GRUAN data flow

Michael Sommer
GRUAN Lead Centre, DWD

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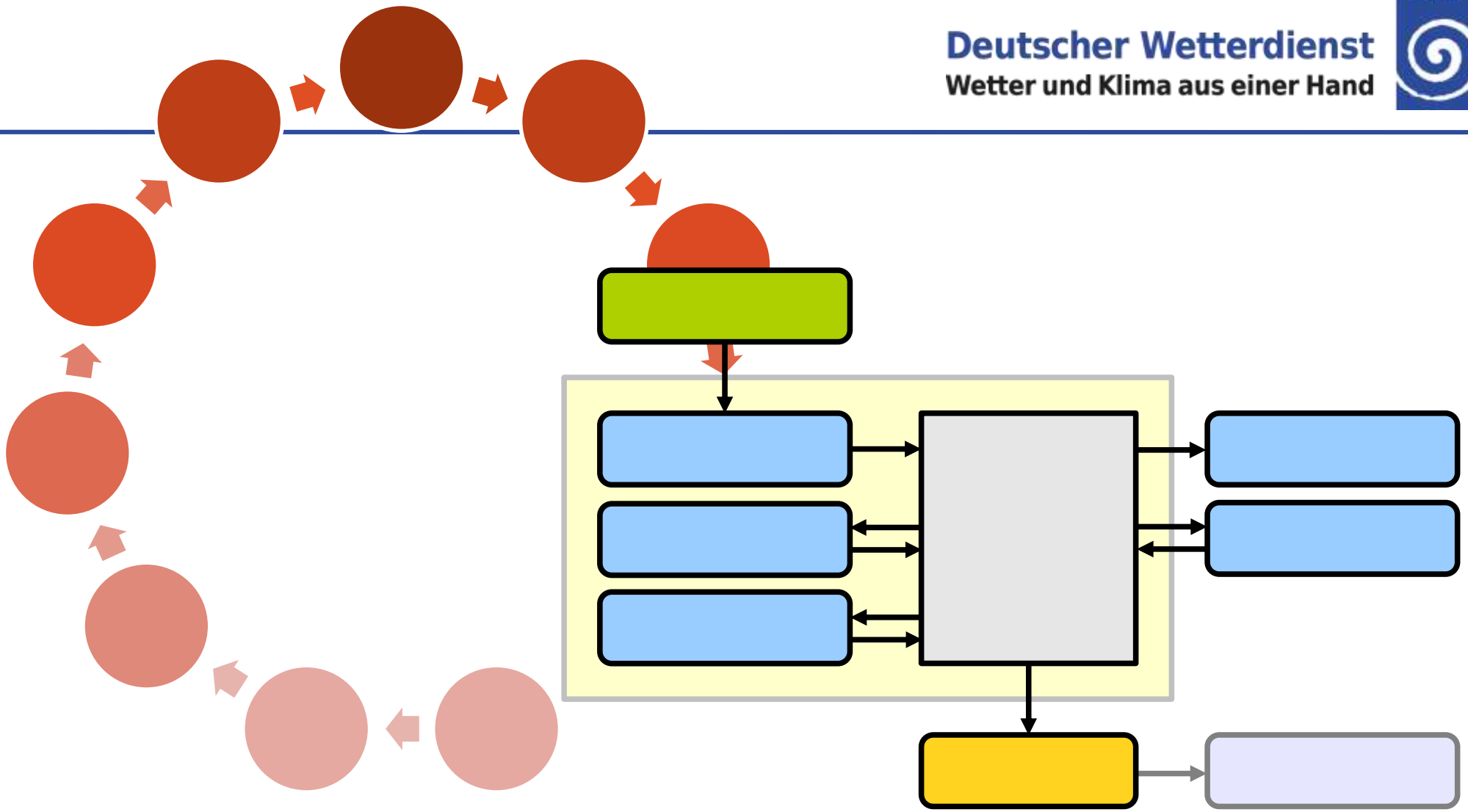
Outline

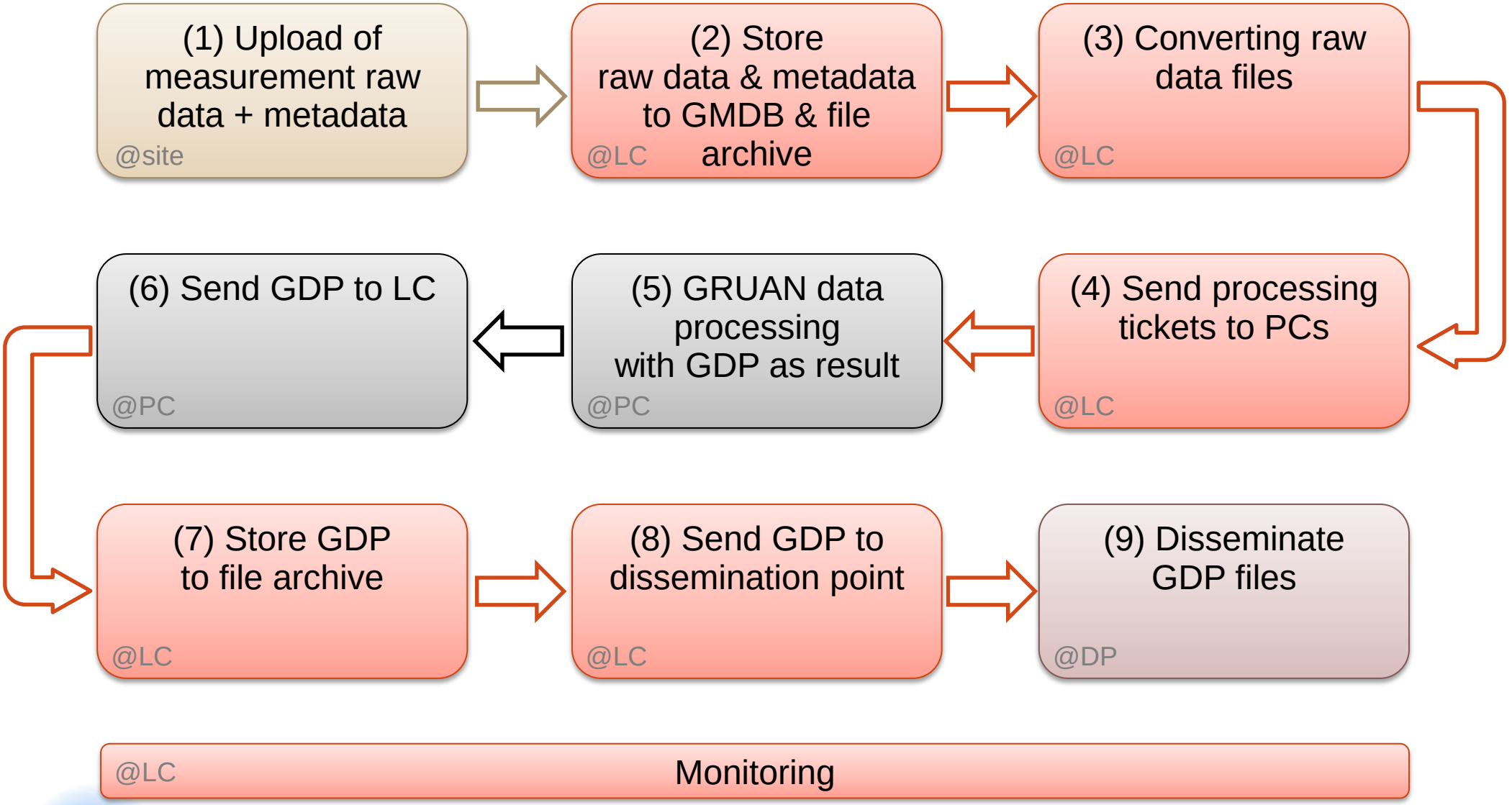
- Steps of GRUAN data flow
- Change management
- Statistics & monitoring
- Conclusion



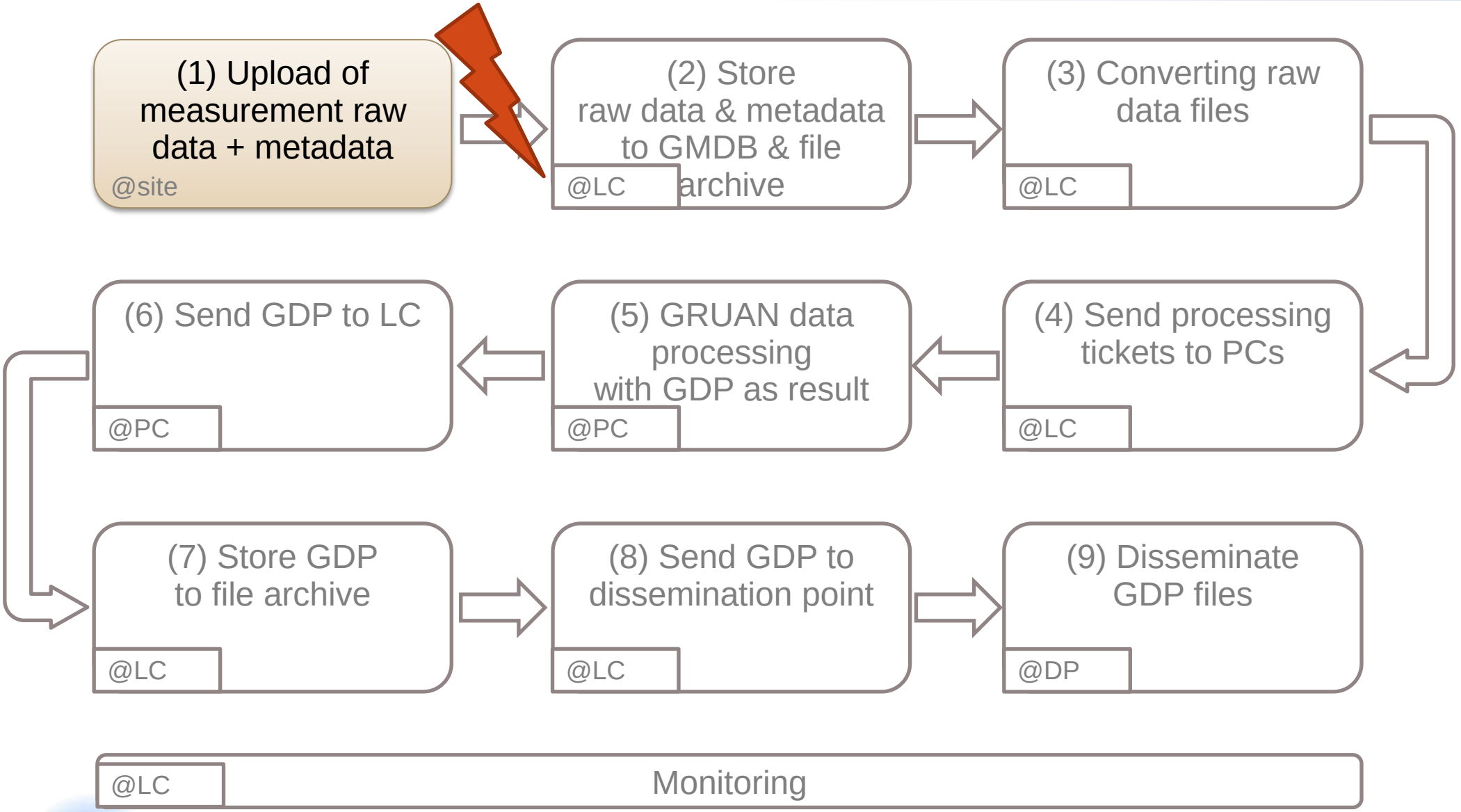
Steps of

DATA FLOW

Data flow scheme

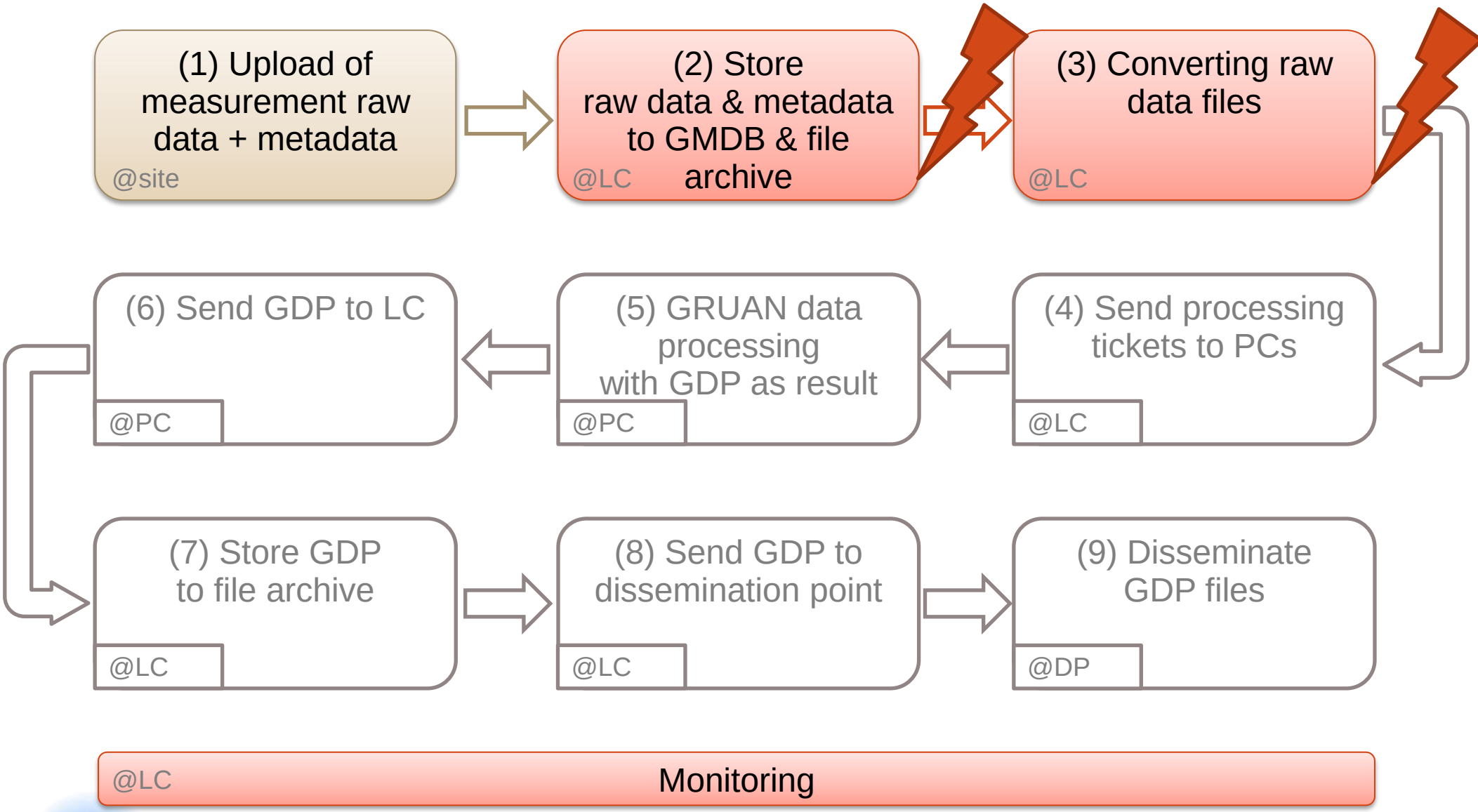


No upload


(1) Upload of measurement raw data + metadata
@site
(2) Store raw data & metadata to GMDB & file archive
@LC
(3) Converting raw data files
@LC
(4) Send processing tickets to PCs
@LC
(5) GRUAN data processing with GDP as result
@PC
(6) Send GDP to LC
@PC
(7) Store GDP to file archive
@LC
(8) Send GDP to dissemination point
@LC
(9) Disseminate GDP files
@DP
@LC
Monitoring

Error/issue in general checks of files or metadata

Deutscher Wetterdienst
Wetter und Klima aus einer Hand



Error in GRUAN data processing

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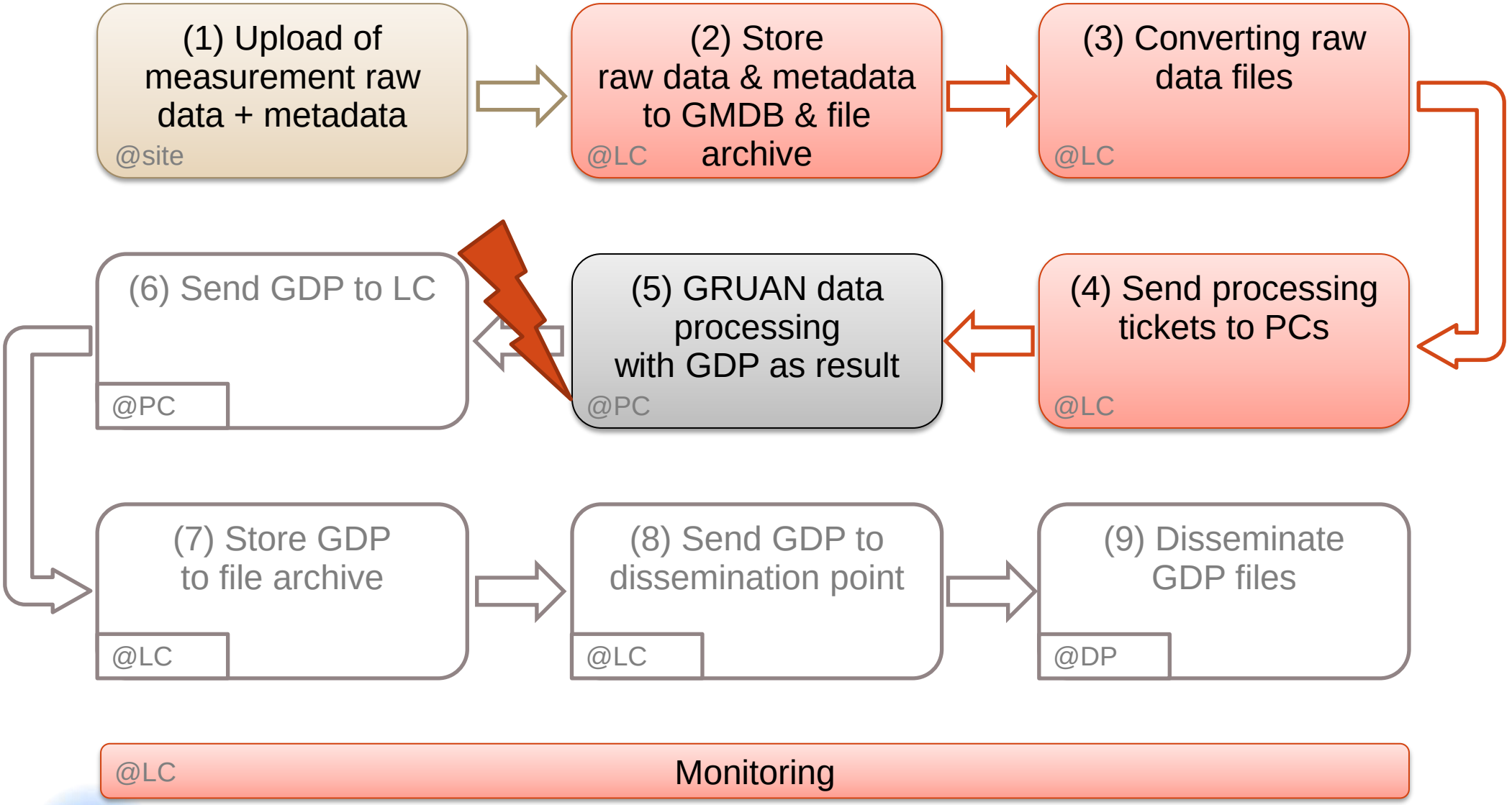
Wetter und Klima aus einer Hand



Current activities of

CHANGE MANAGEMENT

Change management

Deutscher Wetterdienst
Wetter und Klima aus einer Hand

- Large amount of changes in 2016/17
  - Most of GRUAN sites are affected
- Most important changes:
  - Software change: Vaisala MW31 (DC3) to MW41
  - Hardware change: Vaisala RS92 to RS41
  - Hardware change: MeteoLabor SRS-C34 to SRS-C50
- Consequences:
  - Improvement of RsLaunchClient (and other tools)
  - Many changes in general metadata of sites
  - Adaption of monitoring
  - Additional workload at sites, LC & PCs

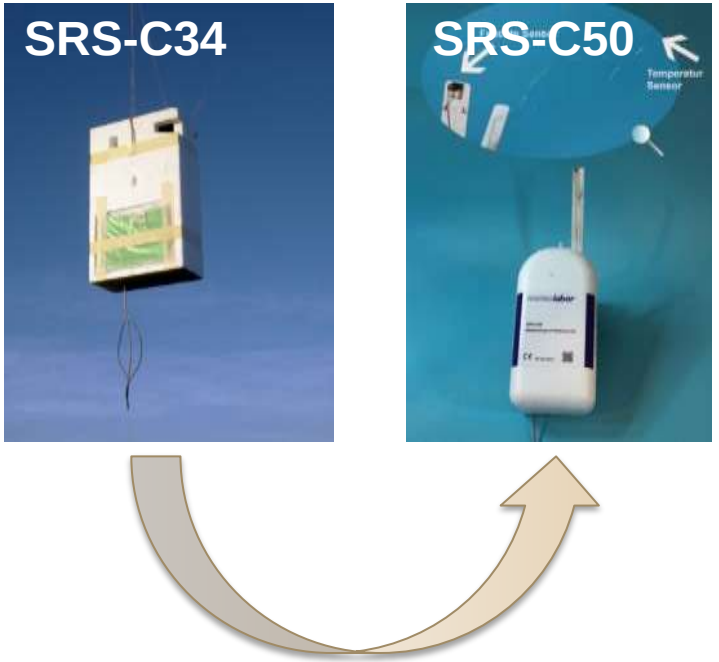
Transition from RS92 to RS41

- Change from Vaisala RS92 to RS41 at following sites:
  - Boulder (January 2017)
  - Cabauw (February 2017)
  - Lauder (at Invercargill, Sep. 2016)
  - Lindenberg (March 2017)
  - Ny-Alesund (April 2017)
  - Potenza (January 2017)
  - Sodankylä (March 2017)

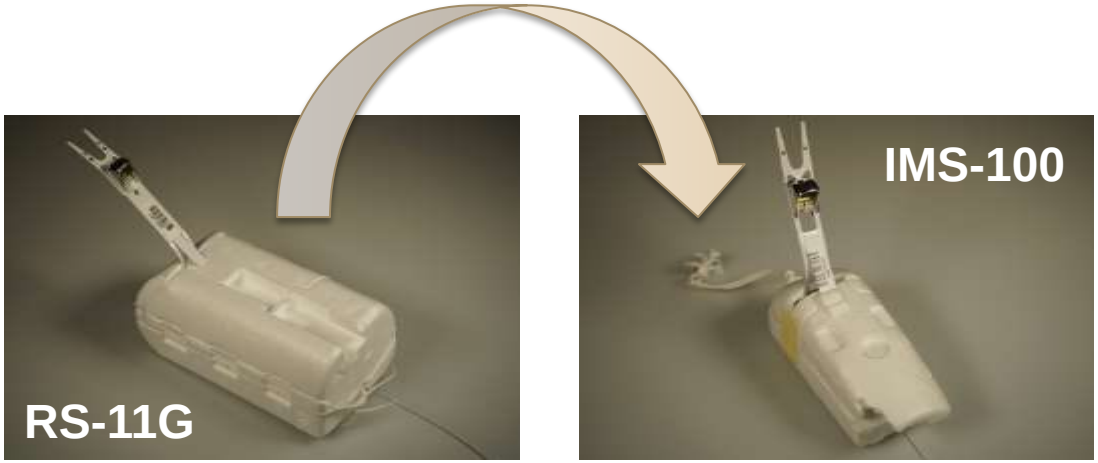
- Some more sites want to change soon
  - ARM sites: Barrow, Lamont/SGP, Graciosa
  - Australian sites: Alice Springs, Darwin, Davis, Macquarie Island, Melbourne (2017/2018)
  - Beltsville
  - Tateno (2018)

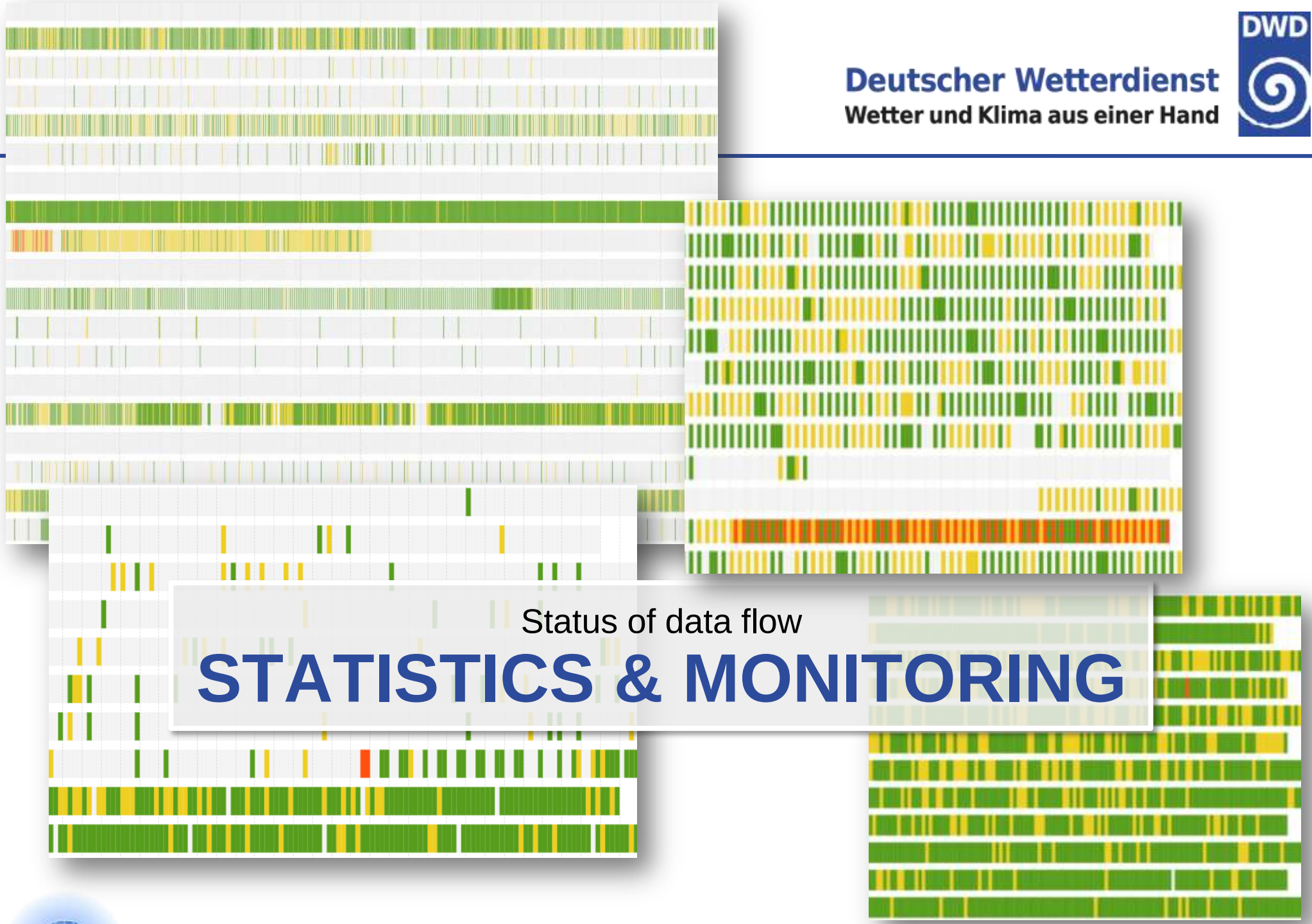
Other transitions

- Change from MeteoLabor SRS-C34 to SRS-C50
  - Payerne (February 2017)



- Change from Meisei RS-11G to IMS-100
  - Tateno (planned in August 2017)





Status of data flow

STATISTICS & MONITORING

Radiosondes

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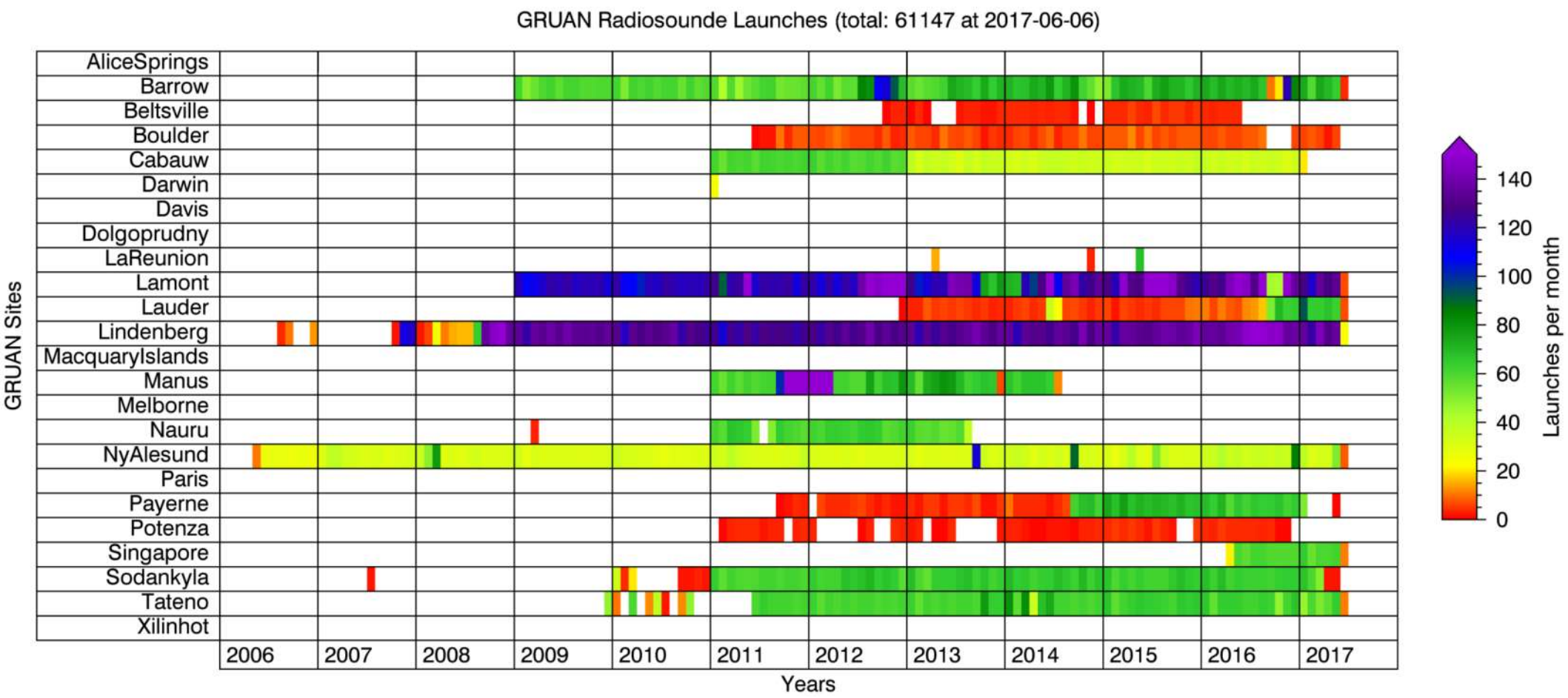
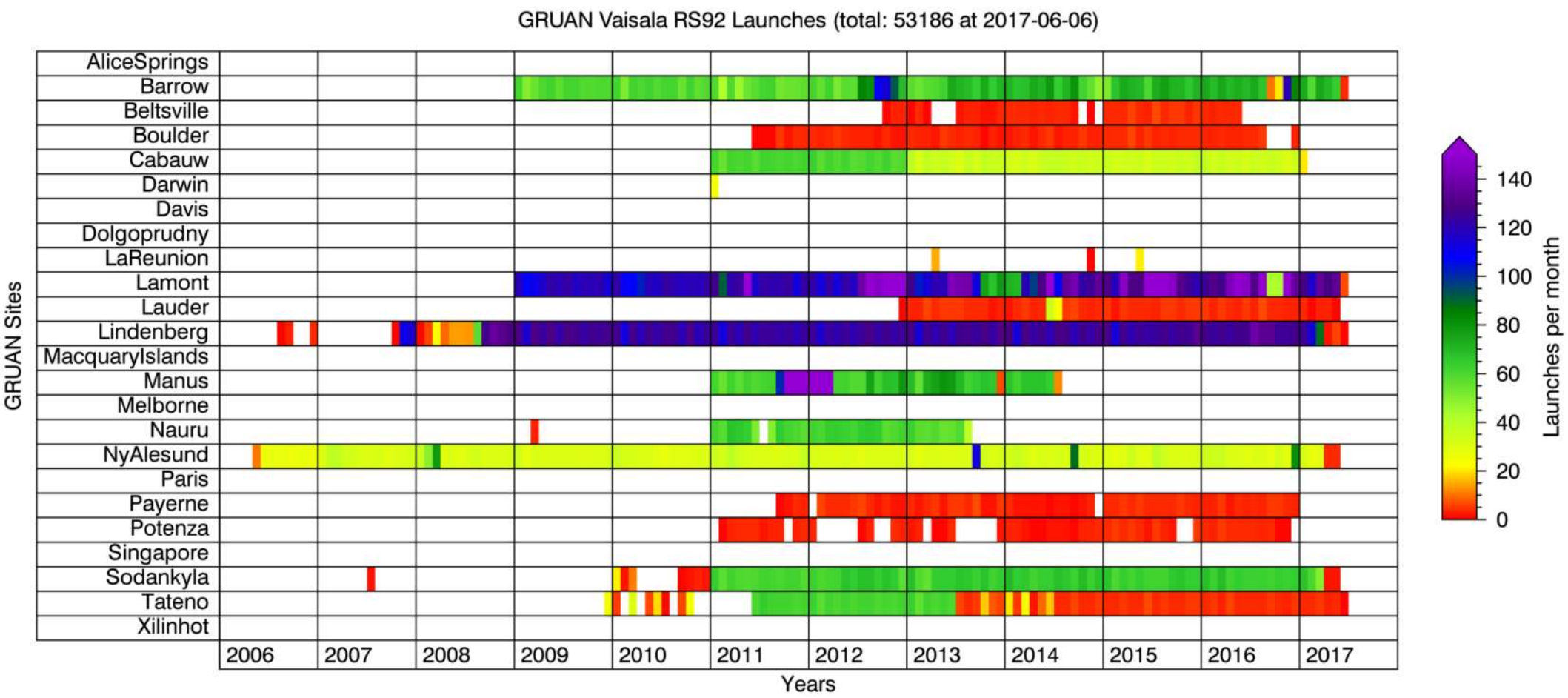
Wetter und Klima aus einer Hand



- Approx. 61,000 launches in GRUAN file archive
- Much more are performed.
  → Some sites have not started data flow yet.

Vaisala RS92

Deutscher Wetterdienst
Wetter und Klima aus einer Hand



- Data flow of RS92 ends at some sites in 2017

Vaisala RS41

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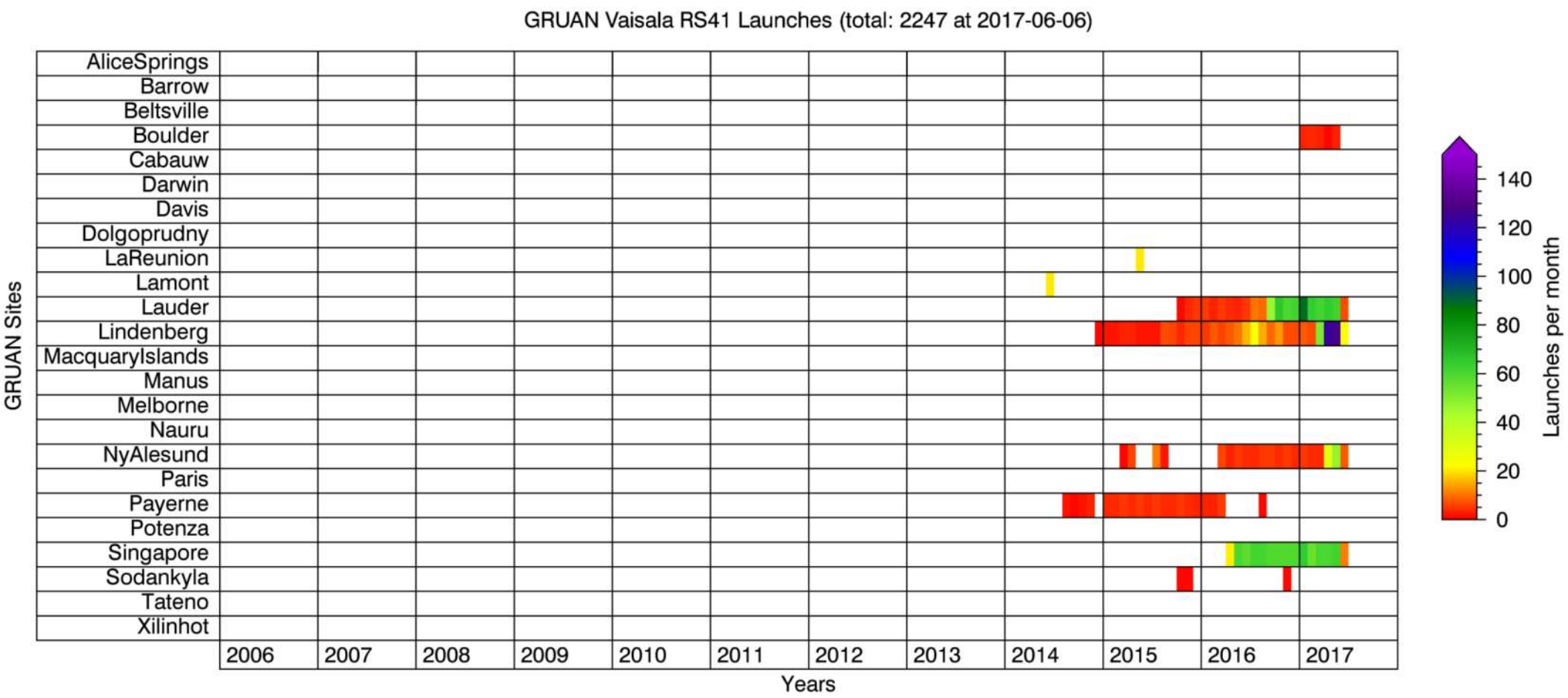
Wetter und Klima aus einer Hand



- Data flow of RS41 started at some sites in last year
- In addition short campaigns and dual launches are available

Ozone sondes

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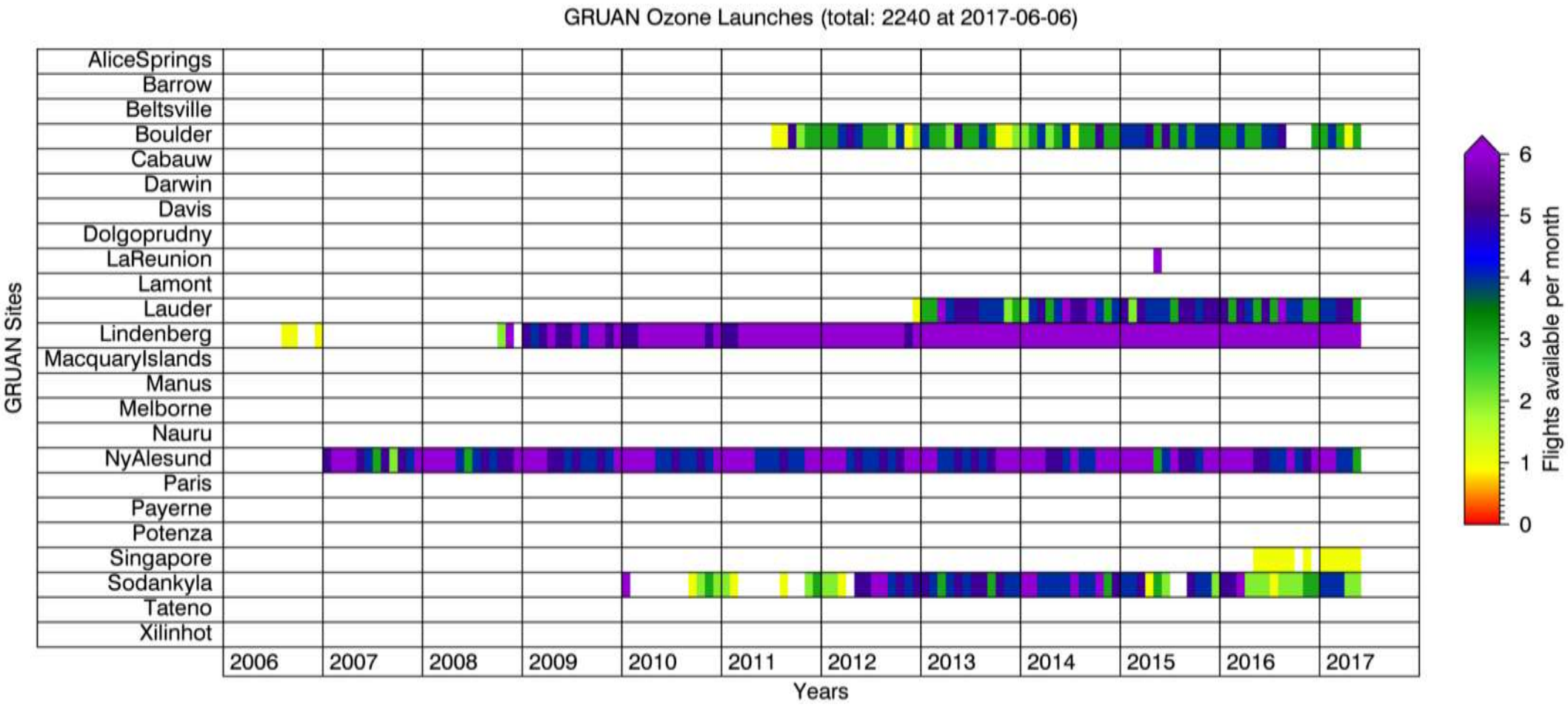
Wetter und Klima aus einer Hand



- Approx. 2250 launches in GRUAN file archive
- More are performed at sites → Please upload to GRUAN.

Stratospheric humidity sondes

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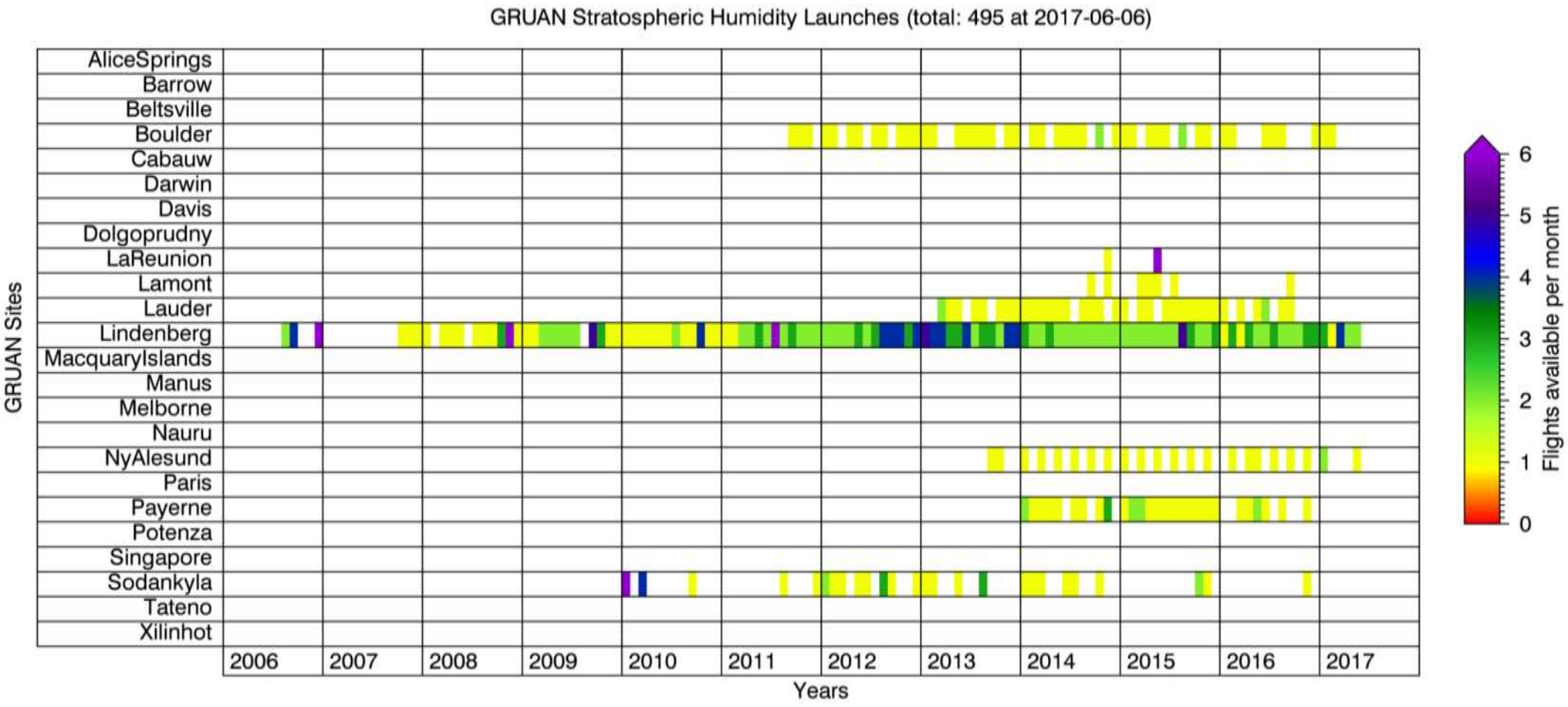
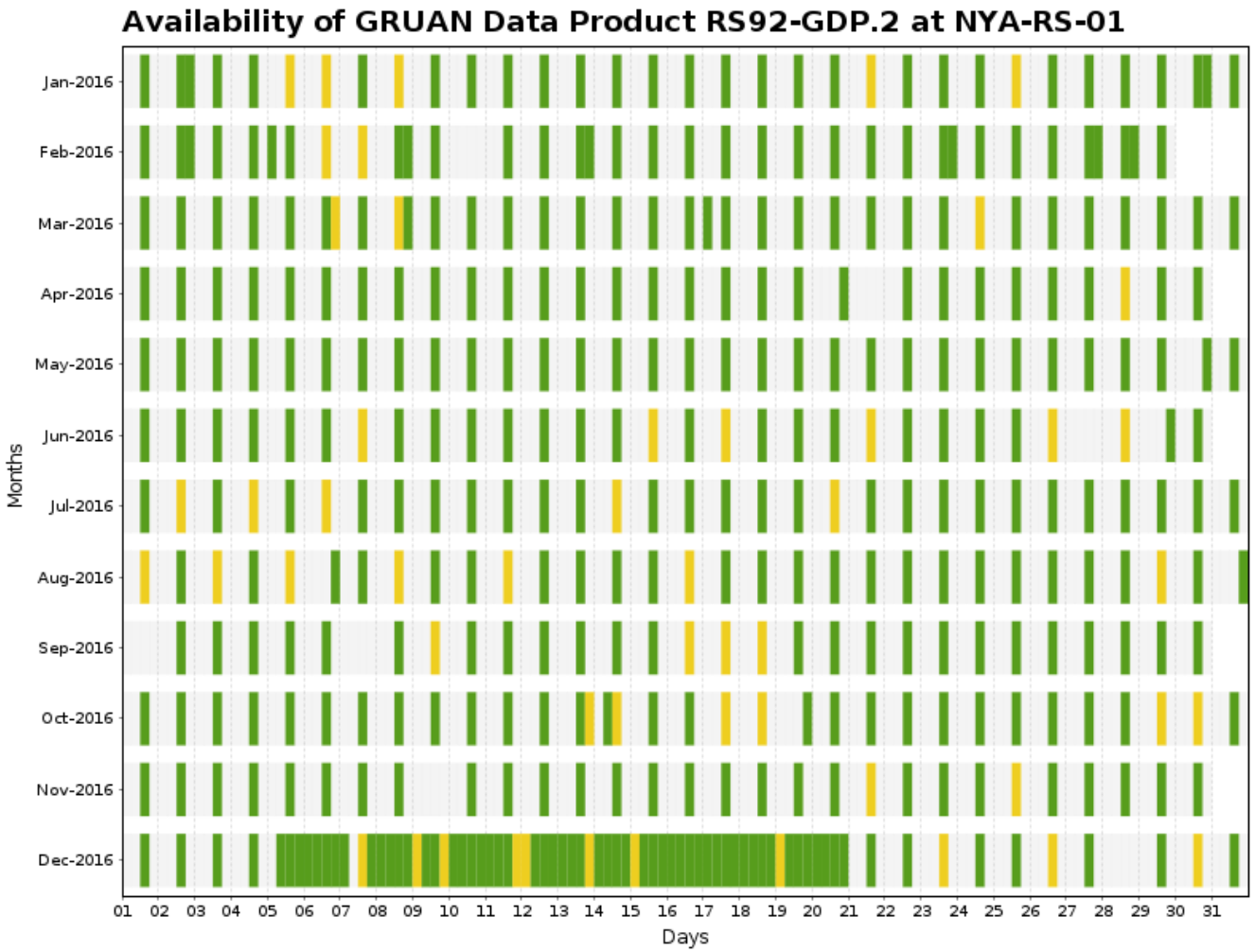
Wetter und Klima aus einer Hand



- Approx. 500 launches in GRUAN file archive
- More are performed at sites → Please upload to GRUAN.

Availability (check of data flow)



Legend

Available (green):
All steps of processing have successfully been completed.

Unprocessed (yellow):
The raw data file has successfully been converted to a GRUAN standardized raw data file format (NetCDF). The processing itself is not done yet, or could not be completed.

Failed (red):
Raw data file could not be converted to a GRUAN standardized raw data file format (NetCDF).

- On GRUAN website (updated monthly)

Reporting

- Current status
  - Annual site reports (at ICM)
  - Monthly updated availability & performance plots (at website)
  - Manual look at detailed monitoring tools in case of specific requests from sites
- What would GRUAN sites like to receive from LC?
  - Monthly reports ?
  - Monthly email with statistics ?
  - Notification in case of errors/failures ? (per email ?)
  - Notification in case of no data ? (when ? → after a month ?)
  - …

  - We should discuss this and make a decision! → **list with priorities**

Conclusion

- Data flow → **Uploading** measurement data is the most important step!
- Change management → A lot of **additional** work at sites, LC, PCs
- Statistics → Available at website
- Reporting → Improvement is necessary

Thank you for your attention.