



REPUBLIC OF RWANDA

ROAD MAINTENANCE FUND

Website: www.fer.gov.rw
P.O. Box: 6658 Kigali-Rwanda



RMF STRATEGIC PLAN 2019-2026

FINAL REPORT

2019

EXECUTIVE SUMMARY

This Strategic Plan includes:

- An executive summary;
- A succinct review of the context of road maintenance sector;
- An overview of the mandate of the Road Maintenance Fund and the implications for its organization and relation with partner entities;
- A needs assessment and strategic analysis for the Road Maintenance Fund;
- A succinct Vision Statement;
- A succinct Mission Statement;
- Key Strategic Priorities;
- A detailed implementation plan which comprises all implementable strategic priority activities that balance the short term quick results and long term strategic work that deliver the most results within the capacities, resources and time frames for 2019-2020 and general activities for the following years;
- Summary analysis of principal partners for the successful implementation of the Road Maintenance Fund programme and detailed priorities;
- Logical Framework for the implementation of the Strategic Plan including objectives, baselines and targets, defined timelines and resource allocations, in both financial and human terms, as well as relevant indicators and regular evaluations of their results and impact.
- Detailed cost estimation for the implementation of the Strategic Plan, mapped to possible funding options.
- Time-frame for the delivery of each year's strategic objectives
- Monitoring and Evaluation strategy

Without regular maintenance, roads can rapidly fall in despair, and may have long term impacts that may hinder development. If road defects are neglected, it may lead to severe destruction requiring full reconstruction at a higher cost than the maintenance costs and this imposes a heavy burden on the economy as passenger and freight services are curtailed consequently leading to a potential loss of economic and social development.

In this strategic plan, special attention is brought to the Fund with regards to the need to address the issue of inadequate funds to finance Road maintenance needs in Rwanda so as to revise alternative and sustainable sources of funds.

To establish the needs on road network in Rwanda, we referred to different reports that produced by RMF and RTDA and other sources of information that include RRA, and National feeder roads policy and strategy. Road maintenance needs and available resources have been compared both at present and in future.

The plan evaluated the real need for road maintenance if all roads are covered, the real need for emergency, the current and projected revenue collections and the current maintenance gap. The plan proposed short, medium and long term way forward to address the issues highlighted above.

Chapter one as the introductory chapter of the Strategic Plan presents RMF's Vision, Mission and Core Values and guiding principles, purpose, the objectives of this strategic plan, RMF's sources of Revenues and total size of road networks.

Chapter two expends the Situational, SWOT, PESTEL and road industry, stakeholders' analyses, challenges and solutions.

Chapter three states about balanced scorecard perspectives strategic objectives and expected outcomes which represents Strategic Pillars, Effective road maintenance funds disbursement, Availability of funds to cover roads maintenance needs, Institutional and human resource capacity enhanced and RMF Strategy Map.

Chapter four presents maximization of the collection of financial resources and solicitation of more resources including Rwanda's road network projected asset value, The past RMF revenue collection trend, Annual estimated proportion of No. of vehicles that enter Rwandan border posts and RMF Projected revenues from 2019-2026.

Chapter five outlines the funding maintenance of the existing and projected road network growth including RMF current commitments status, resources disbursement plan the past RMF expenditures trend and source of road maintenance funds versus proposed solutions

Chapter six highlights the institutional capacity and human resource development which details RMF current organization structure, review and analysis of the organization process, staff development need assessment, decision making structure and strategy for expansion.

Chapter seven discusses about implementation framework which details the institutional arrangements, resource mobilization and allocation, mapping the strategic plan to possible funding options, resource allocation, mapping RMF projected needs to possible funding options, mapping RMF projected needs through resources allocation, accountability, communication plan and monitoring and evaluation.

Chapter eight discusses about success factors, risks and assumptions including Risk Management, Success Factors and Assumptions.

Chapter nine as the last chapter of this strategic plan talks about conclusion and recommendations.

This plan considers short term to be from 1 to 3 years, medium term from 3 to 5 years and long term from 5 to 7 years.

RMF's sources of fund were categorized in three types; including state budget, donors, fuel levy and road toll. These sources appeared not enough to uphold the entire road maintenance needs in the period of 2019/2026.

This work intended to provide guidelines to the institution for maximizing collection of funds, funding maintenance of the existing and projected road network growth and providing guidance on institutional capacity and human resource development towards effective management of RMF resources. RMF's annually cost of projected revenues now stands at 69,765,055,924 Frw in the period 2019/2026 while total projected needs counted 96,482,439,210 FRw. Thus, the average of the exposed gap rated 26,717,383,285 Frw.

Concerning this matter, some solutions were suggested to deal with the identified gap. Results from total revenues of suggested solutions counted 26,734,000,000Frw; these financial figures have eventually pictured that the combination of RMF's projected revenues and proposed solutions sufficiently cover the road maintenance gap. However, it's recommended to RMF to consider all precautions and guidelines captured in this strategic plan in order to overcome the imbalance between road maintenance funds and RMF revenues. The rate of fund disbursement was numerically determined on the basis of value of RMF expenditure activities. The first objective was rated 2% equivalently with 1,9Fwr billion of the total cost. The second objective will be covered by 97% of the total cost equivalently to 96.6 Frw. Lastly the third objective will be accomplished by 1% which is proportionally to 0.96 Frw of the total cost. It was observed that high percentage (97%) is fixed on the second objective which mirrors the main and fundamental activities of RMF.

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ACRONYMS

BK	: Bank of Kigali
BNR	: Bank National du Rwanda
BSC	: Balanced Score Card
CoK	: City of Kigali
COMESA	: The Common Market for Eastern and Southern Africa
D 1, 2	: District Road Class 1, 2
DAF	: Director of Administrative and Finance
DIFMU	: Director of Investment and Fund Mobilization Unit
DG	: Director General
DTSU	: Director of Technical Support Unit
FRPSR	: Feeder Roads Policy and Strategy for Rwanda
FER	: Fond d' Entretien Routier
GDP	: Gross Domestic Product
GoR	: Government of Rwanda
ICT	: Information and Communication Technology
KCB	: Kenya Commercial Bank
LCAs	: Local Community Associations
LODA	: Local Administrative Entities Agency
MD	: Managing Director
MIFOTRA	: Ministry of Public Services and Labour
MINALOC	: Ministry of Local Government
MINECOFIN	: Ministry of Finance and Economic Planning
MININFRA	: Ministry of Infrastructure
NLRs	: National Leadership Retreats
NR	: National Roads
P4, 5	: Primary Road Class 4, 5
PESTEL	: Political, Economic, Social, Technological and Legal factors
PSC	: Public Services Commission
RDB	: Rwanda Development Board

RMF	: Road Maintenance Fund
RNP	: Rwanda National Police
RRA	: Rwanda Revenue Authority
RSSB	: Rwanda Social Security Board
RTDA	: Rwanda Transport Development Agency
RURA	: Rwanda utilities Regulatory Authority
SBSCs	: Sustainability Balanced Score Cards
SM	: Senior Managers
SMART	: Specific Measurable Achievable Realistic and Time-bound
SP	: Strategic Plan
SWOT	: Strength, Weakness, Opportunity and Threats
TOR	: Terms of Reference
USD	: United State Dollars
VPD	: Vehicles per Day
WB	: World Bank

CHAPTER ONE: RMF HISTORICAL BACKGROUND

The Road Maintenance Fund (RMF) is an institution established by the law No.49/2013 of 28/06/2013, published in the official gazette of the Republic of Rwanda, to ensure collection, and funding for the maintenance of road networks in Rwanda.

Ever since its establishment in 1998, the Road Maintenance Fund has achieved significant progress with regards to funding road maintenance, in spite of limited resources currently available. From the time of its creation in 1998 until now, RMF has recorded significant achievements in terms of roads maintenance and bridge rehabilitation. The current revenues of the Road Fund are derived from: a petrol and diesel levy (at present FRW 115.00frw per litre (€ 0.131) for both petrol and diesel), which is about 69.4 % of the revenues, a road toll charged on foreign heavy vehicles (29.6 % of fund revenues).

Revenues from fuel levy and road toll levied on foreign registered vehicles are collected by Rwanda Revenue Authority (RRA) and transferred into the Road Maintenance Fund account held in the Banque Nationale du Rwanda (BNR).

The Ministry of Infrastructure (MININFRA) is responsible for the overall formulation of policies for the road sector, as well as the implementation of road sector strategies (maître d'ouvrage). Rwanda Transport Development Agency (RTDA) is responsible for the overall management of the classified road network. In line with government policy of decentralisation, district roads management is being handed over to the districts. It is in this regard, that the urban roads in Kigali are under the responsibility of Kigali City Council. The management of the rural feeder roads (non-classified) is vested in the Districts. This implies that two ministries are involved in the management of road sub-sector today, viz. MININFRA and MINALOC, which governs the districts and the City of Kigali.

Road infrastructure is one of the most important assets of Rwanda with an estimated asset value of about 1.8 billion US \$ (1.584 trillion Frw). From the economical perspective it is of utmost importance to maintain the road network of the country, not only the paved network, but also the unpaved road network. Since 2011 traffic volume has increased considerably thereby accelerating the road network dilapidation (RMF, 2018).

Road maintenance brings immediate and tremendous benefits to road users through improved access to hospitals, schools, markets, improved comfort, speed and safety, as well as lower vehicle operating costs.

For these benefits to be sustained, road improvements must be followed by a well-planned program of maintenance. Without regular maintenance, roads can rapidly fall in despair, and this may have long term impacts that may hinder development. If road defects are neglected, it may lead to severe destruction requiring full reconstruction at a higher cost than the maintenance costs and this imposes a heavy burden on the economy as passenger and freight services are curtailed consequently leading to a potential loss of economic and social development opportunities.

Road maintenance comprises activities to keep road structure, pavement, shoulders, slopes, drainage facilities and all other structures and property within the road margin close to their

renewed condition. It includes minor repair and improvements to eliminate the cause of defects and to avoid excessive repetition of maintenance efforts.

RMF mobilizes and provides funds for the works classified into three categories: routine maintenance/recurrent maintenance, periodic maintenance and emergency works.

Since its inception, RMF has made remarkable achievements in providing funds for road maintenance regardless of limited resources. Currently, there is a huge mismatch between the funding capacity of RMF and the annual road maintenance needs.

1.1.1 RMF's Vision

Provide adequate financing to ensure efficient road network maintenance for a social economic transformation

1.1.2 RMF's Mission

To effectively collect, manage and disburse resources for the maintenance of the country's road network.

1.1.3 Core values and guiding principles

Transparency, Integrity, Quality service delivery, Partnership and accountability

1.2 RMF resources

Article 1 of Law N° 12bis/2014 of 19/05/2014 modifying and completing Law N° 49/2013 establishing Road Maintenance Fund (RMF) and determining its mission, organization and functioning states that Road Maintenance Fund financial resources come from the following:

- The State budget allocation;
- State or partners' subsidies;
- Funds from activities performed by RMF;
- Proceeds from its property;
- Road user charge levied on gas oil and petrol;
- Road toll levied on foreign registered vehicles;
- Compensation for damages caused to the national road network;
- Loans to RMF approved by the Minister in charge of Finance;
- Donation and bequests;
- Property formerly owned by FER (Fond d' Entretien Routier)

However, it should be noted that the current revenues of the Road Maintenance Fund are derived from only two sources (i) a petrol and diesel levy which is charged at a fixed rate of 115 Frw per litre constituting about 72 % of the total revenues, (ii) a road toll charged on foreign registered heavy vehicles which are charged 152 USD on double trailers and 76 USD on single trailers contributing about 28 % of the total Fund revenues.

According to article 3 of the law No52 bis/2006 of 12/12/2007 determining the attributions structure and functioning of the Road Maintenance Fund (RMF), RMF shall have the main tasks of receiving, managing and the disbursement of funds for the maintenance of public roads. This institution allocates road maintenance funds to the responsible authority as follows; Rwanda Transport Development Agency (RTDA), Districts and City of Kigali.

1.3 Purpose

The purpose of this plan is intended to inform the institution, stakeholders and the public on maximisation of the collection of financial resources, funding maintenance of the existing and projected road network growth, institutional capacity and human resource development so as to find alternative and sustainable sources of funds to be able to satisfy the alarming and growing road maintenance needs.

1.4 Objective of this strategic plan

The major objectives of this plan is to provide strategies on the following three wide areas of RMF operation.

- i. To provide guidance to RMF on maximisation of the collection of financial resources and solicitation of more resources so as to cover the growing maintenance needs of road network
- ii. To provide guidance for funding maintenance of the existing and projected road network growth in a competitive social-economic transformation
- iii. To provide guidance on institutional capacity and human resource development towards effective management of RMF resources

1.5 Data source

The main source of information for this plan is RMF financial and activity reports, different studies, RTDA, National Feeder Roads Policy and Strategy, RMF law and Rwanda Revenue Authority.

1.6 Total road network size

Figure 1. Below presents the total road network size of which **2,748.80Km** are categorized as national roads and **3,906 Km** are categorized as District Roads Class 1.

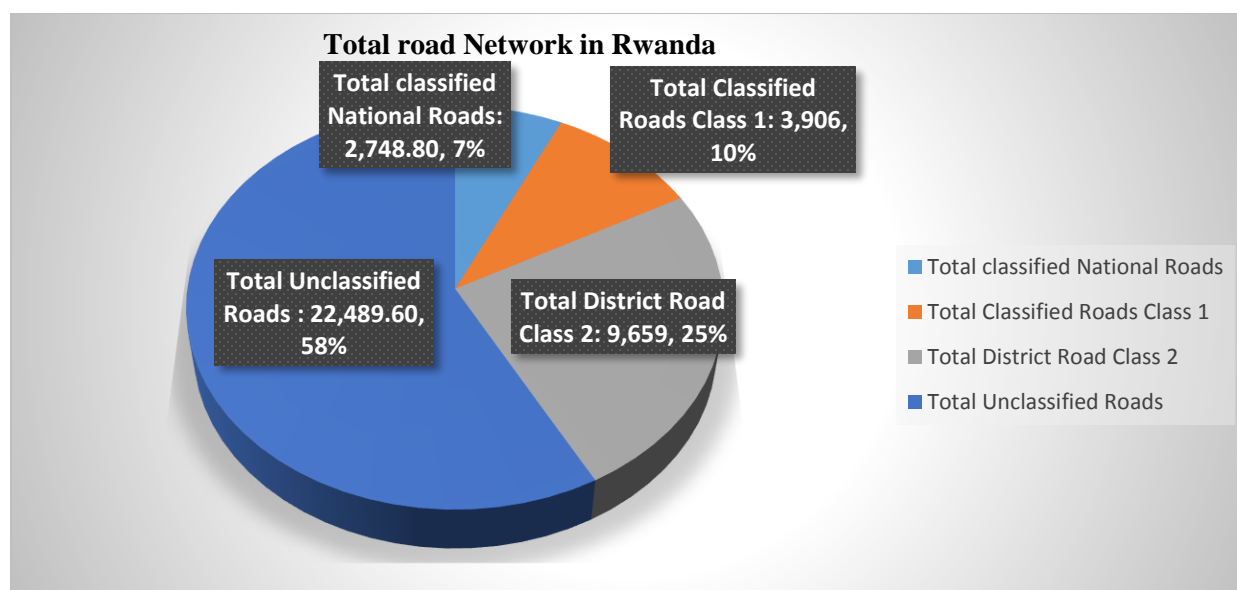


Figure 1: The total road network size

Source: RTDA data.

With reference to the road network size, figure above shows that 2,748.80 km (i.e.:7%) represents total classified national road, 3,906 km (i.e.:10%) embody total classified roads class 1 while 22,489.60 (i.e.:58%) included total unclassified roads and 9,659 km (i.e.:25%) is the total District class 2.

CHAPTER TWO: SITUATIONAL ANALYSIS

2.1 Stakeholder Analysis

The stakeholder analysis and mapping process followed the power, urgency and legitimacy typology ranking. The three attributes define the stakeholder ‘salience’ defined as ‘the degree to which managers give priority to competing stakeholder claims. The more attributes (power, legitimacy, and urgency) a stakeholder is perceived to have the higher their salience. In other words, the greatest priority will be given to stakeholders who have more power, legitimacy and urgency. Power and legitimacy are interrelated and the three variables can overlap. The stakeholders can be categorized into two; the internal stakeholders and the external stakeholders. The internal stakeholders in this particular case include; administrative and service workers, Board of Directors, Investors, Funders, Creditors, Suppliers, Trustees, Directors and the Chief Executive Officers.

The external stakeholders include; the media, quality assessors, certifying agencies, health visitors, customers, service users, Local Government and community (Thomas Donaldson and Lee E. Preston, 1995). It is essential to determine the level of influence each stakeholder holds because managing their level of importance and interest is key to the success of strategy, the summary and source of the results attached.

The stakeholder analysis process will enable RMF determine how to work with stakeholders with different levels of interest and influence. It is important that all the stakeholders of RMF are fully involved if the set objectives are to be achieved. Further, MININFRA is responsible for overall transport policy and strategic planning, the creation of a transport enabling environment, and setting of transport rules, regulations, standards and strategic planning. It is the legal owner on behalf of the State of the transport network and assets; and may delegate responsibilities to District authorities. The RTDA assists MININFRA with the management and administration of the transport sector, and the planning, prioritizing, approval, delivery, management and maintenance of infrastructure, including support to Districts as the managing and implementing agencies.

2.2 Stakeholder Risk Analysis

A proactive approach to strategic risk management is essential in anticipating and mitigating potential risks that could impede the realization of either specific attainable targets, strategic themes, general objectives or even the Board’s overall mandate. Risks have been classified as operational, reputation, compliance, strategic and financial based on RMF’s risk framework.

Strategic risk (including contagion and related party risk) is the prospective adverse impact on the business arising from poor strategic decisions, improper implementation of decisions; or lack of responsiveness to changes in the operational environment. Strategic risk encompasses the risk of choosing and continuing to follow sub optimal strategies to meet objectives; not executing the strategies successfully; and changing the business as usual risks differently from expected.

Operational risk. This is the risk of loss from inadequate or failed processes, people, systems or external events including, but not limited to, business continuity and disaster recovery, corporate governance, security, fraud and IT risks.

Reputation risk which is the risk of damage to corporate image.

Compliance risk defined as exposure to legal penalties, financial forfeiture and material loss arising out of failure to act in accordance with industry laws and regulations, internal policies or prescribed best practices.

Financial risk would emanate from failure to either mobilize adequate funds or lack of prudence in financial resource utilization and encompasses;

Credit risk: The risk of loss from a counterparty not meeting their contractual obligations as they fall due

Liquidity risk: Risk of being unable to meet cash flow obligations as and when they fall, this was observed through the budget execution gap.

For each risk, appropriate mitigation measures have been determined, and the mitigation measures have subsequently informed the implementation as well as the M & E framework. The risk analysis will also be an integral input in the subsequent development of a comprehensive risk management strategy to facilitate successful implementation of the strategic plan.

2.3 SWOT Analysis

SWOT analysis involves looking at the internal strengths and weaknesses of a business and external opportunities and threats. In other words, it is used to analyze the possible internal advantages and problems that a business has, and to determine the external factors of the business which may affect its strategy. The purpose of a SWOT analysis is to conduct a general and quick examination of a business's current position so that it can help the business to develop or plan a direction of development or a proper strategy in future. The achievement of the Plan's objectives will largely depend on how RMF utilizes its' internal strengths to exploit existing opportunities, and manage the weaknesses in its environment, while controlling those factors that pose a threat to the achievement of its planned programs and activities.

The strengths are endowments possessed by RMF upon which future success can be built and which must therefore be improved upon. The weaknesses of RMF comprise deficiencies in resources and capabilities, which must be contained in order to realize the strategic objectives during the Plan period. The Opportunities are the operational potentials and external factors that RMF will take advantage of in order to enhance its ability to achieve its stated goals and objectives. The Threats are the external operational challenges that make it difficult to realize RMF's set objectives.

Table 1: SWOT Analysis

<p><u>Strengths:</u></p> <ul style="list-style-type: none"> – Systems to ensure optimum revenue collection is put in place – Institution work closely with Rwanda Revenue Authority to ensure that the funds are collected efficiently – Revenue collection is reported regularly – Funds disbursement is reported regularly – Liaise with MINICOFIN to agree on the ceiling for the Fiscal year and update Imihigo accordingly – Verification of invoices before payment – Some other external strengths include but not limited to efficient collaboration with districts management, effective contribution of the City of Kigali, etc... – The Road Maintenance Strategy (RMS) of May 2008: among others the strategy aims to ensure that infrastructures are safeguarded and allowed to deliver their maximum benefit; and to allow all stakeholders to understand the investment decisions taken by MININFRA. (by Environmental and Social Management Framework-LODA) 	<p><u>Weaknesses:</u></p> <ul style="list-style-type: none"> – Scarce resources for maintenance of roads. – Insufficient number of technical staffs to implement RMF's Plan – Delays in reporting back to RMF about the use of funds previously transferred – Lack of adequate follow up by District Authorities for the Local Community Associations (LCAs) to report on time – Unforeseen disasters can happen and cause roads destruction that raise unexpected maintenance of roads.
<p><u>Opportunities:</u></p> <ul style="list-style-type: none"> – Increased key stakeholders in maintenance of roads – Increment of operational revenue sources as charge levied on gas oil and petrol which is 115 Frw in 2018 from 85 Frw in 2015 – Accelerate the study to upgrade RMF to 2nd generation thus more sources of funds as the network and traffic are increasing resulting into increment of required funds – The stable political environment creates certainty in investment generation, which 	<p><u>Threats:</u></p> <ul style="list-style-type: none"> – Some sources of revenues are temporary and may terminate unexpectedly – Delays in signing the MoUs by other parties – Misplacing MoUs in some district offices – Competition from neighboring countries. For some time, Rwandan trucks were charged \$500 (Rwf327,760) by Tanzanian authorities, while Tanzanian- registered trucks paid only \$ 152 (Rwf99,639) to enter Rwanda

<p>in turn promotes growth in the transport sector in which the Road Maintenance Fund operates.</p> <ul style="list-style-type: none"> – Good governance policies have been implemented and this is likely to impact positively on the Fund’s decision making. – Strong political relationships with Multi-lateral and bilateral agencies will put the Fund in a good position to attract additional resources for its maintenance operations. – Strong political support and commitment to Vision 2020 as a tool to promote development of the country and the people. Road maintenance activities will need to be aligned to Vision 2050. – Commitment to the development of a strong private sector which may form the basis of establishing public-private partnerships in road maintenance. – The fairly stable economic environment will allow the Fund to effectively manage its budgets while at the same time undertaking long term planning – Development partner support in both financial and technical areas is likely to promote the growth and development of the Fund’s maintenance activities – GDP growth helps Road Maintenance Fund to operate better. 	<ul style="list-style-type: none"> – Increased vehicular traffic due to increased population growth has increased due to an increase in fertility combined with a decline in infant mortality. High population density implies elevated maintenance needs-Increased vehicular traffic could be both a threat and an opportunity – The topography of the country. The hilly terrain may cause landslides and mudslides. It would also be very expensive to construct roads in the meandering hilly areas – Technological threats – due to the land terrain, very high technological applications would be required and these are susceptible to cyber-attacks. – Population displacement – populations may be displaced to pave way. – The introduction of electric mobility in Rwanda.
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2.4 PESTEL Analysis

On the basis of the PESTEL (Political, Economic, Social, Technological and Legal factors) analysis carried out, the following were found to be the key variables in ensuring that RMF is effectively fulfilling its mandate.

Political

- The stable political environment creates certainty in investment generation, which in turn promotes growth in the transport sector in which the Road Maintenance Fund operates.

- Good governance policies have been implemented and this is likely to impact positively on the Fund's decision making.
- Strong political relationships with Multi-lateral and bilateral agencies will put the Fund in a good position to attract additional resources for its maintenance operations.
- Strong political support and commitment to Vision 2050 as a tool to promote development of the country and the people. Road maintenance activities will need to be aligned to Vision 2050
- Commitment to the development of a strong private sector which may form the basis of establishing public-private partnerships in road maintenance.

Economic

- The fairly stable economic environment will allow the Fund to effectively manage its budgets while at the same time undertaking long term planning
- Development partner support in both financial and technical areas is likely to promote the growth and development of the Fund's maintenance activities
- The improved labor market will give the Road Maintenance Fund access to the skills it requires in order to realize its long term vision.
- GDP growth helps Road Maintenance Fund to operate better. As this impact positively on national revenue increase from which portion is reserved to RMF accordingly. This income will increase as the GDP shows a continuous improvement trend with time.

Social

Population growth has increased due to an increase in fertility combined with a decline in infant mortality. High population density implies elevated maintenance needs.

Technological

The Information and Communication Technology (ICT) sector is one of fastest growing sectors in Rwanda. The Road Maintenance Fund will need to explore ways of better integrating this technology into both its internal activities and in its maintenance operations.

Legal

The law setting up RMF was updated in 2014 and has therefore taken into account the emerging issues relating to the operational activities of the fund. However legal framework needs new updates to incorporate current changes and transport sectors policies. RMF has legal personality, administrative and financial autonomy and is governed in accordance with general provisions governing public institutions.

The National Feeder Roads Policy has identified three main strategic and enabling pillars upon which core policy principles have been based:

1. Enabling and Stimulating Rural Socioeconomic Development;
2. Institutional framework in feeder roads operations;

3. Means and resources use efficiency in feeder roads and the details are herein presented.

The government has defined the Feeder Roads as any roads linking farms to markets which include the district class one and two (D1, D2) and unclassified roads.

2.5 Road Industry Analysis

According to the Law number 55/2011 of 14/12/2011 governing roads in Rwanda; roads are defined into four categories and the role and the relation between different stakeholders are here under elaborated:

- a) National roads,
- b) Districts and City of Kigali roads and that of other urban areas - Class I
- c) Districts and City of Kigali roads and that of other urban areas - Class II
- d) Specific roads.

The National roads are comprised of the international roads that link Rwanda with neighboring countries; the roads that link Districts or that link a District and the City of Kigali, roads that link areas of tourist significance and facilities of national or international importance such as ports and airports. The Districts and City of Kigali roads and that of other urban areas – Class one are roads linking different Sectors, headquarters within the same District, or those roads that are used within the same Sector.

Districts and City of Kigali roads and that of other urban areas - Class 2 are the arterial roads that connect Districts roads to rural community centres that are inhabited as an agglomeration. Specific roads are those specifically constructed to connect national roads or District roads to Kigali City and other urban areas to the centres for private sector's activities such as agricultural production, natural resources processing or to tourist sites.

All activities within the road transport sector are managed by the Rwanda Transport Development Agency (RTDA) which operates under the Ministry of Infrastructure (MININFRA). Within the legal and institutional framework stated in the National Transport Policy, MINIFRA is responsible for the sector's policies and strategies. Rwanda is dependent on its road transport system for the economic development of the country. All the major towns are connected by the road network. Rwanda is also well connected by the road transport system with the neighboring countries of Uganda, Kenya, Tanzania, Burundi and the Democratic Republic of Congo. The road system plays a very important role in the import and export business of the country.

The Rwanda road network has improved through rehabilitation and upgrading during the past years. The total road network covers 2,662 km of paved roads and 11,346 km unpaved roads, making a total of 14,008 km. Roads are classified into national (2,748.80 km), District class 1 (3,906 km), District class 2 (9,659 km) and gravel roads (3,563 km). (Source: RTDA).

Road class P4 and P5 would start with spot improvement for roads where traffic is lower than 30 vpd and build a road according to traffic with at least 4.5 meter width as

soon as the traffic exceeds 30 vpd. These are suitable for heavy long-haul trucks, connect the capital Kigali with the provinces and international border crossings. The paved primary roads link Kigali with the major locations of Ngoma, Kirehe, Huye, Gicumbi, Nyagatare, Rusizi, Musanze and Rubavu. Many of these roads are steep, especially in the Northern and Southern provinces, and therefore travel speeds along these roads should be quite slow.

Secondary roads are generally acceptable for small trucks (15 mt max) but require 4WD during rainy seasons especially on roads in mountainous areas. These roads are narrow, steep and difficult to pass during the 6 – 7 month long rainy season. The condition of the district roads in rural areas will only allow small trucks of a 10 mt capacity during the dry season and only about 5 mt during the rainy season.

Rwanda is a small country and the distances from Kigali to the provincial towns are not very far in relative terms. However, due to road conditions and the terrain, the average travelling time for a heavy loaded vehicle, it takes from Kigali as follows: Huye, 3 hours; Rusizi, 5 hours; Rabavu, 2 hours, Ngoma, 3 hours; and Karongi, 4 hours. All secondary roads are unpaved and become very difficult to travel across during the wet season. Truck movements during the rainy season become very difficult due to floods and mudslides, especially with the mountainous terrain of the country.

The government's plan to improve the transport sector places emphasis on rural areas. Its major objectives include maintenance and rehabilitation of the rural road network in order to promote commercial exchanges and reviewing the feasibility of an international railway line that connects to the Tanzanian rail network. These initiatives would make a substantial improvement to the infrastructure to support economic growth and ease the burden on humanitarian programmes.

2.6 Challenges and Solutions

2.6.1 Challenges

- The budget that RMF manages is not sufficient to effectively run all its roads maintenance commitments.
- Government budget subsidies and axle load limit charges do not get to the fund
- There is an increasing challenge to maintain and protect the assets to ensure a longer life and higher level of service from the investments in rehabilitation.
- Nationwide, maintenance needs and costs are increasing.

2.6.2 Solutions

Proposed Short term solution

1. There should be a clear definition of eligible road maintenance works and the available resources should be used for these works only. This would add extra 15 Billion Frw on maintenance budget every year. Additionally, in case there is a deviation of RMF resources to other works that are out RMF's mandate such as rehabilitation and/or construction, this should be considered as a loan to be paid back by the entity in charge of works done.

2. Fast track ratification of the new law on road toll. This would add approximately 500 million Frw every year.
3. Recovery of compensation for damages caused to the national road network.
4. The increase of the fuel levy from the current fixed rate of 115 Frw/Litre represented 14% of the then pump price which was 826Frw per litre in March 2016. Presently the pump price has increased to 1,132 Frw for super and 1,148 Frw per litre for gas oil. If the same percentage is applied on the current pump price just to adjust for the effect of inflation, the current charge would be 161 Frw per litre. An increment of 28.5%. This would add extra 28.5% on the fuel levy collection which would be approximately Frw 3.3 billion every year.

Proposed Medium term solution

1. A certain percentage of Road maintenance contribution should be pegged on donor funded road development projects that are managed by RTDA.
2. Recovery of annual vehicle registration is one of the key sources of revenues for road maintenance funds in other countries. This charge existed previously but was dropped some years ago to simplify the taxation system and streamline administration. Decision makers should consider engaging the Ministry of Finance and Economic Planning to reintroduce this charge and this would add extra approximately between 3 to 4 billion Frw every year.

Proposed Long term solution

1. RMF is one of the institution that build a back bone of infrastructure development of the country, above all the institution has routine revenues permitted by law to perform its mandate. With collaboration between main stakeholders, RMF should imply an effective accountability and effective methods in revenues collection. This will be more significant for institution to know precisely the constant value of entrance revenues each year. Therefore, in the long run RMF should explore the possibility of acquiring loans as stipulated in the law that establishes the fund.
2. RMF will solve the issue of unpaved roads by sealing them using chip seal. This would minimize water from penetrating the road structure, the cost of pavement overlays, the effects of aging and can provide a highly skid-resistant surface. This mechanism will also be used to fill and seal cracks and raveled surfaces of old pavement.

CHAPTER THREE: BALANCED SCORECARD'S METHODOLOGICAL APPROACH

3.1 Introduction

The Balanced Scorecard is a strategic planning and management system that is used extensively in government, industry, and government Funds worldwide to align activities to the vision and strategy of the institution or Fund, improve internal and external communications and monitor institution or Fund performance against strategic goals by Balanced Scorecard Institute (2010).

The RMF's Strategic Plan adopts the BSC framework as a tool for communicating the Fund's strategic aspirations to key stakeholders; aligning the day-to-day work that everyone is doing with strategy; prioritizing projects, products and services that will propel its value addition aspirations; and lastly a tool that will act as a yardstick for measuring and monitoring progress towards realizing strategic targets enshrined in this strategic plan.

3.2 Strategic Pillars

Balanced score card methodological approach was used to develop RMF's 7 year strategic plan based on three strategic pillars including; Effective road maintenance funds disbursement, Availability of funds to cover roads maintenance needs and Institutional and human resource capacity enhanced.

3.2.1 Availability of funds to cover roads maintenance needs

The following requirements are critical to ensure appropriate availability of maintenance funds based in past performance.

As previously mentioned exploring multiple sources of funding is of critical importance. In the short-term one of the proposed recommendations is to ensure that road rehabilitation contracts, funded by Development Partners, include a clause and cost that covers 1 year allocated to conduct maintenance. Similarly, there should be continuous funding for RMF maintenance from GoR (national or central level government) and Development partners as well earmarked budgets.

Hence this pillar will display means of building block concentrates on establishing an adequate and stable flow of funds, usually by introducing an explicit road tariff to manage demand and generate the revenues needed to support the operation and maintenance of roads. Without an adequate flow of funds, none of the reforms will be sustainable. All governments in Africa are seriously short of fiscal revenues. Budget allocations for road maintenance rarely exceed 30 percent of requirements, and it is simply not feasible for governments to increase these allocations under present fiscal conditions. Improved revenue mobilization is essential. However, if road user charges are increased, there is no guarantee that the additional revenues will be allocated to roads. It has adverse impacts on the management of the state's overall budget and is rarely sustainable.

An added concern is that the current financing Road maintenance funding mechanisms do little to strengthen market discipline, either by managing demand or by improving the efficiency of the road agency. Solving the financing problem calls for a radically new source to road maintenance financing in Rwanda

3.2.2 Effective road maintenance funds disbursement

Fund disbursement of RMF are designated to three responsible authorities including RTDA, CoK and districts. The disbursement set up valued in terms of the activities each agency is responsible to perform.

Basing on the flow of Road maintenance funds in context of our nation, in this era of technological advancement, disbursing funds from the RMF level to a road agency at the community level should not take a lot of time for overcoming delaying risks. Taking the shortest duration possible to reach road agencies should reduce the risk of diversion and ensure that work plans are implemented as scheduled and backlogs kept minimal. For this reason, enhancing efficiency in the transfer of funds to road agencies is a matter of priority to ensure consistency in the flow of funds. RMF pays directly the contractors and the transfers are done only to Districts for roads routine maintenance. To enhance accountability, the auditing process should not target road agencies only; rather it should cover the operation efficiency at the national level to avoid unnecessary audit queries. A more comprehensive auditing report should track the operational procedures and efficiency right from the time of allocations to the time funds reach agency accounts. The auditing process should enhance efficiency and accountability at all levels of the system, much to the advantage of road maintenance projects.

3.2.3 Institutional and human resource capacity enhanced

Successful implementation of the strategic plan requires enhancement of human resource and the institutional capacity through different activities including establishment of management Information systems (MIS) within Road Maintenance Fund procedures and establishment of comprehensive institutional legal instruments.

In this regard, the strategic plan provides guideline to build a back bone which concentrates on creating a consistent organizational structure for managing different parts of the Road Maintenance Funds.

3.2.2.1 Strategies for Capacity Development

A capacity needs assessment shall also be conducted at the year one of the strategic plan to determine the experienced gaps of the institution capacity. To enhance institutional capacity, the following strategies have been proposed:

- (1) Training of staff to build an internal capacity to drive the strategy.
- (2) Strengthening the organizational structure to provide for upward mobility.
- (3) Recruitment of skilled staff in areas that do not have adequate skills.

3.3 RMF Strategy Map

A strategy map is a diagram that shows institution's strategy on a single page. It's great for quickly communicating big-picture objectives to everyone in the institution. It helps keep everyone on the same page, and it allows people to see how their jobs affect the institution's or fund's strategic objectives.

Table 2: RMF Strategy Map

S/N	Objectives	Strategic Input	Strategies
1	Maximisation of the collection of financial resources and solicitation of more resources so as to cover the growing maintenance needs of road network	Secure an adequate and stable source of funds.	<ul style="list-style-type: none"> Enhance and Safeguard Road Maintenance Levy Additional source of Funds for road maintenance Enhance financial management of the Fund Strengthen budgeting and financial Reporting of the RMF Fund Develop a framework for transition to 2nd generation fund
2	Funding maintenance of the existing and projected road network growth in a competitive social-economic transformation	Objective resources allocation	<ul style="list-style-type: none"> Institutionalize long term planning for the road maintenance and development Enhance coordination monitoring and evaluation Promote the use of appropriate technology and resources in delivery of roadworks Strengthen RMF advisory role on all matters related to road maintenance and development
3	Institutional capacity and human resource development towards effective management of RMF resources	Institutional Capacity	<ul style="list-style-type: none"> Enhance corporate image and customer service Ensure Compliance with laws and policies Enhance effectiveness of the board of directors Safeguard RMF assets Strengthen RMF systems and procedures
		Human Resource Capacity	<ul style="list-style-type: none"> Ensure Optimal Human Resource Strengthen Human Resource development and knowledge management

			<ul style="list-style-type: none"> ▪ Institutionalize performance based management ▪ Raise and sustain employee satisfaction
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Successful implementation of the 2019-2026 RMF Strategic Plan will depend significantly on a practical framework. The strategy's implementation framework will have a wide spectrum of players in order to allow for maximum participation of all relevant stakeholders.

Existing institutional structure including the oversight bodies that undertake regulatory responsibilities will be charged with carrying out their appropriate roles. Implementation of the strategy will need coherent approaches within and outside RMF to fully exploit its comparative advantages while leveraging the resources and expertise of other stakeholders.

The implementation will be harmonized with the performance contracting framework. The Director General with the support of directors of units will provide overall guidance for the implementation of the Strategic Plan. Regular departmental meetings will be utilized for progress review to support the implementation of the Strategic Plan. RMF will also ensure harmony with other relevant Government initiatives and appropriate linkages with stakeholders to enhance synergy as it seeks to realize the objectives set out in the Plan.

CHAPTER FOUR: MAXIMISATION OF THE COLLECTION OF FINANCIAL RESOURCES AND SOLICITATION OF MORE RESOURCES

4.1 Introduction

The chapter responds to the first objective of this strategic plan which is “to provide guidance to RMF on maximisation of the collection of financial resources and solicitation of more resources so as to cover the growing maintenance needs of road network”.

4.2 Rwanda’s road network projected asset value

The asset value of the Rwandan paved and unpaved road network is presented in Table 3 & Figure 2 below. In the year 2018, the asset value of the network is estimated to approximately US\$1.8 billion (1.584 Trillion FRW). This is expected to rise to approximately US\$2.242 billion (1.848 Trillion Frw) in 2026.

Table 3: Road network value

No	Period	Projected Network Value (US\$ Billion)	Growth per year (0.22%)
1	2018	1,876	-
2	2019	1,971	0.50
3	2020	2,023	0.27
4	2021	2,078	0.29
5	2022	2,074	-0.02
6	2023	2,116	0.22
7	2024	2,158	0.22
8	2025	2,200	0.22
9	2026	2,242	0.22

Source: RTDA data.

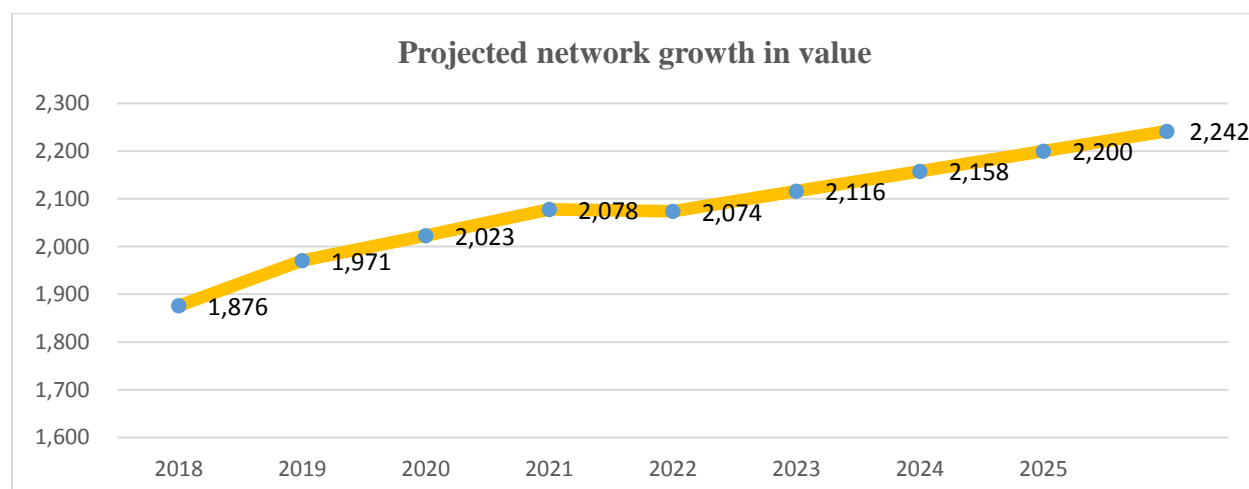


Figure 2: Road Network Value

Results expressed in above table and figure exposed that road network is progressively growing in Rwanda as indicated by the year 2018 which has an asset value rated 1,876 billion (USD) and 2026 the asset value will steadily increase to 2,242 (USD). As specified in the same table, results revealed that for covering the entire needs of road network, the government is quietly required to increase 0,22% on each annually expected road network revenues for covering the entire road network funds in 2019-2026.

4.3 The past RMF revenue collection trend

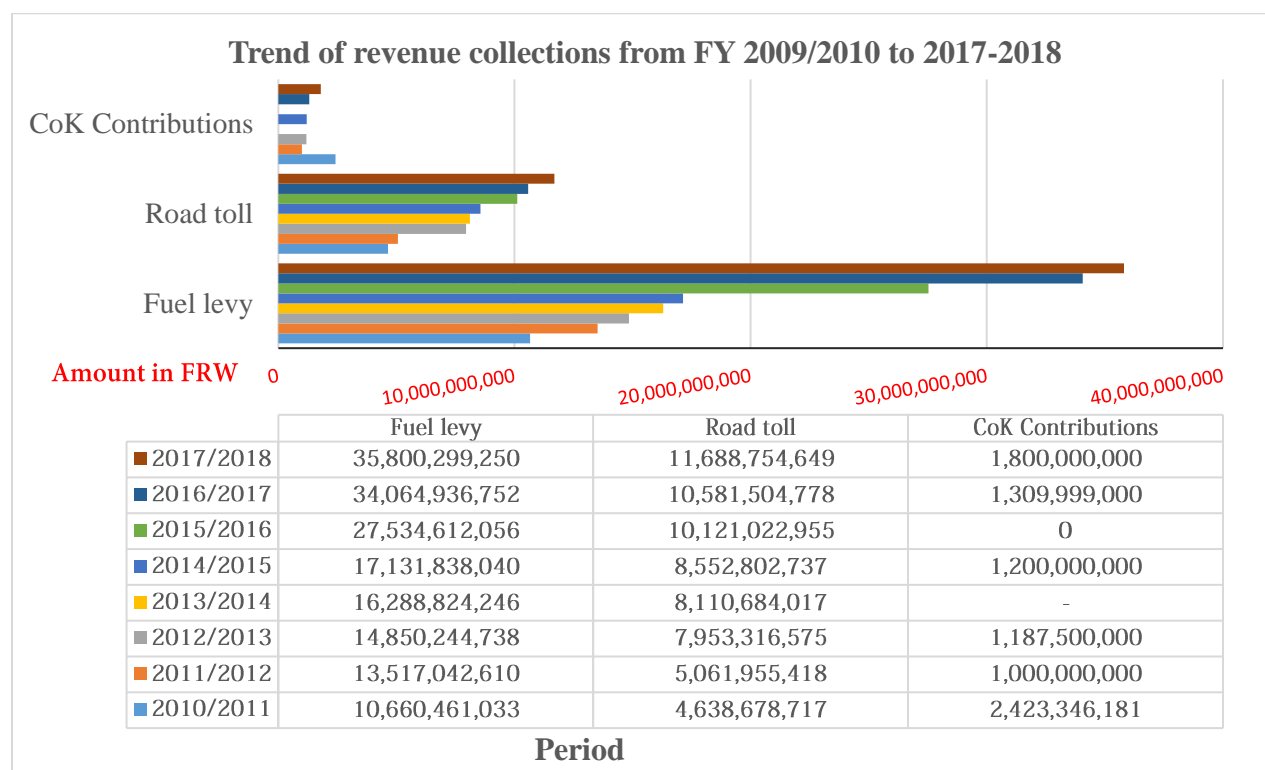


Figure 3: Trend of revenues collection from FY 2009/2010 to 2017-2018

Source: RMF data.

RMF internally generates revenues from taxes imposed on consumption of Premium & Gasoil and Road toll charges imposed on foreign registered vehicles.

Figure 3 above indicates that between 2009/2010 and 2017/2018, RMF revenues have improved by 273%. Major increment was due to 82% increase in fuel levy rate from 63 Rwf/litre to 115 Rwf/litre on 3rd March 2016. The resultant consequence increased the budget and capacity to finance road maintenance activities as highlighted in the figure 3 above.

Rusumo and Gatuna are the busiest border posts connecting Rwanda to Tanzania and Uganda respectively. These two border posts constitute over 80% of the fund's revenues collected from road toll.

4.4 Annual estimated proportion of No.of vehicles that enter Rwandan border posts

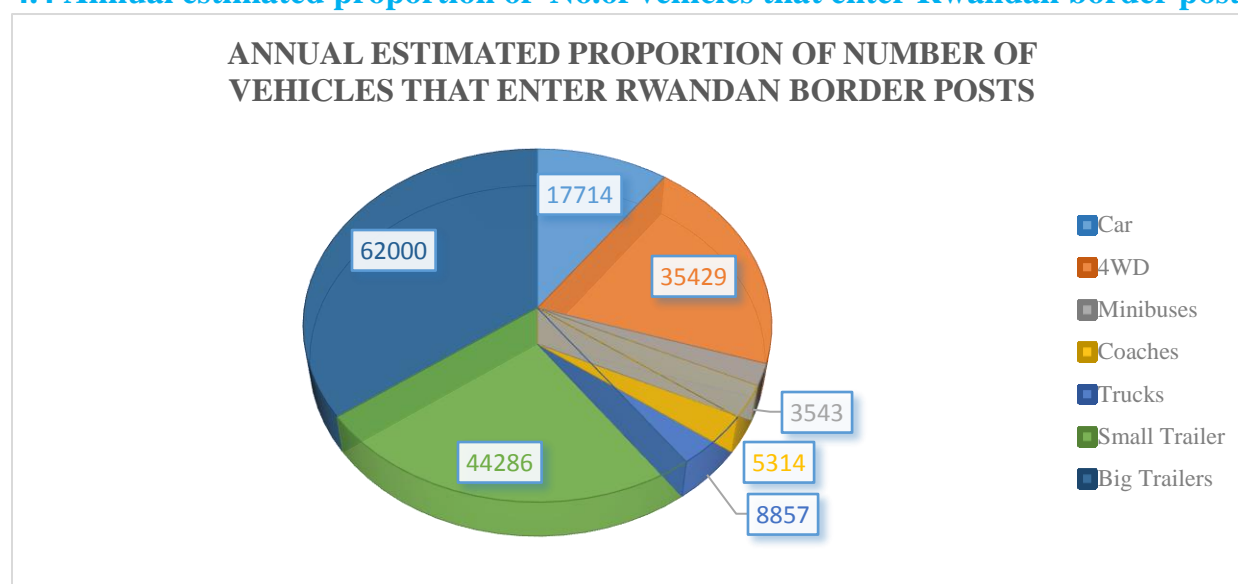


Figure 4: Annual estimated proportion of number of vehicles that enter Rwandan border posts

Source: RRA data.

Currently, there are inconsistencies in the charges imposed on vehicles entering Rwanda's neighbouring countries. In particular, Uganda and Tanzania both impose US\$50 charge on foreign registered buses entering their countries from Rwanda, whereas Rwanda does not. There are further inconsistencies in the charges imposed on different types of trucks (for example, depending on whether they are loaded or not), whilst no charges are imposed on lighter vehicle type. A draft law to harmonise this situation has been submitted to MININFRA to engage concerned stakeholder. If the law is adopted, to charge on US\$50 on minibuses and US\$76 on coaches, (similar to that imposed on Rwandan buses entering Uganda and Tanzania), then based on the estimates above, this would raise approximately extra 500 million FRW.

4.5 RMF past revenues from 2016-2019

It is more significant to have a picture on the past values of the RMF revenues in this strategic plan as long as these numerical data will allow to predict future trend of projected revenues.

Table 4: RMF past revenues from 2016/2019

Period	Past Revenues (Frw)
2016/2017	45,039,446,833
2017/2018	49,289,053,899
2018/2019	52,739,287,672
Average/ Year	49,022,596,135

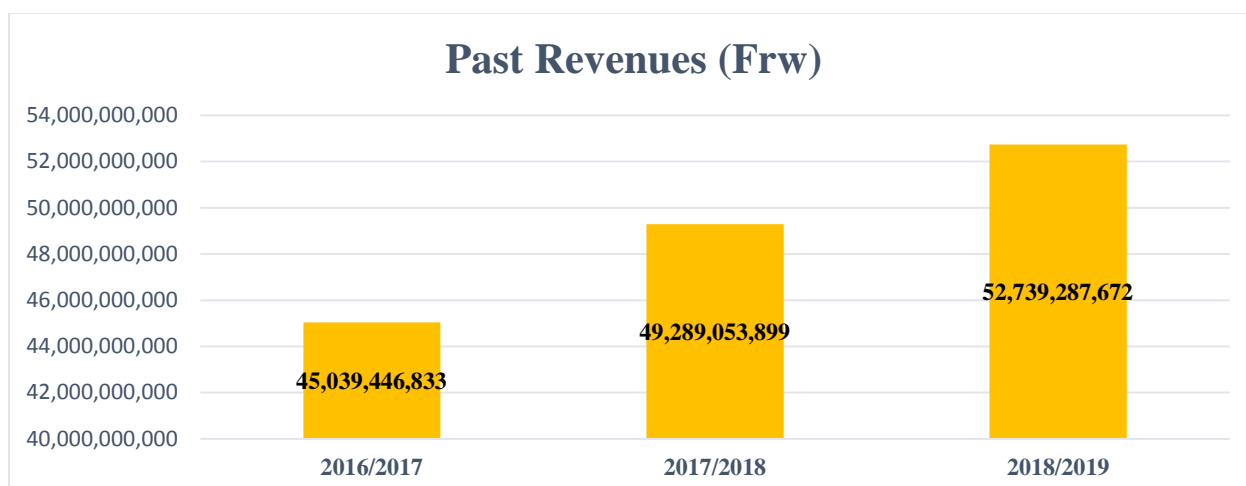


Figure 5: RMF past revenues 2016-2019

As indicated in above figure and table, the Road maintenance revenues in the period of 2016/202019 counted 49,022,596,135 Frw average per year. The computation of these values were based on past variation trend increased by 7% (an increased average, 2016/2017, 2017/2018 and 2018/2019

4.6 RMF Projected revenues from 2019-2026

Table 5: RMF Projected revenues from 2019-2026

Period	Projected Revenues (Frw)
2019/2020	56,431,037,809
2020/2021	60,381,210,456
2021/2022	64,607,895,187
2022/2023	69,130,447,851
2023/2024	73,969,579,200
2024/2025	79,147,449,744
2025/2026	84,687,771,226
Average/Year	69,765,055,924

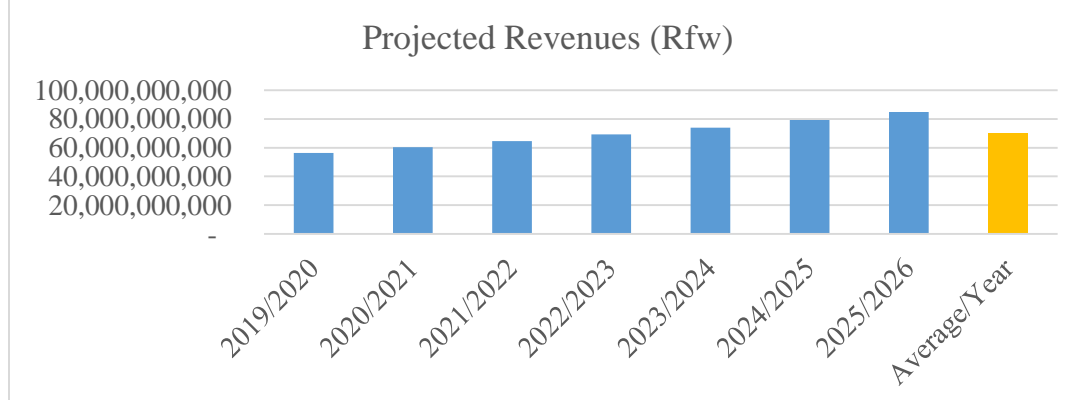


Figure 6: RMF Projected revenues from 2019-2026

As indicated in above figure and table, the Road maintenance revenues in the period of 2019/2026 counted 69,765,055,924 Frw average per year. The computation of these values were based on past variation trend increased by 7% (An increased average, 2016/2017, 2017/2018 and 2018/2019).

CHAPTER FIVE: FUNDING MAINTENANCE OF THE EXISTING AND PROJECTED ROAD NETWORK GROWTH

5.1 Introduction

This chapter responds to the second objective of this strategic plan which has emphasis of “Providing guidance on funding maintenance of the existing and projected road network growth in a competitive social-economic transformation”.

5.2 RMF Current commitments status

The table below indicates current total commitment made by RMF for funding RTDA projects, CoK projects, repayment of RSSB debt and earmarked transfers to Districts for routine maintenance activities on NR and DR1

Table 6: RMF current commitment and implementation status

Client	Total Commitment	Commitment delivered & paid by 2018/2019	Commitment to be carried forward to FY 2019/2020
RTDA Projects	127,998,964,012	88,446,511,494	39,552,452,518
CoK	48,331,840,287	39,509,549,497	8,822,290,790
Routine Maintenance	1,412,606,192	1,300,000,000	112,606,192
RSSB	6,415,349,344	2,205,276,336	4,210,073,008
Total	184,158,759,835	131,461,337,327	52,697,422,508

Source: RMF data.

Table above shows that RMF will carry forward in FY 2019/2020 the commitment amount of Frw 52,697,422,508 which is beyond the Fund’s annual collection.

5.3 Resources disbursement plan

This section sought to identify RMF past and future resource disbursement to its responsible authorities (RTDA, CoK and Districts). This part allowed to determine future projected needs.

5.3.1 The past RMF expenditures trend

It is more significant to put a glance on the past RMF expenditures in this strategic plan as long as these figures will allow to predict future trend of expenditures.

Table 7: The past RMF expenditures trend

<i>Period</i> <i>Client</i>	RTDA		CITY OF KIGALI		DISTRICTS		YEARLY TOTAL FUNDS	
	Amount	%	Amount	%	Amount	%	Amount	%
2013/2014	18,583,165,889	75	5,698,837,539	23	495,551,090	2	24,777,554,518	100
2014/2015	23,918,273,232	75	7,334,937,124	23	637,820,620	2	31,891,030,976	100
2015/2016	26,241,046,867	75	8,047,254,372	23	699,761,250	2	34,988,062,489	100
2016/2017	32,529,586,198	75	9,975,739,767	23	867,455,632	2	43,372,781,597	100
2017/2018	32,466,360,823	75	9,956,350,652	23	865,769,622	2	43,288,481,097	100

Source: RMF Data

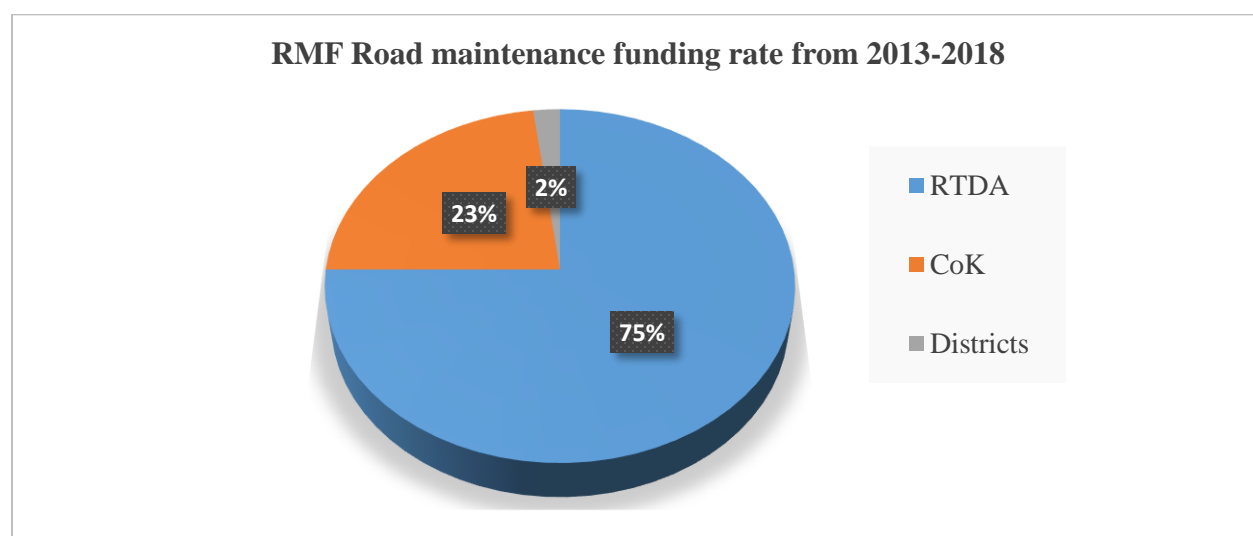


Figure 7: RMF Road maintenance funding rate from 2013-2018

With reference to the past RMF expenditures trend from 2013-2018, results listed in above table and figure showed that each year 75% of total road maintenance funds outflowed to RTDA while 23% were disbursed in City of Kigali and 2% covered road maintenance costs at districts level. These results indicated that the high percentage (75%) were allocated to RTDA which is responsible for the management of all activities within the road transport sector.

5.3.2 RMF projected needs from 2019-2026

Apart from RMF past and future expenditures, this section partly displays projected needs of Road Maintenance from 2019-2026. Results were described in table below;

Table 8: RMF projected needs from 2019-2026

Period	Projected Needs(Frw)
2019/2020	62,939,995,142
2020/2021	71,751,594,462
2021/2022	81,796,817,687
2022/2023	93,248,372,163
2023/2024	106,303,144,266
2024/2025	121,185,584,463
2025/2026	138,151,566,288
Average/Year	96,482,439,210

Source: RMF Data

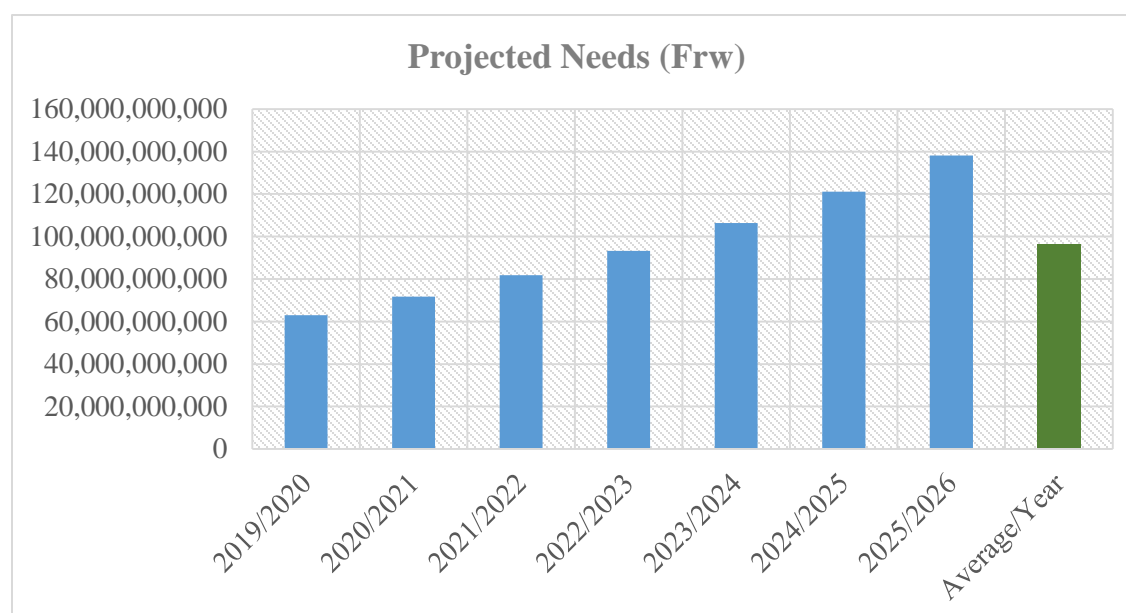


Figure 8: RMF projected needs from 2019-2026

As indicated in above figure and table, the cost of Road maintenance revenues in the period of 2019/2026 counted 96,482,439,210 Frw average per year. The computation of these values were based on past variation trend increased by 14% (by Feeder Road Policy and Strategy for Rwanda). The funding from RMF should increase by 14% per year thereafter by 2026/2027 the RMF will cover maintenance of all roads (FPSR, 2017).

5.3.3 RMF Projected revenues versus projected needs 2019/2026

This table illustrates RMF's expected revenues which are not corresponding with the projected needs for maintenance of roads.

Table 9: RMF Projected revenues versus Projected needs 2019/2026

Period	Projected Revenues (Frw)	Projected Needs (Frw)	Gap (Frw)
2019/2020	56,431,037,809	62,939,995,142	6,508,957,333
2020/2021	60,381,210,456	71,751,594,462	11,370,384,006
2021/2022	64,607,895,187	81,796,817,687	17,188,922,500
2022/2023	69,130,447,851	93,248,372,163	24,117,924,312
2023/2024	73,969,579,200	106,303,144,266	32,333,565,066
2024/2025	79,147,449,744	121,185,584,463	42,038,134,719
2025/2026	84,687,771,226	138,151,566,288	53,463,795,062
Average/Year	69,765,055,924.71	96,482,439,210.08	26,717,383,285

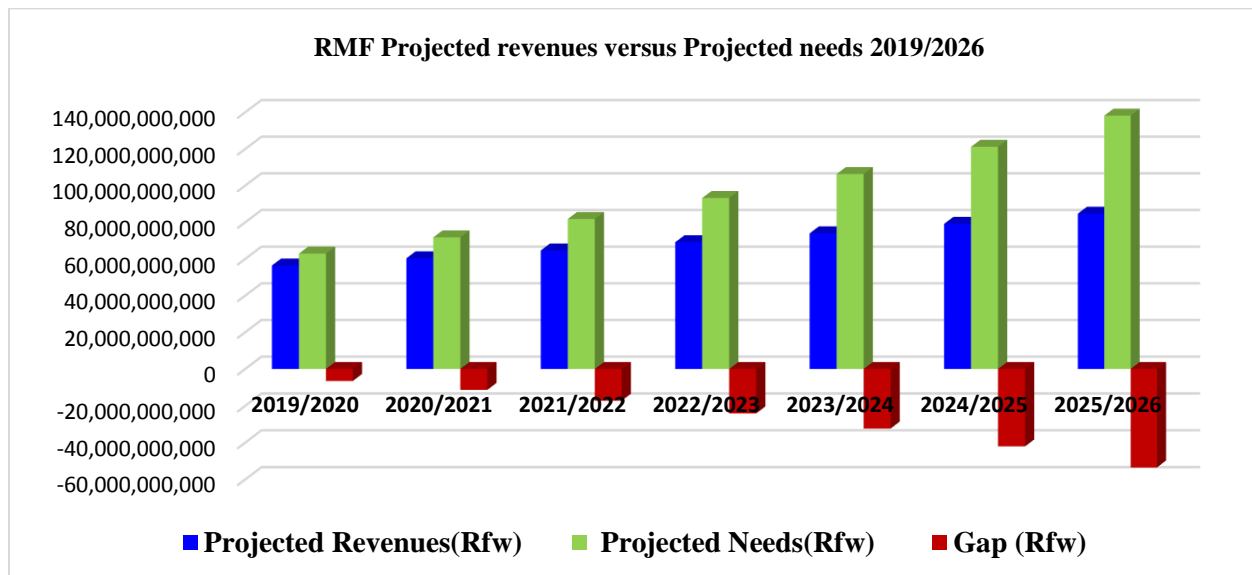


Figure 9: RMF Projected revenues versus Projected needs 2019/2026

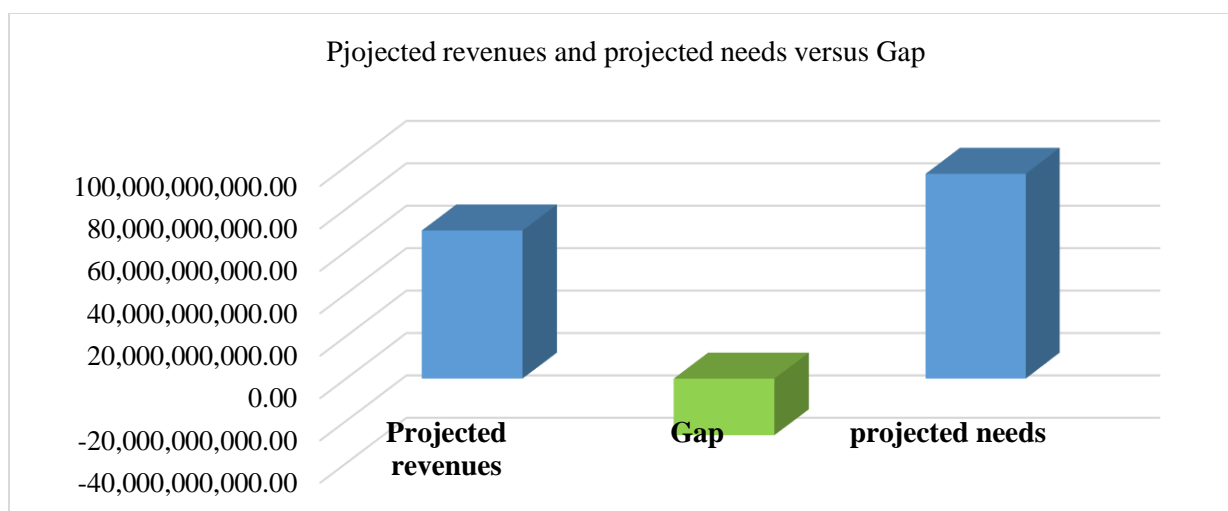


Figure 10: RMF Projected revenues and projected needs versus gap 2019/2026

Results exposed in above table and figure indicate the huge gap (26,717,383,285 Frw) stuck between the yearly average expected revenues (69,765,055,924 Frw) and yearly average expected needs (96,482,439,210 Frw). Opportunely, this strategic plan suggested the strong possible ways of covering the exposed gap.

5.3.4 Mapping the RMF projected needs based on new sources of road maintenance funds

This part highlights revenues dispersal according to the priority of objective implementation versus projected needs. There are also different possible funding options that RMF shall adopt to cover the loading gap related to inadequate revenues for road maintenance in the period of this strategic plan 2019/2026.

5.3.4.1 Recommended sources towards expansion of RMF's Revenues for road maintenance

As much reported in this strategic plan, Road Maintenance Fund take source only from road toll and fuel levies while RMF law allows to exploit vacant and non-activated sources of fund. However, this strategic plan suggested to expand those funding solutions to increase RMF's revenues for slashing down the identified gap of 26.5 billion in the year 2019/2026.

5.3.4.2 Revenues collected from compensation for damages caused to the national road

Table 10: Annually revenues from compensation for damages caused to the national road

Years	Annually revenues (Million-Frw)
2019/2020	700
2020/2021	700
2021/2022	700
2022/2023	700
2023/2024	700
2024/2026	700
2025/2026	700
Total	4,900

Source: Consultant's assumption, 2019

Result presented in the above table underlined that the estimated revenues will be generated from compensation for damages caused to the national road which includes all contraventions paid for national roads' damages such as destroying the trees reserved for environmental sustainability, discharging oil in the road which can cause accident, driving over the road borders and so on... This is estimated to generate about 700 million every year. Therefore, RMF is expected to collect income generation of **4,900 million** (Rfw) throughout this 7 year strategic plan. This source of income is exploited by Rwanda National Police (RNP) and deposited in Government Treasury. This strategic plan recommends that it should be redirected to RMF account for road maintenance.

5.3.4.3 Road maintenance funds retained from each donation and budget of road construction (5%)

Table 11: Road maintenance funds retained from each donation and budget of road construction (5%)

Period	Projected Road funds (USD)	Calculations on the variations by 5% (Million USD)	Revenues per year (Frw)
2018-2019	1,971		-
2019-2020	2,023	2.6	2,353,000,000
2020-2021	2,078	2.75	2,488,750,000
2021-2022	2,074	-0.2	(181,000,000)
2022-2023	2,116	2.1	1,900,500,000
2023-2024	2,158	2.1	1,900,500,000
2024-2025	2,200	2.1	1,900,500,000
2025-2026	2,242	2.1	1,900,500,000
Total		13.55	12,262,750,000
Average per year in Frw			1,752,000,000

Source: Consultant's assumption, 2019

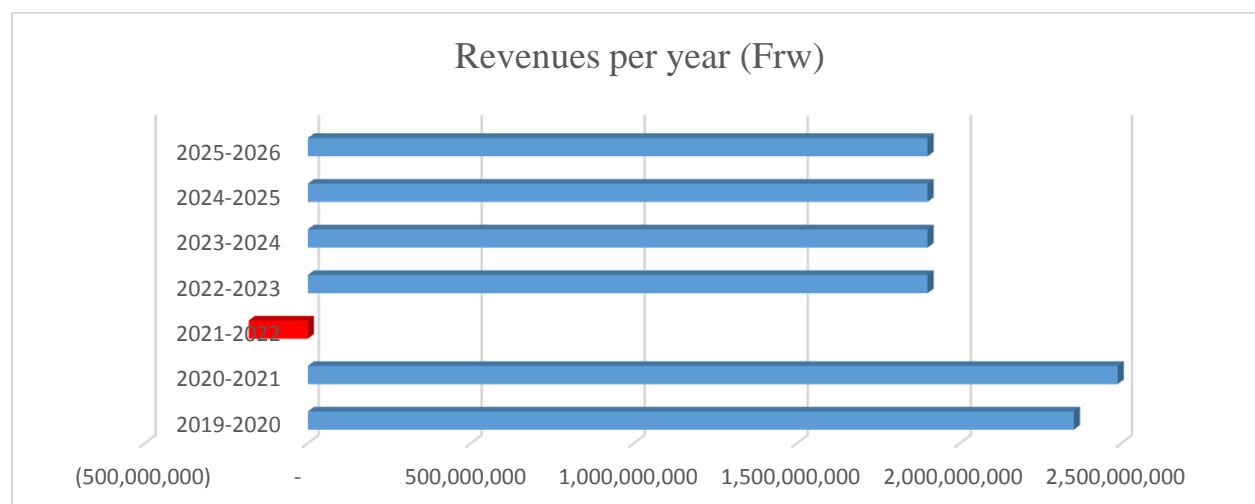


Figure 11: Road maintenance funds retained from each donation and budget of road construction (5%)

This Strategic Plan suggests a percentage of 5% to be retained from each donation and budget for road construction with the purpose of road maintenance. The table and figure above shows the retained yearly income estimates based on the projected road funds in the year 2019/2026. RMF shall collect 12,262,750,000 Frw from this source for road maintenance throughout the years 2019/2026 which gives annually average equals to 1,752,000,000 Frw.

5.3.4.4 Axle load control laws and regulations through weighbridges

Within East Africa it is only in Rwanda that weighbridges are not operational and long-distance drivers abuse the absence of monitoring to overload their trucks with goods, damaging the roads. Whereas other countries in the region spend less than \$1.5 million on each kilometer of road constructed, Rwanda spends \$2 million.

EAC Law Article 90, of Roads and Road Transport of which requires the Partner States to “adopt common rules and regulations governing the dimensions, technical requirements, gross weight and load per axle of vehicles used in trunk roads within the Community” In all EAC countries there is no programme that is strictly adhered to for regular verification and calibration of weighbridges in full conformity with the national weights and measures acts as required by law. Rwanda is yet to construct enough weighbridges as to harmonize its axle load control laws and regulations.

With the implementation of harmonized axle load control, the member states are likely to save over \$1 billion annually, the harmonized axle load control in EAC will enable RMF to retain certain percentage on the estimated USD 1 billion as annually revenues. Probable results are highlighted in table below;

Table 12: Estimation of 1% of revenues from Axle load control laws and weighbridges

Period	Annually revenues (USD)	Annually revenues (905FRw/\$)	1% of Annually revenues (FRw)
2019/2020	1,000,000,000	905,000,000,000	9,050,000,000
2020/2021	1,000,000,000	905,000,000,000	9,050,000,000
2021/2022	1,000,000,000	905,000,000,000	9,050,000,000
2022/2023	1,000,000,000	905,000,000,000	9,050,000,000
2023/2024	1,000,000,000	905,000,000,000	9,050,000,000
2024/2025	1,000,000,000	905,000,000,000	9,050,000,000
2025/2026	1,000,000,000	905,000,000,000	9,050,000,000

Source: Consultant's assumption, 2019

The estimation of road maintenance revenues from Axle load control laws and weighbridges projected USD 1 billion which is proportionally equal to 905,000,000,000 Frw every year. If adopts extraction of 1% of road maintenance funds this will raise 9, 050,000,000 Frw as annually average. If this law is introduced in Rwanda will both reduce the rate of road destruction and increase RMF revenues.

5.4 Source of Road Maintenance funds versus proposed solutions

Road maintenance funds result from different area comprising, Government of Rwanda, Partners and donors. Under, this strategic plan, some solutions were suggested towards expansion of the revenues for roads maintenance.

Table 13: Source of Road Maintenance funds and proposed solutions (in FRw)

Source	2019/2020	2021/2022	22/2023	2023/2024	2023/2025	2025/2026	2026/2027
RMF's expected Revenues	56,431,037,809	60,381,210,456	64,607,895,187	69,130,447,851	73,969,579,200	79,147,449,744	84,687,771,226
Yearly average projected revenues							69,765,055,924RwF
RMF's expected Needs	62,939,995,142	71,751,594,462	81,796,817,687	93,248,372,163	106,303,144,266	121,185,584,463	138,151,566,288
Total of yearly average projected Needs							96,482,439,210FRw
Suggested sources of revenues as solution to the exposed gap							
Track ratification of the new law on road toll	500 Mil	500 Mil	500 Mil	500 Mil	500 Mil	500 Mil	500 Mil
Recovering of annual vehicle registration	4 billion	4 billion	4 billion	4 billion	4 billion	4 billion	4 billion
Increase fuel levy	3.3 billion	3.3 billion	3.3 billion	3.3 billion	3.3 billion	3.3 billion	3.3 billion
GoR	7 Billion	7 Billion	7 Billion	7 Billion	7 Billion	7 Billion	7 Billion
WB	207 Million						
USAIDS	225 Million	225 Million					
Revenues collected from compensation for damages caused to the national road	700.000.000	700.000.000	700.000.000	700.000.000	700.000.000	700.000.000	700.000.000
Road maintenance funds retained from 5% of each donation	2,353,000,000	2,488,750,000	(181,000,000)	1,900,500,000	1,900,500,000	1,900,500,000	1,900,500,000

and budget of road construction							
Estimation of 1% of revenues from Axle load control laws and weighbridges	9,050,000,000	9,050,000,000	9,050,000,000	9,050,000,000	9,050,000,000	9,050,000,000	9,050,000,000
Annually average of revenues from proposed solutions							26,734,000,000 Frw
Annually Gap							26,717,383,285 Frw

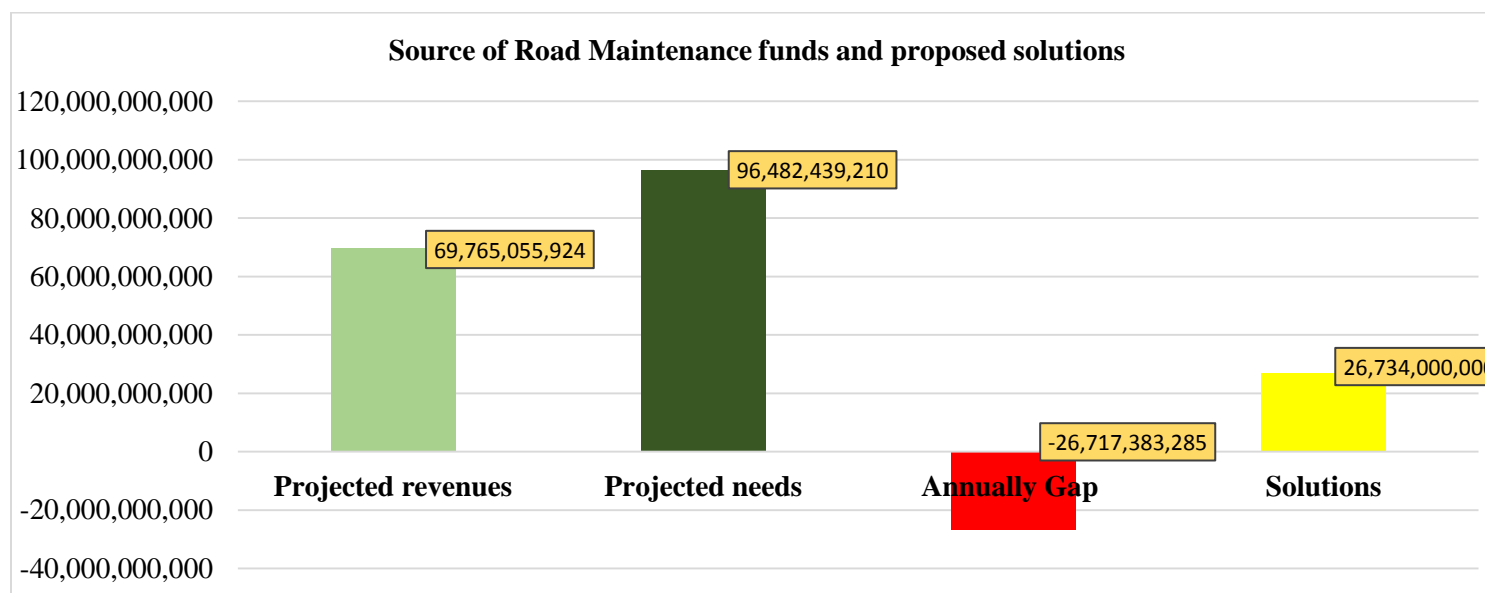


Figure 12: Source of Road Maintenance funds and proposed solutions (in FRw)

Results represents in above table and figure quantified RMF's sources of fund and other sources proposed as solutions in this strategic plan. RMF's sources of fund were categorized in three types; including state budget, donors, fuel levy and road toll. These sources considered not enough to uphold the entire road maintenance needs in the period 2019/2026.

As stated in previous chapters, this work intended to provide guidelines to the institution for maximizing collection of funds and cutting down the growing needs of road maintenance. RMF's annually cost of projected revenues now stands at 69,765,055,924 Frw in the year 2019/2026 while total projected needs counted 96,482,439,210 FRw. Thus, the average of the exposed gap rated 26,717,383,285 Frw.

Concerning this matter, some solutions were suggested to deal with an identified gap. Results from total revenues from suggested solutions counted 26,734,000,000Frw; these financial figures have eventually visualized that the combination of RMF's projected revenues and proposed solutions sufficiently cover the road maintenance gap. However, it's recommended to RMF to consider all precautions and guidelines captured in this strategic plan in order to overcome the imbalance between road maintenance funds and RMF revenues.

CHAPTER SIX: INSTITUTIONAL CAPACITY AND HUMAN RESOURCE DEVELOPMENT

6.1 Introduction

Human Resource is central towards the implementation of the strategy and as such it calls for adequate, knowledgeable and skilled capacity. Human Resource Management is therefore a strategic component that requires support with adequate financial resources and human resource development initiatives. Consequences of not addressing this strategic issue include RMF not being able to deliver on its mandate as well as loss of confidence among stakeholders in the national integration agenda. RMF will endeavor to improve its organizational capacities by establishing the human capital requirements.

This will include deployment and recruitment of the required staff, develop and retain competent staff at all levels, improving knowledge and skills through training and capacity building initiatives and institutionalization of the balanced scorecard performance management system.

6.2 RMF Current Organization Structure

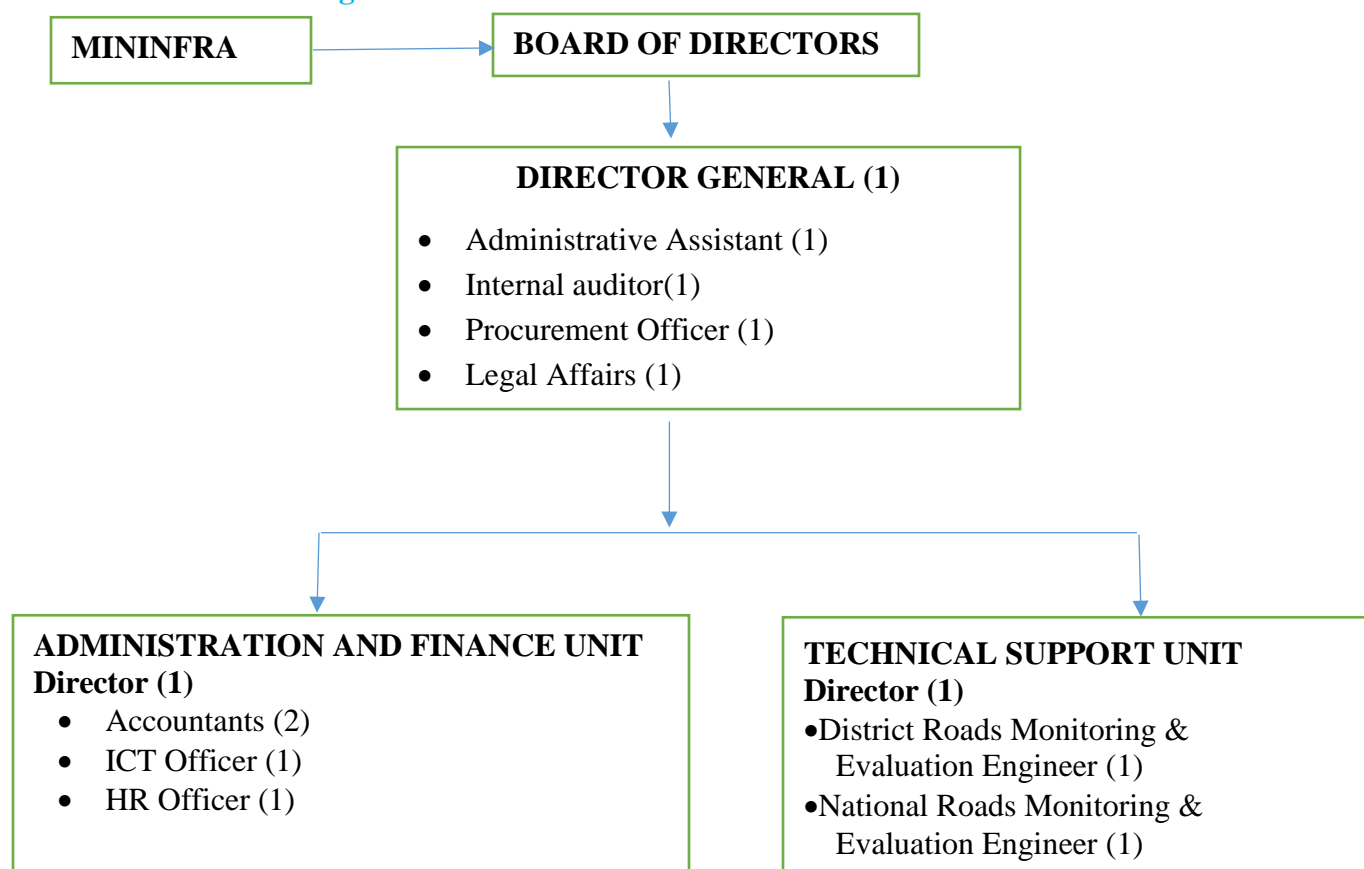


Figure 13: RMF Current Organization Structure

6.3 Review and Analysis of the Organization Process

On the basis of the findings captured in above chapter of this strategic plan that described funds collection, results revealed that the number of RMF staff is not enough to perform new tasks and responsibilities created. Consequently, RMF needs to do as much as possible to strengthen the internal control for covering the vacant positions to complete the current organizational structure.

6.3.1 Staff Development Need Assessment

According to FRSR report (2017) stated that “Road users pay its maintenance” this is also in line with the RMF law which allow this institution to collect road maintenance funds from available sources within the country but currently RMF funds come only from road toll and fuel levies. As mainly narrated in purpose of this strategic plan, guidelines and recommendation are provided to RMF related the maximization of collection of funds and activation of non-functional source of revenues. Therefore, based on these new alternatives of funds collection, RMF is required to make some changes and improvement in organization structure specifically in finance, engineering and investment and fund mobilization.

6.3.2 Decision Making Structure

According to the current organization structure, 2 more accountants are added to support the existing administration and finance unit. Hence, a new department of Investment and fund mobilization is put in place with three staff (Director of Investment and Fund mobilization; Investment and Fund mobilization specialist and public relations officer). The Department of Technical Support Unit is strengthened with new two engineers who will assist in monitoring and evaluation process. (See organization scheme in Figure 13 below).

6.4 New RMF organization structure

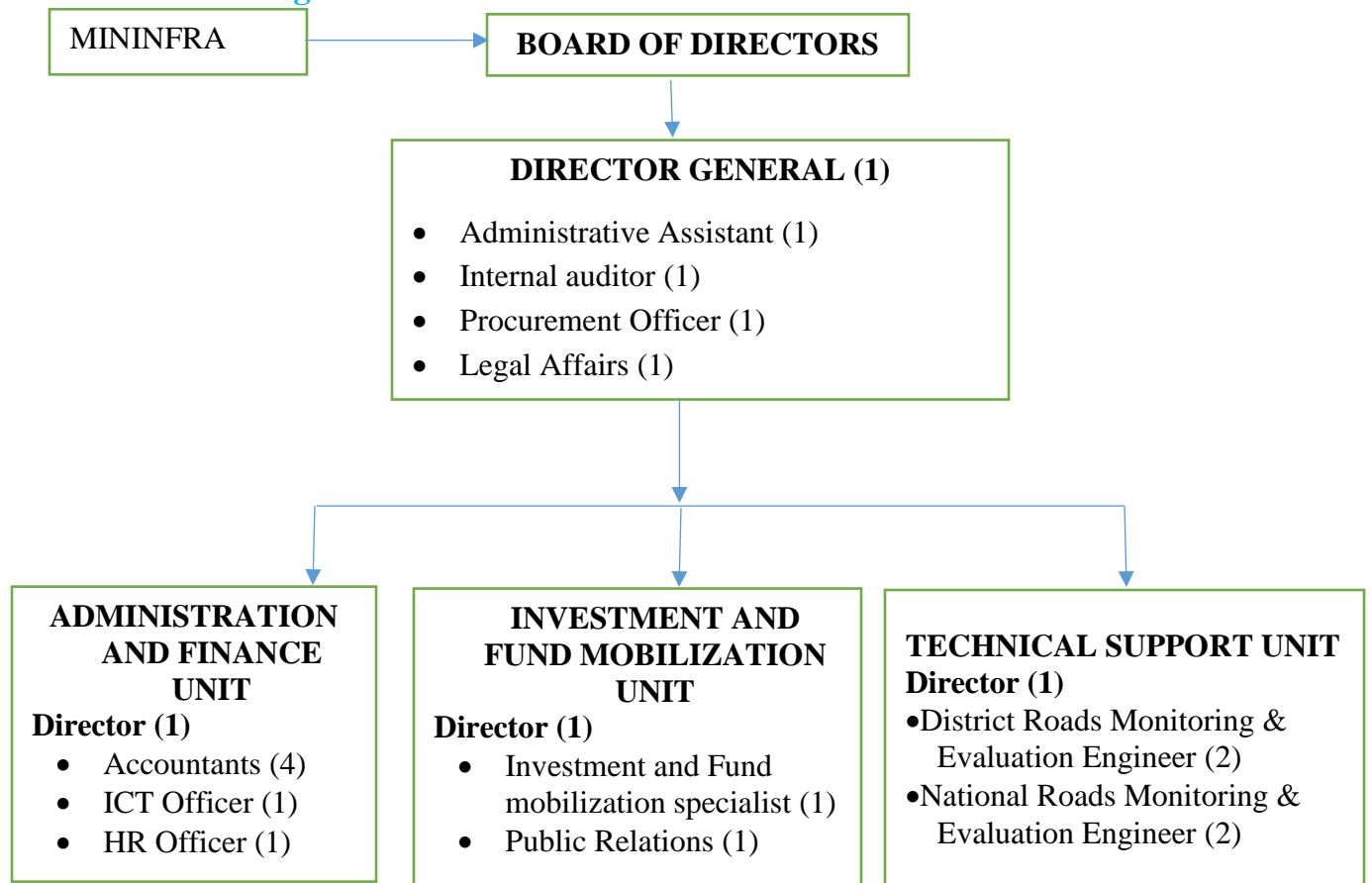


Figure 14: New RMF Organization Structure

6.4.1 Strategy for Expansion

Due to the insufficiency of personnel in the department of Technical support, whereby once these engineers are assigned to conduct a work to the field or in case of annual leaves, the department faces the challenge of unperformed workload specifically monitoring and evaluation which leads to inadequate achievement. Therefore, the inclusion of other more two engineers will solve the problem stated above.

Moreover, the new department of Investment and Fund Mobilization Unit was suggested and this latter is to enhance the collection of revenues and will be the asset to the activation of the other sources of revenues which are currently not exploited.

CHAPTER SEVEN: IMPLEMENTATION FRAMEWORK

7.1 Introduction

Successful implementation of the 2019-2026 RMF Strategic Plan will depend significantly on a practical framework. The Strategy's implementation framework will have a wide spectrum of players in order to allow for maximum participation of all relevant stakeholders. Existing institutional structure including the oversight bodies that undertake regulatory responsibilities will be charged with carrying out their appropriate roles.

Implementation of the strategy will need coherent approaches within and outside RMF to fully exploit its comparative advantages while leveraging the resources and expertise of other stakeholders.

7.2 Institutional Arrangements

The strategy demands coordinated implementation throughout RMF and with external partners. Internal implementation will be undertaken through a collaborative approach providing strategic leadership and direction.

7.3 Resource Mobilization and Allocation

7.3.1 Resource Mobilization

In line with the financial stewardship perspective of the balanced scorecard approach, the integration process requires enormous resources calling for increased mobilization of domestic resources to fund the RMF budget. This includes funds generated from tax, non-tax and local government taxes and fees and fines paid by vehicles demolishing road infrastructure and any other resources that are generated from related activities carried out within the Country. The resource mobilization effort will call for improved efficiency. Extra budgetary resources will consider all types of grants from development partners in terms of both financial and technical support extended to facilitate implementation of RMF activities. Resource mobilization calls for a need to harmonize the activities and synergies across the RMF departments and RMF's key partners.

To undertake resource mobilization the following initiatives will be required;

1. Operationalize a donor coordination mechanism: Allocation of Scarce Resources. Donor coordination is very staff-intensive, so it is best to choose which tables to be at, which issues have priority, where intensive collaboration is needed, and which niches can make a difference with limited resources.
2. Galvanize RMF partners' contributions: enhance channels of communication between various stakeholders in order to further galvanize the collective actions.
3. Mainstream leveraging and unification of donor funds: request of funds such as grant from donors or gathering of funds from different donors.

4. Reviewing and updating the current source of revenues with a view to enhancing the levels of commitments from key stakeholders.

5. In collaboration with RTDA, City of Kigali Council and Districts authorities, conduct national workshops for major companies on the need to contribute financial and technical resources to support the implementation of RMF projects and programs.

7.3.2 Resources Allocation

This assignment will provide the blue print or a road map of resource allocation and how RMF will increase road maintenance funds throughout the usually source and proposed solutions.

As has been noted, RMF usually practices to allocate 75% of the available funds to Rwanda Transport Development Agency roads due to a wider network size that fall under its management and 23% to the City of Kigali for maintenance of roads within the city. The remaining 2% is shared between the routine maintenance of national roads whose management is under the 30 districts authorities and the Fund's administration costs.

7.4 Mapping RMF projected needs to possible funding options

This chapter highlights the Revenues dispersal according to the priority of objective implementation versus projected needs. There are also different possible funding options that RMF shall adopt to cover the gap related to insufficient revenues for road maintenance all over the period of this strategic plan 2019/2026.

7.4.1 Mapping RMF projected needs through resources allocation

With reference to the mapping of this strategic plan, below table highlights the rates of funds disbursement on the basis of strategic objectives achievement.

Table 14: Mapping RMF projected needs through resources allocation

No	Objectives	Percentage	Total cost (Billion-Frw)
1	To provide guidance to RMF on maximisation of the collection of financial resources and solicitation of more resources so as to cover the growing maintenance needs of road network	2%	1.93
2	To provide guidance for funding maintenance of the existing and projected road network growth in a competitive social-economic transformation.	97%	93.6
3	To provide guidance on institutional capacity and human resource development towards effective management of RMF resources.	1%	0.96
Total			96.5

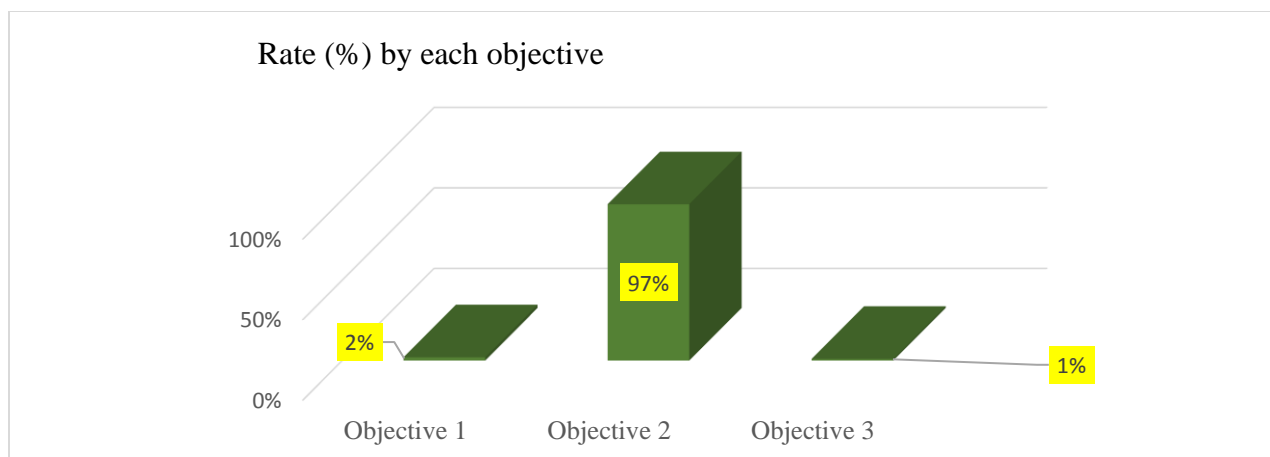
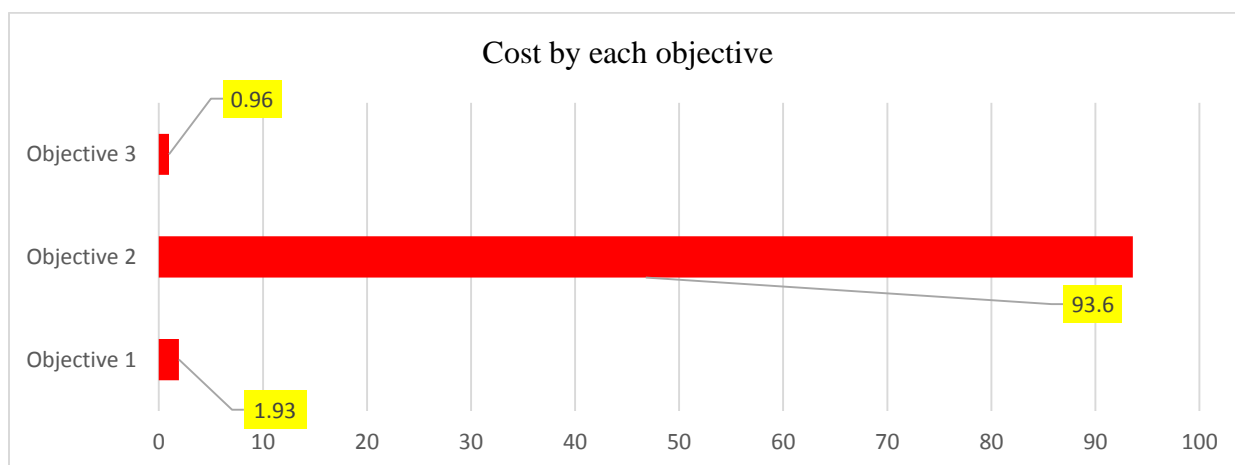


Figure 15: Mapping RMF projected needs through resources allocation



Based on data represented in above table and figures, results showed quantified percentage with respective costs in accordance with the strategic objectives. The first objective was rated 2% equivalently with 1,9Fwr billion of the total cost. The second objective will be covered by 97% of the total cost equivalently to 96.6. Lastly the third objective will be accomplished by 1% which is proportionally to 0.96Fws of the total cost. The rate of fund disbursement was numerically determined on the basis of value of RMF expenditure activities.

7.4.2 Logical Framework

The logical framework describes all details of tasks execution, period and co-relate the activities carried out with respective cost. The logical frame work provides general picture of implementation plan.

Table 15: Logical Framework

STRATEGIC OBJECTIVE 1: To provide guidance to RMF on maximisation of the collection of financial resources and solicitation of more resources so as to cover the growing maintenance needs of road network.											
Performance indicator: <i>Availability of funds to cover road maintenance needs</i>											
Strategic Input	Activities	Output(Results)	Impact(Outcome)	Timeframe							Human resource
				2019/ 2020	2020/ 2021	2021/ 2022	2022/ 2023	2023/ 2024	2024/ 2025	2025/ 2026	
				Cost in (billion-Frws) on 2% of annually projected resources							
Secure an adequate and stable source of funds.	-Set up and computerize fuel and road toll revenues collection systems.	-Revenues maximization realized	-Enhanced and improved operational efficiency	1.2	1.4	1.6	1.8	2.1	2.4	2.8	DAF, DG, DTSU
	-Review and expand the existing operational source of road maintenance funds.	-Increased fuel levy rate from frw 115 to Frw 161.	-Increased funding capacity of road maintenance needs								

	-Activate non-operational sources of funds -Explore new source of funds	-Increased existing funds by 14%									
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STRATEGIC OBJECTIVE 2: To provide guidance for funding maintenance of the existing and projected road network growth in a competitive social-economic transformation

Performance indicator: *Effective road maintenance funds disbursement*

Strategic Input	Activities	Output(Results)	Impact(Outcome)	Timeframe							Human resource
				2019/ 2020	2020/ 2021	2021/ 2022	2022/ 2023	2023/ 2024	2024/ 2025	2025/ 2026	
				Cost in (billion-Frws) on 97% of annually projected resources							
Objective resources allocation	- Finance Routine and Periodic Maintenance executed by RTDA, CoK and Districts	-An estimated annual increase of 7% of road maintenance coverage. -Average of a hundred per cent (100%) of all roads maintained. -Regular reports on the progress of roads maintenance activities	-Improved riding quality -Reduced vehicles operating cost -Increased lifespan of roads -reduced roads maintenance costs	61	69	79	90	103	117	134	DAF & DTSU

	-Monitoring & Evaluation of effective and efficient use of road maintenance funds by respective executing agencies.										
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STRATEGIC OBJECTIVE 3: To provide guidance on institutional capacity and human resource development towards effective management of RMF resources

Performance indicator: *Institutional and human resource capacity enhanced*

Strategic Input	Activities	Output(Results)	Impact(Outcome)	Timeframe							Human resource
				2019/ 2020	2020/ 2021	2021/ 2022	2022/ 2023	2023/ 2024	2024/ 2025	2025/ 2026	
				Cost in (billion-Frw) on 1% of annually projected resources							
Enhancement of institutional capacity.	-Establishment of management Information systems (MIS) within road maintenance procedures. -Establishment of comprehensive	Effective planning, budgeting, monitoring and evaluation	-Efficient resources allocation -Compliance	0.6	0.7	0.8	0.9	1	1.2	1.4	DAF, DG

	institutional legal instruments -Promote RMF corporate identity and brand visibility	-Adherence to established laws, rules and regulations -Increased corporate identity and visibility	-Public awareness of institution capacity								
Enhancement of human resource capacity	-Fill human resource gaps -Develop staff capacity -Motivate and retain institutional personnel	-Fully operating organization structure -Increased skilled staff -Institutional stability	Institutional optimum operating capacity								

The logical framework was established under reflection of three strategic objectives. The first objective aimed at providing guidance to RMF on maximisation of the collection of financial resources and solicitation of more resources so as to cover the growing maintenance needs of road network. The cost estimation of this objective achievement scored 2% of the total cost. The objective two envisioned to provide guidance for funding maintenance of the existing and projected road network growth in a competitive social-economic transformation. And the cost estimation to accomplish this objective valued 97% of the total cost. Lastly, the purpose of third objective is to provide guidance on institutional capacity and human resource development towards effective management of RMF resources. The cost estimation to perform this objective valued 1% of the total cost. The cost estimation of anchored percentage was based on value of the activities embody in each objective. This was the reason why the high percentage (97%) is fixed on the second objective which contained by fundamental and expensive activities of RMF.

7.4.3 Implementation plan of the RMF 7 year strategic plan 2019-2026

The execution plan of the year 2019-2026 of this strategic plan will follow the order of three strategic objectives.

Strategic input	Activity	Required actions	Timeline	Responsible	Output	Budget
Objective 1: To provide guidance to RMF on maximisation of the collection of financial resources and solicitation of more resources so as to cover the growing maintenance needs of road network.						
Secure an adequate and stable source of funds.	Set up and computerize fuel and road toll revenues collection systems	To have full access to Rwanda Revenue Authority fuel and road toll revenues collection systems	2019	RRA, DAF, DG	Revenues maximization realized	Average: 1.93 Billion FRW per each year
		Effective consultations of RRA systems for fuel levy and road toll revenues reconciliation	2019 - 2026	DAF, DG		
		Effective reporting of fuel and road toll revenues collections	2019 - 2026	DAF, DG		
	Review and expand the existing operational source of road maintenance funds.	Estimation of the impact of the current rates of fuel levy and road toll on the actual road maintenance needs	Continuously between 2019 - 2026	DAF, DTSU and Road Agencies	Increased fuel levy and road toll rates	
		Proposition of the new fuel levy rates	Whenever necessary between 2019 – 2026	DAF, DG		
		Proposition of the new road toll rates	Whenever necessary between 2019 – 2026	DAF, DG		
		Draft the new laws on the proposed fuel levy rates	Whenever necessary between 2019 – 2026	DG, MININFRA, Law Reform Commission		
		Draft the new laws on the proposed fuel road toll rates	Whenever necessary	DG, MININFRA,		

Strategic input	Activity	Required actions	Timeline	Responsible	Output	Budget
			between 2019 – 2026	Law Reform Commission		
		Proposition and adoption of the new laws on the proposed fuel levy rates	Whenever necessary between 2019 – 2026	MININFRA, National Assembly		
		Proposition and adoption of the new laws on the proposed road toll rates	Whenever necessary between 2019 – 2026	MININFRA, National Assembly		
Activate non-operational sources of funds	Evaluation of the applicability of the activation of all non – operational sources of funds provided by the RMF Law	2019 - 2020	DAF, DG, DIFMU	Increased existing funds by 14%		
	Elaboration of the roadmap for the activation of all non – operational sources of funds provided by the RMF Law	2019 - 2020	DAF, DG, DIFMU			
	Proposition of the strategies to activate all non – operational sources of funds provided by the RMF Law	2020	DAF, DG, DIFMU			
	Implementation of the strategies to collect revenues from all sources of funds provided by RMF Law	2020 – 2026	DAF, DG, DIFMU			
Explore new source of funds	Conduct a study on the development of a second generation (Upgraded) Road Fund	2019	DG, DTSU, DAF	Increased existing funds by 14%		
	Thorough analysis of the proposals on the study on the on the development of a second generation (Upgraded) Road Fund and submit the proposals on new	2019 – 2020	DAF, DG, RMF Board of Directors			

Strategic input	Activity	Required actions	Timeline	Responsible	Output	Budget
		sources of funds to the competent authorities for approval.				
		Approval of the recommendations of the Study on the development of a second generation (Upgraded) Road Fund on the proposed new sources of funds	2020 – 2021	RMF Board of Directors, MININFRA, MINECOFIN, Parliament		
		Implementation of the approved recommendations of the study on the development of a second generation (Upgraded) Road Fund on the proposed new sources of funds	2021 – 2026	DAF, DG, DIFMU		
Objective 2: To provide guidance for funding maintenance of the existing and projected road network growth in a competitive social-economic transformation						
Objective resources allocation	Finance Routine and Periodic Maintenance executed by RTDA, CoK and Districts	Determination of the yearly roads maintenance needs	Continuously between 2019 - 2026	DTSU, Road Agencies	- An estimated annual increase of 7% of road maintenance coverage. - Average of a hundred per cent (100%) of all roads maintained.	Average: 93.6 Billion FRW per each year
		Set a realistic resources allocation formula for allocating roads maintenance funds to different Road Agencies	2019 – 2020	DG, DTSU		
		Effective planning and budgeting for roads maintenance activities	Continuously between 2019 - 2026	DTSU, DAF, Road Agencies		
		Smart allocation of roads maintenance funds to respective Road Agencies	Continuously between 2019 - 2026	DTSU, DAF, DG		
		Review and visa of road maintenance contracts	Continuously between 2019 - 2026	DTSU, DG		

Strategic input	Activity	Required actions	Timeline	Responsible	Output	Budget
		Payment of Contractors and Consultants’ invoices	Continuously between 2019 - 2026	DTSU, DAF, DG		
		Earmarked transfers to respective Road Agencies where applicable	Continuously between 2019 - 2026	DTSU, DAF, DG		
		Promote the use of appropriate technology and resources in delivery of roadworks	Continuously between 2019 - 2026	DTSU, DG		
	Monitoring & Evaluation of effective and efficient use of road maintenance funds by respective executing agencies	Elaboration and approval of Road Maintenance Fund Financial and Operations Procedures Manual	2019 – 2020	DTSU, DAF, DG, RMF Board of Directors	Regular reports on the progress of roads maintenance activities	
		Set up of clear reporting guidelines for road maintenance activities	2019 – 2020	DTSU		
		Set up of clear working responsibilities between Road Maintenance Fund and respective Road Agencies	2019 – 2020	DTSU, DG		
		Enhance coordination monitoring and evaluation	Continuously between 2019 - 2026	DTSU, DG		
		Strengthen RMF advisory role on all matters related to road maintenance	Continuously between 2019 - 2026	DTSU, DG		
		Timely and effectively reporting of use of road maintenance funds	Continuously between 2019 - 2026	DTSU, DG, Respective executing Road Agencies		
	Objective 3: To provide guidance on institutional capacity and human resource development towards effective management of RMF resources					

Strategic input	Activity	Required actions	Timeline	Responsible	Output	Budget
Enhancement of institutional capacity	Establishment of management Information systems (MIS) within road maintenance procedures	Determination of user requirements for the Management Information Systems	2019 – 2020	DTSU, DAF	<ul style="list-style-type: none"> - Effective planning, budgeting, monitoring and evaluation - Adherence to established laws, rules and regulations - Increased corporate identity and visibility 	Average: 0.96 Billion FRW per each year
		Acquisition of the MIS	2020	DAF		
		Enhance effectiveness of the board of directors	Continuously between 2019 - 2026	DG, RMF Board of Directors		
		Safeguard RMF assets	Continuously between 2019 - 2026	DAF, DTSU		
	Establishment of comprehensive institutional legal instruments	Elaboration and approval of Road Maintenance Fund Financial and Operations Procedures Manual	2019 – 2020	DTSU, DAF, DG, RMF Board of Directors		
		Ensure that the RMF Law is regularly updated	Continuously between 2019 - 2026	DG, DAF		
		Ensure Compliance with laws and policies	Continuously between 2019 - 2026	DG, DAF		
		Strengthen RMF systems and procedures	Continuously between 2019 - 2026	DG, DAF, DTSU		
	Promote RMF corporate identity and brand visibility	Regular update of the Road Maintenance Fund website	Continuously between 2019 - 2026	DG, DAF		
		Regular update and publication of the RMF Service Charter	Continuously between 2019 - 2026	DG, DAF		
		Advertisement of RMF activities in various media	Whenever necessary	DG, DAF		

Strategic input	Activity	Required actions	Timeline	Responsible	Output	Budget
			between 2019 – 2026			
Enhancement of human resource capacity	Fill human resource gaps	Recruitment of staff as per the approved RMF Organizational Structure	2019	DAF		
		Approval of the proposed new RMF Organizational Structure	2019 – 2020	DAF, DG, RMF Board of Directors, MININFRA		
		Recruitment of staff as per the new approved RMF Organizational Structure	2020	DAF, DG		
	Develop staff capacity	Thorough analysis of capacity gaps and objective determination of the trainings required	2019 – 2020	DAF		
		Effective planning for the RMF capacity building	2019 – 2020	DAF		
		Conduct trainings for RMF staff	Continuously between 2019 - 2026	DAF		
	Motivate and retain institutional personnel	Institutionalize performance based management	Continuously between 2019 - 2026	DAF, DTSU, DG		
		Raise and sustain employee satisfaction	Continuously between 2019 - 2026	DAF, DTSU, DG		
		Determination and proposal for approval of incentives for the staff	2019 – 2020	DAF, DG		
		Approval of the incentives for the RMF staff	2021	RMF Board of Directors, MININFRA, MIFOTRA, Cabinet		

7.5 Accountability

Accountability for the implementation of this plan and the use of resources will be critical since it will require proper integrity in utilization of financial, human and material resources. This demands that all stakeholders in the national integration agenda take responsibility and be accountable for the use of resources. All institutions including RTDA, City of Kigali and Districts will account for all resources in accordance to the laid down regulations and procedures.

Part of accountability requires optimum utilization of resources which additionally is in line with the financial stewardship perspective of the balanced scorecard approach. Optimization of resources covers all aspects of financial management of RMF including improving the budgeting process, avoiding wastage and ensuring value for money in all operations, programmes and projects.

7.6 Communication Plan

This section entails the dissemination of information and raising awareness and level of knowledge of the public which is a prerequisite in mobilizing their participation. RMF will use multiple communication channels to disseminate knowledge by popularizing the Strategic Plan 2019-2026 and advice stakeholders including RMF staff, Key stakeholders and the public of key activities and their benefits.

Table 16: Communication with Stakeholders and Partners

Stakeholders	Message (What)	Medium (How)	Schedule
MININFRA	Laws, Rules, Regulations, Status Reports, corporate issues	Formal Paper, Meetings Email, Workshops, Seminars	Monthly, Quarterly (For quarter reports)
Public	Publications	Newspapers, Media, Radio, Internet, Sensitization, Website	As required
Partners			
RTDA	Roles, Responsibilities, Progress reports, Issues,	Meetings, Email, Workshops, Seminars	Monthly; Weekly (For status reports);
CoK	Roles, Responsibilities, Progress reports, Issues	Meetings, Email, Workshops, Seminars	Monthly

Districts	Roles, Responsibilities, Progress reports, Issues	Meetings, Email, Workshops, Seminars	Monthly
Internal communication			
Internal staff	Per diem Activities	Staff Meetings, Face to face, emails	Daily (For daily activities) Weekly (For weekly reports) Monthly (For monthly Reports)

7.7 Monitoring and Evaluation

7.7.1 Monitoring

Monitoring the implementation of the Strategic Plan constitutes systematic tracking of activities and actions to assess progress. This shall entail routine data collection and analysis on the progress of the implementation of the Strategic Plan. Regular reporting at all levels is necessary for follow-up and record keeping. To facilitate this, each department shall:

- Develop an annual work plan with appropriate targets, activities, performance indicators and budgets as derived from this plan.
- Progress for each action/activity shall be measured against specific targets and schedules included in the plan.
- This is followed by analyzing and reporting of information to various users.
- The reporting shall be done quarterly, half-yearly and yearly to Management as well as to the Board.
- Results from the analysis shall then be used to inform decision-making, help to identify difficulties and problem areas and to take immediate corrective action where deviations in implementation have been noted thereby ensuring that targets are achieved.
- The RMF shall implement a computerized system to enhance monitoring, evaluation and reporting of Strategic Plan implementation progress.

7.7.2 Monitoring and Evaluation Team

For the Strategic Plan to be effectively implemented, Monitoring and Evaluation shall be coordinated by the monitoring evaluation and reporting committee appointed by the Directors of board and coordinated by the Director General. The committee shall ensure that strategies are being implemented, performance is being measured, progress reports are made and discussed, and corrective action is taken where necessary. The departments responsible must be accountable for the completion of stated tasks in the Strategic Plan.

Appropriate linkages shall be established to ensure relevant internal and external follow-ups and controls. The overall responsibility of overseeing and managing the monitoring and evaluation of the Strategic Plan lies with the Board.

7.7.3 Cascading the Plan to all Staff

The Strategic Plan must adapt to individual work plans for effective implementation. The Plan shall therefore, be cascaded downwards to the lowest levels. This will help each member of staff to understand and plan for their respective roles.

7.7.4 Linking M&E to Performance Management

For the implementation of the Plan to be effective, the M&E will be an integral part of RMF's performance Management system and will be linked to staff appraisal and reward systems. The Board will monitor and evaluate its activities and performance in the process of reporting on its performance contract on monthly and annual basis. The tracking of the Strategic Plan will be regularized to become part of this process.

CHAPTER EIGHT: SUCCESS FACTORS, RISKS AND ASSUMPTIONS

8.1 Introduction

This section is partly mirrors possible alarming components which can affect negatively and positively the execution of this strategic plan. These success factors, risks and assumptions were highlighted to ease track of strategic plan implementation.

8.2 Risk Management

There are several risks to the implementation of this strategic plan, including the timely availability of resources and human resource capacity. This requires that possible risks are analyzed to take precautionary measures in good time and prevent failure of the plan's implementation.

All entities face uncertainty in the course of implementing their strategies and the challenge for management is to determine how much uncertainty the entity is prepared to accept as it strives to grow stakeholder value. Commitment to robust enterprise risk management during the implementation of this Plan is needed to ensure that RMF is proactive in identifying and managing the risks to which it is exposed. This gives the Executive Management an opportunity to design a 'mitigation strategy' to assist RMF to direct resources and effort effectively and ensure that possible crises are averted. Identifying strategic risks is only the first step in the process. The priorities following the identification of the key strategic risks are to ensure that improvement plans are continuously developed for those control structures that are considered inadequate.

The inherent nature of the risk is the assessment of the risk without specific, focused controls/interventions in place. The residual nature of the risk is the assessment of the risk taking into account the existing controls/ interventions and their perceived effectiveness. The larger the difference between the inherent and residual risk factors, the more effective the controls/interventions in place are perceived to be, and therefore reliance placed on the controls/interventions. The smaller the difference between the inherent and residual risk factors, the more management action and improved control/intervention effectiveness is needed to ensure that the risk is properly managed.

7.2 Success Factors:

Road Maintenance Fund (RMF) has identified the following success factors:

- The transport sector is in continual growth, which goes together with the following components.
- Growth in the transport sector in which the Road Maintenance Fund operates.
- Prosperity and sustainability in the long term and this requires a strong commitment to funds mobilization and management as well as an effective and efficient collaboration of different stakeholders towards achieving RMF objectives.
- Understanding and ownership of the strategic goals and objectives by all those who are involved in the implementation;

- Commitment from RMF's partners as it is required for implementation of RMF's initiatives and achievement of outcomes;
- Effective control of RMF's expenditure through, among others, reduction and/or elimination of resource wastage and/or efforts duplication;
- Regular review, performance oversight, measurement, evaluation and reporting relating to the Strategic Plan;

7.3 Assumptions

In order to effectively implement this strategic plan, the following assumptions were drawn:

- Continued support from ministry in charge of infrastructure;
- Continued support from development partners;
- Stability of RMF's infrastructure;
- Seek ways to broaden and review the existing revenue base and tariffs levied
- Undertake periodical reviews on the progress of the roads being maintained throughout the country
- Put in place efficient mechanisms for revenue collection
- Follow and implement the government of Rwanda Vision 2050 and NST1 policies with regard to developing and maintaining road infrastructures
- Undertake monthly financial reporting and reconciliation of our revenue and expenditures
- Put in place and develop tools (program and financial tools) that will enable RMF to meet its vision, goals and plans
- Lay down and discuss a road map with our beneficiaries/partners and stakeholders.

In addition to setting the direction for RMF's effective functioning, the plan also serves as a resource allocation guide for the whole institution. It indicates how the resources available, both human and financial, will be utilized to achieve the Fund's objectives. In so doing it seeks to ensure that resources are deployed in the right places and in a productive manner, thus furnishing a framework for guiding the institution's thinking and action, thereby preventing it from straying into activities it cannot properly do or those which do not contribute to organizational strategic goals.

CHAPTER NINE: CONCLUSION AND RECOMMENDATIONS

The focal purpose of this strategic plan is to provide guidance on collection of financial resources, funding road maintenance and institution capacity and human resource development. The objectives achievement was done on the basis of Scored Cards methodological approach each objective goes pair with its respective strategic pillars such as: the effective road maintenance funds disbursement, availability of funds to cover roads maintenance needs and institutional and human resource capacity enhanced.

The objective one aims at providing guidance to RMF on maximisation of the collection of financial resources and solicitation of more resources so as to cover the growing maintenance needs of road network. Current results indicate that between 2009/2010 and 2017/2018, RMF revenues have improved by 273%. Major increment was due to 82% increase in fuel levy rate from 63 Rwf/litre to 115 Rwf/litre on 3rd March 2016. The resultant consequence increased the budget and capacity to finance road maintenance activities. Current data showed that Rwanda's road network projected asset value is estimated to approximately US\$1.8 billion (1.584 Trillion FRW). This is expected to rise to approximately US\$ 2.242 billion (1.848 Trillion Frw) in 2026.

Current data exposed that road network is progressively growing in Rwanda as indicated by the year 2018 which has an asset value scored 1,876 billion (USD) and 2026 the asset value will steadily touched 2,242 (USD). Findings revealed that for covering the entire funds of road network; the government is likely required to increase 0,22 % each year for covering the entire road network funds in 2019-2026. The past RMF revenue collection trend were increased at 7% and the projected revenues rated 69,765,055,924 Frws as annually average from 2019-2026. These values proved right the high disequilibrium between road network growth needs and projected revenues in the same period.

The emphasis of second objective was to provide guidance for funding maintenance of the existing and projected road network growth in a competitive social-economic transformation. With reference to the past RMF expenditures trend from 2013-2018, results showed that 75% of total road maintenance funds outflowed to RTDA while 23% were disbursed in City of Kigali and 2% covered road maintenance costs at districts level. These results indicated that the high percentage (75%) were allocated to RTDA which is responsible for the management of all maintenance activities. On basis of FPSR (2017), to cover the entire road maintenance needs in 2019-2026 RMF is expected to increase by 14% on its annually revenues to cut down a huge variation gap of 26,717,383,285 Frw stuck between the yearly average expected revenues (69,765,055,924 Frw) and yearly average expected needs (96,482,439,210 Frw). Opportunely, this strategic plan suggested possible intervention means of covering the exposed gap.

In this regards, figures showed that RMF's annually cost of projected revenues now stands at Frw 69,765,055,924 in the period 2019/2026 while total projected needs counted FRw 96,482,439,210. Thus, the average of the exposed gap rated 26,717,383,285 Frw. Concerning this matter, some solutions were suggested to deal with the identified gap. Results from total revenues of suggested solutions counted 26,734,000,000Frw; these financial figures have eventually pictured that the

combination of RMF's projected revenues and proposed solutions sufficiently cover the road maintenance gap. However, it's recommended to RMF to consider all precautions and guidelines captured in this strategic plan in order to overcome the imbalance between road maintenance funds and RMF revenues.

The last objective point out the institutional capacity and human resource development, on the reflection of the findings of second objectives of strategic plan, results revealed that the number of RMF staff is not enough to perform new tasks and responsibilities created. Consequently, RMF needs to do as much as possible to strengthen the internal control for covering the vacant positions to complete the current organizational structure, 2 more accountants are added to support the existing administration and finance unit.

The new department of Investment and fund mobilization is put in place with three staff including Director of Investment and Fund mobilization, Investment and Fund mobilization specialist and public relations officer. The Department of Technical Support Unit is strengthened with new two engineers who will assist in monitoring and evaluation process.

A part from what is described above, now it comes on the side of implementation plan. Successful implementation of the 2019-2026 RMF Strategic Plan will depend significantly on a practical framework. Implementation of the strategy will need coherent approaches within and outside RMF to fully exploit of its comparative advantages while leveraging the resources and expertise of other stakeholders.

Additionally, the rate of fund disbursement was numerically determined on the basis of value of RMF expenditure activities. The first objective was rated 2% equivalently with 1,9Frw billion of the total cost. The second objective will be covered by 97% of the total cost equivalently to 96.6. Lastly the third objective will be accomplished by 1% which is proportionally to 0.96Fws of the total cost. It was observed that high percentage (97%) is fixed on the second objective which mirrors the main and fundamental activities of RMF.

Hence, the accountability for the implementation of this plan and the use of resources will be critical since it will require proper integrity in utilization of financial, human and material resources.

RMF will also use multiple communication channels to disseminate knowledge by popularizing the Strategic Plan 2019-2026 and advice stakeholders including RMF staff, Key stakeholders and the public of key activities and their benefits. Furthermore, the Strategic Plan to be effectively implemented, Monitoring and Evaluation shall be coordinated by the monitoring, evaluation and reporting committee appointed by the Directors of board and coordinated by the Director General.

Based on findings related to the results on each objective, the following recommendation can be made regarding to Road Maintenance Fund;

Referring on the Article 1 of Law N° 12bis/2014 of 19/05/2014 modifying and completing Law N° 49/2013 establishing Road Maintenance Fund (RMF) and determining its mission, organization

and functioning which states Road Maintenance Fund financial resources; RMF is recommended to maximize the collection of road maintenance funds from other non-activated sources of funds because revenues coming from fuel levies and road toll are not enough compared to Road maintenance needs.

The combination of RMF's projected revenues and proposed solutions is a major start point and the best alternative for covering road maintenance gap. However, it's recommended that RMF should consider all precautions and guidelines captured in this strategic plan in order to overcome the imbalance between road maintenance funds and RMF revenues.

The implementation of a 7 year RMF Strategic Plan will depend significantly on a practical framework. Implementation of the strategy will need coherent approaches within and outside RMF to fully exploit of its comparative advantages while leveraging the resources and expertise of other stakeholders, public of key activities and their benefits. Furthermore, the Strategic Plan to be effectively implemented, M&E and follow up is practically necessary.

APPENDICES

APPENDIX I: Proposed way forward-short term, medium term and long term

This plan considers short term to be between 1 to 3 years, medium term between 3 to 5 years and long term between 5 to 7 years.

Table 17: Proposed way forward-short term, medium term and long term

PROPOSED WAY FORWARD			
Short term	1.	Recovering of Compensation for damages caused to the national road network.	Extra additional amount is not yet ascertained
	2.	There should be a clear definition of eligible road maintenance works and the available resources should be used for these works only	On average this would add approximately extra Rfw15 billion every year on road maintenance budget.
	3.	Fast track ratification of the new law on road toll charges [Impose road toll charges on minibuses(US\$50) and coaches(US\$76) entering Rwanda from neighbouring countries]	This would add approximately extra Rfw 500 million every year.
	4.	The increase of the fuel levy from the current fixed rate of 115 Rfw/Litre represented 14% of the pump price which was 826Rfw per litre in march 2016. Presently the pump price has increased to 1,132 Rfw for super and 1,148 Rfw per litre for gas oil. If the same percentage is applied on the current pump price just to adjust for the effect of inflation, the current charge would be 161 Rfw per litre. An increment of 28.5%	This would add extra 28.5% on the fuel levy collection which would be approximately Rfw 3.3 billion every year.
	5.	Recovering of Axle road control fees(overloading charges)	Extra additional amount is not yet ascertained
Medium term	1.	A certain percentage of Road maintenance contribution should be pegged on donor funded road development projects.	Extra additional amount is not yet ascertained
	2.	Recovering annual vehicle registration charge	This is one of the key sources of revenues for road maintenance funds in other countries. This charge existed previously but was dropped some years ago to simplify the taxation system and streamline administration. Decision makers

			should consider engaging the Ministry of Finance and Economic Planning to reintroduce this charge and would add extra approximately between 3 to 4 billion Rfw every year.
Long Term		Explore the possibility of acquiring loans as stipulated in the law that establishes the fund.	RMF is one of the institution that build a back bone of infrastructure development of the country, above all the institution has routine revenues permitted by law to perform its mandate. With collaboration between main stakeholders, RMF should imply an effective accountability and effective methods in revenues collection. This will be more significant for institution to know precisely the constant value of entrance revenues each year. Therefore, in the long run RMF should explore the possibility of acquiring loans as stipulated in the law that establishes the fund.

APPENDIX II: List of strategic partners

No	Stakeholders	Role and responsibilities	Input	Output
1	RRA	Collection of road maintenance funds	<ul style="list-style-type: none"> ▪ Fuel levy ▪ Road toll charges 	<ul style="list-style-type: none"> -Timely collection of Road maintenance funds -Timely reporting
2	RNP			
3	MININFRA	Maintenance, construction and rehabilitation of roads	<ul style="list-style-type: none"> ▪ National roads ▪ Districts roads 	<ul style="list-style-type: none"> -Rules and regulations -Timely disbursement of Road maintenance funds -Leadership and support -Effective role definition and mandate to achieve common goal -Timely provision of quality works and services
4	RTDA			
5	RURA			
6	LODA			
7	MINALOC			
8	Contractors & supervisors			
9	COK			
10	DISTRICTS			
11	MIFOTRA	Human resource and administration	<ul style="list-style-type: none"> ▪ Accounts and finance staff ▪ Technical staff ▪ Support staff 	<ul style="list-style-type: none"> -Collaboration and support -Effective and efficient service delivery -Compliance with RMF act and other relevant guideline
12	PSC			
13	Consultant			

APPENDIX III: Specific role of RMF key partners

MININFRA (Ministry of Infrastructure)

- It is the supervising Ministry.
- As the main authority, the ministry of Infrastructure performs the planning and programming.
- It organizes the preparation of tender document and procurement for maintenance works.
- The Ministry of Infrastructure also supervises monitoring and evaluation

RTDA (Rwanda Transport Development Agency)

- Management of all activities within the road transport sector

MINECOFIN (Ministry of finance and Economic planning)

- It performs planning and Management of Governmental contribution on Road maintenance budget.

KIGALI CITY COUNCIL

- As the Road authority for City roads in Kigali, It performs the planning, programming, management and supervision of maintenance works for Kigali City road network.

DISTRICTS

- They do programming and management of district roads
- They organize local contributions to the district roads maintenance.

OTHER PARTNERS (World Bank, European Union, African Development Bank)

- Support RMF by technical assistance and financial contribution in Capacity building and road maintenance, a legal framework of RMF should be established in different document.

APPENDIX IV: Training agenda

Staffs	Output	Challenges	Type of training	Cost (Million)	Period
DAF, Administration and finance and technical support unit	Increased knowledge on collection of financial resources	There is a need in increasing knowledge on activation of non-operational source of funds and exploration of new source of funds.	Revenues sources exploitation and funds disbursement strategies	60 Frw	2019-2020
Administration and finance unit and Investment and fund mobilization unit					
Administration and finance unit and technical support unity, RTDA, City of Kigali and Districts		There is a need of knowledge on computerize fuel and road toll revenues collection systems	Revenue collection information system		
- Internal auditor - Procurement Officer		There is skills gap on management Information systems (MIS) within road maintenance activities	MIS training		
DAF, -Administration and finance unit , -Technical support unity, - Partner and stakeholders -Investment and fund mobilization unit	Effective resource collection and management	There is a need of improving resources collection and management at boarder post to ensure timely reporting and funds utilization	Revenues collection and management system	70 Frw	2021-2022
- Administration and finance unit , -Partner and stakeholders	Increased knowledge to grow RMF source of revenues.	There is a need of increasing sources of revenues that should facilitate RMF to fulfil its mandate effectively	Planning and investment strategies		

Administration and finance unit and technical support unit	Increased knowledge on effective resource management	There will be the needed update of knowledge to monitoring and evaluation	Trainings on M & E system	80 Frw	2022-2023
New staff from RMF and Cok, RTDA and districts	Enhanced working experience of new employees	Challenges related to knowledge of new personnel	Revenues collection and management system	90 Frw	2023-2024
RMF Board of Directors, Technical support unit and Administration and finance unit	Conducted study on the development of a second generation (Upgraded) Road Fund	Challenge related to possibility of acquiring loans as stipulated in the law that establishes the fund	Mechanisms of sealing cracks and raveled surfaces of old pavement using chip seal	170 Frw	2024-2026