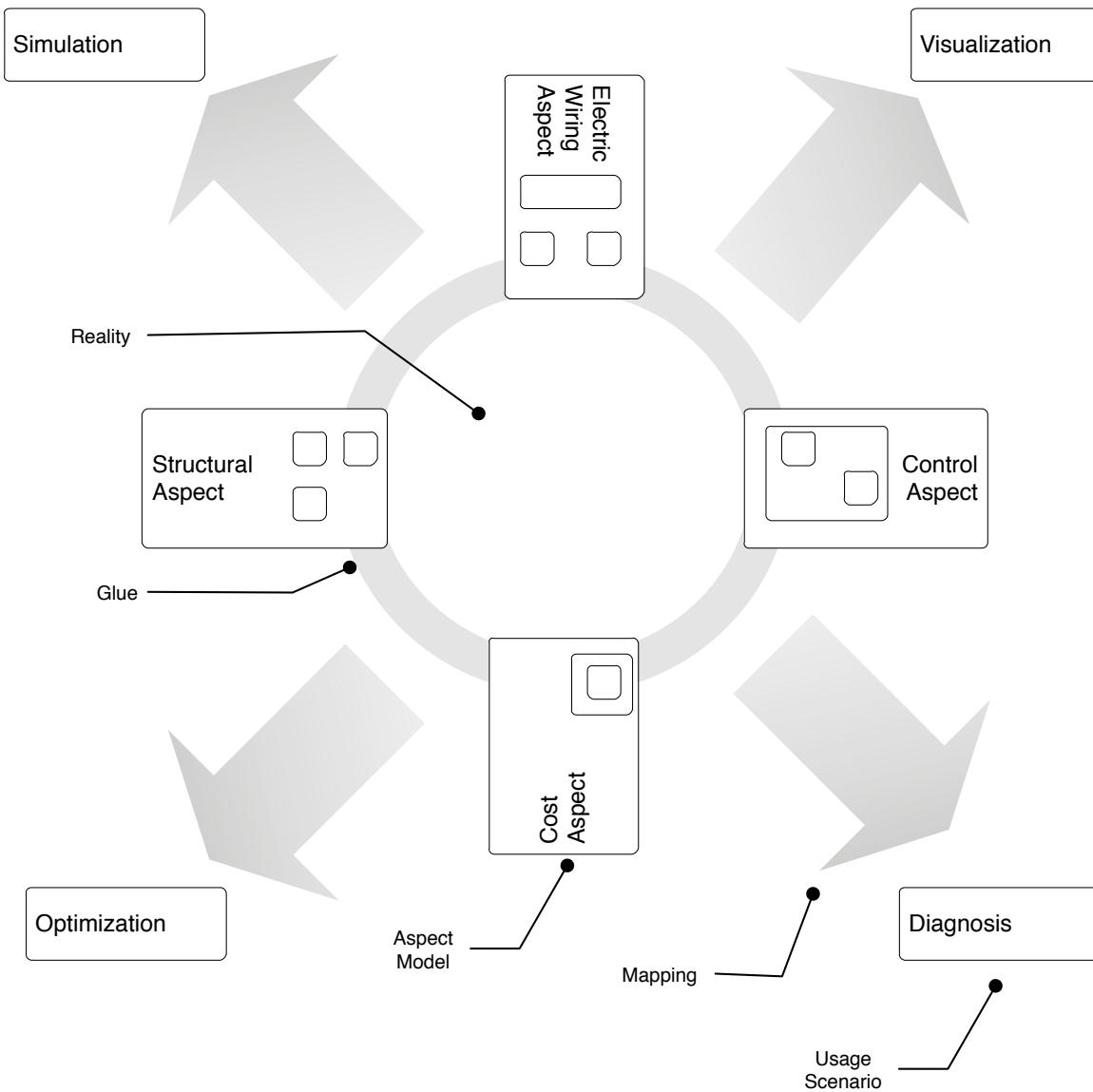


# Composition of heterogeneous systems

David, Levi, Vasco, Paulo, Gergely

# High level picture



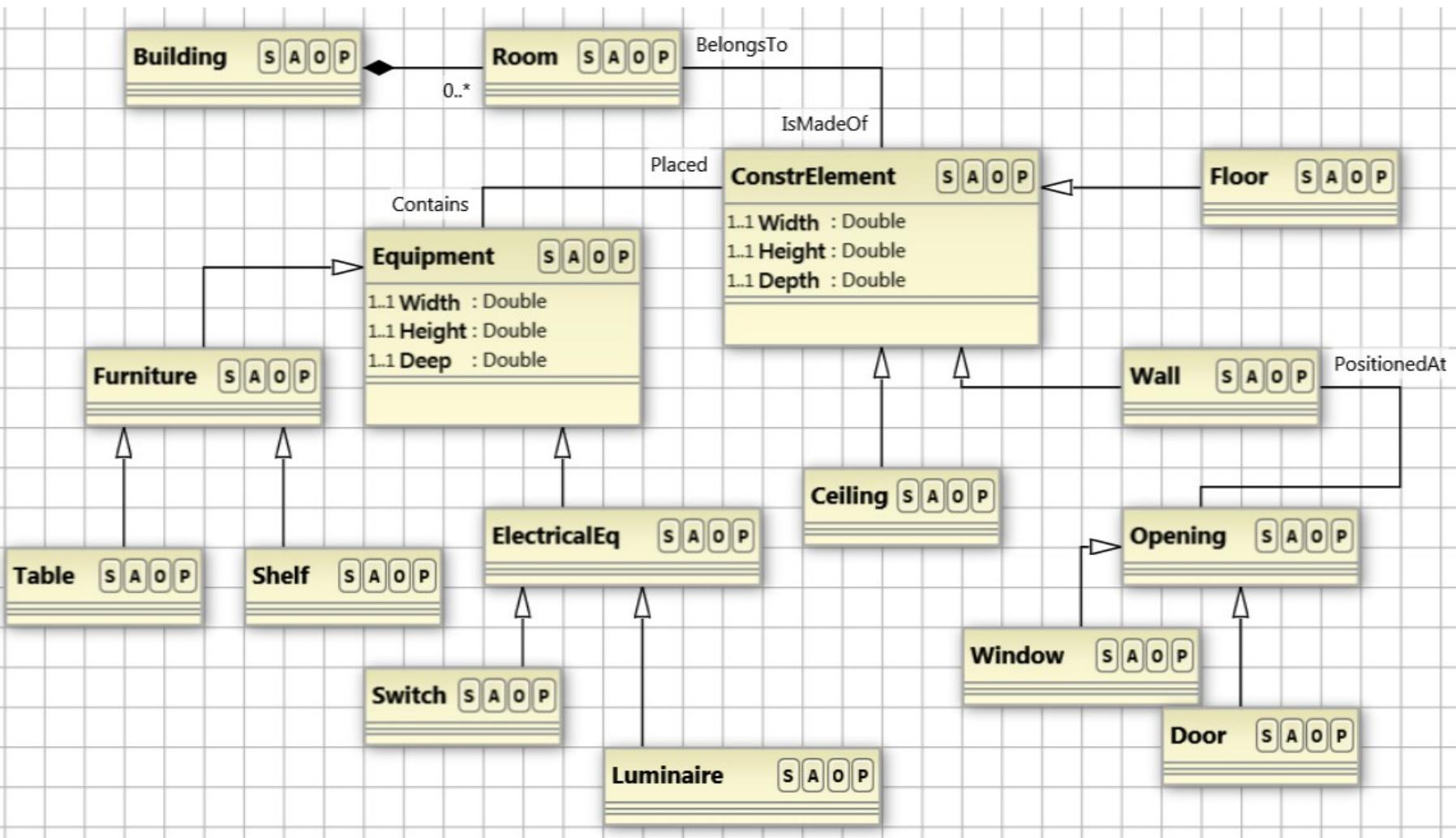
# Reminder

Find relationship of some sort between elements  
of different models on a metamodel level

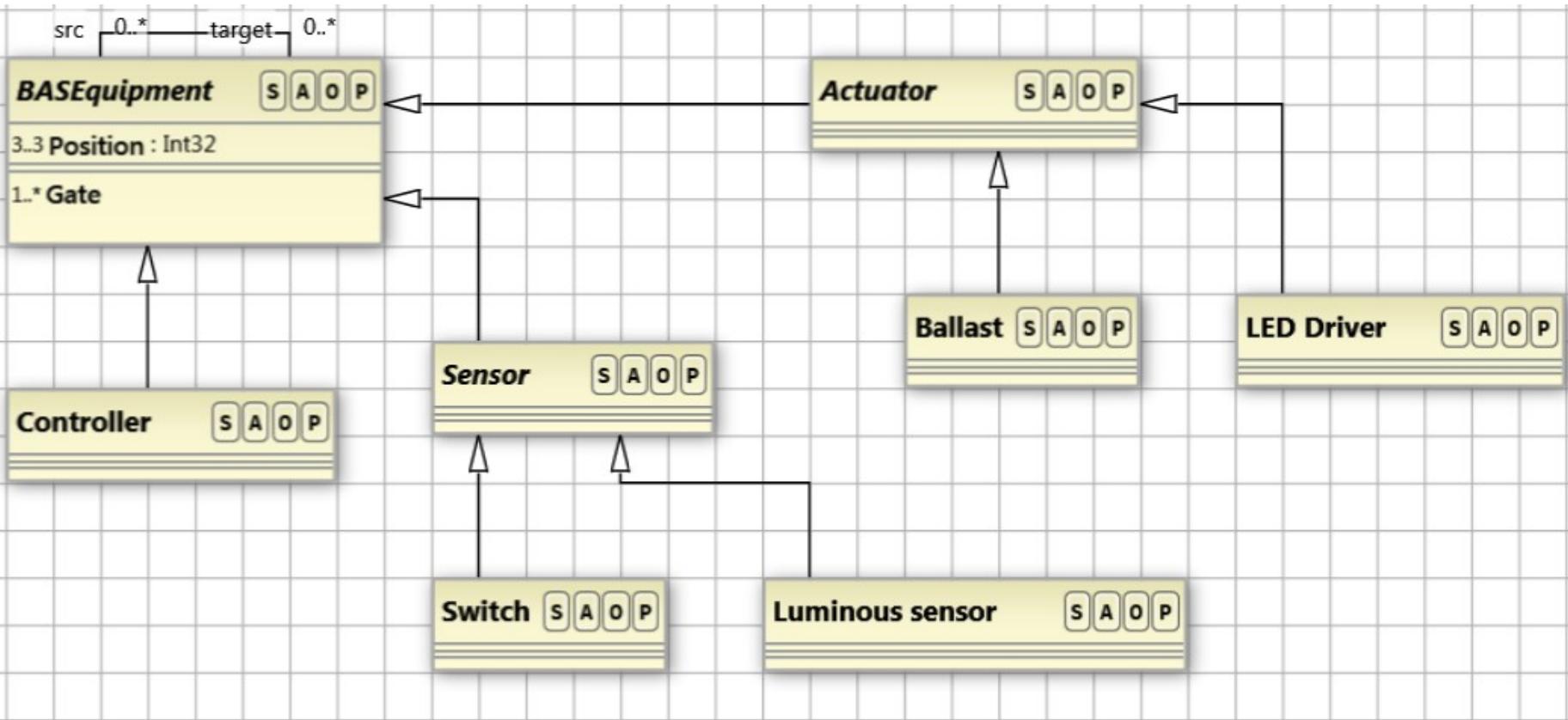


Let's inspect the aspects metamodels

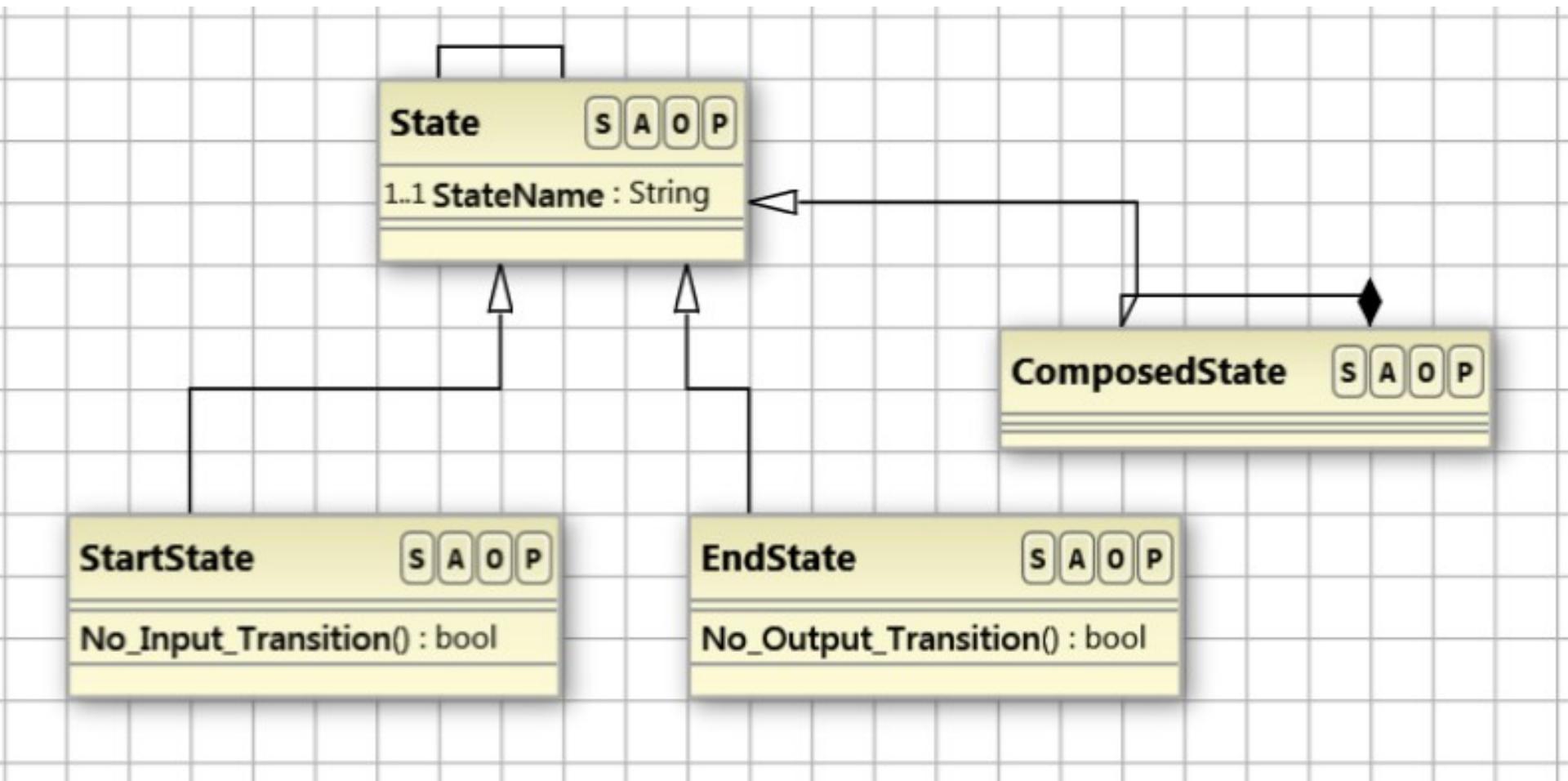
# Structural aspect metamodel



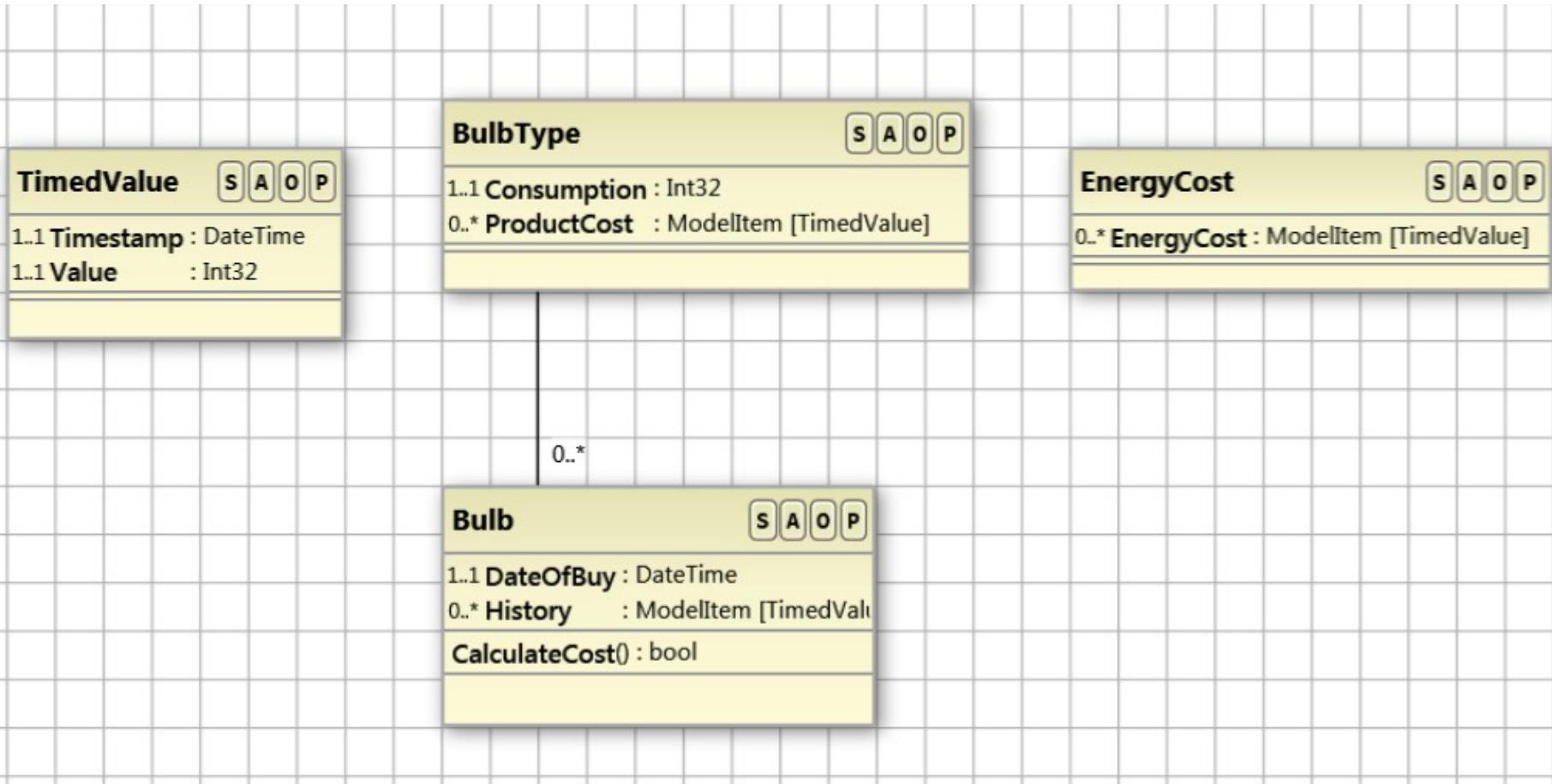
# Commissioning aspect metamodel



# Control logic aspect metamodel

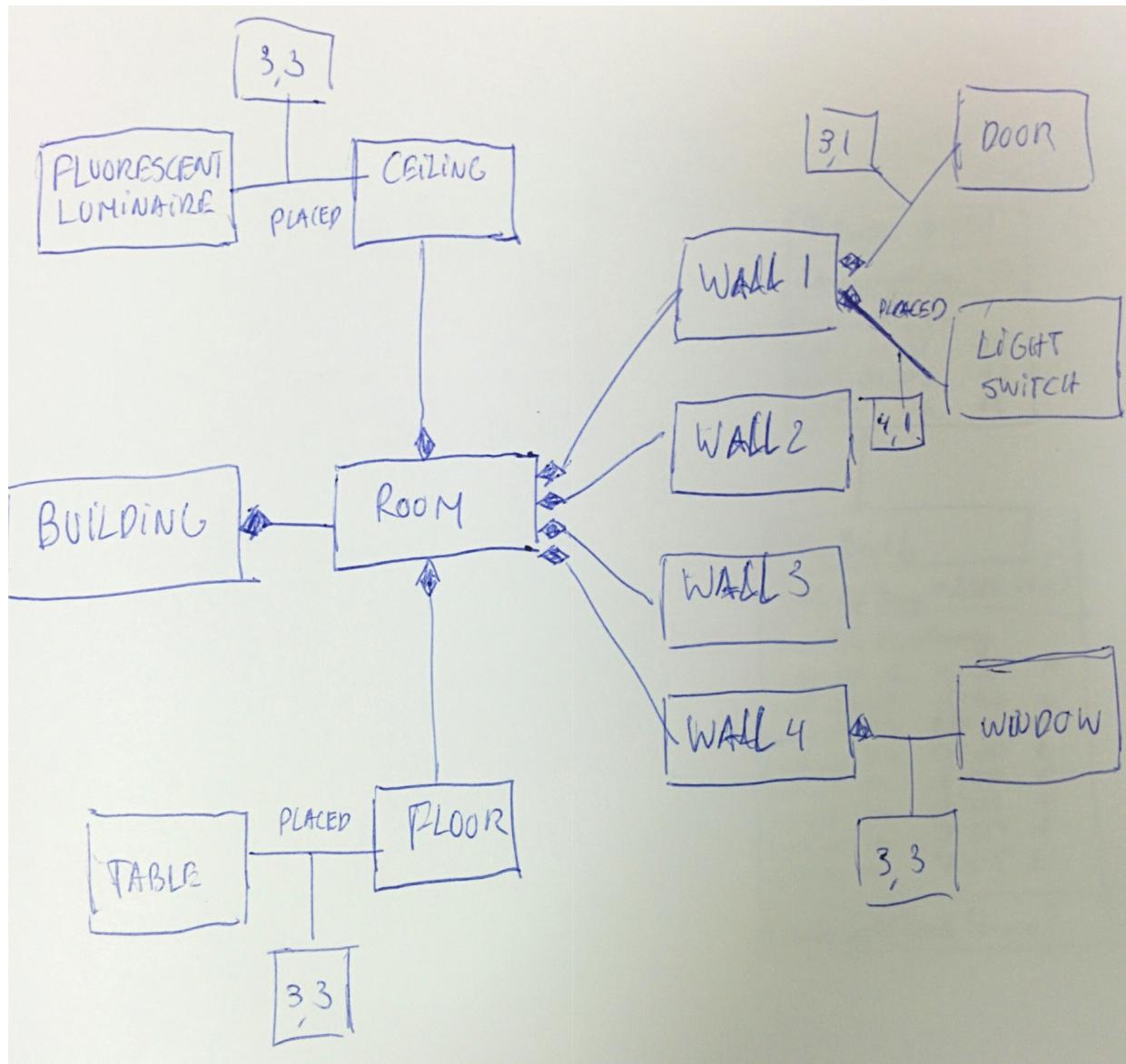


# Cost aspect metamodel

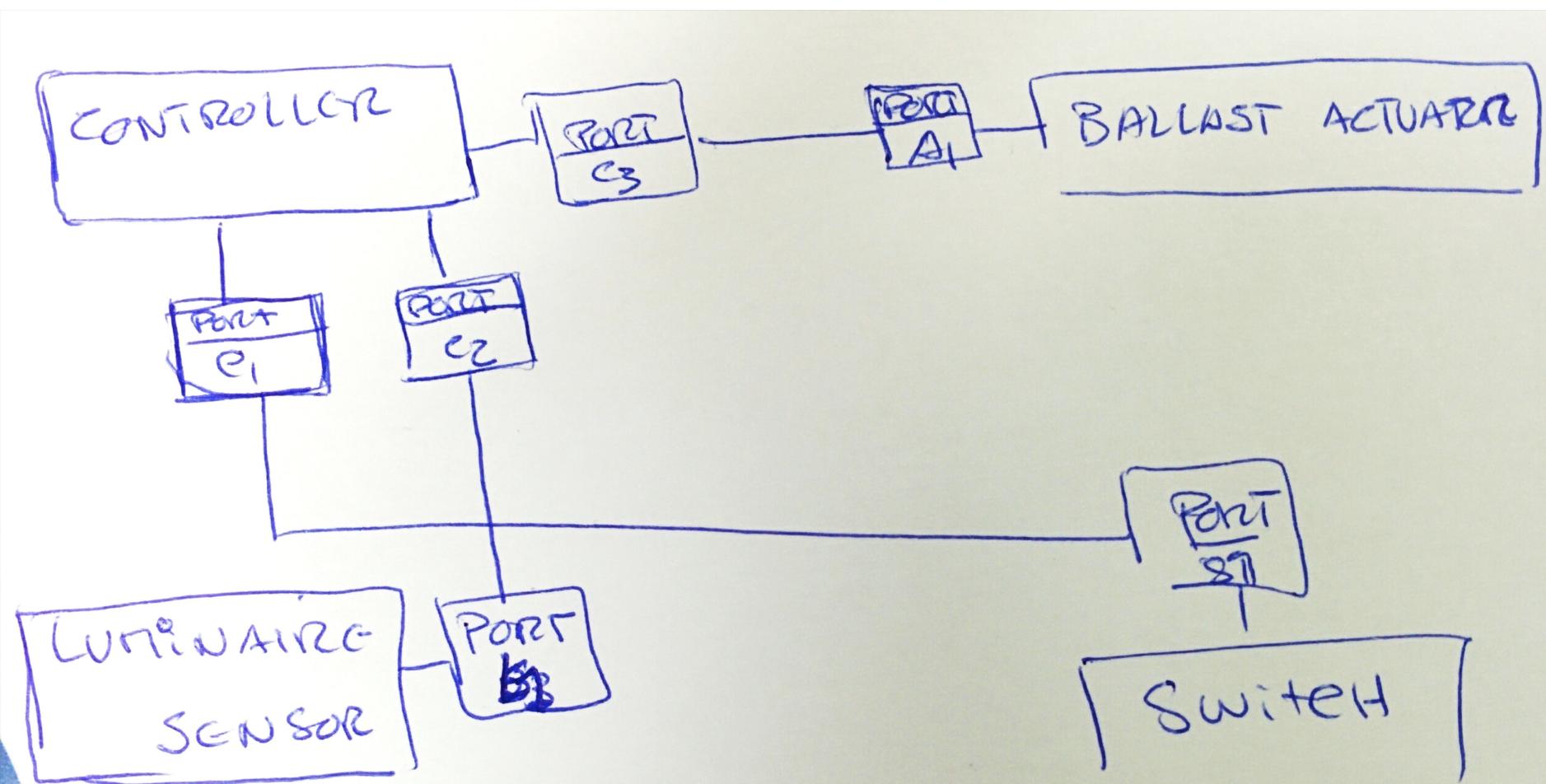


What about models for our use case?

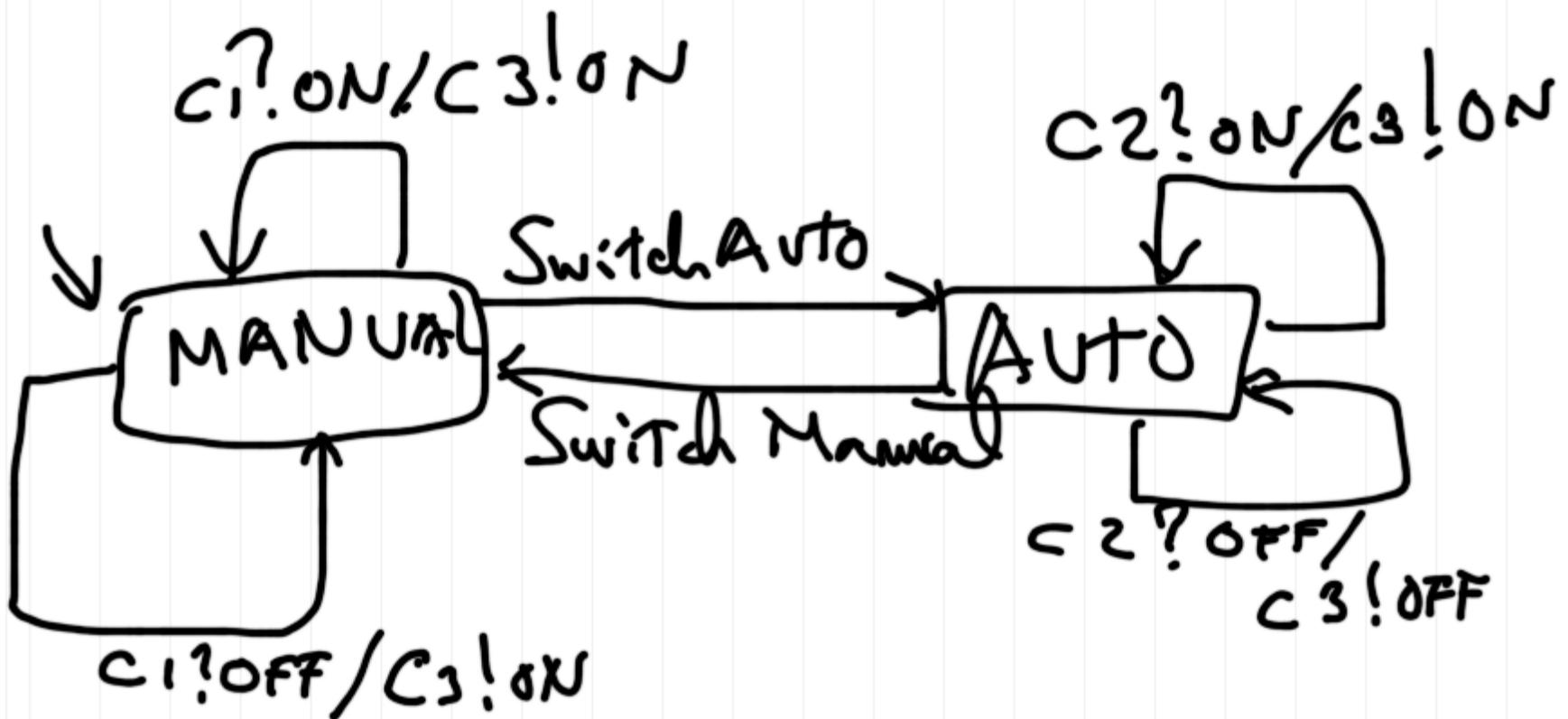
# Structural aspect model



# Commissioning aspect model



# Control logic aspect model



# Economical aspect model

Energy Cost	
2015.01.01.	0,16
2015.01.07.	0,162
2015.01.03	0,163
2015.01.09.	0,154
2015.01.05	0,160

F Bulb #101	
Consumption = 10	
Product Cost H.	
2015.01.01.	10
2015.01.03.	12
2015.01.06.	11

↑

My Bulb		
Date Of Buy = 2015-01-02		
Switch History		
2015.01.02.	15:30	↑
2015.01.02.	15:40	↓
2015.01.03.	20:15	↑
2015.01.04.	06:00	↓
2015.01.04	18:00	↑
2015.01.04	18:02	↓
2015.01.04	18:04	↑
2015.01.04	18:05	↓
Code Cost (DateTime)		

What is the next step now?

Is there already work done on that?

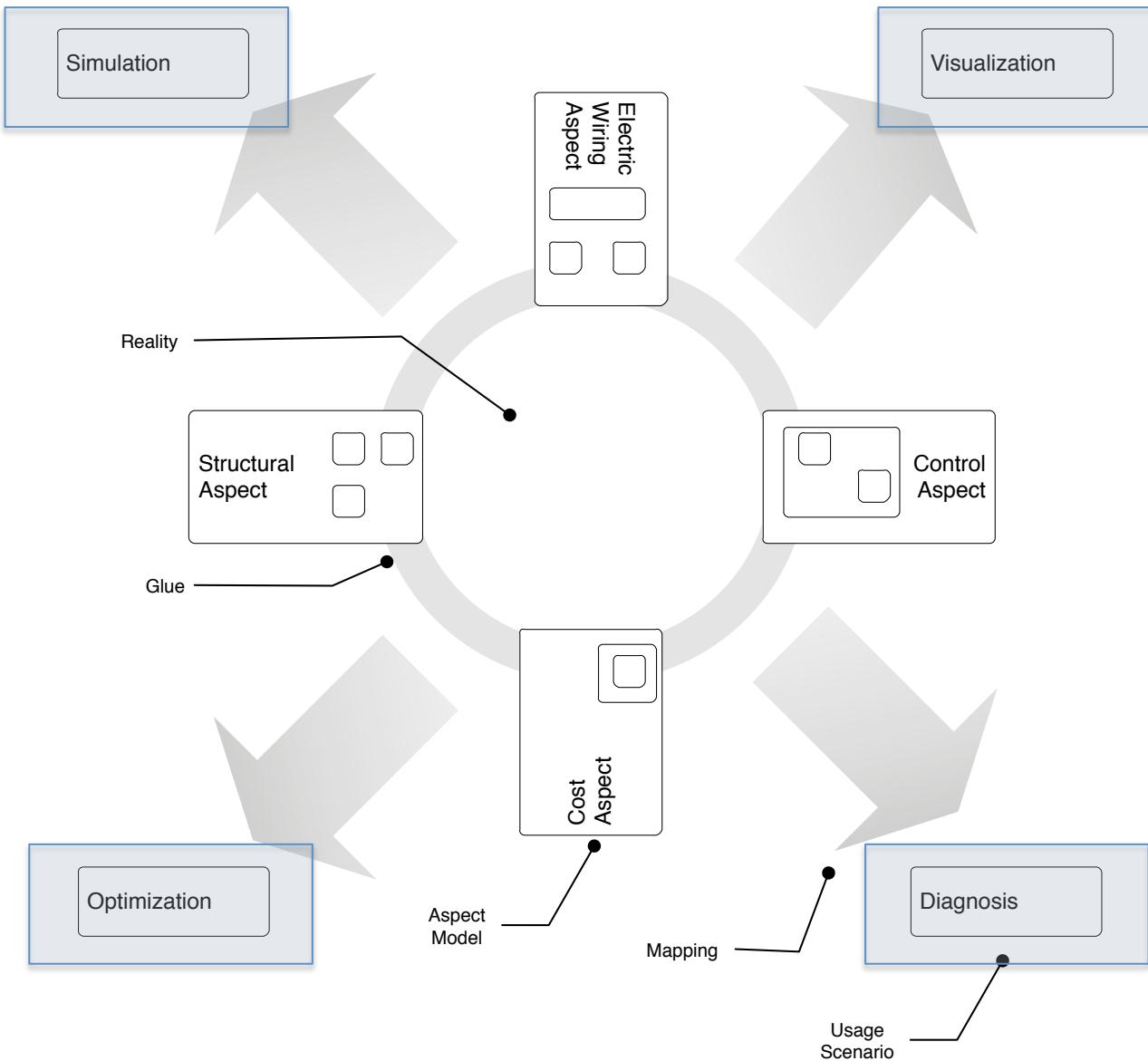
# Related work

- Thesis by Andreas Seibel [Seibel 2013]
  - Traceability
  - Providing automated maintenance of dependencies
  - Automatically applying heterogeneous model operations
  - Specify and apply compositions of heterogeneous model operations

# Related work

- Lack of examples to support the thesis
- Could we use this work to support our idea of composition of heterogeneous models?
  - Goals centered on usage scenarios

# Goal



# Future work

- This is yet a question to be answer
  - Tomorrow ?
- Develop a case study using the framework defined in the thesis
- Use the building automation domain

# References

[Seibel 2013] Seibel, Andreas. *Traceability and model management with executable and dynamic hierarchical megamodels*. Diss. Universitätsbibliothek, 2013.