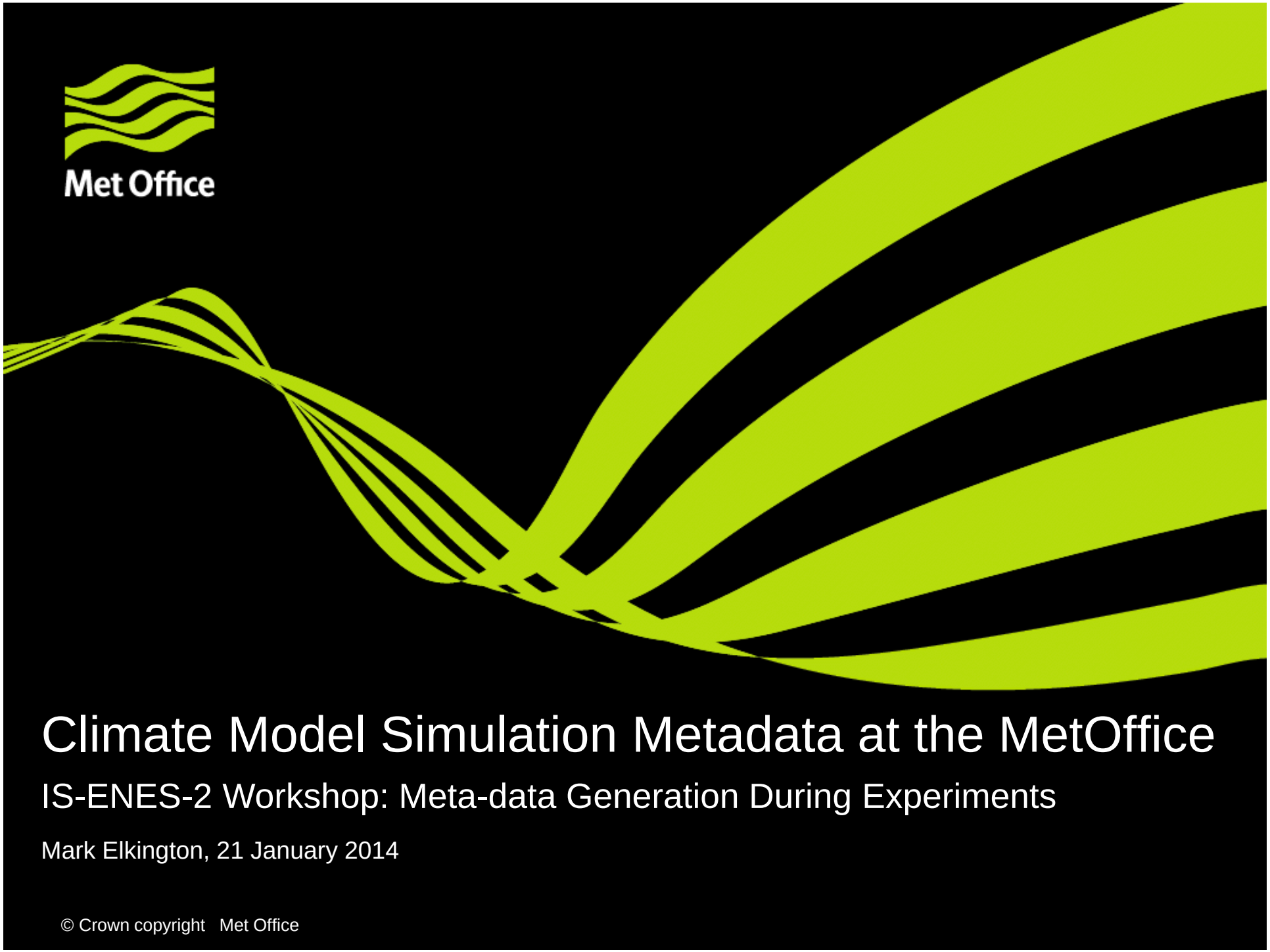


Climate Model Simulation Metadata at the MetOffice

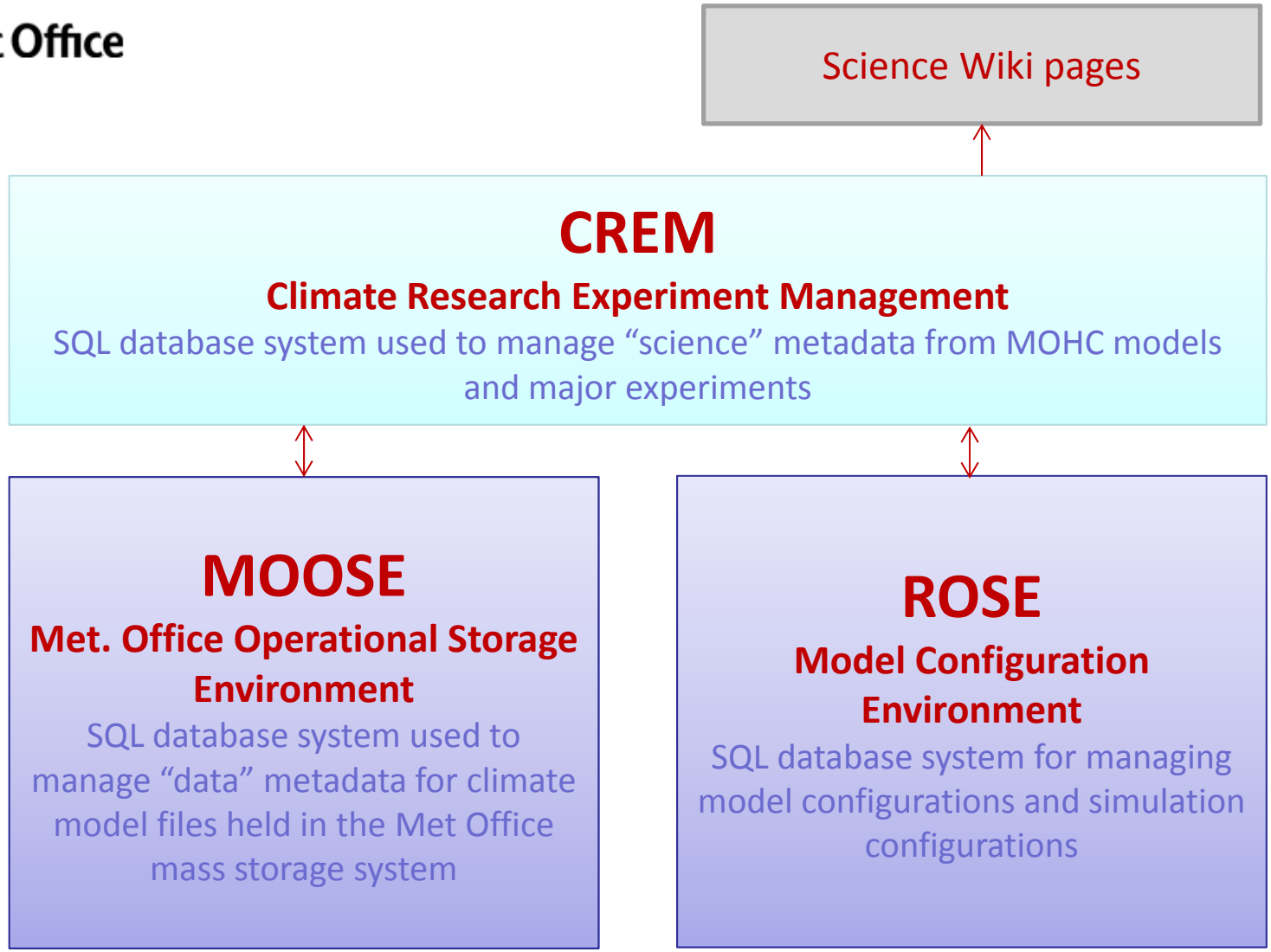
IS-ENES-2 Workshop: Meta-data Generation During Experiments

Mark Elkington, 21 January 2014

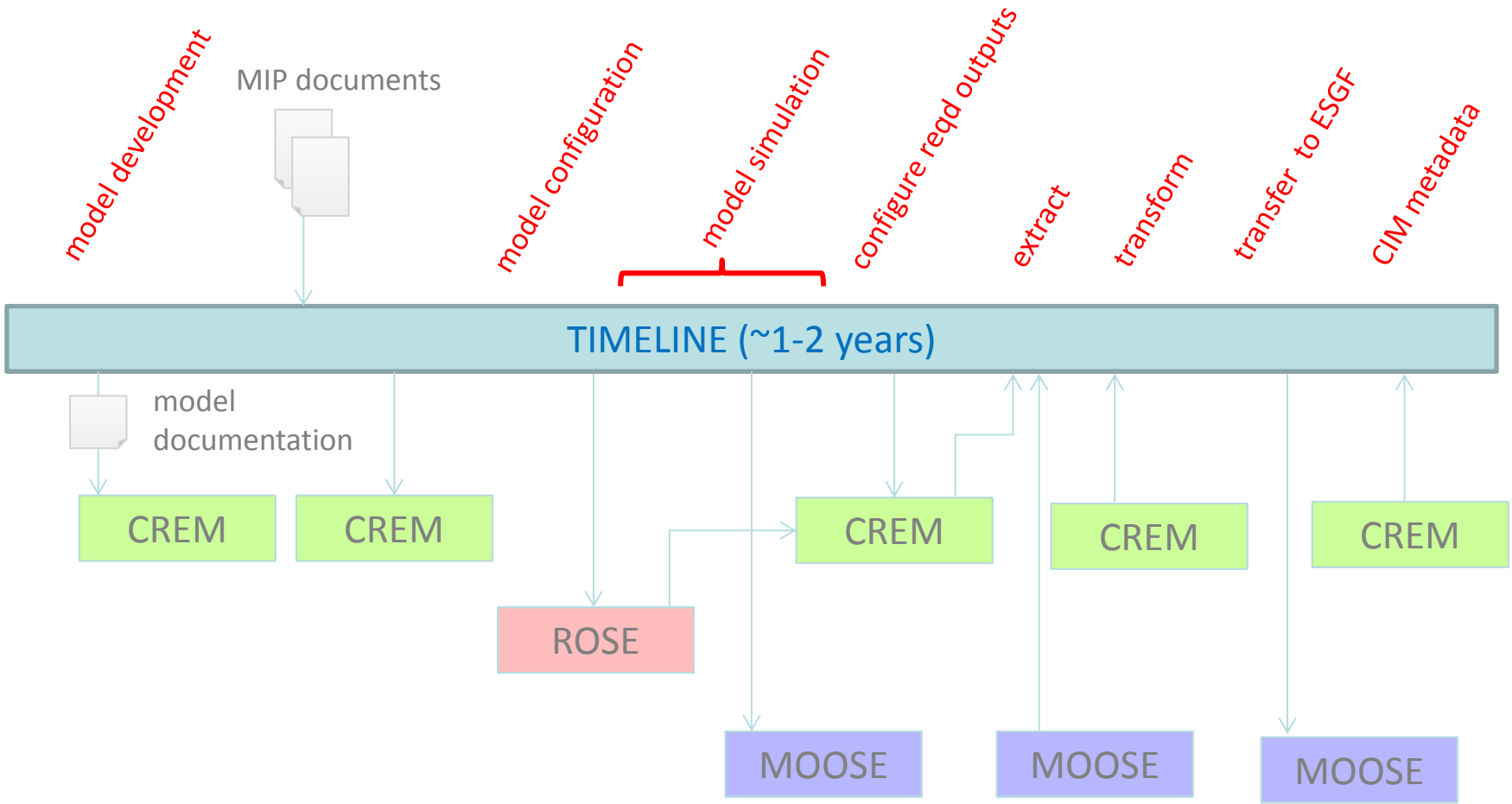
Topics

- MOHC Metadata Repositories and Workflow
- CMIP5 metadata production
- Planned CMIP6 era metadata production
- Required MIP Infrastructure Changes

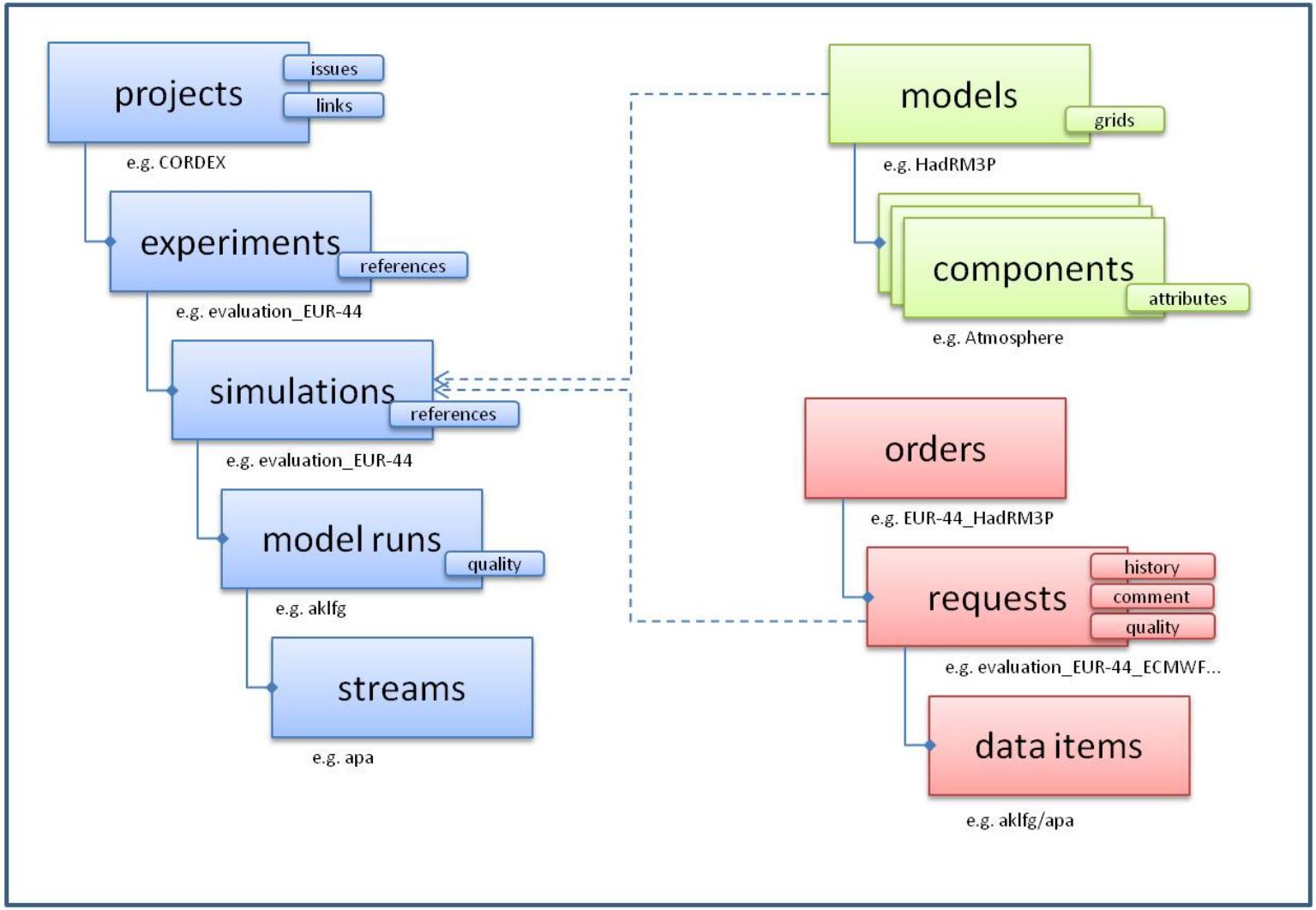
MOHC Metadata Repositories



MOHC Metadata Work Flow

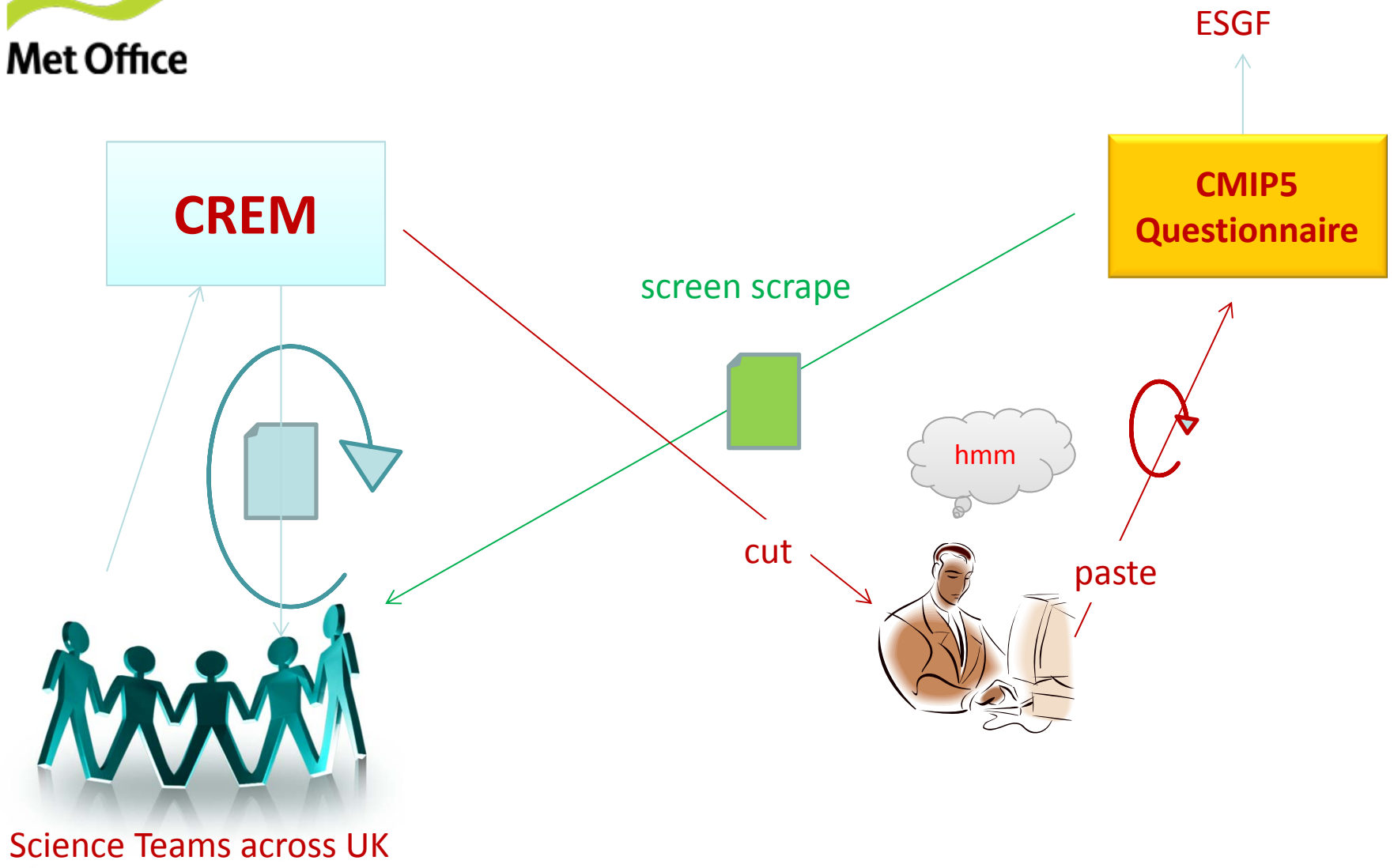


CREM schema overview

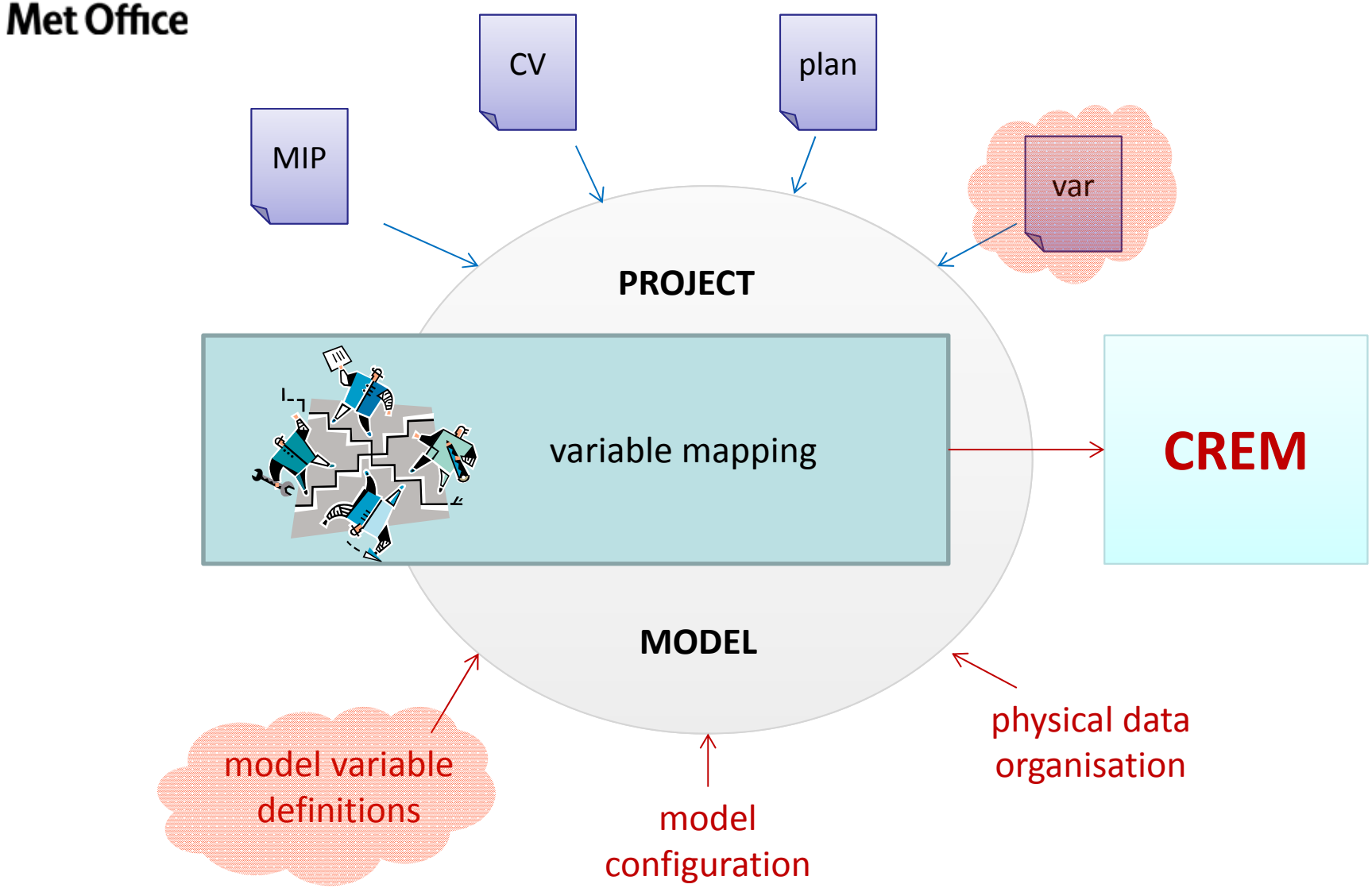


CMIP5 Metadata Experience

CMIP5 Metadata Creation - CIM



project supplied metadata



CIM Metadata

Good

- Good attempt at adding structure to metadata
- Publishing model
- Recent ES-DOC tools show promise
- Resource for the future
- Lots of lessons learned

Not So Good

- Information of little value to our scientists – esp. experiment info.
- Questionnaire not a good model to enter complex metadata
- Analysis/presentation tools were too late
- Opaque versioning

Experiment Metadata

Good

- MIP data good
- CV data OK – but may not work well for multi MIP environment

Bad

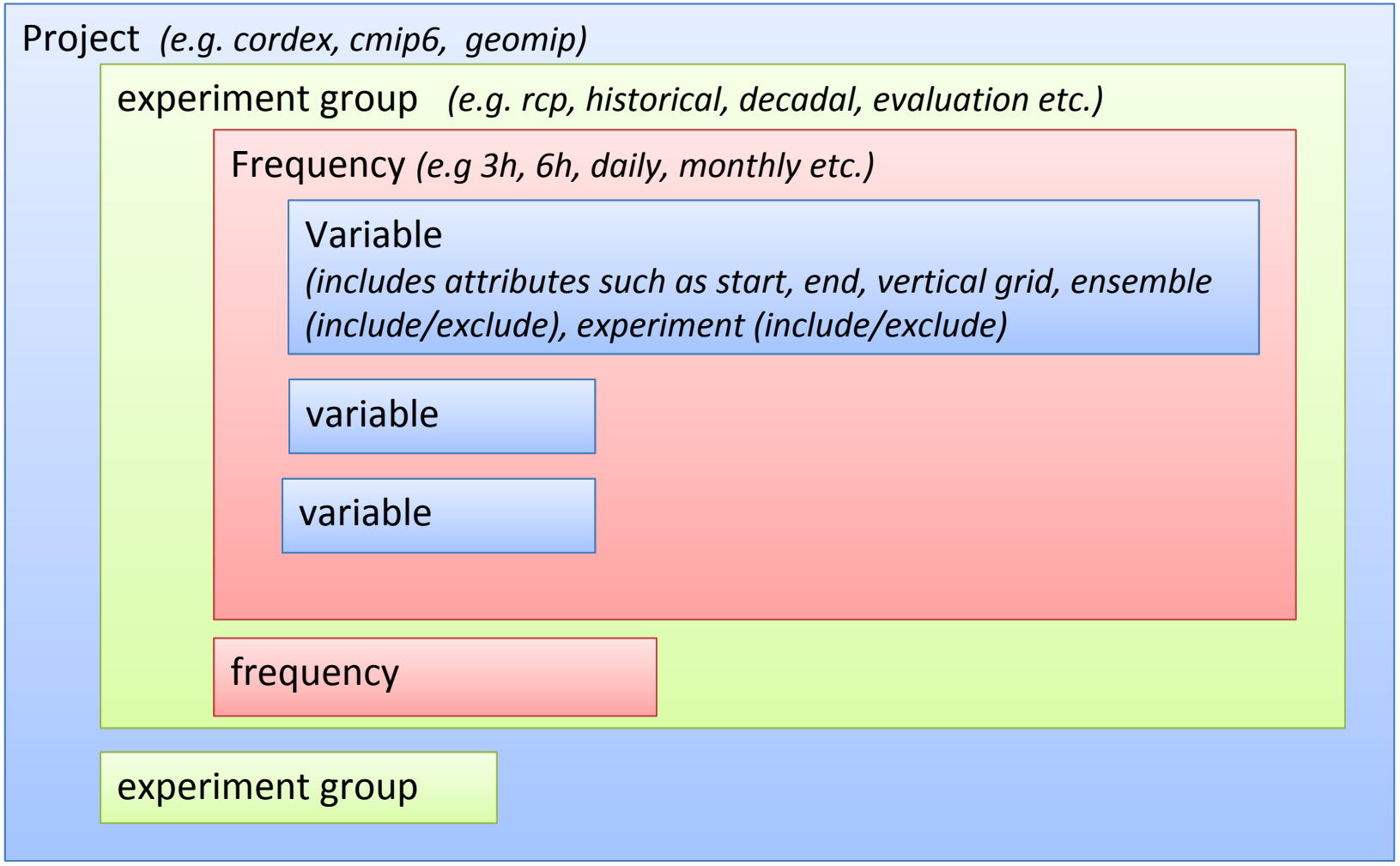
- “Required output” data hard to use without lots of manual interpretation
- Experiment plan format not suitable to establish explicit conformance ‘requirements’

CMIP6 Metadata Experience?

Goals for CMIP6

- Data production configuration driven more directly by project supplied metadata – more structured outputs required from experiment planning process.
- CIM outputs created directly from CREM – metadata is created as direct output of scientist model configuration.
- CIM outputs published directly to ESGF – will require effective verification tool, allowing flexibility where possible.

Required Output Scheme



Infrastructure Enhancements Wishlist (metadata related)

- Required Outputs in structured format (XML/JSON) – and held under configuration control with MIP tables.
- Direct publishing of CIM documents – use of questionnaire interface not a requirement
- Version Management of CIM documents
- CIM usage and tools review to improve relevance to MIP science community
- Mandatory Quality Control checks to be specified explicitly at the same time as the data format specification is published. Minimise checks required.

End . . .