



LYXEA® Real Time Monitoring and Modeling

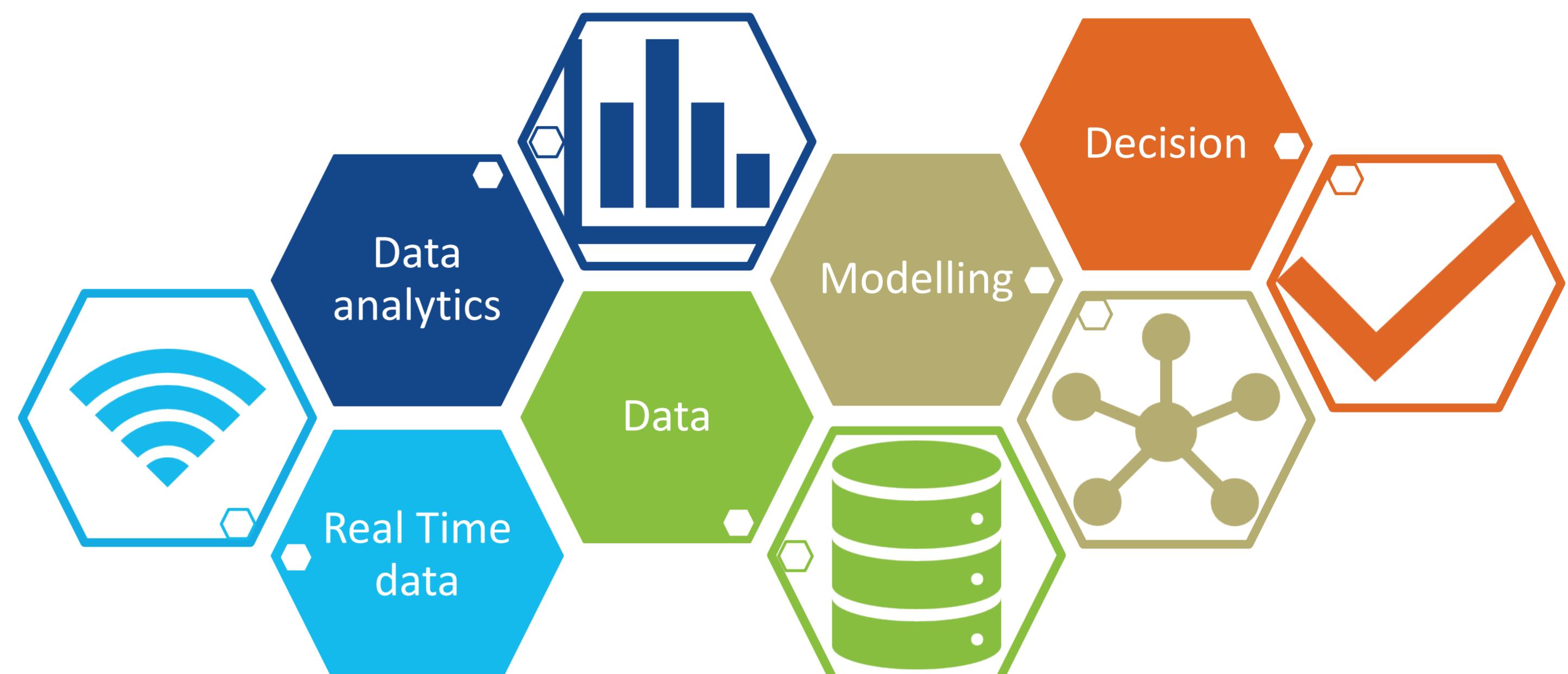
A suite of solutions for integrated MAR/SAT management

A solution for short and long term environmental management

Real time monitoring has become standard during the last 10 years, especially for environmental issues. This started with basic sensors dedicated to water level and climate. The new generation of sensors can monitor water quality compounds, both simple and more complex ones, as well as various environmental conditions that are fundamental to better understand ecosystem functioning.

In parallel, the environmental modelling sciences has considerably increased its scope of study and its accuracy. This «revolution» of modelling has occurred only with the revolution of data acquisition, data banking and data strengthening. It has also considerably grown with the birth of open software. Today a full range of modelling software is available on the market and a full range of library of environmental models are available through open software.

Finally, these two aspects are crucial for an integrated management since real time monitoring allows a «day to day» management (early warning, rapid action etc.) and modelling allows a long term management by predicting phenomena spatially and temporally. But today, these two approaches are completely separated inside the decision making process.

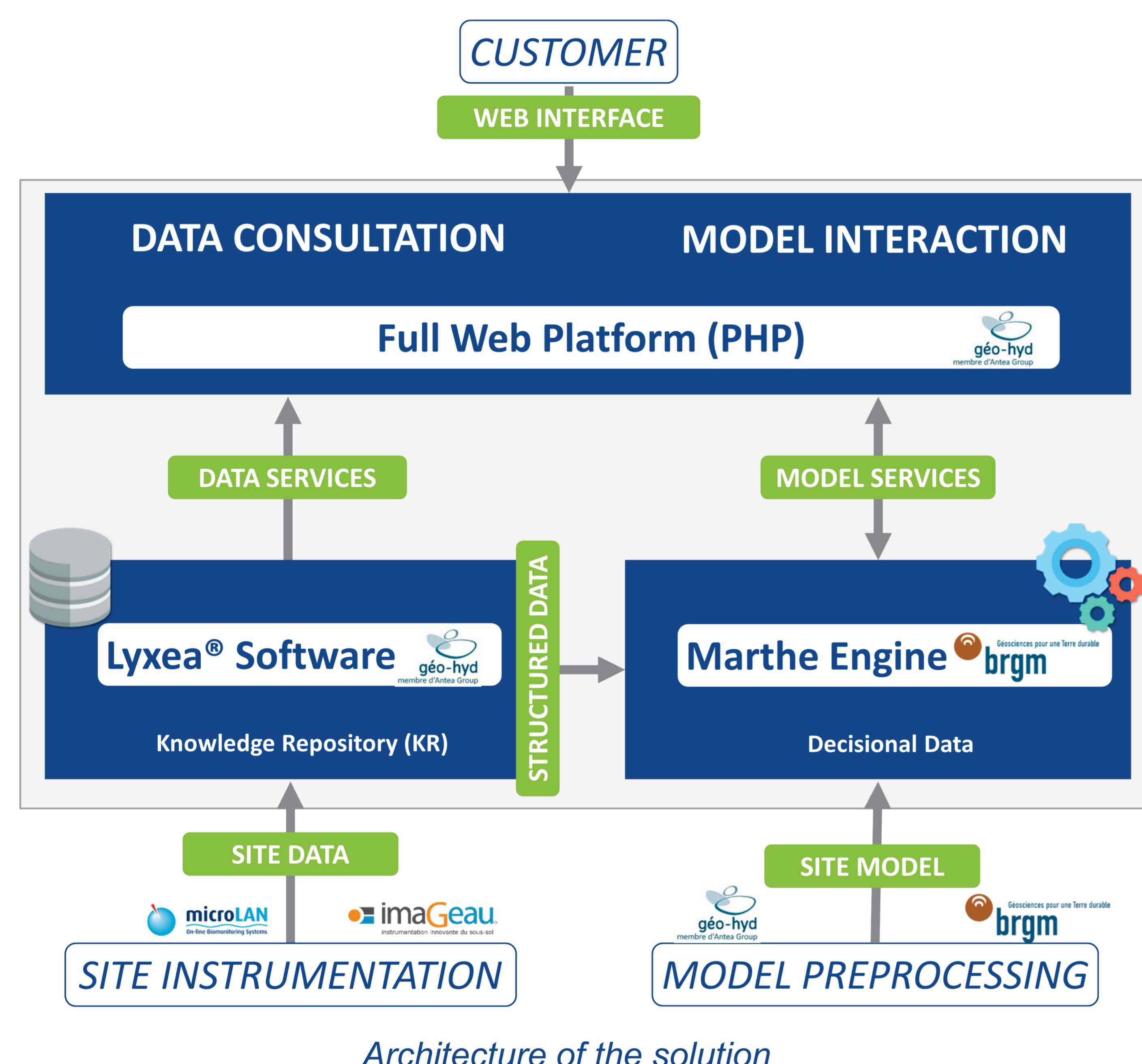


Ecosystem of Lyxea® Real Time Monitoring and Modeling

Clients and opportunities

Environmental data management is gaining increasing importance for different type of clients. Areas of application and potential users are:

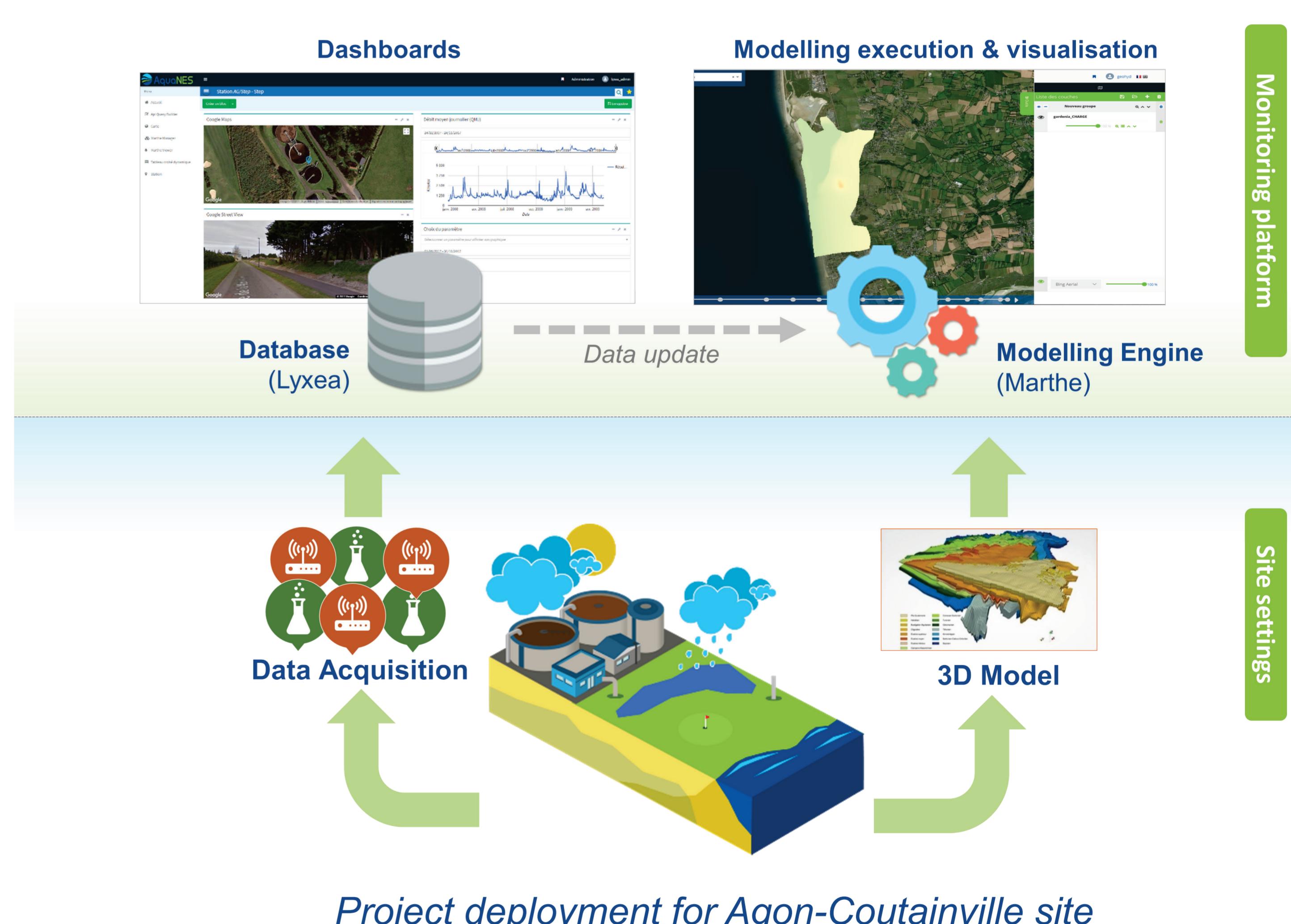
- Industrial and municipal sites: for management of water discharge in the environment in accordance with regulation (included prediction)
- River basin authorities: for management of the (ground)water resources (scenarios and prediction)
- Risk Management Authorities: for flooding management and prediction



Coupling real time monitoring & modelling through the web

Developed during the AquaNES project, Lyxea® Real Time Monitoring and Modelling is able to drive a model in real time and to provide services through web to address operational management, tactical management, strategic management and executive management for a better integration of the decision making.

The solution is modular - not restricted to a database system and able to read and drive different models. The modelling engine can be suitably changed and the database structure is able to store a various number of data types and sources. The solution is also compliant with most of the «water standards» such as Sandre (fr) or ECHA and can report directly according to regulatory requirements.



Future developments for the solution

Due to the modular conception of Lyxea ® Real Time monitoring and Modelling, we aim at extending the solution towards:

- Reactive Transport modelling (chemical compounds)
- Geothermy management
- Drinkable water and waster water treatment plant & network
- Surface Water bodies management
- Soil Remediation management and modelling

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