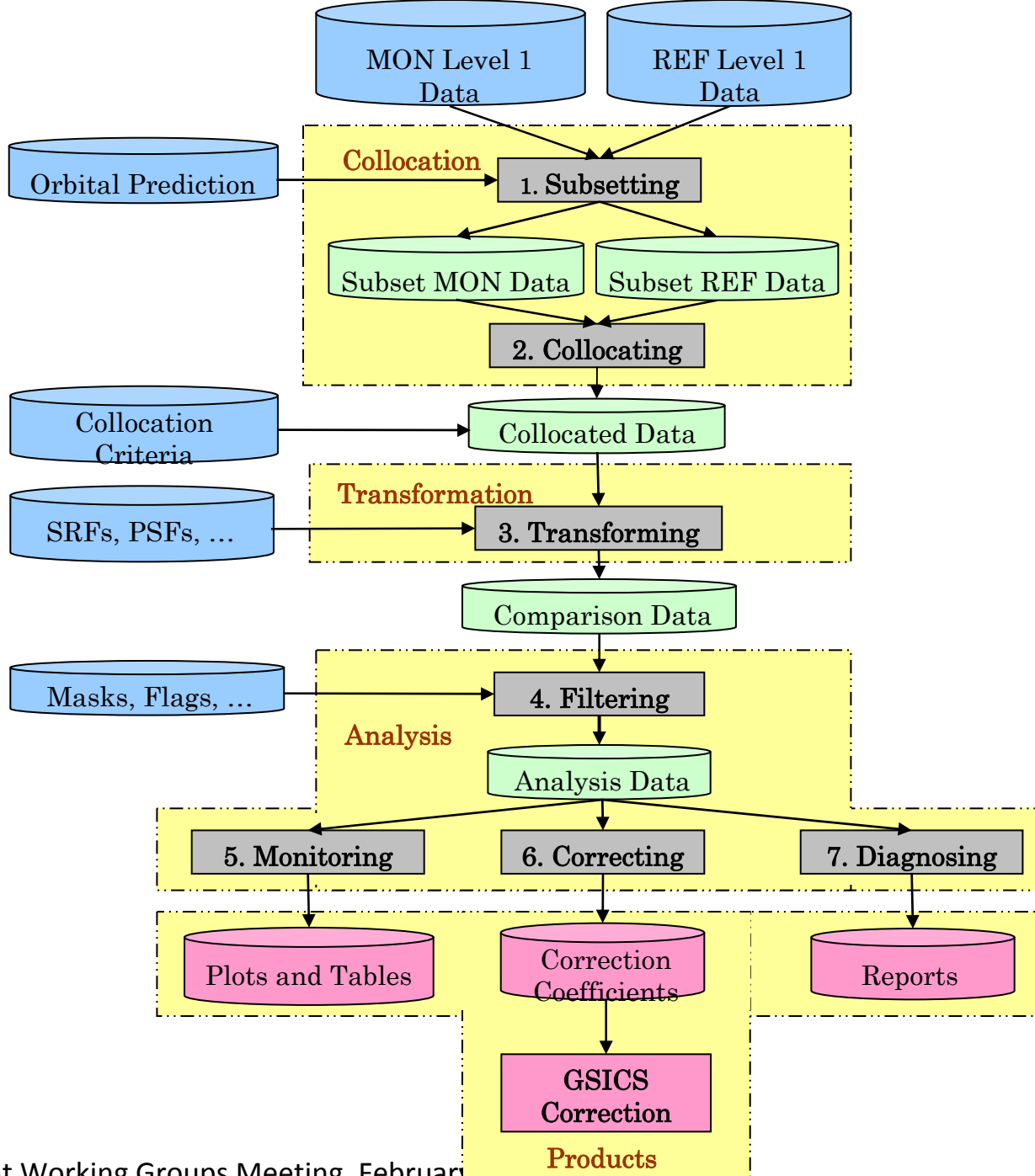# Storing
GSICS Processing Information
With ISO 19115 Metadata Standard

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and

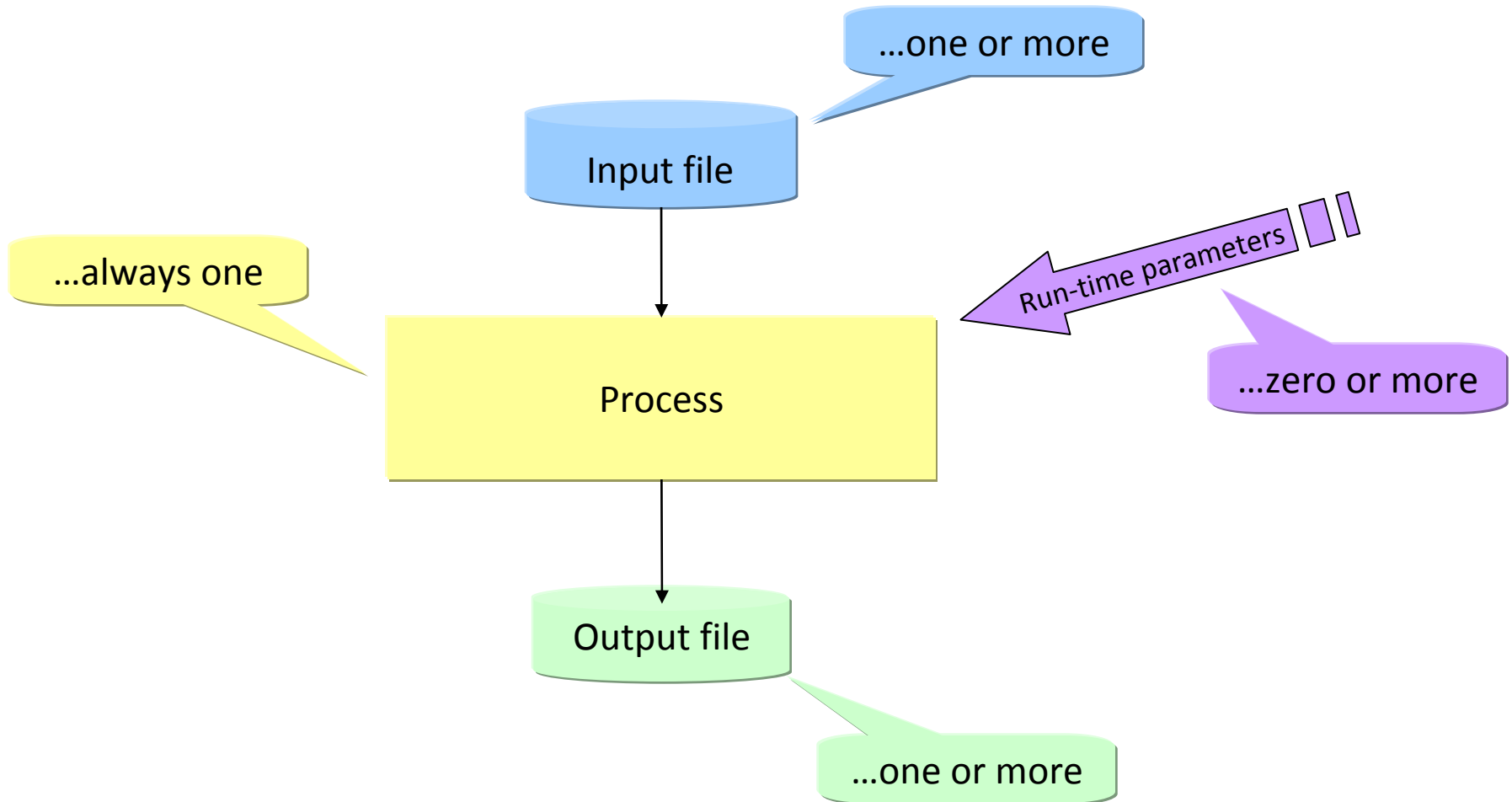University Corporation for Atmospheric Research

Why Processing Information?

- GSICS is about better calibration
- Crucial aspect of calibration is traceability:
  - Reference instruments (and their calibration)
  - Procedures and practices (ATBDs *et al.*)
  - Processing
- Processing information is the basis of a processing traceability system
- Tremendous asset for both users and GSICS collaborators

Processing Elements

…one or more

Input file

…always one

Process

Run-time parameters

…zero or more

Output file

…one or more

Why ISO 19115 Metadata Standard?

- No netCDF convention truly supports processing information

- WMO Core Metadata Profile based on it

- Imagery and gridded data extension (ISO 19115-2) adds important capabilities for describing processing information

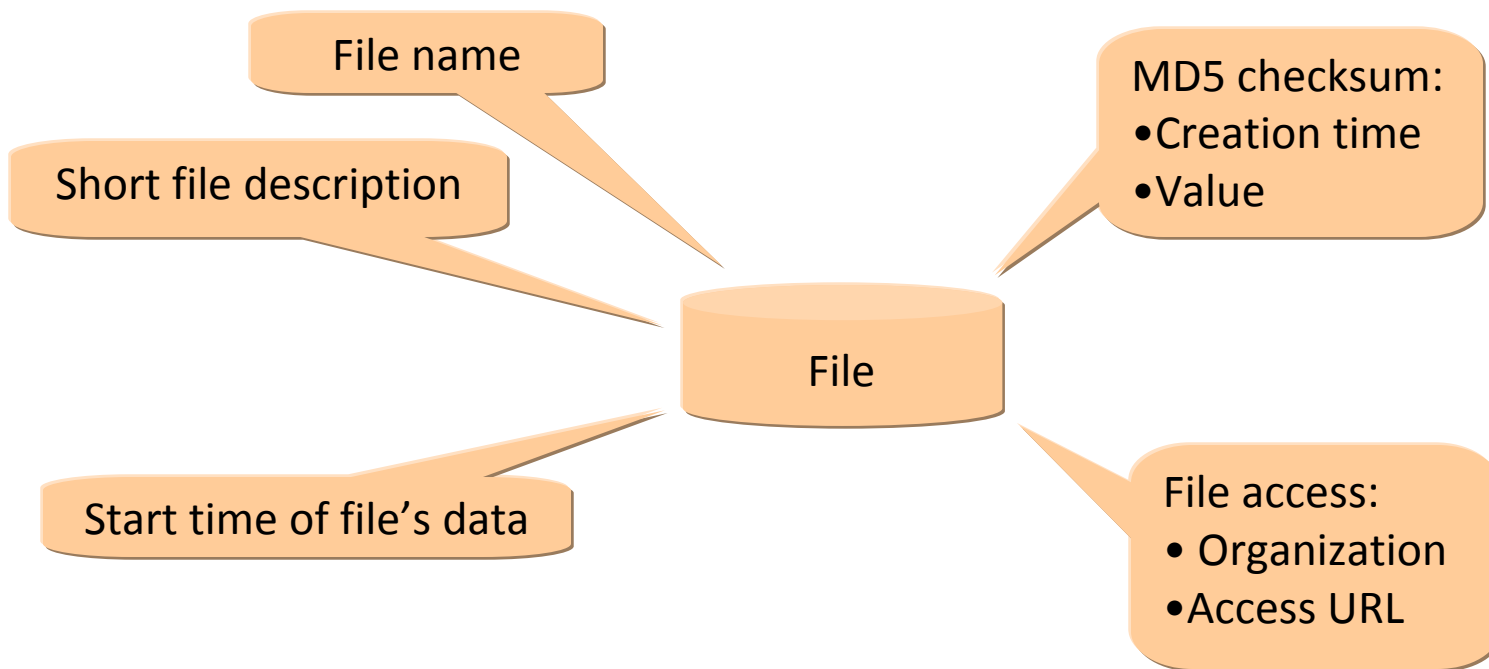- Widespread acceptance → many software tools for manipulation
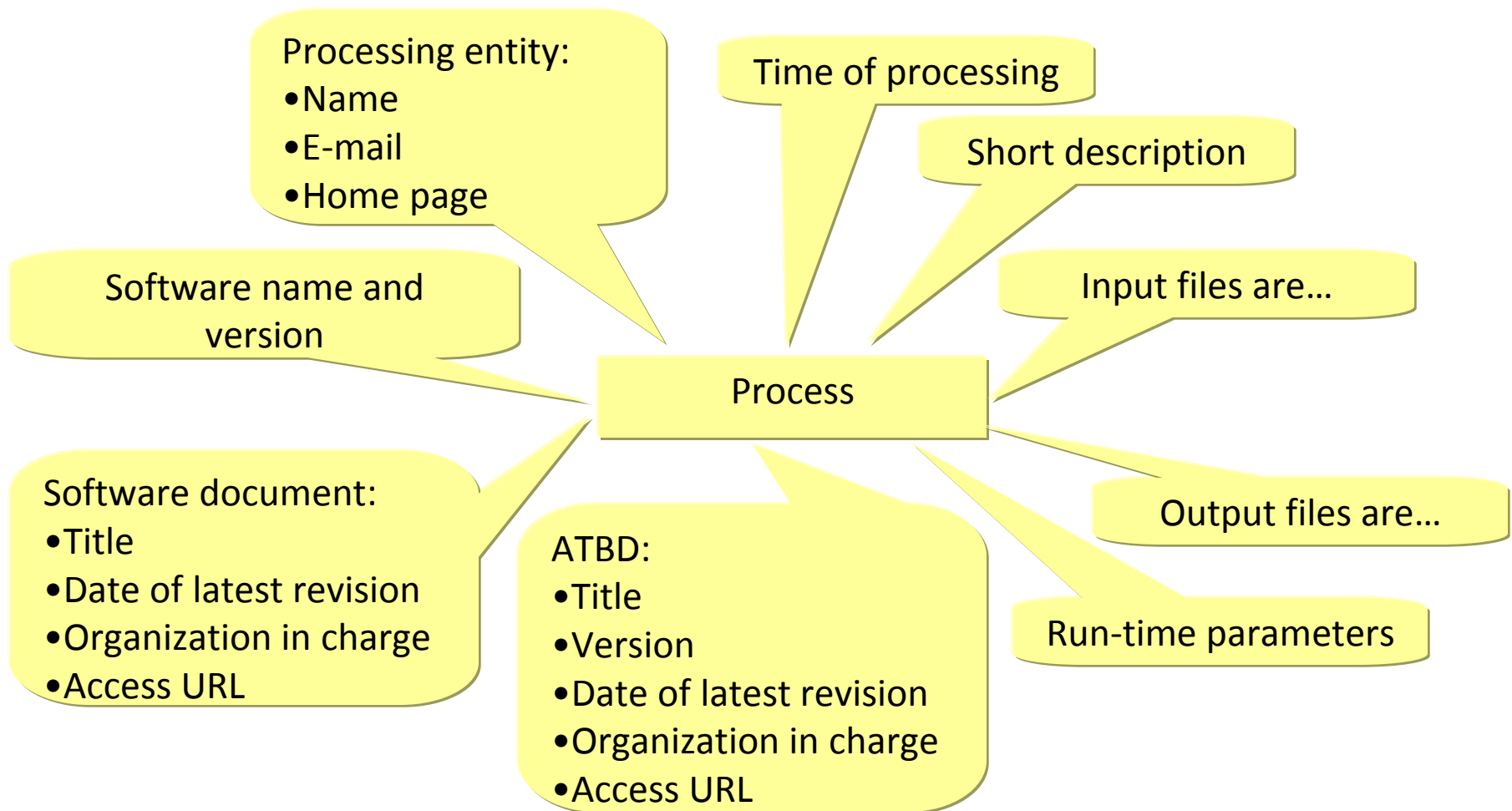
Approach

- Focus only on processing information elements of ISO 19115

- Pick a useful subset for which is practical to provide information in an operational satellite data processing environment

- Produce metadata templates with concise real-life instructions that are easy to complete

File Metadata Template

Same metadata collected for input and output files!

File name

Short file description

MD5 checksum:
- Creation time
- Value

File

Start time of file's data

File access:
- Organization
- Access URL

Process Metadata Template

Processing entity:
- Name
- E-mail
- Home page

Time of processing

Short description

Software name and version

Input files are…

Process

Software document:
- Title
- Date of latest revision
- Organization in charge
- Access URL

Output files are…

ATBD:
- Title
- Version
- Date of latest revision
- Organization in charge
- Access URL

Run-time parameters

Conclusion

- ISO 19115 metadata standard fulfills the requirements for storing GSICS processing information

- Developed templates allow easy implementation

- The templates can be extended with additional metadata if required

- NOAA GPRC is working on a trial system

For technical details:

https://cs.star.nesdis.noaa.gov/GSICS/ProcessingHistoryInIsoMetadata