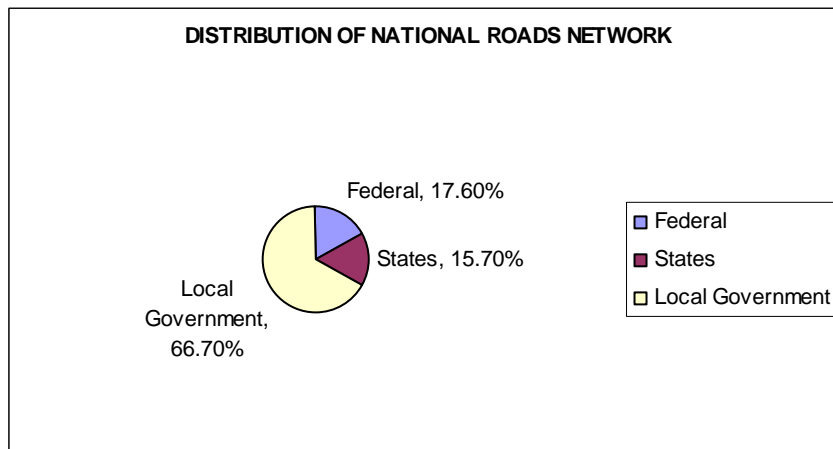


MAINTENANCE AND MANAGEMENT STRATEGY OF FEDERAL ROAD NETWORK

The Agency is proposing a strategy that will enhance the effective and efficient management and maintenance of the Federal road network through involvement of private sector participation. This is a series of short, medium and long term strategies designed to improve and protect the huge investment on the Federal roads network. It is a series of strategies aimed at keeping the roads motorable all the year and gradual recovery of those in poor state with the process of Roll-on, Roll-off maintenance management system that will promote the national objective for a good, safe and efficient road network within the next 8-10 years.

It is important to briefly discuss how we get to where we are in order to know the way forward. The government at various levels have invested huge sum of money in the national road network. The major road infrastructure development in the country took place between 1970 and 1982. This was when the major roads and bridges were constructed to link the various parts of the country. Since then a lot of kilometer of roads and bridges have been added to the network. The national network is currently estimated to be 194,200km with an estimated asset value of N4,567billion out of which 34,120km (17.6%) is Federal Roads with asset value of N2,214billion. The State roads account for 30,500km (15.7%) with estimated asset value of N1,261billion while the Local and Rural roads cover 129,580km (66.7%) for N1,092 billion. However, the Federal roads network carries 70% of freight in the country. It is therefore necessary to protect this asset and investment on a long term basis for the future generations.



The life spans of any Federal roads are between 10 to 15 years, while that of the bridges are much more. With best design and construction method, adequate routine and periodic maintenance are necessary to attain the design life spans and even beyond. It is rather unfortunate that from end of 80s to middle of 90s little provisions were made to protect the huge investment on roads. Within this period the Highway Department of Federal Ministry of Works received less than 30% of the requirement for the maintenance of the federal network. In some years there was no fund provided for maintenance of Federal roads. This hampered effective programming of maintenance of federal road network. Subsequently the life spans of the roads were exhausted hence the almost total collapse of the road network. The efforts of PTF did little to salvage the situation.

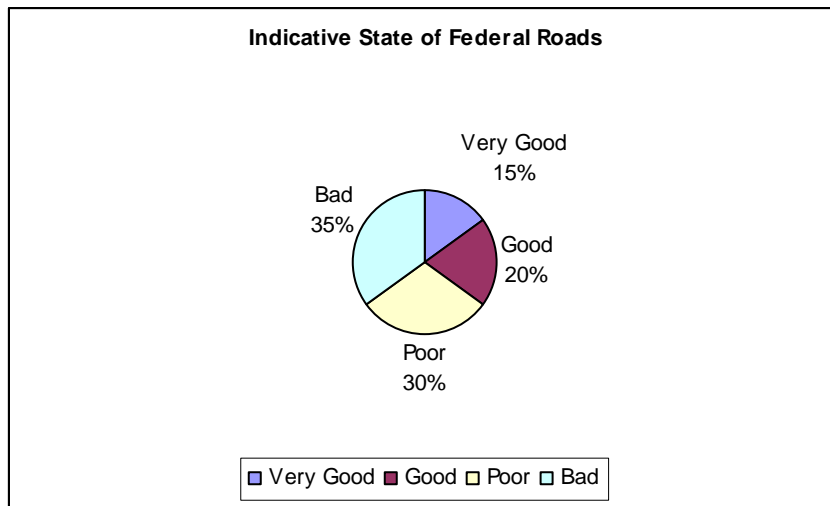
Between 1999 and 2002 a lot of investment was made on road infrastructures. These investments were informed of construction, dualisation, improvement and rehabilitation of some part of the federal network of roads. This is with the view to further salvage the condition of the roads which had gone so bad. The various interventions then did not adequately address the need for the maintenance of the federal road network, hence the Federal Roads Maintenance Agency (FERMA) was created in

November 2002 (Establishment Act 2002) to monitor and maintain Federal Roads network.

SHORT TERM ROAD MAINTENANCE STRATEGY (STRMS).

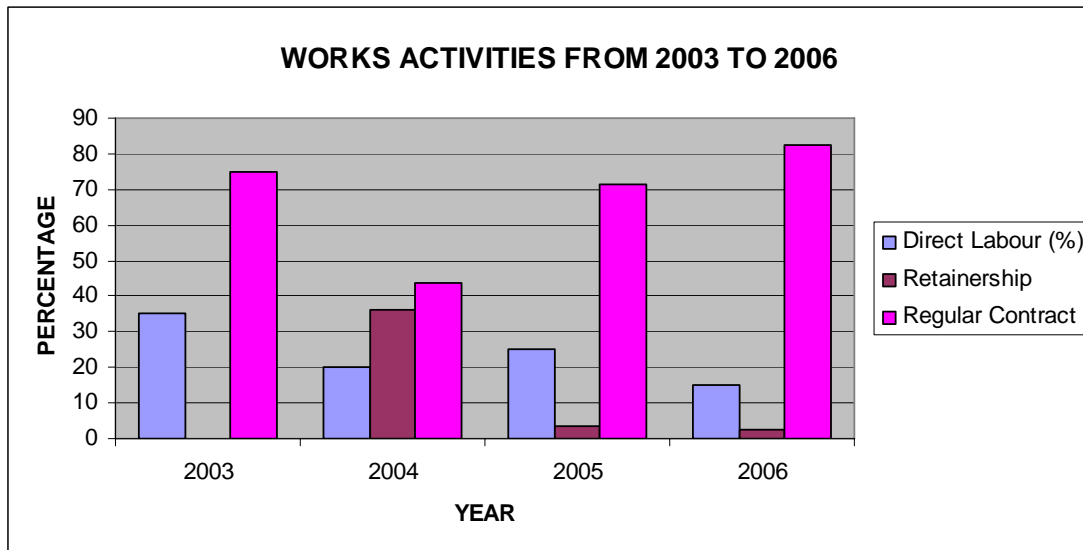
Since the inception of FERMA in 2003, it has intervened in a short term basis on federal road network. The first strategy was short term maintenance strategy to make the roads accessible and safe for the movement of people and goods. Within the period, the Agency was also involved in various other activities which are beyond the scope of maintenance work. Most of the time, the Agency has been carrying out the repairs of the roads with very little routine maintenance because of their states. The roads had failed completely thereby requiring rehabilitation rather than maintenance. These have been the activities of the Agency in the last 4 years. It is evidence that the strategy has provided the much needed relief for the people. However, this process needs to be complemented with another stage of strategy.

Now the indication of the federal road network is that 15% is in very good condition, 20% is in good condition, 30% is in poor condition while 35% is in bad condition. While the Agency shall continue to intervene in all these sections of the roads, it is very important to sustain the percentage of the roads that are in very good and good condition. This is to disallow them from degenerating to poor and bad conditions.



Under the Short Term Maintenance Road Strategy the Agency adopted the Direct Labour, retainership contract and Regular contract type of methods to carry out its activities. Without any doubt these methods have achieved the immediate much needed results. The percentages for each activity for the previous years are as follows:

Year	Direct Labour	Retainership	Regular Contract
2003	35%	0	75%
2004	20%	36.2%	43.8%
2005	25%	3.6%	71.4%
2006	15%	2.5%	82.5%



THE MEDIUM TERM ROAD SECTOR MAINTENANCE MANAGEMENT STRATEGY (MTRSMMS).

The MTRSMMS is a form of **Output and Performance-Based Road Contracts (OPRC)**. It is a natural progression from our retainership type of contract which we have used in the last 3 years, and has contributed immensely to keeping our roads to traffic throughout the contract period. Under the retainership type of contract, the contractor executes the works based on agreed unit cost. Payment is made based on inputs and joint measurement of work executed on site. However, one of the major weaknesses of this type of contract is that the contractor has a bad incentive to do the work i.e. the more quantity of works carried out the more money he makes. This problem is fully addressed under the MTRSMMS.

MTRSMMS ensures that the physical condition of the roads under contract is adequate for the need of road users, over the entire period of the contract which is normally several years, say 5 to 10 years. The payment under this

strategy is based on output rather than input by achieving or exceeding a series of predefined required service levels. It significantly expands the role of the private sector, from the simple execution of works to the management and conservation of road assets.

The Agency shall specify the standards or service levels at which the contractor is to maintain on the road over a long term. It is immaterial to the Agency how much work the contractor undertakes (either more or less than the estimated levels), it is only important that the performance standards are achieved. The contractor is paid on a monthly lump sum on meeting the specified standard. The Agency monitors the compliance and meeting of the service level through selected consultants, scheduled and unscheduled inspections by the Agency before payment can be approved. The road users shall also report cases of non-compliance with the standard.

This method can be used for (a) Rehabilitation work to bring the road/network to a predetermined service level; (b) Carrying out improvement on existing road then maintain it at a prescribed level of service; (c) Carry out additional periodic maintenance works; (d) Maintain an existing good road over a long time at a predetermined level of service, and handover the road to the Agency after the contract at an agreed level of service. However, the Agency shall use this strategy of MTRSMMS on newly constructed or rehabilitated major roads where routine maintenance is only necessary for period between 5-10 years.

Having predetermined the required level of service during and at handover date, the contractor takes decision on how to achieve these service levels. What, when, where and how to carry out the works on the road become the responsibility of the contractor so long as he meets the required service levels. This arrangement shifts the responsibility to the contractor to (a) ensure that works are carried out well; and (b) to be innovative so as to minimize costs and increase profits.

His activities may include, among other:

- i. pavement maintenance and protection works,
- ii. Bridge and other drainage structure maintenance work,
- iii. Vegetation control;
- iv. Maintenance of slops and embankments;
- v. Signaling and road safety works including road marking;
- vi. Street lighting maintenance,

This world-wide method has been used in many countries to sustain national road network over a long time. We can also use the same approach in Nigeria since we have all the conditions necessary for the implementation of such contract. In particular the amendment to FERMA Act 2007, which provides fund on continuous bases for road maintenance, is an antidote and encouragement since fund must be available all the time to meet the payment obligation required in this type of contract.

Some of the roads that may be candidate for the first phase of implementation include:

- a) Otta-Abeokuta Dual carriageway;

- b) Ife-Ilesha Dual carriageway;
- c) Benin-Asaba Dual carriageway;
- d) Benin-Warri Dual carriageway;
- e) Abuja-Keffi Dual carriageway.

**SYSTEMATIC ROAD STRENGTHENING AND ENHANCEMENT
(SRSE) PROGRAMME.**

This approach is the same with MTRSMMS with the scope of works expanded to include periodic maintenance. The strategy shall be used to recover the 30% of the network that required overlay and strengthening over a period of 8 to 10 years. The Agency will embark on systematic overlay and enhancement of these roads in sequence annually. The contract on these roads shall be in two phases- Phase 1 will be the strengthening and overlay of the roads, while phase 2 shall be maintenance over a long term. Payment under both phases shall be based on achieving a predetermined standard or service level. It is believed that if this programme is sustained all roads in this category (poor) shall be in very good condition in 5 to 10 years. The rehabilitation or reconstruction of the remaining 35% of roads in poor condition is to be handled by the Highways Department who will in turn hand them over to the Agency for maintenance soon after completion. These roads also include all other roads under construction or rehabilitation.

If this strategy is given time to work the management of roads will be more efficient and more than 80% of the federal network will be in very good condition.