Openmod Stockholm 2016 Workshop

Break-out groups interest poll

This document is based on its predecessor Break-out groups openmod workshop London for the 2015 workshop.
Return link back to the Wiki page of the openmod Workshop 2016 Stockholm.
Feel free to add rows in and notes after the table!

	Title	**Activity**	**Questions**	**Lead** and participants
1.	**Open Data**	Create a collection of data sources for various topics including pros and cons of each	- Best practice for integrating diverse datasets - Ways to codify “latent knowledge” in community about data sources and processing/mungin - Heating demand data - Conventional power plants with geographical data - how could a common data base be structured to serve best the energy system modelers? - how could quality assurance be realized (meta data and data testing)? - how could a common data base be integrated in / linked to the openmod site?we would like to present the state of development/concept that we worked out and have discussions about future developments	Johannes Dorfner, Tom Brown, Severin Ryberg, Matthew Gidden, Martin Glauer, Ludwig Schneider, Berit Müller, Samarth Kumar, Alaa Alhamwi, Mariela Tapia, Fabrizio Fattori, Kaveri Iychettira, Eva Wiechers, Sunay Gupta, Pietro Zambelli, Andrew Bollinger, Konstantinos Syranidis, Jan Sören Schwarz, Fadi Bitar, Magnus Dahl, Jonas Hörsch, Frauke Wiese

			- Open-data collection for modelling Europe	
2.	**Modelling**		- Spatial and temporal weather data interpolation - Flow based market coupling / Electricity network modelling - Top-down approach for electricity demand	Johannes Dorfner, Severin Ryberg, Konstantinos Syranidis, Matthew Gidden, Tom Brown, Samarth Kumar, Alaa Alhamwi, Mariela Tapia, Fabrizio Fattori, Alice Gunn, Sunay Gupta, Pietro Zambelli, Fadi Bitar, David Kleinhans, Magnus Dahl, Jonas Hörsch
3.	**Technologies**		- Marginal costs	
4.	**Coding**	Possibly: write introductory article for openmod wiki	- What framework to use? - performance VS maintainability - How to create a generic “plug-in-architecture” within different frameworks? - Data/Optimisation workflows: Pandas -> Pyomo -> Pandas - Pyomo/Gams best practices (e.g., testing, documentation, CI)	Johannes Dorfner, Tom Brown, Cord Kaldemeyer, Konstantinos Syranidis, Severin Ryberg, Matthew Gidden, Fabrizio Fattori, Martin Glauer, Kaveri Iychettira, Sunay Gupta, Pietro Zambelli, Andrew Bollinger, Jan Sören Schwarz, Fadi Bitar, David Kleinhans, Magnus Dahl, Jonas Hörsch
5.	**Publishing**			
6.	**Licensing**			Johannes Dorfner, Matthew Gidden, Fabrizio Fattori
7.	**Outreach**		● whom we want to reach ● which objectives we have (concerning the various target groups)	Berit Müller, Martin Glauer, Tom Brown, Fabrizio Fattori, Alice Gunn, Eva Wiechers, Pietro Zambelli, David Kleinhans, Frauke Wiese

			● the development of the openmod site (we will present and discuss the current state of the concept - proposal) ● collection of journals and conferences suitable for openmod ● misuse and quality of open data/modelling ● review/improve Model Fact Sheets (integration of transport?)	
8.	**Visibility**			
	Global Power Plant Data?	WRI is initiating an effort to consolidate global data on power plants and make it open. Discuss and address major issues in this process	Core questions can be defined during workshop, but can include • What team are working on power plant data and how can we combine efforts • What can other teams bring / add to the project? • How do you ensure data quality across different sources? • What information should be included in the database? How can this data best support energy modelers? • What is the best methodology to estimate missing values (generation, efficiency, emissions, water usage)? • How to build a infrastructure that can update data regularly, but keeps effort on a manageable level?	Johannes Friedrich

			• How can we best include unconventional data sources (crowdsourcing, mechanical turk, remote sensing)?	

Proposed Break-out Groups by Session

Session	Theme	Topics
1	Data collecting data	- general collecting data sources for the wiki, improving the data wiki and Data requirements for a European energy system model - data collection google doc - data quality assurance - Power Grid Data - Power plant data Power Plant Data google doc - Weather and climate data: ● Google doc notes ● Google doc notes from London 2015 workshop
	Water/Energy model coupling	google doc
	Coding beyond Pyomo	google doc
	Data data structure organisation on the openmod site	- discussing the concept of a CKAN DB on the openmod-site - data storage - integrating data with the openmod website
	Modelling	- incorporating geospatial data into models

		- spatial and temporal weather data interpolation
	Misc.	Publishing
	from talks	1) GIS Analyses for urban concepts;
2	Data management	- data management best practices (continuing discussion - data quality assurance)
	Data matching / Harmonization	google doc
	Modelling	- techniques for flow based market coupling, electricity network modelling - top-down modeling approach of electricity demand
	Misc.	Licensing
3	NN (free for further discussions)	
	Modelling	- modeling workflows (Pyomo, Pandas, R, GAMS) - modeling best practices - google doc
	Outreach	- objectives, target groups - openmod online presence/platform - conferences, publications (which journals??) - projects - interface between research and public - questions of data manipulation etc.

Archived from Stockholm wiki page before clean-up

History of defining break-out group topics

Finding topics for break-out-groups

This table is an attempt to map the Break-out-groups from the Third Workshop to a smaller number of covered topics.

	Third Workshop break-out-group name	Covered topic(s)
1	Open weather data	Open Data
2	Renewables.ninja	Open Data
3	Use of models in government and industry	Outreach
4	Model Factsheets	Visibility
5	Open model testing	Coding
6	Demand side and storage	Tech, Modelling
7	Wind potentials	Open Data, Tech, Modelling
8	Hydro electricity	Open Data, Tech, Modelling
9	The Open Power System Data platform	Open Data

10	Pros and cons of Open Source modelling	Licensing, Outreach
11	Energy modeling for beginners	Coding, Modelling
12	OpenEnergy platform	Open Data
13	Open Access publishing in energy modelling	Outreach, Publishing
14	Openmod article	Outreach
15	Conference	Outreach
16	Funders best practice list	Outreach
17	Data sources hackathon	Open Data, Coding
18	Openmod website	Outreach
19	Which license fits my model?	Licensing
20	Consultation “Marktstammdatenregister” BNetzA	Open Data, Outreach
21	Load-flow modelling / grids	Modelling, Tech
22	Python/Pyomo user group	Coding, Modelling

Proposed break-out-groups

With the previous mapping at hand, one could therefore propose the following topics. *This list is open to discussion!*

1. **Open Data** Most probable candidate for splitting in 2-3 different groups: covers data publishing (where and how), data acquisition (from where and how) and possibly data processing
2. **Modelling** (Mathematical) modelling techniques, algorithms, basically all conceptual work that is independent from the actual implementation (cf. **Coding**).
3. **Tech** similar to **Modelling**, but more focused on the specifics of specific technologies like fluctuating renewables, power grid, power plants (generators, turbines, ...). Probable candidate for splitting, if many participants with divergent interests come together
4. **Coding** software frameworks for modelling, data processing, optimisation, data visualisation; ask for tips, share tricks, present possibly helpful new stuff; possible split: introductory "course"-style group and a more advanced "sharing of experience"-style group
5. **Publishing** is about (Open Access|Traditional|Other) methods of publishing one's research
6. **Licensing** as about license questions for choosing the "right" license for one's own published works or for how to comply with the licenses of others' works. Possible overlap with **Open Data**
7. **Outreach** is about increasing awareness for open (energy) modelling community with Openmod as a common banner. This includes discussing the common mid- and long-term goals, presenting the current progress
8. **Visibility** is about increasing the reach of one's individual/institute's reach through various means. Possible overlap with **Publishing**