

# CREATIVITY REQUIRES AGILITY

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by Tom Gilb


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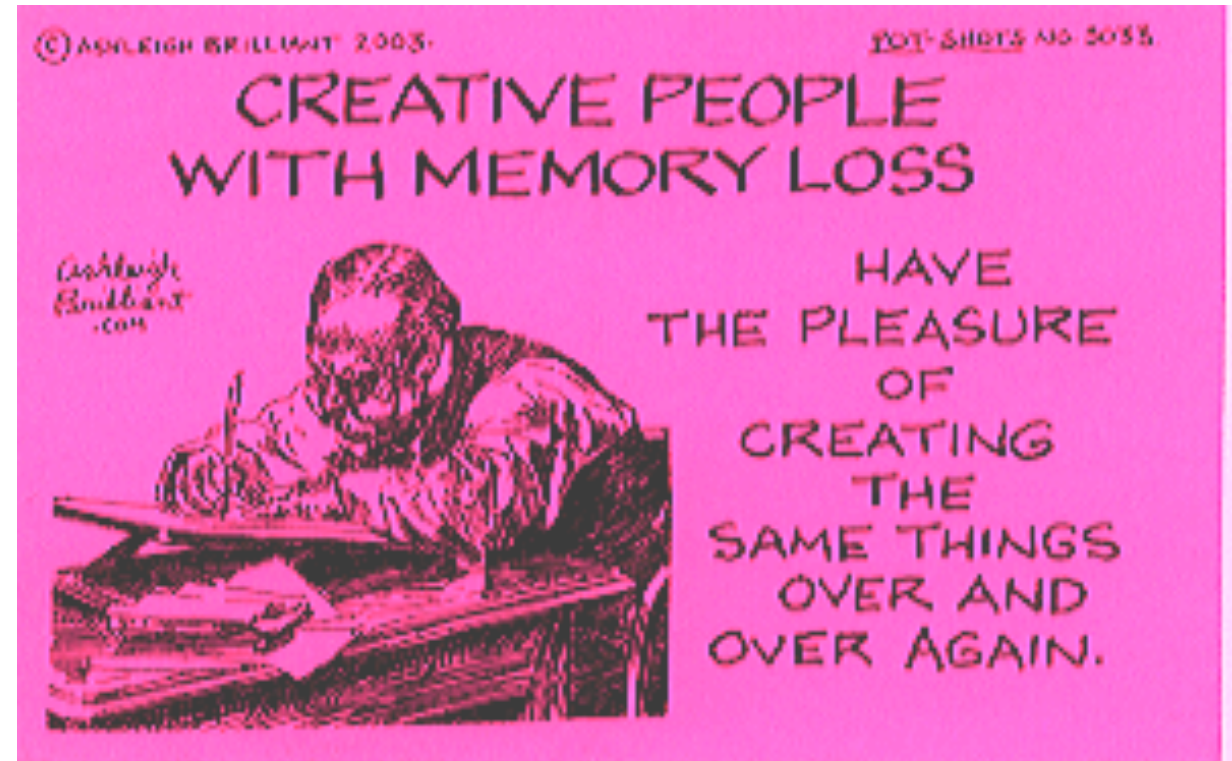


If you can find smart ways to  
deliver values at lower costs,  
then you are truly creative.

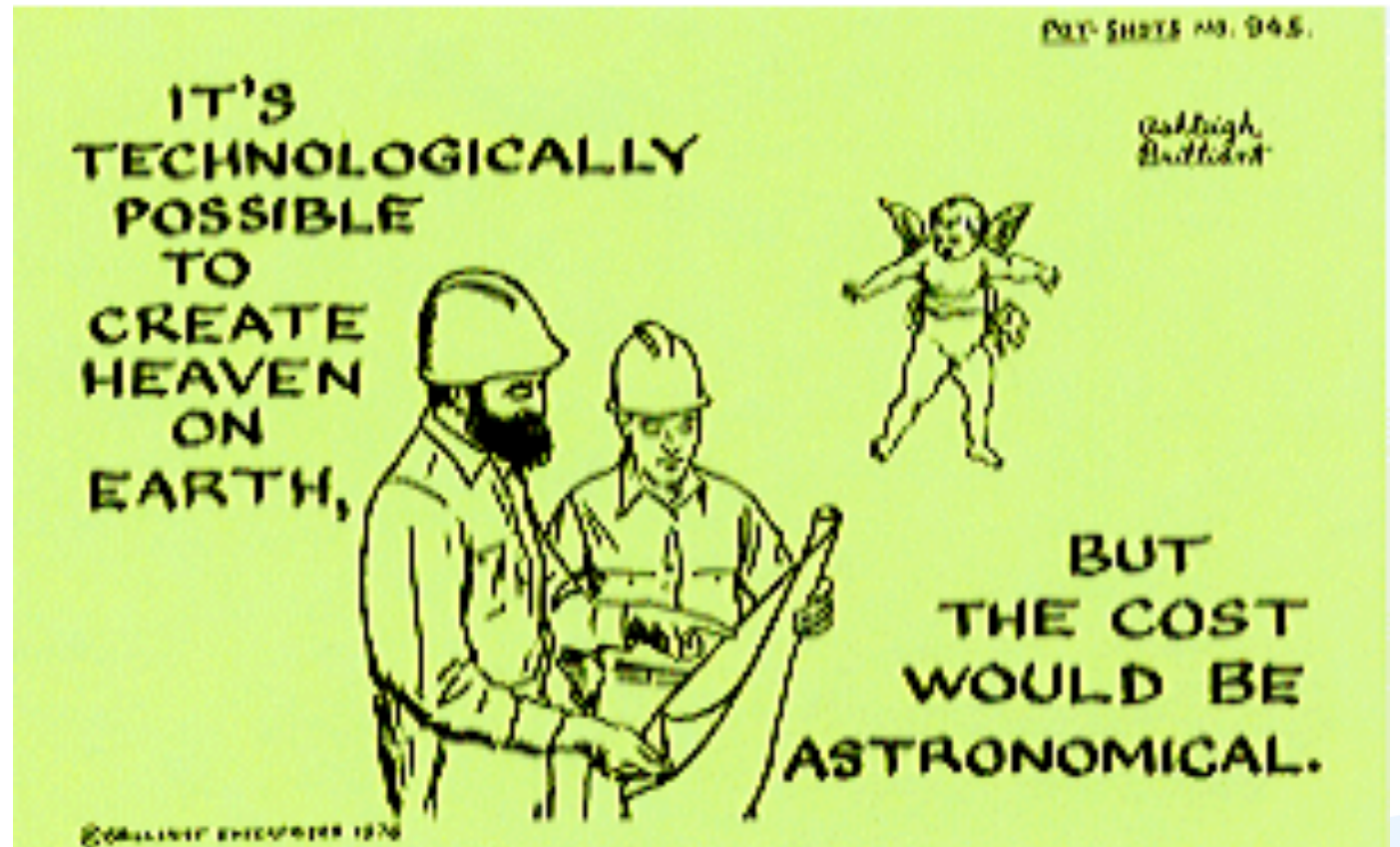
# What is creativity?

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‘Creativity’ is (the ‘Practical Purposeful’ kind): a systematic *process*, of finding and validating solutions, to a stated problem, regarding ‘better values’, and ‘lower costs’.

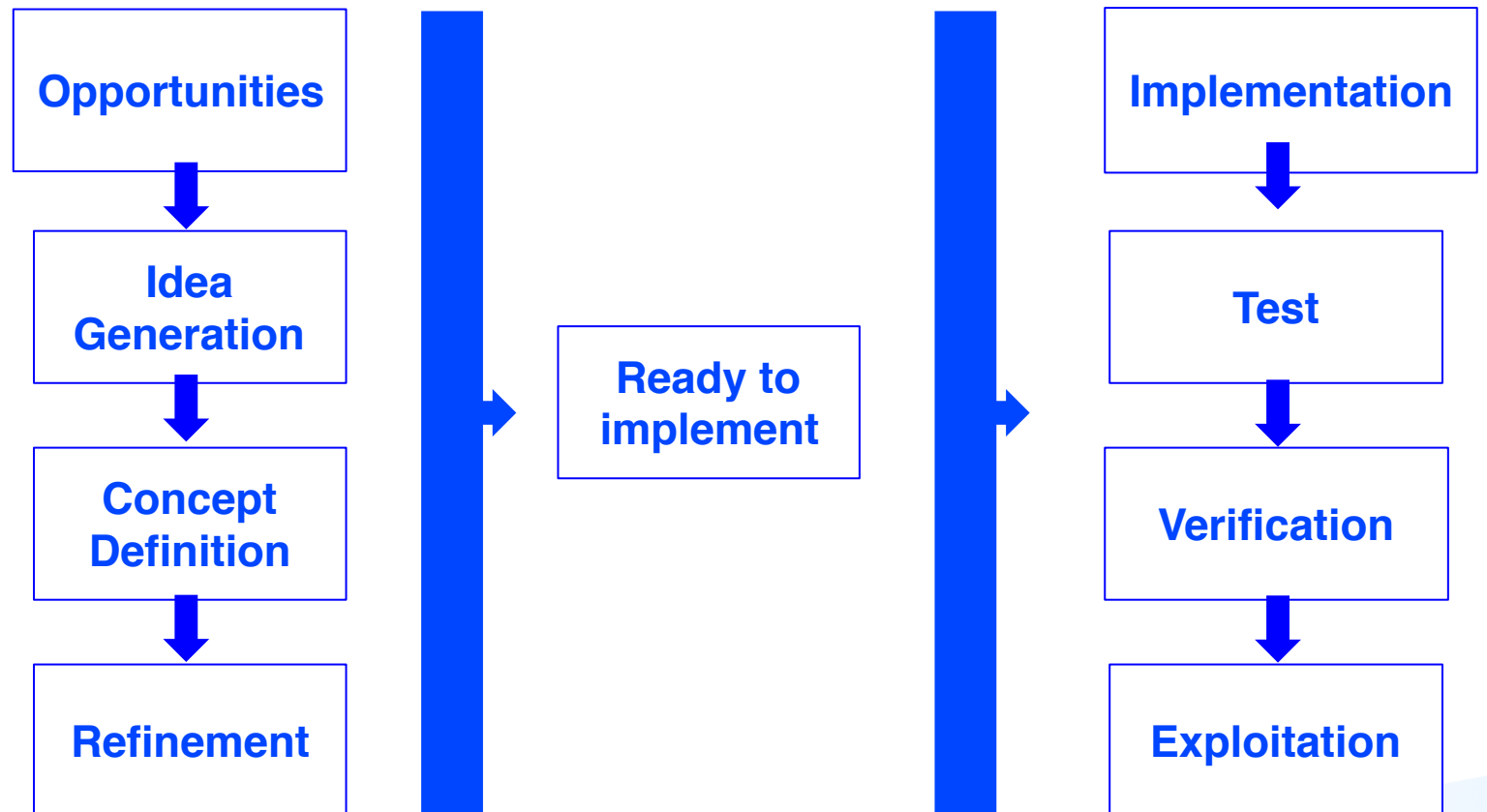


Innovation is when your  
'value to cost ratio' is  
'ten times better', then  
you are *really*  
'innovative'.



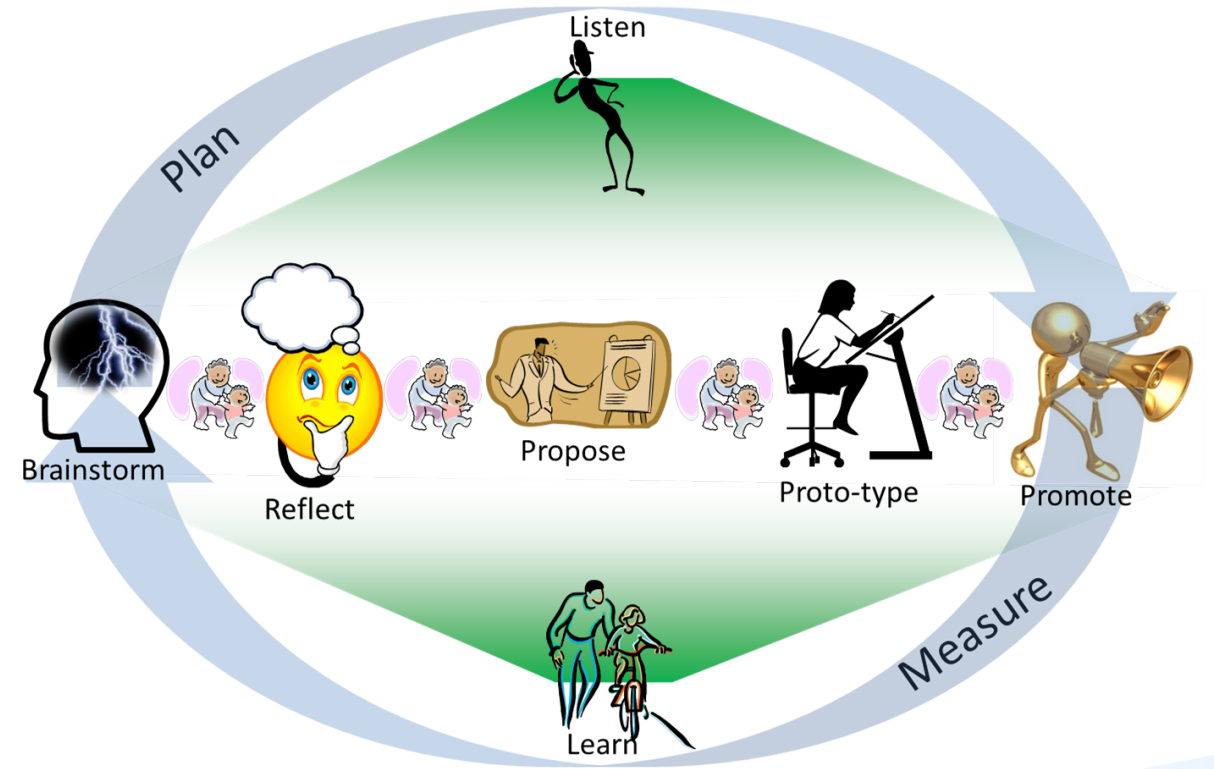
# Creativity and 'Agile'

Rapid feedback every week drives your creative motivation.



# I Define 'Agile' as

Any set of tactics that enable a prioritised stream of useful results, in spite of a changing environment.



“Every successful person has had failures but repeated failure is no guarantee of eventual success.”

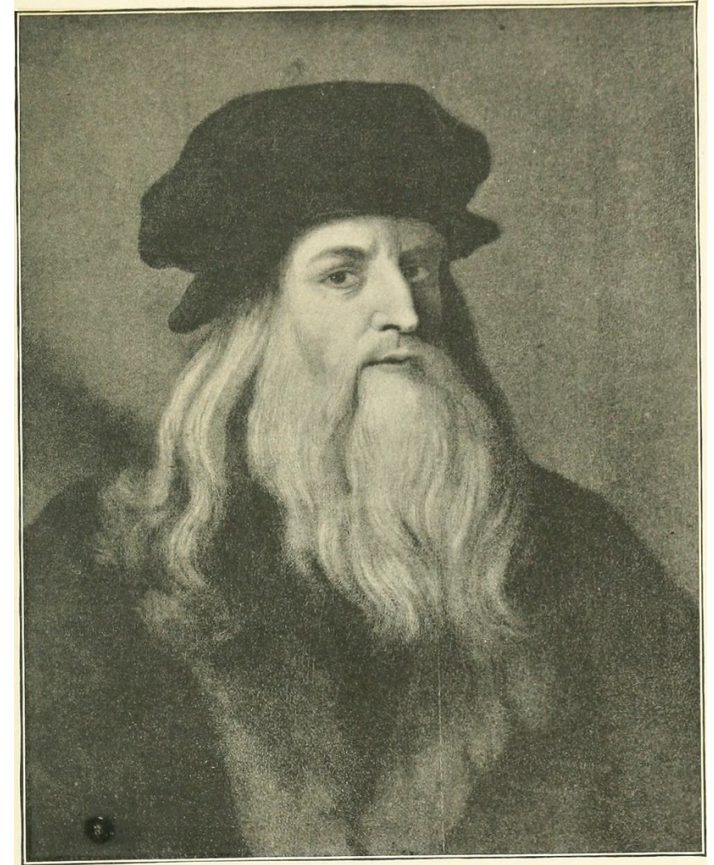
——— *Eric Hoffer*



# Da Vinci was 'Agile'

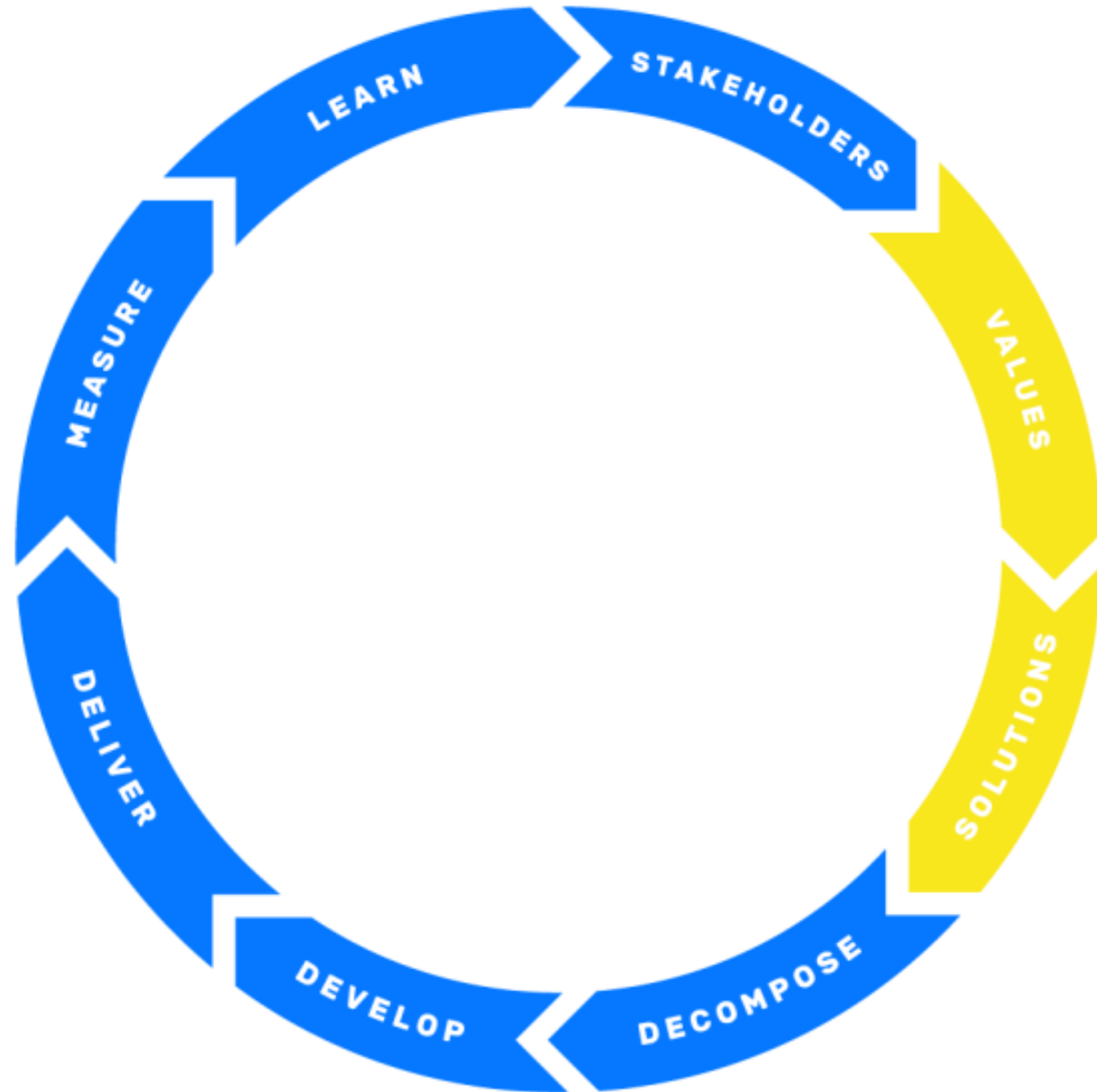
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”Commitment to test knowledge through experience, willingness to learn from mistakes. Learning for one’s self, through practical experience”



# Value Delivery Cycle

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Team Communication is much better with frequent measures of real results.



Clear 'values and constraints' define your 'creativity targets'

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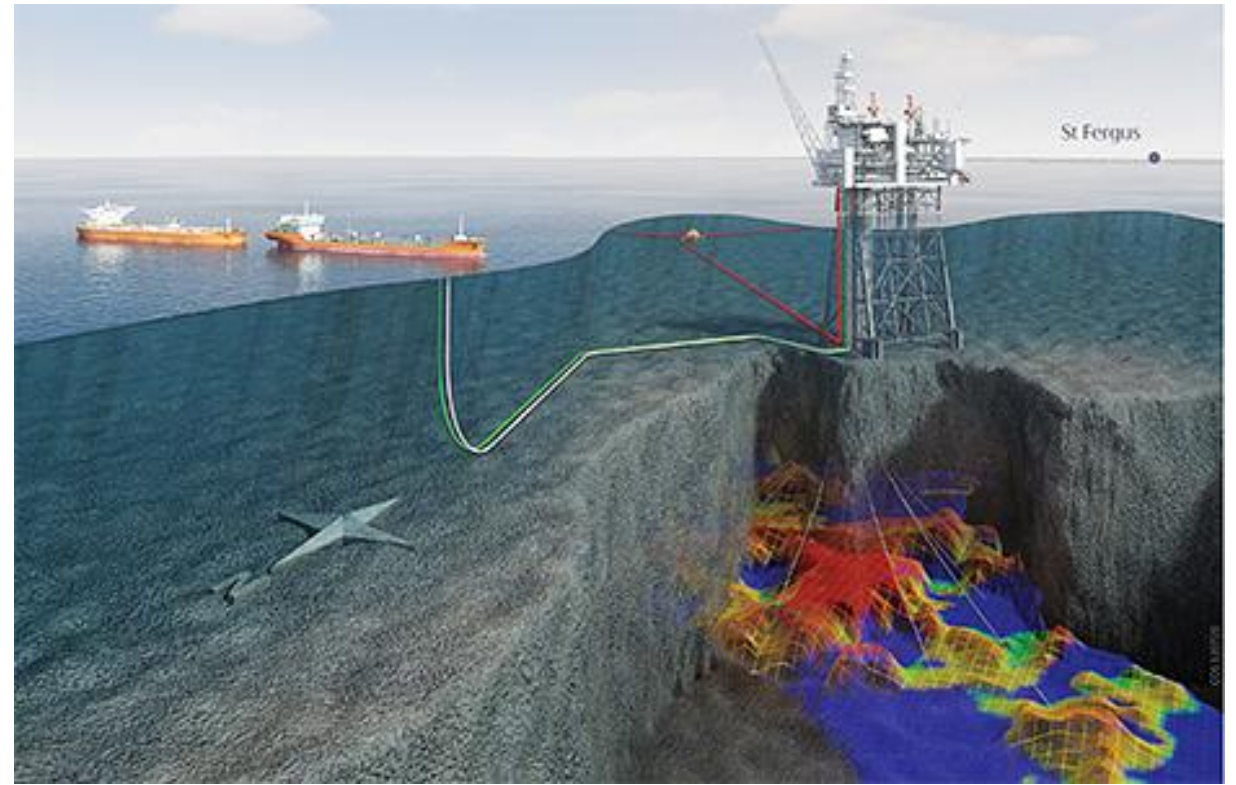
We want 'Higher Security'! is a useless objective to stimulate creativity

We want '95% of hackers to be detected within 5 seconds' is a much clearer way to stimulate creative processes

Why?

The CEO said  
"Robustness is an  
essential system  
requirement"

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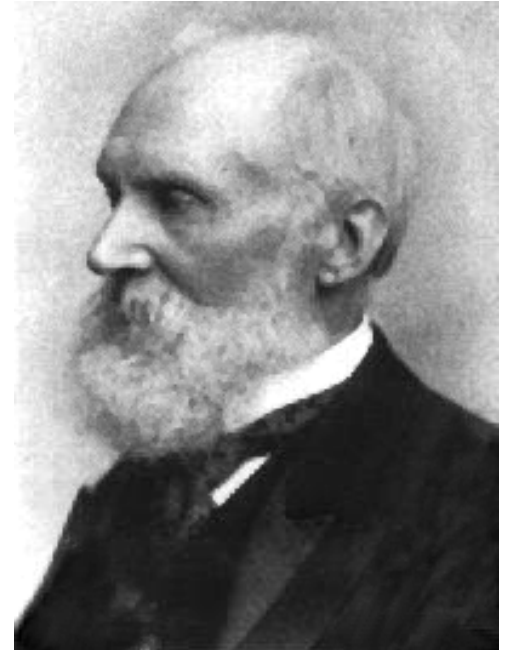


This lack of clarity cost them \$100,000,000  
and 8 years of lost time, with 50 people on  
the project

” I often say that when you can measure what you are speaking about, and express it in numbers, you know something about it;

but when you cannot measure it, when you cannot express it in numbers, your knowledge is of a meagre and unsatisfactory kind”

——— *Lord Kelvin,  
1893*



# Security Value Quantification with Stakeholders

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## AMBITION

to reduce terrorist attacks,  
and identify potential  
terrorist attacks, and  
regulate cyber information

## SCALE

Number Negative [Effects] on  
[Stakeholders] from [Attack Types]  
under [Conditions] in [Places] per  
year for given [Arena]

## EXAMPLE

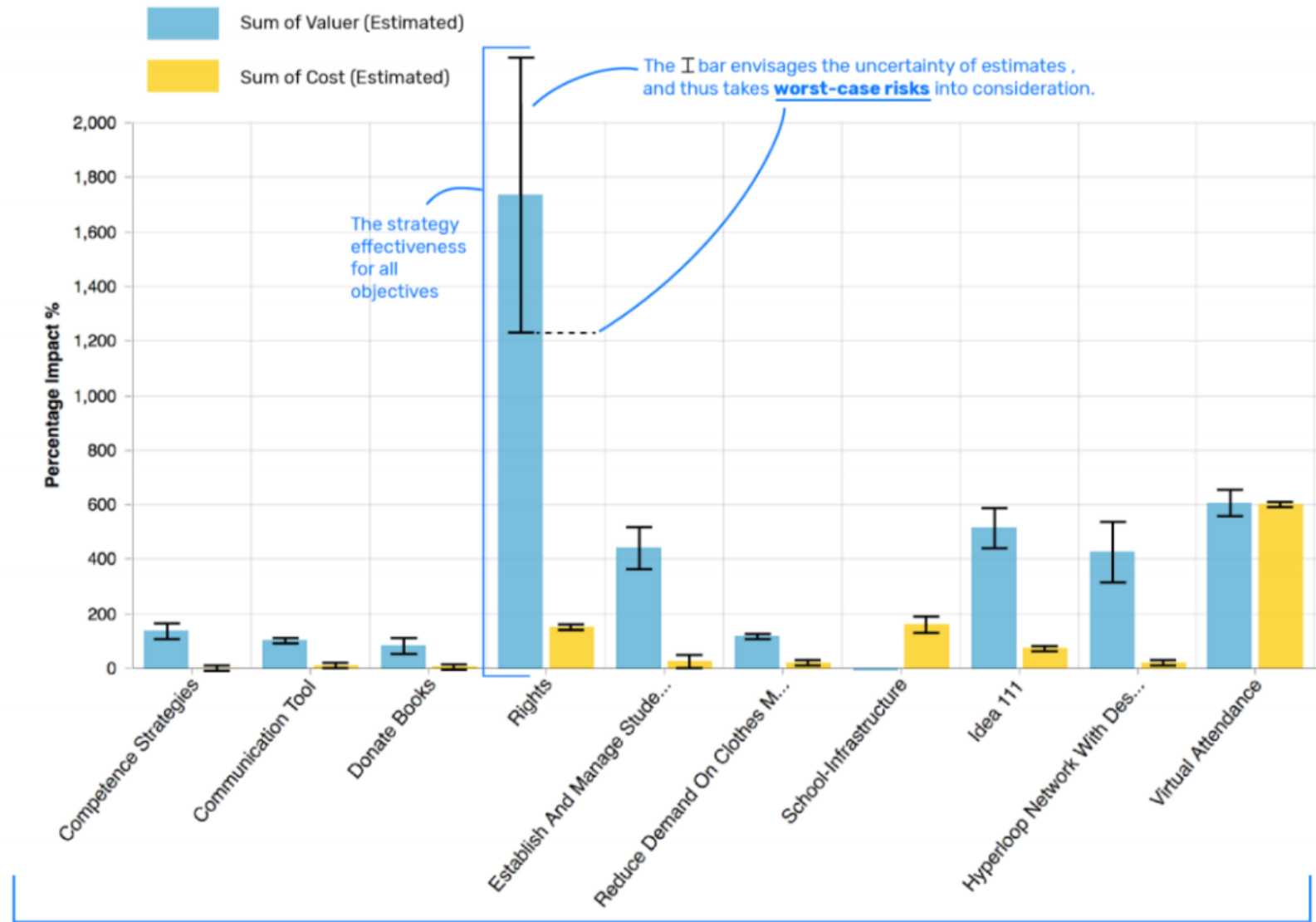
Attack Types {Vehicle  
Attack, Knife Attack, Gun  
Attack}

Dimensions model reality: who, where, when, conditions

# Estimates of design impacts tell you the best options

How much % of what we want to achieve do we achieve by this solution?		MEANS (various strategies) Possible solutions to achieve it.			Could we get all, within the budgets of time and cost?
At what cost?		Design Idea #1	Design Idea #2	Design Idea #3	Total Impact
ENDS What to achieve?	Objectives - value 1 - value 2 - ...	Impact on Objective	Impact on Objective	Impact on Objective	Sum of Impacts on Objectives
Costs to achieve it.	Resources - cost 1 (time) - cost 2 (money) - ...	Impact on Resources	Impact on Resources	Impact on Resources	Sum of Impacts on Resources
Return on investment or profitability	Benefits to Costs Ratio	$\frac{\text{Benefits}}{\text{Costs}}$	$\frac{\text{Benefits}}{\text{Costs}}$	$\frac{\text{Benefits}}{\text{Costs}}$	

# Simple presentation on overall value for costs of each strategy or design



”True wisdom is knowing  
what you don't know”

—— *Confucius*



What items here help us to ‘know what we do not know?’

The numeric relation between ends and means.  
And...

	MEANS	MEANS	MEANS	
	Design Idea #1	Design Idea #2	Design Idea #3	Total Impact
Objectives - value 1 - value 2 - ...	Impact on Objective	Impact on Objective	Impact on Objective	Sum of Impacts on Objectives
Resources - cost 1 (time) - cost 2 (money) - ...	Impact on Resources	Impact on Resources	Impact on Resources	Sum of Impacts on Resources
Benefits to Costs Ratio	<u>Benefits</u> Costs	<u>Benefits</u> Costs	<u>Benefits</u> Costs	

# My Principles of creativity

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1. Practical creativity must have a *defined purpose*, which is *objectively measurable*.
2. Practical creativity must operate in *multiple-purpose dimensions*, at the *same time*.
3. The result of practical creativity depends on the *clarity of the stated objectives*.

# My Principles of creativity

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4. The result of practical creativity, depends on the nature of the *creativity* process, and the *agents employed* to do it.
5. Any creativity objectives initially defined, will *tend to change*, as time goes on, due to changed perceptions, changed external world, and incremental experience with delivering partial results.
6. The practical creative process follows the rules of any *similar* “design”, “planning” or “engineering process”: it is merely a variation on them.

# My Principles of creativity

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7. The “net *value*” of an additional idea, for solving a defined problem, can be *estimated*, in relation to remaining unsatisfied objectives. How far will the idea move us in the direction of our final objectives, from where we are at the moment?
8. The degree of yet-unsatisfied objectives, for a problem being solved, determines the *priority* needed for continued creative effort. This (degree of yet-unsatisfied objectives) is a function of previously accepted, or applied, ideas; and of any changed objectives, since they were originally defined.

# My Principles of creativity

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9. Seemingly “bureaucratic”, rigorous idea *management processes can stimulate, protect and justify creative effort*. 'Total freedom of thought' is not necessarily the best way to get useful creativity.
10. If a creative effort fails to satisfy even a single real, defined or not, *critical success factor ‘Tolerable Level’* then it is, in practice, probably a *total failure*. It serves little useful purpose.

# Innovative Creativity



'Practical Purposeful Innovative Creativity  
using Systems Thinking'

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