

Project management driven by the Top Ten Critical Improvements quantified Presenter: *Tom Gilb*

MASTER 2016

Summary

- When projects are funded, management will usually list a handful of justifications or expectations.
 - But usually vaguely. Like 'Substantially increase productivity', 'Much better Flexibility', 'More robust system'.
- **Tom Gilbs practice is to capture and agree these critical factors, then quantify them so they are crystal clear, and can be used to track progress.**
- All projects should have such management clarity -
 - but practically none do. Management likes the idea of this, but have never been taught at 'business school'.

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.





Richard Smith

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

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**!

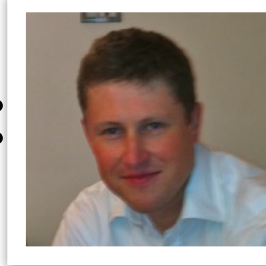


Richard Smith

- “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,....”

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

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

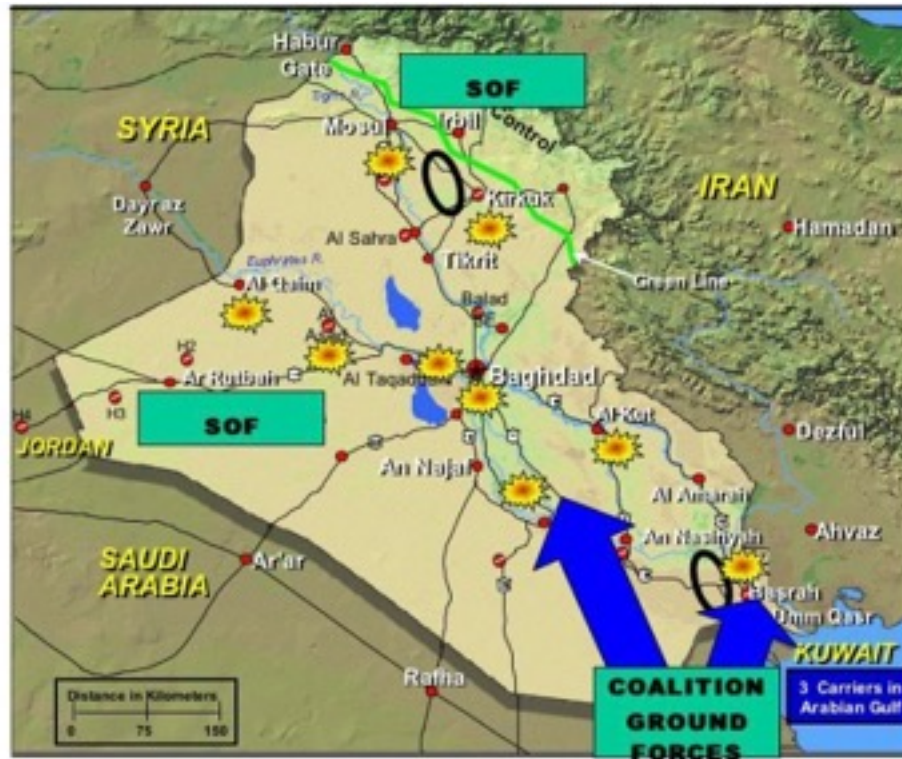


Richard Smith

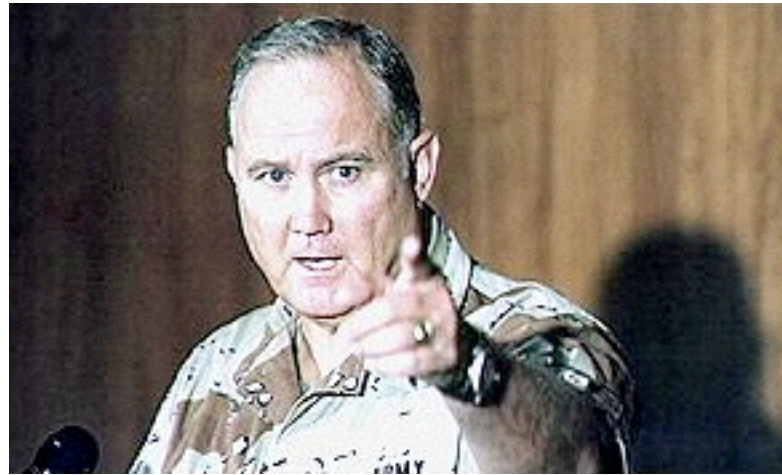
- “ In the end, the new system responsible for 10s of USD billions of notional risk,
- **successfully went live**
- **over one weekend**
- **for 800 users worldwide,**
- and **was seen as a big success**
- **by the sponsoring stakeholders.”**

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

And Now A True War Story



The Persinscom IT System Case



He who does not learn from history
is doomed to repeat it



A Man Who understood that

"a bird in the hand is worth two in the Bush" <-ts

The Evo Planning Week at DoD



- **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 (Brigadier General Palicci)
 - get approval to deliver next week



US Army Example: PERSINSCOM

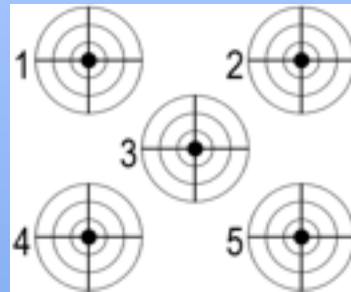
Requirements
and Architecture

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





| STRATEGIES → |
|--|
| OBJECTIVES |
| Customer Service ? → 0 Violation of agreement |
| Availability 90% → 99.5% Up time |
| Usability 200 → 60 Requests by Users |
| Responsiveness 70% → ECP's on time |
| Productivity 3:1 Return on Investment |
| Morale 72 → 60 per mo. Sick Leave |
| Data Integrity 88% → 97% Data Error % |
| Technology Adaptability 75% Adapt Technology |
| Requirement Adaptability ? → 2.6% Adapt to Change |
| Resource Adaptability 2.1M → ? Resource Change |
| Cost Reduction FADS → 30% Total Funding |



Monday
← The Top Ten
Critical
Objectives
Were decided

Sample of Objectives/Strategy definitions

US Army Example: PERSINCOM: Personnel System



Example of one of the Objectives:

Customer Service:

Type: Critical Top level Systems Objective

Gist: Improve customer perception of quality of service provided.

Scale: Violations of Customer Agreement per Month.

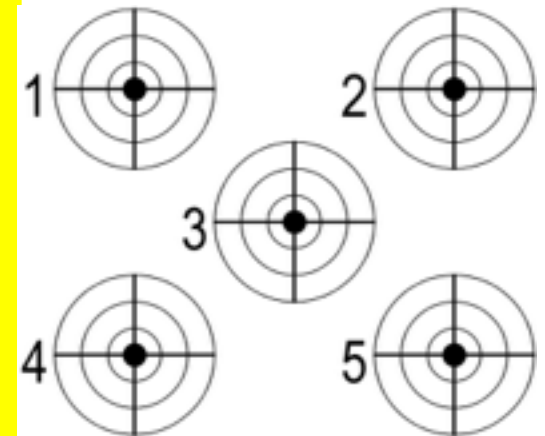
Meter: Log of Violations.

Past [Last Year] Unknown Number ← State of PERSCOM Management Review

Record [NARDAC] 0 ? ← NARDAC Reports Last Year

Fail : <must be better than Past, Unknown number>
←CG

Goal [This Year, PERSINCOM] 0 “Go for the Record” ←
Group SWAG



US Army Example: PERSINSCOM: Personnel System



| STRATEGIES → OBJECTIVES | Technology Investment | Business Practices | People | Empowerment | Principles of IMA Management | Business Process Re-engineering | SUM |
|--|--|--------------------|--------|-------------|------------------------------|---------------------------------|-----|
| Customer Service ? → 0 Violation of agreement | <div>Tuesday</div> <div>The Top Ten</div> <div>Critical Strategies</div> <div>For reaching the</div> <div>← objectives</div> <div>Were decided</div> | | | | | | |
| Availability 90% → 99.5% Up time | | | | | | | |
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| | | | | | | | |
| | | | | | | | |
| | | | | | | | |



A Strategy (Top Level of Detail)

Technology Investment:

Gist: Exploit investment in high return technology.

Impacts: productivity, customer service and conserves resources.



Wednesday:

- We made a rough evaluation
 - of how powerful our strategies might be
 - in relation to our objectives
- Impact Estimation Table
 - 0% Neutral, no \pm impact
 - 100% Gets us to Goal level on time
 - 50% Gets us half way to Goal at deadline
 - -10% has 10% negative side effect

| STRATEGIES → OBJECTIVES | Technology Investment | Business Practices | People | Empowerment | Principles of IMA Management | Business Process Re-engineering | SUM |
|--|-----------------------|--------------------|-------------|-------------|------------------------------|---------------------------------|------|
| Customer Service ? → 0 Violation of agreement | 50% | 10% | 5% | 5% | 5% | 60% | 185% |
| Availability 90% → 99.5% Up time | 50% | 5% | 5-10% | 0 | 0 | 200% | 265% |
| Usability 200 → 60 Requests by Users | 50% | 5-10% | 5-10% | 50% | 0 | 10% | 130% |
| Responsiveness 70% → ECP's on time | 50% | 10% | 90% | 25% | 5% | 50% | 180% |
| Productivity 3:1 Return on Investment | 45% | 60% | 10% | 35% | 100% | 53% | 303% |
| Morale 72 → 60 per mo. Sick Leave | 50% | 5% | 75% | 45% | 15% | 61% | 251% |
| Data Integrity 88% → 97% Data Error % | 42% | 10% | 25% | 5% | 70% | 25% | 177% |
| Technology Adaptability 75% Adapt Technology | 5% | 30% | 5% | 60% | 0 | 60% | 160% |
| Requirement Adaptability ? → 2.6% Adapt to Change | 80% | 20% | 60% | 75% | 20% | 5% | 260% |
| Resource Adaptability 2.1M → ? Resource Change | 10% | 80% | 5% | 50% | 50% | 75% | 270% |
| Cost Reduction FADS → 30% Total Funding | 50% | 40% | 10% | 40% | 50% | 50% | 240% |
| SUM IMPACT FOR EACH SOLUTION | 482% | 280% | 305% | 390% | 315% | 649% | |
| Money % of total budget | 15% | 4% | 3% | 4% | 6% | 4% | |
| Time % total work months/year | 15% | 15% | 20% | 10% | 20% | 18% | |
| SUM RESOURCES | 30 | 19 | 23 | 14 | 26 | 22 | |
| BENEFIT/RESOURCES RATIO | 16:1 | 14:7 | 13:3 | 27:9 | 12:1 | 29:5 | |



MEASURING HAND FOR GLOVE SIZE

Designs

| <i>Design Ideas -></i> | <i>Technology Investment</i> | <i>Business Practices</i> | <i>People</i> | <i>Empowerment</i> | <i>Principles of IMA Management</i> | <i>Business Process Re-engineering</i> | <i>Sum Requirements</i> |
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| <i>Sum of Performance</i> | <i>482%</i> | <i>280%</i> | <i>305%</i> | <i>390%</i> | <i>315%</i> | <i>649%</i> | |
| Money % of total budget | 15% | 4% | 3% | 4% | 6% | 4% | 36% |
| Time % total work months/year | 15% | 15% | 20% | 10% | 20% | 18% | 98% |
| <i>Sum of Costs</i> | <i>30</i> | <i>19</i> | <i>23</i> | <i>14</i> | <i>26</i> | <i>22</i> | |
| <i>Performance to Cost Ratio</i> | <i>16:1</i> | <i>14:7</i> | <i>13:3</i> | <i>27:9</i> | <i>12:1</i> | <i>29:5</i> | |

US Army Example: PERSINSCOM: Personnel System



| STRATEGIES → OBJECTIVES | Technology Investment | Business Practices | People | Empow- erment | <i>Principles of IMA Management</i> | Business Process Re- engineering | SUM |
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Thursday:

Day 4 of 5 of 'Feasibility Study

- We looked for a way to deliver some stakeholder results, next week
- 1 1 1 1
 - 1 increase from 0%
 - 1 stakeholder
 - 1 quality
 - 1 week

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Next weeks Evo Step??

- “You won’t believe we never thought of this, Tom!”
- The step:
 - When the Top General Signs in
 - Move him to the head of the queue
 - Of all people inquiring on the system.



The Conformat Case Study 2003-2013



Market
Research
& Feedback

MR

See paper on this case at www.gilb.com
Papers/Cases/Slides, Gilb Library,

value slide w... http://www.gilb.com/tiki-download_file.php?fileId=152

ppr wrong ag... http://www.gilb.com/tiki-download_file.php?fileId=50

Paper Firm http://www.gilb.com/tiki-download_file.php?fileId=32

And see papers (IEEE Software Fall 2006) by Geir K Hanssen, SINTEF

Their product = **conformat**✓



Chief Storyteller =
Trond Johansen

Customer Successes in Corporate Sector

| | | | |
|---|---|---|---|
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

Real Example of 1 of the 25 Quality Requirements

Usability.Productivity (taken from **Confirmit 8.5**,
**performed a set of predefined steps, to produce a standard
MR Report.**

development)

**Scale for quantification: Time in minutes to set up a
typical specified Market Research-report**

Past Level [Release 8.0]: 65 mins.,

Tolerable Limit [Release 8.5]: 35 mins.,

Goal [Release 8.5]: 25 mins.

**Note: end result was actually 20
minutes 😊**

**Meter [Weekly Step]: Candidates with Reportal experience,
and with knowledge of MR-specific reporting features**



Market
Research
& Feedback



Trond Johansen

Shift: from Function to Quality



- **Our new focus is on the day-to-day operations of our Market Research users,**
 - **not a list of features that they might or might not like. 50% never used!**
 - **We KNOW that increased efficiency, which leads to more profit, will please them.**
 - **The ‘45 minutes actually saved x thousands of customer reports’**
 - **= big \$\$\$ saved**
- **After one week we had defined more or less all the requirements for the next version (8.5) of Confirmit.**



Trond Johansen

- IET for MR Project - Confirmit (<-FIRM Product Brand) 8.5
- **Solution: Recoding**
 - Make it possible to recode variable on the fly from Reportal.
 - Estimated effort: 4 days
 - **Estimated** Productivity Improvement: 20 minutes (50% way to Goal)
 - actual result 38 minutes (95% progress towards Goal)

| | A | B | C | D | E | F | G | BX | BY | BZ | CA |
|----|---|-------------------|--------------|-------|---|-----------|------|------------------|-------|---------------|-------|
| 1 | | | | | | | | | | | |
| 2 | | Current Status | Improvements | | Goals | | | Step9 | | | |
| 3 | | | | | | | | Recoding | | | |
| 4 | | | | | | | | Estimated impact | | Actual impact | |
| 5 | | Units | Units | % | Past | Tolerable | Goal | Units | % | Units | % |
| 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 |

| | Development Team | Users (PMT, Pros, Doc writer, other) | CTO (Sys Arch, Process Mgr) | QA (Configuration Manager & Test Manager) |
|------------------|--|--|--|---|
| Friday | <ul style="list-style-type: none"> ✓ 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 general maintenance work, documentation. | | <ul style="list-style-type: none"> ✓ Approve/reject design & Step N ✓ Attend Project Mgmt meeting: 12-15 | <ul style="list-style-type: none"> ✓ 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 | <ul style="list-style-type: none"> ✓ Develop test code & code for Version N | <ul style="list-style-type: none"> ✓ Use Version N-1 | | <ul style="list-style-type: none"> ✓ Follow up CI ✓ Review test plans, tests |
| Tuesday | <ul style="list-style-type: none"> ✓ Develop Test Code & Code for Version N ✓ Meet with users to Discuss Action Taken Regarding Feedback From Version N-1 | <ul style="list-style-type: none"> ✓ Meet with developers to give Feedback and Discuss Action Taken from previous actions | <ul style="list-style-type: none"> ✓ System Architect to review code and test code | <ul style="list-style-type: none"> ✓ Follow up CI ✓ Review test plans, tests |
| Wednesday | <ul style="list-style-type: none"> ✓ Develop test code & code for Version N |  |  | <ul style="list-style-type: none"> ✓ Review test plans, tests ✓ Follow up CI |
| Thursday | <ul style="list-style-type: none"> ✓ Complete Test Code & Code for Version N ✓ Complete GUI tests for Version N-2 | | | <ul style="list-style-type: none"> ✓ Review test plans, tests ✓ Follow up CI |



Evo's impact on Confirmit product qualities 1st Qtr

- Only 5 highlights of the 25 impacts are listed here

| 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 |



Initial Experiences and conclusions

- **EVO has resulted in**
 - **increased motivation and**
 - **enthusiasm amongst developers,**
 - **it opens up for empowered creativity**
- **Developers**
 - **embraced the method and**
 - **saw the value of using it,**
 - **even though they found parts of Evo difficult to understand and execute**



confirmit✓



Conclusions -

- **The method's positive impact on Confirmit product qualities has convinced us that**
 - **Evo is a better suited development process than our former waterfall process, and**
 - **we will continue to use Evo in the future.**
- **What surprised us the most was**
 - **the method's power of focusing on delivering value for clients versus cost of implementation.**
 - **Evo enables you to re-prioritize the next development-steps based on the weekly feedback.**
 - **What seemed important**
 - **at the start of the project**
 - **may be replaced by other solutions**
 - **based on knowledge gained from previous steps.**
- **The method has**
 - **high focus on measurable product qualities, and**
 - **defining these clearly and testably, requires training and maturity.**
 - **It is important to believe that everything can be measured,**
 - **and to seek guidance if it seems impossible.**

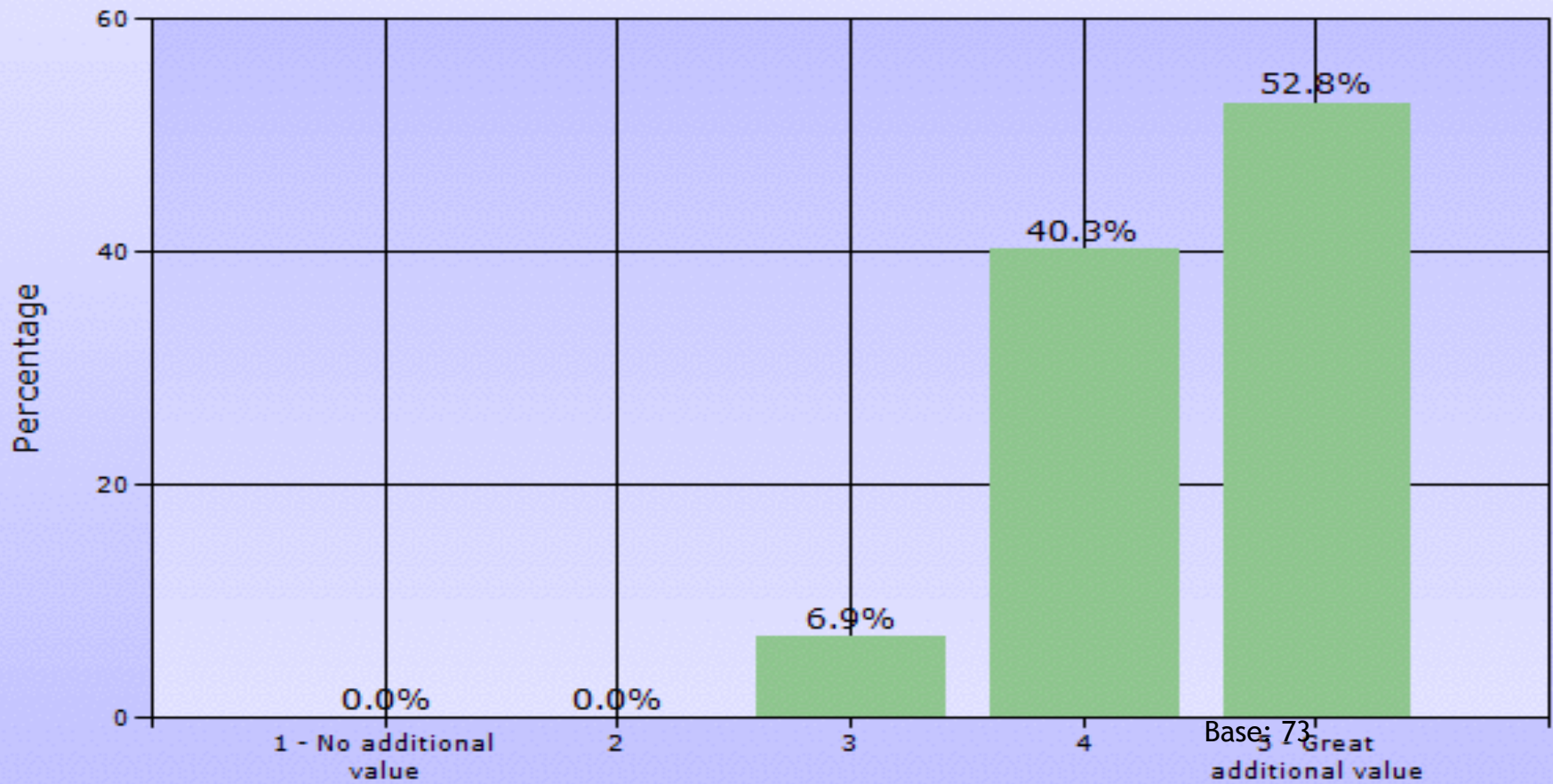


Initial Customer Feedback on the new Conformat 9.0

November 24th, 2004

Initial perceived value of the new release (Base 73 people)

To what extent do you feel Conformat 9.0 will give you additional value?



Evo's impact on Conconfirm 9.0 product qualities

Results from the second quarter of using Evo. 1/2

| Product quality | Description | Customer value |
|-----------------|---|--------------------------------------|
| Intuitiveness | Probability that an inexperienced user can intuitively figure out how to set up a defined Simple Survey correctly. | Probability increased by 175% |
| Productivity | Time in minutes for a defined advanced user, with full knowledge of 9.0 functionality, to set up a defined advanced survey correctly. | Time reduced by 38% |

| Product quality | Description | Customer value |
|-----------------|---|--|
| Productivity | Time (in minutes) to test a defined survey and identify 4 inserted script errors, starting from when the questionnaire is finished to the time testing is complete and is ready for production. (Defined Survey: Complex survey, 60 questions, comprehensive JScripting.) | Time reduced by 83% and error tracking increased by 25% |

Evo's impact on Conformat 9.0 product qualities

Results from the second quarter of using Evo. 2/2

| Product quality | Description | Customer value |
|-----------------|---|---|
| Performance | Max number of panelists that the system can support without exceeding a defined time for the defined task, with all components of the panel system performing acceptable. | Number of panelists increased by 1500% |
| Scalability | Ability to accomplish a bulk-update of X panelists within a timeframe of Z second | Number of panelists increased by 700% |
| Performance | Number of responses a database can contain if the generation of a defined table should be run in 5 seconds. | Number of responses increased by 1400% |

Code quality – "green" week

- In these "green" weeks, some of the deliverables will be less visible for the end users, but more visible for our QA department.
- We manage code quality through an Impact Estimation table

| Current Status | | Improvement | | Goals | | | Step 6 (week 14) | | Step 7 (week 15) |
|-------------------------------|-------|-------------|-----|-------|-----------|------|------------------|---------------|------------------|
| | Units | | | Past | Tolerable | Goal | Estimated Impact | Actual Impact | Estimated Impact |
| | 100,0 | 100,0 | 0 | 80 | 100 | | | | 100 |
| Speed | | | | | | | | | |
| | 100,0 | 100,0 | 0 | 80 | 100 | | 100 | 100 | |
| Maintainability.Doc.Code | | | | | | | | | |
| | 100,0 | 100,0 | 0 | 80 | 100 | | 100 | 100 | |
| InterviewerConsole | | | | | | | | | |
| NUnitTests | | | | | | | | | |
| | 0,0 | 0,0 | 0 | 90 | 100 | | | | |
| PeerTests | | | | | | | | | |
| | 100,0 | 100,0 | 0 | 90 | 100 | | | | 100 |
| FxCop | | | | | | | | | |
| | 0,0 | 10,0 | 10 | 0 | 0 | | | | |
| TestDirectorTests | | | | | | | | | |
| | 100,0 | 100,0 | 0 | 90 | 100 | | | | 100 |
| Robustness.Correctness | | | | | | | | | |
| | 2,0 | 2,0 | 0 | 1 | 2 | | 2 | 2 | |
| Robustness.BoundaryConditions | | | | | | | | | |
| | 0,0 | 0,0 | 0 | 8 | 8 | | | | |
| Speed | | | | | | | | | |
| | 0,0 | 0,0 | 0 | 8 | 8 | | | | |
| ResourceUsage.CPU | | | | | | | | | |
| | 100,0 | 0,0 | 100 | 8 | 8 | | | | |
| Maintainability.Doc.Code | | | | | | | | | |
| | 100,0 | 100,0 | 0 | 8 | 8 | | | | |
| SynchronizationStatus | | | | | | | | | |
| NUnitTests | | | | | | | | | |

POT-SHOTS — Brilliant Thoughts in 17 words or less



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www.ashleighbrilliant.com

Speed

Maintainability

Nunit Tests

PeerTests

TestDirectorTests

Robustness.Correctness

Robustness.Boundary
Conditions

ResourceUsage.CPU

Maintainability.DocCode

SynchronizationStatus

The 1 Week Project Startup Standard for 'Evo' Agile Project Management

- **Top 10 Critical Objectives Quantified**
- **Top 10 Strategies identified**
- **Impact Estimation of strategy effect on Objectives**
- **Find short term value delivery steps**
- **Get buy in from management to proceed**

Day 1: Project Objectives: The top few critical objectives quantified.

- **Objective: Determine, clarify, agree critical few project objectives – results – end states**
- **Process:**
 - Analyze current documentation and slides, for expressed or implied objectives (often implied by designs or lower level objectives)
 - Develop list of Stakeholders and their needs and values
 - Brainstorm ‘top ten’ critical objectives names list. Agree they are top critical few.
 - Detail definition in Planguage – meaning quantify and define clearly, unambiguously and in detail (a page)
 - Quality Control Objectives for Clarity: Major defect measurement. Exit if less than 1.0 majors per page
 - Quality Control Objectives for Relevance: Review against higher level objectives than project for alignment.
 - Define Constraints: resources, traditions, policies, corporate IT architecture, hidden assumptions.
 - Define Issues – yet unresolved
 - Note we might well choose to several things in parallel.
- **Output: A solid set of the top few critical objectives in quantified and measurable language. Stakeholder data specified.**
- **Participants: anybody who is concerned with the business results, the higher the management level the better.**
- **End of Day Process: meet 30 minutes with any responsible interested managers to present the outputs, and to get preliminary corrections and go-ahead.**
- **Note: this process is so critical and can be time consuming, so if necessary it can spill over to next day. Perhaps in parallel with startup of the strategy identification. Nothing is more critical or fundamental than doing this well.**

Lack of clear top level project objectives has seen real projects fail for \$100+ million: personal experience, real case

Quantified Objectives (in Planguage),
What they should have done
8 years earlier!

Bad Objectives, for 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

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.

PROJECT VALUE CLARITY:

Bank top 10 Objectives quantified 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 %**

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%

Example of Estimating the ‘Business Value’ of a *Technical* IT System Improvement (20xx)

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.

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 Standards 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 us on an 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 turn out to be realistic.

Quantified
Definition

Benchmarks = Systems Analysis

Values, unknown cost

Realistic Project
Targets Val/€

Values, if
enough
resources left

Day 2: Project Strategies and Architecture: the top few critical strategies for reaching the critical objectives

- **Objective:** to identify the top 'ten' most critical strategic decisions or architectures; the ones that will contribute or enable us most, to reach our primary objective goal levels on time.
- **Process:**
 - **Analysis of current documentation and slides to identify candidate strategies, implied or expressed.**
 - **Brainstorming of the 'names' of the specific strategy list, the top ten and a set of less powerful ideas (say 11-30)**
 - **Detail each top ten strategy sufficiently to understand impacts (on objectives, time and costs)**
 - **Specify, for each strategy all critical related information (like stakeholders, risks, assumptions, constraints, etc.)**
 - **Quality Control for clarity – correct unclear items. Exit based on defect level, or not.**
 - **Likely that work will need to be done in parallel in order to do ten strategies to a rich level of specification.**
- **Output:** A formal strategy specification, ready for evaluation, and decomposition and delivery of partial value results.
- **Participants:** system architects, project architects, strategy planners. And members of the project team who will be in on the entire weeks process. The major input here is technical and organizational strategy (the means to reach the objectives)
- **End of Day Process:** : meet 30 minutes with any responsible interested managers to present the outputs, and to get preliminary corrections and go-ahead.

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] 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*

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,
en additional budget. If not "I would have a problem" <- BB

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

e the assumption that we can integrate Oorbit with PX+ in a
en in the short term <- BB

/ dependencies for this design idea>.

s Px+ in time. ? tsg 2.12

ags of any factors, which could threaten your estimated

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

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

ability and cost of coherence will not allow us to meet the

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



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 Understanding, Business Scalability, Responsiveness.

D4: a flexible configurable new workflow process -> Effectiveness, Business Scalability, Responsiveness.

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

D6: Orbit GUI. Utilizes Dxx Express Grid Control -> Business Scalability, Responsiveness, Risk & P/L Understanding.

D7: downstream feeds which is used to generate Capability Time to Market -> Business Scalability, Responsiveness.

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 allow us to meet t

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

R5: re Cross Desk on technical design no solution allowi

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

I1: Do we need to put t the objectives (Owners a huge differentiator. D

I2: what are the time s now BB

I3: what will the success what we are actually be

I4: for the business other a lack of clarity as to w how they might differ f

I5: the degree to which useful without Intra Day. BB 2 dec

Risks specification:

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

Issues:

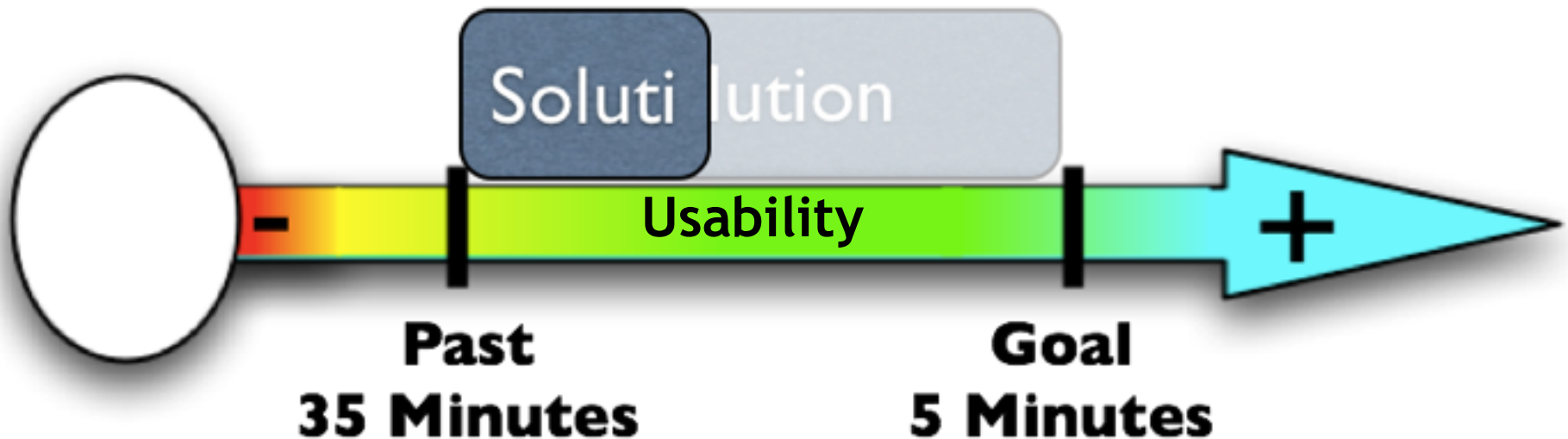
- when answered can turn into a risk
- shares group knowledge
- makes sure we don't forget to analyze later

Day 3: Evaluation of Strategies using Impact Estimation: our best estimates with experience and risk. How sure are of the major strategy decisions.

- **Objective: to estimate to primary effects and all side effects of all top critical strategies on all top critical objectives, and on some resources (time, cost, effort). The estimates will be backed up by evidence, or their credibility will be rated low.**
- **Process:**
 - Using the objectives and strategies developed on first 2 days as inputs
 - Populate an Impact Estimation table (aka Value Decision Table) with estimates of the expected result of deploying defined strategies. Estimate main intended impacts
 - And all side effects (on other core objectives)
 - And on all resources (time, money. Effort)
 - Estimate \pm ranges
 - Specify evidence and sources for estimates
 - Determine Credibility level
 - Quality Control the IE table against standards (Rules for IE in CE book), for possible 'exit' (meets standards)
 - Lots of parallel work needed and expected to do a good job.
- **Output:**
 - A fairly decent Impact Estimation table, possibly a several level set of them.
 - This will tell us if it is safe to proceed (we have good enough strategies)
 - And it will help us prioritize high value deliveries soon.
- **Participants: architects, planners, anybody with strong views on any of the strategies. The team for the week.**
- **Note: it might be necessary and desirable, now or later, to do this impact estimation process at 2 or 3 related levels (Business, Stakeholder, IT System) in order to see the Business-IT relationship clearly. This might exceed time limits and be done parallel or later.**
- **End of Day Process: meet 30 minutes with any responsible interested managers to present the outputs, and to get preliminary corrections and go-ahead.**

Checking that Strategies give Impact towards our Value Objectives

- 10 min. = 33% of total



Acer Project: Impact Estimation Table

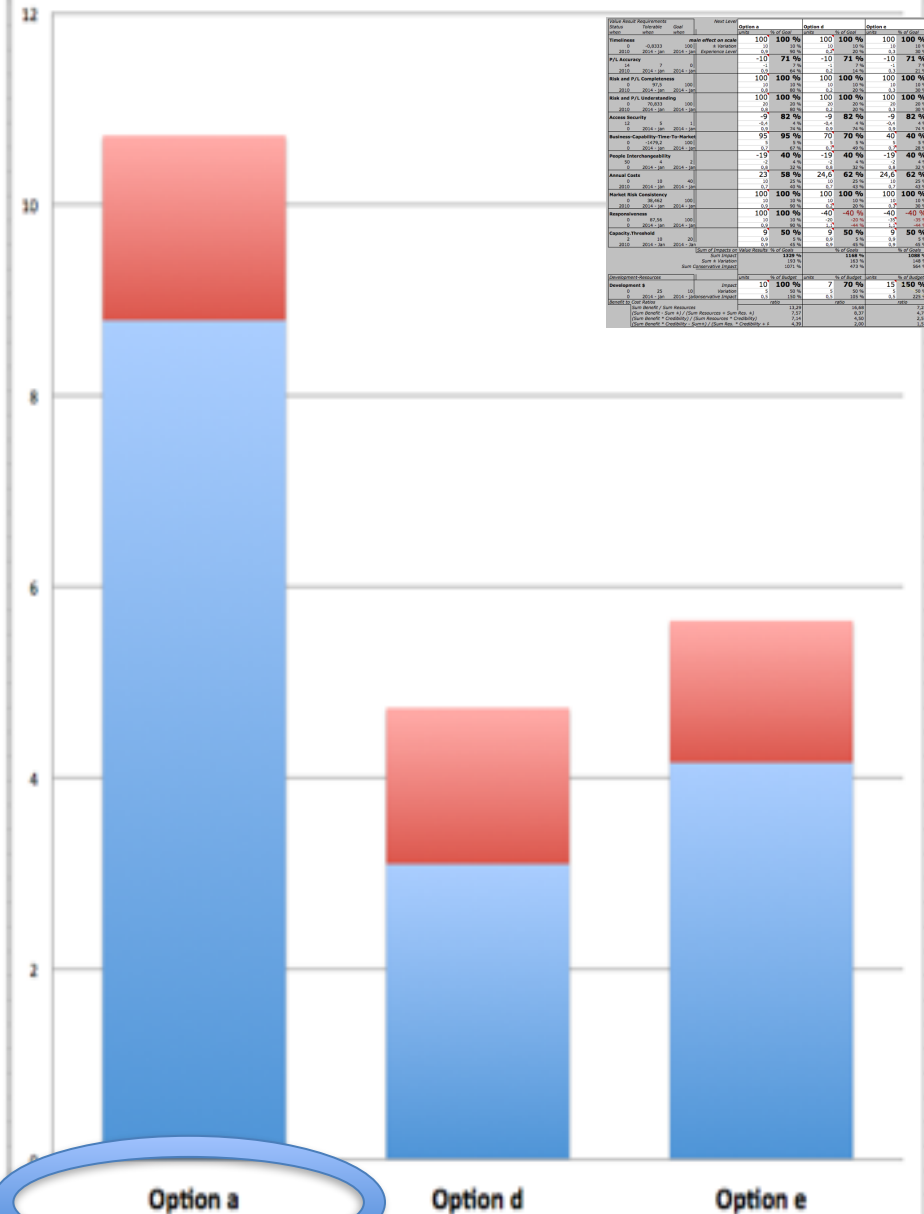
Objectives

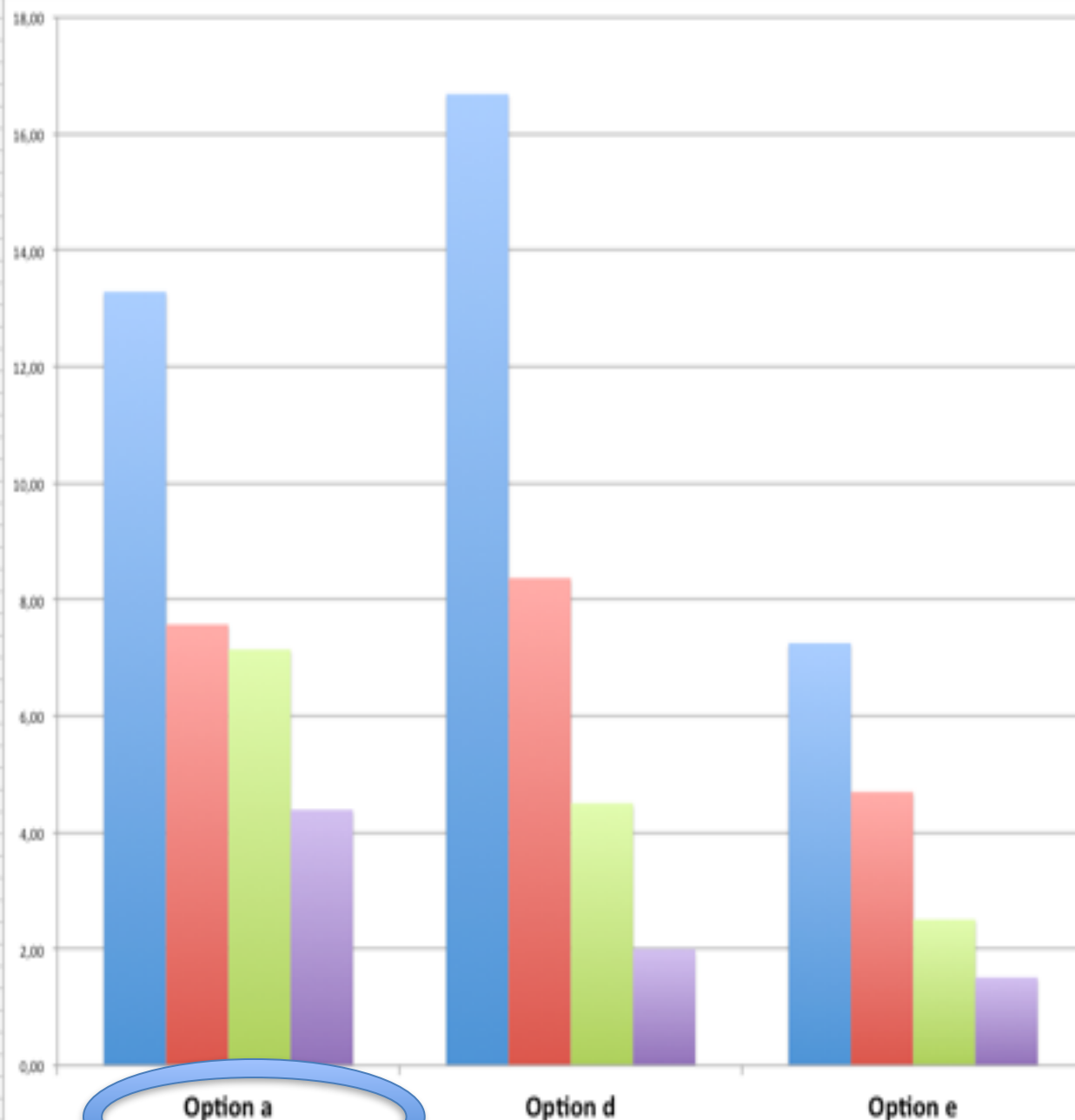
| Strategies | Identify Binding Compliance Requirements Strategy | System Control Strategy | System Implementation | Find Services That Meet Our Strategy | Use The Lowest Cost Provider Strategy |
|---|---|--------------------------|--------------------------|--------------------------------------|---------------------------------------|
| 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% |

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 | |

Sum Impacts adjusted for Experience (Confidence) Level





6 March 20

Day 4: Evolutionary Step Decomposition:

what are the high value short term value delivery steps we can execute?

- **Objective:** to identify near team candidates for real value delivery to real stakeholders. What can we do for real next week!
- **Process:**
 - Identify highest value (to costs) strategies and sub-sets of strategies
 - Decompose into doable subsets in weekly to monthly cycles of result delivery
 - Plan the near steps (1 or more) in detail so that we are ready to execute the step in practice.
 - Who does it, main responsible, team.
 - Expected measurable results and costs
 - Stakeholder involved in receiving
 - Test process (for value)
- **Output:** 1 or more potential steps for value delivery to some stakeholders, a plan good enough to approve and execute in practice.
- **Participants:** Project Management, architects prepared to decompose architecture in practice. The weeks team for this start up study.
- **End of Day Process:** meet 30 minutes with any responsible interested managers to present the outputs, and to get preliminary corrections and go-ahead.

Impact Estimation: Value-for-Money Delivery Table



| STRATEGIES → OBJECTIVES | Technology Investment | Business Practices | People | Empow- erment | <i>Principles of IMA Management</i> | Business Process Re- engineering | SUM |
|--|--------------------------|-----------------------|-------------|------------------|---|--|------|
| Customer Service ? → 0 Violation of agreement | 50% | 10% | 5% | 5% | 5% | 60% | 185% |
| Availability 90% → 99.5% Up time | 50% | 5% | 5-10% | 0 | 0 | 200% | 265% |
| Usability 200 → 60 Requests by Users | 50% | 5-10% | 5-10% | 50% | 0 | 10% | 130% |
| Responsiveness 70% → ECP's on time | 50% | 10% | 90% | 25% | 5% | 50% | 180% |
| Productivity 3:1 Return on Investment | 45% | 60% | 10% | 35% | 100% | 53% | 303% |
| Morale 72 → 60 per mo. Sick Leave | 50% | 5% | 75% | 45% | 15% | 61% | 251% |
| Data Integrity 88% → 97% Data Error % | 42% | 10% | 25% | 5% | 70% | 25% | 177% |
| Technology Adaptability 75% Adapt Technology | 5% | 30% | 5% | 60% | 0 | 60% | 160% |
| Requirement Adaptability ? → 2.6% Adapt to Change | 80% | 20% | 60% | 75% | 20% | 5% | 260% |
| Resource Adaptability 2.1M → ? Resource Change | 10% | 80% | 5% | 50% | 50% | 75% | 270% |
| Cost Reduction FADS → 30% Total Funding | 50% | 40% | 10% | 40% | 50% | 50% | 240% |
| SUM IMPACT FOR EACH SOLUTION | 482% | 280% | 305% | 390% | 315% | 649% | |
| Money % of total budget | 15% | 4% | 3% | 4% | 6% | 4% | |
| Time % total work months/year | 15% | 15% | 20% | 10% | 20% | 18% | |
| SUM RESOURCES | 30 | 19 | 23 | 14 | 26 | 22 | |
| BENEFIT/RESOURCES RATIO | 16:1 | 14:7 | 13:3 | 27:9 | 12:1 | 29:5 | |

Thursday:

Day 4 of 5 of 'Feasibility Study

- We looked for a way to deliver some stakeholder results, next week
- **1 1 1 1 1 1 Unity**
 - **1% increase at least**
 - **1 stakeholder**
 - **1 quality/value**
 - **1 week delivery cycle**
 - **1 function focus**
 - **1 design used**

| STRATEGIES → OBJECTIVES | Technology Investment | Business Practices | People | Empowerment | Principles of IMA Management | Business Process Re-engineering | SUM |
|--|-----------------------|--------------------|-------------|-------------|------------------------------|---------------------------------|------|
| Customer Service ? → 0 Violation of agreement | 50% | 10% | 5% | 5% | 5% | 60% | 185% |
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| SUM RESOURCES | 30 | 19 | 23 | 14 | 26 | 22 | |
| BENEFIT/RESOURCES RATIO | 16:1 | 14:7 | 13:3 | 27:9 | 12:1 | 29:5 | |

Next weeks Evo Step?

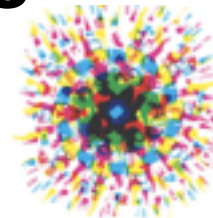
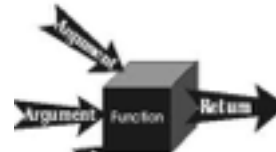
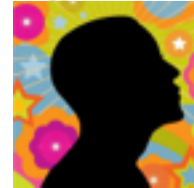
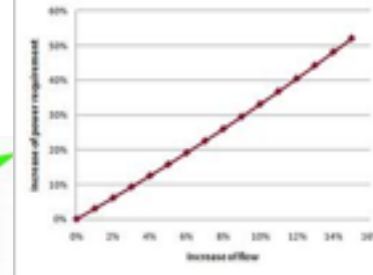


- **“You won’t believe we never thought of this, Tom!”**
- **The step:**
 - **When the Top General Signs in**
 - **Move him to the head of the queue**
 - **of all people inquiring on the system.**



1 1 1 1 1 1 Unity

- 1% increase at least
- 1 stakeholder
- 1 quality or value
- 1-week delivery cycle
- 1 function focus
- 1 design used



Decomposition Principles A Teachable Discipline

Decomposition of Projects into small steps 11/12/2008 13:38

Decomposition of Projects: How to design small, early and frequent incremental and evolutionary feedback, stakeholder result delivery steps, at the level of 2% of project resources.
By Tom Gilb, Norway

Introduction

- The basic premise of iterative, incremental and evolutionary project management [Larman 03 MG] is that a project is divided into early, frequent and short duration delivery steps.
- One basic premise of these methods is that each step will attempt to deliver some real value to stakeholders.
- It is not difficult to envisage steps of construction for a system; the difficulty is when a step has to deliver something of value to stakeholders, in particular to end users.
- This paper will give some teachable guidelines, policies and principles for decomposition. It will also give short examples from practical experience.

A Policy for Evo Planning

One way of guiding Evo planners is by means of a 'policy'. A general policy looks like this (you can modify the policy parameters to your local needs):

Evo Planning Policy (example)

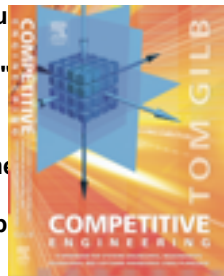
P1: Steps will be sequenced on the basis of their overall benefit-to-cost efficiency.

P2: No step may normally exceed 2% of total project financial budget.

How to decompose systems into small evolutionary steps:

some principles to apply:

- 1• *Believe* there is a way to do it, you just have not *found* it yet!
 - 2• *Identify* obstacles, but don't use them as excuses: use your imagination to get *rid* of them!
 - 3• Focus on *some usefulness* for the user or customer, however small.
 - 4• Do *not* focus on the design ideas themselves, they are distracting, especially for small initial cycles. Sometimes you have to ignore them entirely in the short term!
 - 5• Think; one customer, tomorrow, one interesting improvement.
 - 6• Focus on the *results* (which you should have defined in your goals, moving toward target levels).
 - 7• Don't be afraid to use temporary-scaffolding designs. Their cost must be seen in the light of the value of making some progress, and getting practical experience.
 - 8• Don't be worried that your design is inelegant; it is results that count, not style.
 - 9• Don't be afraid that the customer won't like it. *If you are focusing on what they want*, then by definition, *they* should like it. If you are not, *they* won't like it.
 - 10• Don't get so worried about "what might happen afterwards" that you make no practical progress.
 - 11• You cannot foresee everything. Don't even *think* about it!
 - 12• If you focus on helping your customer in practice, *now*, when they need it, you will be forgiven a lot of 'sins'!
 - 13• You can understand things much better, by getting *some* practical experience (and removing *some* of your fears).
 - 14• Do *early* cycles, on willing local mature parts of your user community.
 - 15• When some cycles, like a purchase-order cycle, take a long time, initiate them *early*, and do other useful cycles while you wait.
 - 16• If something seems to need to wait for 'the big new system', ask if you cannot usefully do it with the 'awful old system', so as to pilot it realistically, and perhaps alleviate some 'pain' in the old system.
 - 17• If something seems too costly to buy, for limited initial use, see if you can negotiate some kind of 'pay as you really use' contract. Most suppliers would like to do this to get your patronage, and to avoid competitors making the same deal.
 - 18• If *you* can't think of some useful small cycles, then talk directly with the real 'customer' or end user. They probably have dozens of suggestions.
 - 19• Talk with end users in *any* case, they have insights you need.
 - 20• Don't be afraid to use the old system and the old 'culture' as a launching platform for the radical new system. There is a lot of merit in this, and many people overlook it.
- I have never seen an exception in 33 years of doing this with many varied cultures. Oh Ye of little faith!



Day 5 of Evo Startup Week

Present to Management, Get Go-ahead

- **Objective:** To present the entire set of plans to responsible executive(s) and discuss them, with approval if possible, or approve with changes.
- **Process:**
 - Present all planned outputs
 - Discuss them and answer questions
 - Take corrections
 - Get approval for the next implementation step.
- **Output:** Approval for next implementation step, corrections
- **Participants:** project tem + key manager above the project manager.
- **End of Day Process:** none, unless corrections needed before execute OK.
 - Possible Corrections and ready to execute a delivery step next week

"I kill men for a living! (General Pellicci)



UNITED STATES ARMY
PERSONNEL INFORMATION
SYSTEMS COMMAND
CERTIFICATE of APPRECIATION

is awarded to

MR. TOM GILB

for

SELFLESS AND DEDICATED SERVICE IN SUPPORT OF THE PERSONNEL INFORMATION SYSTEMS COMMAND. AS A MANAGEMENT CONSULTANT IN RESULT DELIVERY PLANNING, HIS PATRIOTISM, PROFESSIONAL COMPETENCE AND PERSONAL SACRIFICES ARE HIGHLY COMMENDABLE. TOM GILB'S DEDICATION AND THE EXCEPTIONAL MANNER IN WHICH HE PERFORMED HIS DUTIES HAD A DIRECT AND SIGNIFICANT IMPACT ON PERSINSCOM'S MISSION. HIS OUTSTANDING CONTRIBUTIONS AND DISTINGUISHED SERVICE REFLECT GREAT CREDIT ON HIM AND THE UNITED STATES ARMY. CONGRATULATIONS FOR A JOB WELL DONE.

30 AUGUST 1991

Personnel Information Systems Command

Jack A. Pellicci
JACK A. PELLICCI
Brigadier General, USA
Commanding

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