Asset Management System in Africa

The context of road asset management in West Africa

- Important efforts must still be carried out to upgrade and maintain roads in good condition to support economic growth.
- Maintenance problematic is specific:
  - Roads are constructed with local materials (laterite) and techniques requiring appropriate maintenance
  - Operation conditions are severe: traffic is not dense but very aggressive; climate is often extreme: very hot and very dry or very wet
  - People in charge of maintenance management are often very able but young and not experienced (due to turn over)

The context of road asset management in West Africa

- (Re)construction is supported by international development bodies, on project bases. Maintenance is usually supported by national budgets, often severely limited.
- However, maintenance is important, to avoid that the reconstruction is bottomless pit.
- Rational maintenance management, using an appropriate PMS, is as justified in this context than in any other developed or transition countries
- PMS should be adapted to the context

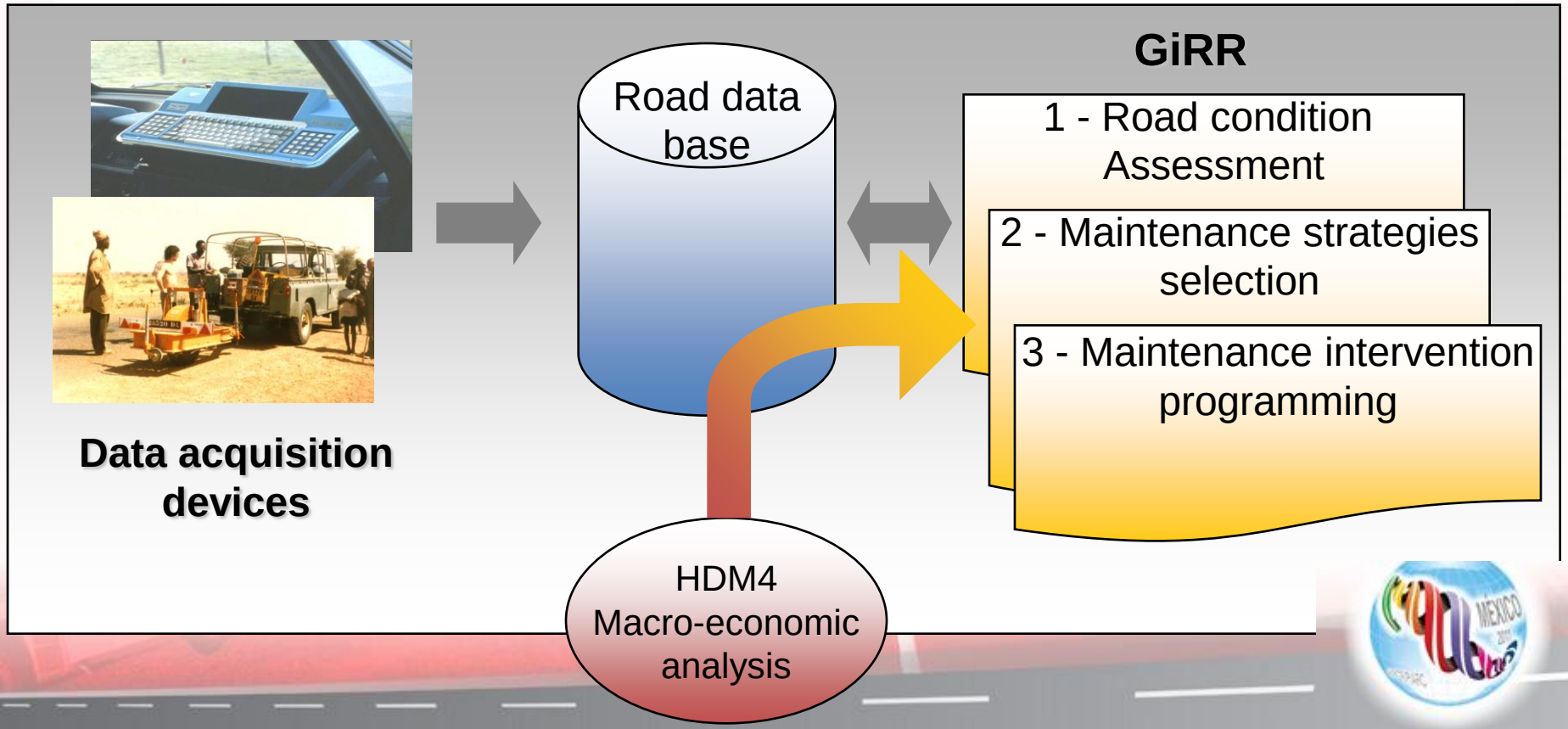
A example of PMS for some West African countries

- EGIS implemented new PMS in several countries of West Africa : Mali, Guinea…
- This PMS is derived from the French system, GiRR®, which was adapted to the context
- The three main functions of GiRR-Africa are:
  - Pavement condition assessment,
  - Maintenance strategies selection,
  - Maintenance programming
- Link with HDM4 which is used for macro-economic analysis

Asset Management System in Africa

A example of PMS for some West African countries

- The structure of the PMS



Specificities of GiRR for West African countries

- Thanks to the large number of parameters in GiRR, it is easy to precisely adapt to various local context;
  - ➔ Road condition indicators, maintenance technique and budget constraints are adapted to regional context;
- Strategies are based on a long experience of pavement behavior and maintenance in this region of the world
  - ➔ They take into account experience of local companies in performing maintenance works
- Once the PMS is parameterized, it is easy to used by road managers

GiRR and HDM4

- HDM4 is used to determine the correct investment needs in infrastructure reconstruction / development, at network or project levels.
- HDM4 provides the overall strategy for reconstruction and maintenance, over the “long term”.
- GiRR starts from the overall strategy from HDM4 and converts it in technical strategies.
- GiRR applies these strategies to elaborate annual (short term) or multiannual (medium term) maintenance programs.

Implementation of GiRR in West African countries

- The objective of implementation is to gradually substitute rational maintenance management to manual process.
- The first steps consisted in implementing the data acquisition devices, the data base and training people to collect and store road data.
- The GiRR software was then installed, and operators were trained; a technical support has been brought for several years for a more efficient use of the PMS.
- Maintenance programs are now elaborated with the PMS.