WEST AFRICAN POWER POOL

SYSTEME D'ECHANGES D'ENERGIE ELECTRIQUE OUEST AFRICAIN

Development of WAPP GIS Database

EU-Technical Assistance

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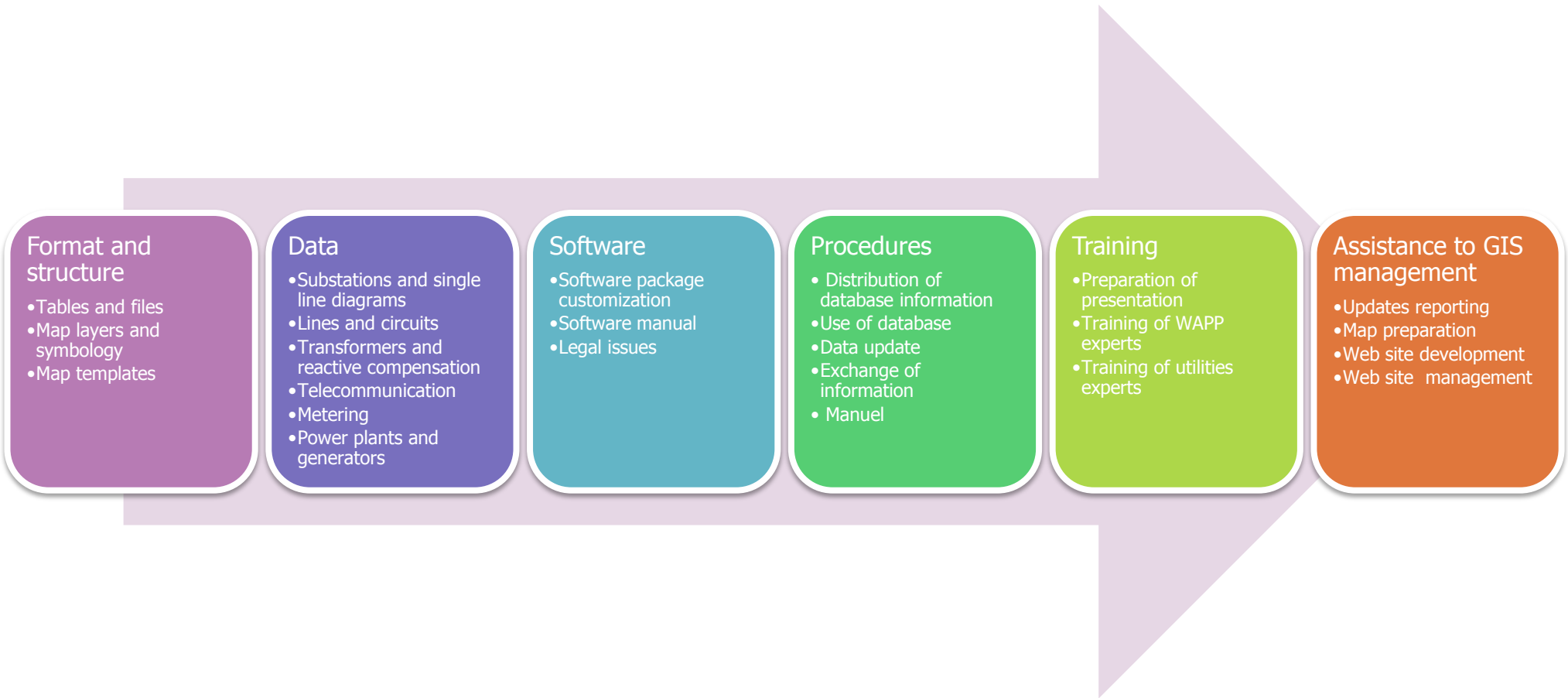
Implementation



Data

- The GIS database presently includes the geo-localized data of about 600 substations, 800 transmission lines (totaling 50,000 km and including about 200 double circuit lines) and 200 power plants, either existing, in project or under study.
- HV transmission system only: from 330kV to 60kV
- Technical data to be included/updated on basis of the data collection performed recently for the synchronization study
- Additional Data will be provided through established focal points in member utilities

Format and structure

- Tables and files
- Map layers and symbology
- Map templates

Format and structure

- Tables and files
  - Transmission lines: design voltage, operating voltage, cable type and section, circuits (design/installed), length, commissioning date, transmission capacity, series compensation, shunt compensation telecommunication facilities (optic fibre, PLC),….
  - Substations: voltage levels, substation type, transformers characteristics, reactive compensation, short-circuit capacity
  - Power plants: characteristics of each generation unit, including installed and available capacity, fuel type, electrical characteristics including transformers

Format and structure

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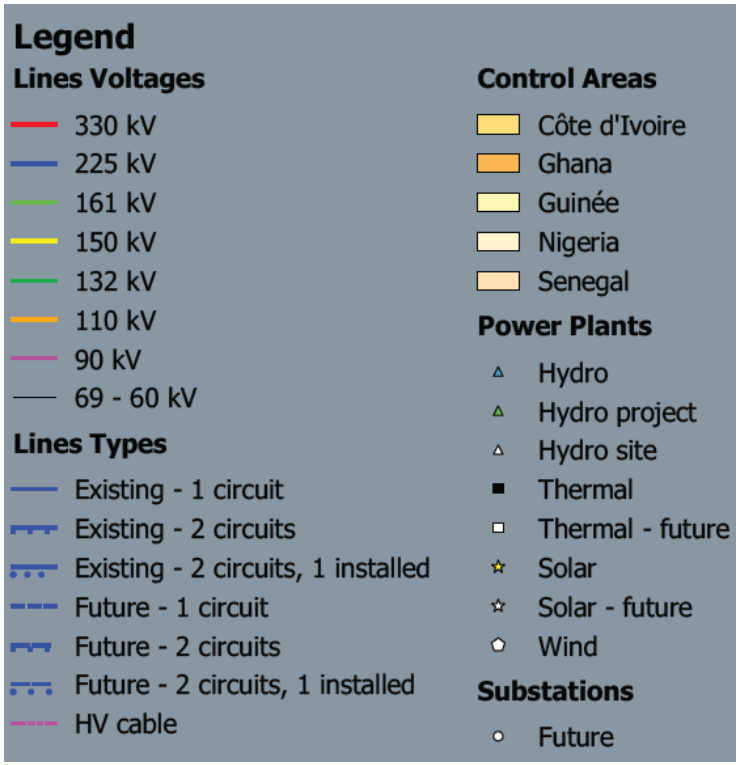
- Map layers and symbology



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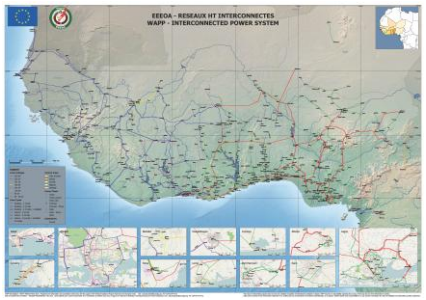
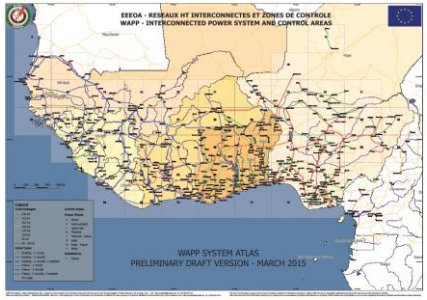
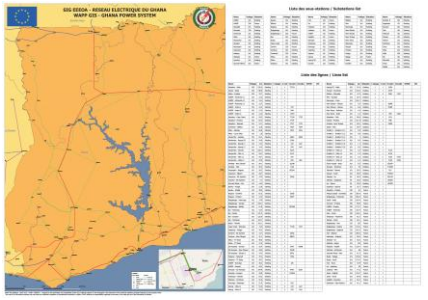
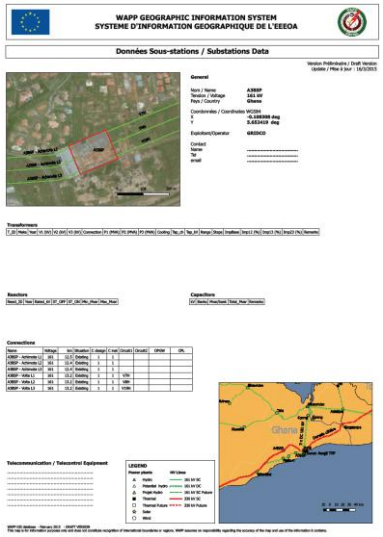




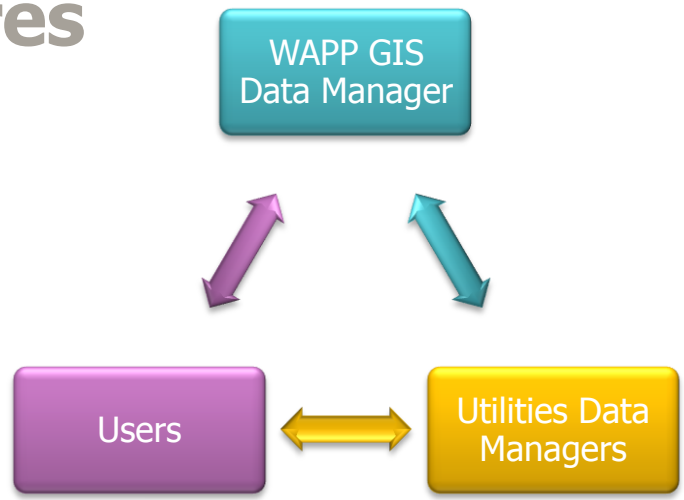




Software

- Software package customization
  - Updated QGIS software
  - Configuration instructions;
  - Project files
  - GIS database
  - Additional layers (background layers, aerial views, ..)
- Software manual

Procedures



- Organization
- Exchanges of information
- Distribution of database information
- Data update
- Use of database

Training

- Training material package
- Training of WAPP experts
- Training of utilities experts

Assistance to GIS management

- Updates and reporting
- Maps preparation
- Preparation and implementation of new developments
- Web site