

# Introductie voor de verdediging van het proefschrift

by *Gerrit Muller* University of Southeast Norway-NISE

e-mail: `gaudisite@gmail.com`

`www.gaudisite.nl`

## Abstract

Het proefschrift beschrijft een ontwerpmethode voor Embedded Systemen. Embedded Systemen zijn systemen waarin de ingebouwde computers en software een onmisbare rol spelen. Het ontwerpen van deze systemen is gecompliceerd door de vele vakgebieden die bij het ontwerp betrokken zijn. Het CAFCR model vormt de basis van de ontwerpmethode. De ontwerpmethode is achteraf toegepast op een medisch werkstation.

### 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.

June 5, 2018  
status: finished  
version: 0.1

logo  
TBD

# Systemen met ingebouwde computers en software



chip



GSM



MRI scanner



cardio X-ray system



television

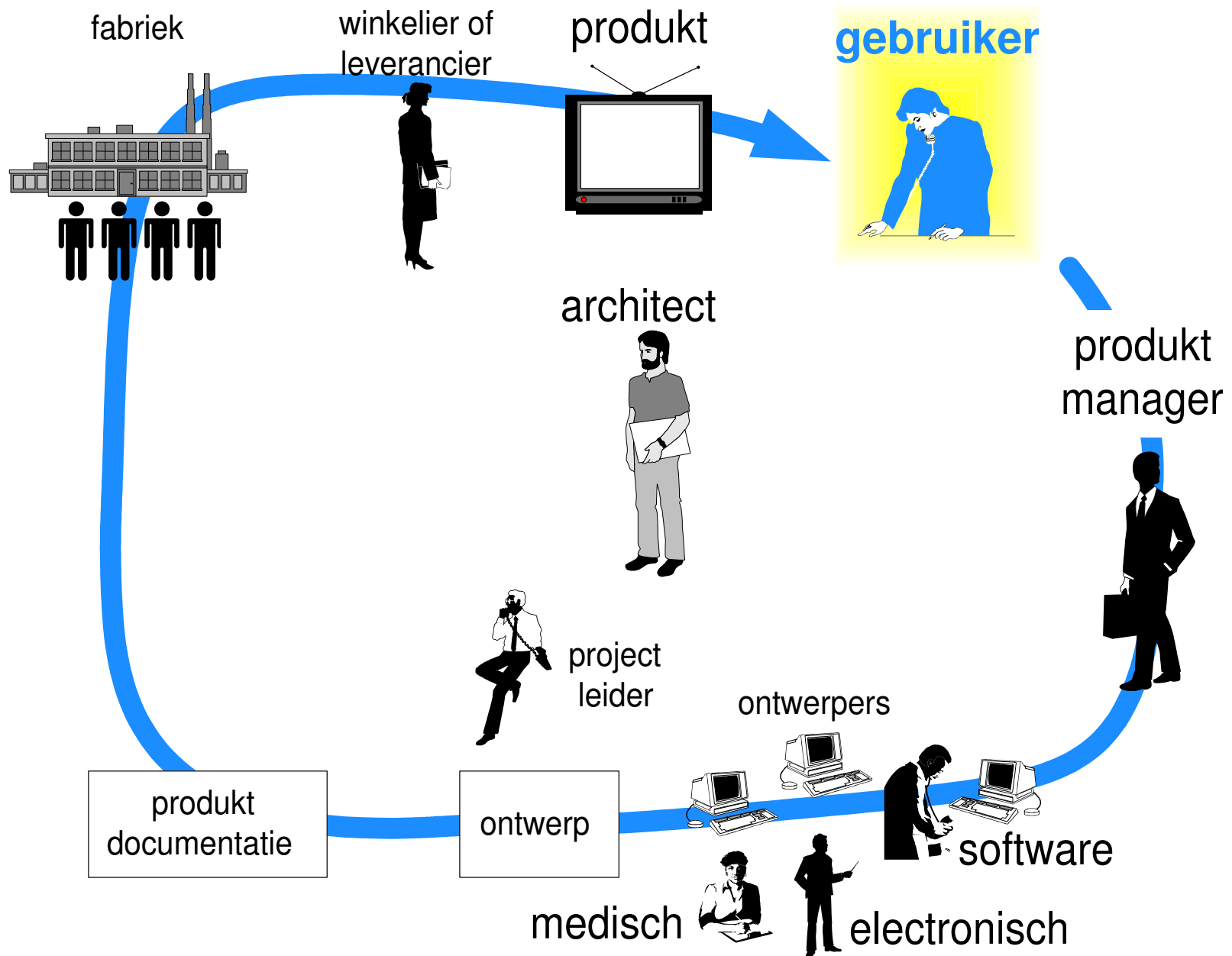


printer

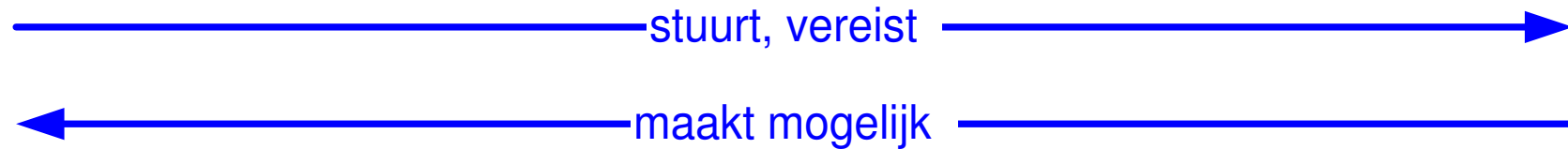


waferstepper

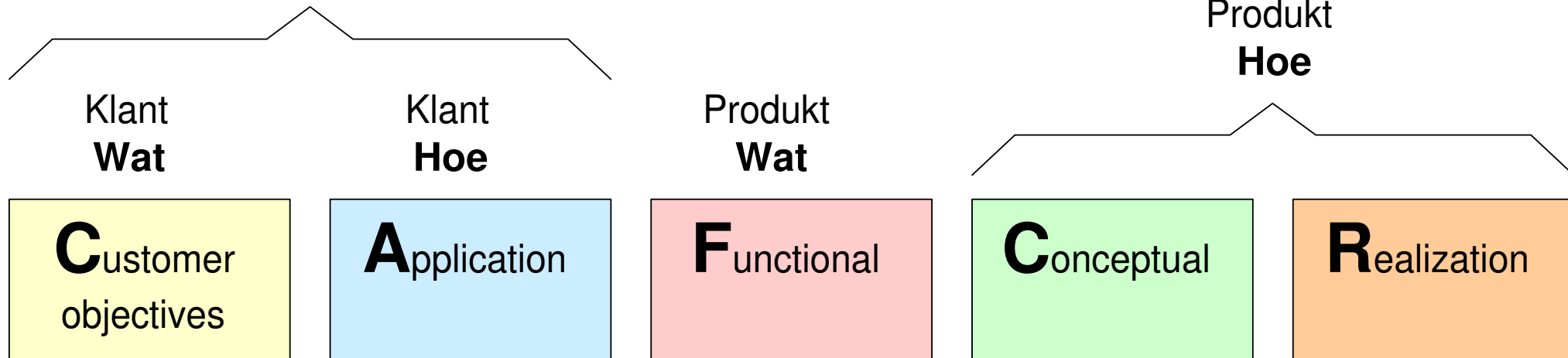
# Produkt creatie cyclus: veel vakgebieden



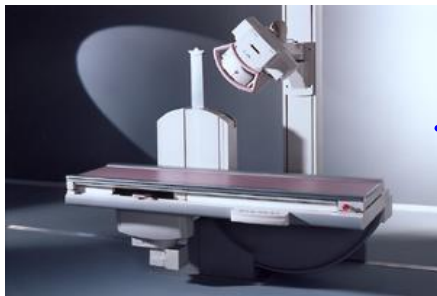
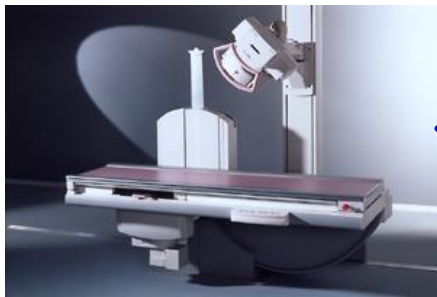
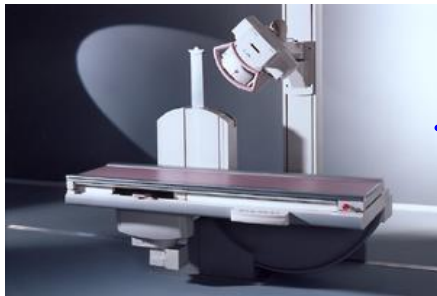
# Het CAFCR model: begrijp de klant



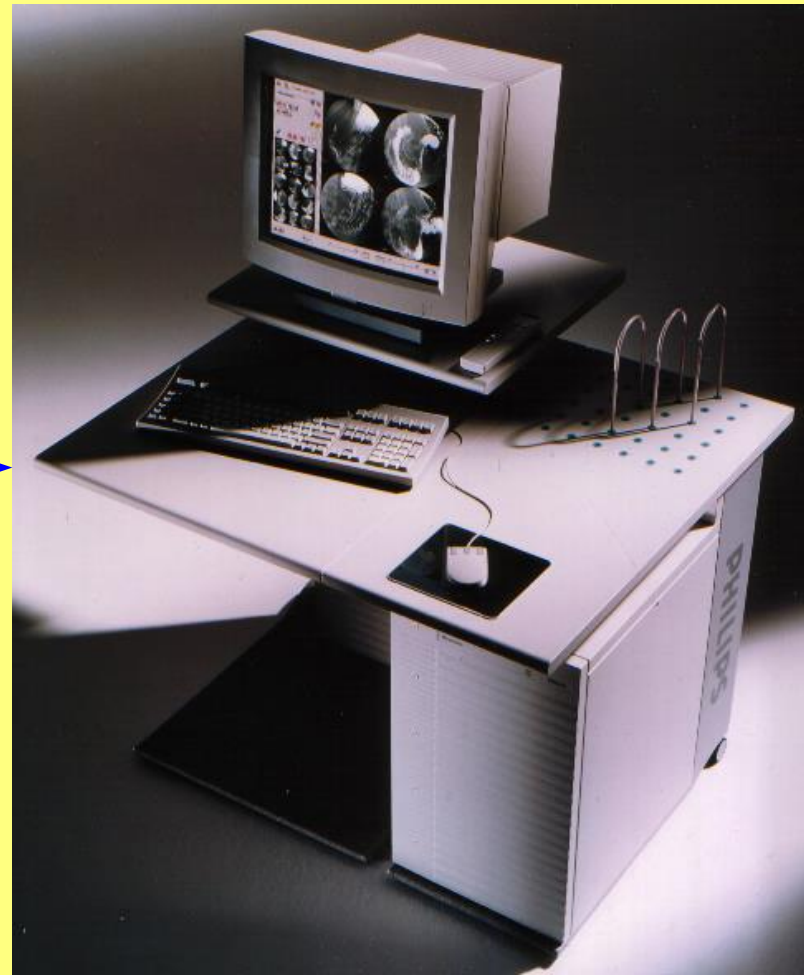
**Wat** heeft de Klant nodig  
in het Produkt en **Waarom?**



# Medisch workstation als casus



URF-systems

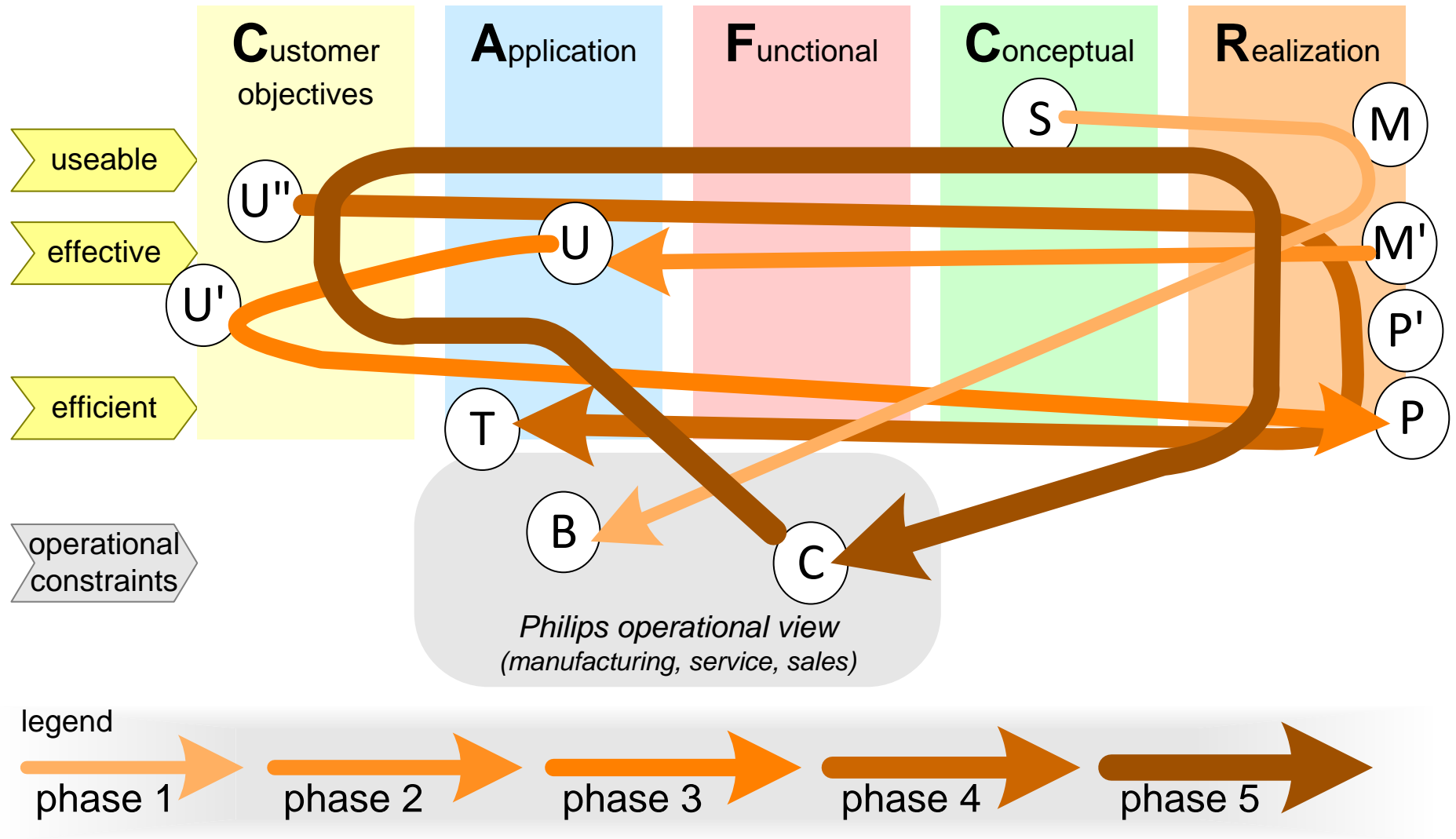


EasyVision: Medical Imaging Workstation

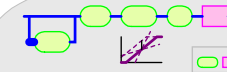
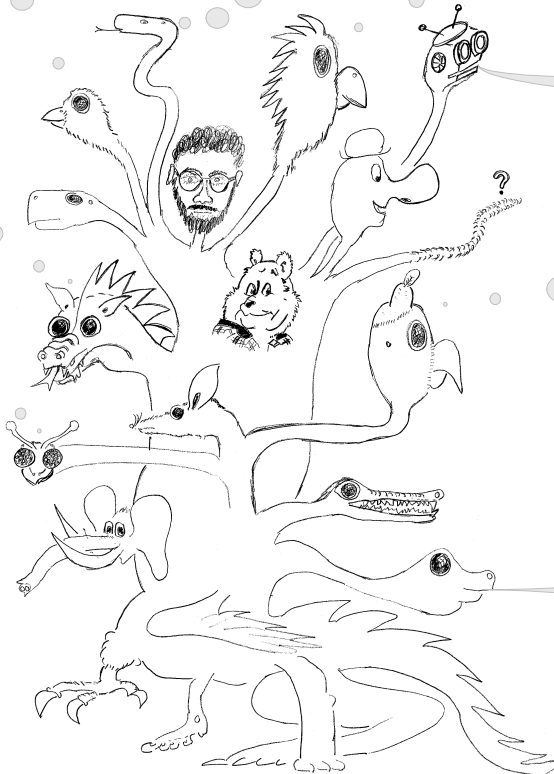
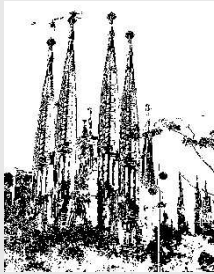
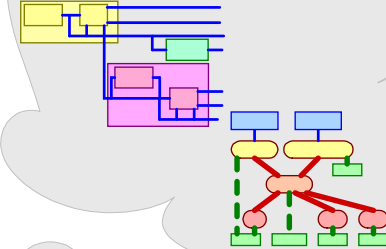


typical clinical image (intestines)

# "Draden van redenering"



# De Systeemarchitect als twintigkoppig-monster



$$\begin{aligned}
 t_{\text{recon}} = & t_{\text{filter}}(n_{\text{raw-x}}, n_{\text{raw-y}}) + \\
 & n_{\text{raw-x}} * (t_{\text{fft}}(n_{\text{raw-y}}) + t_{\text{col-overhead}}) + \\
 & n_{\text{raw-y}} * (t_{\text{fft}}(n_{\text{raw-x}}) + t_{\text{row-overhead}}) + \\
 & t_{\text{corrections}}(n_x, n_y) + \\
 & t_{\text{control-overhead}}
 \end{aligned}$$

