



COST DYNAMICS OF SOCIO-ECONOMICS ON MEGA PROJECTS



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CONTENTS



1. Introduction and Background – Mega Projects and Society
2. Rise in tensions between megaprojects and society
3. Need for Mega Projects Explained – Africa Example
4. The Project as a Development Catalyst
5. Proposed Interventions
6. Impact Measurement
7. Conclusions and Recommendations

1. Introduction and Background – Mega Projects and Society



Mega Projects and Society - Introduction



- Megaprojects are usually large-scale interventions, such as infrastructure projects, and their evaluation requires both analysis of billions of dollars of investment and a long-term perspective.
- Usually sized at US 1 Billion and upwards internationally and smaller caps in Emerging Markets and Developing Countries for example ZAR 1 Billion and upwards in South African terms.
- Significant effort has been applied to understanding the possible causes of failure in megaprojects. Suffice to say they are large scale multiyear projects in various sectors – such as mining, infrastructure, agriculture and manufacturing.
- Megaprojects often have an underestimated effect on local communities and residents, who may be affected by (temporary or permanent) changes in their livelihood conditions or life quality (Abdullah and Rahman, 2021; Zhang et al., 2022)
- Megaprojects stimulate and challenge public opinion, generating a wide range of reactions from citizens. Their ability to attract public attention means they may also influence public participation in collective choices and political decision-making.
- Interest in the study of social impacts in mega-projects has intensified over time, reaching a peak in 2023 (20 papers) in several journals such as the Project Management Journal, International Journal of Project Management and International Journal of Managing Projects in Business for example.

Mega Projects and Society - Introduction



- Scholars are interested in understanding the power relationships among the actors involved in the megaproject and how they use their forces to achieve their goals. They seek to underline the unequal power distribution among project stakeholders.
- Megaproject sponsors all have an interest in presenting the positive relevance of the project, giving a partial picture of the situation, emphasizing the short-term effects (especially the positive economic effects) and avoiding the less visible long-term social impacts. This uneven power distribution could imply a strong conflict between different players (in particular the project sponsor organizations, both private and public and the local community).
- Three research areas for analysis and discussion as homogeneous groups for the managerial perspective adopted:
 1. Infrastructure and social space, in particular the different phases (study, construction, maintenance and decommissioning) of large infrastructure projects that have had positive and negative impacts on local communities.
 2. People engagement and endorsement, covering the methodologies (listening, involvement and endorsement) that were used to limit the negative impacts of the megaproject, as well as reactions to the methods of involvement adopted.
 3. The role of power and social issues, to collect contributions on the hierarchical relationships of exercise of power by listening to categories of stakeholders excluded from the process or penalized by the negative externalities of the megaproject.

2. Rising Tensions between Mega Projects and Society



Tensions between projects and society on the rise



Project Syndicate | THE WORLD'S
OPINION PAGE

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<https://www.project-syndicate.org/commentary/protests-in-kenya-nigeria-and-other-african-countries-demand-three-fundamental-reforms-by-kehinde-a-togun-2024-09>



REPUBLIC OF SOUTH AFRICA

SA news .gov.za

South African Government News Agency

▼ MENU

Construction mafia disrupts projects worth R63bn

Tuesday, November 19, 2024



Since 2019, construction site disruptions by criminal syndicates have disrupted over 180 projects worth R63 billion, using tactics such as extortion, intimidation, violence and sabotage.

“Their demands for up to 30% of contract value undermine the integrity of our procurement systems and delay critical infrastructure delivery,” the Deputy Minister of Finance, Ashor Sarupen, said on Tuesday in Durban.

Addressing the National Construction Summit on site disruption, the Deputy Minister said while the construction industry faces numerous challenges, none is more urgent than the persistent site disruptions by criminal syndicates and community protests.

<https://www.sanews.gov.za/south-africa/construction-mafia-disrupts-projects-worth-r63bn>



Planned nuclear plant in a Kenyan top tourist hub and home to endangered species sparks protest





Thousands protest in Serbia's Belgrade against lithium mining project

Protesters say they fear project by mining giant Rio Tinto would pollute water sources and endanger public health.



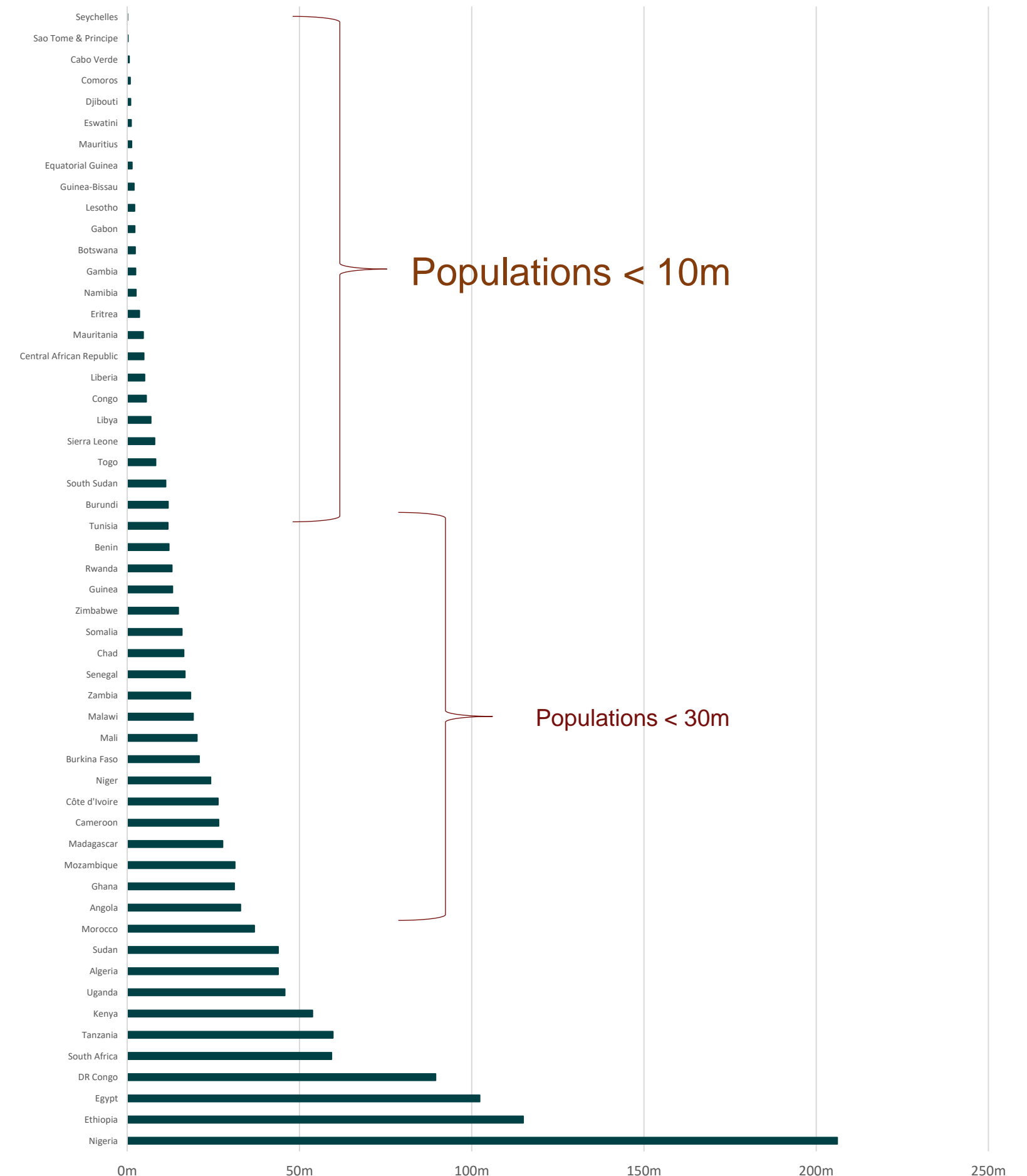
3. Need for Mega Projects Explained – Africa Example



Africa Needs MEGA infrastructure Projects



- Africa is a big market, fragmented into small pieces.
- 22 African countries have populations under 10m.
- Trade is frustrated by 107 unique land borders between 54 states.
- Rules diverge across regulatory standards, competition, investment, intellectual property rights, services – making the scaling of business across borders difficult.
- AfCFTA has potential to consolidate Africa into \$3.4 trillion market of 1.3bn people.
- Creates: market opportunities, scale economies, improved competition, lower business costs.



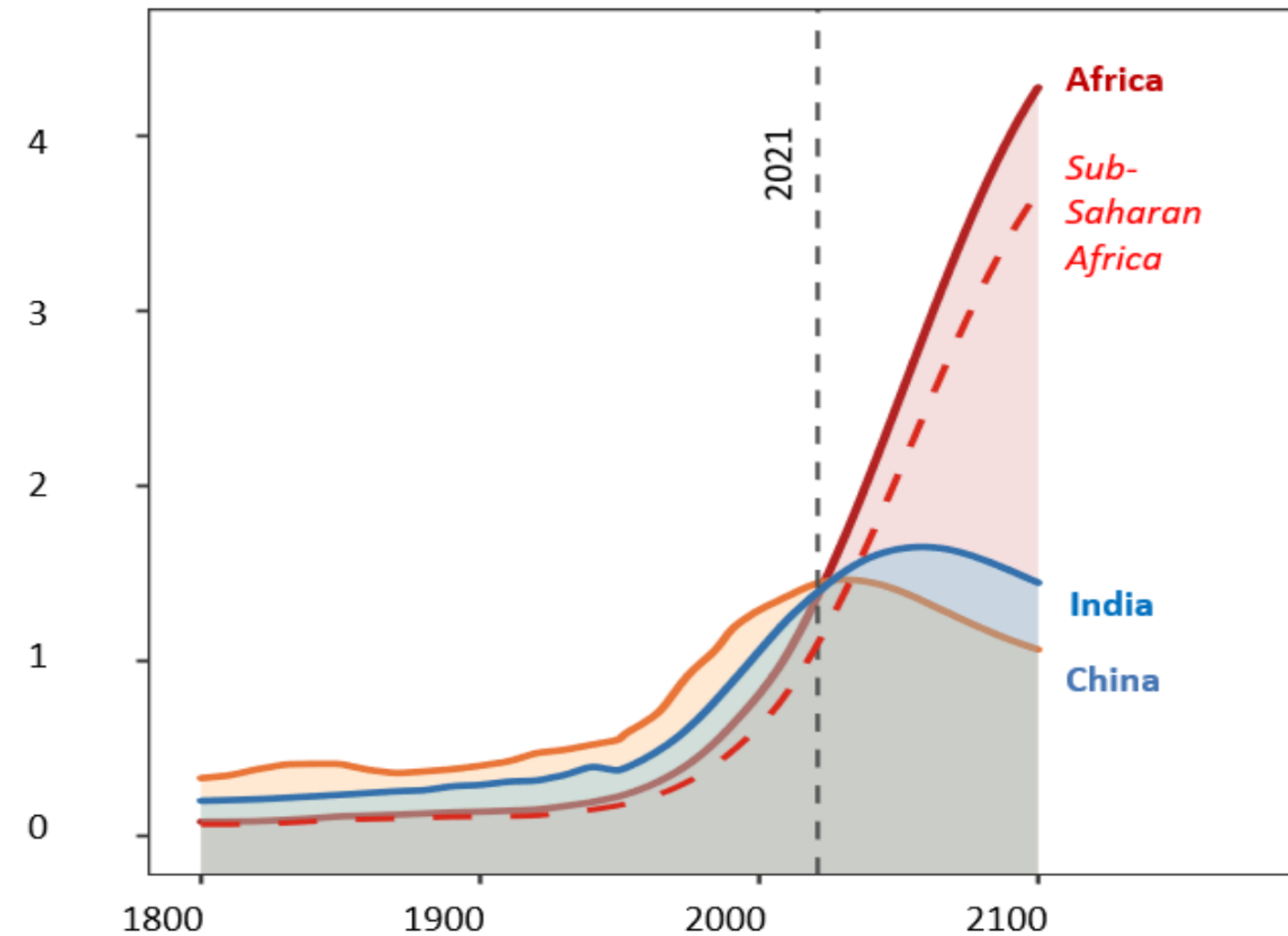
A Growing African Youth Dividend requires World Class Connectivity



A growing market

The increase in population represents a source of growing demand.

(billions)



Sources: Our World in Data, United Nations Population Revision (2019) Medium Scenario.

Note: Excludes CEMAC and WAEMU member countries.

TRANS AFRICAN HIGHWAYS | Gateways for African Trade



Source: African Development Bank

EAST & SOUTHERN AFRICA



USD 4 billion
injected
by the AfDB



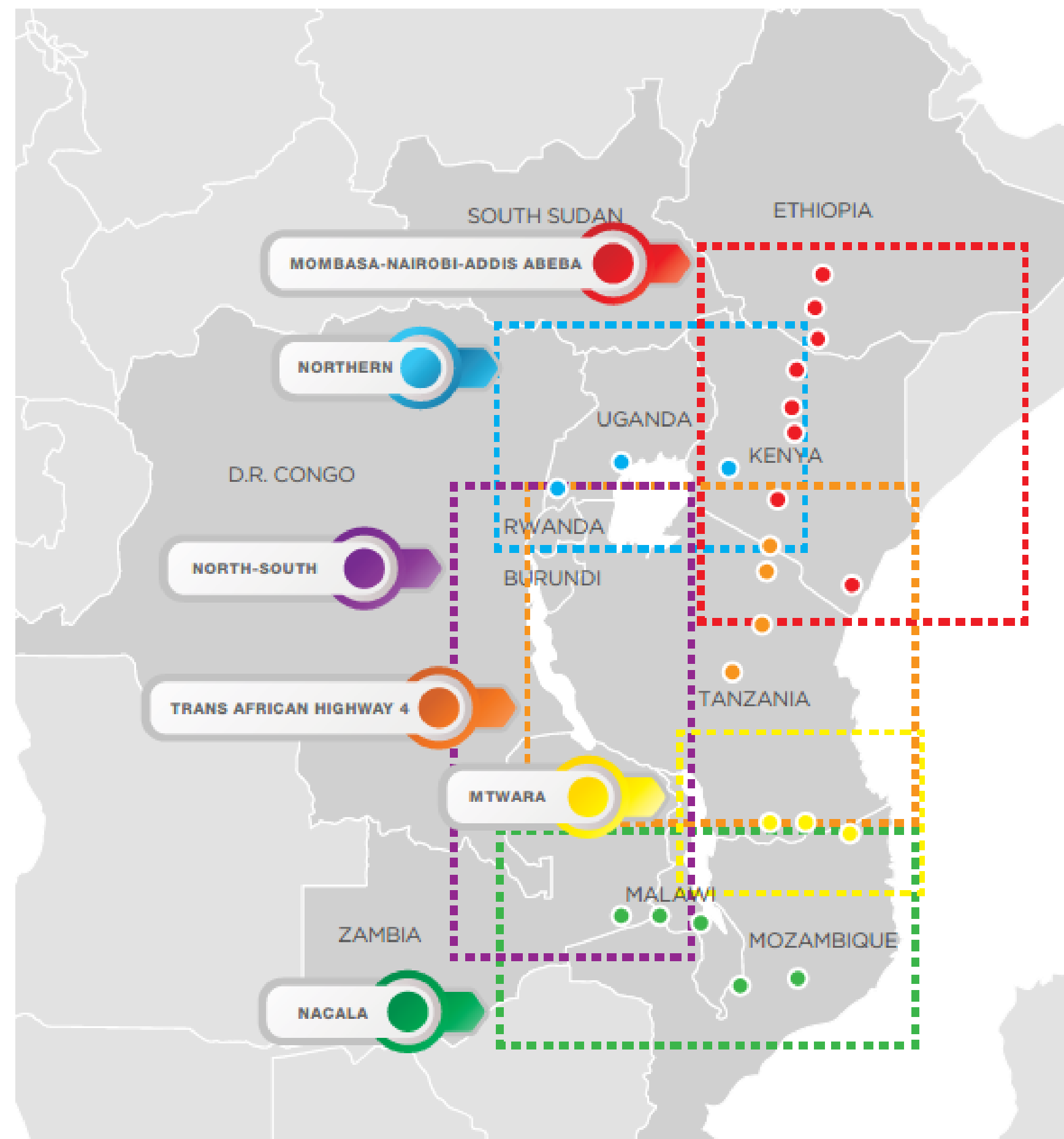
4781 km
of road financed
by the AfDB



94 M
people in AfDB
project areas*

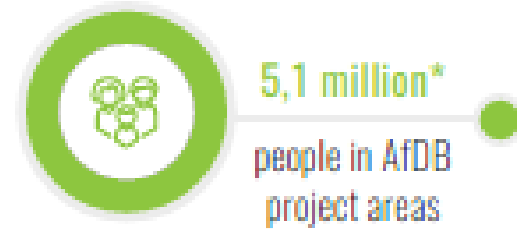


09
one-stop
border posts built



Source: African Development Bank

Nacala Corridor Connecting Zambia & Malawi to the Indian Ocean



Nampula - Cuamba	348 km
Cuamba - Mandimba-Lichinga	175 km
Liwonde - Mangochi	75 km
Bypass road west of Lilongwe	13 km
Luangwa Bridge - Mwami	360 km

Map legend

- One-stop border post
- Section of the road financed by the African Development Bank
- Other sections

Mtwara Corridor

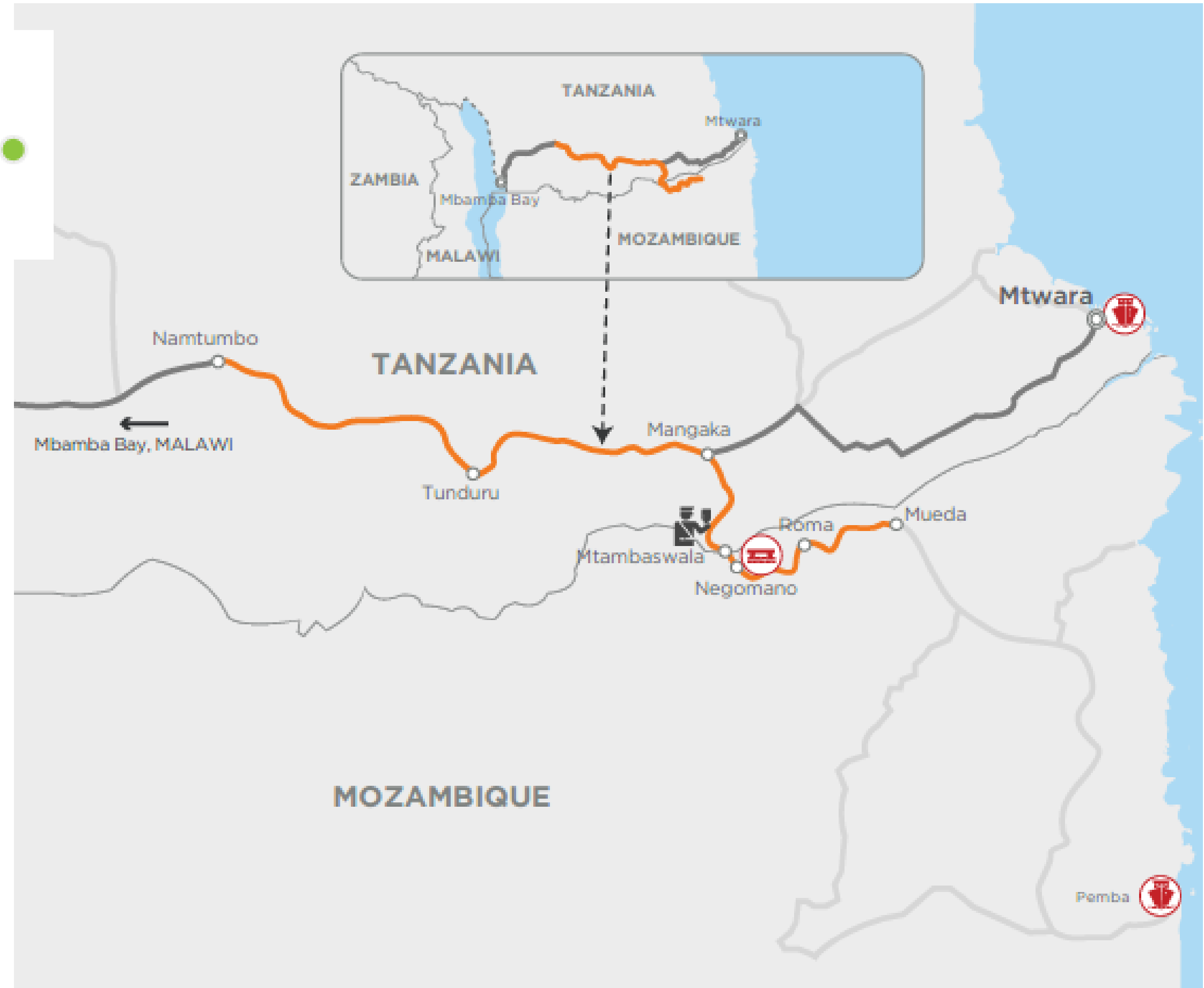
Opening up access from southern Tanzania to Malawi and to Mozambique



USD 335M
injected
by the AfDB

558 km
of road upgraded

2,1 million*
people in AfDB
project areas



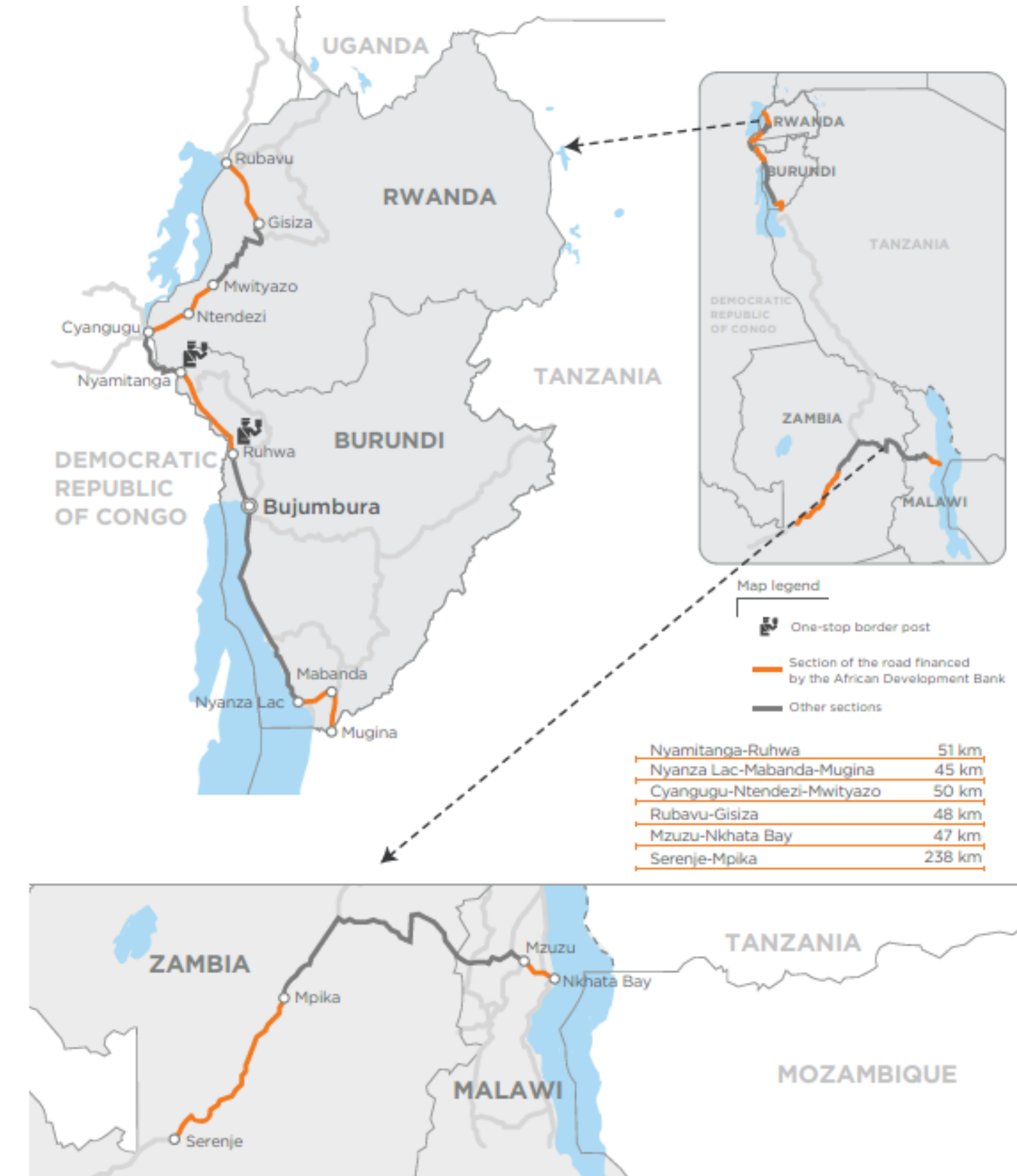
North-South Corridor (North section) Reinforcing connectivity in the Great Lakes Region



USD 633M
injected
by the AfDB

479 km
of road upgraded

**2,4 M (North)*
0,5 M (South)**
people in AfDB
project areas



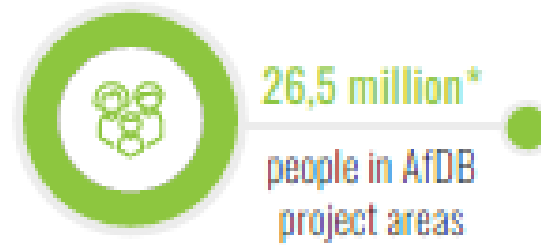
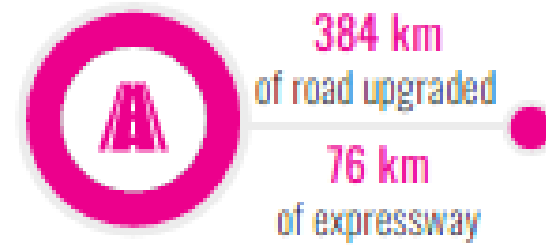
North-South Corridor (South Section)

A bridge to promote trade in the Southern Africa Region

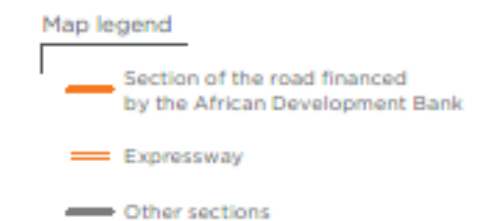


Northern Corridor

Developing trade from between Kenya, D.R. Congo and Rwanda



Fort Portal - Bundibugyo - Lamia	103 km
Kampala - Mpingi	23 km
Timboroa - Eldoret	73 km
Kampala - Jinja	53 km
Kagitumba - Kayonza - Rusumo	208 km



WEST & NORTH AFRICA



USD 2.6 billion
injected
by the AfDB



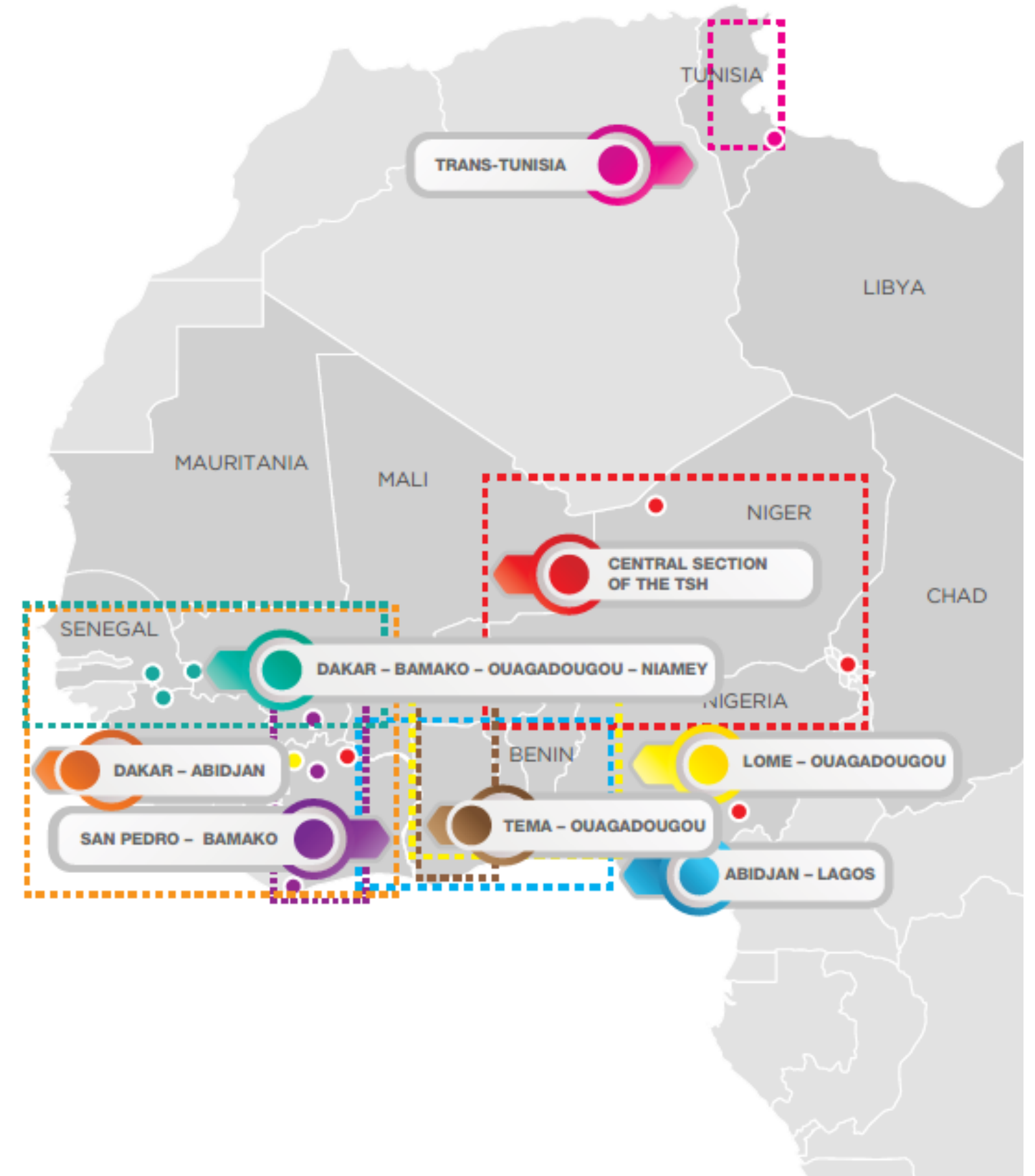
5682 km
of road financed
by the AfDB



110 M
people in AfDB
project areas*

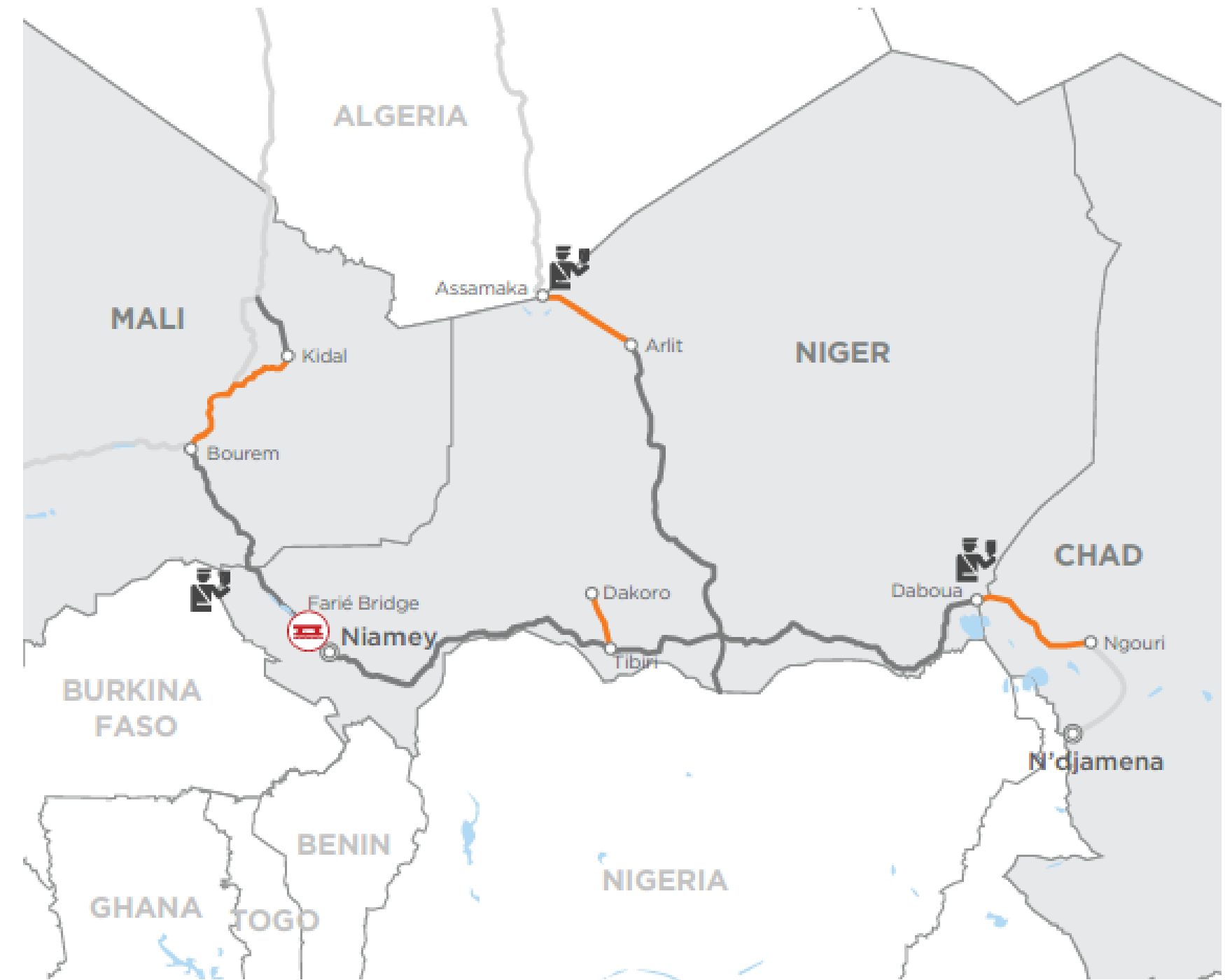


12
one-stop
border posts built



Central Corridor of the TSH

Part of the Trans-Sahara Highway



Arlit - Assamaka - Algerian border	225 km
Ngouri - Daboua - Niger Border	331 km
Bourem - Kidal	286 km
Tibiri - Dakoro	116 km

Map legend

- One-stop border post
- Bridge
- Section of the road financed by the African Development Bank
- Other sections

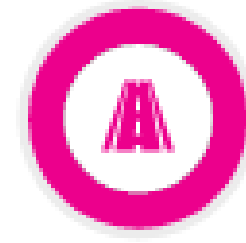
Bamako – San Pedro Corridor

Mano-River union: Connecting landlocked regions to the coastal South



USD 195M

injected
by the AfDB



275 km

of road upgraded



6,8 million*

people in AfDB
project areas



Boundiali – Kani 135 km
Zantiébougou – CI border 140 km

Map legend

- One-stop border post
- Section of the road financed by the African Development Bank
- Other sections

Dakar – Bamako – Ouagadougou – Niamey Corridor

Linking corridors towards the part of Dakar



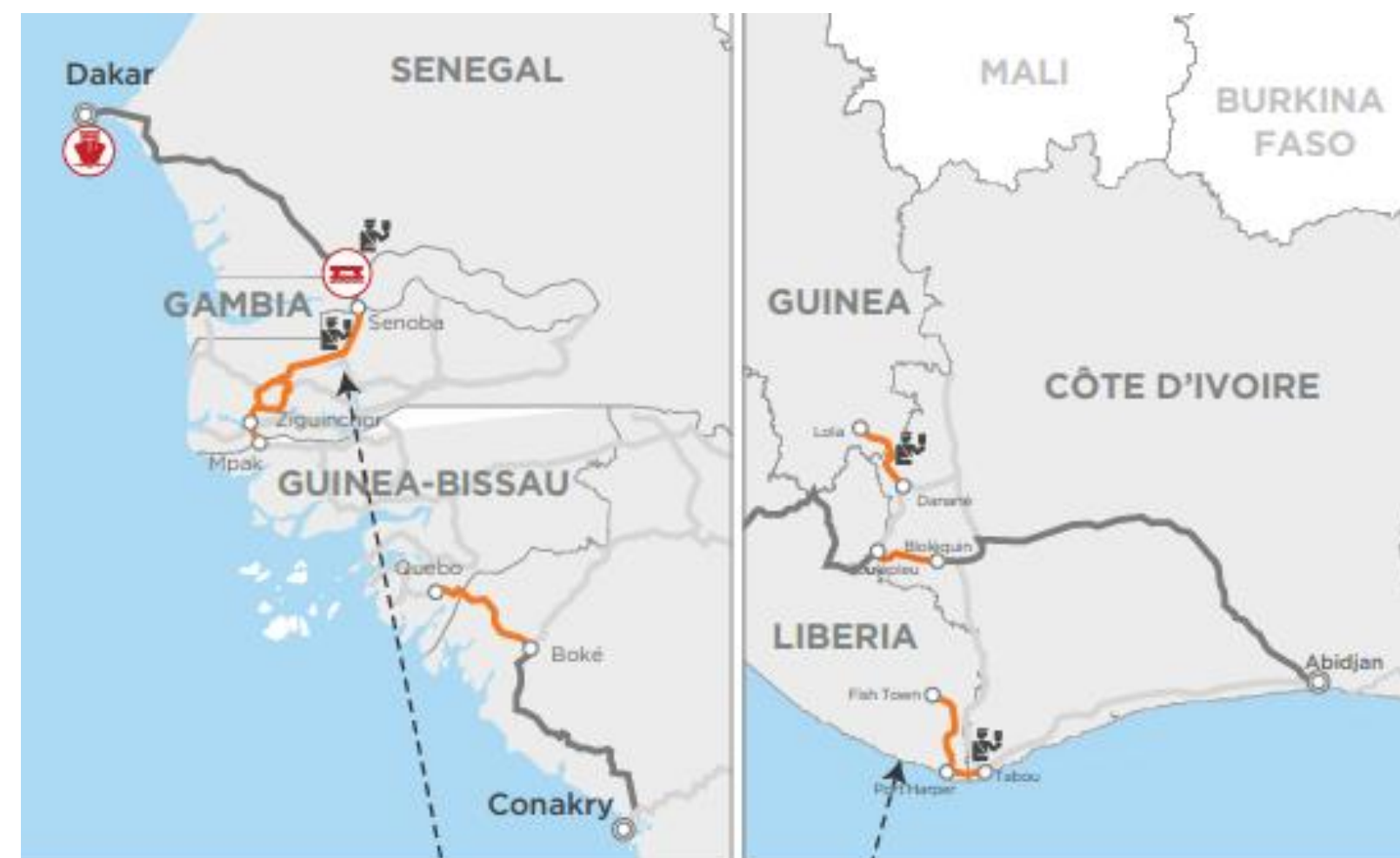
Tambacounda - Labé	474 km
Dakar - (Malick - Pikine - Diamniadio)	32 km
Kita - Border	429 km
Border - Saraya	51 km
Saraya-Kédougou	61 km
Tambacounda - Birkilane	235 km
Dori - Téra	113 km

Map legend

- One-stop border post
- Bridge
- Port
- Section of the road financed by the African Development Bank
- Other sections

Dakar – Abidjan Corridor

Enhancing trade in and beyond the Mano River Union countries



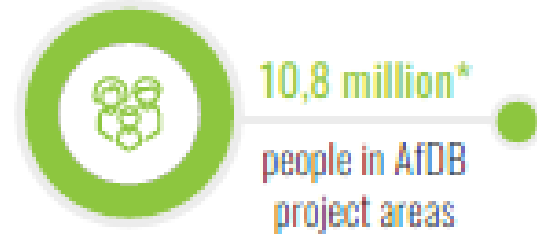
Tambacounda - Labé	474 km
Dakar - (Malick - Pikine - Diamniadio)	32 km
Mpak - Senoba	165 km
Kita - Border	429 km
Border - Saraya	51 km
Saraya-Kédougou	61 km
Tambacounda - Birkilane	235 km
Boké - Québo	107 km

Map legend

- One-stop border post
- Bridge
- Port
- Section of the road financed by the African Development Bank
- Other sections

Abidjan – Lagos Corridor

The central section along the Gulf of Guinea



Pahou - Ouidah	18 km
Ouidah - Hillacondji	59 km
Avépozo - Aného	30 km
Awoshie - Pokoasi	15 km
Akatsi - Aflao	50 km
Dzodze - Akanu	30 km

Map legend

- One-stop border post
- Port
- Section of the road financed by the African Development Bank
- Expressway
- Other sections

Lome – Ouagadougou Corridor

The missing links on the road South to the Gulf of Guinea



USD 362M
injected
by the AfDB

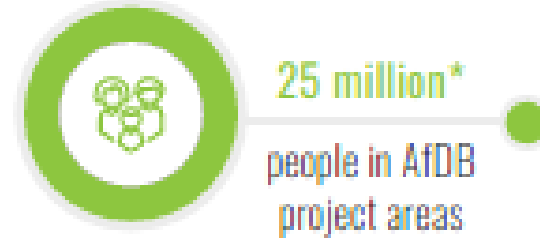
300 km
of road upgraded

8 million*
people in AfDB
project areas



Tema – Ouagadougou Corridor

Connecting landlocked Burkina Faso and Niger to the main port of Ghana



Bobo-Dioulasso – Ouagadougou – Pô	500 km
Swala – Ffulso	178 km
Kitampo – Kumasi	190 km
Kumasi – Anyiman	136 km
Koupéla – Niger Border	218 km
Bamako – Bougouni – Sikasso	150 km

Map legend

- Section of the road financed by the African Development Bank
- Other sections

Trans-Tunisia Corridor

Port of the Trans – Maghreb Highway



Gabès - Ras Jdir 195 km

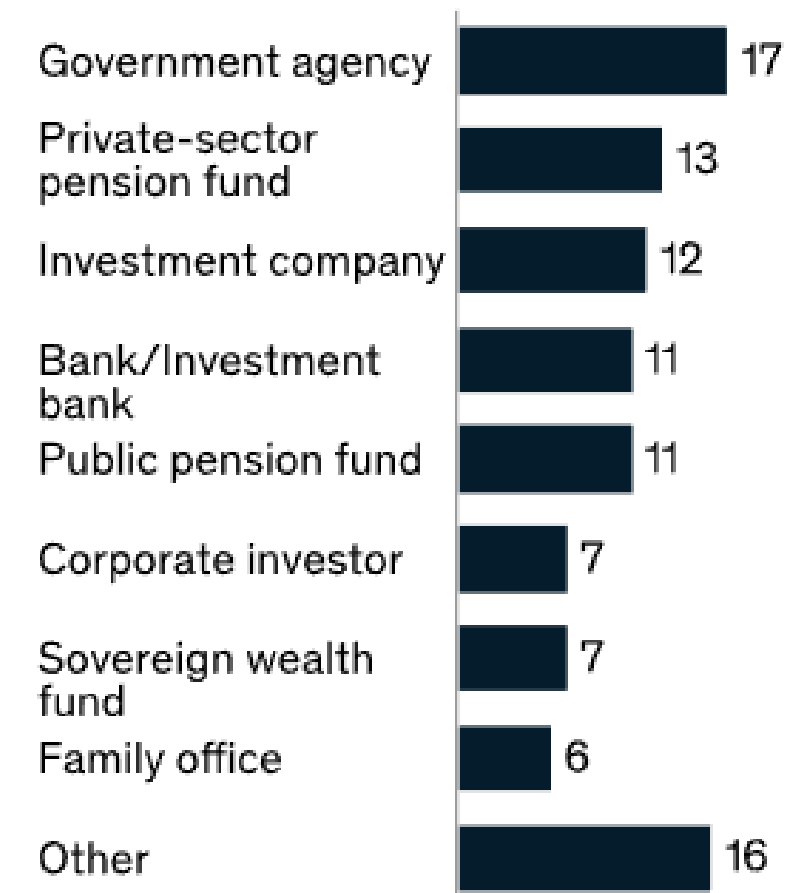


Africa Infrastructure Investment Paradox

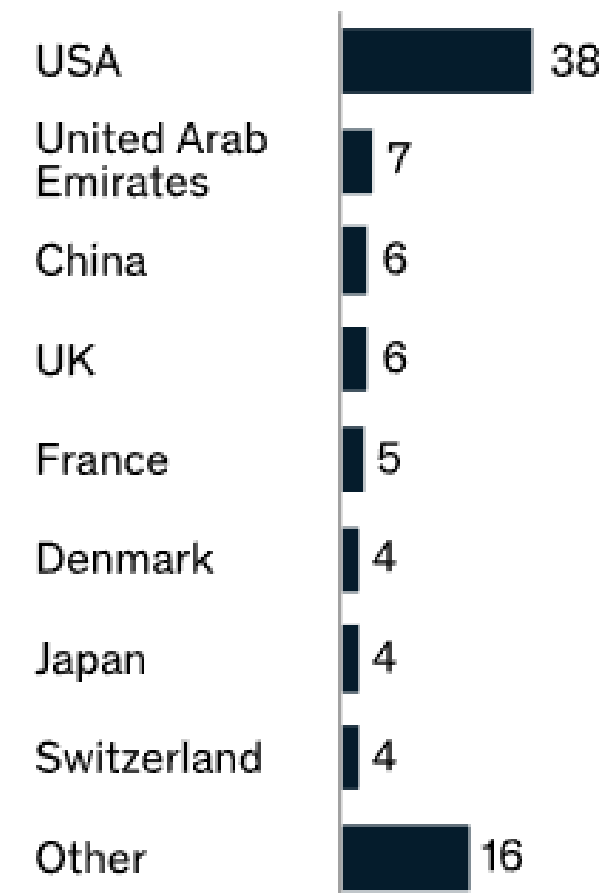


The right interventions could unlock up to \$ 550 billion to invest in African infrastructure.

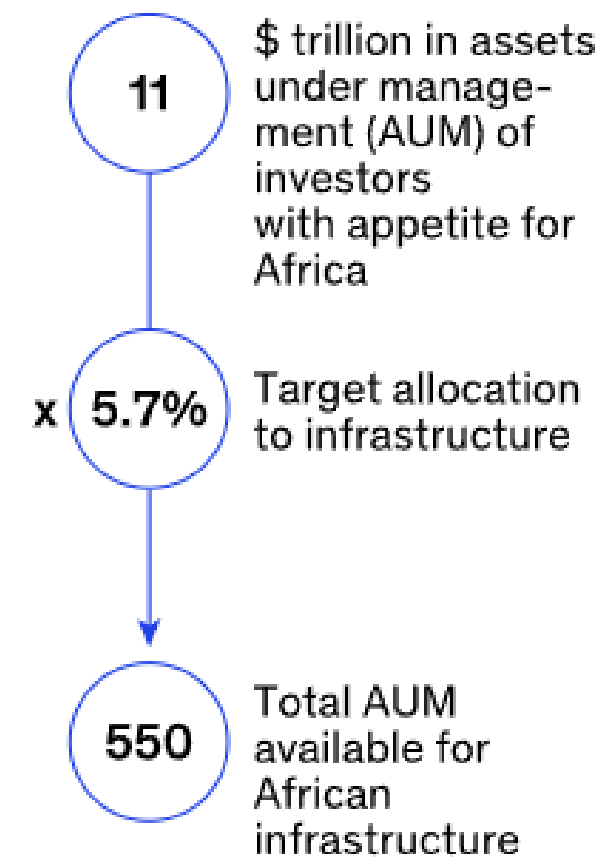
Investors with appetite for Africa by type, %



Investors with appetite for Africa by location, %



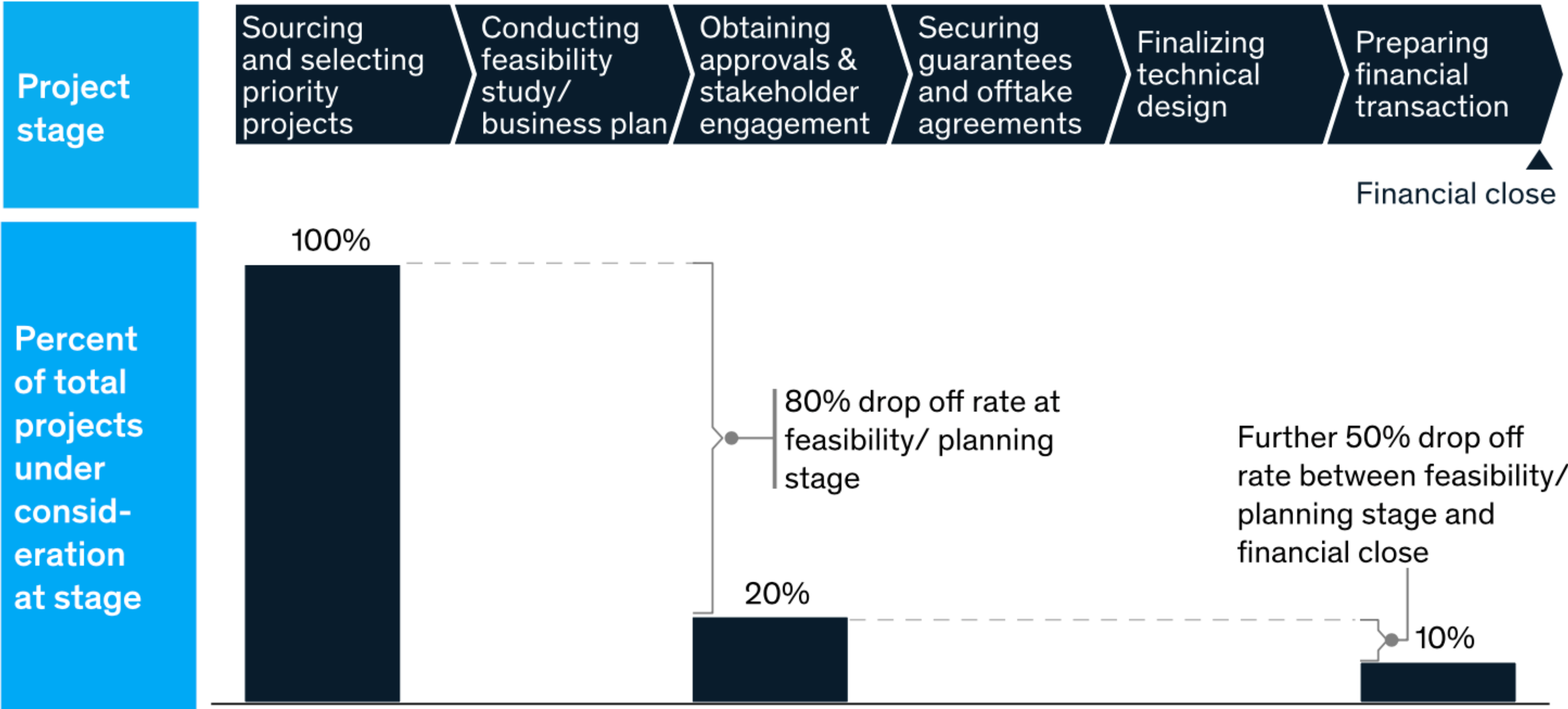
Funds available to invest in African infrastructure



Lack of Adequate Investment Explained



Infrastructure project pipeline success rate by stages in Africa 2024 scenario



4. The Project as a Development Catalyst



Local Socio-Economic Development Strategic Objectives



- To use MEGA Projects as a lever to stimulate the **local economy** and address the **social and economic challenges** of host communities, thus **improving their quality of life** and **creating a sustainable community beyond the project construction phases**.
- Integration of the project, the community, civil society, government and business in a shared vision that enables **maximum economic participation** and **community ownership** of the project.
- Economic Transformation
- Social Inclusion and Cohesion
- Job Creation and SMME development

Example of Community SWOT Analysis



STRENGTHS

- Large population of active citizens that could be employed on the project
- Inclusion of communities as part of the development of Integrated Urban Development Framework
- The project can address four main strategic objectives:
 - Spatial Transformation
 - Inclusive Growth
 - Universal access to basic services
 - Strengthening governance and collaboration of the state and its citizens towards common objectives

WEAKNESSES

- Low education levels of the population – few have tertiary education
- Lack of technical skills due to limited exposure
- Lack of local financial capacity required for participation in the project
- No local companies in the construction value chain
- Food insecurity – There is a prevalence of people going hungry
- Substance abuse and gangsterism
- Teenage pregnancies
- Lack of job opportunities – high youth unemployment above 50%
- Lack of social facilities (Health & schools)

OPPORTUNITIES

- Local job creation
- Stimulation of the local economy
- Establishment and development of local businesses
- Skills development
- Establishing local institutions to deal with identified social ills
- Establishing institutional capacity and partnerships for dealing with the identified social and economic ills.

THREATS

- Community disruptions should there be inadequate participation on the project
- Conventional procurement processes are not able to enable meaningful local participation where there is no local manufacturing capacity
- The project may not achieve the government procurement target of at least 30% spent on Qualifying Small Enterprises and Emerging Micro Enterprises given the lack of local capacity
- Lack of access to funding prevents SMMEs from participating and scaling their businesses



Development With A Difference

CONVENTIONAL VIEW

Project: Example

Project components & requirements:

1. Service Delivery
2. Professional Services
3. Main Contractor
4. Subcontractors
5. Scope
6. Time
7. Cost
8. SHEQ



Local Economic Development Interventions

- **Co-creation & participatory planning**
- **Match project needs & community resources**
- **Design project-specific programmes to address socio-economic needs**
- **Unlock social and economic value**



STRATEGIC VISION

Impact:
Sustainable Communities

- Sustainable Livelihoods
- Local Economic Development
- Industrialisation
- Sustainable Enterprises
- Sustainable Suppliers
- Sustainable Infrastructure
- Sustainable Jobs
- Social Capital
- Intellectual Capital



Bridging The Gap Through SED Approach



PROJECT

BIGEN SED

COMMUNITY

DEMAND

SUPPLY

1. Raw Materials
2. Goods and Services
3. Processed Materials
4. Expertise
5. Labour
6. Plant & Equipment

SED APPROACH

DESIGN OF A LSED STRATEGY:

1. Define the Project Opportunities
2. Define the Local Capacity
3. Consider Municipal IDP
4. Participatory Planning (Community Engagement)
5. Co-creation of Plans for Bridging the Gap
6. Implement the Approved Plans
7. Monitoring and Evaluation

GAP

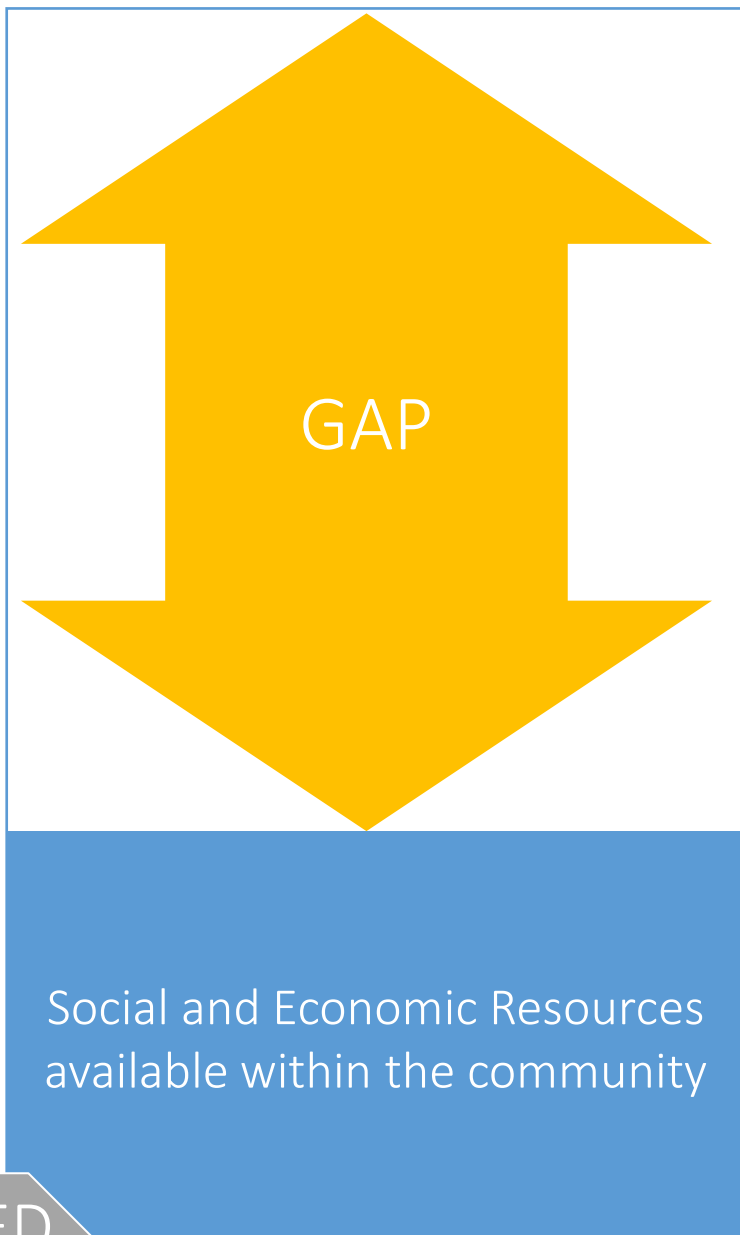
Available Community Social and Economic Resources



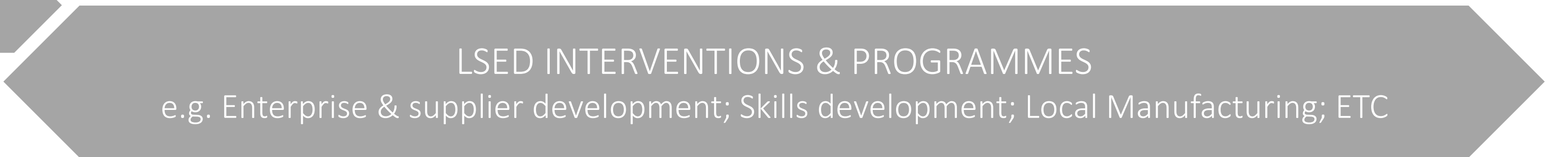
From Project to Impact, Over Time



- 1. Raw Materials
- 2. Goods and Services
- 3. Processed Materials
- 4. Expertise
- 5. Labour
- 6. Plant & Equipment



Turning technical data into LSED intelligence

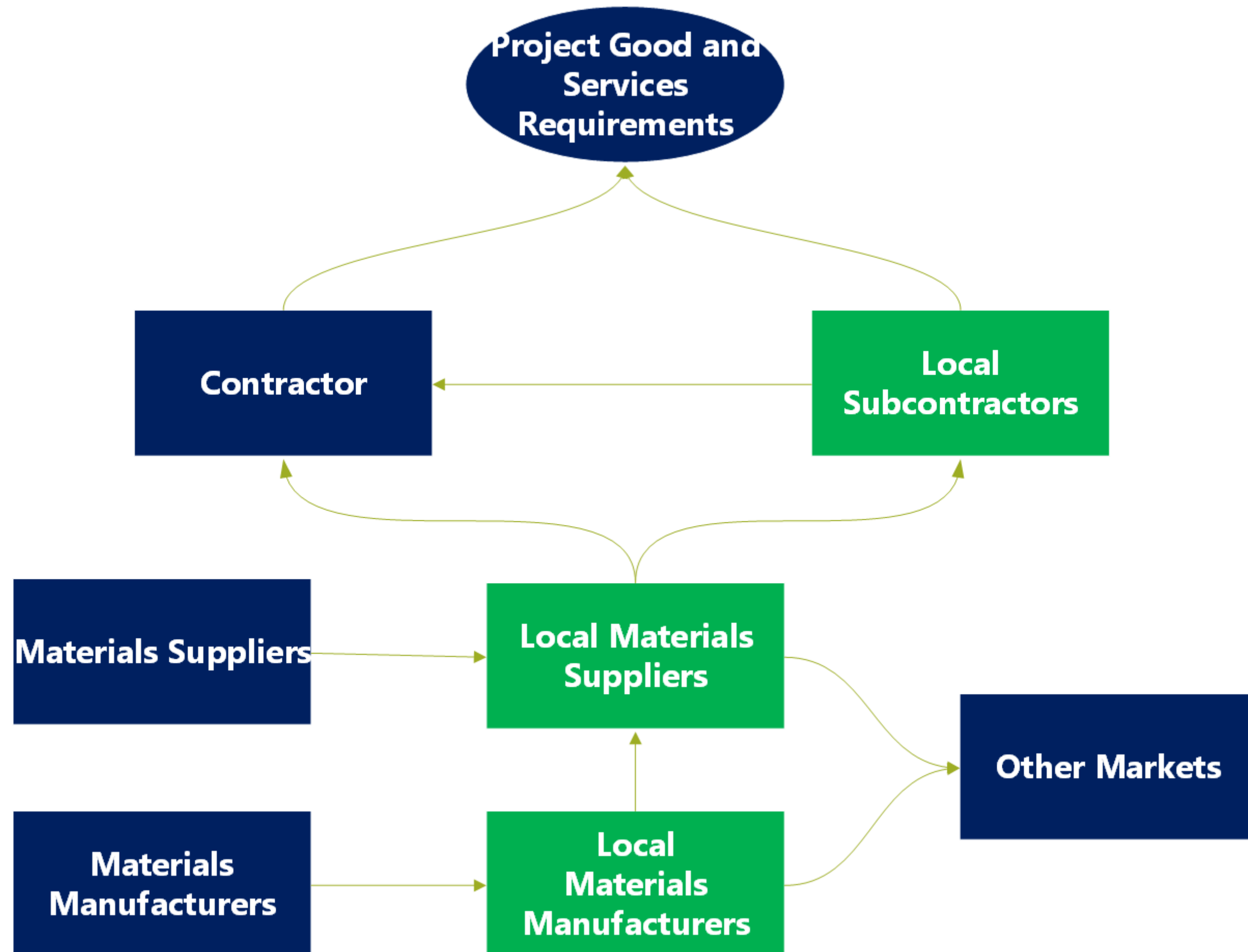




Harnessing the features below provides an opportunity for stimulating the local economy and creating a sustainable economy beyond the project

- **Capital intensive** - an opportunity stimulating the local economy
- **Labour intensive** – an opportunities for job creation and skills development
- **Multi-year project** – growth, sustainability and skills development
- **Estimated 30% to be subcontracted** - QSE and EME companies as opportunity for local SMMEs participation in the case of RSA
- **Extensive construction value chain** – opportunities for local provision of materials, finances, tools, plant and equipment, services, etc.

Local Economic Development Stimulation



The LED Opportunity:

The project requires goods and services which would traditionally be obtained from outside the community with the exception of general labour.

The opportunity lies in the localisation of the supply of these goods and services to enable the circulation of money within the community.

Local businesses need to be established and linked to external markets for their sustainability beyond the project.

Database Creation, Tendering Process & Reporting



Prequalification

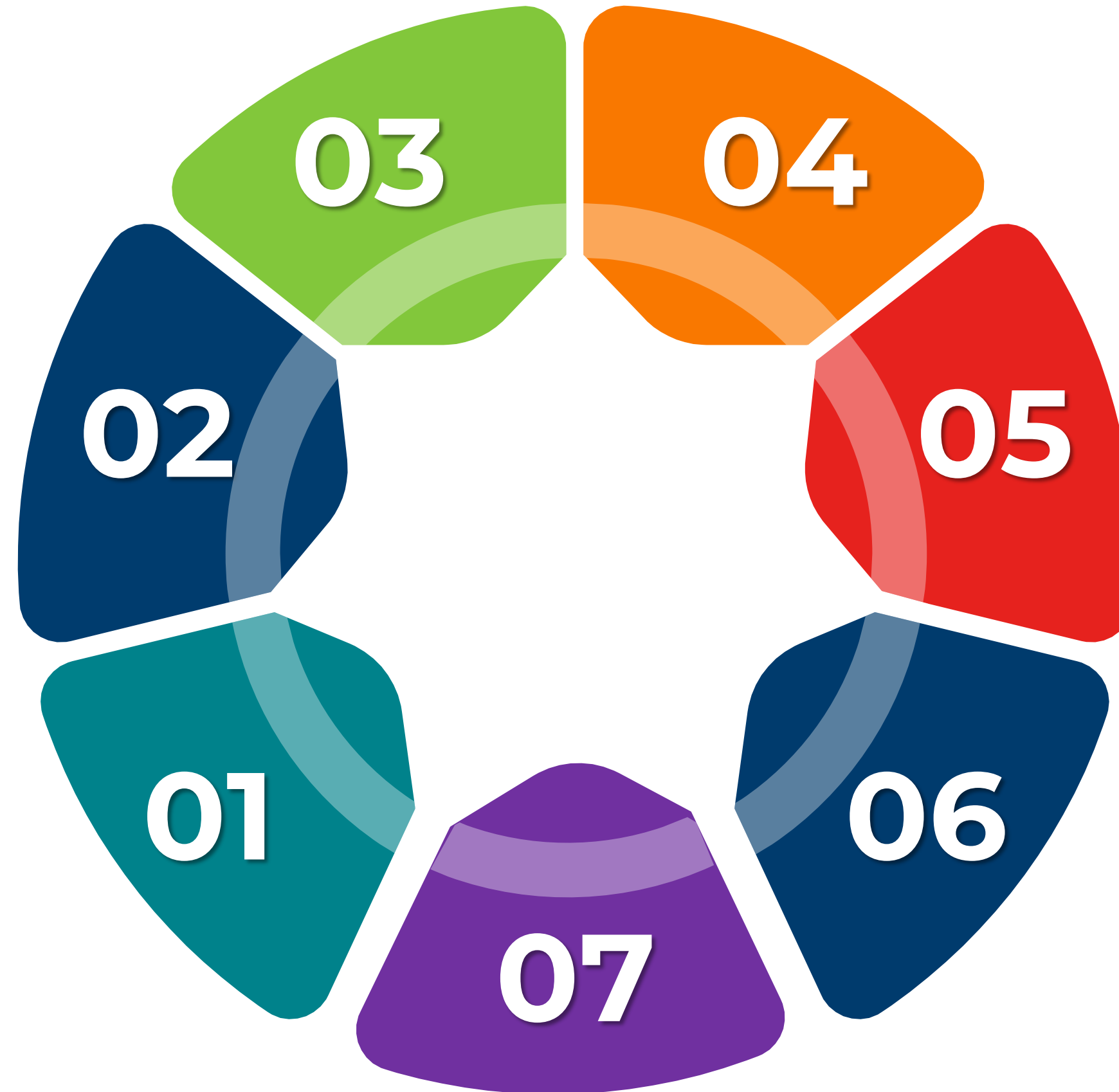
Preparation of prequal documents
Advertise prequal tenders publicly
Ensure that prequal process is fully understood
Evaluation of prequal submissions received and creation of database

Package Determination

Determination of SMME subcontract packages to meet CPG targets set by Client

Stakeholder Engagement

Discussions with all affected stakeholders (Client, Political Structures, Community Structures) separately and in joint sessions



ESD Programme

Management & mentorship of SMMEs for growth

Tendering Training

Arrange Tendering Training for prequalified companies

Tender

Invite prequalified SMMEs
Compile tender documents based on scope of works
Issue tender documentation to selected SMME tenderers
Provide assistance, guidance and mentoring to prospective tenderers
Evaluate tenders and submit recommendation to Project Management Team

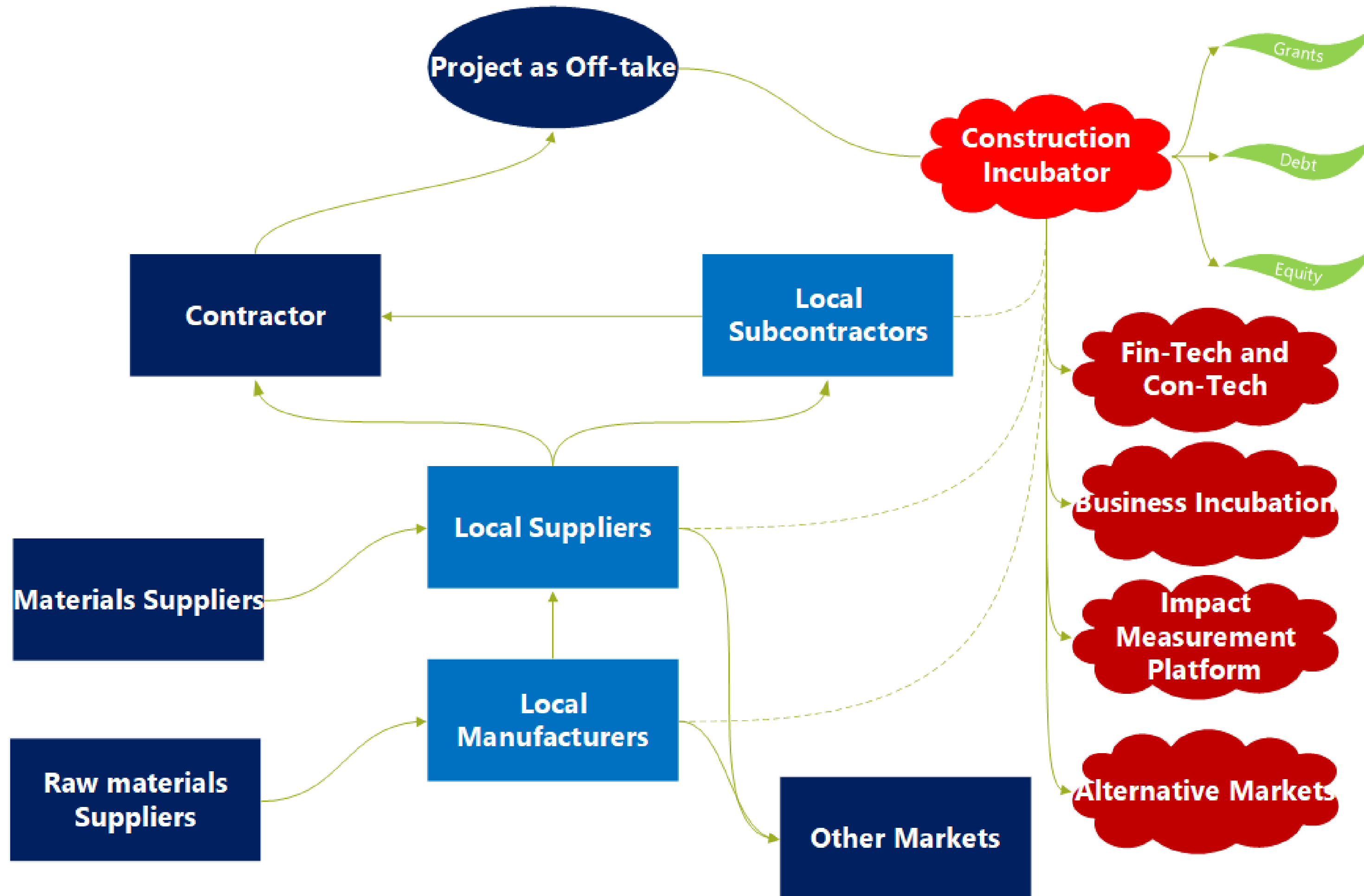
Award of SMME tenders

Assist with agreement between contractors and successful SMME tenderer

5. Proposed Interventions



LED Interventions - Construction Incubator

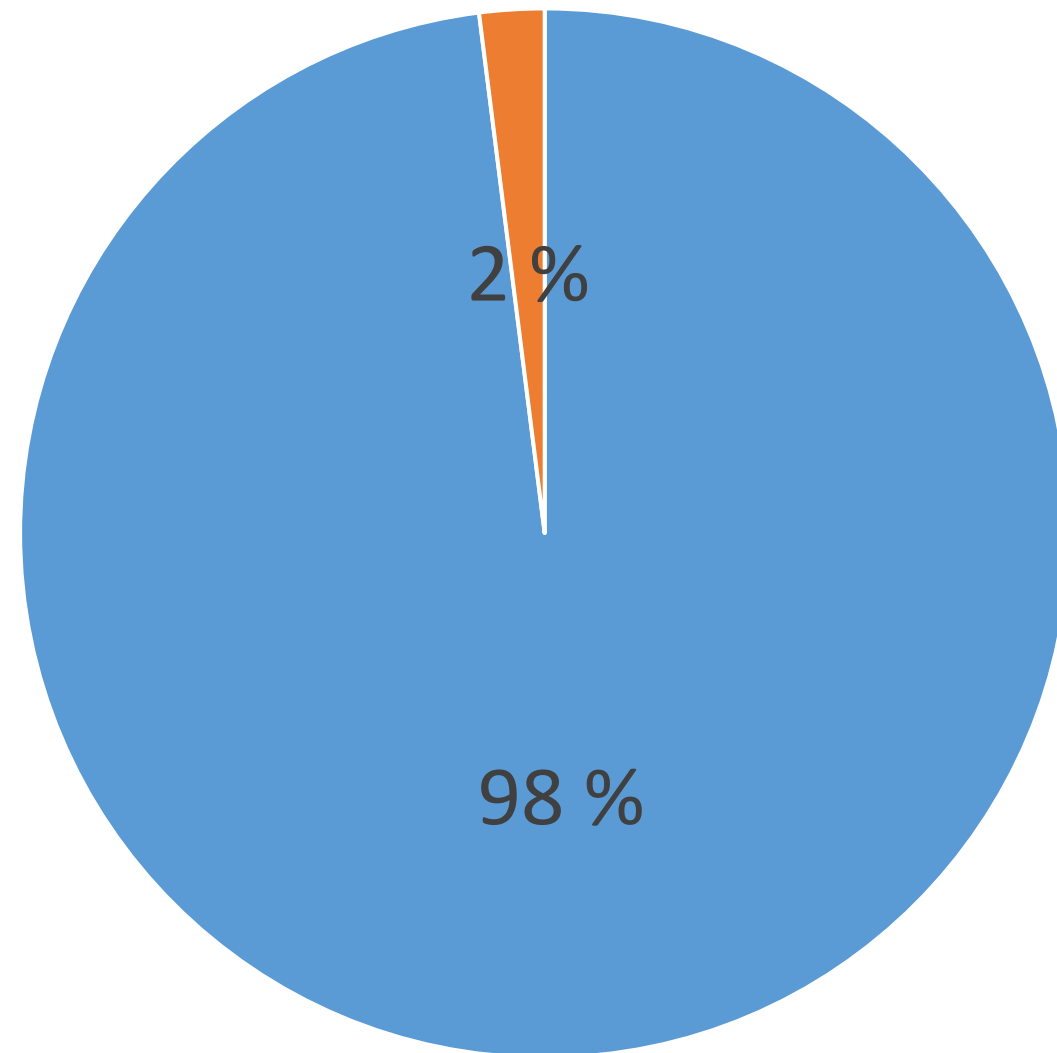


Summary of Local Subcontracting Impact Example



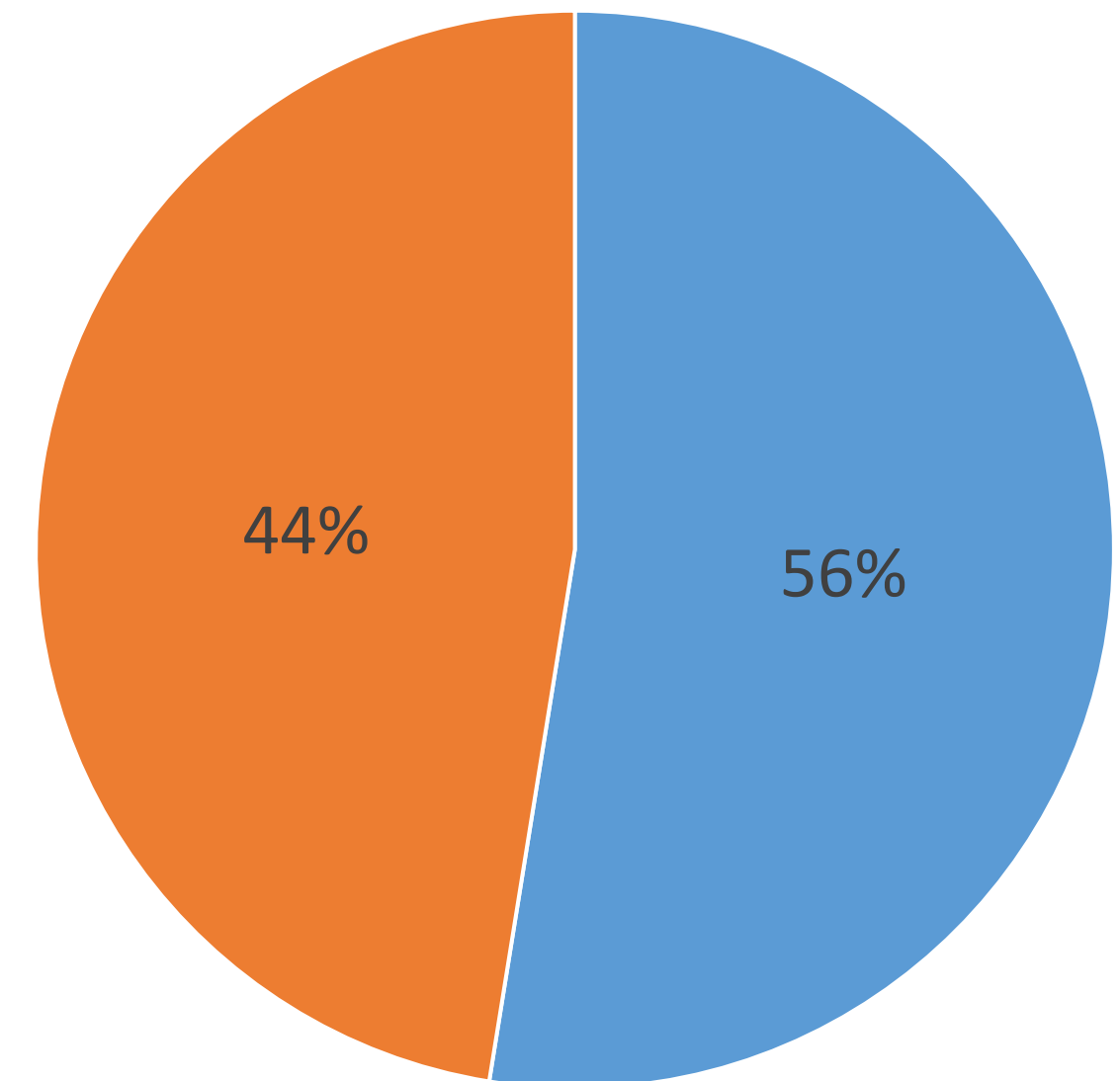
% Of Work Done by Local Subcontractors

Before Interventions



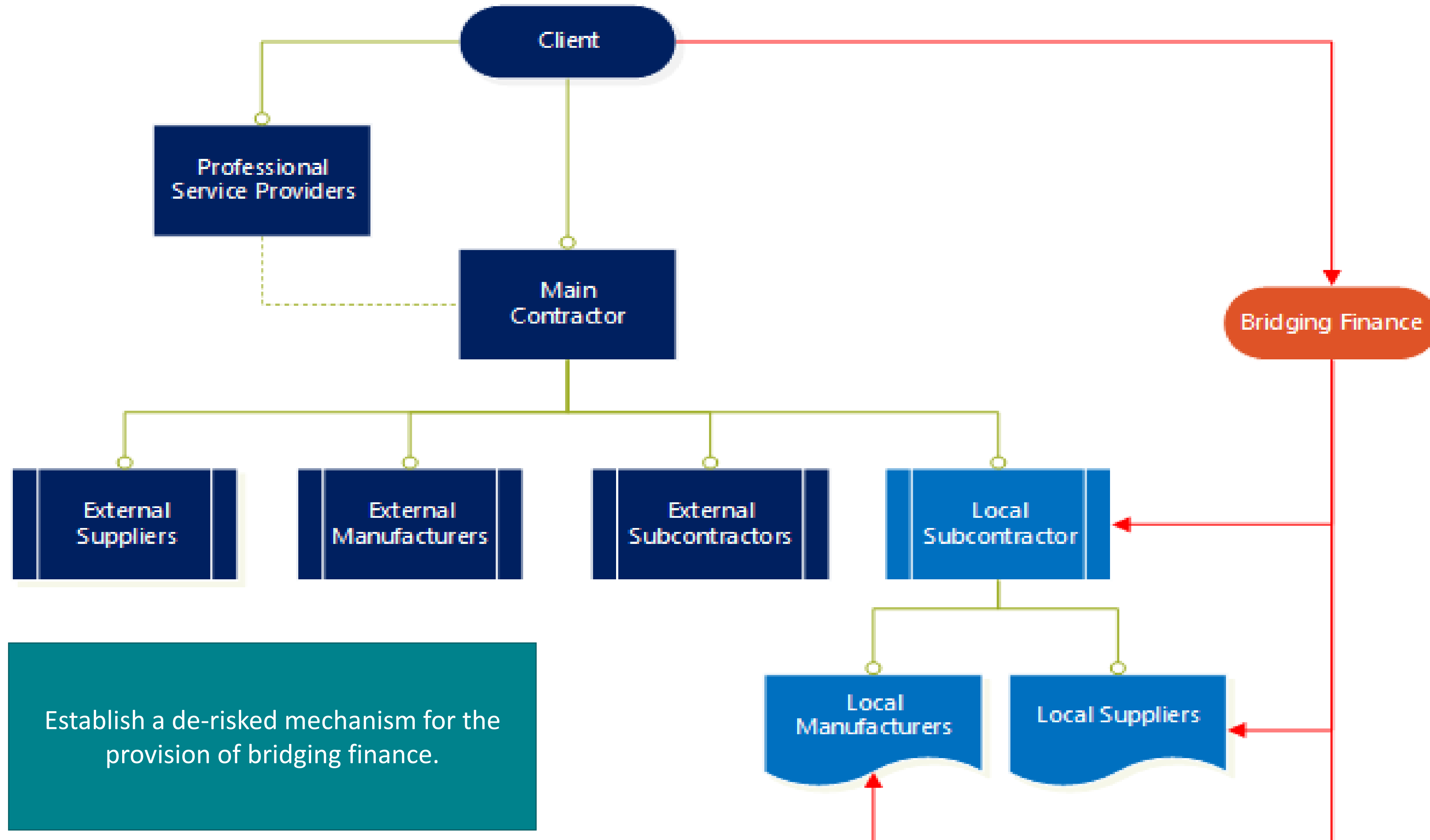
- Main Contractor
- Local Capacity

Final Impact

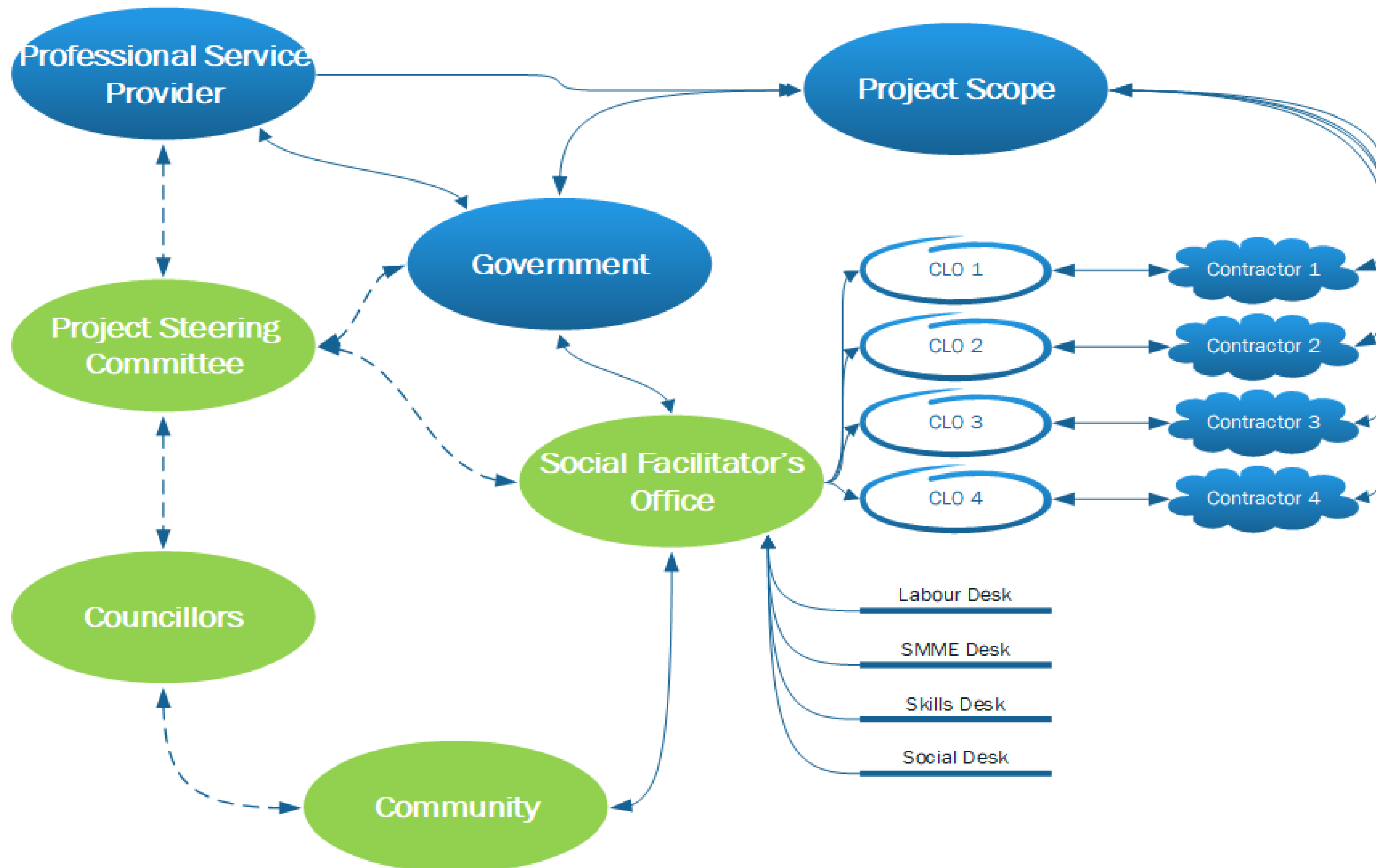


- Main Contractor
- Local Capacity

LSED Interventions - Contracting Strategy



Social Interventions - Project Governance Structure



SOCIAL FACILITATOR

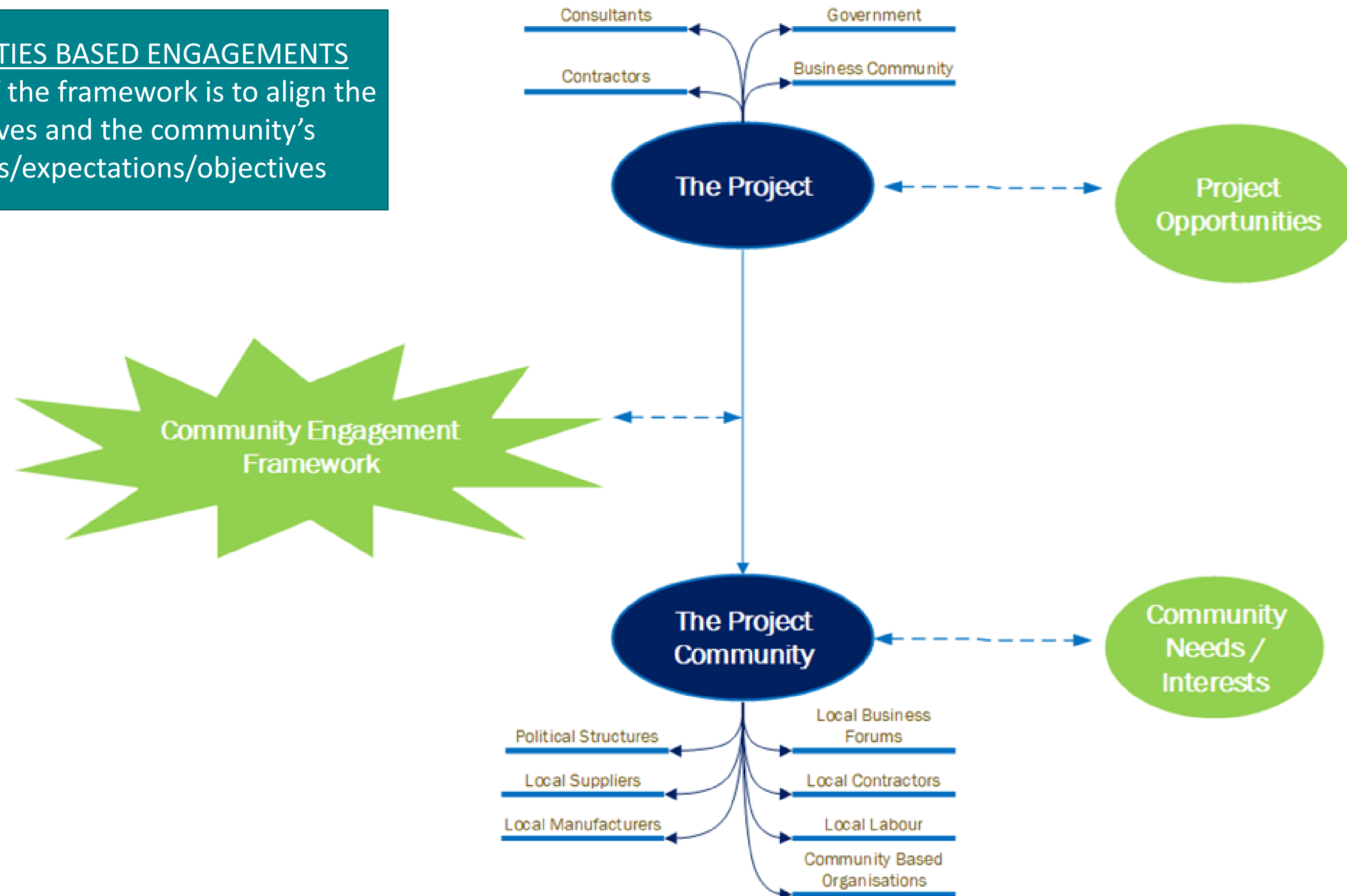
- A central place where community concerns can be lodged and project communications obtained.
- Labour desk services where job applications and opportunities on the project can be handled.
- Skills development desk for all training related issues.
- SMME desk for information on coming opportunities and for handling local tender submissions or applications for business opportunities identified.

Social Interventions - Community Engagement Framework



OPPORTUNITIES BASED ENGAGEMENTS

The essence of the framework is to align the project objectives and the community's needs/interests/expectations/objectives



6. Impact Measurement



LED Interventions Success Indicators



Central to any successful interventions on the project is the ability to establish local businesses that are capacitated to enable the stimulation of a local economy.

Such business require access to the various interventions listed in the adjacent diagram in order to create sustainable jobs

Impact Categories



Economic Inclusion

- Employment
- Procurement



Infrastructure Investment



Community Social Investment



Project Information



Service Delivery



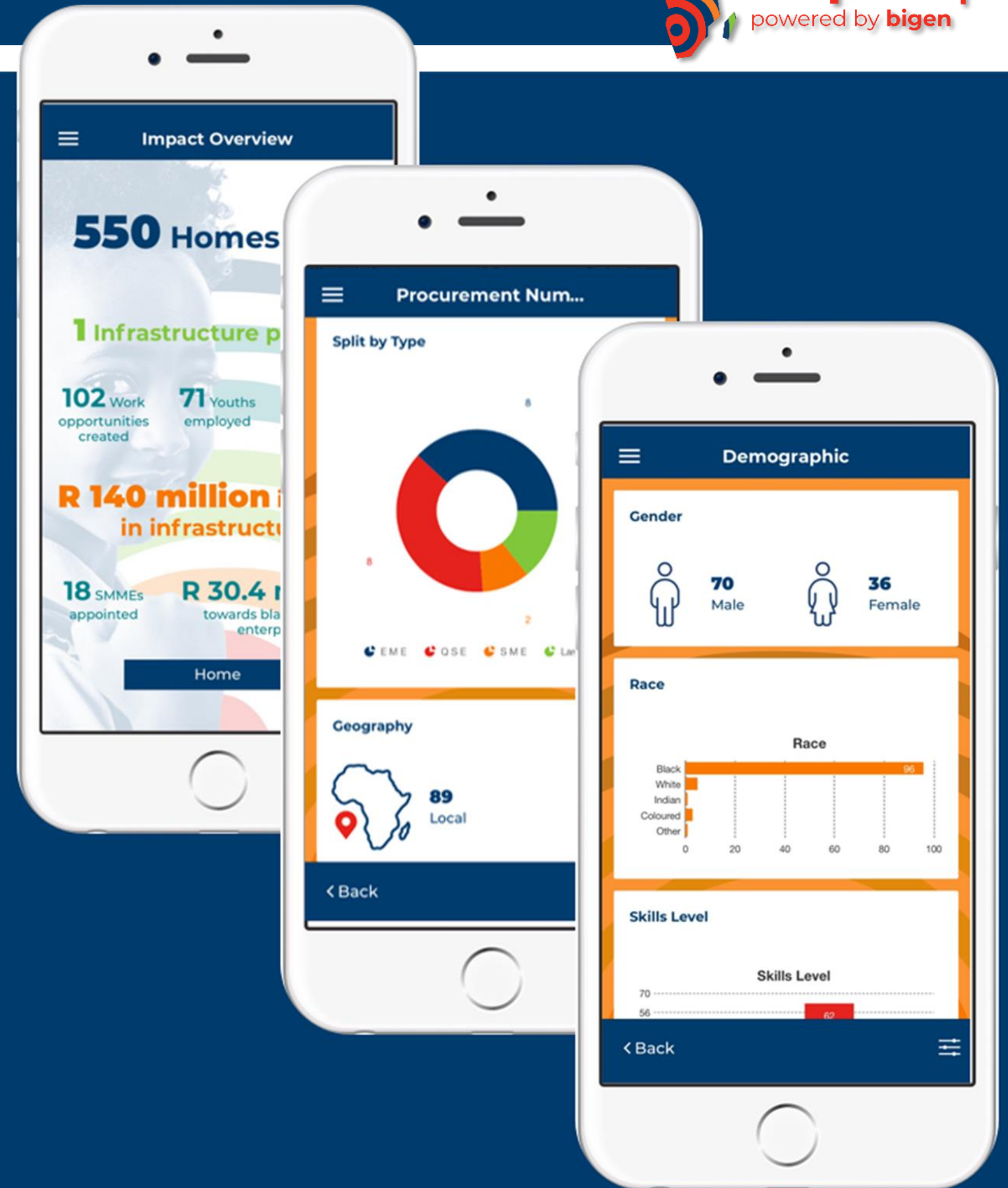
Skills Development



Environment



Health & Safety



Thank you

bigengroup.com

