Packages and tools to build scripted workflows between models and the openENTRANCE platform

Daniel Huppmann
on behalf of the openENTRANCE Consortium

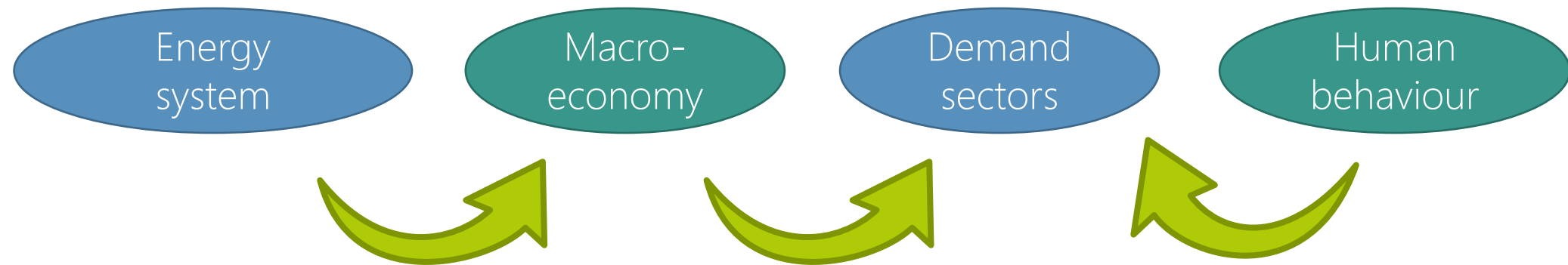Focus Group 5 – Energy Modelling Platform for Europe (EMP-E) 2020

Aim: a modelling platform for European energy transition

The openENTRANCE projects aims to integrate a large ensemble of models…

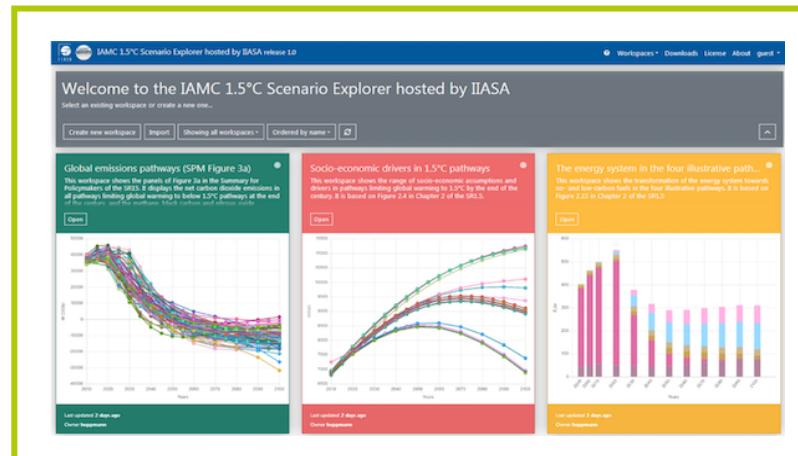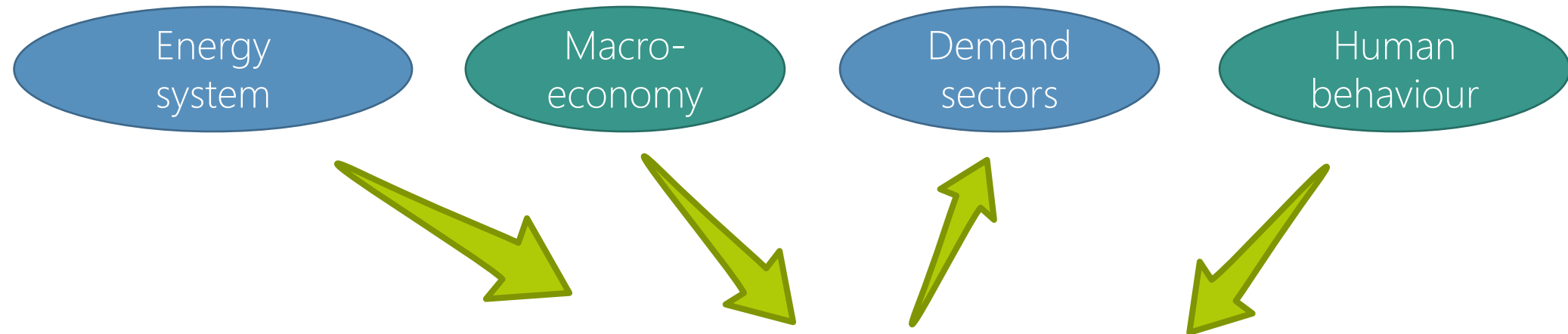Energy system Macro-economy Demand sectors Human behaviour

Practical questions:

- How to get your scenario results to other teams?

- What to do with results from other scenarios (models)?

- How to disseminate results to policymakers, stakeholders and researchers?

Aim: a modelling platform for European energy transition

The openENTRANCE projects aims to integrate a large ensemble of models...

The **IIASA Scenario Explorer** will serve as a central data exchange hub

The three ingredients for linkage to the central platform

1. A **common data format** based on the IAMC template

	A	B	C	D	E	F	G	H	
1	**Model**	**Scenario**	**Region**	**Variable**	**Unit**	**2015**	**2020**	**2025**	
2	GENeSYS-MOD	Societal Commitment	Europe	Primary Energy	EJ/y	69.9	65.7	...	

2. An **open nomenclature** of definitions, regions, (naming of) sectors

   Implement as collaborative process on GitHub
   github.com/openENTRANCE/nomenclature
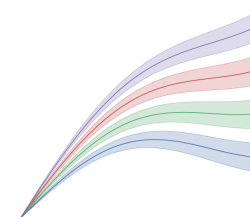
```
Final Energy:
    description: Total final energy consumption
        by all end-use sectors and all fuels,
        excluding transmission/distribution losses
    unit: EJ/yr
```

3. Tools for **automated workflows**

   Aggregation, downscaling, unit conversion,
   validation, visualization & plotting library, ...
   More information: pyam-iamc.readthedocs.io

pyam: analysis and visualization
of integrated assessment scenarios

License Apache 2.0 | passing | docs passing | coverage 85%
DOI 10.5281/zenodo.1470400 | JOSS 10.21105/joss.01095

Repository hosted on — GitHub
Community supported by — Groups.io slack
Documentation hosted by — Read the Docs
pyam-iamc.readthedocs.io

open ENTRANCE

Thank you for your attention!

Dr. Daniel Huppmann
Research Scholar – IIASA Energy Program
www.iiasa.ac.at/staff/huppmann | huppmann@iiasa.ac.at

@daniel_huppmann