

# WRAP-UP

## Joint IS-ENES Workshop on Workflows and Metadata Generation Costa da Caparica, Lisbon, Portugal



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- Share ideas!

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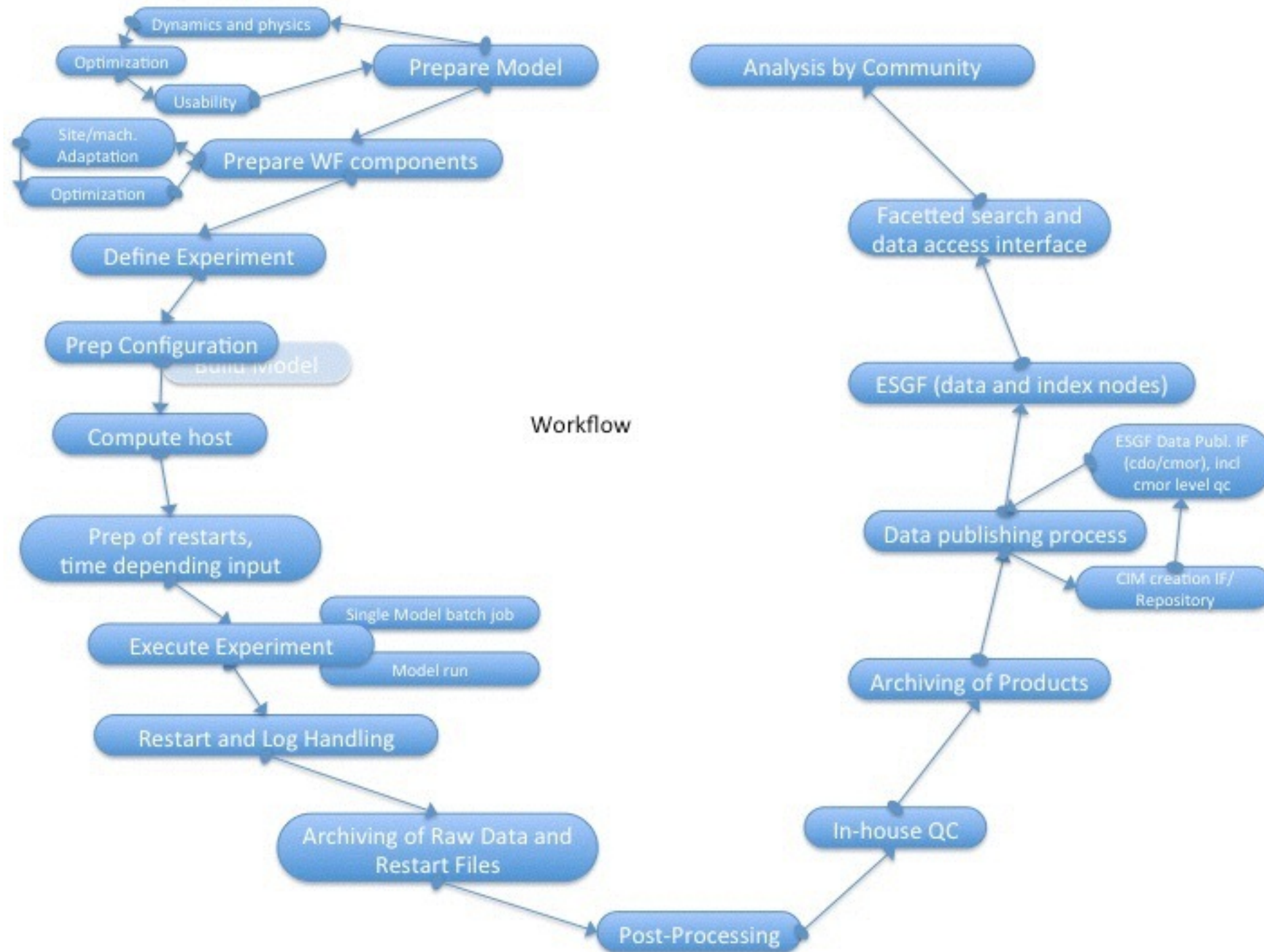
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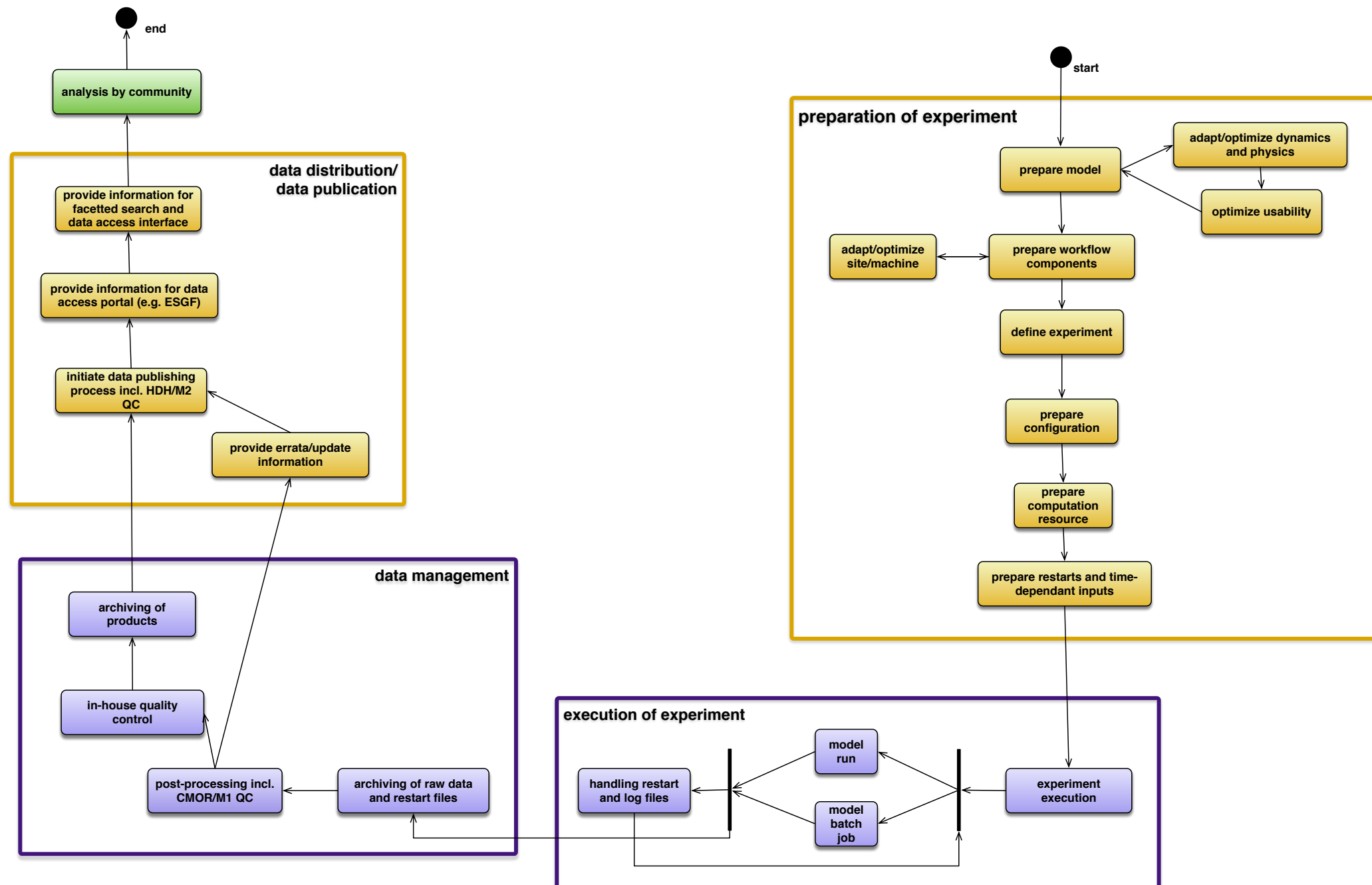
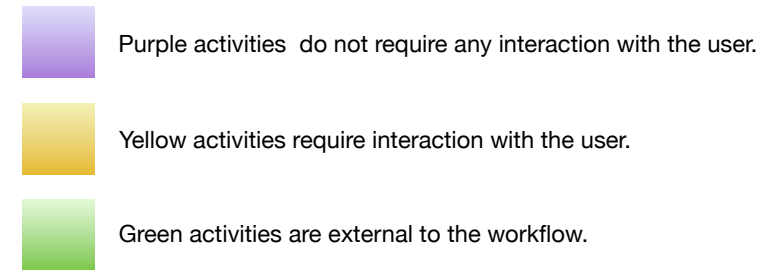
- Share ideas!
- Can we share the participants list?

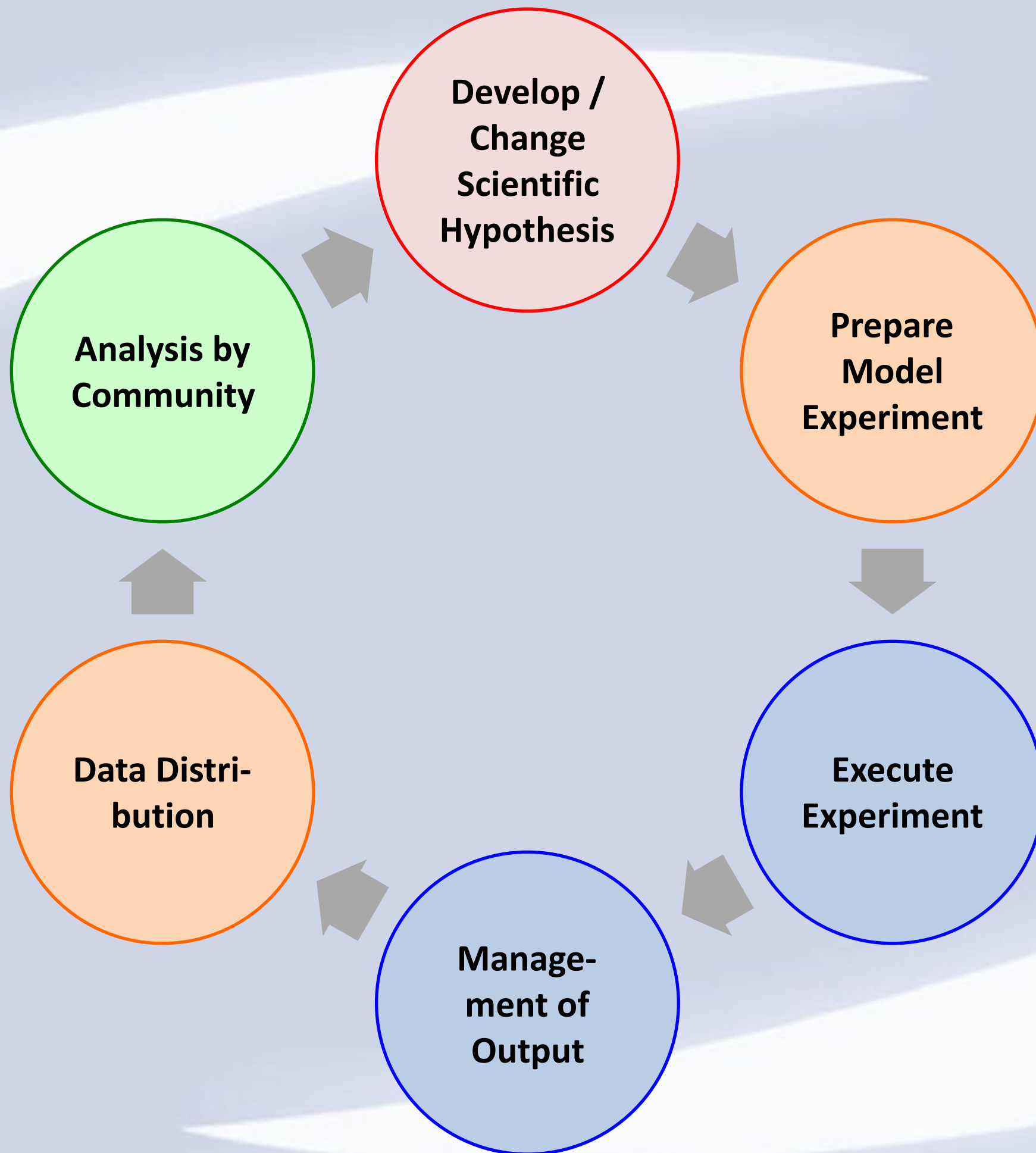
# ESM Workflow

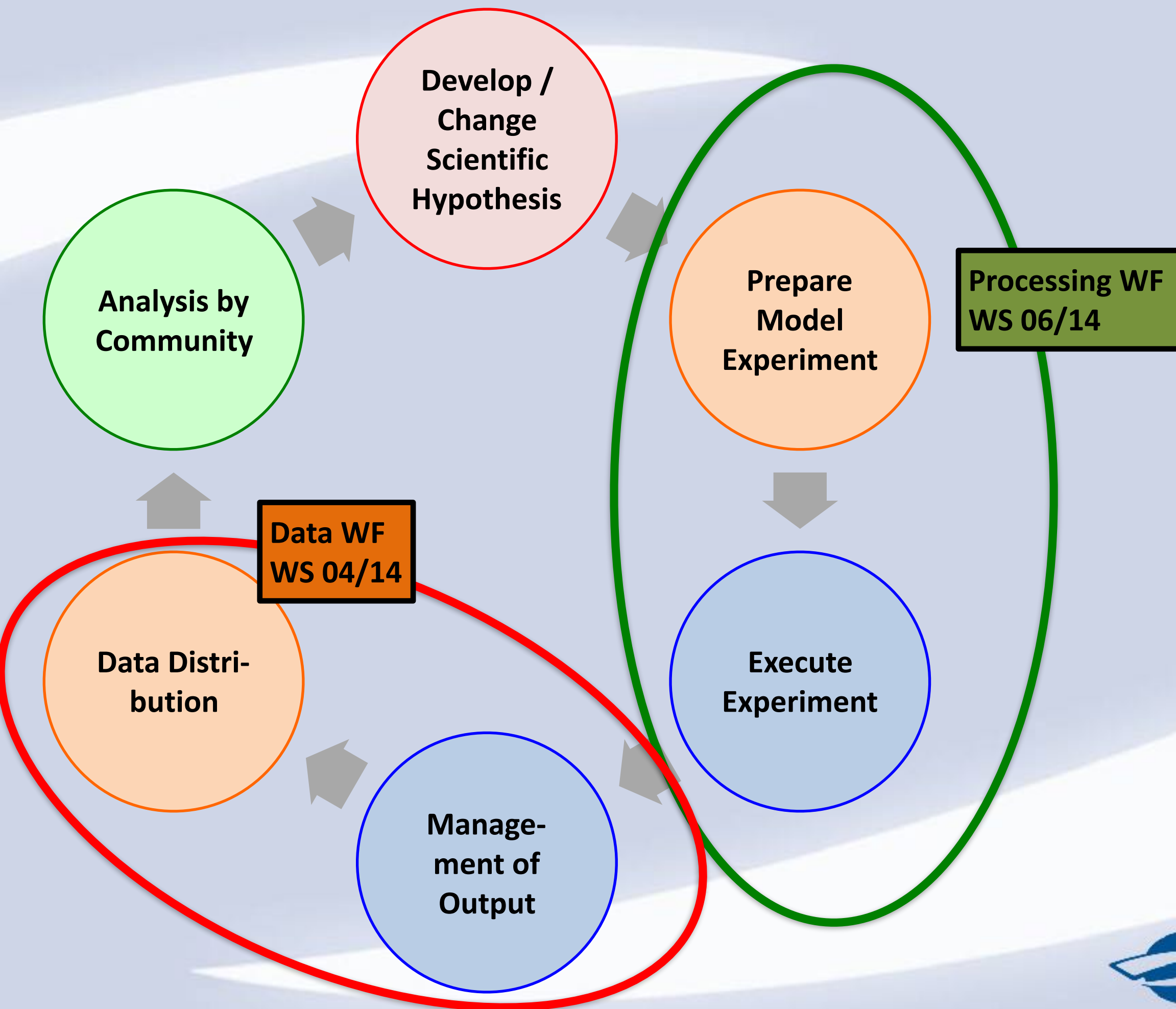


# ESM Workflow

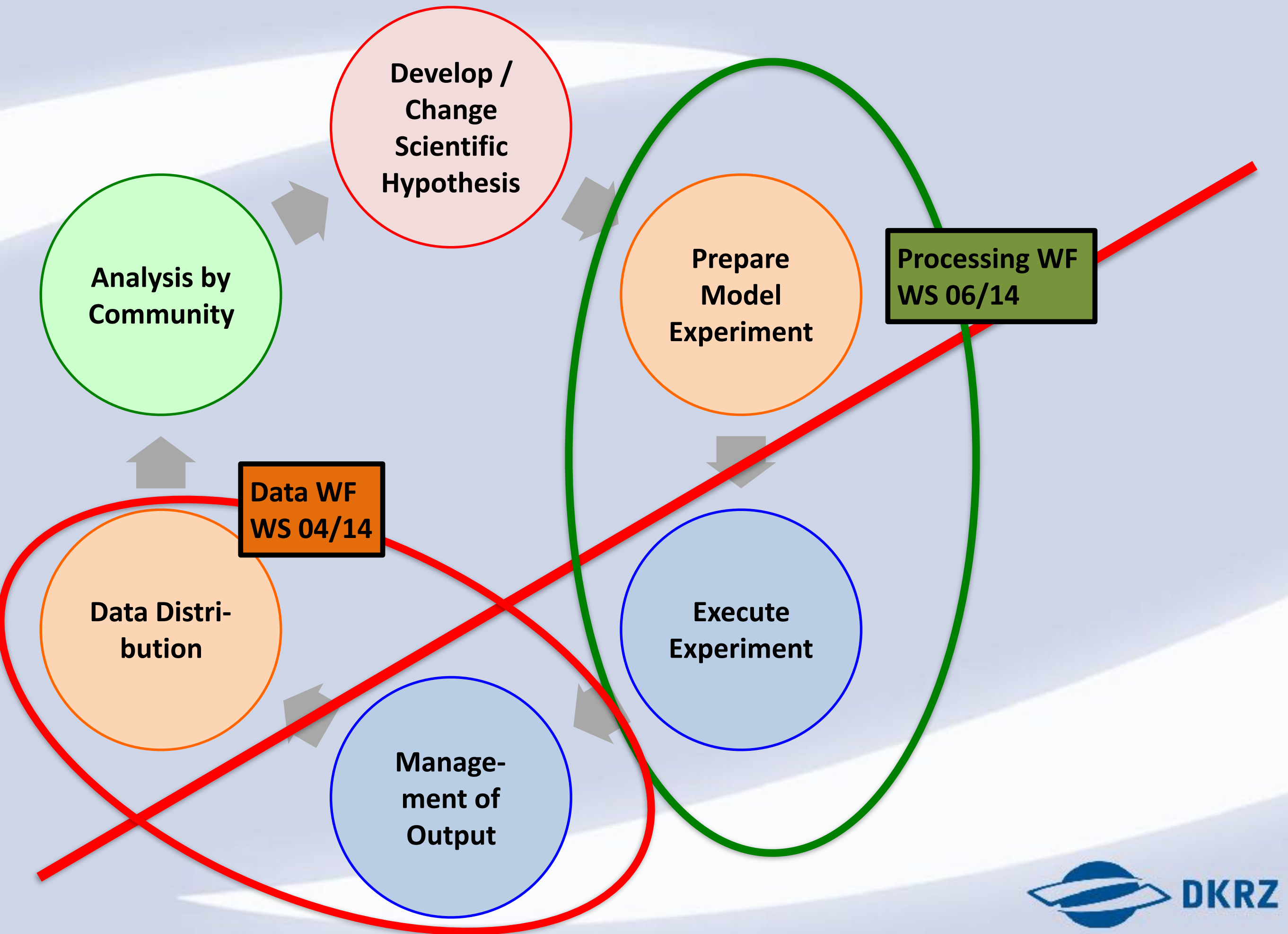
general workflow of the climate model data production process

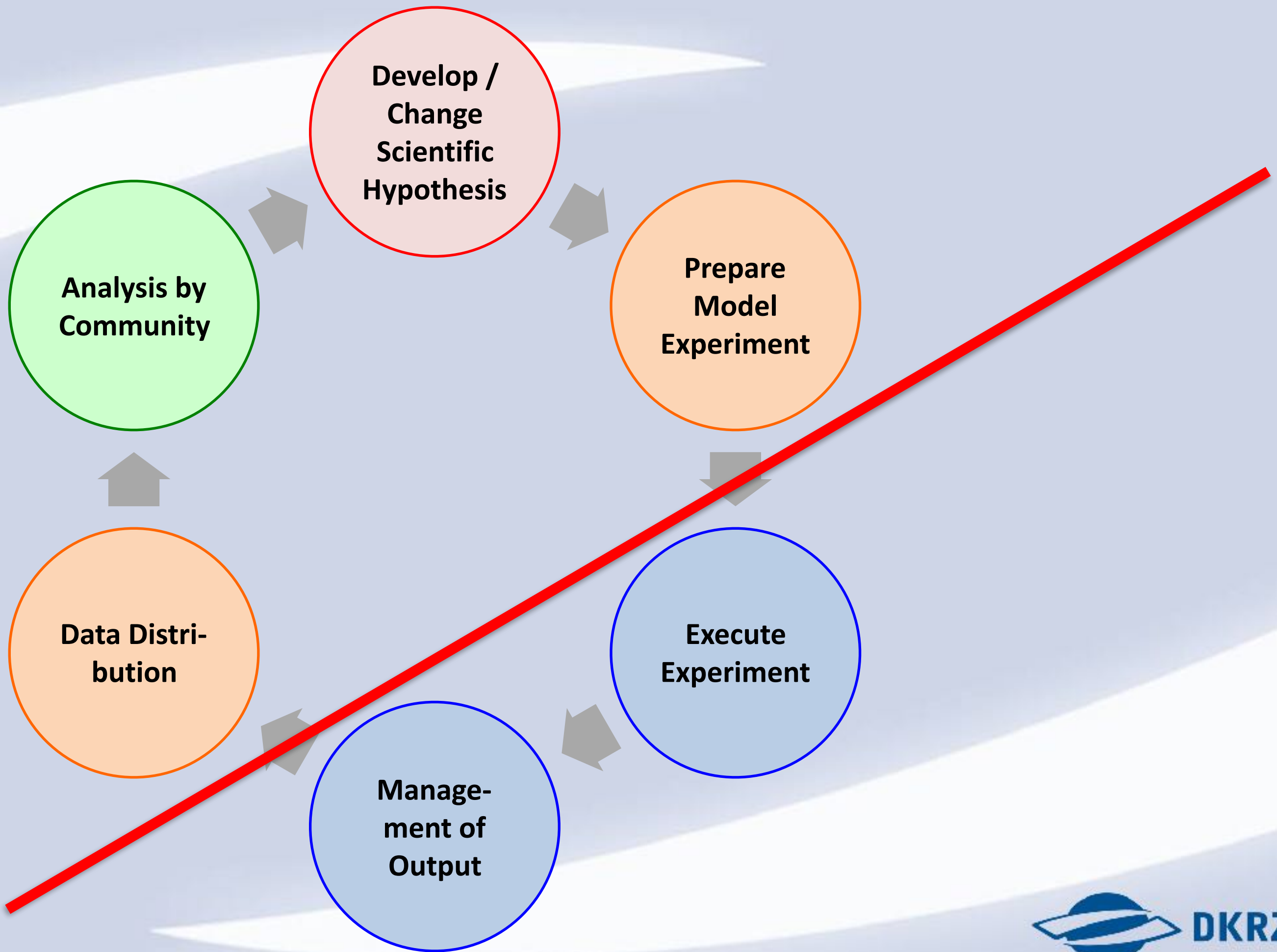


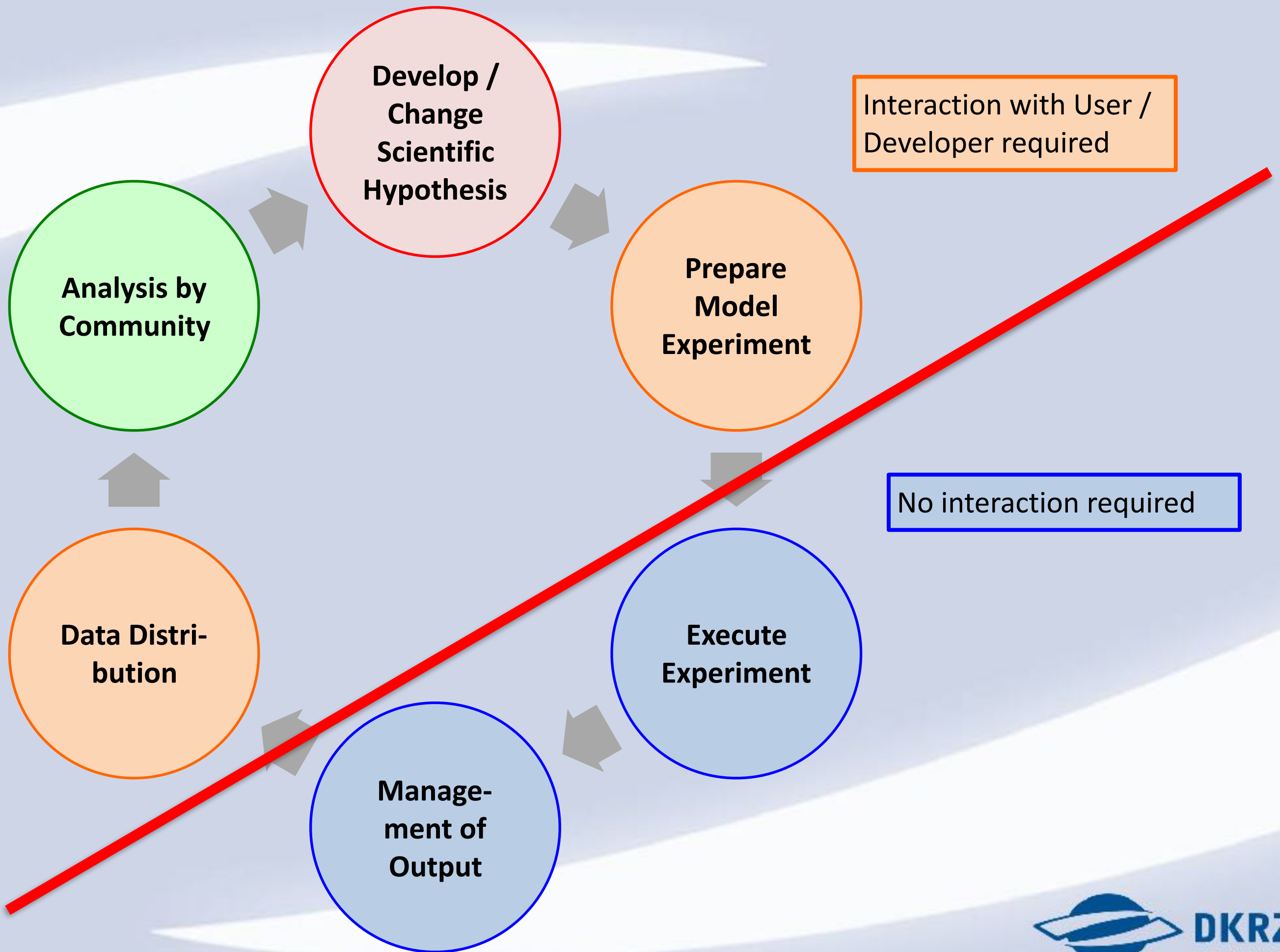


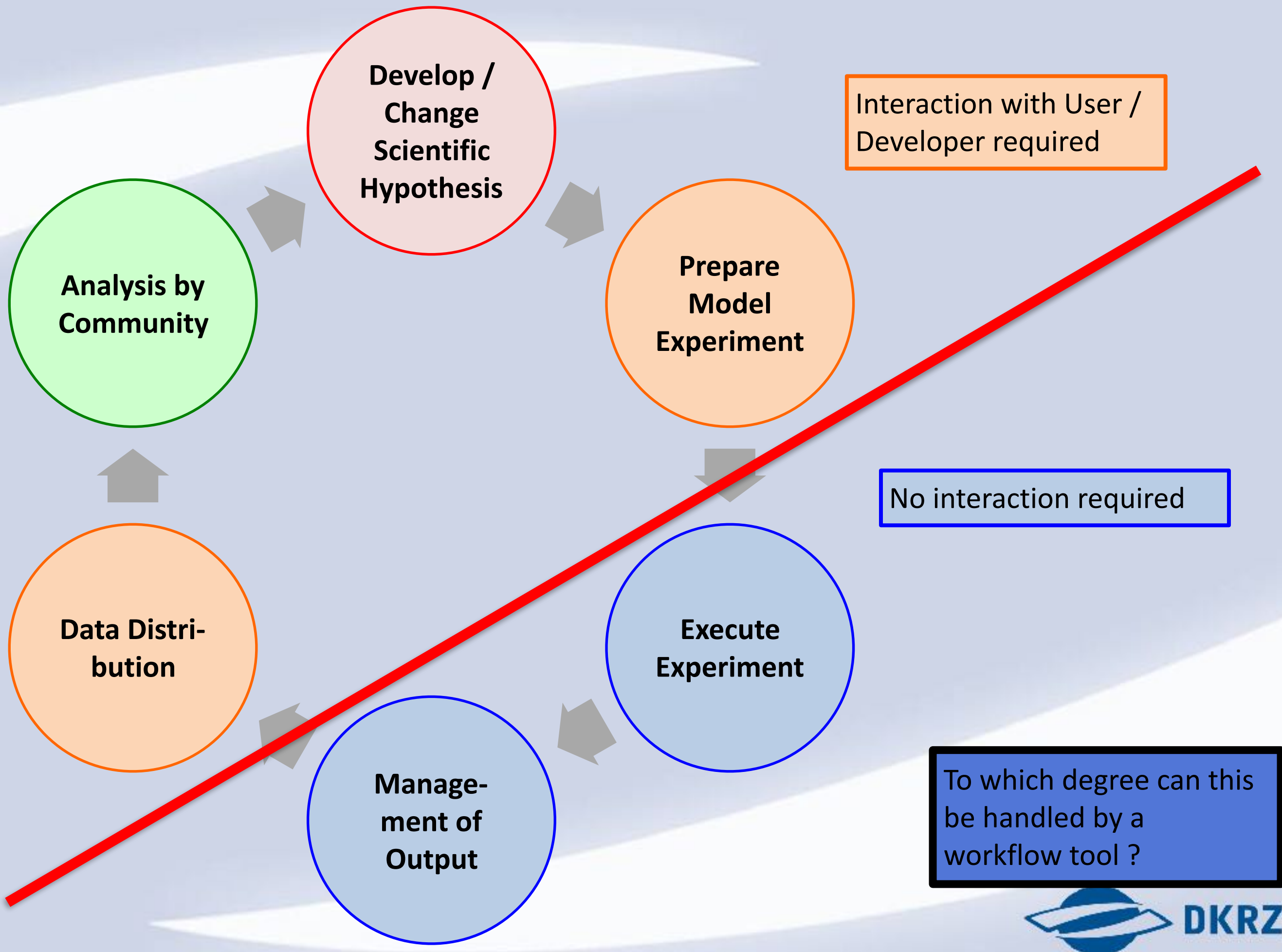












# Three Intense Days





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Joint IS-ENES Workshop on Workflows and Metadata Generation						
Tue September 27, Session 1						
Starts	Main Seminar room		Speaker	Ends	Length	Small Room
09:00	Wed September 28, Session 2					
09:30	Main Seminar room		Speaker	Ends	Length	Small Room
09:45	Session 2a: Site reports on CMIP6 WPs		Chair: K. Fieg			
10:15	Thu September 29, Session 3					
10:30	Starts	Main Seminar room	Speaker	Ends	Length	Small Room
10:45		Session 3a: Workflow tools	Chair: V. Balaji			
11:00	11:0	09:00	Keynote: Asynchronicity	L. Kornbluch, MPI-M	09:50	00:50
11:30	11:3	09:50	General Discussion on Keynote	All	10:20	00:30
12:00	12:0	10:20	Weather and climate models: preparing development workflows for Exascale	F. Lebeau, Allinea	10:40	00:20
12:30	12:3	10:40	Software stack deployment for Earth System Modelling	S. Kosukhin, MPI-M	11:00	00:20
	13:0	11:00	Coffee		11:50	00:30
13:30	14:3	Session 3b: Scheduling		Chair: M. Carter		
14:00	15:0	11:30	Keynote: Cylc - Recent developments & future plans	H. Oliver, NIWA	12:20	00:50
14:30	15:3	12:20	Scale and breadth of cylc usage at the Met Office	D. Matthews, MetO	12:40	00:20
15:00	15:4	12:40	Cylc from NCAS point of view	G. Lister, NCAS	13:00	00:20
15:30	16:1	13:00	Lunch		14:00	01:00
	16:4	14:00	ESIWACE Cylc development and support plan	D. Matthews, MetO	14:25	00:25
	19:0	14:25	A progress report on the rewrite of the GFDL FMS workflow to use Cylc and discrete tools vs. a monolithic job flow.	C. Wilson, NOAA	14:50	00:25
		14:50	Comparison of autosubmit / cylc / ecflow	D. Manubens, BSC	15:15	00:25
		15:15	PreVast - combining modelling with diagnostics at university level	I. Kirchner, FU Berlin	15:40	00:25
		15:40	General Discussion and wrap-up		16:00	00:20

# Three Intense Days

- Your Conclusions:

# Three Intense Days: My Personal Conclusions

- My Conclusions:
  - Everything is work(flow)!
    - ..... and it is hard to get a handle on it!
  - MD is at the core
    - Automatable?
    - Manual?
  - Reproducibility with
    - stochastic processors?
    - Million-way parallelism?
  - We need new ideas!
  - DAGs?
  - Balaji:
    - Expressing entire workflow as graphs (DAGs).
      - Maximize parallelism across the entire graph
      - Minimize graph traversal during fault recovery

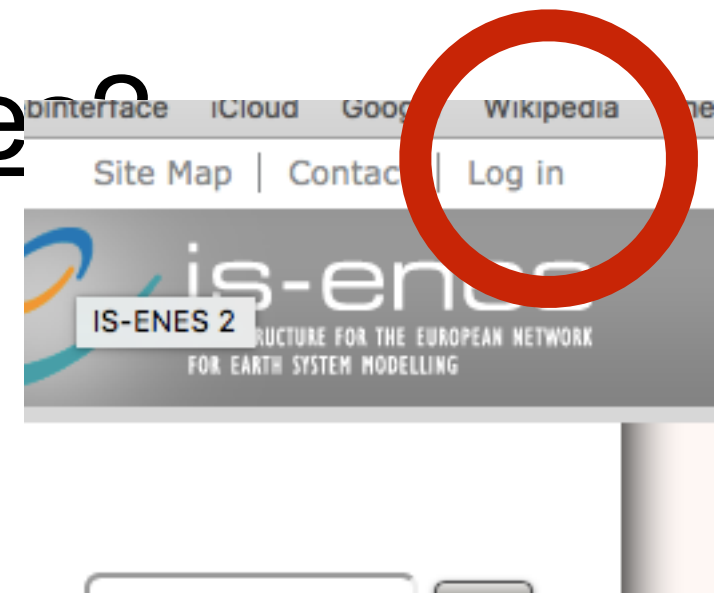


# Next Steps

- Slides will be made available in an upload area on  
<https://is.enes.org/events/final-is-enes2-workshop-on-workflow-solutions-1>  
after registration!

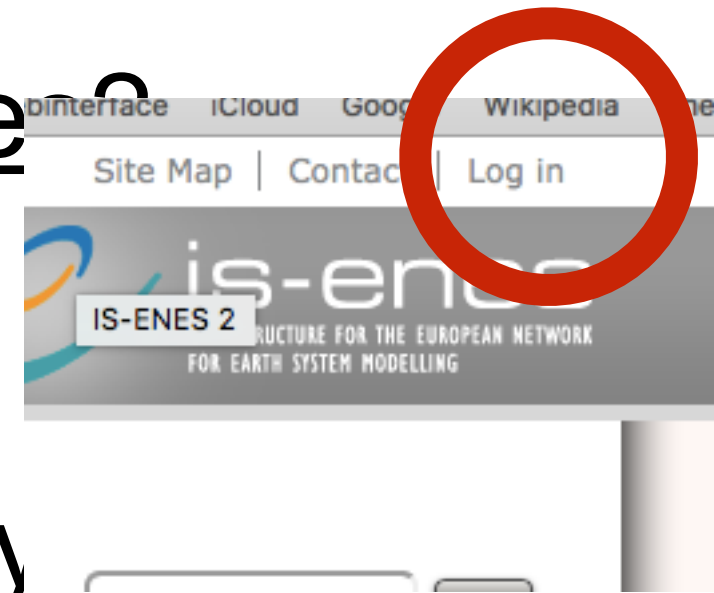
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- Report on WFWS will be available by –Volunteers?



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- Report on WFWS will be available by whom?
  - Volunteers?

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- Report on WFWS will be available by whom?
  - Volunteers?
- Report on MDGenWS will be available from Frank by when?

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- Report on WFWS will be available by whom?  
–Volunteers?
- Report on MDGenWS will be available from Frank by when?
- Keep up the spirits in ESiWACE ...

# Meetings:

–October 2016

- ECMWF, Reading UK:

- HPC in Meteorology**, October 24- 28

- Crossing the Chasm**: Towards common Software Infrastructure for Earth System Model development, October 24 midday - 25 midday

- ENES community meeting**: European Earth System Modelling Infrastructure Strategy, October 25 midday to 27 midday

–November 2016

- 2nd Technical ESMValTool Workshop

- November 15 - 16 Munich, D



# Meetings continued

- November 2016 / January 2017
  - Innovation Workshop with Vendors
    - Probably in Hamburg, D?
- January 2017
  - **Final assembly of IS-ENES2** in Paris IPSL (23rd floor, magnificent view!) on January 16 - 18 2017



# Meetings continued

–March 2017

- Workshop on Coupling Technologies for Earth System Models
  - March 20 - 22 2017, Princeton, US

# Facilitatoes

- **Say thanks to IS-ENES!**



# Thanks

- Kerstin
- Dela
- Frank
- You!

# Thanks

**Let the work flow ;-)  
Let's get going,  
hit the street!**

