Extending Telecom Service Design Activities for Early Verification

Context

Telecom Service Nature
- Complexity: A telecom service can be composed of several applications interacting with each other;
- TSs are used by large number of users and use complex underlying platforms;

Telecom Service Creation
- Telecom Service Creation activities involve different stakeholders that share (collaboration) the same design model and define the requirements;
- ArchiMate considers TOGAF Solutions in IT domain

Our Objective
- We aim to propose methods and tools to assist different stakeholders that are involved in the TS specification activity

Problems
- How to detect the errors and flaws in the design earlier than the implementation phase?
- How to correct the design and improve the qualities accordingly?

Our Approach & Methodology

Early Verification at the Design Activity
- Relying on Model Driven Engineering and Model Driven Analysis, we propose to verify the telecom service at the design phase. Our approach is based on tool-chain.

Contributions
- Define the Linking Meta-Model (LMM) which contains design, softgoal, actor, tool, and measurement elements;
- Implement test-bed for the simulation activity using (OPNET and NS-3);
- The LMM makes it possible to build different tools that support our proposed sub-activities;
- Proposing an approach for the transversal alignment between ArchiMate and measurements.