Master Plan (CMP)

Transboudary Water Management

- Water transfer: 17,990 million cubic metres of water between Lesotho and South Africa
- Multisectoral Investment Opportunity Studies for the Cubango-Okavango basin (C-O MSIOA)
- Strategic Action Programme for the Nubian Sandstone Aquifer System (NSAS)

ICT

- Optic Fibre Cables : 17 countries
- Internet Exchange Points: 38
- Broadband Capacity: 9 Terabits
- AU Convention on Cyber Security and Personal Data Protection (AUCC): 18 countries have signed, 14 have ratified

Figure 11: Specific Outcomes of PIDA PAP1 at a Glance

Key impact resulting in PIDA implementation

Close to 30 million people gained access to electricity, with current overall access to electricity at around **44%**. There has been a slight increase in intra-Africa exports to **16%** of trade due to road and rail infrastructure. PIDA enables the water storage infrastructure needed for food production and trade. ICT broadband penetration is now more than **25%,** exceeding the 10% target. One of the intended outcomes of PIDA is also to address economic marginalisation and social exclusion issues by facilitating the creation of economic opportunities and decent employment. During construction and operation, **112,900** direct and **49,400** indirect jobs were created.

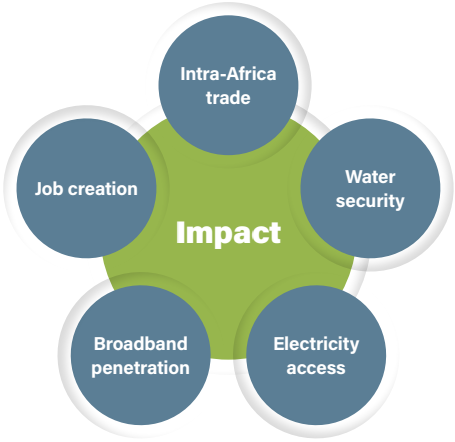


Figure 12: Key Impact of PIDA

PIDA Financing

By the end of 2020, investment commitments had exceeded the PIDA PAP1 initial estimation by **USD 14 billion** (20% above the initial target), reaching **USD 82 billion**. Different financing sources for PIDA PAP1 have been allocated, including **USD 34.35 billion** (42%) from AU Member States, **USD 19.67 billion** (24%) from ICA Members (including World Bank Group, AfDB, ICA MDBs, and DFIs), **USD 19.42 billion** (24%) from the People's Republic of China, **USD 2.28 billion** (3%) from the private sector, and **USD 5.88 billion** (7%) from other sources. The portion of private sector financing (3%) of PIDA projects has been particularly low when compared with other emerging economies, such as India (19%) and Mexico (16%).

The ownership principle is critical to the success of infrastructure development projects promoted by PIDA across Africa. Its principle is based on the belief that infrastructure development projects must cater, first and foremost, to the needs of African countries. With this in mind, it is necessary to acknowledge that the most significant source of financing commitments to PIDA PAP1 (42%) comes from AU Member States. Failure to consider ownership may lead to poor implementation and eventual failure of infrastructure projects.

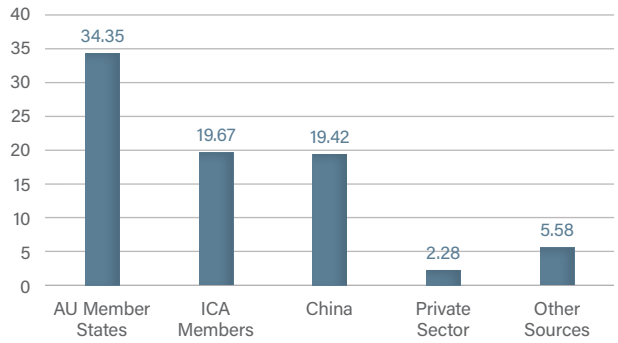


Figure 13: Financing Sources for PIDA PAP1

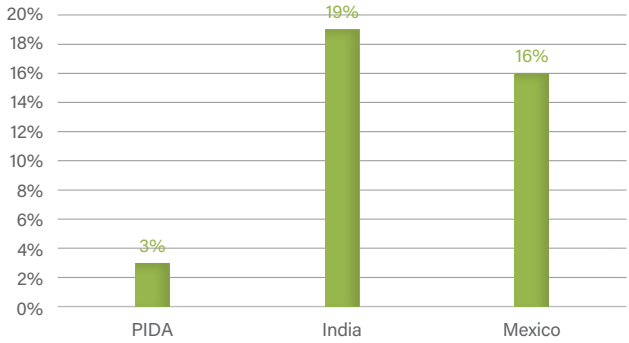


Figure 14: Portion of Financing from Private Sector

Challenges

While over 50% of PIDA PAP1 projects have moved from conceptualisation and early stages, there were inefficiencies in planning and implementation.

Need for a more robust selection process

The broad approach for selecting projects led to the construction of an extensive portfolio of projects (433) considered eligible for PIDA PAP1. They are not always aligned with the priorities laid out in Agenda 2063, such as environmental protection, inclusiveness and regional economic impacts.

Need for a shorter but more operational list of projects

The PIDA PAP1 selection process led to an extensive portfolio of projects. This was unattractive to investors, who often prefer to be presented with a limited number of projects. Investors questioned the quality and viability of the selected projects.

Implementation challenges

One of the main issues affecting the pace of implementation was the inadequate allocation of resources for project preparation at the initial stages. This resulted in a lower quality of project preparation and, therefore, a lack of financing commitments for their implementation.

Lessons Learned

PIDA PAP2 Project Selection

The PIDA PAP2 portfolio has been designed through a careful selection of projects which contribute to Agenda 2063 goals and the Integrated Corridor Approach by improving efficiencies and synergies across the 4 PIDA sectors (Transport, Energy, Water, ICT) and opening access to remote and landlocked hinterlands. It has developed a holistic and innovative approach to selecting a realistic pipeline of transformative cross-border infrastructure projects.

Notably, it has evolved from focusing on individual projects and programmes into an integrated corridor approach as the conceptual basis for PIDA implementation. The process developed for elaborating PIDA PAP2 is articulated around five key steps, as illustrated in the figure below.

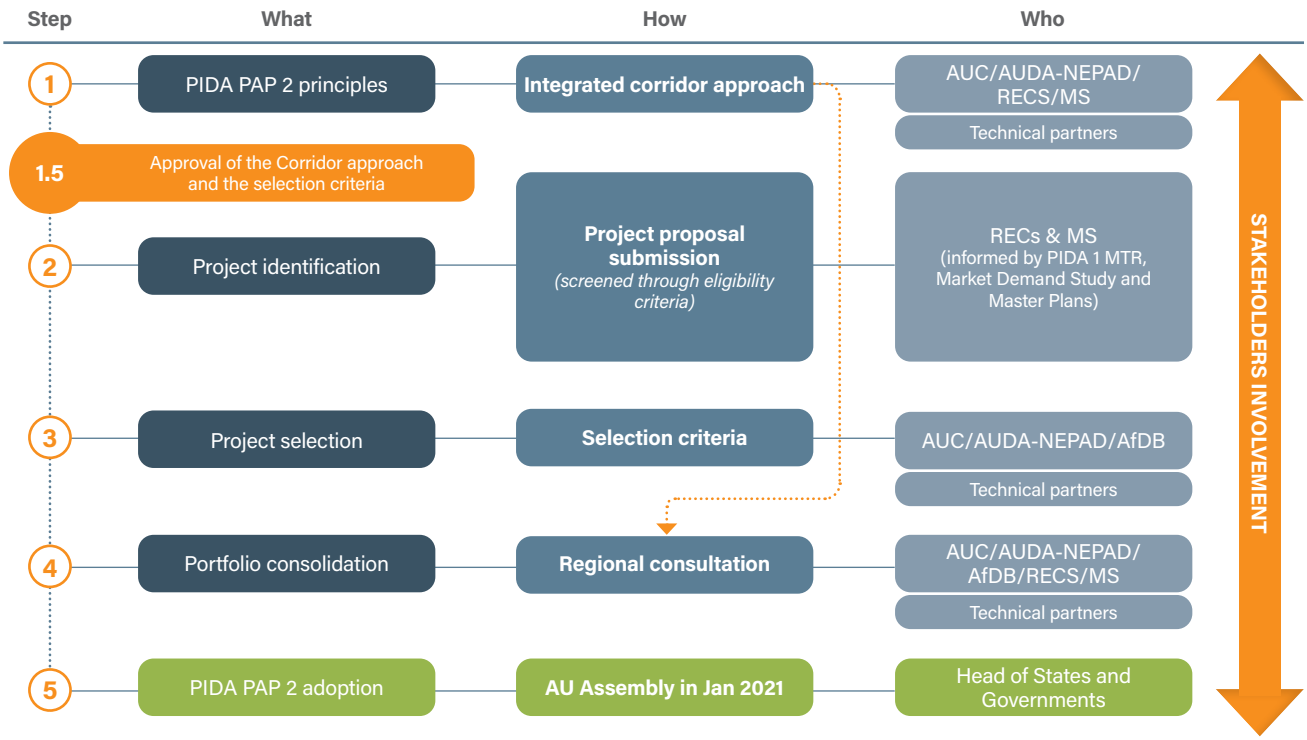


Figure 15: PIDA PAP2 planning process

Source: Elaboration of the 2021-2030 Priority Action Plan for the AU Programme for Infrastructure Development in Africa (PIDA)

Unlock Private Sector Investment from PIDA Financing

Over **USD 34 billion** from AU Member States was allocated to PIDA PAP1 between 2012 and 2020, resulting in investment commitments that exceeded the initial forecast by **USD 14 billion** (20% above the initial target) to reach **USD 82 billion**. Behind this commitment lies the fact that PIDA is a continental framework based on the principle of **African ownership**. AU Member States' contributions represent only **51%** of the estimated financing requirement, so funding from ICA members and the private sector is vital.

PIDA has not maximised its potential to unlock investment from the private as private sector financing was only **3%**. It would be desirable to raise the investment interest of institutional investors and the private sector who have, so far, been hesitant to include PIDA as an asset class in their portfolio through the PIDA marketing mechanism (PIDA Week and DFS) and the Continental Business Network. The resource mobilisation options identified in the PIDA Financing Strategy include exploring the practicality of each financing source, optimising the necessary instruments and building capacity among the various players in the project.

Development Key Institutional Instruments Prepared for PIDA Implementation

Drawing on lessons learned in PIDA PAP1, PIDA stakeholders concentrate on excellent project preparation, maximising the job creation potential of infrastructure projects, and promoting innovative financing and risk mitigation mechanisms for PIDA projects. With the support of partners, PIDA stakeholders have taken the time to develop fit-for-purpose tools and instruments to address specific challenges facing PIDA implementation. The following diagram shows the PIDA implementation initiatives, instruments, continental African programmes, and external opportunities that have been accelerating the PIDA implementation process.

Figure 16: PIDA Implementation Initiatives, Tools and Instruments

Partnership

Implementing large-scale infrastructure projects requires significant resources, expertise, and coordination among various stakeholders. Therefore, partnerships among regional, continental, and international institutions, as well as with RECs, AU Member States and the private sector, are essential for successfully implementing PIDA projects. Partnerships can provide financial resources, technical expertise, and institutional support for project preparation, implementation, and sustainability.

For instance, the Infrastructure Consortium for Africa (ICA) is a partnership of G7 and several G20 countries and development banks that support infrastructure development in Africa. PIDA has also established partnerships with national and regional development banks, which have provided financial and technical support. Partnerships can enhance collaboration, knowledge sharing, and capacity building among stakeholders, which are crucial for the successful implementation of PIDA. Thus, there is a need to explore the partnership and further resources to take necessary actions toward achieving PIDA.

Perspectives on the Future

Lessons learned over the past ten years can be integrated into PIDA to achieve African infrastructure targets and fill the infrastructure deficit across the continent.

Leverage Innovative and Emerging Opportunities to Speed Up Project Implementation

The PIDA process can gain speed by tapping into emerging opportunities ranging from technologies, innovative infrastructure sources, and financing. The rapid advancement of technology, digitalisation, and renewable energy solutions presents new avenues for infrastructure development. Embracing these opportunities will enhance connectivity and promote innovation, job creation, and economic growth. Furthermore, such opportunities open new funding windows and financing mechanisms for Africa's infrastructure development. In particular, Africa should capitalise on private sector funding and institutional investment, including green bonds and climate financing. This is expected to increase investment in PIDA projects.

Scaling Up and Replication of Successful Projects

PIDA has demonstrated that regional integration and cooperation are vital for addressing Africa's infrastructure needs. In the ICT sector, Africa has achieved 150% of PIDA targets. It is essential to consider how to scale up such successful projects and replicate best practices across the continent and in different sectors. Lessons learned from these projects should be documented, and experience-sharing encouraged. In that regard, the Virtual PIDA Information Centre (VPIC), the knowledge-sharing platform, and capacity-building initiatives should be fostered to empower African countries to adapt and replicate successful PIDA projects.

Addressing Persistent Challenges of Capacity and Funding

The next generation of PIDA projects should address the lack of inadequate capacity for project preparation and the limited funding availability. Insufficient funding, inadequate project preparation, and coordination gaps hinder the timely and effective execution of infrastructure projects. To address these challenges, a comprehensive approach is required. Strengthening appropriate public-private partnerships for the project development phase, improving feasibility studies, and streamlining regulatory frameworks can enhance investment attractiveness and address the financing gap. However, such an approach needs a bold capacity-building intervention in African institutions, including promoting good governance practices to ensure efficient project delivery.

Sustainability and Long-Term Impact of Infrastructure Achieved under PIDA

Infrastructure maintenance is one of the most neglected phases of project development across Africa. The next generation of PIDA projects is expected to include a systemic maintenance plan and identify appropriate strategies to finance it. Equally, environmental, social, and economic sustainability should constitute a cornerstone of the PIDA project prioritisation. Green infrastructure initiatives, renewable energy integration, and climate change resilience should be embedded into PIDA projects to ensure long-term benefits and minimise negative environmental impacts. Moreover, addressing social inclusivity and promoting gender equality in infrastructure planning and implementation will foster equitable growth and leave no one behind.

Fostered Inter-Institutional Collaboration and Partnerships

Collaboration and partnerships have been instrumental in PIDA's success thus far, and they will remain vital for its future implementation. Effective coordination among AU institutions, RECs, development partners, and the private sector is crucial for mobilising resources, sharing expertise, and promoting knowledge exchange. Strengthening these collaborative efforts will facilitate the implementation of PIDA projects, maximise their impact, and ensure a harmonised approach toward infrastructure development in Africa.

Through collaborative action, we can collectively overcome challenges, seize emerging opportunities and transform Africa's infrastructure landscape.

Chapter 1
Introduction

Overview of Infrastructure Development in Africa

Infrastructure serves as the bedrock for development in Africa, significantly contributing to economic growth, poverty reduction, and achieving sustainable development goals. It is crucial for increased regional trade, integration, and the realisation of Africa's long-term vision outlined in Agenda 2063 and the Africa Continental Free Trade Area (AfCFTA). However, the continent continues to face a substantial infrastructure gap that hinders social and economic progress, with an estimated annual investment shortfall of up to USD 108 billion. Africa is the second largest continent, with a population of 1.34 billion in 2021 and projected to reach 1.7 billion by 2030. Africa must produce goods and services for domestic consumption and global trade to achieve sustainable economic growth and improve living standards. Inadequate infrastructure is a significant obstacle for Africa in capitalising on emerging conditions for trade, growth, and job creation. Insufficient infrastructure, both in quantity and quality, increases production and transaction costs, reduces business competitiveness, and hinders economic and social development. It also creates an unfavourable business environment, making it less attractive for foreign direct investment. Limited service options and reduced quality of infrastructure affect vulnerable segments of the population.

Individual efforts by African countries to develop infrastructure have faced significant funding deficits due to the high costs involved. African countries, through the African Union and regional economic communities, have adopted the Programme for Infrastructure Development in Africa (PIDA) to address these inadequacies and enhance connectivity. PIDA aims to spearhead physical infrastructure development in transport, energy, ICT, and transboundary water resources. The programme focuses on efficient project preparation, implementation, and operation to deliver the required services and improve living standards. Recognising the critical role of infrastructure in development, the African Union Development Agency (AUDA-NEPAD) has been entrusted with coordinating the planning, resource mobilisation, and implementation of PIDA. AUDA-NEPAD collaborates closely with individual states, the African Union Commission (AUC), Regional Economic Communities (RECs), AfDB, UN Economic Commission for Africa (UNECA), Pan African Institutions, Development Partners, and other relevant stakeholders involved in infrastructure development. AUDA-NEPAD aims to drive infrastructure advancement across Africa by working with these entities.

PIDA Background PIDA, Objectives and Evolution

Upon the relaunch of the OAU into AU in 2002, the AU, through the then New Partnership for Africa's Development (NEPAD), embarked on a comprehensive programme for enhancing continental connectivity in transport, energy, ICT and transboundary water resources. This was undertaken by formulating the Short-Term Action Plan (STAP), adopted in 2002. The STAP comprised a limited number of projects identified, selected, and prioritised for rapid implementation.

The STAP, a short-term action plan, should have been followed by a Medium to Long-Term Strategic Framework (MLTSF) to articulate policies and strategies, outline priorities and contribute to establishing partnerships to promote economic integration and support the development of trade and commerce. The MLTSF was eventually transformed into the PIDA after extensive studies and consultations. The development of PIDA was completed in 2012, and it was adopted as a long-term rolling programme based on elaborate studies with wide stakeholder consultations to establish priorities together with robust institutional structures for the implementation of programmes and projects.

PIDA is grounded in regional and continental master plans and action plans as well as other relevant work undertaken by the African Union (AU), the regional economic communities (RECs), the regional and continental technical agencies (including the lake and river basin organisations (L/RBO) and power pools (PP)), and the concerned countries. The proposed infrastructure development programme articulates short- (2020), medium- (2030), and long-term (2040) priorities for meeting identified infrastructure gaps in a manner consistent with the agreed strategic framework - based on long-term social and economic development visions, strategic objectives, and sector policies - and buttressed by an implementation strategy for the Priority Action Plans (PAP).

Figure 17: PIDA Priority Action Plan

PIDA is a programme focused on four different infrastructure sectors aiming at a wide range of objectives:

- **Transport:** to enable the free movement of goods and people through efficient, safe, affordable and reliable transport services. It includes roads, railways, ports, airports, and related transport services projects.
- **Energy:** to develop efficient, reliable, affordable and environmentally friendly energy networks and increase access to modern energy services. Clean power generation and transmission, high-capacity oil and gas pipelines and renewable energy projects can all fall under the PIDA's energy sector tag.
- **Water:** to promote and enhance integrated water resource management by developing transboundary water infrastructure and strengthening institutions for efficient cooperation on shared water resources.
- **Information and Communications Technology (ICT):** to improve the access of all Africans to reliable and affordable ICT networks, meeting Africa's demand for affordable broadband, increasing access and security to internet services and promoting intra-African e-commerce.

PIDA and its first Priority Action Plan (PIDA PAP1) was adopted by the African Heads of State and Government at the AU in 2012, covering the period 2012-2020. Relevant milestones of PIDA are shown in the timeline below:

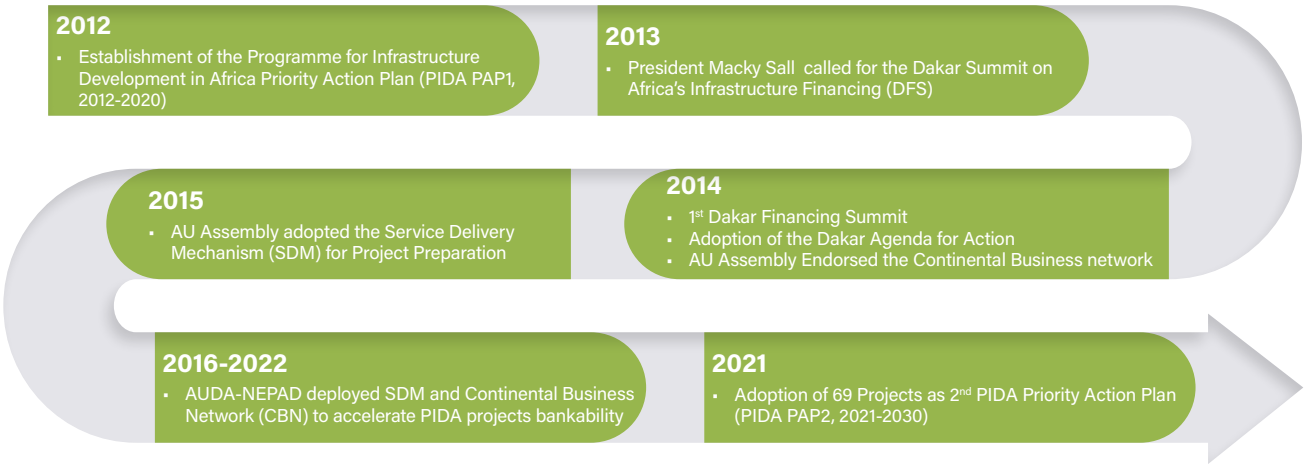


Figure 18: Timeline of PIDA PAP1 History

PIDA PAP1 comprises **51 cross-border infrastructure programmes**, including over 400 projects to be developed by 2020. PIDA PAP2 is made up of 69 projects for the period 2021-2030.

► Case Study: PIDA objectives and regional integration

PIDA is based on a shared vision of regional integration and a long-term agenda that will support the objectives of the Abuja Treaty that established the African Union. It is further expected to achieve the following:

- Reducing transport costs and boosting intra-African trade with transport efficiency gains totalling approximately USD 172 billion in the African Regional Transport Integration Network (ARTIN) and potential for more significant savings as trade corridors open;
- Reducing energy costs and increasing access, enabling Africa to reap savings on electricity production costs of USD 30 billion annually through 2040. Power access is planned to rise from 39% in 2009 to nearly 70% in 2040, providing access to an additional 800 million people;
- Increasing global broadband connectivity by increasing broadband penetration by 10%, which is expected to will increase GDP by 1% by strengthening connections between goods and markets and between people and jobs; and
- Ensuring water and food security in Africa which has the lowest water storage capacity and irrigated agriculture in the world, and about where half the continent faces water stress or water scarcity.

PIDA Institutional Governance

The 2012 African Union Summit adopted the Institutional Architecture for Infrastructure Development in Africa (IAIDA) to support the smooth implementation of PIDA. The main objective of IAIDA is to create an integrated and enabling management environment capable of enhancing the capacity of the African Union and its institutions to streamline all efforts into tangible achievements. IAIDA comprises two mechanisms, including decision-making and implementation, that are defined according to the political mandates of the participating institutions.

Key stakeholders of PIDA, at a continental level, include the AUC and AUDA-NEPAD, which monitor and advocate the implementation of PIDA, and the AfDB, which provides financial leadership. Besides, RECs are responsible for monitoring specific projects developed within their region and assuring the harmonisation and implementation of soft policy measures across countries. Individual Member State States and their correspondent Government Agencies also play an essential role, devising master plans and identifying integrative regional infrastructures, driving and owning specific projects and creating the special purpose vehicles needed for each of them. Overall, the ecosystem of PIDA stakeholders is rich, including parties belonging to the national, regional and continental public sector, sectoral pools, the investment community, financial and multilateral institutions, private sector companies and organisations, international cooperation partners, academia or interest groups.

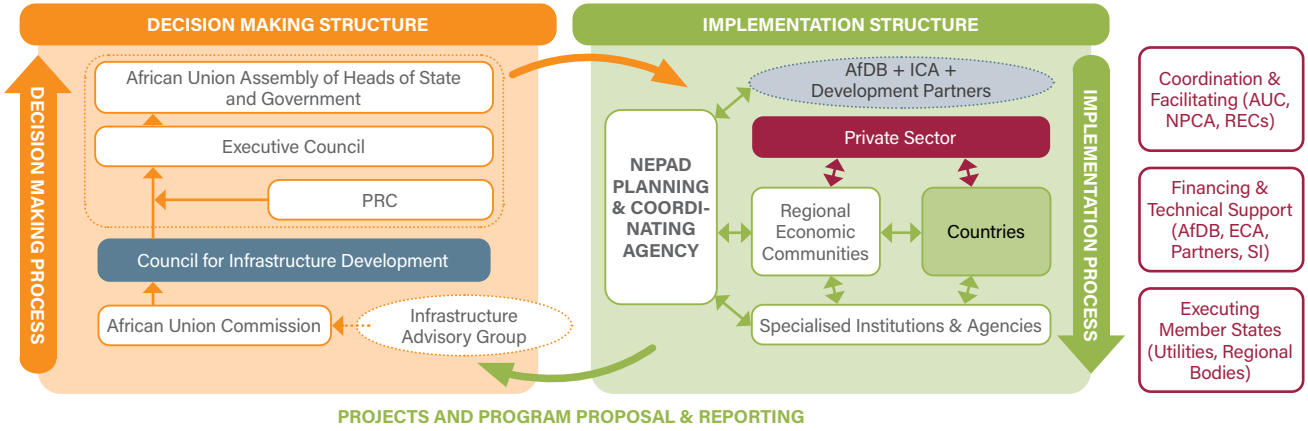


Figure 2: Institutional Architecture for IAIDA

Instruments available for PIDA Implementation Stakeholders

The African Heads of State and Government have identified the shortcomings of early-stage project preparation as one of the critical bottlenecks for PIDA's implementation (Dakar Financing Summit, 2014). The lack of technical and financial capacity leads to the omission of valid project concepts and the proliferation of immature proposals. Some critical aspects that have not always been considered include implementation capacity, regulatory framework, investment conditions, ownership of the assets, government guarantees and cross-border harmonisation. Around 25% of the over 400 projects selected for PIDA PAP1 have not reached the feasibility stage due to a lack of maturity. Since the inception of the First Phase of PIDA in 2012 and the Dakar Financing Summit (DFS) in 2014, which identified shortcomings for the smooth implementation of PIDA Projects. The AUDA-NEPAD has developed several institutional instruments to accelerate the advancement of PIDA PAP projects. Some of the key instruments include:

A. Project Preparation Instruments

- **Service Delivery Mechanism (SDM):** aims to address the lack of capacity and financial resources for early-stage project preparation at the national and regional level and give initial momentum to PIDA Projects.
- **SDM Expert Pool**: the SDM has the required structure and resources to mobilise experts from multiple disciplines quickly and at a limited cost. This provides project sponsors with tailored support on different fronts and specialised advice on a case-by-case basis.
- **SDM Early-stage Project Evaluation Toolkit**: provides an objective and straightforward way to perform the project evaluation process quickly and simply (within 30 days).
- **PIDA Quality Label (PQL):** a quality recognition by the AUDA-NEPAD SDM that reflects a project's adherence to international best practices in project preparation and structuring to bankability, thus increasing the projects' likelihood of reaching financial close.
- **PIDA Job-creation Toolkit** estimates the total job impact throughout the preparation, construction, and operation of the project under consideration and thus providing a basis for developing jobs creation maximisation strategies for PIDA Projects
- **NEPAD - Infrastructure Project Preparation Facility (IPPF):** it assists MS and RECs by providing grant resources and funding for project preparation, encouraging partnerships for implementation, and promoting an enabling environment for cross-border and regional infrastructure development.

B. Risk mitigation and Investment mobilisation instruments

- **Continental Business Network (CBN):** aims at "crowd-in" financing and support for infrastructure projects by creating a platform for collaboration between the public and private sectors.
- **The 5% Agenda and Africa Infrastructure Guarantee Mechanism (AIGM)** aims to mobilise Africa's institutional infrastructure investment community, including African pension and sovereign wealth fund capital, to meet current financing gaps and upscale risk mitigation for PIDA projects.

C. Political steering initiative

- **Presidential Infrastructure Champion Initiative:** accelerates projects by bringing political visibility and mobilising the required resources led by Heads of State and high-level decision-makers

D. Information management and knowledge capitalisation instrument

- **African Infrastructure Database (AID)** and the **Virtual PIDA Information Centre (VPIC)** to facilitate the monitoring communication and cooperation between PIDA stakeholders
- **PPF Database** provides an accurate understanding of the PPF landscape with a presence in Africa and potential sources of project preparation funds
- **Investor and Financial Institutions Database**: provides precise knowledge on the main financial entities with a presence in Africa in the infrastructure sector.

For the development of the second phase of the PIDA Priority Action Plan (PIDA PAP2), which has identified the priority projects for the next decade of PIDA Implementation from 2021-2030. The Member States adopted the following, which build on the progress made during the first phase of PIDA implementation and these include:

- **PIDA Integrated Corridor Approach:** a multisectoral framework to infrastructure development that works toward broadening the socio-development of PIDA by designing and structuring projects to maximise **job creation**, enhance **climate-friendliness**, improve **connectivity between urban and rural areas**, link infrastructure with **other economic sectors**, and to mainstream **gender-sensitivity** across all phases of infrastructure development.
- **PIDA Implementation Strategy:** provides a comprehensive overview of how PAP2 projects will be developed and progressed through the project lifecycle (from planning to financial close) to meet Agenda 2063 – all while enhancing project bankability. The Strategy sets out the institutional structure, the **Integrated Corridor Approach Implementation Principles**, and the available PIDA Instruments that project owners can leverage to accelerate project development and presents data tracking/ monitoring and evaluation tools that will be used to track the development of projects and the overall PAP2 portfolio.
- **PIDA Implementation Guidelines:** These are in the process of being developed and will provide standard operating procedures and processes for project preparation in line with international best practices to ensure standardisation, quality control & assurance at every stage of the project preparation cycle in compliance with the requirements of the PQL1, PQL 2 and PQL 3.

The following diagram shows the PIDA implementation initiatives, instruments, continental African programmes, and external opportunities that have been accelerating the PIDA implementation process.

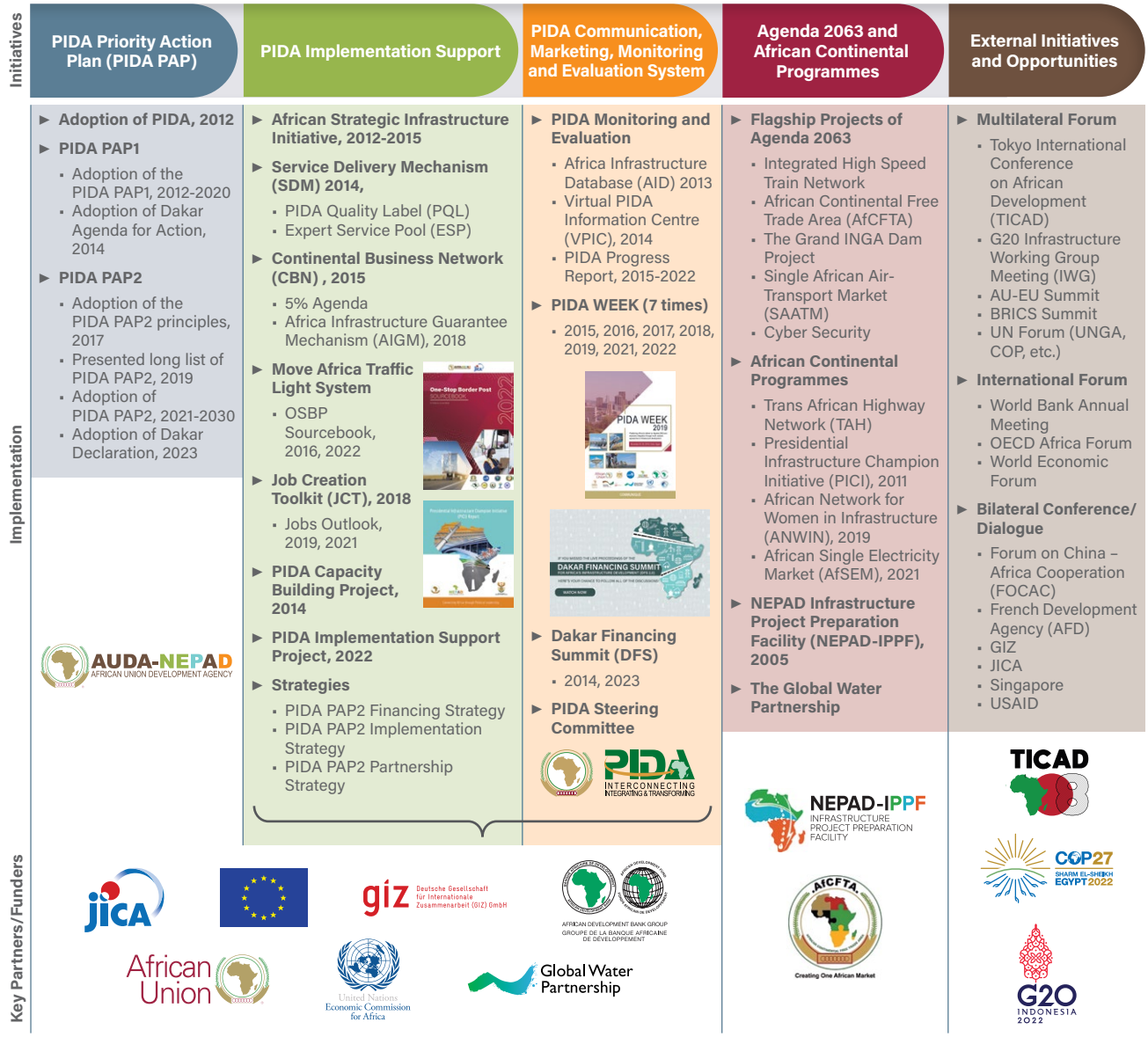


Figure 16: PIDA Implementation Initiatives, Tools and Instruments

Document description and acknowledgements

This 10-Year Progress Report of the PIDA) provides a comprehensive overview of PIDA's journey, achievements, impacts, and future perspective from its establishment in 2012 to the conclusion of the PIDA First Priority Action Plan (PIDA PAP1) in 2021.

This Report presents a detailed account of PIDA's key achievements over the past decade. It highlights the successful identification, prioritisation, and coordination of infrastructure projects across vital sectors, including transportation, energy, water, and ICT. These projects have significantly enhanced connectivity, fostered regional integration, and facilitated trade within and between African countries. The Report delves into the tangible impacts of PIDA's efforts. It explores how PIDA's mobilisation of financial resources through strategic partnerships with development institutions, governments, and private sector stakeholders, has spurred investments in infrastructure projects. These investments have played a crucial role in driving economic growth, job creation, and poverty reduction in the region.

Furthermore, the Report sheds light on PIDA's contribution to establishing policy and regulatory frameworks that create an enabling environment for infrastructure development. PIDA's efforts in promoting harmonisation, standardisation, and best practices have eliminated barriers and streamlined infrastructure investment processes, fostering seamless integration across African nations.

In addition to assessing past achievements, the Report provides an exciting future perspective for PIDA implementation. It introduces the second priority action plan, PIDA PAP2, from 2021 to 2030. PIDA PAP2 aims to build upon the accomplishments of PIDA PAP1 and address the evolving infrastructure needs of Africa. The plan emphasises the acceleration of project implementation, with a focus on streamlining processes, enhancing coordination, and overcoming challenges. PIDA PAP2 also outlines a sustainable and resilient approach to infrastructure development. It advocates incorporating green infrastructure, renewable energy solutions, climate change adaptation measures, and disaster risk reduction strategies into future projects. The plan recognises the transformative potential of private sector participation and aims to promote increased involvement through public-private partnerships (PPPs) and innovative financing models.

This Report signifies the commitment and collaborative efforts of all stakeholders involved in PIDA's journey toward a prosperous, connected, and sustainable Africa.

Chapter 2
PIDA After 10 Years of Sectoral Development

PIDA Sectoral Target 2012-2040

The primary objective of PIDA is to address the ubiquitous regional and intra-regional connectivity challenges in the continent through infrastructure development. In its broadest scope, PIDA is intended to provide not just an adequate stock of infrastructure but the transformational infrastructure that will spur Africa to the next level of development and reposition it as a recognised player in the global economy. Through its various phases, PIDA is geared to enhance connectivity across the continent and thus facilitate the growth of intra-Africa trade in goods and services and the movement of persons. This will be achieved through, among other things, the reduction in the cost of conducting business and providing for an unrestricted flow of financial and human capital across the continent. With that, the physical infrastructure to be built under the PIDA from 2012 to 2040 is summarised as follows:

Figure 19: Additional Infrastructure to be built under PIDA from 2012 to 2040

Source: PIDA Study Synthesis[1]

(i) **The PIDA transport** plans link the major production and consumption centres, provide connectivity among the cities, define the best hub ports and railway routes and open the land-locked countries to improved regional and continental trade. Expected targets to achieve by 2040 in the transport sector are **30,700 km** of modern highways and **30,200 km** of modern railways.

(ii) **The PIDA energy** infrastructure plans call for the development of major hydroelectric projects to generate **54 GW** of electricity needed to meet forecasted increases in power demand resulting from increased consumption of households, industry, and agriculture, as well as wider access to electricity. Energy plans also include transmission lines with **16,500 km** to connect the continent's power pools and permit a significant increase in inter-regional energy trade. One regional petroleum-product pipeline and the Nigeria-Algeria gas pipeline are also included in the PIDA energy project.

(iii) **The PIDA transboundary water** programme targets the development of multipurpose dams, water resource management and water supply infrastructure. It builds the capacity of Africa's lake and river basin organisations to plan and develop hydraulic infrastructure. It would also help address the looming food deficit. The expected target to achieve new water storage capacity by 2040 is **20,101 hm³**.

(iv) **The ICT** component of PIDA helps establish an enabling environment for completing Africa's terrestrial fibre-optic infrastructure and installing Internet exchange points (IXPs) in countries. It connects each country to two different submarine cables to take advantage of the newly established capacity around Africa, interconnect countries and establish IXPs.

[1] AfDB, PIDA Study Synthesis, 2011. Available at https://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/PIDA%20Study%20Synthesis.pdf

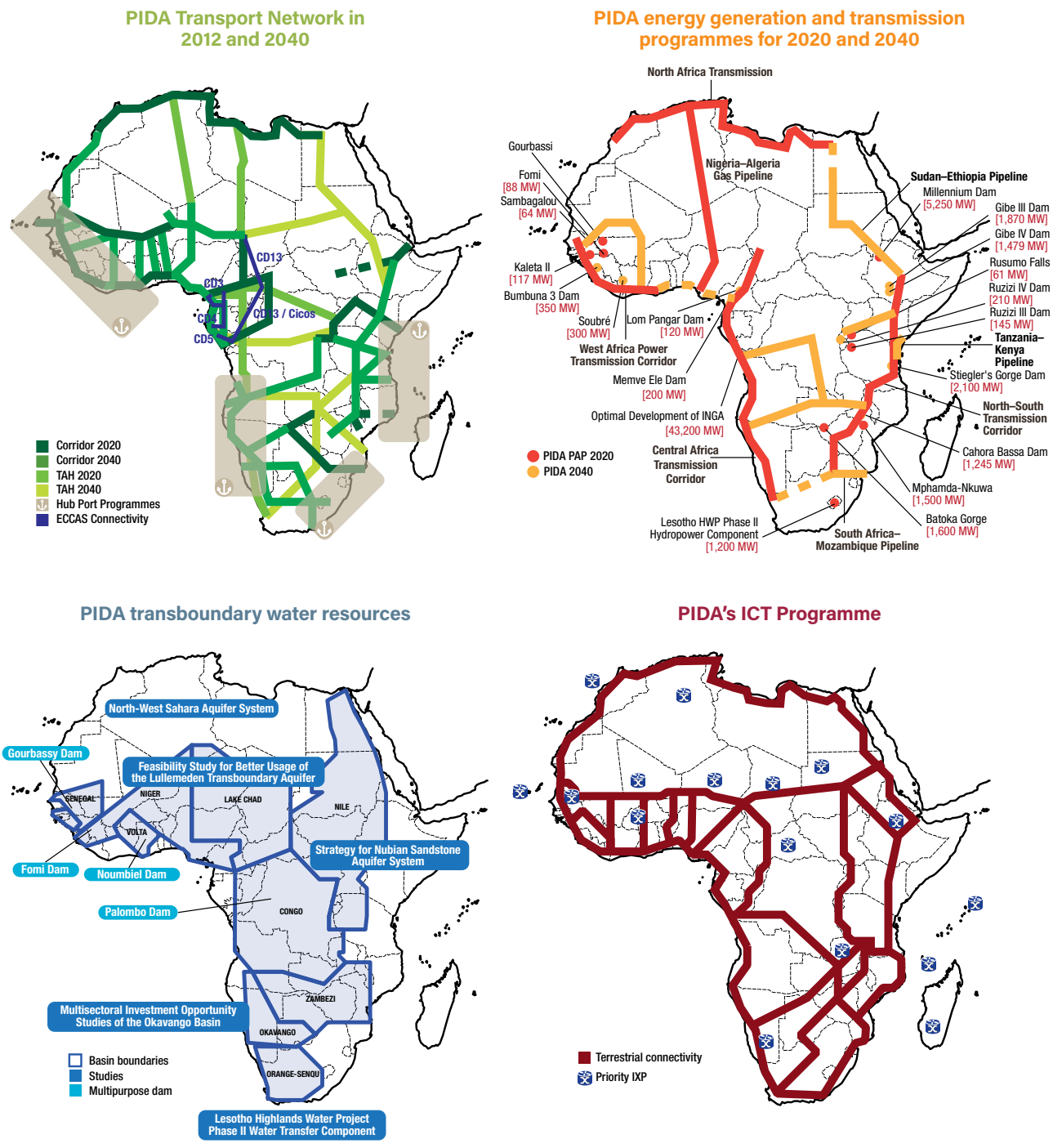


Figure 20: PIDA Projects up to 2040

Source: PIDA Executive Summary[2]

[2] AfDB, AUC, NEPAD, UNECA, PIDA Executive Summary, 2011. Available at https://www.au-pida.org/download/pida-executive-summary/

Actual Infrastructure Added through PIDA PAP1 (2012-2020)

PIDA PAP1 included 51 programmes with 433 projects across the four major sectors: Transport, Energy, Water, and ICT. PIDA PAP1 projects focus on constructing, rehabilitating, and upgrading existing infrastructure facilities and supporting the development of new infrastructure to enhance economic connectivity and regional integration across the continent. Some of the infrastructure facilities added through PIDA PAP1 include upgrades to ports, railways, air transport, multipurpose dams and water transfer projects for energy production and water resources management and developing regulatory environments for ICT. Interconnection projects, pipeline developments, and hydropower production centres were also part of PIDA PAP1 projects.

The following diagram shows the tangible results made by PIDA PAP1 in the transport, energy, transboundary water, and ICT sectors between 2012 and 2022. A more detailed analysis of progress on infrastructure development is provided in the following subsections.

Transport

- Road: 16,066 km
- Railway: 4,077 km
- One-Stop Border Posts (OSBPs): 120 OSBPs

Energy

- Transmission Lines: 3,506 Km
- Hydro-Electricity Generation: 7GW
- African Continental Power Systems Master Plan (CMP)

Transboudary Water Management

- Water transfer: 17,990 million cubic metres of water between Lesotho and South Africa
- Multisectoral Investment Opportunity Studies for the Cubango-Okavango basin (C-O MSIOA)
- Strategic Action Programme for the Nubian Sandstone Aquifer System (NSAS)

ICT

- Optic Fibre Cables : 17 countries
- Internet Exchange Points: 38
- Broadband Capacity: 9 Terabits
- AU Convention on Cyber Security and Personal Data Protection (AUCC): 18 countries have signed, 14 have ratified

Figure 21: Specific Outcomes of PIDA PAP1 at a Glance

Source: PIDA PAP2 Financing Strategy[3], 3rd Edition OSBP Sourcebook[4], Statement from AUDA-NEPAD[5], Africa Water Investment Programme[6]

[3] AfDB, PIDA -PAP2 Financing Strategy, 2022. Available at https://www.au-pida.org/download/pida-pap2-financing-strategy/

[4] AUDA-NEPAD 3rd Edition OSBP Sourcebook, 2022. Available at https://www.nepad.org/publication/one-stop-border-post-sourcebook

[5] AUDA-NEPAD. Available at https://www.un.org/ldc5/sites/www.un.org.ldc5/files/unldcs_arrm_session_5_feb_24_auda_nepad_towela_nyirenda_jere.pdf

[6] Africa Water Investment Programme. Available at https://aipwater.org/

Transport

In an increasingly changing global landscape, boosting intra-African trade is a credible and achievable path for Africa's economic sovereignty. As a continent, it has made considerable progress with the AfCFTA. However, to become the game-changer we desire, it must put in place the necessary infrastructure to be the critical enabler of intra-African trade. In line with its objective, **16,066 km of road** and **4,077 km of railway lines** have been developed since the inception of PIDA[3]. One-Stop Border Posts (OSBPs) are essential to connecting this cross-border infrastructure. So far, almost **120 OSBPs** that have been planned or implemented have been identified[4].

In the context of achievement against targets set in 2012, **52%** of the target on modern highways has already been achieved as there is a growing awareness of the importance of the corridor development approach in the continent. On the other hand, railway development requires significant capital investments that may not be readily available from public sources, resulting in **14%** of achievement against the target as of 2023. Inadequate capacities of railway companies and their financial performance, coupled with challenging geopolitical, legal and regulatory environments, can also pose operational challenges to modern railway investments. Due to the highly regulated nature of railway development, modern railway projects usually require extensive engagement with multiple stakeholders within the transport sector to ensure compliance with legal, safety, operational, and environmental standards. Despite these challenges, investments in modern railway projects have the potential to offer long-term benefits such as facilitating trade and regional integration, reducing traffic congestion, lowering emissions, enhancing safety, and promoting sustainable and inclusive economic growth.

The PIDA transport sector has the most projects in the portfolio and shows relatively good implementation results, with **73** projects either at the construction or operation stage. One possible reason for the relatively successful implementation may be higher standardisation and predictability in highway construction. It often follows standardised specifications and is subject to similar design and construction techniques in many parts of the world. It may also need fewer permits and approvals than other sectors, allowing easier approval and quicker implementation times. Another possible reason is that the private sector generally plays a crucial role in funding, constructing, and operating transport projects. The private sector's involvement can potentially increase the project's implementation speed as private parties may be more innovative, responsive, and efficient in project delivery.

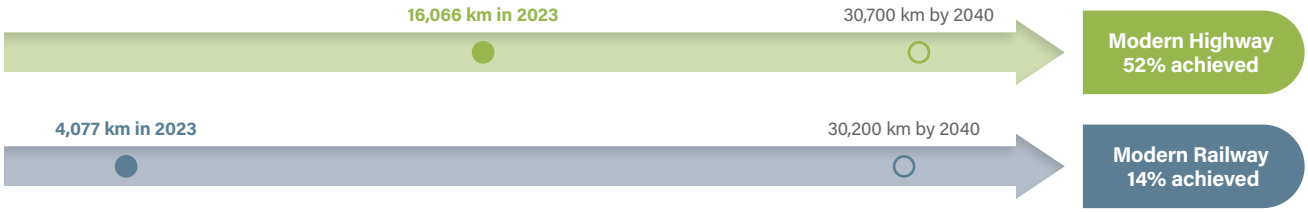


Figure 22: Kilometres of Roads and Railways Constructed

Source: PIDA Study Synthesis[1], PIDA PAP2 Financing Strategy[3]

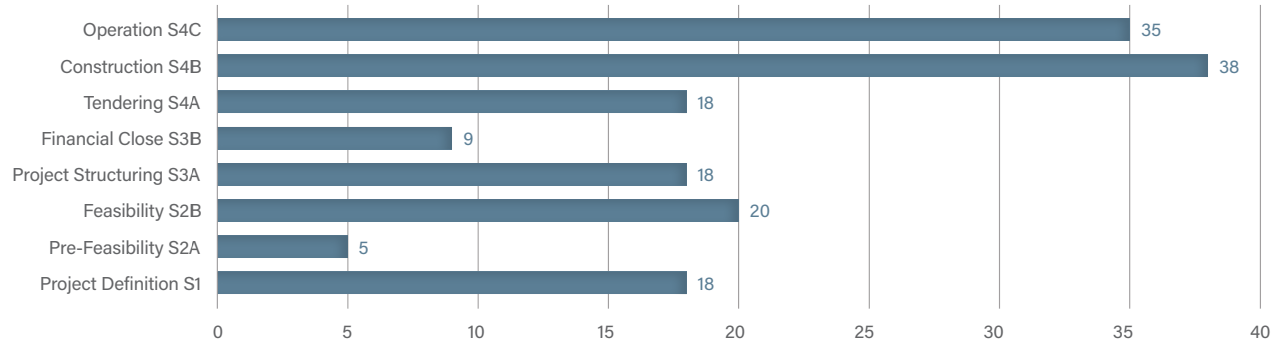


Figure 23: Transport Project Status on PIDA PAP1

Source: PIDA Data Collection Exercise by AUDA-NEPAD, 2022[7]

[7] AUDA-NEPAD, PIDA Data Collection Exercise, 2022

► Case Study 1: Standard Gauge Railway (SGR)

1. **The Djibouti/Addis Ababa SGR** is a railway link between Ethiopia's capital city Addis Ababa and the Port of Djibouti in Djibouti. The project was completed in 2018 and is seen as a vital transport corridor for Ethiopia's imports and exports and a critical regional transport link. The railway covers a distance of around 768 km, reducing travel time from the Port of Djibouti to Addis Ababa from about three days to just 10-12 hours.
2. **The Mombasa/Nairobi SGR** is a 472 km-long standard gauge railway that links the port city of Mombasa in Kenya to the nation's capital, Nairobi. The railway was completed in 2017 and has been operational since then, reducing the travel time between the two cities from around 12 hours to just 4.5 hours. The railway is expected to further extend to Kampala in Uganda, and Kigali in Rwanda, upon completion of all phases.
3. **The Dar es Salaam/Dodoma SGR** is part of the Central Corridor SGR network in Tanzania, which aims to link the port city of Dar es Salaam with the capital city Dodoma and eventually reach the border with Rwanda. The 550 km-long railway project has been divided into three phases, with the first phase covering a distance of 203 km and completed in 2019. The second phase, covering 422 km, is expected to be completed by 2023. The completion of the SGR is expected to boost the transportation of cargo and passengers and stimulate economic growth and job creation in the region.

Source: PIDA Progress Report 2019[8], Virtual PIDA Information Centre (VPIC)[9]

Energy

The energy sector in Africa faces challenges that include low generation capacity, high costs, unstable energy supplies, and low access rates, among others. The **African Continental Power Systems Master Plan (CMP)** is therefore planned within the context of the ongoing effort to set up the **African Single Electricity Market (AfSEM)** - one of the largest electricity markets in the world. It creates a long-term continent-wide planning process for power generation and transmission involving all five African power pools. So far, **3,506 km** of transmission lines have been developed[3] to deliver **232GW**[10], total installed capacity for electricity generation on the continent to increase the linkage of electricity networks of Africa. With over 54 shared river basins in Africa, cooperation in managing and developing transboundary water resources is crucial for regional and economic integration. Hydro-electricity is the most dominant renewable energy in the African electricity sector, with an installed capacity of **7GW** through PIDA projects[5].

The PIDA energy sector is relatively slow-paced in implementation compared to the transport sector. In particular, there is a slight lag in the achievement of hydro-electricity projects at **13%** compared to the **21%** achievement of the transmission lines. The development of hydro-electricity projects is subject to complex geological, environmental and social factors, which can create risks that are difficult to manage. Challenges that can be encountered include environmental impact assessment, project preparation, land acquisition, and resettlement of affected communities, among others. Also, financing arrangements for hydro projects are often long-term and require multiple investor or partner participation, making them more prone to political and economic risks.

Additionally, hydro-electricity projects may require significant upfront capital investment for feasibility studies, design work, and construction costs. Regulatory challenges may also involve securing permits and licenses for construction and operations. Despite these challenges, hydro-electricity projects provide a significant renewable energy source essential for economic and sustainable development. Such projects can spur economic growth through long-term power generation, thus offering long-term economic benefits.

8 AUDA-NEPAD, PIDA Progress Report, 2019. Available at https://www.au-pida.org/download/pida-progress-report-2019/

9 Virtual PIDA Information Centre. Available at https://www.au-pida.org/

10 African Union, African Common Position on Energy Access and Energy Transition Technical paper, 2022

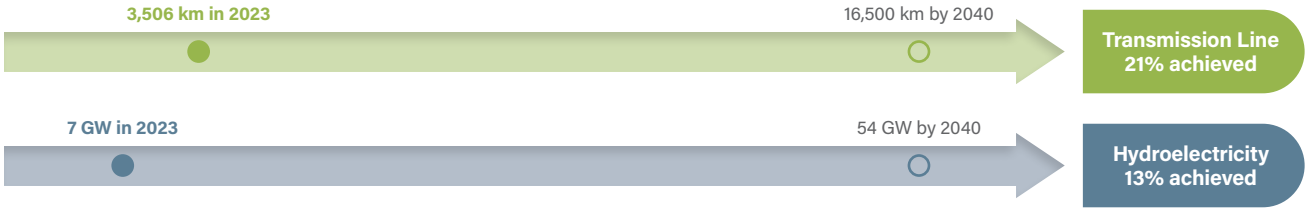


Figure 24: Kilometres of Transmission Lines and GW Generated

Source: PIDA Study Synthesis[1], PIDA PAP2 Financing Strategy[3], Statement from AUDA-NEPAD[5]

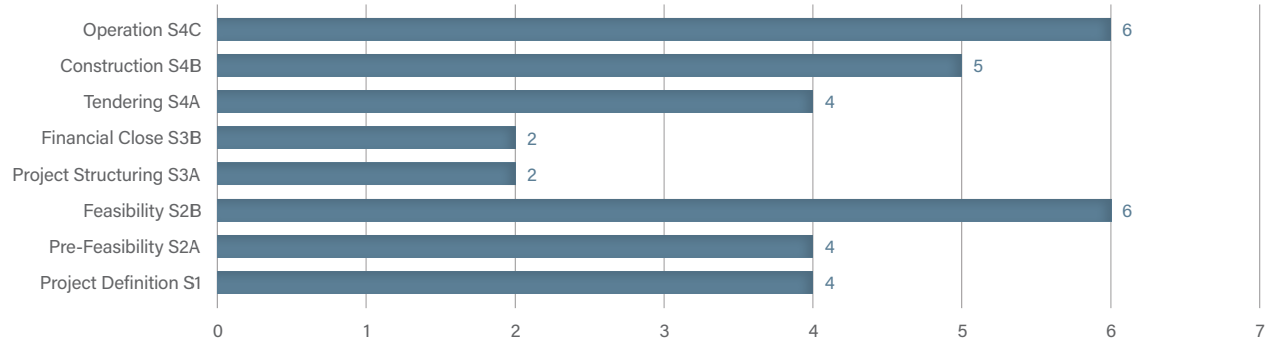


Figure 25: Energy Project Status on PIDA PAP1

Source: PIDA Data Collection Exercise by AUDA-NEPAD, 2022[7]

► Case Study 2: Transmission Line

Zambia-Tanzania-Kenya Interconnection Project, also known as the **ZTK interconnector**, is now operational. ZTK transmission line can carry up to 400 kV of electricity and stretches 1,350 km linking the power grids of Zambia, Tanzania and Kenya, and has the potential to expand electricity connectivity to other neighbouring countries. This electricity interconnection project enables the countries to share surplus electricity, providing economic benefits for the region. Kenya has already started importing electricity from Ethiopia through the transmission line and exporting electricity to Tanzania, particularly during the dry season when Tanzania needs help to meet electricity demand. It is expected that other countries in the region, such as Uganda, Rwanda, and the Democratic Republic of the Congo, will benefit from this interconnection and be connected to this electricity highway soon.

Source: Virtual PIDA Information Centre (VPIC)[9]

Transboundary Water

While consolidated data on new water storage capacity is scarce, almost **17 990 million cubic metres** of water have been transferred to South Africa since the Lesotho Highlands Water Project (LHWP) Phase 1 commissioning in 2004. Two PIDA PAP1 projects that successfully entered into the operation stage include the joint development of the Strategic Action Programme for the Nubian Sandstone Aquifer System (NSAS) by the four countries Chad, Egypt, Libya and Sudan; and the Multisectoral Investment Opportunity Studies for the Cubango- Okavango basin (C-O MSIOA). The first project resulted in technical tools to afford a better understanding of the regional aquifer system and a strategic action programme to set up the policy and institutional reforms necessary for collective management actions of the shared groundwater resources and to address critical transboundary concerns at both the regional and national level by the four countries. The implementation of the latter project has resulted in the setup of the Cubango-Okavango River Basin (CORB) Fund, a hybrid fund (sinking and endowment vehicles) for mobilising long-term resources to enable the countries to provide more coordinated support to local livelihoods and sustainable water resource

use. The delivery of water infrastructure across Africa remains below the target of at least the additional USD 30 billion required annually to meet Sustainable Development Goal 6. Thus, members of the Continental Africa Water Investment Programme (AIP) 's International **High-Level Panel on Water Investments** for Africa are exploring **actionable pathways for countries to mobilise at least USD 30 billion annually by 2030**[6]. In addition, the **AIP-PIDA Water Investment Scorecard** will mobilise political leadership, enhance mutual accountability and track progress towards accelerating water investments on the continent.

PIDA Transboundary water infrastructure requires attention as there were virtually no water project submissions in PIDA PAP1. Therefore, an urgent need to intensify efforts on developing transboundary water infrastructure is paramount, as well as addressing the adverse impacts of climate change for the transformation and socio-economic development to achieve regional integration in Africa. One major challenge is the need for early involvement and cooperation from multiple stakeholders in different countries. Different countries involved in the project may have divergent interests, priorities, and governance frameworks, challenging coordination and alignment of objectives. Despite these challenges, transboundary water projects offer an opportunity for regional integration, improved connectivity, and an increase in the overall socio-economic growth of the region. Proper project planning, stakeholder engagement, and implementation of risk mitigation strategies can reduce these challenges, thus making it more achievable to invest in transboundary water projects.

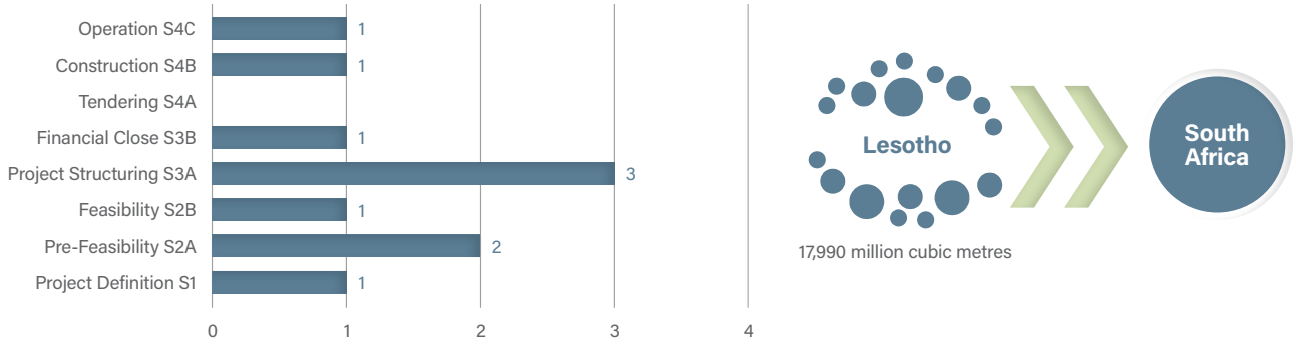


Figure 26: Transboundary Water Project Status on PIDA PAP1

Source: PIDA Data Collection Exercise by AUDA-NEPAD, 2022[7]

► Case Study 3: Transboundary Water

The Lesotho Highlands Water Project (LHWP) is a multi-phased project to provide water to the Gauteng region of South Africa and to generate hydro-electricity for Lesotho. Phase 1 of the multi-phase LHWP entailed the construction of the Katse Dam, Mohale Dams, Matsoku Diversion Tunnel and the Muela hydropower station. Lesotho benefits from a sustainable, independent energy supply for Lesotho that will meet the country's electricity requirements and royalty revenue from the project. In contrast, South Africa benefits from the security of the high-quality water supply transferred into the Vaal River system for domestic and industrial use in the Gauteng province. Almost 17 990 million cubic metres of water have been transferred to South Africa since the commissioning of the LHWP Phase 1 in 2004.

Phase II of the LHWP will be implemented in terms of two distinct components: a water delivery system to augment the delivery of water to South Africa and a hydropower generation system, which will increase the current electricity generation capacity in Lesotho.

Source: Virtual PIDA Information Centre (VPIC)[9]

ICT

The development of ICT projects is considered successful following a pressing demand for the digital economy in the continent. Most PIDA PAP1 ICT projects are being implemented, and **17 countries** have achieved digital connectivity via optical fibre cables[3]. ICT capacity is currently in the region of **9 Terabits** against a target of 6 Terabits by 2020[5]. Cybersecurity is of rising significance on the continent. As part of PIDA, the **AU Convention Cyber Security and Personal Data Protection (AUCC)** was established as a credible framework for cybersecurity in Africa through the organisation of electronic transactions, protection of personal data, promotion of cyber security, e-governance and combating of cybercrime**.** The AUCC has been **signed by 18-Member States** and **ratified by 14** states[11].

Unlike building physical infrastructure such as roads, railways, or bridges, implementing ICT projects involves developing and deploying software and digital infrastructure. Digital infrastructure, such as data centres, broadband networks, and cloud computing platforms, can be constructed with significantly less time and resources than traditional infrastructure. The software-based tools and applications employed in ICT projects can be tweaked, adapted, and updated faster than their physical infrastructure counterparts. Therefore, **68%** of the ICT projects are either at the construction or operation stage. Nevertheless, the development and implementation of ICT infrastructure are not without challenges and risks. Since ICT infrastructure is highly interdependent, new systems may face challenges when integrating with legacy systems or scaling to accommodate larger user bases. ICT infrastructure projects require careful planning, stakeholder engagement, and monitoring to ensure successful implementation.

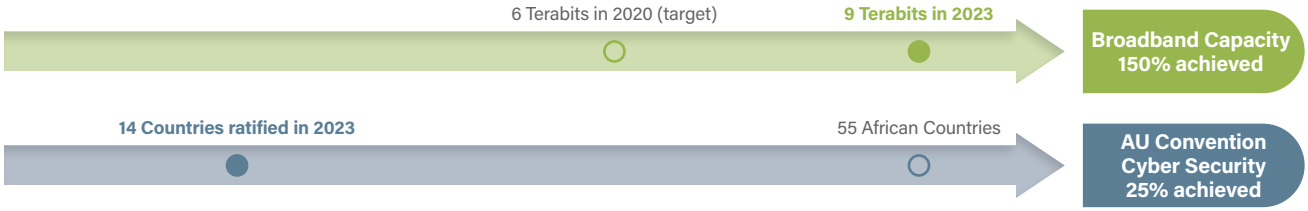


Figure 27: ICT Capacity

Source: PIDA Study Synthesis[1], PIDA PAP2 Financing Strategy[3], African Union Convention on Cyber Security and Personal Data Protection[11]

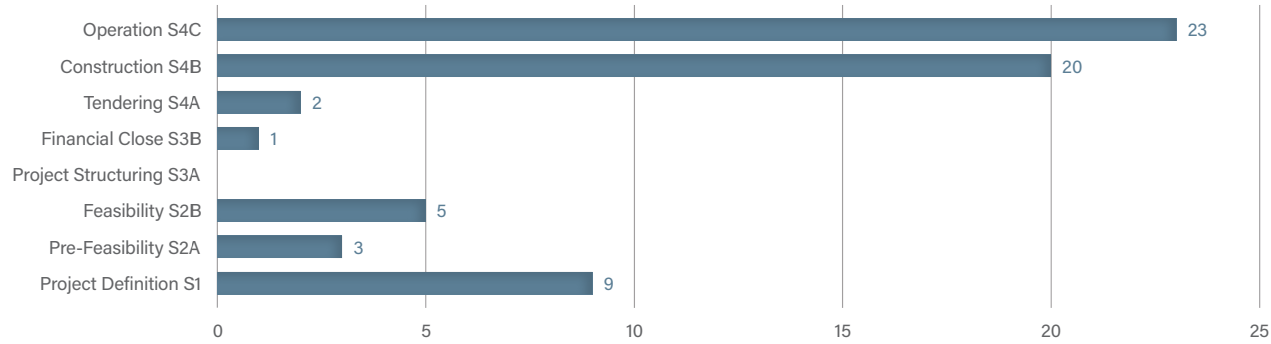


Figure 28: ICT Project Status on PIDA PAP1

Source: PIDA Data Collection Exercise by AUDA-NEPAD, 2022[7]

[11] AUC, AU Convention Cyber Security and Personal data protection, 2023. Available at https://au.int/sites/default/files/treaties/29560-sl-AFRICAN_UNION_CONVENTION_ON_CYBER_SECURITY_AND_PERSONAL_DATA_PROTECTION.pdf

► Case Study 4: ICT

Internet Exchange Points (IXPs) are physical locations where Internet Service Providers (ISPs) and network operators interconnect with each other to exchange local Internet traffic. The establishment of IXPs in Africa has the potential to save significant costs and improve internet connectivity across the continent by promoting local content creation, enabling cost reductions for ISPs, and improving the quality of service for end-users. Additionally, the proliferation of IXPs across Africa helps governments to manage or regulate internet traffic in their countries better, leading to improved cybersecurity. Through PIDA PAP1, more than 40 countries are connected with regional fibre optic cables and internet connectivity through IXPs.

Source: Virtual PIDA Information Centre (VPIC)[9]

Key Impact Resulting from PIDA PAP1

PIDA PAP1 has facilitated the expansion of transport, energy, transboundary water, and ICT infrastructure. Over the last ten years, PIDA has helped strengthen regional integration, economic connectivity, socio-economic development, and ICT development. While PIDA is still underway towards long-term objectives by 2040, key impacts from PIDA implementation are described below.

The impact of PIDA implementation is noticed in the close to **30 million people** that gained access to electricity, with current access to electricity around **44%**[5]. There was a slight increase in intra-Africa exports to **16%** of trade due to road and rail infrastructure[5]. PIDA enables the water storage infrastructure needed for food production and trade. ICT broadband penetration is now more than **25%** and well over the 10% target[5].

One of the intended outcomes of PIDA is also to address economic marginalisation and social exclusion issues by facilitating the creation of economic opportunities and decent employment. In total, **112,900 direct** and **49,400 indirect jobs** were created during the construction and operation of PIDA projects[3].

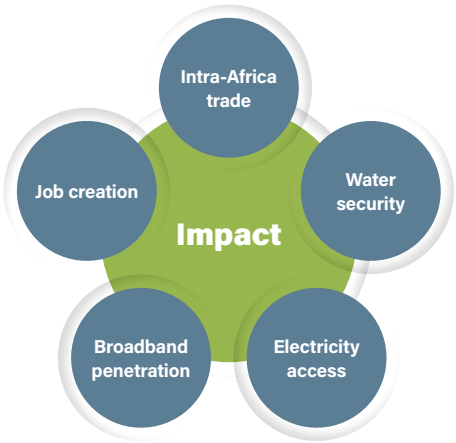


Figure 29: Impact of PIDA

Chapter 3
PIDA After 10 Years of Regional Development

Overall PIDA Implementation Status as of 2022

PIDA project status has shown progress in some areas and challenges in other areas, reflecting the complexity of infrastructure development efforts on the continent. Identified PIDA projects have made varying degrees of progress, with some projects progressing quickly while others have encountered delays. Based on the data available, the PIDA project stage referred to in the PIDA Progress Report 2017[1] was the available baseline. However, some progress *vis-à-vis* its inception in 2012 has to be considered.

There is a growing effort delivered to implement PIDA projects as the primary role of AUDA-NEPAD: **67** projects are in operation, **65** projects are under construction, **26** projects are at tendering stage, **15** projects are in transaction support and working towards a financial close, and 23 projects are at creating commercial and technical structure while **73%** of projects have moved from conceptualisation and early stages. The trends moving out from the definition & pre-feasibility stage in 2022 are more pronounced compared to the baseline in 2017, resulting in most PIDA PAP1 projects being in either structuring, financial close, tendering, operation, or construction stage.

Figure 30: Trends in PIDA Project Stage between 2017 and 2022

Source: PIDA Progress Report 2017[12] and PIDA Data Collection Study (2022)[7]

The Role of Regional Economic Communities (RECs)

The role of Regional Economic Communities (RECs) in PIDA is to serve as knowledge banks, assist with project preparation, act as promoters of PIDA, and track PIDA project progress. The RECs are also responsible for aligning the national infrastructure priorities with the continent's interests and facilitating cooperation between Member States. At a regional project level, RECs are responsible for monitoring specific projects developed within their region and ensuring the harmonisation and implementation of soft policy measures across countries.

In 2019, Africa Regional Integration Index (ARII) was published to assess the regional integration status and efforts of countries that are members of the eight RECs recognised by the African Union. The Report measures regional integration using five dimensions: free movement of people, trade integration, productive integration, regional infrastructure integration, and macroeconomic integration. The Report presents an overall index score for each country, its regional average, and a score for each dimension. Major corridors and regional integration scores on the respective RECs are illustrated as follows:

[12] AUDA-NEPAD, PIDA Progress Report, 2017. Available at https://www.au-pida.org/download/pida-progress-report-2017/

Figure 31: RECs and major corridors

Source: Data Collection Survey on Corridor Development in Africa, JICA[13]

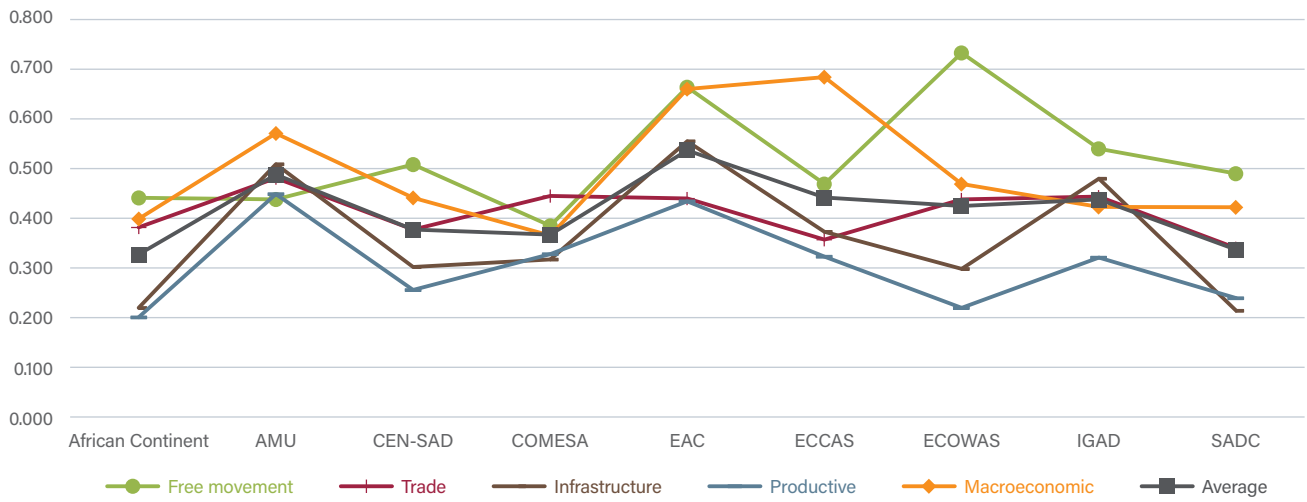


Figure 32: Regional Integration Scores for the African Continent and RECs.

Source: African Regional Integration Index Report in 2019[14]

[13] JICA, Data Collection Survey on Corridor Development in Africa, 2022. Available at https://www.integrate-africa.org/fileadmin/uploads/afdb/Documents/ARII-Report2019-FIN-R40-11jun20.pdf

[14] AUC, AfDB, UNECA, Africa Regional Integration Index Report, 2019. Available at https://www.integrate-africa.org/fileadmin/uploads/afdb/Documents/ARII-Report2019-FIN-R40-11jun20.pdf

Regional Development through PIDA PAP1

PIDA's impact to date can be seen through the completion of various transboundary infrastructure projects, including transport, energy, water, and ICT projects, which enhance connectivity between countries, regions, and the continent. This increased connectivity is instrumental in promoting trade, manufacturing, and agricultural development, reducing costs of goods and services, and improving access to markets and essential services. PIDA has also achieved results in some sectors, including completing a continental backbone fibre-optic network for the ICT sector. This leads to decreased connectivity costs and increased access to digital services. This section shows an analysis of the progress of PIDA projects and the level of integration, referring to the results of the PIDA data collection study conducted by AUDA-NEPAD and the African Regional Integration Index Report in 2019. Box also introduces notable corridors along the PIDA PAP1.

Arab Maghreb Union (AMU)

Arab Maghreb Union (AMU) is one of the eight RECs implementing PIDA projects. According to the recent PIDA data collection study by AUDA-NEPAD, AMU has 10 projects available under PIDA PAP1. These projects were spread over the transport, energy, water, and ICT sectors. The progress of these projects varied, with **6** being at the project preparation stage, while the other **6** are in the project structuring and construction and operation stages. Nonetheless, the AMU has continued working with PIDA at different project development and implementation stages to ensure the infrastructure projects are delivered to benefit the region and the continent.

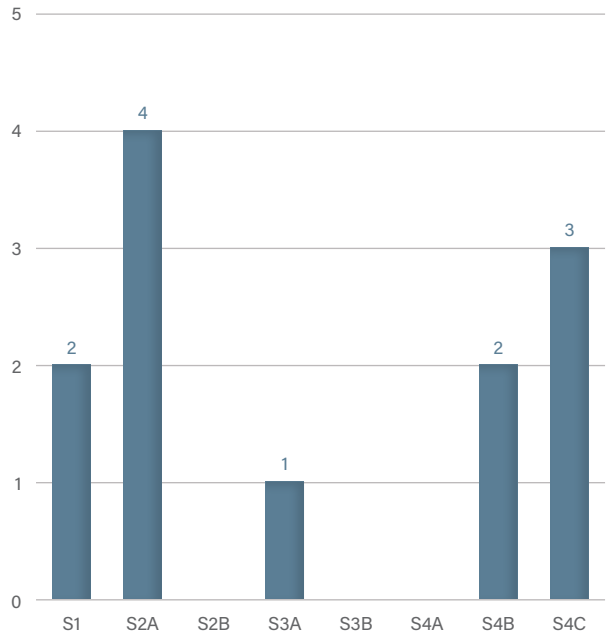
Based on the African Regional Integration Index (ARII) in 2019, AMU region had an infrastructure integration score of **0.509**, indicating an advanced level of integration compared to other RECs. The Report further shows that the AMU region's strength lies in macroeconomic policies, where it scored higher than other dimensions such as trade, infrastructure, and free movement of people. However, it is also essential to recognise the measures that the AMU has taken to reinforce regional integration, such as the Strategic Plan for Infrastructure Development in the Maghreb Region (PSDIR), which focuses on developing infrastructure and promoting cooperation and collaboration between AMU Member States.

► Case Study 5: Trans-Maghreb Highway

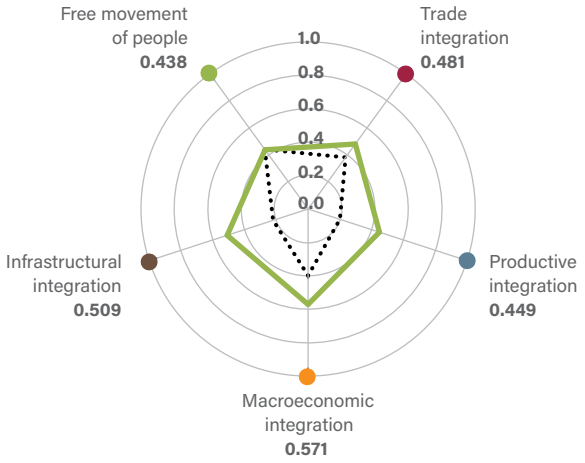
The Trans-Maghreb Highway is a significant infrastructure project in North Africa that is expected to serve 55 towns with a total population of over 60 million people when completed. The project involves the development of a two-lane dual carriageway that spans approximately 935 km across four countries in the Maghreb region, namely Morocco, Algeria, Tunisia, and Libya.

The project aims to become the nerve centre for the region's economy, intensifying inter-Maghrebian trade and boosting regional economic integration. It seeks to achieve this by facilitating the free movement of people, goods and capital between countries in the region, linking 22 international airports, main ports, rail terminals, universities, research centres, and the largest hospitals, as well as the main industrial and tourist areas across the region.

Source: PIDA Progress Report 2019[8]



Average score	**0.488**
Strongest dimension	Macroeconomic integration
Weakest dimension	Free movement of people



Dotted line represents Africa's scores.

Figure 33: AMU Region Project Stage

Common Market for Eastern and Southern Africa (COMESA)

The development of the COMESA region through PIDA projects has been significant, with the vital role of the North-South Corridor that runs from Dar es Salaam in Tanzania to Durban in South Africa, passing through Zambia, Zimbabwe, Malawi, and Botswana. COMESA has secured significant funding to implement several key infrastructure projects, including roads, bridges, and energy projects. For instance, AfDB has supported the 2,700 km transport corridor from Kazungula, the border between Botswana and Zambia, to Northern Rwanda.

13 projects are currently in the implementation stage, either in tendering or under construction. **9 projects** are in the preparation stage. COMESA has established a framework for coordinating and implementing PIDA projects, including developing a regional transport master plan. The framework includes establishing the Tripartite Free Trade Area (TFTA) among COMESA, EAC, and SADC, which aims to deepen regional integration, promote trade, and facilitate the movement of goods and people across the region.

ARII report of 2019 rates the COMESA region's level of regional integration as slightly lower, with an infrastructure integration score of **0.317** out of 1.0. The Report indicates that the region's overall performance in the different components of regional integration, namely trade, productive, macroeconomic, and infrastructural integration, is relatively low compared to other regional economic communities in Africa. However, the Report highlights COMESA's high performers, including Zambia, Kenya, and Rwanda, who perform exceptionally in specific dimensions of regional integration. For example, Zambia ranks highest in trade integration, with a score of **0.951**, while Kenya ranks highest in productive integration, with a score of **0.663**.

► Case Study 6: North South Corridor

The North-South Corridor is a transport corridor that is part of the PIDA and Presidential Infrastructure Championship Initiative (PICI). It is administered through the COMESA-EAC-SADC Tripartite process. It is a multimodal corridor that runs from Dar es Salaam in Tanzania to Durban in South Africa, passing through Zambia, Zimbabwe, Malawi, and Botswana. The Corridor is a vital artery for trade and transport in the southern and eastern African regions. It serves as a gateway for landlocked countries to access the East African coast and the Indian Ocean through the Tanzanian port of Dar es Salaam.

It creates an integrated transport network for the entire Southern and Eastern African regions, facilitating trade and investment between African countries. The North-South Corridor has become the busiest transport corridor in the region, with an estimated USD 40 billion worth of goods being transported every year, and it continues to play a significant role in the development of the COMESA region.

Figure 34: Photo: Kazungula Bridge (AUDA-NEPAD)

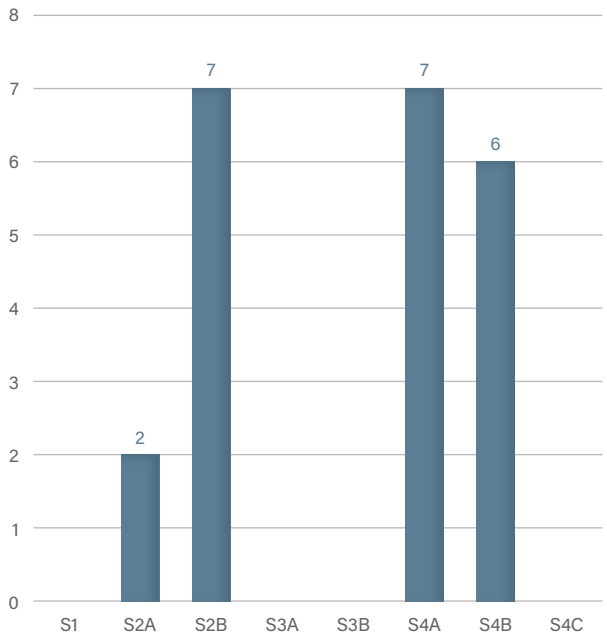
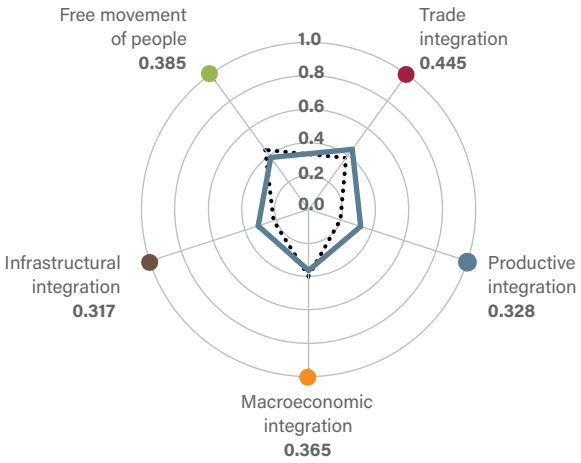


Figure 35: COMESA Region Project Stage in 2022

Average score	**0.367**
Strongest dimension	Trade integration
Weakest dimension	Infrastructural integration



Dotted line represents Africa's scores.

East African Community (EAC)

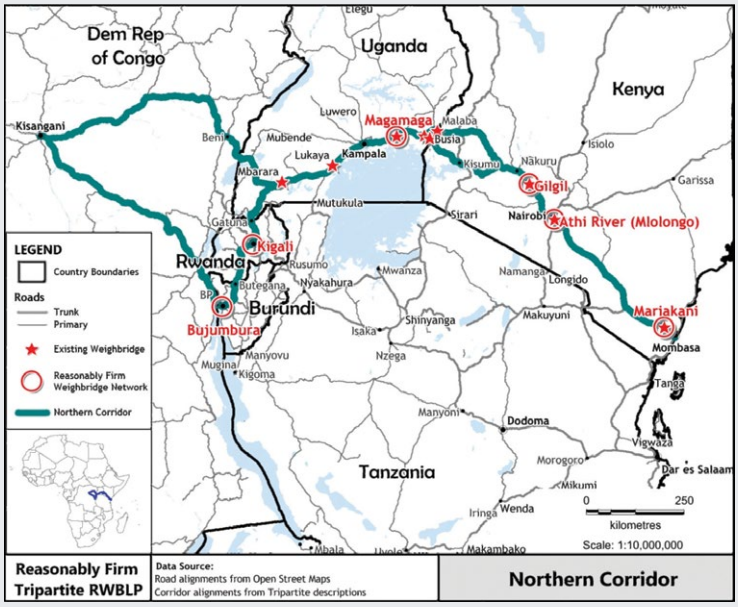
East African Community (EAC) region has made significant strides in implementing PIDA projects. According to the 2018 PIDA Progress Report[15], the total value of the projects is over USD 30 in the region. One of the flagship projects in which the EAC region is involved is the Northern Corridor, which aims to improve transport infrastructure and enhance connectivity through One-Stop Border Posts (OSBPs) and efficiency that stretches from the port of Mombasa in Kenya to Kigali in Rwanda. The project includes the construction of the Standard Gauge Railway (SGR), which connects Mombasa to Nairobi and onward to Kampala, Kigali, and Juba.

EAC region has also placed significant emphasis on the free movement of people, goods, and services, which is a critical dimension of the PIDA project. The region has taken several measures to facilitate the movement of people and goods, including implementing the Single Customs Territory (SCT) and launching the EAC e-passport, which promotes regional integration.

The EAC region has the largest number of projects among other RECs, with **85** PIDA PAP1 projects being implemented. The EAC's performance in the context of PIDA has been commendable, with **80** projects (**94%**) at the structuring, financial close, tendering, construction or operation stages, while **5** projects (**6**%) are at the project preparation stage. This high commitment to infrastructure development brings the highest score on infrastructure integration, with **0.555** among all RECs assessed in the 2019 ARII report.

► Case Study 7: Northern Corridor

The Northern Corridor is a key transport route in East and Central Africa. Its transport network consists of modes of surface transport routes linking the landlocked countries to the Port of Mombasa. These surface modes include road, rail, pipeline and inland waterways. With the launch of the Mombasa Port and Northern Corridor Community Charter, key stakeholders are committed to modernising the primary transport infrastructure of the port and corridor at large to facilitate trade in the region. The existing infrastructure along the Northern Corridor consists of physical transport infrastructure that is crucial for trade facilitation and provides logistics services that reduce trade costs, as well as soft infrastructure to facilitate faster clearance and processing of goods. Among the physical transport infrastructure are the Maritime Port of Mombasa, Road Network, Weighbridges, Borders & One-Stop Border Posts (OSBPs), Railway, Oil Pipeline, Inland Waterways and Inland Container Depots (ICDs).

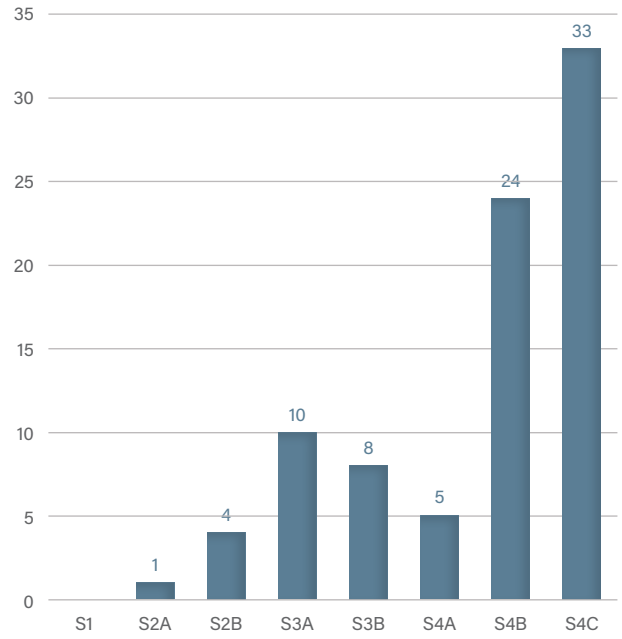


Source: Northern Corridor Transit and Transport Coordination Authority (NCTTCA)[16]
Map: Tripartite Transport & Transit Facilitation Programme – TTTFP[17]

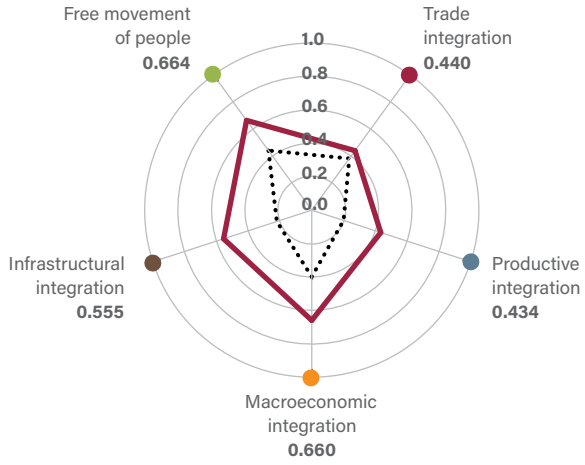
15 AUDA-NEPAD, PIDA Progress Report, 2018. Available at https://www.au-pida.org/download/pida-implementation-report-2018/

16 Northern Corridor Transit and Transport Coordination Authority – NCTTCA. Available at https://ttcanc.org/

17 Tripartite Transport & Transit Facilitation Programme – TTTFP. Available at https://tttfp.org/



Average score	**0.537**
Strongest dimension	Free movement of people
Weakest dimension	Productive integration



Dotted line represents Africa's scores.

Figure 36: EAC Region Project Stage in 2022

Economic Community of Central African States (ECCAS)

ECCAS is vital in implementing PIDA projects in the Central African region. According to the latest PIDA data collection study, ECCAS has 17 projects under PIDA PAP1. These projects are spread over the four sectors. The progress of the projects is varied, with **11 projects** being at either the structuring, financial close, tendering, or construction stage. The other **6 projects** are in the project preparation stage.

ARII report identifies several challenges facing the ECCAS region regarding regional integration, including infrastructure development, limited productive capacity, and relatively lower levels of intra-regional trade. Despite these challenges, macroeconomic integration is the highest and free movement of the people in the ECCAS region fares relatively high among other RECs.

► Case Study 8: Central Corridor

The Central Corridor involves developing a multimodal transport system that links the Port of Dar es Salaam in Tanzania to Burundi, Rwanda, Uganda, and the Democratic Republic of Congo. The Central Corridor consists of road, rail, and port infrastructure, and it is designed to facilitate trade, enhance connectivity and promote economic growth in the region. The Central Corridor project is considered a complex programme, and significant progress has been achieved in partnership with the Central Corridor Transit Transport Facilitation Agency (CCTTFA), the AUC, AUDA-NEPAD, and AfDB in a limited time. The project has progressed with over 120 sub-projects consolidated and standardised within a single reporting tool and projects prioritised across five countries.

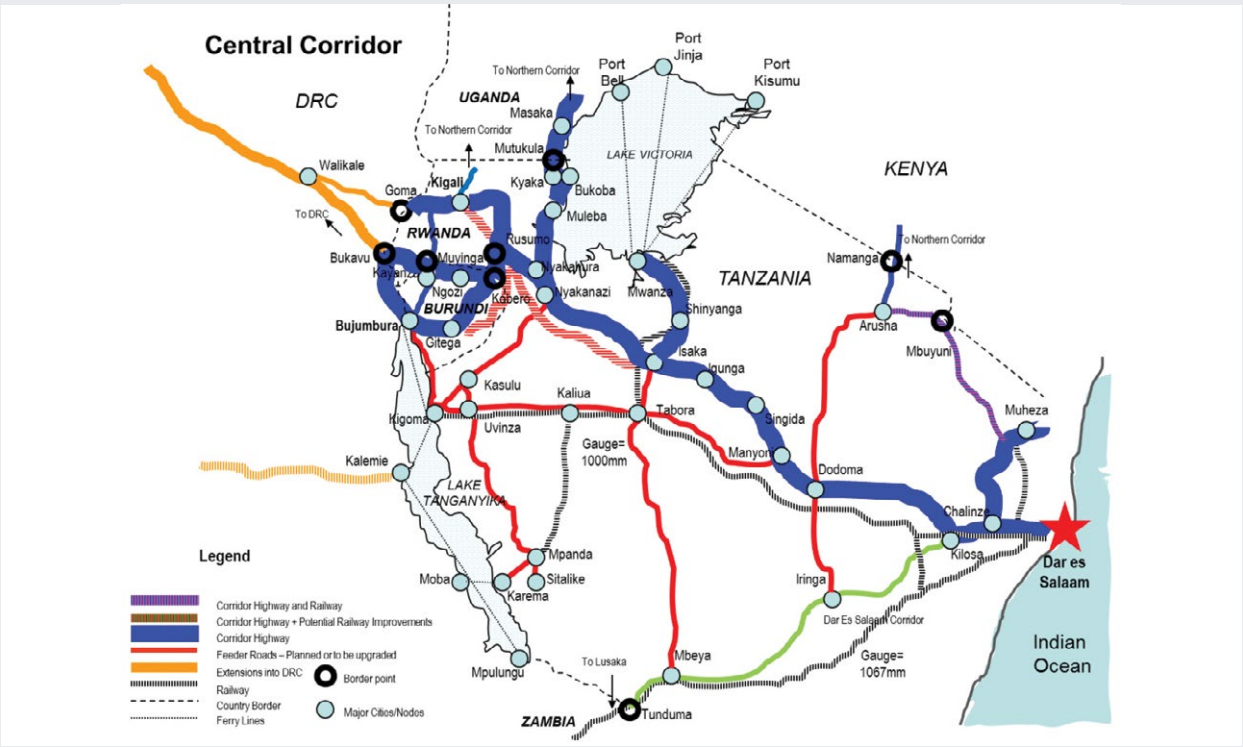
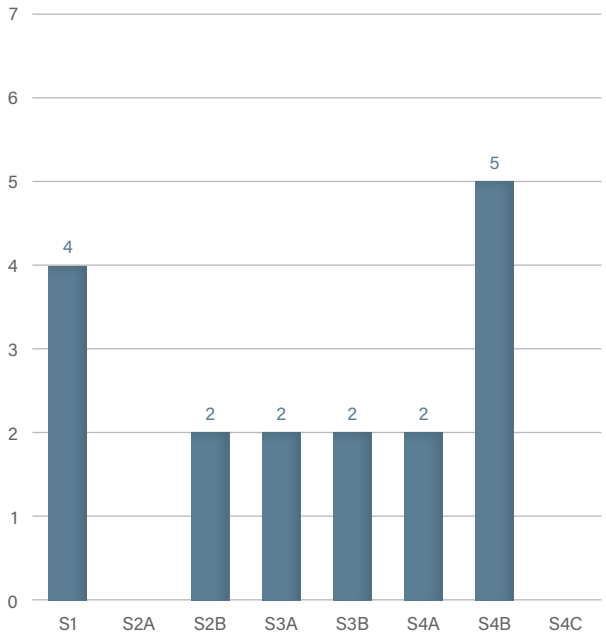


Figure 37: Map: Central Corridor Transit Transport Facilitation Agency (CCTTFA)[18]

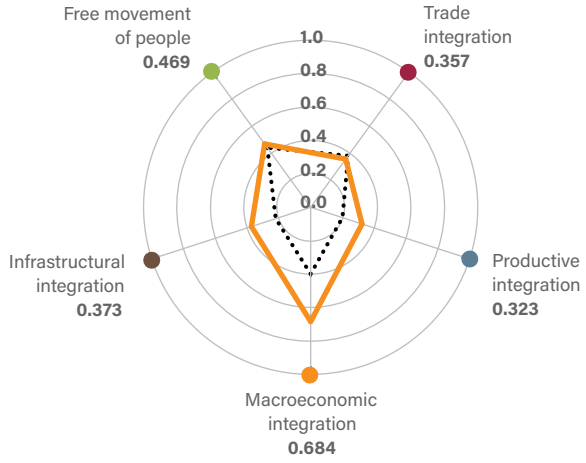
Source: PIDA Progress Report 2019-2020[19]

[18] Central Corridor Transit Transport Facilitation Agency – CCTTFA. Available at https://centralcorridor-ttfa.org/home/

[19] AUDA-NEPAD, PIDA Progress Report, 2019-2020. Available at https://www.au-pida.org/download/pida-progress-report-2019-2020/



Average score	**0.442**
Strongest dimension	Macroeconomic integration
Weakest dimension	Productive integration



Dotted line represents Africa's scores.

Figure 38: ECCAS Region Project Stage in 2022

Economic Community of West African States (ECOWAS) and Community of Sahel–Saharan States (CEN-SAD)

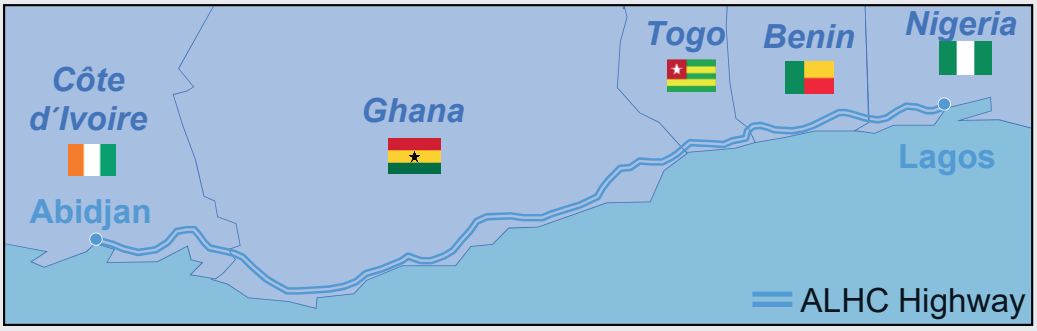
The West Africa region, where ECOWAS and CEN-SAD are, has the one of the largest numbers of PIDA projects on the continent, covering all four sectors. ECOWAS has demonstrated a high level of commitment to implementing PIDA projects in the region, particularly in the rollout of the PIDA Capacity Development Programme (PIDA CAP). ECOWAS has taken steps to address some of the challenges facing infrastructure development in the region, for example, establishing the West Africa Power Pool (WAPP) to address power supply challenges in the region, working together with ECOWAS and AfDB.

The ECOWAS region has the largest number of projects among the RECs, with **62** PIDA PAP1 projects implemented. **Forty-seven projects** (**76%**) are beyond the feasibility study phase, while **15 (24%)** are in the preparation stage. According to the ARII in 2019, the Report states that while ECOWAS scores highest on the free movement of people, there are gaps in areas such as infrastructure, trade and productive integration. ECOWAS has been taking steps to address these gaps. For example, they launched the ECOWAS Trade Liberalisation Scheme (ETLS) to promote intra-regional trade and the West African Monetary Zone (WAMZ) to promote monetary integration.

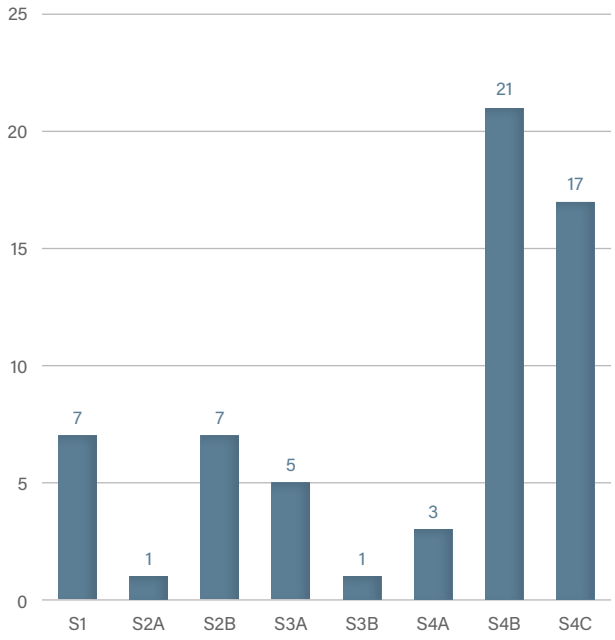
► Case Study 9: Abidjan–Lagos Corridor

The Abidjan-Lagos Corridor is a major transport infrastructure project in West Africa. It entails the construction of a six-lane dual-carriage highway from Abidjan in Cote d'Ivoire, through Accra in Ghana, Lomé in Togo, and Cotonou in Benin, to Lagos in Nigeria. The project is a flagship ECOWAS programme and covers about 1,028 km. It was initiated in 2013 following a decision by the Presidents of the five countries along the corridor, with a Treaty formalising the agreement being signed in March 2014.

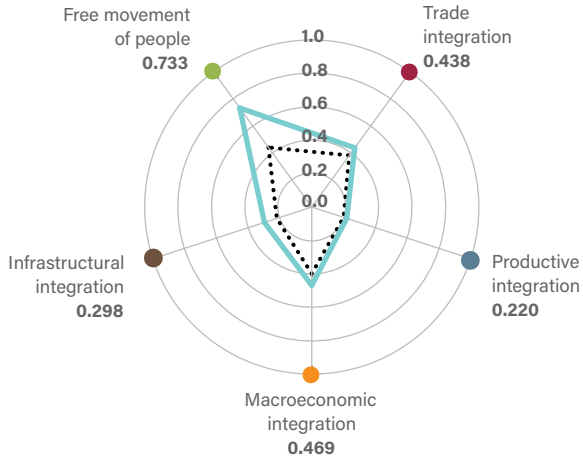
In terms of milestones achieved, all Member States have ratified the Abidjan-Lagos Corridor Treaty, establishing the legal and institutional framework for implementing the project. Project-financing agreements for the feasibility and detailed engineering study have been signed and ratified by Member States, with consultation ongoing with AfDB to secure the required additional funding. The project has also witnessed the design of institutional arrangements to guide its preparation, construction, operations and management/maintenance of the corridor. These efforts have culminated in the establishment of the Abidjan Lagos Corridor Management Authority (AICoMA), the first transnational project management corridor authority in Africa.



Source: PIDA Progress Report 2019[8]



Average score	**0.425**
Strongest dimension	Free movement of people
Weakest dimension	Productive integration



Dotted line represents Africa's scores.

Figure 39: ECOWAS Region Project Stage in 2022

Intergovernmental Authority on Development (IGAD)

IGAD is an eight-country trade and development bloc in East Africa, and it is involved in several regional infrastructure development programmes in the region. IGAD has restructured its involvement in supporting major transport and ICT projects by developing some options, such as the establishment of an IGAD infrastructure fund, exploring non-traditional donors and promoting public-private partnerships.

According to ARII, in 2019, the infrastructure integration rate for the IGAD region was **0.480**, which is relatively higher than the other RECs, such as COMESA and ECOWAS. While certain countries in IGAD, such as Kenya, have improved their infrastructure, there is still a need for increased investment and implementation of PIDA projects. In particular, **13 projects** out of 22 are still in the preparation stage. To deal with this, IGAD continues to assist in mobilising donor funding for the vital missing links and other infrastructure interventions to facilitate the movement of goods and people in the region.

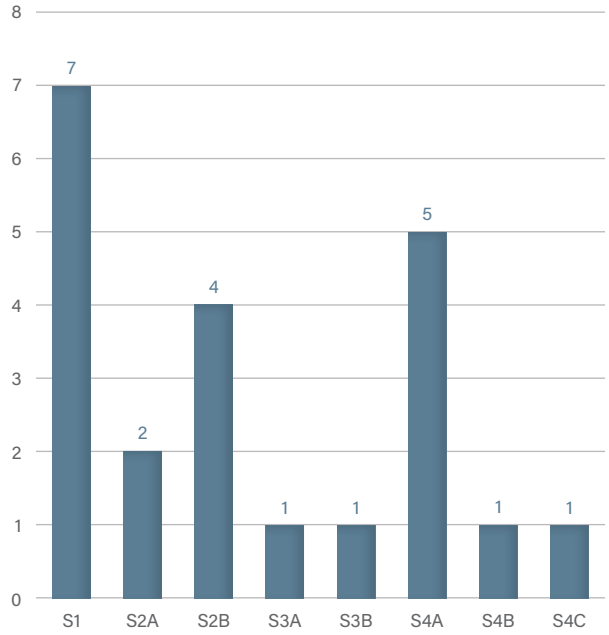
► Case Study 10: LAPSSET Corridor

The LAPSSET Corridor is a regional flagship project to enhance transport and logistics infrastructure to create seamless connectivity between the Eastern African countries of Kenya, Ethiopia, and South Sudan. The corridor covers Inter-regional Highways totalling 2,618 km from Lamu to Isiolo, Isiolo to Juba (South Sudan), Isiolo to Addis Ababa (Ethiopia), and Lamu to Garsen (Kenya), where 363 km (South Sudan); 1,769km (Kenya); and 500 km (Ethiopia). Through this transport network, the project will create a link connecting a population of 160 million people in the three mentioned countries, potentially impacting the wider Eastern and Central African regions.

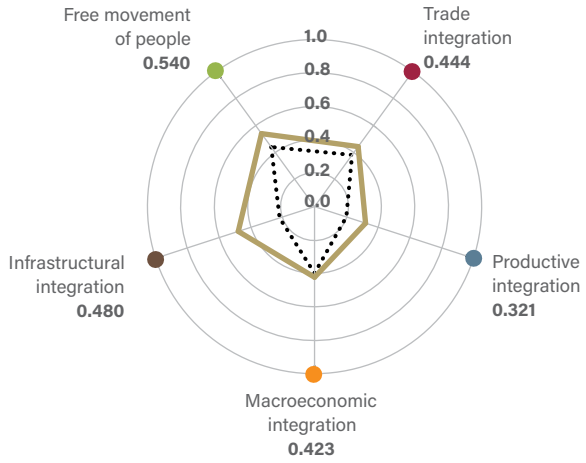
The project involves the construction of a road network, railway infrastructure, oil pipelines, ICT, and the development of Lamu Port in Kenya. The construction of the first three berths of the Lamu Port was contracted to a Chinese firm in 2014, and the LAPSSET Plaza and Lamu Port police station have already been completed. The project aims to boost regional trade, investment, and tourism. It is part of the larger land bridge connecting the East African coast from Lamu Port to the West African coast at Douala Port.

Source: LAPSSET Corridor Development Authority[20]

[20] LAPSSET Corridor Development Authority – LDC. Available at https://www.lapsset.go.ke/



Average score	**0.438**
Strongest dimension	Free movement of people
Weakest dimension	Productive integration



Dotted line represents Africa's scores.

Figure 40: IGAD Region Project Stage in 2022

Southern African Development Community (SADC)

SADC is an inter-governmental organisation headquartered in Gaborone, Botswana, comprising 16 Member States in southern Africa. The infrastructure gap between South Africa and other SADC members remains significant. South Africa scores almost perfectly, with a score of **0.893** in the infrastructure integration assessment. In contrast, the five members, including the Democratic Republic of Congo, Eswatini, Lesotho, Madagascar, and Tanzania, scored nearly zero. The Report suggests that gaps in regional infrastructure are pulling down SADC's scores, with a regional average score of only **0.214** in this dimension. Though some countries like Tanzania and the Democratic Republic of Congo score better in productive integration, the average score for effective integration in the region is not much better at **0.239**.

In 2022, **25 projects (61%)** were at either structuring, financial close, tendering, construction or operation stage, while **16** (**39**%) remained at the project preparation stage. It would require a greater commitment for SADC members to invest in infrastructure, taking bold and decisive action towards infrastructure development, mobilising domestic and external resources to finance infrastructure investments, and creating the right environment for private sector participation.

SADC has developed a long-term vision, the Regional Indicative Strategic Development Plan (RISDP), which provides a comprehensive regional cooperation and integration framework. The RISDP identifies infrastructure development as a key priority for regional integration. It is designed to integrate with the PIDA, and the two programmes work in tandem to promote regional infrastructure development.

► Case Study 11: Nacala Corridor

The Nacala Corridor, consisting of road, rail, and port infrastructure, is a priority corridor for infrastructure development in the southern African region, which is strategically located to facilitate and enhance regional trade, mobility, and connectivity. The Corridor, which is over 900 km long, passes through several countries, including Mozambique, Zimbabwe, Malawi, and Zambia, and it is an essential transportation link in the region.

The Nacala Corridor project aims to enhance regional trade, economic growth, and integration by improving transport efficiency and reliability and reducing transport costs through its various transport modes, such as the rail and port infrastructure. Like other infrastructure development programs under the PIDA, the Nacala Corridor is prioritised by regional and continental stakeholders and development partners for assistance, including funding and technical support to ensure its successful implementation.

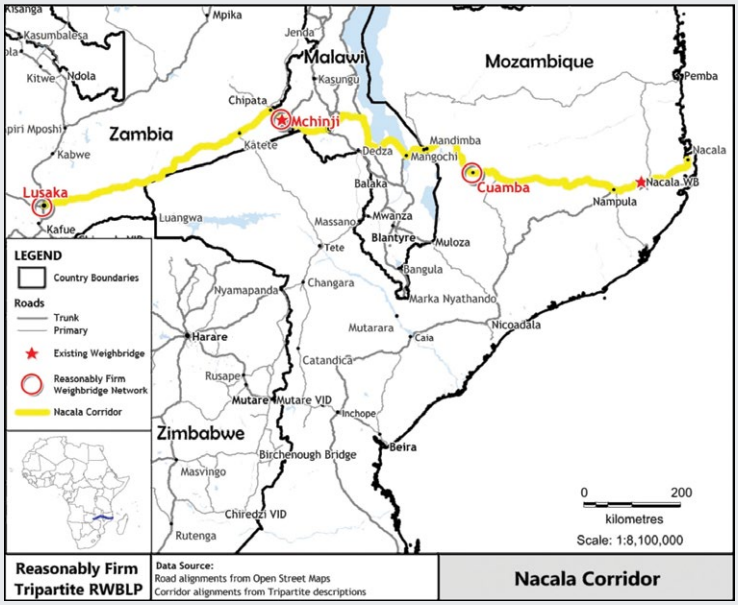
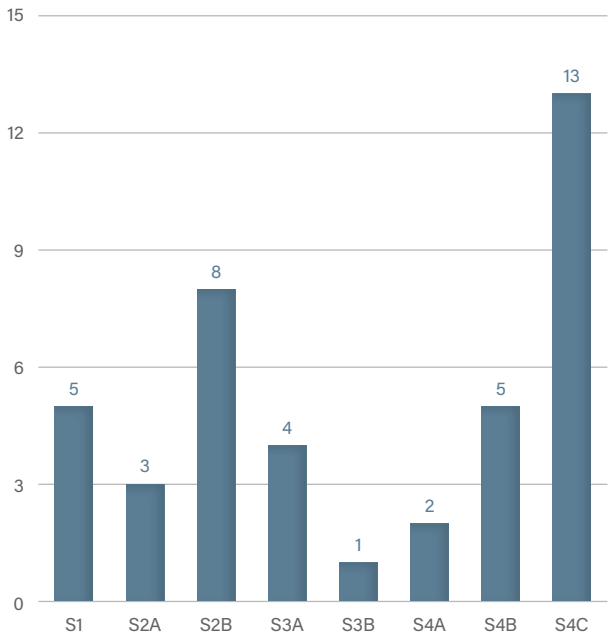
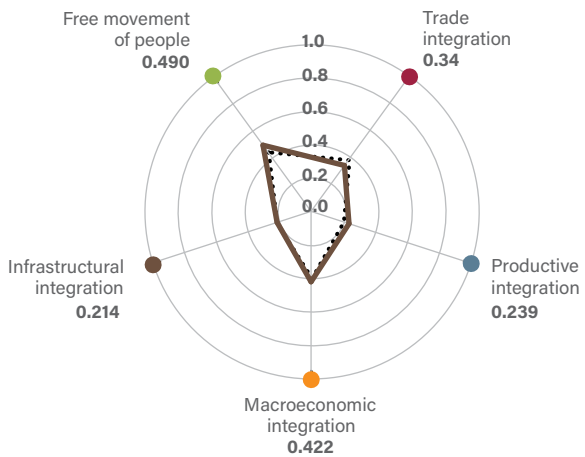


Figure 41: Map: Tripartite Transport & Transit Facilitation Programme – TTTFP[17]

Source: PIDA Progress Report 2019-2020[19]



Average score	**0.337**
Strongest dimension	Free movement of people
Weakest dimension	Infrastructural integration



Dotted line represents Africa's scores.

Figure 42: SADC Region Project Stage in 2022

Chapter 4
PIDA Financing

PIDA Financing Requirement

The estimated cost of implementing all the projects identified in PIDA to address projected infrastructure needs by 2040 is **USD 360 billion**[2]. Out of this amount, PIDA PAP1 requires an investment of **USD 67.9 billion** for regional infrastructure development through cross-border connectivity and integration between 2012 and 2020[2]. PIDA PAP2 contains 69 transport, energy, transboundary, and ICT projects, with an investment value of **USD 160.7 billion**[21]. To realise available finances and bridge the financing gaps, resource mobilisation will be necessary to bridge the financing gaps, diversify the sources of financing, and explore innovative financing mechanisms.

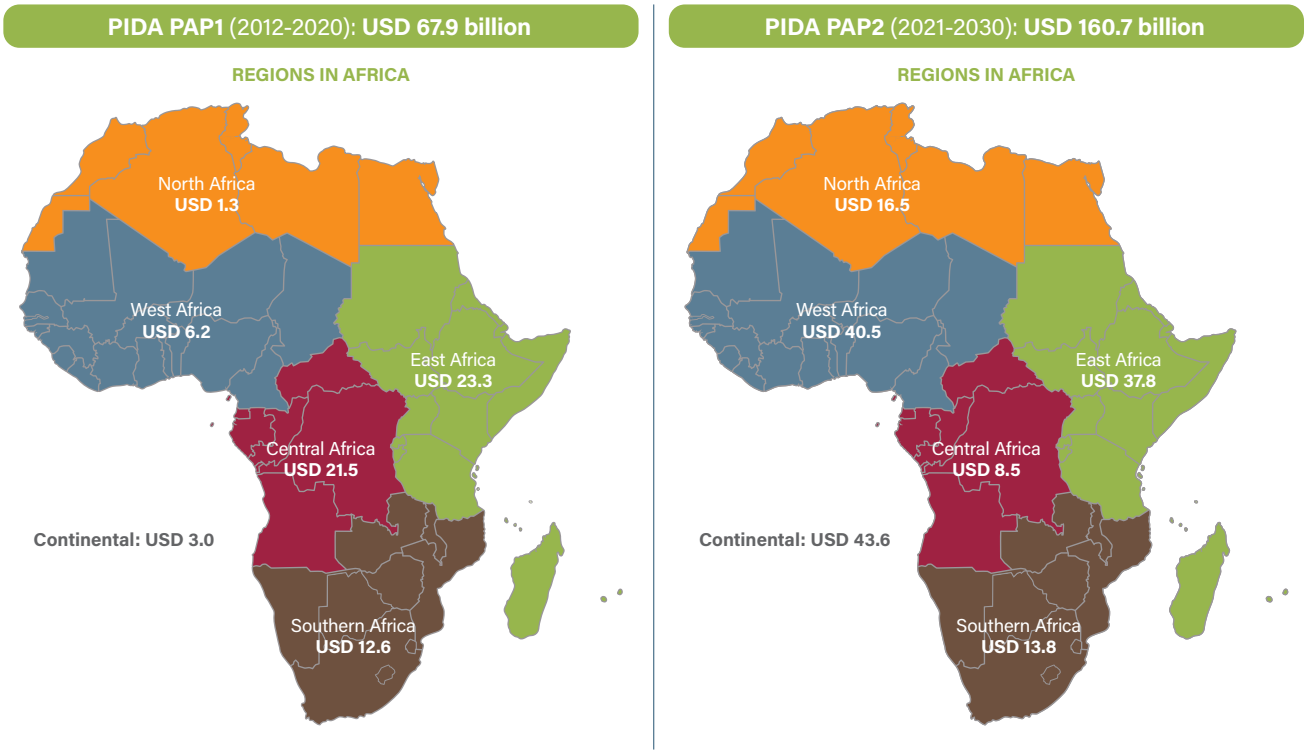


Figure 43: PIDA Financing Requirement

Source: PIDA Executive Summary[2] and African Development Bank[21]

Actual Financing Allocation to PIDA PAP1 (2012-2020)

By the end of 2020, investment commitments had exceeded the PIDA PAP1 initial estimation by **USD 14 billion** (20% above the initial target), reaching **USD 82 billion**[3]. Nevertheless, despite this level of financial commitment., PIDA PAP1 goals have not been met. Indeed, PIDA PAP 1 projects have experienced significant roadblocks impeding their progress towards the advanced stages of the project cycle.

Different financing sources for PIDA PAP1 have been allocated, including **USD 34.35 billion** (42%) from AU Member States, **USD 19.67 billion** (24%) from ICA Members (including World Bank Group, AfDB, ICA MDBs, and DFIs), **USD 19.42 billion** (24%)

[21] African Development Bank. Available at https://www.afdb.org/en/news-and-events/dakar-financing-summit-160-billion-worth-infrastructure-projects-africa-58734

from The People's Republic of China, **USD 2.28 billion** (3%) from the private sector, and **USD 5.88 billion** (7%) from other sources (outside ICA MDBs and DFIs). The portion of financing from the private sector (3%) to the PIDA projects has been particularly low when compared with other emerging economies, such as India (19%) and Mexico (16%)[3].

The ownership principle is critical to the success of infrastructure development projects promoted by PIDA across Africa. Its principle is based on the belief that infrastructure development projects must cater, first and foremost, to the needs of African countries. Therefore, PIDA aims to ensure that the respective AU Member States that will benefit from the infrastructure projects have a stronger voice in the project's design, financing, and implementation. With this in mind, it is necessary to acknowledge that the most significant source of financing commitments to PIDA PAP1 is AU Member States (42%). Failure to consider ownership may lead to less implementation and eventual collapse of infrastructure projects, negatively impacting the African economic outlook. This may be where the key to PIDA's breakthrough and success lies.

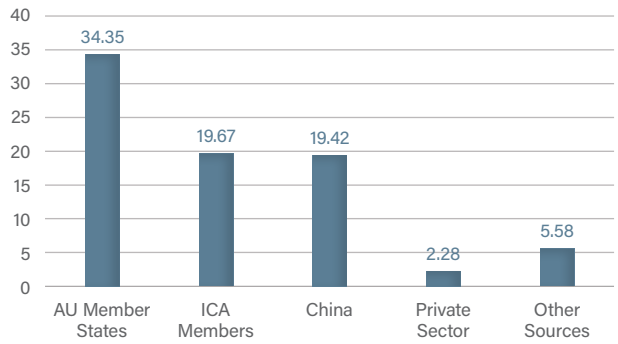


Figure 44: Sources of Financing for PIDA

Source: PIDA PAP2 Financing Strategy[3]

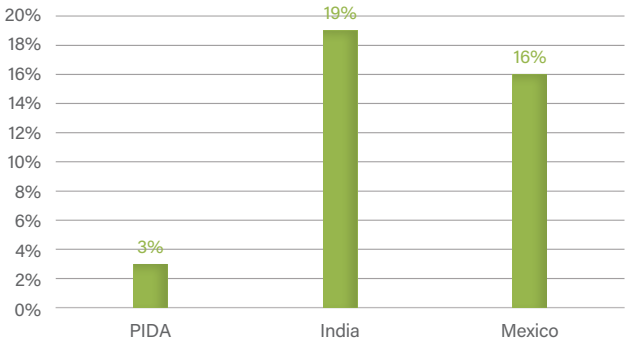


Figure 45: Portion from the Private Sector

Source: PIDA PAP2 Financing Strategy[3]

PIDA Financing Strategy

PIDA Financing Strategy is a guideline that outlines the plan for the financing of PIDA projects. The strategy was developed in line with the implementation strategy of PIDA, considering the projects by region, sector, and the availability of financing at the various stages of the project life cycle. The main objective of the PIDA Financing Strategy is to identify and work with the leading players to close the existing gaps for all PIDA projects throughout their different stages of the project life cycle. The strategy underscores the need to consider the nature of individual programmes, projects, and respective sectors they belong to.

The Financing Strategy employs various financing options, including traditional sources such as national development budgets, loans and grants from development banks and development partners, and equity from private investors. The primary goal of the Financing Strategy is to diversify and expand the sources of financing and promote private sector involvement in PIDA projects. The PIDA Financing Strategy seeks to ensure that financing is available on time and secured efficiently for all PIDA projects throughout their different stages of the project life cycle. It underscores the need for innovative financing solutions for PIDA projects that are bankable, well-structured, and fulfil the most important bankability aspects to secure finance and comply with the major requirements of Development Finance Institutions (DFIs).

Key Instruments for Project Preparation Stage

Proper project preparation enables the design, planning, and organisation of complex infrastructure projects, including cross-regional projects. Through careful project preparation, projects can be assessed according to their economic, social, environmental, institutional, and technical viability. This assessment is essential for identifying risks, challenges, and potential solutions, which helps to mitigate risks and uncertainties during project implementation. Adequate project preparation maximises the likelihood of successfully securing

project funding, enhances the predictability of project costs and schedules, and ultimately delivers infrastructure projects that meet the needs of communities, businesses, and governments.

Additionally, successful project preparation saves time and reduces the likelihood of cost overruns during project implementation, which can result from poor planning and designs. PIDA recognises the significance of project preparation and, as such, has leveraged innovative financing mechanisms and resources to support the project preparation stage through the establishment of a Service Delivery Mechanism (SDM), NEPAD Infrastructure Project Preparation Facilities (NEPAD-IPPF), and other mechanisms.

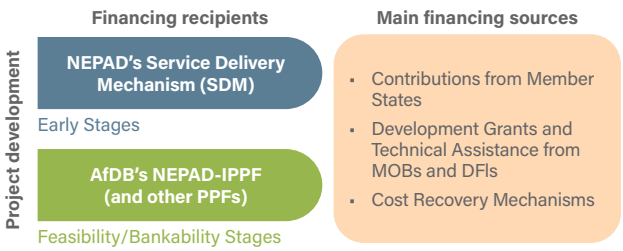


Figure 46: PIDA Project Preparation Facilities

Source: PIDA PAP2 Financing Strategy[3]

Service Delivery Mechanism (SDM)

The Service Delivery Mechanism (SDM) is an infrastructure project preparation instrument established within AUDA-NEPAD in 2014. The SDM addresses the lack of capacity for early-stage project preparation at national and regional levels, focusing on providing technical assistance to countries and agencies that originate PIDA projects. The SDM provides institutional advisory services, legal advice, communications, and capacity-building support to prepare bankable and investment-ready projects.

In 2020, the SDM **Experts Service Pool (ESP)** became fully operational, supporting a sizeable pipeline of PIDA projects with early-stage advisory services. ESP is a competitively contracted pool of experts that assists regional and national infrastructure project owners (Member States, RECs, River Basin Authorities, etc.) with advisory services to accelerate project processing times from the concept stage to the financial close. The initiative aims to increase the number of projects that reach the bankable stage more efficiently.

Over the past three years, the SDM has developed the **PIDA Quality Label (PQL)** as a widely recognised project certification to overcome the barriers preventing financial entities from investing in PIDA projects. The certification process promotes excellence during the preparation phase, allowing for smoother progress of projects and ensuring they reach financial close within a shorter period.

NEPAD Infrastructure Project Preparation Facility (NEPAD-IPPF)

Financial requirements of project preparation and development are not fully met with the traditional funding sources due to the limited public budget of African governments. Various innovative sources of financing to support project preparation, such as the creation of the NEPAD Infrastructure Project Preparation Facility (NEPAD-IPPF), have been explored.

The NEPAD-IPPF is an important source of grants to undertake early project preparation activities. The funds are leveraged from various sources, which include national, regional and multinational development banks on the one hand and cooperating partners on the other. The main cooperating partners include the EU and specialised state development agencies such as CIDA, JICA, AFD, GIZ and USAID.

Since 2005, NEPAD-IPPF has approved **95 grants** for regional infrastructure projects, crowding in investment financing of **USD 25.25 billion**. During 2016-2020 as a strategic business plan, it also aims to commit **between USD 160 million and USD 250 million** to **prepare 60 to 80 projects**, expected to leverage **USD 16-25 billion** financing for construction and operation. To achieve a broader socio-economic impact, NEPAD-IPPF has, since 2017, made concerted efforts to mainstream climate change, gender, fragility and resilience and job creation in project preparation activities. This will facilitate a more holistic and integrated approach and ensure that projects prepared by NEPAD-IPPF have a broader and more sustainable development impact[22].

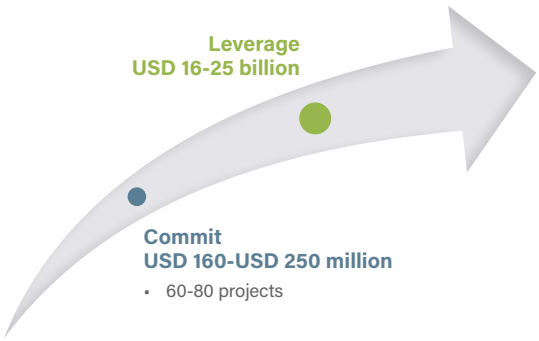


Figure 47: NEPAD IPPF Strategic Business Plan 2016-2020

Source: NEPAD IPPF[22]

[22] NEPAD IPPF. Available at https://www.afdb.org/en/topics-and-sectors/initiatives-partnerships/nepad-infrastructure-project-preparation-facility-nepad-ippf

Financing Sources for Construction and Operation Stage

The execution of projects entails the largest amount of financing throughout the project cycle. AU Member States' national budget often cannot raise the required funding solely from public sources. Therefore, the participation of other development partners such MDBs, DFIs, bilateral Official Development Assistance (ODA), and private sector financing is required. It is also becoming increasingly urgent to unlock additional flows from long-term institutional investors, such as pension funds and Sovereign Wealth Funds (SWF), and innovative sources of finance, such as climate finance, green bonds, and diaspora bonds financing.

Table 1: Financing Sources for Construction and Operation Stage

Construction and Operation Stage	Multi-bi Assistance Mechanisms	MDBs
		DFIs
		Government Agencies
	Innovative Funding	Green Finance
		Green Bonds
		Diaspora bonds
	Institutional Investors	Pension Funds
		Sovereign wealth funds
	Private Sectors	PPP
		Blended Finance

Resource Mobilisation for PIDA

While the level of financial commitments for PIDA PAP1 is exceeded by USD 14 billion more than the original financial requirement, PIDA PAP1 has not met the goals as some PIDA projects remain in the project preparation stages. Resource mobilisation is critical in increasing alternative financing for each project preparation stage, including definition, feasibility, and project structuring. The major instruments and advocacy focus on accelerating PIDA implementation are introduced in the following subchapters.

PIDA Information System

(i) **African Infrastructure Database (AID)** (https://aid.nepad.org/auth/login) is a data management tool for collecting, validating, storing, and disseminating quality-assured and up-to-date infrastructure project data in Africa. The contents of AID are managed by project owners/implementers from all over the continent. These include RECs, corridor authorities/agencies, power pools, river basin organisations, other regional institutions, and relevant institutions in Member States with primary data on infrastructure projects. Users in each of these institutions have permission to add, edit and/or publish their project information through a validation workflow to ensure the quality of information captured.

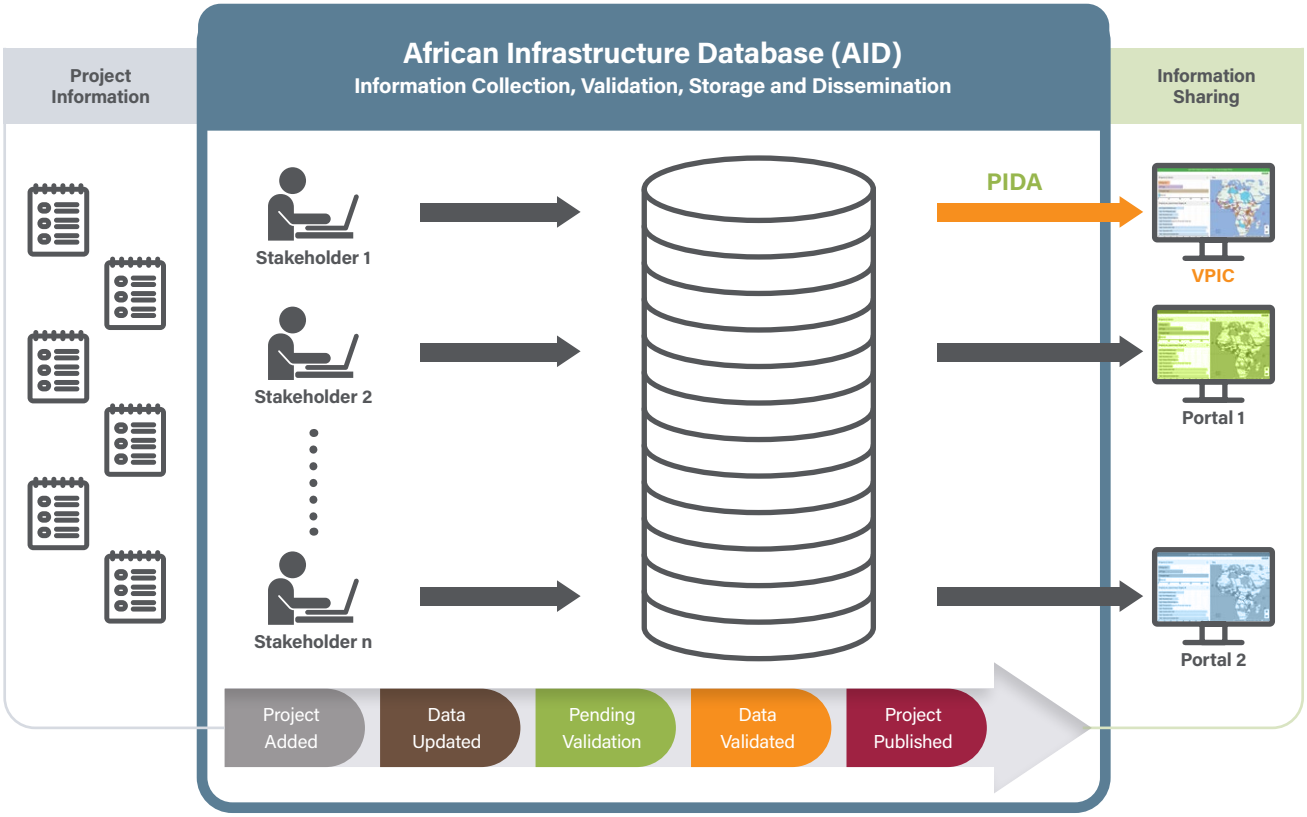


Figure 48: AID Framework

(ii) **Virtual PIDA Information Centre (VPIC)** (https://www.au-pida.org) is an online knowledge portal providing content on PIDA activities by all parties involved in accelerating PIDA PAP. The specific purpose of VPIC is to facilitate the sharing of PIDA PAP information, promote participation in PIDA implementation, enable the tracking and reporting of progress in PIDA PAP implementation, and promote investment opportunities in PIDA PAP projects. The contents include news, events, external links, media galleries, and documents. VPIC also presents information on PIDA projects interactively, directly from AID. Stakeholders of VPIC include users and institutions at international, continental, regional, and national levels, including development partners, project financiers, private and public institutions, media, and the general public interested in PIDA.

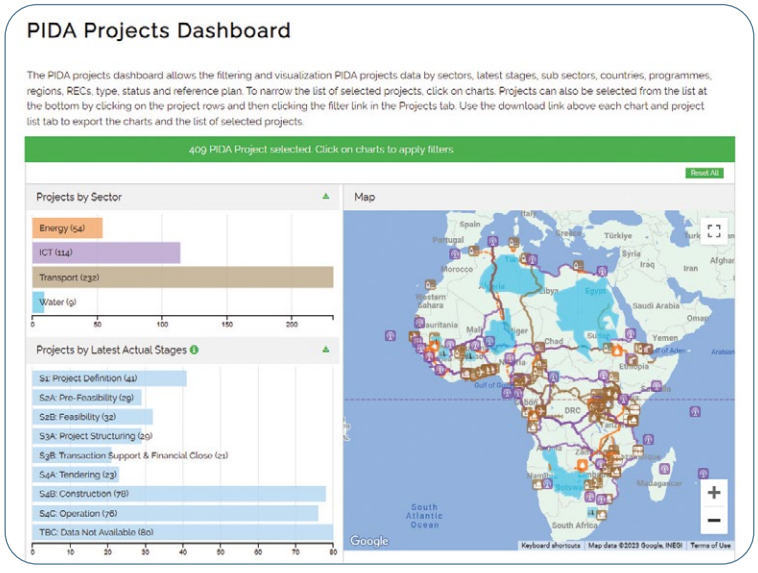


Figure 49: VPIC Dashboard

PIDA Marketing and Communication

(i) **PIDA Week** has evolved and become the flagship advocacy and marketing event for the PIDA programme and, specifically, projects needing financing. PIDA Week has brought together thousands of international and regional experts from multiple stakeholders to deliberate on the issues around infrastructure delivery in Africa and those related to PIDA. It allows stakeholders to review and reflect on progress in programme implementation, discuss ways to overcome the key challenges and advance possible solutions, share lessons learned, and identify ways to improve implementation. The first PIDA Week was held in Côte d'Ivoire in 2015 under the theme "Accelerating Infrastructure Implementation for Africa's Integration," followed by Côte d'Ivoire in 2016, Namibia in 2017, Zimbabwe in 2018, Egypt in 2019, South Africa in 2020, and Kenya in 2021.

Figure 50: Historical Development of the PIDA Week

Source: Virtual VIDA Information Centre (VPIC)[9]

(ii) **Dakar Financing Summit (DFS)** is a summit that was held in June 2014 and 2023, respectively, under the leadership of President Macky Sall of Senegal, to mobilise stakeholders around the efforts made by AUDA-NEPAD to accelerate the implementation of PIDA projects. The 1st DFS (DFS1.0), through the "Dakar Agenda for Action," provided concerted solutions to expedite the 16 projects among PIDA PAP1 due to its strategic, political and economic importance as flagship regional projects. The 2nd DFS (DFS2.0) featured 22 projects in transport, energy, water and ICT among PIDA PAP2 projects. More than 20 deal rooms were organised between investors and project sponsors where several investment interests for about USD 65 billion were raised[23].

[23] AUDA-NEPAD, Dakar Financing Summit, 2022. Available at https://www.dakarfinancingsummit.org/

Figure 51: Group Photo at Dakar Financing Summit in 2023

Private Sector Participation

Although the private sector could have made a USD 2 billion allocation to the PIDA project during 2012-2020, PIDA has not maximised its unlocking investment potential throughout the project life cycle. According to the PIDA PAP2 Financing Strategy, these three main issues need to be addressed to increase private sector participation, (i) reduce project's risks (both real and perceived), (ii) modify regulations that limit exposure to non-listed instruments or even promote a minimum percentage to be allocated to infrastructure, and (iii) promoting capacity building within institutional investors to enhance their knowledge and skills to finance infrastructure projects. With this in mind, the following two initiatives were undertaken to address impediments to private-sector participation.

(i) **Continental Business Network** is an African Union Heads of State and Government response to facilitate private sector advice and leadership in essential continent-wide infrastructure projects by creating a high-level private sector forum. In this regard, the CBN acts as an exclusive Infrastructure Investment Advisory platform for African leaders. In 2014, DFS 1.0 identified significant challenges that undermined the successful implementation of PIDA, including the lack of private sector involvement. Increasing the participation of the private sector was therefore identified as critical in narrowing existing gaps in financial and human resource requirements. Consequently, the CBN was established in 2015 to address the issues. The illustration below shows a snapshot of the CBN role.

Figure 52: Snapshot of the role of the CBN

Source: PIDA Progress Report 2019-2020[19]

(ii) **5% Agenda** is a campaign aiming at encouraging Sovereign Wealth Fund (SWF) and Pension funds participation in infrastructure financing in Africa, increasing the allocations of African asset owners to African infrastructure from its low base of approximately 1.5% of their African Infrastructure Management (AUM) to a more impactful 5% of AUM. This initiative is based on the guidance and recommendations of the CBN and is spearheaded by AUDA-NEPAD. The 5% Agenda is expected to have the following effects, among others, and is essential to ensure long-term investment allocations to the PIDA project:

- Unlocking USD 25 billion in African institutional savings capital to implement regional and domestic infrastructure projects on the continent.
- Taking specific, concrete next steps to raise the investment interest of international institutional and non-institutional financiers who have hesitated to include African infrastructure projects as an asset class in their investment portfolios.

Key Takeaways and Lessons Learned from PIDA PAP1 Financing

It is necessary to acknowledge the fact that over USD 34 billion in financing from AU Member States can be allocated to the PIDA PAP1 project between 2012 and 2020, resulting in investment commitments had exceeded the PIDA PAP1 initial estimation by USD 14 billion (20% above the initial target) reaching USD 82 billion. Behind this commitment lies the fact that PIDA is a continental framework based on the principle of African ownership. On the other hand, it is important to take cognisance of the environment, including AU Member States' allocation representing only 51% of an estimated financing requirement. Thus, the role of ICA members and the private sector is vital. Given that several projects remain in the project preparation stage, there is an urgent need to optimise such financing sources for the project preparation stage. This will help identify risks, challenges, and potential solutions to maximise the likelihood of successfully securing project funding and delivery.

Particularly, PIDA has not maximised its unlocking investment potential from the private sector throughout the project life cycle as private sector financing had a limited allocation (3%). It would be desirable to raise the investment interest of institutional investors and the private sector, who have hesitated to include the PIDA project as an asset class in their portfolio through the PIDA marketing mechanism (PIDA Week and DFS) and Continental Business Network. Also, arising from the resource mobilisation options identified in the PIDA Financing Strategy, there is a need to explore the practicality of each financing source, optimise the necessary instruments, and build capacity among the various players in the project.

Chapter 5
Partnerships

The partners involved in implementing PIDA projects at different stages of the project cycle include development banks, other long-term lenders, project preparation facilities, and national, regional and international development agencies. The banks and partners provide credit and grants for financing and funding projects or support the development of policy and legal instruments together with institutional and capacity building.

PIDA Stakeholder

PIDA provides a strategic framework for priority projects to transform Africa by constructing modern infrastructure to strengthen Africa's competitiveness and integration into the global economy. Under the auspices of the African Union, the PIDA is jointly undertaken by AUC, AUDA-NEPAD, AfDB, UNECA, and RECs.

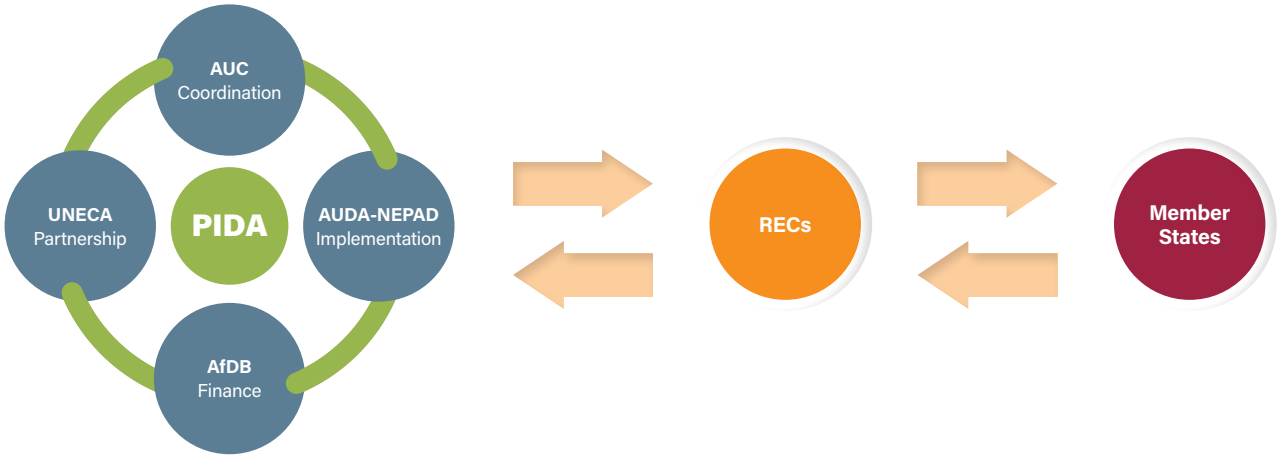
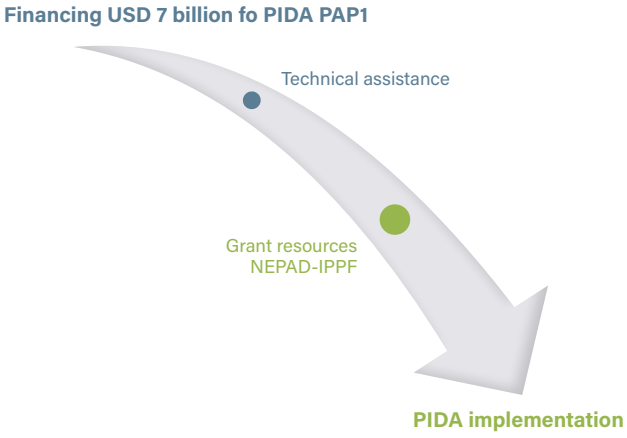


Figure 53: Strategic Frameworks for Partnerships

African Development Bank (AfDB)

The African Development Bank (AfDB) is the principal continental development bank providing capital through credit and grants to African States in infrastructure and a wide range of other sectors, including agriculture and industry. AfDB has provided over **USD 7 billion** in financing for PIDA PAP1 projects (2012-2020)[24].

One of the best-known PIDA projects the AfDB supports is the Abidjan-Lagos Highway project, valued at USD 15.6 billion[23]. The 1,081-kilometer Abidjan- highway will link Abidjan to Lagos via Accra, Lomé, and Cotonou along the West African coast. The Abidjan-Lagos axis covers nearly 75% of West Africa's commercial activities. The transport sector accounts for 8% of the region's gross domestic product and is an essential driver of economic development and job creation, particularly for women and young people. AfDB provided **€22.4 million** for preparatory studies for the implementation and management of the corridor project[24].



[24] African Development Bank Available at https://www.afdb.org/en/news-and-events/dakar-financing-summit-160-billion-worth-infrastructure-projects-africa-58734

AfDB has also provided **USD 50 million** in technical and financial assistance to the Government of the DRC to develop the INGA 3 Hydropower generation project, which has the potential to transform DRC into the largest exporter of renewable energy in Africa[24].

The AfDB has mobilised resources for and taken a leading role in developing PIDA and currently houses the **NEPAD Infrastructure Projects Preparation Facility (NEPAD-IPPF).** The NEPAD-IPPF was set up as a special fund to assist African States, RECs, specialised agencies and related institutions by providing grant resources. The grants to PIDA are expected to be applied in preparing high-quality and viable regional and continental infrastructure projects to access financing from public and private sources. The grants are also intended to build consensus and partnership for project implementation and for promoting infrastructure projects and programmes that enhance regional integration and trade.

United Nations Economic Commission for Africa (UNECA)

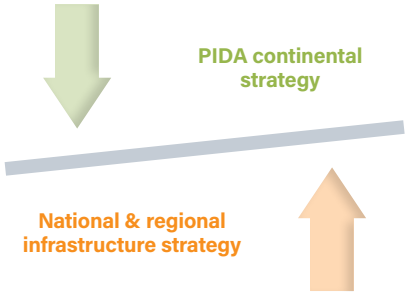
The United Nations Economic Commission for Africa (UNECA) played a critical role as one of the leading agencies in advocating for the implementation of PIDA at various global and strategic partnership platforms. UNECA worked closely with the AUC and AUDA-NEPAD to identify PIDA projects to be showcased in mobilising the needed resources through national and regional financing, capital markets, the private sector, and development partners.

Additionally, UNECA played an essential role in supporting the AUC to promote the implementation of the Trans-African Highway (TAH) network. In collaboration with the AUC, UNECA developed a roadmap to accelerate the ratification and implementation of a norm and standards intergovernmental agreement for TAH. Furthermore, UNECA collaborated with AUDA-NEPAD and RECs to establish a common framework to harmonise policies, laws, and regulations on investment in PIDA projects.

Regional Economic Communities (RECs)

The Regional Economic Communities (RECs) are crucial in PIDA implementation. The RECs act as knowledge banks for PIDA, be the contact points with PIDA leading agencies (AUC, AUDA-NEPAD, AfDB, UNECA), act as promoters of PIDA, and track the progress of PIDA projects. They can also act as surrogate lead agencies, particularly for multi-country projects.

One of the critical roles of RECs in the context of PIDA is to promote alignment between national, regional, and continental interests in infrastructure development. It requires work between RECs, national lead agencies, and sectoral organisations, such as power pools and ports associations, to deliver on their mandates through PIDA.



Institutional Architecture for Infrastructure Development in Africa (IAIDA)

Due to the scope, geographical coverage, resource requirements and coordination, it was recognised that successful implementation of PIDA projects required an elaborate institutional architecture. The PIDA implementation and coordination mechanisms were drawn up before its commencement, and the structure established is the Institutional Architecture for Infrastructure Development in Africa (IAIDA). The IADA contains the PIDA institutional framework and describes the various roles and responsibilities of the key stakeholders both in decision-making and implementation processes for its efficient and effective steering and coordination.

IAIDA also contains the key stakeholders involved in its governance. These include the AUC, AUDA-NEPAD, the AfDB, UNECA, RECs – Infrastructure Departments, AU Member States and Partners and the Infrastructure Consortium for Africa (ICA). The governance structure comprises the Council for Infrastructure Development (CID), Infrastructure Advisory Group (IAG) and PIDA Steering Committee (PSC). These governance organs and their technical committees hold scheduled meetings where decisions are taken and where, as obligated, recommendations are made to the relevant AU organs.

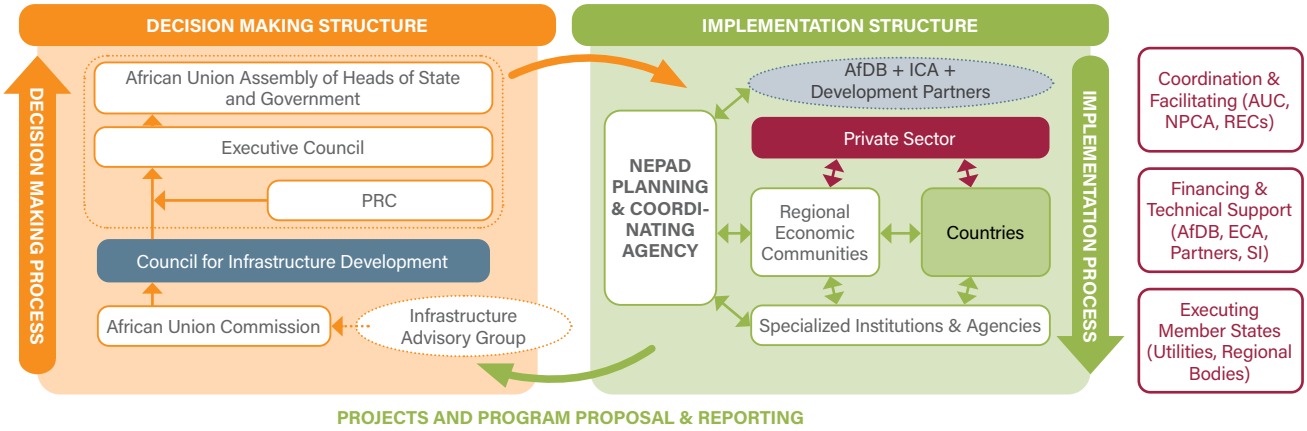


Figure 54: The Snapshot of IAIDA Mechanism

Source: IAIDA Handbook[25]

Germany African Union Development Cooperation

Germany via the Federal Ministry of Economic Cooperation and Development (BMZ) has been and continues to be a key pro-active strategic partner to the African Union on a wide range of developmental programmes and continental reforms. One of the major reforms has been in the infrastructure sector where strategic support was provided via the GIZ that led to the conceptualization and development of a continental wide portfolio of cross border projects in the water, energy, transport, and ICT sectors. Through its technical support policy, industry consultative and implementation advisory service are provided to project owners, organs of the AUC and PIDA projects. BMZ will continue this thematic focus on PIDA infrastructure and is of the view that connecting and integrating the continent with green projects will contribute to a more efficient, resilient, and prosperous Africa.

Infrastructure Consortium for Africa (ICA)

The Infrastructure Consortium for Africa (ICA) is one of the most important fora for resource mobilisation to provide funds for developing infrastructure in Africa. It was established in July 2005 following the G8 decision at its Summit in Gleneagles (UK) to support and strengthen Africa's transport, water, energy, and ICT infrastructure. ICA operates through a tripartite arrangement comprising bilateral development partners, African institutions, and multilateral institutions.

While the ICA's bilateral members include the G7 countries (Canada, France, Germany, Italy, Japan, the UK and the US), its membership is open to all countries in the G20. Other states, agencies and the private sector have joined in later years. The multilateral members that include the World Bank Group, AfDB, the European Commission (EC), the European Investment Bank (EIB) and the Development Bank of Southern Africa (DBSA) provide substantial resources to PIDA projects largely through grants and loans.

The ICA tracks the resources provided for infrastructure projects in the continent, including the ones under the PIDA. The ICA resources finance all infrastructure in the beneficial countries where PIDA provides for the development of backbone infrastructure for cross-border links in transport, energy, ICT and water.

[25] AUC, AIDA Handbook, 2017. Available at https://www.au-pida.org/download/the-institutional-architecture-for-infrastructure-development-in-africa-iaida-handbook/

While the actual commitments dedicated to PIDA projects are not unbundled, France and Japan have made over USD 15 billion in total commitments among the G20 members in the ICA since 2012, as shown in Pie Chart below. South Africa has also made over USD 9 billion in total commitments during the same period. The World Bank Group has made one of the largest commitments to infrastructure development with over USD 54 billion in total commitments, followed by AfDB with USD 32 billion and the European Investment Bank (EIB) with USD 12 billion, respectively.

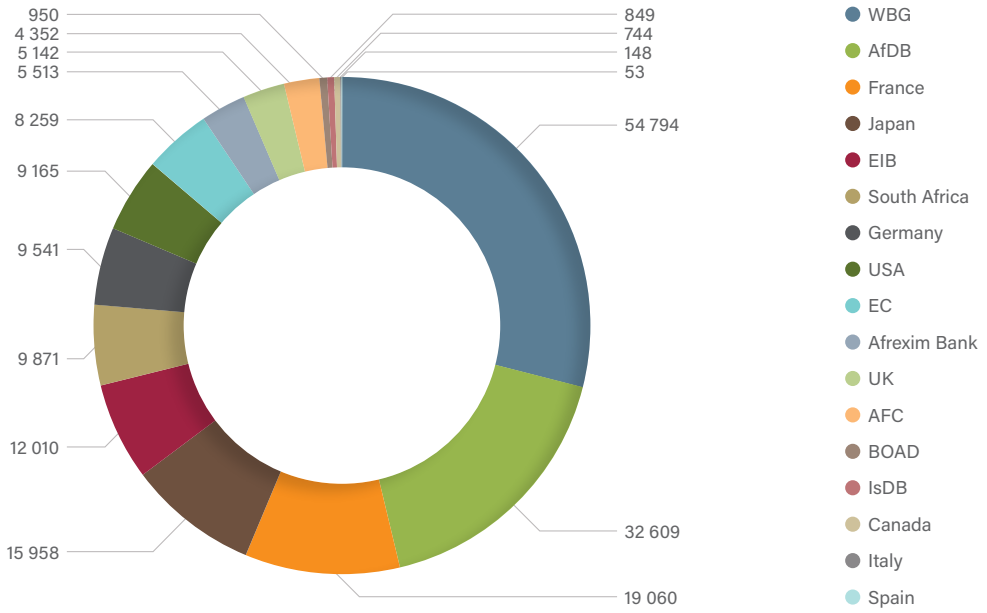
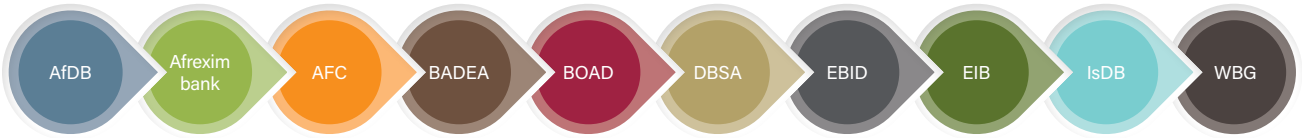


Figure 55: Total Infrastructure Commitments among ICA Members 2012-2020

Source: Infrastructure Financing Trends in Africa, ICA, 2012-2020[26]

Development Banks

Development banks are critical in funding project preparation, lending for PIDA project development and operation, and supporting policy development and capacity building in the African states and RECs. Development banks currently lending to PIDA include AfDB, DBSA, ECOWAS Bank for Investment and Development (EBID), and various African regional and national development banks. The following is a snapshot of some of the most notable regional development banks to support PIDA implementation.



Development Bank for Southern Africa (DBSA)

The Development Bank of Southern Africa (DBSA) has played an active role in leveraging and co-financing project preparation activities, especially in the Southern Africa region and in providing capital for developing and operating infrastructure projects through providing debt and equity. The DBSA also administers the Southern African Development Community (SADC) and has an

[26] ICA Infrastructure Financing Trends in Africa, 2012-2020. Available at http://www.nepad-ippf.org/sites/default/files/filefield_paths/IFT_Africa_Report%202019-2020-English.pdf

established Project Preparation and Development Facility (PPDF), which facilitates financing for the preparation of infrastructure projects in the SADC subregion. The DBSA is also the Project Executing Agency for implementing the start-up phase of the SADC Water Fund. The DBSA may also operate as a book runner in projects funded through the syndication of several creditors.

ECOWAS Bank for Investment and Development (EBID)

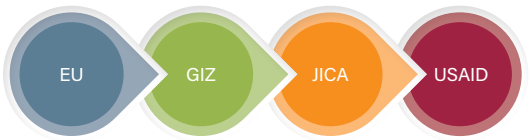
The ECOWAS Bank for Investment and Development (EBID) supports ECOWAS Member States by mobilising resources for grants, credit and capacity building. The EBID has over forty years been supporting Member States to meet infrastructural, social and institutional challenges through financing projects under its private and public sector windows.

World Bank Group (WBG)

The World Bank Group is one of the major development partners of PIDA, providing financial resources, technical assistance, and policy advice to support PIDA implementation. The World Bank is leading in developing the capacity to undertake project identification, scoping, and supporting further downstream project preparation to financial closure. Under project identification in the four infrastructure sectors, the Bank has continued to facilitate the conducting of needs assessment to determine priority projects that will provide the highest impact by enhancing regional connectivity in transport, trading in energy to address the supply of power and other sources of energy and sharing of transboundary water resources.

Development Partners

Development partners contribute to the implementation of PIDA by providing financial resources, support for the development of policy and legal instruments, institution capacity building, and advisory services, among others. The following is a snapshot of crucial development partners working with AUDA-NEPAD for PIDA implementation.



European Union (EU)

The European Union (EU) is a leading partner in developing PIDA in terms of funding its projects through their various stages along the life cycles. The EU provides financing of physical infrastructure projects under the Europa/Africa Trust Fund or through the European Investment Bank (EIB). The EU also extends funding for developing policy, legal and regulatory instruments and capacity building. The following are some examples of EU support for PIDA:

(i) Preparation of PIDA PAP2 through technical assistance to the African Union.
(ii) Support to the AUC on preliminary work on harmonising standards in the railways.
(iii) Facilitate the establishment of the African Single Electricity Market (AfSEM) through the Africa-EU Energy Partnership.
(iv) African Internet Exchange System (AXIS) grant provided by Luxembourg to support the establishment of national and regional Internet exchange points (IXPs) and regional Internet carriers[27].
(v) Policy and Regulation Initiative for Digital Africa (PRIDA)[28] – €10 million grant by the EU which aims to promote universally accessible/affordable broadband across the continent through a harmonised and enabling regulatory framework for ICT use by social/economic development; and
(vi) Carry out training in PPP for RECs and Member States through the EU Infrastructure Support Mechanism (EU-ISM).

[27] EU Africa Infrastructure Trust Fund, African Internet Exchange System (AXIS). Available at https://www.eu-africa-infrastructure-tf.net/activities/grants/axis-african-internet-exchange-system.htm

[28] EU Policy and Regulation Initiative for Digital Africa (PRIDA). Available at https://international-partnerships.ec.europa.eu/policies/programming/programmes/policy-and-regulation-initiative-digital-africa-prida_en

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)

GIZ has a been founding partner and continues to play an essential role in the implementation of PIDA through its support of the AUC and AUDA-NEPAD in promoting and implementing PIDA. GIZ supports PIDA through various fields of action such as PIDA information management and progress reporting, marketing, and leveraging cooperation with the private sector funders, the provision of capacity for early-stage project preparation, capacity building, and coordination between PIDA leading agencies. Major contributions made by GIZ to PIDA include:

(i) **Technical advisory and support**: GIZ provide technical advisory and support to PIDA in several fields, such as infrastructure project preparation financing, capacity building, and coordination between central PIDA stakeholders. GIZ not only funded the development of the PIDA 1 and 2 pipeline but it facilitated the consultative process together with the AUC and the PIDA task force. In addition, a significant budget was allocated towards the appointment of an Expert Service Pool to provide advisory support to PIDA projects.

(ii) **Capacity building**: GIZ supports the provision of capacity for early-stage project preparation, organizes trainings, including for infrastructure PPPs.

(iii) **Establishment of platforms**: GIZ facilitated the establishment of the African Network of Women in Infrastructure (ANWIn), a high-level strategic engagement platform hosted by the AUC Department of Infrastructure and Energy. A policy proposition was developed via this technical assistance.

(iv) **Development of tools**: With GIZ support, essential tools to facilitate PIDA implementation, such as Service Delivery Mechanism (SDM) and its PIDA Quality Label (PQL) including the Green Infrastructure Appraisal, and Continental Business Network (CBN), PIDA Job Creation Toolkit among others have been developed.

(v) **MSME linkage to Infrastructure:** During the Covid 19 period AUDA via GIZ support launched a MSME initiative that realized funding for at least 4 small enterprises and this program continues to grow with interest from other development partners.

(vi) **Integrated Corridor Approach:** This Green Integrated corridor approach to infrastructure was initiated under the PIDA and is being piloted in the Central Corridor of Africa.

Japan International Cooperation Agency (JICA)

Japan International Cooperation Agency (JICA) has supported capacity development at institutional and human levels and physical infrastructure development in Africa. The specific areas where support to PIDA has been provided include the corridor development approach, reinforcement of resource mobilisation efforts through the PIDA information system, and enhancement of continental connectivity and trade facilitation.

(i) Support for the Corridor Development Approach

JICA's core cooperation policy for Africa in infrastructure development promotes a corridor development approach. As of 2022, JICA has supported the formulation of strategic master plans for the Northern Corridor, the Nacala Corridor, and the West Africa Growth Ring (the three priority corridors) and has advocated the enhancement of potential industrial activities, expansion of market scale, and elimination of bottlenecks in infrastructure and logistics which is the key to corridor development.

JICA's three priority corridors are aligned with PIDA. Their support has been extensively committed to realising the economic growth scenario using various cooperation tools, as indicated in the following Figure.

JICA's Corridor Development Approach

JICA comprehensively supports the realization of the economic growth scenario by making full use of a variety of cooperation tools.

	Corridor Infrastructure Development Plan		Industrial Development	Social Sector Development
	Facility development/Hard infrastructure	Institutional development and technology Transfer/Soft infrastructure		
Loan Grant Technical Cooperation Public Private Parthnership	●Development of ports,roads,bridges,railways,etc.(grant/loan) ●Energy supply facility development (grant/loan) ●One-Stop Border Post (OSBP) facility development (grant/loan) ●Special Economic Zone (SEZ) development (grant/loan) To support the medium and long-term stable economic growth, JICA supports the development of economic infrastructures such as transportation, power, energy and communication.	●Cross-border facility and institutional-building (technical cooperation) ●Infrastructure operation and management capacity building (technical cooperation) ●Financial assistance for private investment promotion (loan) JICA is promoting trade and investment through its support to OSBP that facilitates logistics and trade as well as encouraging private sector investments in order to strengthen the growth driving force.	●Mining Industry ●Agriculture ●Tourism ●Technical Education	●Medical Care ●Public Health ●Education ●Water Supply

Tema intersection (part of the Ghana International Corridor Improvement Project) (Ghana)

Source of the Nile Bridge (Uganda)

Mombasa Port Development Project and Mombasa Port Area Road Development Project (Kenya) [Photo: Toyo Construction Co., Ltd.]

Namanga OSBP (Kenya-Tanzania border)

JICA's major projects in the 3 priority corridor area (loan/grant projects carried out in 2000 or later)

● : Loan ● : Grant Aid

Transport Sector

- Port
- Bridge
- Airport
- Road
- One Stop Border Post

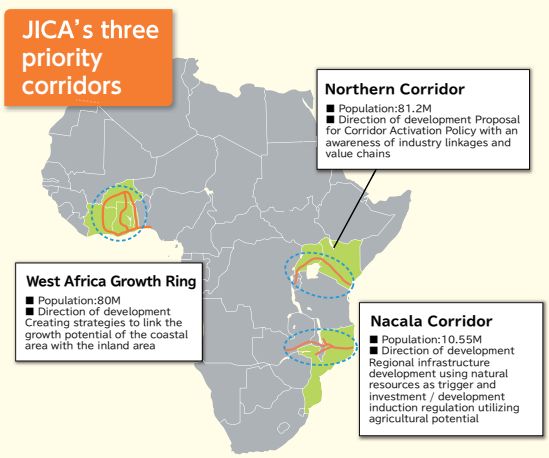
Energy Sector

- Geothermal Power Plant
- Thermal Power Plant
- Substation and Transmission Line
- Hydro Power Plant

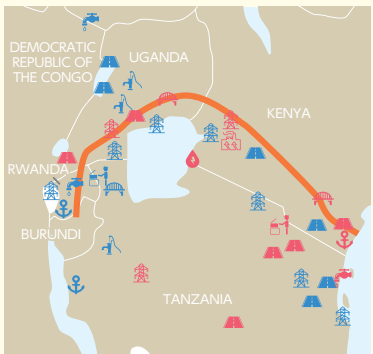
Water Sector

- Water Supply
- Groundwater and Water Transmission

JICA's three priority corridors



West Africa Growth Ring



Northern Corridor

Nacala Corridor

Figure 56: JICA's Corridor Approach

The most recent corridor study[7] undertaken by JICA was a survey on five African corridors: Northern Corridor, Nacala Corridor, West African Growth, North-South Corridor and the Central Corridor. The survey identified five barriers construed as obstacles to promoting corridor development. These five barriers are denoted as the "Barrier of Distance and Time," "Barrier of Gateway and Border," "Barrier of Transport Infrastructure Quality," "Barrier of Regional Disparities," and "Barriers of People and Consciousness." The analysis of the presence and intensity of the above barriers indicated that many corridor countries, except a few coastal countries, were still suffering from the said barriers.

The study recommended a review of the current Corridor Development Approach considering new developments, especially with respect to the quality of infrastructure coupled with environmental and social issues. It was also pointed out that the new corridor approach further needs to address the issues of digitalisation, climate change and decarbonisation, the balance in the benefits between disparities between coastal and inland areas on the one hand and those between the urban and rural communities. Harmonising the Smart Corridor concept in the updated Corridor Development Approach was also underlined to ensure corridors use ICT solutions in their development.

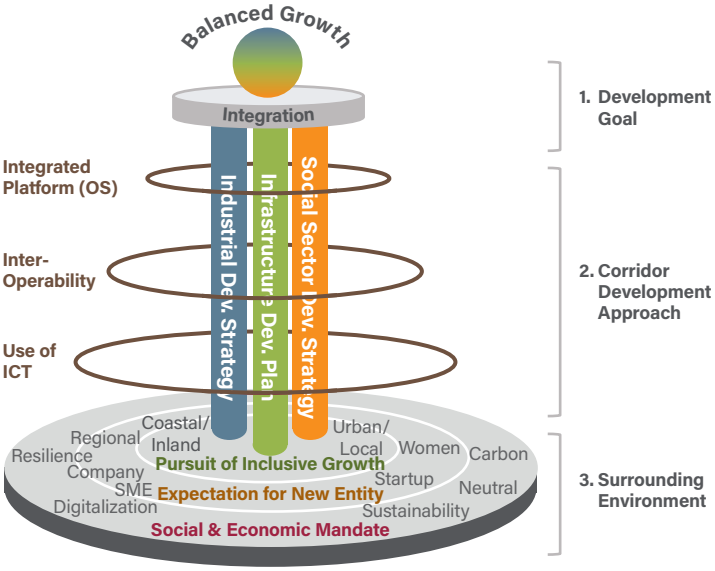


Figure 57: Corridor Development Approach 2.0

Source: Data Collection Survey on Corridor Development in Africa, JICA, 2022[13]

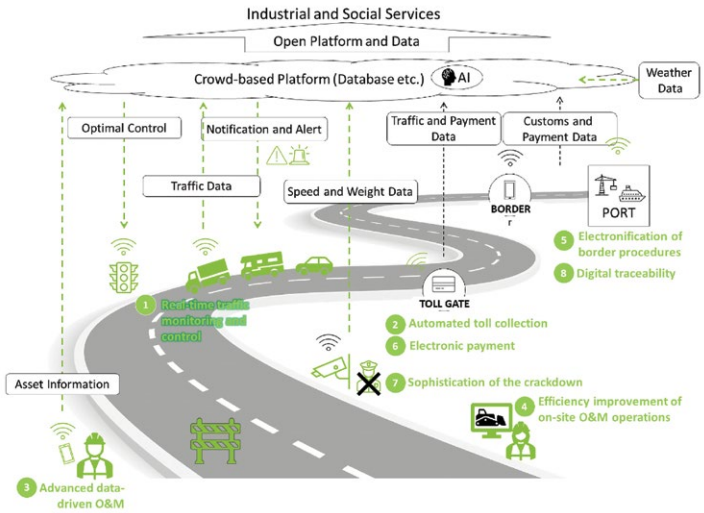


Figure 58: Strategic Use of ICT in Corridor Development

Source: Data Collection Survey on Corridor Development in Africa, JICA, 2022[13]

(ii) Reinforce Resource Mobilisation Efforts through the PIDA Information System

Reliable and up-to-date information on projects is vital for providing effective project support in accelerating the implementation of PIDA. AUDA-NEPAD uses information systems to collect, validate and disseminate information on the progress of PIDA projects. Validated information, among others, is used to compile a PIDA Progress Report that informs the partners and stakeholders on the implementation of PIDA. Despite the existence of PIDA information systems and efforts to improve the flow of information on PIDA projects in the previous years, challenges remain in the quality of data, and project information is still incomplete, partly inaccurate, inadequate, and outdated.

With support from JICA, PIDA comprehensive data collection survey was undertaken by AUDA-NEPAD to reinforce resource mobilisation efforts by providing up-to-date information on PIDA projects. The work has also extended to improve the contents of the Virtual PIDA Information Centre (VPIC), an online knowledge portal of PIDA, to present a reliable PIDA dashboard, news, events, videos, and document.

(iii) Enhancement of Africa's Connectivity

One-Stop Border Posts (OSBPs) are a uniquely modern approach for improving efficiency at land border crossings. OSBPs are also central to the implementation of transport projects in PIDA PAP and enhanced interconnectivity of markets and regional integration on the continent.

JICA has supported 14 OSBPs in the continent through facility development and technical cooperation. OSBP Sourcebook, an operational guide to the OSBPs, is a key resource that AUDA-NEPAD and JICA jointly undertook to develop and revise subsequently. The sourcebook provides a practical reference by sharing experiences and lessons learned from developing OSBPs for the decision-makers and the implementers of OSBP projects.

Figure 59: Group Photograph on the launch of the 3rd Edition OSBP Sourcebook

USAID/Power Africa

PIDA benefits from the USAID/Power Africa programme, a US-funded initiative aimed at advancing inclusive, low-carbon economic growth that improves livelihoods and prosperity by increasing the generation capacity and the number of consumers connected to the power grid. The USAID Power Africa is based on the Africa Power Vision (APV), which supports PIDA and targets priority energy projects in Africa to advance its implementation in line with Africa's Agenda 2063.

The USAID/Africa initiative was developed by the AUC, AUDA-NEPAD, AfDB, UNECA, and Nigeria's Federal Ministry of Finance. APV has five pillars: Leveraging domestic resources; Driving GDP growth with electrification; Scaling power through regional integration; Running our power assets efficiently; and Mobilising all available resources. The primary aim of the APV is to achieve defined targets in the levels of residential and industry/business electrification available on-grid and off-grid solutions and use the continent's vast renewable energy resources.

It also advocates for increased regional integration to scale up energy delivery efficiently. It emphasises the critical role of technical skills and institutional capacity development to ensure the development and implementation of energy projects sustainably. It will achieve this by unlocking power project development, enabling countries to improve their energy institutions and advance towards self-reliance. USAID Power Africa facilitates the development of the power industry in Africa by providing the following:

(i) Technical assistance in policy and regulatory design/reforms;
(ii) Transaction assistance where early-stage support for innovative energy solutions, resource evaluations, feasibility and grid impact studies;
(iii) Financing instruments providing equity, mezzanine financing, senior and sub-senior loans, guarantees, export credits, grants, and insurance programmes;
(iv) Capacity Building with technical assistance provided to support institutional strengthening, technical and regulatory skills development, and project development/management activities; Trade missions to the US and sub-Saharan Africa.

Power Africa has provided technical assistance to Togo in developing a regulatory and legal framework to support off-grid electrification and to Ethiopia for capacity building and drafting a new geothermal law with accompanying regulations. Under the transaction assistance initiative, Power Africa has more than 70 transaction advisors working across sub-Saharan Africa who can provide free expertise to qualifying project developers and public sector entities.

The USAID has provided financing through loan guarantees to cover monies lent to small hydro projects to secure borrowing from Standard Chartered Bank to the PTA Bank for on-lending to power projects in Africa. These projects include two run-of-river hydropower plants in Uganda that will significantly boost the country's clean energy infrastructure. An MOU has been signed between USAID and the European Union and brings together the collective resources of more than 175 public and private sector partners to increase the number of people with access to electricity in Sub-Saharan Africa.

International Organisations

Partnerships have also been established with International Organisations/Forums such as the Global Water Partnership, OECD, and World Economic Forum (WEF), further supporting PIDA with knowledge, expertise, and resources to implement its flagship programmes.

The Global Water Partnership (GWP)

The Global Water Partnership (GWP)[29] is a network of over 3000 water organisations that promotes the effective, efficient, and sustainable management of water resources worldwide. GWP provides a platform where global, regional, national, and local water actors can share water insights and access technical assistance and policy guidance for the smart management of water resources.

GWP signed a Memorandum of Understanding (MoU) with AUDA-NEPAD to collaborate on the execution of PIDA's portfolio of transboundary water and hydropower projects in November 2018 during PIDA Week, held in Victoria Falls, Zimbabwe. The partnership aims to accelerate the delivery of critical PIDA Water infrastructure, develop sustainable development goal (SDG) investment and business cases, remove transaction management-related blockages, and integrate water security and climate resilience into project development. Additionally, the collaboration also aims to improve water governance and knowledge, as well as strengthen institutional capacity.

Figure 60: Signing partnerships between AUDA-NEPAD and GWP

Organisation for Economic Cooperation and Development (OECD)

The Quality Infrastructure in 21st Century Africa report[30] was released at an online 9 July 2020 high-level launch event. It marked the culmination of the first phase of a collaborative initiative between the OECD and African Centre for Economic Transformation (ACET), and AUDA-NEPAD that dated back to the 2018 International Economic Forum on Africa, held in Paris, when President Nana Akufo-Addo called on to establish a technical platform to facilitate a policy dialogue around optimising, accelerating and scaling up quality infrastructure in Africa.

The report identifies the bottlenecks to infrastructure development—including institutional capacity constraints and multiple regulatory and technical standards—and proposes two critical mechanisms for the way forward:

(i) Expanding the PIDA Quality Label (PQL) system to recognise quality infrastructure;
(ii) Creating a platform to enhance real-time peer learning and sharing good practices among African infrastructure professionals.

29 The Global Water Partnership. Available at https://www.gwp.org/en/

30 OECD, Quality Infrastructure in 21st Century Africa, 2020. Available at https://nepad-my.sharepoint.com/personal/mcneilm_nepad_org/Documents/Attachments/Annual%20Rerport_v4_single%20page_view%201.docx?web=1

World Economic Forum (WEF)

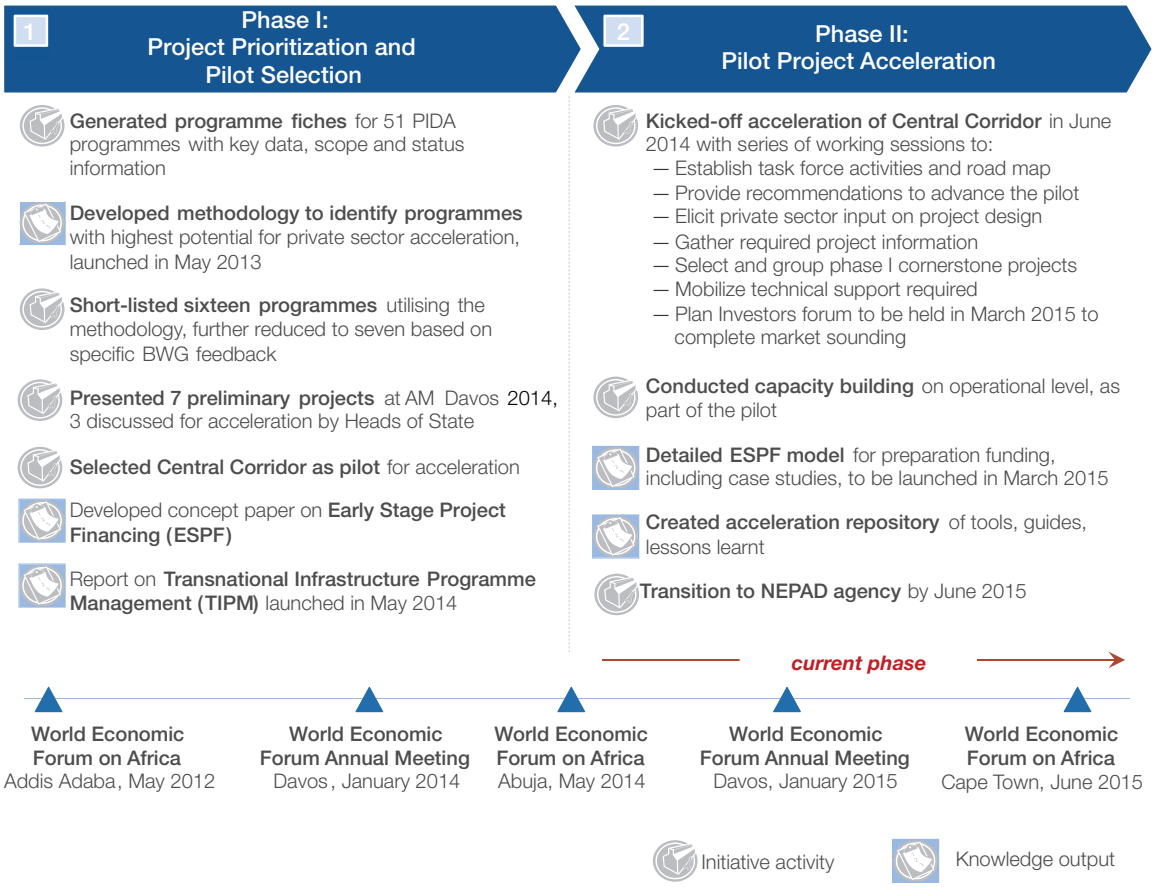
The African Strategic Infrastructure Initiative (ASI)[31] was established to achieve the PIDA objectives by enhancing collaboration with the private sector. The Initiative was set up by international and African business leaders at the World Economic Forum (WEF) on Africa in Addis Ababa in May 2012. It is led by the WEF in partnership with the AfDB and is supported and guided by the AUC and the AUD-NEPAD. The Initiative aims to:

(i) Assist the public sector in benefiting from objective, transparent and informed input from the private sector to prioritise and systematically select projects for acceleration from PIDA; and

(ii) Develop innovative ideas and generate informative publications on project acceleration (including enablement and capacity building), transnational infrastructure programme management and early-stage project financing to improve infrastructure delivery in Africa.

The ASI will ultimately provide a model to be replicated across Africa, creating an enabling environment for private sector involvement in infrastructure development, with a core focus on accelerating the implementation of PIDA. A Business Working Group (BWG) was established to ensure a coordinated business voice to prioritise and accelerate PIDA. Currently, it consists of more than 40 public institutions and private companies.

The ASI has been structured into two phases, where the first focuses on "Project Prioritisation and Pilot Selection," and the second focuses on "Pilot Project Acceleration," as summarised in the Figure below, along with key reports and tools produced.



[31] WEF, The African Strategic Infrastructure Initiative (ASI), 2015. Available at https://www3.weforum.org/docs/WEF_AFSII_Project_Overview_Accelerating_Infrastructure_Development_in_Africa.pdf

The methodology included a set of analytic tools (Excel Model) provided by the BCG that was used sequentially in four basic steps based on the PIDA PAP1 project list (data sourced from AUC, AUDA-NEPAD (Aurecon consultancy)):

(i) Unbundling complex programmes into discrete individual projects to facilitate direct comparison (as comparisons between broadly labelled programmes can be misleading);
(ii) Grouping projects by potential along three key thresholds (data quality/availability, project environment, project complexity) and rating them for immediate, mid- or long-term acceleration;
(iii) Using the "two-lens clustering" method to identify candidates for immediate acceleration according to their readiness and likely value creation and impact; and
(iv) Fine-tuning the shortlist by rating projects on other vital considerations (e.g., regional and sector diversity and public support).

Based on the data and method, 16 programmes were initially shortlisted and presented to stakeholders at the WEF on Africa (May 2013, Cape Town). The shortlist was refined through a second private sector survey conducted more granularly. Additional identification criteria were also applied, such as low sequential dependence with other programmes (programme implementation dependent on another being completed first), the availability of acceleration levers, private sector interest and reduced "showstoppers." This provided a shortlist of seven PIDA programmes that served as the basis for selecting the pilot project.

The Boston Consulting Group (BCG) provided three strategic secondments to the WEF in the period 2012-2015 to fulfil and support the required activities of the Initiative, acting as project advisor. Technical assistance was provided for this period for all work streams and packaging of projects. PIDA PAP1 programmes were unbundled, analysed, shortlisted and packaged through the processes summarised above.

The shortlisted and packaged PIDA PAP1 projects provided a foundation for featured projects at the first Dakar Finance Summit in 2014, motivated for early project preparation and the continental business network similar to the BWG.

The ASI has also facilitated the mobilisation of much-needed technical resources, sponsored by the DBSA, to complete the required project packaging exercises of the stage 1 projects in preparation for their showcasing and market sounding during the Central Corridor Presidential Roundtable and Investors' Forum in March 2015 in Dar Es Salaam, Tanzania.

The Initiative reached its final phase in 2015 and was envisioned to be hosted at the AUDA-NEPAD to accelerate, scale and replicate PIDA PAP projects. This did not transpire, and the Initiative transitioned to Sustainable Development Investment Partnership (SDIP) currently hosted at the DBSA. The following are the Initiative's publications and topics aimed to enable the environment for African infrastructure development anchored with PIDA:

(i) Strategic Infrastructure in Africa – A business approach to project acceleration.
(ii) Managing Transnational Infrastructure Programmes in Africa – Challenges and Best Practices.
(iii) Early-Stage Project Preparation Financing; and
(iv) Capacity Building piloted with selected project (Central Corridor).

Chapter 6

Agenda 2063 and Continental Infrastructure Initiatives to Drive Socio-Economic Impacts

Agenda 2063

Agenda 2063 is the continent's strategic framework designed to deliver its goal for inclusive and sustainable development. This development is intended to exhibit concrete manifestation of the Pan-African drive for unity, self-determination, freedom and collective prosperity pursued under Pan-Africanism and African Renaissance. Agenda 2063 prioritises inclusive social and economic development, continental and regional integration, democratic governance and peace and security, among other issues aimed at repositioning Africa to become a global player.

It seeks to achieve a people-centric development, gender equality and youth empowerment; changing global contexts such as increased globalisation and the ICT revolution; the increased unity of Africa; and emerging development and investment opportunities in areas such as agri-business, infrastructure development, health and education as well as the value addition in African commodities. Three Goals are relevant for transport, energy, water and ICT infrastructure. These are (i) Goal 10: World Class Infrastructure Criss-Crosses Africa, (ii) Goal 6: Blue/Ocean Economy for Accelerated Economic Growth and (iii) Goal 20: Africa takes full responsibility for financing her development. Africa accords prime focus on infrastructure development as a key enabler for stimulating and promoting regional integration, trade and economic transformation[32].

Flagship Projects of Agenda 2063

The flagship projects of Agenda 2063 are a set of priority projects and initiatives identified to drive the implementation within the broader framework of Agenda 2063. These flagship projects cover many sectors and thematic areas, including infrastructure, trade, governance, and education. The flagship projects are designed to address Africa's critical challenges and opportunities and accelerate the continent's development. They are intended to promote inclusive growth, regional integration, and sustainable development across Africa. These flagship projects are supported by various mechanisms, including financial resources, technical expertise, and partnerships with regional and international institutions, Member States, and the private sector. Implementing the flagship programmes requires collaboration, coordination, and commitment from all stakeholders.

Several PIDA projects were identified under Agenda 2063, such as constructing a high-speed railway, the Inga Dam in the Democratic Republic of Congo, and the Single African Air Transport Market (SAATM). PIDA contributes to implementing these flagship projects by providing support, coordination, and resources to ensure their successful realisation. Thus, PIDA and the Agenda 2063 flagship projects are interconnected, with PIDA playing a crucial role in advancing the infrastructure development objectives of Agenda 2063.

African Continental Free Trade Area (AfCFTA)

The AfCFTA is a continental flagship initiative that will create a single market for goods and services, facilitate the movement of persons, and promote industrial development and sustainable and inclusive socio-economic growth in accordance with Agenda 2063. By 2050, the AfCFTA is expected to expand the size of Africa's economy to USD 29 trillion and create a single African market for goods and services, covering an estimated 1.2 billion people across AU Member States[33].

The infrastructure created under PIDA, such as transportation networks, energy systems, transboundary water, and ICT infrastructure, plays a crucial role in realising the targets of the AfCFTA. By reducing the cost of transport, ensuring the availability of energy and water, and facilitating the effective exchange of information, PIDA infrastructure supports the production and trade of goods and services within the AfCFTA framework.

Figure 61: Discussions between AUDA-NEPAD and AfCFTA Secretariat

[32] African Union, Goals & Priority Areas of Agenda 2063. Available at https://au.int/en/agenda2063/goals

[33] AfCFTA Secretariat, Purpose of the AfCFTA. Available at https://au-afcfta.org/purpose-the-afcfta/

To strengthen institutional links and promote regional integration and trade in Africa, AUDA-NEPAD and AfCFTA Secretariat held a working session to draw on the depth and breadth of their experiences to develop a strong work programme of collaboration on 21 October 2022. Key areas of collaboration were identified, and the respective teams were tasked with creating a detailed work plan to resume implementation in 2023[34].

The African Integrated High-Speed Railway Network (AIHSRN)

The African Integrated High-Speed Railway Network (AIHSRN) is a flagship project of Agenda 2063. The AIHSRN aims to connect African cities, megacities, commercial and industrial hubs, economic zones, and tourist destinations across the continent by developing a comprehensive high-speed rail network. The AIHSRN aims to enhance regional integration, promote economic development, and facilitate the movement of goods, services, and people within Africa. By improving connectivity through rail infrastructure, the AIHSRN aims to reduce transport costs, alleviate congestion, and enhance trade and economic cooperation among African countries.

The AIHSRN is being developed in a phased approach, with the first phase spanning from 2013 to 2023. During this phase, a master plan for the development of the AIHSRN has been prepared, along with detailed scoping studies for two pilot projects. The master plan outlines the proposed routes and infrastructure for the AIHSRN, considering population centres, economic activities, and tourism potential. To ensure successful implementation, various stakeholders, including AU Member States, RECs, and international organisations such as the AfDB and the World Bank, are involved in planning and coordinating the AIHSRN project. Additionally, training programs have been conducted to enhance the capacity of Member States in areas such as railway financing and international conventions related to railway equipment.

The AIHSRN is considered a key enabler of regional integration and economic development in Africa. It aligns with the objectives of PIDA and other flagship projects under Agenda 2063. The maps below present the AIHSRN master plans for 2033 and 2043.

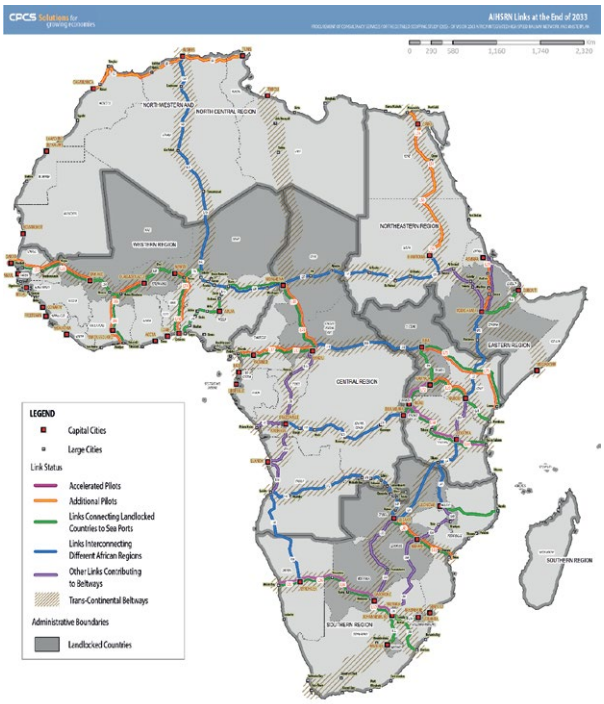


Figure 62: Map AIHSRN Master Plan 2033

Source: PIDA Progress Report 2019[8]

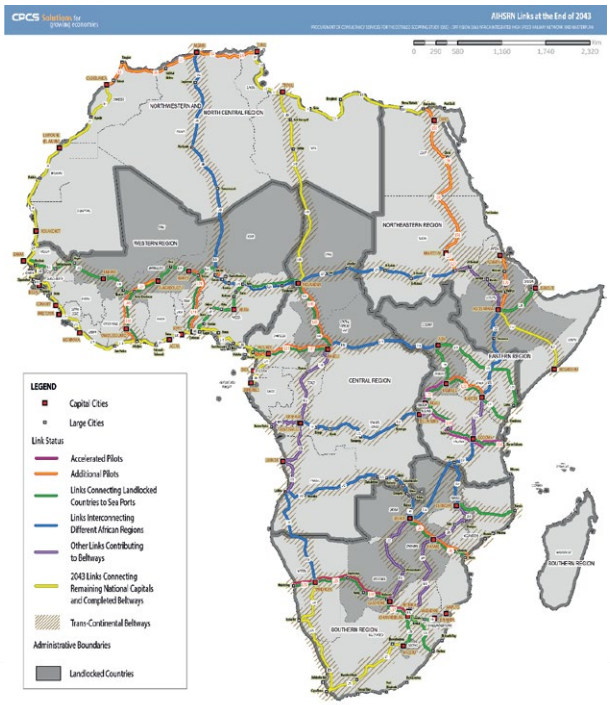


Figure 63: MAP of AIHSRN Master Plan 2043

[34] AUDA-NEPAD, Strengthening links between AUDA-NEPAD and the AfCFTA Secretariat will promote regional integration and trade in Africa. Available at https://www.nepad.org/news/strengthening-links-between-auda-nepad-and-afcfta-secretariat-will-promote-regional

The Single African Air-Transport Market (SAATM)

The Single African Air Transport Market (SAATM) is a flagship project of the Agenda 2063, an initiative of the AU to create a single unified air transport market in Africa to advance the liberalisation of civil aviation in Africa and act as an impetus to the continent's economic integration agenda. SAATM ensures aviation plays a major role in connecting Africa, promoting its social, economic and political integration and boosting intra-Africa trade and tourism. Open-air arrangements boost traffic, drive economies and create jobs. According to the International Air Transport Association (IATA) survey, if the following 12 key AU Member States opened their markets and increased connectivity, an extra **155,000 jobs** and **USD1.3 billion** in annual GDP would be created in those countries[35].

Figure 64: Target countries for traffic impacts of Intra-African liberalisation

Source: IATA survey[35]

PIDA identifies the development of a continental aviation infrastructure master plan, including a seamless airspace architecture, to identify current aviation infrastructure gaps on the continent (Airports and Air Navigation Services), considering the expected traffic growth with the full operationalisation of the SAATM. Currently, **35 AU Member States** with a total population of more than 800 million people, accounting for 61% of the population on the African continent and 89% of the intra-African air transport market, have joined SAATM and have opened up their markets to each other, removing restrictions in terms of frequency, capacity and granting to each other traffic rights and this will enable intra-African transport connectivity and support improvement of trade and tourism[36].

The Grand Inga Dam Project

The Grand Inga Dam project is a significant hydropower scheme in the DRC, aiming to provide affordable and clean electricity to the DRC and the entire continent. It is identified as a PIDA and a flagship project in Agenda 2063, potentially contributing to Africa's energy needs and economic development. The project proposes to have a total installed capacity of over 42,000 MW.

Following the decision by the Government of DRC in 2018 to change the Inga 3 concept from 4,800 MW to 11,000 MW for a total investment cost of USD 18 billion - including USD 4 billion for the transmission lines - an agreement was signed in October 2018 between the Government and a consortium of Chinese and Spanish companies to undertake technical studies and environmental and socio-economic impact assessments of Inga 3. Out of the 11,000 MW capacity, South Africa receives 5,000 MW, Nigeria 3,000MW, mining companies in DRC 1,300 MW and the rest for the DRC National Utility (SNEL). Guinea also expressed a desire to buy 7,500 MW[37].

Figure 65: Photo: The Grand Inga Hydropower Project (AUDA-NEPAD)

35 IATA, Transforming Intra-African Air Connectivity, 2014. Available at https://www.iata.org/contentassets/44c1166a6e10411a982b2624047e118c/intervistas_africaliberalisation_finalreport_july2014.pdf

36 African Union, 2022. Available at https://au.int/en/pressreleases/20220317/auc-and-kingdom-morocco-sign-revised-constitution-afcac-and-moi-saatm

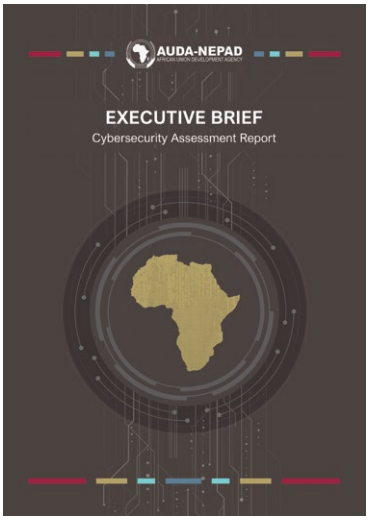
37 AUDA-NEPAD, The Grand Inga Hydropower Project. Available at https://www.nepad.org/agenda-2063/flagship-project/grand-inga-hydropower-project

Cyber Security

In June 2014, the AU Summit adopted the African Union Convention on Cyber Security and Personal Data Protection (AUCC), also known as the Malabo Convention. The primary objective of the Convention is to ensure the security of persons and institutions together with those of financial, technical and informational assets and resources throughout the continent. It addresses cybercrime and cybersecurity and underscores the need to legislate vital elements of electronic transactions and personal data protection.

The Convention will enable the harmonisation of cybersecurity policies, laws and strategies; facilitate online and offline global and intra-regional trade; boost investors' confidence in the infrastructure sector; and encourage the development of local content and services. The Convention will have a crucial impact on the operations of the ACFTA as cybersecurity will be essential in the conduct of trade through the e-commerce provision of e-services and in the free movement of persons across borders.

While the Convention is supposed to come into force upon ratification by 15 states, currently, it has obtained 18 signatures and 14 ratifications[11]. To assess the status of national and regional structures, provide advocacy towards cybersecurity measures in line with the Convention, and domesticate it into national policies and laws. AUDA-NEPAD has developed a cybersecurity assessment framework[38]. This framework facilitates the development of tailored guidelines and interventions for implementation in Member States. The upsurge in e-commerce transactions and the provision of public services through e-platforms following the COVID-19 pandemic has brought forward the need to implement the Convention rapidly. In E-commerce, the security of an electronic payment system (EPS) is critical as it raises confidence and generates trust with sellers and consumers. Several RECs have already developed model policies and legislative instruments on cyber security for adoption by their Member States.



AUDA-NEPAD Cybersecurity Assessment Report[38]

Other Continental Initiatives to Drive Socio-Economic Growth in Africa

Continental infrastructure initiatives have been recognised as crucial drivers of socio-economic growth in Africa. These initiatives aim to address the infrastructure gap on the continent and unlock its potential for economic development. Overall, these initiatives, in conjunction with PIDA, work towards addressing Africa's infrastructure challenges, unlocking economic potential, and promoting socio-economic growth on a continental scale. Here are key initiatives that highlight how these initiatives can boost socio-economic growth.

Africa Single Electricity Market (AfSEM)

The Africa Single Electricity Market (AfSEM), an essential instrument in PIDA's energy sector, is intended to facilitate sustainable development of the African electricity sector by establishing an integrated continental electricity market. Its primary goal is to provide secure, sustainable, reliable, competitive, and affordable energy to the continent's households, industries and businesses. AfSEM's establishment resulted from the AU programme on Harmonisation of Regulatory Frameworks for the Electricity Market in Africa. Subsequently, the AfSEM Policy Paper, the Roadmap, and the governance structure were prepared and adopted by the AU Heads of State in February 2021. It is expected that AfSEM will provide better energy security, sustainability, and competitiveness to the AU Member States, which will form one of the largest single electricity markets globally and serve a population of over 1.3 billion.

Following the launch of AfSEM, progress has been made. The implementation of its master plan has achieved key milestones, including the agreement on suitable technical solutions in collaboration with the African Power Pools, which entails the review

[38] AUDA-NEPAD, Cybersecurity Assessment Report, 2020. Available at https://www.au-pida.org/download/cybersecurity-assessment-report/

of the Energy Information Systems (EIS) and Geographic Information System (GIS) and the power system simulation software. Several participatory consultation meetings have taken place, and the selection of partners for the technical training has been undertaken.

The AfSEM is anticipated to lead to a diversification of energy sources, better trade and investment exchanges, closing the energy infrastructure gaps between regions and countries, and leveraging the AfCFTA. In line with AU Agenda 2063 and SDG7, the continent's single electricity market is also expected to facilitate the optimisation of Africa's renewable energy sources to achieve 100 per cent access to electricity by 2030.

Presidential Infrastructure Champion Initiative (PICI)

The Presidential Infrastructure Championship Initiative (PICI) is an initiative which assigns leadership of specific projects to individual Heads of State to promote the project or programme in the continent. This essential strategy takes advantage of individual Presidents' interests and capacities to encourage the implementation of the project or programme. The champions are central to the success of their assigned projects as they undertake essential tasks requiring innovation and dedication. The PICI performs the following functions: Bringing visibility to the projects; Providing leadership; Unblocking political bottlenecks; Leading in resource mobilisation efforts for project implementation; Ensuring speedy project implementation within five years. The project champions are supposed to submit progress reports on their projects to the HSGOC regularly. Currently, the projects under PICI are shown hereunder.

The PICI holds strategic reflection sessions to rally momentum, alliances, and partnerships towards accelerated action on the PICI implementation process. Two such sessions were held in the last two years. The first was held in July 2021, and the second one on the margin of the 7th PIDA Week during February/March 2022 in Nairobi, Kenya. The following events were also important for the PICI:

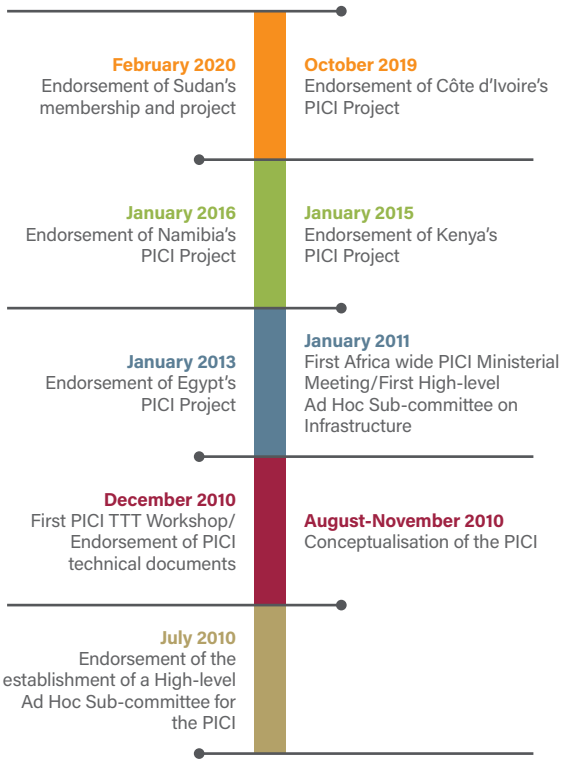


Figure 66: Chronology of PICI Milestones

Source: Virtual PIDA Information Centre (VPIC)[9]

(i) Two Ministerial Sessions of the Liaison Committee of the Trans Saharan Road (CLRT) were held in May and November 2021, respectively. The central theme was to follow up on the proposal for establishing an institutional framework for managing the Trans-Saharan Route Corridor.

(ii) The 2nd Meeting of the LAPSSET Corridor Council of Ministers was held in Addis Ababa, Ethiopia, during June/July 2021, where the footprint states signed the TORs of the project Steering Committee.

(iii) The VICMED Stakeholder Consultation Workshop was held in Dar Es-Salam, Tanzania, in February 2022 to enhance synergies and alignment with relevant stakeholders and underline the key challenges/lessons learned.

On fundraising and multi-stakeholder engagements, the following are the highlights.

(i) A High-Level Round Table meeting of the VICMED Project was held in Cairo in October 2021, with the main target being to bring more visibility to the implementation process, mobilise resources for the Feasibility Phase 2 of the VICMED project, and share lessons learned and best practices.

(ii) AUDA-NEPAD has been engaged with various development partners and financiers to raise funds and expand the private sector engagement in the PICI implementation process. These include African Financial Corporation (AFC), AfDB, Africa 50, and DBSA.

(iii) The AUDA-NEPAD Service Delivery Mechanism (SDM) has been engaged with PICI project sponsors to provide technical assistance to address early-stage project preparation issues and challenges at all levels to improve the bankability of PICI projects.

African Network for Women in Infrastructure (ANWIn)

The African Network for Women in Infrastructure (ANWIn) initiative was launched during PIDA Week in Cairo, Egypt, in 2019. ANWIn aims to promote the participation of African women in infrastructure development at the national, regional, and global levels. It serves as a platform that connects and supports individuals, civil society organisations, the private sector, and governmental organisations interested in gender-responsive infrastructure development. ANWIn advocates for commitment and action from various stakeholders to ensure more equitable participation of women in the infrastructure sector in Africa. It seeks to integrate the role of women into the implementation of PIDA projects, with special consideration given to areas where they have equal capacity as men, such as feasibility studies where manual work is not the primary requirement.

Figure 67: African Network for Women in Infrastructure (ANWIN)

Source: PIDA Progress Report 2019/2020[19]

The AUC and AUDA-NEPAD developed the initiative with the support of the Government of Germany through GiZ. ANWIn is part of the broader efforts to ensure gender-responsive planning and implementation of infrastructure projects in Africa. The goal of the ANWIn is to "provide a high-level strategic engagement platform that will bring all stakeholders together for ensuring a gender-responsive planning and implementation of infrastructure."

Policy Coherence between PIDA and Continental Infrastructure Initiatives

PIDA and continental infrastructure initiatives strive for policy consistency to ensure effective coordination and implementation of infrastructure projects in Africa. The consistency of policy between PIDA and other initiatives is crucial for avoiding duplication, promoting harmonisation, and maximising the impact of infrastructure development efforts. PIDA demonstrates the consistency of policy with other infrastructure initiatives through the following:

(i) Aligning Objectives: PIDA aligns its objectives with the broader goals and objectives of other continental infrastructure initiatives. This alignment ensures that the policies and strategies developed by PIDA are consistent with the overall vision and priorities of the continent.

(ii) Coordinated Planning: PIDA works closely with other initiatives, such as the flagship projects of Agenda 2063, AfSEM, PICI, and ANWIn, to ensure coordinated planning and implementation of specific infrastructure projects. This coordination helps to avoid conflicting policies and provides a coherent approach to infrastructure development.

(iii) Collaboration and Partnerships: PIDA fosters collaboration and partnerships with other infrastructure initiatives and stakeholders. This collaboration promotes the exchange of knowledge, sharing of best practices, and alignment of policies and strategies.

(iv) Monitoring and Evaluation: PIDA incorporates monitoring and evaluation mechanisms to assess the progress and impact of infrastructure projects. This evaluation process helps to identify any inconsistencies or gaps in policy implementation and allows for necessary adjustments to ensure policy consistency.

PIDA and other infrastructure initiatives can work cohesively by striving for policy consistency and leveraging resources, expertise, and partnerships to advance infrastructure development, regional integration, and sustainable growth in Africa.

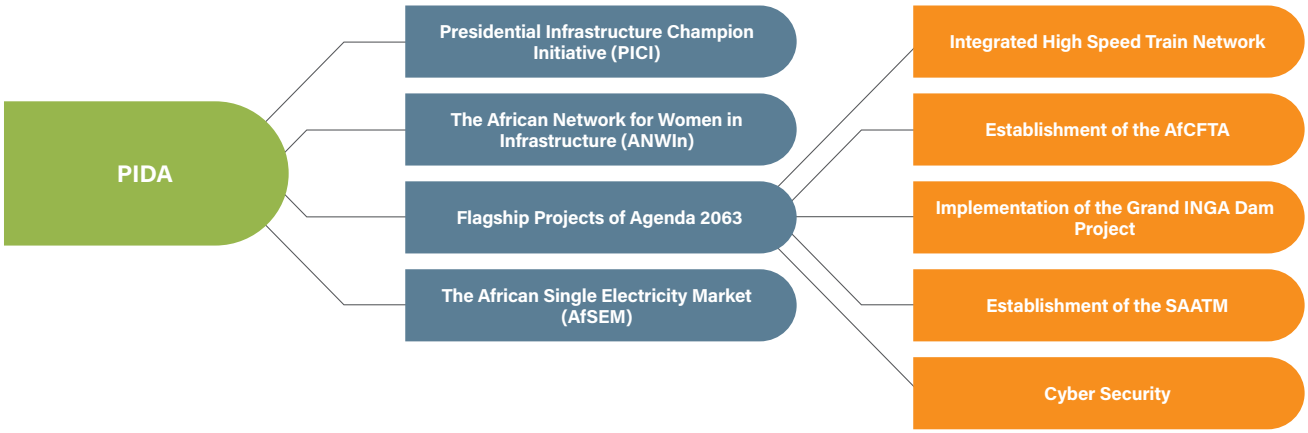


Figure 68: Figure: Inter-linkage between PIDA and Continental Infrastructure Initiatives

Source: Compiled by AUDA-NEPAD based on the Virtual PIDA Information Centre (VPIC)[9]

Chapter 7
Perspectives and Way Forward

As this report highlights, the decade of PIDA implementation from 2012 to 2022 has resulted in some infrastructure financing and development gains in Africa. We have witnessed the start and end of the first PIDA Priority Action Plan and embarked on PIDA PAP2 following a more structured and streamlined approach, building on the lessons of PIDA PAP1. As we work towards the mid-point of PIDA PAP2 and the subsequent design of PIDA PAP3, several emerging perspectives will shape the way forward.

Concerted Focus on Early-Stage Project Engagement and Preparation

Early engagement with potential investors: Experience has shown that project finance structuring works better when sponsors and investors start their engagement and communication in the early stages of project preparation. Moreover, the ticket size of cross-border infrastructure projects may need several financiers working together in syndication. Continuous dialogue at this stage can help stakeholders focus on essential requirements to get the projects off the ground and contribute to a predictable project pipeline.

Increased and dedicated funding for early-stage project preparation: Well-prepared projects are the route to bankability and hence the full implementation of projects. As such, African governments, development finance institutions and international partners should increase their support and funding for infrastructure project preparation and, more significantly, early-stage project preparation. This funding covers the costs of feasibility studies, environmental impact assessments, and other activities needed to prepare projects for financing. Home-grown and dedicated facilities for PIDA, such as the NEPAD IPPF under the AfDB and the PIDA SDM under AUDA-NEPAD, are notable examples that need more funding and support.

Cost recovery and efficiency: Meeting the infrastructure financing gap necessitates adequate resources secured right from the inception to prepare projects for bankability quickly. This is crucial to avoid the vicious cycle where we must keep updating feasibility studies because resources for complementary phases were not mobilised in time or the project was not structured to bankability. The establishment of a cost-recovery-based dedicated fund for early-stage project preparation seeded by AU Member States with contributions from development partners, DFIs, the private sector, MDBs etc., will achieve the dual objectives of fast-tracking project preparation while ensuring that resources are sustained through revolving, cost-recovery operations.

Consolidation of services for infrastructure project preparation: Many separate initiatives need to work together so that project owners can receive consolidated services for project preparation. This can be achieved by encouraging technical and financial partners, DFIs, Guarantee Funds, and the banking and financial sectors to work closely with regional and continental institutions to achieve synergy and coherence between the various infrastructure financing mechanisms at national and regional levels. This should result in concrete actions to mobilise USD 8 billion for project preparation and USD 1 billion for early-stage project preparation over the next five years.

Build on what works: AUDA-NEPAD has developed the PIDA Service Delivery Mechanism (SDM), which aims to address the lack of capacity and financial resources in Member States for early-stage project preparation for PIDA projects. The SDM includes a Quick-Check Methodology (QCM) to provide a rapid, objective and simplified assessment of projects to determine suitable interventions to move the projects forward; an Expert Service Pool to mobilise experts from multiple disciplines and provide project sponsors with tailored support and specialised advisory services based on the QCM and the PIDA Quality Label to acknowledge and certify a projects' adherence to international best practices in project preparation and structuring to bankability, thus increasing the projects' likelihood of reaching financial close.

Accelerating & Scaling up Implementation

Leverage Innovative and Emerging Opportunities to Speed Up Project Implementation

The PIDA process can gain speed by tapping into emerging opportunities ranging from technologies, innovative infrastructure sources, and financing. The rapid advancement of technology, digitalisation, and renewable energy solutions presents new avenues for infrastructure development. Embracing these opportunities will enhance connectivity and promote innovation, job creation, and economic growth. Furthermore, such opportunities open new funding windows and financing mechanisms for Africa's infrastructure development. Africa should capitalise on private sector funding and institutional investment, including green bonds and climate financing. This is expected to increase investment in PIDA projects.

Scaling Up and Replication of Successful Projects

PIDA has demonstrated that regional integration and cooperation are vital for addressing Africa's infrastructure needs. Africa has achieved 150% of PIDA targets in the ICT sector. It is essential to consider how to scale up such successful projects and replicate best practices across the continent and the different sectors. Lessons learned from these projects should be documented, and experience sharing should be encouraged. In that regard, the Virtual PIDA Information Centre (VPIC), the knowledge-sharing platform, and capacity-building initiatives should be fostered to empower African countries to adapt and replicate successful PIDA projects.

Sustainable, Sustained and Innovative Financing

Public-Private Partnerships and project de-risking: Adopting appropriate mechanisms for de-risking projects and strengthening risk mitigation systems to improve the business climate, enhance investor appetite and accelerate private investment will be critical to efforts to close the infrastructure financing gap. Implementing a common framework to enhance private sector financing of trans-boundary infrastructure projects in Africa through harmonising policies, laws, regulations, and PPP frameworks across countries and regions will help sustain an enabling environment that can attract increased private capital into Africa's infrastructure.

Sustained financing across the entire project lifecycle: There is a need to ensure adequate financing for project preparation, construction, operations, and maintenance and efficiently utilise available resources. Experience has shown that the inability to mobilise sufficient resources has the detrimental effect of inefficiency and poor absorption by implementing agencies.

Targeted financing summits and investor conferences and dialogues: Many avenues are emerging for convening financiers and project stakeholders, including the Dakar Financing Summit, PIDA Week, the Africa Investment Forum, global development forums, etc. Mechanisms are required to monitor and track the contribution and impact of these different spaces on Africa's infrastructure.

Innovative Financing: The idea of innovative financing is as old as PIDA itself, and it is well acknowledged that in the wake of shrinking fiscal space, funding for infrastructure development can come from new forms of financing such as green bonds, diaspora bonds, and social impact bonds among others.

Amplifying the role of domestic resources and institutional investors in cross-border infrastructure: While domestic resources remain the main source for infrastructure financing, the role of Institutional Investors in financing Africa's infrastructure cannot be overstated, and we are yet to harness and tap into the enormous potential of such investors. With the global pandemic decreasing economic growth worldwide and new regulations limiting the amount of investment capital available for Africa's infrastructure development, institutional investors, like Sovereign Wealth Funds, pension funds, and insurance companies, are emerging as a potential mainstream financing source to close the infrastructure finance gap in Africa.

Encouraging local participation: Sustainable infrastructure development in Africa will depend on a stable ecosystem that includes local participation and domestic resources, leveraging the anticipated youth dividend and incorporating deliberate strategies to include and involve local actors, including women, in infrastructure project implementation and management. Africa's infrastructure development should increase the outreach of current and new programmes to provide financing to local SMEs

that are part of the infrastructure development value chain. The PIDA Job-creation Toolkit, which estimates the total job potential throughout the preparation, construction, and operation of projects, provides a basis for local content and job maximisation strategies for African Member States.

Climate financing and debt relief for infrastructure: Efforts should be aligned with developing resilient and green infrastructure and initiatives that make it easier for Africa to access climate financing. Furthermore, infrastructure should be prioritised in debt-relief initiatives such that any debt-relief measures result in the allocation of forgiven debt to infrastructure development. Other pertinent measures include carbon credit trading, African climate trading mechanisms (market for carbon credits), and debt-nature swaps.

Innovative approaches to private credit: Leadership is required to develop innovative private credit solutions that align with African pension and sovereign wealth funds mandates and, at the same time, assist African trade banks, whose lending capacity and balance sheets have been impacted by COVID-19. This can be achieved through a new post-COVID-19 partnership model, where African and global institutional investors could achieve competitive risk-adjusted returns on the back of transactions structured by African trade banks and guaranteed by Export Credit Agencies (ECAs).

Strategic Partnerships & Infrastructure Development Ecosystem

Foster Inter-Institutional Collaboration and Partnerships: Collaboration and partnerships have been instrumental in PIDA's success thus far, and they will remain vital for its future implementation. Effective coordination among AU institutions, RECs, development partners, and the private sector is crucial for mobilising resources, sharing expertise, and promoting knowledge exchange. Strengthening these collaborative efforts will facilitate the implementation of PIDA projects, maximise their impact, and ensure a harmonised approach toward infrastructure development in Africa.

One African Voice & accountability framework for partnerships: As espoused in the PIDA Partnership Strategy, African countries and organisations must have a consistent voice when dealing with strategic partners and foreign investors on regional infrastructure development at all levels of engagement. An essential step is for Member States to signal clearly to all partners that PIDA projects are the building blocks for strategic partnerships for regional infrastructure development and inter-continental initiatives. Likewise, Member States must ensure that PIDA projects feature in their national development plans and public investment programmes to speed up their implementation.

Integrated Infrastructure Development Ecosystem: Project stakeholders must adopt an ecosystem approach to infrastructure project development and implementation to maximise the efficacy of governments' investments and give confidence to the private sector by galvanising the collective capacity of a wide range of stakeholders and increasing value-added from improved coordination and shared learning. The private and public sectors need to proactively create an effective and efficient project development ecosystem, incorporating existing and new instruments, that significantly scales up pipelines of bankable and investable infrastructure projects.

Synergy, Coherence and Complementarity

Complementarity between Technical and Financial Assistance: One success factor for infrastructure projects is the synergy between technical and financial assistance: our development partners provide technical assistance, while our development finance institutions provide financial support. The two sides must be more aligned when designing financing instruments and implementation modalities.

Coherence to achieve maximum impact: Coherence in the collective actions of development partners and financial institutions is needed to promote enhanced coordination of the various stakeholders and institutions involved in PIDA infrastructure projects, avoid duplication, ensure greater synergies, and effectively utilise scarce resources. For instance, through their current and planned programmes, we need development partners, MDBs and DFIs to mobilise and twin African and their own domestic and international pension and sovereign investors to deliver partnerships that will accelerate PIDA implementation.

Synergy: The PIDA PAP2 project pipeline represents the most significant investment opportunity for DFIs, commercial banks and institutional investors on the continent. This opportunity will only materialise if we translate these projects into a sustainable pipeline of bankable projects that can attract investment. This requires synergy between national, regional, continental and global infrastructure coordination and financing.

- Synergy in internal cooperation between Member States is a prerequisite for developing the transboundary infrastructure to establish regional markets and facilitate trade.
- Synergy in international cooperation to leverage technical assistance and stable sources of finance. A good example is the cooperation currently ongoing in the development of the Continental Energy Transmission Masterplan, which is being developed through a collaborative effort of the Member States, RECS, Power Pools, AU Subsidiary bodies and Development Partners, which include AfDB, UNECA, EU, GIZ, Power Africa, World Bank, Get.Transform etc.

Coordination & implementation mechanisms: The Institutional Architecture for Infrastructure Development in Africa (IAIDA), which was adopted by the AU Assembly in 2012 as part of the PIDA declaration, clearly outlines the differentiated roles and responsibilities of AUC, AUDA-NEPAD, RECs, and other stakeholders. IAIDA was designed to promote enhanced coordination of the various stakeholder and institutions involved in PIDA implementation to avoid duplication, ensure greater synergies, and promote effective utilisation of scarce resources.

Corridor Development and Nexus Approaches

Focus on Corridor Development: The Integrated Corridor Approach offers opportunities for cross-sectoral nexus projects that address Africa's development needs, including post-pandemic economic recovery. An effective network of regional corridors will ensure greater African integration, promote intra-African trade and enhance industrialisation leading to sustainable and inclusive economic growth. This is thus a call to accelerate development within identified corridors and expand technical resources and project funding for these corridors.

Infrastructure Nexus Approaches: Corridor development is thus an integral part of boosting intra-African trade and an essential element of regional integration. We must ensure that corridors anchor programmes across other sectors – agriculture and food security, health, education, science and technology, natural resource governance etc. This way, delivery across these sectors will be concentrated to enable visible socio-economic transformation. Great importance must be placed on financing ICT, energy, road and rail projects that are trans-boundary in scale, spur the industrialisation of Africa's economies, and capacitate the workforce through skills enhancement for the youth.

Examples of Infrastructure-related nexus approaches include:

- **Water-Energy-Food**
- **Infrastructure-Trade-Industrialisation**
- **Digitalisation-Energy-Trade**
- **Peace-Security-Infrastructure**

Synergies between PIDA and other frameworks: There is a need to strengthen synergies between PIDA and other key Agenda 2063 flagship projects, namely the Accelerated Industrial Development for Africa (AIDA), the implementation of the African Continental Free Trade Area (ACFTA), among others. Agenda 2063 envisions the development of world-class, integrative infrastructure to support Africa's accelerated integration and growth, technological transformation, trade and development. The African Union (AU) recognises that sound infrastructure is a major factor for Africa's economic growth, poverty reduction, and attainment of the aspirations of Agenda 2063 and the Sustainable Development Goals.

Wider Economic Benefits & Sustained Impacts

Regional integration and rural-urban connectivity: Increased regional cooperation can lead to more efficient use of resources and better infrastructure development outcomes. PIDA's Integrated Corridor Approach is based on regional infrastructure integration and provides the critical link between national infrastructure development and regional and continental infrastructure networks.

Last mile service delivery: We should ensure that infrastructure projects prioritise social and environmental objectives, such as promoting greater access to basic services, improving health outcomes, and protecting biodiversity. We should also encourage innovation and experimentation to identify new, more cost-effective ways to deliver infrastructure services to underserved communities. The role of SMEs in this continental economy must be a central and fundamental part of project planning, delivery, and maintenance. We should focus on specific infrastructure sectors within strategic development corridors to support MSMEs with access to market opportunities, linkages for partnerships, and adoption of global best practices that can lead to significant jobs, economic impacts, and resilience outcomes in the short to medium term.

Maximising Employment Opportunities: One of the intended outcomes of PIDA is to address economic marginalisation and social exclusion issues by facilitating the creation of economic opportunities and decent employment. The PIDA Job Creation Toolkit is a catalytic tool to jump-start a new era of African job creation using infrastructure projects, particularly linking investment decisions to expanding Africa's workforce and SME participation.

Sustainability of infrastructure: Maintenance is one of the most neglected phases of project development across Africa. The next generation of PIDA projects is expected to include a systemic maintenance plan and identify appropriate strategies to finance it. Equally, environmental, social, and economic sustainability should constitute a cornerstone of the PIDA project prioritisation. Green infrastructure initiatives, renewable energy integration, and climate change resilience should be embedded into PIDA projects to ensure long-term benefits and minimise negative environmental impacts. Moreover, addressing social inclusivity and promoting gender equality in infrastructure planning and implementation will foster equitable growth and leave no one behind. There is a need for a stronger push to institute cost-reflective tariffs in all infrastructure sectors and, where necessary, supported by a properly structured subsidy mechanism funded by the state.

Inclusivity: Partners and stakeholders should ensure gender and disability inclusion in PIDA projects and ensure that projects are implemented in a gender-inclusive manner, recognising that women play a crucial role in development. Additionally, including women and minority groups in infrastructure development decisions will open up opportunities for community empowerment.

Multi-faceted Capacity building and Institutional Capacity Development

Addressing Persistent Capacity Challenges: The next generation of PIDA projects should address the lack of inadequate capacity for project preparation and the limited funding availability. Insufficient funding, inadequate project preparation, and coordination gaps hinder the timely and effective execution of infrastructure projects. To address these challenges, a comprehensive approach is required with bold capacity-building interventions in African institutions, including promoting good governance practices that will ensure efficient project delivery.

Local and localised capacity: infrastructure development should be supported by the requisite institutional capacities at both national and regional levels. Programmes should thus embed capacity development in areas such as project preparation, PPPs, project financing, climate financing, etc. Developing the necessary technical and managerial skills to manage infrastructure projects effectively is essential, enhancing the capacity of Member States, AUDA-NEPAD and other responsible institutions within the project implementation value chain. Furthermore, we should train and support local talent to ensure a pipeline of skilled workers who can design, build, and maintain infrastructure over the long term.

Sustained political commitment and ownership

Creating an enabling environment for investment: A clear and transparent regulatory framework is the foundation for a conducive business environment. Governments need to create the right legislative, regulatory and institutional environment to attract private investors to come on board.

National ownership and alignment of financing needs: the need to align project financing needs with existing sources of financing, such as pension funds, sovereign wealth funds, development banks, private sector investors, and development partners, is key to infrastructure development. At the national level, governments could enhance their ownership and leadership by investing in their own infrastructure projects. Enhanced government ownership of projects would increase sustainability, including timely maintenance and repairs.

Inclusion of PIDA projects in national development plans and budgets: Including PIDA PAP 2 projects in national development plans will ensure that projects are allocated the necessary financing resources at the country level for project development and implementation while adhering to national and regional priorities.

Monitoring, Evaluation and Learning

Monitoring and Evaluation Framework: A robust monitoring and evaluation mechanism is envisaged to enable PIDA stakeholders to access objective and reliable data on the projects' financing needs, implementation progress and performance. The framework should address monitoring at the level of PIDA as a programme and at the level of individual projects. Key performance indicators can be used to develop scorecards and project dashboards.

Joint monitoring of actions and commitments for infrastructure projects: Since there are various modalities of implementation and a diversity of actors and stakeholders, it will be important to establish processes for joint monitoring and review of the progress of the multiple partnerships and associated commitments in relation to PIDA implementation.

Quality Infrastructure Investment

Certifying Excellence in early-stage project preparation: the PIDA Service Delivery Model (SDM) works with project sponsors to accelerate early-stage project preparation and incorporates the PIDA Quality Label (PQL) as a measure of excellence in project preparation. Projects that meet the PQL standard are thus able to mobilise much-needed finance from project preparation facilities. The PIDA Quality Label (PQL) has been developed in line with international best practices to ensure standardisation, quality control & assurance throughout the project preparation cycle. It must be supported to become Africa's de-facto measure of excellence in project preparation.

Quality Infrastructure Partnerships: "Quality" investment means considering a wide range of factors when making investment decisions, including environmental and social impact, debt sustainability, the safety and reliability of the construction, and the impact on local employment and technical expertise. The concept of quality infrastructure also provides a sound basis for assessing the performance of Africa's strategic infrastructure partnerships.

Green, Smart and Climate-Resilient Infrastructure

Promote sustainable infrastructure development: Infrastructure development should be environmentally sustainable and meet the needs of future generations. Policies and practices to promote sustainable development and climate change mitigation should be implemented. This will require us to build resilience into infrastructure projects in regions vulnerable to climate change or other environmental hazards, such as flooding or drought. Working with partners, AUDA-NEPAD has developed an infrastructure appraisal methodology to provide options for preparing and building regional large-scale infrastructure projects that are more resilient and adaptative to climate change.

Resilient and smart infrastructure – post-COVID, the pressing need for adequate quality infrastructure is evident, especially in energy and ICT. This must be accompanied by initiatives that enhance productive capacities and promote regional value and supply chains – leveraging climate financing to support the implementation of infrastructure projects that have the potential to be implemented quickly using "green" considerations.

Enduring principles

The founding principles of NEPAD remain relevant and applicable to the development of Africa's infrastructure:

e) Good governance, as an essential requirement for peace, security and sustainable political and socioeconomic development.
f) African ownership and leadership, as well as broad and deep participation by all sectors of society.
g) Anchoring the development of Africa on its resources and resourcefulness of its people.
h) The partnership between and amongst African people.
i) Acceleration of regional and continental integration.
j) Building the competitiveness of African countries as a whole.
k) Forging a new international partnership that changes the unequal relationship between Africa and the developed world; and
l) Ensuring that all partnerships with AUDA-NEPAD are linked to the SDGs, and other agreed goals and targets.

Conclusion

PIDA PAP1 was a foundational phase for PIDA implementation and succeeded in establishing an institutional framework and devising solutions to some of the key challenges impacting infrastructure development. By the time the second priority action plan was being defined, several instruments and initiatives were already in place, ready to be refined and operationalised. PIDA PAP2 represents a consolidation phase in which the identification and selection of projects have been more deliberate, informed by the integrated corridor approach and aiming to leverage efficiencies and synergies in how cross-border infrastructure is planned and built. Furthermore, in PIDA PAP2, the delivery model has been crystalised, resting on three interrelated strategies for partnerships, financing and implementation and leading to articulating PIDA implementation guidelines. Various instruments and initiatives such as the Service Delivery Model, PIDA Quality Label, and Job Creation Toolkit have been operationalised and demonstrated the value of focusing on the quality of project preparation as well as spotlighting the jobs potential of infrastructure projects and the attendant spillover benefits for African economies. We expect significant results to be achieved in this phase. When PIDA PAP3 comes into play, it will represent a pinnacle in infrastructure development for the continent with massive transformative impacts in line with Agenda 2063. We are 40 years away from "The Africa We Want," and we are slowly but surely aligning Africa's infrastructure development with the ambitions for *"An integrated, prosperous and peaceful Africa, driven by its own citizens, representing a dynamic force in the international arena."*

Abbreviations and Acronyms

ACET	African Centre for Economic Transformation
AFC	Africa Finance Corporation
AfCFTA	African Continental Free Trade Area
AfDB	African Development Bank
AfSEM	African Single Electricity Market
AID	African Infrastructure Database
AIGM	African Infrastructure Guarantee Mechanism
AIP	Africa Water Investment Programme
AMU	Arab Maghreb Union
ANWIn	African Network for Women in Infrastructure
ASI	African Strategic Infrastructure Initiative
AU	African Union
AUC	African Union Commission
AUCC	AU Convention Cyber Security and Personal Data Protection
AUDA-NEPAD	African Union Development Agency - NEPAD
AWF	Africa Water Facility
AXIS	African Internet Exchange System
BOAD	West African Development Bank
CBN	Continental Business Network
CEN-SAD	Community of Sahel–Saharan States
CID	Council for Infrastructure Development
CMP	Continental Power System Masterplan
COMESA	Common Market for Eastern and Southern Africa
DBSA	Development Bank of Southern Africa
DFI	Development Finance Institution
DFS	Dakar Financing Summit
EAC	East African Community
EBID	ECOWAS Bank for Investment and Development
ECCAS	Economic Community of Central African States
ECOWAS	Economic Community of West African States
EIB	European Investment Bank
ESP	Expert Service Pool
EU	European Union
EU-AITF	Europe/Africa Infrastructure Trust Fund
EUC	European Union Commission
EU-ISM	EU Infrastructure Support Mechanism
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GWP	Global Water Partnership
IAG	Infrastructure Advisory Group
IAIDA	Institutional Architecture for Infrastructure Development in Africa
ICAO	International Civil Aviation Organization
ICA	Infrastructure Consortium for Africa

ICT	Information Communications Technology
IGAD	Intergovernmental Authority on Development
IsDB	Islamic Development Bank
IXP	Internet Exchange Point
JICA	Japan International Cooperation Agency
LHWP	Lesotho Highlands Water Project
MDB	Multilateral Development Bank
M&E	Monitoring and Evaluation
MS	Member State
MTR	Medium Term Review
NEPAD	New Partnership for Africa's Development
NEPAD IPPF	NEPAD Infrastructure Project Preparation Facility
NSAS	Nubian Sandstone Aquifer System
ODA	Official Development Assistance
OECD	Organisation for Economic Cooperation and Development
OSBP	One-Stop Border Post
PIDA	Programme for Infrastructure Development in Africa
PIDA CAP	PIDA Capacity Development Programme
PIDA PAP	PIDA Priority Action Plan
PPF	Project Preparation Facility
PPP	Public Private Partnership
PQL	PIDA Quality Label
PRIDA	Policy and Regulation Initiative for Digital Africa
PSC	PIDA Steering Committee
REC	Regional Economic Community
SAATM	Single African Air Transport Market
SADC	Southern African Development Community
SDGs	Sustainable Development Goals
SDM	Service Delivery Mechanism
SGR	Standard Gauge Railways
STC	Specialised Technical Committees
SWF	Sovereign Wealth Funds
TAH	Trans-African Highway Network
TICAD	Tokyo International Conference on African Development
ToR	Terms of Reference
UEMOA	West African Monetary and Economic Union
UNECA	United Nations Economic Commission for Africa
USAID	United States Agency for International Development
VPIC	Virtual PIDA Information Center
WAEMU	West African Economic and Monetary Union
WBG	World Bank Group
WEF	World Economic Forum
WTO	World Trade Organization

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