The Copernicus Atmosphere Monitoring Service (CAMS) delivers a wealth of information on atmospheric composition change over short to long timescales. One of the core products of CAMS regards short term air quality forecasts with a three days lead time as well as reanalyses over the past years for the European region.

This service is covered by the CAMS_50 project which is now operational since 2015. It relies on a distributed production of 9 individual air quality models, consolidated by a centralised regional production unit at Météo-France before delivery to the European Centre on Medium Range Meteorological Forecasts, which implements the CAMS service.

Each model is operated by its own development team across Europe, all of them deliver air quality forecasts covering the whole continent at 10km resolution. The modelling team currently operational are at present: CHIMERE (France), DEHM (Denmark), EMEP/MSC-W (Norway), EURAD-IM (Germany), GEM-AQ (Poland), LOTOS-EUROS (The Netherlands), MATCH (Sweden), MOCAGE (France), SILAM (Finland). Two additional models are now applying to join the ensemble: MINNI (Italy), and MONARCH (Spain).

Such an ensemble of different models offers excellent complementarity in model capabilities as demonstrated by the performances of the ENSEMBLE product. It also leads to substantial challenges in coordinated model development. We will present the main recent achievements, status, and future plans for the validation and development of models underlying the service.