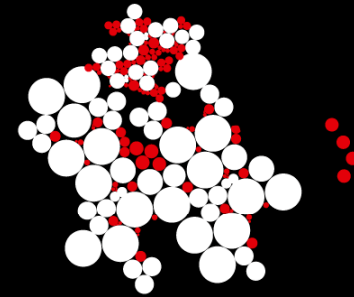


UNIVERSITEIT TWENTE.

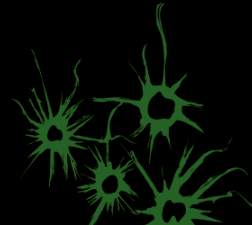


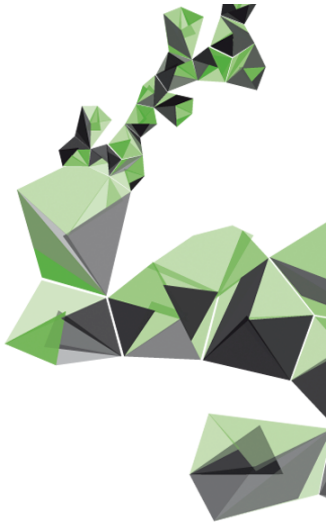
# Business Modelling Panel



Lisette van Gemert-Pijnen (mod)  
Maarten van Limburg

February 12, 2010  
eTELEMED 2010, St Maarten

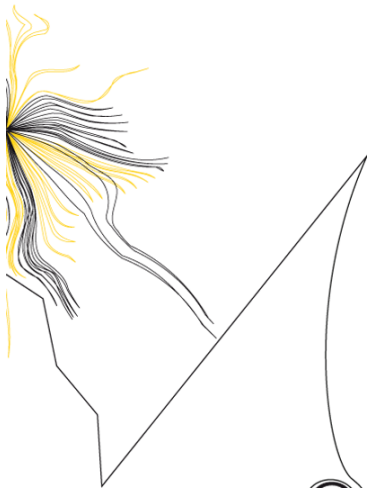




## PANEL Digital Society Trends: Business modelling for design & implementation of Healthcare Technology

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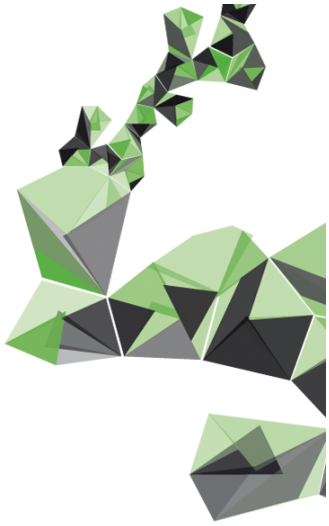
<b>Lisette van Gemert-Pijnen</b>	<b>University of Twente</b>	<b>The Netherlands</b>
Maarten van Limburg	University of Twente	The Netherlands
Liezl van Dyk	Stellenbosch University	South Africa
Marike Hettinga	Windesheim	The Netherlands
Lambert Nieuwenhuis	University of Twente	The Netherlands
Hans C. Ossebaard	National Institute for Public Health and the Environment	The Netherlands



## Panel procedures

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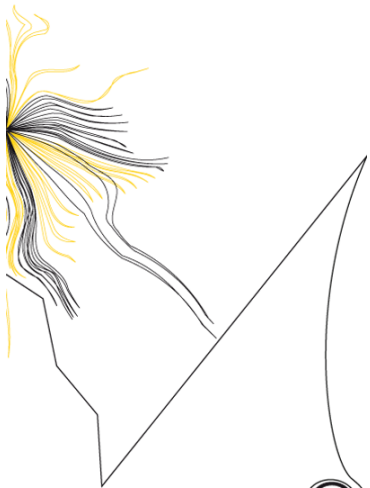
- Self-Introduction of panelists
- Short propositions
- Discussion-statements
  - Response from the audience
  - Response from the panel
  - Interaction between/among panel and audience

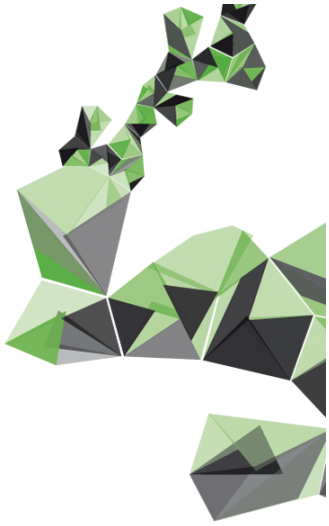


## Business models and eHealth (Maarten)

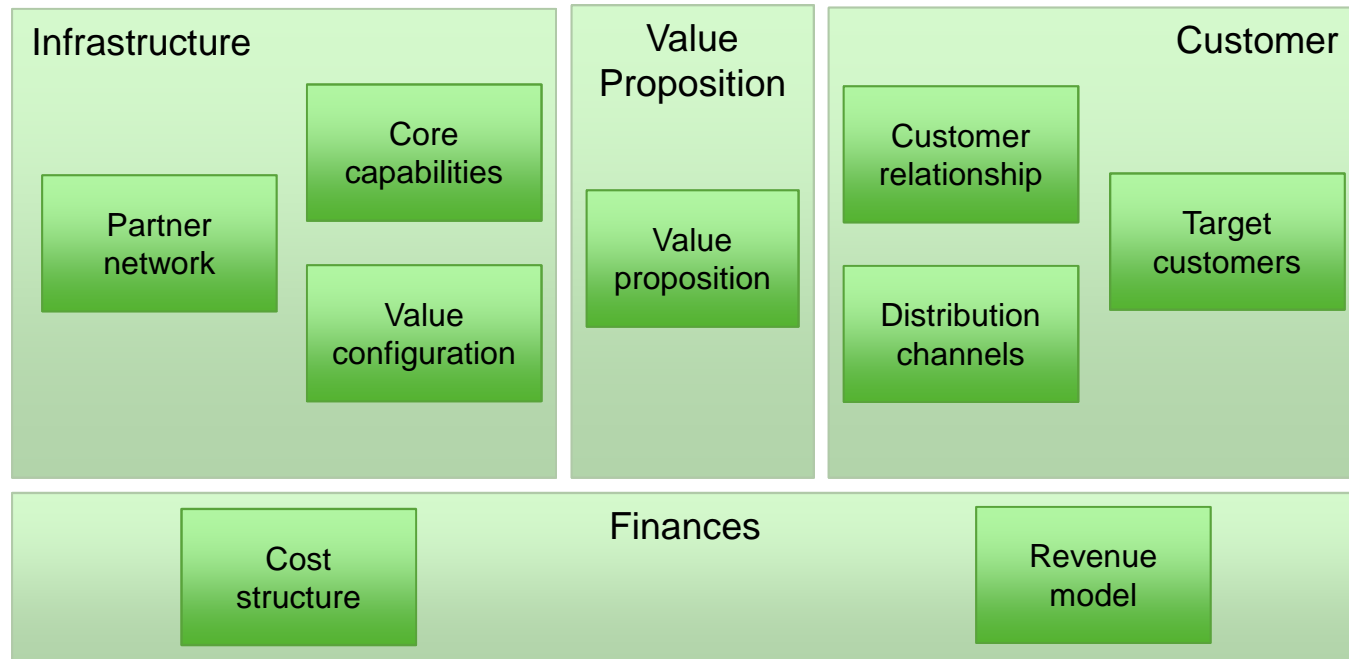
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- A Business model is ‘the rationale of how an organization creates, delivers and captures value’.
- Going from ‘traditional healthcare services’ to eHealth services requires health organizations to reinvent themselves.
- Business modelling facilitates that step!

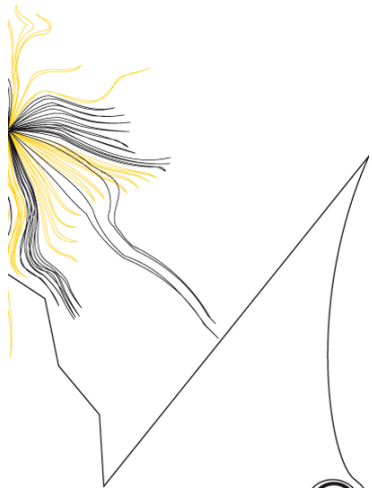


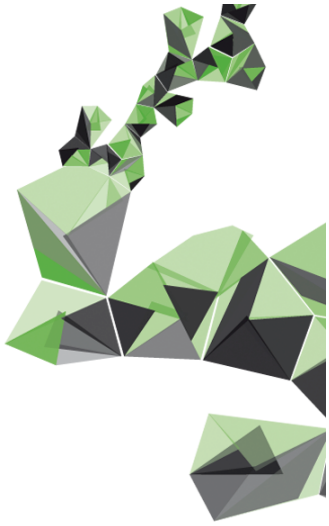


# A business model



Osterwalder, Pigneur (2004)

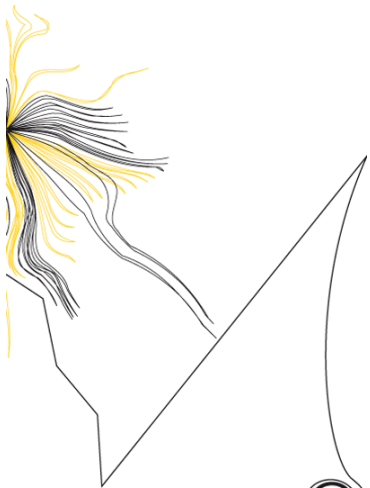




## **Business *modelling* is a collaborative process with clients as most relevant stakes (Lisette)**

---

- Different from business casus, models
- Different from cost benefit analysis
- Multi-perspective focus
- Service (intangible) oriented
- Clients as drivers
- Co-creation of values
- Consensus-driven
- Formative evaluation



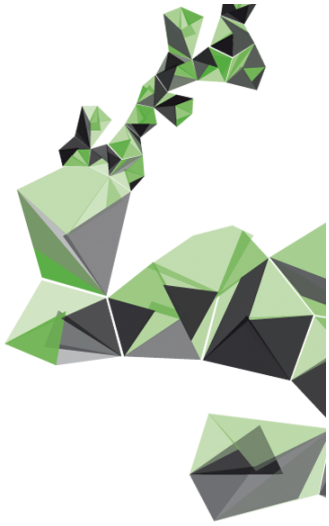
## Examples business *models* other industries

---

3 successful, different business models:

- Philips Senseo (co-creation)
- Ryan Air (collaboration of stakeholders)
- Apple (user-centered innovation)

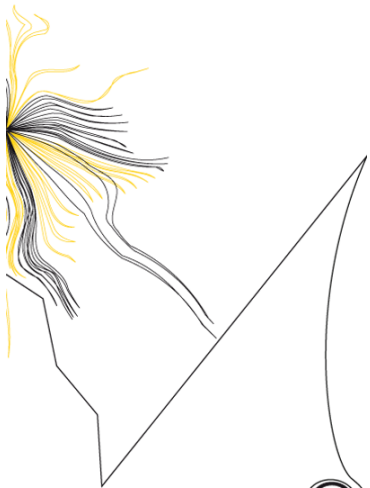
And in eHealth ???



## Statement #1 (Maarten)

---

- The *process* of business modelling is just as important as the business model itself.
  - High # of stakeholders
  - Conflicting interests
  - Complex money flows





# Process is equally important as the numbers (Bart)

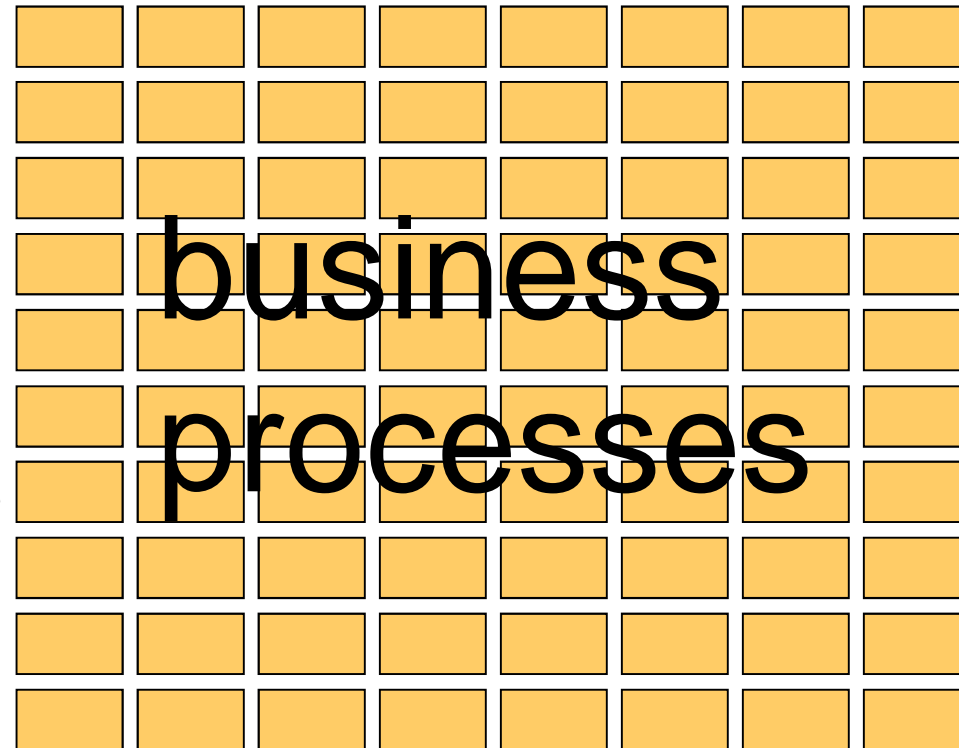
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- aspects

- prevention, diagnostics, therapy, quality, medication, medical aid, personnel, reimbursement, payment

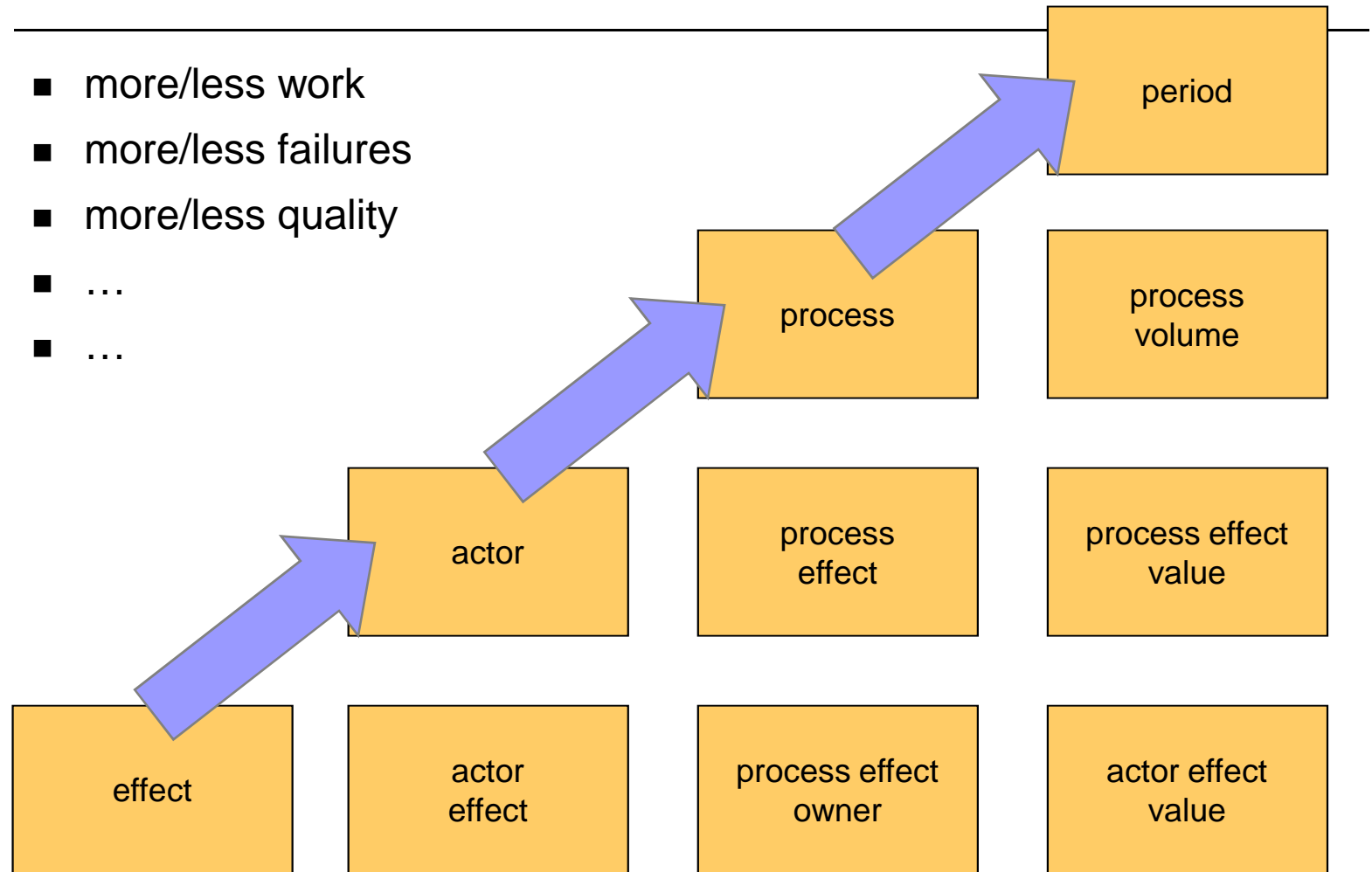
- actor types

- insurance company
- general practitioner
- pharmacist
- home care
- physiotherapist
- nursing houses
- mental health care
- hospital – specialists
- hospital – logistics
- insurer
- network provider
- clearing house



# Process to analyze impact of a new service

- more/less work
- more/less failures
- more/less quality
- ...
- ...



## Statement # 2 Upside down approach (Bart)

---

- **υποεπίσδει approach is important!**
- Business modelling in an early design phase
- Calculation on costs in an early phase, upside down approach

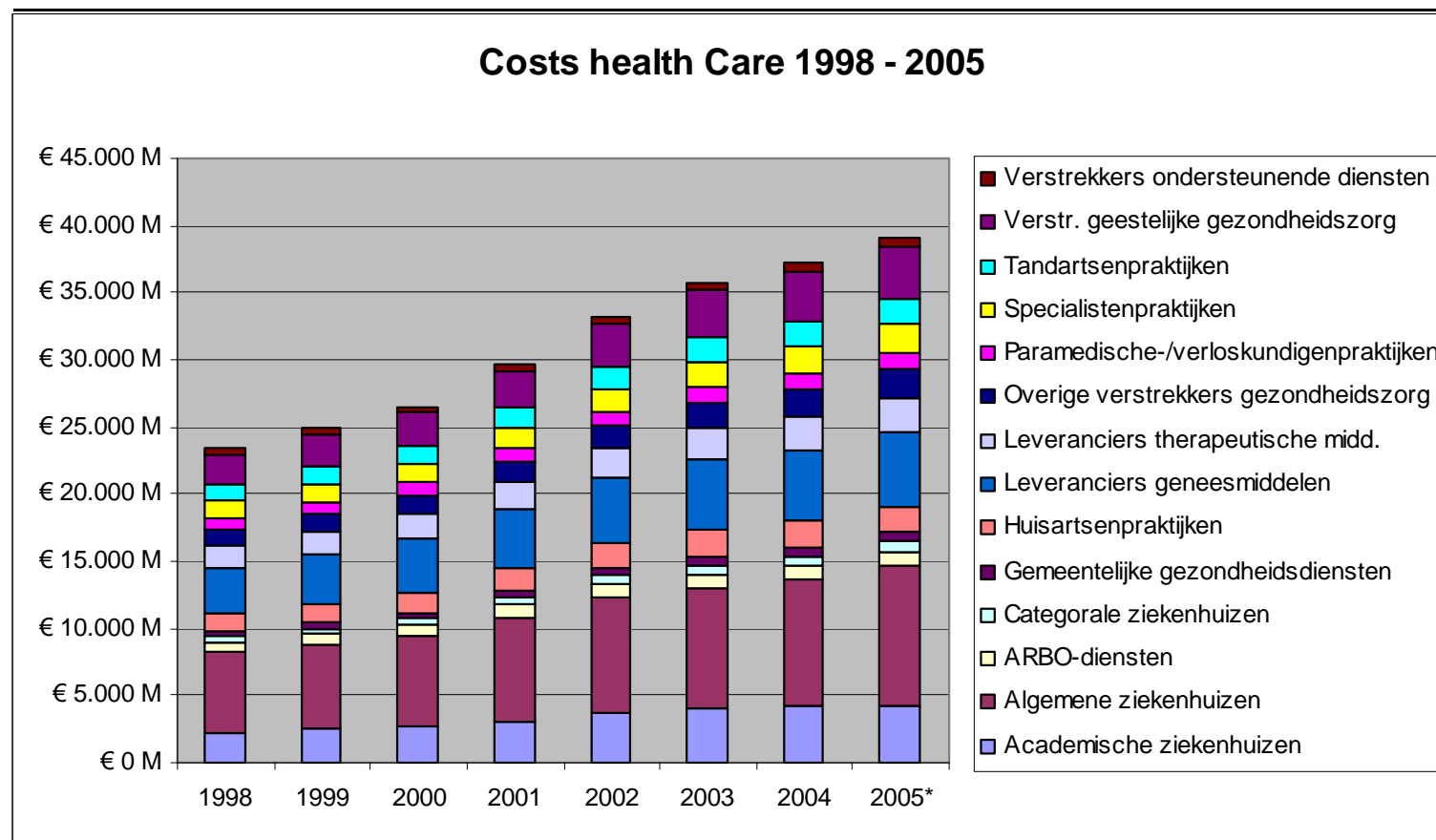
## Statement # 3 Emphasize organisational design (Marike)

---

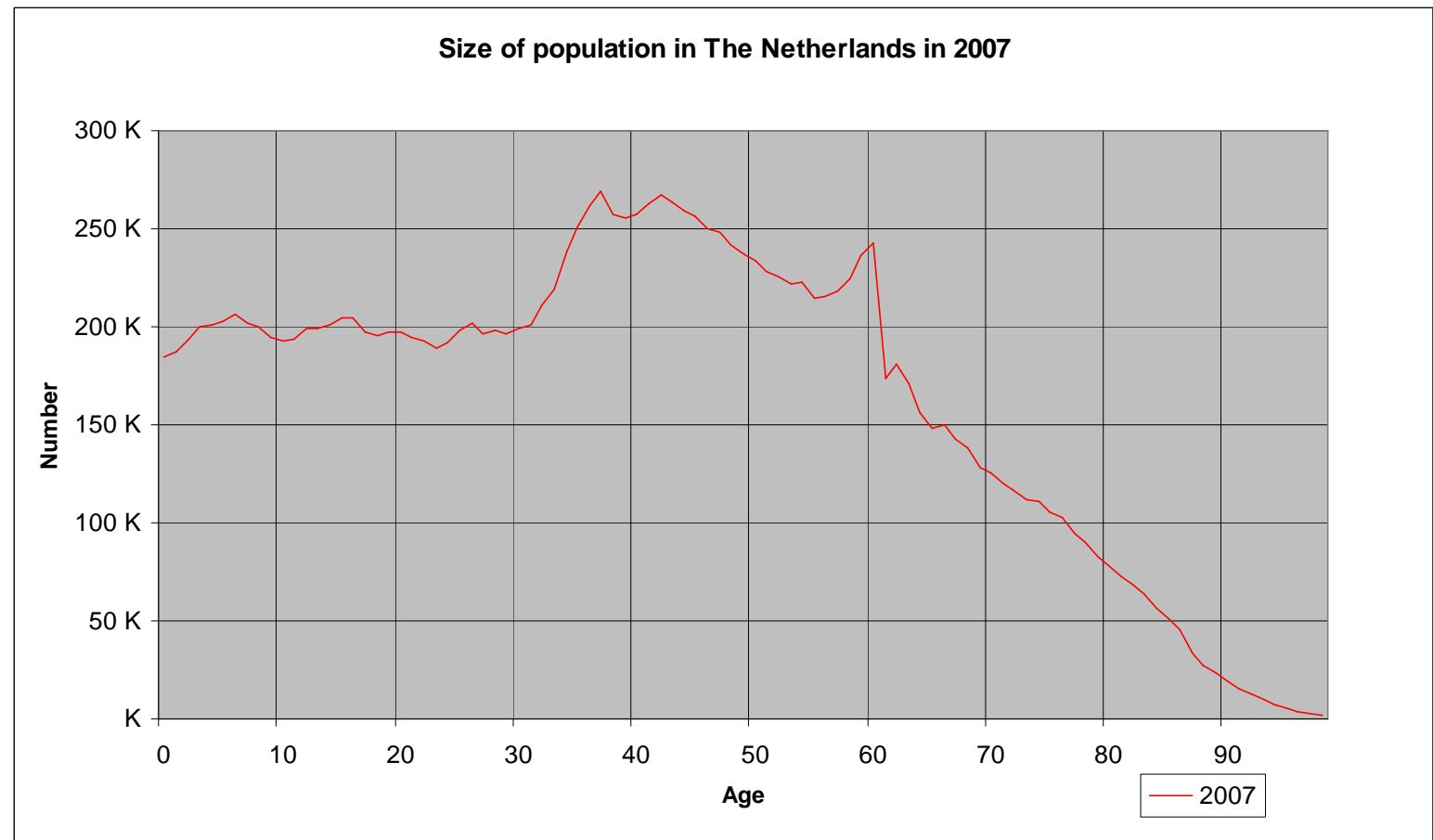
- Early stage in a project
- Stakeholders participate from start
- Formative evaluation of alternative role divisions

*(switch presentation)*

## Statement # 4 “it’s about economy, stupid” (Bart)

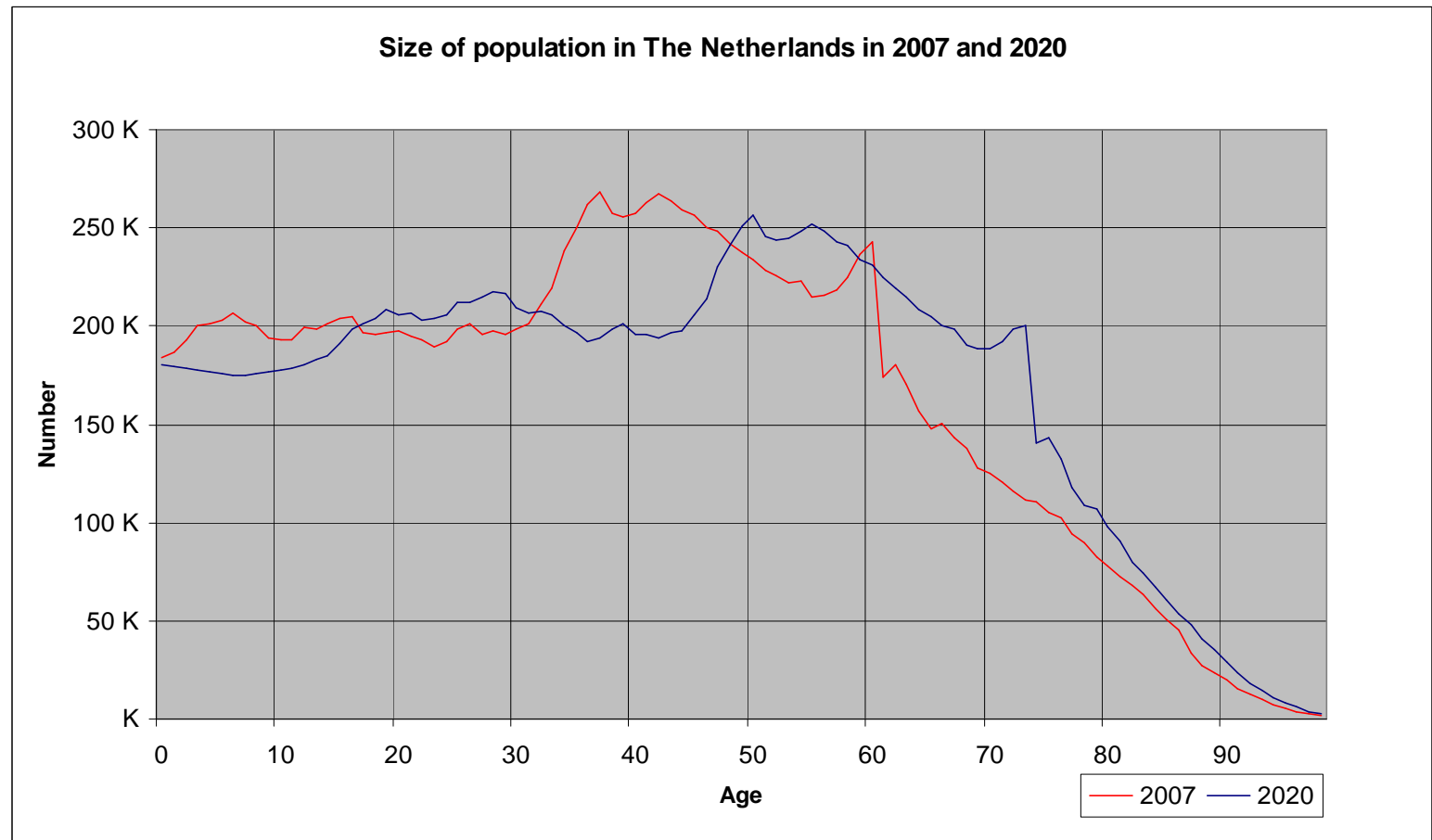


# Size of population in nl in 2007



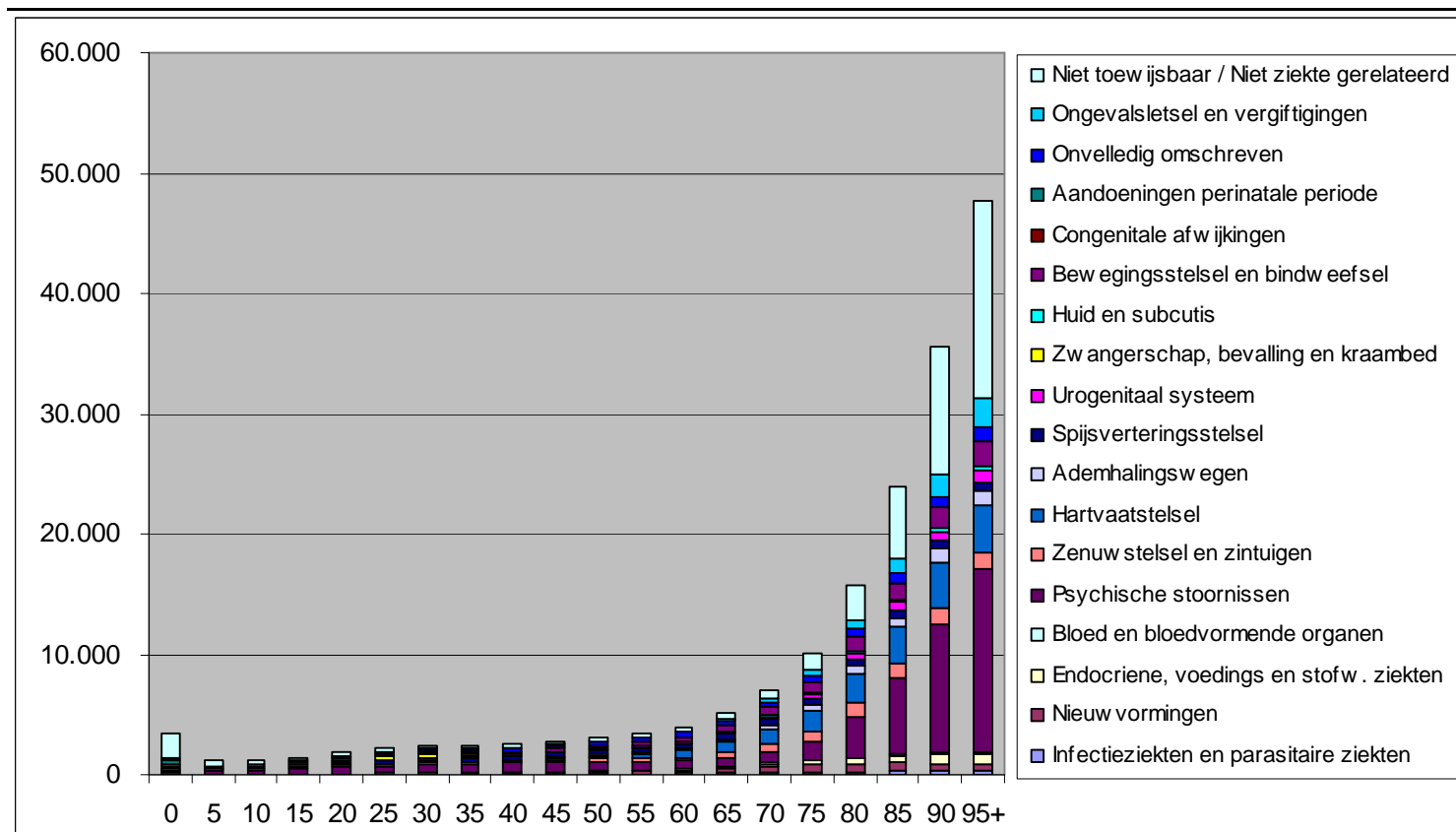
Source: Centraal Bureau voor de Statistiek, Voorburg/Heerlen 2007

# Size of population in nl in 2007 and 2020



Source: Centraal Bureau voor de Statistiek, Voorburg/Heerlen 2007

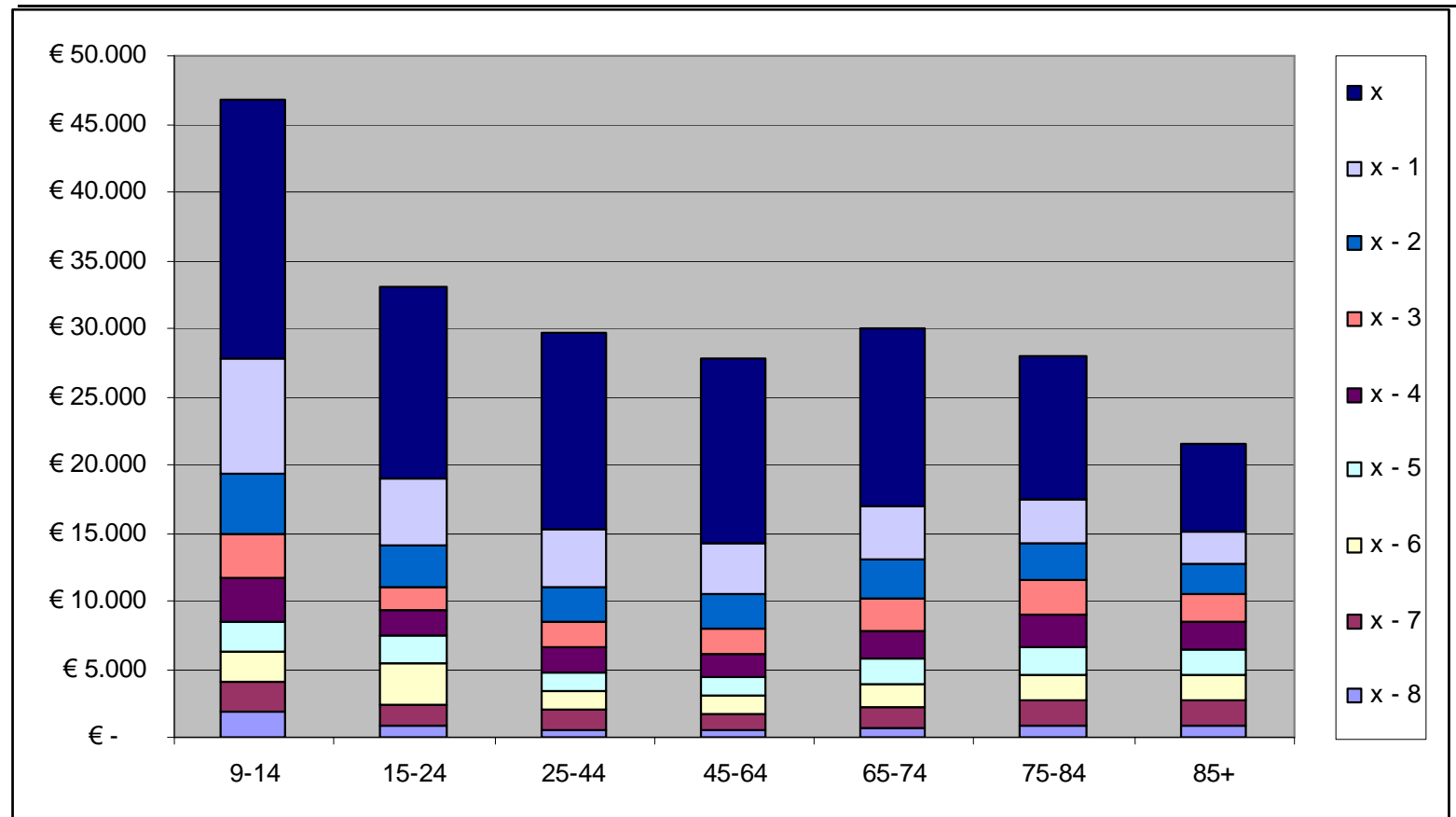
# Illness related costs/capita in nl - 2003



Copyright RIVM, 2006. Slobbe LCJ, Kommer GJ, Smit JM, Groen J, Meerding WJ, Polder JJ. Kosten van Ziekten in Nederland 2003 ([www.kostenvanziekten.nl](http://www.kostenvanziekten.nl))

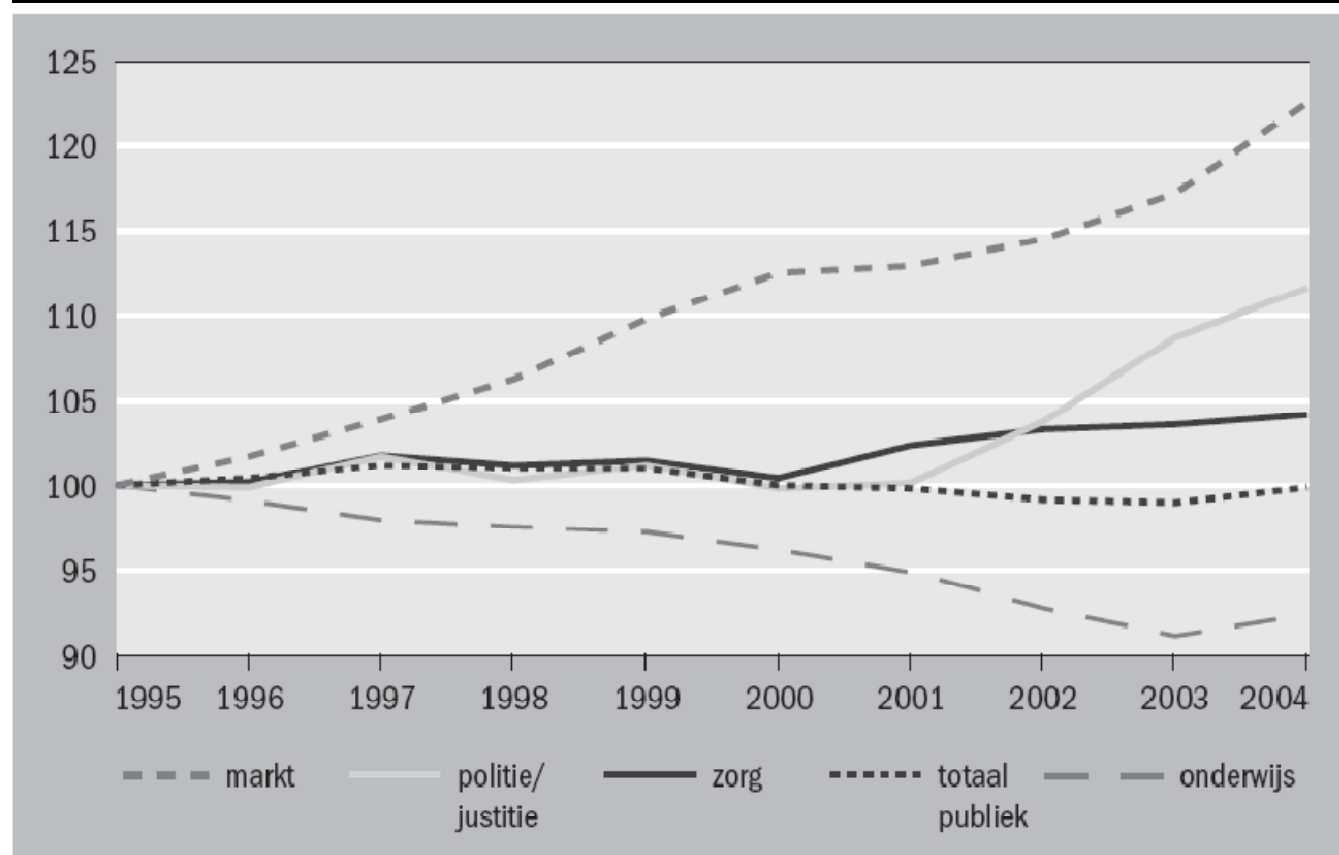


# Health costs during the last years of life



# Labor productivity developments

## PUBLIC AND MARKET SERVICES

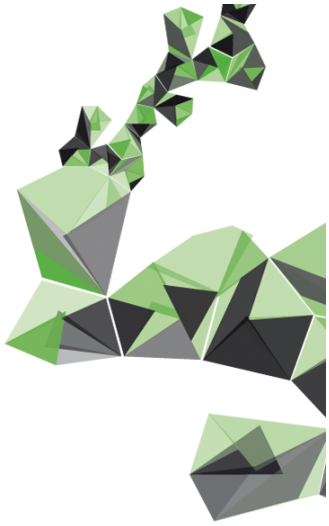


Publieke prestaties in perspectief, SCP, Jan 2007, page 46

## Well-known effects of ict in health care

---

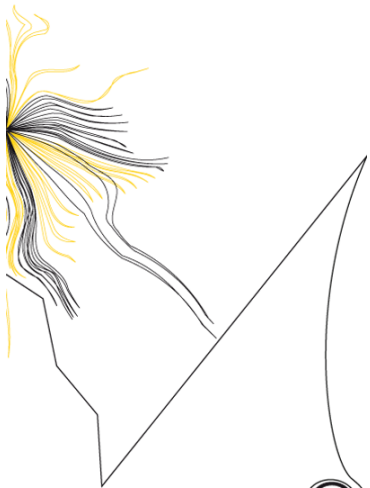
- cost reduction due to re-use of medical information
- cost reduction due to decrease of medication errors
  - reduction of costs required for additional health care
- cost reduction due to improved labour productivity
- increased cost/benefit ratio due to increased quality

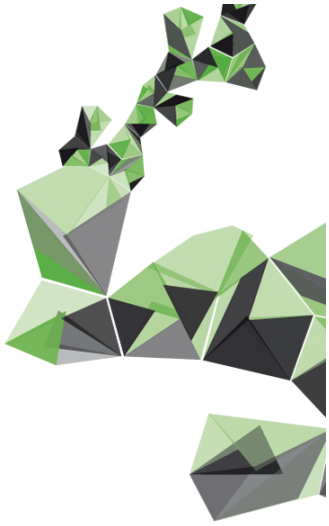


## Statement #5 Patients complicate business modelling (Maarten en Marike)

---

- **Patients have a delicate role in healthcare**
  - Patients are no real customers
  - Patients are not the deciding or paying stakeholder
  - Asymmetric relationships, heavily dependant on trust
  - ‘What do patients want’ vs. ‘We know what’s best’

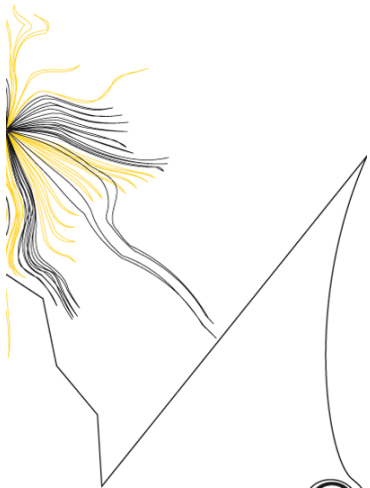


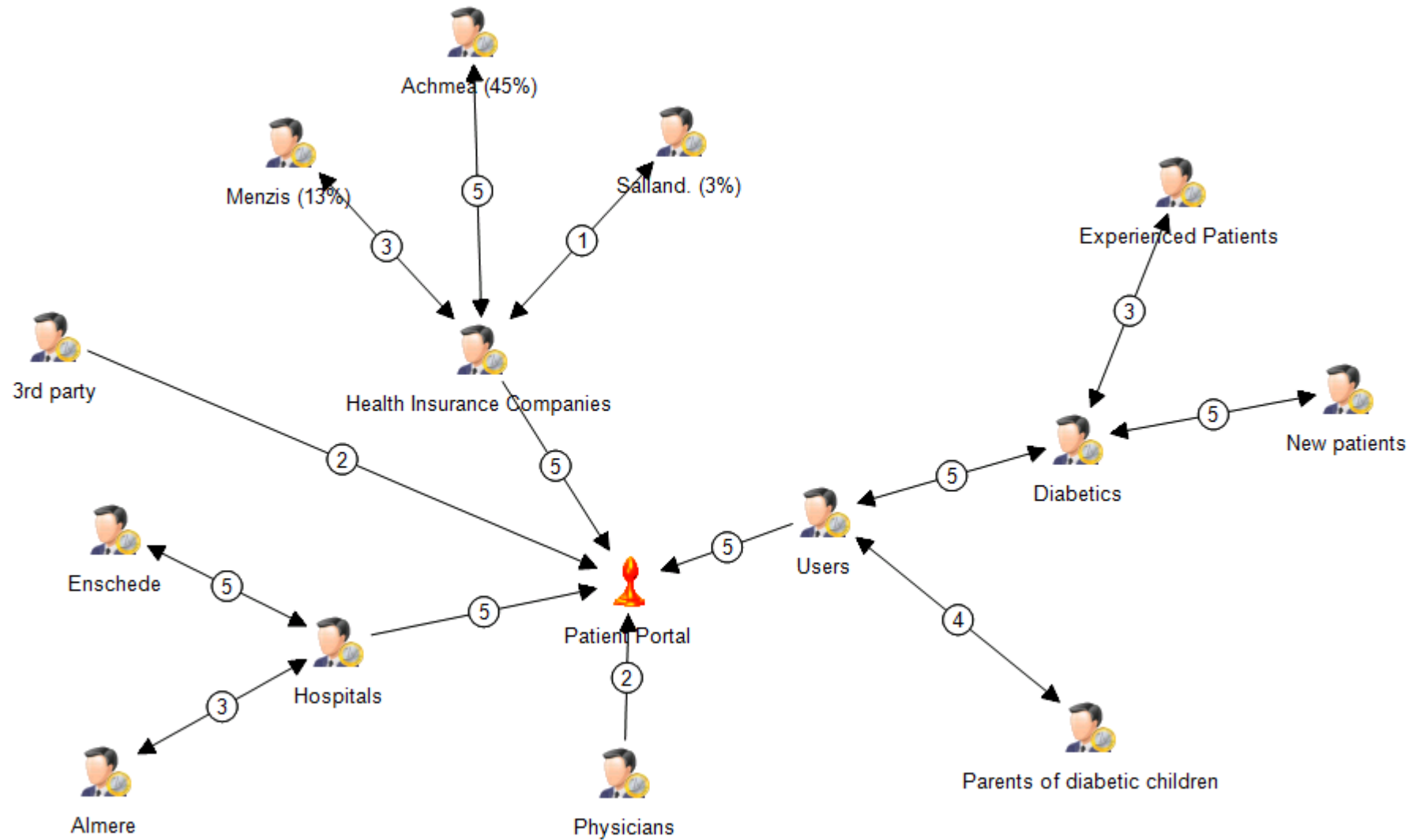


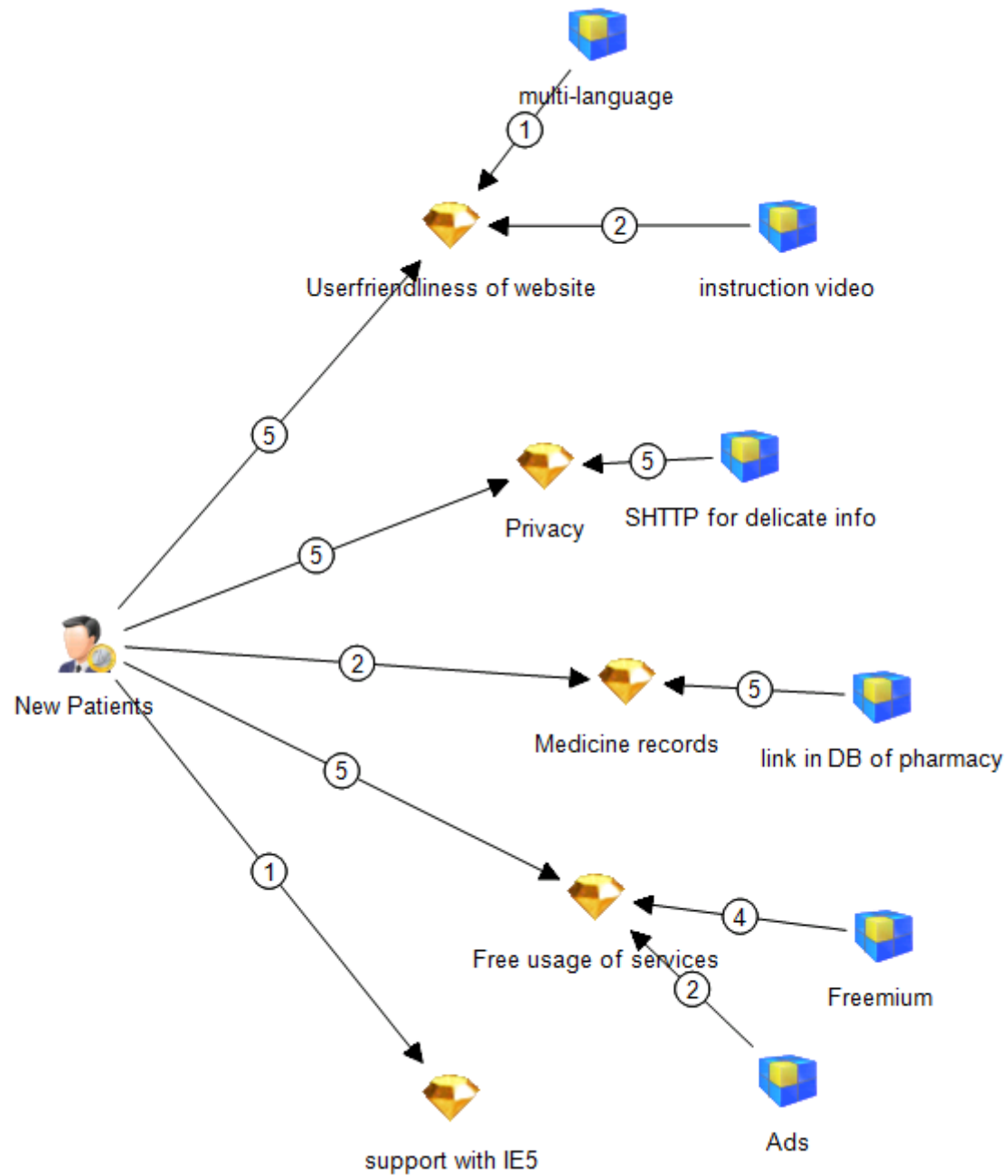
## Statement #6 Business modelling implies a holistic approach (Maarten, Hans)

---

- Collaborating health organizations
- Collaborating with patients
- Empowering patients
- Iterative process stimulating reconsideration of deep-rooted assumptions







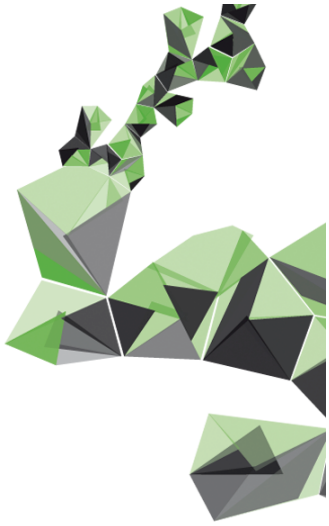
## **Statement # 7 Cooperation a multidisciplinary effort, but... (Liezl)**

---

- Telemedicine is a multidisciplinary effort

(Switch presentation)

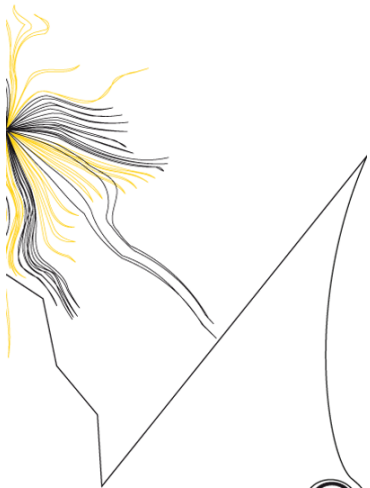




## Statement #8 Business modeling is overlooked or poorly understood in health care (Maarten)

---

- Existing business models are “simple sums”-models
- Based on fuzzy assumptions
- Skewed Critical Design Issues
- Borrowed Business models



Thank you  
Merci beaucoup  
Baaie dankie  
Bedankt

# Telemedicine: A multidisciplinary effort

## Why to use Business Modeling ~~ing~~<sup>S</sup> for Design and Implementation of Healthcare Technology

Liezl van Dyk  
(Stellenbosch University)

- “Bedryfsingenieur”

- Operations Research (Mathematical Modeling for Decision Making)
- Systems/ Business/ Enterprise Engineering

- 2005-2008 - E-learning Advisor

- From 2009: Engineering Management

- Engineering Faculty Telemedicine project



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UNIVERSITY

# Telemedicine: A multidisciplinary effort

Business (Process) Modeling  $\neq$   
Business Model

Management  
business  
processes

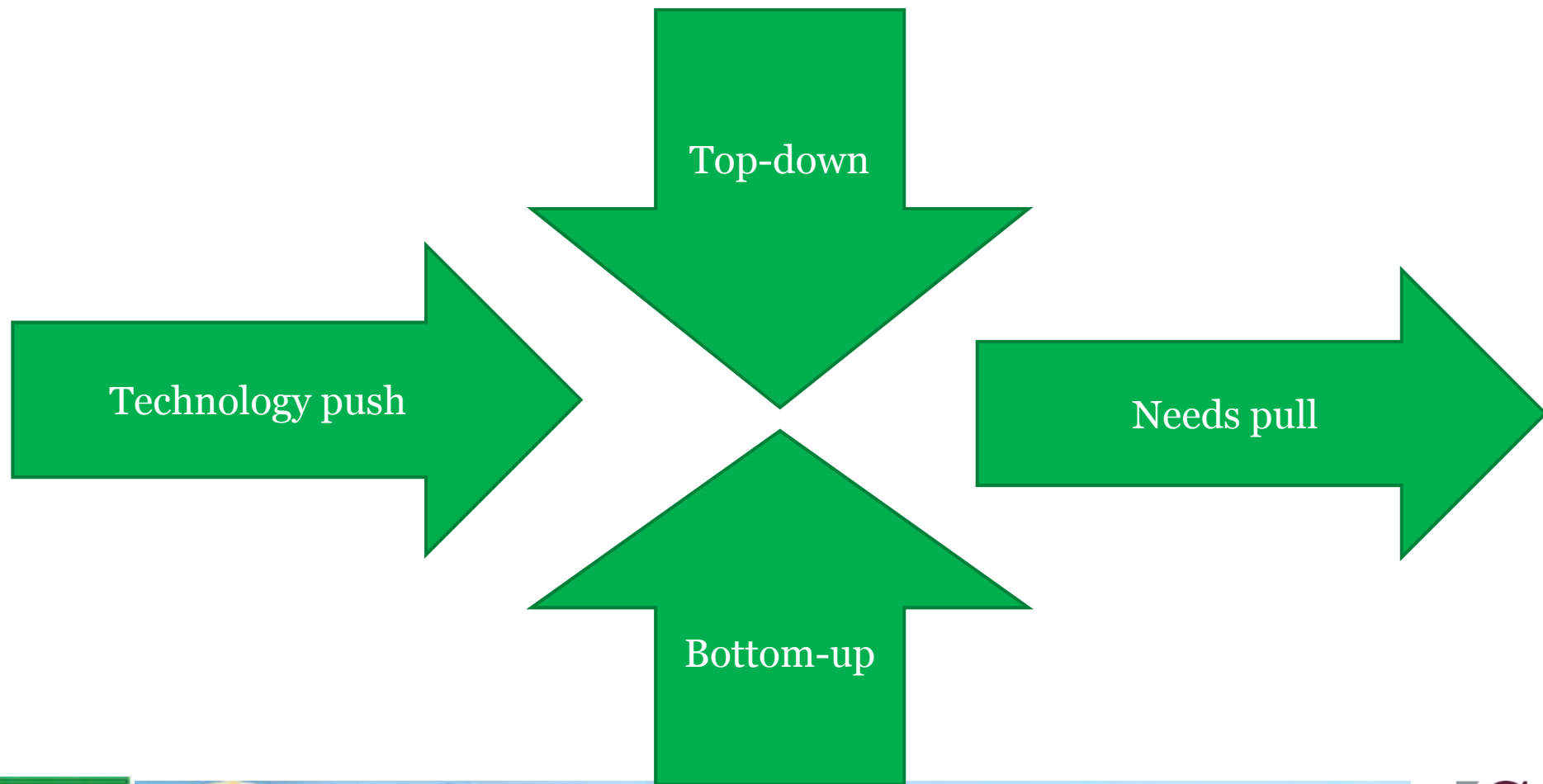
Operational  
processes

Supporting  
processes



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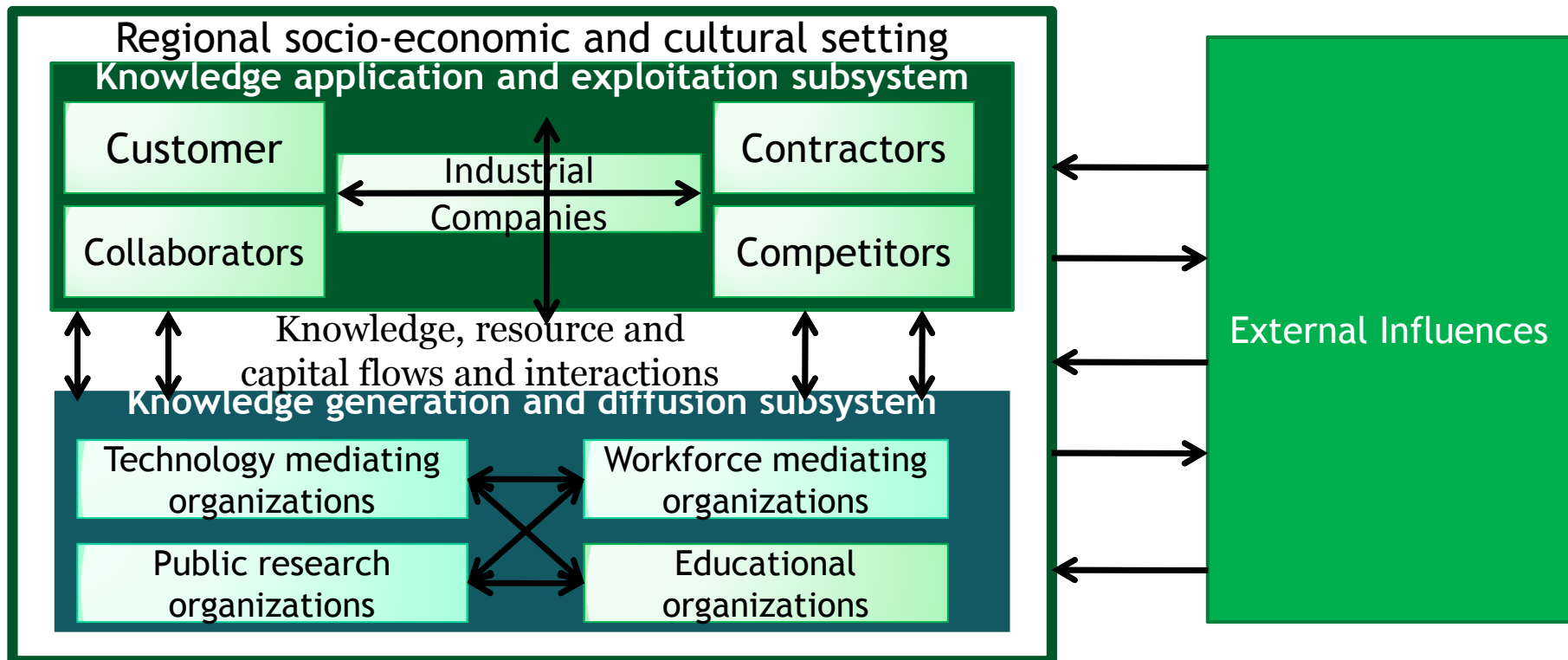
# Telemedicine: A multidisciplinary effort



# Who is the customer?

- Individual patient? Family of individual patient?
- Doctor? / Nurse? / Doctor-in-training
- Hospital (hospital group)? / Pharmacy? / Drug developer?
- Government (public health)? Private Healthcare provider?
- Medical School? / Medical Student? / Government?

## Regional Systems of Innovation



# Telemedicine: A multidisciplinary effort

## Open Business Models as answer to eTELEMED initiatives?

Open innovation (OI) is a strategy by which companies allow a flow of knowledge across their boundaries as they look for ways to enhance their innovation capability. Company boundaries become 'permeable', enabling the matching and integration of resources between the company and external collaborators. In a closed approach to innovation, a company relies on internal resources only.



# Telemedicine: A multidisciplinary effort

## “How to” Open Innovation

	OI motivation	21
<b>How to build an open innovation culture</b>	Company culture	24
	Cultural archetypes	24
	OI sub-cultures	25
	OI and R&D	26
<b>How to set up open innovation procedures</b>	The OI implementation team	30
	Case studies	30
	Activities of the OI implementation team	35
<b>How to acquire open innovation skills</b>	Skills for OI	42
	A framework for training and skills	42
	The risk of losing skills	44
<b>How to motivate employees</b>	Overcoming the NIH syndrome	46
	Reward systems and career paths	47
<b>How does this all fit together? A framework</b>	Top management	50
	Functions and sub-cultures	50



# Telemedicine: A multidisciplinary effort

- Is Open Innovation and Open Business Models the answer to getting things work in a multi-disciplinary environment?
- Is Web 2.0 an answer to the need for Knowledge Networks within context of eTELEMED?



# Organisational design as requirement for sustainable embedding of telemedicine

Panel contribution e-Telemed, February 12, 2010

**Marike Hettinga, Timber Haaker, Sikke Visser**

*Windesheim University of Applied Sciences, Zwolle, the Netherlands  
& Novay, Enschede, the Netherlands*

[m.hettinga@windesheim.nl](mailto:m.hettinga@windesheim.nl)



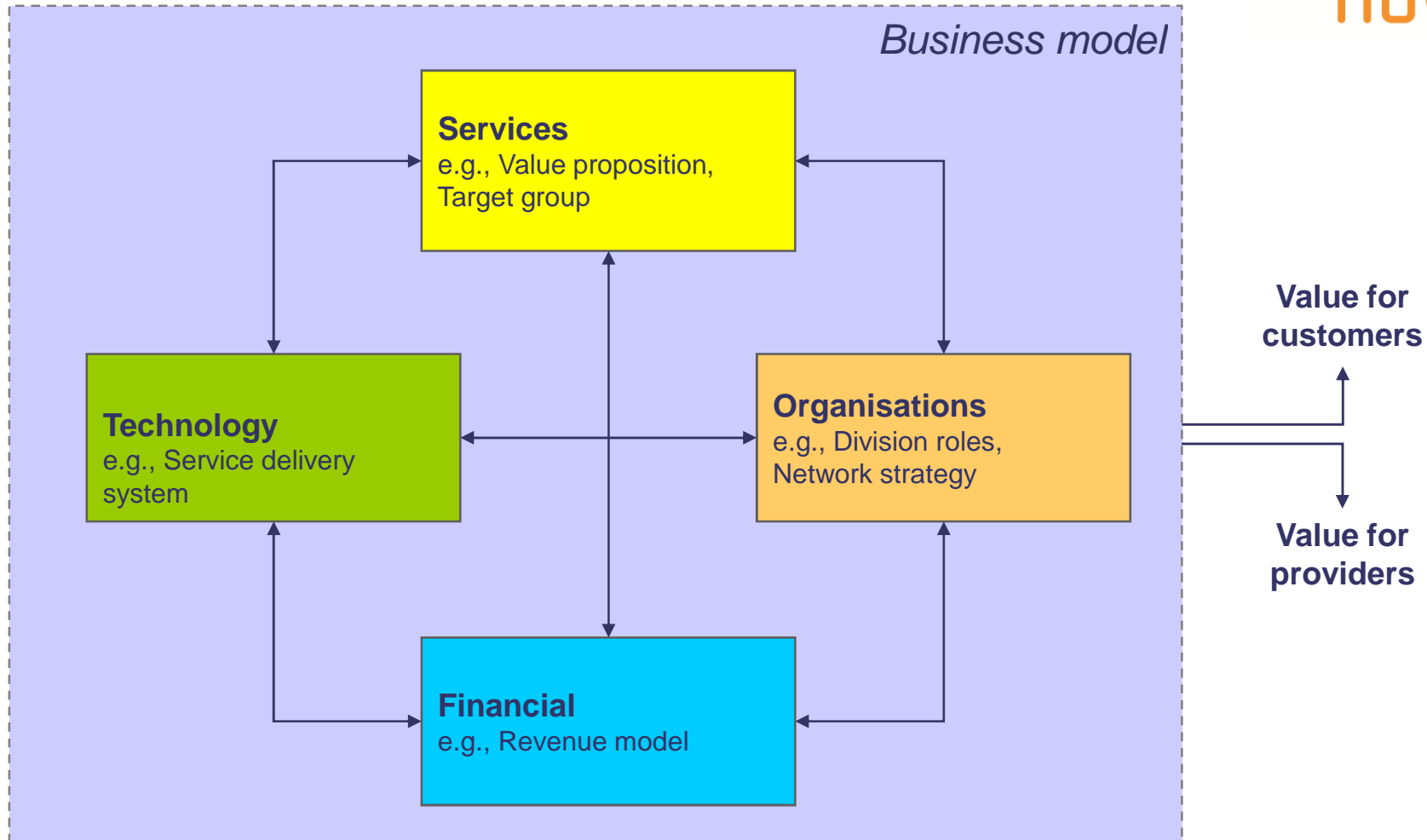
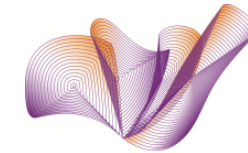
## gap between project and practice is too deep:

- too often: end-of-project equals end-of-telemed-innovation
- too late during project: anticipation on sustainable embedding of innovation in regular care practice

## opportunity using business model method:

- perspective switch: telemed-innovation as a service instead of a solely technological innovation
- development of a viable business model for this service





Creating successful ICT-services, practical guidelines based on the STOF method, Edward Faber en Henny de Vos (2008)  
See also: [www.stofmethod.com](http://www.stofmethod.com)

het gebeurt op windesheim



**An example:**

**Organizational arrangements for a  
Personalized Dementia Directory  
(PDD)**





# DementieWijzer

vraagbaak voor zorg- en welzijnsdiensten

zoek

Niet aangemeld.

Hoe werkt het?

Veelgestelde vragen

Nieuws

Informatie op maat

Helpdesk

Colofon

## Hoe werkt de DementieWijzer?



De DementieWijzer helpt u gericht te zoeken naar antwoorden op uw vragen over de zorg voor mensen met dementie. Daarnaast biedt de DementieWijzer actueel nieuws rondom dementie en de mogelijkheid om door te linken naar interessante landelijke en regionale websites. U kunt zelf een regio kiezen door deze op het landkaartje rechts op het scherm aan te klikken.

### Veel gestelde vragen

De DementieWijzer gaat uit van veel gestelde vragen. Wilt u bijvoorbeeld weten waar u terecht kunt voor hulp of hoe u in contact kan komen met anderen die in een vergelijkbare situatie zitten? Dan kan de DementieWijzer u helpen. Klik de voor u relevante vraag aan. DementieWijzer helpt uw vraag nader te specificeren.

### Informatie op maat

Naast algemene informatie over uw regio kunt u ook informatie op maat krijgen, die aansluit bij uw persoonlijke situatie. Wilt u dit, klik dan in het menu op



Nationaal

### Nationaal

#### Agis Zorgkantoor

Welkom op de website van Agis Zorgkantoren. De AWBZ is ee...

#### Alzheimer Café

Een Alzheimer Café is een maandelijks informele bijeenk...

#### Alzheimer Nederland

Alzheimer Nederland zet zich al ruim 20 jaar in voor mens...

#### Benjamin en de anderen

Een film over leven met dementie. Deze film rekt af met...

#### Breed Platform Verzekerden & Werk

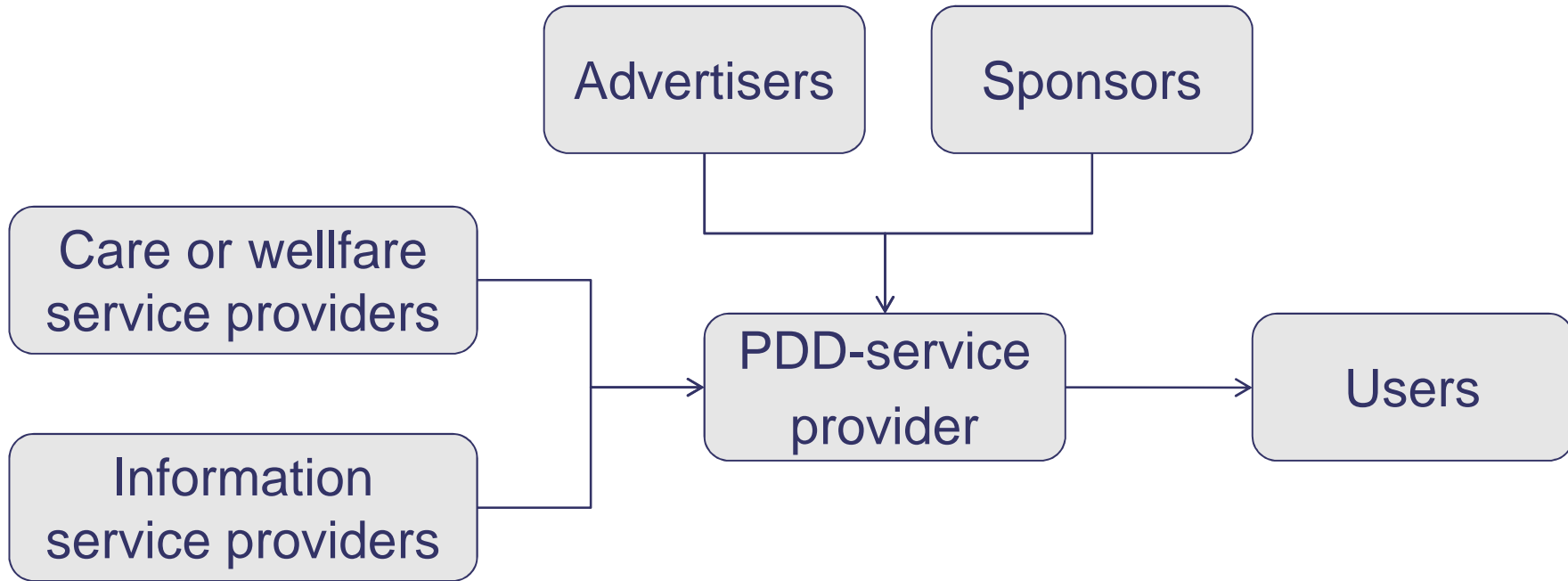
Vragen over werk, uitkeringen, verzekeringen? Deze websit...

in an early stage of the project:

- draw an inventory of all activities needed to offer this service
- cluster these activities in roles



# General role model for PDD





# Alternative organizational arrangements

Commercial model

Government model

Patient community model

Care provider model

Insurer model



discuss alternative models with stakeholders

graphical presentation makes it concrete and serves as a vehicle for discussion



Think of your own telemedicine projects...

How and when did you anticipate on the organizational role division for the sustainable offering of the service?

Please share your best practices!

