111111

The Unity Method 111111 for decomposition into iterative value delivery steps

By Tom@Gilb.com

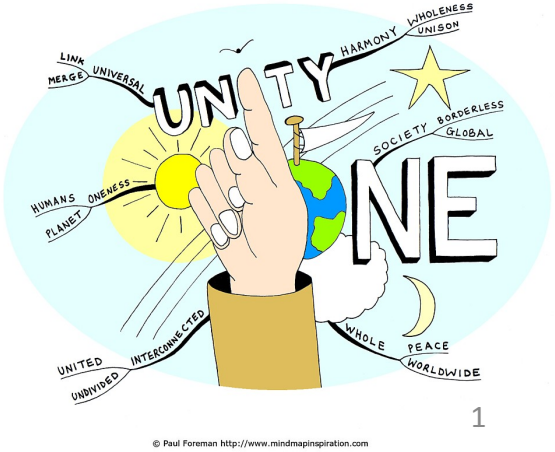
Slides at www.gilb.com/downloads

10 minute lightening talk, 10:05 to 11 session

Oslo, Radisson BLU Hotel, Holbergs Plass

www.smidig.no

Smidig 2010



´1´ 4 U2

One **Bono U2**

´One´ lyrics

Is it getting better?

Or do you feel the same?

Will it make it easier on you now?

You got someone to blame

You say, one love, one life

When it's one need in the night

One love, we get to share it

Leaves you baby if you don't care for it

One love, one blood

One life, you got to do what you should

One life, with each other

Sisters, brothers

One life but we're not the same

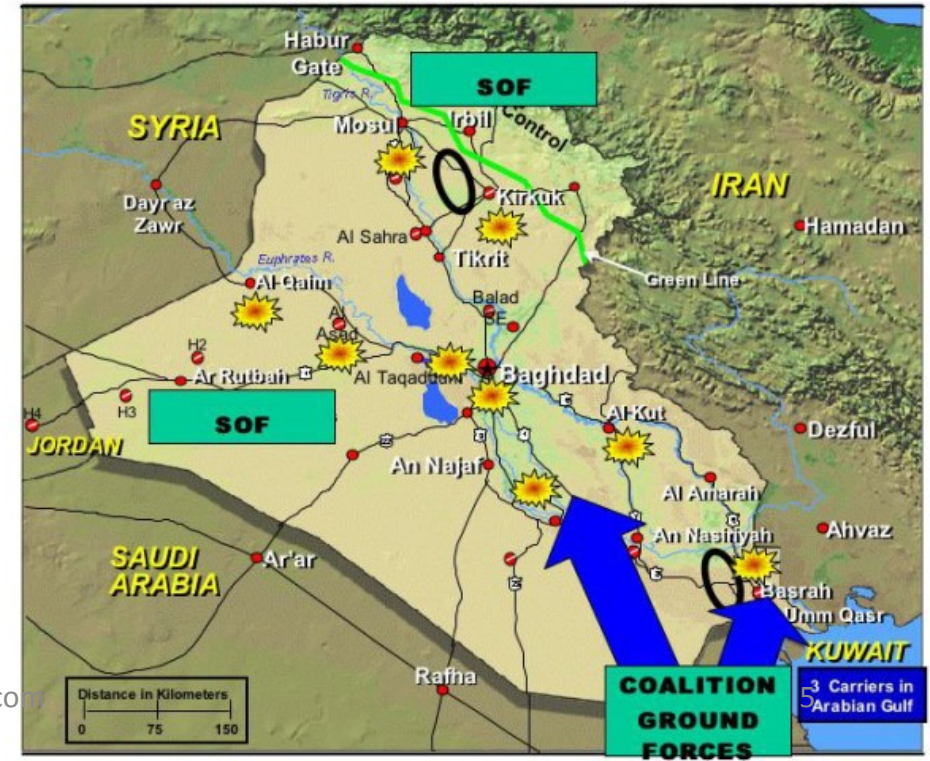
We get to carry each other, carry each other

One

One

A True War Story
111111 in practice

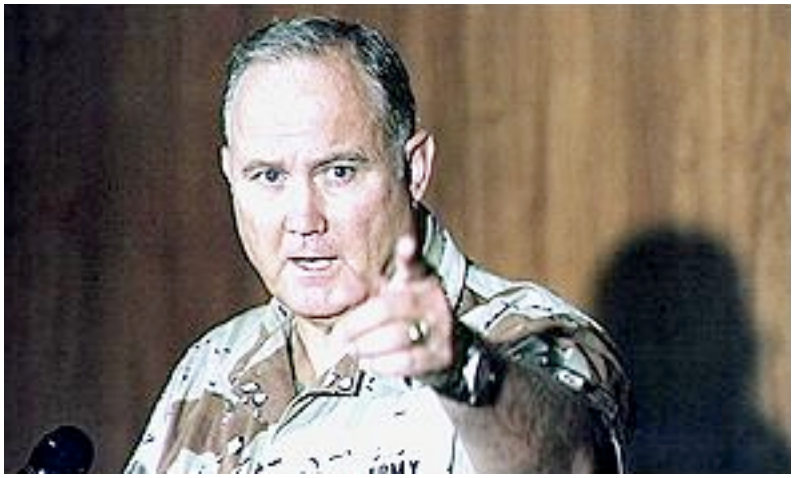
- How we found a value delivery step ´next week´
  - a week of value delivery beat 11 years of waterfall method



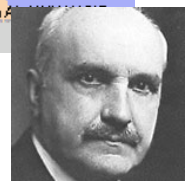
The ***Persinscom IT System*** Case

Commanding General
Norman Schwartzkopf

´Stormin´ Norman´



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

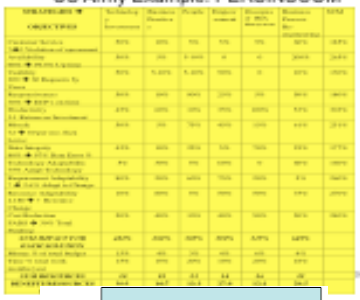


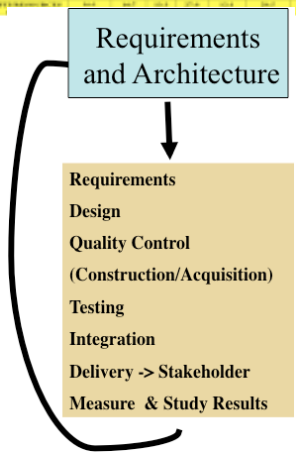
A Man Who understood that
"a bird in the hand is worth two in the Bush" <-tsg

The ´Evo´ Planning Week at DoD

- **Monday**
  - Define top Ten critical objectives, quantitatively
  - Agree that thee are the main points of the effort/project
- **Tuesday**
  - Define roughly the top ten most powerful strategies
  - for enabling us to reach our objectives 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?
  - A tool for decomposing the value steps and seeing best value for resources
- **Thursday**
  - Divide into rough delivery steps (annual, quarterly)
  - Derive a delivery step for 'Next Week'
- **Friday**
  - Present these plans to approval manager (Brigadier General Pellicci)
  - get approval to deliver next week
  - (they can´t resist results next week!

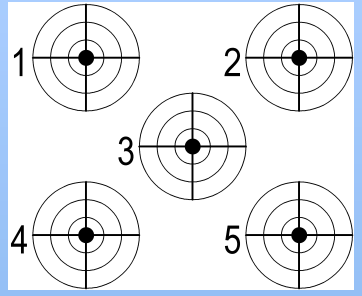
US Army Example: PERSINSCOM





US Army Example: PERSINSCOM: Personnel System

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: PERSINSCOM: 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

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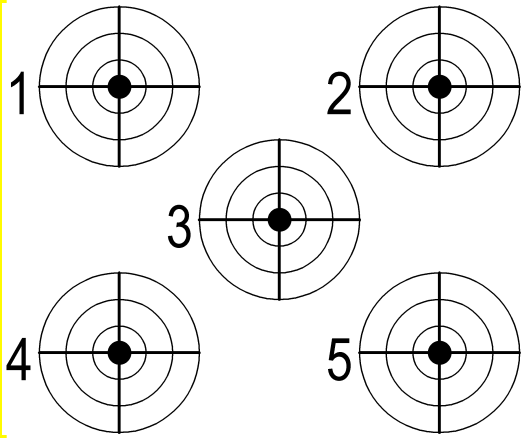

US Army Example: PERSINSCOM: Personnel System

STRATEGIES ➔ OBJECTIVES	Technology Investment	Business Practices	People	Empow-erment	*Principles of IMA Management*	Business Process Re-engineering	SUM
Customer Service ?➔0 Violation of agreement							
Availability 90% ➔ 99.5% Up time							
Usability 200 ➔ 60 Requests by Users							
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Requirement Adaptability ? ➔ 2.6% Adapt to Change							
Resource Adaptability 2.1M ➔ ? Resource Change							
Cost Reduction FADS ➔ 30% Total Funding							

Tuesday

The Top Ten

Critical Strategies

For reaching the

←objectives

Were decided

A Strategy (Top Level of Detail)

Technology Investment:

Gist: Exploit investment in high return technology.

Impacts: productivity, customer service and conserves resources.

Wednesday: Sanity Check
Day 3 of 5 of 'Feasibility Study

- **We made a rough evaluation**
  - **of how powerful our strategies might be**
  - **in relation to our objectives**

- **Impact Estimation Table**
  - **0% Neutral, no ± 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	Empow-erment	*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

Persinscom **Impact Estimation** Table:

Designs

Design Ideas ->	*Technology Investment*	*Business Practices*	*People*	*Empowerment*	*Principles of IMA Management*	*Business Process Re-engineering*	*Sum Requirements*
Requirements	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	45%				100%	53%	303%
3:1 Return on Investment	50%				15%	61%	251%
Morale 72 <-> 60 per month on Sick Leave							
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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 of Performance	*482%*	*280%*	*305%*	*390%*	*315%*	*649%*	
Money % of total budget	15%	4%	3%	4%	6%	4%	36%
Time % total work months/year	15%	15%	20%	10%	20%	18%	98%
Sum of Costs	*30*	*19*	*23*	*14*	*26*	*22*	
Performance to Cost Ratio	*16:1*	*14:7*	*13:3*	*27:9*	*12:1*	*29:5*	

R→ D Impacts

Impact Estimation: Value-for-Money Delivery Table

STRATEGIES ➔ **OBJECTIVES**	Technology Investment	Business Practices	People	Empow-erment	*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%
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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 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	Empow-erment	*Principles of IMA Management*	Business Process Re-engineering	SUM
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Next weeks Evo Step?

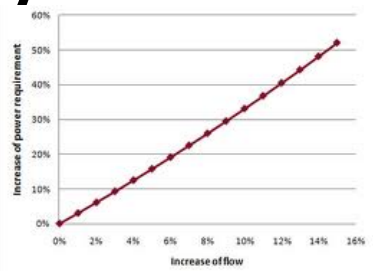
- **“You won’t believe we never thought of this, Tom!’**

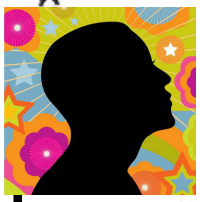
- **The step:**
  - **When the Top General Signs in**
  - **Move him to the head of the queue**
    - **of all people inquiring on the system.**

1 1 1 1 1 1 Unity

– 1% increase at least

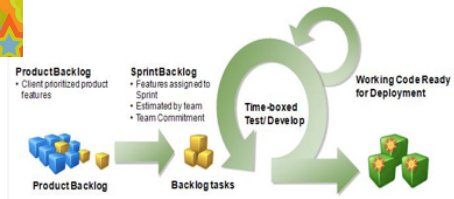
– 1 stakeholder



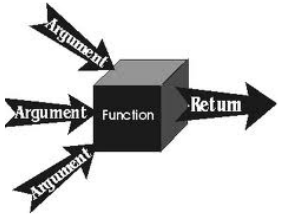


– 1 quality or value

– 1-week delivery cycle



– 1 function focus



– 1 design used

"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

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.

http://www.gilb.com/tiki-download_file.php?fileId=41

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 th style.

9• Don't be afraid that the customer won't like it. *If* you are focu *they want*, then by definition, *they* should like it. If you are not,

10• Don't get so worried about "what might happen afterwards' 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*, where they *really* 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.

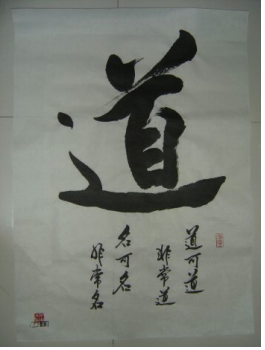
18• If *you* can't think of some useful small cycles, then talk directly with the real 'customer' or end user. They probably have dozens of suggestions.

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

Rene Descartes on Focus

- **"We should bring the whole force of our minds**
  - **to bear upon the most minute and simple details**
  - **and to dwell upon them for a long time**
  - **so that we become accustomed to perceive the truth clearly and distinctly."**
- **Rene Descartes, Rules for the Direction of the Mind, 1628**



Tao Te Ching (500BC)

- **That which remains quiet, is easy to handle.**
- **That which is not yet developed is easy to manage.**
- **That which is weak is easy to control.**
- **That which is still small is easy to direct.**
- **Deal with little troubles before they become big.**
- **Attend to little problems before they get out of hand.**
  - **For the largest tree was once a sprout,**
- **the tallest tower started with the first brick,**
- **and the longest journey started with the first step.**

- **From Lao Tzu in Bahn, 1980 (also quoted in Gilb, Principles of Software Engineering Management page 96), Penguin book**

Takk !

- www.Gilb.com