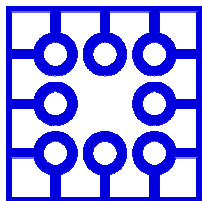


**MUNI  
FI**



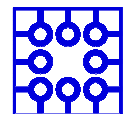
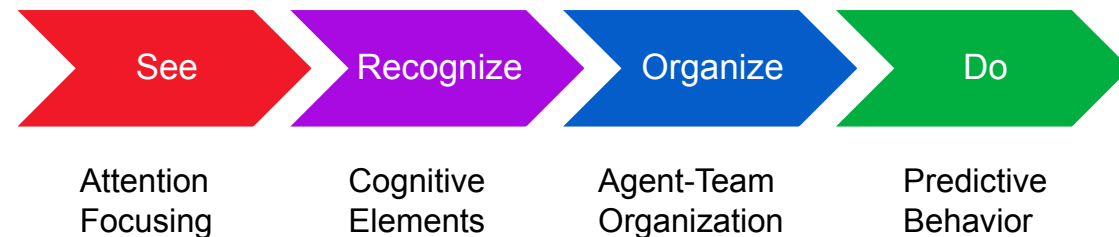
**Laboratoř  
servisních  
systémů**

# **Diamond Do**



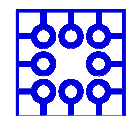
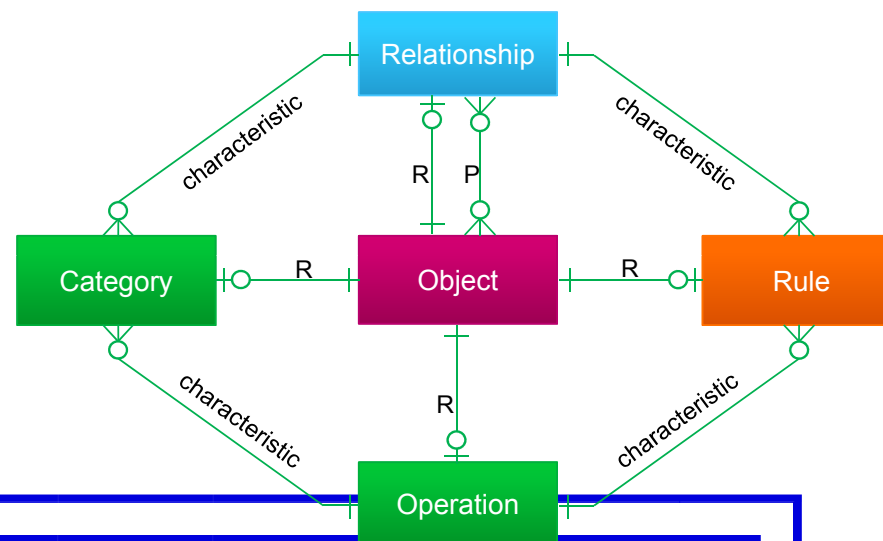
# Diamond-Path Framework

- Paradigm aimed to help understand and act in a service-system environment
- Theoretical concept
- 4 diamond-shaped models



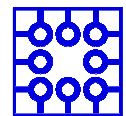
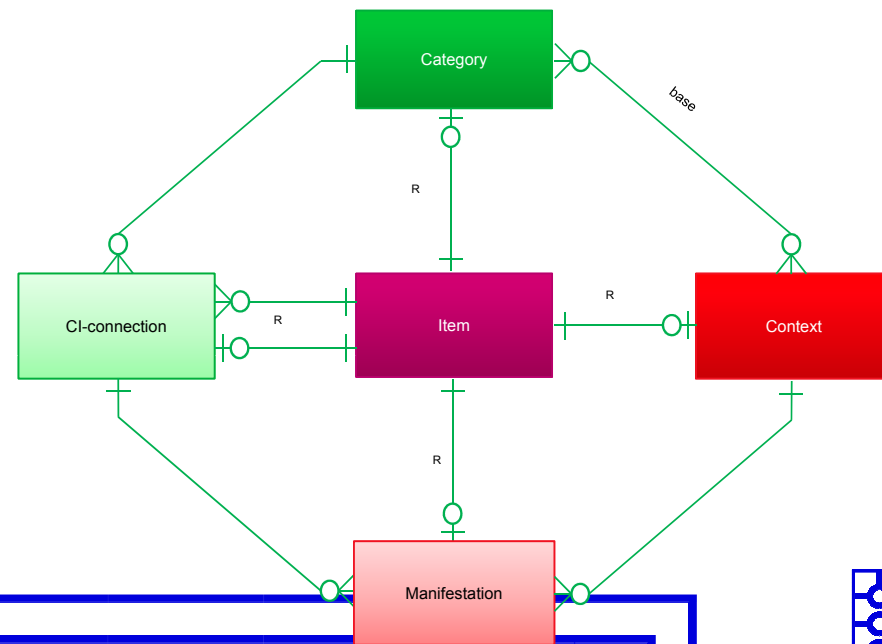
# Diamond of Attention Focussing

- Objects and relationships between them
- Mention-use duality
  - Modelling a modelling tool
  - Referring to itself



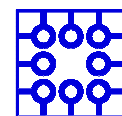
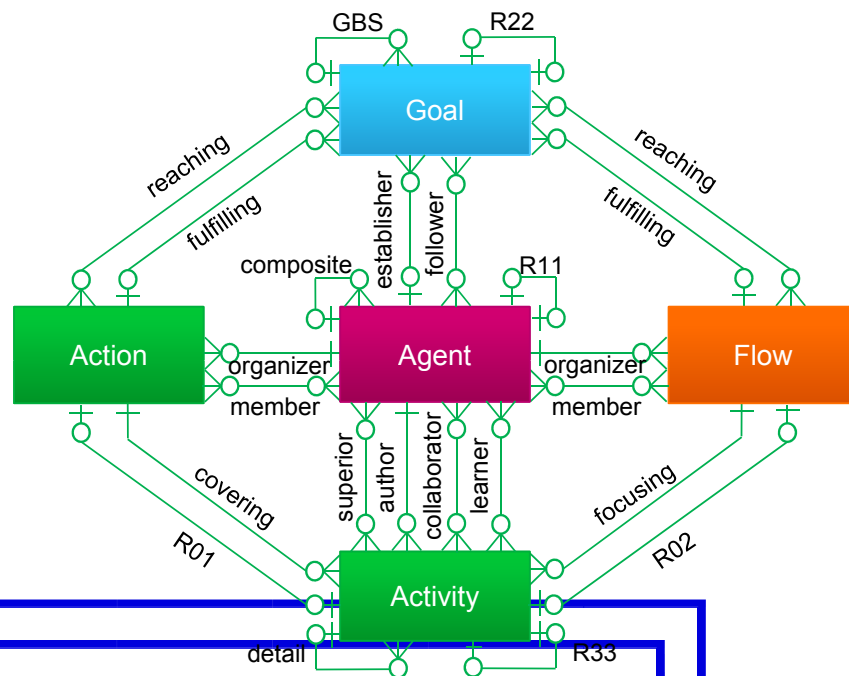
# Diamond of Cognitive Elements

- Working within the context
- Given level of certainty
- Mention-use duality



# Diamond of Agent – Team Organization

Action vs. Flow  
Agent Behavior  
R-edge: context

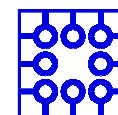
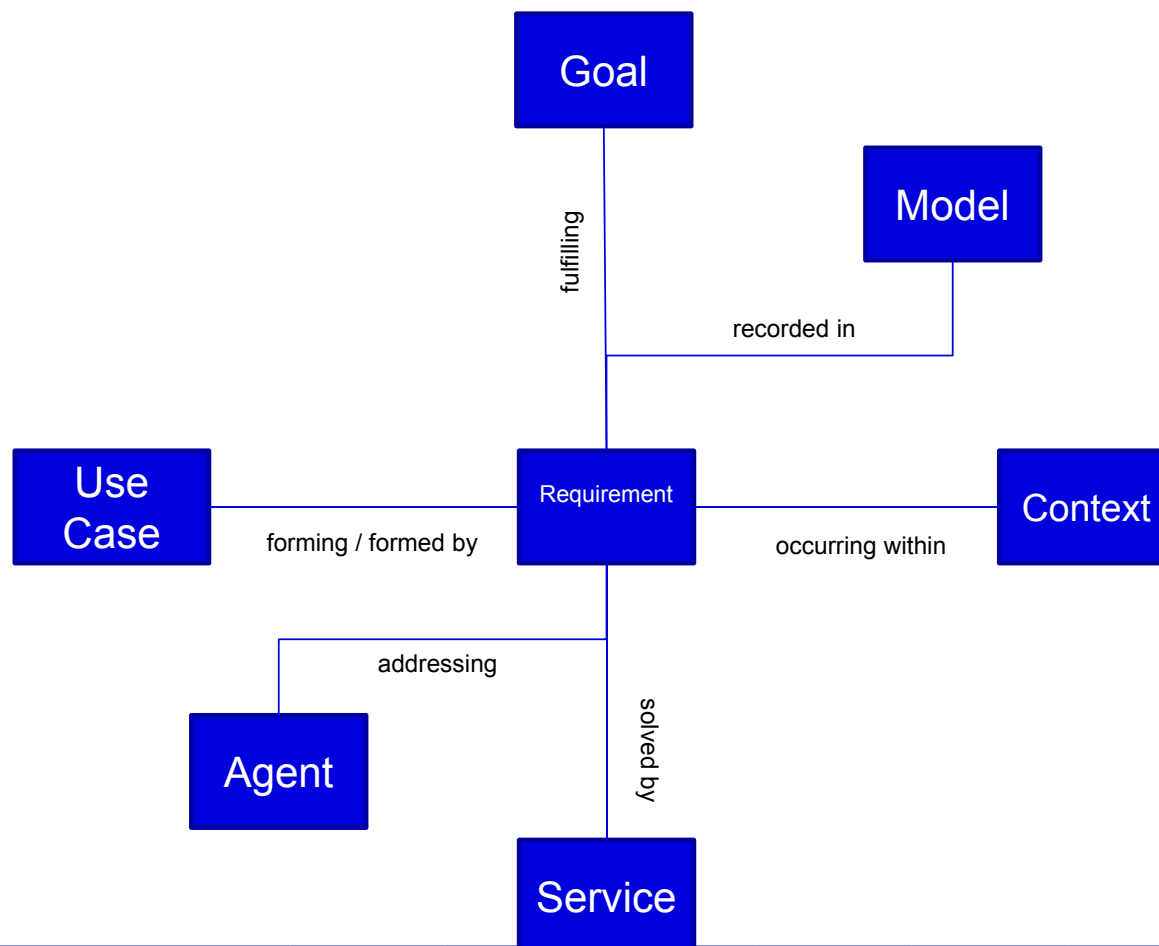


# Analysis of the Agent

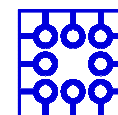
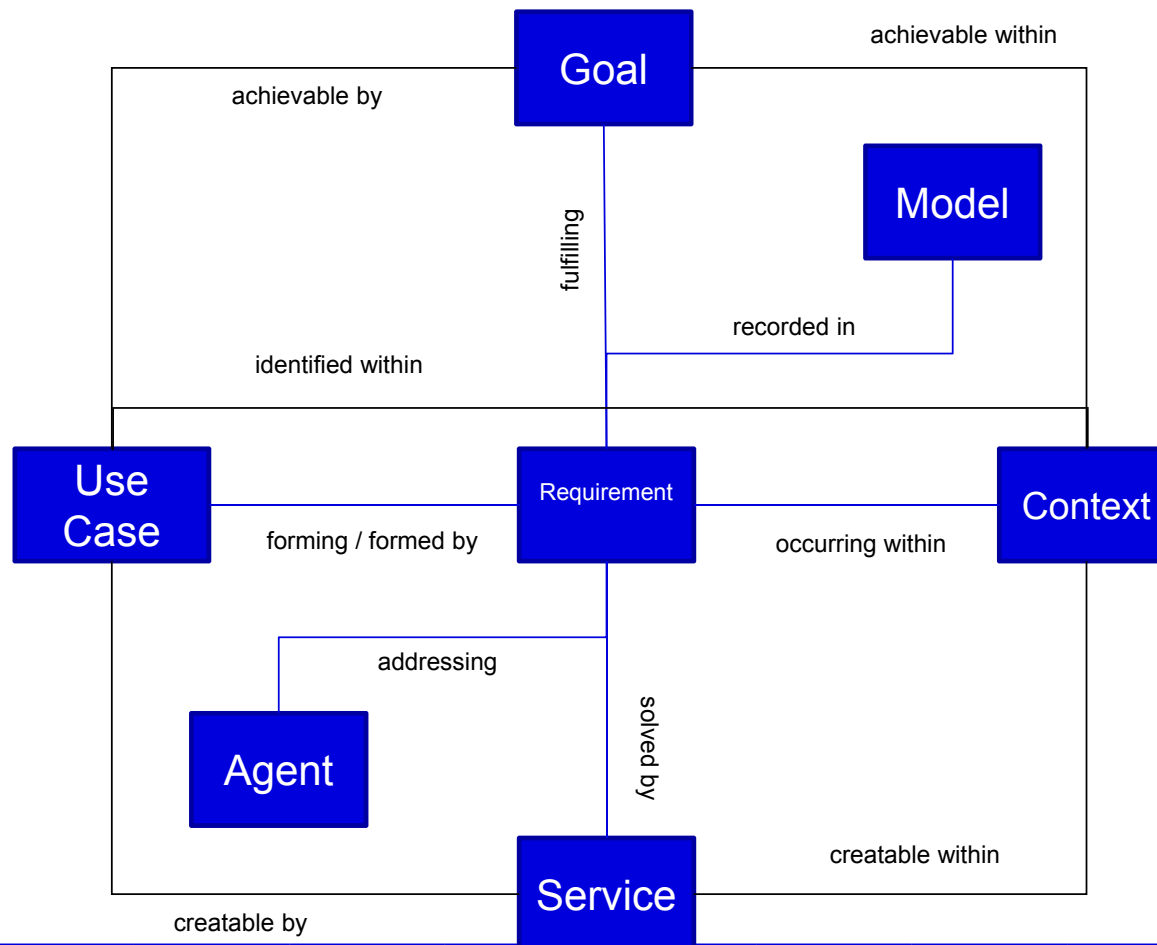
- What can be centered in the agent role?
- Agent has requirements
- Requirements can be modelled



# What is related to requirements?



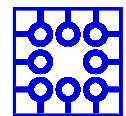
# What is related to requirements?



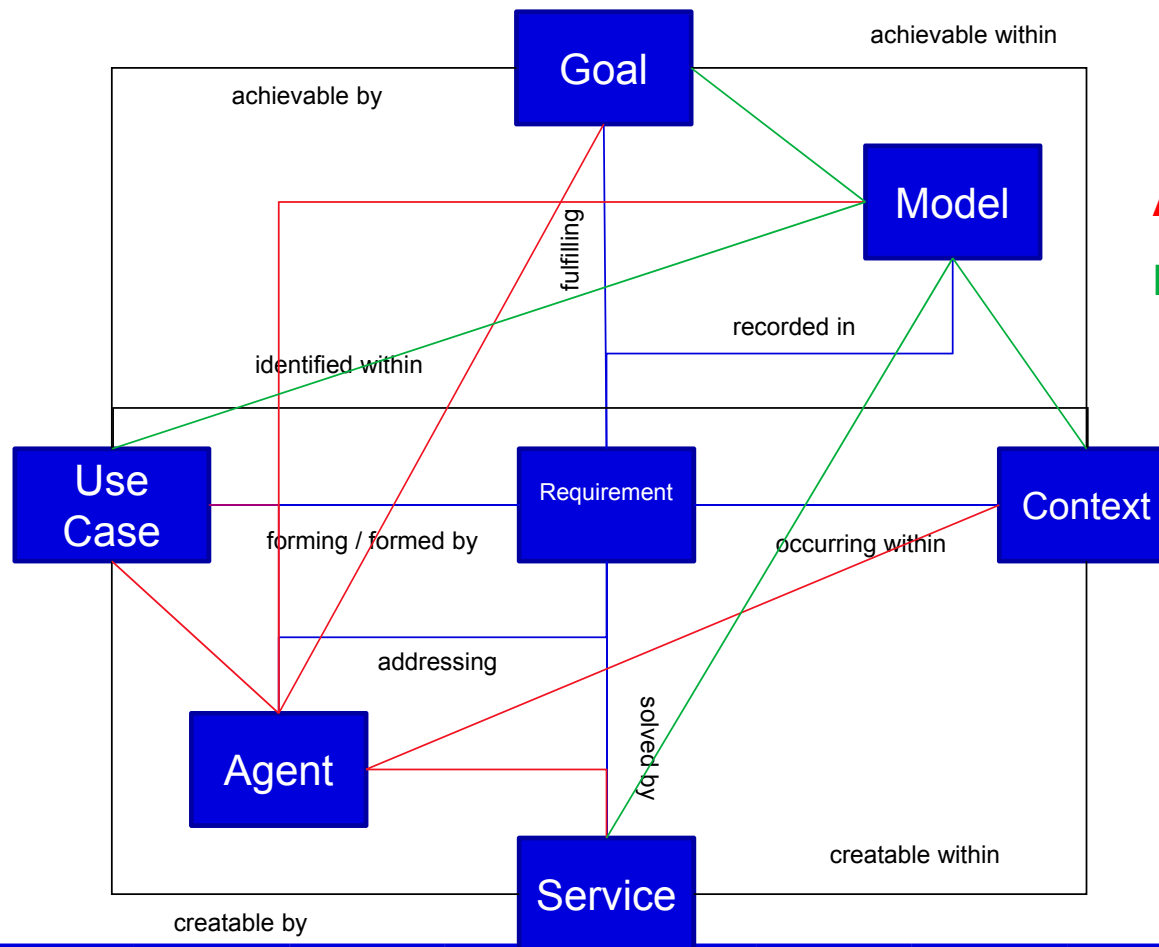


# rent a car like rent a bike, pick up the car along the road and go, any time, anywhere

- Requirement: we want to solve the transportation issues
- Agent: the city or municipality, citizens, tourists
- Model: which type of transportation at which time for which group of people
- goal: drive green! car sharing! reduce traffic jam and arrange the transportation better
- Use case: Smart transportation projects, Car sharing projects
- Service: real-time car booking service, service centre, reg. services etc.
- Context: Smart City

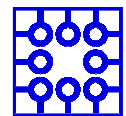


# Two special containers

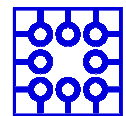
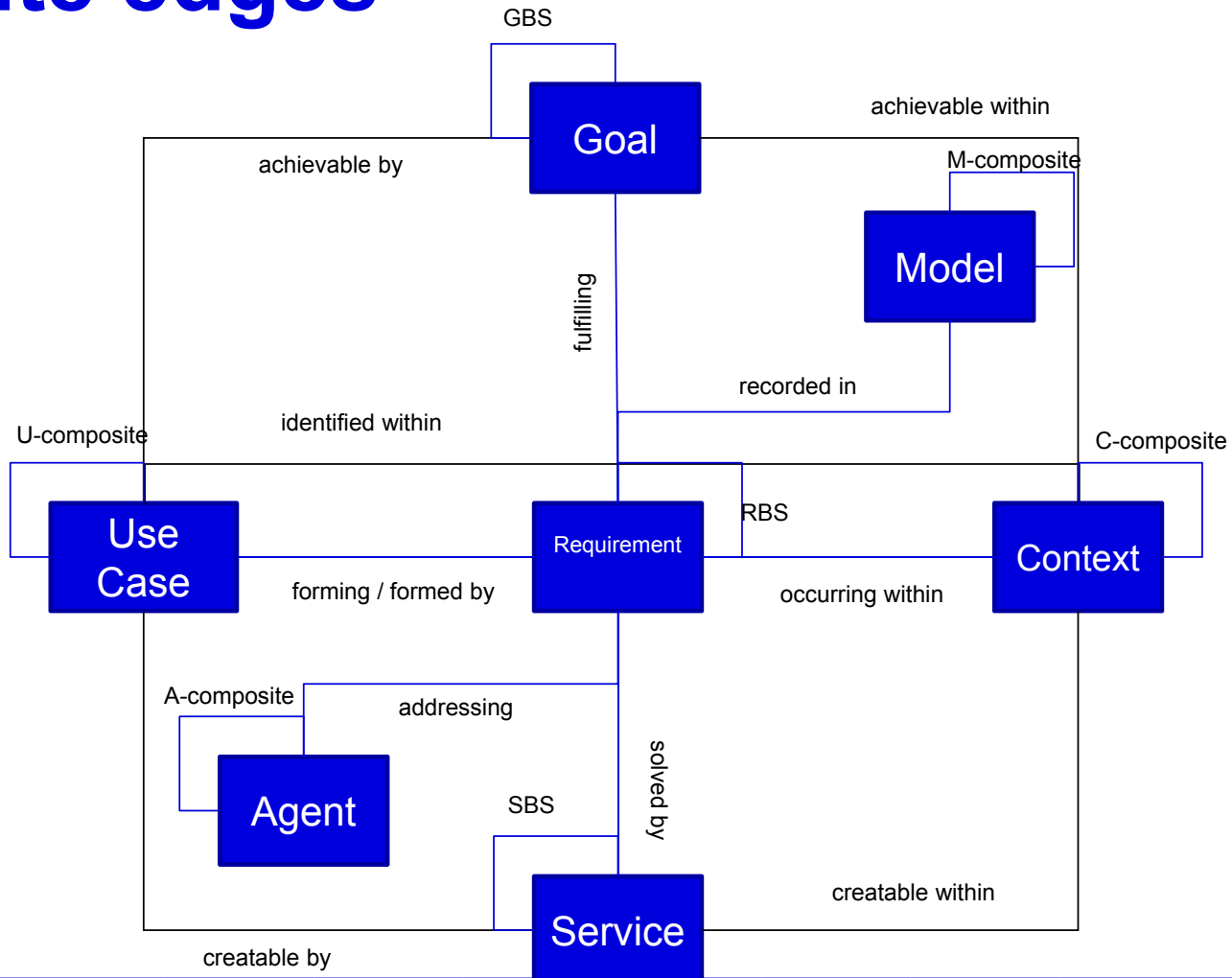


**Agent** wishes, defines, does.

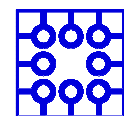
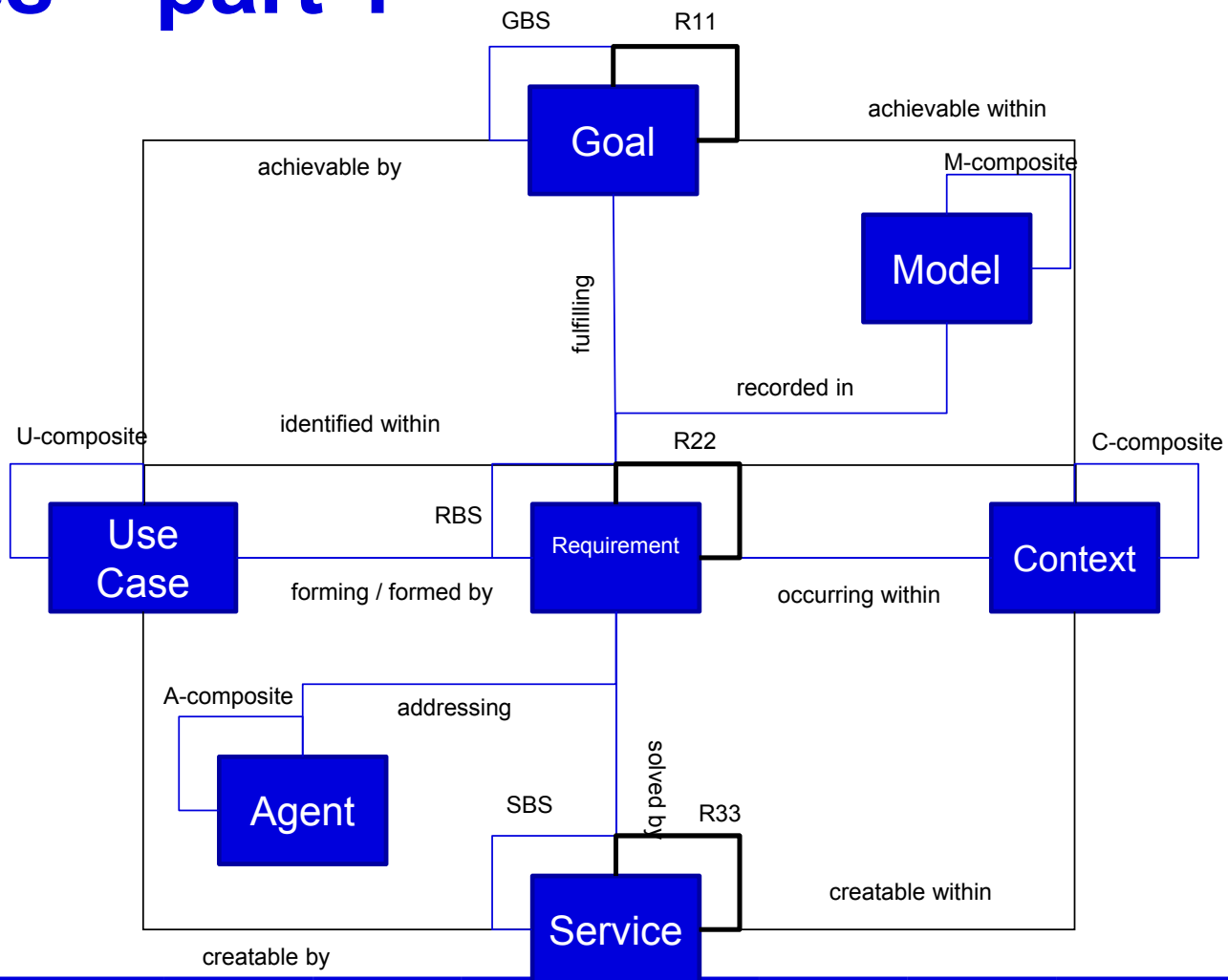
**Model** records.



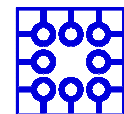
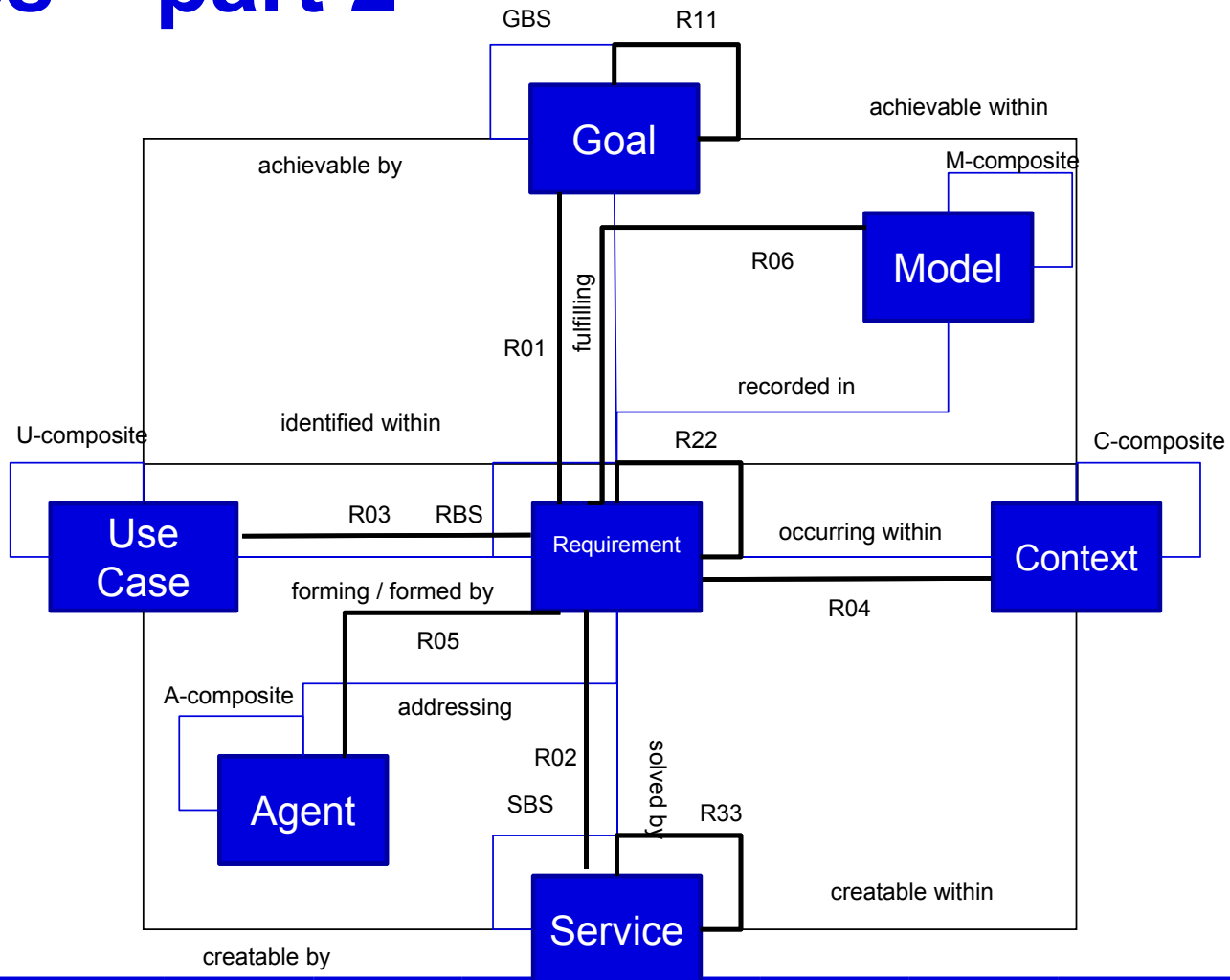
# Composite edges



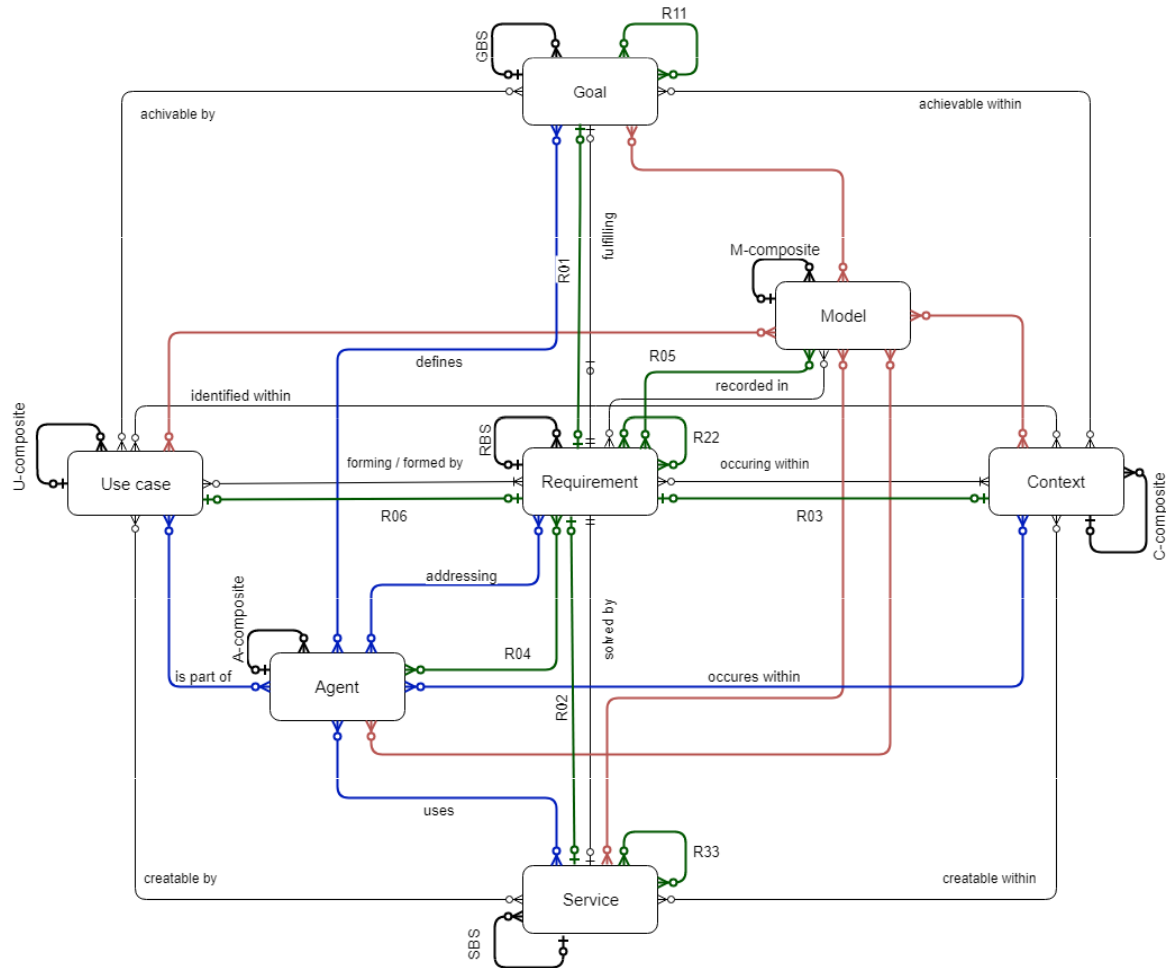
# R – edges – part 1



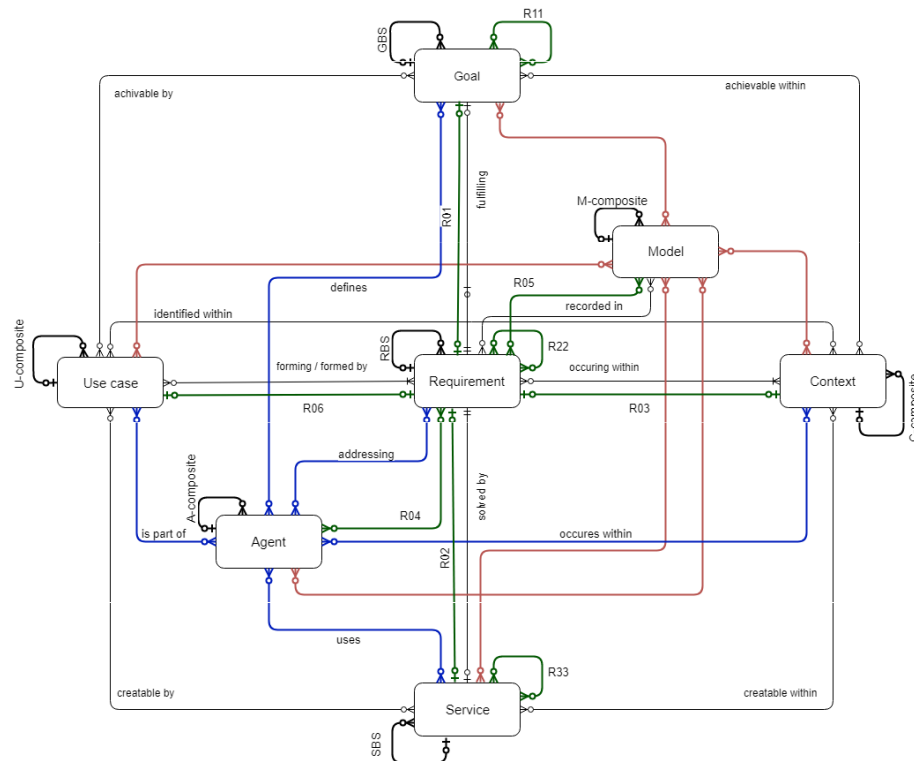
# R – edges – part 2



# Do diamond – nicer



## Diamond of Predictive Behaviour



- Depicts the motivation of agents to DO
- Everything can be seen as a requirement
- Forming and being formed by behavioral patterns
- Models as a system memory

# Context of the service

Context	Requirement					
Healthy run of the citizen	To find optimal road					
Race of the moto bikers	To find optimal road					
Emergency service	To find optimal road					



## What are the principles?

### Principle of service definition - vertical

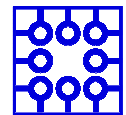
- Service is not the most important element.
- The Requirement is the key to build successful service environment
- The goals are the basement for the set of requirements

### Principle of context understanding – horizontal

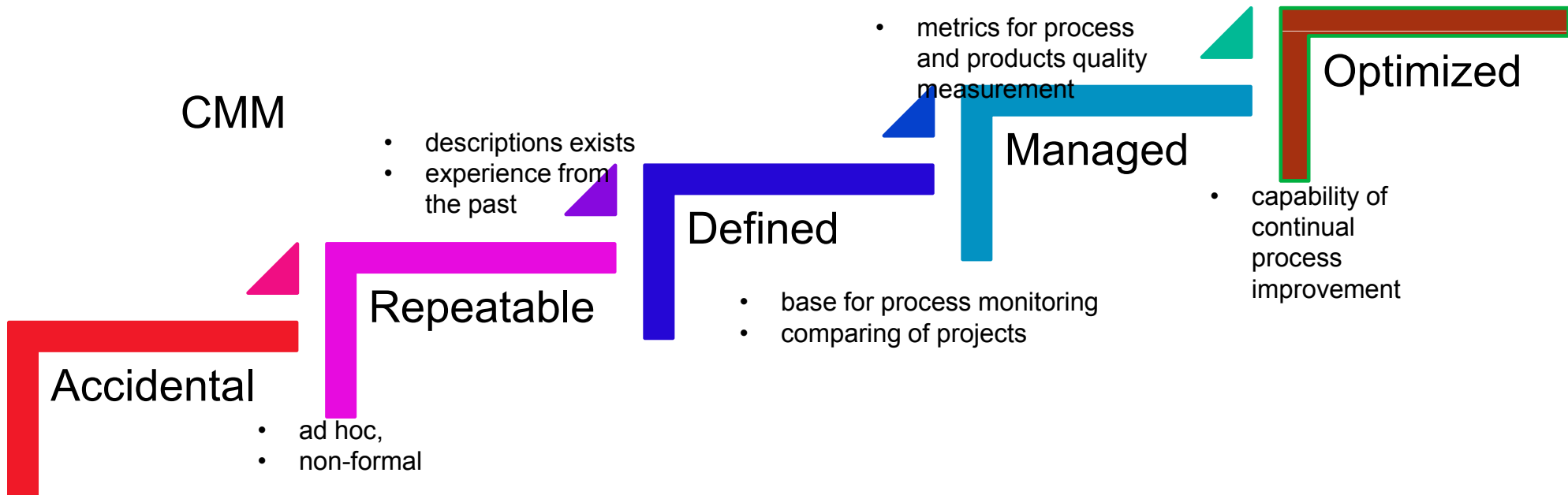
- Context is the part of the model, not the externality
- Use case is identified within the context (finding similar solutions)
- Requirement is forming and is formed by Use cases

### Principle of completeness – z-axis

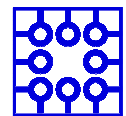
- Agents identification must be done in the relations with other elements
- Model must involve all other elements including itself



# Universal modelling

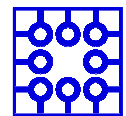


How long does it take for regular ISs to adjust in order to support newly optimized processes?

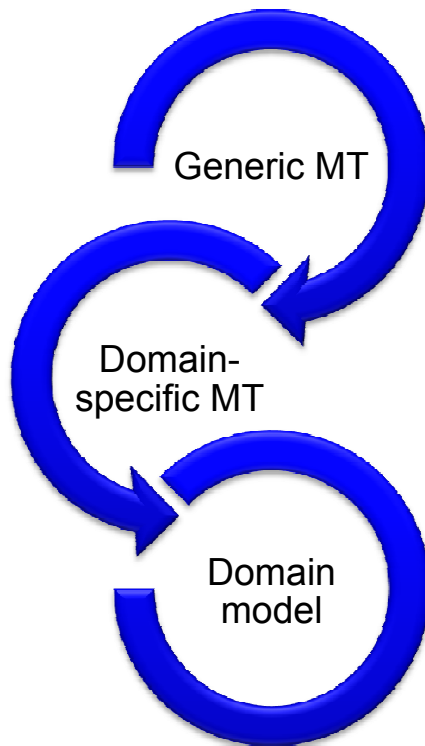


## Current Modelling Tools

- Current CASE tools, BPMT, PMT, ... allow to record only such objects and relationships, which had their creators in minds in the time when they were developing the tool.
- Objects and relationships, we focus on when modeling various aspects of business, are continually changing.
- Problem of effective communication within any IT project lies nearly always on boundaries of capability of a given modeling tool (... thus the model doesn't represent the reality appropriately)
- Except of some isolated cases, there are only few ways to extend used MT by constructs which are needed for current specific requirements.
- A problem arises in integration of some partial views into one common view.



## Meta-modelling



- Ability to develop and adjust domain-specific modelling tools
- Helps to construct the domain in terms comprehensible to domain experts
- Hierarchy of modelling tools