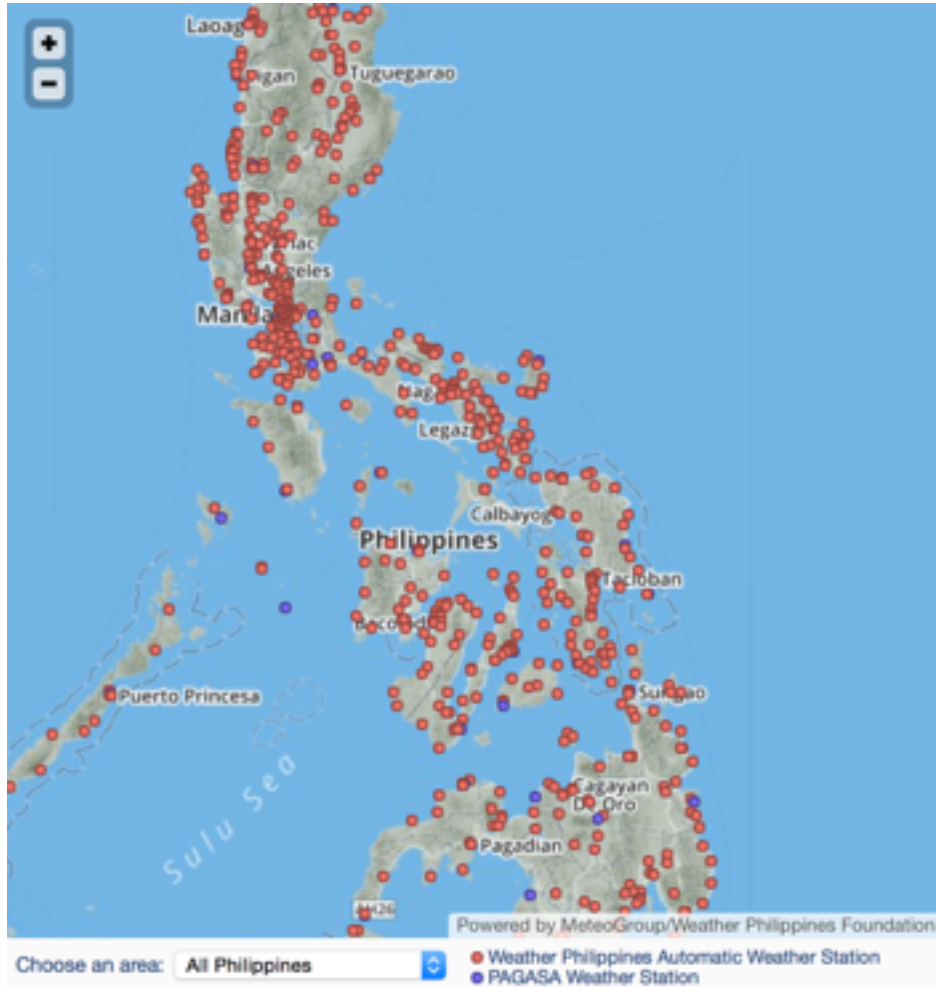




Setting up an affordable weather information system

Sebastian Glink, Business Unit Manager
UNDP CIRDA Workshop, Kampala 3 March

Weather Station Deployment



- Currently approx. 700 AWS deployed
- All provincial capitols covered
- All cities covered
- Other priority Meteorological sites covered

Automated Weather Station (AWS)

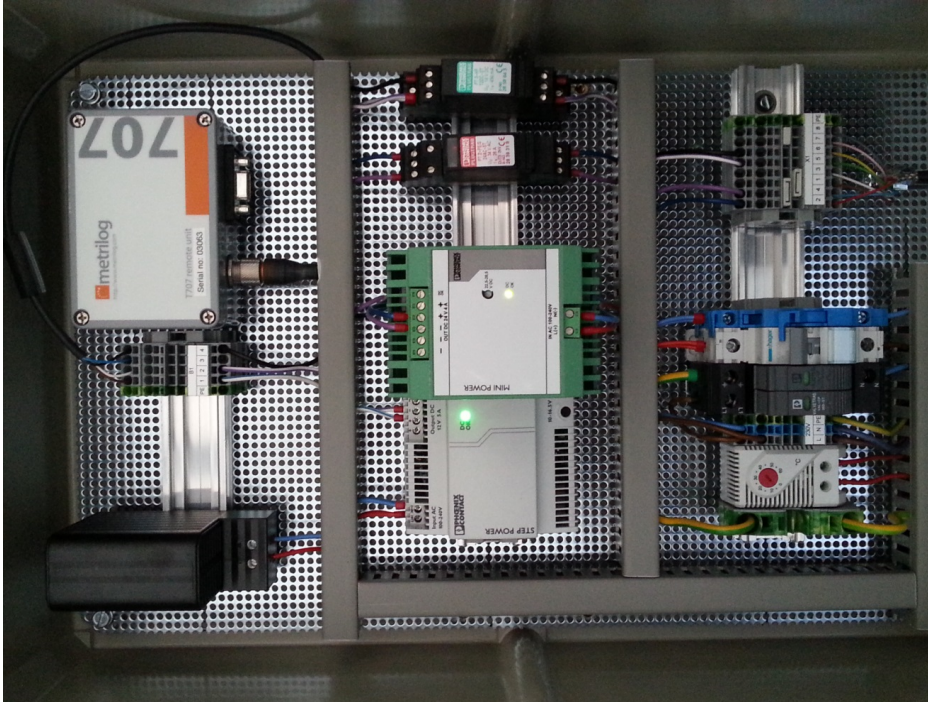
Measures:

- Global/Solar Radiation
- Wind Direction / Speed
- Temperature
- Pressure
- Humidity
- Rain/Precipitation

- Solar Powered with Redundant Li-Poly Batteries
- Transmits data every 10-minutes by SMS/GPRS



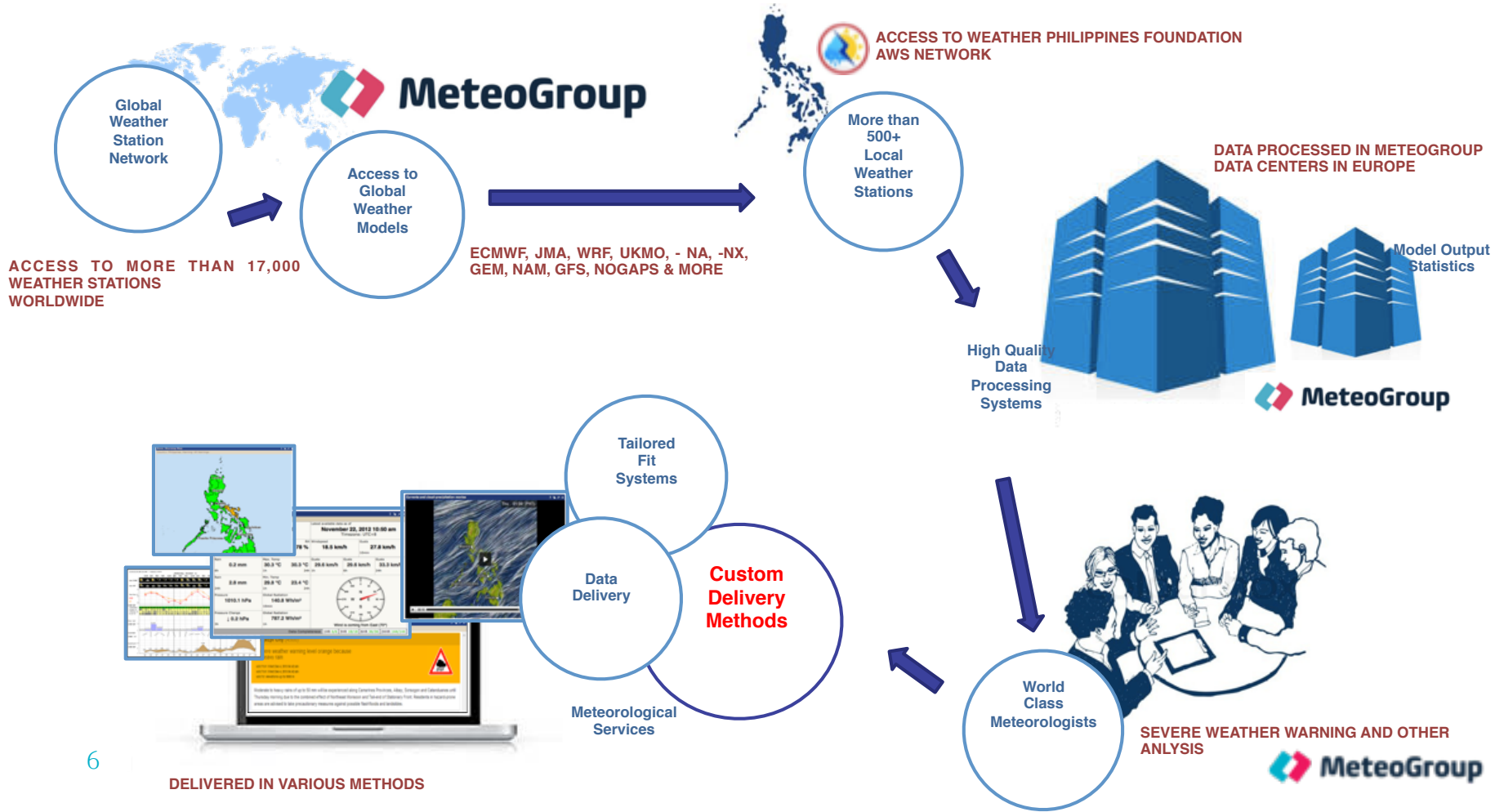
Technical set up



The switch cabinet is used to ensure, that the Luft WS and the modem for data transmission gets power. The sensor needs 24 Volt, the modem 12 Volt.



Data Source, Processing and Delivery



The key elements: Technology

- Collect local weather data which means: a system spread all over the country taking into account local weather phenomena, means: dense network of AWS which allows a proper tracking of the storms, accurate warnings regarding local situations, and a certain percentage of failures of weather stations without a complete failure of the system
- Use automated communication channels (AWS), ideally with satellite backup
- Use affordable AWS which provide quality very close to the standard expensive equipment by national weather bureaus
- The AWS must be placed in a pre-existing safe environment with existing local maintenance (cell sites, gas stations, ports, airports)
- The processing must be entrusted to an efficient weather services provider rather than the local weather service, and such provider must have an integrated forecasting platform, automated forecasting systems, existing communication platforms (like structures for portals, communication system for weather alerts, for platforms products for local customers, the private sector, and experience in handling the collection and the processing of data of a large number of AWS)

The key elements: Funding

- Use private funding, and possibly the support of international organisations to avoid corruption and lengthy appropriation processes
- Work with local enterprises which can derive a benefit for the local businesses (shipping and other logistics, energy production and distribution, residential developers, shopping malls, mining, insurance, agriculture, etc.) and provide them, in return for their investment, with products which are of value and a CSR effect
- LDC country does not mean that there is no wealth, actually just the opposite
- Work with funders which have the related infrastructure (cell phone companies, gas companies, energy companies, ports, airlines etc.)
- Both the initial costs for the set up and the costs of operating and maintaining of the system must be secured (ideally for a period of 10 years)

The key elements: Authorities

- The local weather bureau should be convinced that the system will be a benefit, not a threat, also with a view to get cooperation where the national weather bureau can offer something, with a view to get data from existing infrastructure and with a view to support an official severe weather warning system
- The local authorities (provincial, municipal) will usually be more receptive because they see a direct interest
- Ideally an international organisation, or a respected national weather service from a non-threatening developed country could partner

The key elements: Organisation

- The organisation should stay in private hands
- Ideal form: joint venture with local partner which can get sponsors, sort out political issues, provide the infrastructure and the management of it, and has access to the relevant market
- Foundation (tax issues) for donations

Can it be done?

As the WeatherPhilippines project shows: definitely.

The funding has been secured from major local interests for a project life of 10 years plus, and we have not tapped all possible resources, by far not.



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to master the weather**