

**"Agility is the Tool, Not the Master:  
Gilb's Ten Key Agile Principles  
to deliver stakeholder value,  
avoid bureaucracy, and give creative freedom"**

***'Smidighet er kun et verktøy: hovedpoenget burde  
være verdileveranse til interessenter!***

**Tom Gilb**

**Presentation Oslo SDC, June 16 2010, 11:40-12:40**

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**[www.gilb.com](http://www.gilb.com)**

**These slides will be on [gilb.com](http://gilb.com) downloads)**

**Paper: To appear [agilerecord.com](http://agilerecord.com) Summer 2010.**

**[http://homepage.mac.com/tomgilb/filechute/Agile  
%20Principles%20and%20Values%20for%20Agile  
%20Record%202010%20Gilb.doc](http://homepage.mac.com/tomgilb/filechute/Agile%20Principles%20and%20Values%20for%20Agile%20Record%202010%20Gilb.doc)**

# So, what are Agile methods missing?

- Stakeholder Focus

- Real projects have dozens of stakeholders
  - Not just a customer in the next room
  - Not just a user with a use case or story

- Results Focus

- It is not about writing code, it is about delivering value to stakeholders
- It is not about programming, it is about making systems work, for real people

- Systems Focus

- It is not about coding – (*again* 😊)
- It is about reuse, data, hardware, training, motivation, sub-contracting, Outsourcing, help lines, user documentation, user interfaces, security, etc.
- So, a systems engineering scope is necessary to deliver results.
- Systems Engineering needs quantified performance and quality objectives
  - To synchronize all necessary disciplines, so that they deliver the results.

# Scrum and Evo

- "Tom Gilb invented Evo, arguably the first Agile process.
- He and his son Kai have been working with me in Norway to align what they are doing with Scrum.
- Kai has some excellent case studies where he has acted as Product Owner. He has done some of the most innovative things I have seen in the Scrum community"
  - Jeff Sutherland, co-inventor of Scrum, 5Feb 2010 in Scrum Alliance Email (recommending us to be invited to Scrum Gathering, Orlando in March 2010, which we did)
  - <http://bit.ly/a5Fd1T> #scrum #agile Sutherland credits Gilb in Roots of Scrum slide #accu2010





# Gilb credited as Root



**THE ROOTS OF SCRUM**  
**How the Japanese lean experience changed global software development**

With help from Citrix Online, Google, Yahoo, Microsoft, IBM, Oracle, MySpace, Adobe, GE, Siemens, Disney Animation, BellSouth, Alcatel-Lucent, GSI Commerce, Ulticom, Palm, St. Jude Medical, DigiChart, RosettaStone, Healthwise, Sony, Ericsson, Accenture, Trifork, Systematic Software Engineering, Exigen Services, SirsiDynix, Softhouse, Philips, Barclays Global Investors, Constant Contact, Wellogic, Inova Solutions, Medco, Saxo Bank, Xebia, Insight.com, SolutionsIQ, Crisp, Johns Hopkins Applied Physics Laboratory, Unitarian Universalist Association, Motley Fool, Planon, FinnTech, OpenView Venture Partners, Jyske Bank, BEC, Camp Scrum, DotWay AB, Ultimate Software, Scrum Training Institute, AtTask, Intronis, Version One, OpenView Labs, Central Desktop, Open-E, Zmags, eEye, R... Hamilton, Scrum Alliance, Fortis, DIPS, Program... Gilb.com, WebGuide Partner, Emergn, NSB (Norwe... egasystems, Wake Forest University, The Economist, iContact, Avaya, Kar... Marketing, accelare, Tam Tam

**ACCU, Oxford, UK 14 Apr 2010**

SCRUM TRAINING INSTITUTE openview venture partners ScrumAlliance transforming the world of work

Tuesday, April 13, 2010 1

# First Attempt to Teach a Scrum Front End Using Evo ideas



- ▶ A 1-day front-end for 'Product Managers' before a 1-day Scrum Overview course for Product Managers
- ▶ Commissioned by and co-authored by Gabriella Benefield (Scrum Alliance) 2009
- ▶ Detailed training exercises available at
  - ! [http://www.gilb.com/tiki-download\\_file.php?fileId=353](http://www.gilb.com/tiki-download_file.php?fileId=353)
  - ! Value Planning slides for Scrum (Oct 09)
- ▶ The following dozen slides are Tom's attempt to describe the relationship of
  - ! Scrum and the Value Planning front end
  - ! based on Evo
  - ! These slides were not part of the training G. B. and I held in 2009)

**+ Value Planning**

**(+ Scrum)**

# **A better 'front end' to Scrum, and other agile variants**

**BASED ON IDEAS FROM THE 'EVO' METHOD**

**Efficient Value Organisation/Options**

**Evolving Value in Organizations**

**Evolving Value Optimization ,**

**Efficient Value Optimization**

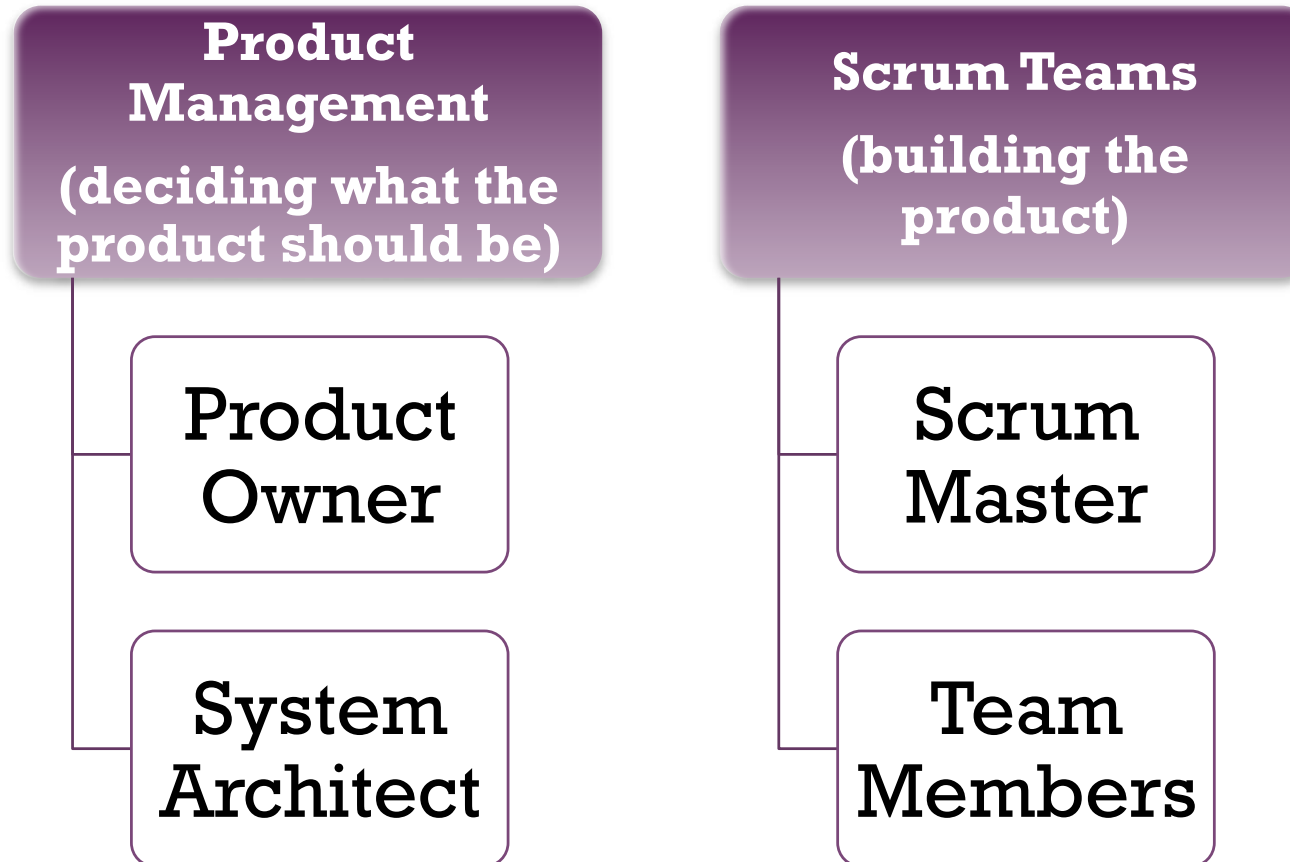
**= EVO**



# Value Planning

## The Organizational Components

7





# Value Planning

## The *Inputs*

8

### Product Management (deciding what the product should be)

**Stakeholders and their Needs**  
(like: Potential New Users, Usability)

**Long Term Quality Needs**  
(like Portability, Security, Adaptability)

### Scrum Teams (building the product)

**Requirements**  
(what to build, how well to build)

**High Level and Super-ordinate Designs and Architecture**  
(how to build, solutions given from others)



# Value Planning

## The Work Products - outputs

### Product Management

(deciding what the product should be)

#### Product Owner:

Requirements, particularly top critical few improvement requirements

#### Strategies, Designs, Solutions

(How we propose to deliver the improvements)

#### System Architect:

Technical Architecture to support long term  
(like suppliers, interfaces, platforms, languages)

### Scrum Teams

(building the product)

**Scrum Master:**  
ensure team  
empowerment

**Team Members:**  
(IT)

**Code, Tests,  
System  
Improvements,  
Reports on  
progress, Work  
Process  
Improvements**



# The *Product Management Process*

## Deciding the exact product content

**Gather relevant inputs: Analyze The Market & Related Environment**

**Stakeholders**

**Stakeholder needs**



**Clarify Needs & Organize the Information:  
= Clear and Complete Requirements**

**Quantify Improvements and Constraints**

**Add info about risks, sources, priorities**



**Decide how to deliver the requirements – Product Design**

**Strategies, Design, Architecture**

**Estimate expected Impacts on Product Improvements and costs**



**Iteration assumed!**

# Analysis: by PM

## *What You 'have to' know*

### Market Needs

**Product Characteristics**  
**How good? Qualities**  
**Top 10 Critical Improvements**

**Service Characteristics**  
**(help, training, fault support,**  
**sales channels, ... )**

### Other Needs

**Organizational Needs**  
**IT Environment, Sales and**  
**marketing Environment,**  
**Distribution and Partners,**  
**International considerations, ...**

**External Environment Needs**  
**(legal, co-operation, image, ..)**

# Requirements:

## *Determining What You Want*

*What you need to  
determine*

**Top Level Critical Objectives**

**All other critical requirements**

*How well you need  
to determine  
requirements*

**Quantified, Unambiguous,  
Clear, Testable, Agreed and  
Approved, Quality Controlled**

**With supporting detail to allow  
analysis, risk understanding,  
prioritization**





# Design: to meet Requirements:

What you have  
to design

**Choose specific designs of  
product and service**

(detailed enough to hand over  
to development team)

**Choose specific  
architectures to deal with  
long term needs**

(platforms, interfaces,  
processes, organizational  
structures, rewards)

How well you  
have to design  
it

So that **you reasonably understand  
all critical** attributes and costs  
( $\pm 20\%$ ?)

**So that the overall long term  
implications of the product  
are understood**

(recruitment, partnering,  
international deals)

# Building: The development team

**What** do you  
have to do?

**Build Product**  
(Software, Dataware,  
Docuware)

**Validate Product**  
(Does it work well enough?)

How **well** do  
you have to do  
it

**To meet all targets, and constraints  
– for quality and performance.  
For new increments, and total  
system**

**To reflect on both product  
attributes and process  
problems.**

**To improve their own work  
environment.**

**To improve the design,  
estimates and requirements.**

# Implementation: Integration: Delivery to Market

What the team  
has to do

**Integrate next  
increment into existing  
product and field/Beta  
trial it**

**Deliver to market as  
finished product  
change**

How well it  
has to be done

**So that it normally is clean  
(no bugs!) and impressive.  
So that we learn, and can  
tune it, before final market  
delivery**

**Rock solid. No  
problems. Clear  
improvement to all  
customers**



# Value-Driven Scrum

(one of your options for smart Product Ownership)

## ■! Defined As:

- ! The real world interface to the Scrum Product Owner
- ! The Businesses 'Organizational Value' Management
- ! The Business Function Management
- ! The Technical Architecture Management

## ■! All in a pipeline to the Scrum Product Owner (PO)

- ! Fully designed, from the *organizational* point of view
- ! Allowing additional design at the level of *programming, chunking, and data*
  - ! By the Scrum Team
- ! Prioritized from the *Organizational Point of View*





# The 'Scrum Product Owner'

- ! Needs to get enough information about the product
  - ! To allow the Scrum team to build, test, make technical detailed decisions
- ! Here is one set of tools to allow the Product Owner
  - ! Perhaps, in larger environments, a PO 'team'
  - ! To collect information, to plan, so that
    - ! **We really deliver the best value for money, as soon as possible**

# + What is new?

## What is Value-Planning (VP) ?

18

### ■! **Dominant focus on Value Delivery Management –**

- ! Not from a programming point of view
- ! But from a business and management non technical point of view
- ! Which critical value improvements do we need first, and next

### ■! **Stakeholder Values-and-Priorities Integration\***

- ! Of management, marketing, IT, Systems Engineering,
- ! Including Sales, Customer Service and ALL Critical Stakeholders

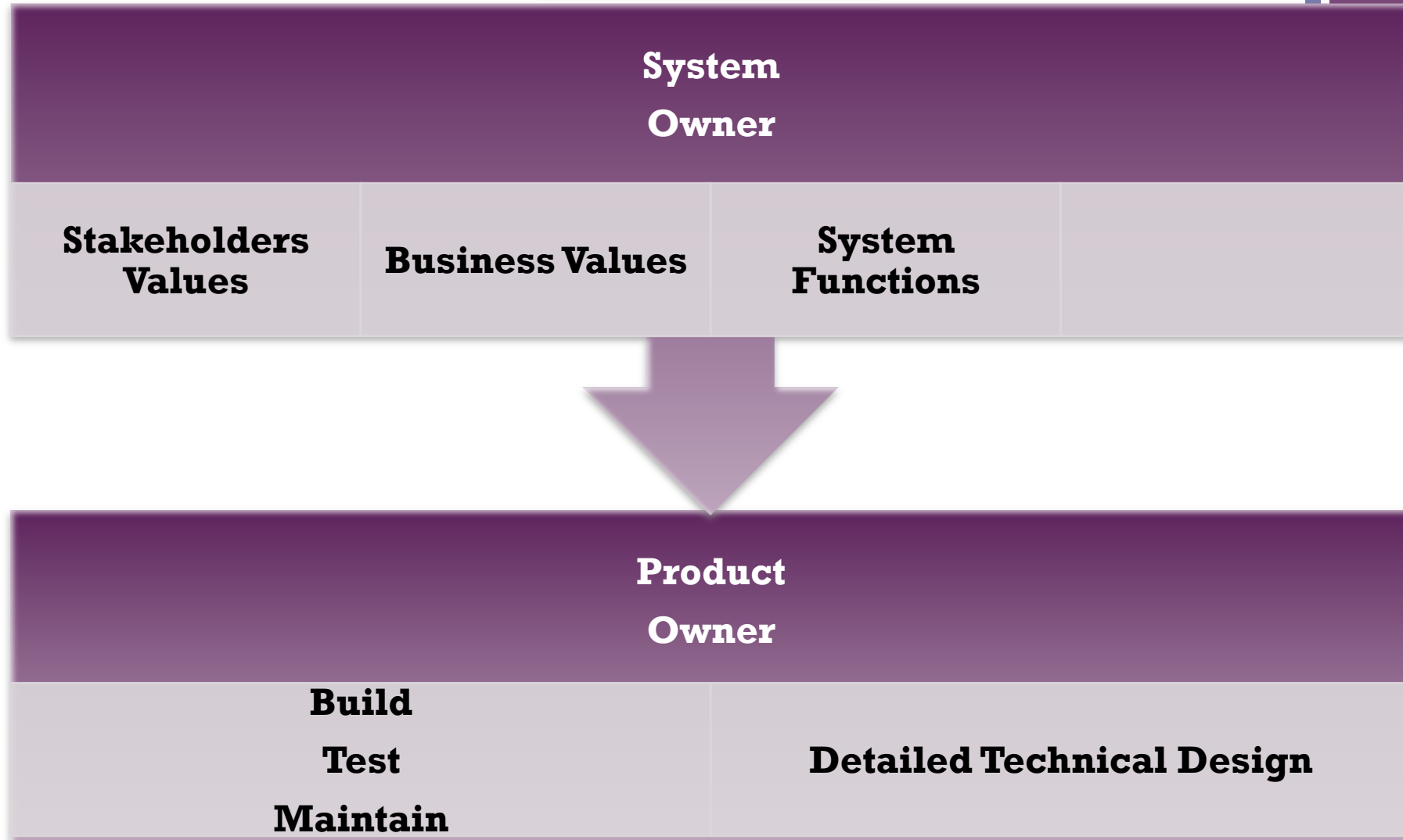
### ■! **Systems View – Systems Architecture – Systems Engineering**

- ! \* integration: defined as: Alignment and reasonable balance of competing interests, through intelligent dynamic prioritization.

See ppt note for depth papers on priority, including:  
[http://www.gilb.com/tiki-download\\_file.php?fileId=60](http://www.gilb.com/tiki-download_file.php?fileId=60)



## Value Driven Scrum



# + Value Decision Tables

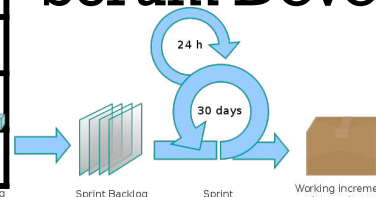
Business Goals	Stakeholder Value 1	Stakeholder Value 2
Business Value 1	-10%	40%
Business Value 2	50%	10%
Resources	20%	10%

Stakeholder Val.	Product Value 1	Product Value 2
Stakeholder Value 1	-10%	50 %
Stakeholder Value 2	10 %	10%
Resources	2 %	5 %

Product Values	Solution 1	Solution 2
Product Value 1	-10%	40%
Product Value 2	50%	80 %
Resources	1 %	2 %

Prioritized List
1. Solution 2
2. Solution 9
3. Solution 7

Scrum Develops



We measure improvements  
Learn and Repeat



# + Value Decision Tables

Business Goals	Training Costs	User Productivity
Profit	-10%	40%
Market Share	50%	10%
Resources	20%	10%

Stakeholder Val.	Intuitiveness	Performance
Training Costs	-10%	50 %
User Productivity	10 %	10%
Resources	2 %	5 %

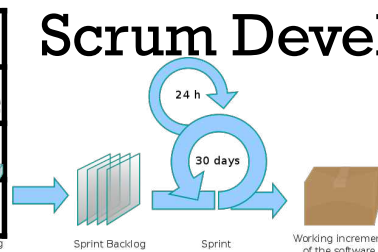
Product Values	GUI Style Rex	Code Optimize
Intuitiveness	-10%	40%
Performance	50%	80 %
Resources	1 %	2 %

Jeffsutherland  
Twitter: Very  
cool product  
backlog  
management  
by Tom and Kai  
Gilb <http://ad.vu/2h4d>  
Sat 28 March  
2009



Prioritized List
1. Code Optimize
2. Solution 9
3. Solution 7

Product Backlog



Scrum Develops We measure  
 improvements  
 Learn and Repeat

## **+! Value Management (Evo)**

- ! Fokus på utfordringer som ønskes løst.
- ! Krav som formes med interessenter, som beskriver hva man ønsker forbedret, og en skala for å kunne måle forbedring fra dagens situasjon.
- ! Kravet kvantifiserer ønsket og "akseptabel" forbedring.
- ! Matrise som viser hvordan krav og løsninger som påvirker hverandre.
- ! Testing av funksjon/oppgaver både før og etter utvikling.
- ! Et videre og mer omfattende fokus enn SCRUM

## **Value Management (Evo)**

Focus towards challenges

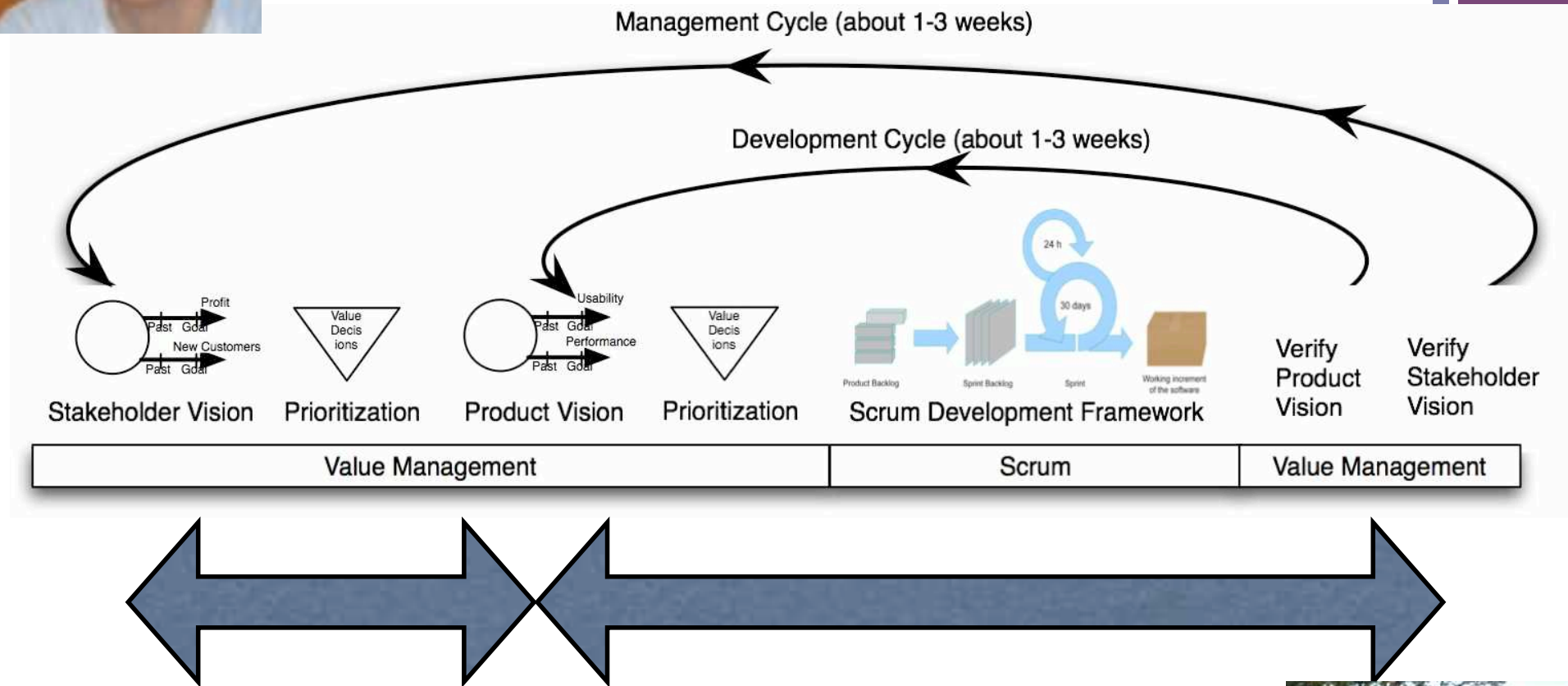
Stakeholder requirements  
quantified

Both Goal and Tolerable levels  
specified.

Table shows relationship  
requirements and design

Testing during and after deliver  
cycles

A more-advanced and more-  
comprehensive way to apply  
Scrum



Jeffsutherland Twitter: Very cool product backlog management by Tom and Kai Gilb <http://ad.vu/2h4d> Sat 28 March 2009



# Gilb's Ten Key Agile Principles

to avoid bureaucracy and give creative freedom

- 1.! Control projects by quantified critical-few results. 1 Page total !  
(not stories, functions, features, use cases, objects, ..)
- 2.! Make sure those results are business results, not technical  
Align your project with your financial sponsor's interests!
3. Give developers freedom, to find out *how* to deliver those results
4. Estimate the impacts of your designs, on *your* quantified goals
5. Select designs with the best impacts in relation to their costs, do them first.
6. Decompose the workflow, into weekly (or 2% of budget) time boxes
7. Change designs, based on quantified experience of implementation
8. Change requirements, based in quantified experience, new inputs
9. Involve the stakeholders, every week, in setting quantified goals
10. Involve the stakeholders, every week, in *actually using* increments





# Gilb's Agile Principles

to avoid bureaucracy and give creative freedom (1 sentence summary)



Main Idea:

**Get early, and frequent, real, stakeholder net-value - delivered**

	VALUE TO CREATE	VALUE TO PRESERVE	VALUE TO SACRIFICE
EMPLOYEES			
CUSTOMERS			
SUPPLIERS AND PROFESSIONAL ADVISERS			
INVESTORS			
TRADES UNIONS			
GOVERNMENT			
MEDIA			
COMMUNITY			
OTHER STAKEHOLDER GROUPS			

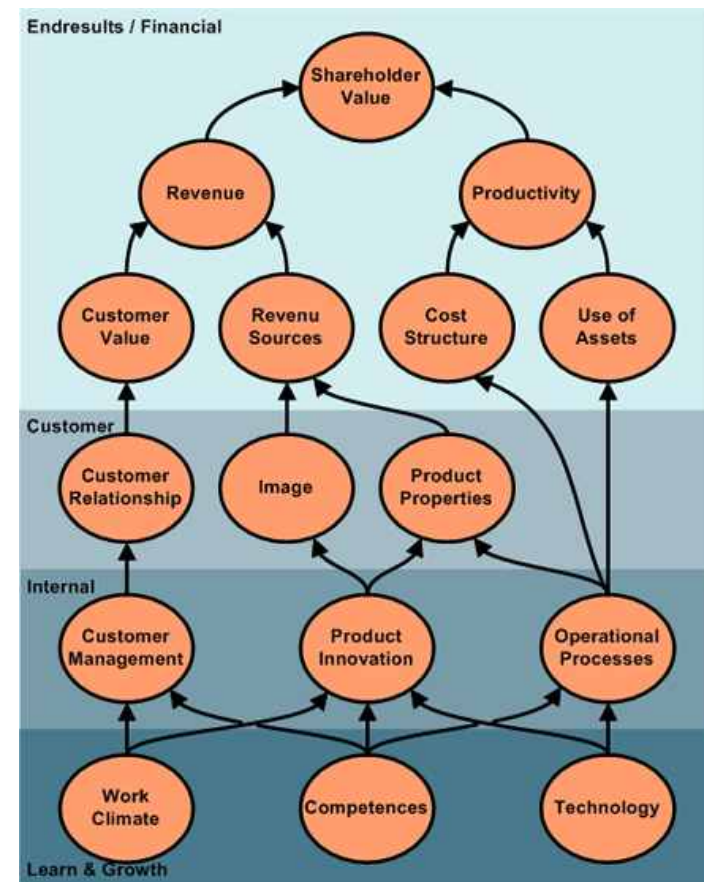
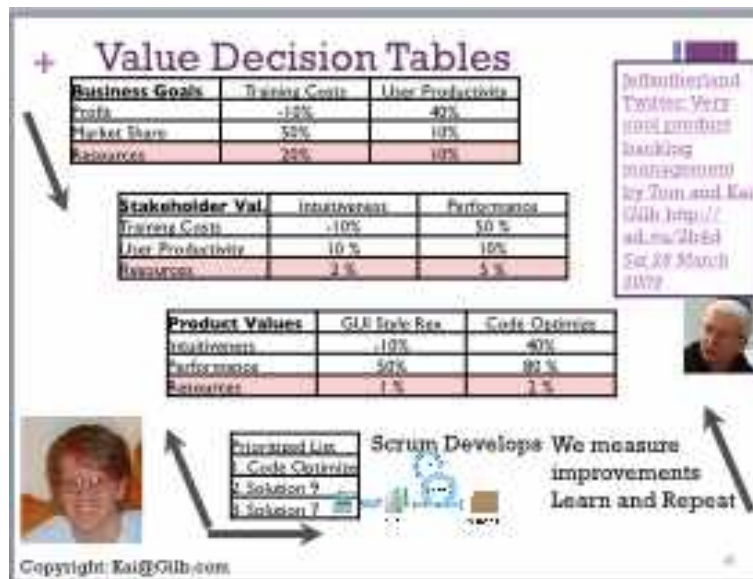
**Deliver  
Value !**



# 1. Control projects by quantified critical-few results. 1 Page total !

(not stories, functions, features, use cases, objects, ..)

1. De viktigste resultatforbedringer må kvantifiseres, for å styres i havn.



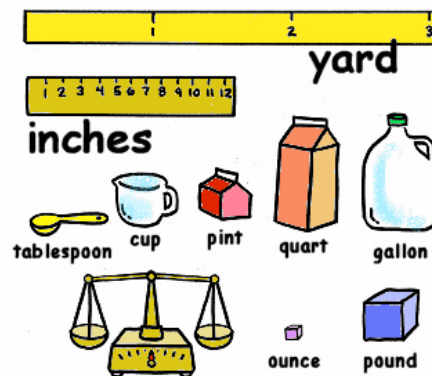
# NOT LIKE THIS! Project Objectives

## ‘Unquantified few’

### Real Example of *Lack of Scales*

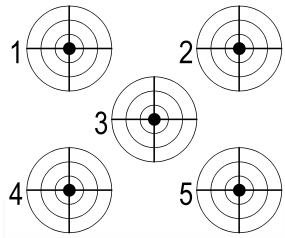
#### ► Defined Scales of Measure:

- ! Demands **comparative thinking**.
- ! Leads to requirements that are unambiguously clear
- ! Helps Team be **Aligned with the Business**

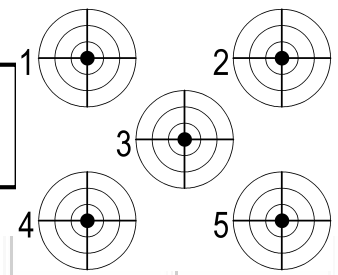


1. *Central to The Corporations business strategy is to be the world's premier integrated\_<domain> service provider.*
2. *Will provide a much more efficient user experience*
3. *Dramatically scale back the time frequently needed after the last data is acquired to time align, depth correct, splice, merge, recompute and/or do whatever else is needed to generate the desired products*
4. *Make the system much easier to understand and use than has been the case for previous system.*
5. *A primary goal is to provide a much more productive system development environment than was previously the case.*
6. *Will provide a richer set of functionality for supporting next-generation logging tools and applications.*
7. *Robustness is an essential system requirement (see rewrite in example below)*
8. *Major improvements in data quality over current practices*

This lack of clarity cost them \$100,000, 000



**More like this! (Real case).**



Business objective	Measure	Goal (200X)	Stretch goal ('0X)	Volume	Value	Profit	Cash
Time to market	Normal project time from GT to GT5	<9 mo.	<6 mo.	X		X	X
Mid-range	Min BoM for The Corp phone	<\$90	<\$30	X		X	X
Platformisation Technology	# of Technology 66 Lic. shipping > 3M/yr	4	6	X		X	X
Interface	Interface units	>11M	>13M	X		X	X
Operator preference	Top-3 operators issue RFQ spec The Corp	1	2	X		X	X
Productivity				X		X	X
Get Torden	Lyn goes for Technology 66 in Sep-04	Yes		X		X	X
Fragmentation	Share of components modified	<10%	<5%		X	X	X
Commoditisation	Switching cost for a UI to another System	>1yr	>2yrs		X	X	X
Duplication	The Corp share of 'in scope' code in best-selling device	>90%	>95%		X	X	X
Competitiveness	Major feature comparison with MX	Same	Better	X		X	X
User experience	Key use cases superior vs. competition	5	10	X	X	X	X
Downstream cost saving	Project ROI for Licensees	>33%	>66%	X	X	X	X
Platformisation IFace	Number of shipping Lic.	33	55	X		X	X
Japan	Share of of XXX sales	>50%	>60%	X		X	X

Numbers are intentionally changed from real ones

**Business Objectives Quantified**



## 2. Make sure those results are business results, not technical

Align your project with your financial sponsor's interests!

2. De styrende resultater er interessehaververdi, ikke teknisk utforming

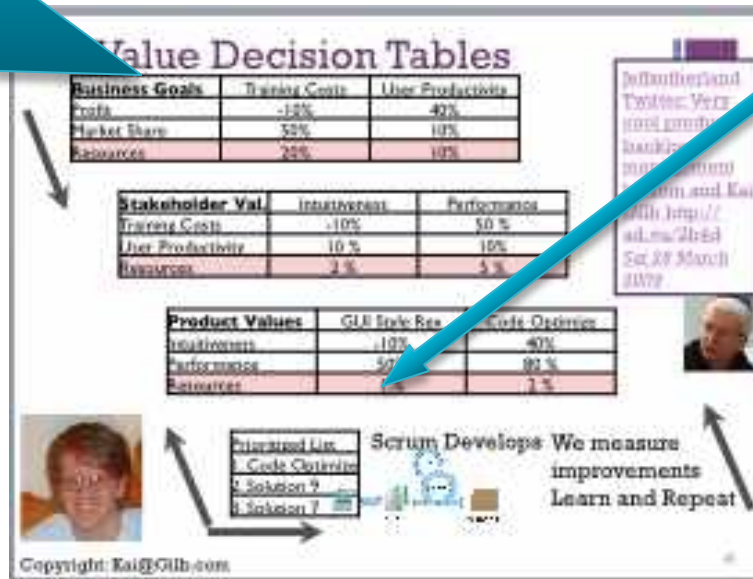
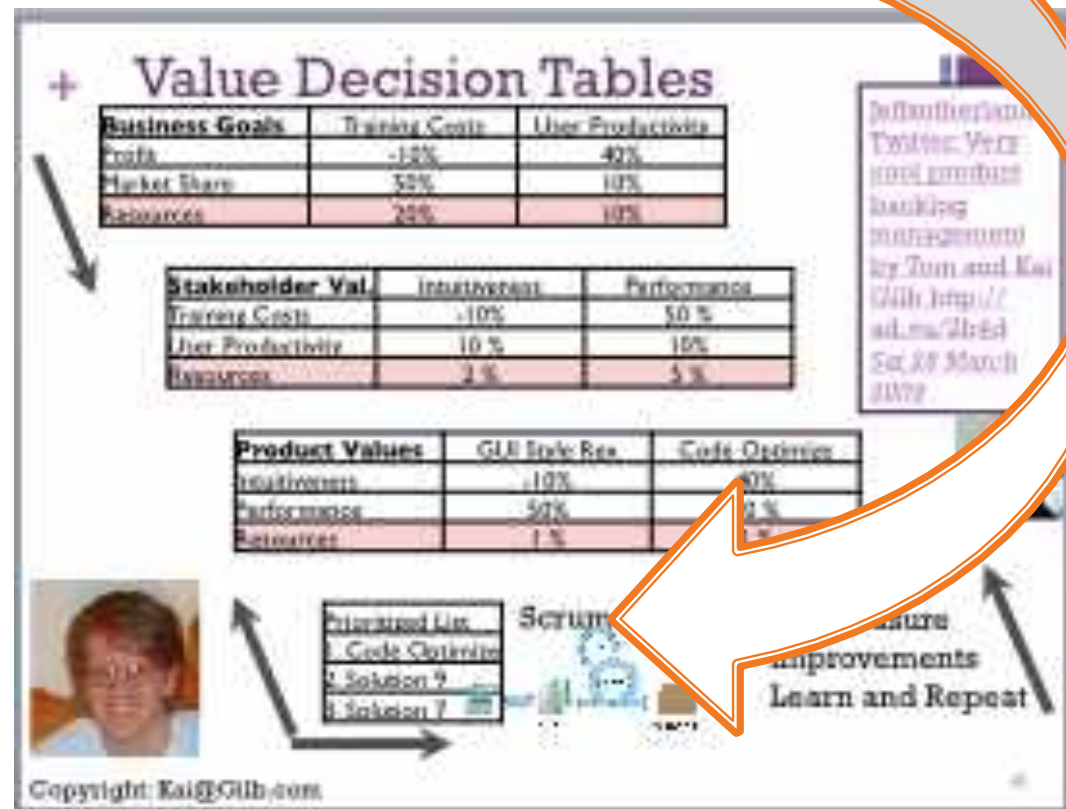


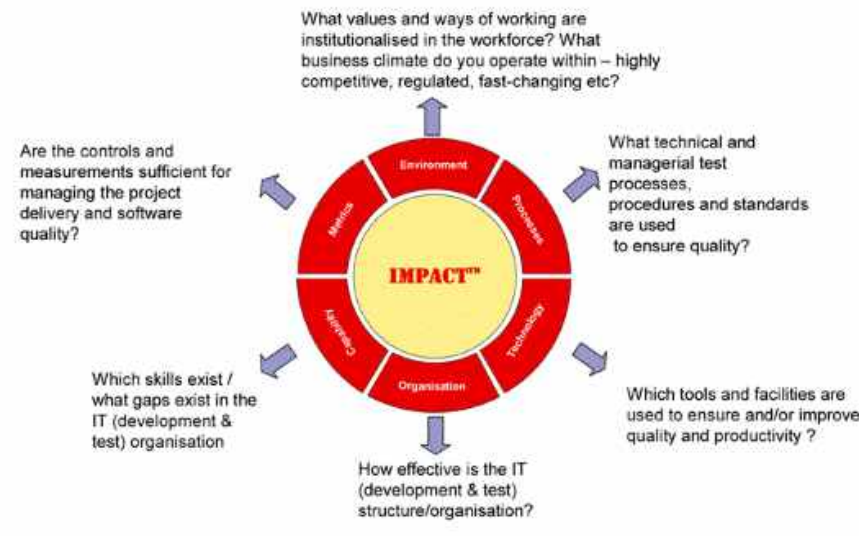
Figure 1. The "Mother of All Models". © 2006 MarketingNPV LLC. All Rights Reserved.

### 3. Give developers freedom, to find out *how* to deliver those results

### 3. Slipp utviklerne fri!



## 4. Estimate the impacts of your designs, on *your* quantified goals



- ▶! Anslå effektene som dine løsninger har
  - ! På både
  - ! Hovedmålsetninger
  - ! Og
  - ! Kostnader

If you cannot, then your knowledge is of a meagre and unsatisfactory kind (Lord Kelvin)



Strategy Impact Estimation:  
for a \$100,000,000 Organizational Improvement Investment

# Technical Strategies



## Objectives

↓

Business Objective

Time to market

Mid-range

Platformisation Technology

Interface

Operator preference

Get Torden

Commoditisation

Duplication

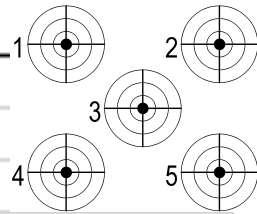
Competitiveness

User experience

Downstream cost saving

Platformisation IFace

Japan



## "Benefits"

Viking De

Defend vs Technology 66

Tools

User Experce

GUI & Graphics

Security

Defend vs OCD

Enterprise

hardware adaptation	Telephony	Reference designs	IFace	Modularity	Defend vs Technology 66	Tools	User Experce	GUI & Graphics	Security	Defend vs OCD	Enterprise
20%	10%	30%	5%	10%	5%	15%	0%	0%	0%	5%	5%
15%	10%	30%	5%	10%	5%	5%	10%	5%	5%	0%	0%
25%	10%	30%	0%	5%	10%	0%	5%	0%	10%	0%	5%
5%	15%	15%	0%	5%	0%	5%	0%	0%	10%	0%	10%
0%	0%	0%	0%	0%	20%	5%	10%	10%	20%	5%	10%
25%	10%	10%	-10%	0%	20%	0%	10%	-20%	10%	10%	5%
20%	10%	20%	10%	-20%	25%	15%	0%	0%	5%	10%	5%
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5%	0%	0%	0%	0%	0%	0%	30%	10%	0%	0%	0%
15%	10%	20%	40%	0%	20%	5%	10%	0%	0%	10%	5%
10%	10%	20%	0%	0%	20%	0%	0%	0%	0%	0%	5%
10%	5%	20%	0%	0%	0%	0%	10%	5%	0%	0%	0%

## Strategy Impacts on Objectives

## Benefit/Cost

Contribution to overall result

Cost (£M)

ROI Index (100=average)

15%	9%	17%	4%								5%
£ 2.85	£ 0.49	£ 3.21	£ 2.54	£ 1.92	£ 2.31	£ 0.81	£ 1.21	£ 2.68	£ 0.79	£ 0.62	£ 0.60
106	358	109	33	78	127	148	107	10	152	202	174

Cost

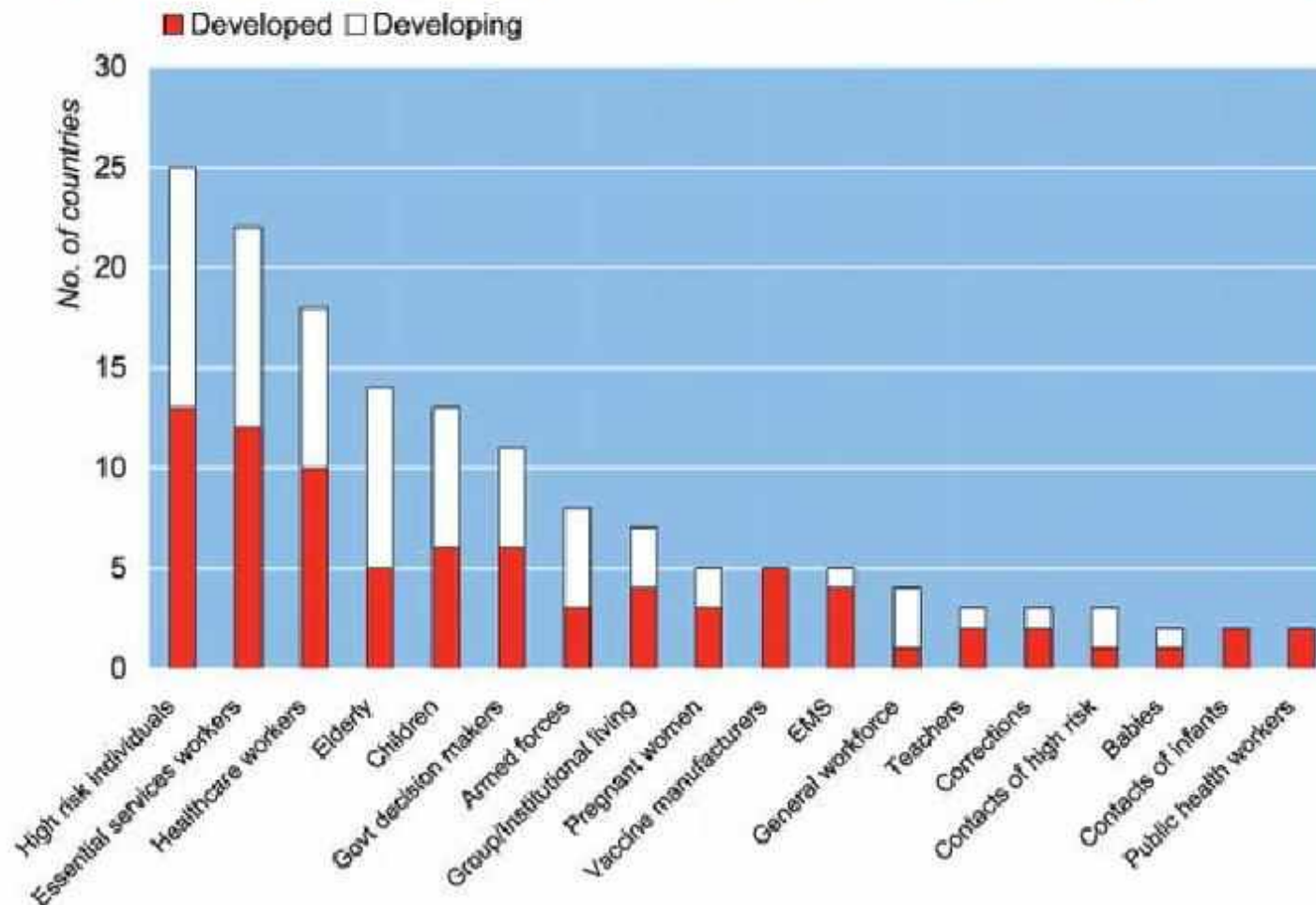
358 !

ratio



## 5. Select designs with the best impacts in relation to their costs, do them first.

Figure 1: Vaccine Priority Groups by Development Status - Listed in at Least Two National Plans



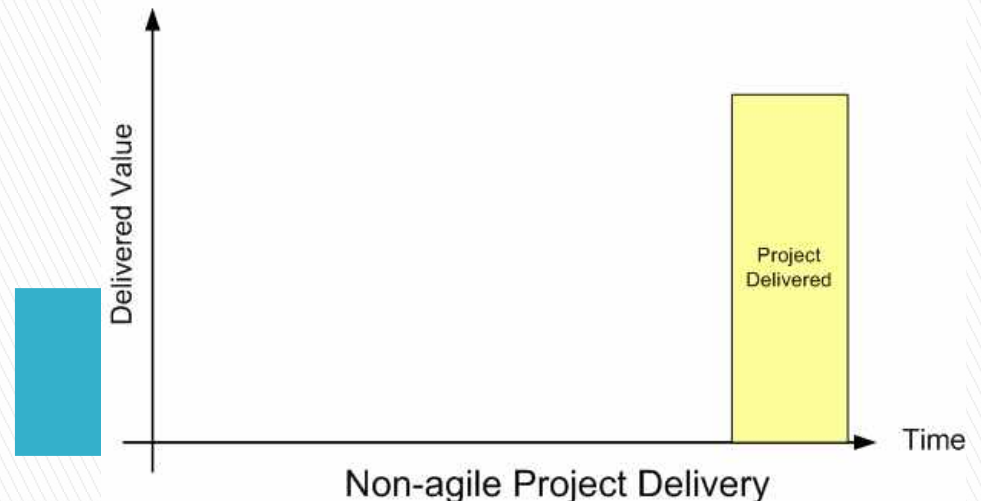
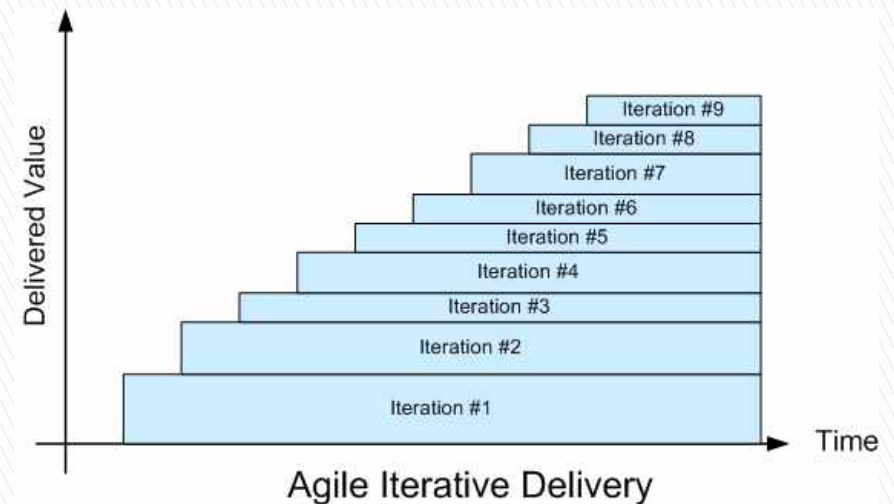
Source: Uscher-Pines et al. Priority setting for pandemic influenza: An analysis of national preparedness plans. PLoS Med 2006;3(10):e436. DOI: 10.1371/journal.pmed.0030436.

## 6. Decompose the workflow, into weekly (or 2% of budget) time boxes

- ▶ 6. Del opp arbeidet i ukentlige (eller 2% av det hele) verdileveransetrinn til interessentene

Decomposition of Projects:  
How to Design Small  
Incremental Steps INCOSE  
2008

[http://www.gilb.com/tiki-download\\_file.php?fileId=41](http://www.gilb.com/tiki-download_file.php?fileId=41)



## 7. Change designs, based on quantified experience of implementation

- ▶ 7. Endre dine tekniske løsninger, basert på kortsiktige målinger og andre erfaringer

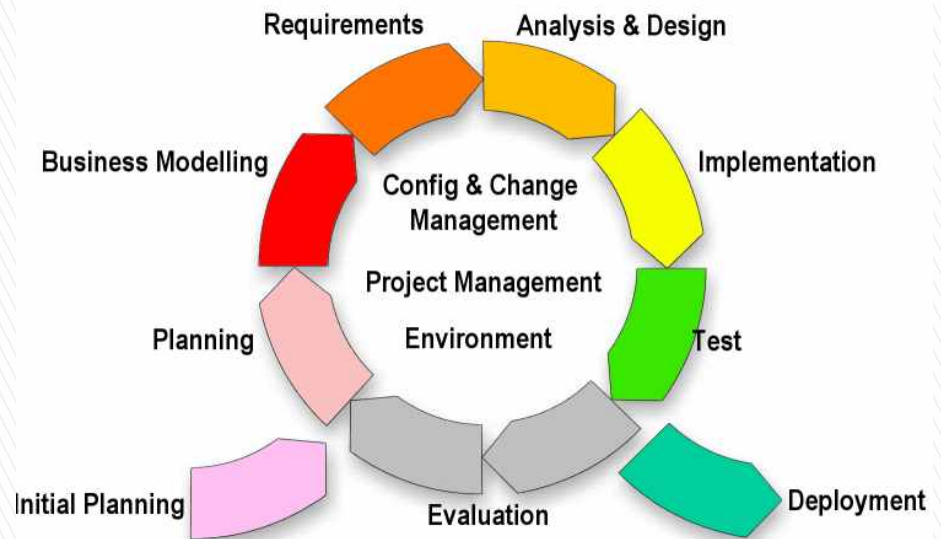
Design is the servant of the requirement. If it does not work 'fire' it.



## 8. Change requirements, based on quantified experience, new inputs: intelligent tradeoff.

- ▶ 8. Endre de kravene med lavere fortrinn, når de målbart strider mot viktigere krav

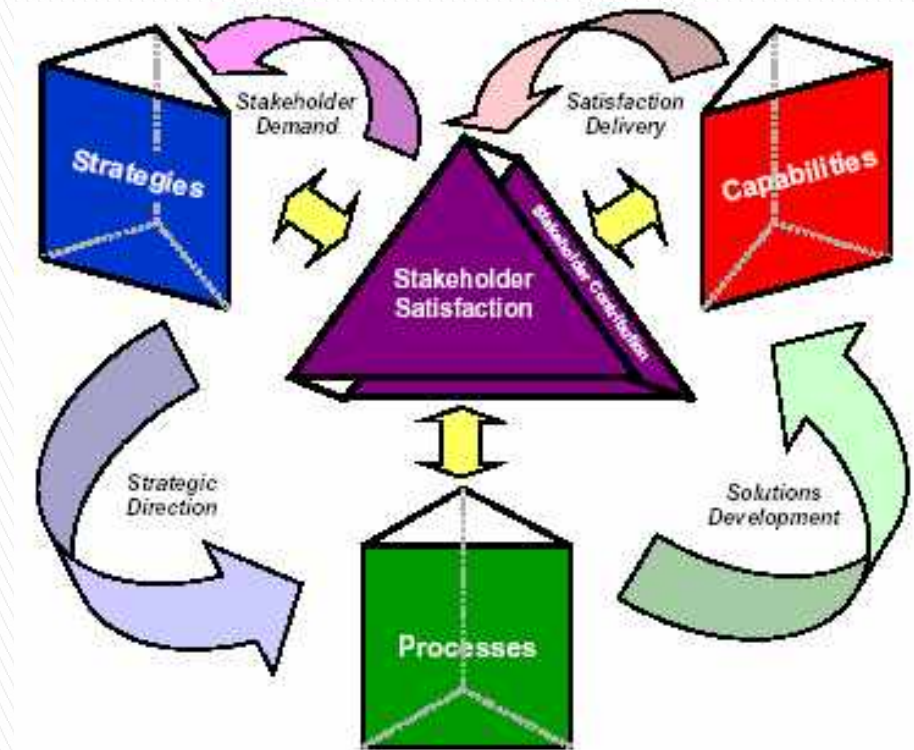
Reduce the level or delivery time, of lower-priority requirements, in order to deliver high priority requirements on time, within budget, or at Goal levels.





## 9. Involve the stakeholders, every week, in setting quantified goals

La interesseshaverne  
delta kontinuerlig med  
justering og  
prioritering av sine  
behov

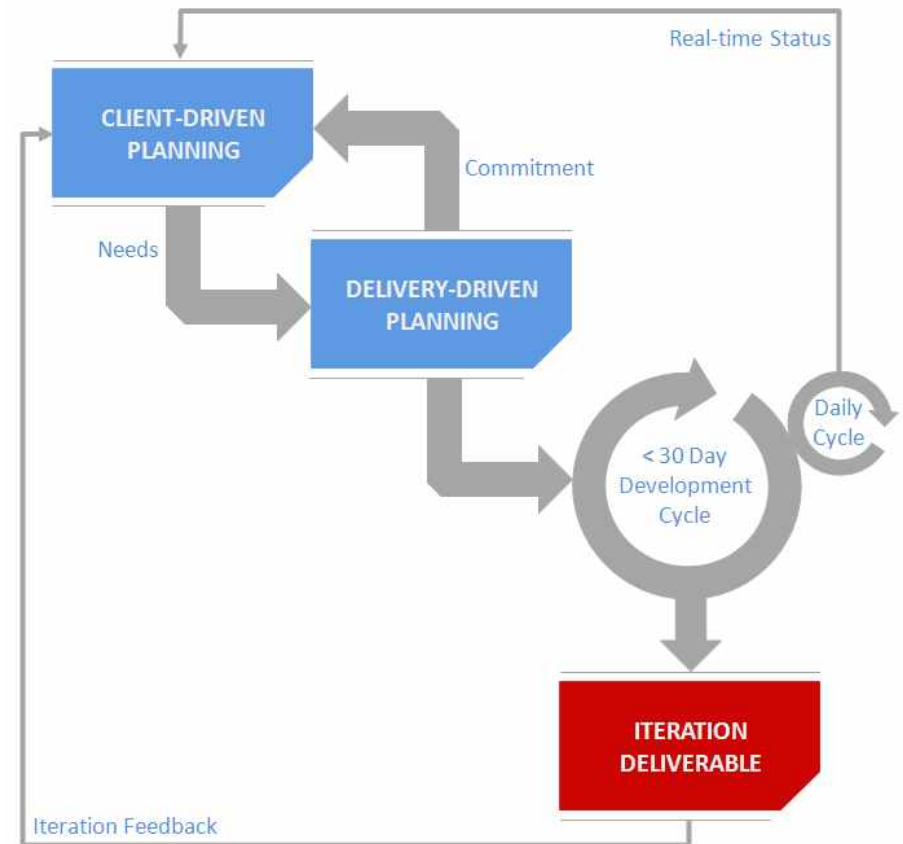


It is much easier to determine requirements with a little hindsight!

The eternal cycle of stakeholder priorities

# 10. Involve the stakeholders, every week, in actually using increments

- ▶ 10. Sjekk, umiddelbart og kontinuerlig, om verdien som interessehaverne *skulle* oppleve, er blitt til virkelighet



# My 10 Agile Values?

- ! **Simplicity**
  - ! **1. Focus on real stakeholder values**
- ! **Communication**
  - ! **2. Communicate stakeholder values quantitatively**
  - ! **3. Estimate expected results and costs for weekly steps**
- ! **Feedback**
  - ! **4. Generate results, weekly, for stakeholders, in their environment**
  - ! **5. Measure all critical aspects of the improved results cycle.**
  - ! **6. Analyze deviation from your initial estimates**
- ! **Courage**
  - ! **7. Change plans to reflect weekly learning**
  - ! **8. Immediately implement valued stakeholder needs, next week**
    - ! *Don't wait, don't study (analysis paralysis), don't make excuses.*
    - ! *Just Do It!*
  - ! **9. Tell stakeholders exactly what you will deliver next week**
  - ! **10. Use any design, strategy, method, process that works quantitatively well - to get your results**
    - ! **Be a systems engineer, not a just programmer (a 'Softcrafter').**
    - ! **Do not be limited by your craft background, in serving your paymasters**



# My 10 Agile *Values*? (Detail)

- ! **Simplicity** (enklest mulig)
- ! **Communication** (forstå hverandre)
- ! **Feedback** (hurtige tilbakemeldinger)
- ! **Courage** (mot til å gå for store verdileveranser)

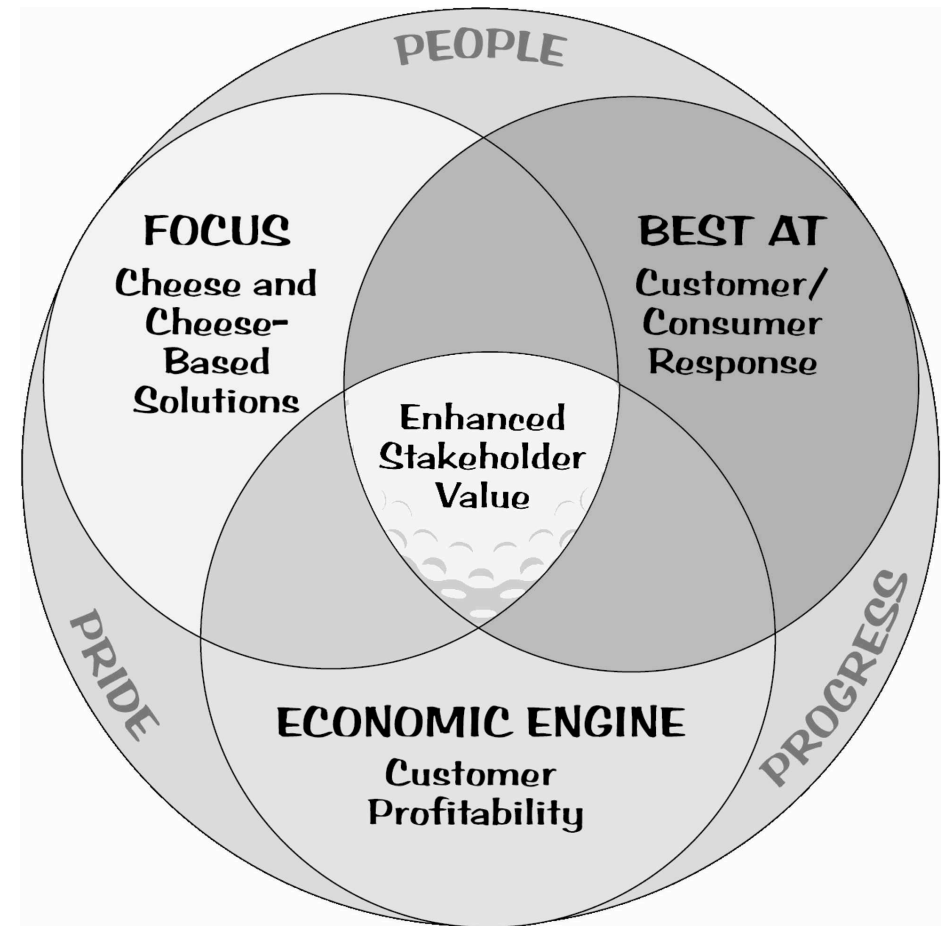




# Simplicity

## !1. Focus on real stakeholder values

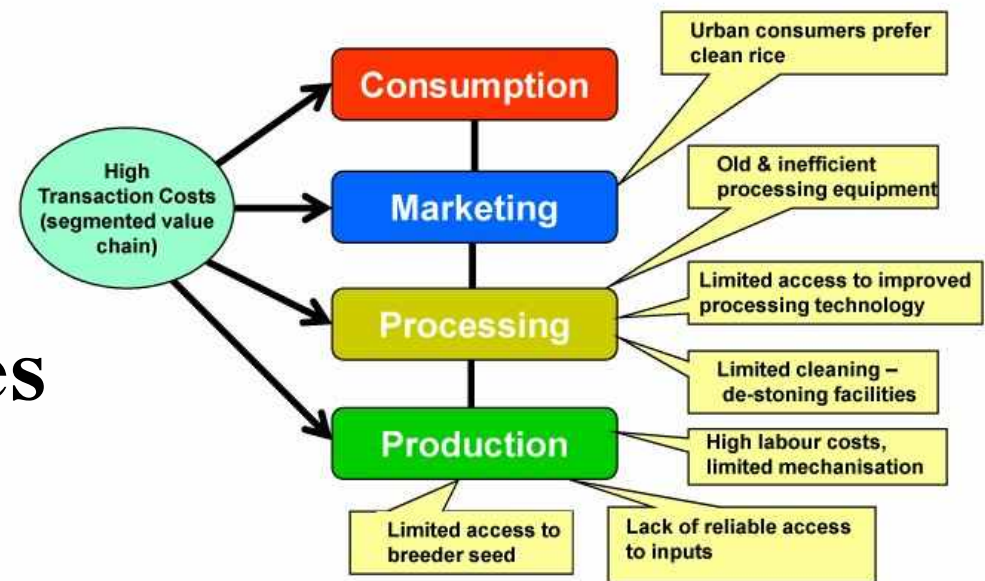
- !1. Bruk ressursene dine på det som interessehaverne virkelig verdsetter, i forhold til kostnadene.



# Communication

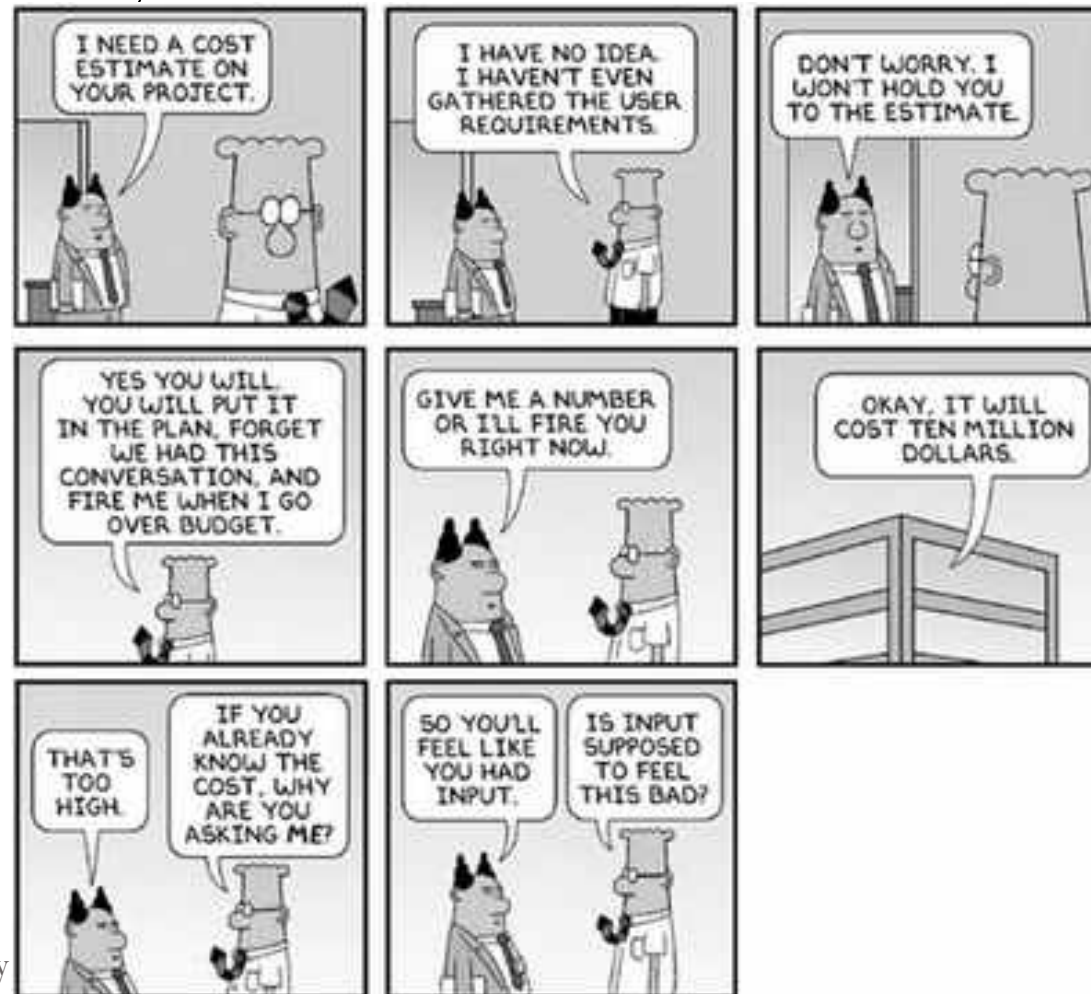
- **2. Communicate stakeholder values quantitatively.**
- **2. uttrykk interessehavernes verdier med tall, ikke julebordsfraser**

Kura - Kano Rice Value Chain



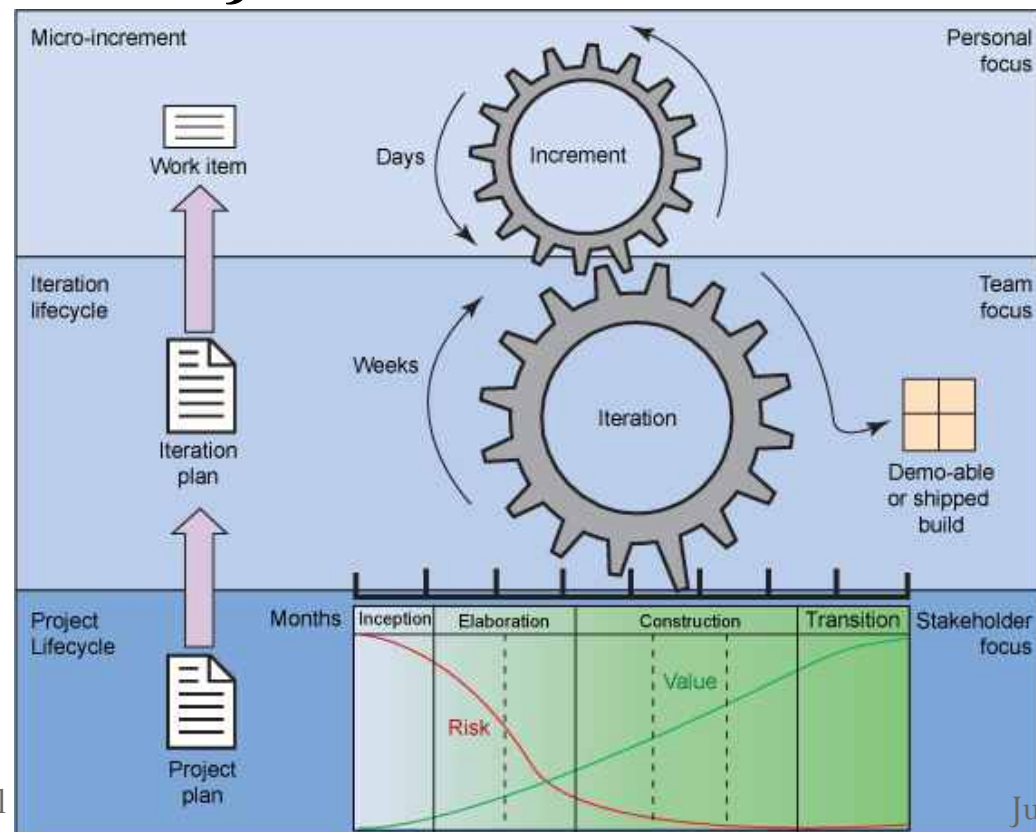
# Estimate Often

- ! 3. Estimate expected results and costs for weekly steps
- ! 3. Tallfest forventede verdileveranse og kostnader for hver leveransesyklus



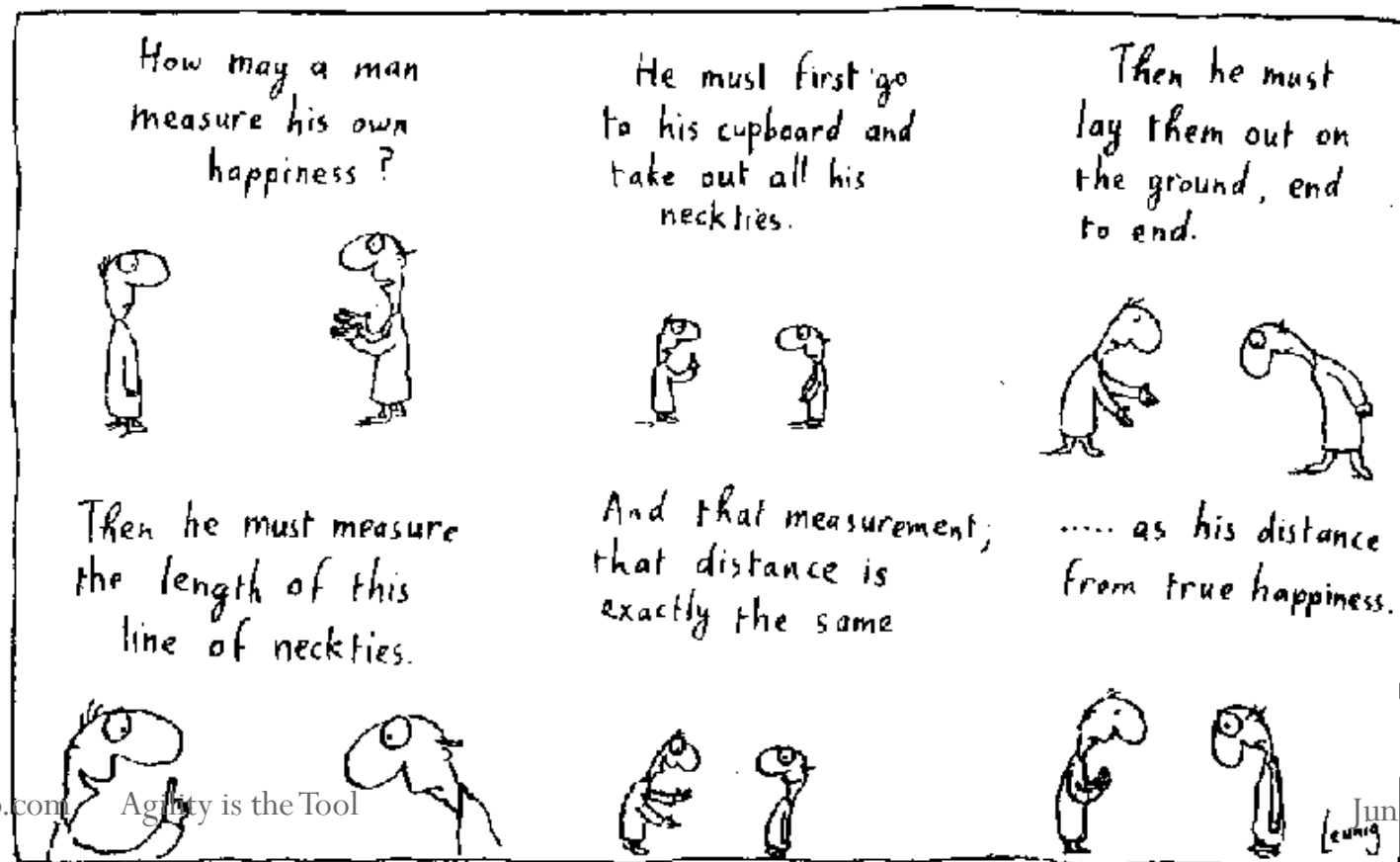
# Feedback

- !4. Generate results, weekly, for stakeholders, in *their* environment
- !4. Lever systeminkrementer hyppig i *ekte* interessehavermiljøet



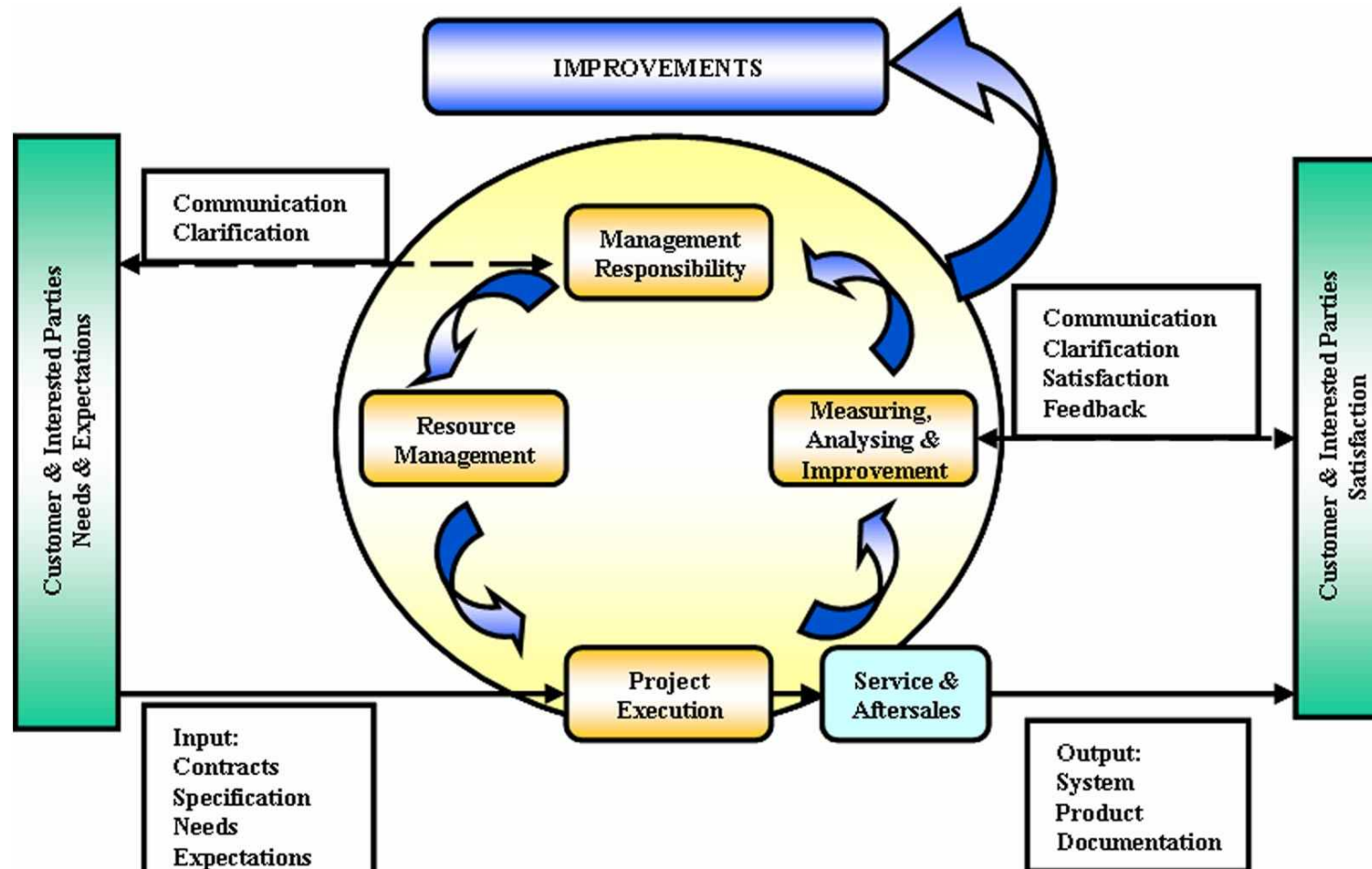
# Measure Critical Stuff

- ! 5. Measure all critical aspects of the improved results cycle.
- ! 5. Mål, på rimelig vis, alle kritiske egenskaper ved din inkrementell verdileveranseforsøk.



# Learn from Deviations

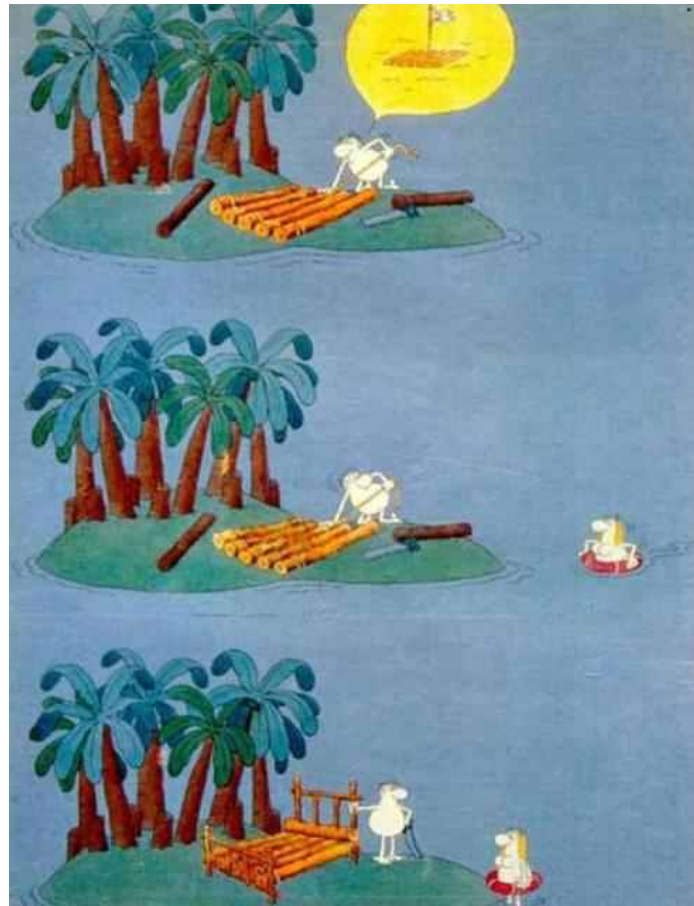
- ! 6. Analyze deviation from your initial estimates.
- ! 6. Lær mest mulig fra avvik fra dine forventninger





# Courage

- !7. Change plans to reflect weekly learning.
- !7. Det er ikke skam å snu i tide



## Deliver Value Now

- **8. Immediately implement valued stakeholder needs, next week**
  - *Don't wait, don't study (analysis paralysis), don't make excuses.*
  - *Just Do It!*
- **8. La neste leveranse være den mest verdifulle, uansett tidligere planer.**





# Tell Stakeholders What's next

- ! 9. Tell stakeholders exactly what you will deliver next week
- ! 9. Annonser for interesseshaverne nøyaktig hvor mye verdi dere har tenkt å levere ved neste trinn.



# If it works, do it!

- ! 10. Use any design, strategy, method, process that works quantitatively well - to get your results
  - ! Be a systems engineer, not a just programmer (a 'Softcrafter').
  - ! Do not be limited by your craft background, in serving your paymasters.
- ! 10. Funker det, så duger det



# So, what are Agile methods missing?

- ! **Stakeholder Focus**

- ! **Real projects have dozens of stakeholders**
  - ! **Not just a customer in the next room**
  - ! **Not just a user with a use case or story**

- ! **Results Focus**

- ! **It is not about writing code, it is about delivering value to stakeholders**
- ! **It is not about programming, it is about making systems work, for real people**

- ! **Systems Focus**

- ! **It is not about coding – (*again* 😊)**
- ! **It is about reuse, data, hardware, training, motivation, sub-contracting, Outsourcing, help lines, user documentation, user interfaces, security, etc.**
- ! **So, a systems engineering scope is necessary to deliver results.**
- ! **Systems Engineering needs quantified performance and quality objectives**
  - ! **To synchronize all necessary disciplines, so that they deliver the results.**

- ! Ecstatic Stakeholder!

- ! Spre gleden til dine interesshavere



# End of 1 Hour NDC, Oslo Lecture

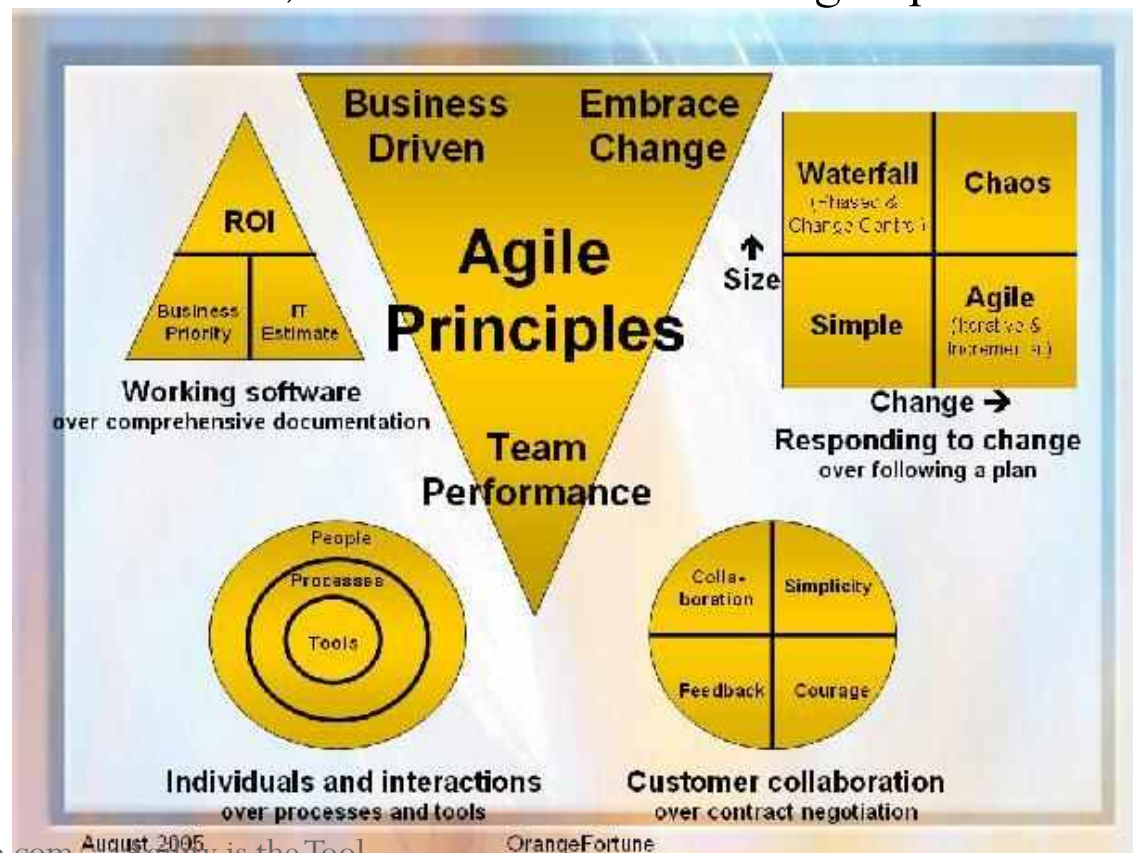
- Discussion Remarks Questions ?
  - Now, and throughout the conference
- And by email
  - [TomsGilb@Gmail.com](mailto:TomsGilb@Gmail.com)
  - +47 92066 705
  - @ ImTomGilb
- For another Norwegian case study of doing it right, see Confirmit
  - [http://www.gilb.com/tiki-download\\_file.php?fileId=278](http://www.gilb.com/tiki-download_file.php?fileId=278)
  - [http://www.gilb.com/tiki-download\\_file.php?fileId=50](http://www.gilb.com/tiki-download_file.php?fileId=50)
- See Value slides, following these, as an extra reserve, another angle.
  - From London BCS SPA Lecture 2009

## Does real Software Practice Advancement need yet another 'Manifesto'?

\_"AGILE HAS DOOMED ITSELF - TO BECOME YET ANOTHER FAD".

What is Seriously Wrong with Agile practices and interpretations - why AGILE, AS CURRENTLY PRACTICED, is PROJECT-failure-prone as a culture

"What is Tom's advice, his own more value-oriented 'agile' principles and values (see below) and metrics-oriented agile practices in Evo?



## **Gilb's 'Value Driven Planning' Principles:**

- 1. Critical Stakeholders determine the values**
- 2. Values can and must be quantified**
- 3. Values are supported by Value Architecture**
- 4. Value levels are determined by timing, architecture effect, and resources**
- 5. Value levels can differ for different scopes (where, who)**
- 6. Value can be delivered early**
- 7. Value can be locked in incrementally**
- 8. New Values can be discovered (external news, experience)**
- 9. Values can be evaluated as a function of architecture (Impact Estimation)**
- 10. Value delivery will attract resources.**

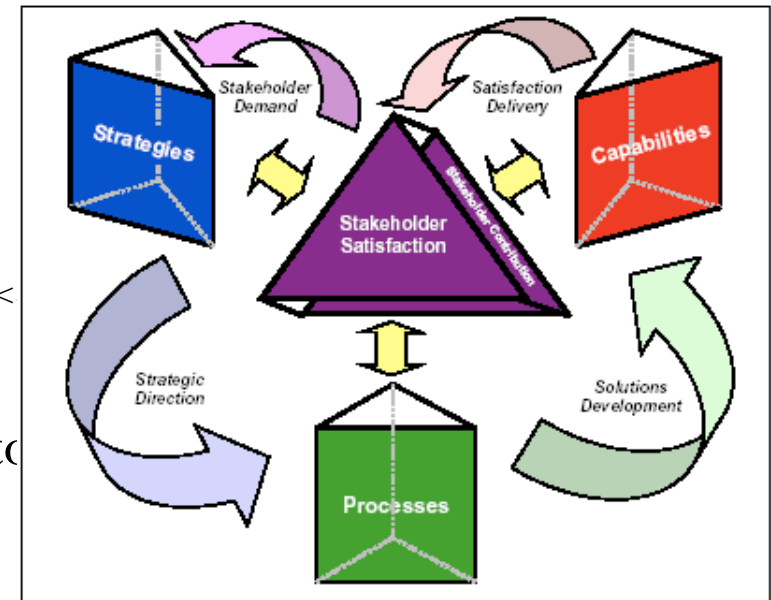


# Value Driven Planning Principles in Detail:

# 1. Critical Stakeholders determine the values

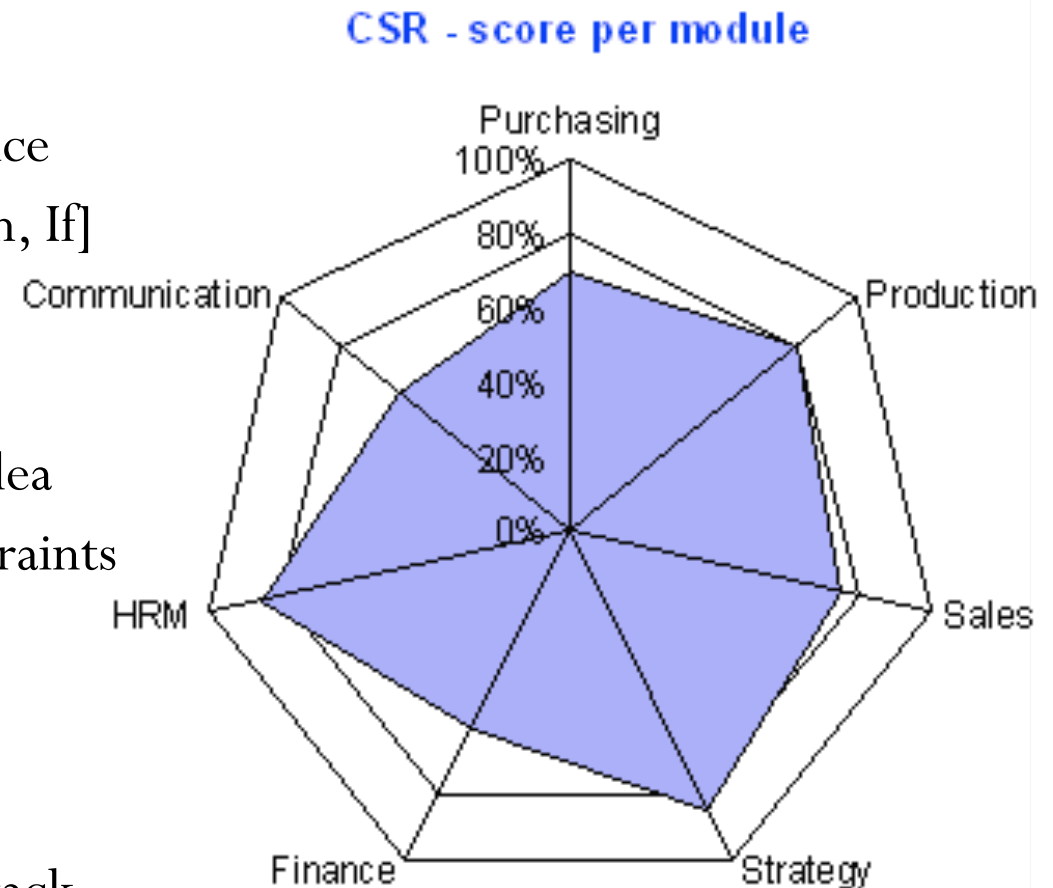
Critical: “having a decisive or crucial importance in the success or failure of something” < Dictionary

- ! The primary and prioritized values we need to deliver are determined by
  - ! analysis of the needs and values of stakeholders
    - ! stakeholders who can determine whether we *succeed* or *fail*.
- ! We cannot afford to satisfy *other (less critical)* levels, at other times and places, yet.
  - ! Because that might undermine our ability to satisfy the more critical stakeholders –
  - ! and consequently threaten our overall project success.



## 2. 'Values' can and must be *quantified*

- ! Values can, if you want, be expressed numerically.
  - ! With a defined scale of measure
  - ! with a deliverable level of performance
  - ! and with qualifier info [Where, When, If]
- ! Quantification is useful:
  - ! to clarify your own thoughts
  - ! to get real agreement to one clear idea
  - ! to allow for varied targets and constraints
  - ! to allow direct comparison with benchmarks
  - ! to put in Request for bids, bids and contracts
  - ! to manage project evolutionarily : track progress
  - ! as a basis for measurement and testing
  - ! to enable research on methods



- Figure 1: Real (NON-CONFIDENTIAL version) example of an initial draft of setting the objectives that engineering processes must meet.

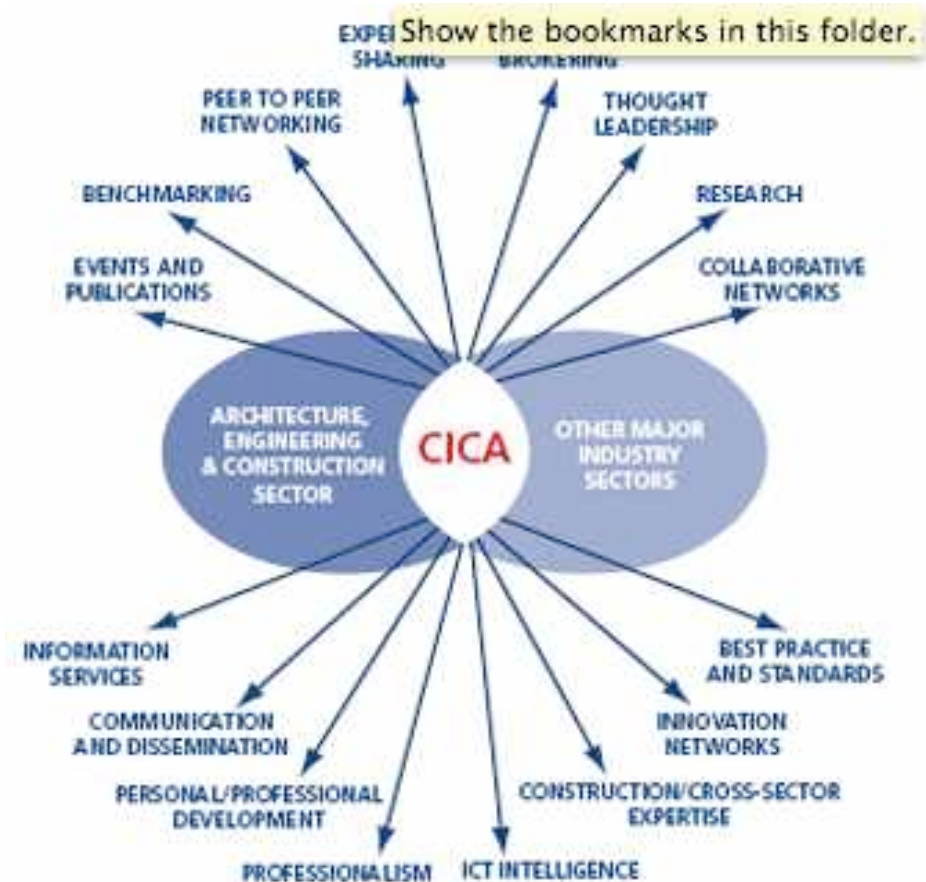
Business objective	Measure	Goal (200X)	Stretch goal ('0X)	Volume	Value	Profit	Cash
Time to market	Normal project time from GT to GT5	<9 mo.	<6 mo.	X	X	X	X
Mid-range	Min BoM for The Corp phone	<\$90	<\$30	X	X	X	X
Platformisation Technology	# of Technology 66 Lic. shipping > 3M/yr	4	6	X	X	X	X
Interface	Interface units	>11M	>13M	X	X	X	X
Operator preference	Top-3 operators issue RFQ spec The Corp	1	2	X	X	X	X
Productivity				X	X	X	X
Get Torden	Lyn goes for Technology 66 in Sep-04	yes		X	X	X	X
Fragmentation	Share of components modified	<10%	<5%	X	X	X	X
Commoditisation	Switching cost for a UI to another System	>1yr	>2yrs	X	X	X	X
Duplication	The Corp share of 'in scope' code in best-selling device	>90%	>95%	X	X	X	X
Competitiveness	Major feature comparison with MX	Same	Better	X	X	X	X
User experience	Key use cases superior vs. competition	5	10	X	X	X	X
Downstream cost saving	Project ROI for Licensees	>33%	>66%	X	X	X	X
Platformisation IFace	Number of shipping Lic.	33	55	X	X	X	X
Japan	Share of of XXX sales	>50%	>60%	X	X	X	X

Numbers are intentionally changed from real ones

Business Values Quantified

### 3. Values are supported by Value Architecture

- ! Value Architecture: defined as:
  - ! anything you *implement* with a view to satisfying stakeholder values.
- ! Value Architecture:
  - ! includes product/system objectives
    - ! Which are a 'design' for satisfying stakeholder values
  - ! Has a multitude of performance and cost impacts
  - ! can impact a given system differently, depending on what is in the system, or what gets put in later
  - ! Needs to try to maximize value delivered for resources used.



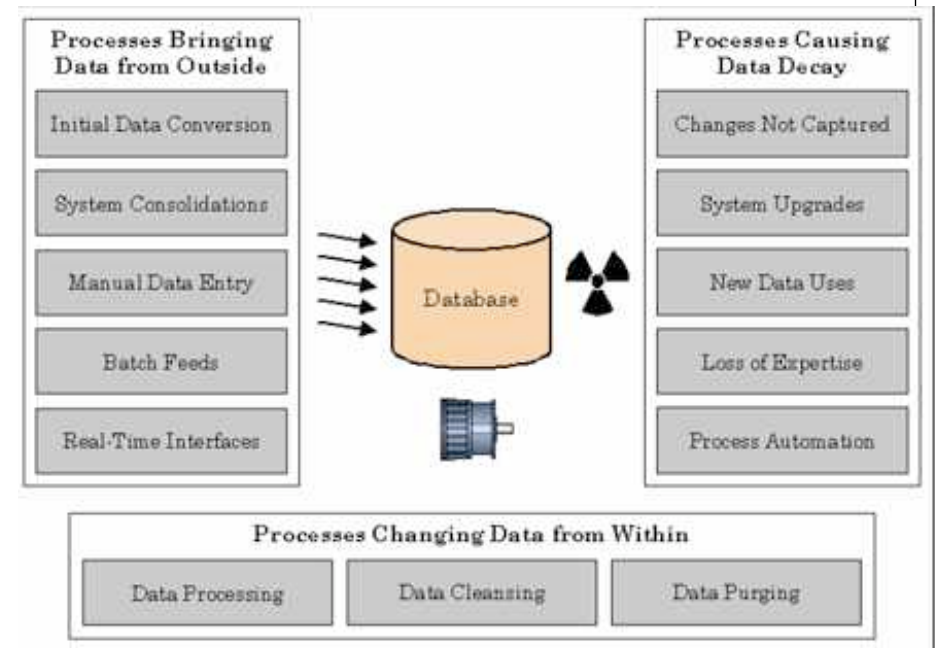
## 4. Value levels are determined by *timing, architecture effect, and resources*

Value levels: defined as:

the degree of satisfaction of value needs.

Value level:

- ! depends on *when* you observe the level
  - ! The environment, the people, other system performance characteristics (security, speed, usability)
- ! depends on the *current incremental power* of *particular value architecture* components
- ! depends on *resources available* both in development and operation



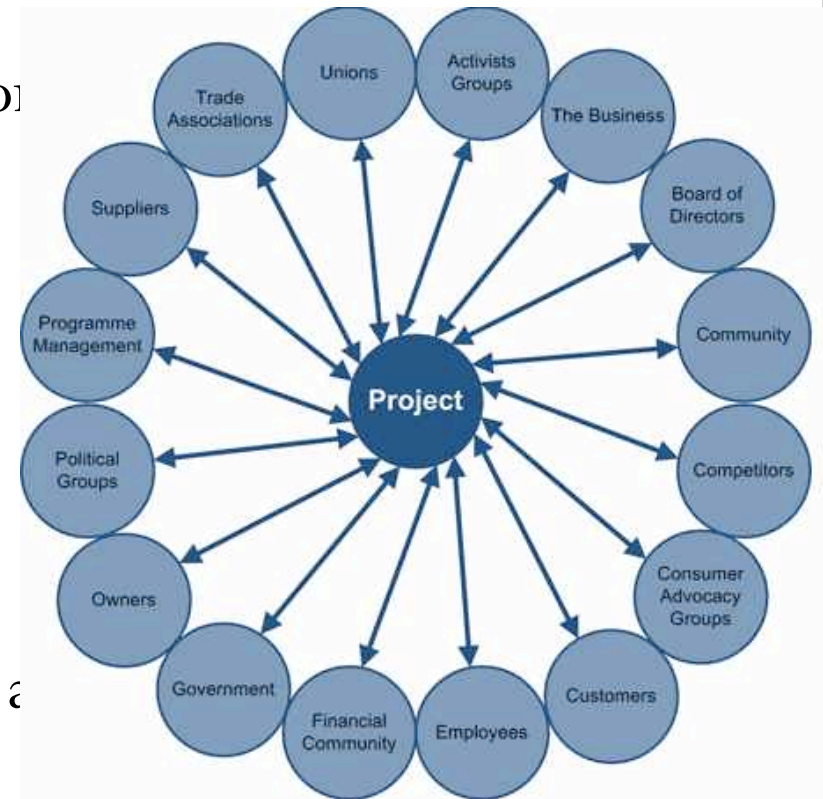


## 5. Required Value *levels* can differ for different scopes (where, who)

The level of value needed, and the level of value delivered - for a single attribute dimension (like Ease of Use) can vary for

- ! different stakeholders
- ! at different times
  - ! (peak, holiday, slack, emergency, early implementation)
- ! for different 'locations'
  - ! countries, companies, industries

There is nothing simple like 'one level for a



- 6. Value can be delivered early

You do not have to wait until 'the project is done' to deliver useful stakeholder value satisfaction.

You can intentionally target the highest priority stakeholders, and their highest priority value area, and levels.

You can deliver them early and continuously

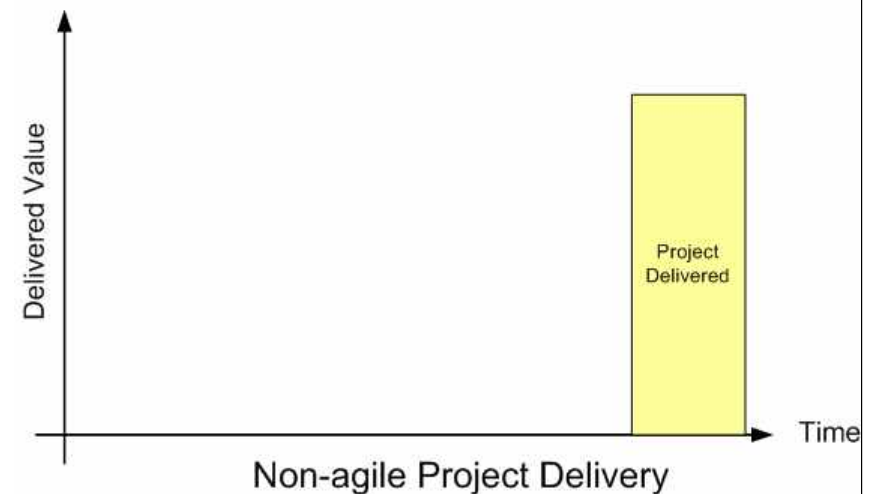
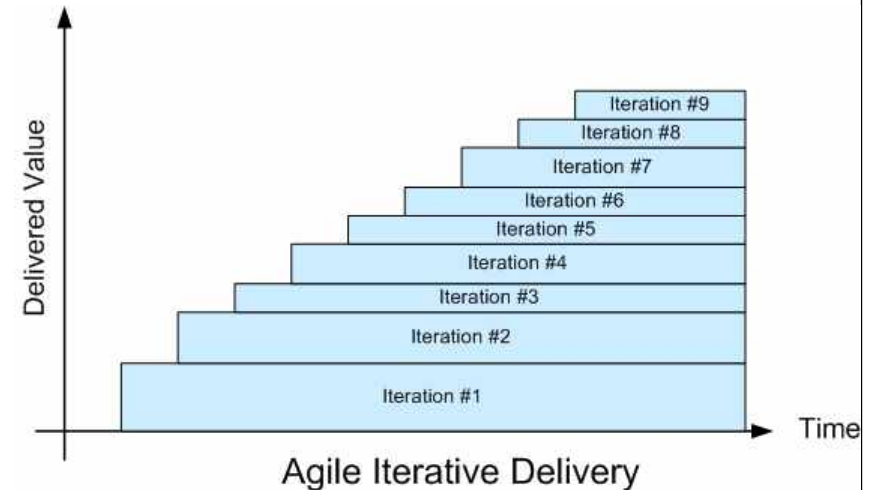
You can learn what is possible

And what stakeholders really value.

Discover new value ideas

Discover new stakeholders

Discover new levels of satisfaction



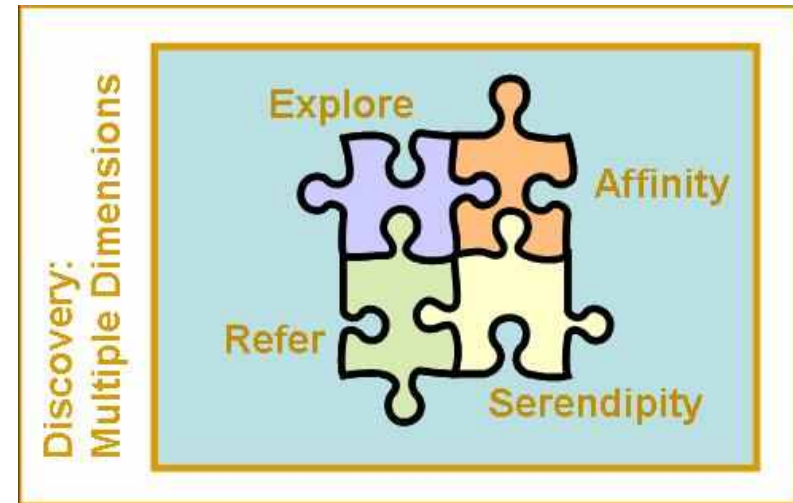
- 7. Value can be locked in incrementally

- ! You can increment the value satisfaction
  - ! *towards* longer term Goal levels
- ! You can spread the value deliveries
  - ! that are *proven* in *some* places,
  - ! more widely in the next increments
- ! This probably assumes that you have really handed over real results to real people.
  - ! Not just developed systems without delivery



## 8. New Values can be discovered (external news, experience)

- ! *Expect*, and try to discover,
  - ! entirely new stakeholder values.
- ! These will of course emerge *after you start delivering* some satisfaction, because:
  - ! Stakeholders believe you can help
  - ! Things *change*



June 8, 2010

## 9. Values can be *evaluated* as a function of *architecture* (using 'Impact Estimation')

- ! It is possible to get an **overview** of
  - ! the totality of impacts
  - ! that your **architecture**
  - ! (all designs and strategies)
  - ! **might** have
  - ! on all your defined stakeholder **needs**.

Business Objective	Weight	Viking Deliverables											
		hardware adaptation	Telephony	Reference designs	IFace	Modularity	Defend vs Technology 66	Tools	User Experce	GUI & Graphics	Security	Defend vs OCD	Enterprise
Time to market	20%	20%	10%	30%	5%	10%	5%	15%	0%	0%	0%	5%	5%
Mid-range	10%	15%	0%	15%	0%	30%	15%	5%	10%	5%	5%	0%	0%
Platformisation Technology	5%	25%	10%	30%	0%	0%	10%	0%	5%	0%	10%	0%	5%
Interface	5%	5%	15%	15%	0%	5%	0%	5%	0%	0%	10%	0%	10%
Operator preference	10%	0%	10%	0%	15%	5%	20%	5%	10%	10%	20%	5%	10%
Get Torden	10%	25%	10%	10%	-10%	0%	20%	0%	10%	-20%	10%	10%	5%
Commoditisation	5%	20%	10%	20%	10%	-20%	25%	15%	0%	0%	5%	10%	5%
Duplication	10%	15%	10%	10%	0%	0%	40%	0%	0%	0%	5%	20%	5%
Competitiveness	5%	10%	15%	20%	0%	10%	20%	10%	10%	20%	10%	10%	10%
User experience	5%	5%	0%	0%	0%	20%	0%	0%	30%	10%	0%	0%	0%
Downstream cost saving	5%	15%	5%	20%	0%	10%	20%	0%	10%	0%	0%	10%	5%
Platformisation IFace	5%	10%	10%	20%	40%	0%	20%	5%	0%	0%	0%	0%	5%
Japan	5%	10%	5%	20%	0%	10%	0%	0%	10%	5%	0%	0%	0%
Contribution to overall result		15%	9%	17%	4%	7%	15%	6%	6%	1%	6%	6%	5%
Cost (EM)	£	2.85	£ 0.49	£ 3.21	£ 2.54	£ 1.92	£ 2.31	£ 0.81	£ 1.21	£ 2.68	£ 0.79	£ 0.62	£ 0.60
ROI Index (100=average)		106	358	109	33	78	137	148	107	10	152	202	174

- ! Use an Impact Estimation table

- ! and you will be able to spot *opportunities* for

- ! high value and
- ! low cost early deliveries
  - ! by analyzing the numbers on the table

See next slide  
For enlargement



Strategy Impact Estimation:  
for a \$100,000,000 Organizational Improvement Investment

# Technical Strategies

## Objectives

Defined  
In earlier slide

Business Objective

Time to market
Mid-range
Platformisation Technology
Interface
Operator preference
Get Torden
Commoditisation
Duplication
Competitiveness
User experience
Downstream cost saving
Platformisation IFace
Japan

Viking Deliverables

hardware adaptation	Telephony	Reference designs	IFace	Modularity	Defend vs Technology 66	Tools	User Exper'ce	GUI & Graphics	Security	Defend vs OCD	Enterprise
20%	10%	30%	5%	10%	5%	15%	0%	0%	0%	5%	5%
15%	10%	30%	5%	10%	5%	5%	10%	5%	5%	0%	0%
25%	10%	30%	0%	5%	10%	0%	5%	0%	10%	0%	5%
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10%	10%	20%	40%	0%	20%	5%	0%	0%	0%	0%	5%
10%	5%	20%	0%	10%	0%	0%	10%	5%	0%	0%	0%
15%	9%	17%	4%	7%	15%	6%	6%	1%	6%	6%	5%
£ 2.85	£ 0.49	£ 3.21	£ 2.54	£ 1.92	£ 2.31	£ 0.81	£ 1.21	£ 2.68	£ 0.79	£ 0.62	£ 0.60
106	358	109	33	78	137	148	107	10	152	202	174

"Benefits"

Strategy  
Impacts  
on  
Objectives

Cost

## 10. Value delivery will attract resources.

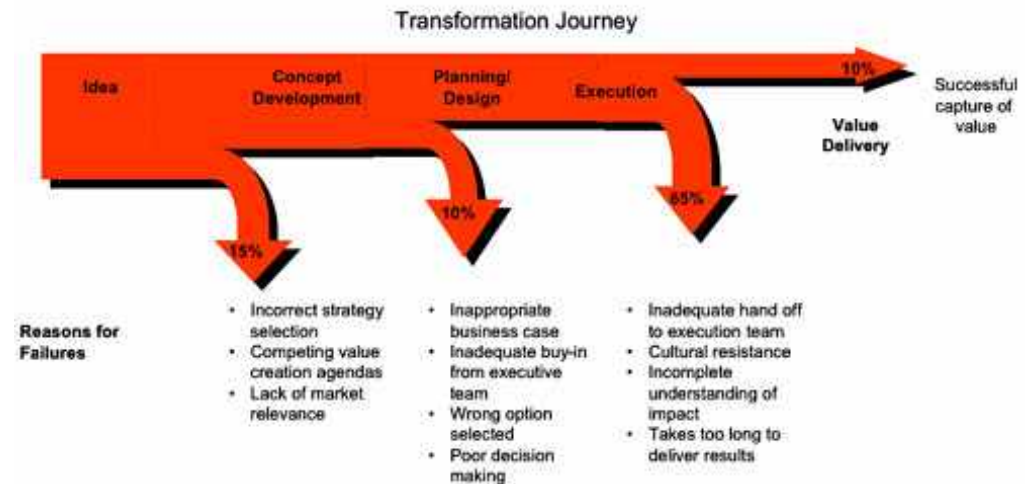
- ! If you are really good at delivering value
  - ! You can expect to attract
    - ! even more funding
  - ! Managers like
    - ! to be credited with success
  - ! Money seeks
    - ! best interest rates



June 8, 2010

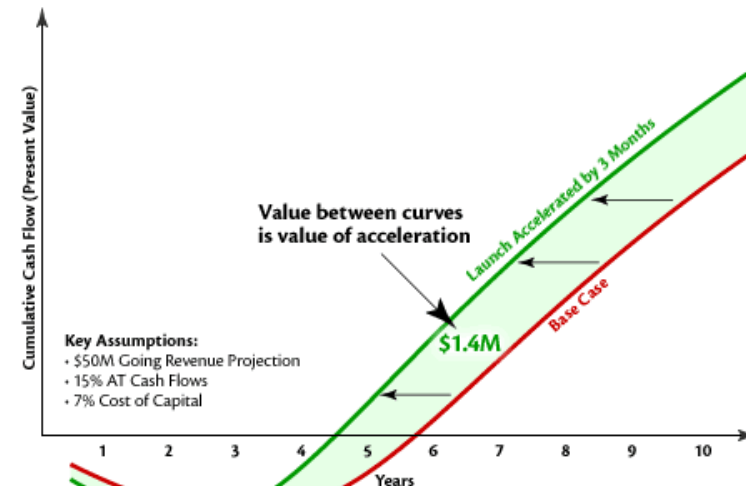
# Gilb's Value Manifesto: A Management Policy?

- 1.! **Really useful value, for real stakeholders will be defined measurably.**  
No nice-sounding emotive words please.
- 2.! **Value will be seen in light of total long term costs**  
as a decent return on investment.
- 3.! **Powerful management devices, like motivation and follow-up, will make sure that the value for money is really delivered – or that the failure is punished, and the success is rewarded.**
- 4.! **The value will be delivered evolutionarily – not all at the end.**
- 5.! **That is, we will create a stream of prioritized value delivery to stakeholders, at the *beginning* of our value delivery projects; and continue as long as the real return on investment is suitably large.**
- 6.! **The CEO is primarily responsible for making all this happen effectively.**
  - 1.! **The CFO will be charged with tracking all value to cost progress.**
  - 2.! **The CTO and CIO will be charged with formulating all their efforts in terms of measurable value for resources.**



Source: Survey 100 Global Companies 2001-2002

## Cumulative Present Value of Accelerating Cash Flows



Source "Value Delivery in Systems Engineering" available at [www.gilb.com](http://www.gilb.com)

Unpublished paper [http://www.gilb.com/community/tiki-download\\_file.php?fileId=137](http://www.gilb.com/community/tiki-download_file.php?fileId=137)

# The Value Delivery Problem

- ! **Sponsors who order and pay for systems engineering projects,**
  - ! **must justify their money spent**
  - ! **based on the expected consequential effects (hereafter called ‘value’) of the systems.**
- ! **The value of the technical system is often expressed**
  - ! **in presentation slides and requirements documents**
  - ! **as a set of nice-sounding words,**
  - ! **under various titles such as “System Objectives”, and “Business Problem Definition”**

# Some Assertions

**Assertion 1. When top management allows large projects to proceed, with such badly formulated primary objectives, then**

- ! **they are responsible as managers for the outcome (failure).**
- ! **They cannot plead ignorance.**

**Assertion 2. The failure of technical staff (project management) to react to the lack of primary objective formulation by top management is also a total failure to do reasonable systems engineering.**

- ! **Management might have a poor requirements culture, but we should routinely save them from themselves.**

**Assertion 3. Both top managers and project personnel can be trained and motivated to clarify and quantify critical objectives routinely.**

- ! **But until the poor external culture of education and practice changes, it may take strong CEO action to make this happen in your corporation.**
- ! **My experience is that no one else will fight for this.**

**Assertion 4. All top level system performance improvements, are by definition, variables.**

- ! **So, we can expect to define them quantitatively.**
- ! **We can also expect to be able to measure or test the current level of performance.**
- ! **Words like 'enhanced', 'reduced', 'improved' are not serious systems engineering requirements terms.**