

Defining Methodology with a Few Examples

by *Gerrit Muller* USN-SE

e-mail: `gaudisite@gmail.com`

`www.gaudisite.nl`

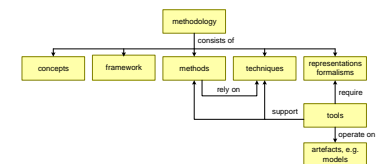
Abstract

We use many confusing terms. This presentation shows how Philips Research used the term Methodology at the beginning of this century. A few examples illustrate how actual methodologies map on this interpretation.

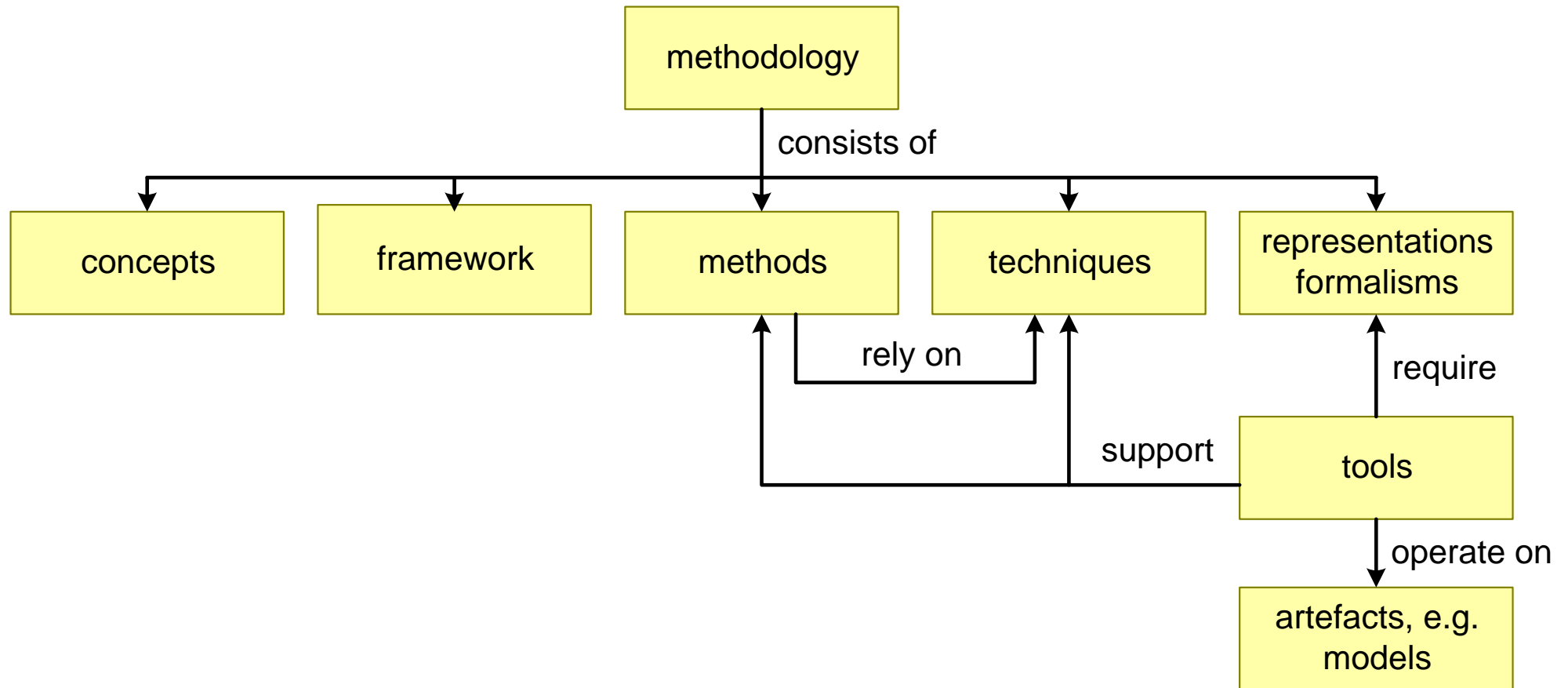
Distribution

This article or presentation is written as part of the Gaudí project. The Gaudí project philosophy is to improve by obtaining frequent feedback. Frequent feedback is pursued by an open creation process. This document is published as intermediate or nearly mature version to get feedback. Further distribution is allowed as long as the document remains complete and unchanged.

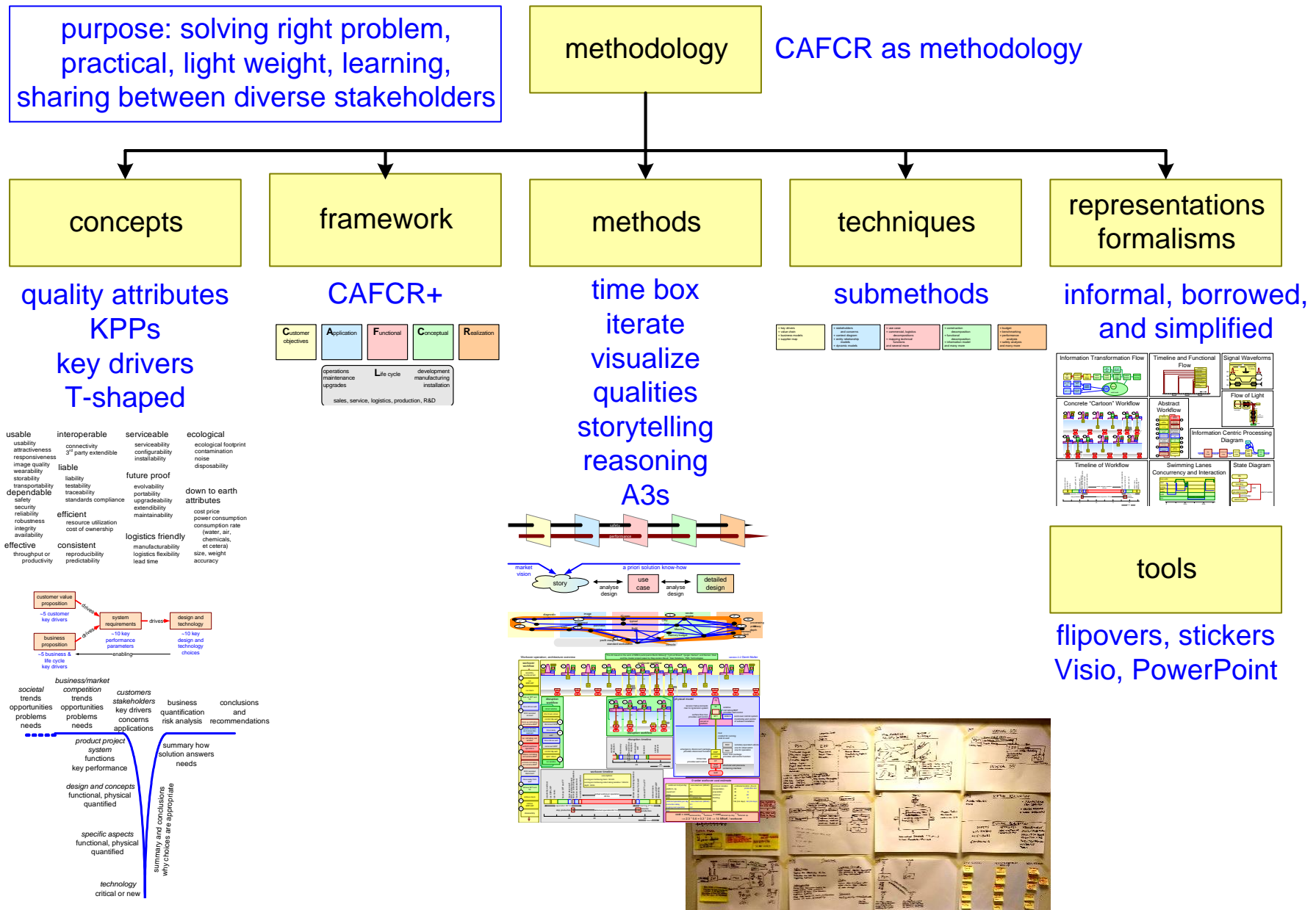
October 14, 2024
status: preliminary
draft
version: 0



Mutually Related Elements Form a Methodology



Example CAFCR Mapped on the Elements

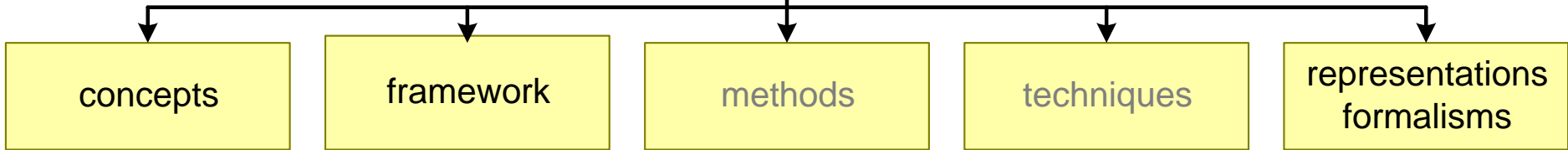


Example UAF Mapped on the Elements

purpose: interoperability of processes, organizations and tools to manage acquisition and development

methodology

UAF mapped on methodology elements



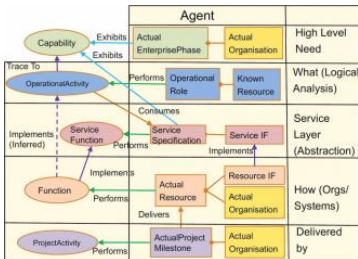
domain metamodel profile

UAF grid

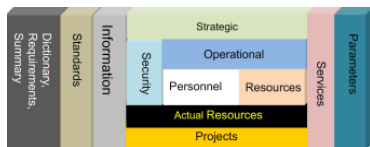
EA Guide (not normative)

SysML diagrams

- Block Definition Diagram
- Internal Block Diagram
- Activity Diagram
- State Machine Diagram
- Sequence Diagram
- Parametric Diagram
- Requirement Diagram



	Category	Structure	Connectivity	Process	State	Interaction	Interchange	Performance	Complexity	Realization	Traceability
Materials	Material	Structure	Connectivity	Process	State	Interaction	Interchange	Performance	Complexity	Realization	Traceability
Strategic	Strategic	Structure	Connectivity	Process	State	Interaction	Interchange	Performance	Complexity	Realization	Traceability
Operational	Operational	Structure	Connectivity	Process	State	Interaction	Interchange	Performance	Complexity	Realization	Traceability
Services	Services	Structure	Connectivity	Process	State	Interaction	Interchange	Performance	Complexity	Realization	Traceability
Personnel	Personnel	Structure	Connectivity	Process	State	Interaction	Interchange	Performance	Complexity	Realization	Traceability
Resources	Resources	Structure	Connectivity	Process	State	Interaction	Interchange	Performance	Complexity	Realization	Traceability
Security	Security	Structure	Connectivity	Process	State	Interaction	Interchange	Performance	Complexity	Realization	Traceability
Projects	Projects	Structure	Connectivity	Process	State	Interaction	Interchange	Performance	Complexity	Realization	Traceability
Standards	Standards	Structure	Connectivity	Process	State	Interaction	Interchange	Performance	Complexity	Realization	Traceability
Actual Resources	Actual Resources	Structure	Connectivity	Process	State	Interaction	Interchange	Performance	Complexity	Realization	Traceability



tools

tool agnostic, however assumes heavy tools

figures and information source (retrieved 2024-10-14): <https://www.omgwiki.org/uaf/doku.php>

Elaborating some of the Terms

- A **framework** is a structure to help in positioning elements.
- A **method** is a description or visualization on how to achieve a purpose. A method contains a sequence of steps with guidance on how to go through the steps to achieve the purpose. It may elaborate on how to perform the steps, what artifacts to produce, and what means to use.
- **Techniques** serve specific purposes, providing a description how to achieve the desired purpose
- A **process** is a blueprint of working that organizations provide to achieve specific goals, e.g. they may have a systems development process (typically phase gated).