

Video instructions & slides

Lean Seminar / IO Leadership meeting

- *Towards a congruent understanding of lean* -

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Niklas Modig

Niklas Modig is a researcher at the Center for Innovation and Operations Management at Stockholm School of Economics, Sweden. He has been living for extended periods in Japan since 1994 and reads, writes, and speaks Japanese fluently. From 2006 to 2008, Niklas was a visiting researcher at the “Center of Excellence – Manufacturing Management Research Center” at the University of Tokyo, where he was supervised and led by professor Takahiro Fujimoto who is the leading Toyota researcher of all time. As the first and only foreign researcher in the world Niklas was given access to conduct a in-depth study of Toyota Motor Corporation’s own view of their production philosophy and their “people-making processes” in Japan. Niklas’ main research focus is how Toyota Motor Corporation is extracting their competitive advantage and transferring the Toyota Production System outside their manufacturing system. Another research interest is how to create “one lean system”, i.e. a holistic philosophy covering the whole value chain. Niklas holds a M.Sc. (Operations Strategy) from Stockholm School of Economics and he will defend his doctoral thesis - “*Born Lean: An empirical investigation of how TPS is integrated within the Toyota car dealer industry*” - in 2010. He is also certified within communication and change - communicology - specializing on facilitation within operational development. He works as a supervisor and facilitator for various multi-national companies and organizations, such as Scania, Telenor, Sandvik, AstraZeneca, TeliaSonera, Siemens, Statoil, EDB, Fujitsu, SEB, Nordea, Norrmejerier, Nordic Hotels, various hospitals and governmental organizations, etc. and has taken a prominent position as an inspirational lecturer within the field of lean service and operational excellence. In parallel with his business research, Niklas is also researching about “communication and teaching excellence” by making qualitative studies of various world-class organizations aiming to create behavioral change through instant mindset and competence integration. Niklas “produces” lean competence.



Instructions for the video material

- The video material was recorded May 10th 2010 and covers the Lean seminar / IO leadership meeting held in Gothenburg! The video is divided into 14 small video modules together covering the different parts of the seminar:
 - Introduction, Part 1, Part 2, Part 3, Part 4, Part 5
The intention of the video material is to use the modules as train-the trainer material, i.e. a person who attended the original seminar shows the video for other employees and together discuss the very same questions while watching the video.
- The printed slides (this documentation) can be used as a complement for the discussion.
- The aim is consequently – by using the same material and conducting the same exercises - to create a congruent view of “ what lean is” within the organization of Volvo Car Corporation.
- The modules can be watched in separate sessions, but the sequence has to be followed, i.e. one has to start from the beginning and then continue. It is recommended to run all films in one session and to pause after each film for joint reflections and discussions on own action plan.
- Everything that is written on the whiteboard during the seminar is included in this documentation as pictures. There are also extra slides included in the documentation complementing the pictures.

Video module	Video module	Slides
2 Introduction – Niklas Modig	17.33 min	Slide 0.1-0-5
3 Part 1 – Lean as a strategy - Introduction	22.44 min	Slide 1.1-1.12
4 Part 1 – Exercise 1 – Flow in a service process	06.06 min	Slide 1.1-1.12
5 Part 1 – Exercise 2 – Flow in a sales process	25.34 min	Slide 1.1-1.12
6 Part 1 – Exercise 3 – Flow in an innovation process	13.09 min	Slide 1.1-1.12
7 Part 1 – Questions & summary	07.13 min	Slide 1.1-1.12
8 Part 2 – The intention of lean – Introduction	18.13 min	Slide 2.1-2.5
9 Part 2 – The learning organization (demo of the dentist example)	09.10 min	Slide 2.1-2.5
10 Part 2 – Exercise 1 – Prerequisites for a learning organization	07.13 min	Slide 2.1-2.5
11 Part 3 – The content of lean - Introduction	13.39 min	Slide 3.1-3.4
12 Part 3 – Exercise 1 – Jidoka in product development	05.15 min	Slide 3.1-3.4
13 Part 3 – Exercise 2 – To set, hold and change standards	08.27 min	Slide 3.1-3.4
14 Part 4 – How to become lean - Introduction and exercise	12.26 min	Slide 4.1-4.3
15 Part 5 – Lean management - Introduction and exercise	13.04 min	Slide 5.1-5.2

Outline of the seminar

INTRODUCTION!

- Niklas Modig

PART 1 - Common understanding of **what lean is** (and what lean is not) as a “strategy” irrespective of contextual setting.

- “One lean system” vs. a “lean function”
- Corporate lean strategy vs. functional lean strategy

PART 2 - Common understanding of the **intention / goal of lean**.

- “When” is a system lean?
- Short-term perspective vs. long-term perspective
- Static perspective vs. dynamic perspective

PART 3 - Common understanding of the **content of lean**.

- Philosophical level (values, principles and frames)
- Operational level (methods, tools and activities)
- Congruence vs. incongruence within “a system”

PART 4 - Common understanding of “**how**” to become lean.

- Strategies for “integrating” lean on a philosophical level
- Strategies for “implementing” lean on an operational level
- Rapid transformation projects vs. development of an evolutionary learning capability

PART 5 - Common understanding of **lean management**.

- Prerequisites, requirements, commitment, ownership, mindset, etc.
- Balancing “push” and “pull”

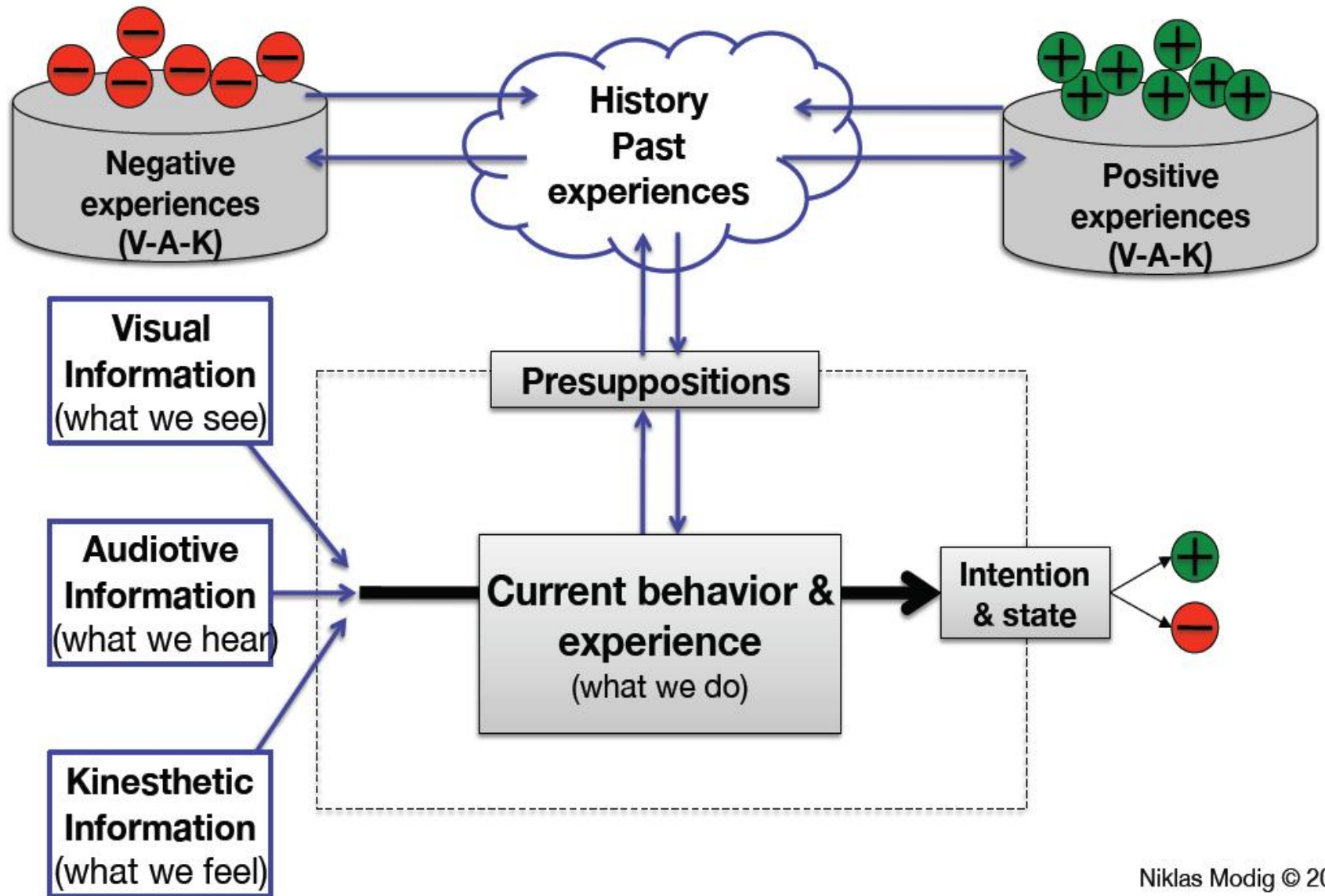
Introduction

- *What is the intention of this seminar?*

Niklas Modig!

0.1 Presuppositions

Everything we experience is “filtered” through our presuppositions

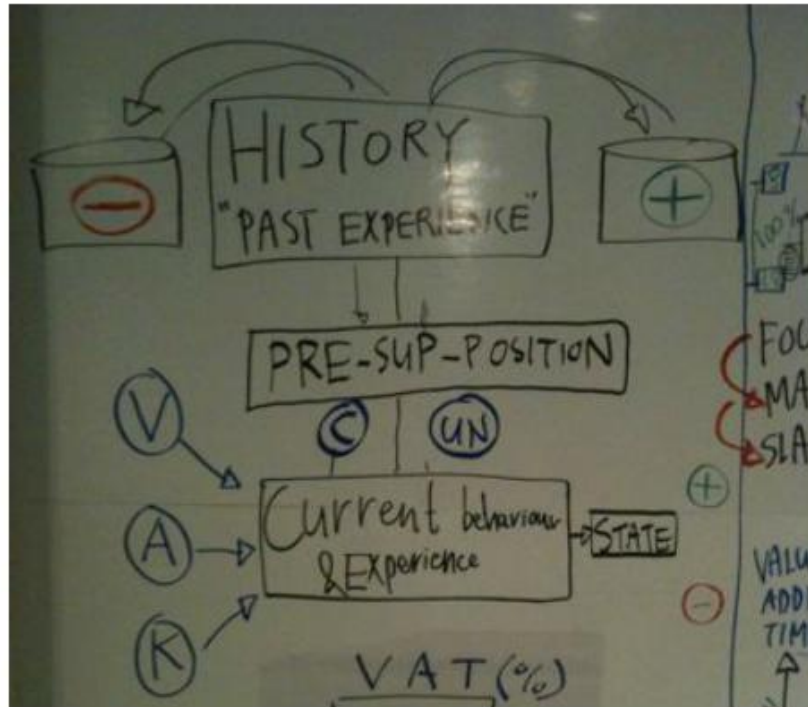


0.2 Four small tests – what did your brain “do” with you...

- Why is his **shirt outside**... looking lousy!!
- **Aerobics instructor**... what kind of “man” is Niklas...?
- “**Take**” suicide... correct English is “**commit**” suicide...
- He can't spell “**disipline**”... it is **DISCIPLINE!!!**

0.3 Presuppositions

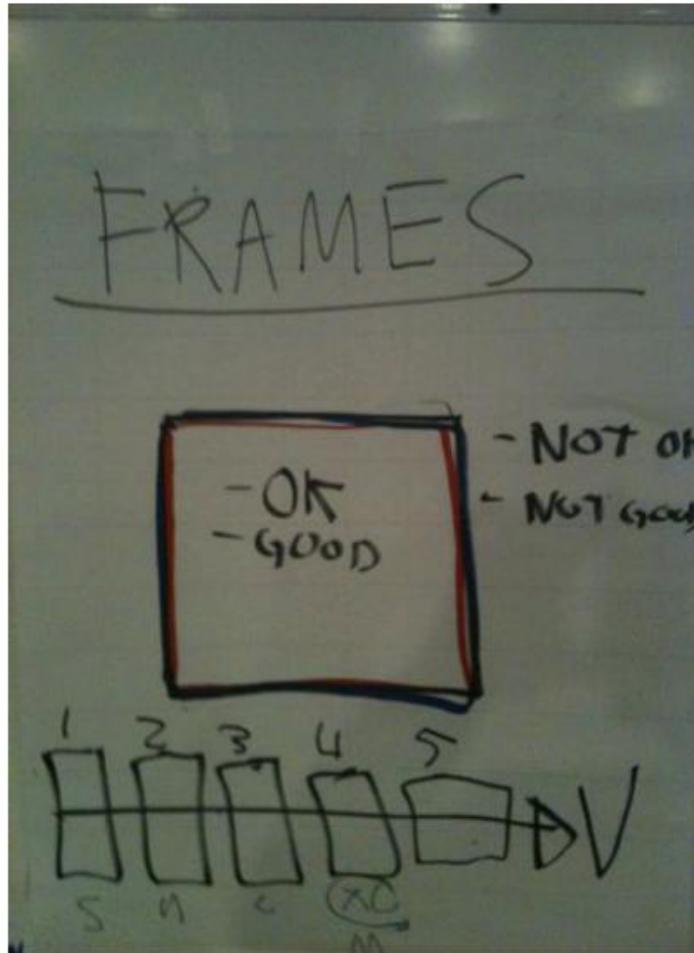
A **presupposition** is something we only can change through consciousness and “new history”, i.e. a new way of doing things.



- Pre-sup-position = *something that you "put under" before.*
- Everything that we experience is registered as “presuppositions” in the limbic system in our brain.
- These “self-created” presuppositions define and affect our current behavior, how we experience “new” things and consequently our current “state”.

0.4 Frames

In contrast to presuppositions, a **frame** is something we can “set” in order to define what is correct, good, normal, ok, etc.



- It is our frames that “decide” what we shall do
- Frames define what is possible and what limitation we have
- What is inside vs. outside a frame?
- A frame defines:
 - *What is normal, what is not normal?*
 - *What is ok, what is not ok?*
 - *What is correct, what is not correct?*
 - *What is good, what is not good? (etc)*
- Frame competence = An ability to “handle” frames, i.e. to set, hold, follow, change, expand, choose, respect, describe, explain, evaluate, adjust, clarify, etc.

0.5 The intention of the IO leadership seminar

- To create a congruent view**
- i.e. common presuppositions -**
- regarding what lean is**
- and what lean is not**

Part 1

- *What a “lean” production strategy is,
and what it is not.*

1.1 Two different production strategies

Toyota developed a “lean” manufacturing strategy

Mass production

- Western manufacturers
- Maximizing capacity and resource utilization (value adding time) by having inventory as slack.
- Goal: 100% Value Adding Time



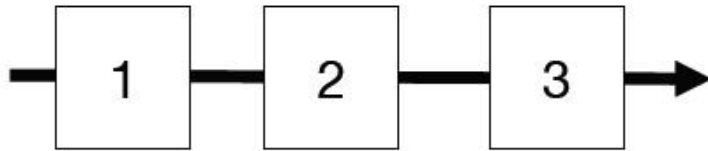
Lean production

- Toyota Motor Corporation
- Maximizing flow (value receiving time) by having capacity as slack
- Goal: 100% Value Receiving Time

1.2 Two different production strategies

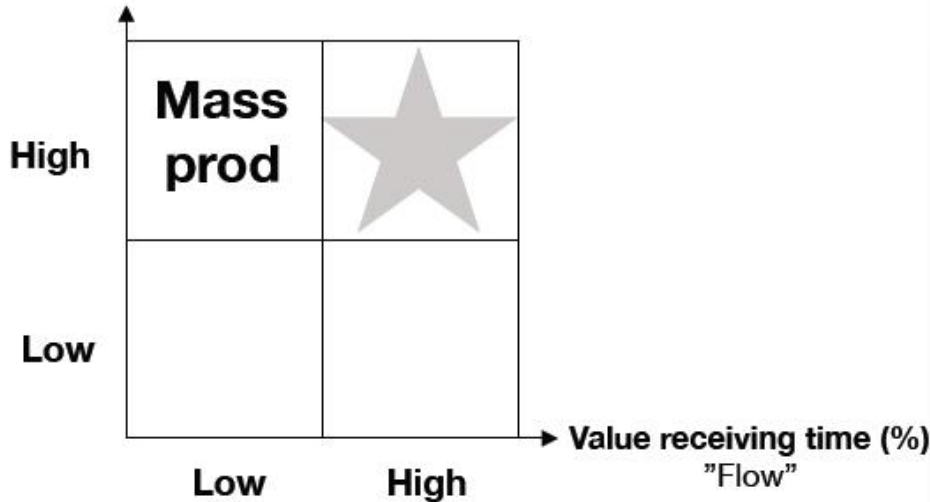
Toyota developed a “lean” manufacturing strategy

Mass production
(To attach work to people)

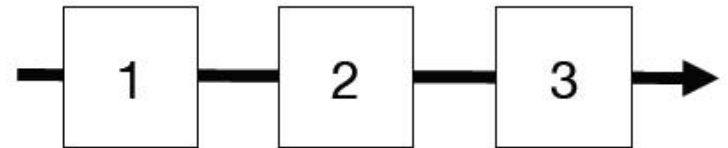


Focus: Resource
Maximize: Capacity utilization
Slack (buffer): Inventory

Value adding time (%)
"Capacity utilization"

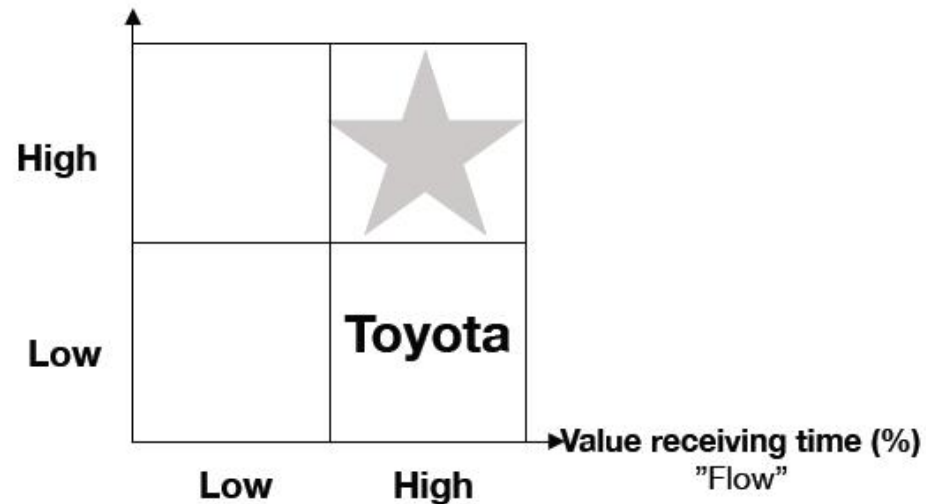


Toyota
(To attach people to work)

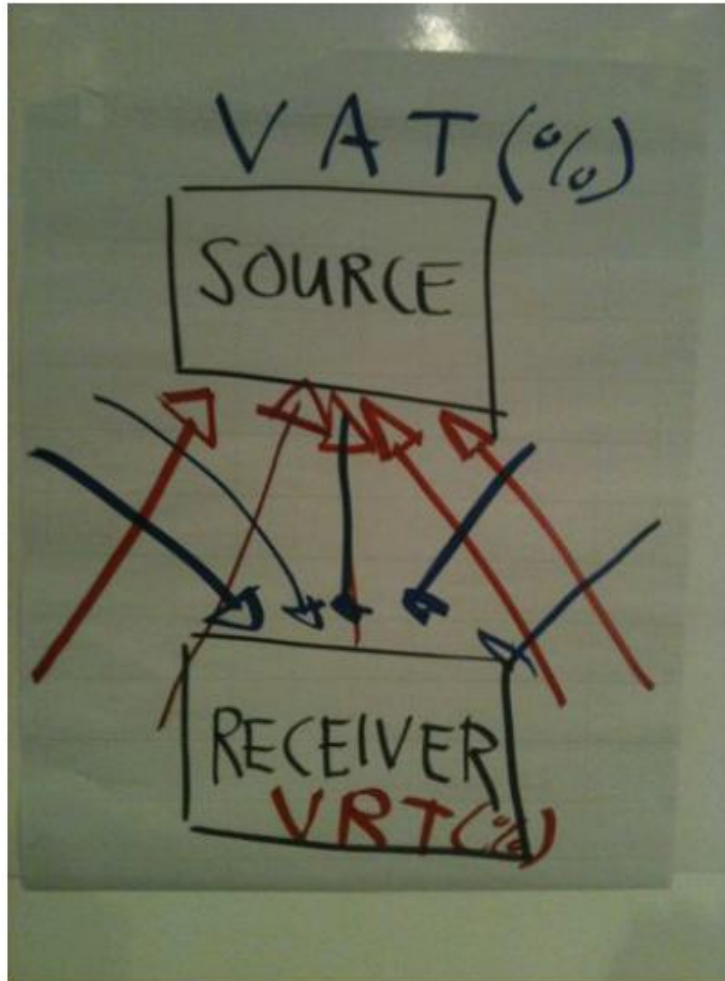


Focus: Customer (ext/int) → System
Maximize: Flow
Slack: Capacity

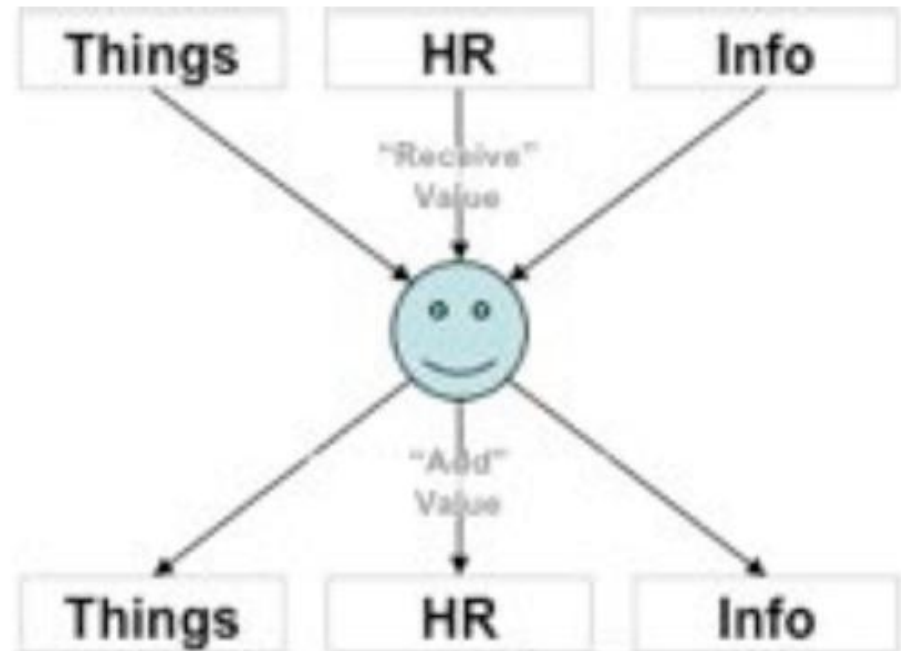
Value adding time (%)
"Capacity utilization"



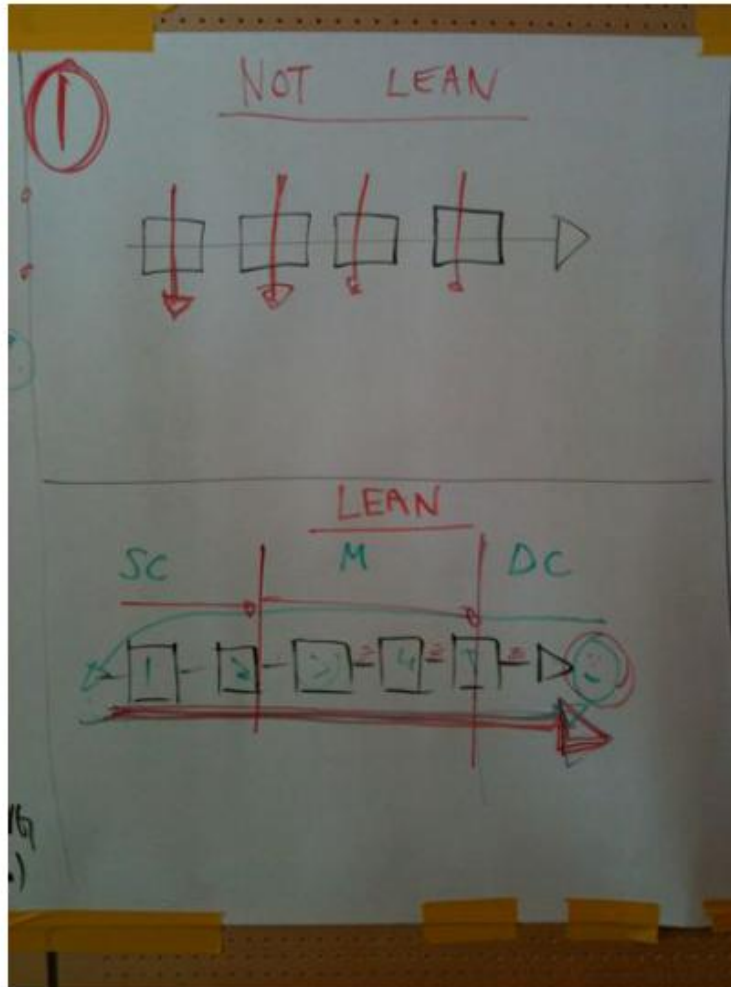
1.3 Value transmission perspective



- Every employee is a customer (receiving value from someone or something) and every employee is a supplier (adding value to someone or something)



1.4 To define a lean strategy



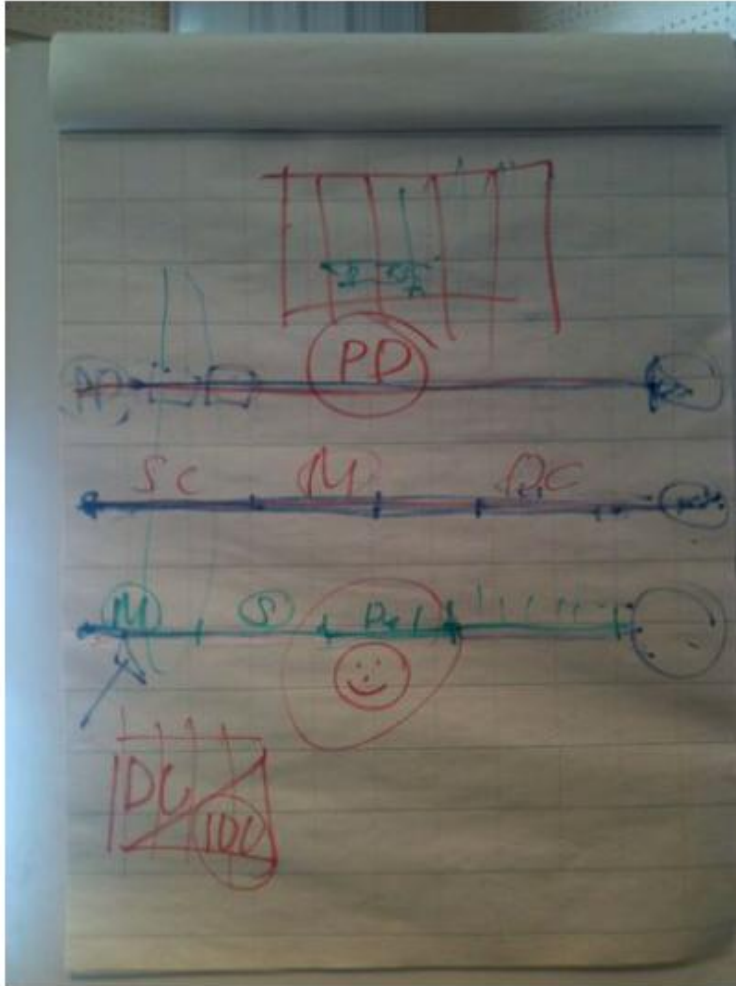
Defining functional lean strategies

- How is “flow” defined on a functional level?
- What is the flow unit, i.e. what “receiver” (material, component, customer, information, concept / idea) is “flowing” through all activities within the function?

Defining a corporate lean strategy

- How is “flow” defined on a corporate level, i.e. how are the functional flows connected?
- All main processes should only include one flow unit, i.e. what is “flowing” (end-to-end) through the different functions.

1.5 To maximize flow, i.e. value receiving time



Maximizing value receiving time:

Product development

Flow unit: a concept / information / knowledge

The flow unit is defined by the nature of the activities

Manufacturing

Flow unit: Material / component / vehicle

Purchasing-manufacturing-distribution-usage-service

Service

Flow unit: The customer

Marketing-sales-distribution-usage-service

1.6 To maximize flow, i.e. value receiving time



Maximizing value receiving time:

Maintenance / service process of a car

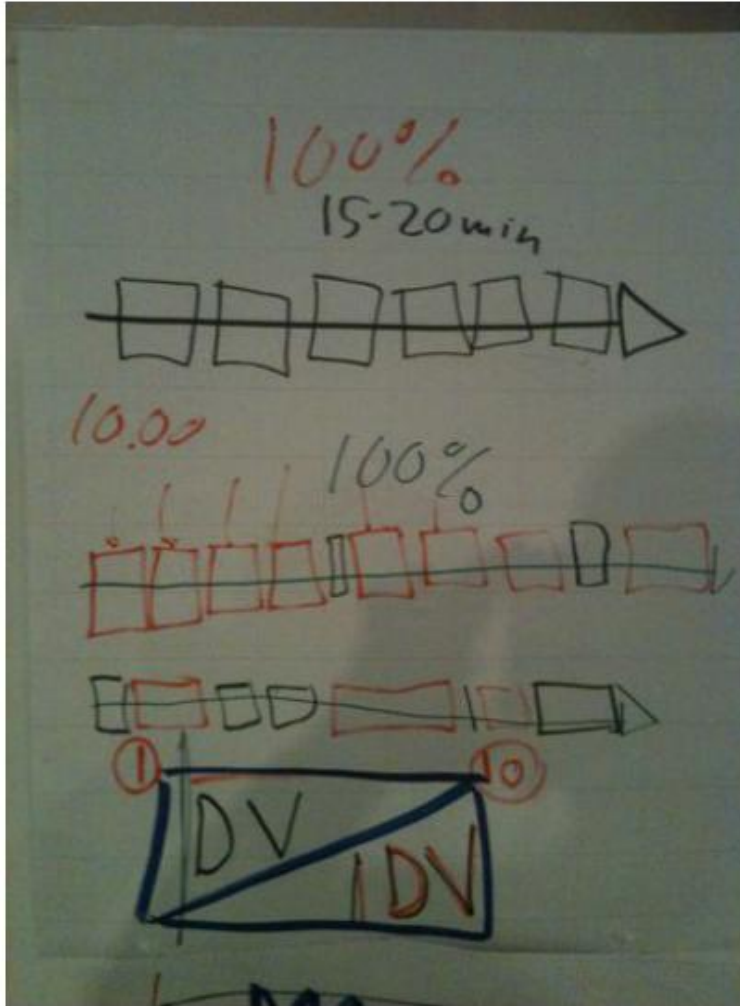
Flow unit: the car

- The car receives value from the mechanics and their equipment

Flow unit: the customer (waiting for the car)

- The customer receives value (concrete outcome and state) at the service center from the sales personnel while waiting for the service to be finished.

1.7 To maximize “flow” in services



Flow in services

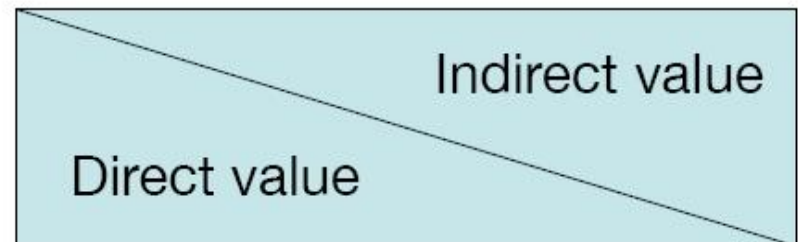
- Activities within a service process deliver both direct and indirect value to the customer
- The “optimal” process is subjective, i.e. defined by the need of the single customer

Direct value

- The concrete result of a service process
- The “hard” value

Indirect value

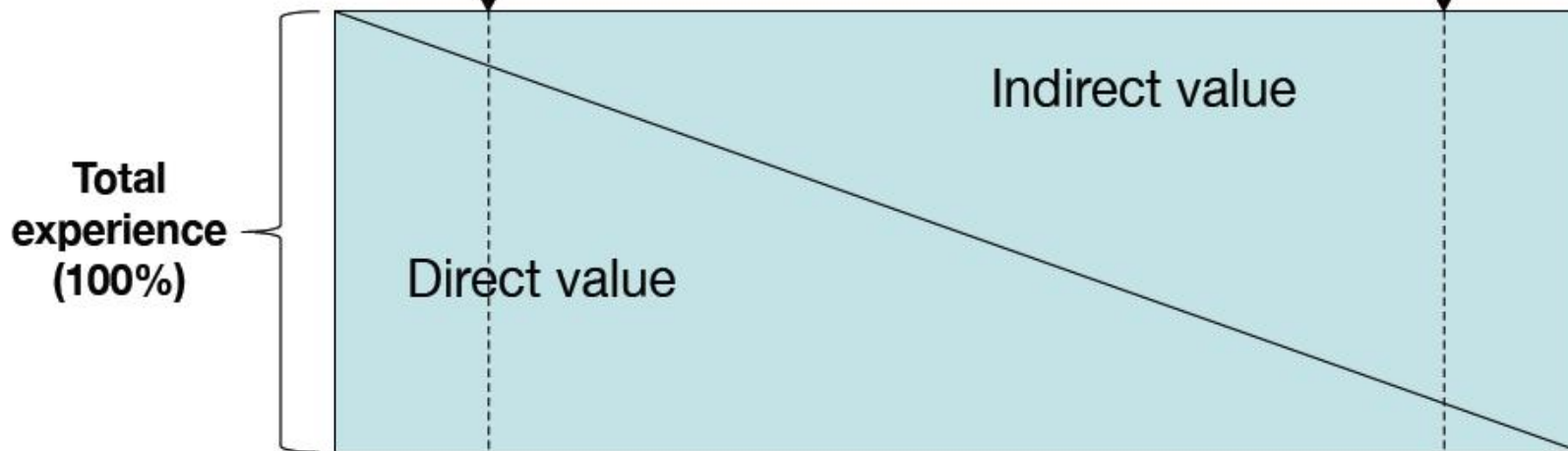
- The state / experience of the customer
- The “soft” value



1.8 Two different operations strategy

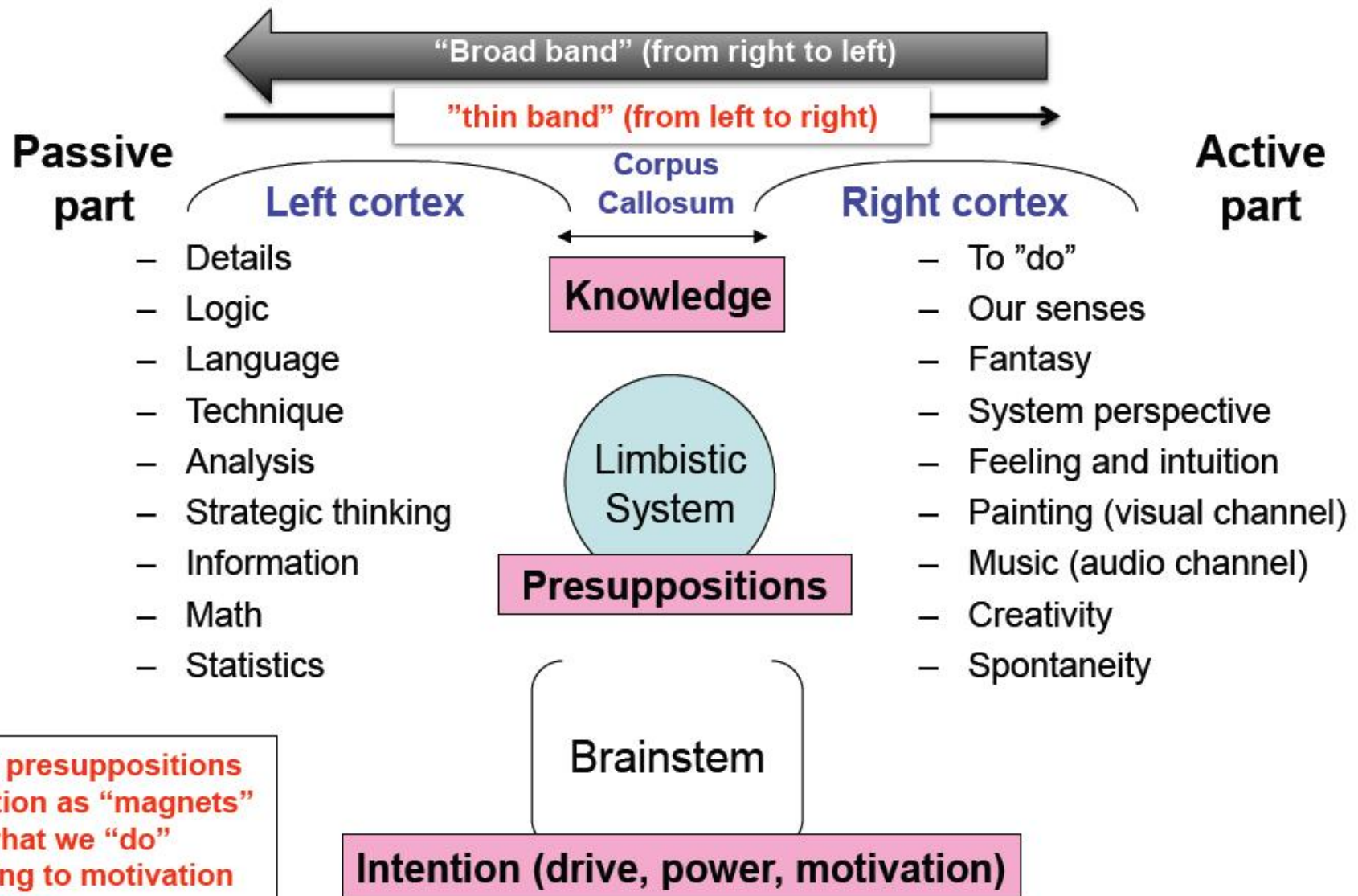
- **Main focus:** Direct value
- **Activities:** Delivering concrete results
- **Need:** Usually conscious and narrow
- **Performance objective:** Speed
- **Example:** The process of fixing a flat tire

- **Main focus:** Indirect value
- **Activities:** Delivering nice experience
- **Need:** Broad and sometimes vague
- **Performance objective:** Quality / confidence
- **Example:** The process of selling a car

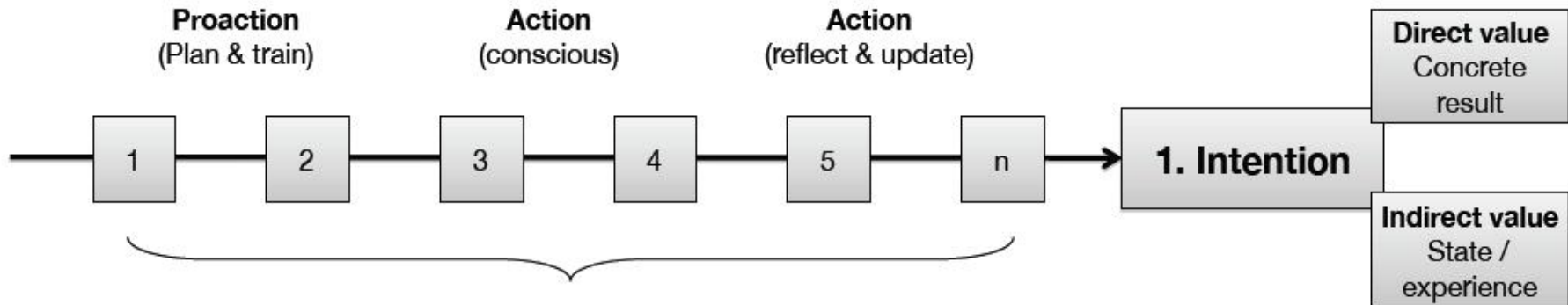


1.9 How our brain works..

Right brain activity is the “engine” of behavioral change



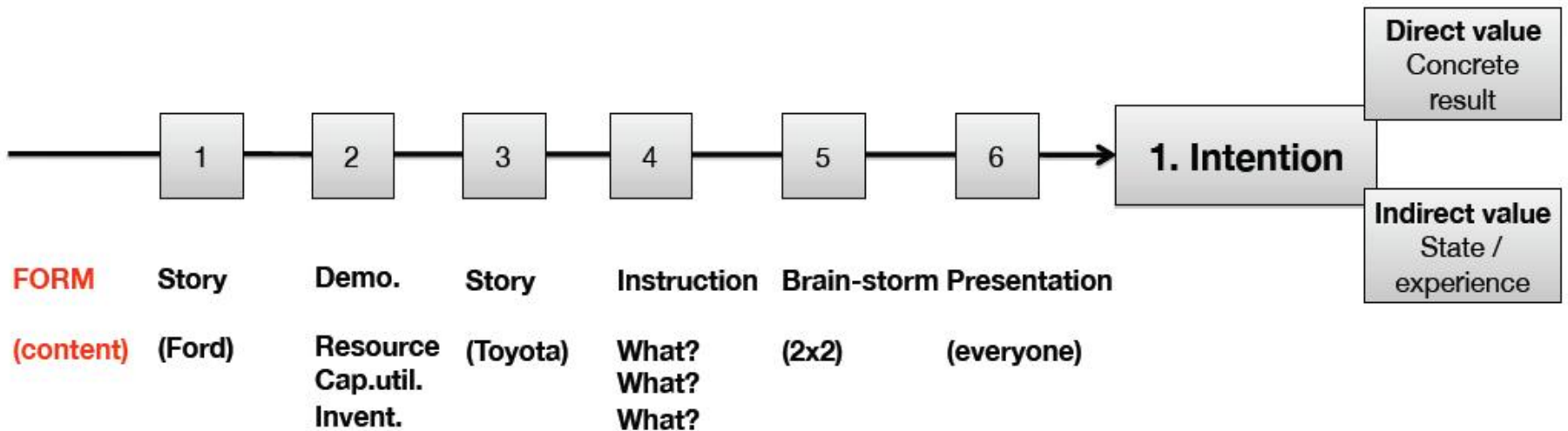
1.10 A generic way to create process flow



1. Definition the intention, i.e. what “value” is going to be produced (given a certain need)
2. Choice of activity frames (in order to realize the intention, i.e. fulfil the need)
3. Sequence of the activities (order)
4. Proportion of the activities (length)

1.11 Example from the lecture

To chose "right" activity frame in order to realize the intention



1.12 Examples of pedagogical activity frames

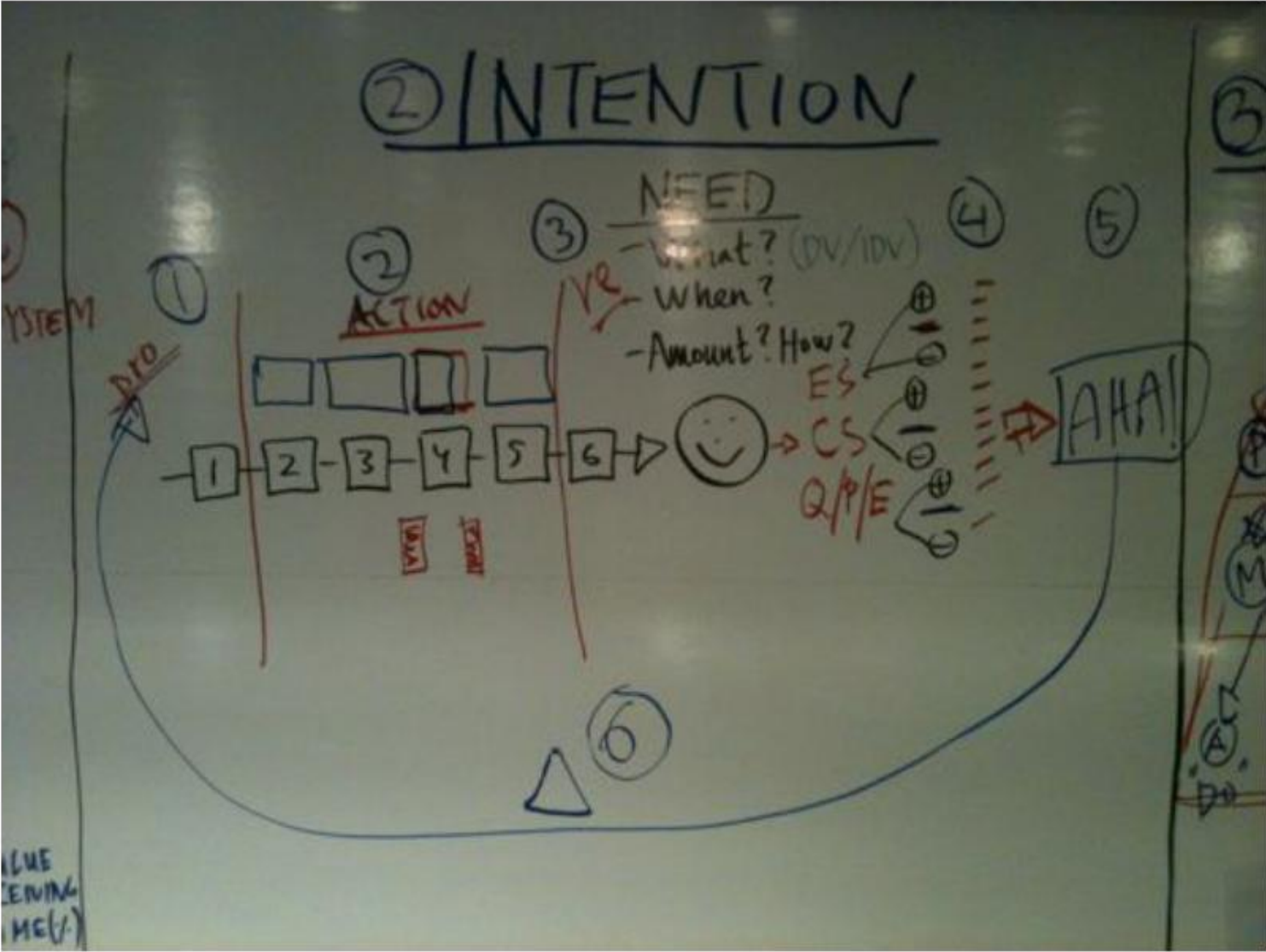
- Dialog
- Lecture
- Brain-storming
- Demonstration
- Role play
- Exercise/ practice
- Instruction
- Coffee / lunch
- 2x2 mini-discussion
- Summary
- Game / competition
- Own time
- Cooperation
- Interview
- Improvise
- Repetition
- Plenum
- Discussion
- Reflection
- Coaching
- Exchange of experience
- Modelling
- Story-telling
- Filtering
- Evaluation
- Presentation
- Relax
- Break / chill & relax

Part 2

- *The intention / goal with lean*

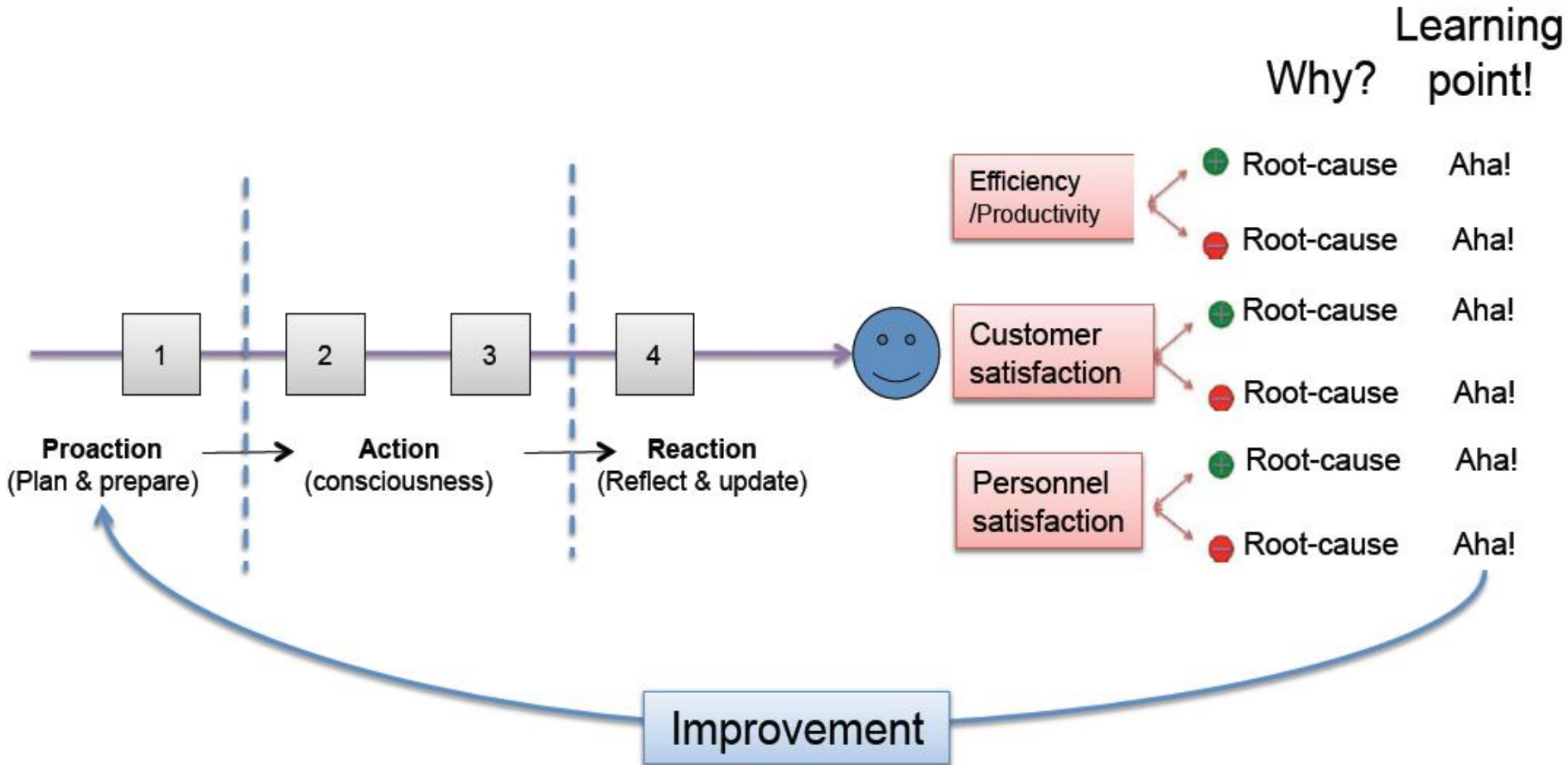
2.1 The intention with lean

Toyota had a common intention to learn something new every day



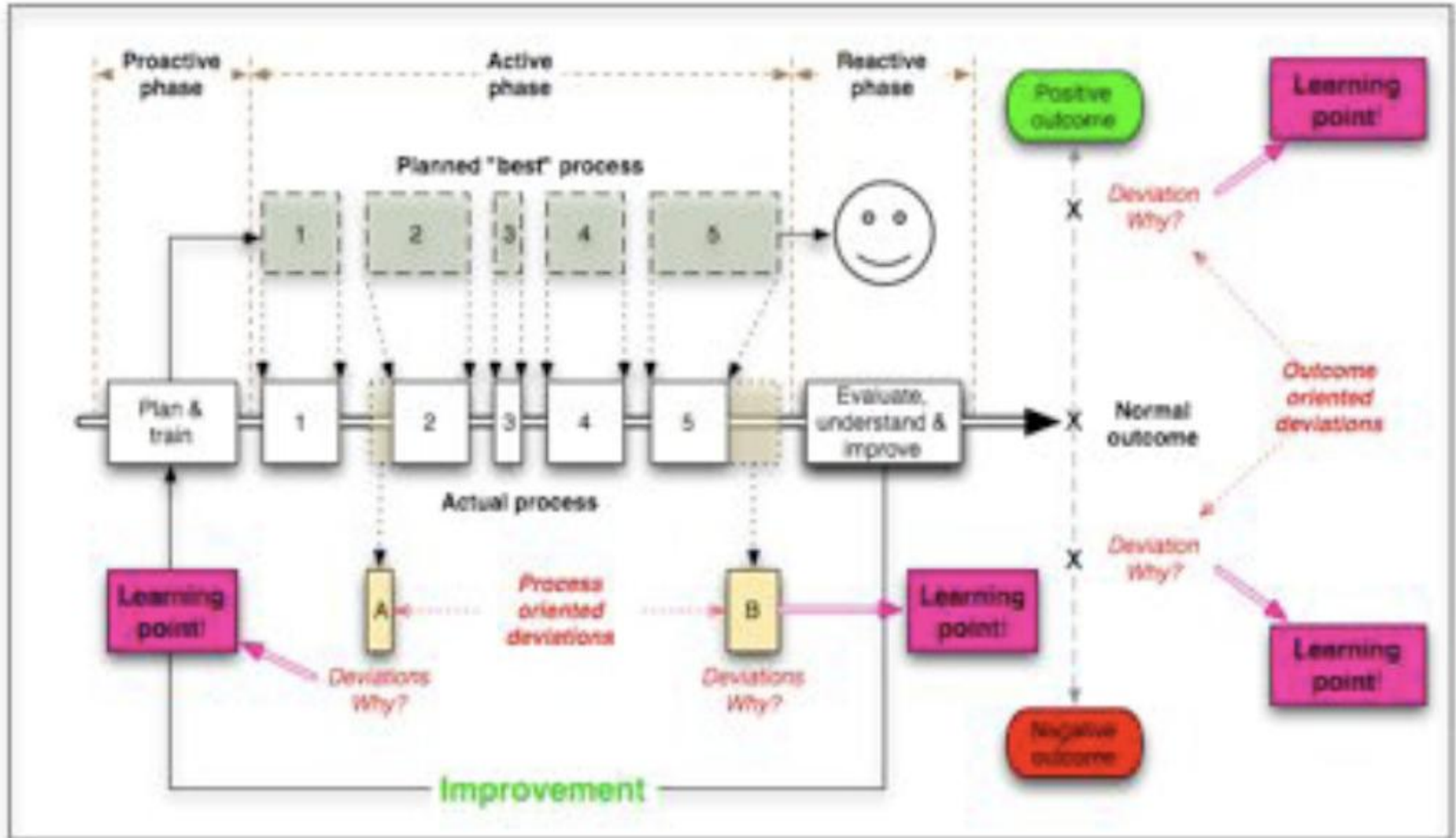
2.2 The intention with lean

Toyota had a common intention to learn something new every day



2.3 The intention with lean

Toyota had a common intention to learn something new every day



2.4 An evolutionary learning capability

The foundation of the learning organization is to develop “meta-capabilities”

1. Capability to “set” standards (proaction)

- To develop a process maximizing “value receiving time” (what is our best normal situation today?)

2. Capability to “hold” standards (action)

- To commonly utilize a standard in order create a possibility to evaluate it “together”

3. Capability to evaluate standards (reaction)

- Outcome oriented evaluation – identification of deviations from the “normal” level of output
- Process oriented evaluation – identification of deviations from the normal process and situation

4. Capability to solve problem

- To identify the root-cause of positive deviations (why did the deviation occur?)
- To identify the root-cause of negative deviations (why did the deviation occur?)

5. Capability to develop, educate and train people

- To learn something from a deviation (why it occurred) and spread the “AHA”s throughout the organization

6. Capability to improve

- To develop and implement improvements (securing that the negative deviations will never reoccur)

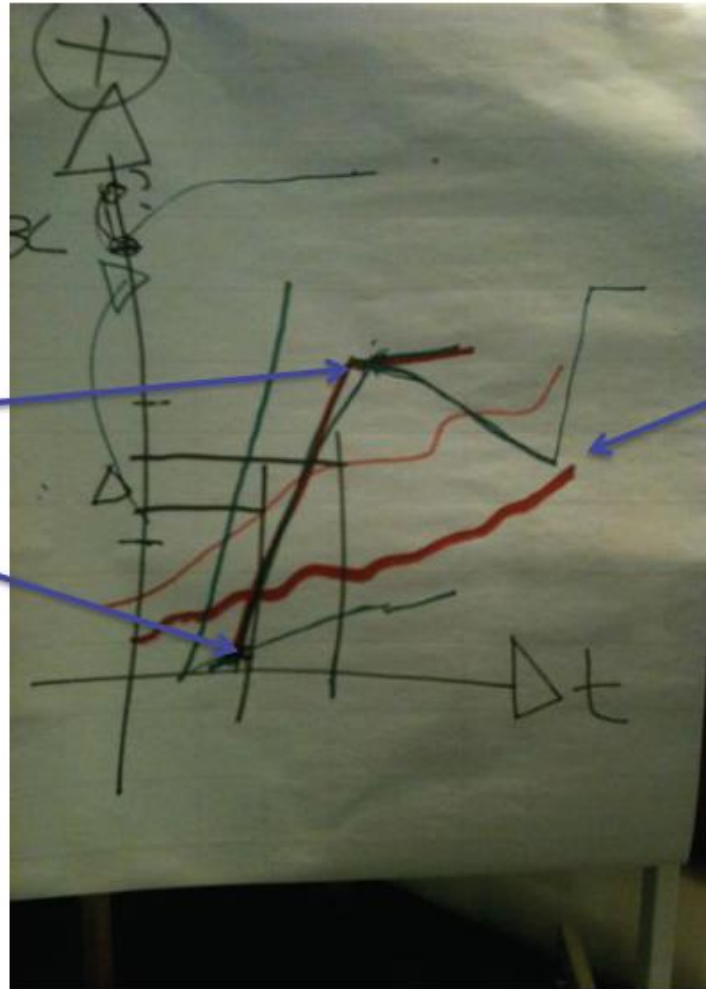
2.5 The intention with lean

Static vs. dynamic view

Static view

- To establish and define flow
- To increase flow from point A to point B

- Through rapid transformation projects



Dynamic view

- An evolutionary learning capability
- To continuously gain new competence and understanding of “how” to create flow

- Through incremental & continuous improvement

Part 3

- *The content of lean*

3.1 The content of lean

Lean (TPS) is a congruent system of values, principles, methods and tools & activities - together realizing their production strategy

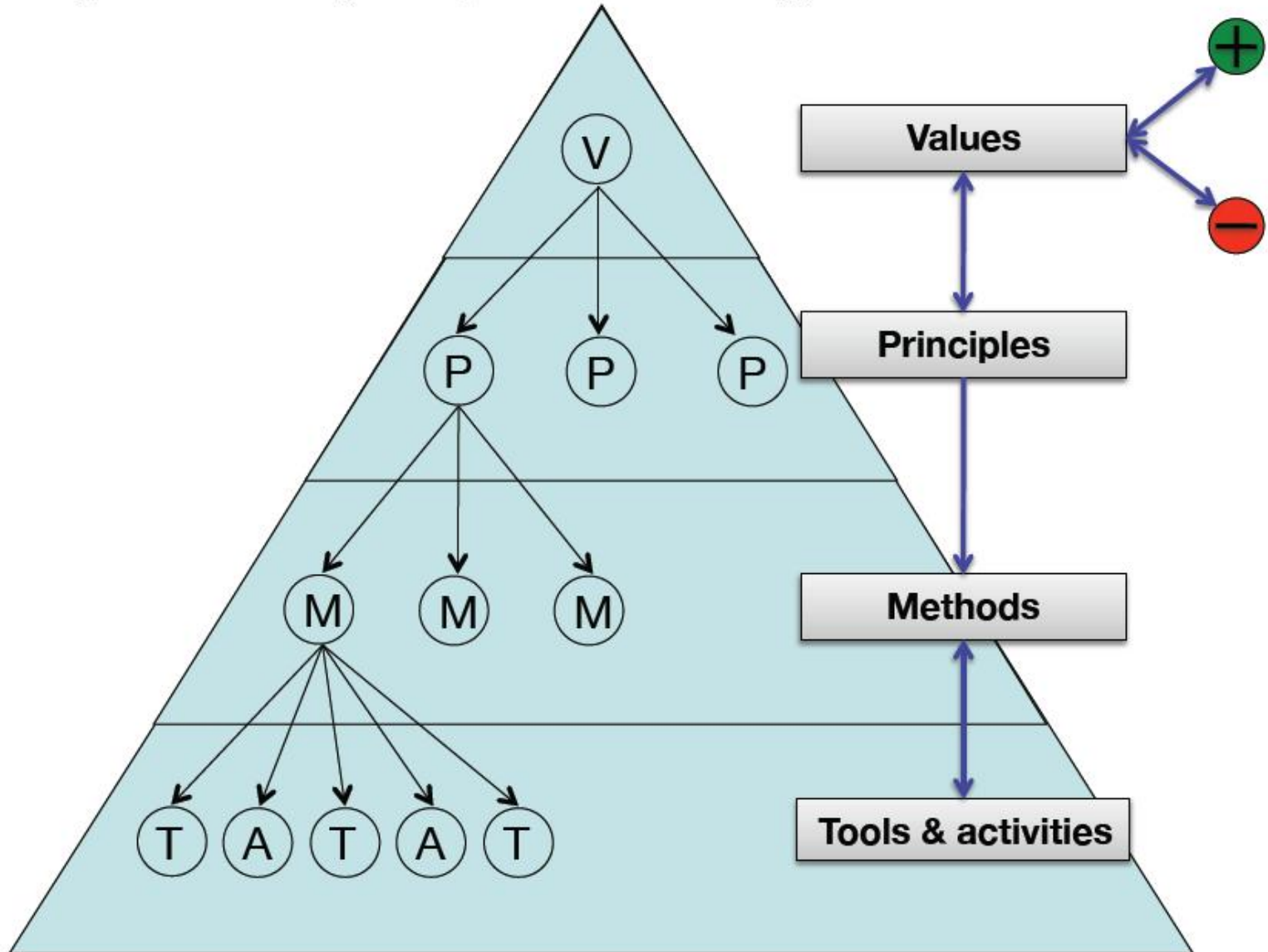


Sakusai-san...

- ...view Toyota as a tree which has been growing for 60 years...
- The tree of today is beautiful but the “physical” tree is not valuable in itself.
- The real value is within our philosophy of “how” we take care of our tree and “why” we do it in a certain way.
- The philosophy is a system perspective of how everything works together
- The most important thing is the “congruence” between values, principles, methods and tools & actions

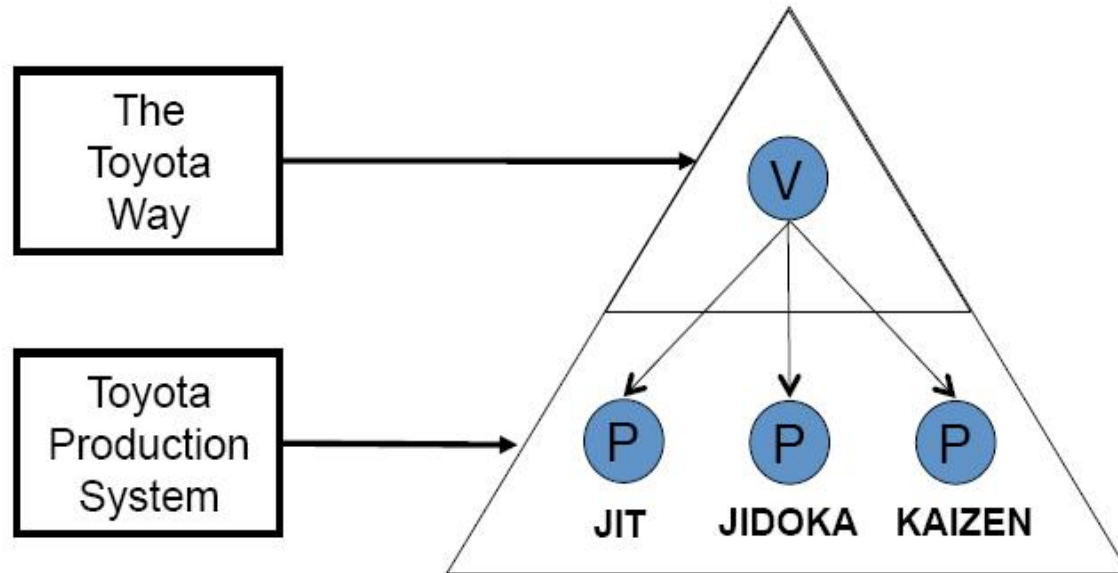
3.2 The content of lean

Lean (TPS) is a congruent system of values, principles, methods and tools & actions - together realizing their production strategy



3.3 What principles are included in TPS?

Just-in-time, Jidoka and Kaizen – all three principles together found the dynamic system, i.e. the foundation of the evolutionary learning capability



The Toyota Way

- Team-work
- Respect for the individual
- Continuous improvement
- Challenge
- Gechi-genbutsu (go and see)

Just-in-time

- To create a conscious flow through the system, i.e. to create a normal situation of the end-to-end-flow. What is normal flow?
- To create a congruent system where everyone knows what is "correct" and "normal" and is acting according to that certain normal behaviour, i.e. a congruent behaviour.
- To create "regularity"

Jidoka

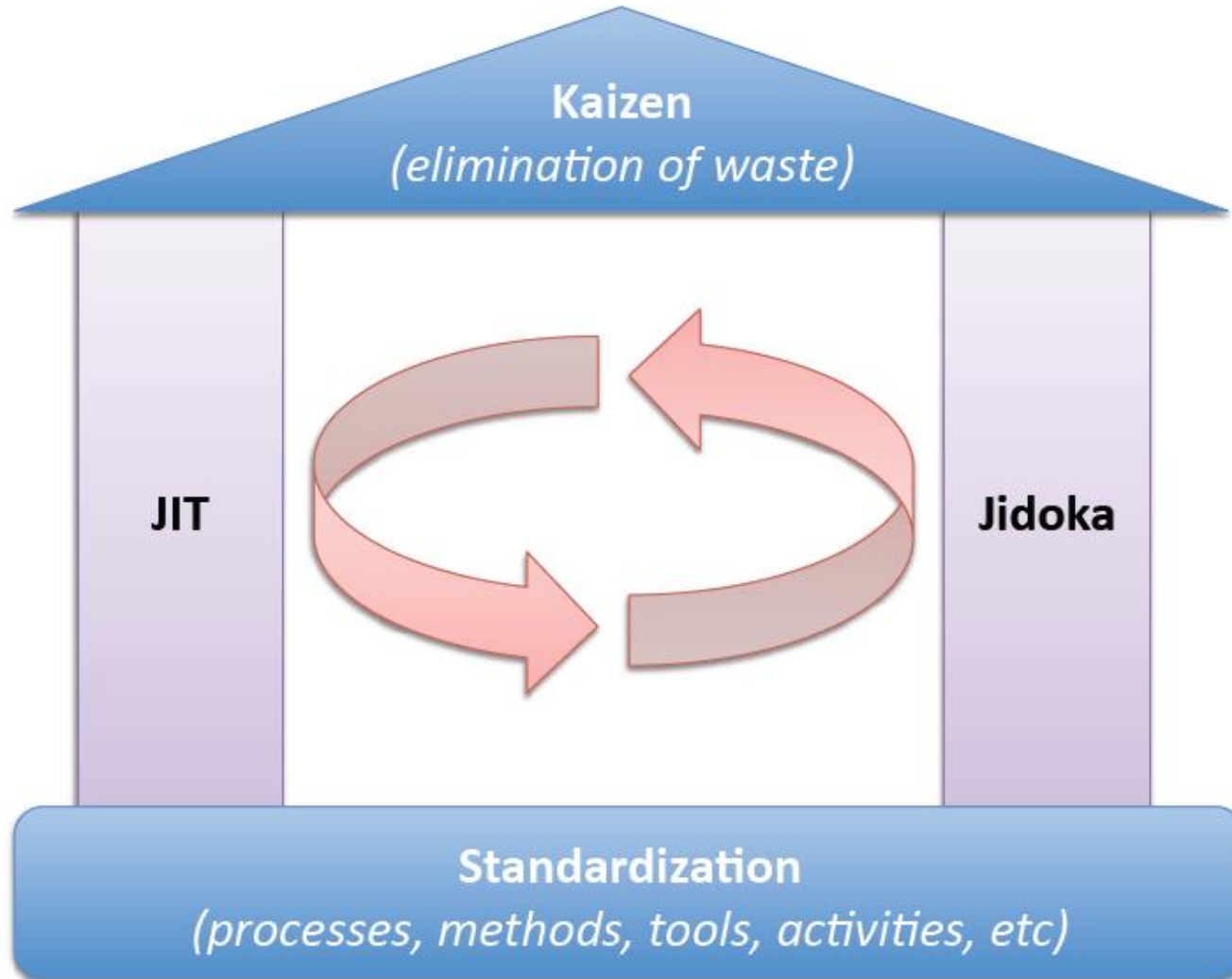
- To hinder, prevent and identify problems that disturbs the flow, i.e. to identify the abnormal / "the unconscious (through visualization)"
- To instantly identify what is incongruent within the system, i.e. everything that is a deviation from normality.
- To identify "irregularity"

Kaizen

- To continuously improve the normal situation through identification of abnormalities and elimination of waste /change of the root that caused it.
- To change the incongruent behaviour within the system in order to make the "new behaviour" congruent.
- To identify the "root" of the irregularity and improve regularity

3.4 What principles are included in TPS?

Toyota Motor Corporations sometimes use a house as a visual metaphor

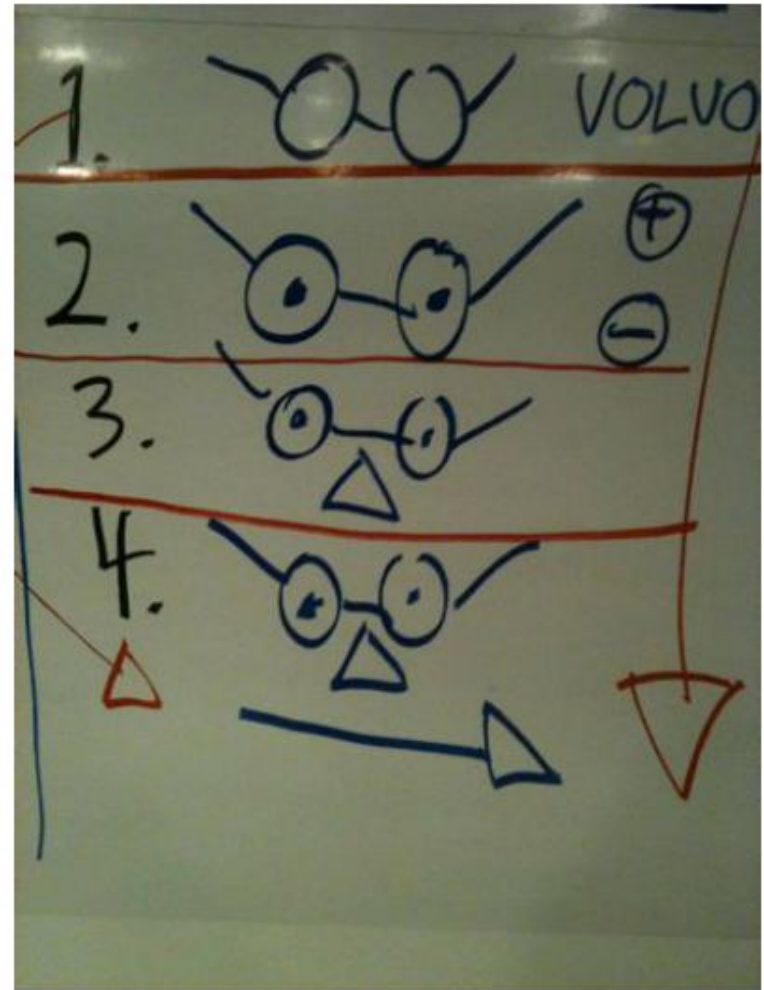
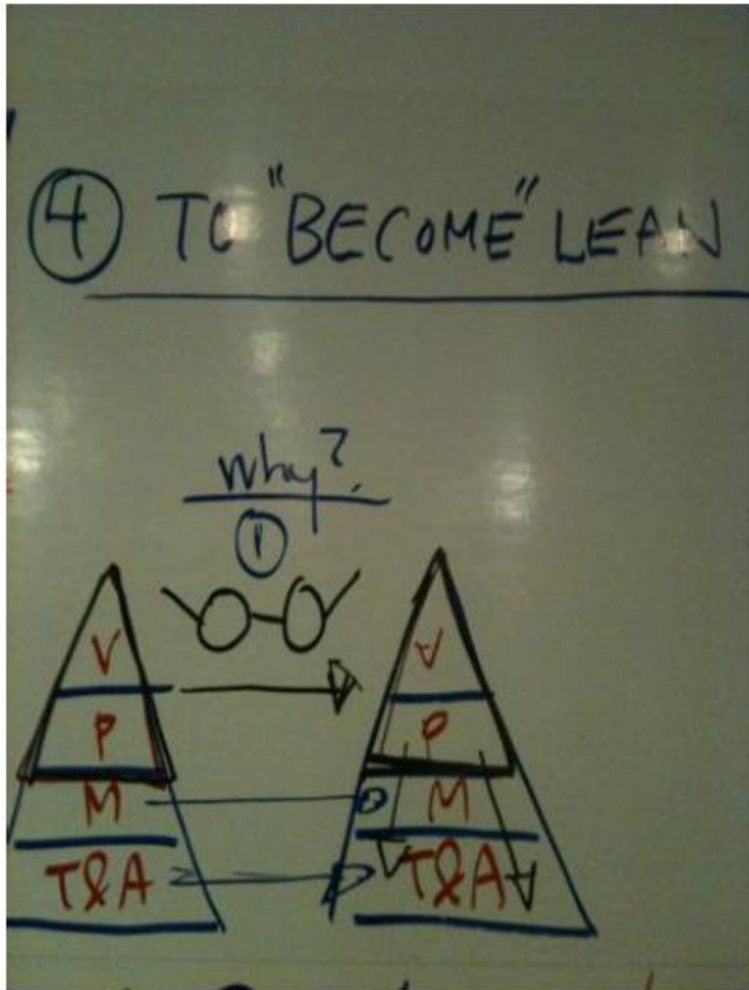


Part 4

- *How to become lean*

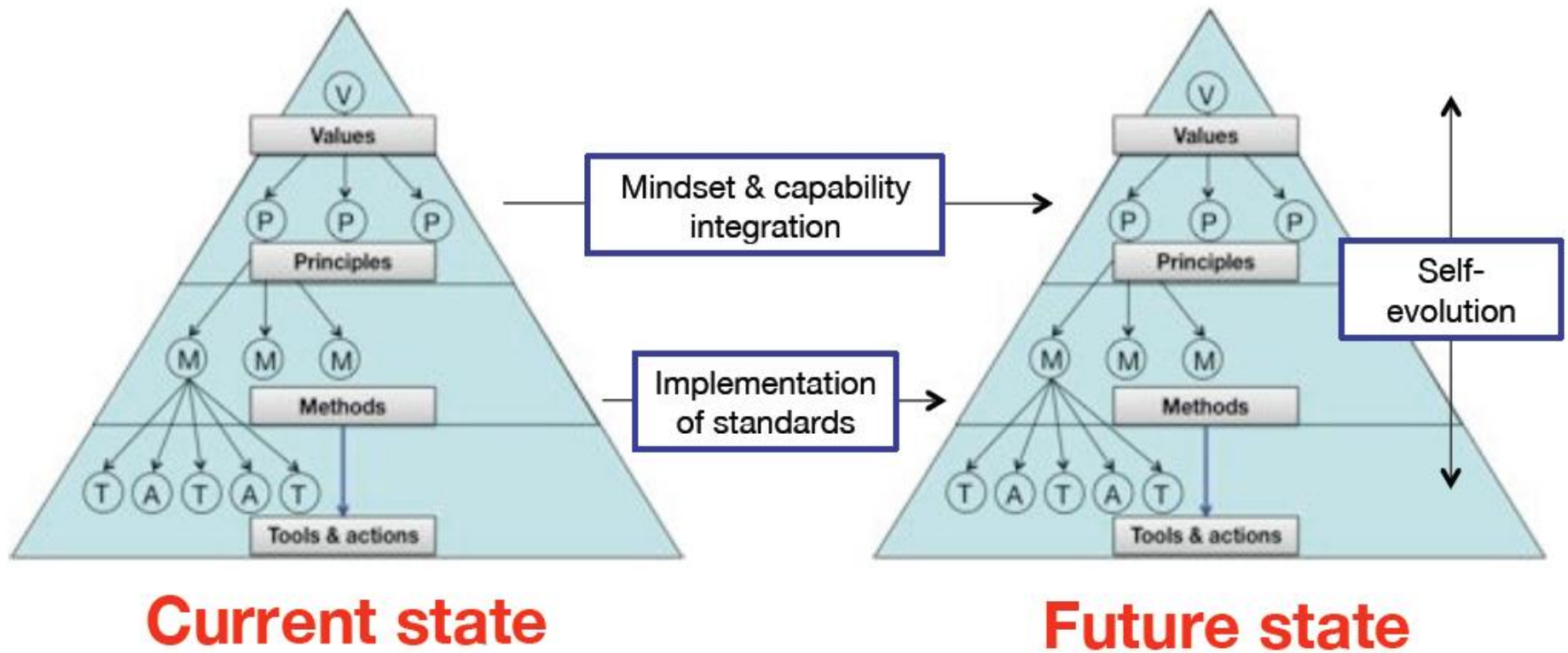
4.1 How is lean implemented?

Depending on “what lean is”, i.e. on what level of abstraction it is defined, it is “transferred” in different ways.



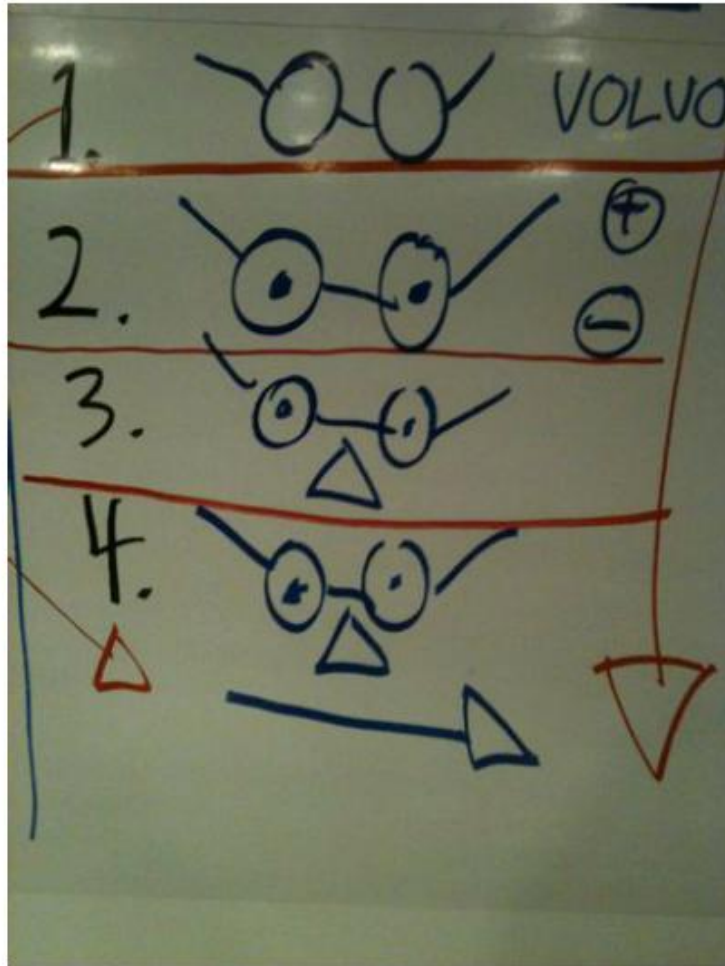
4.2 How to become lean

To *integrate* on a philosophical level or *implement* on an operational level



4.3 Integration of common “glasses”

Trigger behavior change and understanding through “right brain” activity



1. Develop “glasses”

- Values
- Principles

2. Use the glasses – to “filter”

- Make the employees use the glasses, i.e. to filter their current process “through” the values and the principles
- *Is this congruent with our values?*
- *Is this congruent with our principles?*
- *What is good and what can be improved?*

3. Develop improvement suggestions

- Develop concrete improvement suggestions, i.e. new or improved methods or tools / actions

4. Develop implementation plan

- Develop a plan of how to implement the improvement suggestion
- Implement and continue filtering

The filtering process is done ALL THE TIME and is NOT a project!!!

Part 5

- *Lean Management*

5.1 Lean management

1. Define a lean strategy
 - “ONE” lean strategy
 - Functional strategies
2. Define the intention of the lean initiative
 - Static perspective or dynamic perspective
 - What is the goal?
3. Define the content of lean
 - Define values and principles
 - Standardize context-specific (and generic) methods and tools & activities
4. Define how to “transfer” lean
 - Integration strategy (glasses)
 - Implementation strategy (rapid improvement projects)

Success factors

- Top-management should not only support “lean”, they should own, live and lead it
- Train-the-trainer implementation!
- 100% understanding, commitment and consistency from everyone is a prerequisite
- Lean includes “everything” and it never stops

- Metaphor: *If lean is competence regarding “health”, then the rapid transformation programs are similar to weight-loss-programs*

5.2 Building in commitment



Building in “commitment” top-down

1. Build a “first version” of the glasses
2. Ask everyone: *Are we committed to these “glasses”?*
3. Use the following answering frame:
 - YES!!!
 - *No, but if we improve it like this then I say YES!!!*
4. 100% commitment is crucial before spreading the glasses to a lower level of management