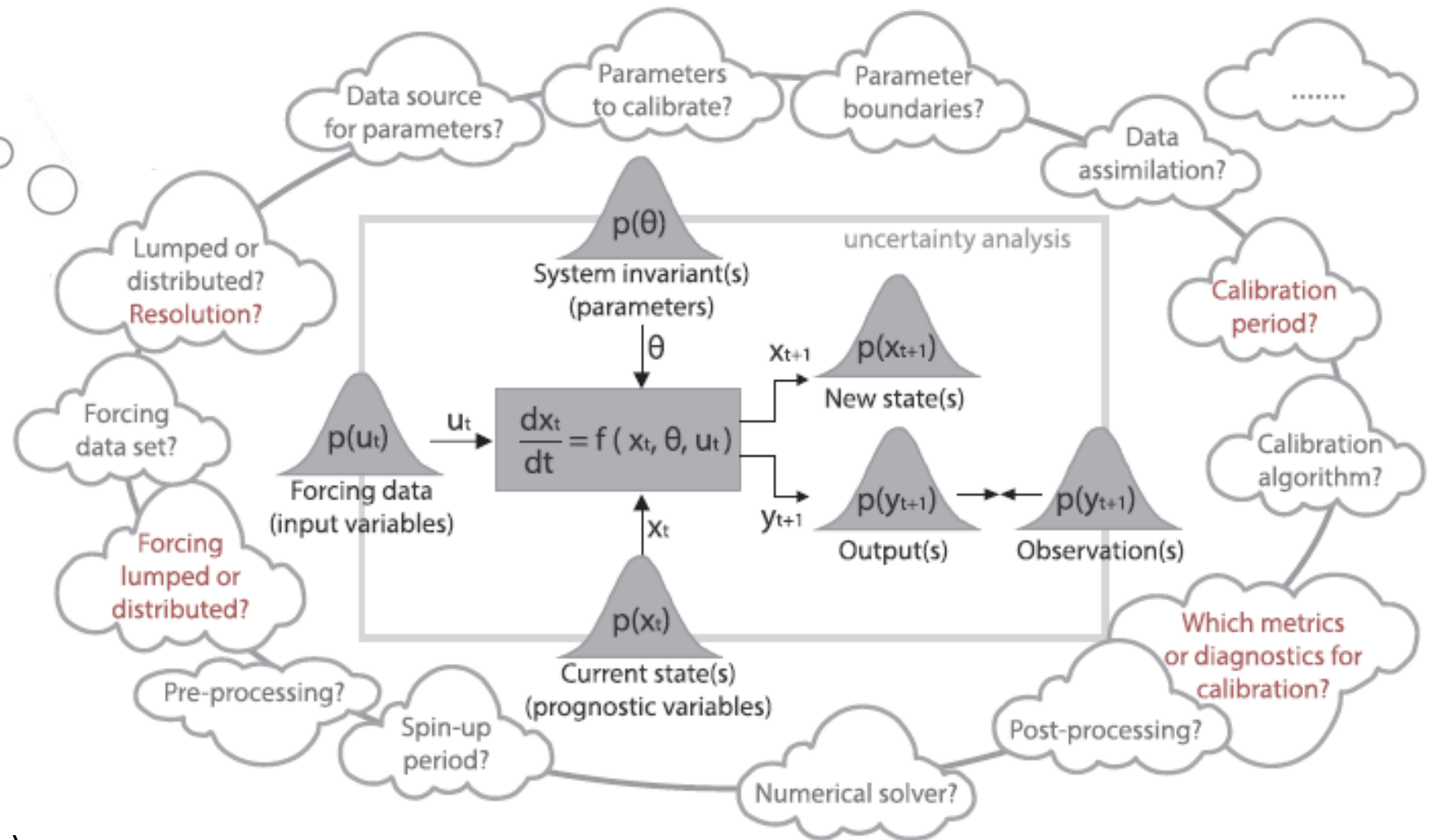


The impact of modelling decisions in hydrological modelling

Janneke Remmers, janneke.remmers@wur.nl



(Melsen et al., 2019,
adapted by Lieke Melsen)

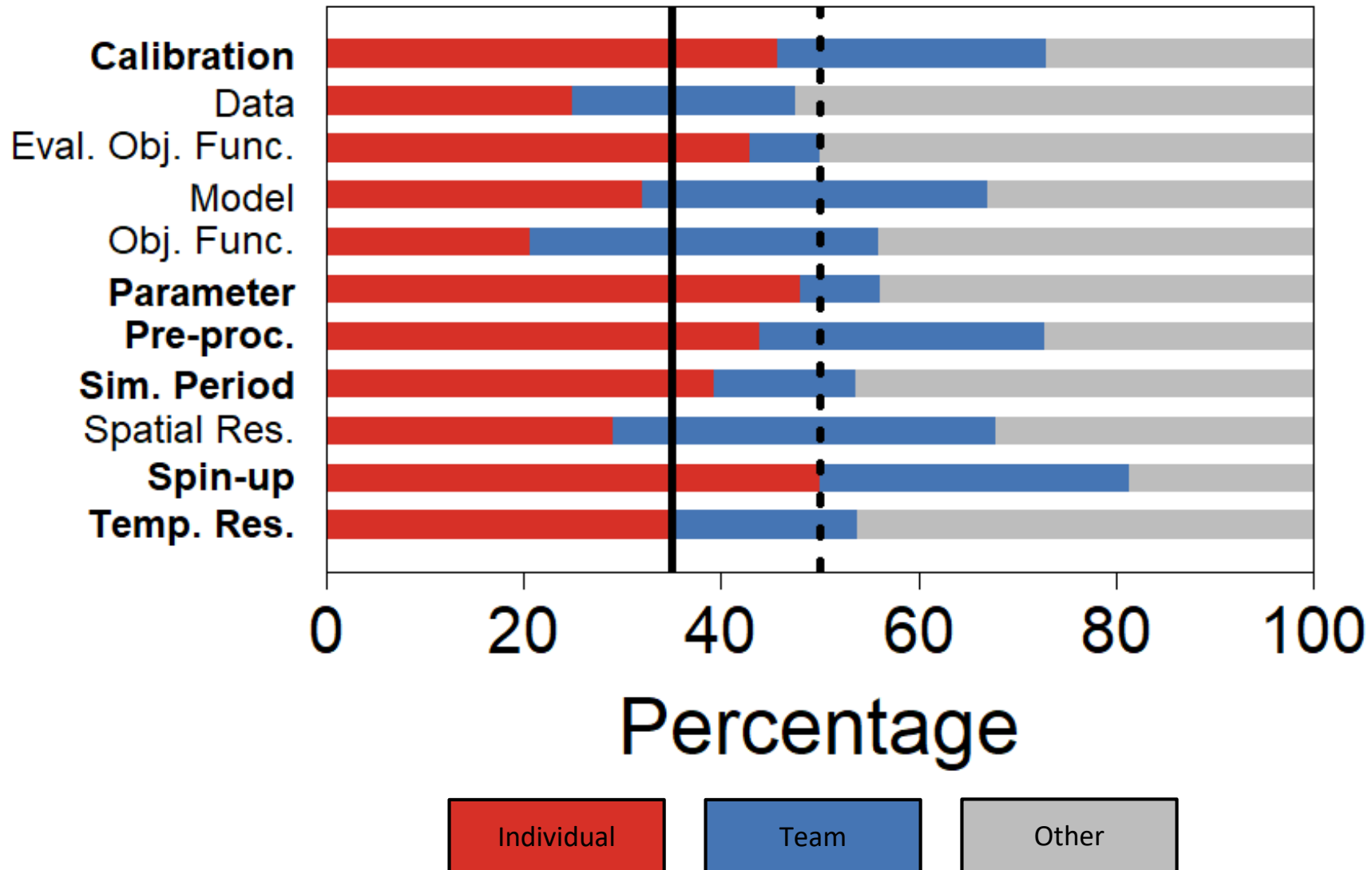
Identified reasons for modelling decisions:



(Melsen, 2021, It takes a village to run a model, in preparation for WRR)

→
increased personal freedom of choice

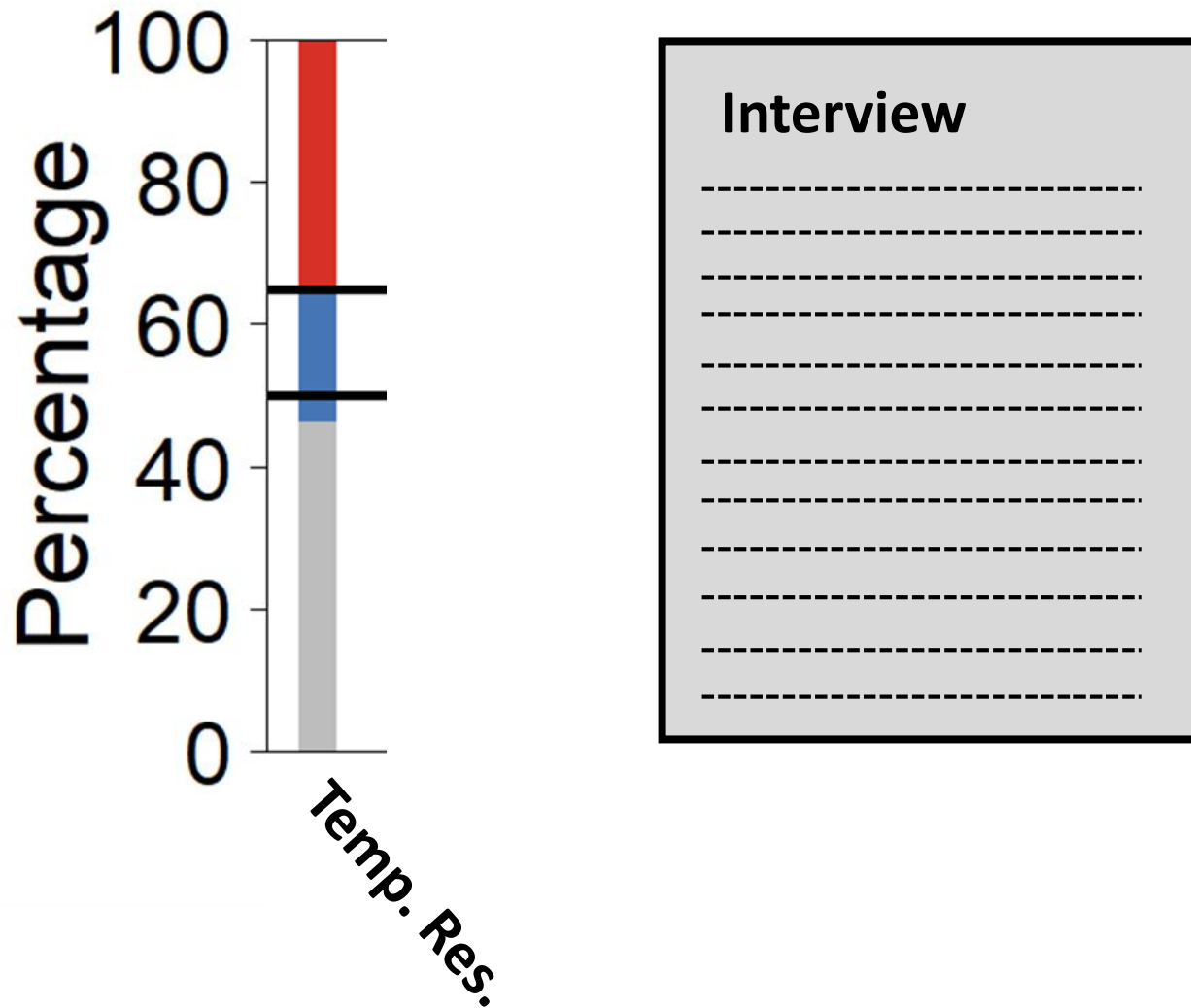
Reasons behind modelling decisions



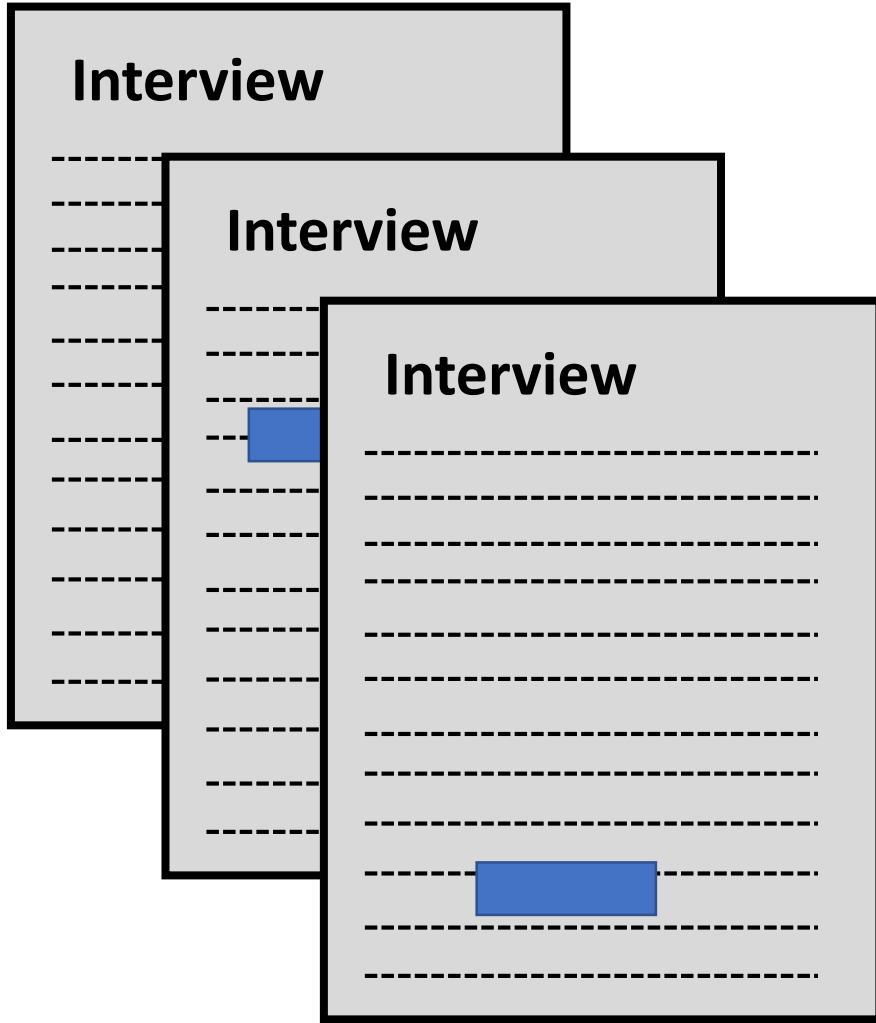
+ Objective Function
+ Calibration Period

(Melsen et al., 2019)

Highlight: Temporal resolution



Highlight: Temporal resolution



Daily

7.5 min
+
Monthly
aggregation

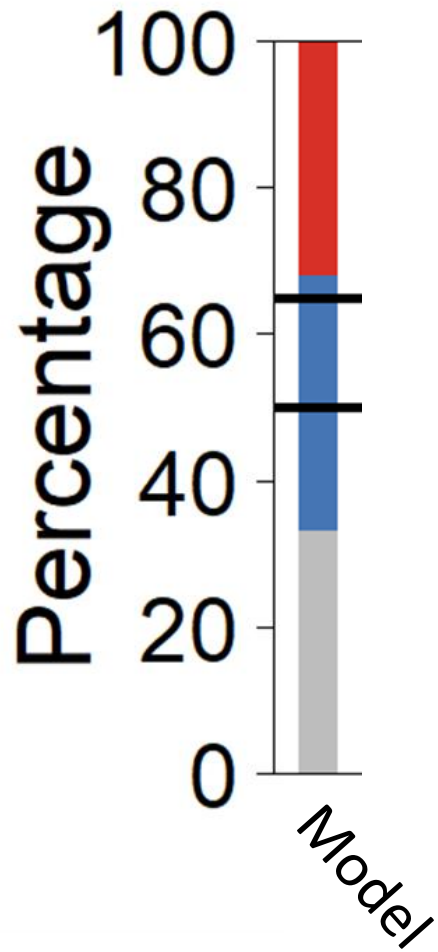
3 hours
+
Daily
aggregation

3 hours
+
Monthly
aggregation

6 hours
+
Daily
aggregation

6 hours
+
Monthly
aggregation

Highlight: Model selection



(Craig et al, 2020, EMS)

Fast

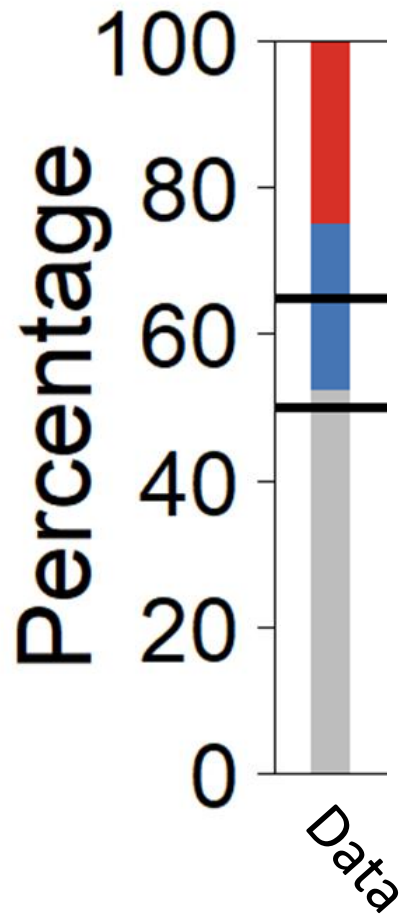
Suitable for all platforms
(Windows,
Linux & Mac)

User-friendly

Suitable for
study goal

Different distributions
possible

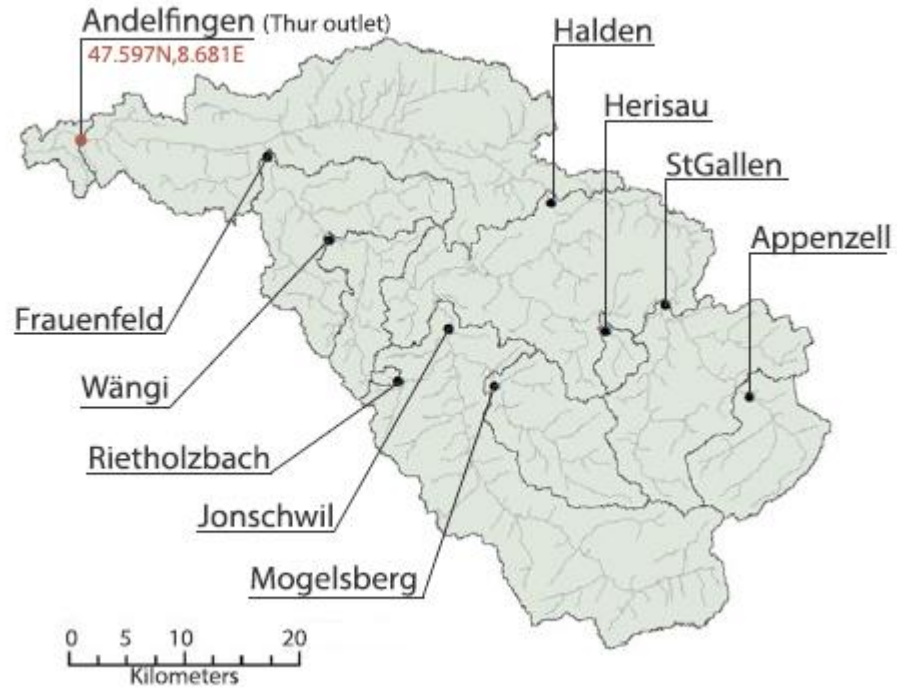
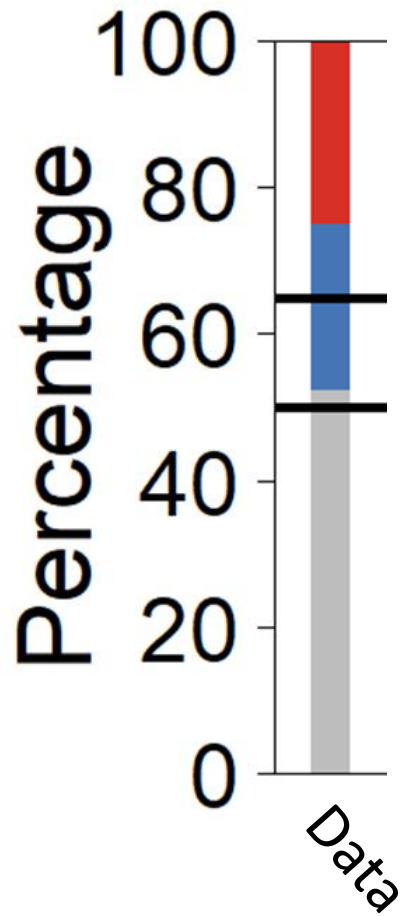
Highlight: Data



Criteria:

- *1000 – 2000 km²*
- *Including some subbasins*
- *Accessibility (reproducibility)*

Highlight: Data



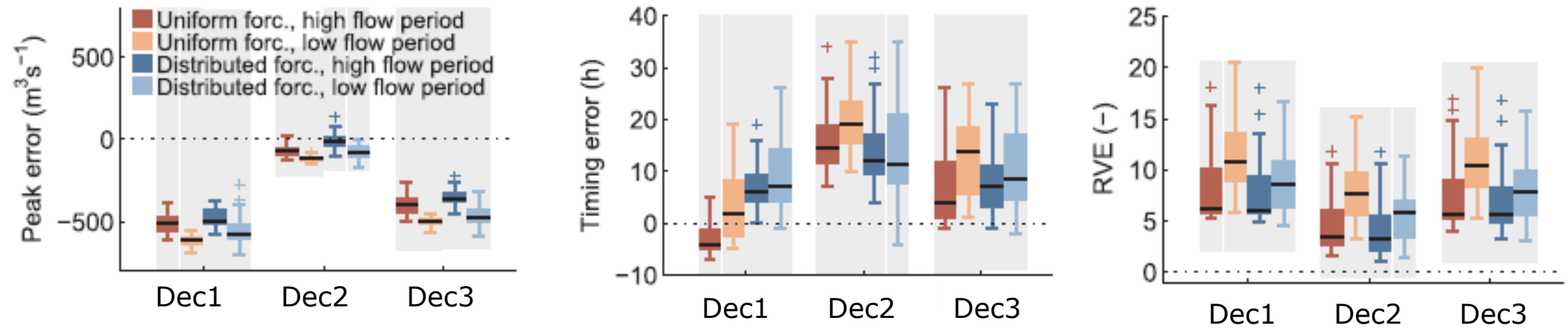
(Melsen et al., 2019)

Fullfills requirements

Data availability

Experience supervisor

Quantification example (Melsen et al, 2019)



(Melsen et al., 2019, adapted)

What is next?

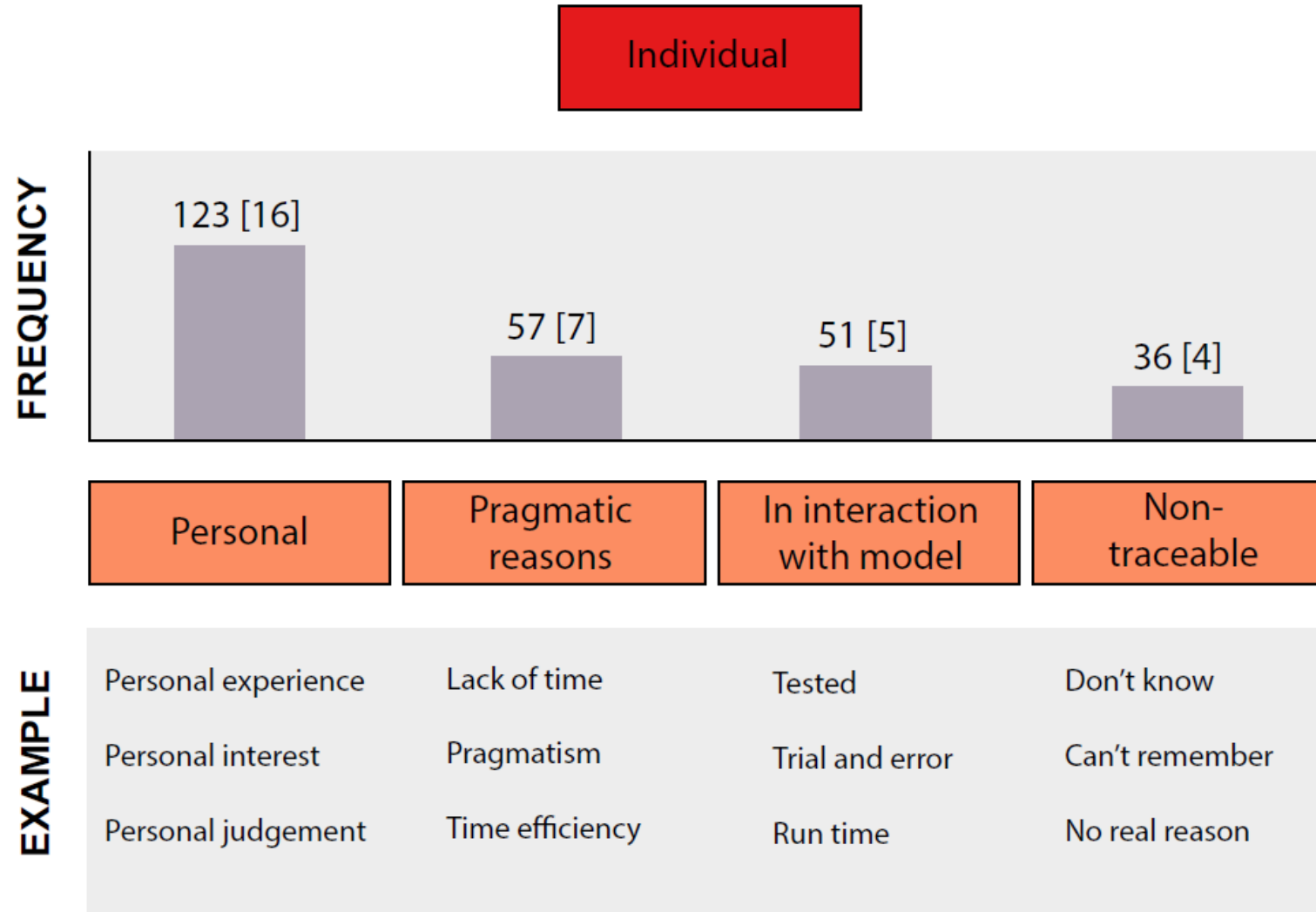
EGU 2021

Session HS3.07

Janneke Remmers

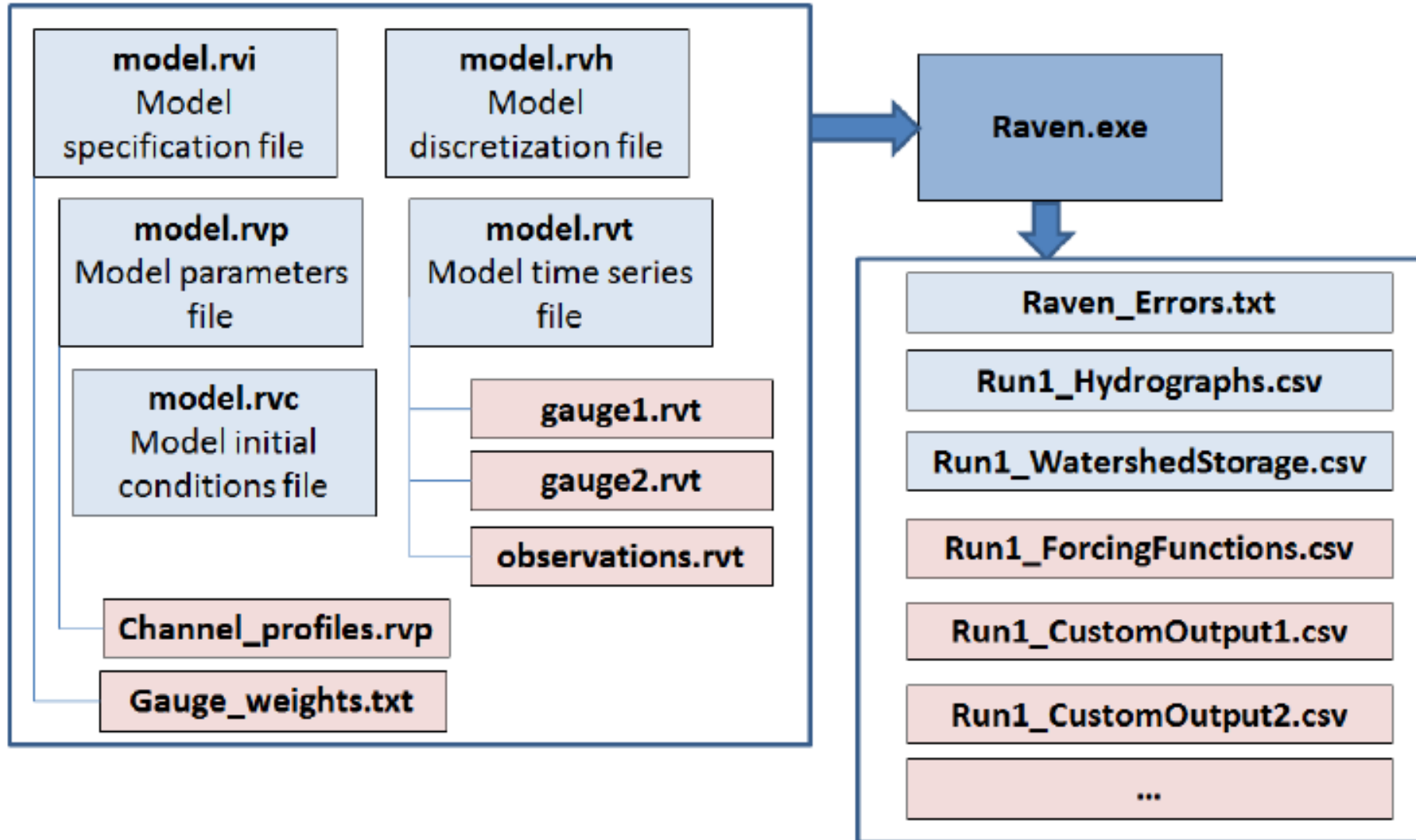
janneke.remmers@wur.nl

Appendix A: Elaboration on the reason 'Individual'



(Melsen, 2021, It takes a village to run a model, in preparation for WRR)

Appendix B: Raven



(Raven: User's and Developer's Manual v3.0)