# Space Weather Architectural Direction

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# Current Space Weather

- MOSWOC 24/7 Capabilities
  - Models
  - Forecaster Client
- Premium and Public Site
  - Sector-specific guidance
  - General info for the public

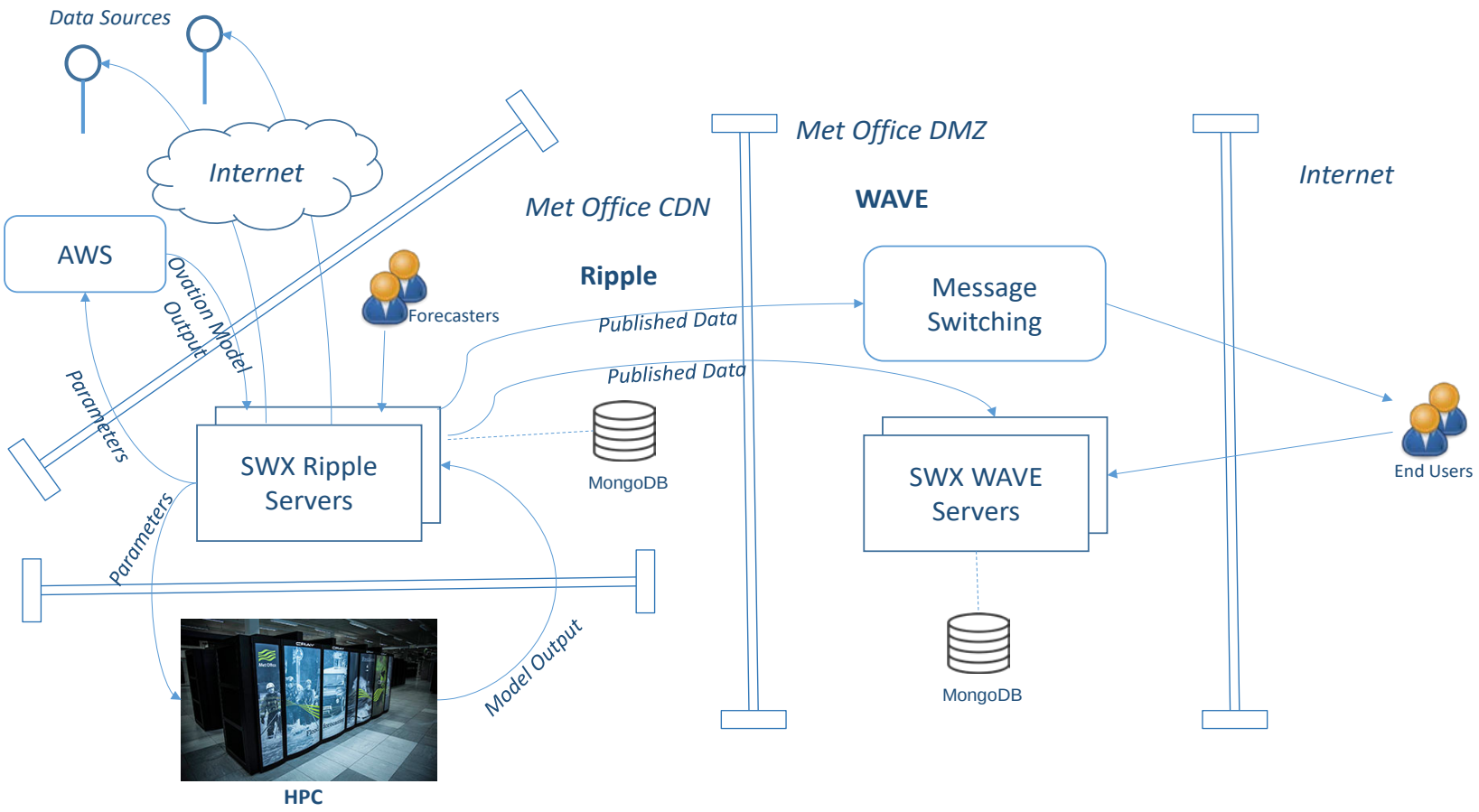
# Work That's Underway

- **AWS Migration:** Migrating the Space Weather application onto Amazon Web Services
  - **Opportunity:** Simplifies building of APIs to share observation data and model output (see below)

- **Data Sharing/APIs:**
  - **Opportunity:** Externalises Space Weather data streams for use by researchers and partner organisations

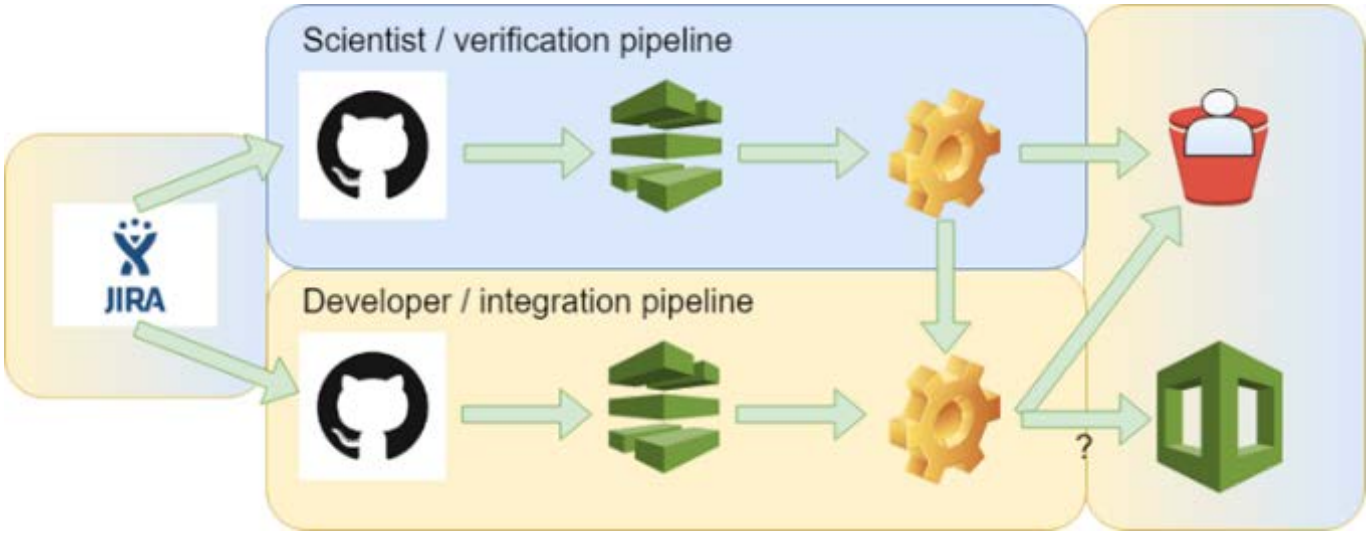
- **Research to Operations Optimisation:**
  - **Opportunity:** Allows access to Space Weather APIs and pre-configured AWS environments to develop and operationalise models, reducing R2O cycle times

# As-Is SWX Application Architecture
## (Very High-Level)



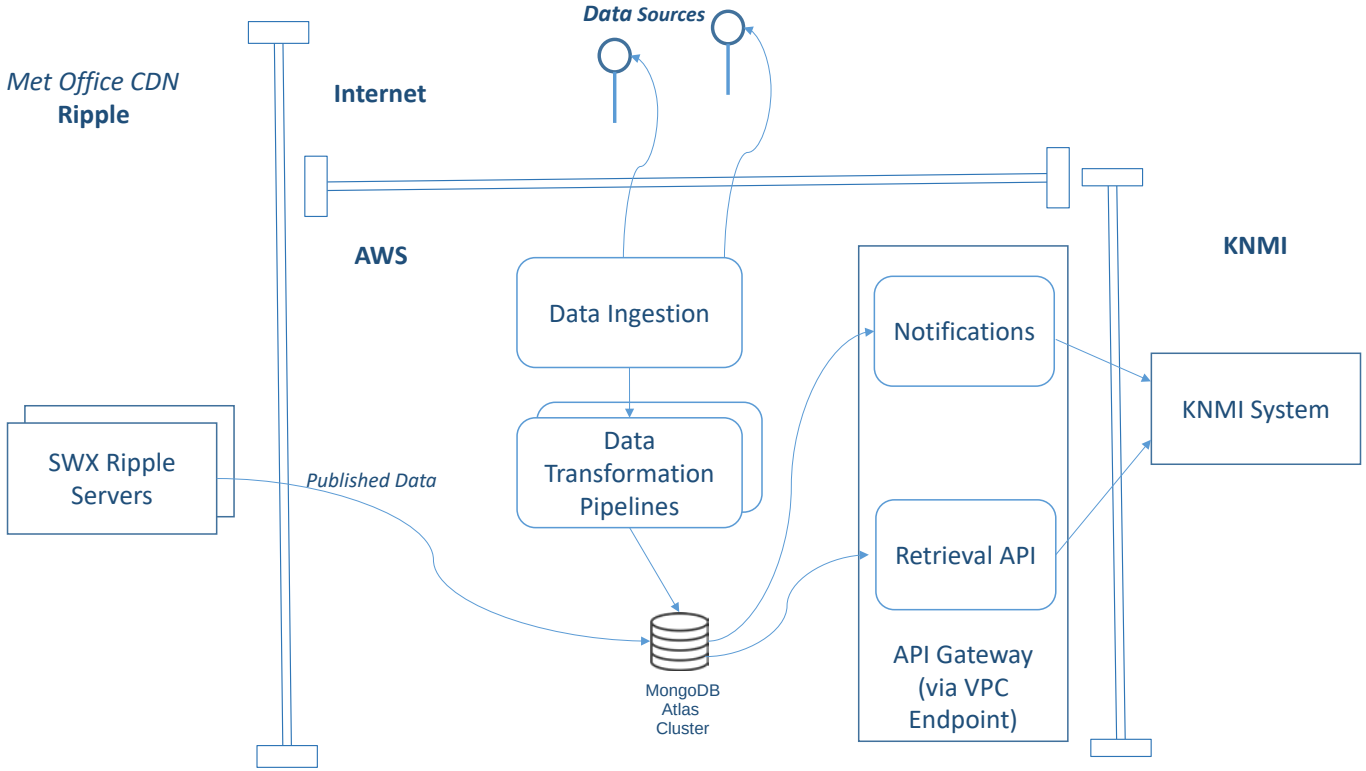
# MO Internal R2O Optimisation

- **Science Collaboration:** Providing Met Office Space Weather scientists with “sandbox” access to model code, test automation and build pipelines on AWS for validation and development, to shorten Research-to-Operations cycle time
  - **Opportunity:** Use this ongoing effort as a foundation to expose more Space Weather models and observation data to the broader research community (i.e., SWIMMR)



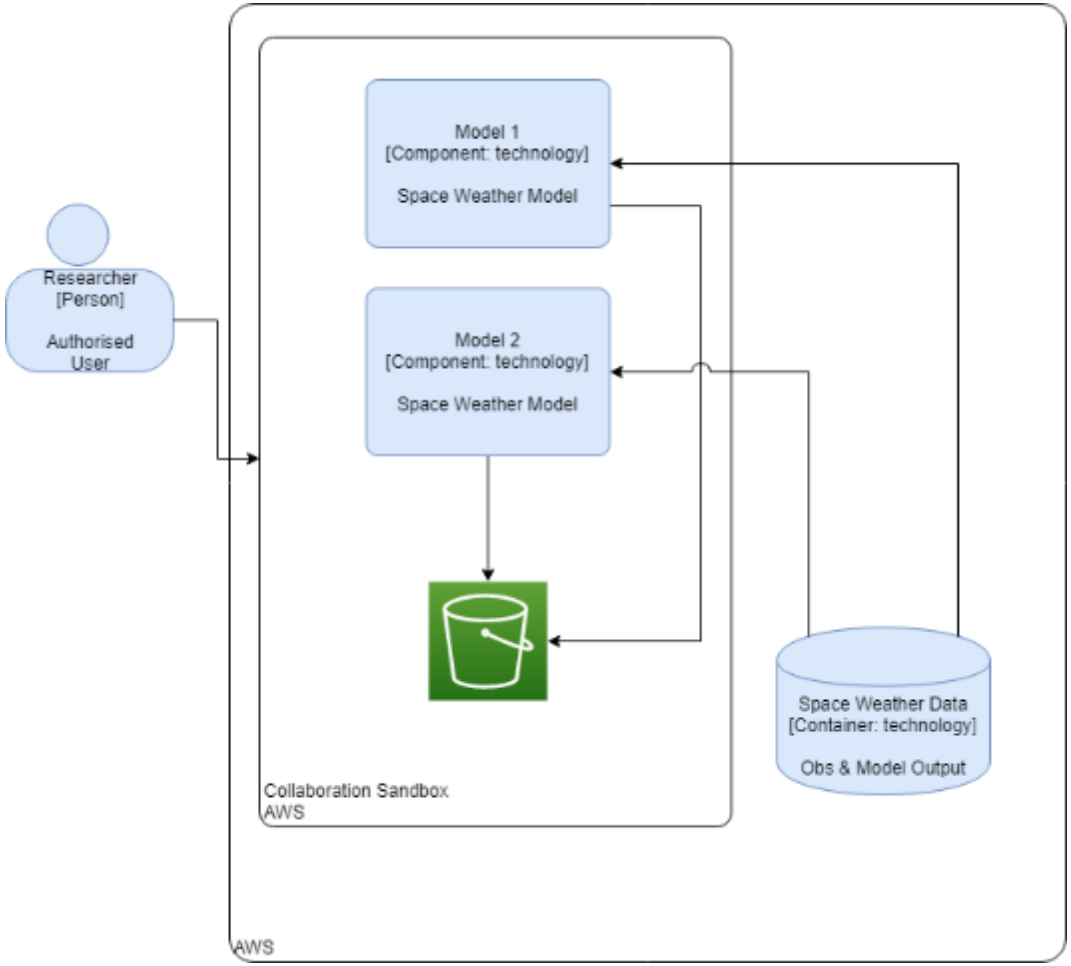
# Work on the Horizon

- **KNMI (Netherlands Met Office)**
  - Sharing Met Office Space Weather observations and model data over **AWS APIs** to support KNMI's launch of a Netherlands-specific Space Weather capability



# SWIMMR Portal and Sandbox

- Space Weather operational data portal and “Research Sandbox” capabilities for UK researchers and international collaborators
  - Ability to run Space Weather models and access current (and possibly historic) Space Weather data in a controlled AWS-resident environment
  - Portal follows KNMI pattern



Met Office

# Questions?