

Alexandru Nichersu
Andreas Koch

Common workshop of the Utility Network ADE and the Energy ADE



EIFER

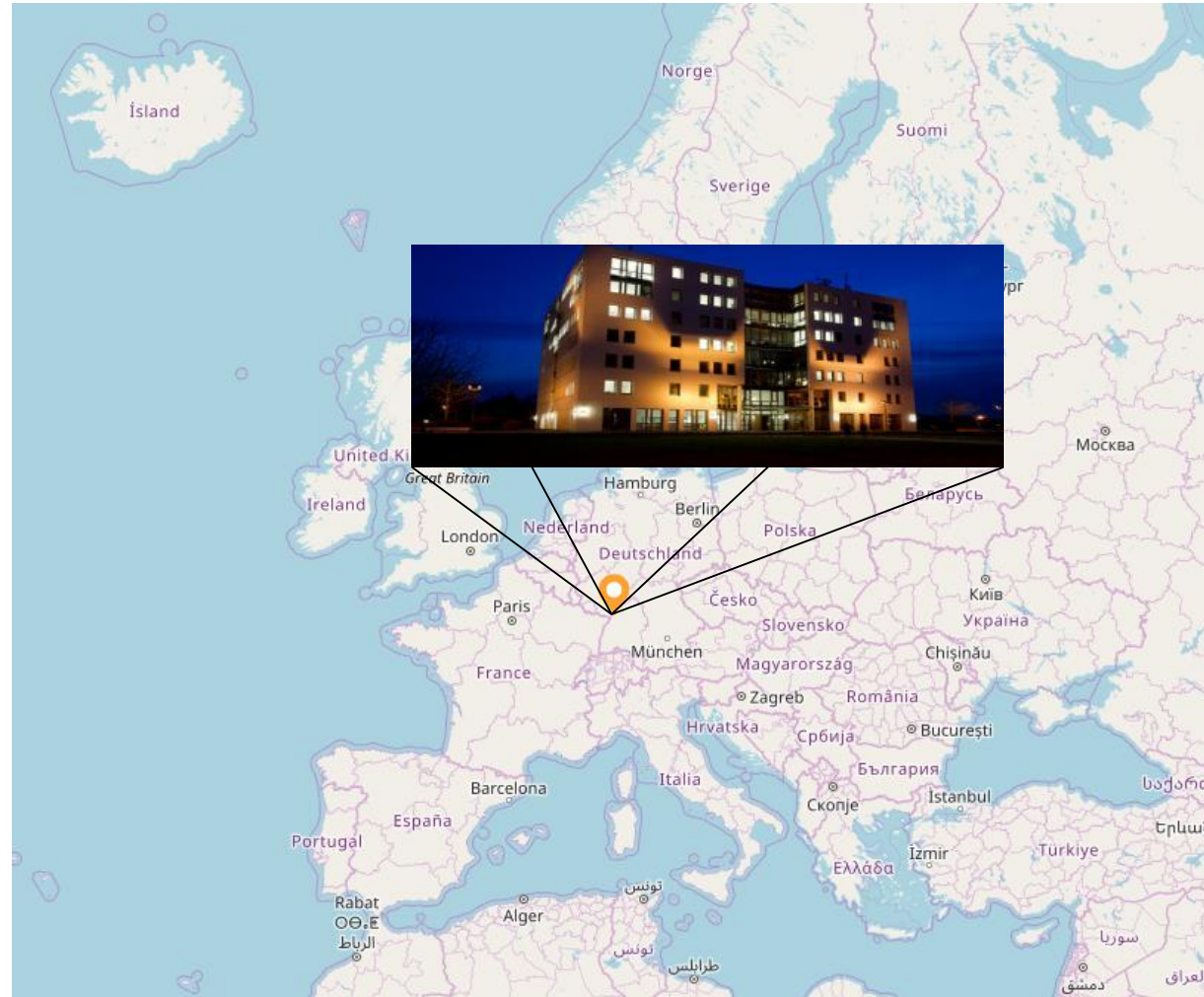
EnergyADE
UtilityNetworkADE



KIT facts and figures:
9.239 Employees
25.892 Students
€ 851 million



EDF R&D facts and figures:
2,100 employees
€ 572 million





ENERGY RESOURCES AND DISTRIBUTED GENERATION

- Bio-energy
- Geo-technology
- Distributed Generation Technologies
- Fuel cells and electrolysis

ENERGY, CITIES AND TERRITORIES

- Energy planning
- Tool development for territories
- Urban systems

- Energy System Analysis and Climate Change
- Externalities

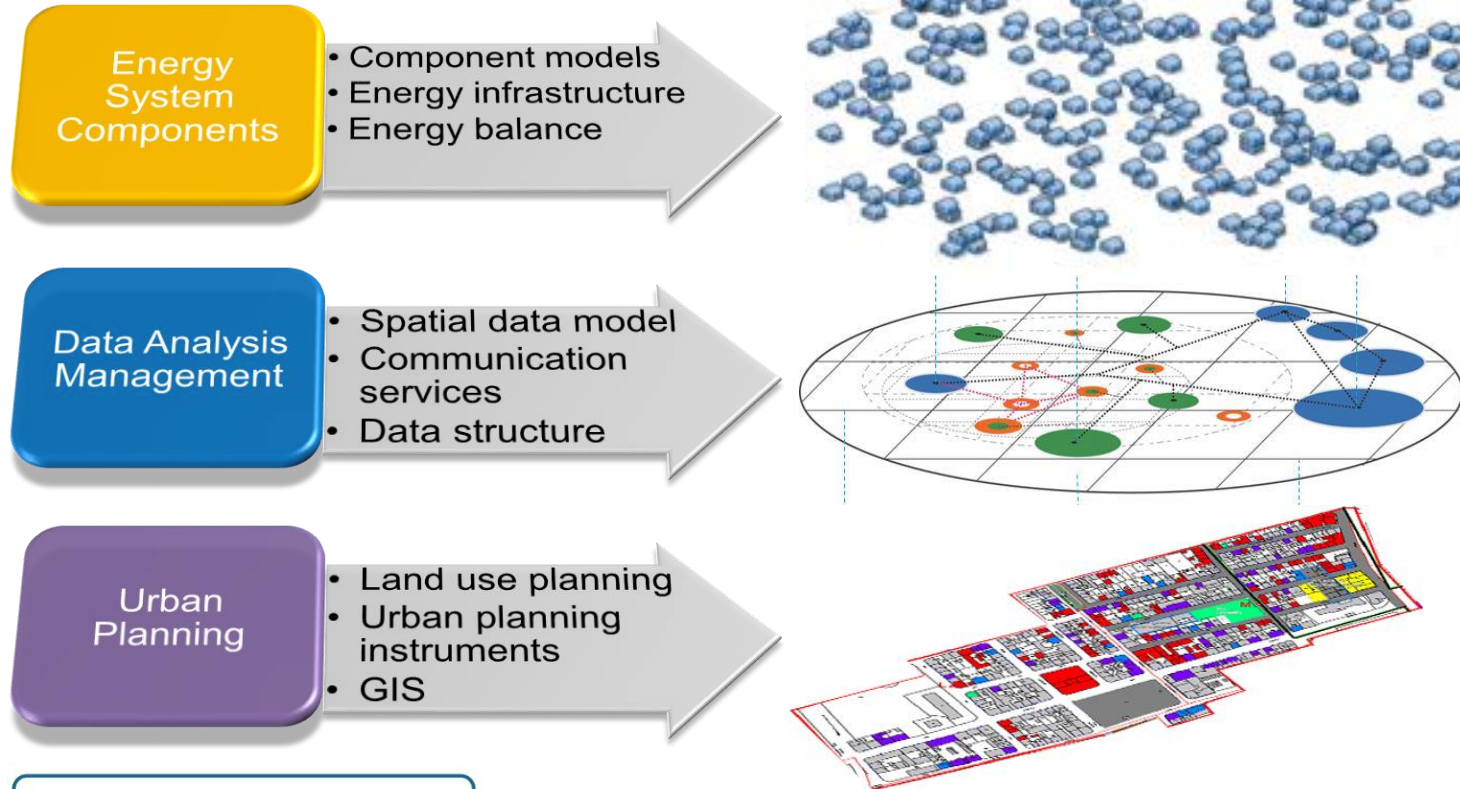
ECONOMICS OF ENERGY SYSTEMS AND ENVIRONMENT

European Economic Interest Grouping of
EDF and KIT

120 Employees, 92 Researcher (20 PhD
Students)

40% French, 40% German and 20% other
nationalities

Energy Planning & Geosimulation
30 Researchers, (9 PhD, 8 PhD candidates)



Group is involved in standardization committees, such as the ICA to the OGC

Workshop participants



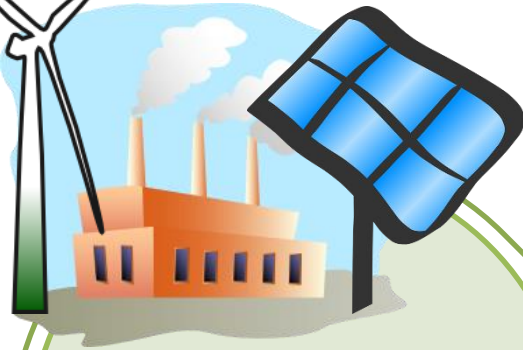
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	Name	Institution	Wed	Thu	Fri		Registratio
1	Steffen Wallner	KIT	✓	✓	✓	✗	4 Tagen
2	Ahmed Hussein	HfT Stuttgart	✗	✓	✓	✗	4 Tagen
3	Syed Monjur Murshed	EIFER	✓	✓	✗	✗	4 Tagen
4	Steve Smyth		✓	✓	✓	✗	5 Tagen
5	Jonny Sexton	EIFER	✓	✓	✓	✗	5 Tagen
6	Klaus Viebig	SIG 3D	✓	✓	✓	✗	6 Tagen
7	Karl-Heinz Häfele	KIT	✓	✓	✓	✗	6 Tagen
8	Pilar Monsalvete	HfT Stuttgart	✓	✓	✓	✗	7 Tagen
9	Rebecca Ilehag	KIT	✓	✗	✗	✗	7 Tagen
10	Romain Nouvel	Transsolar	✓	✓	✗	✗	10 Tagen
11	Marco Wirtz	EBC, RWTH Aachen University	✓	✓	✓	✗	11 Tagen
12	Nils Schüler	EPFL	✓	✓	✗	✗	24 Tagen
13	Fernando Gonzalez Balcarce	TUM	✗	✗	✓	✗	24 Tagen
14	Lydia Trzcinski	CSTB	✓	✓	✓	✗	26 Tagen
15	Carsten Roensdorf	OS	✗	✗	✓	✗	40 Tagen
16	Usman Ali	UCD	✓	✓	✓	✗	47 Tagen
17	Sebastián Ortega Trujillo	ULPGC	✓	✓	✓	✗	49 Tagen
18	Jochen Wendel	EIFER	✓	✓	✓	✗	49 Tagen
19	Beata Sliz-Szkliniarz	EIFER	✓	✓	✓	✗	49 Tagen
20	Joachim Benner	KIT	✓	✓	✓	✗	60 Tagen
21	Allen Gilliland III	BuildZero.Org	✓	✓	✗	✗	62 Tagen
22	Bo Mao	KTH	✓	✓	✓	✗	75 Tagen
23	Monica Arnaudo	KTH	✓	✓	✓	✗	75 Tagen
24	Edmund Widl	AIT	✓	✓	✓	✗	80 Tagen
25	Avichal Malhotra	E3D, RWTH Aachen University	✓	✓	✓	✗	87 Tagen
26	Thomas Gilbert	Newcastle University, UK	✓	✓	✓	✗	110 Tagen
27	Tatjana Kutzner	TUM	✗	✓	✓	✗	126 Tagen
28	Thomas H. Kolbe	TUM	✗	✓	✓	✗	137 Tagen
29	Claus Nagel	VCS	✓	✓	✓	✗	139 Tagen
30	Giorgio Agugiaro	AIT	✓	✓	✓	✗	139 Tagen
31	Alexander Simons	EIFER	✓	✓	✓	✗	139 Tagen
32	Egbert Casper	CITIS	✓	✓	✓	✗	139 Tagen
33	Xander den Duijn	TU Delft	✓	✓	✓	✗	139 Tagen
34	Robert Lach	Supercomputing Centre Swierk	✓	✓	✓	✗	139 Tagen

City wide energy chain

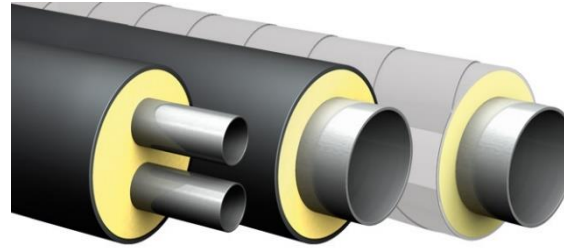


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Production

- Fossil based
- Renewables
- Industrial processes
 - Nuclear



Utility Networks

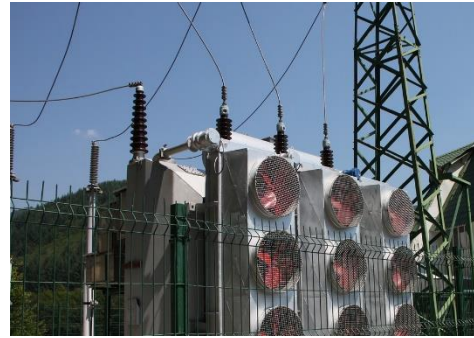
- Electrical
 - Gas
- District Heating
- District Cooling
- Waste water
 - Steam
 - Oil



Consumption

- Tertiary
- Housing
- Industrial

Integrated approach to modelling the entire energy chain on a city scale



**Energy
Production
facility**

**Utility
Network**

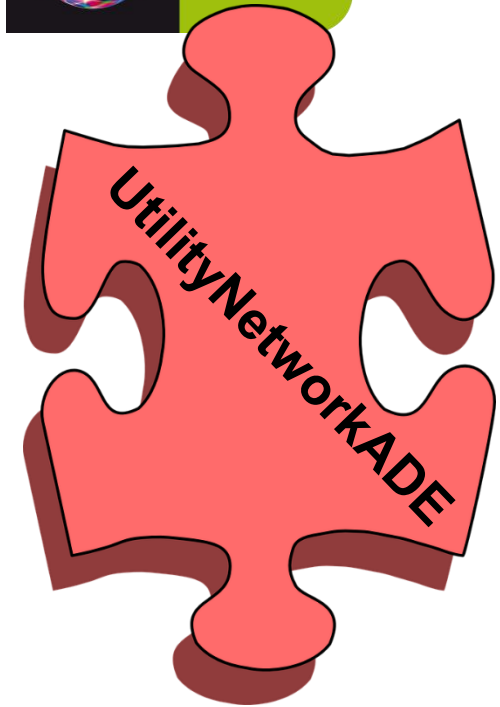
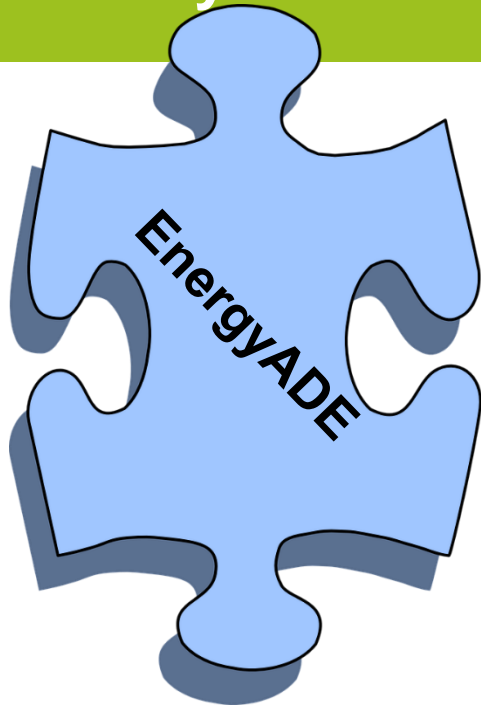
Substation

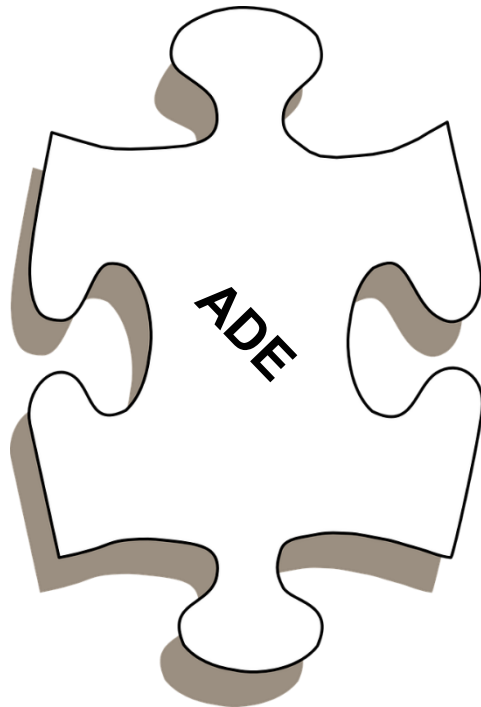
**Utility
Network**

**House / District /
Neighborhood /
Town / City**

Majority of modelling/simulation
situation from substation to
production facility

Modelling of
demand at
house/district/
neighbourhood
level





Application Domain Extension

Standard extended for specific applications starting from the UML

UML modeling approach for ADE's

EIFER has made 2017 the EIFER-ADE year by hosting:

- March UtilityNetworkADE
- December The common EnergyADE and the UtilityNetworkADE

