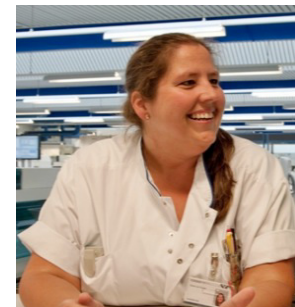




Upside down you're turning me... Tarte Tartin lean strategy

Marloes Hendriks, Henk Veraart
Elisabeth TweeSteden Hospital, The Netherlands





Ziekenhuis



Who are we?

- Marloes Hendriks, MSc, senior lean consultant
 - broad experience as a (lean) consultant in different hospitals and consulting firms (> 10 years)
 - m.hendriks@elisabeth.nl
 - nl.linkedin.com/in/hendriksmarloes/
- Henk Veraart, MD, ophthalmic surgeon,
 - board member Lidz (Lean in de zorg/Lean in healthcare)
 - H.veraart@elisabeth.nl
 - <http://nl.linkedin.com/in/henkveraart/>
 - Twitter: @henkveraart





You are here

St. Elisabeth Hospital



- Budget >220 million Euro
- 28 disciplines
- Annual:
 - ✓ 347.000 outpatient visits
 - ✓ 44.000 admissions
(16.000 in day care)
 - ✓ 30.000 urgent care
- 3.500 employees
- 180 doctors
- 200 medical residents

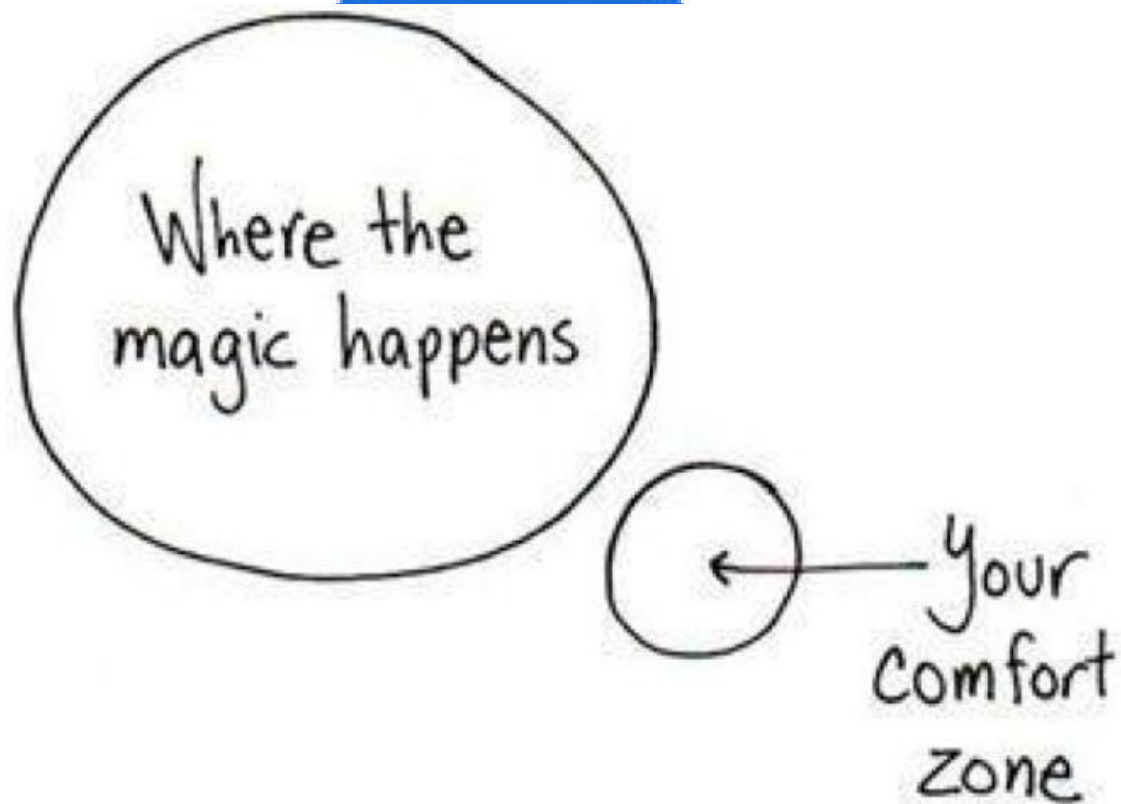
TweeSteden Hospital



- Budget > 155 million Euro
- 22 disciplines
- Annual:
 - ✓ 306.000 outpatient visits
 - ✓ 42.000 admissions
(22.500 in day care)
 - ✓ 30.000 urgent care
- 2.200 employees
- 170 doctors
- 80 medical residents

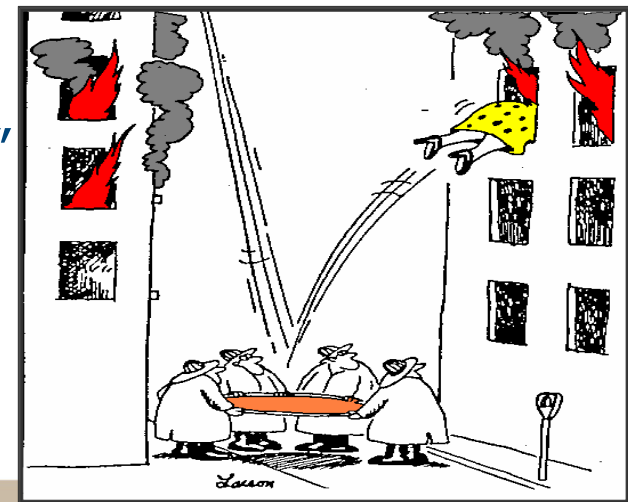
Learning objectives

- Understand the different strategies for lean: top down vs. bottom up ("Tarte Tatin") orientated.
- Understand the pro's and con's for each strategy
- Know how to decide on the best strategy for your organisation, related to the lean-objectives

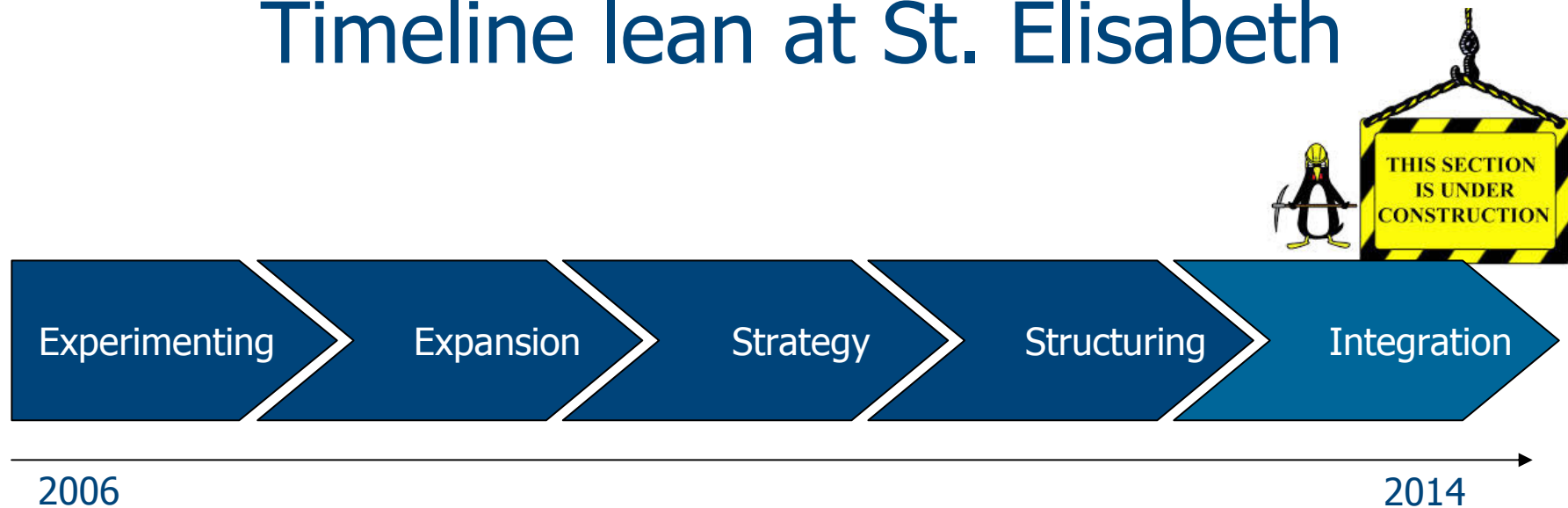


Situation at the beginning - 2006

- Externally driven improvement projects
 - Project-based
 - Top-down
 - Short term results
- No acceptance
 - No learning
 - Not sustainable
 - Exhausting
 - “Firefighting”



Timeline lean at St. Elisabeth



Phase 1: Experimenting by frontrunners: LMMI, neurosurgery, orthopedics

- Sense of urgency: high costs, searching for new methods for improvement, renovation
- Nurses and doctors' initiative
- Coincidence: "right answer at the right moment"



Phase 2: Results and enthusiasm: spreading the virus

- Low hanging fruit: translating 14 principles to your own department, right words to susceptible people, creating ambassadors, creating leading coalition
- Process improvements: "Quick wins"
- Inspiration: Lean healthcare summits USA, several Dutch companies, Toyota Prague,
- Research by master-students



Phase 3: Lean becoming part of the strategy of the hospital.

- Loving Care
- Lean
- Quality & safety

De toekomst van het St. Elisabeth Ziekenhuis Tilburg laat zich in vier woorden omschrijven:

- + **Lief**, wat staat voor menslievende patiëntenzorg;
- + **Lean**, wat staat voor een efficiënte bedrijfsvoering;
- + **Kwaliteit en Veiligheid**, voor verantwoorde patiëntenzorg.

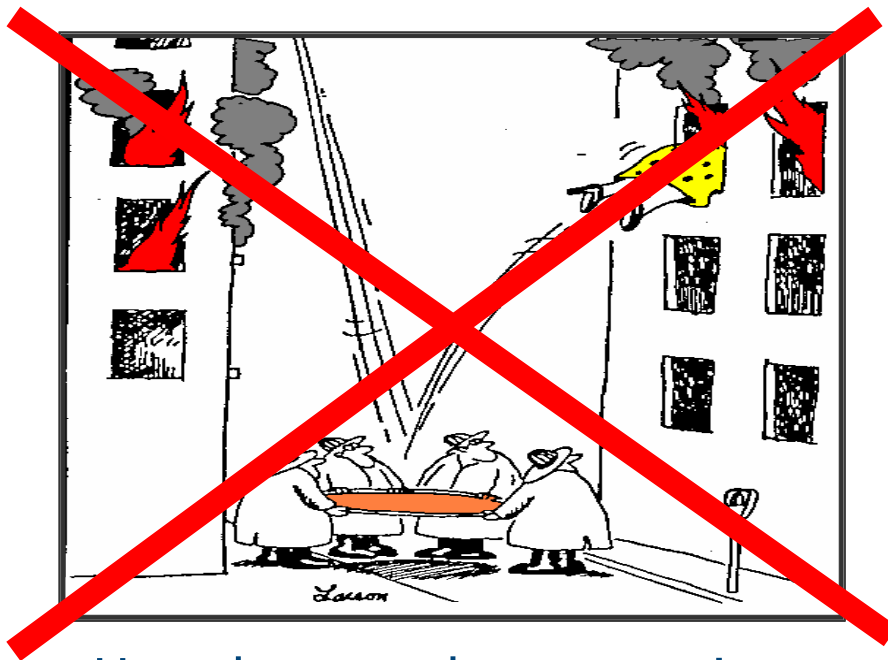


Goals for Lean at St. Elisabeth

1. Creating an improvement culture: Improvement of problem solving capabilities throughout the entire organization
2. Improvement of the process by eliminating waste



Phase 4: Improvement structure



How do we make process improvement part of everyone's daily work?



Elements of the improvement structure

- Daystart / evaluation
 - Improvement board
 - Kaizen
 - Visualization
 - A3
 - “Keek op de week”/ “weekly watch”
 - 5S
- Coaching and lean leadership



Improvement structure: daystart, evaluation




Improvement structure: improvement board

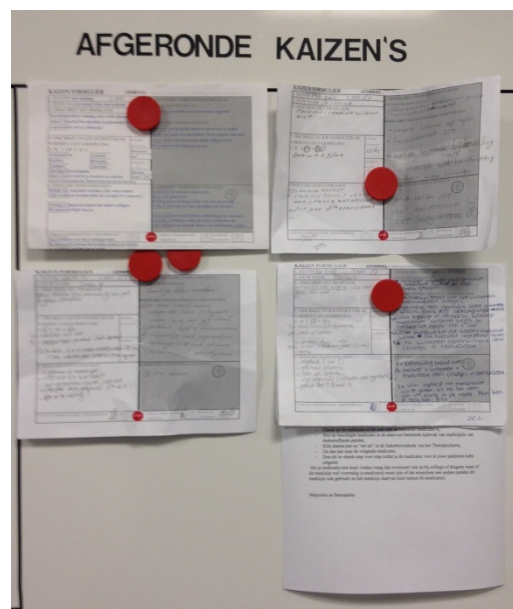
Waar lopen wij tegen aan?						
Nr	Melddatum	Door wie?	Waar loop ik tegen aan?	Wat is de oorzaak?	Verbetervoorstel Actie+ Door wie	Datum evaluatie
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						



Improvement structure: Kaizen

KAIZEN FORMULIER **LEERDOEL:** PROBLEEMOPLOSSEND VERMOGEN TEAM VERGROTEN

1. DATUM VANDAAG		2. AFD.		A. MOGELIJKE VERBETERMAATREGELEN	
3. JOUW NAAM				HOE IS HET BRANDJE GEBLUST?	
4. OMSCHRIJF HET PROBLEEM				MOGELIJKE TEGENMAATREGELEN	
5. OMCIRKEL EN KWANTIFICEER VERSILLING O W T O P V B C		JAARLIJKS (0,7% PER MO)			
		TOTAAL:			
6. MOGELIJKE (KERN) OORZAKEN				B. GEKOZEN VERBETERMAATREGELEN	
7. PARAAF LEIDINGGEVENDE VOOR PROBLEEM		1		 C. PARAAF LEIDINGGEVENDE VOOR PLAN	
		2		D. DATUM AFGEROND	
		3			

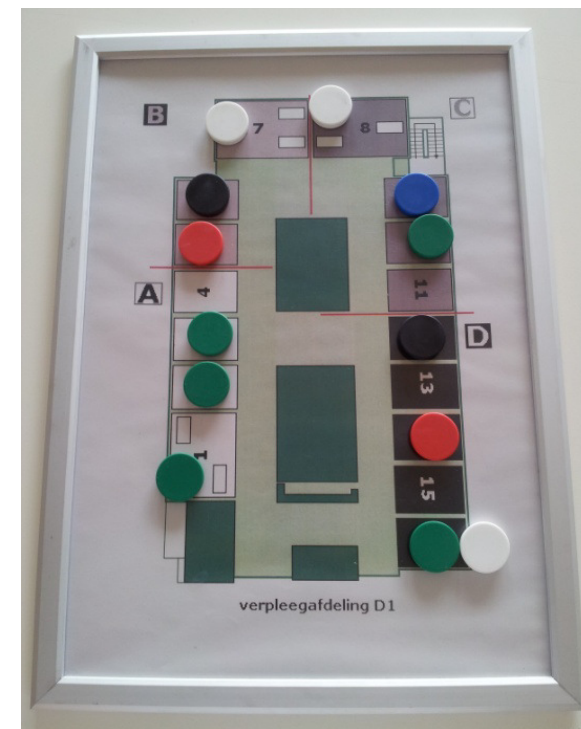


Kai Zen

 Change Good



Improvement structure: visualization



Improvement structure: A3

A3

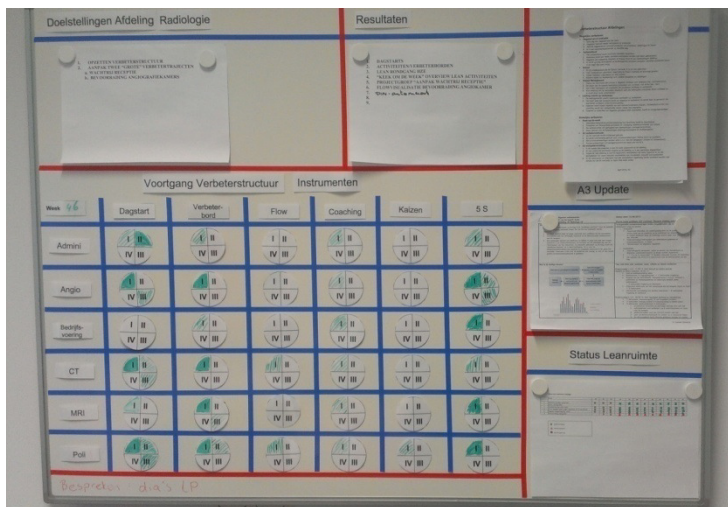
Eigenaar verbeteractie:
Afdeling:

Datum start:
Proces (waar probleem zich voordoet):

1. Wat is het probleem?	5. Verbetermaatregel
2. Wat is de huidige situatie?	6. Test (wie doet wat, wanneer, waar, criteria en datum evaluatie)
3. Wat is de (kern)oorzaak van het probleem?	7. Evaluatie test + eventueel nieuwe test
4. Wat is de wenselijke situatie?	8. Conclusie + consequentie



Improvement structure: “keek op de week” = “weekly watch”



Improvement structure: 5S

- Goal: workplace without waste
- 5 steps



Improvement structure: coaching and lean leadership

“White Coat Leadership”

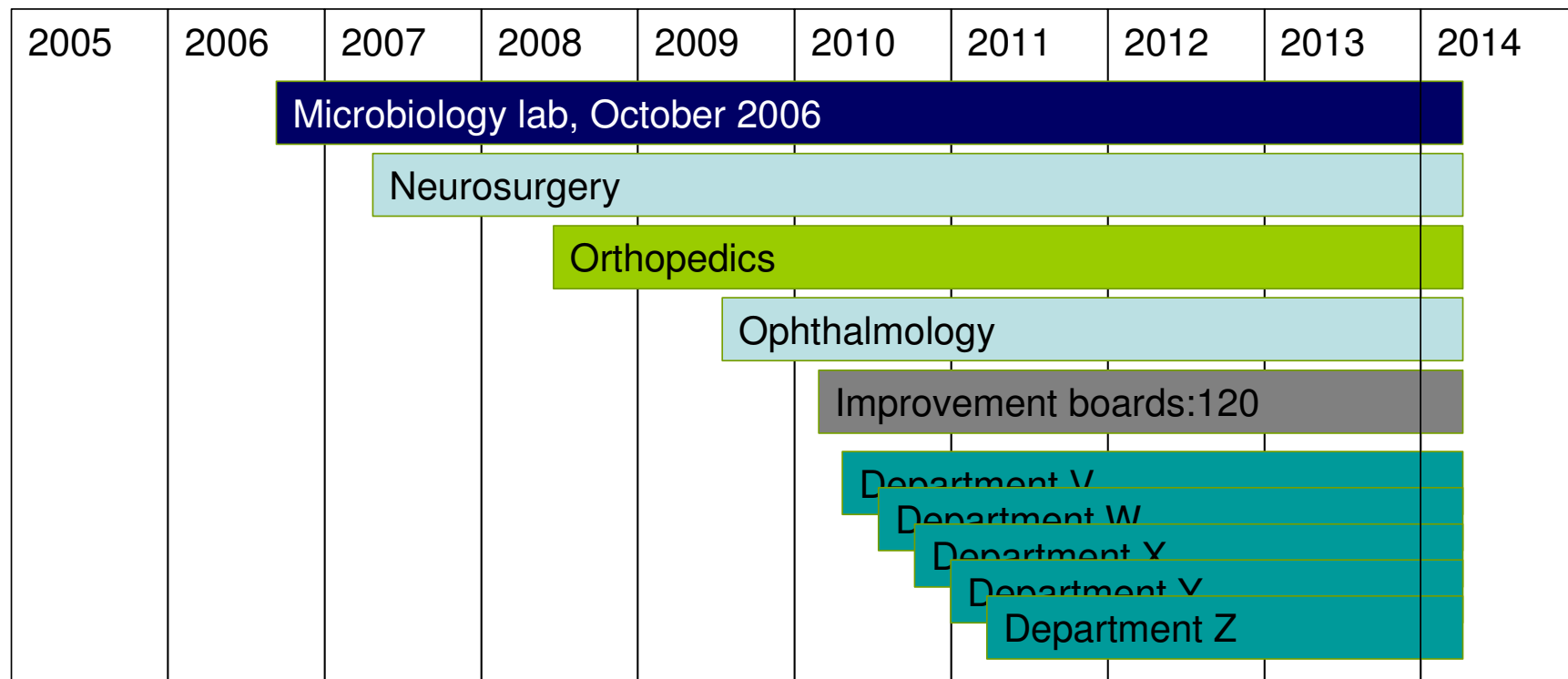
- All knowing
- “In charge”
- Autocratic
- “Buck stops here”
- Impatient
- Blaming
- Controlling

Lean Improvement Leadership

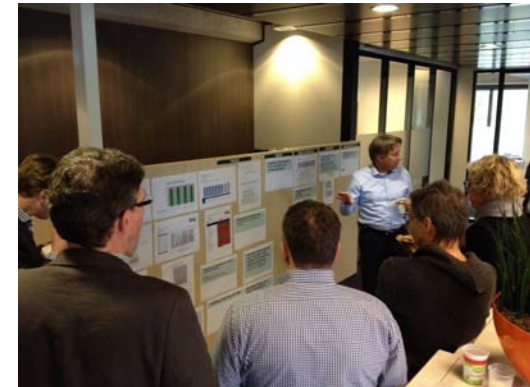
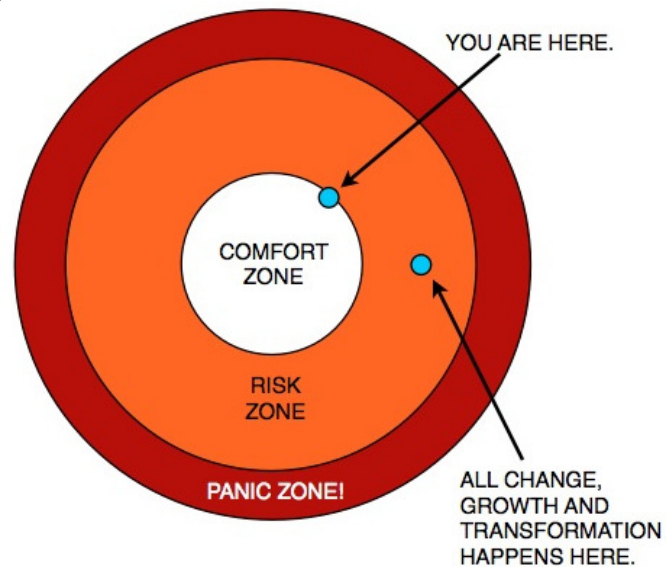
- Patient
- Knowledgeable
- Facilitator
- Teacher
- Student
- Helper
- Communicator
- Guide



Expansion of the improvement structure



Phase 5: struggling Board takes responsibility for lean



Next steps: 'our north'

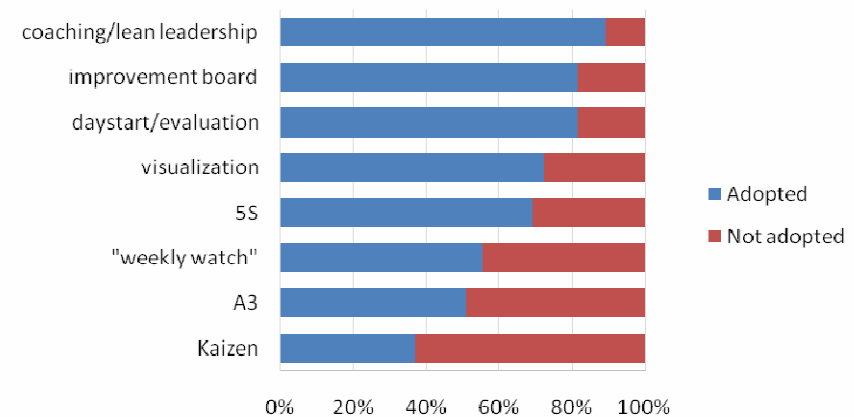
- Merge with TweeSteden Hospital
- Improvement across departments
- Lean leadership everyday and at all levels
- Align hospital long-term goals and daily improvement
- Lean = the way we improve



Results: problem solving capabilities

- 2013: > 6000 improvements
- Start and end the day as a team
- More involvement
- More ownership

Adoption of improvement structure



Results: Improved value streams

Cataract process

- All appointments planned at once
- Reduction of:
 - 1 visit to the hospital
 - 1 visit to the pharmacy
 - 1 visit to optometrist (450 hours)
- Reduce waiting time at outpatient clinic by combining steps



Reduction throughput time microbiology lab

Old situation:

- Average throughput time: 65 hours (64,6 hours waiting)
- Lots of searching, variation in workload



Batch-analyzer

Improved situation:

- From batch to one piece flow
- Average throughput time: 3 hours



Random access analyzer

Reflection: early adaptors believed in lean and got the freedom to experiment

- Right answer at the right moment
- Professionals believed in the possibilities
- Departments and staff were free to experiment; together
- Higher management involved; not responsible



Reflection: benefits of our 'tarte-tatin'-strategy



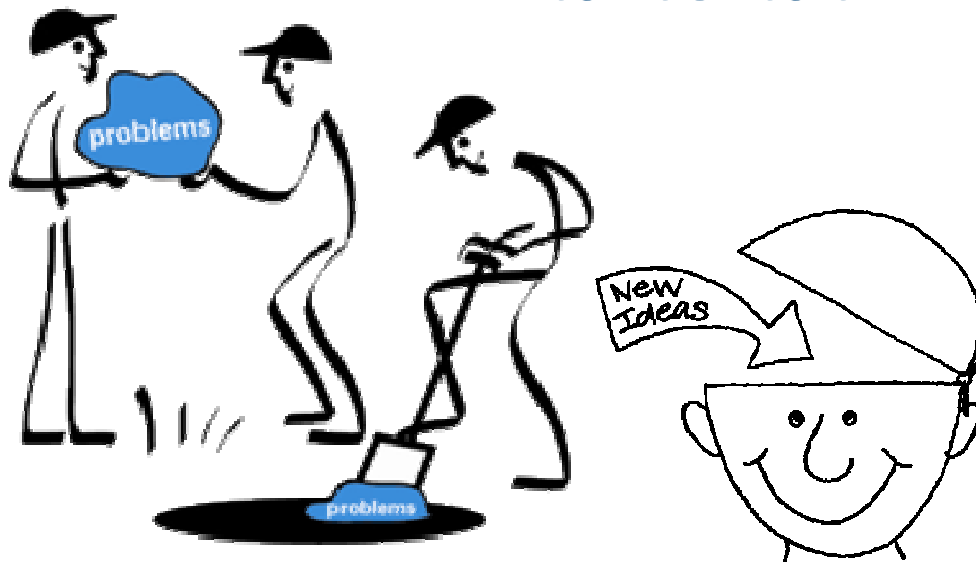
Ownership:
professionals and teams



Homemade:
proud and adjusted to
the needs of the team



Reflection: benefits of our 'tarte-tatin'-strategy



Change of behavior and
culture within teams

Increased problem
solving capabilities

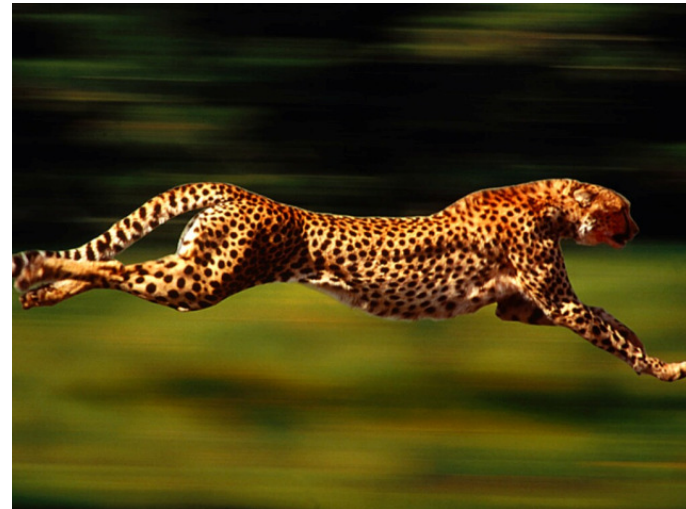


**HAPPY
WORK**

Reflection: the downsides



VS.



Reflection: the downsides



VS.



Reflection: the downsides



VS.





Looking at the literature: change and strategies for change

	Emergent / incremental change Bottom-up	Planned change Top-down
Characteristics	<ul style="list-style-type: none"> • Continual process: experimentation and adaptation • Exact goal is unclear • Management as a coach for change – bottom up • Consultants focus on the process • Focus on behavior and culture 	<ul style="list-style-type: none"> • Clear beginning and end (project) • Unfreeze-change-freeze (Lewin) • SMART goals • Driven by management – top down • Consultants as experts • Focus on results, structures and processes
Strategies for change	<ul style="list-style-type: none"> • Acceptance; connecting different interests • Learning and developing 	<ul style="list-style-type: none"> • Force and power • Convincing by using arguments (for example results and urgency)



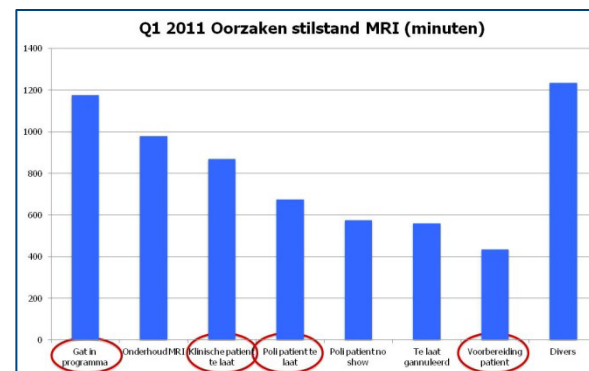
Looking at the literature: effects of these strategies

	Emergent / incremental change Bottom-up	Planned change Top-down
Effects	<ul style="list-style-type: none"> • Stimulating creativity • Increasing ownership professionals • Messy, sometimes inefficient • Effects often unpredictable • Difficult to let go of management's controlling behavior 	<ul style="list-style-type: none"> • Predictable effects • Fast results • Commitment higher management • Often resistance • Risk of falling back when management attention decreases

Strategy mainly depends on goal and commitment

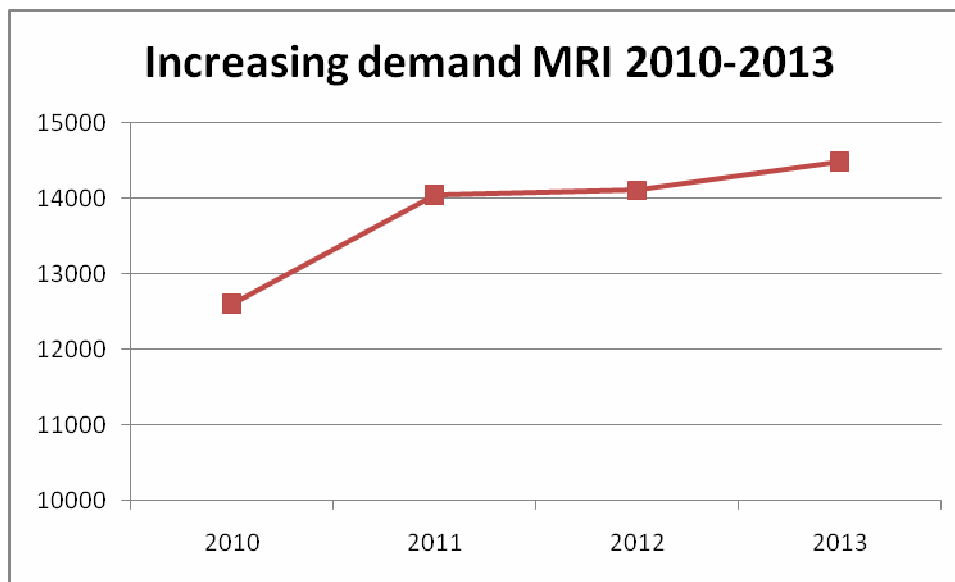
Top-down: an example

- Problem: how can we keep an acceptable access time with increasing demand?
- Higher management 'ordered' the MRI-team to solve this



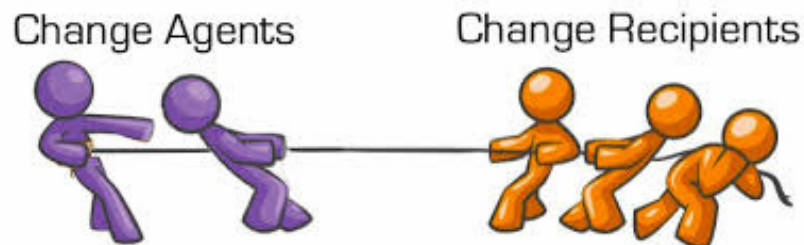
The results: stable access time, more patients

- Stable access time, more patients (+ 15%)



The results: lean is associated with top-down goals, not daily improvement

- Resistance and distrust within the team
- Lean is experienced as a push, not a pull
- Difficult to achieve an improvement culture



Wrap-up; discussion

- Tarte tatin is the only lean strategy for sustainable, daily improvement; everyone, everyday
- Tarte tatin is the only lean strategy for touching the hearts of the co-workers (change of culture and behaviour)
- Apply push and pull also to the change-process
- Only apply top-down strategies when:
 - high urgency for quantitative results
 - quantitative results are the only goal

