

VERDIKRAV

HVORDAN *KLARLEGGE* OG *KVANTIFISERE* KRAV TIL INTERESSENTVERDIER?

KI 15:10- 15:40 (30 minutter) Dag 1, Feb 15 2017
<http://tinyurl.com/GILB1502>

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Foredraget vil gi praktiske eksempler fra det virkelige liv på hvordan man kan klarlegge verdikrav og kvalitetskrav.

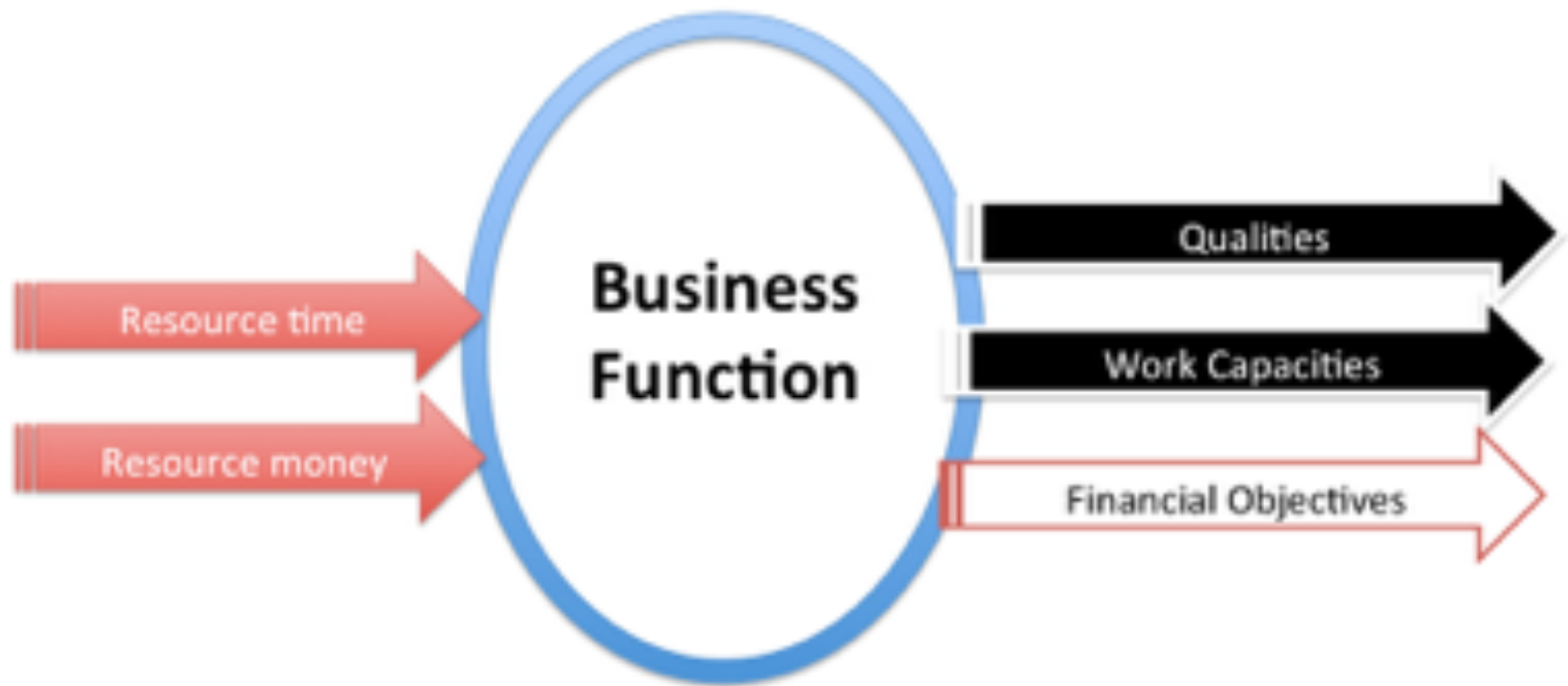
Hovedidéen er at vi må uttrykke krav kvantitativt, og ut ifra interessentens synsvinkel.

Denne praksis er uvanlig idag.

Vi er overfokusert på å beskrive et teknisk og funksjonelt system som skal bygges, og vi glemmer helt å beskrive hvorfor den skal bygges.

Hva lærer du? Verdikrav: Hvordan klarlegge og kvantifisere krav som tilfredsstiller interessentens verdier?

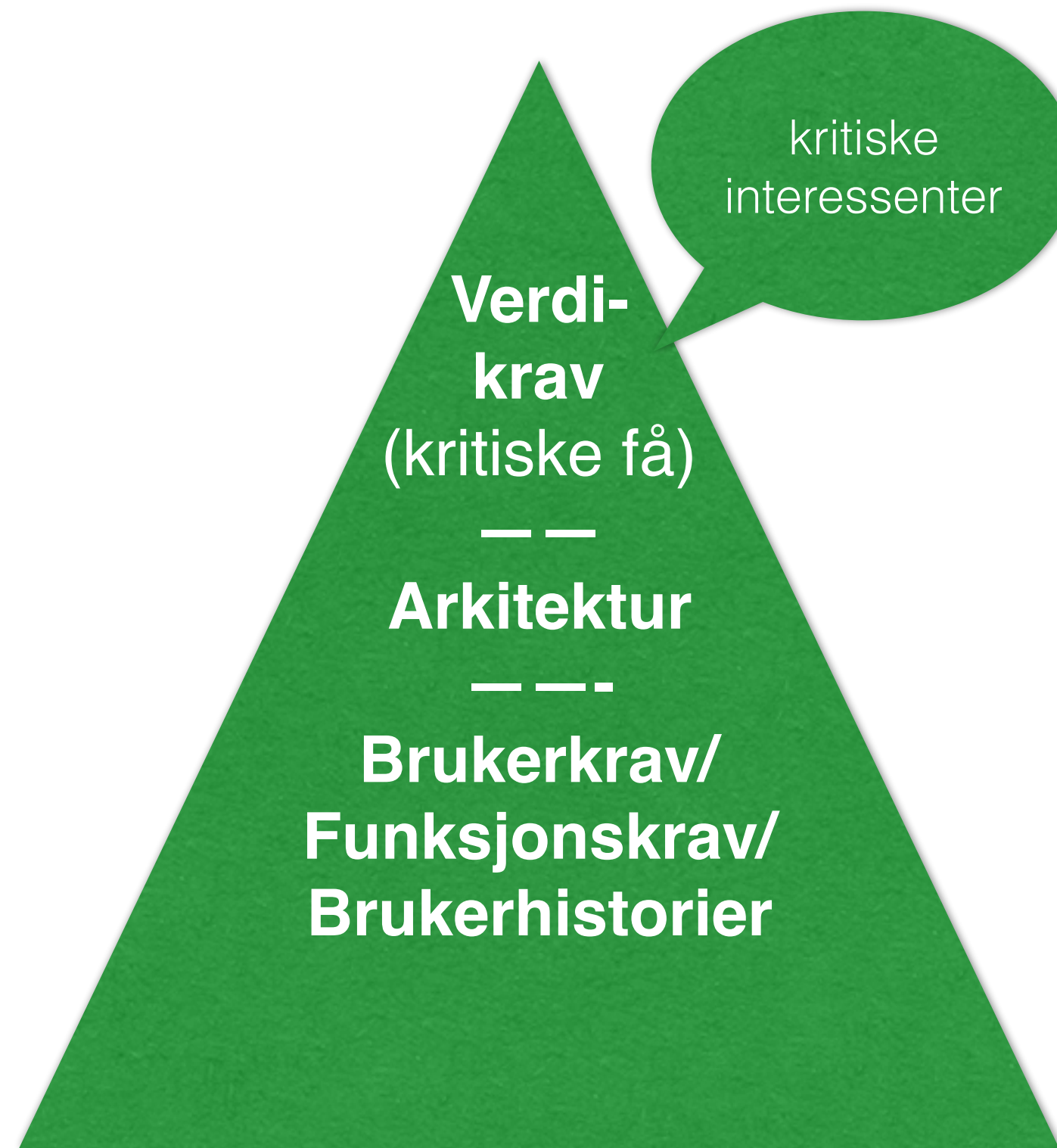
Verdikrav er hovedpoeng ved alle IT prosjekter



kilde: Value Planning fig 1.1 d

De kritiske interessenters, kritiskeverdikrav er overordnede

“Verdikrav” inkluderer alle
tekniske ‘kvaliteter’ (sikkerhet,
brukervennlighet, tekniske
gjeld,) og **organisatoriske og
produktkvaliteter**
(markedsandel, rykte,
uavhengig sikkerhetsvurdering)

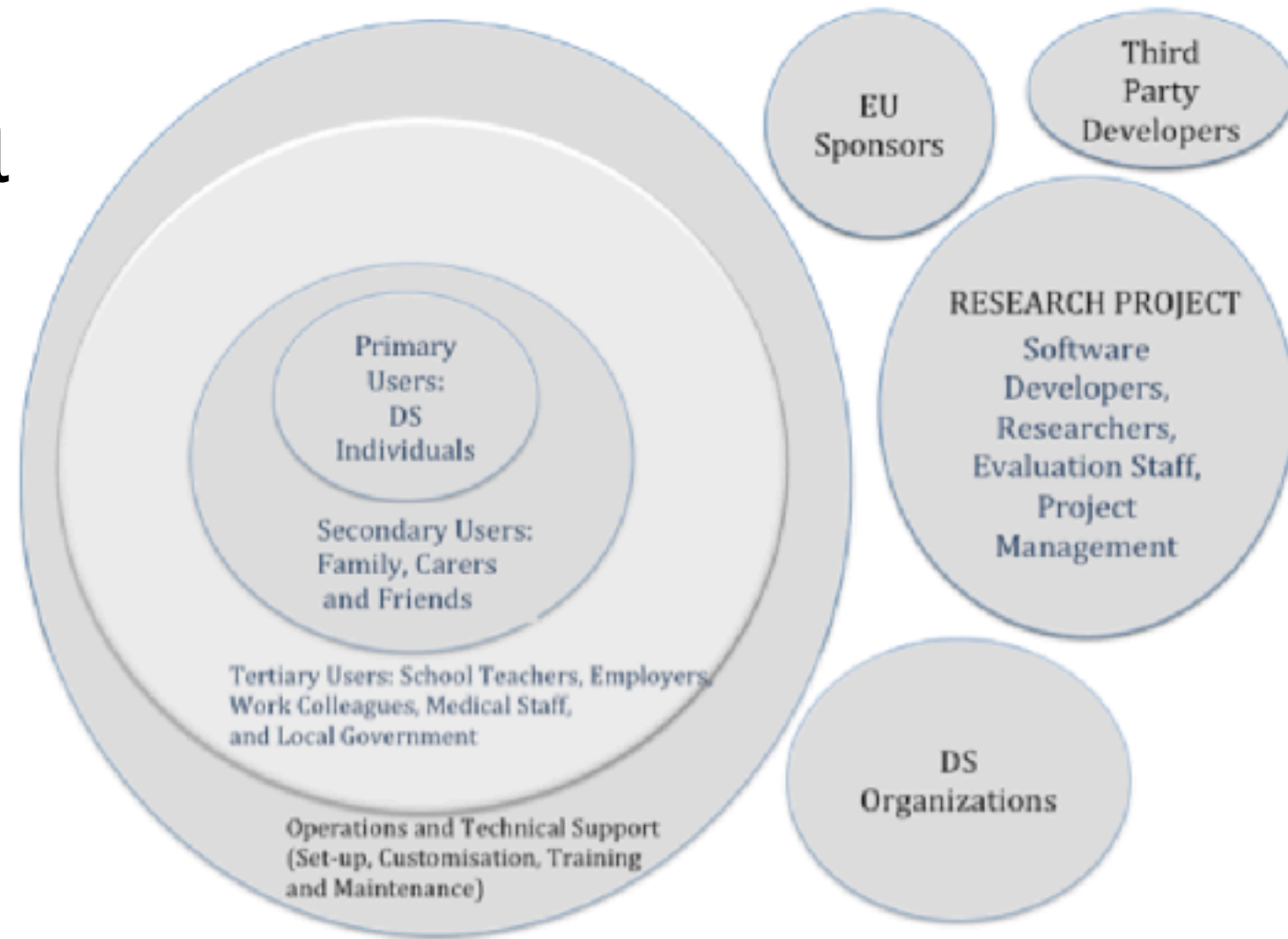


Hvor mange
interessenter må
man analysere
kravene til?

**Hvor mange kritiske
interessenter har dere?**

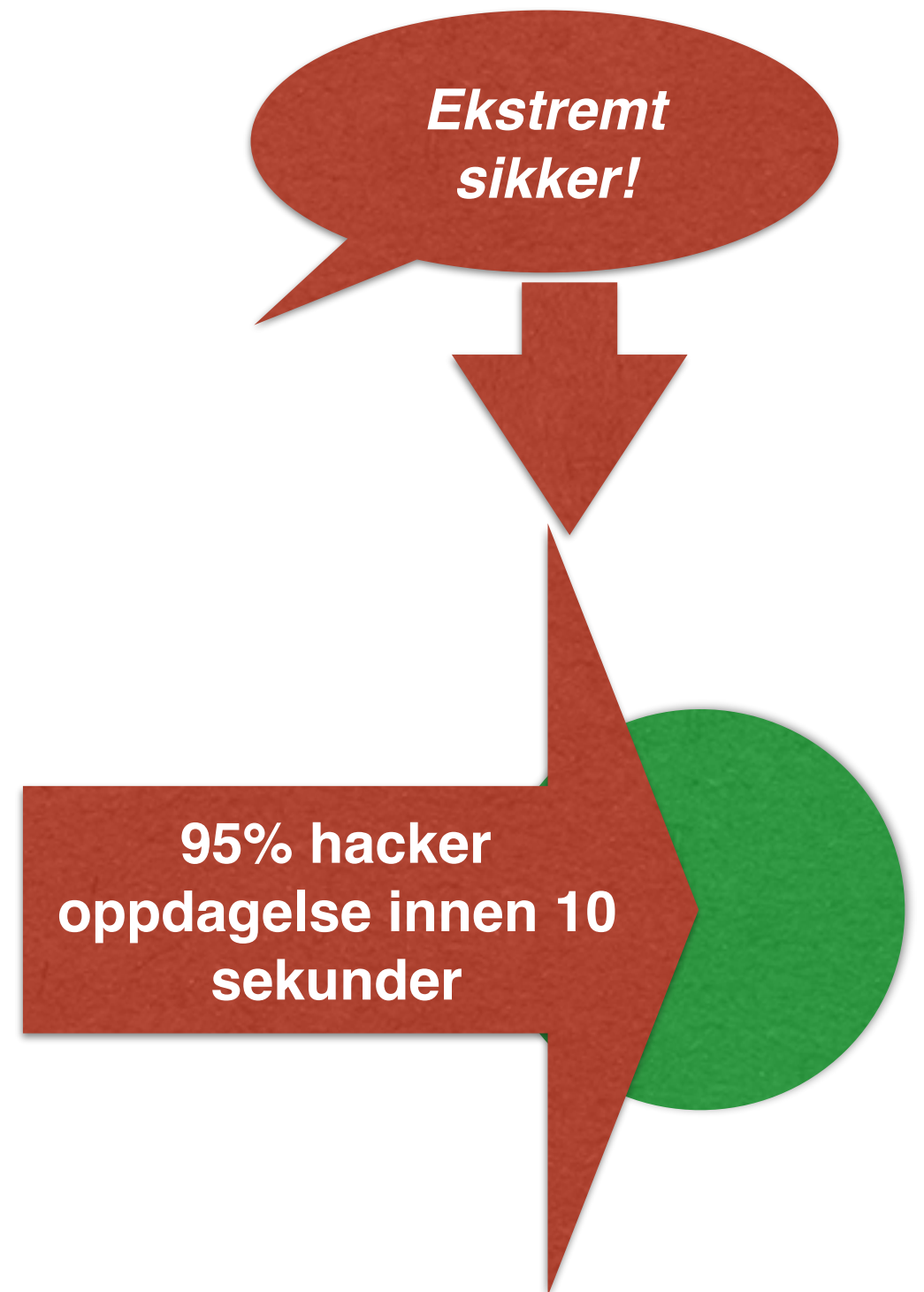
**Hvor mange kritiske krav har
interessenter?**

**Har dere en formell
'interessent-kravanalyse
prosess'?**



Rå krav fra interessenter må omformes til *entydige* krav

- kravinformasjon vi finner ved interessentanalyse er meget sjelden godt nok:
- ofte er det tenkte midler, ikke ekte mål (eller 'resultat')
- som regel meget tvetydig (brukervennlig, vedlikeholdbar)
- forbedringsgrad uklart ('bedre', 'lavere')
- definisjoner mangler (Medisinske Personalet')
- klare tidskrav mangler (snarest, når prosjekt ferdig)
- underforståtte begrensninger ikke med
- ubrukelig til: kontrakter, anbud, prosjektstyring
- blir ignorert til fordel for tydeligere krav, selvom disse ikke er så viktige



'Bring' eksempel. Kai Gilb

Prosjektedning ved bedre kravanalyse

Navn: **Finn.Raskt**

Version: 07.01.09 15.00

Type: Produkt Verdi

Eier: Lin

Interessenter: Produkteiere, Brukere, Citymail, Kunder, kunders kunder(postmottagare), Jobbsökande, Journalister, Partners, Anställda, Brukere Citimail, Partners, Operativ-



Kvantifiseringsskala:

Gjennomsnittlig tid, i sekunder, en Bruker med def. [Bruker-Ekspertise, standardverdi Normal] bruker for å finne det de og vi ønsker at de skal finne.

fra: def. [Startposisjon, standardverdi er foran ett blankt ark i webleseren].

til: def. [Funnet] posisjon der informasjonen er tilstede på skjermen til Bruker, og det er registrert hos Bruker.

Før [14.12.08, Funnet=Ukjent-Produkt] **50 sek.** <- Lin/Terje "2 bruker tester"

Tolererbart [31.03.09, Funnet=Ukjent-Produkt] **40 sek.** <- Lin/Terje

Mål [31.03.09, Funnet=Ukjent-Produkt] **15 sek.** <- Lin/Terje

Ukjent-Produkt: def.som: korrekt Produkt, der brukeren vet hva de vil ha/gjøre, men ikke vet hvilket Produkt som kan gjøre jobben, eller ikke husker korrekt Produktnavn.

Toppsjefens Verdier

Virkelig eksempel på topp-nivå kritiske verdikrav som ikke ble klarlagt eller tatt alvorlig før projektet var blitt en stor fiasko

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

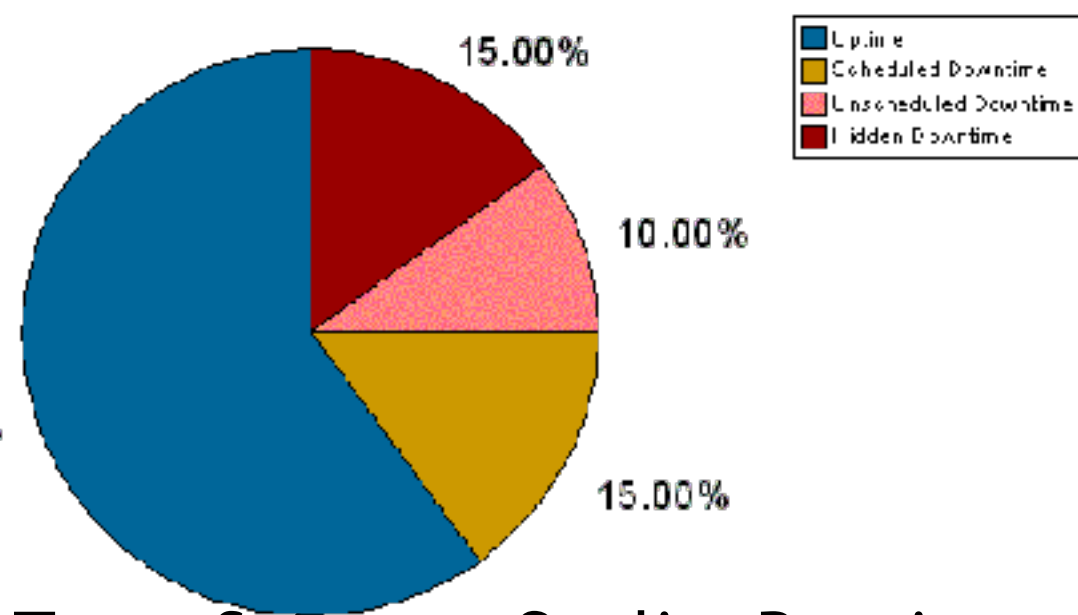
8. *Major improvements in **data quality** over current practices*

denne manglende klarhet kostet dem 90 lagmedlemmer x 8 år, mellom \$100-\$160 millioner i utgifter, uten av disse verdier levert overhodet.

Rock Solid Robustness: *many splendored*

- Type: *Complex* Product Quality Requirement.
- Includes:
 - {*Software Downtime,*
 - *Restore Speed,*
 - *Testability,*
 - *Fault Prevention Capability,*
 - *Fault Isolation Capability,*
 - *Fault Analysis Capability,*
 - *Hardware Debugging Capability*}.





Software Downtime:

Type: Software Quality Requirement. **Version:** 25 October 2007.

Part of: Rock Solid Robustness.

Ambition: to have minimal downtime due to software failures <- HFA 6.1

Issue: does this not imply that there is a system wide downtime requirement?

Scale: <mean time between forced restarts for defined [Activity], for a defined [Intensity].>

Fail [Any Release or Evo Step, Activity = Recompute, Intensity = Peak Level] 14 days
<- HFA 6.1.1

Goal [By 2008?, Activity = Data Acquisition, Intensity = Lowest level] : 300 days ??
Stretch: 600 days.

Restore Speed:

Type: Software Quality Requirement. **Version:** 25 October 2007.

Part of: Rock Solid Robustness

Ambition: Should an error occur (or the user otherwise desire to do so), the system shall be able to restore the system to a previously saved state in less than 10 minutes. <-6.1.2 HFA.

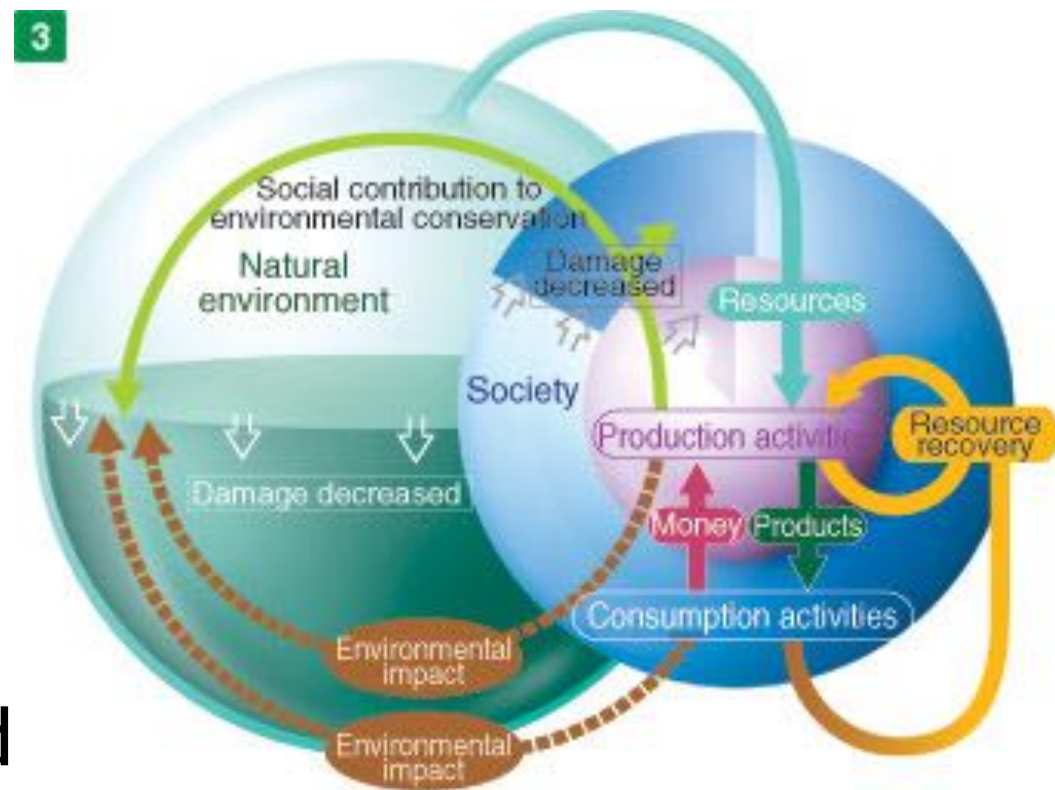
Scale: Duration from Initiation of Restore to Complete and verified state of a defined [Previous: Default = Immediately Previous]] saved state.

Initiation: defined as {Operator Initiation, System Initiation, ?}. Default = Any.

Goal [Initial and all subsequent released and Evo steps] 1 minute?

Fail [Initial and all subsequent released and Evo steps] 10 minutes. <- 6.1.2 HFA

Catastrophe: 100 minutes.



Testability (part of “Robustness”)



Testability:

Type: Software Quality Requirement.

Part of: Rock Solid Robustness

Initial Version: 20 Oct 2006

Version: 25 October 2007.

Status: Demo draft,

Stakeholder: {Operator, Tester}.

Ambition: Rapid-duration automatic testing of
<critical complex tests>, with extreme operator setup and
initiation.

Scale: the duration of a defined [Volume] of testing, or a
defined [Type], by a defined [Skill Level] of system
operator, under defined [Operating Conditions].

Goal [All Customer Use, Volume = 1,000,000 data items, Type = WireXXXX Vs DXX, Skill = First Time Novice, Operating Conditions = Field, {Sea Or Desert}. <10 mins.

Design Hypothesis: Tool Simulators, Reverse Cracking Tool, Generation of simulated telemetry frames entirely in software, Application specific sophistication, for drilling - recorded mode simulation by playing back the dump file, Application test harness console <-6.2.1 HFA



Brukervennlighets 'mal', fra 'Competitive Engineering' Kap. 5

- **Usability**:
- **Type: Complex Quality Requirement.**
- **Includes {Entry Conditions, Training Requirement, Computer Familiarity, Web Experience Level, Productivity, Error Rate, Likeability, Intuitiveness, Intelligibility}.**
-
- **Entry Conditions** : Scale: <Grade Level of User>.
- **Training Requirement**: Scale: Time needed to read <any instructions> or get <any help> in order to perform defined [Tasks] successfully.
- **Computer Familiarity**: : Scale: Years of <experience with computers>.
- **Web Experience Level** : Scale: Years of <experience with using the web>
- **Productivity**: Scale: Ability to correctly produce defined [Work Units: Default: Completed Trans- actions].
- **Error Rate**: Scale: Number of Erroneous Transactions requiring correction each <session>.
- **Likeability**: Scale: Option of <pleasure> on using the system on scale of -10 to +10.
- **Intuitiveness**: : Scale: Probability that a defined [User] can intuitively figure out how to do a defined [Task] correctly (without any errors needing correction).
- **Intelligibility**: : Scale: Probability in % that a defined [User] will correctly interpret defined [Messages or Displays].

Brodie's Stakeholder Map 2014 PhD

The stakeholders.

The stakeholders identified to date include:

- Primary users (PU) - Down's Syndrome individuals
 - children
 - teenagers
 - adults (19% work and 23% attend a day centre)
- Secondary users (SU) - carers
 - Family or care home (85% + 3%)
 - Monitoring (as opposed to living alongside) (12%)
- Tertiary users (TU) - friends (Note: in their own right some could additionally be primary users)
- Tertiary users (TU) - teachers (including day centre staff) (23% attend a day centre + x% at school)
- Tertiary users (TU) - employers (19% work)
- Tertiary users (TU) - health-related staff (doctors, nurses, dentists, nutritionists, etc.)
- Down's Syndrome organizations
- Project system developers
- Technical support
- Operations
- Researchers
- EU project sponsors
- Legislation
- Third party developers
- Project management
- Research organizations
- Industrial partners.

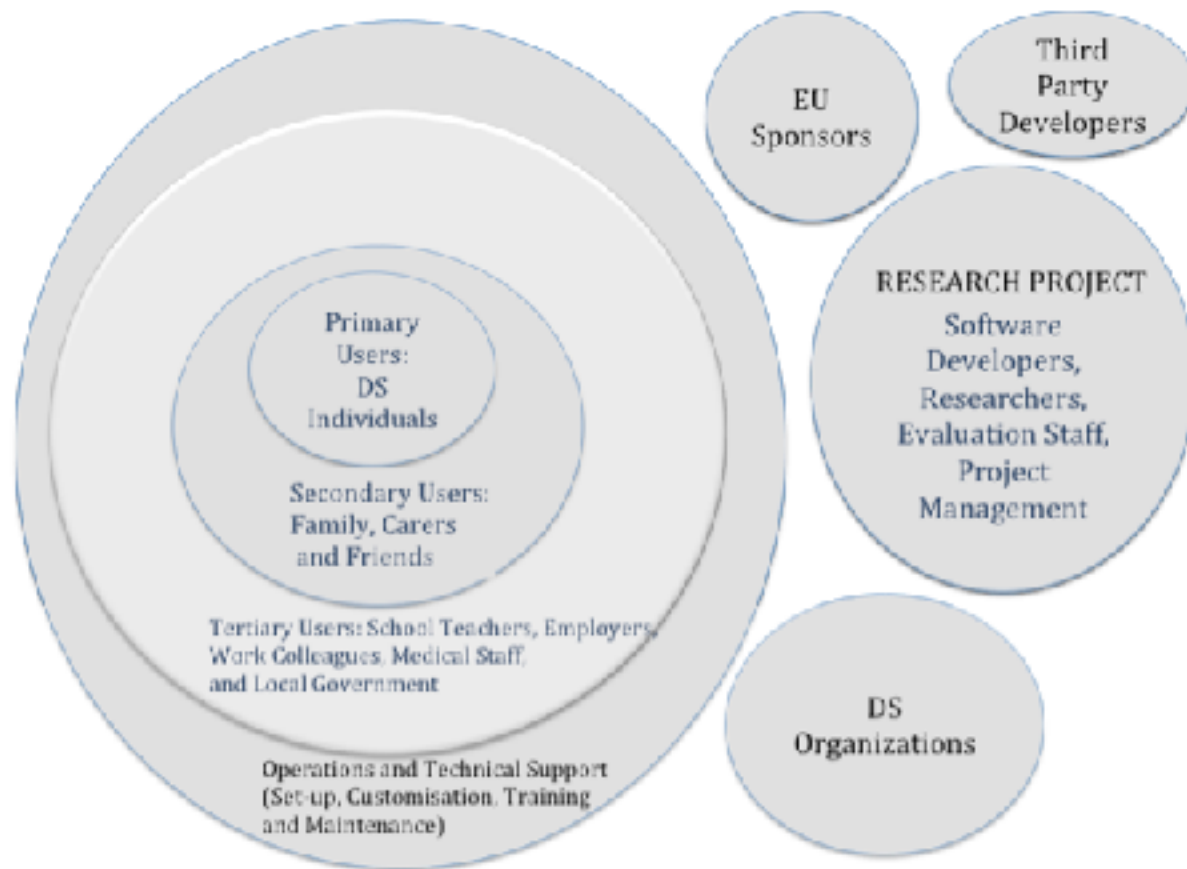
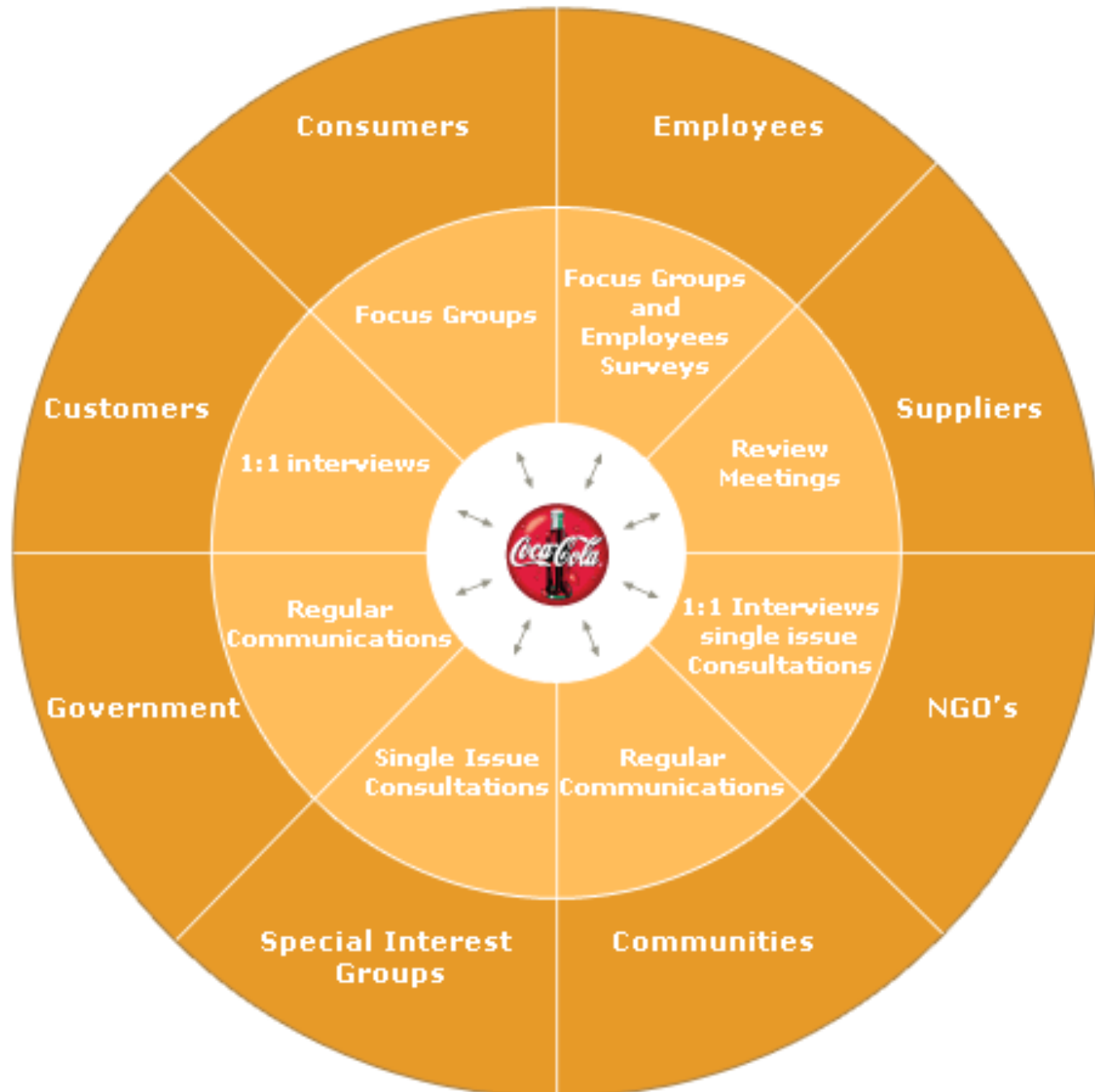


Figure 5.y: Various stakeholders

Du kan ikke spørre interessenter 'hva de vil ha'

- du må *analysere deg frem til* krav
 - ved å lese en plan
 - ved å lese en lov
 - ved å lese klager
 - ved å analysere topplederenes taler
 - ved å forsøke å lever antatte verdier og måle reaksjonene
 - ved Snowdons Sensemaker: Wisdom of Crowds
 - <http://cognitive-edge.com/sensemaker/>
 - og 100 flere metoder



uklar krav-ansvar

- hvem har utferdiget kravet?
- hvilke interessenter støtter den?
- hvilken interessenter kan skades av den?
- hvem har godkjent kravendringer?
- hvem har finansiell ansvar?
- hvem har gjennomføringsansvaret for verdinivået?
- hvem er fagekspertise som står for vurderinger om kravet?
- hvem skal godkjenne leveransen av verdien?

Tolerable [2020, Europe, Products = Pharmas]
700 days.

Range: ± 200 days.

Risk: incorrect interpretation of actual CEO slide
25.

Source: CEO Vision Statement, Jan 1 20xx
Brussels.

Supports: Core Purpose.

Supported By: Top Long-Range Objectives.

Constrained By: Core Values.

Implementation Responsibility: CEO.

Plan Owner: Strategic Planning office.

Value Planning, side 39

Uklare kravrelasjoner

- Hvilke *overordnede* krav støttes en gitt strategisk krav?
- Hvilke *underordnede* krav støtter en gitt strategisk krav ?
- Er visse krav egentlig '*valgfrie strategier*', eller er de '*bastante krav*'?
- hvilket *nivå* i organisasjonen er *ansvarlig for* et gitt sett med krav?
- På *hvilken måte* er de ansvarlige?

Contract Flexibility:

Type: Project level Critical Objective.

Owner: Project Manager.

Supports: CTO Objectives, especially

Technical Adaptability.

Scale: The Speed which a Contract can be Changed at minimum cost of loss to reflect Circumstances.

Goal: < 1 month.

Contract: All IT Services and IT Products.

Changed: 1.1.2017

Circumstances: changed economics, or failure to live up to expectations.

Deadline: This Year.

Supporting Strategies:

FlexiCon: www.FlexibleContracts.com.

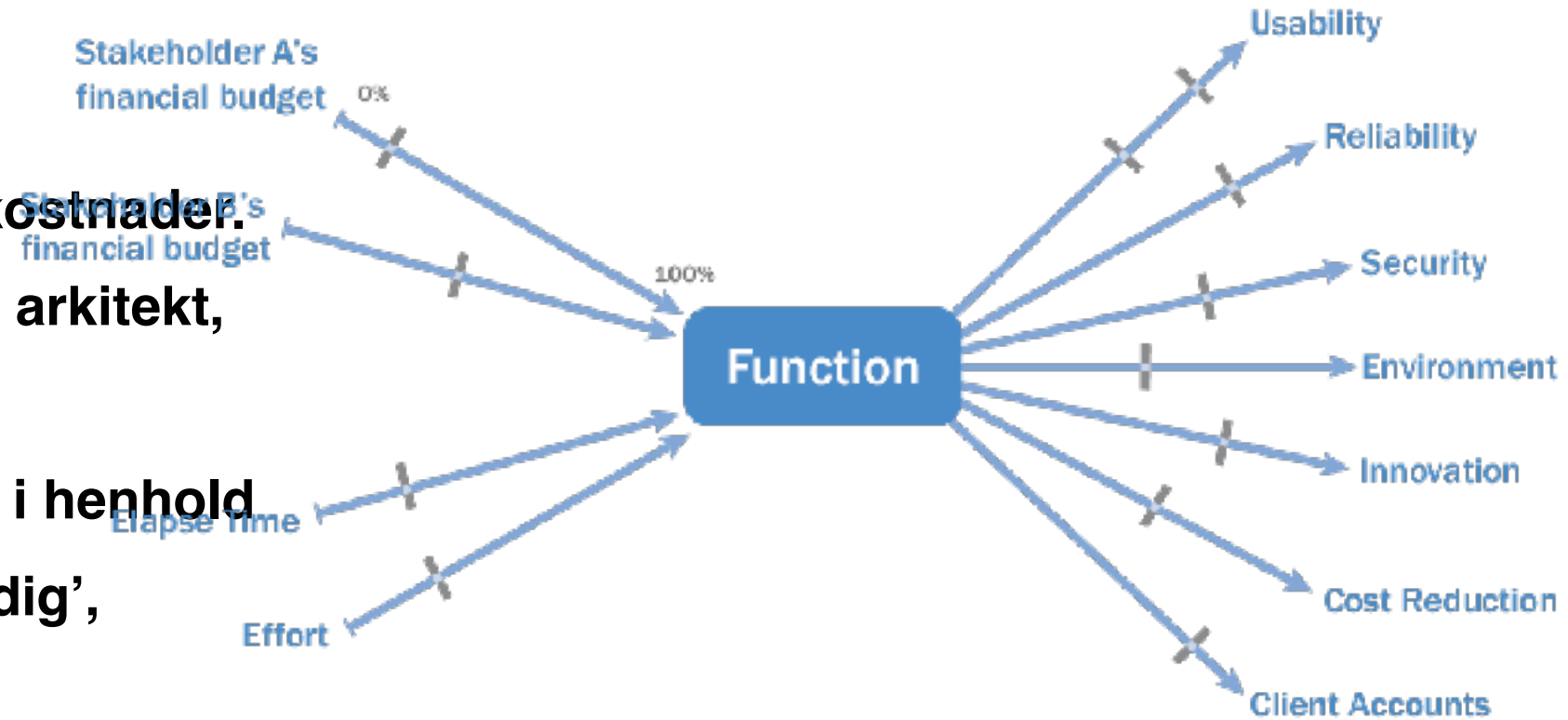
Supporting Objectives:

Legal Dept: % of Flexible Contracts in Force.

Planguage Example in Value Planning book 1.3 The mapping of many relationships for a single objective.

Produkteier ansvar

1. Produkteier bør fokusere på sluttresultater, produktverdier og kostnader.
2. Produkteier bør ikke opptre som arkitekt, eller teknisk løsningsingeniør
3. Produkteier bør levere verdikrav i henhold til sunne best-praksis regler ('entydig', 'målbar', 'rikt spesifisert')
4. Produkteier setter grunnprioriteter ved å spesifisere minsteverdi, suksessverdi, tidsfrister
5. Produkteier bør estimere og stå ansvarlig for produktegenskapenes verdibidrag til det neste høyere nivå, som har noen planlagte målsetninger



'Advanced Product Owner'
in **Gilb's Mythodology**, **Agilerecord.com**,
<http://www.gilb.com//dl799>
<http://www.agilerecord.com/advanced-product-owners/>
<http://www.gilb.com/dl833> is Slides Smidig 2014

Impact Estimation principle

How much % of what we want to achieve do we achieve by this solution
At what cost ?

Possible solutions to achieve it

Could we get all, within the budgets of time and cost ?

		Design Idea #1	Design Idea #2	Design Idea #3	Total Impact
What to achieve	Objectives	Impact on Objective	Impact on Objective	Impact on Objective	Sum of Impacts on Objectives
Cost to achieve it	Resources Time Money	Impact on Resources	Impact on Resources	Impact on Resources	Sum of Impact on Resources
Return on Investment	Benefits to Cost Ratio	$\frac{\text{Benefits}}{\text{Cost}}$	$\frac{\text{Benefits}}{\text{Cost}}$	$\frac{\text{Benefits}}{\text{Cost}}$	

app.needsandmeans.com/iet/IET-AFGGXOT					
Untitled					
Requirements	ProductDesign	Financials	MarketingStrategy	DistributionMethod	Sum
Demographic Past: 0 → Wish: 50 %	20 ± 5 % Δ%: 40 ± 10 %	27 ± 5 % Δ%: 54 ± 10 %	23 ± 3 % Δ%: 46 ± 6 %	10 ± 0 % Δ%: 20 ± 0 %	ΣΔ%: 160 ± 26 %
Millionaire Past: 1 → Wish: 1000000 \$	450000 ± 15000 Δ%: 45 ± 15 %	400000 ± 10000 Δ%: 40 ± 10 %	100000 ± 50000 Δ%: 10 ± 5 %	200000 ± 10000 Δ%: 20 ± 10 %	ΣΔ%: 115 ± 40 %
MarketSegment Past: 4 → Wish: 1 Market Rank	1 ± 1 Market... Δ%: 100 ± 33 %	4 ± 1 Market... Δ%: 0 ± 33 %	2 ± 1 Market... Δ%: 67 ± 33 %	3 ± 1 Market... Δ%: 33 ± 33 %	ΣΔ%: 200 ± 132 %
Geography Past: 0 → Wish: 100 %	5 ± 5 % Δ%: 5 ± 5 %	10 ± 4 % Δ%: 10 ± 4 %	40 ± 5 % Δ%: 40 ± 5 %	30 ± 5 % Δ%: 30 ± 5 %	ΣΔ%: 85 ± 19 %
Market Past: 0 → Wish: 100 %	40 ± 10 % Δ%: 40 ± 10 %	5 ± 3 % Δ%: 5 ± 3 %	40 ± 10 % Δ%: 40 ± 10 %	20 ± 5 % Δ%: 20 ± 5 %	ΣΔ%: 105 ± 28 %
Sum Of Performance:	Σ%: 230 ± 73 %	Σ%: 109 ± 60 %	Σ%: 203 ± 59 %	Σ%: 123 ± 53 %	
TimeToMarket Past: 1 → Wish: 8 Weeks	2 ± 0.5 Weeks Δ%: 14 ± 7 %	2 ± 0.5 Weeks Δ%: 14 ± 7 %	3 ± 0.75 Weeks Δ%: 29 ± 11 %	4 ± 1 Weeks Δ%: 43 ± 14 %	ΣΔ%: 100 ± 39 %
ShowMeTheMoney Past: 0 → Wish: 5005 £	1200 ± 200 £ Δ%: 24 ± 4 %	205 ± 200 £ Δ%: 4 ± 4 %	2100 ± 500 £ Δ%: 42 ± 10 %	1500 ± 0 £ Δ%: 30 ± 0 %	ΣΔ%: 100 ± 18 %
Sum Of Resources:	Σ%: 38 ± 11 %	Σ%: 18 ± 11 %	Σ%: 71 ± 21 %	Σ%: 73 ± 14 %	
Performance To Cost:	6.05	6.06	2.86	1.68	
Ratio (Worst Case)	3.20	1.69	1.57	0.80	

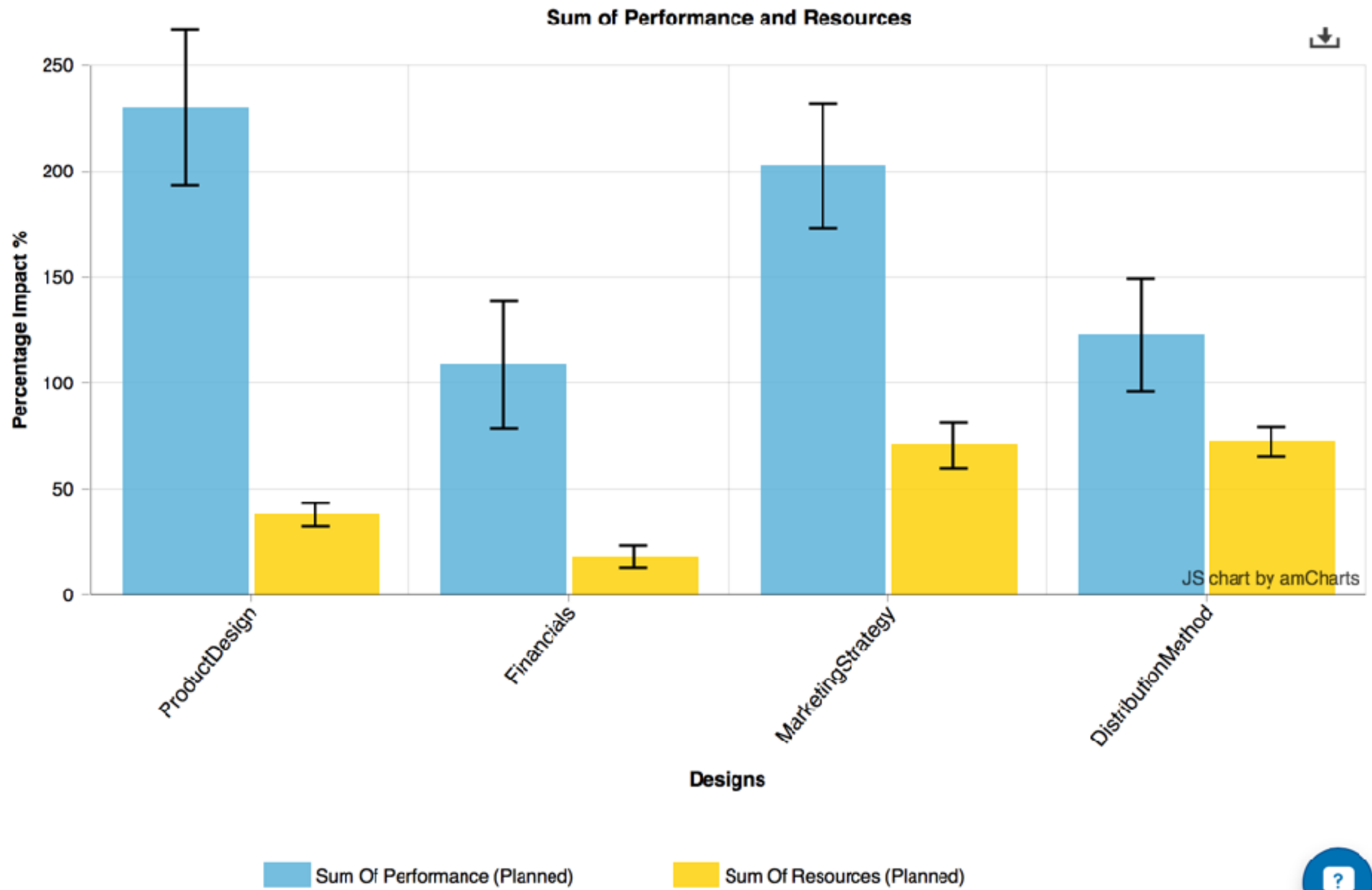
157/49 = 3.2

20

Settings...

+ Add to table

Sort designs



Man kan måle kravkvalitet, og motivere 50 X bedre krav

Intel forbedrer kravkvalitet minst faktor 50, ved Planguage og Spec QC

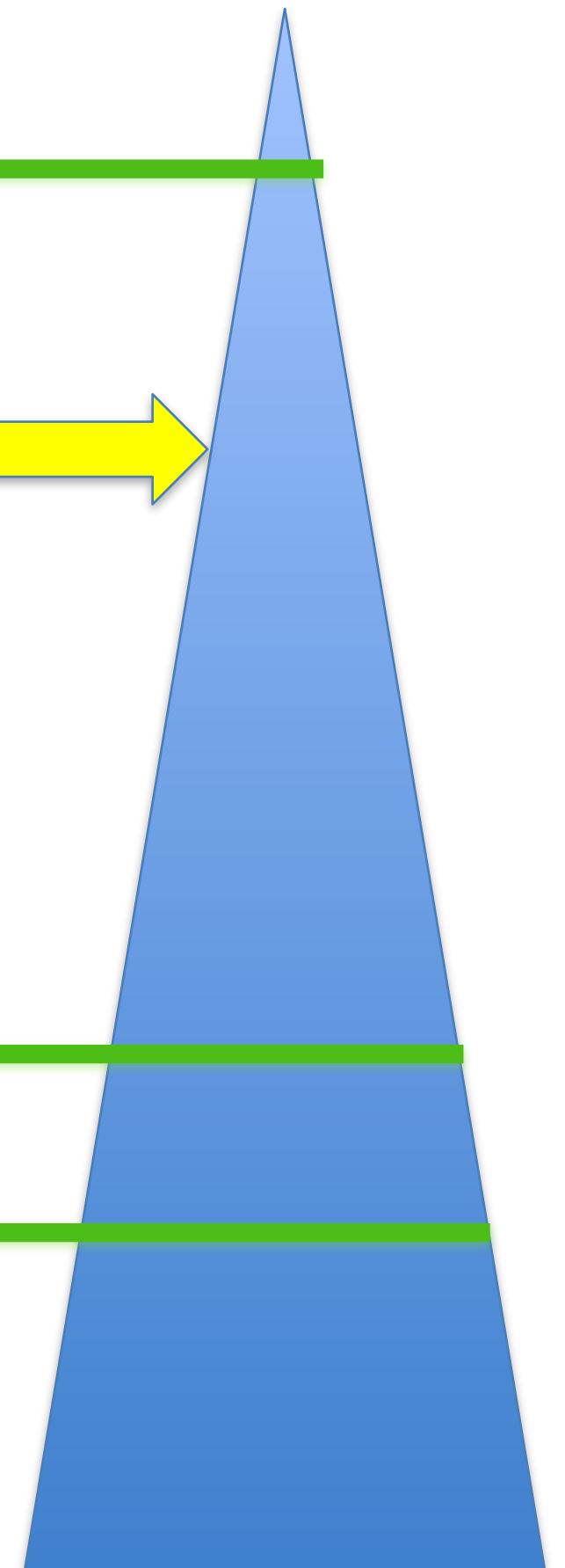
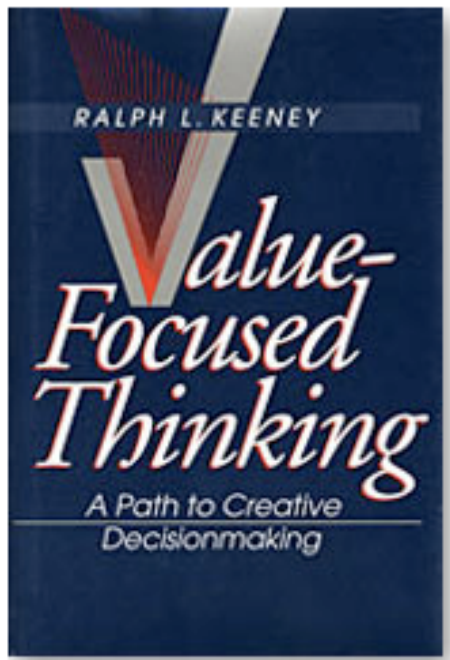
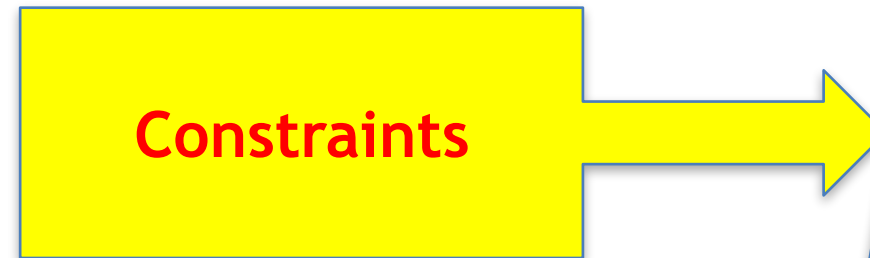
Prosjektproduktivitet økte minst 233% iflg Terzakis, Intel

Rev.	# of Defects	# of Pages	Defects/ Page (DPP)	% Change in DPP
0.3	312	31	10.06	
0.5	209	44	4.75	-53%
0.6	247	60	4.12	-13%
0.7	114	33	3.45	-16%
0.8	45	38	1.18	-66%
1.0	10	45	0.22	-81%
Overall % change in DPP revision 0.3 to 1.0:				-98%



Keeney's: 'Levels of objectives' *Krav er fra 'et bestemt ståsted'*

- 1. Fundamental Objectives
 - (above us)
- 2. Generic Constraints
 - (our given framework)
 - Political Practical
 - Design Strategy Formulation Constraints
 - Quality of Organization Constraints
 - Cost/Time/Resource Constraints
- 3. Strategic Objectives
 - (objectives at our level)
- 4. Means Objectives:
 - (*supporting* our objectives)



User Stories with Value Metrics

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gilb.com

How can we relate user stories to several related stakeholders, and to several related value requirements ?

Version 14-02-2017

Mike Cohn's Blog - "Succeeding with Agile NON-FUNCTIONAL REQUIREMENTS AS USER STORIES"

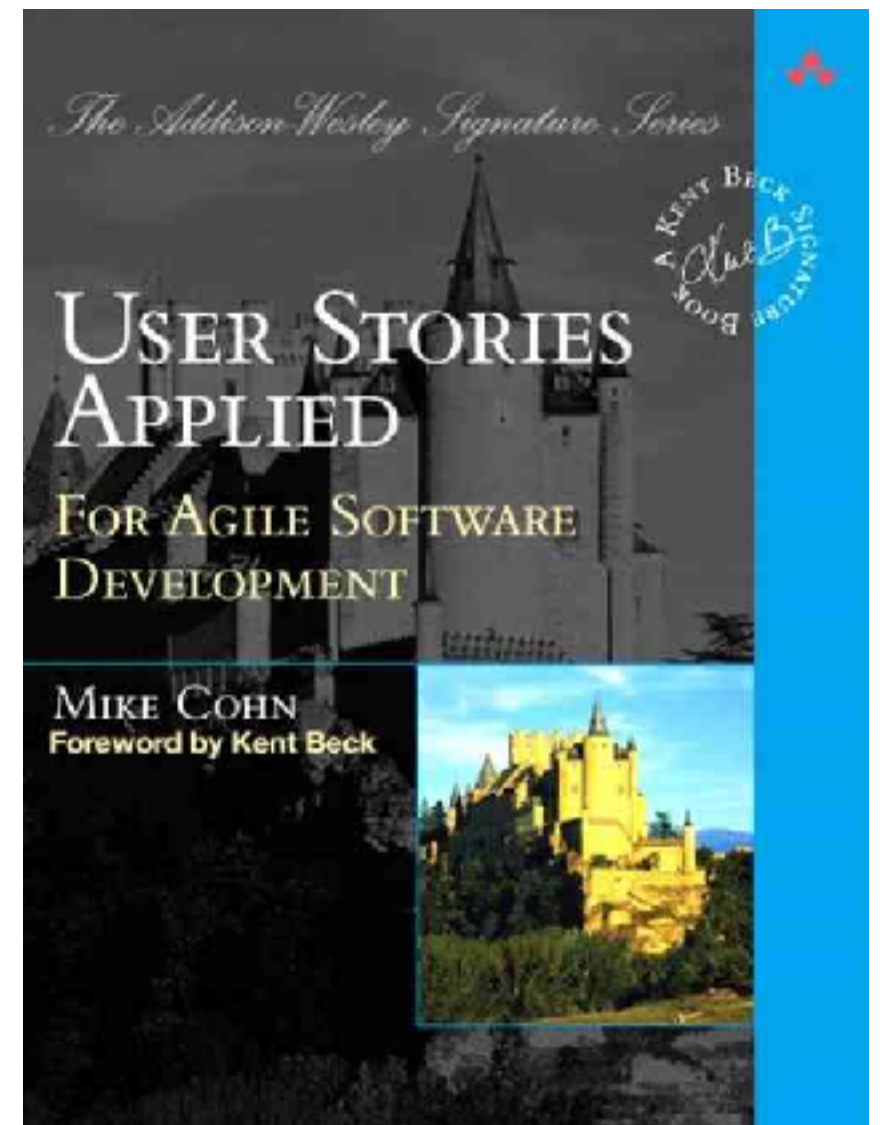
Mike Cohn says: **January 16, 2009 at 9:41 pm**

Tom does, indeed, have excellent advice on non-functional requirements (as well as every other type of requirement). I'd encourage everyone to read his [Competitive Engineering](#) book as well as his [Principles of Software Engineering Management](#) book. By the way, my company is named after his "Mountain Goat" principle in that book:

Take one step at a time up the slippery mountainside, and make absolutely sure that each hoof is on solid ground before you take the next step.

When I named the company back in 1992 this was about incremental development ("the next step") and making sure each increment was what we'd call "potentially shippable" today. Tom was indeed the original agilist in my mind.

I had the honor of having dinner with him last month for the first time. He and his equally brilliant son, Kai, threw a challenge at me that I haven't met yet. I'm planning to blog about it this weekend to see if anyone here can help me! Stay tuned.



bit.ly/CompetitiveEngineering
(signup for free CE copy)

Experiments with Value Metrics and User Stories:

kai@Gilb.com 2016

A As a customer I want to combine deliveries from two restaurants to get the best of both worlds Customer Order.Speed 2 Delivery.Speed 15 Meal.Appreciation 0.3 Restaurant Meal.Volume 1 Meal.Price -1 Courier Delivery.Rides -1 silverline 5	B As a customer I want to select vegetarian dishes so that I can easily select food that I want as a vegetarian Customer Order.Speed -1 Restaurant Meal.Price -1 Courier silverline 1
C As a customer I want to select from earlier orders so I can repeat my preferences Customer Order.Speed -3 Restaurant Meal.Volume 2 Courier silverline 2	D As a customer I want to select vegetarian dishes so that I can easily select food that I want as a vegetarian Customer Order.Speed -2 Restaurant Meal.Price 1 Courier silverline 1
E As a customer I want to receive updates of my delivery so I know when to set the table Customer Restaurant Courier silverline 3	F As a customer I want to get a surprise meal within price constraints so that I discover new dishes and restaurants Customer Meal.Appreciation 0.1 Restaurant Meal.Volume 1 Courier silverline 2
G As a customer I want to see reviews of restaurants from others so that I can choose the best meal Customer Meal.Appreciation 0.2 Restaurant Courier silverline 3	H As a customer I want to get a surprise meal within price constraints so that I discover new dishes and restaurants Customer Meal.Appreciation 0.1 Restaurant Meal.Volume -1 Courier Delivery.Rides -0.5 silverline 1

Estimated Story Impact on Value

Poker Planning Cost

		Value Stakeholders	Order.Speed Customer	Delivery.Speed Customer	Meal.Appreciation Customer	Meal.Volume Restaurant	Meal.Price Restaurant	Delivery.Rides Courier
		Scale	Average minutes from opening app to having placed an order	Average minutes from order to courier confirmation	Average customer rating in app 1-5	Orders per restaurant per week	Average price per order	Average rides per courier per hour
		Status	7	45	3.5	18	19	1.5
		Tolerable	8	50	3	15	17	3
		Goal[after next sprint]	7	40	4	18	19	4
Description	Cost (story points)							
As a customer I want to combine deliveries from two restaurants to get the best of both worlds	5		2	15	0,3	1	-1	-1
As a customer I want to select vegetarian dishes so that I can easily select food that I want as a vegetarian	1		-1				-1	
As a customer I want to select from earlier orders so I can repeat my preferences	2		-3			2		
As a customer I want to filter on allergenics so that I can easily select food that I can eat	1		-2		0,1		1	
As a customer I want to receive updates of my delivery so I know when to set the table	3							
As a customer I want to get a surprise meal within price constraints so that I discover new dishes and restaurants	2				0,1	1		
As a customer I want to see reviews of restaurants from others so that I can choose the best meal	3				0,2			
As a customer I want to return a meal within 10 minutes if I don't like it so that I have less risk of paying for a meal that I don't like	1				0,1	-1		-0,5
As a customer I want to get meal suggestions based on my earlier orders so I have more variety and I can discover new meals	3		-2		0,1	1		
As a customer I want to place an order for the next day so that I can ensure to have the food I want when I have guests	2							
As a customer I want to pay cash to the courier so that I don't have to give my credit card details	1							
As a restaurant I want to get meal predictions so I can prepare meals ahead of time for quick delivery	3							
As a restaurant I want to suggest combinations to up-sell higher margin items	5				0,1		2	
As a restaurant I want to give special discounts for people nearby so that I attract more customers that will also eat in the restaurant	2			-5			-2	2
As a restaurant I want to pay a price so that negative ratings below a certain threshold are ignored	1				-0,5	1		
As a restaurant I want to change prices of meals dynamically so that I can ask for higher prices when demand gets close to what the kitchen can supply	3				-0,3		2	
As a restaurant I want to change the dishes that customers see based on availability of ingredients	3							
As a restaurant I want to get information about the types of dishes that are mostly sold in my neighborhood so that I can better serve local customers	3			-5		1		1
As a restaurant I want to pay to get a more prominent position in the customers view so that they are more likely to choose for me	1				-0,1	2		
As a restaurant I want to update photos of the meals so that I can make them look more attractive for customers	1				-0,1	1		
As a restaurant I want to give a discount to people that have ordered frequently	2				0,1	2	-2	
As a courier I want to see the optimum route to my next order	5			-5				1
As a courier I want to collect multiple deliveries, so I don't waste time driving back and forth	5			10				2

**Bruker historier
i forhold til verdier og interesser**

A

As a **customer** I want to combine deliveries from two restaurants to get the best of both worlds

Customer
 Order.Speed 2
 Delivery.Speed 15
 Meal.Appreciation 0.3

Restaurant
 Meal.Volume 1
 Meal.Price -1

Courier
 Delivery.Rides -1



5

Value	Order.Speed	Delivery.Speed	Meal.Appreciation	Meal.Volume	Meal.Price	Delivery.Rides
Stakeholders	Customer	Customer	Customer	Restaurant	Restaurant	Courier
Scale	Average minutes from opening app to having placed an order	Average minutes from order to courier confirmation	Average customer rating in app 1-5	Orders per restaurant per week	Average price per order	Average rides per courier per hour
Status	7	45	3,5	18	19	1,5
Tolerable	8	50	3	15	17	3
Goal[after next sprint]	7	40	4	18	19	4

Value	Order.Speed	Delivery.Speed	M
Stakeholders	Customer	Customer	
Scale	Average minutes from opening app to having placed an order	Average minutes from order to courier confirmation	A
Status	7	45	
Tolerable	8	50	
Goal[after next sprint]	7	40	



<http://www.gilb.com/DL461>

User Stories: A Skeptical View

by Tom and Kai Gilb

The Skeptical View

We agree with the ideals of user stories, in the 'Myths' [1, Denning & Cohn] discussed below, but do not agree at all to Myth arguments given, that user stories are a good, sufficient or even best way to achieve the ideals. We are going to argue that we need to improve user stories for serious and large projects. It is possible for trivial projects that user stories are sufficient tools.

Myth 1: User stories and the conversations provoked by them comprise verbal communication, which is clearer than written communication.

There may be occasions where good, conversational communication can help clear up bad written communication.

In fact we see a lot of really bad written 'user needs' communica-

of our product clearly superior to all competitive products at all times.

Scale: average seconds needed for defined [Users] to Correctly Complete defined [Tasks] defined [Help]

Goal [Deadline = 1st Release, Users = Novice, Tasks = Most Complex, Help = {No Training, No Written References}] 10 seconds $\pm$ 5 seconds <- Product Marketing Manager.

Correctly Complete: defined as: the result would not ever need to be corrected as an error or as sub-optimal.

If there are any questions about this spec, then the answer needs to be written down in the spec, for reference by all future users of the specification. Not just 'discussed' orally, and forgotten in practice.

Toms 10 Bud for Verdikrav

- 1. gjør grundig interessentanalyse, 1 kritisk interessent kan bestemme suksess eller fiasko.**
- 2. verdier er subjektive, og avhenger av ståsted; men de kan måles objektivt**
- 3. verdikrav kan oversettes til langsiktige finansielle resultater, men det er ikke nødvendig bare man er enige at kravet i seg selv er kritisk**
- 4. man kan prioritere verdikrav som gir best effekt, på deres nest nivå opp, med krav**
- 5. verdikrav bør defineres ved hjelp av en veldefinert kravskala**
- 6. man bør spesifisere en verdibegrensning, et 'dårligst akseptabel' nivå**
- 7. man bør spesifisere en suksess nivå: 'full leveranse', 'full uttelling', 'nok'**
- 8. man bør kunne levere økninger i kritiske verdier, tidlig, ofte, og kontinuerlig: inntil alle suksess-nivåene er nådd**
- 9. kun ved å levere målbare verdier kan du bevise at dine strategier virker som de skal**
- 10. når du har levert ett sett med kritiske verdier, så venter et nytt sett som videre utfordring**

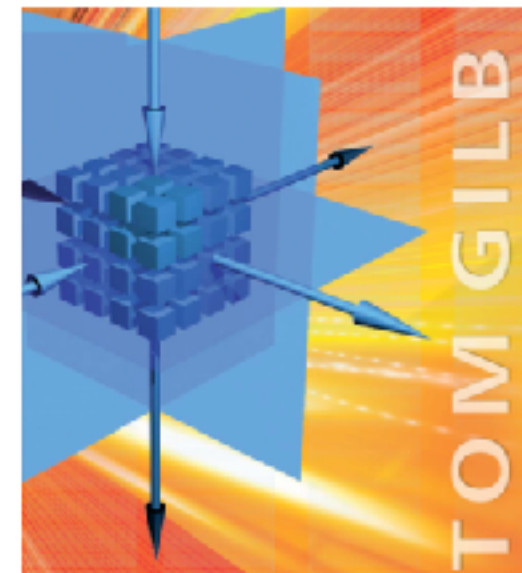
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