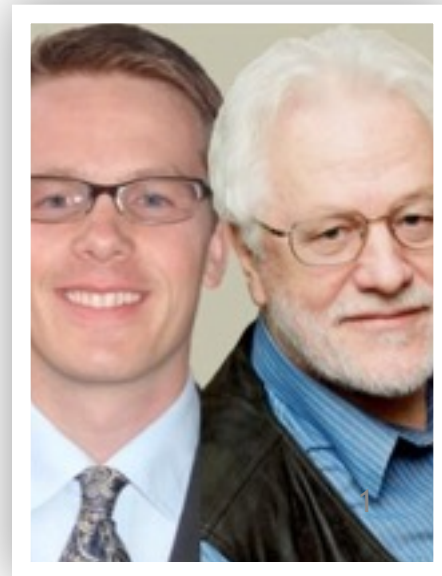


“Experience in Multinational Banks with Advanced Stakeholder Value Requirements: *Quantified* for Testability and Tracking”

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MASTER 2016



Unclear Objectives



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Case: Multinational Bank 2011

Critical Project Objectives ‘not clear’



Critical Project Objectives ‘not clear’

- A sample of about 6 projects, showed that **none of them had clear** quantified project top level critical requirements, yet
- The CTO commissioned us to look at his own selected sample of large troubled projects, wrt their requirements (2 days)
- The sample showed that they did **not** have clear quantified top level requirements
 - But that their team **was easily able to write quantified requirements, same day.** When coached.



Critical Project Objectives ‘not clear’

- The CTO concluded that **none of their 100s of projects had clear enough objectives, or primary improvement requirements, at their base.**



Critical Project Objectives ‘not clear’

The CTO asked Tom,

**“This is so simple and obvious!
Why don’t we do it?”**

Tom replied:

“Universities don’t teach it.

You don’t teach it in house

You as CTO have not required it to be done
before giving funding”.



Case: Multinational Bank 2011

Critical Project Objectives 'not clear'

What about You ?





Richard Smith



“ I attended a 3-day course with you and Kai whilst at Citigroup in 2006”⁸

11 June 2014

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Previous PM Methods:
No 'Value delivery tracking'.
No change reaction ability



Richard Smith

- “However, (our old project management methodology) main failings were that
- it almost **totally missed the ability to track delivery of actual *value* improvements to a project's stakeholders,**
- **and the ability to react to changes**
 - in requirements and
 - priority
 - for the project's duration”



We only had the illusion of control.
But little help to testers and analysts



Richard Smith

- “The (old) toolset generated lots of charts and stats
- that provided the illusion of risk control.
- But actually provided very little help to the analysts, developers and testers actually doing the work at the coal face.”



The proof is in the pudding;



Richard Smith

- “The proof is in the pudding;
- I have **used Evo**
 - *(albeit in disguise sometimes)*
 - on two large, high-risk projects in front-office investment banking businesses,
 - and several smaller tasks. “



Experience: if top level requirements are *separated* from design, the 'requirements' are **stable**!

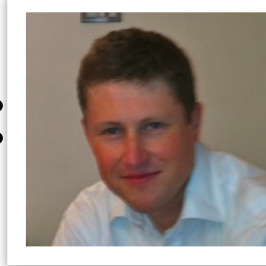


Richard Smith

- “On the largest critical project,
- the original ***business functions & performance objective*** requirements document,
- ***which included no design,***
- essentially remained ***unchanged***
- over the **14 months** the project took to deliver,....”



Dynamic (Agile, Evo) design testing: not unlike 'Lean Startup'



Richard Smith

- “... but **the detailed designs**
 - (of the GUI, business logic, performance characteristics)
- **changed many many times**,
 - guided by lessons learnt
 - and **feedback** gained by
 - delivering a succession of early deliveries
 - to real users”



“I attended a 3-day course with you and Kai whilst at Citigroup in 2006”, Richard Smith



It looks like the stakeholders liked the top level system qualities, on first try



Richard Smith

- “ In the end, the new system responsible for 10s of USD billions of notional risk,
- **successfully went live**
- **over one weekend**
- **for 800 users worldwide,**
- and **was seen as a big success**
- **by the sponsoring stakeholders.”**

“I attended a 3-day course with you and Kai whilst at Citigroup in 2006” , Richard Smith

Bank Training like Richard Used

THE LEARNING PROCESS

THEORY, PRACTICE, DISCUSS, DOCUMENTATIONS

1. Lectures (50%)

Basic Theory (Principles, Standards, Rules, Templates)
Case studies (as far as possible from DB and banking)
Examples of practice (as far as possible from DB and banking)

2. Questions and discussion

3. Participant exercise
(small groups 2 to 4), followed up by Instructors, and experienced DB assistants (if available)

4. Substantial digital documentation, a library of books, papers, cases



Requirements Course Outline <http://www.gilb.com/dl522>

Day 1 Quantify Requirements

1. Overview: Evo & Planuquage in relation to Agile

Day 2 Standards, Principles, Risks

1. Tips for **analyzing** project plans to find the 'real' value

Day 3 Design, Delivery, Culture Change

1. **estimating** the quantified impact of a **design** on



Requirements Workshop



WORKSHOP ADVANTAGES

a complete method for tackling all the critical and real stakeholder requirements for a project, at all levels of consideration for IT Projects.

BAR NONE

the most advanced and comprehensive workshop on requirements specification in the

Master how you communicate your organisation's 'real' requirements, and your stakeholders' most critical improvement requirements, in an unambiguous, clear, measurable, and testable way.

Project and System Level Requirements Specifications

Workshop Objectives:

This workshop will allow you to walk away with practical ability to improve your projects most critical requirements.

You will be able to identify, classify and specify critical project and stakeholder

Workshop Intended for:

People who write requirements (BAs), and their managers.
Product owners, project managers and their managers
Consultants, engineering/IT methods owners and teachers.

Workshop

Detailed Syllabus: Metrics for a bank

Day 1

Quantify Requirements

1. **Overview:** Evo & Planguage in relation to Agile Methods
2. practical **examples** of Planguage for requirements (case studies)
3. the various requirements **concepts** defined deeply and exemplified
4. requirements **templates** (to make standards practical) design constraint templates (a type of required design or architecture)
5. how to **quantify** any qualitative requirement (like intuitiveness or adaptability or security) – this is the key ability that most all other 'requirements' workshops do not teach!
6. **advanced** scale of measure specification methods (a 'scale' is more than units)

Day 2

Standards, Principles, Risks

1. Tips for **analyzing** project plans to find the 'real' value requirements.
2. **standards** for requirements (rules, processes, templates, glossary)
3. **principles** for requirements (help you to tackle new problems better)
4. **quality control** of requirements: measuring requirement conformance to standards (reviews, inspections, agile reviews)
5. how to give information that determines **priorities** of requirements (example Wish/Goal/Fail and Qualifiers)
6. how to include requirement information about **risks and uncertainties**

Day 3

Design, Delivery, Culture Change

1. **estimating** the quantified impact of a **design** on requirements
2. evolutionary project management and how it integrates with requirements. The Evo cycle and how it relates to Agile iteration.
3. **training** requirements writers: how to train colleagues and yourself
4. changing requirements **culture**: how to change your culture of requirements
5. expected **results** from requirements culture improvement: how to measure or know that things are working well
6. a **policy** for improved requirements: summary of main guidelines for value driven projects, and value requirements.



ONE PAGE PROJECT REQUIREMENTS QUANTIFIED

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%

Goal [Dec. 20xy] 100%



ONE PAGE PROJECT REQUIREMENTS QUANTIFIED

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 [2009, 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 [Batch-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 = E 1 - 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 %**

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!



Actual Example
deciding between
5 systems
(named a, b ,c, d, e)

Value Result Requirements			Next Level	Option a		Option d		Option e	
Status when	Tolerable when	Goal when		units	% of Goal	units	% of Goal	units	% of Goal
Timeliness			main effect on scale ± Variation Experience Level	100	100 %	100	100 %	100	100 %
0	-0,8333	100		10	10 %	10	10 %	10	10 %
2010	2014 - jan	2014 - jan		0,9	90 %	0,2	20 %	0,3	30 %
P/L Accuracy				-10	71 %	-10	71 %	-10	71 %
14	7	0		-1	7 %	-1	7 %	-1	7 %
2010	2014 - jan	2014 - jan		0,9	64 %	0,2	14 %	0,3	21 %
Risk and P/L Completeness				100	100 %	100	100 %	100	100 %
0	97,5	100		10	10 %	10	10 %	10	10 %
2010	2014 - jan	2014 - jan		0,8	80 %	0,2	20 %	0,3	30 %
Risk and P/L Understanding				100	100 %	100	100 %	100	100 %
0	70,833	100		20	20 %	20	20 %	20	20 %
2010	2014 - jan	2014 - jan		0,8	80 %	0,2	20 %	0,3	30 %
Access Security				-9	82 %	-9	82 %	-9	82 %
12	5	1		-0,4	4 %	-0,4	4 %	-0,4	4 %
0	2014 - jan	2014 - jan		0,9	74 %	0,9	74 %	0,9	74 %
Business-Capability-Time-To-Market				95	95 %	70	70 %	40	40 %
0	-1479,2	100		5	5 %	5	5 %	5	5 %
0	2014 - jan	2014 - jan		0,7	67 %	0,7	49 %	0,7	28 %
People Interchangeability				-19	40 %	-19	40 %	-19	40 %
50	4	2		-2	4 %	-2	4 %	-2	4 %
0	2014 - jan	2014 - jan		0,8	32 %	0,8	32 %	0,8	32 %
Annual Costs				23	58 %	24,6	62 %	24,6	62 %
0	10	40		10	25 %	10	25 %	10	25 %
2010	2014 - jan	2014 - jan		0,7	40 %	0,7	43 %	0,7	43 %
Market Risk Consistency				100	100 %	100	100 %	100	100 %
0	38,462	100		10	10 %	10	10 %	10	10 %
2010	2014 - jan	2014 - jan		0,9	90 %	0,2	20 %	0,3	30 %
Responsiveness				100	100 %	-40	-40 %	-40	-40 %
0	87,56	100		10	10 %	-20	-20 %	-35	-35 %
0	2014 - jan	2014 - jan		0,9	90 %	1,1	-44 %	1,1	-44 %
Capacity.Threshold				9	50 %	9	50 %	9	50 %
2	10	20		0,9	5 %	0,9	5 %	0,9	5 %
2010	2014 - Jan	2014 - Jan		0,9	45 %	0,9	45 %	0,9	45 %
Sum of Impacts on Value Results				% of Goals		% of Goals		% of Goals	
Sum Impact				1329 %		1168 %		1088 %	
Sum ± Variation				193 %		163 %		148 %	
Sum Conservative Impact				1071 %		473 %		564 %	
Development-Resources				units	% of Budget	units	% of Budget	units	% of Budget
Development \$			Impact Variation conservative Impact	10	100 %	7	70 %	15	150 %
0	25	10		5	50 %	5	50 %	5	50 %
0	2014 - jan	2014 - jan		0,5	150 %	0,5	105 %	0,5	225 %
Benefit to Cost Ratios				ratio		ratio		ratio	
Sum Benefit / Sum Resources				13,29		16,68		7,25	
(Sum Benefit - Sum ±) / (Sum Resources + Sum Res. ±)				7,57		8,37		4,70	
(Sum Benefit * Credibility) / (Sum Resources * Credibility)				7,14		4,50		2,51	
(Sum Benefit * Credibility - Sum±) / (Sum Res. * Credibility + f				4,39		2,00		1,51	

Value Result Requirements Status when	Tolerable when	Goal when	Next Level	Option a units	% of Goal	Option d units	% of Goal	Option e units	% of Goal
Timeliness			main effect on scale	100	100 %	100	100 %	100	100 %
0	-0,8333	100	± Variation	10	10 %	10	10 %	10	10 %
2010	2014 - jan	2014 - jan	Experience Level	0,9	90 %	0,2	20 %	0,3	30 %
P/L Accuracy				-10	71 %	-10	71 %	-10	71 %
14	7	0		-1	7 %	-1	7 %	-1	7 %
2010	2014 - jan	2014 - jan		0,9	64 %	0,2	14 %	0,3	21 %
Risk and P/L Completeness				100	100 %	100	100 %	100	100 %
0	97,5	100		10	10 %	10	10 %	10	10 %
2010	2014 - jan	2014 - jan							

Risk and P/L Understanding		
0	70,833	10
2010	2014 - jan	2014 - jan
Access Security		
12	5	
0	2014 - jan	2014 - jan
Business-Capability-Time-To-Market		
0	-1479,2	10
0	2014 - jan	2014 - jan
People Interchangeability		
50	4	
0	2014 - jan	2014 - jan
Annual Costs		
0	10	4
2010	2014 - jan	2014 - jan
Market Risk Consistency		
0	38,462	10
2010	2014 - jan	2014 - jan
Responsiveness		
0	87,56	10
0	2014 - jan	2014 - jan
Capacity.Threshold		
2	10	2
2010	2014 - Jan	2014 - Jan

Kai's Excel Tool (modelling architecture decisions)

1. Integration of Bank Values and Architecture Options

2. Evaluation, which one is 'best' ?

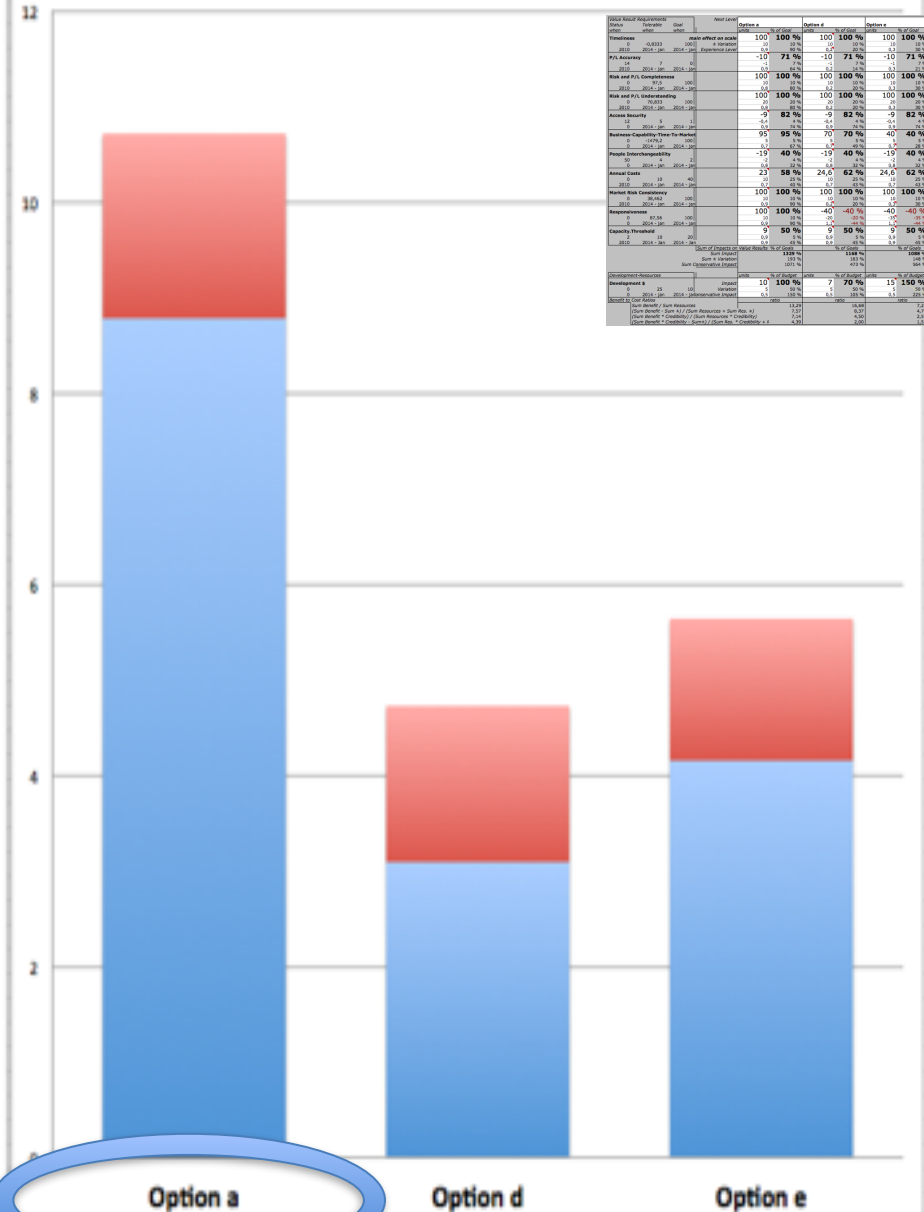
3. Best can be (anything you like!), but mainly

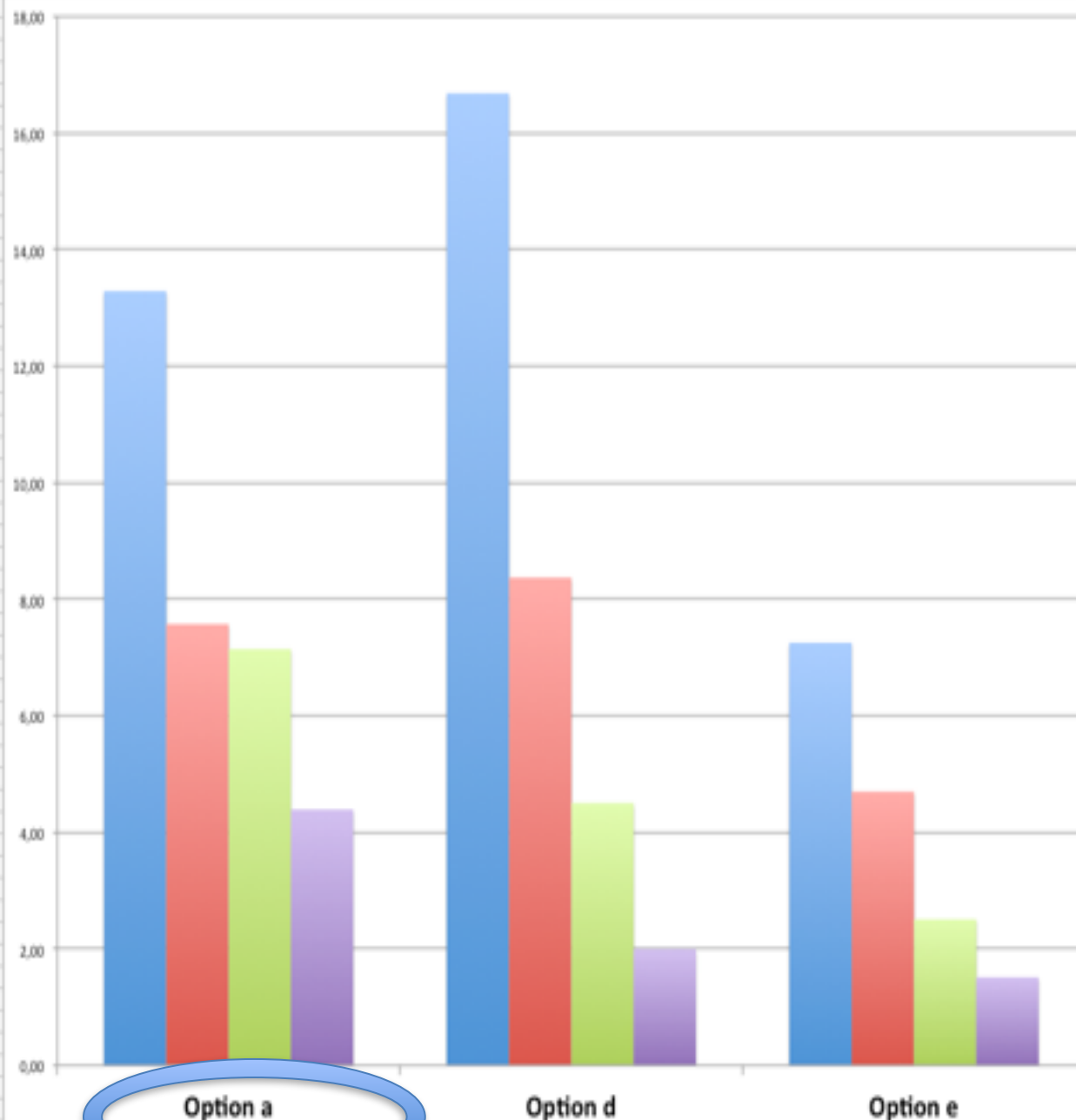
1. Best for delivering all values in general ($\sum V$), 'Effectiveness' or

2. (Better in long term) Best at delivering Bank Value for Resources used to do so (the 'efficiency' ($\sum V / \sum \text{€}$))

2010	2014 - Jan	2014 - Jan		0,9	45 %	0,9	45 %	0,9	45 %
			Sum of Impacts on Value Results	% of Goals		% of Goals		% of Goals	
			Sum Impact	1329 %		1168 %		1088 %	
			Sum ± Variation	193 %		163 %		148 %	
			Sum Conservative Impact	1071 %		473 %		564 %	
Development-Resources			units	% of Budget	units	% of Budget	units	% of Budget	
Development \$			10	100 %	7	70 %	15	150 %	
0	25	10	Variation	5	50 %	5	50 %	5	50 %
0	2014 - jan	2014 - jan	conservative Impact	0,5	150 %	0,5	105 %	0,5	225 %
Benefit to Cost Ratios			ratio		ratio		ratio		
Sum Benefit / Sum Resources			13,29		16,68		7,25		
(Sum Benefit - Sum ±) / (Sum Resources + Sum Res. ±)			7,57		8,37		4,70		
(Sum Benefit * Credibility) / (Sum Resources * Credibility)			7,14		4,50		2,51		
(Sum Benefit * Credibility - Sum±) / (Sum Res. * Credibility + f			4,39		2,00		1,51		

Sum Impacts adjusted for Experience (Confidence) Level





- Sum Benefit / Sum Resources
- $(\text{Sum Benefit} - \text{Sum } \pm) / (\text{Sum Resources} + \text{Sum Res. } \pm)$
- $(\text{Sum Benefit} * \text{Credibility}) / (\text{Sum Resources} * \text{Credibility})$
- $(\text{Sum Benefit} * \text{Credibility} - \text{Sum } \pm) / (\text{Sum Res.} * \text{Credibility} + \text{Res. } \pm)$



A City Bank Compliance Project: 'Acer'

A City Bank Compliance Project: 'Acer'



We have identified the following top level goals for 85 OurBank Europe systems:

Increase compliance with CISS:
25% compliance → 90% compliance

Reduce the time it takes to process a request for a new user account: 24 hrs → 4 hrs

Increase service availability: 10 hrs → 24 hrs

Reduce costs: 100% of current level → 60% of current level

The systems for which these goals have been identified serve over 30,000 users.

Security administration is currently provided by an ISAG, which is managed by John C .

These goals ought to be achieved by a deadline of 30-Jun-xx

Acer: Security Administration Compliance:

Security Administration Compliance:

Ambition: to become compliant and to remain continuously compliant with all current officially binding security administration requirements both from THE CORP and Regulatory Authorities.

Scope: Account Opening and Entitlement Reporting.

Scale: % compliant with THE CORP Information Security Standards (CISS) [THE CORP Information Security System or Process].

Note: CISS is an officially binding security administration requirement with which we must become compliant.

===== Benchmarks =====

Past [CISS = RSA and IBECS ISAG Compliance Matrix [Regional Security Administration and IBECS Independent Security Administration Group, October 2003] 25% <- JC, Nov-03]

Note: The RSA/IBECS Compliance Matrix originates from Otto Ch...

===== Targets =====

Wish [Deadline = March 2004, Systems = High Criticality Systems] 100%

Wish [Deadline = June 2004, Systems = {Medium & Low} Criticality Systems] 100%

Note: Wishes are stakeholder valued levels that we are not yet sure we can deliver in practice, just acknowledging the desire.

Goal [Deadline = March 2004, Systems = High Criticality Systems] 90%±5%

Goal [Deadline = June 2004, Systems = {Medium & Low} Criticality Systems] 90%±5%

Goal [Midline = February 2004] **50%±10%** "intermediary goal short of 100%"

Note: Goal levels are what we think we can really promise and focus on. These types of goals put Evolutionary result delivery steps.

Stretch [Deadline = March 2004, Systems = High Criticality Systems] 95%±5%

Stretch [Deadline = June 2004, Systems = {Medium & Low} Criticality Systems] 95%±5%

Note: Stretch levels are something that we might be able to achieve if we have sufficient resources, focus, and are not sure of that yet. We are NOT promising it now! So this is a way to hold the ideals up in case those t...

Quantified
Definition

Benchmarks = Systems Analysis

Values, unknown cost

Realistic Project
Targets Val/€

Values, if
enough
resources left

Security Administration Performance:

Ambition: To have a highly competitive service capability for security administration, entitlement reporting related work processes

Scope: Account Opening and Entitlement Reporting.

Scale: Time in elapsed hours for a defined [Person, default: Employee] of defined [Capability, default: Trained] to successfully respond to a [Client Request, default: Create New User ID]

Note: this strongly parameterized Scale, which is a basic structure for deriving Evolutionary steps of partial value delivery, is specified in the Goal statements below.

Meter: Daily Activity Report

===== **Benchmarks** =====

Past: [Client Request = Create New User ID] 24 hours

Client Request = {Create New User ID = 24 hours, User Access Request = 24 hours, Resource Request = 24 hours, Bulk Requests (EG Project related) = 2 weeks, Password Resets = 30 minutes}

===== **Targets** =====

Wish: [Person = Employee, Capability = Trained, Client Request = Create New User ID, Conditions = Normal Conditions] 2 hours

Goal: [Person = Employee, Capability = Trained, Client Request = Create New User ID, Conditions = Normal Conditions] 4 hours

Stretch: [Person = Employee, Capability = Trained, Client Request = Create New User ID, Conditions = Normal Conditions] 3 hours

Quantified
Definition

Benchmarks = Systems Analysis

Values, unknown costs

Realistic Project Targets

Values, if enough resources left

Acer: Security Administration Availability:

Security Administration Availability:

Ambition: To have a service capability for security administration and entitlement reporting that is continuously available to respond to client requests in real-time for 24 hours a day Monday to Friday for the next 5 years.

Scope: Account Opening and Entitlement Reporting.

Scale: Time in real time hours that a defined [Person, default: Employee] of defined [Client Request, default: Create New User ID] is available to successfully respond to a [Client Request, default: Create New User ID]

Quantified
Definition

===== **Benchmarks** =====

Past: [Person = IBECS ISAG, RSA Employee normal working hours:] Mon - Fri 08:00 - 18:00 GMT <- Nov-03
Client Request = {Create New User ID = 24 hours, U request = 24
hours, Bulk Requests (EG Project related) = 2 weeks

Benchmarks = Systems Analysis

===== **Targets** =====

Wish: [Person = Employee, Capability = Trained, Client Request = Create New User ID, Conditions = Normal Conditions] 24x5 hours

Goal: [Person = Employee, Capability = Trained, Client Request = Create New User ID, Conditions = Normal Conditions] 21x5 hours

Values, unknown costs

Stretch: [Person = Employee, Capability = Trained, Client Request = Create New User ID, Conditions = Normal Conditions] 22.5x5 hours

Realistic Project Targets Val/€

Note: the goal statement still allows a response that meets 24x5 availability requirements within a 4 hour window

Values, if enough resources left

Acer: Security Administration Cost:

Security Administration Cost:

Ambition (level): reduce current cost of compliance (including bc client effort) to a minimum.

Scope: Account Opening and Entitlement Reporting.

Scale: the relative % cost of 2003 levels of cost for defined [Persons] defined [Client Requests] under Normal Conditions.

Meter: US\$ cost for security administration services

===== Benchmarks =====

Past: [2003, Persons = {Employees & Clients}, Client Requests = All] 100% 'by definition'

===== Targets =====

Wish: [June 2004, Persons = Employees, Client Request = Create New User ID] 40%

Goal: [June 2004, Persons = Employees, Client Request = Create New User ID] 60%

Stretch: [June 2004, Persons = Employees, Client Request = Create New User ID] 50%

Quantified
Definition

Benchmarks = Systems Analysis

Values, unknown costs

Realistic Project Targets Val/€

Values, if enough resources left

Acer: VERY TOP LEVEL PROJECT STRATEGIES

Note: *These very top level project strategies specify how we are going to achieve the top level project goals.*

Identify Binding Compliance Requirements Strategy:

Gist: Identify all officially binding security administration requirements with which we must become compliant both from THE CORP and Regulatory Authorities.

System Control Strategy:

Gist: a formal system or process we can use to decide what characterizes a [system; default = application] has with regard to our compliance, performance, availability and cost goals

Note: *an inspection process, for instance*

Define and implement inspection for security administration-related business requirements specifications

Define and implement inspection for [systems; default = applications] which already exist in CitiTech environments

Note: *systems include applications, databases, data service and machines. Project ACER ought to be extensible.*

How much do these strategies cost?

System Implementation Strategy:

Gist: a formal system or process we can use to actually change a [system; default = application] so that it meets our compliance, performance, availability and cost goals

All systems ought to feed EERS

Publish best practices for developing security administration requirement specifications

Publish a security administration requirement specification template

Application technology managers are service providers in the formal change process, that

How much impact on our 4 Goals
do these strategies have?

Find Services That Meet Our Goals Strategy:

Gist: a formal system or process we can use to evaluate security administration services offered by internal and external services providers so that we can meet our defined goals

Note: *this strategy avoids pre-supposition that one solution is the only option (EG all applications must migrate to RSA and that RSA is the only security administration services offering)*

Use The Lowest Cost Provider Strategy:

Gist: use the services provider that meets all signed-off project goals for the lowest \$US cost.

Note: *if all project goals can be met by more than one services provider, the provider offering the lowest \$US cost for meeting the goals and no more than the goals ought to be used*

Acer Project: Impact Estimation Table

Objectives

Strategies	Identify Binding Compliance Requirements Strategy	System Control Strategy	System Implementation	Find Services That Meet Our Strategy	Use The Lowest Cost Provider Strategy
Goals	Strategies				
Security Administration Compliance 25% → 90%	100%	100%	100%	50%	0%
Security Administration Performance 24 hrs → 4 hrs	75%	100%	100%	100%	0%
Security Administration Availability 10 hrs → 24 hrs	0%	Impacts			0%
Security Administration Cost 100% → 60%	50%	100%	100%	100%	100%
Total Percentage Impact	225%	300%	300%	350%	100%
Evidence	ISAG Gap Analysis Oct-03	John Collins	John Collins	John Collins	John Collins
Cost to Implement Strategy	15 man days (US\$ 5,550)	15 man days (US\$ 5,550)	15 man days (US\$ 5,550)	15 man days (US\$ 5,550)	1man day (US\$ 1,110)
Credibility	0.9	0.6	0.6	0.75	0.9
Cost Adjusted Percentage Impact	202.5%	180%	180%	262.5%	90%

Finance Organization Case

- This case, 2007, is about defining an improved financial IT organization
- For a large multinational bank in London

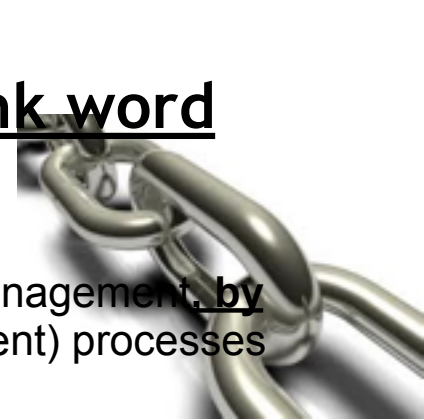


The ‘Official’ Forgotten CIO ‘Objectives’: (\$100 Million was spent for this in 1 Year)

- **“Achieve ‘One Bank’ vision through globally integrated IT Portfolio Management, by implementation of a single toolset supporting existing (and consistent) processes across our IT**
- **Perform accurate measurement and tracking of project and non-project related IT expenses.**
- **Track and allocate human resources based on skills, level of work commitment and timing.**
- **Enable business alignment through the ability to manage critical initiatives on a portfolio basis and support faster time to market providing the potential for increase in revenues.**
- **Enable the business and SMT to make sound management decisions around the portfolio, and optimize the IT spend so as to effectively prioritize IT spend, and maximize business value.**
- **Replace resource intensive and disparate Portfolio Management tool, with industry “best in breed” capabilities.**
- **Improvement in the time it takes IT to respond to business changes.**
- **Reduction in costs through eliminating redundant projects.**
- **Better planning and tracking capabilities, so as to reduce project cost and time overruns.”**



The 'Official' Forgotten CIO Objectives: Link word analysis



- Achieve 'One Bank' vision through globally integrated IT Portfolio Management, by implementation of a single toolset supporting existing (and consistent) processes across our IT
- Perform accurate measurement and tracking of project and non-project related IT expenses.
- Track and allocate human resources based on skills, level of work commitment and timing.
- Enable business alignment through the ability to manage critical initiatives on a portfolio basis and support faster time to market providing the potential for increase in revenues.
- Enable the business and SMT to make sound management decisions around the portfolio, and optimize the IT spend so as to effectively prioritize IT spend, and maximize business value.
- Replace resource intensive and disparate Portfolio Management tool, with industry "best in breed" capabilities.
- Improvement in the time it takes IT to respond to business changes.
- Reduction in costs through eliminating redundant projects.
- Better planning and tracking capabilities, so as to reduce project cost and time overruns.

The 'Official' Forgotten CIO Objectives:

Link word analysis, clear separation of *means* and *ends*

- Achieve 'One Bank' vision
 - **through** globally integrated IT Portfolio Management,
 - **by implementation of** a single toolset
 - **supporting** existing (and consistent) processes across our IT
- Perform accurate measurement and tracking of project and non-project related IT expenses.
- Track and allocate human resources based on skills, level of work commitment and timing.
- Enable business alignment
 - **through the ability to** manage critical initiatives on a portfolio basis
 - **and support** faster time to market
 - **providing the potential for** increase in revenues.
- Enable the business and SMT to make sound management decisions around the portfolio, and optimize the IT spend
 - **so as to** effectively prioritize IT spend, and maximize business value.
- Replace resource intensive and disparate Portfolio Management tool, with industry “best in breed” capabilities.
- Improvement in the time it takes IT
 - **to** respond to business changes.
- Reduction in costs
 - **through** eliminating redundant projects.
- Better planning and tracking capabilities,
 - **so as to** reduce project cost and time overruns.



Reminder of COOs Initial 4 main objectives for' Single IT1,
text as of 22 Sept meeting.
Fewer and simpler than the original.

- 1. “Make sure it is for key business goals.”
 <- COO,
- 2. “avoid duplication” <- COO,
- 3. “not re-inventing the wheel” <- COO
- 4. “I am interested in the MIS. I’d like some
 good metrics about what’s coming off the 1
 billion production line,
- (are we delivering on time, under budget,
 are customers satisfied, and are we
 delivering the value).”<- COO My View

Business Result Alignment: BRA: Simplified summary versions

- **Ambition:** *Maximize delivery speed, and satisfaction level, of the Change the Bank Book of Work to achieve 'key business goals'*
- **Scale:** % of Planned Value actually Delivered to the Business by defined [Time].
- **Past** [Corp., Time = Deadline, 2007]: X% (guess
- $X < 30\%\text{??})$ <- tg
- **Goal** [Corp., Time = Deadline, 2009]: < 50%, maybe much more?
- **Issue:** can The Tool be exploited to track Value?
- ... *more detail drafted, this is a summary*

Avoid Duplication:

- **Ambition:** eliminate corporate efforts that duplicate other corporate efforts.
- **Scale:** % of project investment that is Duplicated
- **Past [2007]:** > 30%?? Wild guess
- **Goal [2010]** < 5% hope
- ... *more detail drafted, this is a summary*

Exploiting Existing Tools:

- Ambition: *make use of existing tools, avoid reinventing the wheel.*
- Scale: % by Total Investment Value that Arguably could be avoided by Profitably making use of Existing Tools
- Past: 30%±30% ?? wild initial guess to start discussion tg
- Goal [2012?, Corp. Wide]: ~ 100%
- ... *more detail drafted, this is a summary*

Results MIS:

- **Ambition:** deliver high-significance real-time metrics, on critical aspects, of project results and resources.
- **Scale:** % of defined [Key Project Data] available to management in real time.
- **Key Project Data:** default: {% of Goal Delivered to date, Stakeholder Satisfaction level, Value for Money}
- **Past [Corp., 2007]: 0%**
- **Goal [Corp., 2010]: > 90%**

Ok, those were the *simplifications*

- Here is an example of the detail we really specified that day

SPEC TEMPLATE: for 'Planguage' Specification

<Tag>:

Ambition:

----- *Measurement* -----

Scale:

Past:

Goal:

Meter:

----- *Relationships* -----

Type:

Supports:

Supported By:

----- *Objective Admin* -----

Version:

Owner:

Status:

Scope:

----- *Definitions* -----



Avoid Duplication: in full detail

Ambition: *eliminate corporate efforts that duplicate other corporate efforts.*

----- *Measurement* -----

Scale: % of project investment that is Duplicated

Past [2007]: > 30%?? Wild guess

Goal [2010] < 5% hope

Meter: <manual estimate of all projects.>

----- *Relationships* -----

Type: IT COO Level Project Objective

Supports:

1. Portfolio Management Strategic Initiative {Management Framework Quantified.

2. Business problem statement (PID 2.00. 9 areas. Not Quantified.

3. High Level Business Requirements: OMSC1 (One IT), OMSC2 (Top Allocation). All quantified!

Supported By: <strategy not identified yet>. <-tg

----- *Objective Admin* -----

Version: 23 Sept 2007

Sponsor: CIO

Owner: -, IT COO

Status: draft tg for COO? -> TS

Scope: : the 1/3 of IT spend for New Demand <- COO

----- *Definitions* -----

Duplicated:

Work that could to a substantial degree (30% or more) be avoided or effort or investment - is 'duplicated'.

BASIC REQUIREMENT QUANTIFICATION:

- testing
- quality control
- architecture analysis (IE Tables)

RELATIONSHIPS:

- change control
- quality control

ADMINISTRATION DATA:

- for change control
- for quality status level and testing

DEFINITIONS:

- necessary for measurement
- necessary for testing

Case Study: City Investment Bank

- **Quantifying it all**
 - **in a single week**
 - **project start process**



The Evo Planning Week at The Bank

- **Monday**
 - Define top Ten critical objectives, quantitatively
 - Agree that these are the main points of the effort/project
- **Tuesday**
 - Define roughly the top ten most powerful strategies,
 - for enabling us to reach our Goals on Time
- **Wednesday**
 - Make an Impact Estimation Table for Objectives/Strategies
 - Sanity Test: do we seem to have enough powerful strategies to get to our Goals, with a reasonable safety margin?
- **Thursday**
 - Divide into rough delivery steps (annual, quarterly)
 - Derive a delivery step for 'Next Week'
- **Friday**
 - Present these plans to approval manager (Director of 1,000 Devs)
 - get approval to deliver next week



US Army Example: PERSINSCOM

Requirements
and Architecture

Requirements
Design
Quality Control
(Construction/Acquisition)
Testing
Integration
Delivery -> Stakeholder
Measure & Study Results

<http://www.gilb.com/dl521>

Detailed Evo week project initiation as of 2012

Example of Estimating the Value of a Technical IT System Improvement (20xx)

Example of a later improvement in specification by the director (BW)

“Banks understand the \$\$ bottom line, effects”

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.

ONE PAGE PROJECT REQUIREMENTS QUANTIFIED

On the first day of
‘Project Startup’

Real Bank Project : Project Progress Testability

Quantification of 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 [2009, 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 [Batch-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 = E 1 - 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 %**

Detailed Example

- **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] $<95 \pm 2\%$**
Goal [April 20xz, Trades=eTrades] $98.5 \pm 0.5 \%$

Focus



Goals
Table

IE

Quantified Objective in Planguage Tool: notice Stakeholders

Timeliness

Version: 1.12.

Type: Top Level Business Goal

Quality

Owner: Sam, Andy

Stakeholders: **Primary:** Front Office, Middle Office; **Secondary:** Senior Management, Product Control, Financial Control, Internal Audit

Ambition: 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]

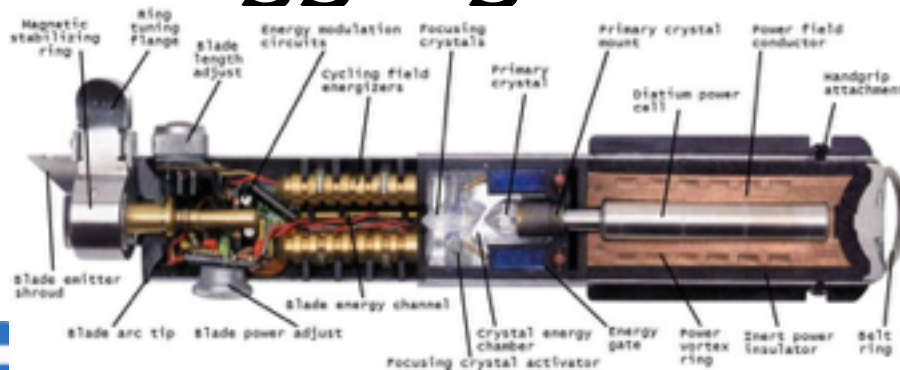
	Day & Time	Conditions (Place, Defined, Stakeholder, etc.)	number	
Past	[at			±
Status	[at	Sum	0	±
Tolerable	[by 2014 - j.	Sum	3	±
Goal	[by 2014 - j.	Sum	100	±
Past	[	SLA=SOD risk by 7.30am, Scope=Exxxx Exxxxx, System=OXXXX	6	±
Status	[	SLA=SOD risk by 7.30am, Scope=Exxxx Exxxxx, System=OXXXX	6	±
Tolerable	[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	

Don't we need more detail to estimate costs and other attributes of a design?

Simple design description

- Design Spec:

– Risk and P/ L aggregation

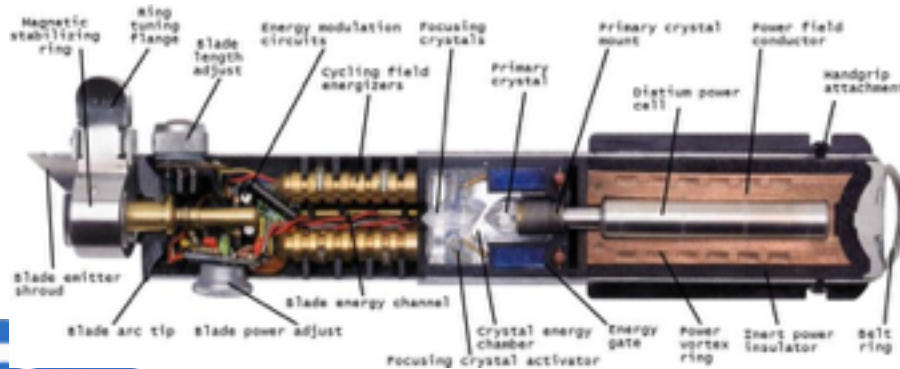


Ask the following questions about such brief design descriptions

- 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?

The architecture needs

- More detail
- If we want to understand costs, impacts priorities and risks early
- Rather than,
 - too late



Same Bank, Later Project: Strategy

- An **example of defining a major strategy**
- On a **single page**
 - *Do you really want to make do with the usual ‘1 liner’* (Strategy or architecture specification)?
- This was done In **one** hour, it is NOT time consuming
- We get the detail **needed to manage**
 - Quantification, estimation of costs,
 - and effects
 - Risks
 - Priotritization



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 character
Barclays(for overview)

Source: <Source references for the information in this specific
Various, can be done later BB

Gist: risk and P/L aggregation service, which also provides wo
outbound and inbound feed support. Currently used by Rates I
and Middle Office, USA & UK.

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

D1: ETL Layer. Rules based highly configurable imple
which allows the data to be onboarded more quickly,
very quickly. With minimal development required. ->
Market, Business Scalability

D2: high performance risk and P/L aggregation proce
Timeliness, P/L Explanation, Risk & P/L Understanding
Scalability, Responsiveness.

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

D4: a flexible configurable workflow tool, which can
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.

development costs will not be different. All will base on a
n mm and 3 years. The o+

slightly, like \$n mm for hardware. MA AH 3 dec

ntinue to own Orbit. TSG DEC 2

, 3 years, will constrained to a scope we can in fact deliver,
even additional budget. If not "I would have a problem" <-

xpanding Orbit will not be prohibitive. <- BB 2 dec

le the assumption that we can integrate Orbit with Px+ in a
en in the short term <- BB

y dependencies for this design idea>.

s Px+ in time. ? tsg 2.12

tags of any factors, which could threaten your estimated

red. Mitigation: continue to use Pxx <- tsg 2.12

l integration of Px+ is not as easy as thought & we must

scalability and cost of coherence will not allow us to meet

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
Dec BB 2 dec



Spec Headers

Detailed Description and -> Impacted Objectives

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 (PUBLIC EXAMPLE EDIT)

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 Extra Business, 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

D4: a flexible configuration new workflow processes Effectiveness, Business

D5: a report definition contained with Orbit, with minimal regression Explanation, Risk & P/L Business Scalability.

D6: Orbit GUI. Utilizes Dxx Express Grid Contr Capability. -> Responsi Risk & P/L Understand

D7: downstream feeds which is used to gener Capability Time to Mar

The Detailed description is useful,

- to understand costs
- to understand impacts on your objectives (see ' ->')
- to permit separate implementation and value delivery, incrementally
- as basis for test planning

Design Spec Enlarged 2 of 2

==== Priority & Risk Management

=====

Assumptions: <Any assumptions that have been made>.

A1: FCCP is assumed to not currently exist and is Requirements Spec. <- discussions AH MA JH EC

Consequence: FCX impact estimation

A2: **Costs**, the development different. All will base on and 3 years. The ops cost mm for hardware. MA AH

A3: Boss X will continue to

A4: the schedule, 3 years we can in fact deliver, O budget. If not "I would h

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

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

Dependencies: <State at

D1: FCxx replaces PX+ in time. tsg 2.12

ASSUMPTIONS:

- broadcasts critical factors for present and future re-examination
- helps risk analysis
- are an integral part of the design specification

DEPENDENCIES:

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

R1. FCxx is delayed tsg 2.12

R2: the technical thought & we must

R3: the and or scalability not allow us to move

R4: **scalability** of year especially <-

R5: re Cross Desk on technical design Risk no solution a

Risks specification:

- shares group risk knowhow
- permits redesign to mitigate the risk
- allows realistic estimates of cost and impacts

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

I1: Do we need to put the objectives (Owners is a huge differentiator

I2: what are the time now BB

I3: what will the success what we are actually b

I4: for the business other still a lack of clarity as and how they might dif BB

Issues:

- when answered can turn into a risk
- shares group knowledge
- makes sure we don't forget to analyze later

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

Note Problems Immediately

- Charles Darwin made it a rule to *write down immediately any observation* or argument that *seemed to run counter* to his theories.
- He had noticed that we *humans tend to forget inconvenient facts*, and if *special notice is not taken of them*, they simply *fade out of awareness*. Therefore, urged Darwin: “**Cherish Your Exceptions.**”
- Source: John Gall, The Systems Bible, XX



SOLUTION RESPONSIBILITY:

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

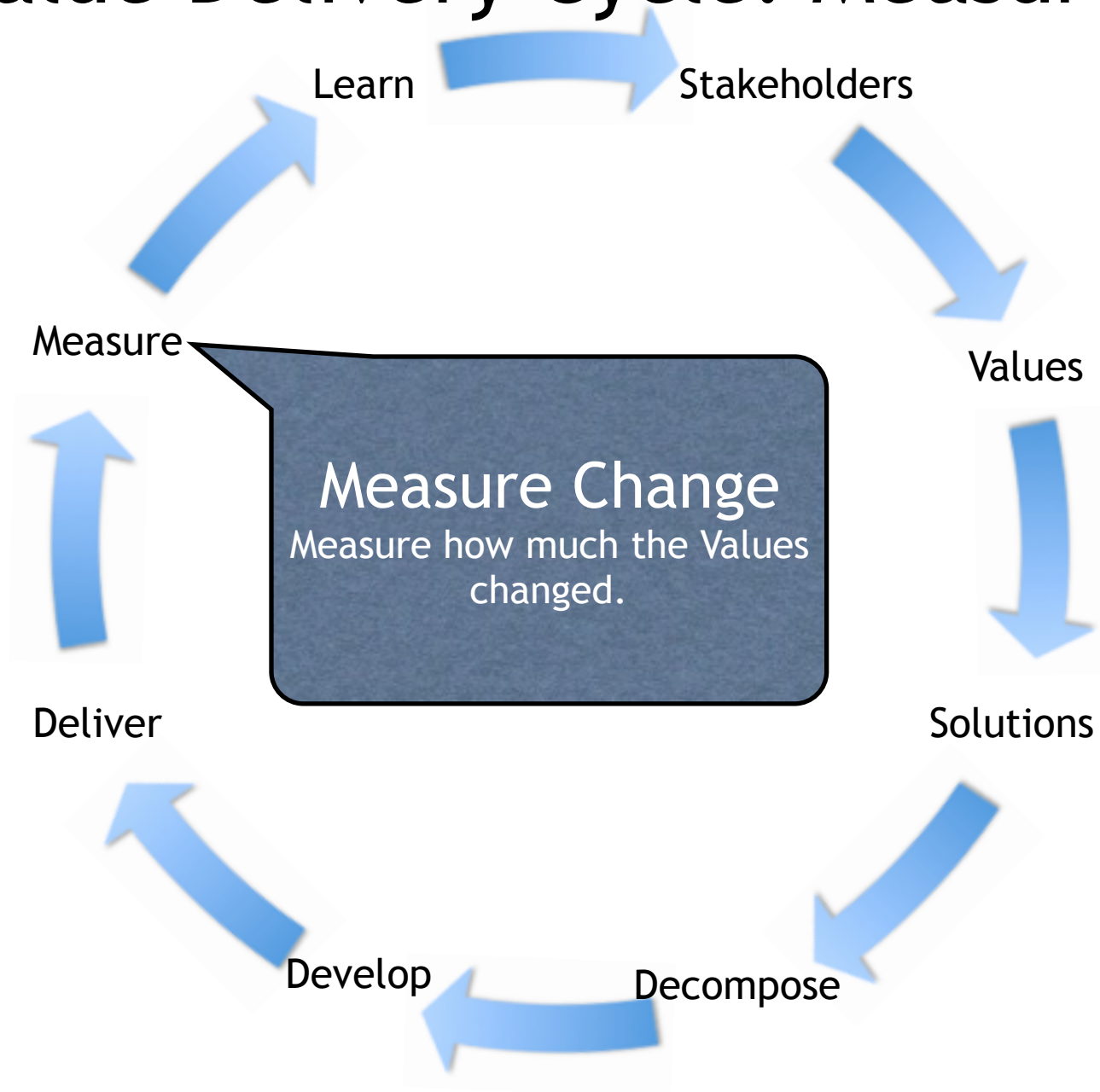
NOT 🙄

- 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
- **Real (Bad) Example:** “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

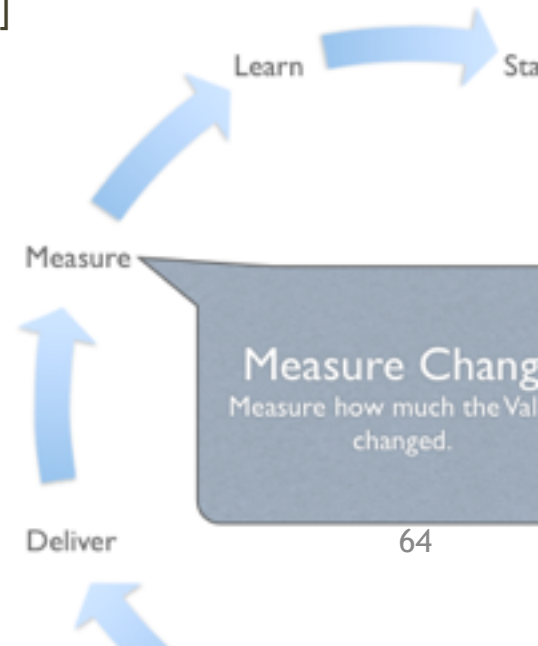
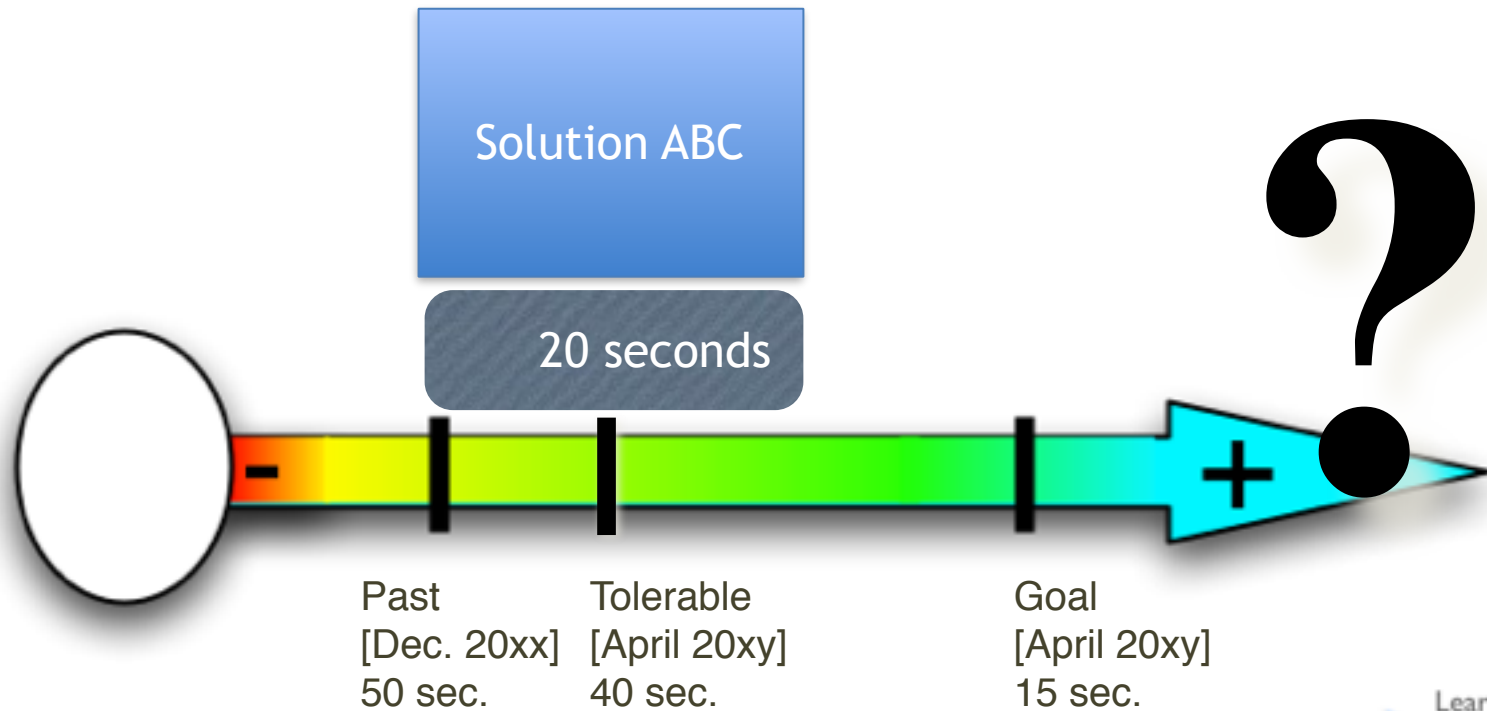
YES ! 😊

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

Value Delivery Cycle: Measure



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



Improvement

Impact Estimation Tables

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

11 June 2014

© Gilb.com

Measuring the quality of

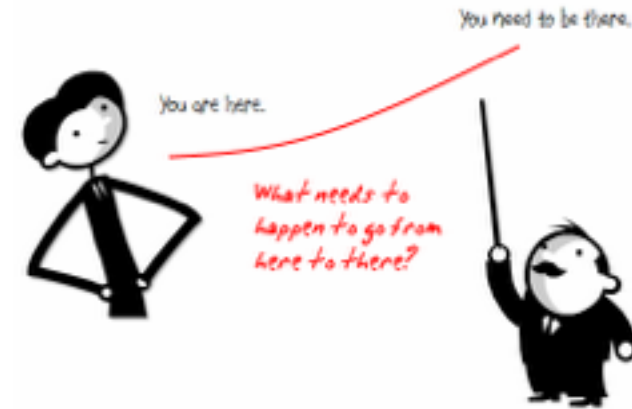
- any Bank IT Project Specification
 - Especially critical top level requirements and architecture for big projects
- Using
- Agile Specification Quality Control
- Spec QC

Real Case of Agile SQC from London Bank, Sept 3, 2009

- How good are *you* at finding critical defects in requirements?

WHY are we doing this?

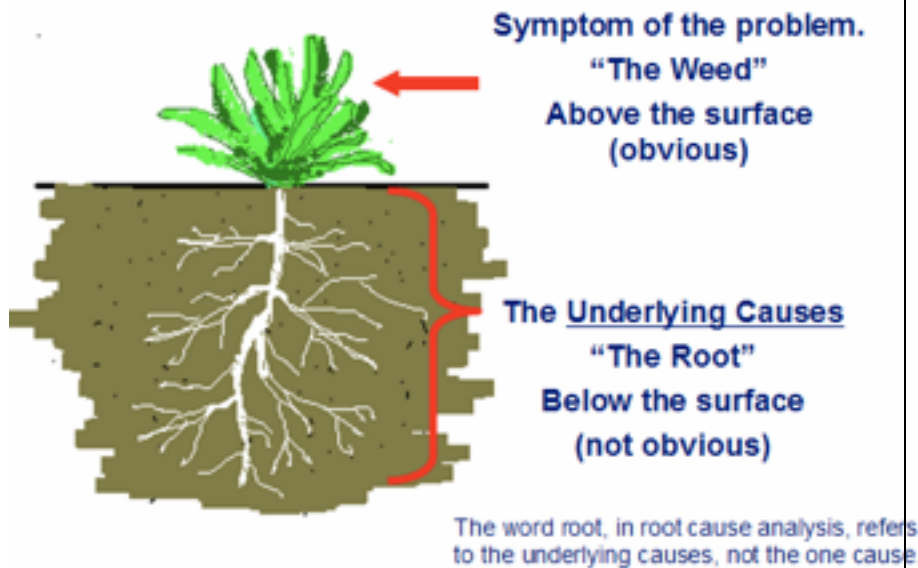
Part of Platform Rationalisation Initiative, with below Main Objectives.



- Rationalize into a smaller number of core processing platforms. This cuts technology spend on duplicate platforms, and creates the opportunity for operational saves. Expected 60%-80% reduction in processing cost to Fixed Income Business levies.
- International Securities on one platform, Fixed Income and Equities (Institutional and PB).
- Global Processing consistency with single Operations In-Tray and associated workflow.
- Consistent financial processing on one Accounting engine, feeding a single sub-ledger across products.
- First step towards evolution of “Big Ideas” for Securities.
- Improved development environment, leading to increased capacity to enhance functionality in future.
- Removes duplicative spend on two back office platforms in support of mandatory message changes, etc.

Rules are needed

- To define *specification* defects



- **Main Objectives Defects** (*root causes*) lead to *potential defects in the next stages*
 - Architecture
 - Design
 - Testing
 - Construction
- Any of which can result in **FAULTS** in the final system
- Faults can result in breakdown of the real product.

QC Rules for Top Level Objectives

- **CLEAR:** Every word and phrase should be clear enough to allow objective test of a delivery. (we need to know exactly what is required and expected)
- **UNAMBIGUOUS:** Every word and phrase should be unambiguous to all potential intended readers. (no different than intended interpretations should be possible)
- **QUANTIFIED QUALITY:** all qualities (good things we want to improve) shall be expressed quantitatively.
- After we started the exercise I regretted not adding the usual rule:
- **4. NO DESIGN:** objectives shall not be expressed in terms of a design or architecture
 - (a ‘means’ to reach the ‘real’ objective), when it is possible and is our real intent, to express the improvements in terms of quality, performance, and cost that are expected, instead.



Potential consequence
of major defects
in architecture specs

COUNT MAJOR 'DEFECTS' (RULES VIOLATIONS)

Rules Reminder:

1. Clear,
2. Unambiguous,
3. Quantified Qualities,
4. No Design/Architecture



- “Rationalize into a smaller number of core processing platforms. This cuts technology spend on duplicate platforms, and creates the opportunity for operational saves. Expected 60%-80% reduction in processing cost to Fixed Income Business lines.
- International Securities on one platform, Fixed Income and Equities (Institutional and PB).
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LINK WORDS: OBJECTIVE:ARCHITECTURE

RULE 4. No Design/Architecture



- Rationalize into a smaller number of core processing platforms. *This cuts technology spend* on duplicate platforms, and *creates the opportunity* for operational saves. Expected 60%-80% reduction in processing cost to Fixed Income Business lines.
- International Securities on one platform, Fixed Income and Equities (Institutional and PB).
- Global Processing consistency with single Operations In-Tray and associated workflow.
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- *Improved development environment*, leading to increased capacity to enhance functionality in future.
- Removes duplicative spend on two back office platforms in support of mandatory message changes, etc.

Agile Spec QC Results



- **Reported** major defects =
- Last week: 15, 17, 21
- **Today** =18, 15, 15, 13 others less

- Estimated appx. Total defects found by a small team (2-4 people) = 36 ± 6
 - 2x highest found.
- Estimated appx. Total Majors in the 110 words = 100 ± 10
 - (3x group total. 30% effectiveness of team)
- Estimated approximate total defects in normalized page (300 words) = 280 ± 20
 - (Majors in 110 words x 3)

Advanced Questions



- **High Quality Level?**
“Maximum Majors for Exit from process” = **1.0 majors** remaining max.
- If all *found* majors **removed**, how many majors *remaining* per Page? =
- **Predicted Bugs** resulting?
 - if released now
 - (for each such page in requirements),
- **Penalty** for Majors at this level
 - (Main Objectives) = **PROJECT FAILURE**



How can we improve such bad specification? (in 'Planguage') for "Improved development environment"

Development Capacity:

Version: 3 Sept 2009 16:26

Type: Main <Complex/Elementary> Objective for a project.

Ambition Level: radically increase the capacity for developers to do defined tasks. <- Tsg

Scale: the Calendar Time for defined [Developers] to Successfully carry out defined [Tasks].

Owner: Tim Fxxx

Calendar Time: defined as: full working days within the start to delivery time frame.

Past [2009, {Bxx, Lxx, Gxx}, If QA Approved Processes used, Developer = Architect, Task =
Draft Architecture] **15 days ± 4 ??** <- Rob

Goal[2011, { Bxx, Lxx, Gxx }, If QA Approved Processes used, Developer = Architect, Task =
Draft Architecture] **1.5 days ± 0.4 ??** <- Rob

Justification: Really good architects are very scarce so we need to optimize their use.

Risks: we use effort that should be directed to really high volume or even more critical areas (like Main Objective).

Participant Feedback

- Management Conclusion:
 - **“The defect density is completely unacceptable in the ‘Main Objectives’ section”**
 - They wondered how to improve it
 - (see example previous slide)
 - They emailed me afterward:
 - *“Thanks for your time today Tom, very useful talking to you and perfect timing for the stage we’re at in our reengineering program. There are some concepts I definitely want to take forward and will spend some time over the next few days discussing this with Pxx and Pxx , but may then get some more of your time to think through how we take things forward.*
 -
 - *Once again, thanks for your time, Kxx “*



The 1-page 'Spec QC' process

- **Developed by Kai and Tom for Citi**
- **Who wanted a 'simple process'**
- **Because 'the complex processes we have, don't work very well' (VC, CIO Europe)**



- P1: Identify Checkers:** Two people, maybe more, should be identified to carry out the checking.
- P2: Select Rules:** The group identifies about three rules to use for checking the specification. (My favorites are clarity ('clear enough to test'), unambiguous ('to the intended readership') and completeness ('compared to sources'). For requirements, I also use 'no optional design'.)
- P3: Choose Sample(s):** The group then selects sample(s) of about one 'logical' page in length (300 non-commentary words). Choosing such a page at random can add credibility – so long as it is representative of the content that is subject to quality control. The group should decide whether all the checkers should use the same sample, or whether different samples are more appropriate.
- P4: Instruct Checkers:** The SQC team leader briefly instructs the checkers about the rules, the checking time, and how to document any defects, and then determine if they are major defects (majors).
- P5: Check Sample:** The checkers use between 10 and 30 minutes to check their sample against the selected rules. Each checker should 'mark up' their copy of the document as they check (underlining issues, and classifying them as 'major' or not). At the end of checking, each checker should count the number of 'possible majors' (spec defects, rule violations) they have found in their page.
- P6: Report Results:** The checkers each report to the group their number of 'possible majors.' Each checker determines their number of majors, and reports it.
- P7: Analyze Results:** The SQC team leader extrapolates from the findings the number of majors in a single page (about 6 times** the most majors found by a single person, or alternatively 3 times the unique majors found by a 2 to 4 person team). This gives the major-defect density estimate. If using more than one sample, you should average the densities found by the group in different pages. The SQC team leader then multiplies the 'average major defects per page density' by the 'total number of pages' to get the 'total number of major defects in the specification' (for dramatic effect!).
- P8: Decide Action:** If the number of majors per page found is a large one (ten majors or more), then there is little point in the group doing anything, except determining how they are going to get someone to write the specification 'properly', meaning to acceptable exit level. There is no economic point in looking at the other pages to find 'all the defects', or correcting the majors already found. There are simply too many majors not found.
- P9: Suggest Cause:** The team then chooses any major defect and thinks for a minute why it happened. Then the team agrees a short sentence, or better still a few words, to capture their verdict.

- P1: Identify Checkers:** Two people, maybe more, should be identified to carry out the checking.
- P2: Select Rules:** The group identifies about three rules to use for checking the specification. (My favorites are clarity ('clear enough to test'), unambiguous ('to the intended readership') and completeness ('complete').)
- P3: Choose Sample:** The group chooses a sample of non-conformances from the specification, using a random sampling method to ensure that the sample is representative of the whole specification. (The group should choose all the defects, whether they are major or minor.)
- P4: Instructions:** The group develops instructions for the checking time, and how to document any defects, and then determine if they are major defects (majors).
- P5: Check Sample:** The checkers use between 10 and 30 minutes to check their sample against the selected rules. Each checker should 'mark up' their copy of the document as they check (underlining issues, and classifying them as 'major' or not). At the end of checking, each checker should count the number of 'possible majors' (spec defects, rule violations) they have found in their page.
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- P7: Analyze Results:** The SQC team leader extrapolates from the findings the number of majors in a single page. (The team leader should be able to do this by a unique method, which gives more accurate results than SQC.)
- P8: Suggest Cause:** The team then chooses any major defect and thinks for a minute why it happened. Then the team agrees a short sentence, or better still a few words, to capture their verdict.
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At least it is
on one page!

Defect Rates
in 2003 Citigroup, London, Gilb Client
Using Spec QC/Extreme Inspection + Planguage Requirements
(same courses Richard Smith went on)

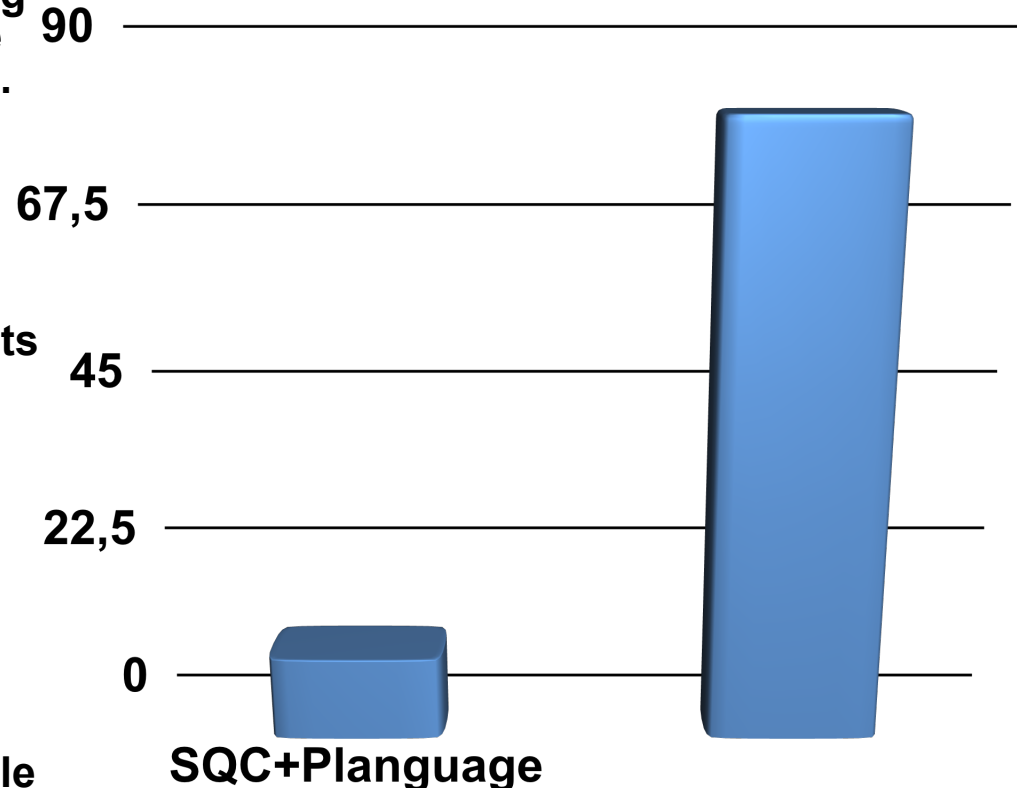
Across 18 DV (DeVelopment) Projects using the new requirements method, the average major defect rate on first inspection is 11.2.

4 of the 18 DV projects were re-inspected after failing to meet the Exit Criteria of 10 major defects per page.

A sample of 6 DV projects with requirements in the 'old' format were tested against the rules set of:

- **The requirement is uniquely identifiable**
- **All stakeholders are identified.**
- **The content of the requirement is 'clear and unambiguous'**
- **A practical test can be applied to validate it's delivery.**

The average major defect rate in this sample was 80.4.



SQC Form: Filled Out Example

The point here is that **'SQC collects data and uses it intelligently'**

Date Started: May 29 2003

Leader: Tom

Author: Tino

Other Checkers: Artur

Specification Reference: Test Plan V 2.0

Total Physical pages: 10

Spec Sample Reference: page 3

Rules Checked: Generic Rules, Test Plan Rules

Sample Size: ~300 (Non commentary words)

Checking Time Planned: 30 minutes Actual: 25 minutes

Checking Rate Planned: 2 pages/hour Actual:

Defects Identified:

Majors: 6, 8, 3

Minors: 10, 15, 30

Estimated Unique Majors Found by Team: about 16

Estimated Average Majors/Logical Page: $\sim 16 \times 3 = 48$ (Logical Page = 300 Non Commentary Words)

Estimated Total Majors in Specification: $48 \times 10 = 480$

Majors in Relation to Exit level: 48/1 (47 too many)

Recommendation: no exit, redo and resubmit

Causes (of defect level): author not familiar with rules

Actions suggested to mitigate Causes: author studies rules, all authors given training in rules

Responsible for Action: project manager

Completion Date/Time: May 29 2003 18:08



Conclusion SQC

- **1. you can measure the quality of any spec**
- **2. the ability to measure quality**
 - **can be used to**
 - **motivate quality improvement**
 - **by at least 10x**
 - **in short term (2 to 6 months)**



Evo as a Framework for Agile at Major City Multinational Bank 2012

- The Evo Standard for A Bank, as Agile Framework
- http://www.gilb.com/tiki-download_file.php?fileId=487
- You may adopt it freely, with credit.
 - And modify to taste
- See also (includes textbooks free)
- <http://www.gilb.com/Project-Management>

The Evo Framework: Main Process

1. Gather from all the key stakeholders the top few (5 to 20) most critical goals that the project needs to deliver. Give each goal a reference name (a tag).
2. For each goal, define a scale of measure and a 'final' goal level.
For example: *Reliable: Scale: Mean Time Before Failure, Goal: 1 month.*
3. Define approximately 4 budgets for your most limited resources (for example, time, people, money, and equipment).
4. Write up these plans for the goals and budgets
(*Try to ensure this is kept to only one page*).
5. Negotiate with the key stakeholders to formally agree the goals and budgets.
6. Plan to deliver some benefit (that is, progress towards the goals) in *weekly* (or shorter) increments (Evo steps).
7. Implement the project in Evo steps.
Report to project sponsors after each Evo step (weekly, or shorter) with your best available estimates or measures, for each performance goal and each resource budget.
On a single page, summarize the *progress to date* towards achieving the goals and the costs incurred.
8. When all Goals are reached: 'Claim success and move on'
 - a. Free remaining resources for more profitable ventures

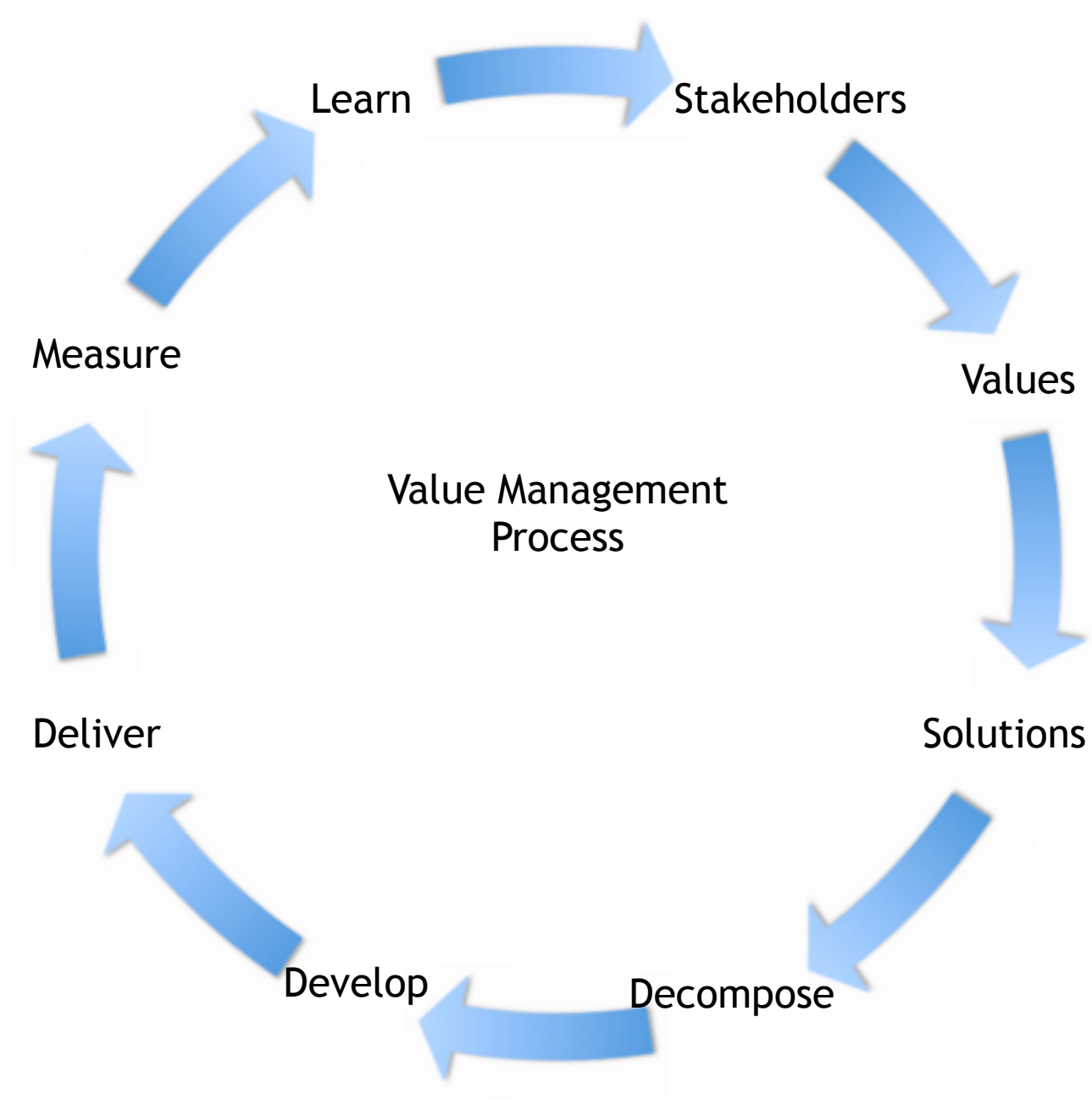
Last slide

- For free digital copy of our Books (CE, Evo) and Papers, including Competitive Engineering,
- Email Tom @ Gilb . Com
 - with subject 'Book'

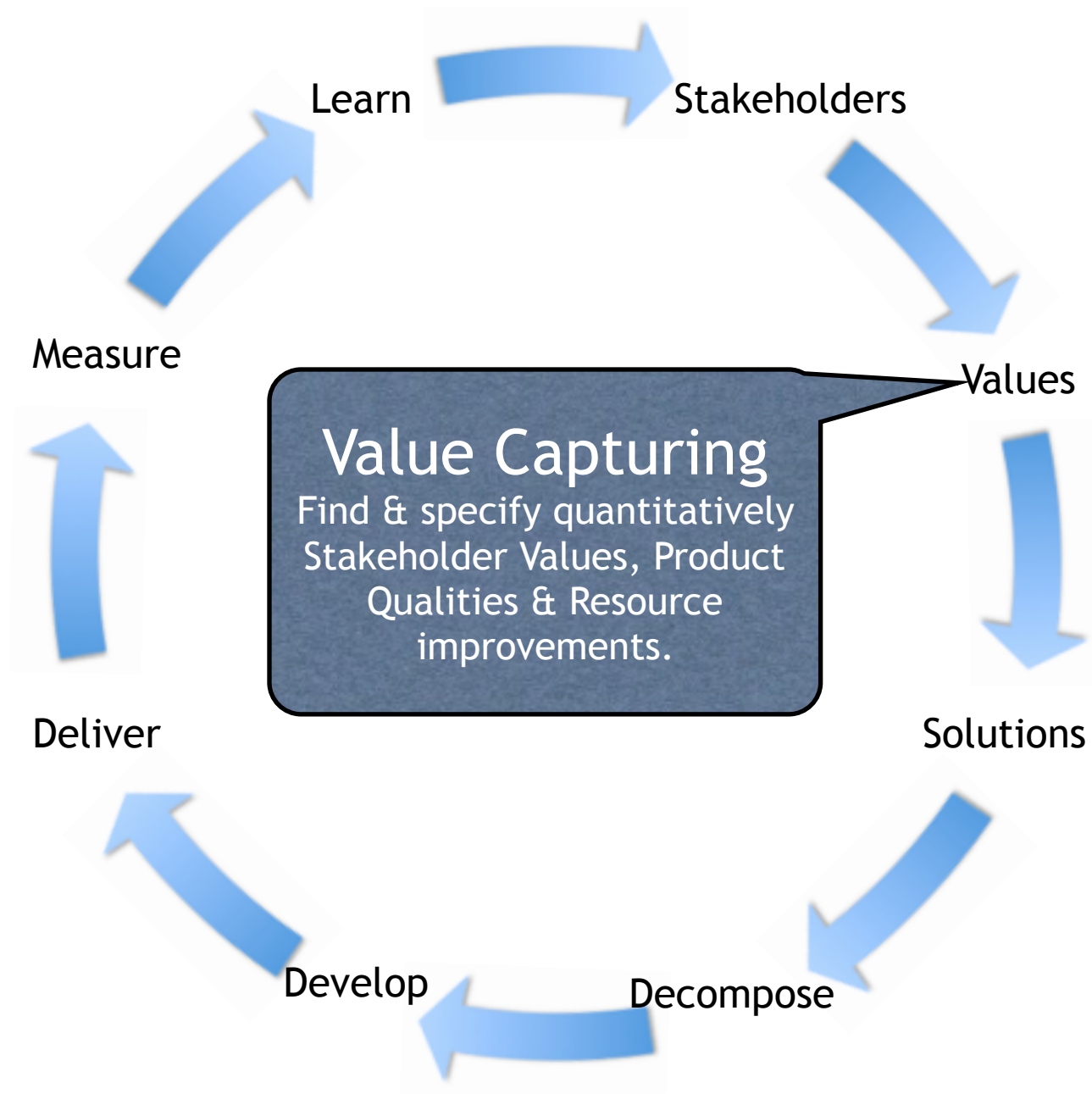
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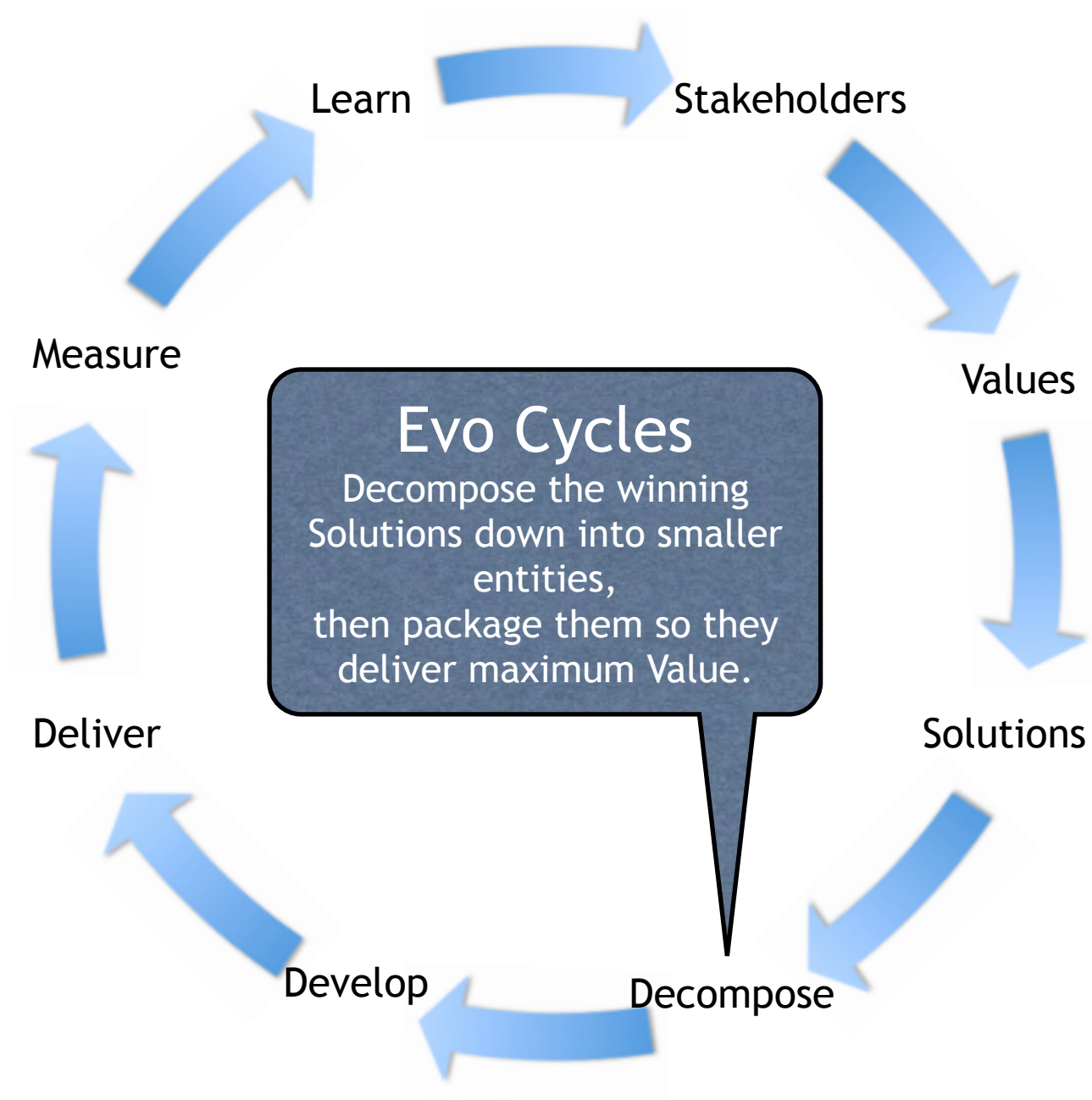
End of Nordea Presentation December 2013

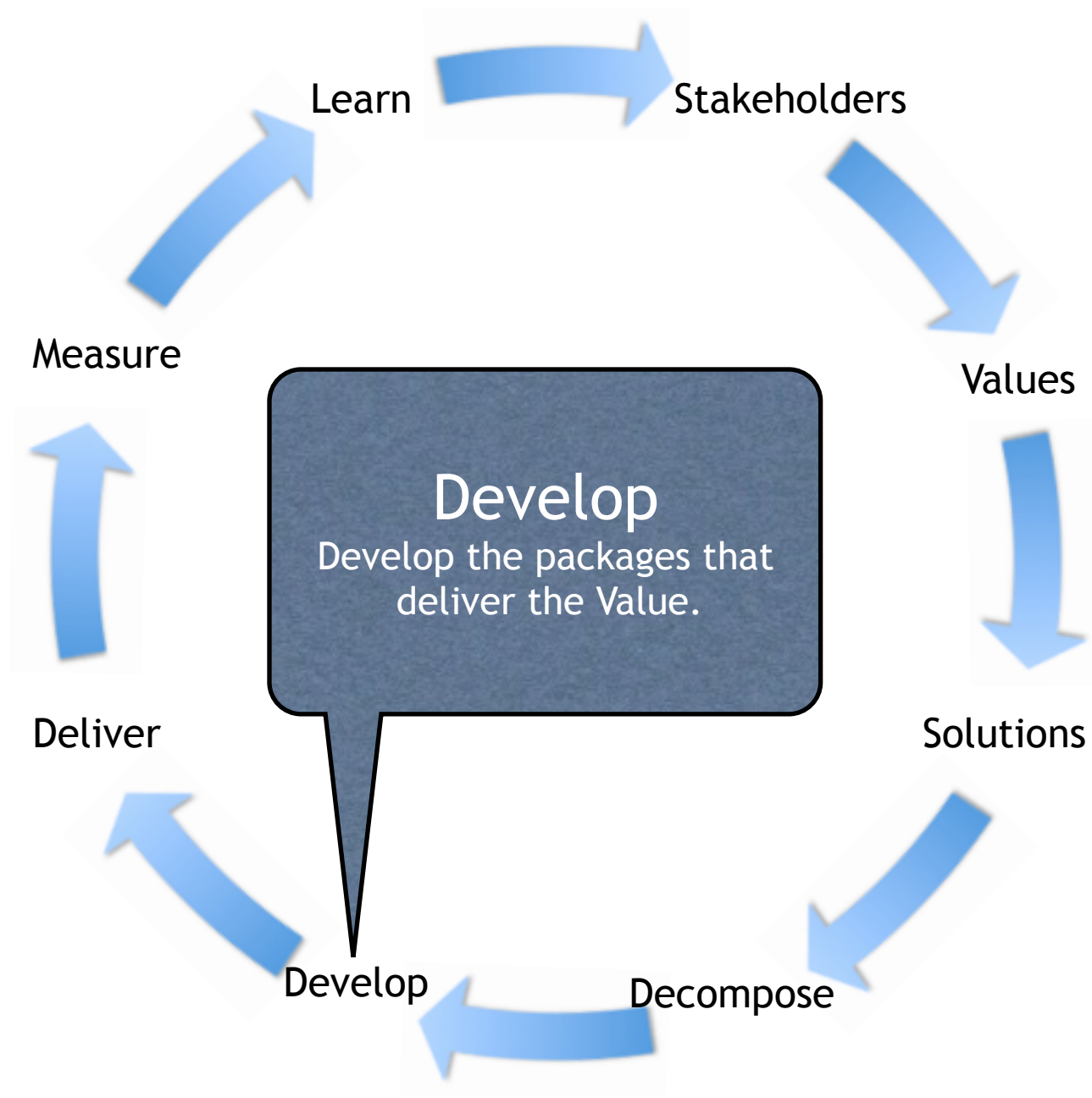




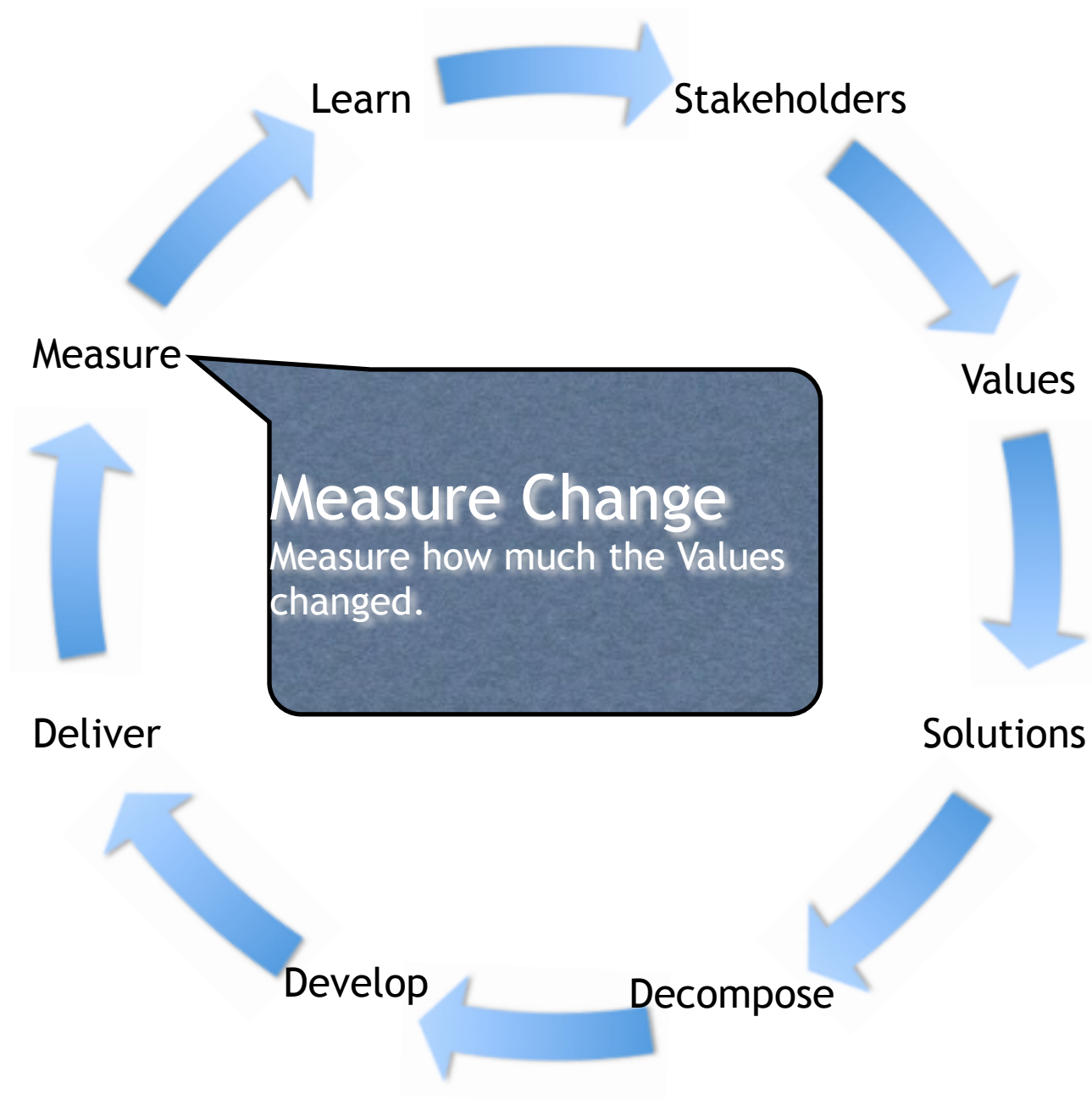


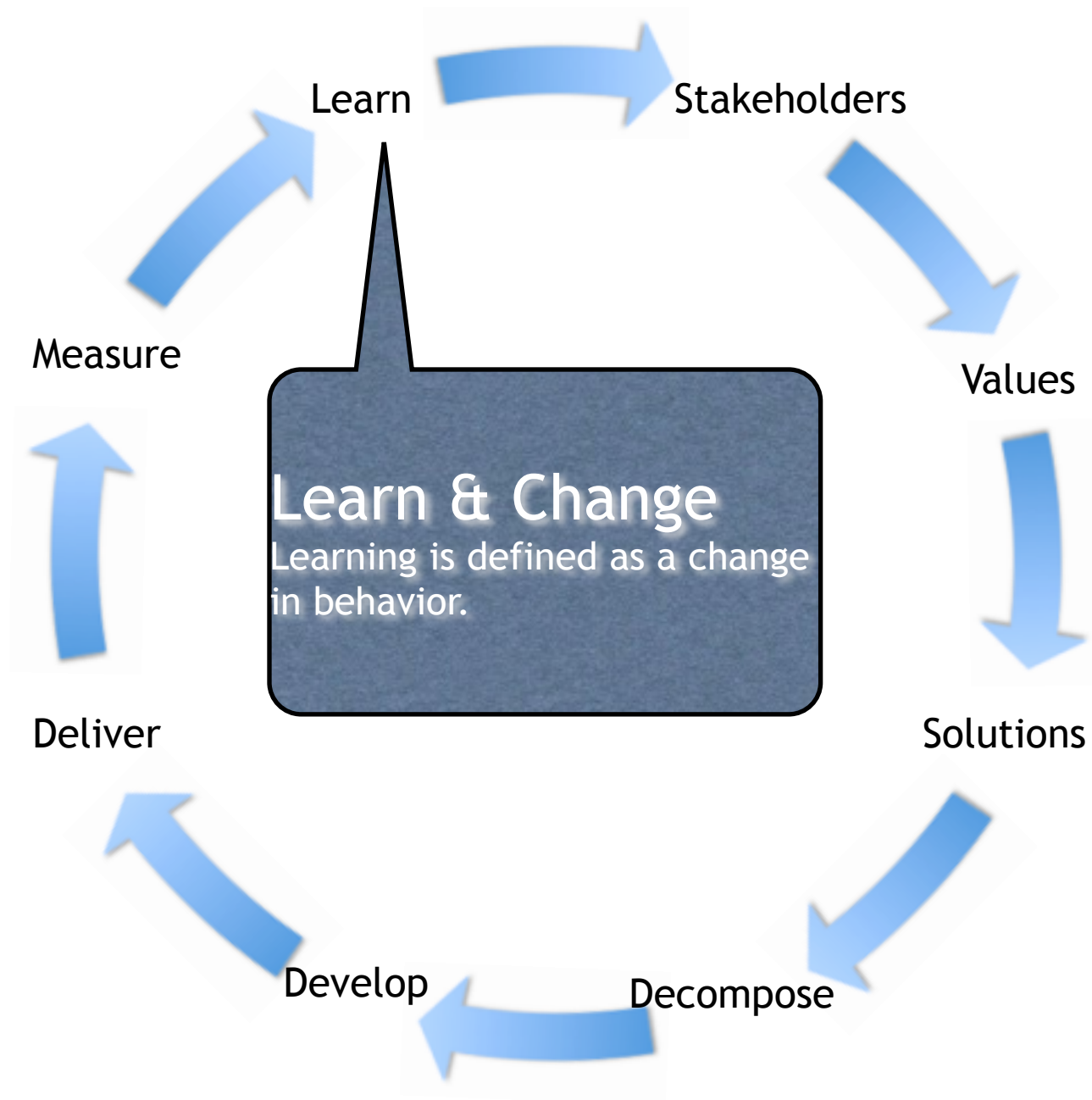




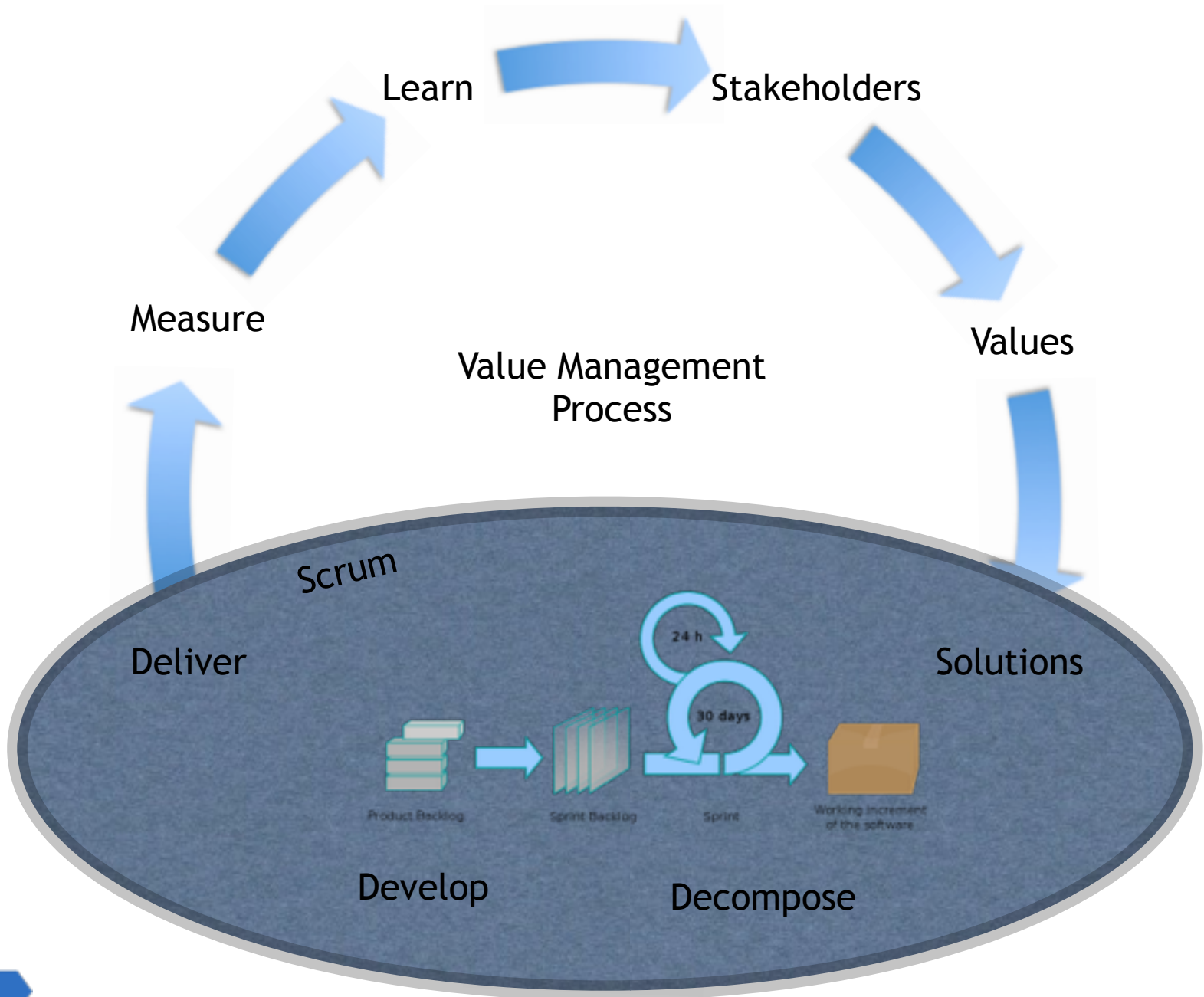












Value Management

