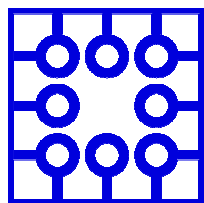


MUNI
FI



**Laboratoř
servisních
systémů**

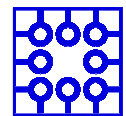
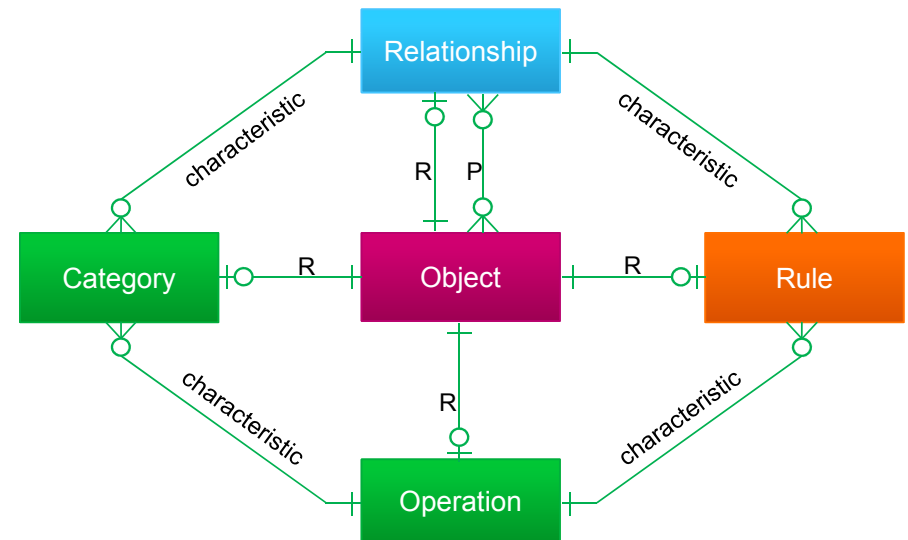
Diamond Path – Part 2

Leonard Walletzký
PA181
2022



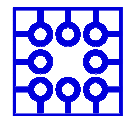
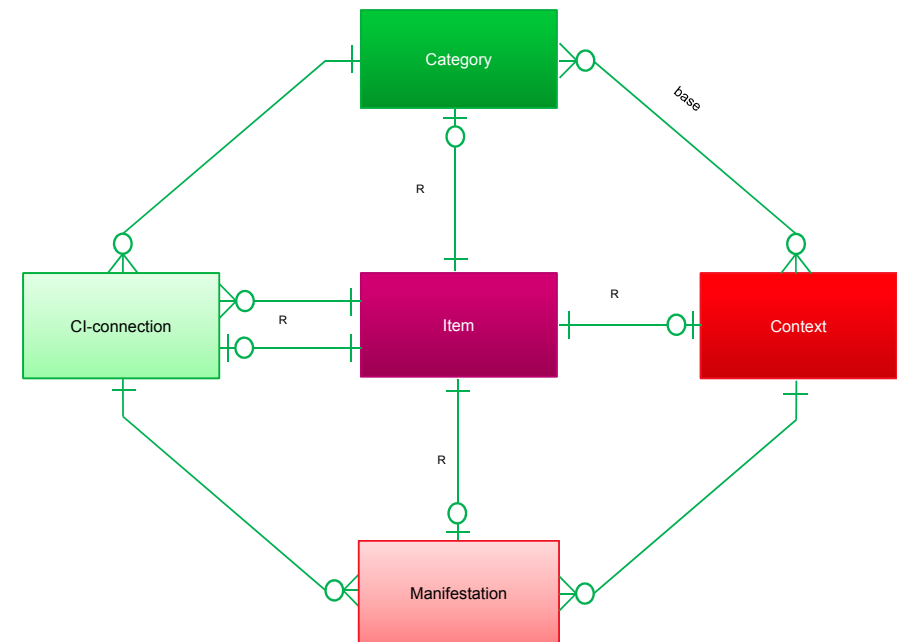
Diamond of Attention Focussing

- Objects and relationships between them
- Mention-use duality
- It is mind model

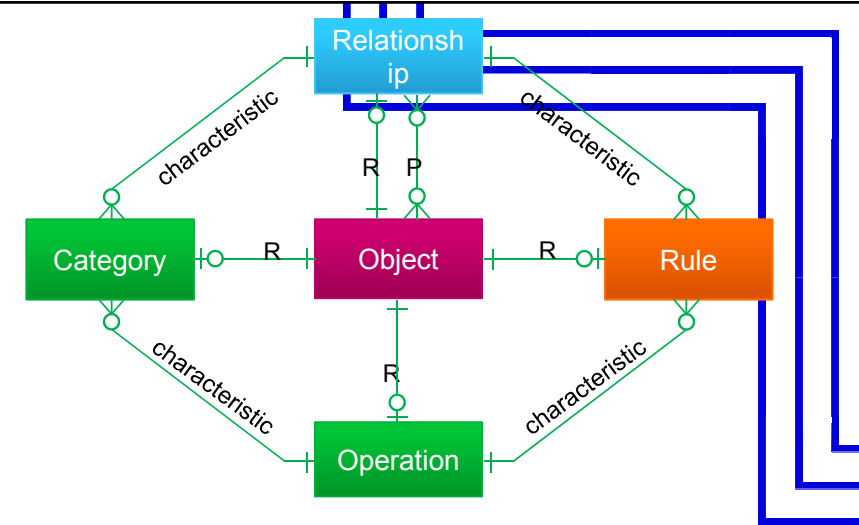


Diamond of Cognitive Elements

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



What does the street mean?



- How the buildings look like
- How they are arranged
- How they are designed

Architecture



- Energy
- Data
- Water
- Other

Infrastructure



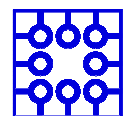
- Public transport
- Pedestrians
- Immobile persons
- Cars
- E-mobility

Mobility



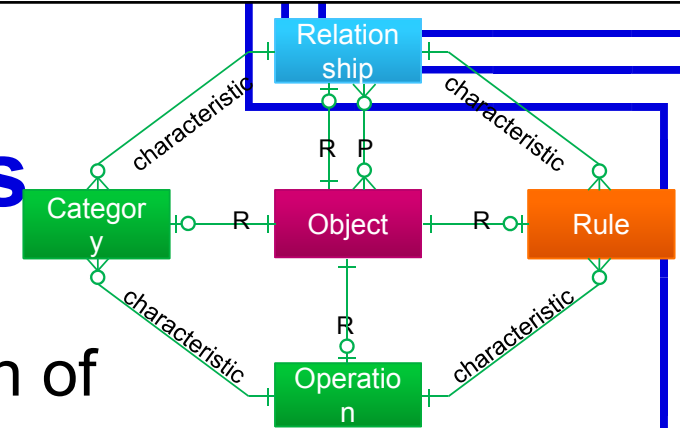
- Types of areas
- Grass
- Flowers, bushes and trees
- Air pollution

Environment



Laboratoř
servisních
systémů

Objects and their relationships



- Each point of view means different identification of the objects and their relationships



Objects



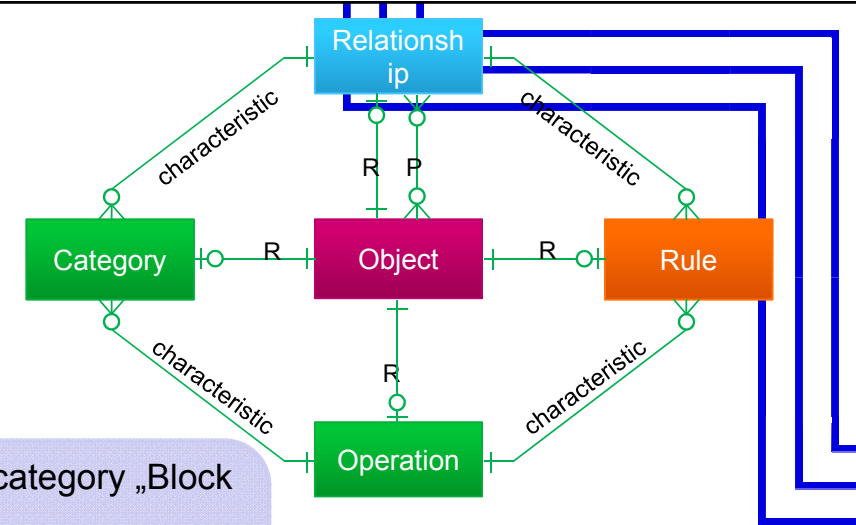
- Houses
- Shops and restaurants
- Windows
- Cars
- Lamps
- Pedestrian ways

Relationships



- are adjacent to
- are interconnected with
- are designed in
- are linked to

Indentification of categories

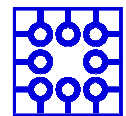


Object we find interesting in our primary point of view

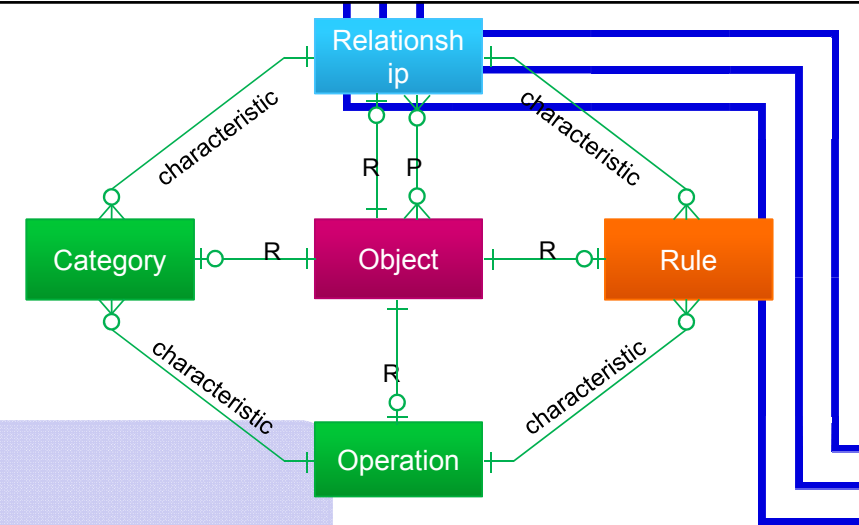
- Houses in adjacent to each other belong into category „Block of flats“
- Houses in selected design belong into category „Historical houses“
- Windows designed for historical house belongs into „Historical windows“

Objects we find interesting generally

- Lamps, Cars and Houses belong to „Street objects“



Setting of operations



For block of flats

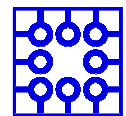
- Operation „Select flat for living“
- Operation „Clear the frontage“

For historical windows

- Operation „Open“ and „Close“
- Operation „Clean“
- Operation „Change“

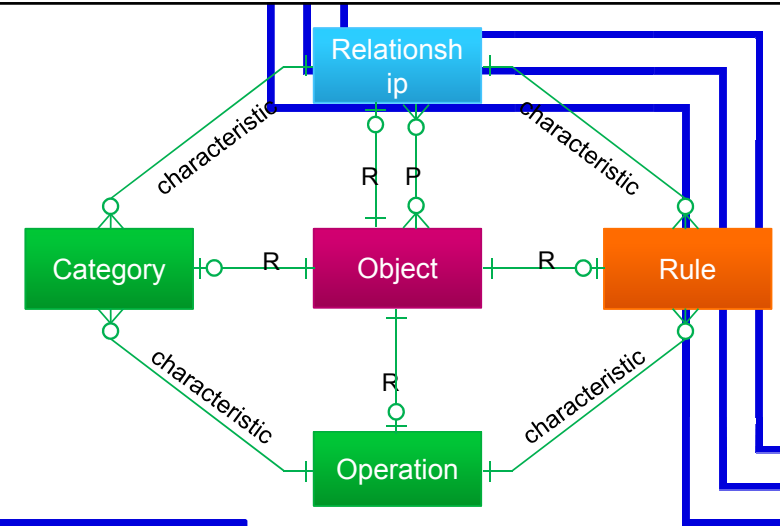
For equipment on the street

- Operation „Switch On“ and „Switch Off“
- Operation „Change intensity of light“
- Operation „Change“ and „Maintain“



We define the rules

- Rules can also potentially identify the link to other contexts
- They are linked to **Relationships!**



Houses in historical design

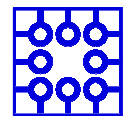
- Every change must be verified by municipality
- They are excluded from energy certification
- The flats can be given to selected persons

Windows in historical house

- Cannot be changed to plastic
- Can be opened in clear air only
- Must be maintained in different way than modern one

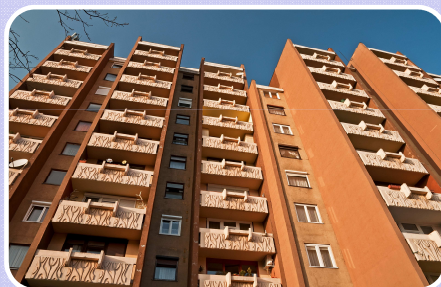
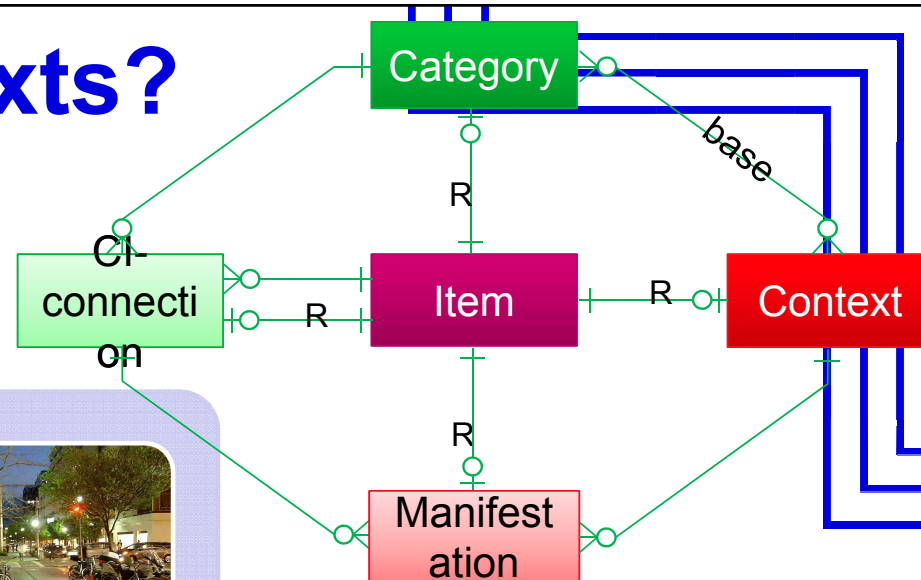
Pedestrian way linked with lamps

- Lamps can switch off only if intensity of daylight increase some level
- Pedestrian way should detect the movement to inform the lamp to intensify the lighting



Objects in more contexts?

- There are objects that belongs into more categories
- Those categories should mean different context too



Historical houses

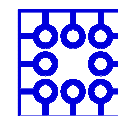
- We look to their historical value
- We are

Block of flats

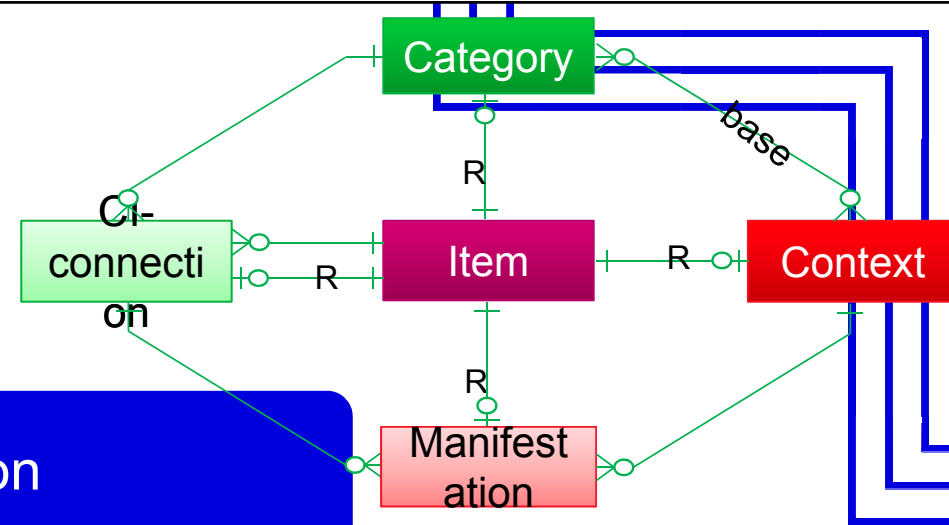
- We look to them as providers of accommodation and hospitality services

Objects of the street

- We identify them as the part of the street infrastructure



Why do we need to interconnect contexts?



Some rules we identify via context interconnection

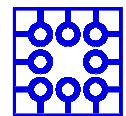
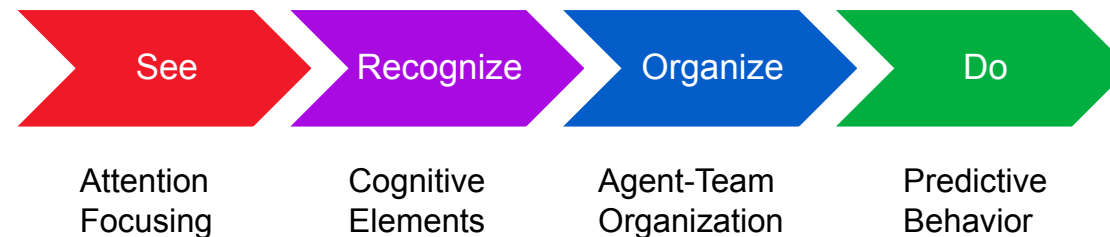
- Example: You cannot install modern lamps on the street with historical houses

The role of object in different services leads into different manifestation

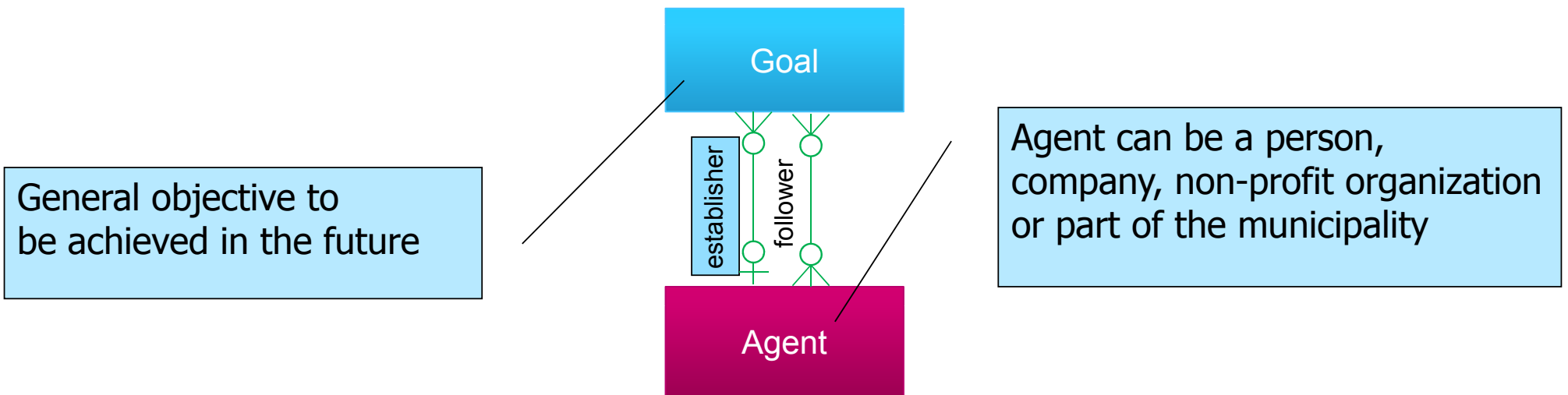
- Example:
 - In the context of „Street security“ lamp represents the object that provide light service
 - In the context of „Smart Energy“ lamp represents the device that must be managed to save the energy

Diamond-Path Framework

- We continue the journey
- Now we focus to living entities
- Subjects or Agents



Diamond of Agent-Team Organization

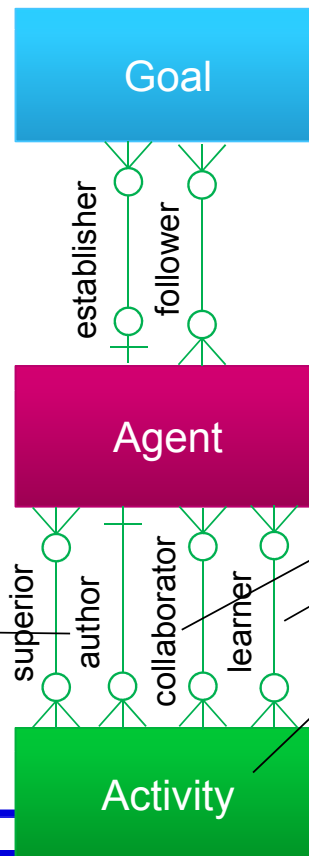


Example:

A city citizen has a goal to have **nice life**, without intermissions from the state, secured **job and good** public services.

Diamond of Agent-Team Organization

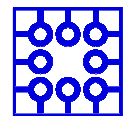
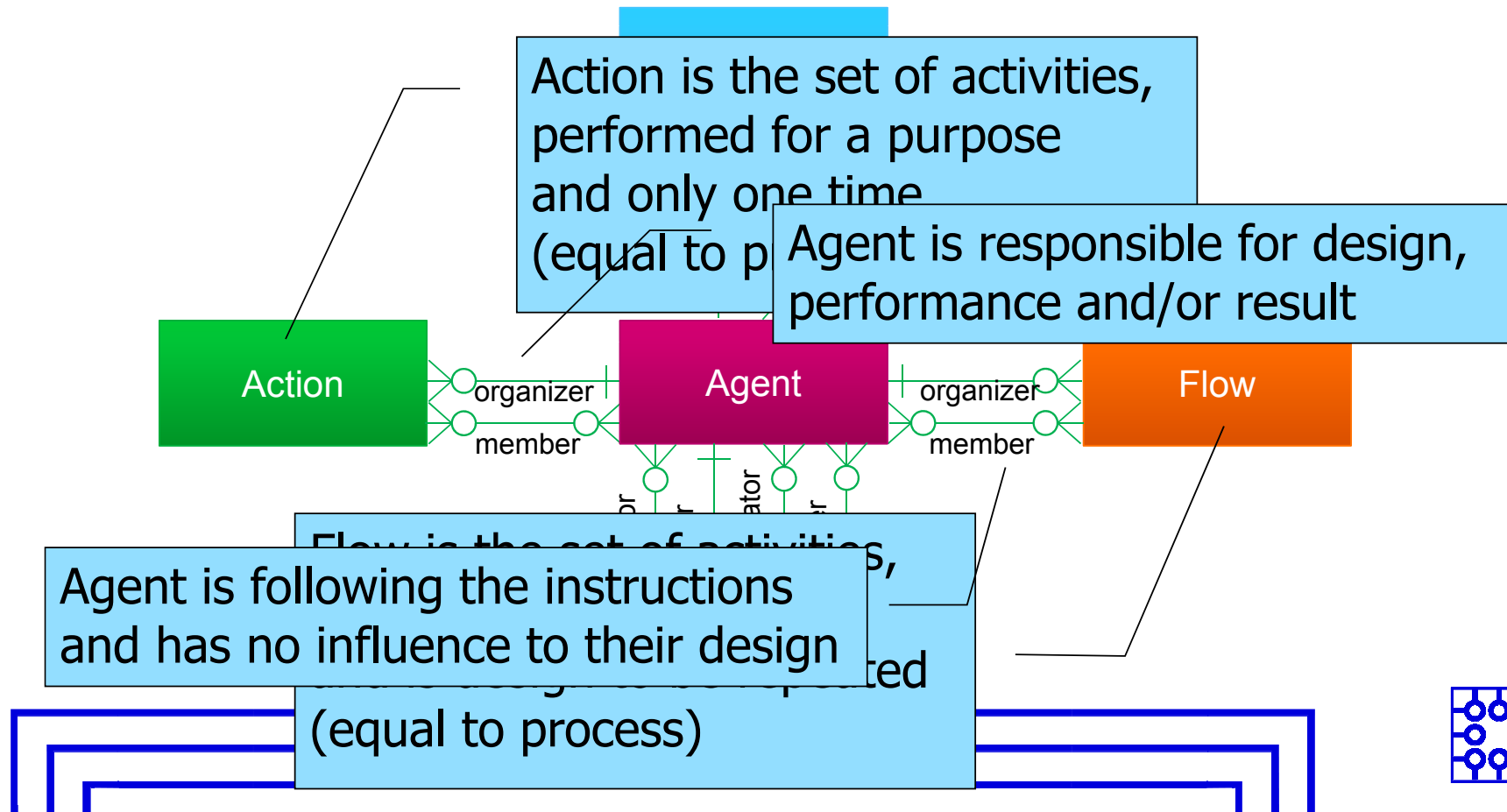
Agent is leading the activity
Agent is author of the activity
Company is providing the developed service



Agent is collaborating on the activity
Agent is observing the activity
New product manager is shadowing the experienced one.

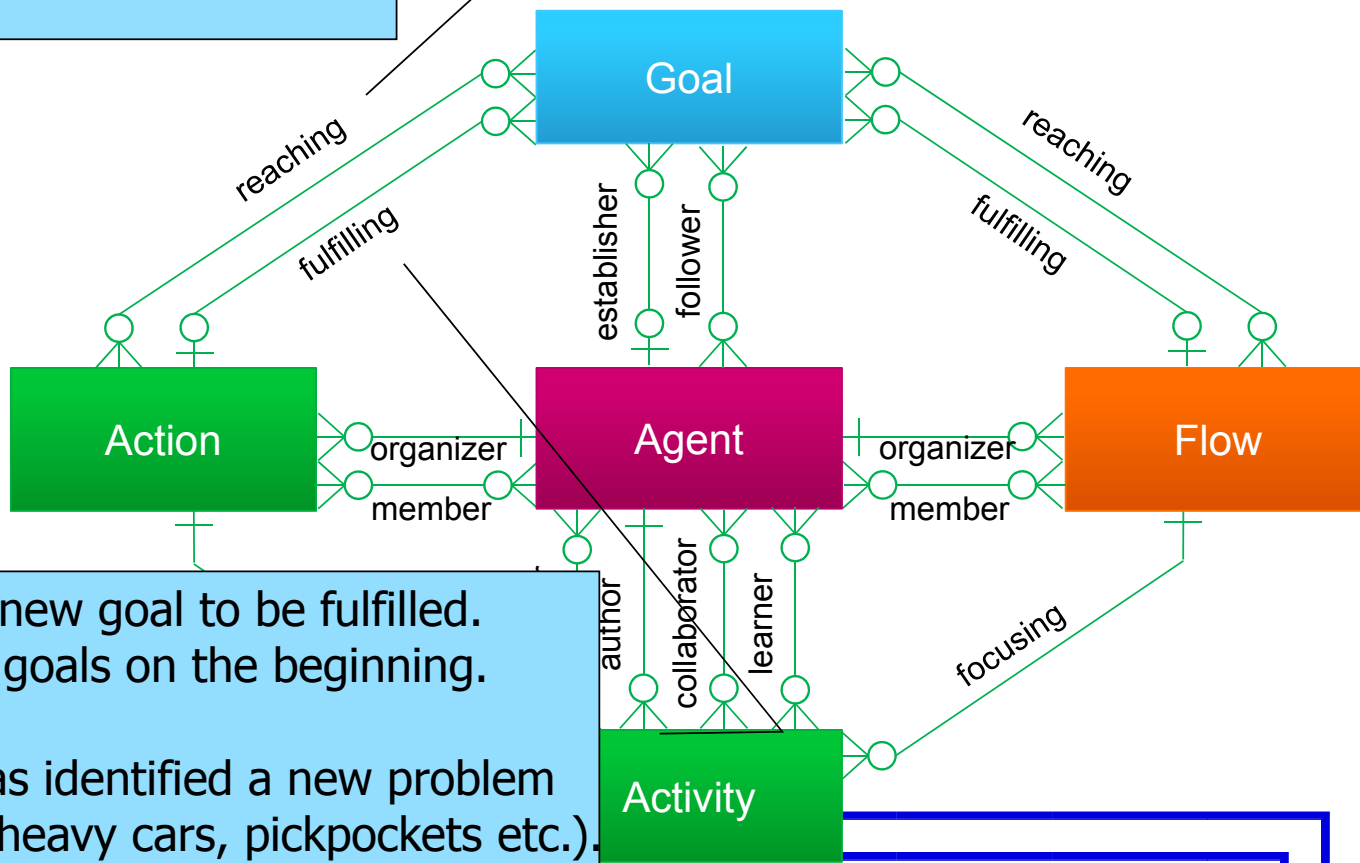
Activity is any performance, (mental or physical) done by agent

Diamond of Agent-Team Organization



Agent-Team Organization

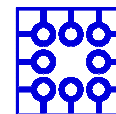
Organization



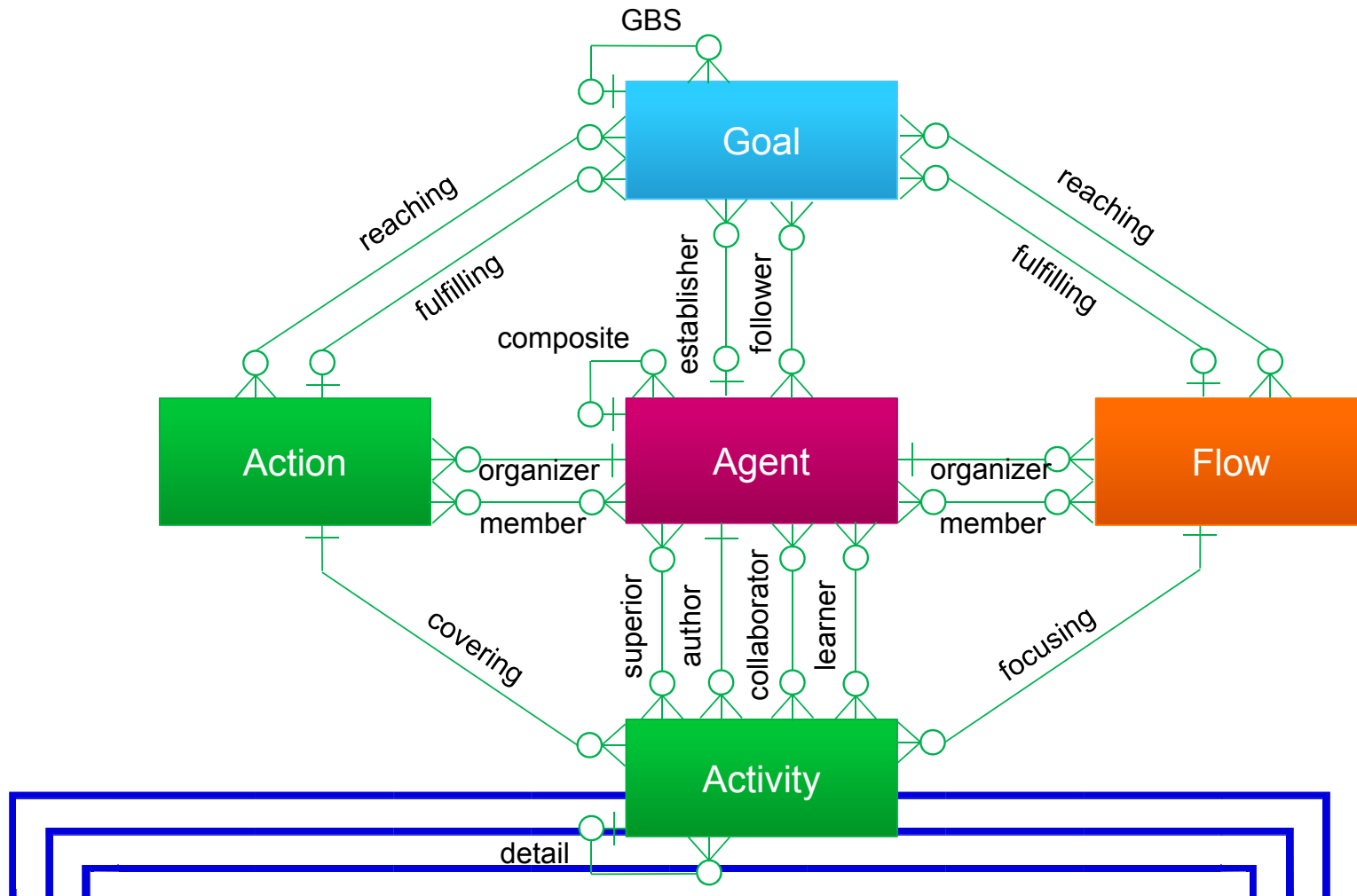
Action contributes on reaching the goal
Installing the new cameras is reaching the goal of city security

Action is defining a new goal to be fulfilled.
We do not know all goals on the beginning.

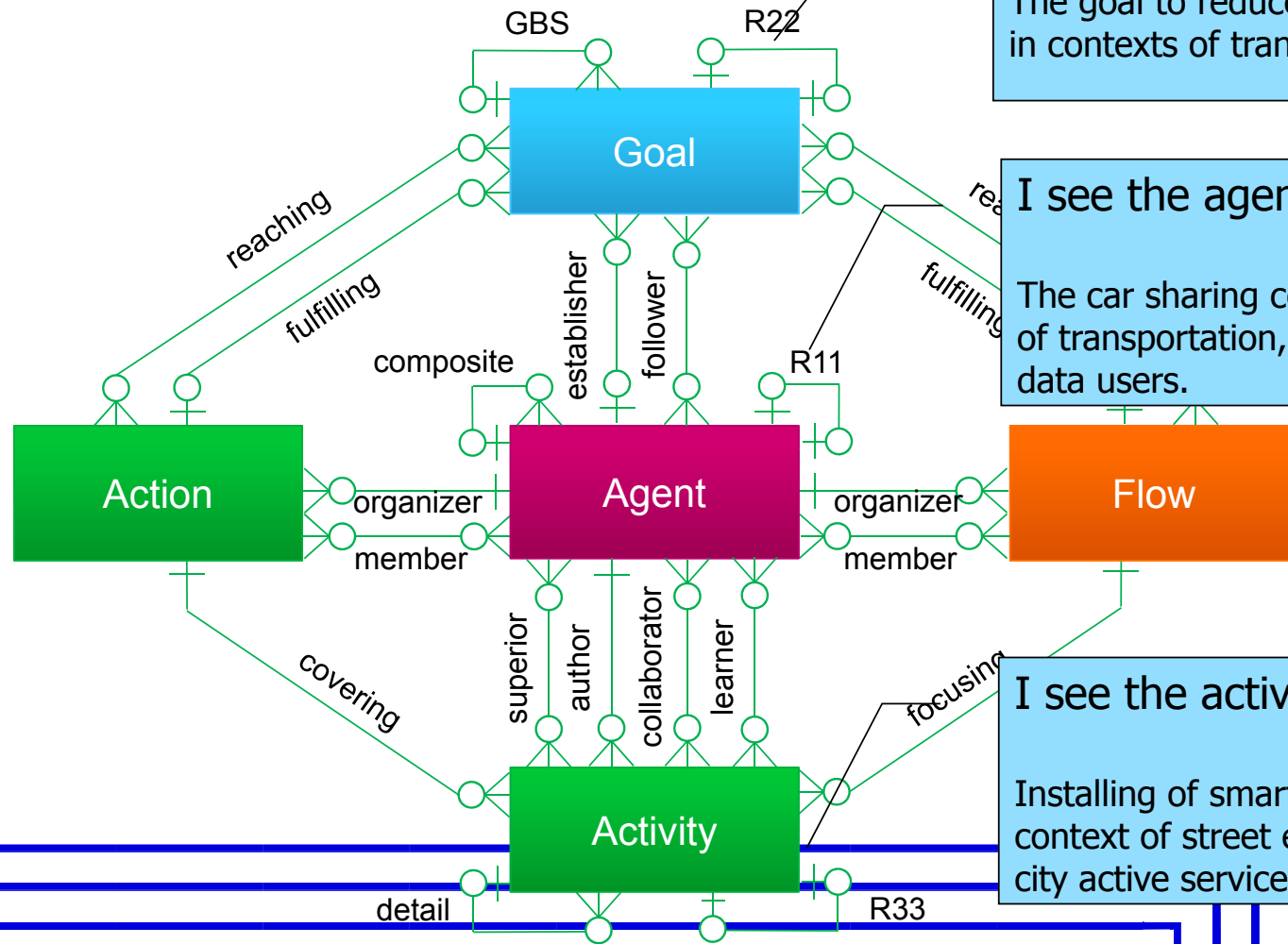
The security cameras identified a new problem to be solved (no of heavy cars, pickpockets etc.)



Diamond of Agent-Team Organization



Diamond of Agent-Team Orga



I see the goal in other context
The goal to reduce the traffic is present in contexts of transportation and air pollution

I see the agent in other context
The car sharing company is acting in context of transportation, and also in context of city data users.

I see the activity in other context
Installing of smart benches is present in context of street equipment, and also in city active services.

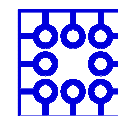
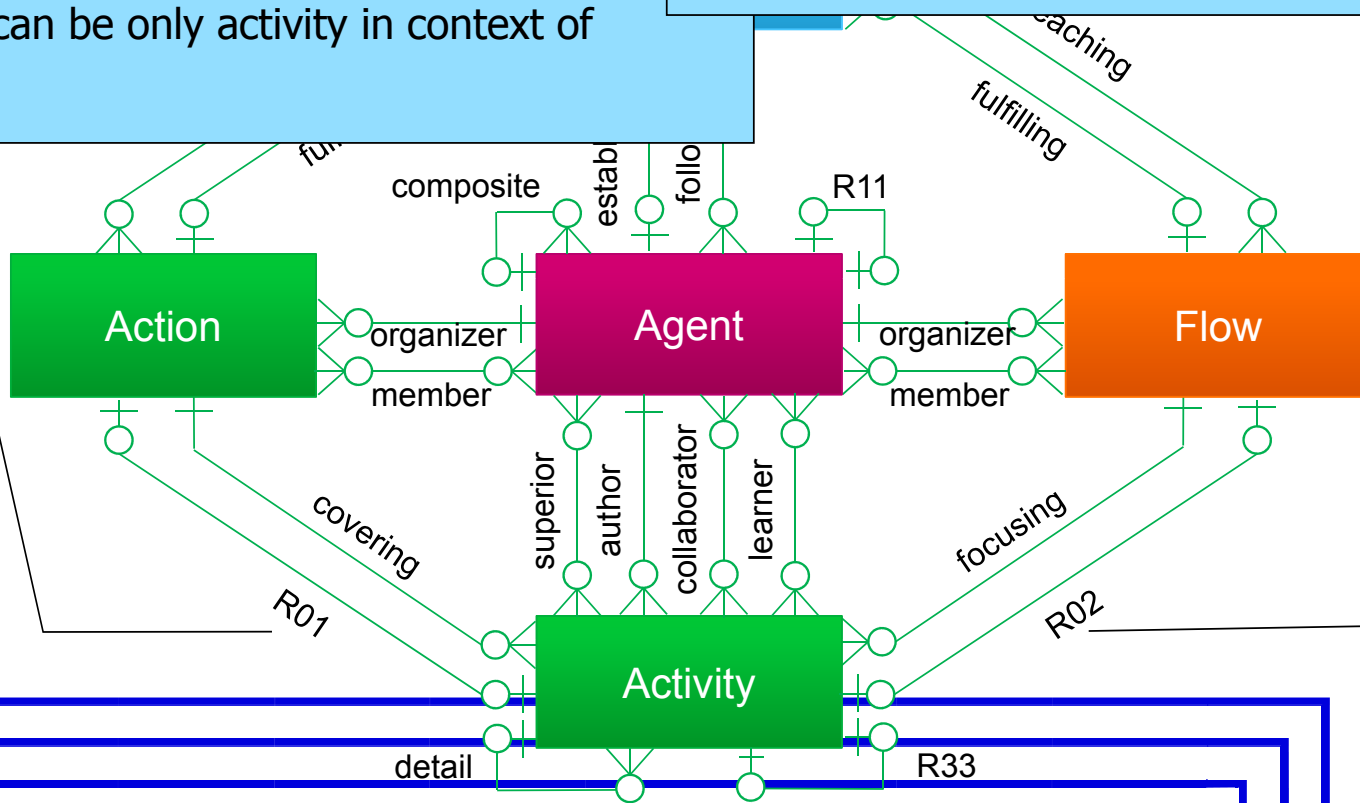
Diamond of Agent Team Organization

Action in one context can be an activity in other

Implementation of bike sharing is an action in context of transportation, but can be only activity in context of carbon neutral city.

Flow in one context can be an activity in other

Annual evaluation of air pollution process is the flow in the context of city environment, but only activity in context of sustainable city context.



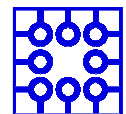
Example of usage of Diamond Organize

Organization schema of Smart concept's implementation

Goal is only one – Strategies are used intensively and interconnected to territory

- It meant that strategies formulated by central administration are really used and implemented in the projects, formulated by municipalities
- Municipalities are independent – central administration can recommend only in general
- Only exception is the grant or financing the project from the central budget – the administration can set the conditions of support

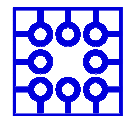
Assignment: To identify main activities (actions, flows) for the main actors and define necessary context



Contexts

Context 1: Ministry of local development is the supervisor of implementation

Context 2: The same ministry is also responsible for implementation of specific procurement (as many other ministries)



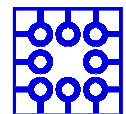
Context 1: Actions and Flows

Action:

- Development of supporting application
- Formulation of instructions how to use it
- Prepare the plan of implementation
- Define the flows

Flow:

- Control of strategies' actualization
- Maintenance of application
- Organizing annual meeting with other ministries
- Monitoring of feedback from municipalities



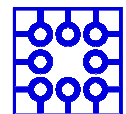
Context 2: Flows and Actions

Actions:

- Formulate the first proposal of priorities for relevant procurement
- Get the skills to work with the application
- Participate on implementation

Flows:

- Maintenance of relevant information in every relevant procurement (link to the strategies, sources of financing)
- Monitoring of feedback from municipalities
- Participating on the meetings with other ministries



What can we see?

Some flows are the same – but do they contain same activities?

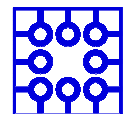
- Monitoring the feedback from municipalities
- Context 1: Feedback is focused to the usage of the whole SMART concept, if it is useful and helps the municipalities to define their projects easier.
- Context 2: Feedback is about relevance of the procurement, if it fits to the strategy of the municipality and can be linked with strategy of specific ministry.

Same actions are affecting actions in the same context:

- Development of Application affects it maintenance and making the materials

Same actions are affecting actions and flows in different context

- Instruction material in Context 1 is affecting the most of Flows and Actions in Context 2



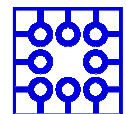
The main results

The knowledge of the contexts and their meaning help to understand the value of application

The fact that one context will affect other is not an issue, but advantage

The main failure of every service is insufficient analysis of contextual overlaps

The knowledge how different stakeholders (agents) are reacting to the fulfillment of the same goal is the key for the formulation of the value proposition



Diamond of Organization

Summary

- Matrix-based organization: Action vs. Flow
- Activity vs. Action / Flow
- R-edges
- Examples

