



## **Building a value chain through open data and user interaction. Case study of yr.no.**

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11 years ago the website yr.no were launched, and we, MET Norway, had no idea of what we were part of. yr.no is a weather portal with joint ownership of MET Norway and NRK (Norwegian Broadcasting Company). The core pillars of yr.no, and it's success, are open data and cooperation between NRK and MET Norway. A third component, we did not anticipate, were the user feedback and how this feedback came to influence not only the service, but also the research.

Opening yr.no made us vulnerable. The forecast on yr.no is mainly a pure computer product, with no interference from the meteorologists, were the bias and error of the model fully exposed. Prior to yr.no, forecasters compensated for known errors and bias in the forecast model. The opening of yr.no resulted in a stream of feedback from the users, whenever the forecasts on yr.no had a minor, or major, fault someone informed us. This continuous stream of information forced us to look at how we handled feedback, and how we tailored the research to amend documented errors. The influence of this information has moved from how we presented the forecast on the web to influencing how we tailor research applications. Basically: The launch of yr.no has moved MET Norway to look upon the whole chain from the observations to the presentation and feedback. Quite a significant amount of the research at MET Norway is now focused on building and maintaining a value chain from observations to presentations and feedback, and ensuring that improvements at any point in the value chain is reflected throughout the chain. One example is the change in focus on the development of the NWP. Prior to yr.no were all focus on improving the model without post processing. yr.no, with user feedback, has shown the value of adding post processing to the chain, and thus remove model- and weather dependant bias.

One continuous critic has been on the gap between current weather and model weather. To compensate for this has a new product for nowcasting of precipitation by weather radar been implemented. Here the precipitation is estimated for the next 90 minutes to ensure a seamless presentation between current weather and forecast. To ensure a similar improvement of temperature forecast, data from private weather stations is used for bias correction.

MET Norway implemented an open data policy in 2007. This has been a foundation for the development of yr.no, combined with the expectation of the Norwegian public of MET Norway to publish the weather forecasts in a modern fashion. The co-development of yr.no with NRK ensured that we fulfilled the public expectation, but would not have been possible without an open data policy.