

WP10

# Requirements

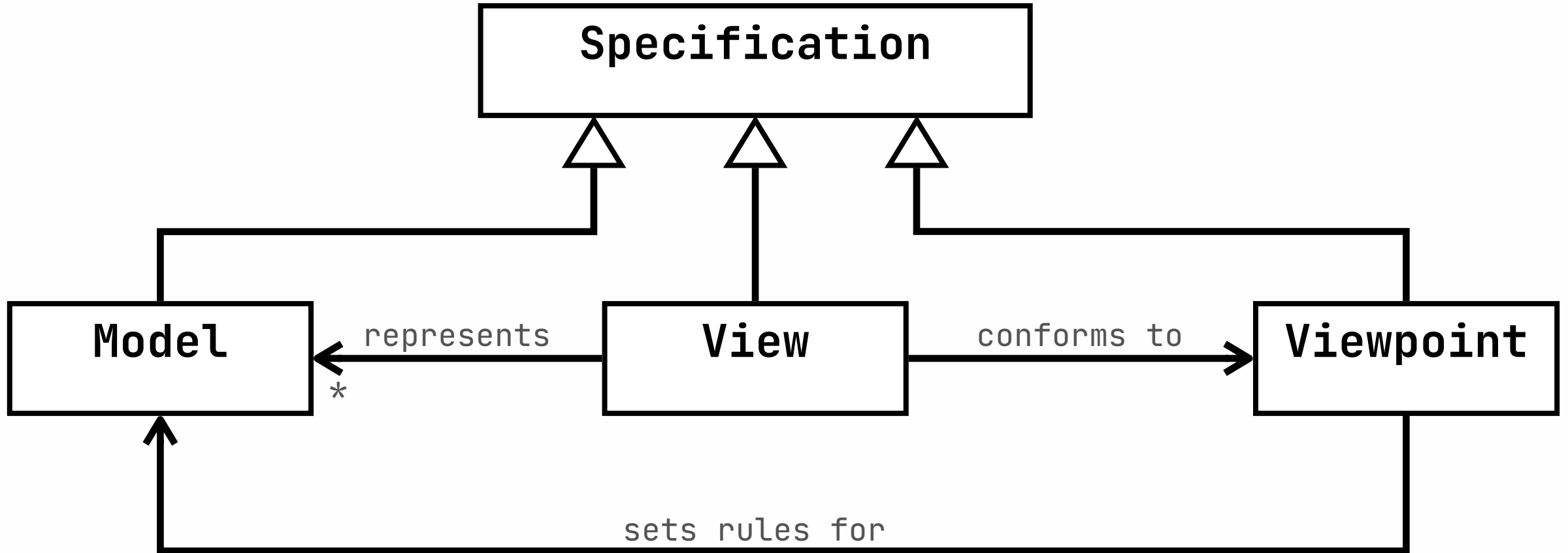
**Design of Software Architectures**

Dr. Vadim Zaytsev aka @grammarware, 23 September 2022

# WP08 Recap

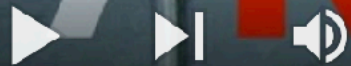
- **Domain**
  - area of coherent activity
- **Concept**
  - part of the domain jargon
- **Aspect**
  - the main concept of the architecture domain

# WP09 Recap





# THE EXPERT 7 RED LINES



0:00 / 7:34 (7:25)

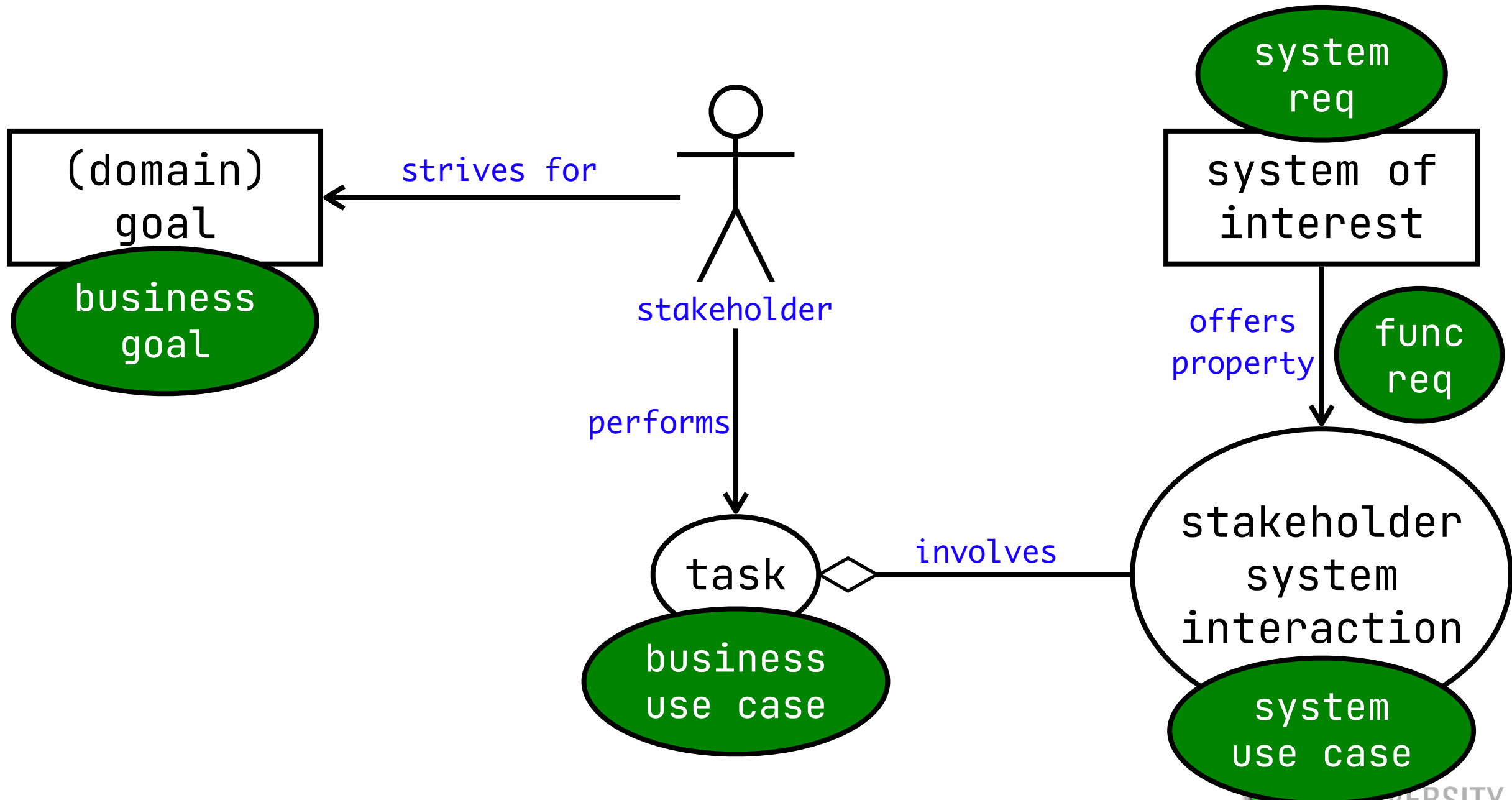


# Why use requirements?

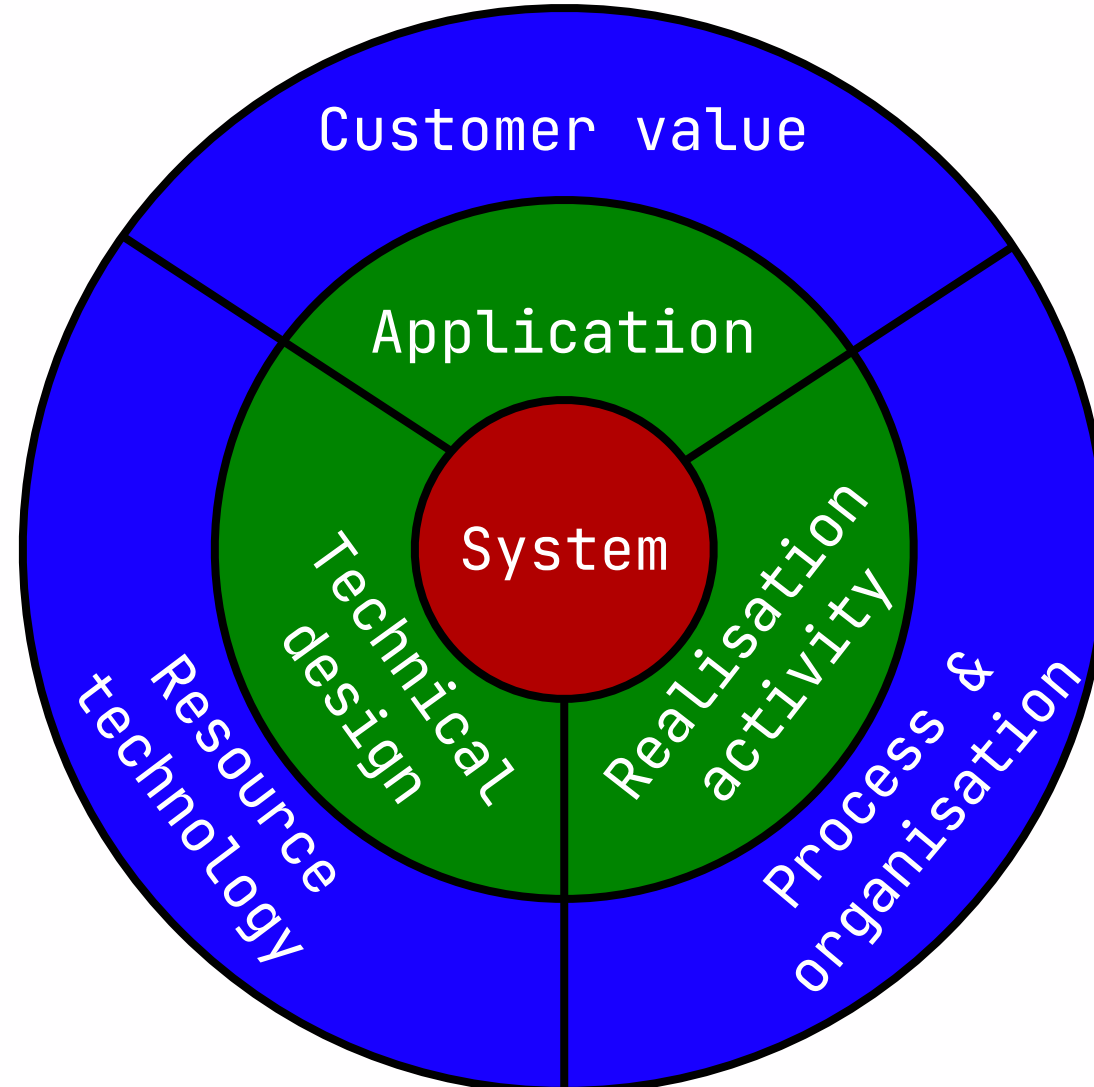
- clarify goals of the customer
- satisfy the customer needs
- bind the customer's needs to implementation details
- make it realistic
- translate customer concerns to something explicit
- test if customer needs match the final product
- define the scope of the project
- have a direction
- identify most important properties
- bind the customer to the contract

# Why use requirements?

- Understand what **stakeholders** need
- Agree about what to **deliver**
- See **business** relevance for context
- Know what to **realise**
- Establish basis for **testing**
- Mechanism for **outsourcing** development
- **Scope** management



# Where requirements



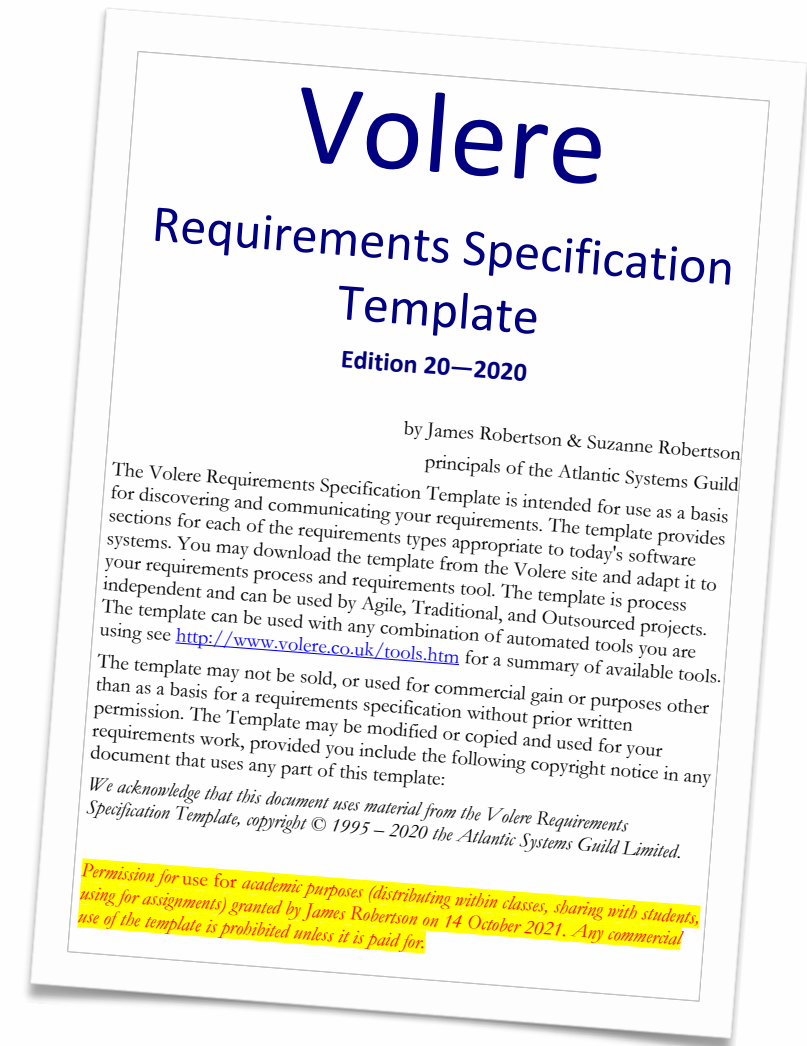
# Requirements for requirements

- Fulfils a **need**
  - for at least one **stakeholder**
  - when
- **Verifiable**
  - testable
  - acceptance criterion
- **Realisable**
  - approved by supplier
  - known realisation approach
  - or explicit uncertain
- **Atomic**
  - indivisible
  - specific
- **Traceable**
  - forward
  - backward



# Req properties & priorities

- SMART
- MoSCoW
- High/Medium/Low
- Satisfaction/dissatisfaction
- Specifications in a chosen language
  - application domain model
  - standard terminology
  - UML, OCL, ...



# Requirements

- Distribute **workload** systematically
- Pick three main **stakeholders**, per stakeholder:
  - identify **concerns** (**goal**, **task**, needed system **property**)
  - write **requirements**/use cases, put on the circle
- Each req
  - **fulfils a need**, is **verifiable**, **realisable**, **atomic**, **traceable**
- All reqs
  - **prioritised**, **grouped**, **unique**, **cover the domain**, **free of conflicts**
- Prioritise according to **sat/dissat** level (per stakeholder)
- What was **difficult**? (be specific!)
- **Present/discuss next time**

