Agile architecture sketches «4C» approach

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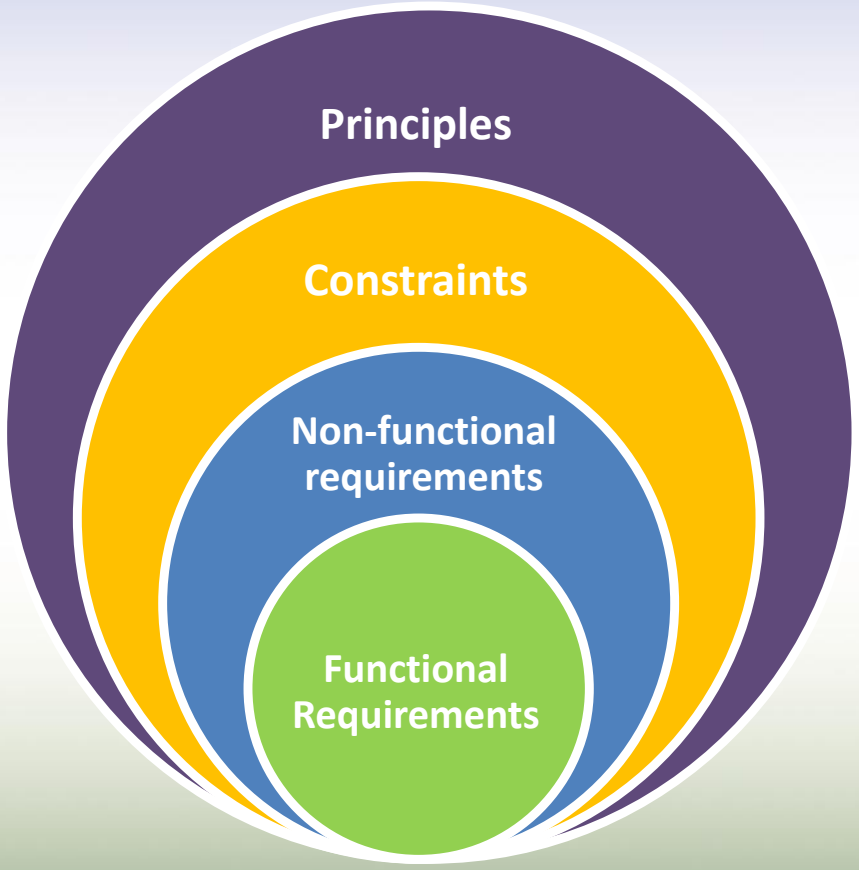
11.03.2014

AGENDA

- Context
- Problem
- Methodology/approach
- Implementation
- What is next?

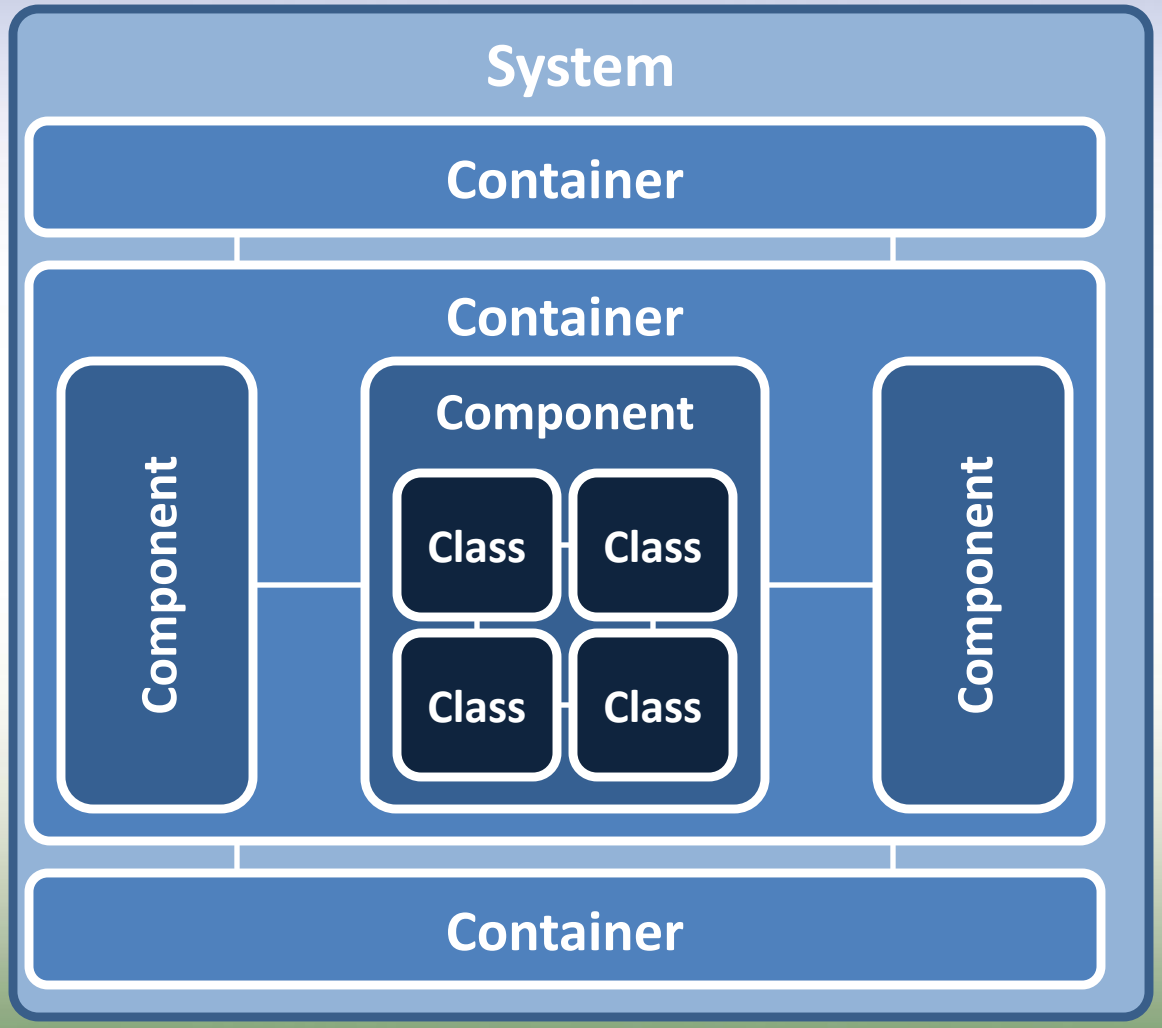
DESIGNING SOFTWARE



PROBLEMS

- SA HLD documents in current format is not useful. It takes much time and power, is coming elder before finished.
- There is no single “materialized” view on solution as a whole.
- We have troubles in communication of business requirements and architecture decisions: what and how should we build IT-solutions.
- New staff on-boarding to project is complicated and chaotic.
- Painful handover to support process and scattered support documentation.
- Trash in meta.

«4C» DIAGRAM SKETCHING



Context diagram

Container diagram

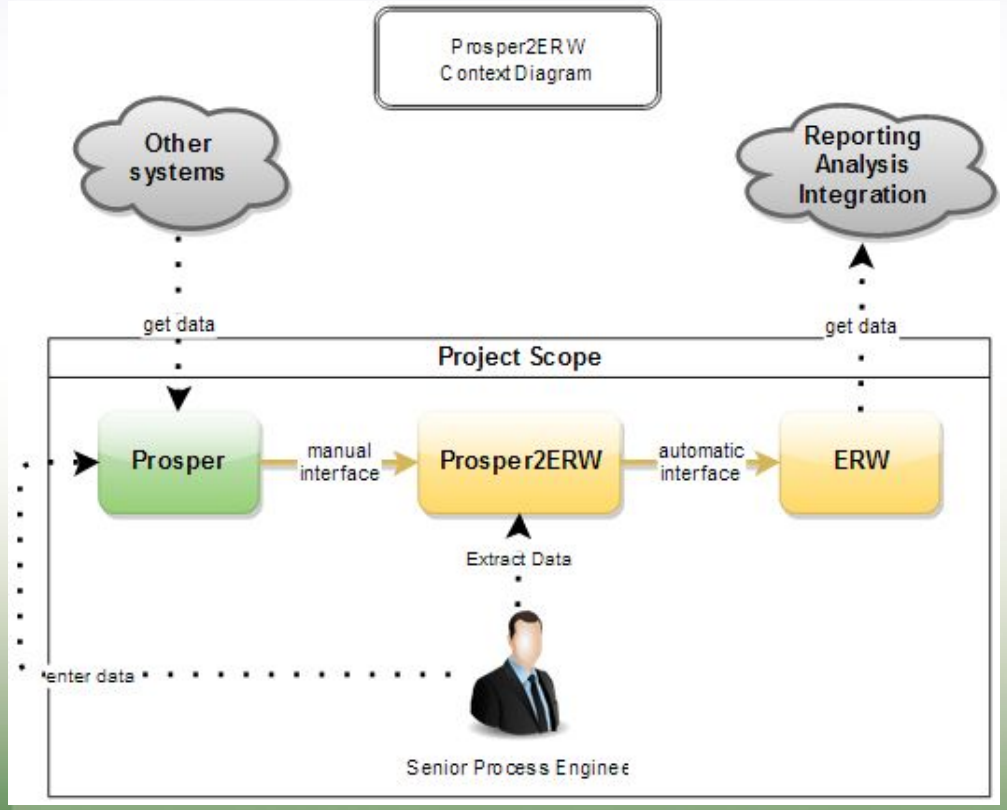
Component diagram

Class diagram

1C: CONTEXT DIAGRAM

An big picture of the system landscape:

- What is the software system that we are building?
- Who is using it?
- How does it fit in the existing IT environment?



Content:

IT System

Users, actors, roles, personas, etc

Purpose →

Motivation

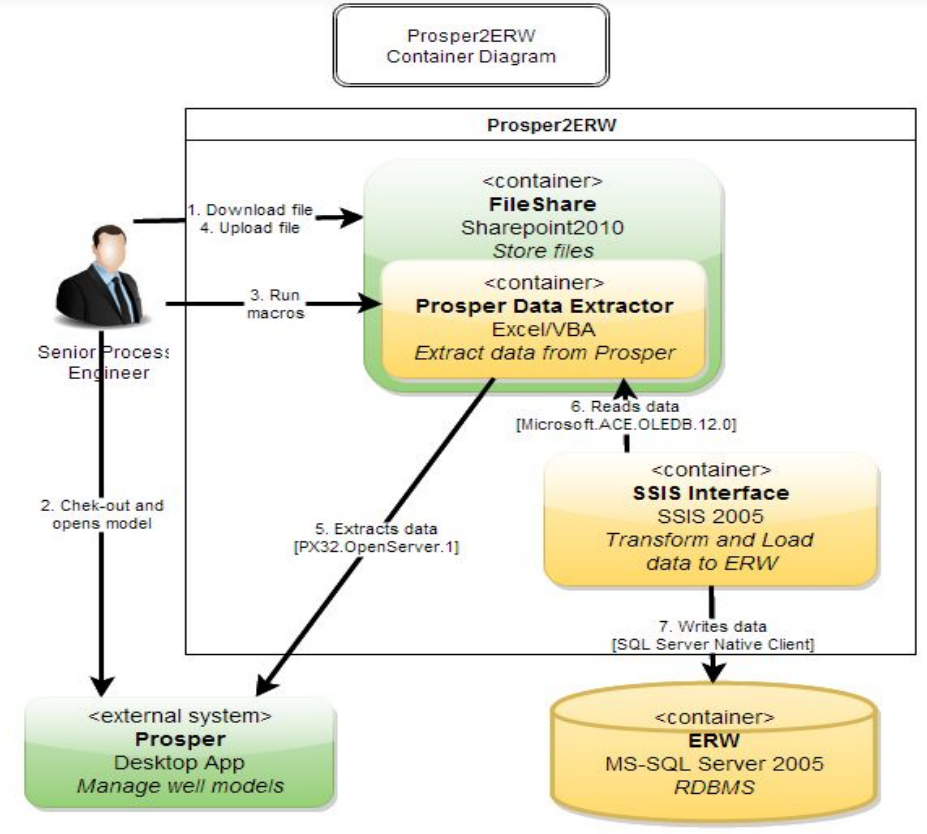
- Makes context explicit - **no assumptions.**
- What is being **added** to an existing **IT environment.**
- Starting point for **discussions** between **technical** and **non-technical** people.
- Who we need to go concerning **inter-system interfaces.**
- Not much detail: help to **set the scene**, starting point for other diagrams.

Audience

- **Technical** and **non-technical** people, **inside** and **outside** project team.

2C: CONTAINER DIAGRAM

- What is the overall shape of the software system?
- What are the high-level technology decisions?
- How are responsibilities distributed across the system?
- How do containers communicate with one another?
- Where do we need to write code to implement features?



Content:

Name
Technology
Responsibilities

Containers - logical executables or processes that make up the software system.

Purpose
Method
Style
[Protocol/port]

→ Inter-container communication
Is inter-process communication.

Motivation

- Makes the high-level **technology choices explicit.**
- Shows **relationships between containers** and how they communicate.
- Provides a **framework** in which to place **components** (components home).
- Provides the **link between** a very high-level **context** diagram and a very cluttered **component** diagram.

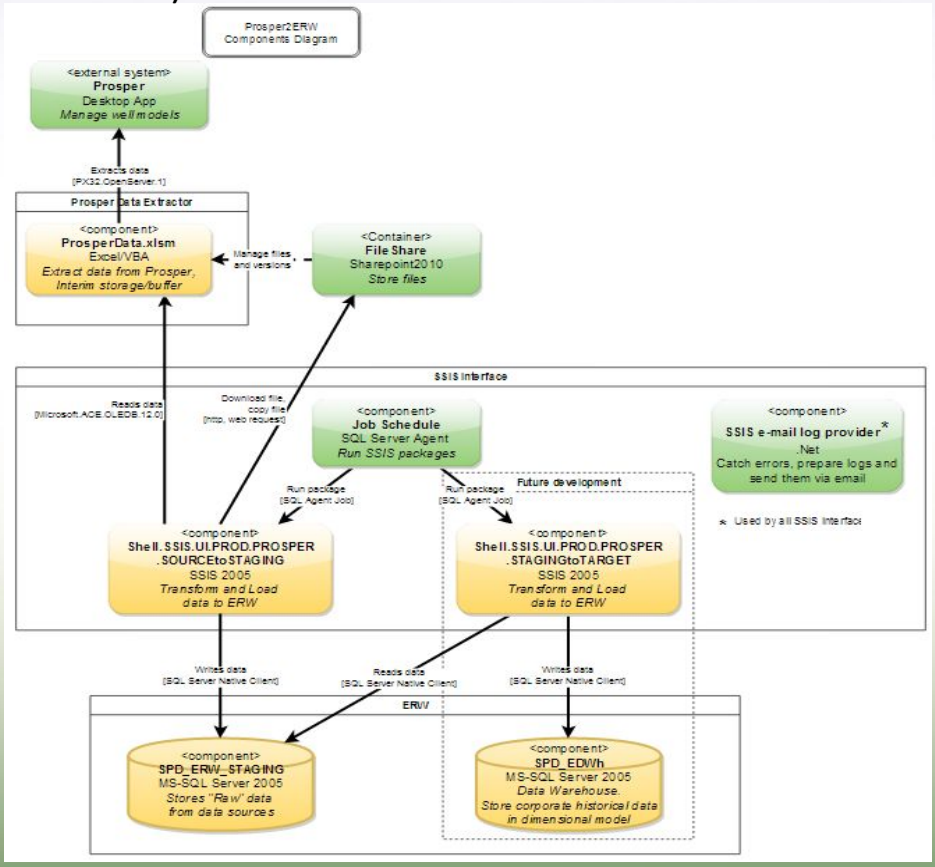
Audience

Technical people inside and outside of the project team: everybody from software **developers** through to **operational** and **support** staff.

3C: COMPONENT DIAGRAM

Zoom in and decompose each container:

- What components/services is the system made up of?
- Is it clear how the system works at a high-level?
- Do all components/services have a home (reside in a container)?



Content:

Name
Technology
Responsibilities

Components are the coarse-grained building blocks of your system

Purpose
Style

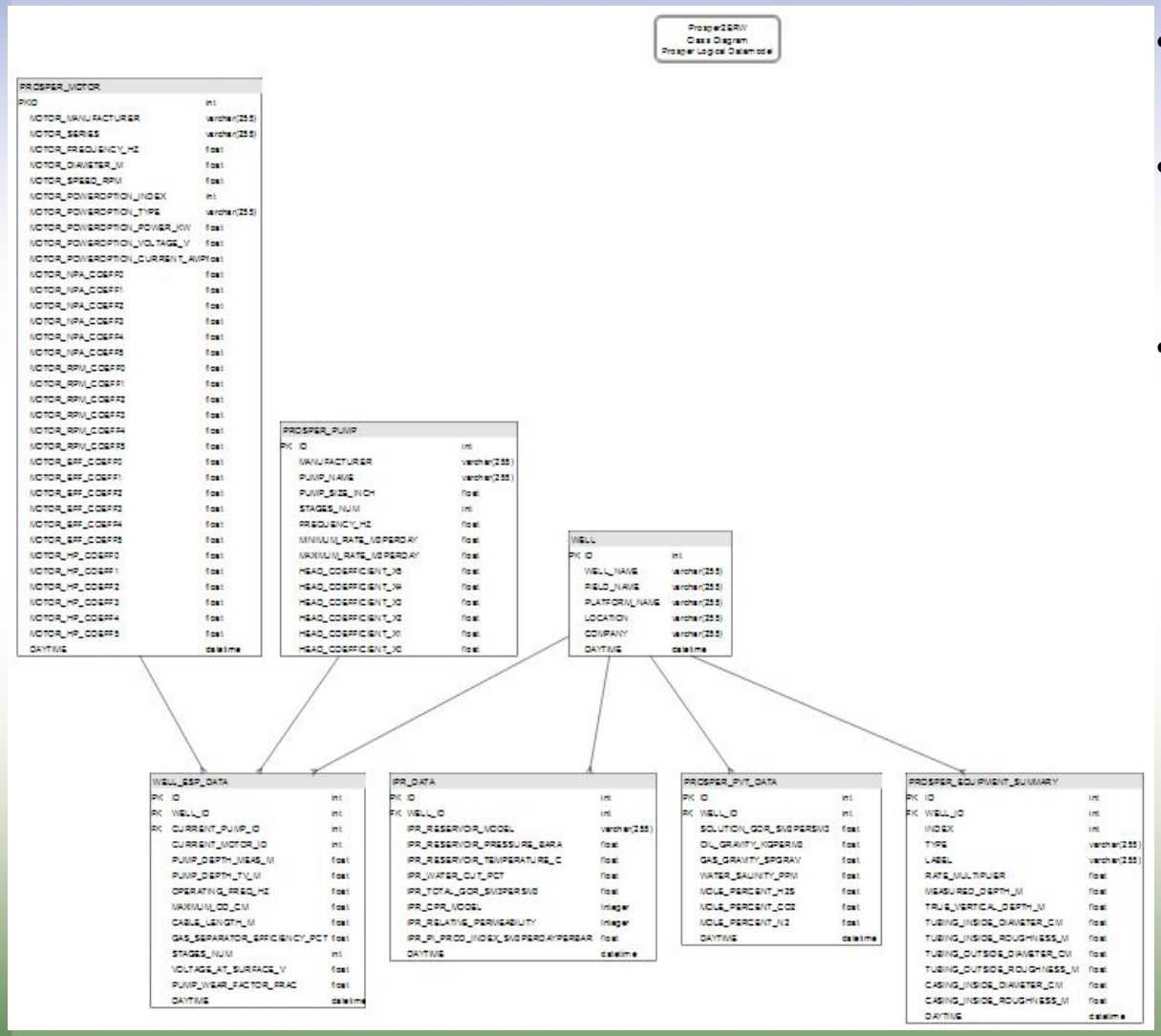
Motivation

- Shows the high-level **decomposition** of your software system into **components** with distinct **responsibilities**.
- Shows **relationships** and **dependencies** between **components**.
- Provides a **framework** for high-level software development **estimates** and how the **delivery** can be broken down (**WBS**).

Audience

Technical people within the software development team

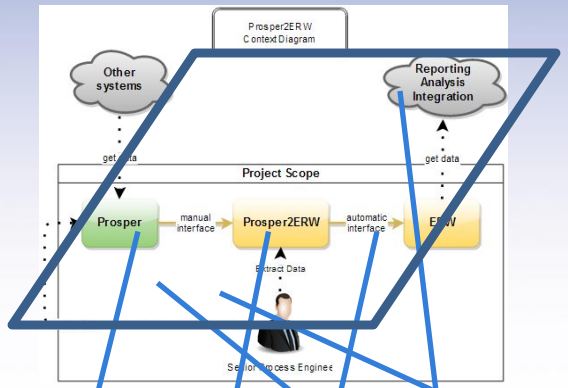
4C: CLASS DIAGRAM (optional?)

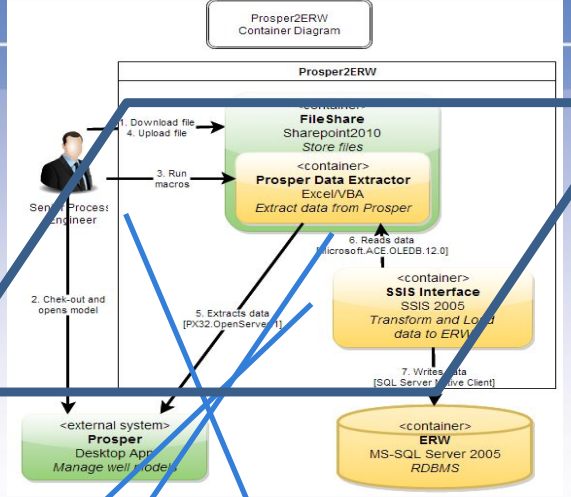


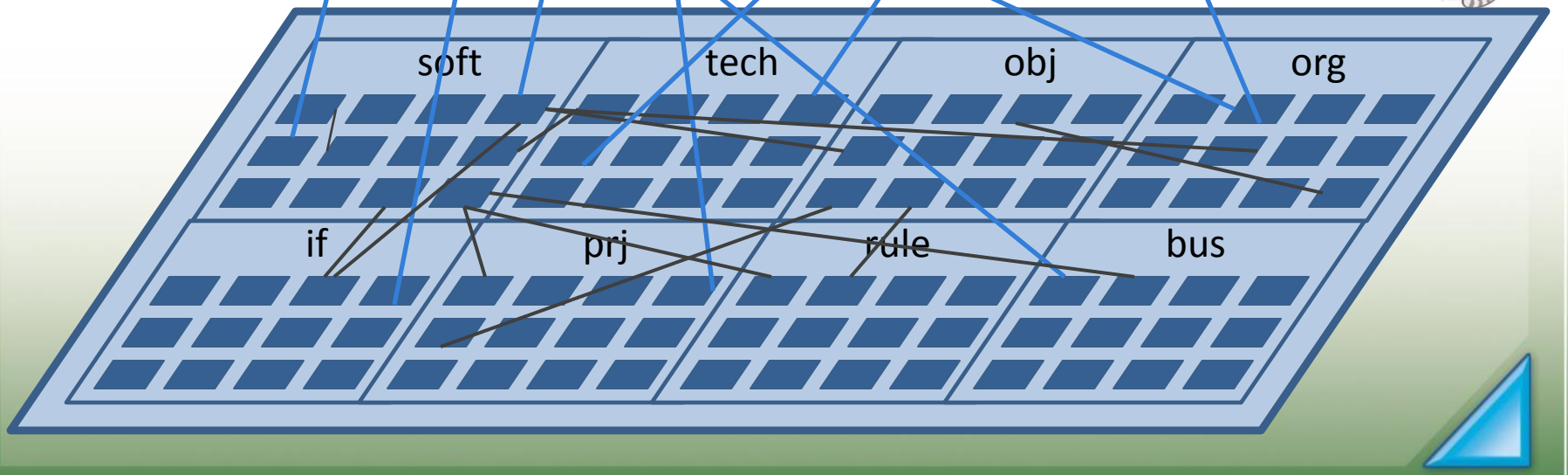
- Is a high-level **UML class diagram.**
- Explains how a particular **pattern** or **component** is **implemented.**
- Classes are the smallest building blocks of our software systems.

Instead of classic UML class-diagram we will use **Conceptual/Logical Data Model Diagram**

SA HLD ON META







IS THIS ENOUGH?

- SA HLD – is not just “word document somewhere in SP”, but power tool which help to:
  - assess, collaborate and communicate BRs and technical decisions
  - present high-level view on the solution and help to **navigate** throughout the solution
  - provides relevant levels of abstraction for different contributors during full product life-cycle (requirements-design-development-testing-deploy-support-decomission).
- This is **not** a complete set of project/tech. documents – this is SA HLD.

  (Process diagram, data-models, mapping, detailed design, Deployment diagram etc.)

WHAT IS NEXT?

For all projects:

- SA HLD should be published on meta in “4C”-format.
- Workshops Arch-PM-BA-(BUS) to collaborate requirements and high-level vision. Deliverables: C1 and C2.
- “Architecture checkbox” on ABP when C1-C4 is published on meta.