GeoWeb: The meteorological tool for improved collaborations between R&D and operations

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The GeoWeb system is an integrated system that provides functionality for monitoring real time and archived meteorological phenomena; analyzing related georeferenced data; producing warnings and forecasts for citizens and specific communities. It will be the next generation tooling for monitoring the atmosphere by forecasters, scientists and developers.

GeoWeb's key advantage is its applicability for both operations and research, enabling fast deployment of research results into operation use. GeoWeb will have software development opportunities for both internal and external users as it is Open Source, which makes it flexible to specific adjustments and acts as an enabler for future demands.

GeoWeb is a web-based application; it provides a clear view on the state of the atmosphere, on-the-fly tailor-made products, easy extendable to incorporate geophysical innovations, a well-designed codebase that can be easily shared with other parties and has operational value for the coming years. The user experience is task-oriented instead of application-oriented to ease the mental load of users. Due to the used OGC standards it is easy to insert external georeferenced data into the system. As KNMI has both scientific and operational tasks it is required that GeoWeb can be used for both, and that scientific results can be easily and in a controllable manner transferred to an operational status.

GeoWeb is in a continuous development phase. It is developed in an Agile/Scrum-way with end-users (forecasters from the forecasting office) as product-owners. There are biweekly reviews, specific user interaction sessions to try out concepts of novel user interfaces. Development of GeoWeb will continue in the coming years and by investigating possible cooperations with industry and colleague institutes we aim to fulfill our goal for collaboration.

This talk will focus on the 'soft' aspects to make a success from GeoWeb;
- Position GeoWeb as the vehicle between R&D and operations to enable the flow of innovation
- Seeking the community to work on this challenge together
- To deal with scalability and cost effectiveness cloud infrastructures are being used. The project is seeking the balance between going fully cloud native (and therefore creating a tight coupling with cloud service providers e.g. Amazon, Google, Microsoft) or going for the more generic containerized solutions (Docker)
- Examples will be given of open datasets that can be used within GeoWeb by using open standards enabling Open Science