Setting and Tracking Project Objectives:

The **Planguage** Approach

PROMS-G
Project Management
Specialist Group

Tuesday 7 Dec 2010, 18:30 – 20:00

At BCS London

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Overview

The entire talk, for those who like simple slides:

1. Quantify all improvement requirements
2. Estimate quantified impact of all ´means´
3. Do the project in small 2% increments
   - Highest value for stakeholder first
   - Measure real value delivered (Goals reached)
   - Learn from deviations and successes
   - Modify all requirements and designs as experience and environment dictates

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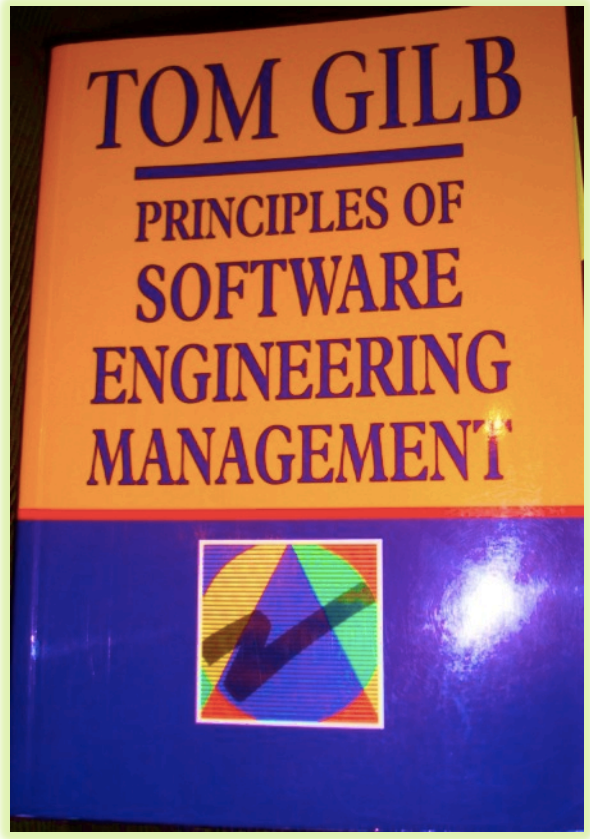
Some details and caveats

- If you like simplified slides and unfounded generalisations
  - Leave now, or fall asleep, or check messages and news on your phone
- I personally prefer concrete details, and real examples★
  - So if you choose to stay on, there is going to be a lot of detail
  - In fact – you will not be able to study all the detail and I will not have time to explain it
  - But the slides are available at www.gilb.com/downloads
  - So, if they seem interesting you can study them at your leisure
  - In addition, if you need detailed explanation you will find it in the book 'Competitive Engineering'. If you ask me at tom@gilb.com I´ll be happy to send you a free digital copy.
  - If you are too shy to ask, then copies can be acquired the usual way, and there is plenty of detail free at www.gilb.com
- Last chance to escape is NOW

★ I want to show examples that are as realistic as possible, but in order to maintain client confidentiality I have:

- not revealed client names, person names, project names, site locations or application names
- I have also randomly changed numbers. It is the principles of realistic use I want to share

The theory and practice of the Evo method for project management



1988

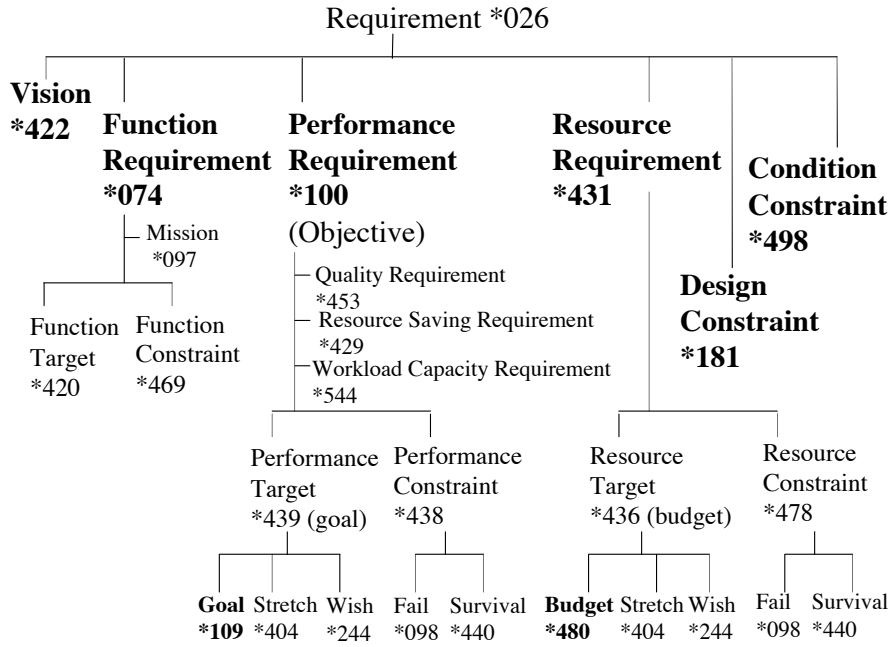
2005

Planguage: A planning language

A systems engineering language to help

people communicate (management, systems & software):

- Concept glossary
- Control of multiple dimensions: performance, costs & constraints
- Extendible, tailorable & open
- Rich views, traceability & configuration management
- Risk management
- Priority management



Evo / Value Delivery

The Evo method (also known as the Value Delivery Method VDM) is a radical simplification (Lean!) from a project management perspective

VALUE CLARITY: Quantify the most-critical project objectives on day 1

SOLUTION RESPONSIBILITY: Quantify impact of all suggested strategies, architectures, on all critical objectives, the deadlines, and the budgets

VALUE REPORTING: Measure project progress early, continuously, in terms of top ten objectives

JUST-IN-TIME PLANNING: Dynamic intelligent do-next prioritisation: Value/cost based

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Lack of clear top level project objectives

Real project fail of $100+ million: personal experience

Bad Objectives (over 8 years)

*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 partial rewrite in example at right)*

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

Quantified Planguage Objectives

Robustness.Testability:

Type: Software Quality Requirement.
Version: 20 Oct 2006-10-20.
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.

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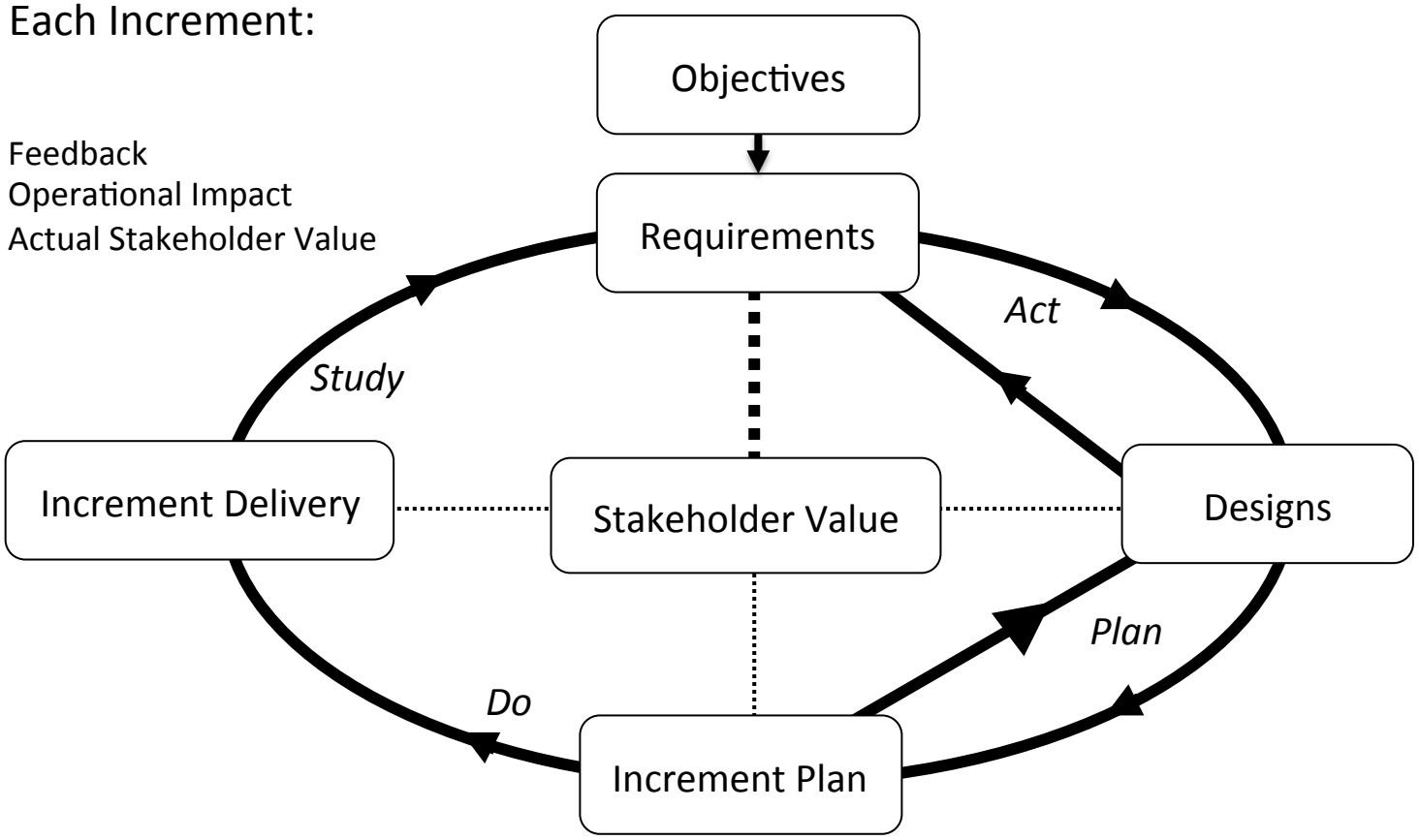
The Evo Planning Cycle

Based on Shewhart Cycle

One Cycle for
Each Increment:



Feedback
Operational Impact
Actual Stakeholder Value

Sequence for Delivery
Estimated Stakeholder Value

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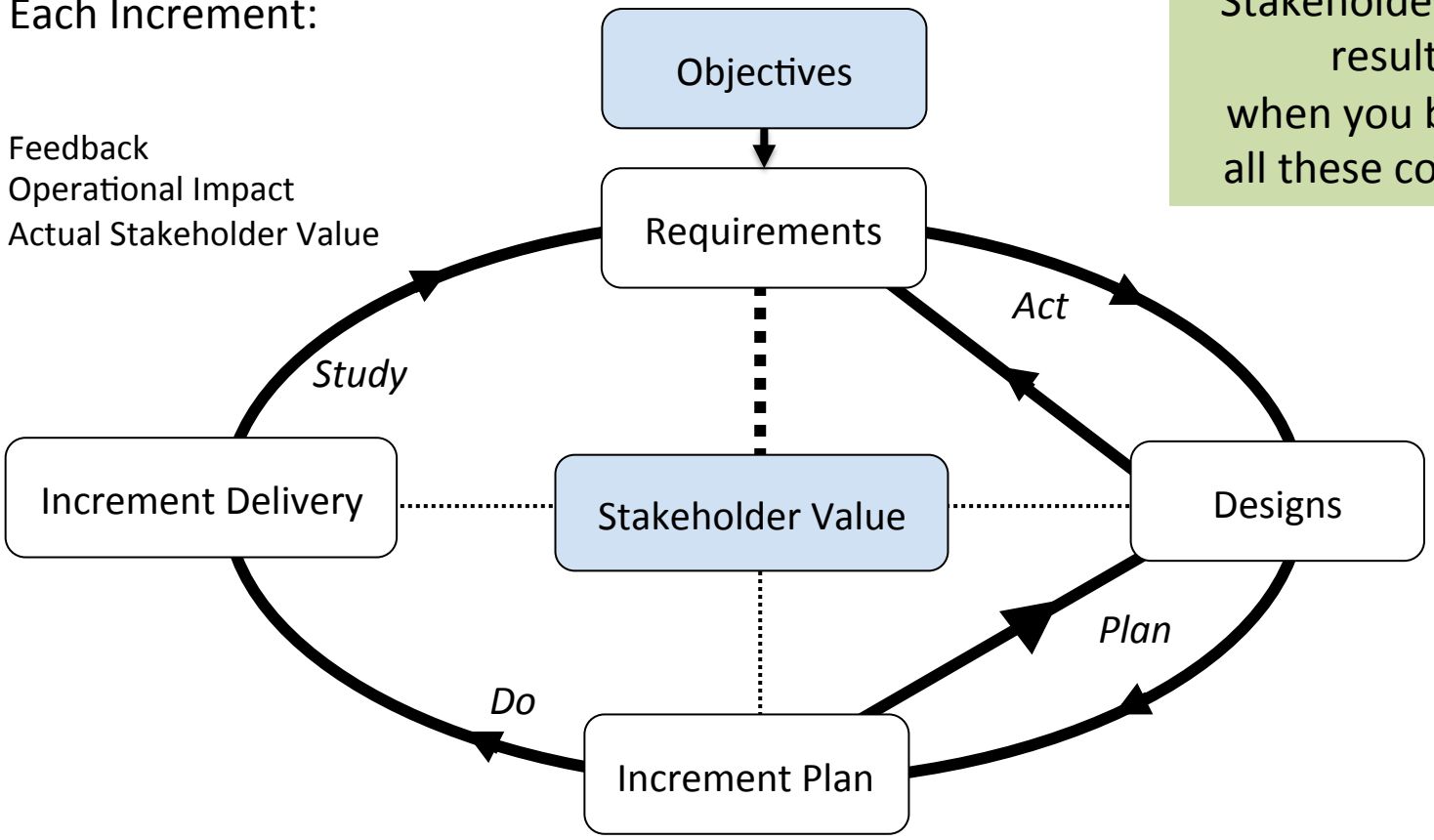
The Evo Planning Cycle

Based on Shewhart Cycle

One Cycle for
Each Increment:

Feedback
Operational Impact
Actual Stakeholder Value

Stakeholder Value results when you balance all these concepts



Sequence for Delivery
Estimated Stakeholder Value

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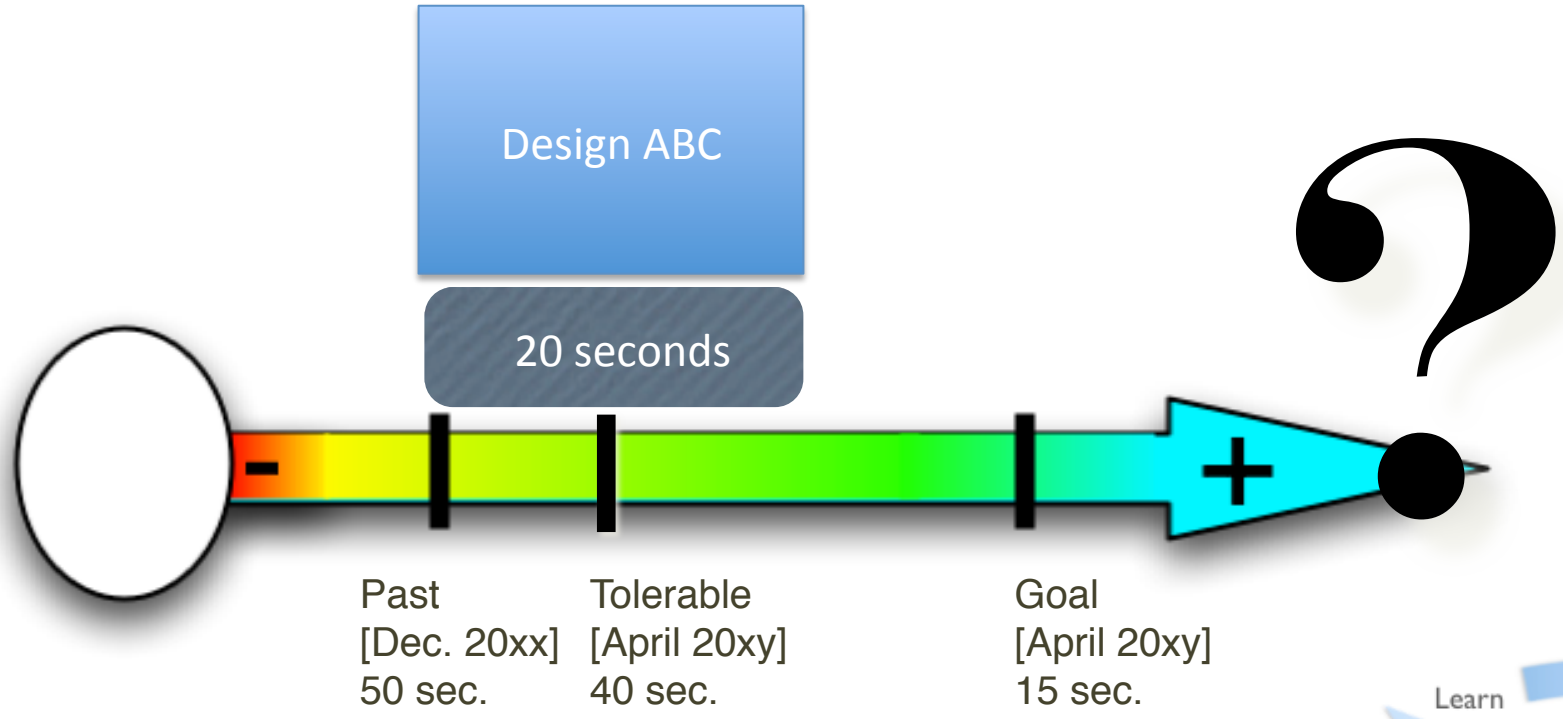
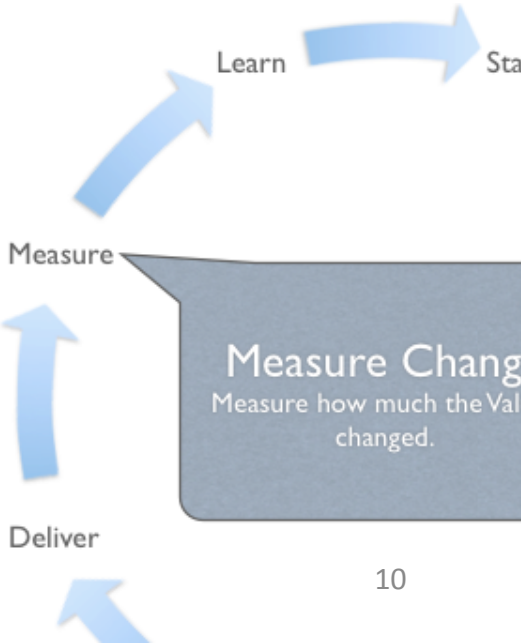
The real-scale impact of a design on a single improvement objective goal





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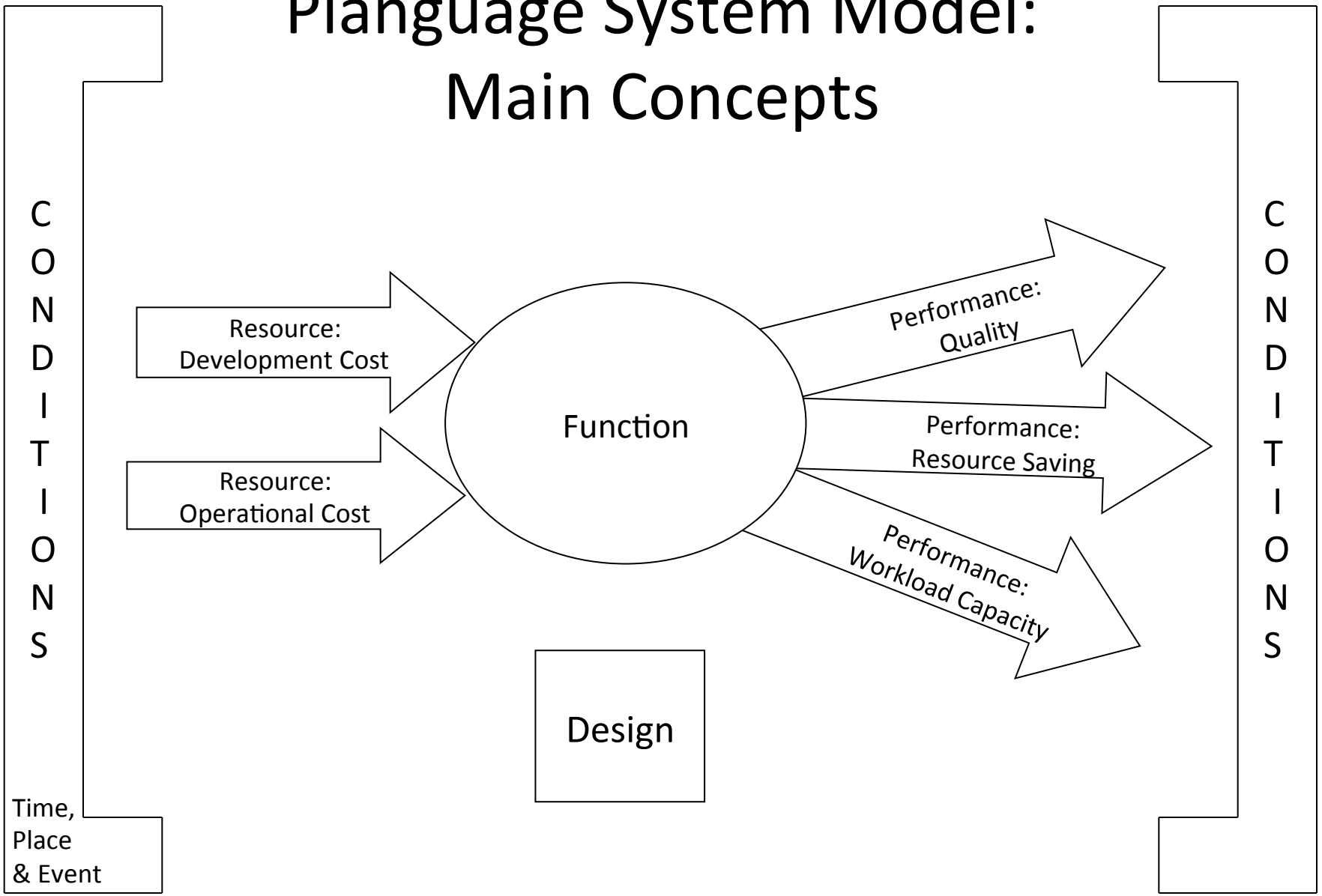
Planguage System Model: Main Concepts



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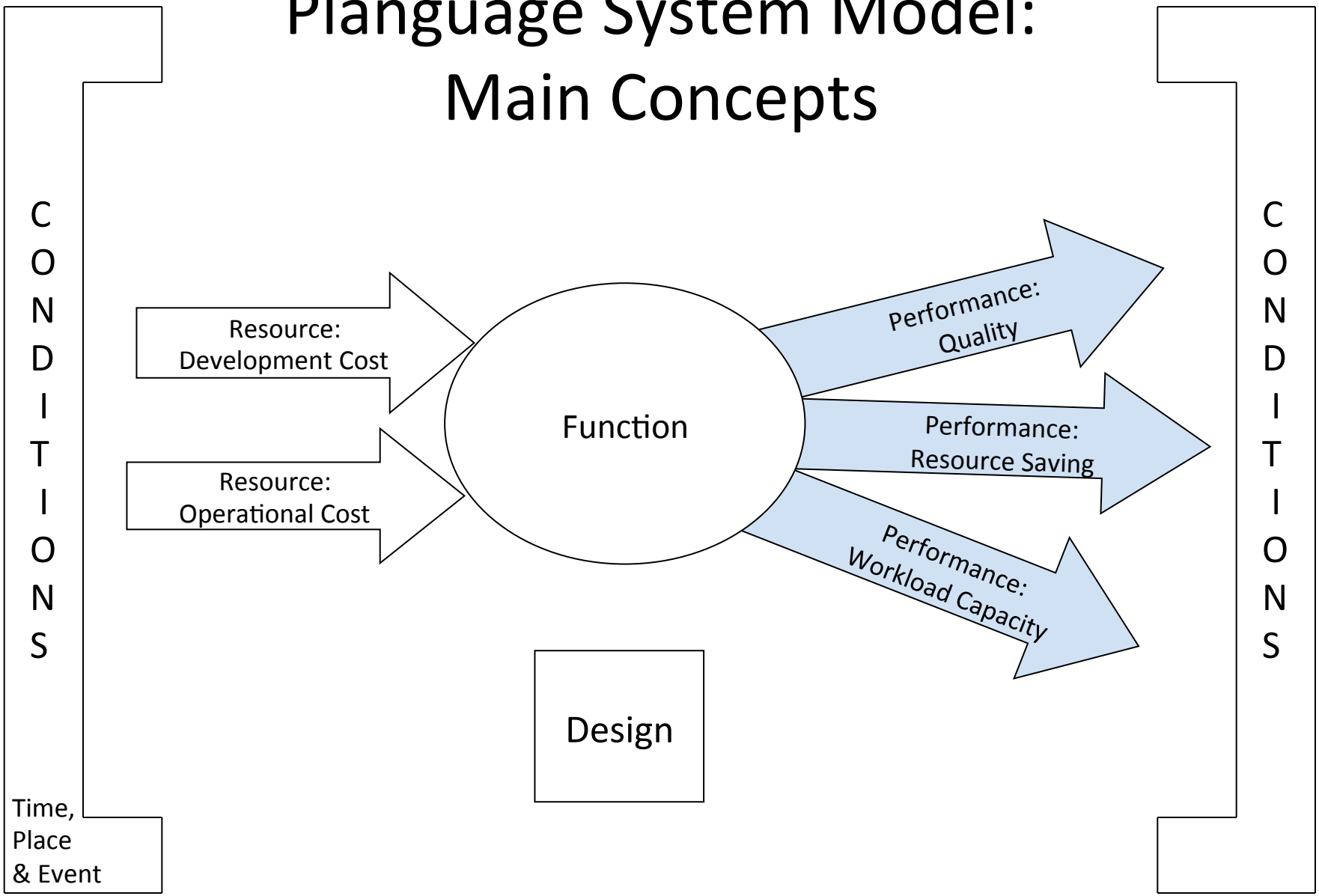

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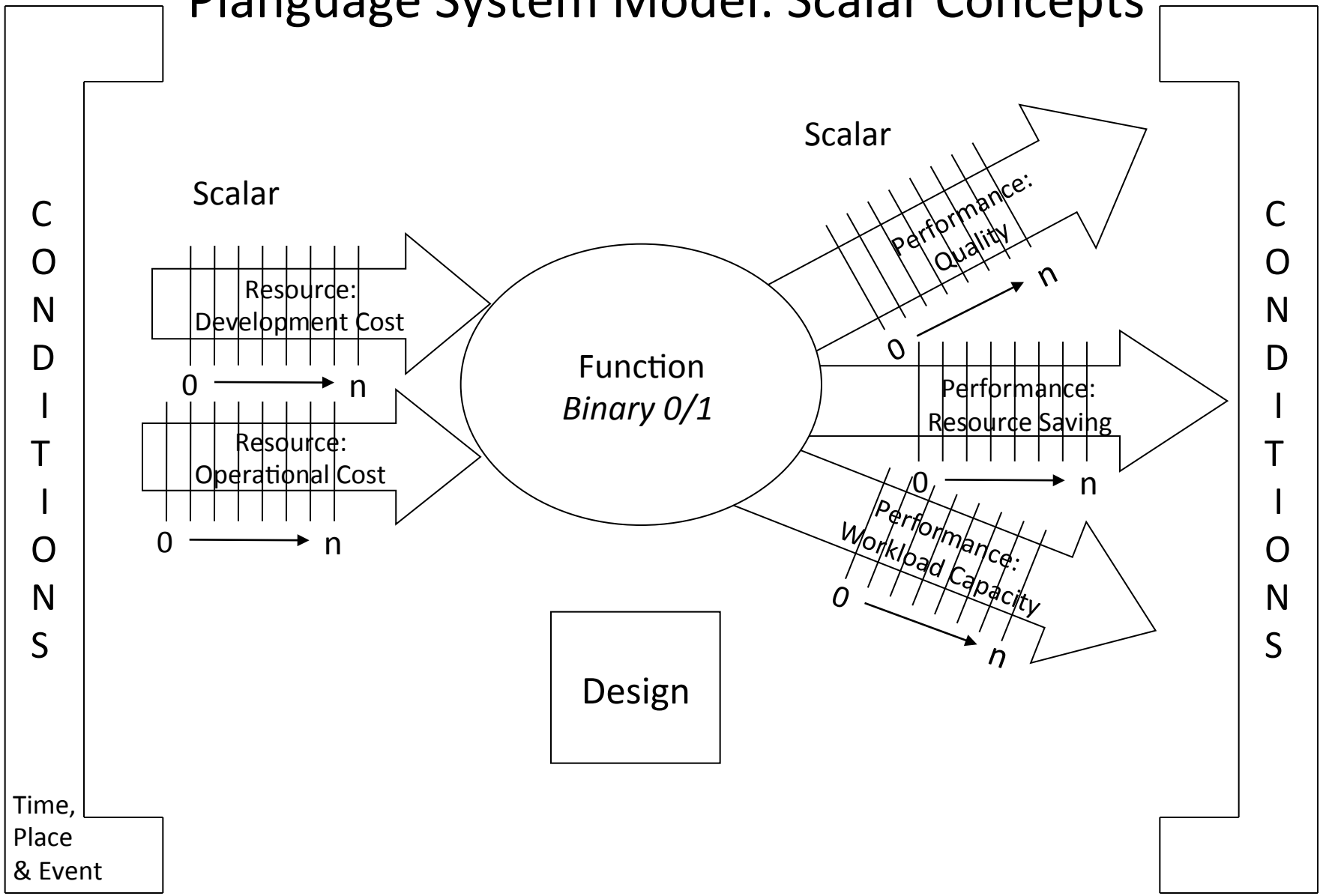
Planguage System Model: Scalar Concepts



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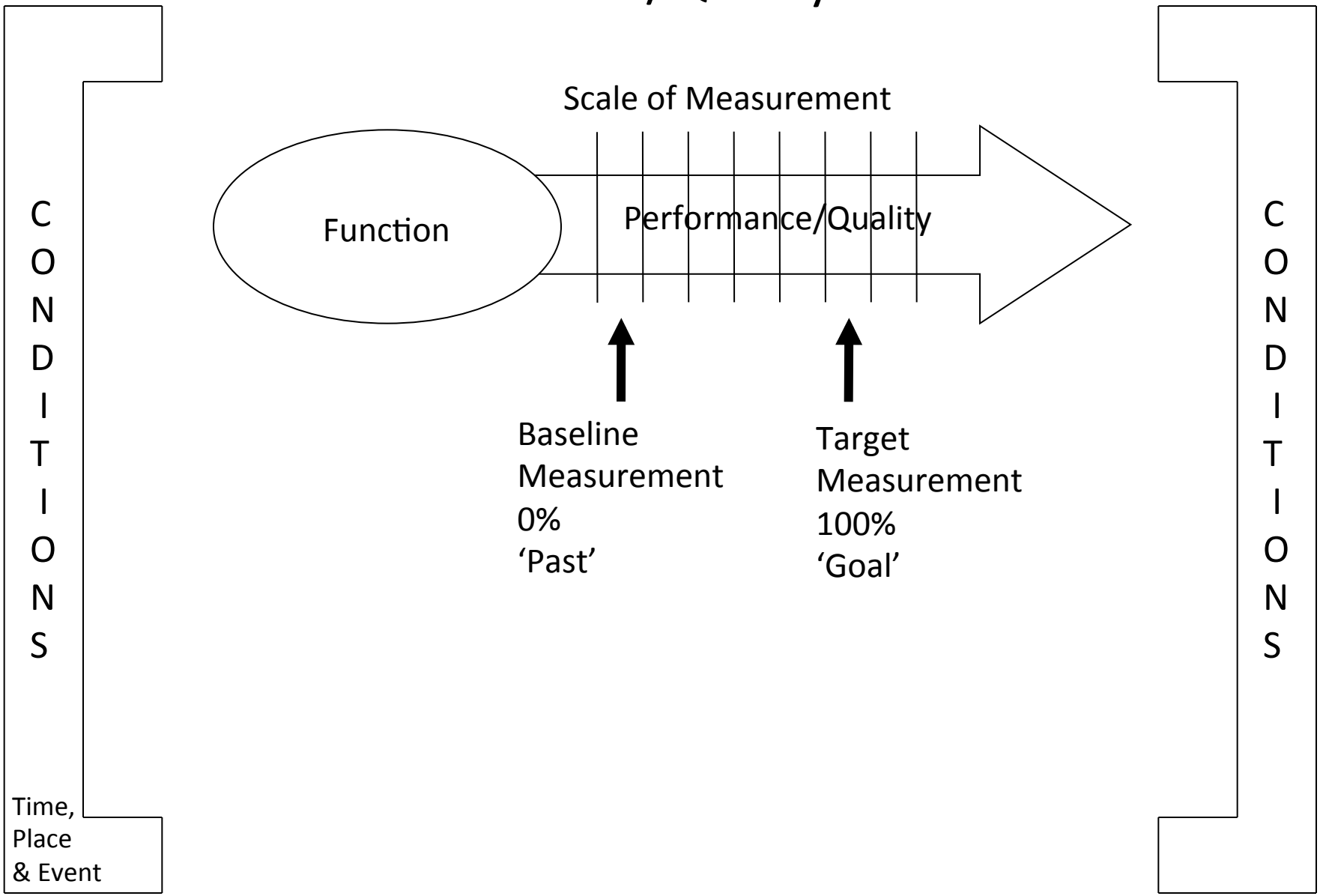
Scalar Performance/Quality Attribute



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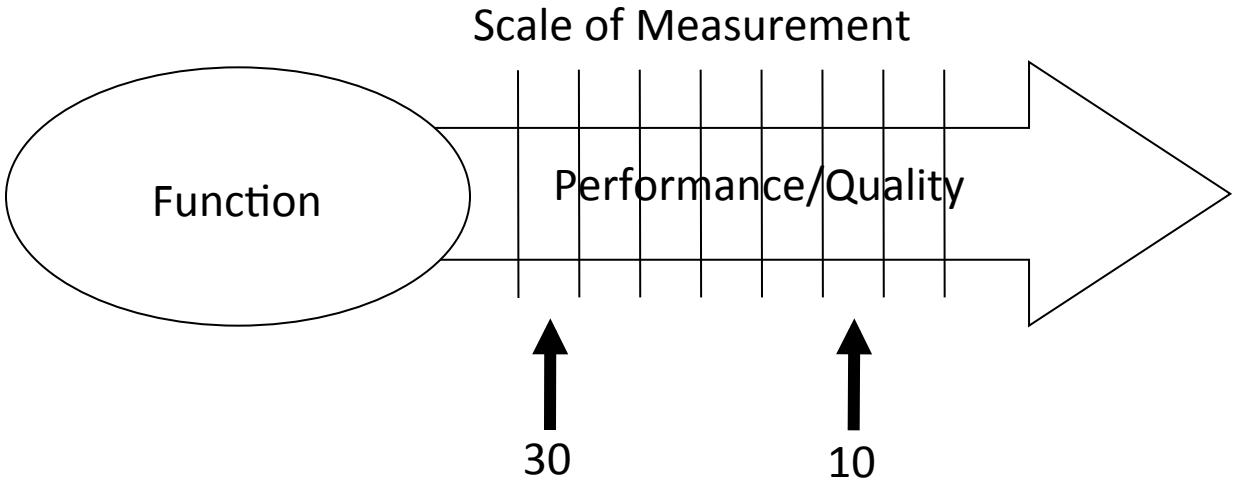
Scalar Performance/Quality Attribute

CONDITIONS



R1: Customer Request Time [Function = Submit Request]:
Type: Performance requirement:
Ambition: Reduce time for customer to submit request.
Scale: Average time in minutes taken for defined [stakeholder] for defined [request type: Default = Loan].
Past [Customer]: **30**.
Goal [Customer]: **10**.

Past [Loan, Competitor A, July 2008]: **25**.

Time, Place & Event

CONDITIONS

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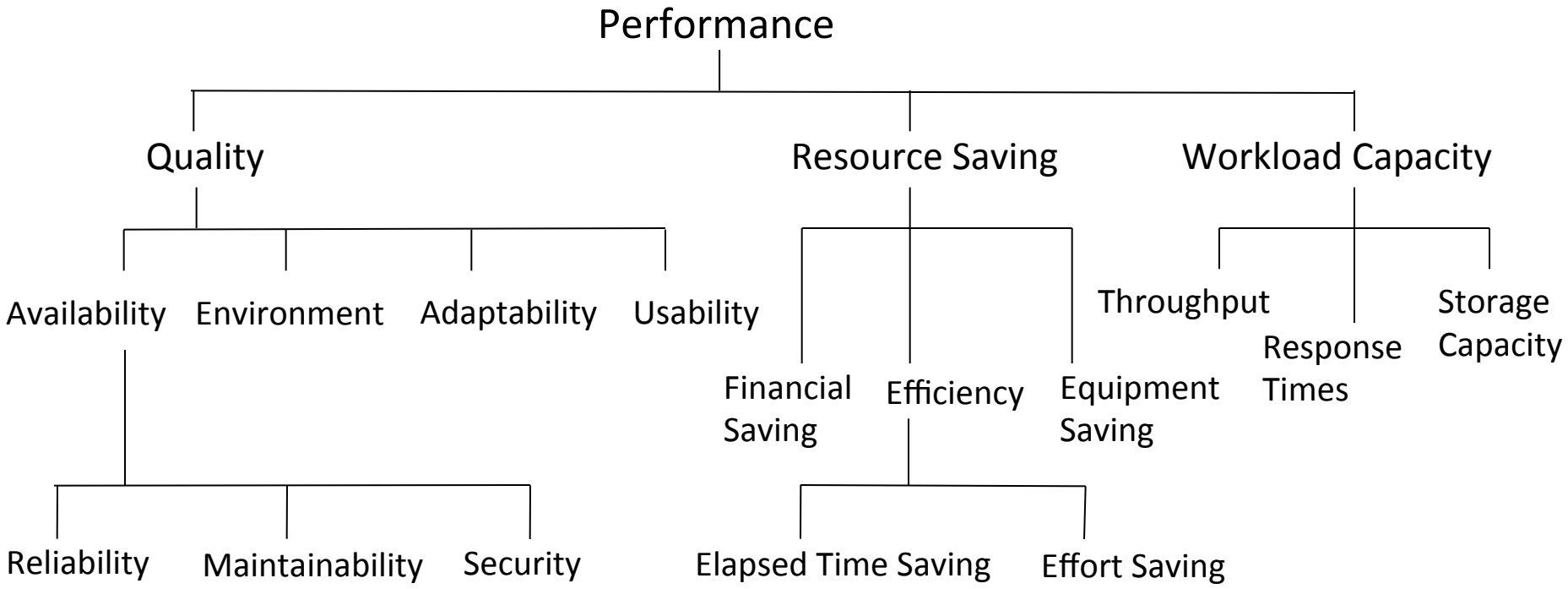
A Hierarchy of Performance/Quality Attributes



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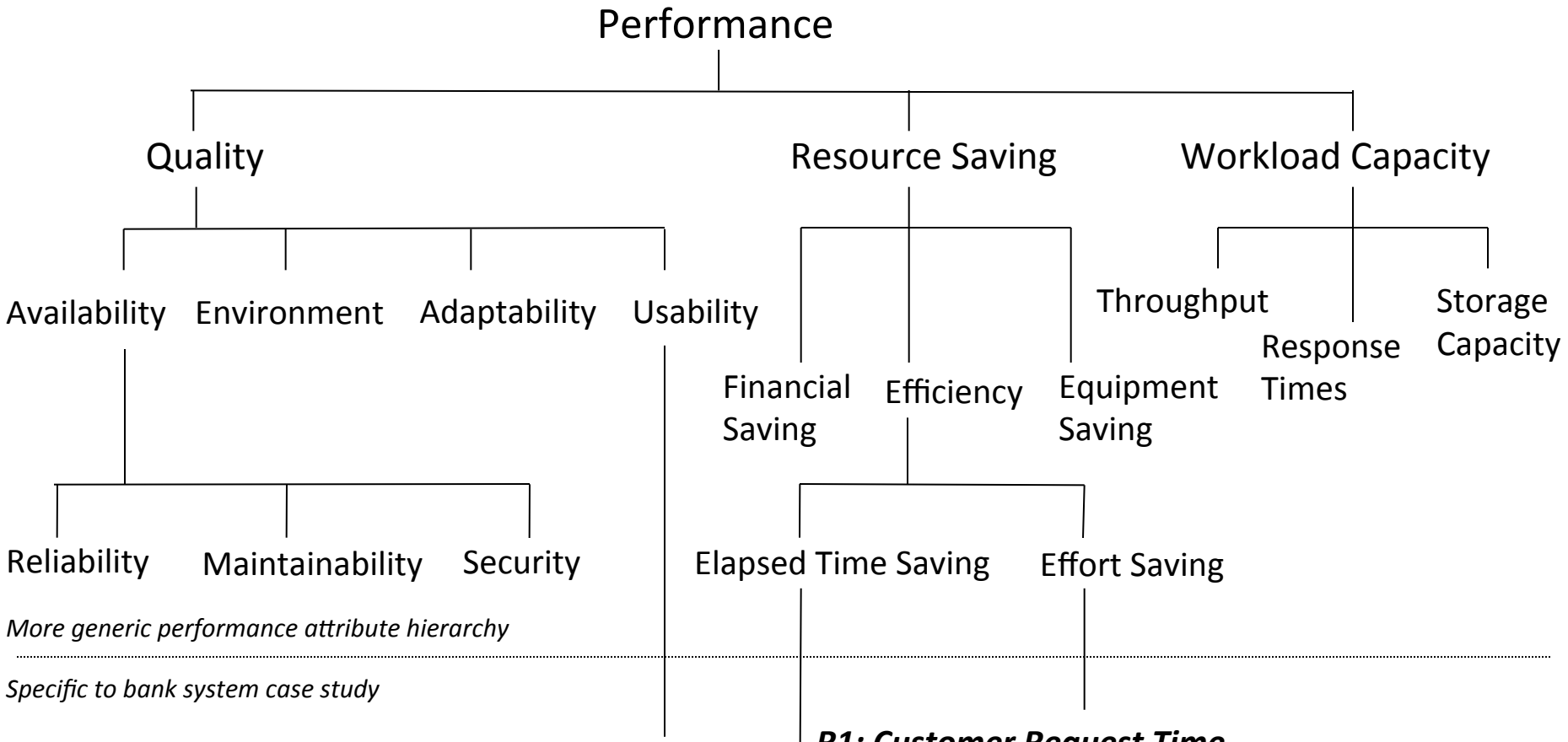

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Value Clarity

Quantify the most-critical project objectives on day 1

P&L-Consistency&T P&L: **Scale:** total adjustments btw Flash/Predict and Actual (T+1) signed off P&L. per day. **Past 60 Goal**: **15**

Speed-To-Deliver: **Scale**: average Calendar days needed from New Idea Approved until Idea Operational, for given Tasks, on given Markets.
Past [200x, Market = EURex, Task =Bond Execution] **2-3 months** ?
Goal [Deadline =End 20xz, Market = EURex, Task =Bond Execution] **5 days**

Operational-Control: **Scale**: % of trades per day, where the calculated economic difference between OUR CO and Marketplace/Clients, is less than "1 Yen"(or equivalent).
Past [April 20xx] **10%** change this to 90% NH **Goal** [Dec. 20xy] **100%**

Operational-Control.Consistent: **Scale**: % of defined [Trades] failing full STP across the transaction cycle. **Past** [April 20xx, Trades=Voice Trades] **95%**
Past [April 20xx, Trades=eTrades] **93%**
Goal [April 20xz, Trades=Voice Trades] <**95 ± 2%**>
Goal [April 20xz, Trades=eTrades] **98.5 ± 0.5 %**

Operational-Control.Timely.End&OvernightP&L Scale: number of times, per quarter, the P&L information is not delivered timely to the defined [Bach-Run].
Past [April 20xx, Batch-Run=Overnight] 1 **Goal** [Dec. 20xy, Batch-Run=Overnight] <**0.5**> **Past** [April 20xx, Batch-Run= **T+1**] **1 Goal** [Dec. 20xy, Batch-Run=End-Of-Day, Delay<1hour] **1**

Operational-Control.Timely.IntradayP&L Scale: number of times per day the intraday P&L process is delayed more than 0.5 sec.

Operational-Control.Timely.Trade-Bookings Scale: number of trades per day that are not booked on trade date. **Past** [April 20xx] **20 ?**

Front-Office-Trade-Management-Efficiency Scale: Time from Ticket Launch to trade updating real-time risk view
Past [20xx, Function = Risk Mgt, Region = Global] **~ 80s** +/- **45s** ??
Goal [End 20xz, Function = Risk Mgt, Region = Global] **~ 50%** better?
Managing Risk – Accurate – Consolidated – Real Time

Risk.Cross-Product Scale: % of financial products that risk metrics can be displayed in a single position blotter in a way appropriate for the trader (i.e. – around a benchmark vs. across the curve).
Past [April 20xx] **0%** 95%. **Goal** [Dec. 20xy] **100%**

Risk.Low-latency Scale: number of times per day the intraday risk metrics is delayed by more than 0.5 sec. **Past** [April 20xx, NA] **1% Past** [April 20xx, EMEA] ??**% Past** [April 20xx, AP] 100**% Goal** [Dec. 20xy] **0%**
Risk.Accuracy

Risk. user-configurable Scale: ??? pretty binary – feature is there or not – how do we represent?
Past [April 20xx] **1% Goal** [Dec. 20xy] **0%**

Operational Cost Efficiency Scale: <Increased efficiency (Straight through processing STP Rates)>

Cost-Per-Trade Scale: % reduction in Cost-Per-Trade
Goal (EOY 20xy, cost type = I 1 – REGION = ALL) **Reduce cost by 60%** (BW)
Goal (EOY 20xy, cost type = I 2 – REGION = ALL) **Reduce cost by x %**
Goal (EOY 20xy, cost type = E1 – REGION = ALL) **Reduce cost by x %**
Goal (EOY 20xy, cost type = E 2 – REGION = ALL) **Reduce cost by 100%**
Goal (EOY 20xy, cost type = E 3 – REGION = ALL) **Reduce cost by x %**

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A Quantified Objective using Planguage Tool

Notice Stakeholders!

Timeliness

Version *1.12.*
Type: *Top Level Business Goal*
Quality
Owner: *Sam, Andy*
Stakeho **Primary:** Front Office, Middle Office; **Secondary:** Senior Management, Product Control, Financial Control, Internal Audit
Ambitio *Consistently meet timeliness SLAs for the daily business process. E. g. Availability of SOD risk*

Scale: **average number of days per year that defined [SLA] is exceeded, due to the [System], for defined [Scope]**

		Day & Time		*Conditions (Place, Defined, Stakeholder, etc.)*	]	*number*	
Past	[at		,		]		±
Status	[at		,	Sum	]	**0**	±
Tolerable	[by	2014	,	Sum	]	**3**	±
Goal	[by	2014 - j	... ,	Sum	]	**100**	±
Past	[		... ,	SLA=SOD risk by 7.30am, Scope=Exxxx Exxxxx, System=OXXXX	]	6	±
Status	[		,	SLA=SOD risk by 7.30am, Scope=Exxxx Exxxxx, System=OXXXX	]	**6**	±
Tolerable	[	2014 - j	... ,	SLA=SOD risk by 7.30am, Scope=Exxxx Exxxxx, System=TBD	]	**2**	±
Goal	[	2014 - j	,	SLA=SOD risk by 7.30am, Scope=Exxxx Exxxxx, System=TBD	]	**0**	±
	[		... ,		]		±
Past			...	SLA=Initial EOD P/L within 5 mins of being avail. in Kxxxx, Scope=Exxxx Flo		252	
Status				SLA=Initial EOD P/L within 5 mins of being avail. in Kxxxx, Scope=Exxxx Flo		**252**	
Tolerable		2014 - j	...	SLA=Initial EOD P/L within 5 mins of being avail. in Kxxxx, Scope=Exxxx Flo		**15**	
Goal		2014 - j		SLA=Initial EOD P/L within 5 mins of being avail. in Kxxxx, Scope=Exxxx Flo		**0**	
			...				
Past			...	SLA=SOD risk by 7am, Scope=Exxxx Flow Options, System=Txxxx		1	
Status				SLA=SOD risk by 7am, Scope=Exxxx Flow Options, System=Txxxx		1	
Tolerable		2014 - j	...	SLA=SOD risk by 7am, Scope=Exxxx Flow Options, System=TBD		1	
Goal		2014 - j		SLA=SOD risk by 7am, Scope=Exxxx Flow Options, System=TBD		0	
			...				

Example of Estimating the Value of a Technical IT System Improvement

TIME.HEDGE - Time for hedge execution of average-sized trade	
Ambition:	Reduce the average time taken from verbal agreement ("done") to hedge execution of an <average-sized> trade
Scale:	Seconds
Past:	[2Q10; Region=NA] 30 seconds
Goal:	[2Q12; Region=ALL] 3 seconds
Business Value:	**[Type=Revenue; Reason=Improved Hedging P&L; Goal Scale=3 seconds; Region=Global] Revenue= +$1mm to +$2mm**

SPEED.CODE – Mean elapsed time for code changes	
Ambition:	Reduce the mean elapsed time for code changes from business request to end-user go live
Scale:	Mean time in calendar days over <three> months
Past:	[2009; Market=Eurex; Task=Bond execution] <60 - 90> days
Goal:	[2Q12; Market=Eurex; Task=Bond execution] 5 days
Business Value:	**[Type=Revenue; Reason=Earlier P&L from faster time to Market; Goal Scale=5 days; Region=Global] Revenue= +$2mm to +$5mm**

This is an example made to reason about specification standards and is not supposed to be a real spec. Just realistic.

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Solution Responsibility

Quantify impact of all suggested **strategies, architectures**, on all critical objectives, deadline, and budget

NOT ☹

- Just *name* an idea/design
- Assert the design is good
- Fail to explain how you know
- Fail to take responsibility
- Fail to measure results
- Fail to consider all requirements
- Fail to even estimate costs
- *"Tool Simulators, Reverse Cracking Tool, Generation of simulated telemetry frames entirely in software, Application specific sophistication, for <our domain>– recorded mode simulation by playing back the dump file, Application test harness console" <-6.2.1 HFA*

YES ! ☺

- Describe detail for estimation
- Estimate the impact on Goals
- Estimate the ± uncertainty
- Specify the estimate evidence
- Estimate all objectives
- Estimate all resources

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Don´t we need more detail to estimate costs and other attributes of a design?

***Simple* design description**

- Design Spec:

"A Risk & P/L aggregation system"

Ask the following questions about such *brief* design descriptions

- What will it cost to develop?
- What will it cost to operate?
- Will we deliver any or all of the quality and performance Goal levels on time?
- What are the critical assumptions, that might fail or be untrue?
- What are the known risks?
- Do we actually understand anything of consequence from such a short design specification?

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See enlarged view of this slide in following slides. This is a 1-page overview

Defining a Design/Solution/Architecture/Strategy (Planguage, CE Design Template)

1. enough detail to estimate, 2. some impact assertion, 3. Assumptions, Risks, Issues

Orbit Application Base: (formal Cross reference Tag)

Type: Primary Architecture Option

========== Basic Information ==========

Version: Nov. 30 20xx 16:49, updated 2.Dec by telephone and in meeting. 14:34

Status: Draft

Owner: Brent Barclays

Expert: Raj Shell, London

Authority: for differentiating business environment characteristics, Raj Shell, Brent Barclays (for overview)

Source: <Source references for the information in this specification. Could include people>. Various, can be done later BB

Gist: risk and P/L aggregation service, which also provides work flow/adjustment and outbound and inbound feed support. Currently used by Rates ExtraBusiness, Front Office and Middle Office, USA & UK.

Description: <Describe the design idea in sufficient detail to support the estimated impacts and costs given below>.

D1: ETL Layer. Rules based highly configurable implementation of the ETL Pattern, which allows the data to be onboarded more quickly. Load and persist new data very quickly. With minimal development required. -> Business-Capability-Time-To-Market, Business Scalability

D2: high performance risk and P/L aggregation processing (Cube Building). -> Timeliness, P/L Explanation, Risk & P/L Understanding, Decision Support, Business Scalability, Responsiveness,

D3: Orbit supports BOTH Risk and P/L -> P/L Explanation, Risk & P/L Consistency, Risk & P/L Understanding, Decision Support,

D4: a flexible configurable workflow tool, which can be used to easily define new workflow processes -> Books/Records Consistency, Business Process Effectiveness, Business Capability Time to Market,

D5: a report definition language, which provides 90+% of the business logic contained with Orbit, allows a quick turnaround of new and enhanced reports with minimal regression testing and release procedure impact. -> P/L Explanation, Risk & P/L Understanding, Business Capability Time to Market, Business Scalability,

D6: Orbit GUI. Utilizes an Outlook Explorer metaphor for ease of use, and the Dxx Express Grid Control, to provide high performance Cube Interrogation Capability. -> Responsiveness, People Interchangeability, Decision Support, Risk & P/L Understanding,

D7: downstream feeds. A configurable event-driven data export service, which is used to generate feeds . -> Business Process Effectiveness, Business Capability Time to Market

========== **Priority and Risk Management** =======

Assumptions: <Any assumptions that have been made>.

A1: **FCCP is assumed to be a part of Orbit.** FCxx does not currently exist and is Dec 20xx 6 months into Requirements Spec. <- Picked up by TsG from dec 2 discussions AH MA JH EC.

Consequence: FCxx must be a part of the impact estimation and costs rating.

A2: **Costs**, the development costs will not be different. All will base on a budget of say $nn mm and 3 years. The o+

costs may differ slightly, like $n mm for hardware. MA AH 3 dec

A3:Boss X will continue to own Orbit. TSG DEC 2

A4: the schedule, 3 years, will constrained to a scope we can in fact deliver, OR we will be given additional budget. If not "I would have a problem" <- BB

A5: the cost of expanding Orbit will not be prohibitive. <- BB 2 dec

A6: we have made the assumption that we can integrate Oribit with PX+ in a sensible way, even in the short term <- BB

Dependencies: <State any dependencies for this design idea>.

D1: FCxx replaces Px+ in time. ? tsg 2.12

Risks: <Name or refer to tags of any factors, which could threaten your estimated impacts>.

R1. FCxx is delayed. Mitigation: continue to use Pxx <- tsg 2.12

R2: the technical **integration** of Px+ is not as easy as thought & we must redevelop Oribit

R3: the and or scalability and cost of **coherence** will not allow us to meet the delivery.

R4: **scalability** of Orbit team and infrastructure, first year especially <- BB. People, environments, etc.

R5: re Cross Desk reporting Requirement, major impact on technical design. **Solution not currently known**. Risk no solution allowing us to report all P/L

Issues: <Unresolved concerns or problems in the specification or the system>.

I1: Do we need to put the fact that we own Orbit into the objectives (Ownership). MA said, other agreed this is a huge differentiator. Dec 2.

I2: what are the time scales and scope now? Unclear now BB

I3: what will the success factors be? We don't know what we are actually being asked to do. BB 2 dec 20xx

I4: for the business other than flow options, there is still a lack of clarity as to what the requirements are and how they might differ from Extra and Flow Options. BB

I5: the degree to which this option will be seen to be useful without Intra Day. BB 2

Design Specification (1 of 2)

Specification Headers

Detailed Description and -> Impacted Objectives

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Design Specification (2 of 2)

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R4: **scalability** of Orbit team and infrastructure, first year especially <- BB. People, environments, etc.

R5: re Cross Desk reporting Requirement, major impact on technical design. **Solution not currently known**. Risk no solution allowing us to report all P/L

Issues*: <Unresolved concerns or problems in the specification or the system>.*

I1: Do we need to put the fact that we own Orbit into the objectives (Ownership). MA said, other agreed this is a huge differentiator. Dec 2.

I2: what are the time scales and scope now? Unclear now BB

I3: what will the success factors be? We don't know what we are actually being asked to do. BB 2 dec 20xx

I4: for the business other than flow options, there is still a lack of clarity as to what the requirements are and how they might differ from Extra and Flow Options. BB

I5: the degree to which this option will be seen to be useful without Intra Day. BB 2 dec

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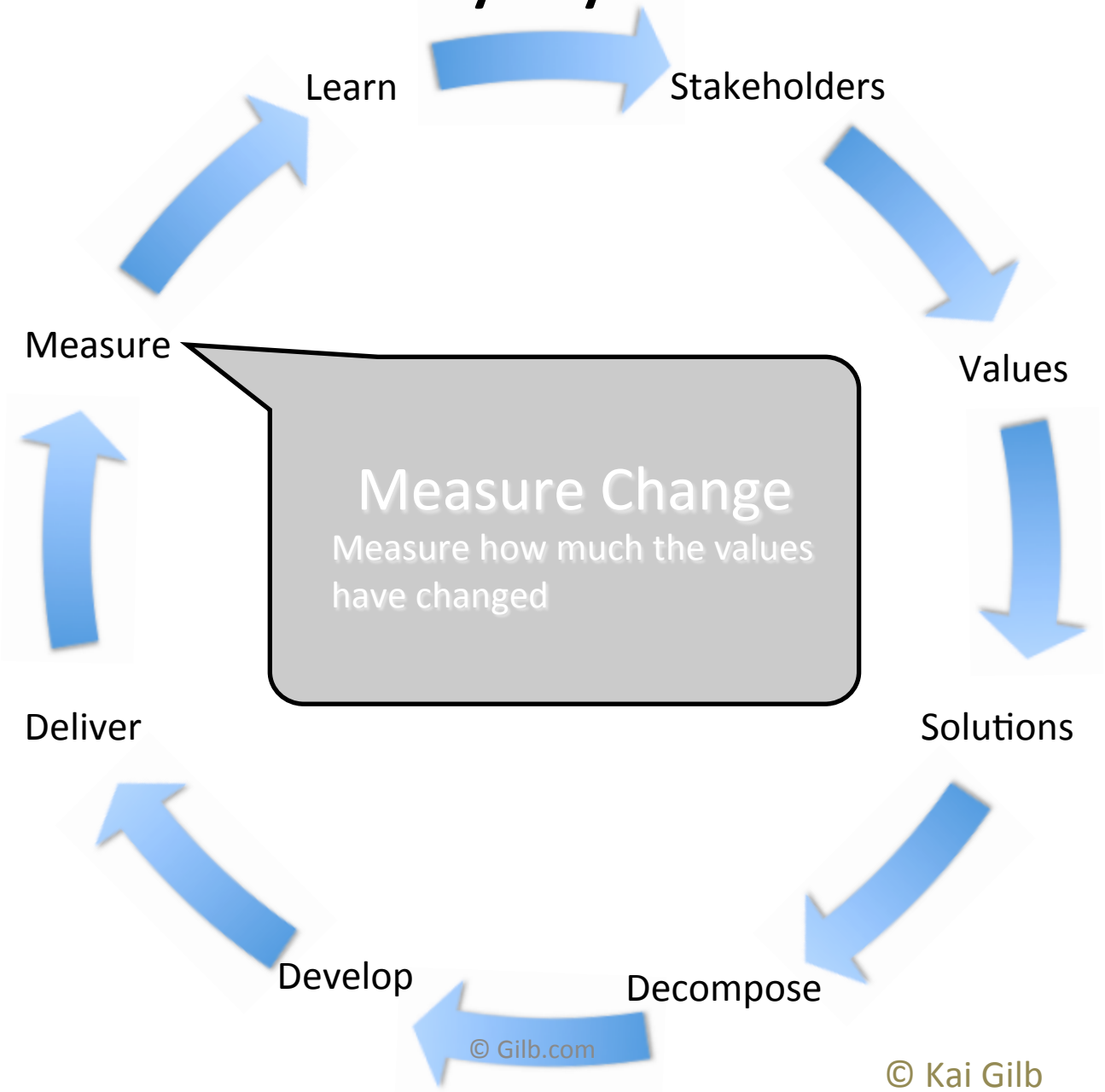
Value Delivery Cycle: Measure



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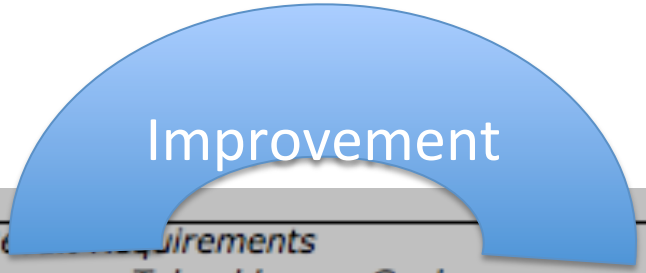
26

Impact Estimation

Tables



Improvement

Value Re… …quirements Status when	Tolerable when	Goal when	Operating Model Consistency units	% of Goal
P&L-Consistency&T P&L			-20	**44%**
60	0	15	-10	22%
0	0	0	0.1	4%
Speed-To-Deliver			-20	**29%**
75	30	5	-7	10%
0	0	0	0.1	3%
Operational-Control.Accurate			5	**50%**
90	99	100	5	50%
0	0	0	0.1	5%
Operational-Control.Consistent			1	**50%**
97	0	99	0.2	10%
0	0	0	0.2	10%
Operational-Control.Timely.End&Overnigh			-1	**200%**
1	1	0.5	-0.5	100%
0	0	0	0.2	40%
Operational-Control.Timely.IntradayP&L				
1	2	3		
0	0	0		
Operational-Control.Timely.Trade-Booking			-15	**75%**

Estimate Units & %

± Uncertainty Worst Case range

Credibility Adjustment 0.0 to 1.0

Based on tool built by Kai Gilb, done by him at client

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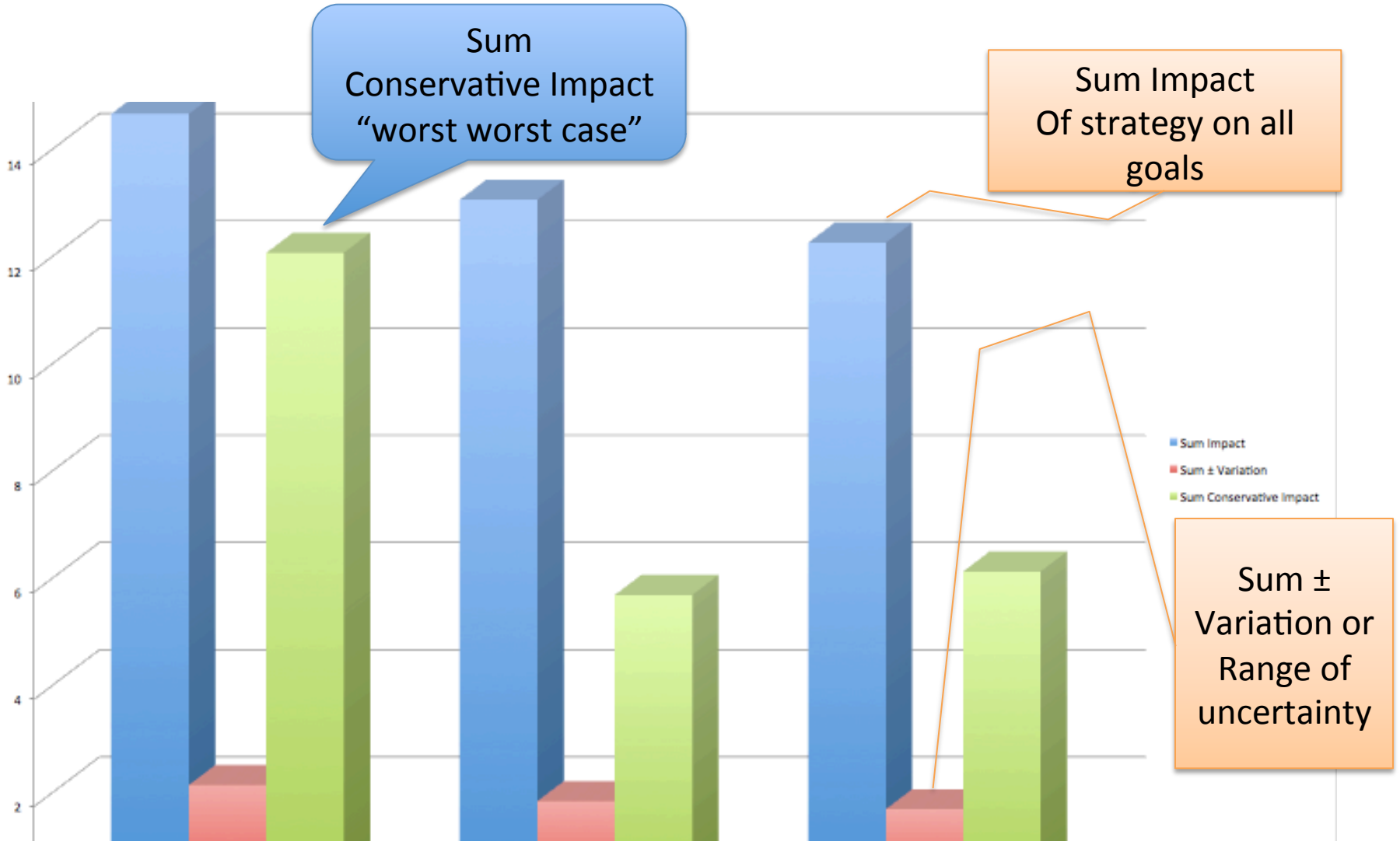
Summary of Options wrt Risk (20xx)



Based on work done by Kai Gilb

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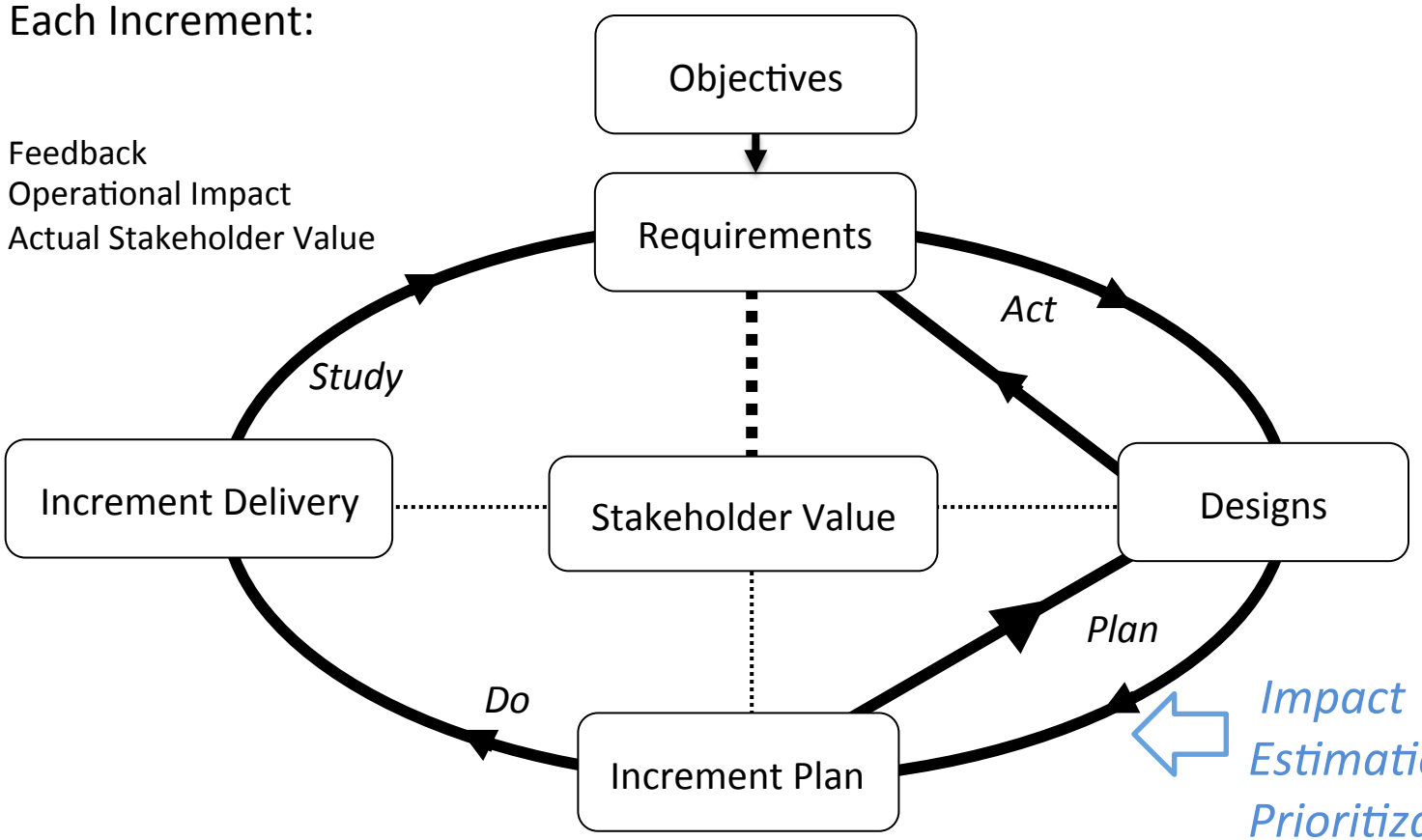
Planning Cycle

Based on Shewhart Cycle

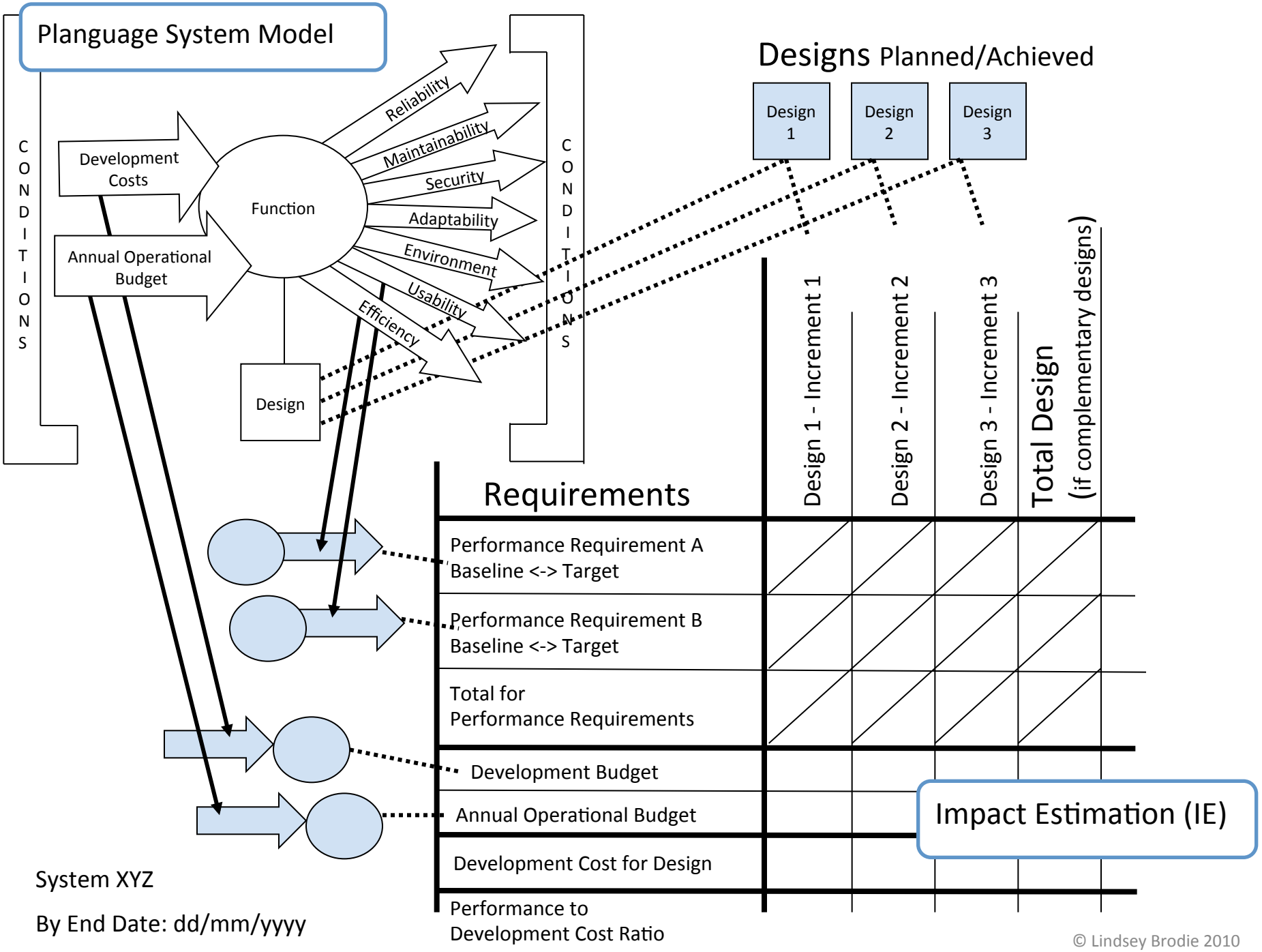
One Cycle for
Each Increment:



Feedback
Operational Impact
Actual Stakeholder Value

Impact Estimation (IE) Prioritization

Sequence for Delivery
Estimated Stakeholder Value



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An Impact Estimation **Table**

Key:
s = seconds
m = minutes
d = days
w = week

But what's the stakeholder value?

Bank System By End Date: dd/mm/yyyy Requirements	Designs by expected Increment with design dependencies 1 D1: Automate Rules + Manual Testing	2 D2: Back Office Loan Decisioning	3 D3: Web Self-Service	4 D4: Automate Rules + Automate Testing
R1: Time for customer to submit request 30 min <-> 10 min	-	-	10 m 100%	-
R2: Time for Back Office to enter request 30 min <-> 10 min	-	-	0 m 150%	-
R3: Time to respond to customer request 5 days <-> 20 seconds	-	1 d 80%	20 s 100%	-
R4: No of Back Office complaints 10 per week <-> 0	5 50%	<1 90%	0 100%	(2) (80%)
R5: No of customer complaints 25 per week <-> 5	-	15 50%	5 100%	-
R6: Time to update business rules 1 month <-> 1 day	2 w 50%	-	-	1 d 100%
R7: Time to distribute business rules 2 weeks <-> 1 day	1 d 100%	-	20 s 103%	-
Cumulative Total for Performance Requirements	200%	170%	280%	50%
Development Budget 2.5M <-> 300K	2.3	2.0	1.0	0.5
Development Cost for Design	0.2	0.3	1.0	0.5
Cumulative Performance to Devt. Cost Ratio	1000	567	280	100

Stakeholder Value
Using Figures of Merit
Not real numbers

Key:
s = seconds
m = minutes
d = days
w = week

Bank System

By End Date: dd/mm/yyyy

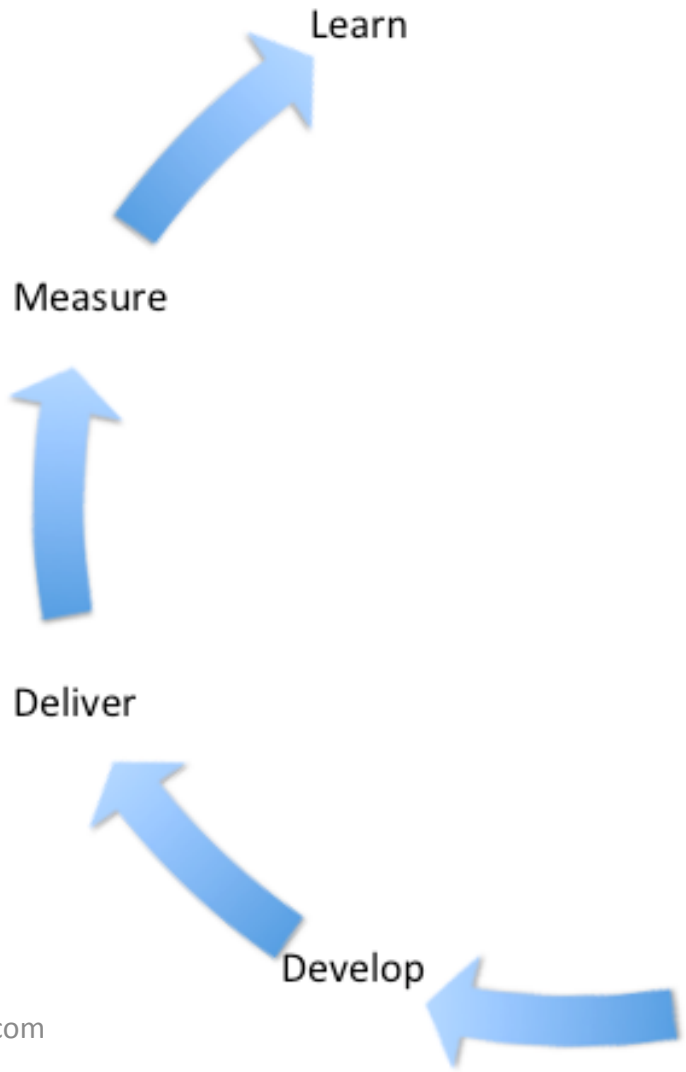
Designs by expected Increment with design dependencies

Regulator	IT Dept.	Customer	Rule Admin.	Business Unit	Back Office	Total Value / Benefit	Requirements	1 D1: Automate Rules + Manual Testing	2 D2: Back Office Loan Decisioning	3 D3: Web Self-Service	4 D4: Automate Rules + Automate Testing
		4				4	R1: Time for customer to submit request 30 min <-> 10 min	-	-	10 m 100%	-
					3	3	R2: Time for Back Office to enter request 30 min <-> 10 min	-	-	0 m 150%	-
		9		9		18	R3: Time to respond to customer request 5 days <-> 20 seconds	-	1 d 80%	20 s 100%	-
					1	1	R4: No of Back Office complaints 10 per week <-> 0	5 50%	<1 90%	0 100%	(2) (80%)
		1			5	6	R5: No of customer complaints 25 per week <-> 5	-	15 50%	5 100%	-
1			5	4	8	18	R6: Time to update business rules 1 month <-> 1 day	2 w 50%	-	-	1 d 100%
1			3	4	6	14	R7: Time to distribute business rules 2 weeks <-> 1 day	1 d 100%	-	20 s 103%	-
2		14	8	17	23	64	Cumulative Total for Performance Requirements	200%	170%	280%	50%
							Development Budget 2.5M <-> 300K	2.3	2.0	1.0	0.5
							Development Cost for Design	0.2	0.3	1.0	0.5
							Cumulative Performance to Devt. Cost Ratio	1000	567	280	100
							Cumulative Stakeholder Value to Development Cost Ratio	23.5/0.2 =117.5	17.8/0.3 =59.3	13.7/1.0 =13.7	9/0.5 =18

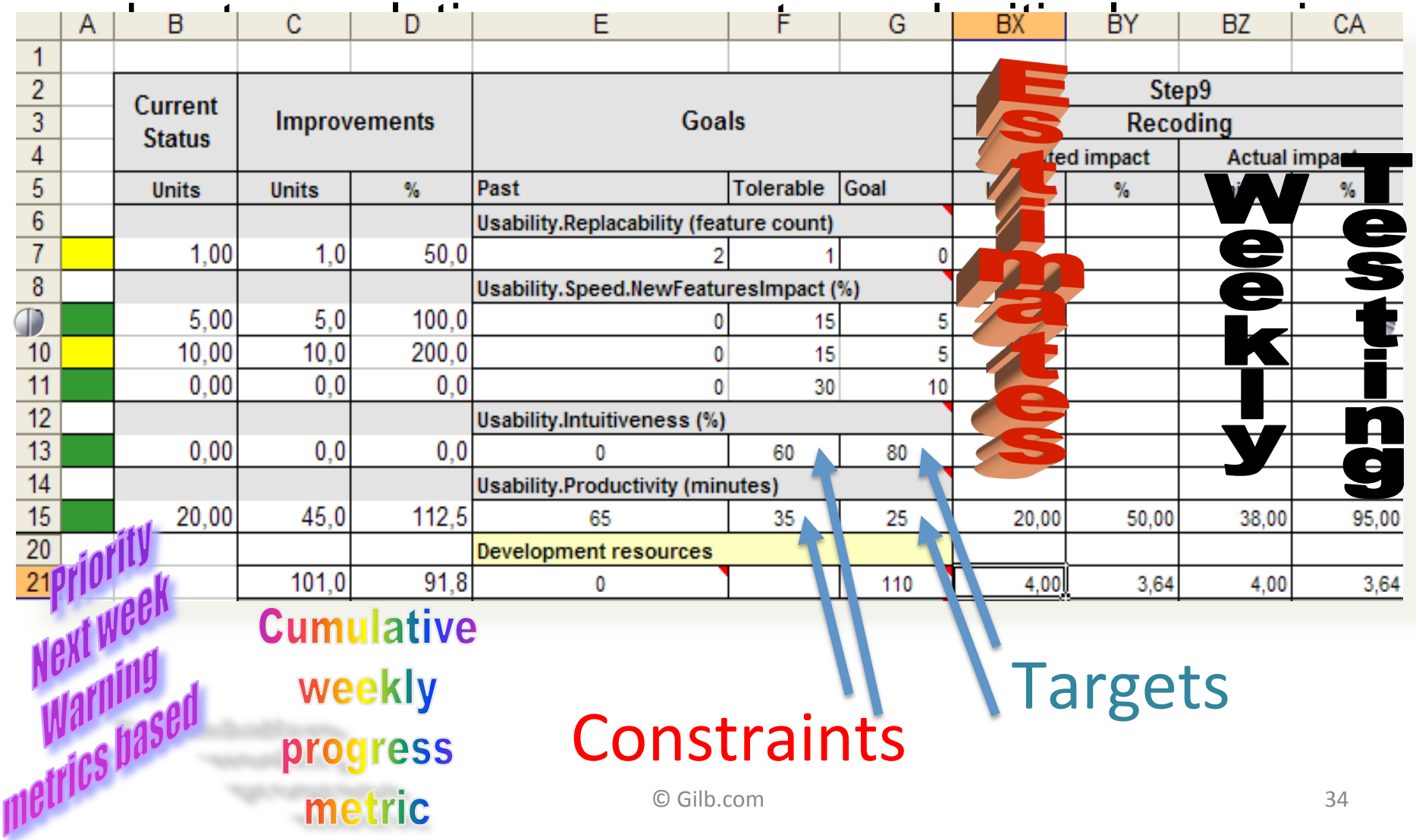
The Value Impact Estimation Table (VIE)
Developed for PhD Research by
lindseybrodie@btopenworld.com

VALUE REPORTING:
Measure project progress early, continuously, in terms of top ten objectives

- Basic idea
  - Estimate expected value next cycle
    - Based on a specific design for that increment
    - Design Hypothesis
  - Measure the actual effect, roughly, pilot,
    - Confirm or deny the effect hypothesis
  - If reasonable result compared to need and expectation, then take another cumulative cycle
  - Measure the cumulated value later, and better, before scaling up and major release
  - If bad result: learn change, try again



Real client (Confirmit): weekly design impact estimates, & same week measurement, weekly feedback to the development team



	A	B	C	D	E	F	G	BX	BY	BZ	CA
1											
2		Current Status	Improvements		Goals			Step9			
3								Recoding			
4								ted impact		Actual impa	
5		Units	Units	%	Past	Tolerable	Goal		%		%
6					Usability.Replacability (feature count)						
7		1,00	1,0	50,0	2	1	0				
8					Usability.Speed.NewFeaturesImpact (%)						
9		5,00	5,0	100,0	0	15	5				
10		10,00	10,0	200,0	0	15	5				
11		0,00	0,0	0,0	0	30	10				
12					Usability.Intuitiveness (%)						
13		0,00	0,0	0,0	0	60	80				
14					Usability.Productivity (minutes)						
15		20,00	45,0	112,5	65	35	25	20,00	50,00	38,00	95,00
20					Development resources						
21			101,0	91,8	0		110	4,00	3,64	4,00	3,64

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Evo Plan Confirmit 8.5

4 product areas were attacked in all: 25 Qualities concurrently, one quarter of a year. Total development staff = 13

Sum impact after 9 deivery cycles

9

8

3

3

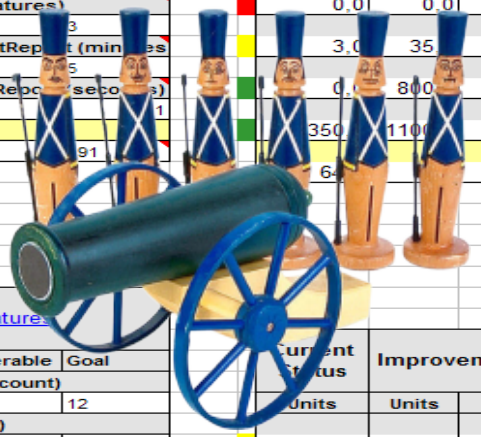
Impact Estimation Table: Reportal codename "Hyggen"

Current Status	Improv		Reportal - E-SAT features		
Units	Units	%	ast	Tolerable	Goal
			sability.Intuitivness (%)		
75,0	25,0	62,5	0	75	90
			sability.Consistency.Visual (Elements)		
14,0	14,0	100,0	0	11	14
			sability.Consistency.Interaction (Components)		
15,0	15,0	107,1	0	11	14
			sability.Productivity (minutes)		
5,0	75,0	96,2	0	5	2
5,0	45,0	95,7	0	5	1
			sability.Flexibility.OfflineReport.ExportFormats		
3,0	2,0	66,7		3	4
			sability.Robustness (errors)		
1,0	22,0	95,7		1	0
			sability.Replacability (nr of features)		
4,0	5,0	100,0		5	3
			sability.ResponseTime.ExportRep t (min es		
1,0	12,0	150,0	3	13	5
			sability.ResponseTime.ViewRepo seco s)		
1,0	14,0	100,0	15		1
			evelopment resources		
203,0					91

Current Status	Improvements		Survey Engine .NET		
Units	Units	%	Past	Tolerable	Goal
			Backwards.Compatibility (%)		
83,0	48,0	80,0	40	85	95
0,0	67,0	100,0	67	0	0
			Generate.WI.Time (small/medium/large seconds)		
4,0	59,0	100,0	63	8	4
10,0	397,0	100,0	407	100	10
94,0	2290,0	103,9	2384	500	180
			Testability (%)		
10,0	10,0	13,3	0	100	100
			Usability.Speed (seconds/user rating 1-10)		
774,0	507,0	51,7	1281	600	300
5,0	3,0	60,0	2	5	7
			Runtime.ResourceUsage.Memory		
0,0	0,0	0,0		?	?
			Runtime.ResourceUsage.CPU		
3,0	35	97,2	38	3	2
			Runtime.ResourceUsage.MemoryLeak		
0,	800	100,0	800	0	0
			Runtime.Concurrency (number of users)		
350	1100	146,7	150	500	1000
64			Development resources		
			0		84

Current Status	Improvements		Reportal - MR Features		
Units	Units	%	Past	Tolerable	Goal
			Usability.Replacability (feature count)		
1,0	1,0	50,0	14	13	12
			Usability.Productivity (minutes)		
20,0	45,0	112,5	65	35	25
			Usability.ClientAcceptance (features count)		
4,4	4,4	36,7	0	4	12
			Development resources		
101,0			0		86

Current Status	Improvements		XML Web Services		
Units	Units	%	Past	Tolerable	Goal
			TransferDefinition.Usability.Efficiency		
7,0	9,0	81,8	16	10	5
17,0	8,0	53,3	25	15	10
			TransferDefinition.Usability.Response		
943,0	-186,0	######	170	60	30
			TransferDefinition.Usability.Intuitiveness		
5,0	10,0	95,2	15	7,5	4,5
			Development resources		
2,0			0		48



Trond Johansen

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Confirmit Evo-week cycle: Measure Progress Weekly

	Development Team	Users (PMT, Pros, Doc writer, other)	CTO (Sys Arch, Process Mgr)	QA (Configuration Manager & Test Manager)
Friday	✓ PM: Send Version N detail plan to CTO + prior to Project Mgmt meeting ✓ PM: Attend Project Mgmt meeting: 12.00-15.00 ✓ Developers: Focus on genereal maintenance work, documentation.		✓ Approve/reject design & Step N ✓ Attend Project Mgmt meeting: 12-15	✓ Run final build and create setup for Version N-1. ✓ Install setup on test servers (external and internal) ✓ Perform initial crash test and then release Version N-1
Monday	✓ Develop test code & code for Version N	✓ Use Version N-1		✓ Follow up CI ✓ Review test plans, tests
Tuesday	✓ Develop Test Code & Code for Version N ✓ Meet with users to Discuss Action Taken Regarding Feedback From Version N-1	✓ Meet with developers to give Feedback and Discuss Action Taken from previous actions	✓ System Architect to review code and test code	✓ Follow up CI ✓ Review test plans, tests
Wednesday	✓ Develop test code & code for Version N			✓ Review test plans, tests ✓ Follow up CI
Thursday	✓ Complete Test Code & Code for Version N ✓ Complete GUI tests for Version N-2			✓ Review test plans, tests ✓ Follow up CI

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Evo's impact on Confirmit product qualities

Description of requirement/work task	Past	Status
Usability.Productivity: Time for the system to generate a survey	7200 sec	15 sec
Usability.Productivity: Time to set up a typical specified Market Research-report (MR)	65 min	20 min
Usability.Productivity: Time to grant a set of End-users access to a Report set and distribute report login info.	80 min	5 min
Usability.Intuitiveness: The time in minutes it takes a medium experienced programmer to define a complete and correct data transfer definition with Confirmit Web Services without any user documentation or any other aid	15 min	5 min
Performance.Runtime.Concurrency: Maximum number of simultaneous respondents executing a survey with a click rate of 20 sec and an response time<500 ms, given a defined [Survey-Complexity] and a defined [Server Configuration, Typical]	250 users	6000

Only 5 highlights of the 25 impacts are listed here

confirmit Release 8.5

Just-In-Time Planning

Dynamic intelligent do-next prioritisation:
Value/cost based

Can you buy into *this* planning policy?

"Do,
in the next value delivery cycle,
that which is estimated to give most value,
to all objectives,
with regard to risk"

Notice the automatically computed priority colours, after each delivery and measurement cycle

Sum impact after 9 deivery cycles

Impact Estimation Table: Reportal c… "Hyggen"

9

Current Status	Improvements		Reportal - E-SAT features		
Units	Units	%	Past	Tolerable	Goal
			Usability.Intuitivness (%)		
75,0	25,0	62,5	50	75	90
			Usability.Consistency.Visual (Elements)		
14,0	14,0	100,0	0	11	14
			Usability.Consistency.Interaction (Components)		
15,0	15,0	107,1	0	11	14
			Usability.Productivity (minutes)		
5,0	75,0	96,2	80	5	2
5,0	45,0	95,7	50	5	1
			Usability.Flexibility.OfflineReport.ExportFormats		
3,0	2,0	66,7	1	3	4
			Usability.Robustness (errors)		
1,0	22,0	95,7	7	1	0
			Usability.Replacability (nr of features)		
4,0	5,0	100,0	8	5	3
			Usability.ResponseTime.ExportReport (minutes		
1,0	12,0	150,0	13	13	5
			Usability.ResponseTime.ViewReport (seconds)		
1,0	14,0	100,0	15	3	1
			Development resources		
203,0			0		191

Current Status	Improvements		Survey Engine .NET		
Units	Units	%	Past	Tolerable	Goal
83,0	48,0	80,0	Backwards.Compatibility (%)		
0,0	67,0	100,0	40	85	95
			67	0	0
4,0	59,0	100,0	Generate.WI.Time (small/medium/large seconds)		
10,0	397,0	100,0	63	8	4
94,0	2290,0	103,9	407	100	10
			2384	500	180
10,0	10,0	13,3	Testability (%)		
			0	100	100
774,0	507,0	51,7	Usability.Speed (seconds/user rating 1-10)		
5,0	3,0	60,0	1281	600	300
			2	5	7
0,0	0,0	0,0	Runtime.ResourceUsage.Memory		
				?	?
3,0	35,0	97,2	Runtime.ResourceUsage.CPU		
			38	3	2
0,0	800,0	100,0	Runtime.ResourceUsage.MemoryLeak		
			800	0	0
850,0	1100,0	146,7	Runtime.Concurrency (number of users)		
			150	500	1000
64,0			Development resources		
			0		84

8

Current Status	Improvements		Reportal - MR Features		
Units	Units	%	Past	Tolerable	Goal
			Usability.Replacability (feature count)		
1,0	1,0	50,0	14	13	12
			Usability.Productivity (minutes)		
20,0	45,0	112,5	65	35	25
			Usability.ClientAcceptance (features count)		
4,4	4,4	36,7	0	4	12
			Development resources		
101,0			0		86

3

Current Status	Improvements		XML Web Services		
Units	Units	%	Past	Tolerable	Goal
			TransferDefinition.Usability.Efficiency		
7,0	9,0	81,8	16	10	5
17,0	8,0	53,3	25	15	10
			TransferDefinition.Usability.Response		
943,0	-186,0	######	170	60	30
			TransferDefinition.Usability.Intuitiveness		
5,0	10,0	95,2	15	7,5	4,5
			Development resources		
2,0			0		48

3

Trond Johansen

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Example: Impact Estimations
As you see, done with *great* uncertainty

Requirements	Opt A	Opt B
TIME.TRADE From 10 to 4 by Dec-11	100%	± 60%
TIME.HEDGE From 30 to 3 by Dec-11	100%	75% ± 60%
SPEED.CODE From 60 to 5 by Dec-11	100%	65% ± 10%
PNL.ADJUST From 60 to 15 by Dec-11	90% ± 10%	85% ± 100%
CAP.TXNS From 62000 to 500000 by Dec-11	100%	50% ± 100%
CAP.PEAK From 6000 to 100000 by Dec-11	100%	25% ± 100%
CAP.BURST From 20 to 200 by Dec-11	75% ± 10%	0% ± 100%
CAP.POSNS From 4000 to 40000 by Dec-11	100%	100% ± 40%
CAP.TRADERS From 180 to 270 by Dec-11	90% ± 10%	100% ± 30%
AVAIL.P1 From 100 to 20 by Dec-11	90% ± 10%	50% ± 75%
RISK.MANAGE From 0 to 100 by Dec-11	100%	50% ± 50%
RISK.TIME From 99 to 100 by Dec-11	100%	0% ± 100%
RISK.REFRESH From 500 to 200 by Dec-11	98% ± 1%	50% ± 50%

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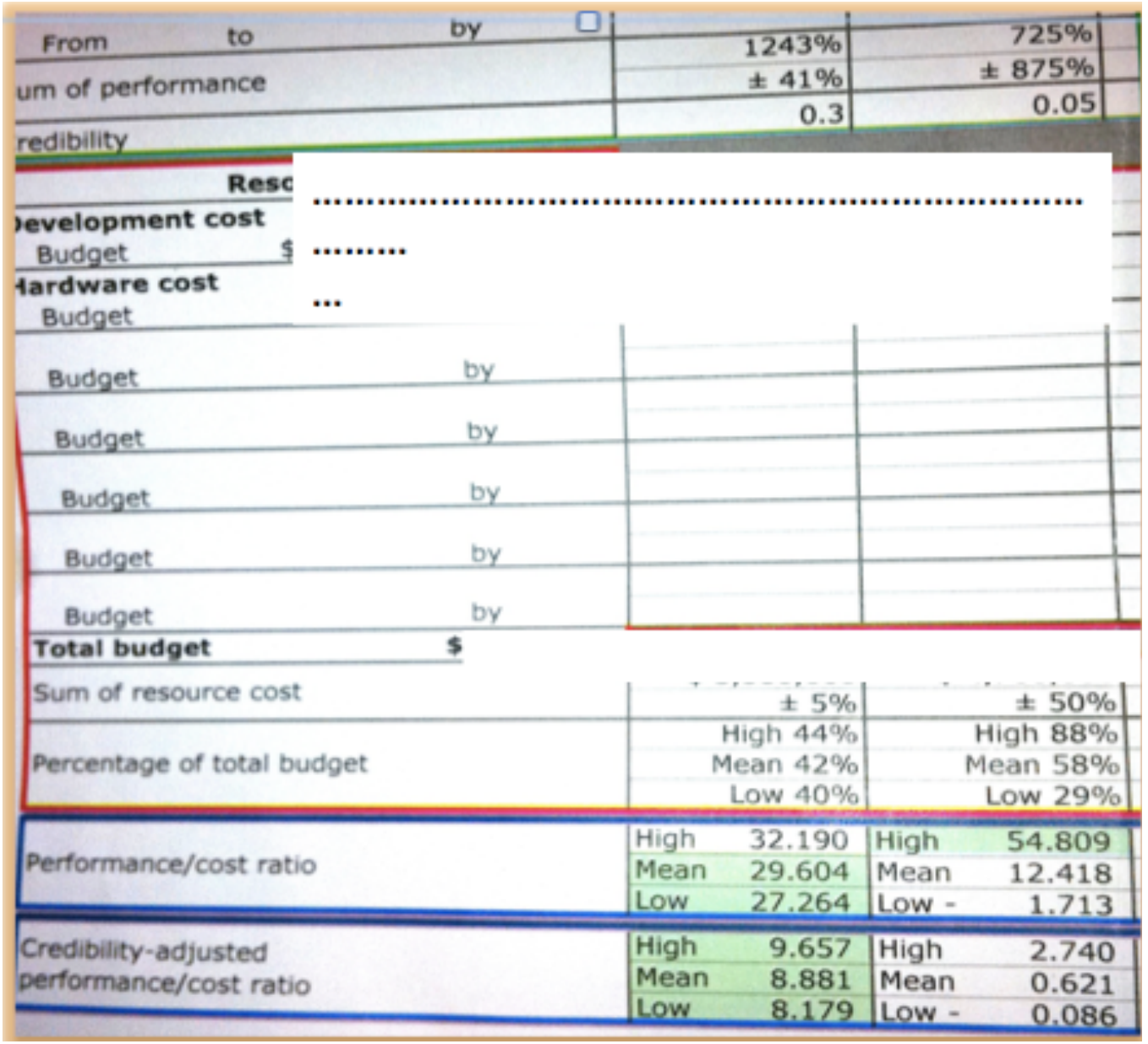
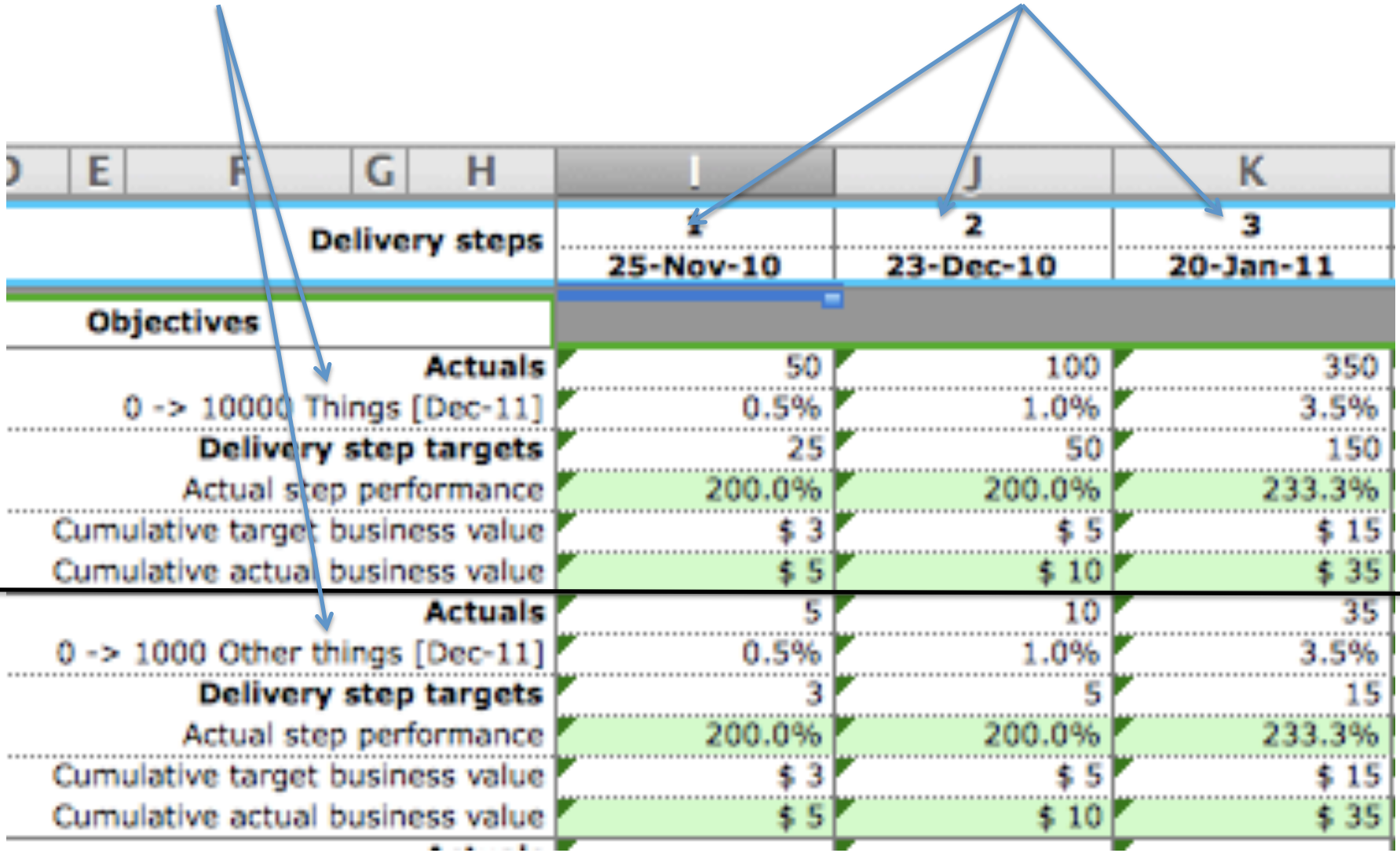
The ‘Bottom Line’



From	to	by	1243%	725%
um of performance			± 41%	± 875%
redibility			0.3	0.05
Resc				
evelopment cost				
Budget	$			
Hardware cost				
Budget				
Budget		by		
Budget		by		
Budget		by		
Budget		by		
Budget		by		
Total budget		$		
Sum of resource cost			± 5%	± 50%
Percentage of total budget			High 44% Mean 42% Low 40%	High 88% Mean 58% Low 29%
Performance/cost ratio			High 32.190 Mean 29.604 Low 27.264	High 54.809 Mean 12.418 Low - 1.713
Credibility-adjusted performance/cost ratio			High 9.657 Mean 8.881 Low 8.179	High 2.740 Mean 0.621 Low - 0.086

For 2 objectives, tracking 3 delivery-steps



	E	F	G	H	I	J	K
				Delivery steps	**1**	**2**	**3**
					25-Nov-10	**23-Dec-10**	**20-Jan-11**
Objectives							
				Actuals	50	100	350
				0 -> 10000 Things [Dec-11]	0.5%	1.0%	3.5%
				Delivery step targets	25	50	150
				Actual step performance	200.0%	200.0%	233.3%
				Cumulative target business value	$ 3	$ 5	$ 15
				Cumulative actual business value	$ 5	$ 10	$ 35
				Actuals	5	10	35
				0 -> 1000 Other things [Dec-11]	0.5%	1.0%	3.5%
				Delivery step targets	3	5	15
				Actual step performance	200.0%	200.0%	233.3%
				Cumulative target business value	$ 3	$ 5	$ 15
				Cumulative actual business value	$ 5	$ 10	$ 35

(teaching example, not real)

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It is fascinating how focused and creative the dialogue becomes between domain experts when they are guided by quantified goal sets, the need to estimate , give evidence, state uncertainty and assign credibility.
All culminating in decision documentation which is auditable reviewable, improvable and transparent! <- TG

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Make friends by delivering results

- Get out of the ‘nerd mode’ of delivering functions/stories to a user
- Get into the mode of delivering real measurable results with the highest value to stakeholders

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Shock your boss!

Insist on being stakeholder-value oriented, rather than IT-oriented

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Questions?