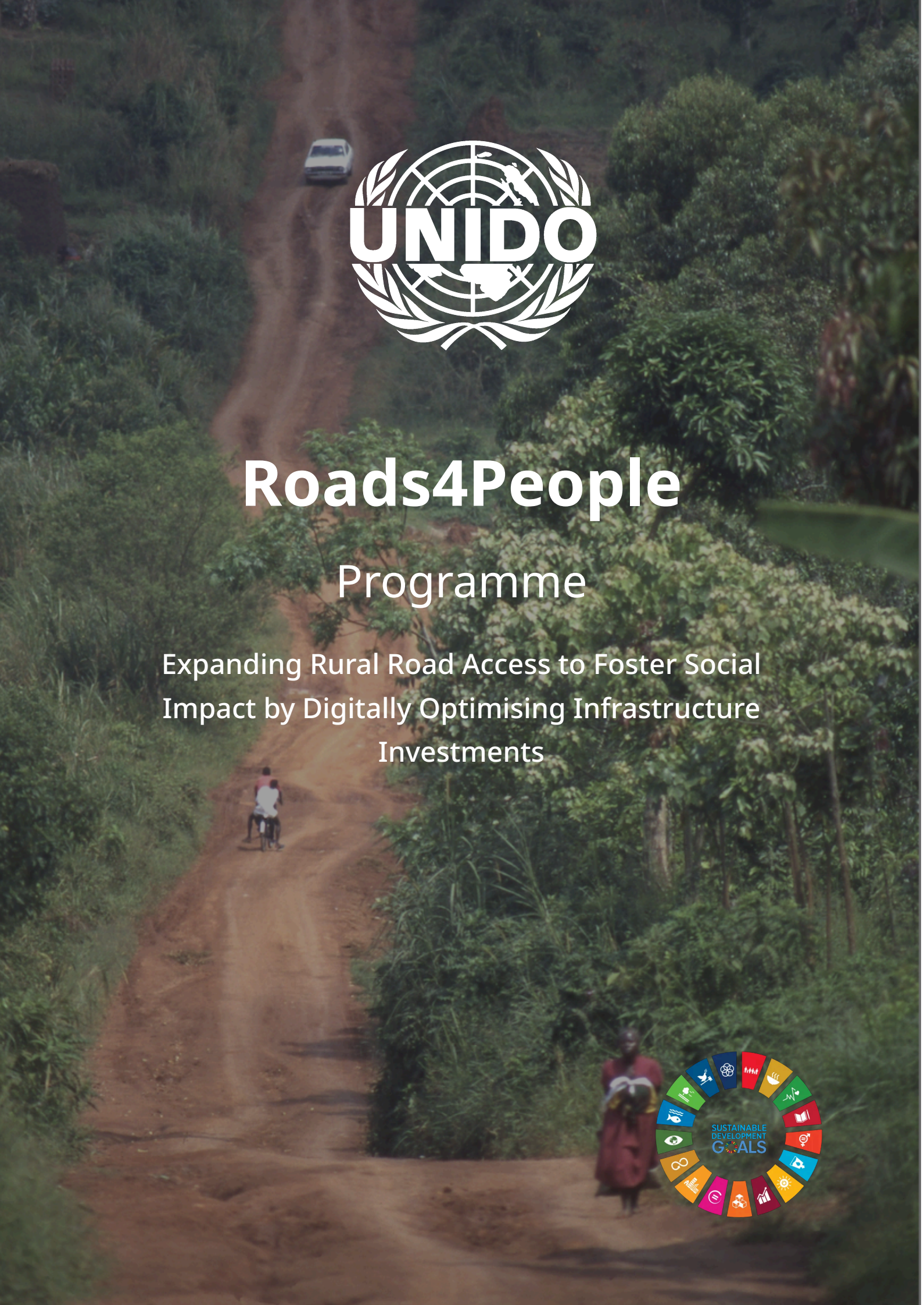


Roads4People

Programme

Expanding Rural Road Access to Foster Social Impact by Digitally Optimising Infrastructure Investments

The Roads4People Programme

1. Introduction

The "Roads4People" programme aims to leverage innovative technologies of ORIS, in partnership with UNIDO, with the goal of supporting the creation of a safe, resilient, sustainable, and inclusive transportation network in developing countries, particularly for rural areas, which form a backbone of inclusive economic development.

Building on an institutional partnership between ORIS - a digital platform for optimising road infrastructure and promoting network resilience and sustainability - and the United Nations Industrial Development Organisation, Roads4People will use innovative technology transfer and capacity building in the road sector to improve performance and leverage investment in rural, secondary and agricultural roads.

The programme aims to leverage digital technologies to improve the efficiency and resilience of infrastructure, support rural development and build capacity for reporting on the Sustainable Development Goals (SDGs), marking an important step towards achieving inclusive and sustainable development.

Through UNIDO's collaboration with ORIS, the Roads4People country projects will generate potential savings in beneficiary countries through the optimisation of major roads, which will be partially channelled through a Rural Roads Fund, a local financial mechanism created to support the development of rural roads.

2. Components of the country projects

The Roads4People project offers an integrated response to the complex challenges facing the road sector internationally, combining economic development with climate resilience and a more equitable and social impact for local communities. The project's cross-cutting activities address the following components:

Digitisation of the Road Industry

The project supports the digitisation of the road sector in the beneficiary country. Data on the local road industry and the national infrastructure network is compiled on a digital platform, using innovative digital technologies to collect and structure quality

data and analyse it to generate detailed and highly accurate modelling. The platform, transferred to local stakeholders through user licenses, will provide road authorities and private stakeholders with access to relevant data and analysis tools, ensuring efficiency, transparency, coordinated decision-making and improved reporting capabilities.

Efficiency of Road Investments

The project aims to improve the efficiency of road infrastructure investments in the country. The innovative technology introduced and deployed will optimise road design prior to tendering and construction phases, reducing the total financial cost of each project and the use of natural resources. This will enable the government to spend the public budget more efficiently, building more and better assets with the same planned resources. Thanks to the project, national road authorities will be able to sustainably increase the efficiency of investments across the sector.

The Rural Roads Fund

The project intervention also supports the establishment of a local fund, with the aim of channelling the potential financial resources saved through road optimisation activities into co-financing rural road projects, thereby mobilising additional funds for this purpose. The RRF will use a sustainable funding model, guaranteeing the long-term maintenance and rehabilitation of rural roads. This component will provide a reliable mechanism for continued investment in rural infrastructure, even after project completion.

Environmental Impact

The Roads4People project makes it possible to integrate the reduction of carbon emissions and the use of materials into the very heart of infrastructure design, using ORIS's innovative technologies for calculating carbon emissions (CO2) throughout the life cycle and analysing materials.

Ultimately, the entire road construction ecosystem within the beneficiary country will be able to plan, calculate and optimise the carbon footprint and materials use of their projects and processes. In addition, the consolidated approach to carbon emissions will enable national authorities to report and aggregate the performance of projects at national level, thereby contributing to some of the SDG indicators on these issues. Incorporating these tools into road planning will help to reduce the overall environmental footprint of national road infrastructure development over the long term.

Climate Resilience

The project also supports the development of road infrastructure that is more resistant to climate change, by integrating advanced climate risk assessment tools and adaptation strategies. Climate projections and infrastructure vulnerability will be integrated into the planning process, enabling the relevant authorities to anticipate and mitigate the impacts of climate change on road networks.

The most vulnerable and sensitive roads to climate change on the country's network will be analysed and highlighted through a multi-criteria analysis of the network, in order to ensure resilience and sustainability.

Road Safety

Using the ORIS platform, the project will integrate the iRAP methodology into the road planning and design process, to ensure compliance with international road safety standards. Capacity-building initiatives will also train local authorities and engineers to integrate safety into road design, ensuring safer and more resilient roads throughout the country.

Inclusive Infrastructure

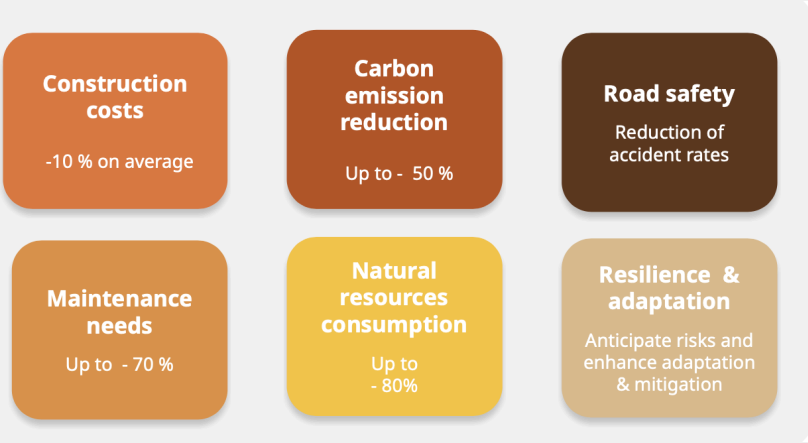
The project supports the development of a more inclusive road network, thereby supporting socio-economic development and poverty reduction, particularly through support for agricultural value chains.

The ORIS platform enables the accessibility of rural areas and the connection of the rural population to essential social infrastructure to be taken into account when setting priorities, which will help to increase the socio-economic inclusiveness of the network. Road projects are also prioritised according to the socio-economic impact of potential disruption and connectivity to key public services (education, health, rural markets).

The platform will also integrate data on agricultural infrastructure to ensure that the impact on agricultural productivity and value chains is taken into account in decision-making. The project will prioritise road projects that improve access to agricultural markets, thereby reducing transport costs for rural farmers and improving their livelihoods.

3. Leveraging ORIS digital technologies

ORIS digitally connects all data of a project on one single platform, helping to provide a holistic analysis for the best designs.



By providing clear decision dashboards and a synthetic view on project impacts, ORIS paves the way for circular, low-carbon, resource optimised, safe, resilient and competitive infrastructure solutions. Through its platform, ORIS is committed to enable all players within the road industry to make informed decisions for more sustainable, resilient, and safe linear infrastructure.

4. Conclusion

In short, the 'Roads4People' project is a strategic lever for sustainable transformation of road infrastructure in beneficiary countries, strengthening innovation, resilience and inclusiveness, while catalysing rural socio-economic growth through modern, efficient and sustainable infrastructure.

An impactful programme, aiming for :

- Strengthening the digital and technical capacities of government authorities and private actors to build an efficient and sustainable road sector and optimise public financial resources.
- Improving connectivity and climate resilience, promoting sustainable social and economic development for the population, particularly in rural areas.
- Road users to benefit from better connected, improved and safer road infrastructure.
- Reducing the environmental impact of road infrastructure and protecting the planet.