



IEA-P – DEPARTAMENTO DE PROJETOS  
(PROJECT DEPARTMENT)

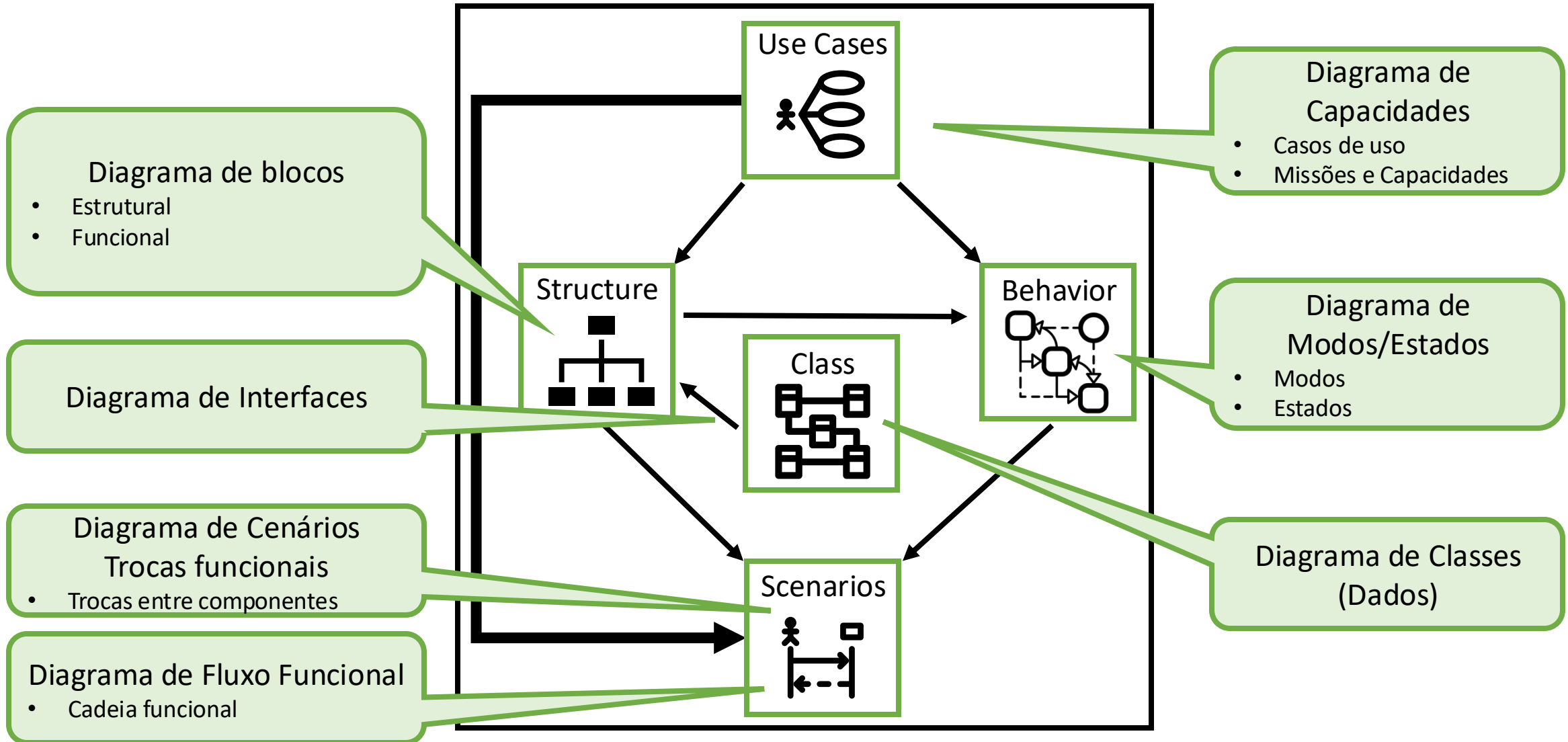
# INTEGRAÇÃO DOS DIAGRAMAS EM UM MODELO

Preparado por Prof. Dr. Christopher Shneider Cerqueira

Aula 08



# ROTEIRO DOS DIAGRAMAS





# UM MÉTODO MBSE SIMPLIFICADO

Chapter 3.4



## Juntando tudo...

- Além de aprender a linguagem e as ferramentas de modelagem, um modelador deve aplicar um método de engenharia de sistemas baseado em modelo (MBSE) que adere às práticas de engenharia e modelagem de sistemas para construir modelos de sistema de qualidade.
- O método MBSE selecionado determina as atividades de modelagem que são executadas, a ordenação das atividades e os tipos de artefatos de modelagem produzidos.





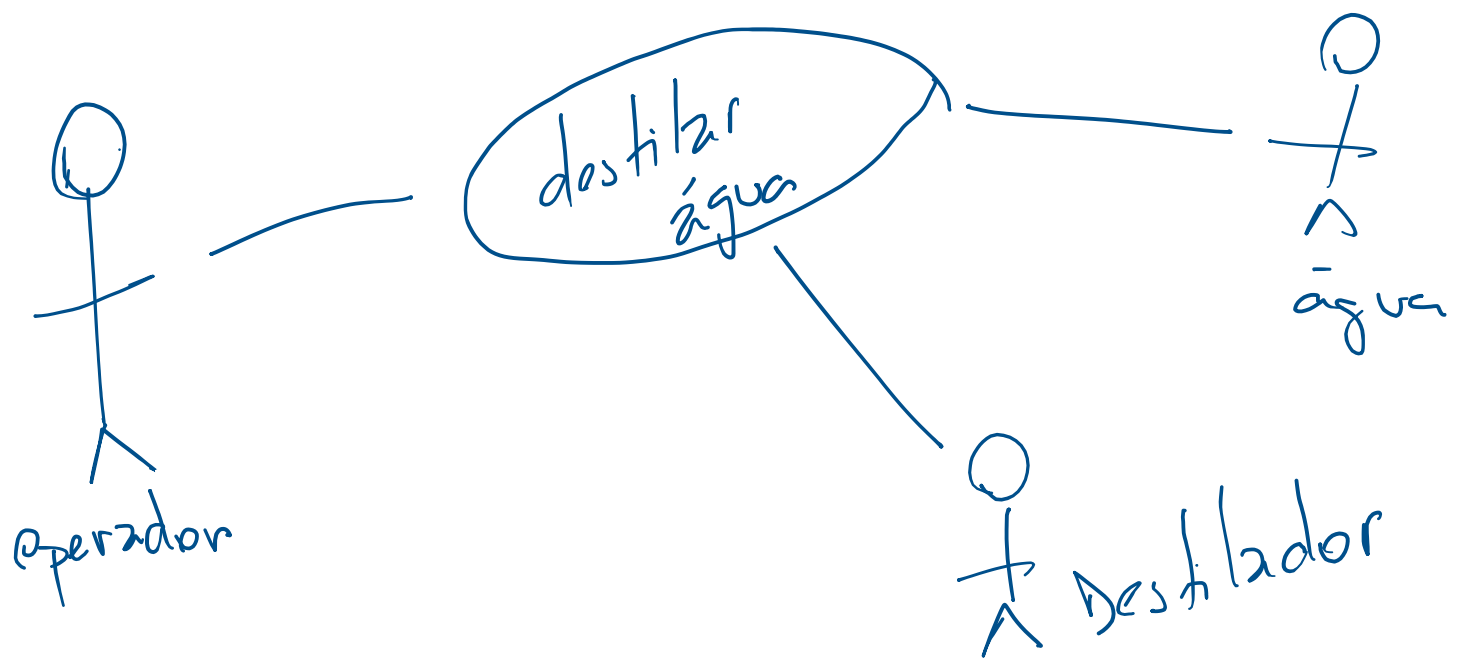
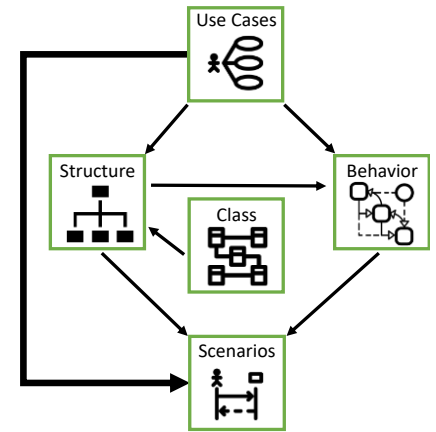
# Fluxo simplificado

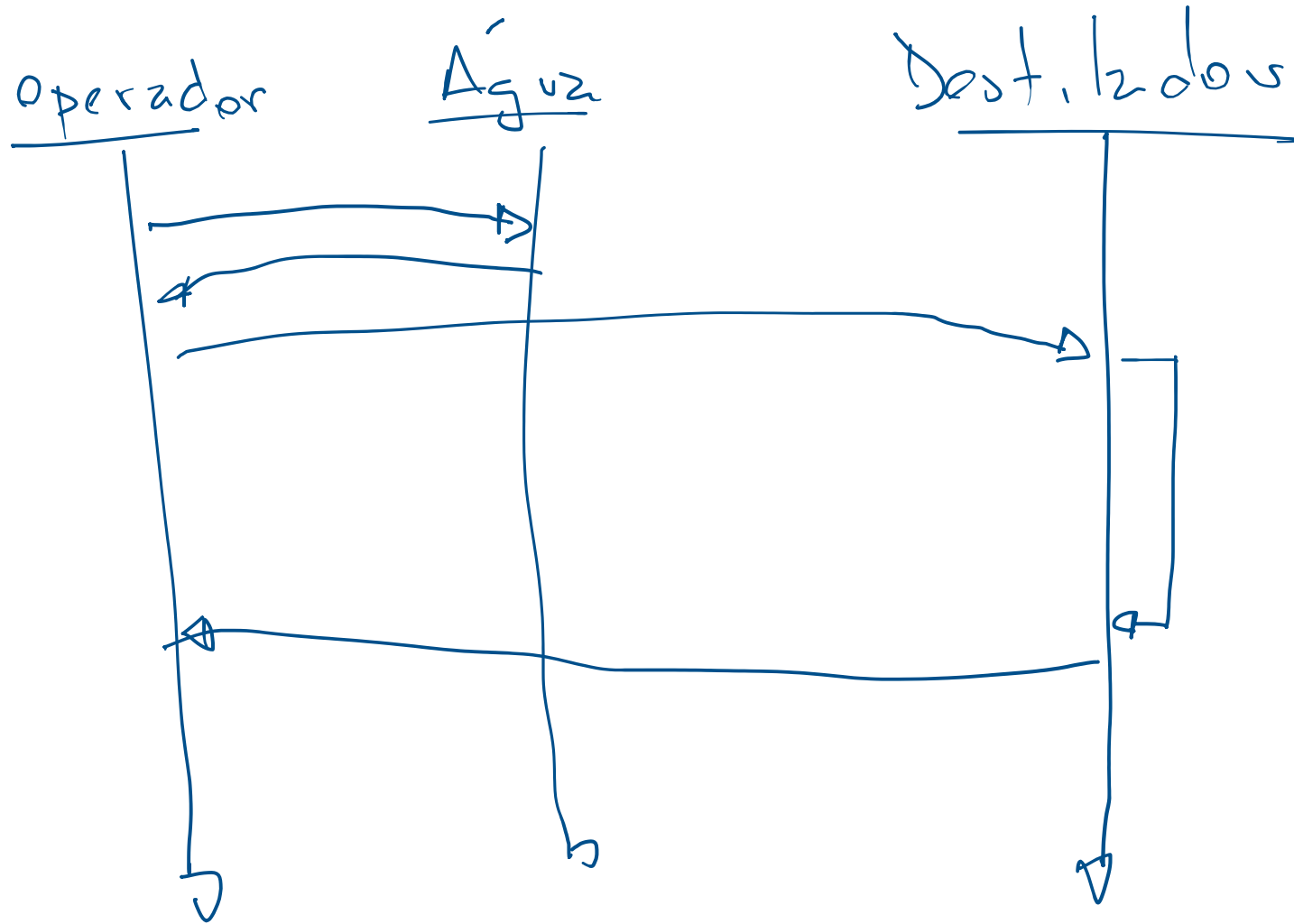
- *Organizar o modelo (SysML é só uma linguagem, e cada metodologia iria estruturar a linguagem para seu uso – nós iremos usar Arcadia ...)*
- Análise de necessidades
- Escrita de requisitos
- Síntese e exploração de alternativas de solução
- Análises



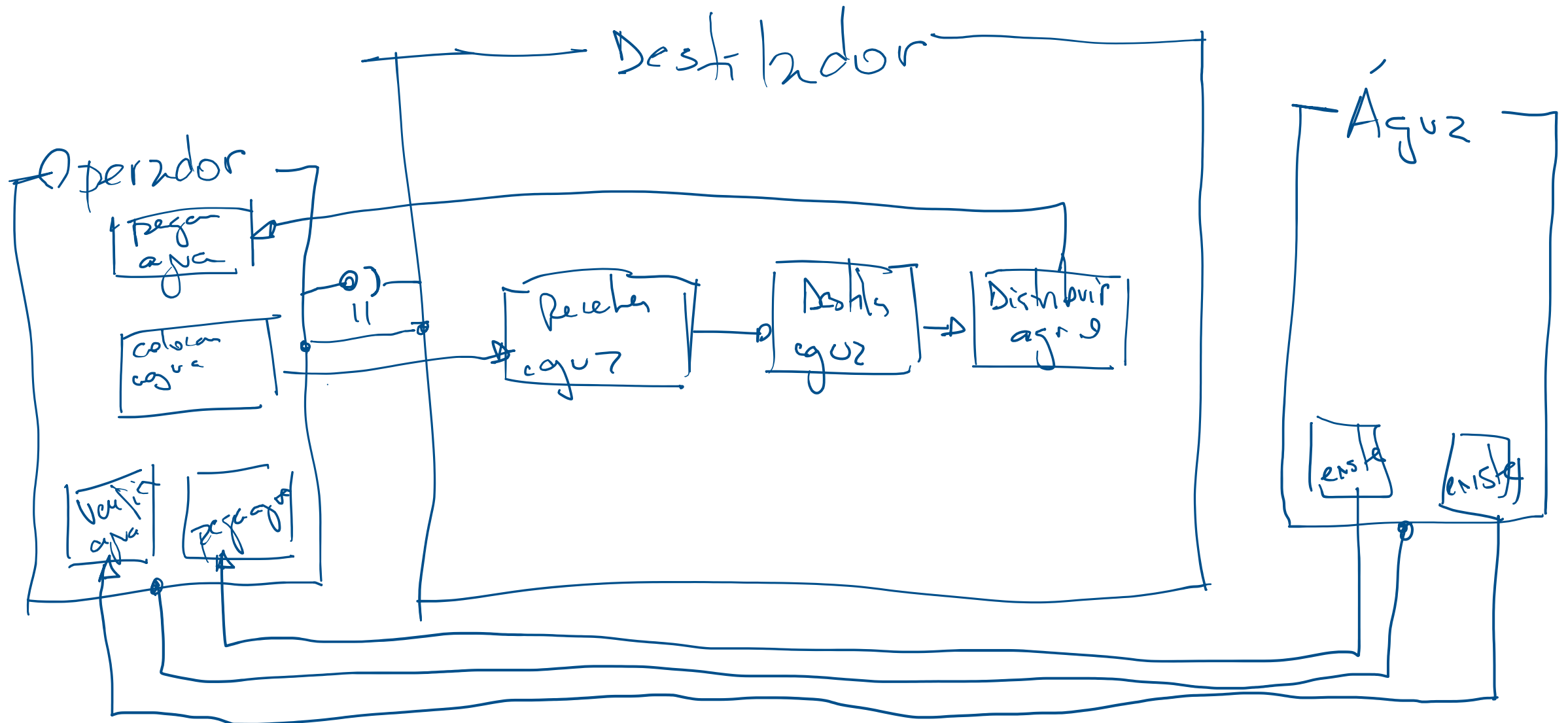
# Exemplo (em inglês): HE NEED FOR CLEAN DRINKING WATER

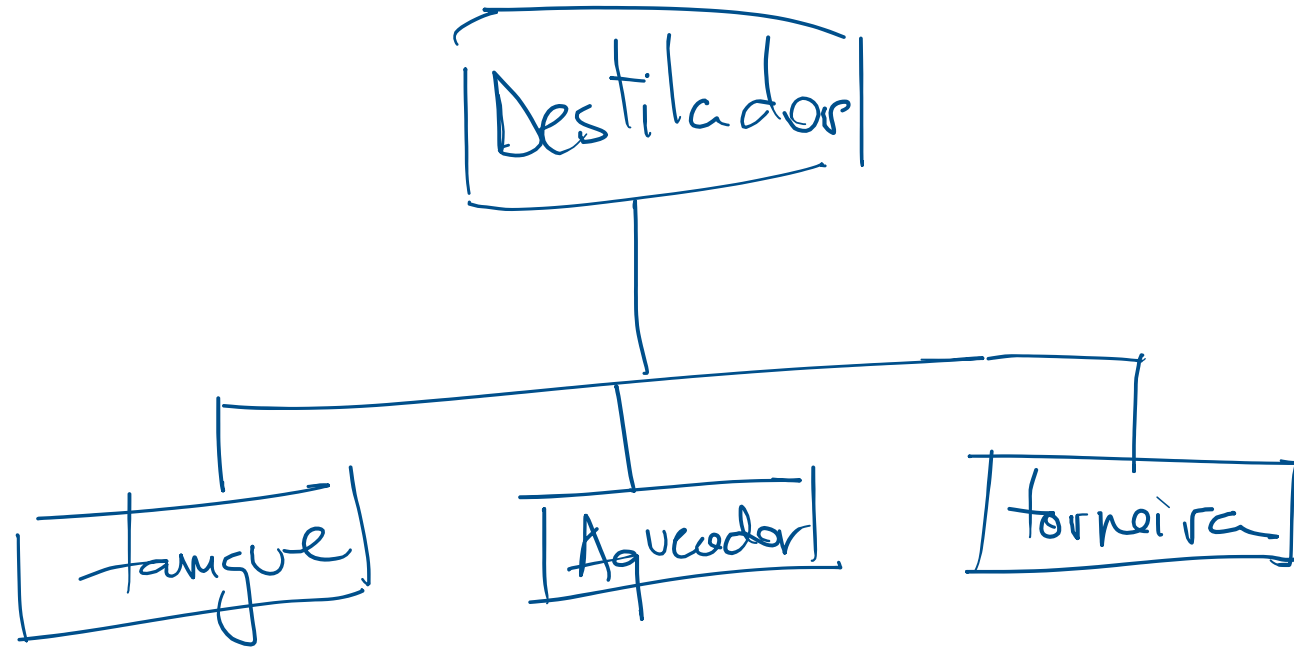
- Consider the needs of a humanitarian organization dedicated to providing safe drinking water to the broadest possible spectrum of people, especially in impoverished parts of the world where it is not readily available. For purposes of this example, it is assumed that cost effectively supplying a sustainable long-term source of pure water in remote, impoverished areas is of paramount importance.

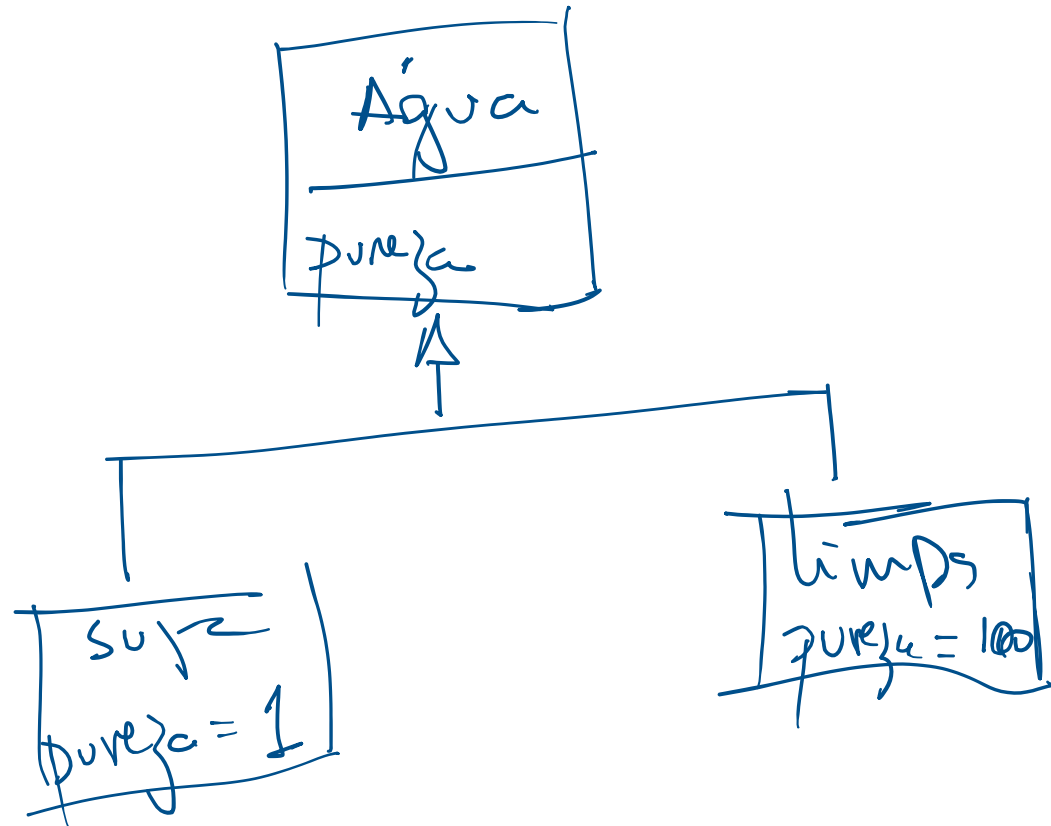


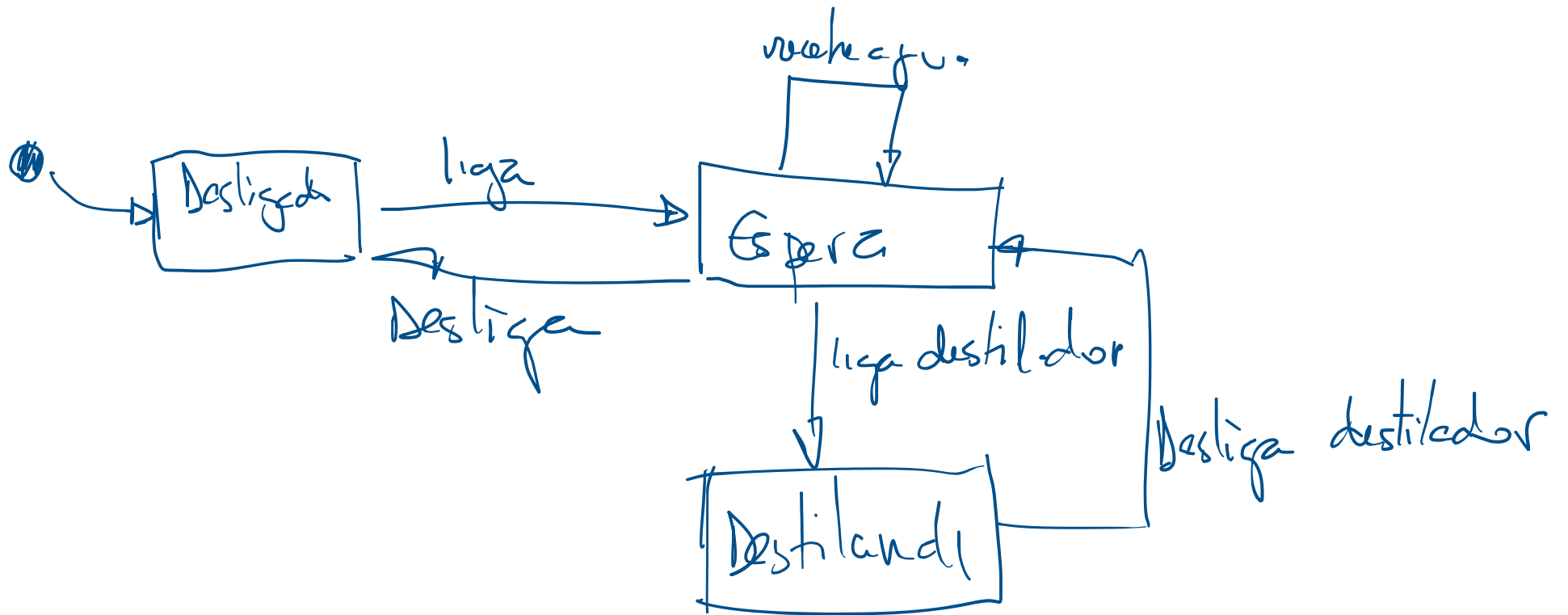


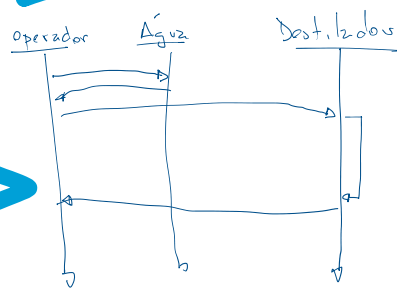
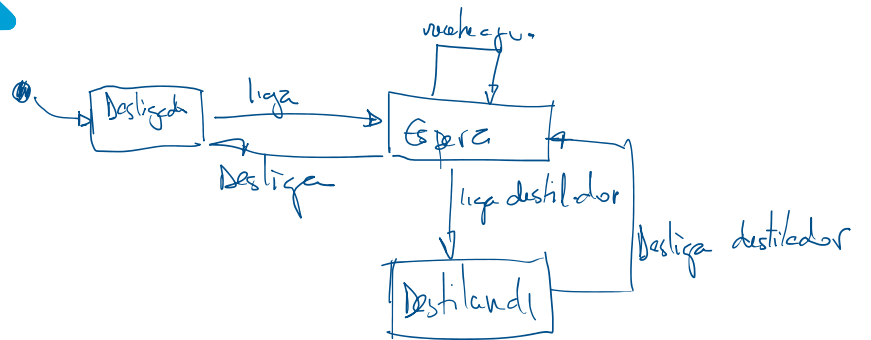
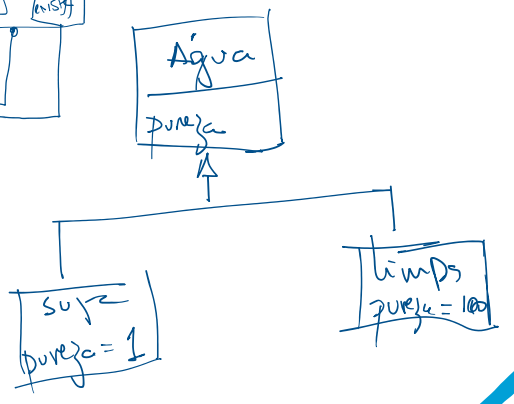
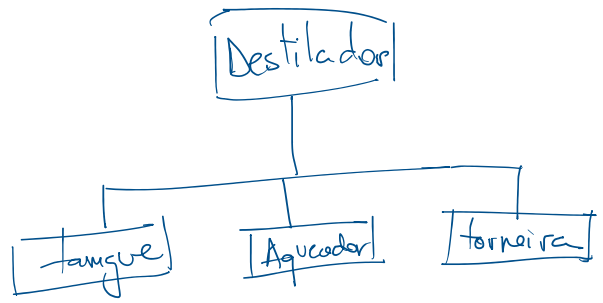
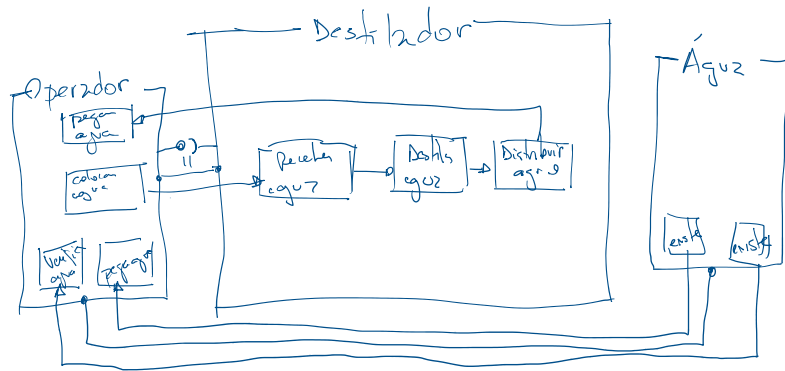
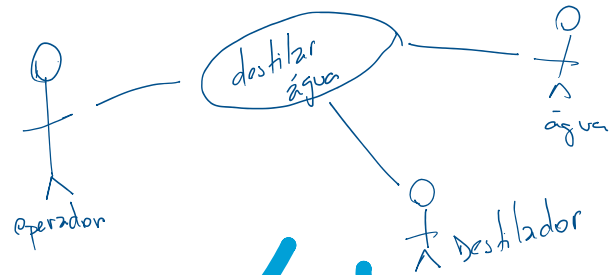


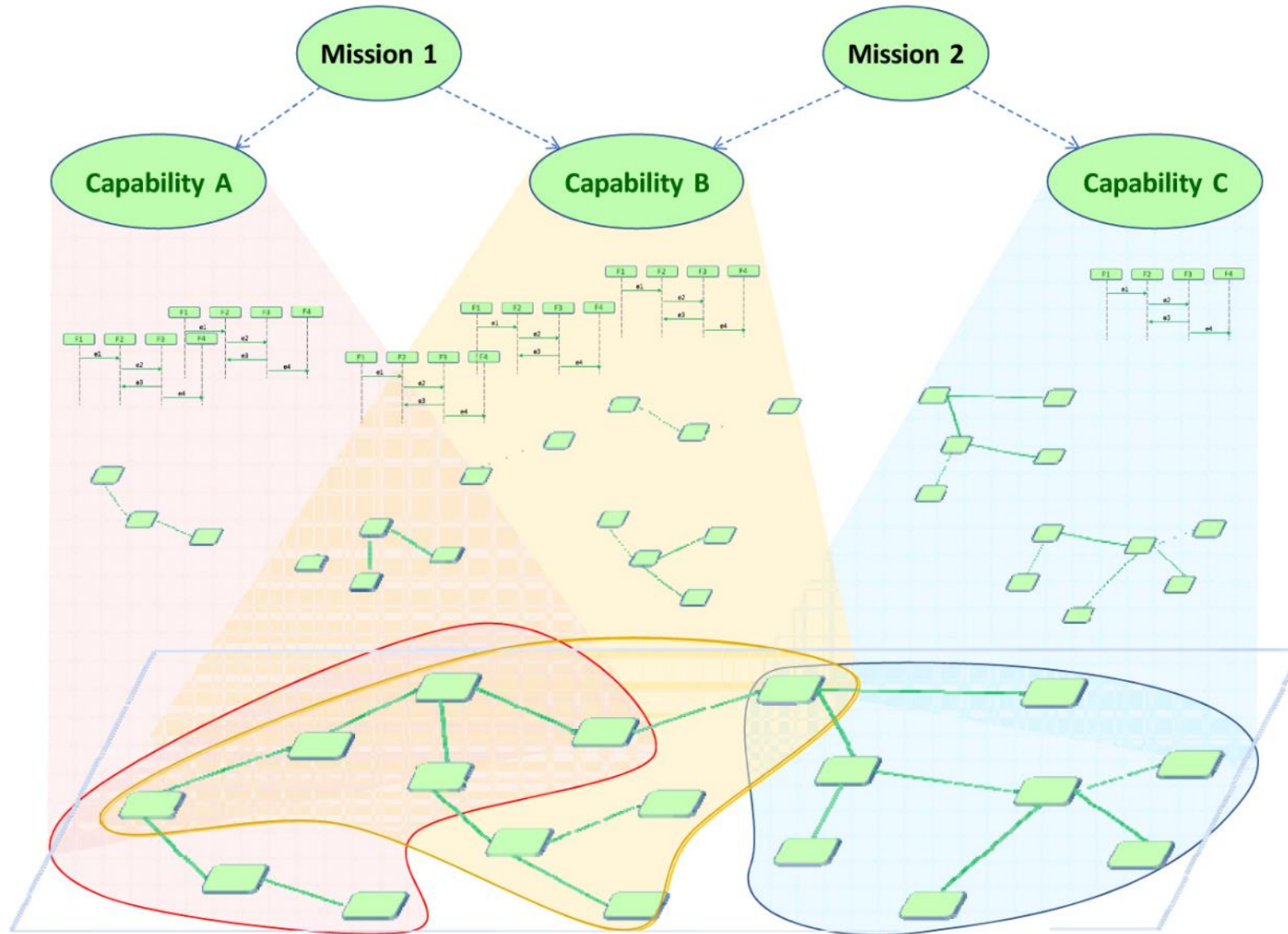




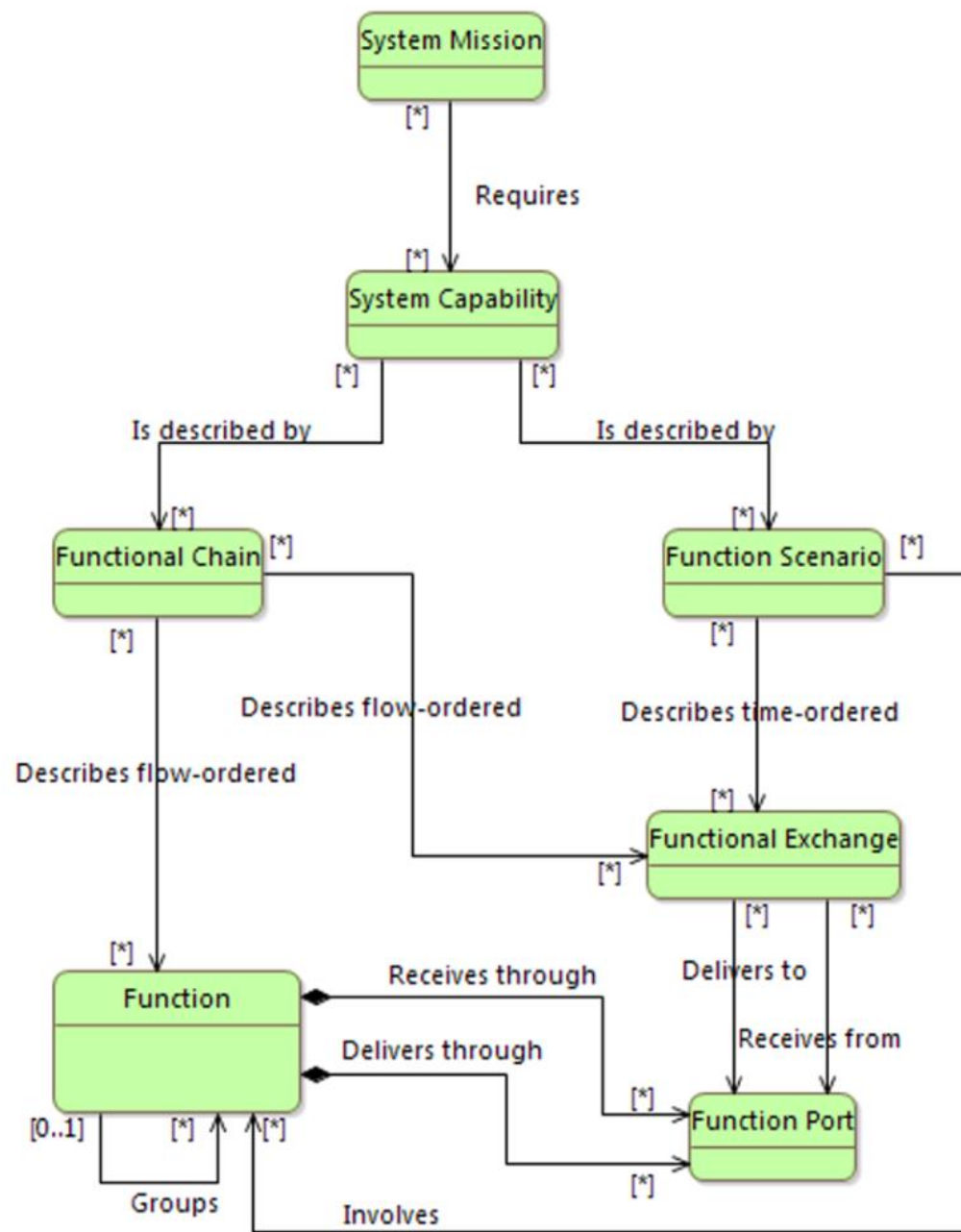




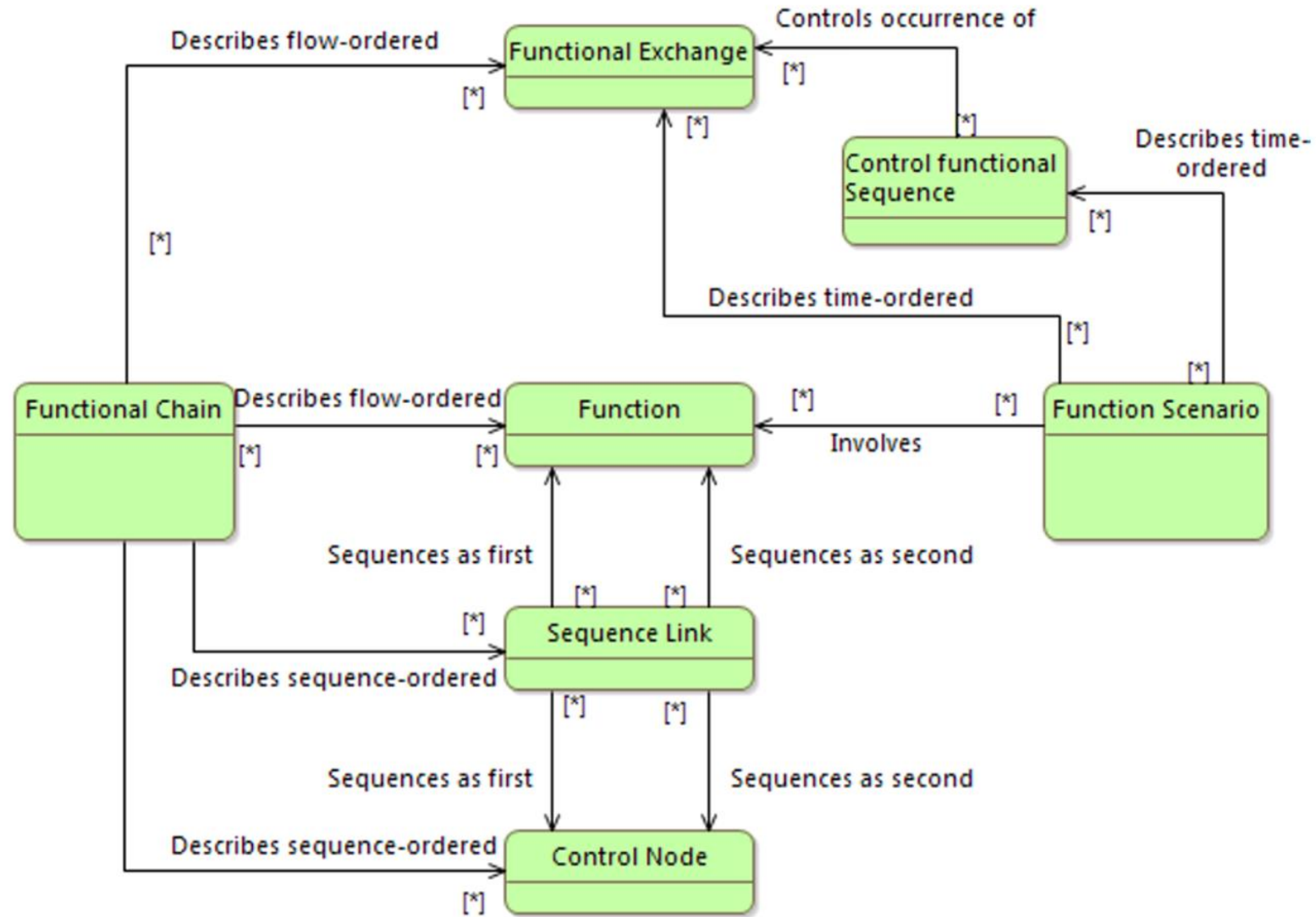




**Figure 23.2.** Structure of the functional view in a perspective

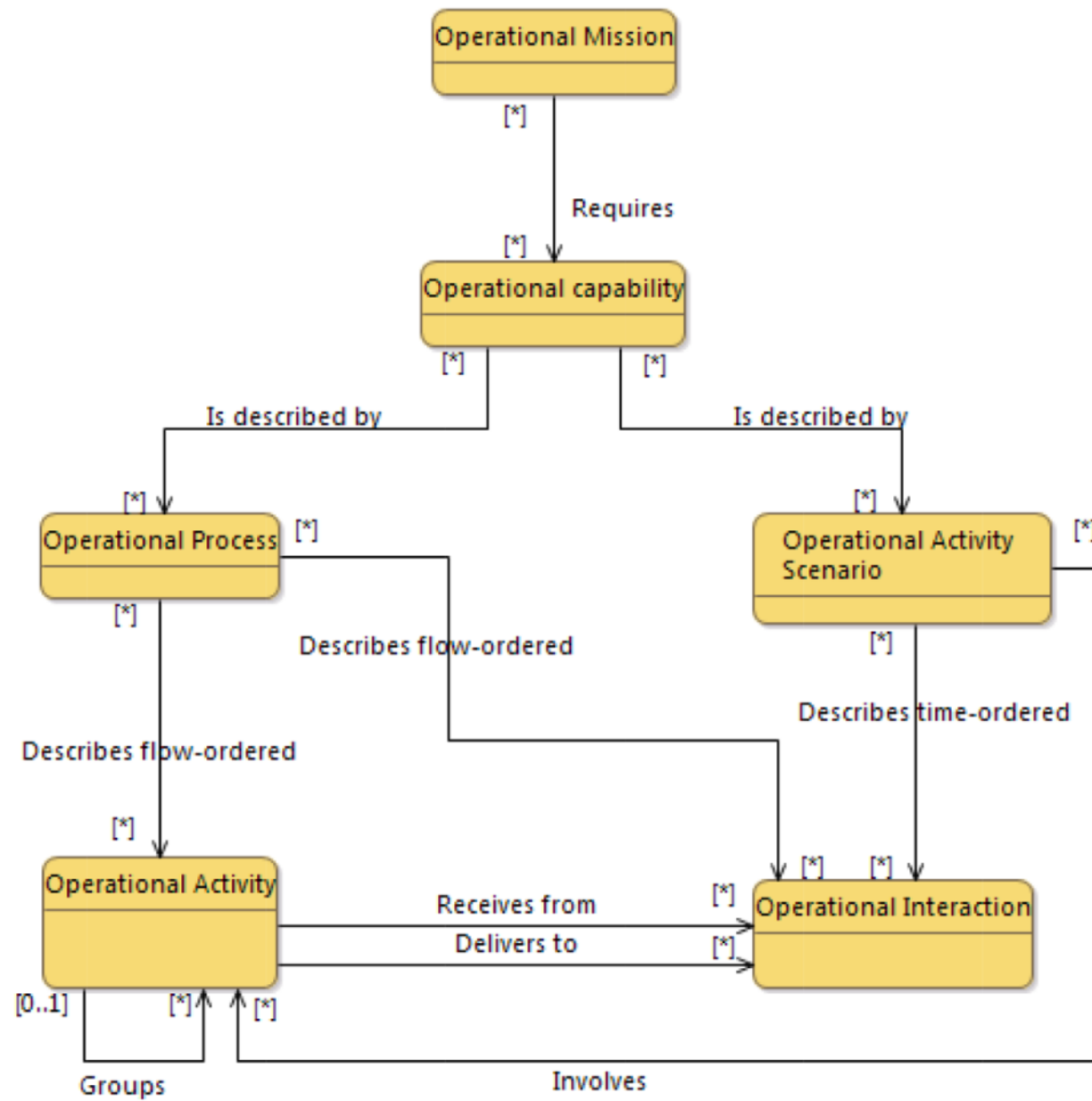


**Figure 17.1.** Concepts and relationships involved in functional description

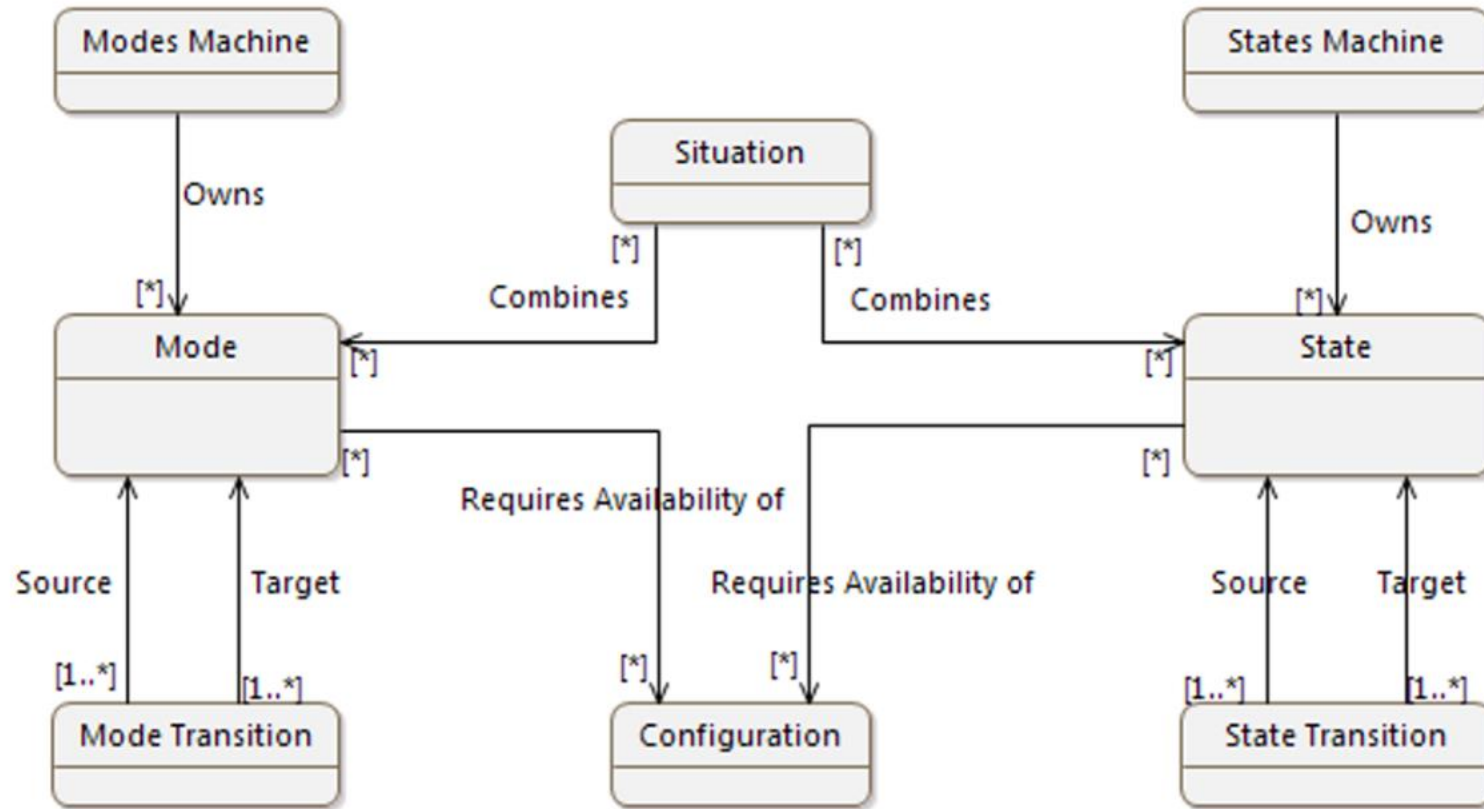


**Figure 17.2.** Complementary concepts for describing functional chains and scenarios

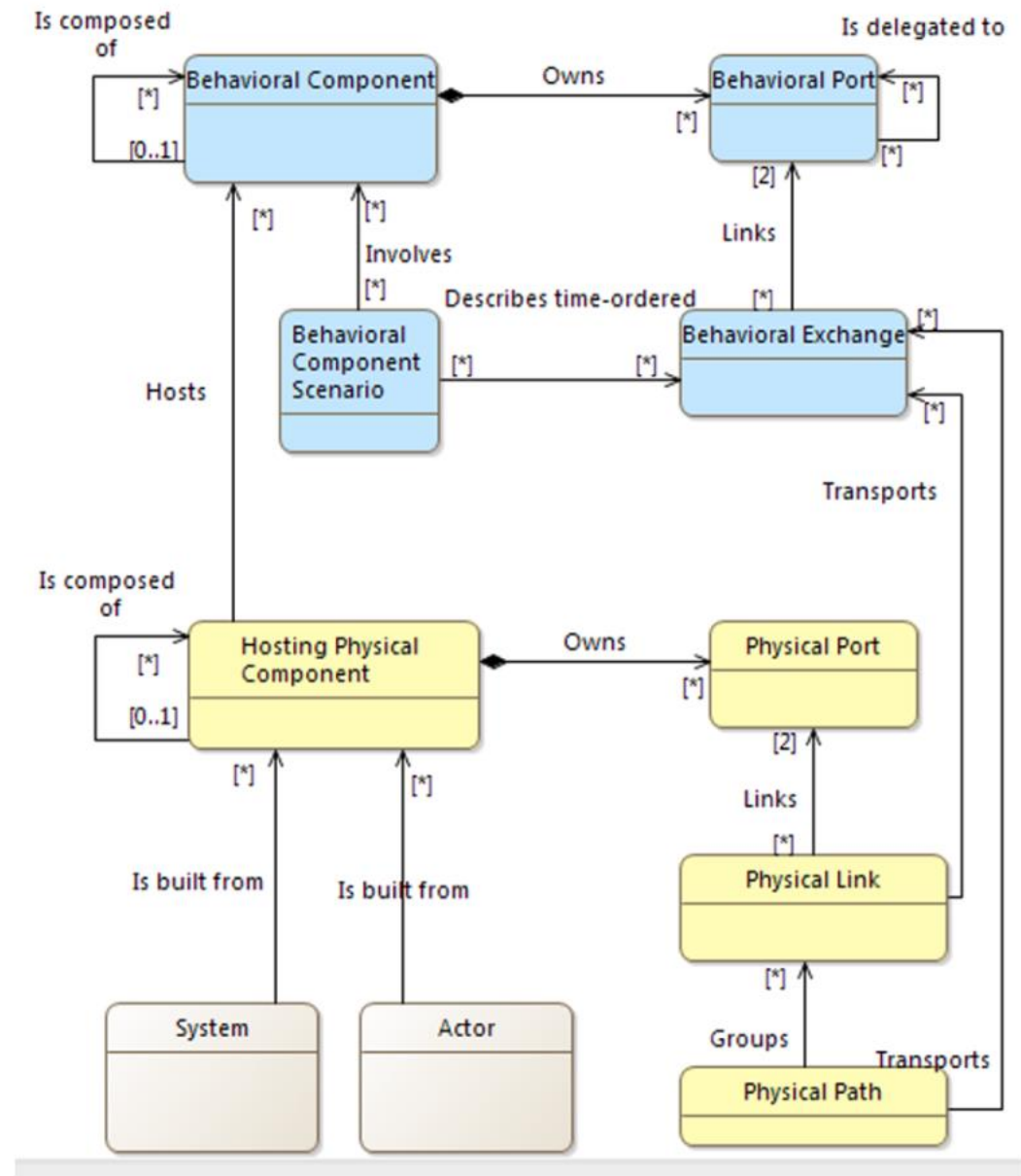




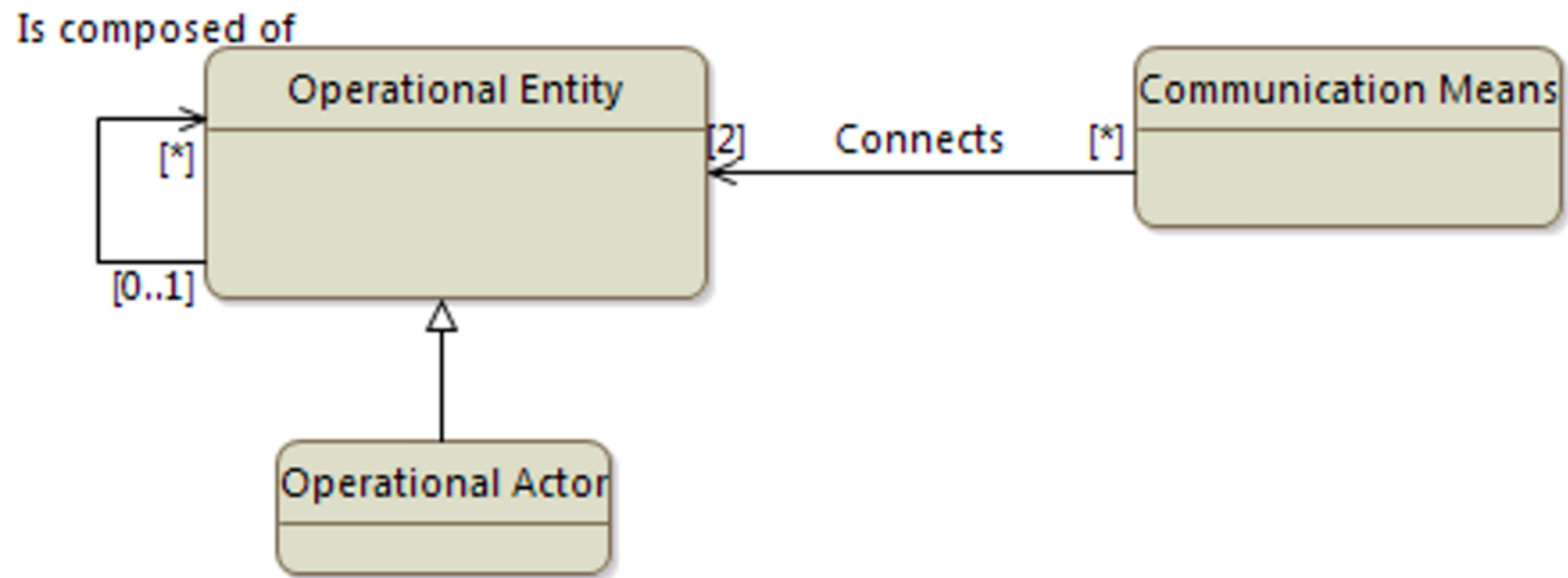
**Figure 17.9.** Concepts and relationships involved in the functional parts of operational analysis



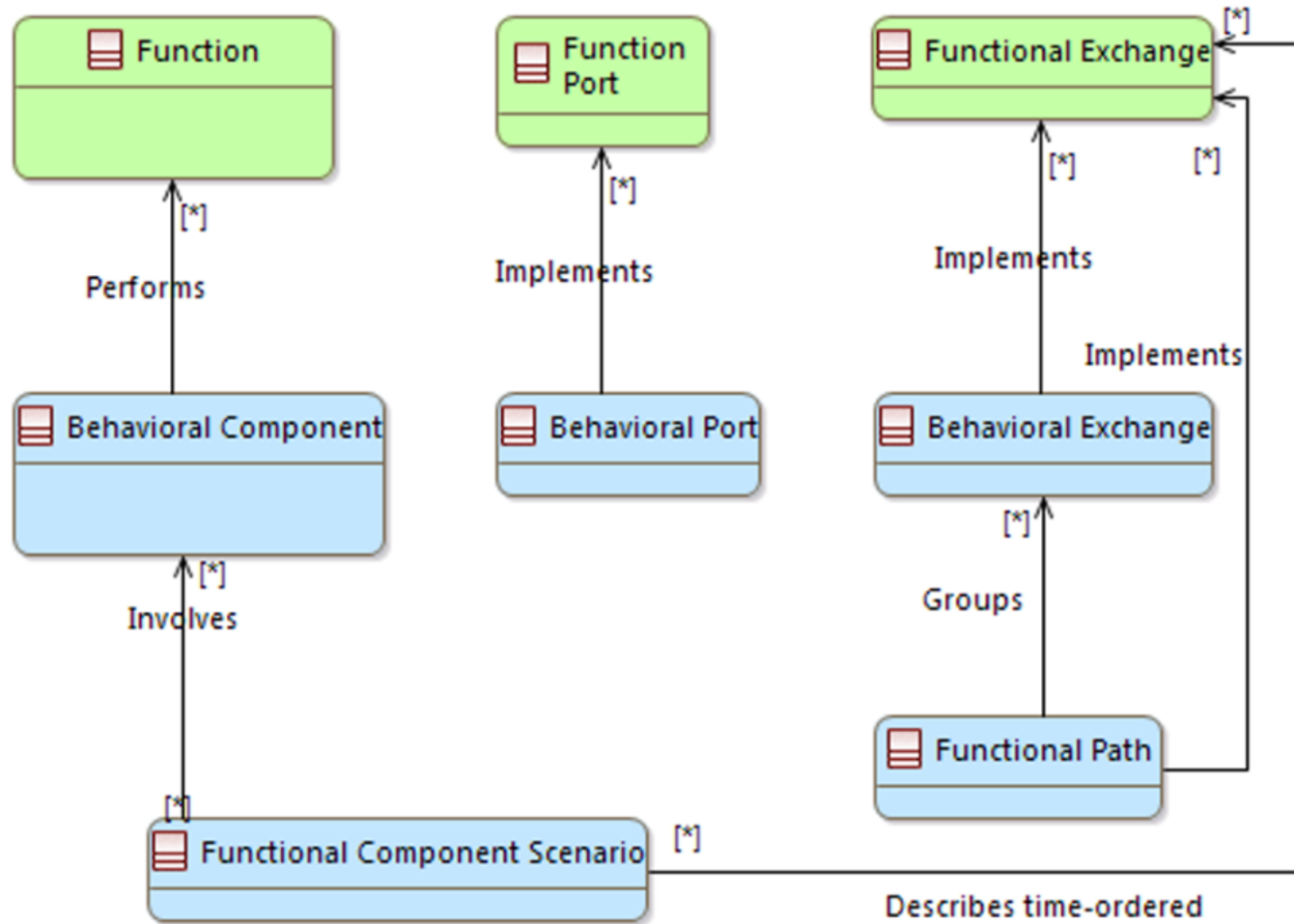
**Figure 18.1.** Concepts and relations involved in states and modes



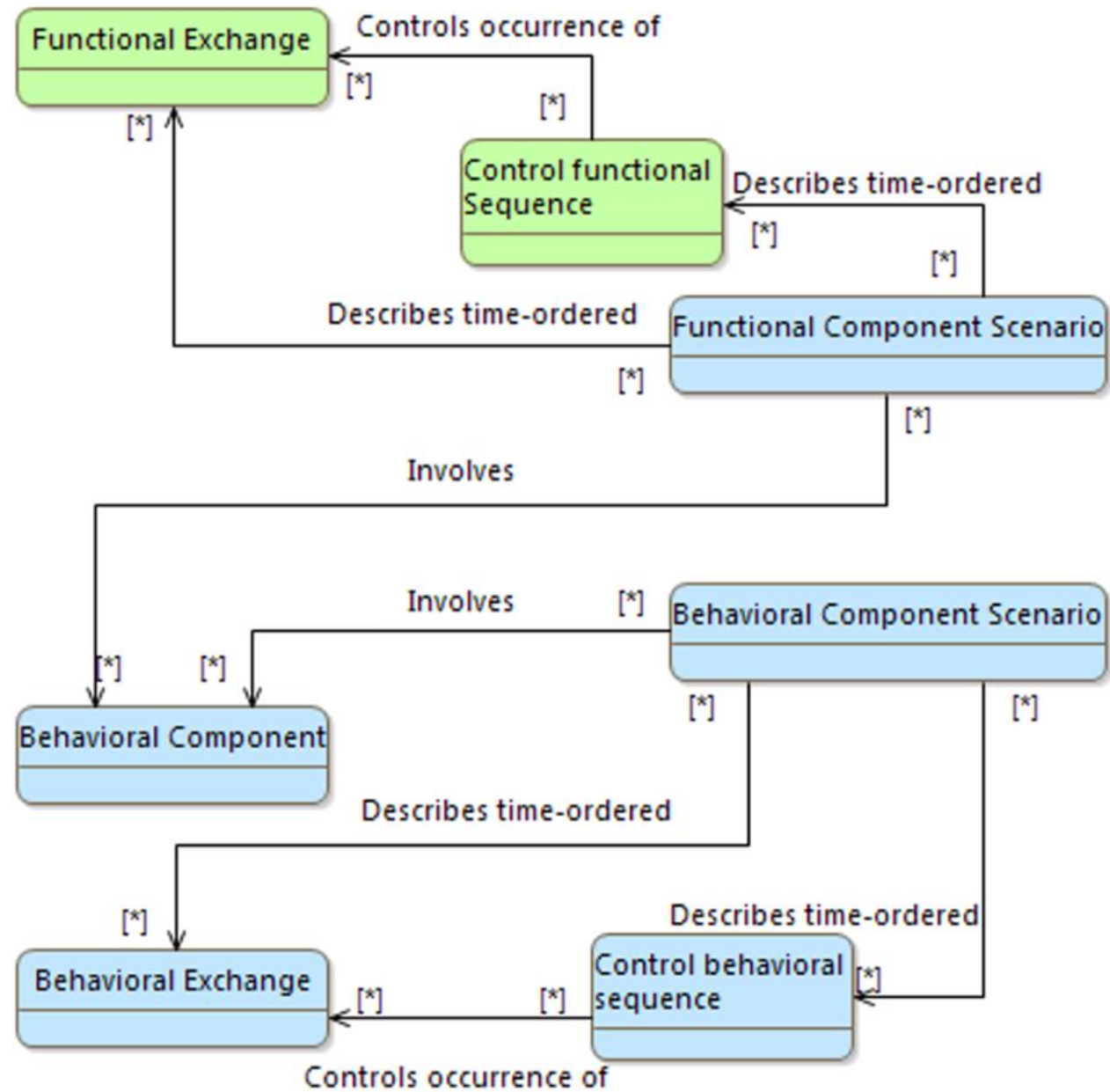
**Figure 19.1.** Concepts and relationships involved in structural description



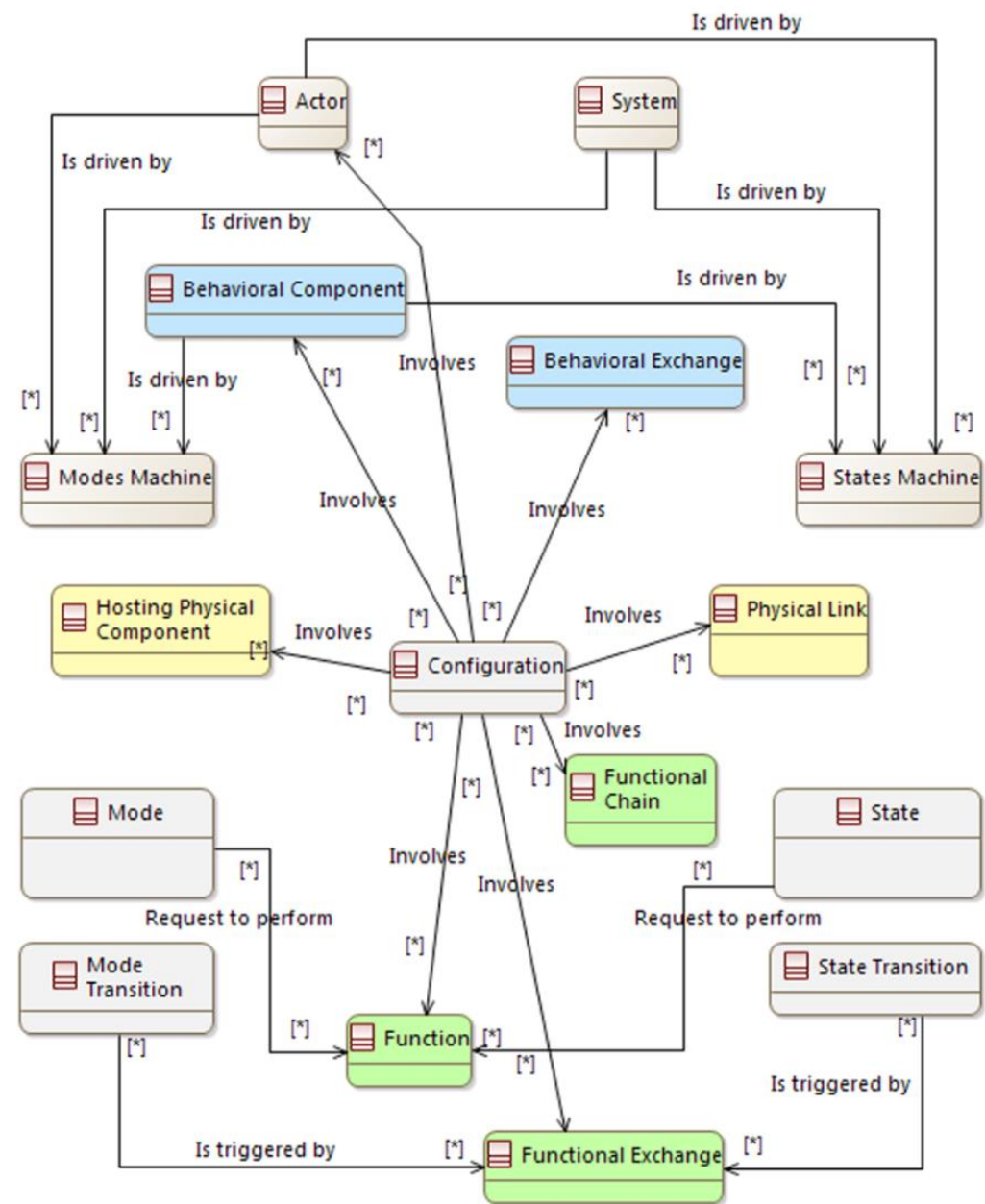
**Figure 19.6.** *Structural concepts and relationships in operational analysis*



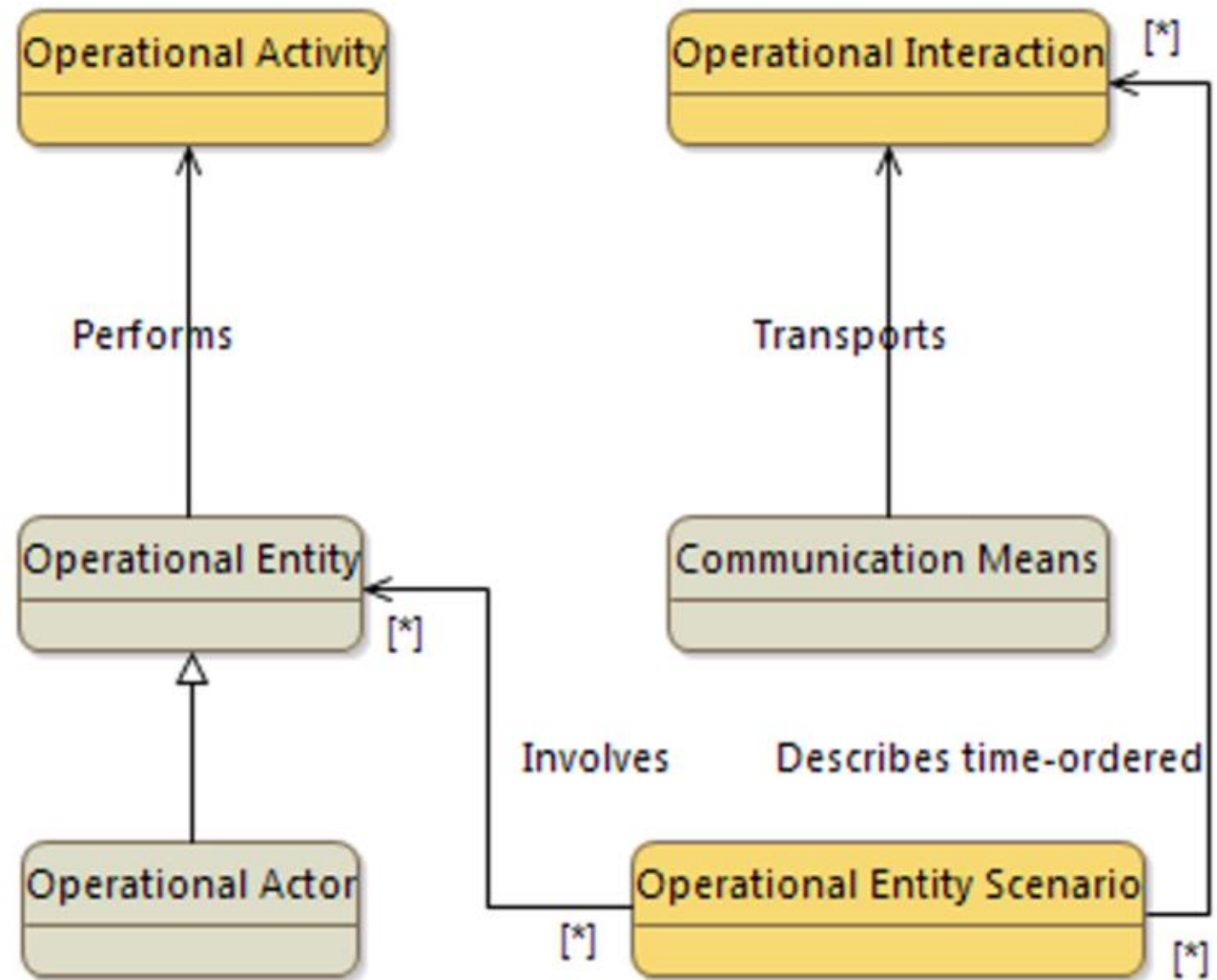
**Figure 20.1.** Concepts and relationships between functional and structural descriptions



**Figure 20.2.** Complementary concepts for describing scenarios

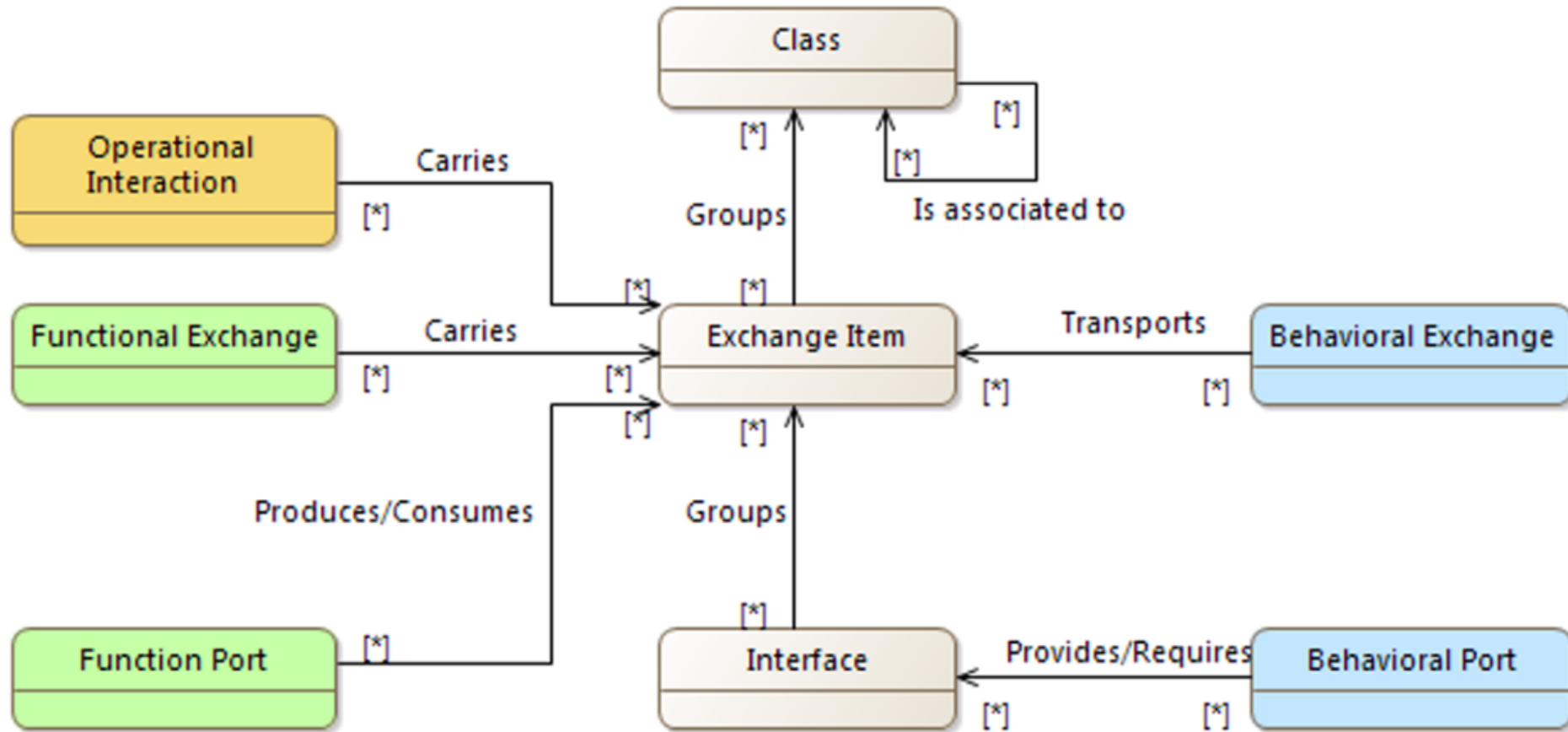


**Figure 20.7.** Concepts and relationships between states and modes and functional and structural descriptions (partial)



**Figure 20.8.** *Links between the main functional and structural concepts concerning operational analysis*





**Figure 21.1.** Concepts and relations involved in exchange data and their use

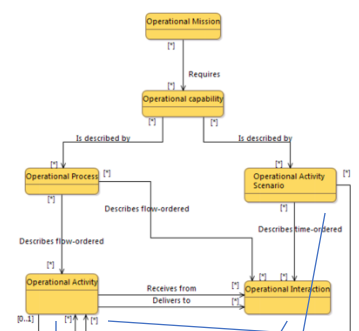


Figure 17.9. Concepts and relationships involved in the functional parts of operational analysis

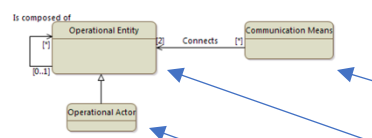


Figure 19.6. Structural concepts and relationships in operational analysis

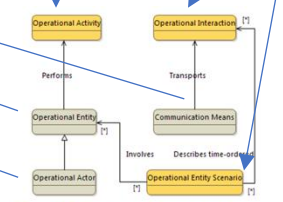


Figure 20.8. Links between the main functional and structural concepts concerning operational analysis

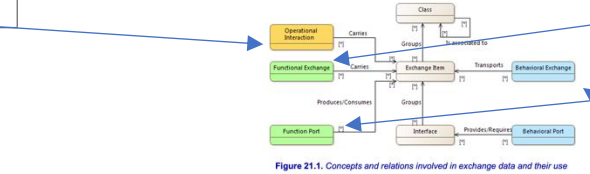


Figure 21.1. Concepts and relations involved in exchange data and their use

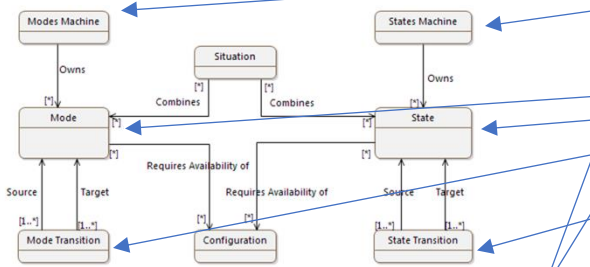


Figure 18.1. Concepts and relations involved in states and modes

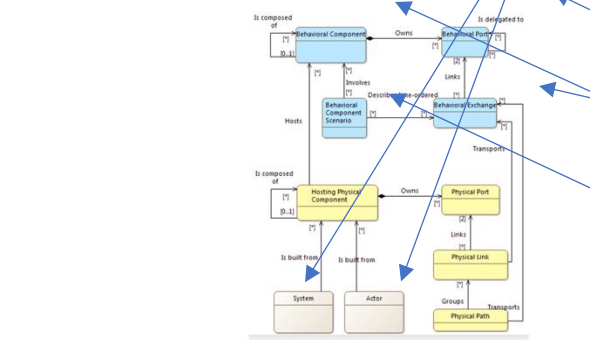


Figure 19.1. Concepts and relationships involved in structural description

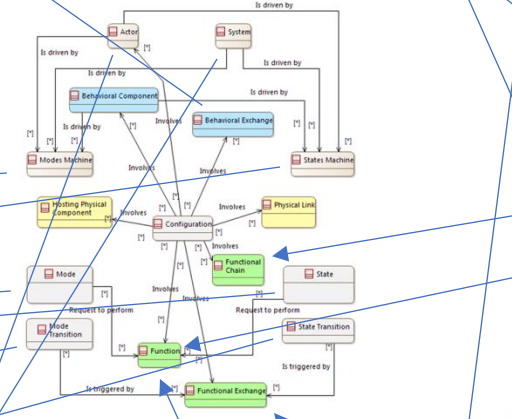


Figure 20.7. Concepts and relationships between states and modes and functional and structural descriptions (partial)

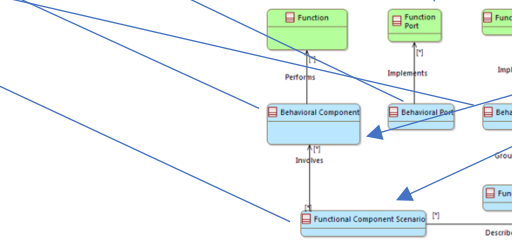


Figure 20.1. Concepts and relationships between functional and structural descriptions

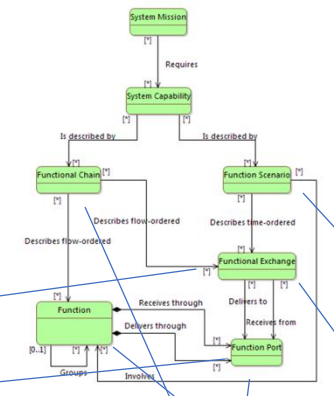


Figure 17.1. Concepts and relationships involved in functional description

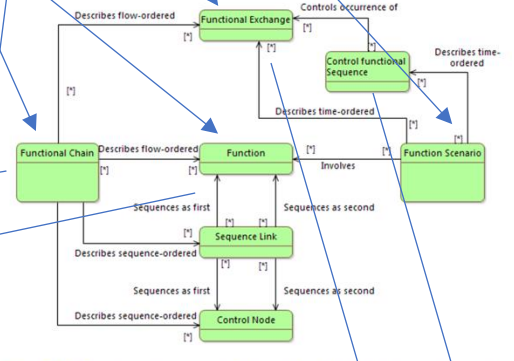


Figure 17.2. Complementary concepts for describing functional chains and scenarios

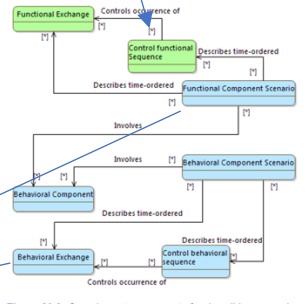


Figure 20.2. Complementary concepts for describing scenarios



Cenas dos próximos capítulos



MINISTÉRIO DA DEFESA  
COMANDO DA AERONÁUTICA



LOGÍSTICA

DCA 400-6

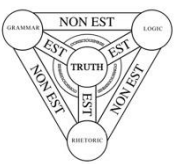
CICLO DE VIDA DE SISTEMAS E MATERIAIS DA  
AERONÁUTICA

2007

- A presente Diretriz tem por finalidade ordenar o planejamento e a execução das fases e principais eventos do Ciclo de Vida de Sistemas e Materiais da Aeronáutica, bem como regular tecnicamente a atuação, a interação e a responsabilidade dos Órgãos e Sistemas do COMAER que intervêm no processo.



# CONCEPTIO FRAMEWORK



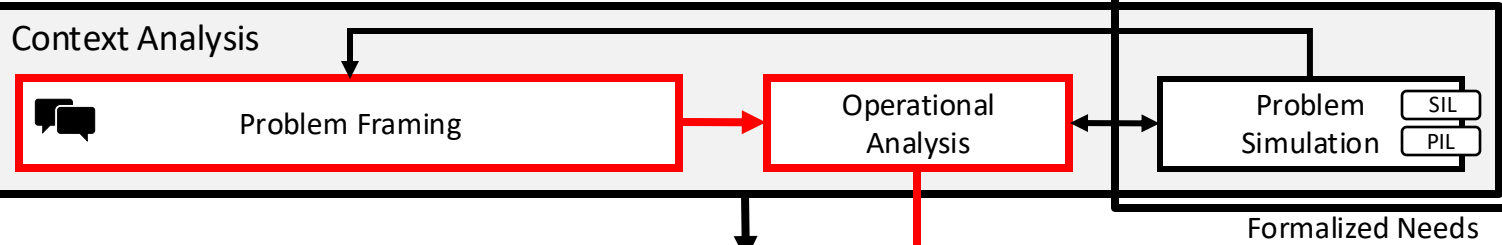
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Problem

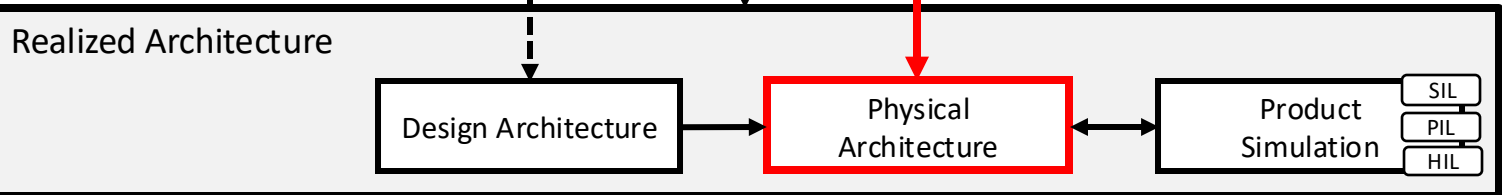
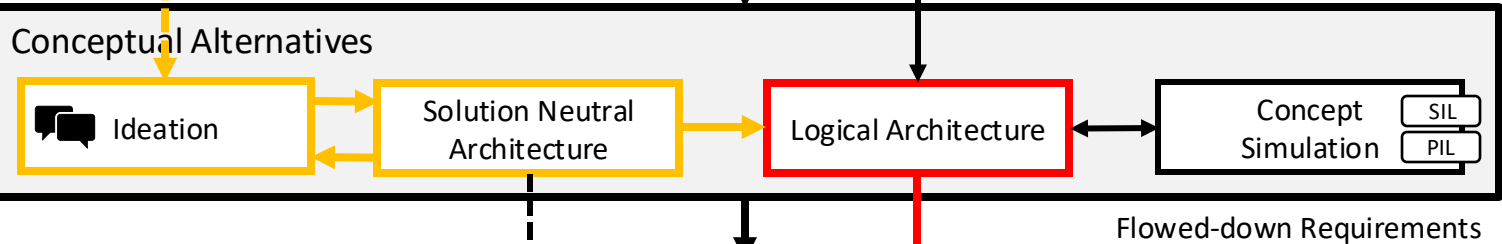
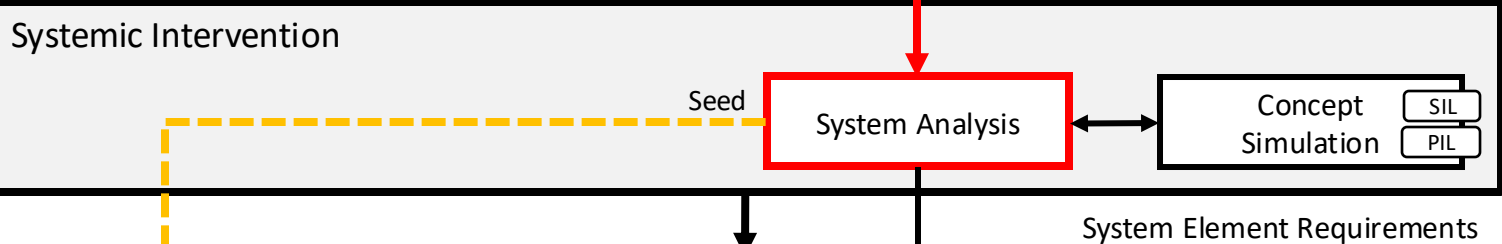


Soft Operational Research

Problem Structuring Methods



Hard Operational Research



Multi Criteria Decision Analysis

Specific Discipline Analysis

Multilevel and Multiphase

Solution

PNOP

NOP

ROP

RTLI