```
                    ┌─────────────────┐
                    │  Data uploaded  │
                    │   to an ESG     │
                    │   data node     │
                    └────────┬────────┘
                             │
                             ▼
╔════════════════════════════════════════════════════╗
║                    ESG Publisher                     ║
║                      ┌──────────────────┐            ║
║                      │ CMOR2 Conformance│            ║
║              Y       │     checks       │            ║
║         ◇────────────▶──────────────────┘            ║    ┌──────────────┐
║        CMIP5                 │                        ║    │ Need this code│
║        Data?                 ▼                        ║────│ to be available│
║         ◇          ┌──────────────────┐               ║    └──────────────┘
║         │          │ WDCC Conformance │               ║
║         │          │     Checks       │               ║
║         │          └────────┬─────────┘               ║
║         │                   ▼                          ║
║       N │              ◇─────────◇      N              ║    ┌──────────────┐
║         │             Conforms?  ├──────────────────────────▶│Do not publish│
║         │              ◇─────────◇                    ║    └──────────────┘
║         │                   │ Y                        ║
║         │                   ▼                          ║
║         │          ┌──────────────────┐               ║
║         │          │ Catalog updated  │               ║
║         └──────────▶  with conformance│               ║
║                    │  check status    │               ║
║                    └────────┬─────────┘               ║
║                             ▼                          ║
║                    ┌──────────────────┐               ║
║                    │     Publish      │               ║
║                    └──────────────────┘               ║
╚════════════════════════════════════════════════════╝
                             │
                             ▼
                        ◇─────────◇        N       ┌──────────┐
                         Core     ├───────────────▶│    QC    │
                         Data?    │                │  Ended   │
                        ◇─────────◇                └──────────┘
                             │ Y
                             ▼
                    ┌──────────────────────┐
                    │ Data will be replicated│
                    │ (checksums used to     │
                    │  guarantee identical   │
                    │  copies)               │
                    └──────────────────────┘
```

```
                                                    ┌──────────────────────┐
                                                    │ New versions of       │
                                                    │ metadata result in    │
                                                    │ incremented metadata  │
                                                    │ version numbers. New  │
                                                    │ versions of the objects│
                                                    │ described by the      │
                                                    │ metadata result in    │
                                                    │ new URIs.             │
                                                    └──────────────────────┘
   ┌──────────────────────┐
   │  Meta4 Questionnaire  │◀─┐
   └──────────┬───────────┘  │
              │              │
              ▼              │
         ◇─────────◇         │      ◇────────◇         ┌──────────────┐
          Valid?   ├─────────┘      │ Export │         │  Persist XML │
         ◇─────────◇                │  Now   ├────────▶│              │
                                    ◇────────◇         └──────┬───────┘
                                                              ▼
                                                    ┌──────────────────────┐
                                                    │ Export via Atom Feed  │
                                                    │ pointing to persisted │
                                                    │ XML documents         │
                                                    └──────────────────────┘
```

Replication

Data arrives at Core Node 1

Data arrives at Core Node 2

Data arrives at Core Node N

Should we do conformance at this node?

Y

Subjective Quality Control

N

Wait & Poll QC status

Pass QC?

N

Notify modelling centres that a new version is needed

Y

Make status available for status poll

Metadata QC ... Completeness ... ... Request DOI

Pass to ESG Publisher & Distribute Catalogs

Replication

Metadata in
ESG data nodes

Data arrives at
Core Node 1

Data arrives at
Core Node 2

Data arrives at
Core Node N

Should we do
conformance
at this node?

Y

Subjective Data
Quality Control

N

Wait &
Poll QC
status

Subjective Metadata
Quality Control

Pass
QC?

N

Notify modelling
centres that a new
version is needed

Y

Make status available
for status poll

Metadata QC ...
Completeness ...
... Request DOI

Pass to ESG
Publisher & Distribute
Catalogs

Including
metadata
processing

Create CIM instance