TOM GILB

Value Planning:

Top Level Vision Engineering

How to communicate critical visions and values quantitatively.

Using The Planning Language.

The One-Page 'Value Planning' Book.

Why? I believe your time is valuable. I believe that if someone is an expert or master of a subject, they can write it down in one page or less. So, to potentially save you the time, of reading the rest of the book, I'll try to do a 1-page version right here and now. If you need more detail later, you know where to find it.

Sound Bite

> **Deliver Real Stakeholder Value Now**

The One-Sentence Summary.

Value Planning means you will elicit and clarify critical stakeholder values quantitatively, and prioritize delivering those values, as soon as possible.

The One Paragraph Summary.

1. **STAKEHOLDERS**: Identify your most critical stakeholders.
2. **OBJECTIVES**: Identify the smart levels of their most critical value improvements.
3. **STRATEGIES**: Identify potential strategies for delivering planned value levels to stakeholders, at lowest cost and risk.
4. **SMALL STEPS**: Decompose strategies into suitably smaller deliverable increments.
5. **DELIVER VALUE**: Attempt to deliver measurable value to some stakeholders.
6. *LEARN*: Measure results and costs; then decide if you are on track, or need to change something. *Continue the process until all goals reached.*

The Rest-of-the-Page Summary.

1. We will make use of our Planning Language, called 'Planguage' ('PL').
2. The central capability of Planguage is that it can be used for *any system* of 'product' or 'service', at any level of abstraction or detail.
3. Planguage is capable of expressing *all results, improvements, values and qualities quantitatively.*
4. Planguage can help you plan, estimate and track delivery of *all costs* and resources.
5. Planguage will help you keep numeric accounts of *multiple critical values*, and corresponding *multiple critical resources*, so you can manage value for money; i.e. the *efficiency* of planning, decision-making and contracted result deliveries.
6. Planguage is extremely *risk* conscious at the level of every aspect of planning that might involve risk to your successful value delivery.
7. Planguage not only helps with planning values and costs, but is consequently used to manage practical *implementation*, learning and *feedback* from plan application.
8. Planguage will help you *align* and connect plans at many *related levels* of consideration, from top management to the most detailed level of planning you need.
9. Planguage enables you to *measure the quality of planning*, and to set a release threshold for plans.
10. Planguage has tools to *automate* plan specification, and to integrate your updated decisions and knowledge.

1. My TEDx Talk http://tinyurl.com/GilbTedx, "All Qualities Can Be Quantified". 18 minutes.
2. **Value Manifesto** http://concepts.gilb.com/dl898
3. Value Planning: leanpub.com/ValuePlanning, Value Planning book 5 minute video https://www.gilb.com/store/2W2zCX6z
4. Δ : "Value Planning Basics" For Advanced Management Results . A 23-page book.
 http://concepts.gilb.com/dl925

Introduction

This is a very short book, in 5 Parts.

It is suitable, we hope, for a manager, planner, trainer or consultant, who wants to get a practical, but non-superficial feel, for our methods of value quantification.

For those who wish far more detail (expert and Master level), and also who want to provide a tool for the manager, who wishes to spread these ideas in their organization, we also currently provide the comprehensive 10-Chapter, 100 Section Appendix, as a digital accessory [10].

CONTENTS

Part 0. Vision Engineering: Introduction

The most visionary visions of top executives and corporations can usefully be *clarified*, primarily through *quantification*.

Vision Engineering:
How to support your core business vision by much clearer practical plans and actions.

Introduction
In the best-selling management book 'Built To Last' [1] a convincing case is made that long-term successful organizations ("Visionary Companies") will derive their shorter-term objectives, strategies, and policies from the Core Values and Core Purpose (Core Ideology).

They need to make sure that all consequent activity is strongly aligned to these core values, and the core purpose.

This book will outline a set of specific practical 'management engineering' tools, for articulating the Core-supporting objectives and strategies, and for making sure that they are, in fact, aligned to the 'core'.

We hope the knowledgeable reader will find the tools *useful* and *practical*.

> ***But setting up and constraining the solution space
> and constructing the measure of performance
> is the wicked part of the problem.***

[Dilemmas in a General Theory of Planning', Rittel, H., and M. Webber]
Quote:Part 0.

Finally: although this book and these methods will give *some* help in determining what the problems to be solved by planning actually *are*; this is not primarily a method for solving Wicked Problems, where we have no certainty at all in knowing what our true objectives should be.

Our focus is from the point where we have *some* notion of objectives; then clarifying them, and delivering them.

Here is a summary of the concepts of 'Core Ideology'.

Core Ideology (Core Values + Core Purpose)
Core ideology has the *highest priority* in planning, since "Once you're clear about the core ideology, you should feel free to change absolutely *anything* that is not part of the core ideology." [1, p.231]

Core Values
Core Values [1] are 'a handful of basic ingrained beliefs' about how to run a given organization. They are almost unchangeable for the lifetime of the organization. They are the strongest guidelines that all other activity in the organization must try to align with. They are the highest priority. The 'core values' can be viewed as **'constraints'** on planning and activity. Anything that violates these constraints is not acceptable; is out of 'alignment' with the core values.

Values Are Far More Than Profit and Finance

Julie Hanna brought out this point nicely in Wired (UK, June 2016)

"While appealing in its simplicity, short-term profit maximisation has been equated with creating shareholder value and often comes at the expense of sustainable value creation for shareholders and stakeholders alike."

"Nine out of ten [Millenials] believe that success should be measured by more than financial performance. For them, the idea of going to work with the singular goal of maximising profits and shareholder value is pointless and abhorrent."

Hanna quotes Astro Teller:[**https://en.wikipedia.org/wiki/Astro_Teller**]

"Purpose is the point. Profit is the result. It's the natural order things.

Greater value creation leads to more profit than trying to maximise profit as an endgame."

and she cites Twitter co-founder Ev Williams:

"Profit allows you to reinvest in purpose."

Julie
Hanna *Charlie Surbey*

So, if we accept this (purpose before profit), it becomes critical that we master that art of *clearly expressing these non-financial values*: so that they are not pushed aside by the 'unbalanced' financial side of the Scorecard. This book is dedicated to that broader art of value management.

Core Values Examples [1, 4]

Sony Core Values**:** [1, p.237]
• *Elevation of Japanese national culture and status.*
• *Being a pioneer – not following others, but doing the impossible.*
• *Respect and encouragement of individual ability and creativity.*

Merck Core Values: [1, p.236]
•*Corporate social responsibility.*
•*Unequivocal excellence in all aspects of the company.*
•*Science-based innovation.*
•*Honesty and integrity.*
•*Profit, but profit from work that benefits humanity.*

Core Purpose
A Core Purpose is the most fundamental 'why?' the organization exists.

A Core Purpose can be viewed as the most fundamental *objective*; the most fundamental *measure* of progress or improvement; the measure that all supporting strategies intend to improve.

We must always aim to improve in that dimension, while keeping loyal to our core value constraints.

Core **Purpose** Examples [1, 4]

Sony: *"To experience the sheer joy of innovation and the application of technology for the benefit and pleasure of the general public".*

Merck*: "To preserve and improve human life".*
All of our actions must be measured by our success in achieving this goal. [1, p.236. p.89]

Hewlett Packard: "To make technical contributions for the advancement and welfare of humanity"

Wal-Mart: "To give ordinary folk the chance to buy the same things as rich people"

Walt Disney: "To make people happy."

"It's not hard to make decisions when you know what your values are."

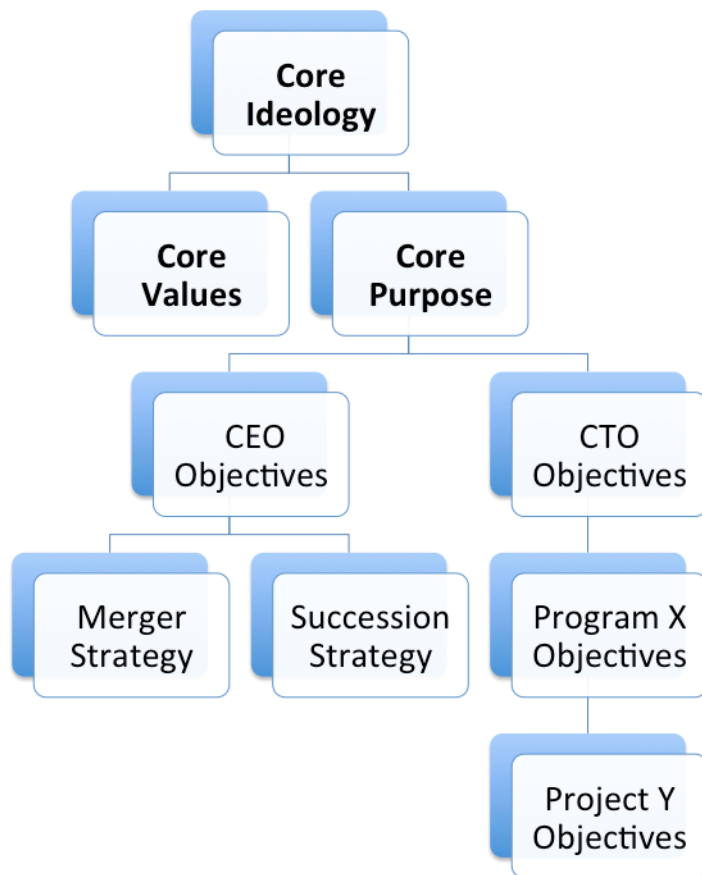— Roy Disney (Famous for firing top executives based on these values)

Figure A. Core Ideology.

Notice that the core purpose serves *two distinct areas*.

It defines a core **mission** (what we do) like 'make people happy'.

But it also implies that 'improvement is better', within constraints (core values). So it gives a potentially measurable '**performance** dimension'.

The more people made happier, the better. The more total happiness (people x degree of happiness) the better. The less pain or disease, the better.
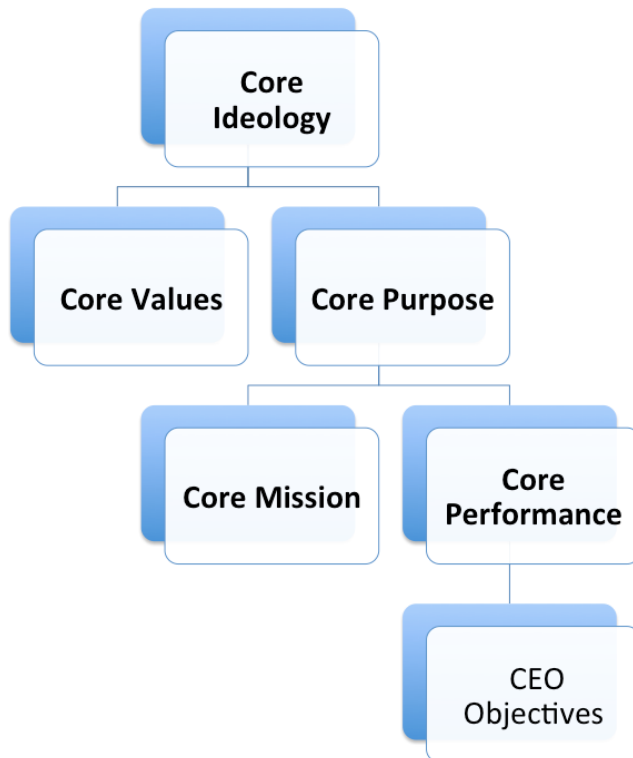
*Figure B The 2 components of Core Purpose. **What** you are (mission), and what you want to **improve** (performance).*

Summary: Core Ideology

The reader is referred to the 'Built To Last' [1, 4] literature for substantial detail on core ideology. We assume the reader grasps the basics, and is motivated to look at some potential tools for management planning and action, based on the platform or framework of a 'Core Ideology'.

Our main purpose in *this* book is

- to show some practical ways to make management plans clearer (to plan so *readers 'cannot misunderstand'*),

- to show how to check the quality of planning (*are plans unambiguous, complete, consistent, powerful?*), and

- to show how to follow up the plans in practice (*do they work?*)

Part 1. Our 'Vision Engineering' Objectives.

Clarifying Core Ideology
We can begin with the core ideology statements themselves. It might be healthy to increase the *clarity* and *intelligibility* of the core *value* statements, and the core *purpose* statements, themselves.

This can either be done as a *clarification*, without changing the original statements themselves – they may be somewhat 'holy' and traditional – or you might find it advantageous to *directly modify* them for clarity.
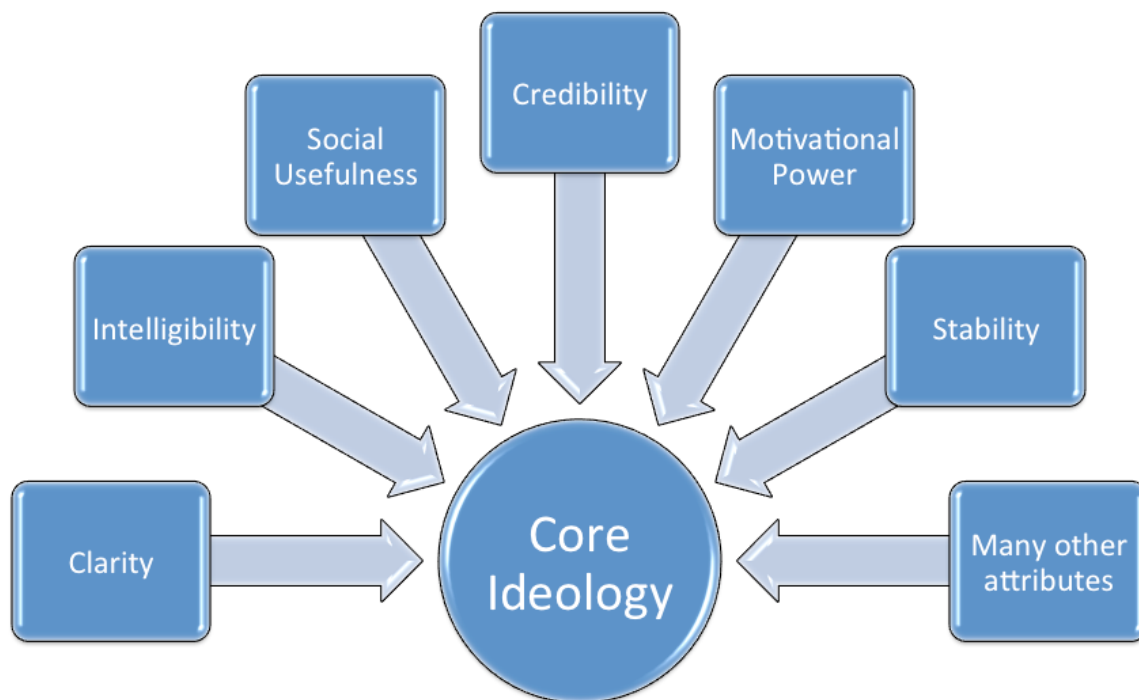

Figure 1 A. Some attributes of a Core Ideology.

Clarifying a Core Value Statement

Take for example a core *value* statement:

3M [1, p.68, p.152-3] **"Tolerance for Honest Mistakes"**

Anyone could reasonably ask:

• How much 'tolerance'?

• What does 'honest' mean?

• What is a 'mistake'?

No doubt, the corporate practice itself, and senior employees, can answer these questions in practice.

But let us say that we wanted to clarify the 3M Core Value *even better.*
We might need to clarify it because of rapid corporate growth, in distant cultures – so people got it better, faster?

We might also want to clarify as a better basis for deriving more-detailed plans and practices.

We might rewrite the Core Value, or provide helpful interpretation and commentary.

Why?

A useful approach to clarification is to ask 'why?'

In this case the reasons (for the 3M 'tolerate honest mistakes') seem to be to *encourage experimentation*, so that improved ideas are more likely to emerge, than if people were afraid of being criticized for failed experiments.

So we could rewrite the core value, in order to get *nearer* the real 3M intent:

> *"Judge efforts on their <u>useful outcome</u>, not on necessary experiments to get there."*
>
> *"Judge <u>results</u>, not process".*
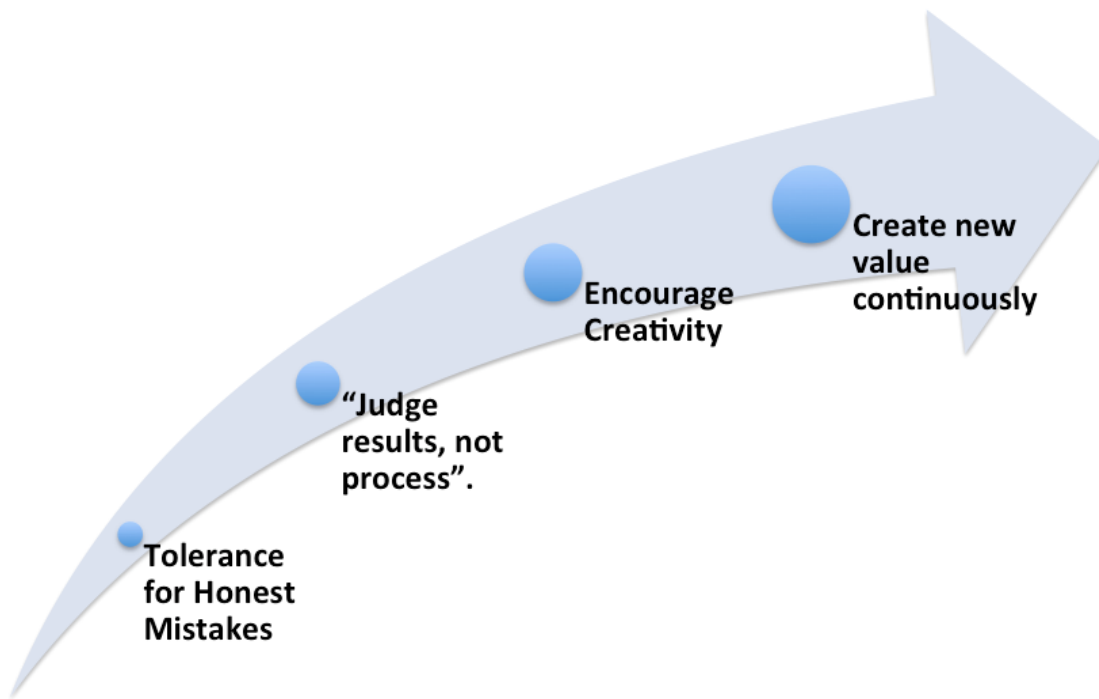
Figure 1 B Asking 'Why?', multiple times, is not only a practical way to 'clarify' a core value. It might easily lead to your own recognition, that you need to reformulate your core values at a higher level. What you had originally, might have been but one means (tolerate mistakes) to the real ends (create value). Here is a speculative example.

There are a large number of other possible methods for clarification of core values, and indeed any planning statement, at any level. More follows in the rest of this book, and its references.

The main point is that no matter how 'hallowed' the statement is ("All men are created equal.") you should consider as your first step, some clarification of the core statement itself, maybe a real 'elevation' to a higher level of purpose: it is 'core', right? So it may be worth it.

The penalty, if you fail to clarify, might be that **all other** critical planning will be based on *misinterpretations* of the core! The cost to get it right is small; like an hour to a day of effort.

Clarifying a Core Purpose
It is arguably *very* critical to have a rock-solid, crystal-clear Core *Purpose* Statement as the basis for further planning.

Take for example: Merck [1930s, 1, p.236] **"To preserve and improve human life"**

This is intended as the fundamental performance measure of all corporate activity for a pharmaceuticals company. It is of course constrained – and thus partly defined - by their core *values* (keywords: responsibility, excellence, science, honest, profit).

If someone found that their pharmaceutical technology could be used for *animals or plants* – does the 'human life' idea apply, or disqualify the product area?

If they could extend human life for people *living in a permanent coma*, does that count, as within their core purpose?

If they *found psychological, mechanical, electronic or religious means, or other 'services',* for improving the human life; are these means valid? Or is there some constraint about sticking to the drug business, even if other available means are more cost-effective?

I can't see where it says, *strategy constraint 'drugs only'.*

Let us look at some possible Merck 'clarifications' for
"To preserve and improve human life":

'To improve life quality by _any means_.'

'*To <u>provide products</u> to improve life quality.*'

'*To develop <u>knowledge</u>, and apply it, to get improved human mental and physical life quality.*'
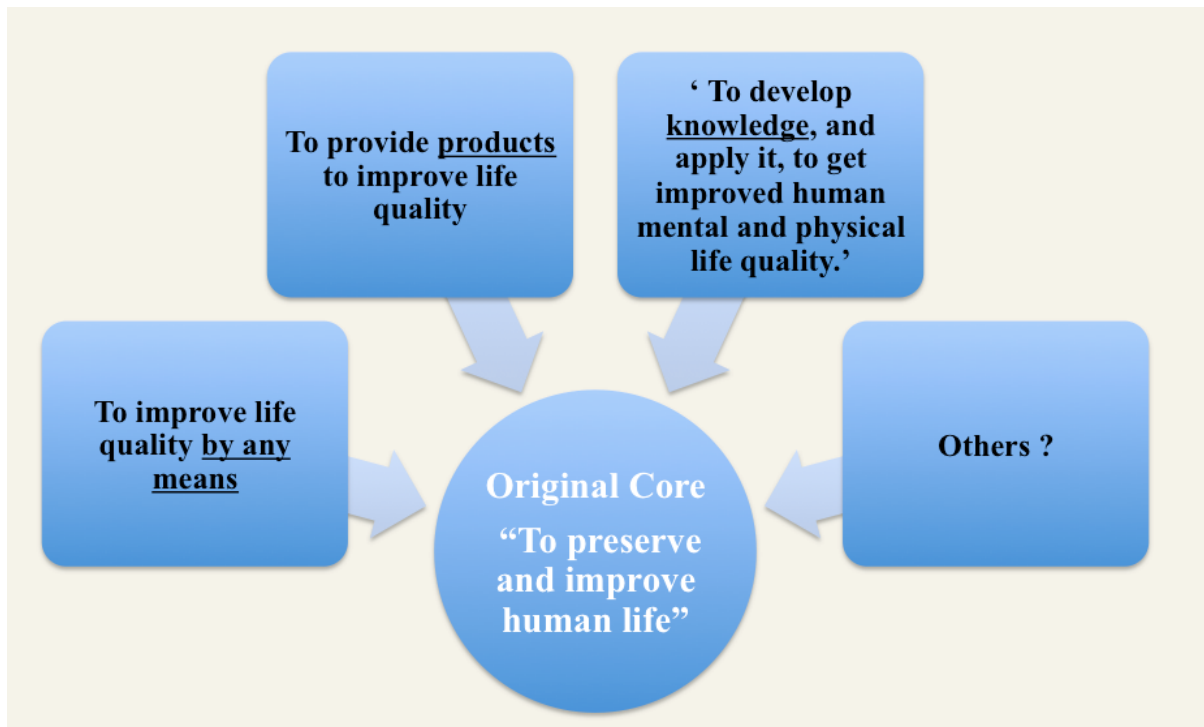

Figure   1 C. Some options for reformulating the original Merck Core purpose. The options would lead to very different business product options.

Each one of these is significantly different from the other. So consider a re-think of the articulation of your most fundamental purpose, before making it the touchstone of all other planning work.

Defining a Scale of measure:
One 'device' we will need, sooner or later, to *really* clarify performance objectives, is to define them, so that we can *quantify* them in practice.

The fact that we can then set numeric targets, and numeric constraints, and track them, is *powerful*; but in fact is *not* the main point.

The main purpose of 'quantification of performance objectives', is to force us to *think deeply*, and *debate* exactly, what we mean; so that others, later, cannot fail to understand us.

THE QUANTIFICATION PRINCIPLE
Performance objectives, ranging from *core objectives* to 'any' detailed performance objective – where 'getting better-and-better in time' is implied – can *always* be defined using 'scales of measure'.
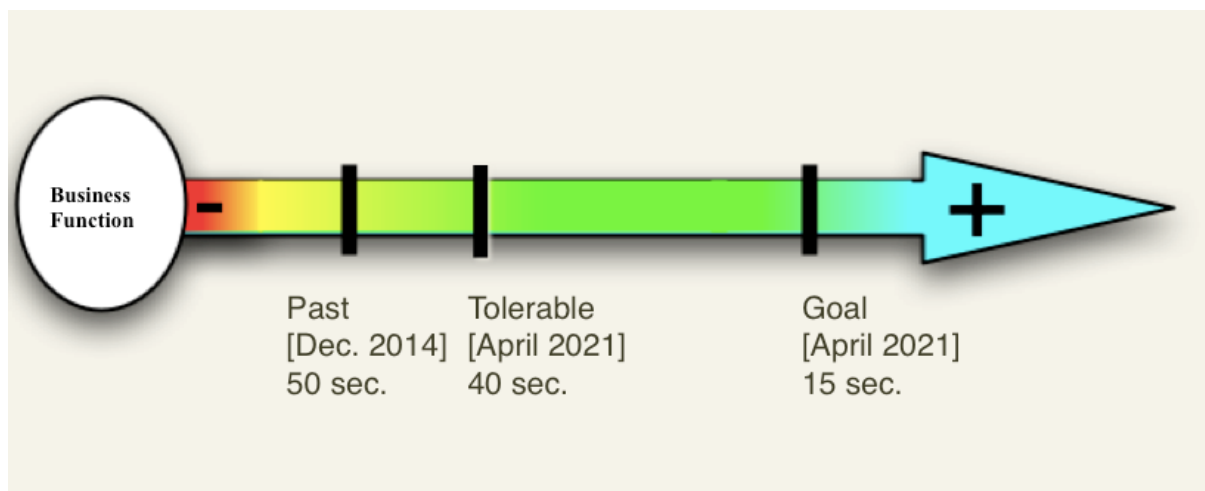
Figure 1 D. Any performance measure, for an organization, can be visualized as an arrow, with the performance itself varying from very bad (left hand side '-') to very good (right hand side '+'). The arrow itself is our standard symbol for a performance-defining variable, such as "average time needed to make a sale". Along this defined Scale of measure, we can then describe useful degrees of performance data. Past performance, competitor performance and future plans.

And once we have agreed on clearly defined 'scales of measure', we can apply a large useful set of devices, to exploit the fact that we have entered 'numeric territory'. Management plan accounting, for 'performance' values, not just financials.

Less poetry, more logic.
• Nothing wrong with poetry and the arts, in their place.

Let me introduce a 'planning language' method:
'Planguage', I call it [2,3]. It rhymes with 'plan' and 'language'.

● We write "**Scale**:… " in front of our defined **scale of measure**.
● Note that we are NOT defining a testing, tracking or measuring process (later called 'Meter: ---") yet. Just volts, not a voltmeter.
● We are just *enabling* ourselves to *think about* our most cherished core purpose *numerically*.
● Let us try with the example: "***To <u>provide products to</u> improve life quality.***"
● *What is the 'scale' to quantify this, and to define what we mean numerically?*

<u>S1</u>: **Scale:** New Products Released Annually.

• *You can see the weakness with this draft, S1?*

<u>S2</u>: **Scale:** Annual Sales for all products that improve life quality.

• And the weakness with *this, S2*? For example, Merck is famous for giving away some drugs!

I would prefer this draft, because there is less to misunderstand:

<u>S3</u>: **Scale:** Estimated **B**etter **D**ays for defined [**Life Form**] as a direct result of defined [**Products**].

Better Days: days where the entity themselves, or another better judge, would judge their life to be better than without Our Product.

Life Form: {Human, Animal, Plant}.

Products: {Patents, Drugs, Machines, Licenses, Services, Distribution, Education, Motivation, Others}.

S1,S2 and S3 are arbitrary reference tags to the statements. Capitalized terms ('**B**etter **D**ays') are formally defined terms.

Scale: Estimated **B**etter **D**ays for defined [**Life Form**] as a direct result of defined [**Products**].

Business Function

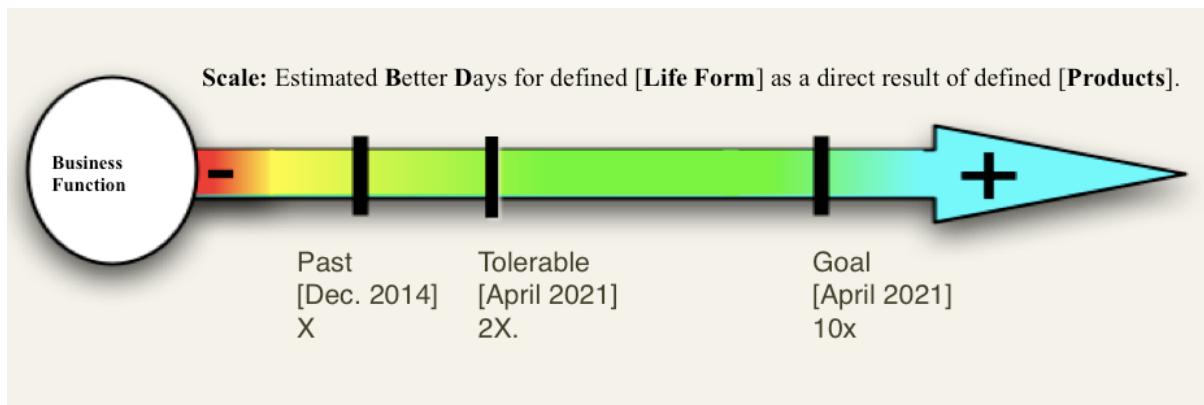| Past	Tolerable	Goal
[Dec. 2014]	[April 2021]	[April 2021]
X	2X.	10x

*Figure 1 E. My suggested, draft, 'scale of measure', for my 'improved' variant of Merck's original core purpose ('To preserve and improve human life') "**To provide products to improve life quality.**" .*

I would argue that 'S3' is a pretty good draft effort, as a powerful definition of our Core Purpose. The core purpose has not changed. But our ability to articulate it, and to discuss any related plans, is arguably improved.
I would argue that it can help us, in deriving relevant aligned plans, and help us to judge their effectiveness, for promoting our core purpose.

I would argue that 'S3' is a better top management tool than the 'poetic' phrases (S1, S2) that preceded it, even though poetry might *still* be useful for simple *emotive* presentation, in some circumstances.

Management can usefully distinguish between '**presentation** formats' (like

Ambition Level: To <u>provide products to</u> improve life quality.

and '**planning** formats' (like S3).

You probably need both formats, for different audiences and purposes.

Deriving Objectives from the Core Purpose and Core Values.

A defined 'Scale' gives us a 'numeric-scale definition' of core value and core purposes.

This enables us to move our planning from a 'poetic' to a 'numeric' basis.
                    (From Management BS to Management Engineering)

We can now plan, by *determining a useful set-of-points on that scale of measure.*

There are three major planning categories:
•   **Benchmarks**: points for *comparison* with future plans.
•   **Constraints**: borders, *worst acceptable* levels.
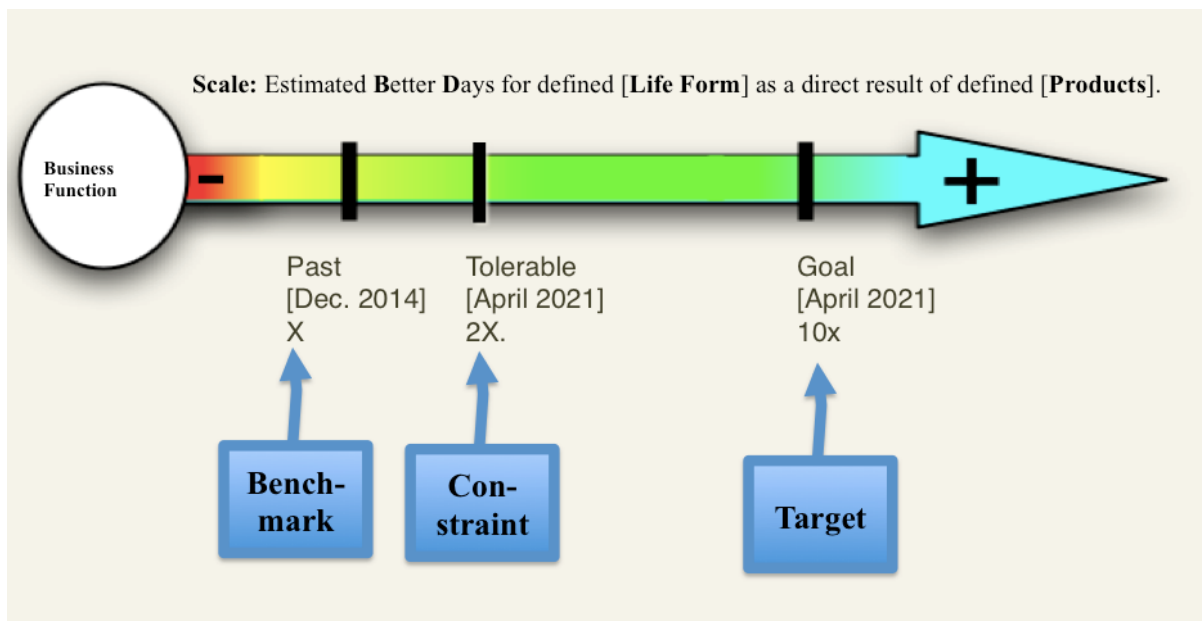•   **Targets**: levels of performance we are *aiming* for.

Figure 1 F. Three major categories of 'levels' of performance.

I have defined a number of these concepts in Planguage. Here is a useful set.

Benchmarks: levels of performance worth knowing about, in comparison with future planned levels. For us, for competitors, for the past and possible future.

Past: any estimated, or measured, level for us, or others, that is *interesting* to compare future plans to.

Trend: an estimation of the levels, good or bad, that will possibly be reached by us, or others, at defined times, and under defined circumstances.

Record: a state-of-the-art extreme, attained under defined conditions.

Constraints: less-than-successful areas we are trying to avoid.

Catastrophe: the edges of a numeric range of performance results that are disastrous in consequence, and possibly not recoverable.

Tolerable: the edges of a numeric range that is tolerable, just above Catastrophe, but still **failing** *to some degree* to satisfy, even at the OK level.
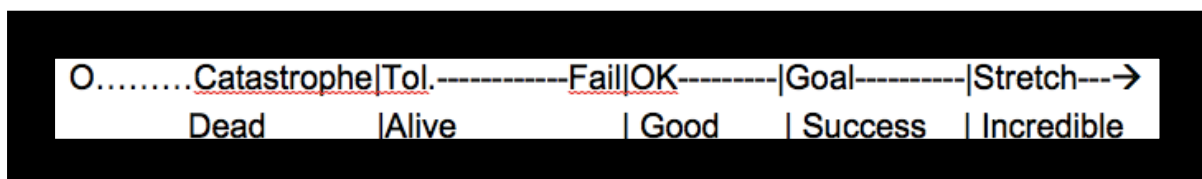

Figure 1 G: points and ranges on a scale of performance.

OK: a range just above the tolerable range.
- Not intolerable.
- Not failing.
- Pretty 'good',
- but not yet at an ambitious and competitive 'success' level, (called the Goal).

Targets: levels we are aiming to reach

Goal: a level which is both satisfactory, and considered feasible; you can promise it.
- 'Better than the Goal level' is a *range*, we can call the success range.
- But, there might not be any defined or planned value for getting better, in that range.

Stretch: a level that has stakeholder value, and which you will attempt to move towards, if resources remain, after all other critical objectives' Goal levels are reached. This means we are not fully committed initially to achieve this level: it *depends*.

Ideal: *(rarely used except to distinguish it from more practical targets)* a level of perfection unlikely to be achievable in practice, and not necessary achievable (since competitors cannot get to it either). But we can aim to 'tend towards' it. From another point of view, it is also a 'benchmark'.
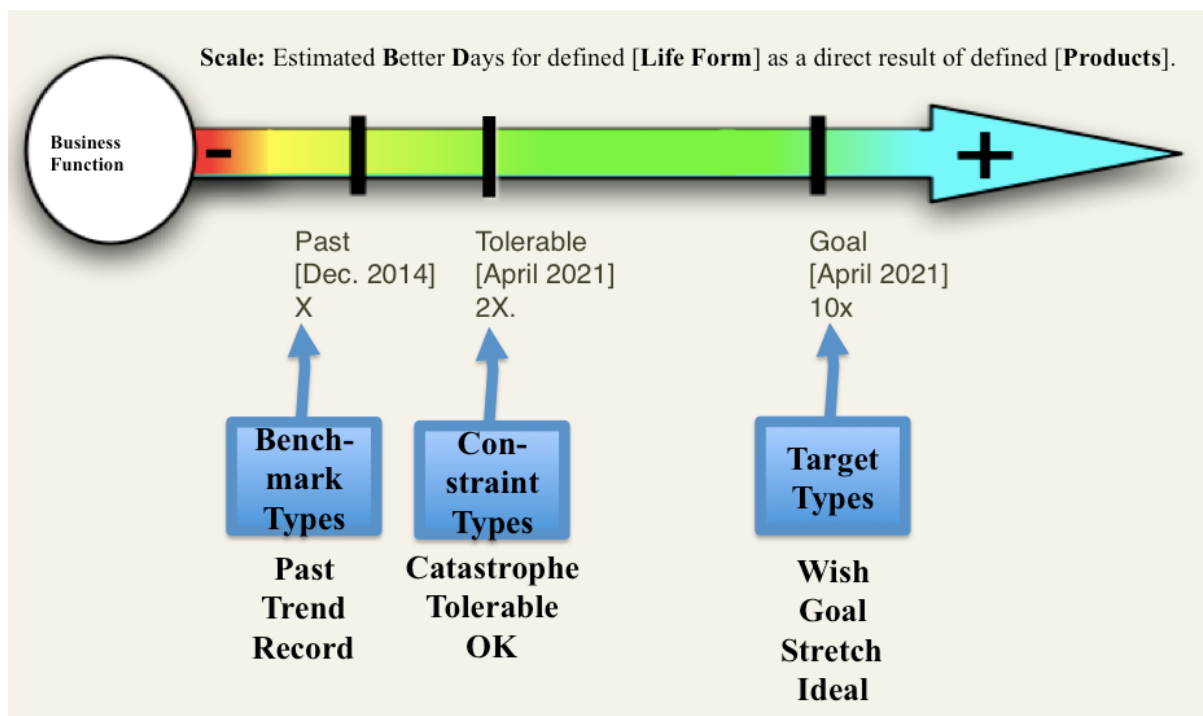- Examples 100% availability, zero time to learn to do a non-trivial task.

Figure 1 H : Specific instances of each type of planning-level on a scale.

Determining the numbers.

The next step is to determine some 'planning values' (some numbers on the scale that are valuable for our planning purposes), using any useful means to determine the numbers.

For example:

Merck Core Purpose:

S3: **Scale**: Estimated Better Days for defined [Life Form, default: Humans] as a direct result of defined [Product, Default: All].

Past: 100.

Goal: 1,000.

This makes the point that we plan to get 'ten times better'. But it would be more intelligible, if we added some 'implied but not stated *here* yet' defined conditions, in a 'qualifier' statement, in [*square brackets*], like this:

Merck Core Purpose:

Scale: Estimated Better Days for defined [**Life Form**, default: Humans] as a direct result of defined [**Products**, Default: Pharmaceuticals].

Past *[2014, Europe, Products = Tranquilizers, Life Form = {Humans, Animals}]* 100.

Goal *[2024, USA, Products = All Merck Products and Services]* 1,000.

The [qualifier] statement enables us to be more specific. We can have many such statements (many Goals, many Pasts) about different interesting levels of performance.

This means we can plan for a both **complex** enterprise (many connected parts), and **complicated** enterprise (difficult to predict, estimate and understand, especially with respect to its environment).

This avoids vagueness, over-simplification, misunderstandings, and over-generalization. We can be as clear, exact, and specific as is useful, at a given stage of planning.

For example:

Merck Core Purpose:

Scale: Estimated Better Days for defined [Life Form, default: Humans] as a direct result of defined [Product, Default: All].

Past [2014, Europe, Products = Tranquilizers] 100.

Goal [2024, USA, Products = All Merck Products and Services] 1,000.

Goal [2020, Worldwide, Products = All Merck Products and Services, If Merge Approved] 500.

Tolerable [2020, Europe, Products = Pharmaceuticals] 200±100? <- CEO Vision Statement.
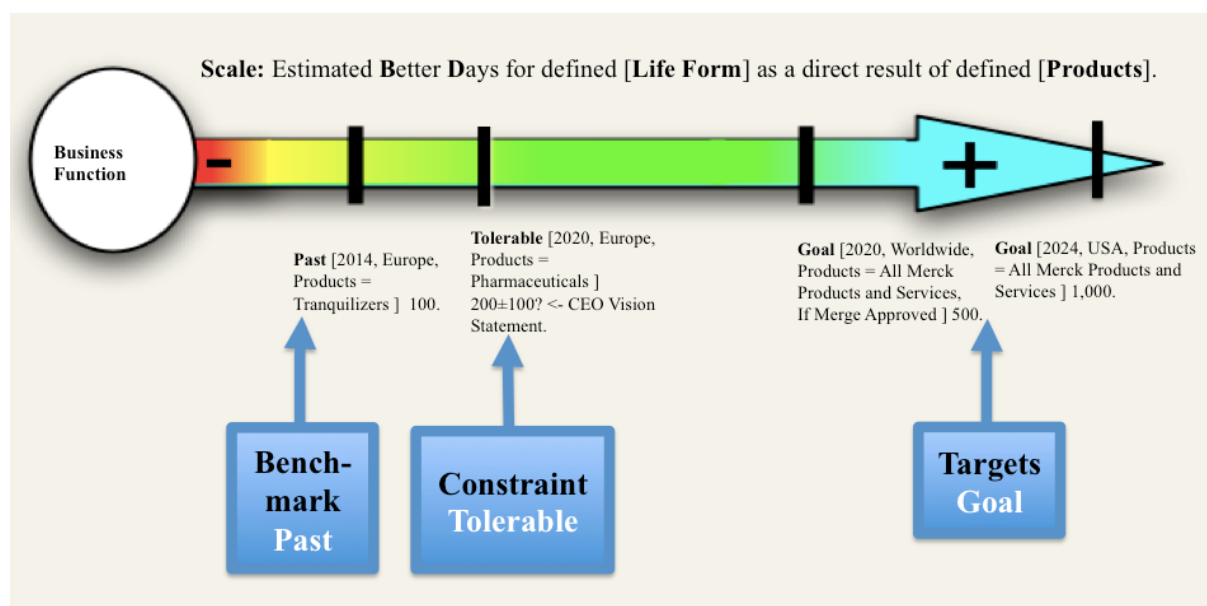

Figure 1 i Simple examples of defining interesting planning points along a Scale.

Any useful number of points on the business performance scale (in this case a 'Scale' for the 'top level performance' **core** purpose) can be defined, using any interesting set of the types of points (Past, Goal, Tolerable, etc.). And any set, or combination of, [qualifier conditions], a sort of 'adjectives', can be planned, *in addition to* any one of these scale points.

The consequence is that the *qualifier condition*s permit 'drilling down' into detail, of plans laid: *later*, and *at sub-lev*els.
• For example year by year, and country by country.

Notice that the Scale *definition* is being 'reused' (write once, use many times), by all these scale points.

This is why we take pains to be precise in defining a Scale (using 10 words, rather than one), and why we *parameterize* it ('defined [Life Form]').

Clarifying Objectives
It is central that objectives are perfectly understood, by all intended readers. All employees, investors, media etc.

Perfect *practical* clarity is a *nearly* attainable objective, using fairly simple means.

It is unacceptable, (a bad practice we have measured worldwide) for objectives to be so badly written, that employees and managers judge 30% to 70% of all specification words they read, to be either *ambiguous* or *unclear* (to at least *some* of the potential readership).

You will already have noticed some of the devices we use to reduce ambiguity. Scale + Goal for example, beats 'exceedingly'.

Many other devices in the Planning Language are not yet explained or mentioned. But they are available when you are ready.

Here are some *clarification practices* that have *already* appeared in the examples above:

1. *Consistent official definition* of key planning parameters (like Past, Goal, Scale). A formal Glossary exists [2,6]

2. Our drive to become *numeric* (beats nice words like 'substantially improved')

3. The use of qualifiers to define 'when', 'where' and other conditions. "[2020, UK, If Finance Approved]"

4. The consistent formal use of terms written with **C**apital **L**etters, indicating that the term is *formally defined*. Like: **Life Form**: {Human, Animal, Plant} in the initial S3 example above. And like "**P**ast, **S**cale, and **Merck Core Purpose:".**

5. There are dozens more devices, you can choose to improve clarity, too many to enumerate here [2].

Your practical 'organizational planning-improvement campaign', we believe, should be 'to reduce 'major defects' (avoid planning specification terms that might possibly cause misinterpretation, of serious consequence, by some reader) in planning.

The degree of improvement should be from a 'normal', but unacceptable, level of 30% or more defects, to a level of *less* than 1 defect per 300 words. A tough but do-able objective.[URL22]

Extending Understanding of the Objectives – Background.
In addition to the specification devices mentioned above ("Clarifying Objectives"), we have developed a large set of simple devices for adding *background* information to a fundamental objective.

It consists of a predefined set of 'parameters' (Scale and Past are 'parameters' too), and other Planguage [2] devices; as well as the ability to define any new additional parameters *you* find useful.

We already inserted some background information in the example above:

Tolerable [2020, Europe, Products = Pharmas] 700 ±200 ? <- CEO Vision Statement.

±200 means the tolerable *range* is 200 days (500 to 900 days)

? means even this is a *questionable* number or interpretation. Don't take it too seriously. Uncertainty.

<- is a 'Source' arrow, used to specify our *source* of the specification. In this case the 'CEO Vision Statement'. We could have also written:

Tolerable [2020, Europe, Products = Pharmas] 700 days.   **Range**: ±200 days.   **Risk**: incorrect interpretation of actual CEO slide 25.   **Source**: CEO Vision Statement, Jan 1 20xx Brussels.   *Here is a small sample of some of the other available background statements (with illustrative text after the parameter):*   **Supports**: Core Purpose.   **Supported By**: Top Long-Range Objectives.   **Constrained By**: Core Values.   **Implementation Responsibility**: CEO.   **Plan Owner**: Strategic Planning office.

With all the statements you might want to use, you can easily fill a page, or a slide, with 20 to 60 statements for a single defined objective.

It is up to you, to use or create, what you find valuable to add, as background to the core specification. The full specification, for a *single* objective, forms a small collection ('database') of 'everything' we need to know, in relation to that objective.

Of course, subsets, right down to one-liners, can be extracted for specific presentation purposes, while other statements can be drilled-down to, on demand.

Once when we were having a top management fight in London, about using this format (the Marketing Guys wanted to keep it simple and unintelligible) a seasoned director stopped the show by saying:

> *I have estimated that we spend on average £200,000 for each one of these objectives, and too frequently screw things up. If defining an objective in 40 lines instead of one line solves that problem, then that is a small price to pay, and a necessary investment in getting our business right" (Thanks BW).*

If you use the simple principle of investing more effort, in management planning quality, *only if it pays off*, you should not end up with unnecessary bureaucracy.

I know we have too much meaningless low-quality verbiage in planning, everywhere, today. So do you, I expect.

My suggestion is, in fact, to write *less* in total, and to make it '*reusable*'; and to *raise the quality* of what we *do* write - by two orders of magnitude. Get rid of those too many major defects per page.

This 'specification quality improvement' is measurable using the methods immediately in Part 2 below.

Part 2. Quality Control of Objectives

Measuring the Quality of Management Planning Specifications.

Most management plans (Objectives, Policies, Core Values, Strategies) are never formally measured to any standard.

They may be discussed, edited and approved, but there is no formal measurement involved.

We have developed a simple measurement process for measuring the various qualities of management planning.

It is based on a software process known as 'Inspection' [7], and on a simplified variation we have developed, *Specification Quality Control* (SQC) [2, Chapter 8].

The method is completely general, and applies to any writings or specifications, both technical plans and management plans.

 The SQC principle is simple and classical. We measure deviation from *standards*. Deviations from our 'planning rules' are called 'specification *defects', or 'planning defects' if you prefer*). We focus on a significant class of defects called '**major** defects'.

All major defects are by definition unacceptable. They create risk of damage to your results and economics.

We try to get a rough, but useful, estimate of the **major defect density** for a given plan.

For large documents we use 'representative samples' as sufficient basis for the defect density estimate, to keep costs down. An hour or so is usually sufficient for most purposes.

Once we can acceptably measure the 'defect level' (major defect density per 300-word page), we can judge whether the specification (of, say, corporate objectives) meets our 'reasonable standard' maximum level of defect density, for allowing plan release.

Zero defects would of course be nice. It might accidentally be achieved.

But as a practical matter we have to be satisfied with a radical improvement, to a level where it pays off to release the specification to other subsequent levels of planning, and deal with remaining imperfections afterwards.

This is called the 'Exit' Level of quality of the specification.

A *good* initial exit level is:

'*maximum estimated remaining'* **10 major defects** per 'page' (300 words).

A *more ambitious* level is maximum 1 major/page.

Notice that we do not necessarily release known defects. We calculate the possible level of defects, based on
- a sample of defects found, (about 30% are found in pages checked)
- and an estimate of defects probably not found yet (the other 70%).

For example, if we looked at a 10-page document, and our checking team found 10 major defects in a sample of a few pages (1 to 3 pages is fine).

We would estimate the total number of defects per page. Like this.

If we assume our team's defect-finding effectiveness is about 1/3 (they fail to find 2 out of 3 defects present – a normal result) then the estimate is that there are about 30 majors in the sample page – 10 found, 20 not found yet.
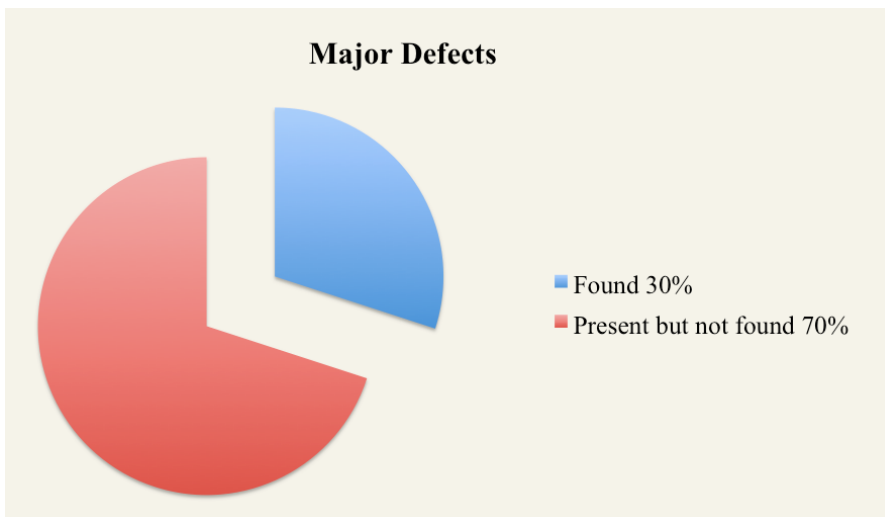

Figure 2 A. when reviewing a planning document using a few people, the team's effectiveness is limited to finding about 30% of the Major Defects actually on the page. But that means if they find 30 Majors there are about 100 Majors total. So fixing the 30 found is not much use. We have to deal with all 100 somehow.

And, assuming our sample pages are accepted as representative of the other pages there are about 10 (pages) x 30 majors = 300 major defects in the document.

This is usually considered an 'obviously unacceptable' result. Exit is therefore 'failed', and the whole document must be reworked to a higher adherence, to the formal written standard.

Re-checking after trying to improve the plan will determine if it can exit, using a different,or random, sample of the 10 pages.
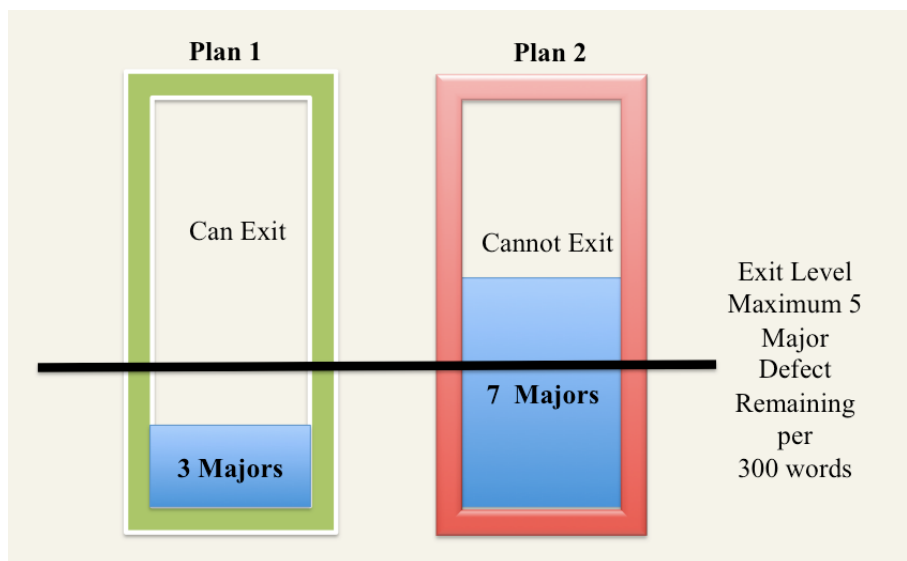
Figure 2 B. Planning documents can be measured for conformance to your standards. If even a sample of a plan says that defects exceed the Exit level, they cannot be allowed downstream. That would do more damage than good. This 'planning process Exit discipline' will motivate planners to learn, and follow, planning standards first time around.

Our experience, when initially checking any document (technical or managerial) that has *not* been subject to this discipline, is that the estimated defect density is about 100 major defects per page, or more; even by the simplest of standards (clear, unambiguous); as judged by senior managers or engineers.

This result is of course unacceptable; but since nobody measured before, nobody was conscious of the problem.

Mini Case 2 A: CEO Garbage Out

Once at a large US telecoms organization, my client decided to measure the major defects in the Corporate Quality Policy issued by the CEO, and hanging on the walls, as a single page declaration.

I forget the exact result, but it gave us all a good laugh, because the major defect count was well over 100.

That means the one-page policy could be misunderstood by employees on up to 100 different points.

Of course nobody dared tell the CEO, but a senior executive I had lunch with afterwards, acknowledged the problem was widespread.

What we have found, both on a large corporate scale, and in large scale engineering, is that if the Exit level standard is taken seriously by management, then the quality level produced, the first time around, will rapidly move towards that exit level. There are, as for as I know, no large scale studies of this for *top management*.

Mini Case 2 B: Clear Measurable Top Level Objectives: then 15 Years Success.

But, one 20,000 person corporation I worked with for several years, who adopted the clear measurable objectives methods at the board, CEO, and directors level; reversed over 5 years of losses, and went into profit for the next 15 years – unlike any competitor!

I like to think this was a function of much clearer management thinking, enforced by the CEO (RW). All of the credit belonged to the dynamic engineering-trained CEO.

But he was 100% behind my suggestion, and behind the consequent effort, to get him and all his direct reports to quantify their objectives.

The Corporate Planner, Peter Hall, and I trained the directors (half day), and they needed it. The Board was behind the CEO on this issue too.

People will quickly teach themselves how to follow the 'how to write good objectives' standard (more below).

The alternative, to reducing defects at this early planning level, is that each major defect will corrupt efforts downstream, and cost considerably more finally, than the effort to write things properly in the first place. A stitch in time saves nine.

The management-planning quality-control is logically divided into two phases.
Is it clear?
Is it right?

If a management planning document has, say, 100 ambiguous and unclear terms per page, then it is premature, to say the least, to attempt to evaluate whether it contains powerful, useful, aligned, relevant ideas, to support core values, or other higher levels of planning.

In simple terms, we must first measure that a plan is reasonably intelligible. Only when it is intelligible, can we proceed to evaluate whether it is 'the right stuff'. Here is some more detail on those issues.
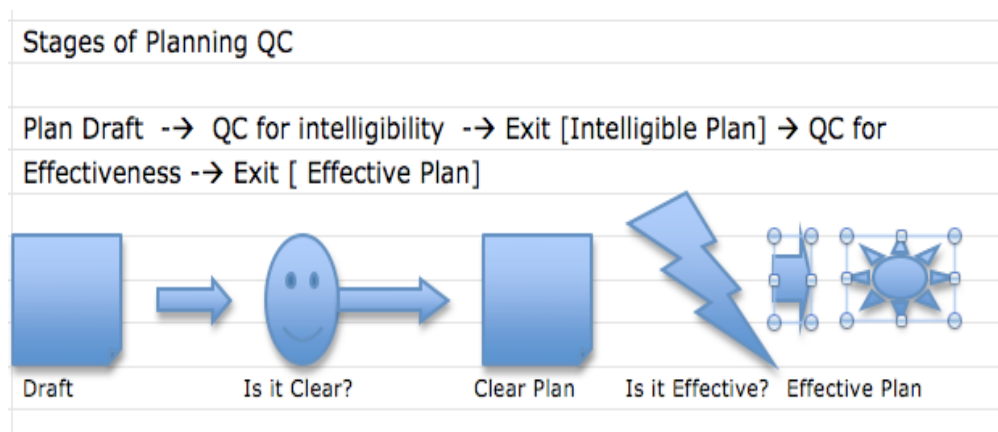

Figure 2 C. The planning 2 stages of quality control: 1. Clear?, 2. Right?

Testing Your Objectives for Clarity: The Simplified Spec Quality Control
Our first task when a non-trivial size draft plan (say core values, or corporate objectives) is ready, is to run a check on *intelligibility*.

Step 1: define 'Intended Readership' for the plan.
Make a list of all the various types of people (lawyers, engineers, Board Members, middle managers, consultants, new employees etc.) who must be able to reliably interpret the plan.

Step 2: Standards for Intelligibility.
Make a list of 'Rules' for writing, which if followed, would give you the level of intelligibility needed by your Intended Readership – *all* of them. Include the *weakest ones* in their *weakest moments* (stress, pressure, tired).

I have found the following Rules to be basic and sufficient for most beginning purposes:

C1: UNAMBIGUOUS: The Objectives will be *unambiguous* to the Intended Readership. *One interpretation: the right one only.*

C2: CLEAR: The Objectives will be *clear* enough for all of the Intended Readership, to correctly and completely, carry out relevant strategy planning, as intended, and to check for themselves, that it is a correct interpretation, *even under worst case conditions*.

C3: ENDS NOT MEANS: The objectives will be stated in terms of the ultimate *'end states'* desired (at that level of planning), and NOT in terms of strategies (means) perceived as leading to those end states. *How well, not HOW.*

Step 3: The Spec QC Checking Process
•   Convene a small team of credible senior people (2 to 6).
•   Present the rules to them.
•   Ask if they agree in principle to these rules and understand them.
•   Give them about a page (300 words) of text each (can be all same page, or some different pages).
•   Give them about 30 minutes for the page.
•   Ask them to mark any word of term that violates these rules.
•   Ask them to categorize each rule violation as a 'defect'.
•   Ask them to classify each defect as either 'Major' (really must be corrected, consequential), or minor (rule violation, but does not really matter much in practice – for example because it is not a decision driver, but is a footnote).

Step 4: Reporting, and Process Validation
•   Each checker reports major defects they claim to have found. For example 10, 5, 20, 12 Majors.

Step 5: Calculation of Defect Density

- Estimate that the team has found about 40 unique major defects [2, 7 pp299-301]. Twice what the largest claim (20) was.
- Estimate the team has found about 1/3 of the actually present defects just now. And that there are therefore about 40 +80 = 120 Majors in the page.
- We cannot fully explain here exactly why we do this (hints are given!), so trust it, or read the references.
- We are trying to move the estimate nearer the truth, than the raw data alone.

Step 6: Exit Determination

- If the exit level (maximum estimated remaining Major defects per page) is, say 10, then we have a clear case of *failed exit* (even if we had skipped Step 5!).
- Revise the document, if Exit fails, according to the Rules.
- Otherwise release the document as *intelligible* (but not yet reviewed for being 'the right stuff'

Figure 2 D. The Plan Quality Control process. If the plan has a low violation of planning rules, it can be economically released 'downstream'. If not, it pays off to reject it, and get a version that can be safely released.

IF EXIT FAILS

If the level of unclear and unintelligible content is as high as this example above, then

- editing the plan, according to the Rules, is required,
- and a new Quality Control is required, until successful Exit is achieved.

If the specification is difficult to interpret, then it is premature to take the next step of deciding if it is a 'good' (effective for purpose) plan.

On the other hand, even a plan that is, at this stage, zero major defects, might be a bad plan for the real business!

Clarity is not the same as effectiveness. But it is a necessary first step.

Example:

Let us assume that the following terms were marked as unclear/ambiguous:

S3: **Scale**: Estimated <u>better days</u> for <u>living things</u> as a direct result of our <u>products</u>.

Let us call that '3 Major defects'.

- After all, they make the Merck Core Purpose unintelligible!

We could attempt clarification by rewriting as:

S3: **Scale: Estimated Better Days for defined [Living Things] as a direct result of defined [Products].**
<u>**Better Days**</u>: days where the entity themselves, or other better judge, would judge their life to be better than without Our Product.
<u>**Living Things**</u>: {Human, Animal, Plant}
<u>**Products**</u>: {Patents, Drugs, Machines, Licenses, Services, Distribution, Education, Motivation, Others}.

Testing Objectives Against Core Ideology

If we can 'Exit' from the 'Clarity' quality control process, with a sufficiently intelligible specification of objectives, then we have the basis for deciding if those objectives are "the right stuff."

How do we evaluate to see if a management objective is *good enough*?

We can evaluate a management objective, for cost-effectiveness and risk, against the following Rules (as an example):

E1. Objective Effectiveness Estimate:
*The **set of effects**, we expect the objective to have, on our own higher-level objectives (for example our 'Core Purpose' Goals) **is estimated**, with reasonably credible evidence and sources?*

E2. Costing.

> *The **resources** required to deliver this objective, at specified times, places and conditions (the [qualifiers]) are credibily **estimated**?*
>
> ***E3. Specification of conflicts.***
> *A: If anything with the objective, or planned strategies for it, in any way threaten to conflict **with our Core Values**, or with **any other constraints** (Policy, Law, Custom), we must **list these formally** under suitable Background headings, such as Threats, Issues, Risks, Assumptions, Dependencies, Conflicts.*
>
> *B. We shall not censor any potential conflict, however improbable. But notes, on our evaluation or mitigation, can be included.*

Standard 2. Simple sample Rules for Checking Objectives against a Core Ideology.

In other words we need to evaluate effectiveness, costs and conflicts.

Plan Clarity	Plan Effectiveness
Clear	Main impact on Goals is estimated
Unambiguous	Side effects are estimated
Complete	Costs are estimated
Consistent	Constraint violations are specified
Variables quantified	Risks, threats, mitigations, assumptions are specified
	Issues not resolved are specified
	Potential conflicts are specified

Table 2 A. The two classes of standards for checking a plan. First it needs to be intelligible. If it passes that test, we are then 'enabled' to judge its effectiveness for purpose (for our objectives). Both classes of reviews here, result in an objective and quantitative evaluation of a plan's suitability for purpose. Very few businesses today have this rigor in their review process. Few seem aware that they could have such a process.

Using the rules to evaluate plan effectiveness for purpose
To do the first element (E1, above) we need to make an estimate of 'the degree to which this objective is expected to contribute to one or more higher objectives'.

Let us simplify by assuming that this higher objective is the Core Purpose itself, the primary dimension we want to improve. We defined one such in this paper above (**Merck Core Purpose**).

Let us now assume we have a lower level supporting objective called: "**Top Long Range Objectives**"

Let us assume that we believed that the set of Top Long-Range Objectives [Year = 2020] would be capable of *exactly meeting* the **Merck Core Purpose, Goal [Year =2020].**
● Then we could assert that belief by estimating the impact as '100%'.

We could offer 'evidence' for our '100% effectiveness' belief by referring to the set of facts, reasoning and sub-estimates:

Evidence: *TLRO:MCP 2012 Estimation Basis**.***

We could indicate the degree of uncertainty of this estimate, by a statement like:

Uncertainty*: ±50%*

We are now doing a simple form of 'Impact Estimation' [Full detail Ref. 2, Chapter 9, Impact Estimation], and see below.

It would be a matter of planning policy and management discretion to accept these estimates, review their evidence, and decide if the uncertainty was acceptable; enough to approve and proceed.

But the main point here is that, if we take the trouble to quantify objectives, and specify conditions, for targets and constraints; then we have enabled ourselves to 'reason further in a quantitative way', about the impacts of plans on their objectives.

We are now more likely to see weaknesses in a plan, at an early stage, and take steps to remedy it early.

		Telephony	Modularity	Tools	User Experience	GUI & Graphics	Security	Enterprise
					..........................Deliverables			
Business Objective								
Time to Market		10%	10%	15%	0%	0%	0%	5%
Product Range		0%	30%	5%	10%	5%	5%	0%
Platform Technology		10%	0%	0%	5%	0%	10%	5%
Units		15%	5%	5%	0%	0%	10%	10%
Operator Preference		10%	5%	5%	10%	10%	20%	10%
Commoditization		10%	-20%	15%	0%	0%	5%	5%
Duplication		10%	0%	0%	0%	0%	5%	5%
Competitiveness		15%	10%	10%	10%	20%	10%	10%
User Experience		0%	20%	0%	30%	10%	0%	0%
Downstream Cost Saving		5%	10%	0%	10%	0%	0%	5%
Other Country		5%	10%	0%	10%	5%	0%	0%
Total Contribution		90%	80%	55%	85%	50%	65%	55%
Cost (£M)		0.49	1.92	0.81	1.21	2.68	0.79	0.60
Contribution to Cost Ratio		**184**	42	68	70	19	82	92

Table 2 B.   An example of a real (2005) top management Impact Estimation Table. The Objectives (name tags only) on the left were quantified with defined Scales, and Goal and Stretch levels of performance. This table satisfies rules E1 and E2 above, and below: effectiveness and cost estimation.

Evaluation of Resources.

E2. Costing.
The resources required to deliver this objective, at specified times, places and conditions (the [qualifiers]) are reasonably estimated ?

It is **not logically possible** to estimate, let alone know, the resources (time, effort, money) needed to achieve any level of performance, **if** you only know the required level of performance; but have *not yet* determined the *specific strategy* (means), to reach that level, under specified conditions.

Yet, if we do not know the resources needed, we cannot yet approve the objective, because we might not have, or get, the resources necessary.

We can only approve of the objective itself, as a necessary condition for reaching our even higher-level objectives, hoping we can later find suitable cost-effective strategies.

And we can approve the **next stage,** of determining one or more strategies, and costing them. Only on the basis of credible resource estimates, within our resource capabilities.

Then, we can give the final go ahead, do it. Do the strategy, and get us to the promised Goal.

Note that, even with the best well-known strategy, and the best available cost *estimates*; I am a skeptic about what the *real* costs (time, effort, money) will really be. The situation is usually complicated; unpredictable.

The simplest remedy I have, is that - even after conditional strategy approval, based on initial estimates - we *still* need to monitor *early and gradual r*esult improvement, quantitatively, and take action if a predicted result stream is not happening.

This feedback evaluation is much more practical when the results are quantified as suggested above [9].

In the impact estimation table above, you will see that the monetary cost of each strategy was estimated, and could then be compared to the estimated impacts of each strategy.

Conflict with Constraints

E3. Does the objective in any way threaten to conflict with our Core Values?
*Or with any other constraints (Policy, Law, Custom).*

The objective, and in fact its implementation strategy, must both be reviewed initially, and potentially be reviewed in the light of partial feedback from partial implementation, continuously, for any emergent unacceptable conflict with any defined constraints.

These defined constraints can include Core Principles, Policies, Laws, Local Culture, and any other constraint we agree to respect.

Conflicts need to be documented in the plan, the magnitude estimated, and a decision as to whether the conflict, or potential risk of conflict is acceptable needs to be made.

Cross Checking Stakeholders for Completeness of Objectives

An additional quality control on objectives is to make sure you have a fairly complete set of stakeholders. Then for each stakeholder to analyze their objectives, and constraints.
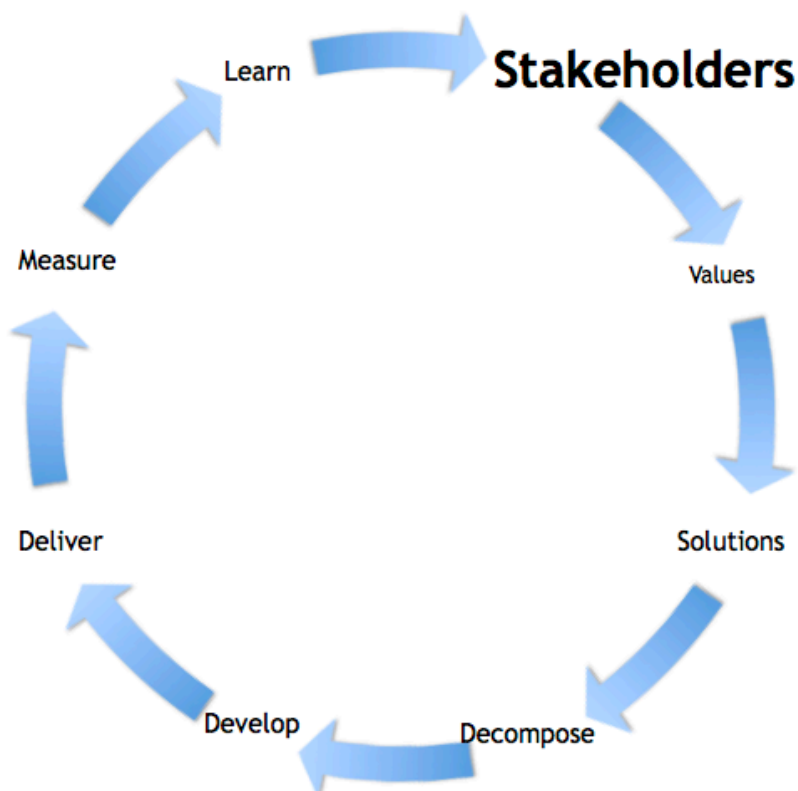
Figure 2E. Stakeholder analysis is a necessary prerequisite to determining the values (objectives and constraints) for your plans [URL90]**.**
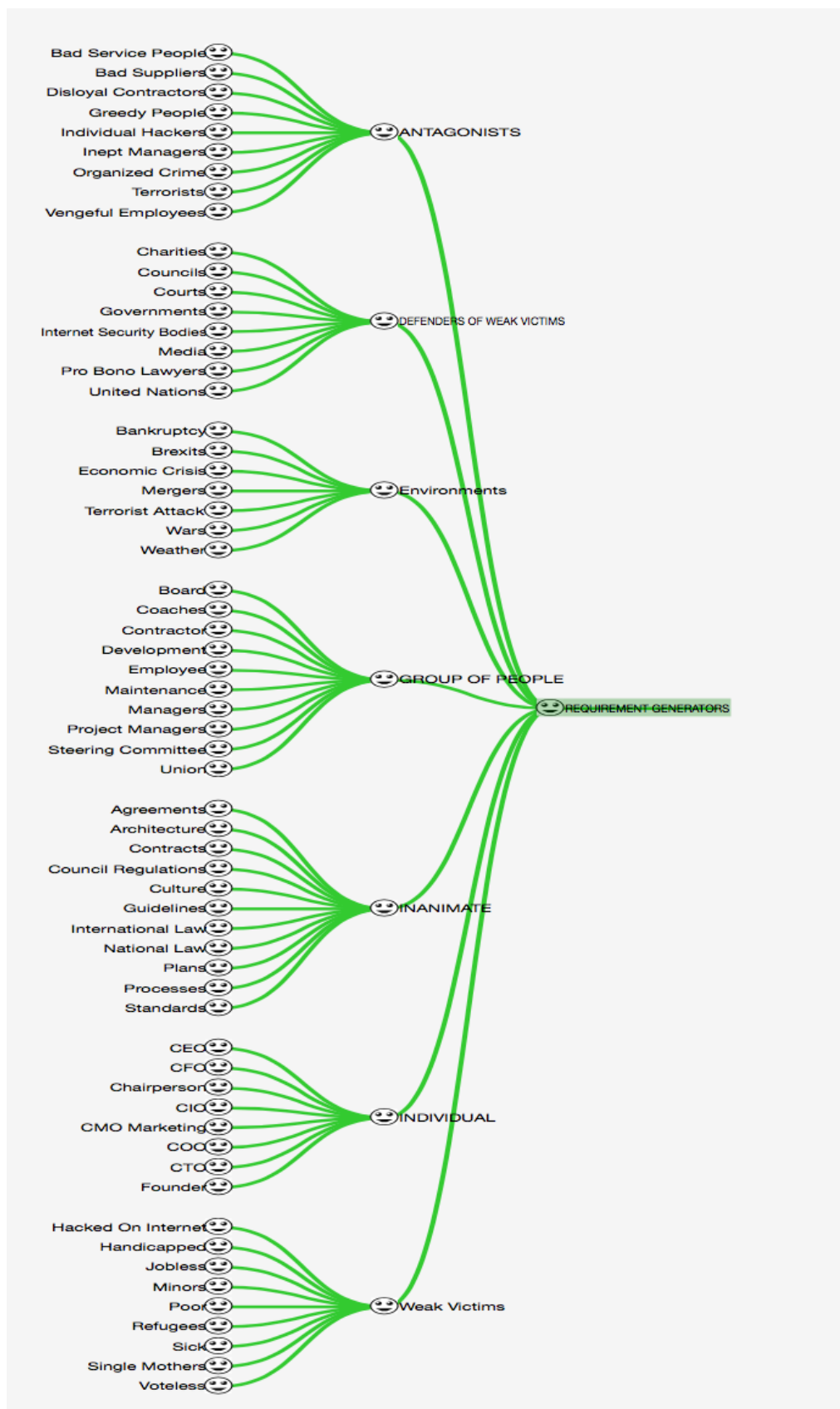
FIGURE 2F: HERE IS A STRUCTURED LIST OF TYPICAL TYPES OF STAKEHOLDERS. NOTE THAT 'INANIMATE STAKEHOLDERS' CAN GENERATE CRITICAL REQUIREMENTS TOO.

Part 3. Strategies.

The term 'strategy' has many possible interpretations, but I will define the sense I use it here, too.

A dictionary definition says: "a plan of action or policy designed to achieve a major or overall aim".

I will stick to that essential idea, and clarify.

A strategy is *any means* directed towards an *end*.

It is what we plan, and do, or perhaps 'do *without* formal planning', *in order to achieve* one-or-more higher priority objectives (aims).

A strategy is **anything** that might, or will, serve our aims; and *certainly **not** restricted, as the dictionary definition indicates*, to 'plan of *action* or *policy*'.
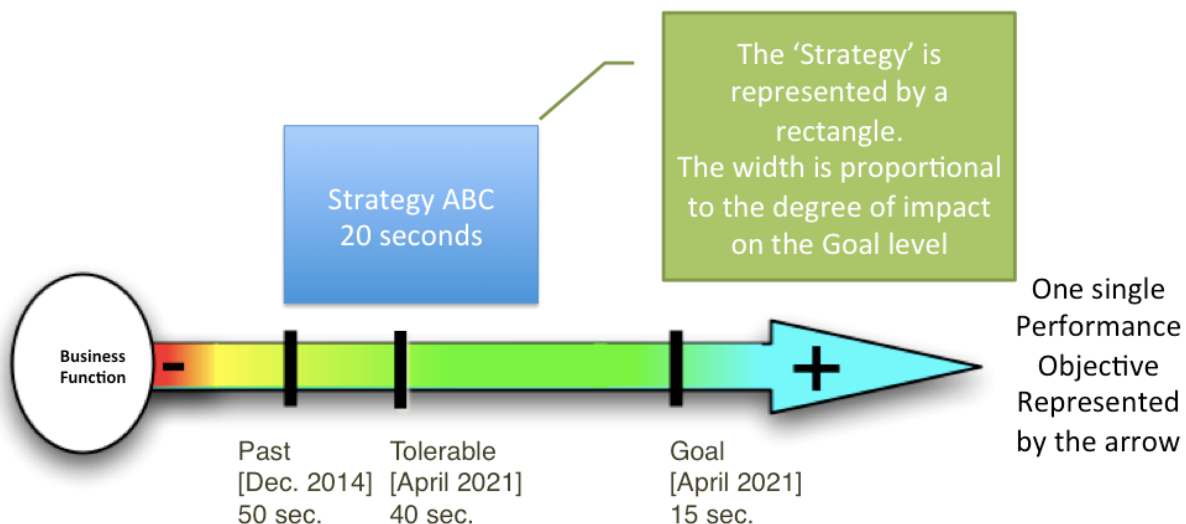

Figure 3 A. A 'strategy' is something we plan to do, with a hope that it will have a positive effect on at least one objective's Goal. A numeric estimate, of the future strategy impact, is called an 'Impact Estimation'. In this example the estimate is 20 seconds progress towards the Goal.

A given objective may be supported by *other and different supporting objectives*; themselves supported by related strategies (which may be classified as supporting objectives too!).

```
                    ┌──────────────┐
                    │     Core     │
                    │   Objective  │
                    └──────────────┘
              ┌────────────┴────────────┐
       ┌──────────────┐          ┌──────────────┐
       │    Board     │          │    Board     │
       │  Objective 1 │          │  Objective 2 │
       └──────────────┘          └──────────────┘
                          ┌────────────┴────────────┐
                   ┌──────────────┐          ┌──────────────┐
                   │     CEO      │          │     CTO      │
                   │  Objectives  │          │  Objectives  │
                   └──────────────┘          └──────────────┘
              ┌──────────┴──────────┐               │
       ┌──────────────┐     ┌──────────────┐ ┌──────────────┐
       │    Merger    │     │  Succession  │ │   Program X  │
       │   Strategy   │     │   Strategy   │ │  Objectives  │
       └──────────────┘     └──────────────┘ └──────────────┘
                                                    │
                                             ┌──────────────┐
                                             │   Project Y  │
                                             │  Objectives  │
                                             └──────────────┘
```
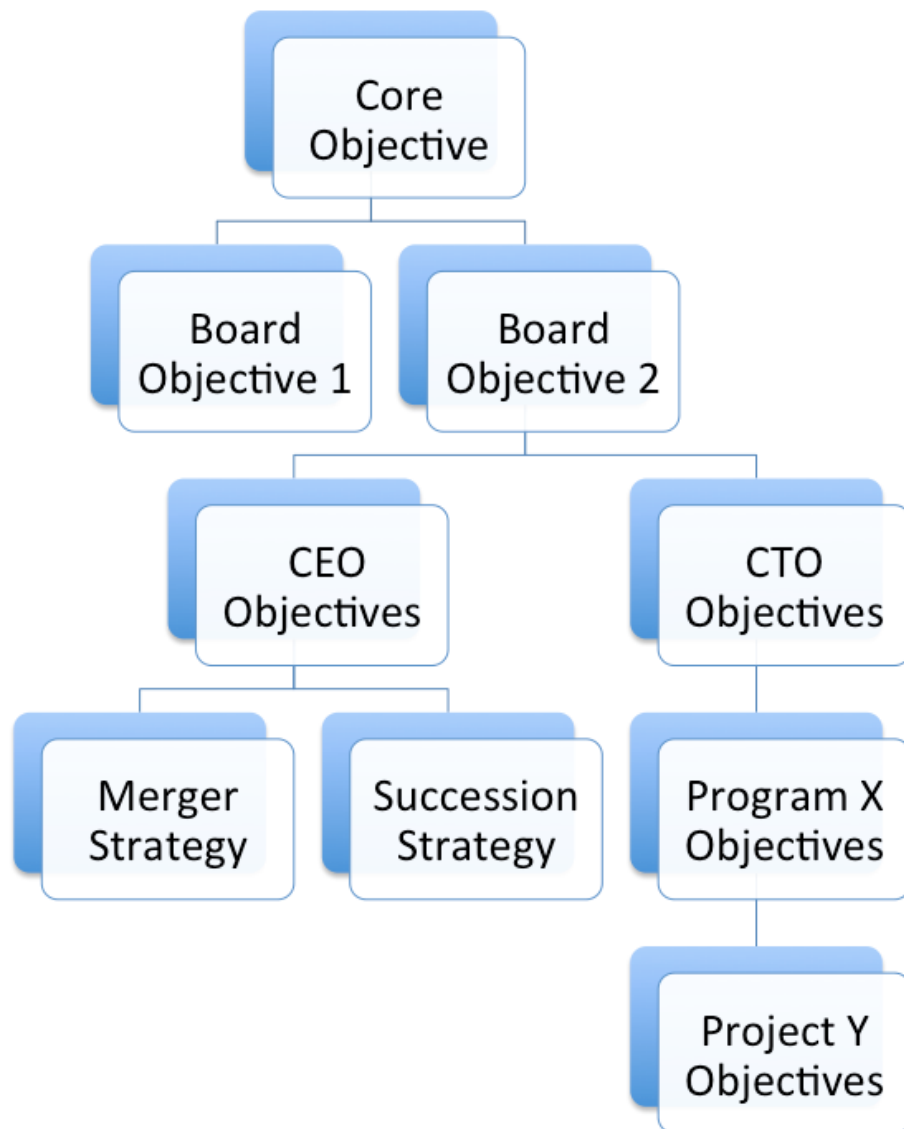
Figure 3 B. A simplified and symbolic hierarchy of objectives and supporting strategies. In our world, these relationships, the thin vertical lines, can be quantified, estimated and measured.

Strategic Objectives

Strategic objectives were defined by Keeney [5] as a level of objectives, that, at *our own* level of responsibility (or some defined level of responsibility) were the strategies *we* had chosen, in order to support the objectives 'one level up' (our bosses *own* objectives), which Keeney called 'Fundamental Objectives'.

So, for example, the Board might have a set of *strategic objectives* for supporting the Core Purpose.

Notice that this *set of ideas*, about the relationships of levels of objectives, can apply to *any level* of the organization. Fundamental – boss, strategic – me. Fundamental objectives are not *my* business to change, approve, or be ultimately responsible for. But my *strategic* objectives had better *support* them.
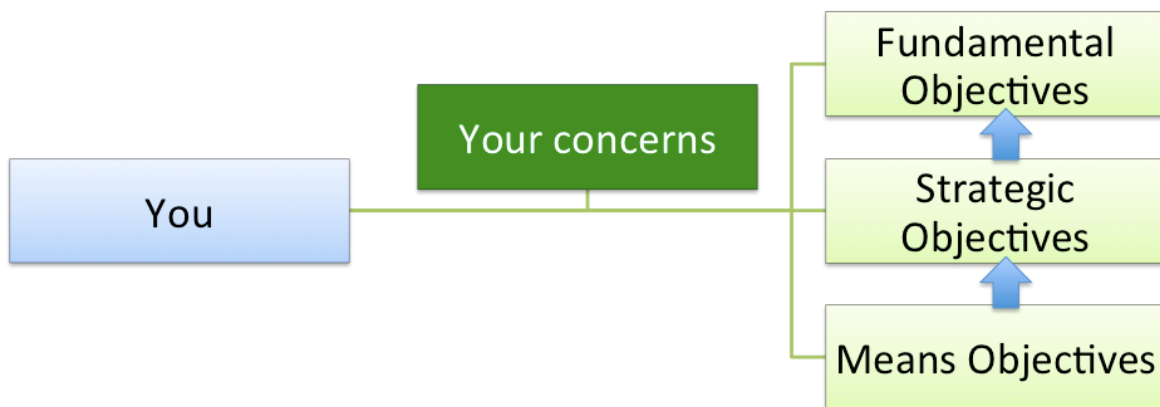
Figure 3 C Your primary responsibility is to meet your Strategic Objectives. But you need to make sure they actually satisfy your next level up 'Fundamental Objectives'. And, you need to worry that the Means Objectives, which are intended to satisfy your Strategic objectives, really do the job, on time, on budget.

Means Objectives

Keeney's [5] "Means Objectives" are the sets of objectives that support achievement of *my* strategic objectives. They do not have to come from 'my staff' or 'my subordinates'. They could be set, and delivered, from *any* partner, supplier, or organizational component that is capable of delivering results, which will support achievement of our *own* strategic objectives.
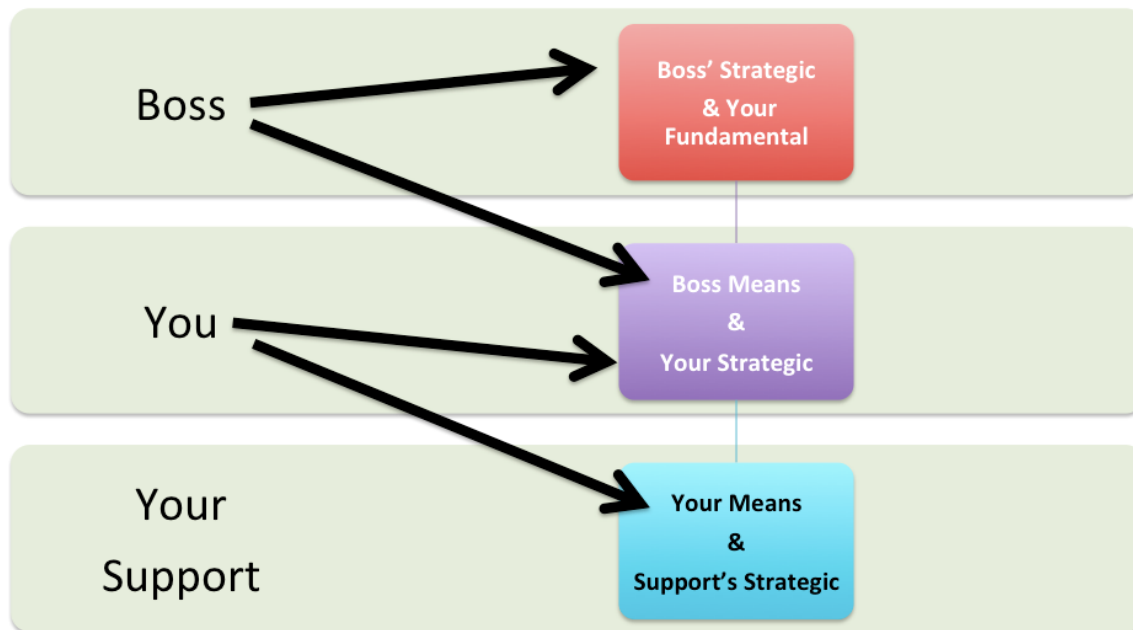
.

Figure 3 D. The perception of what is' ends' and what are the 'means' depends on your stakeholder level. 'One mans meat is another mans poison'.

Abstract and Concrete Strategies:
All objectives and strategies come in two basic different forms, *abstract* and *concrete*.

1. **Abstract Strategy**: a future result (Goal Level) is specified, but not a specific *means* for actually getting there. An 'abstract strategy' is really a 'variable result *objective' (an improvement statement)*. Sooner or later someone has to make some *concrete* 'means' decisions (*a specific decision, as to what to do in the real world to get that improvement*) as to how to get to the target levels. But, from the *point of view* of the 'next level above', the *abstract* strategy is still a 'strategy' (a means to *their* ends).

Examples of *abstract* strategies.
• 	*Increase productivity by 20%.*
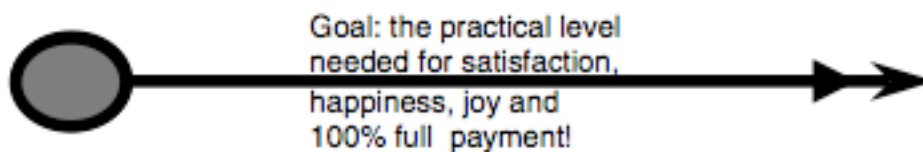• 	*Reduce Capital Expenditure by 10%*

Figure 3 E. An 'abstract strategy' is expressed as a scalar objective, and it is designed to support a specific higher-level objective, with some required level of performance. It does not itself contain a particular specific 'concrete strategy', that might really deliver that level of performance. So, at some point we have to find real concrete strategies, to make it work, at intended levels of performance.
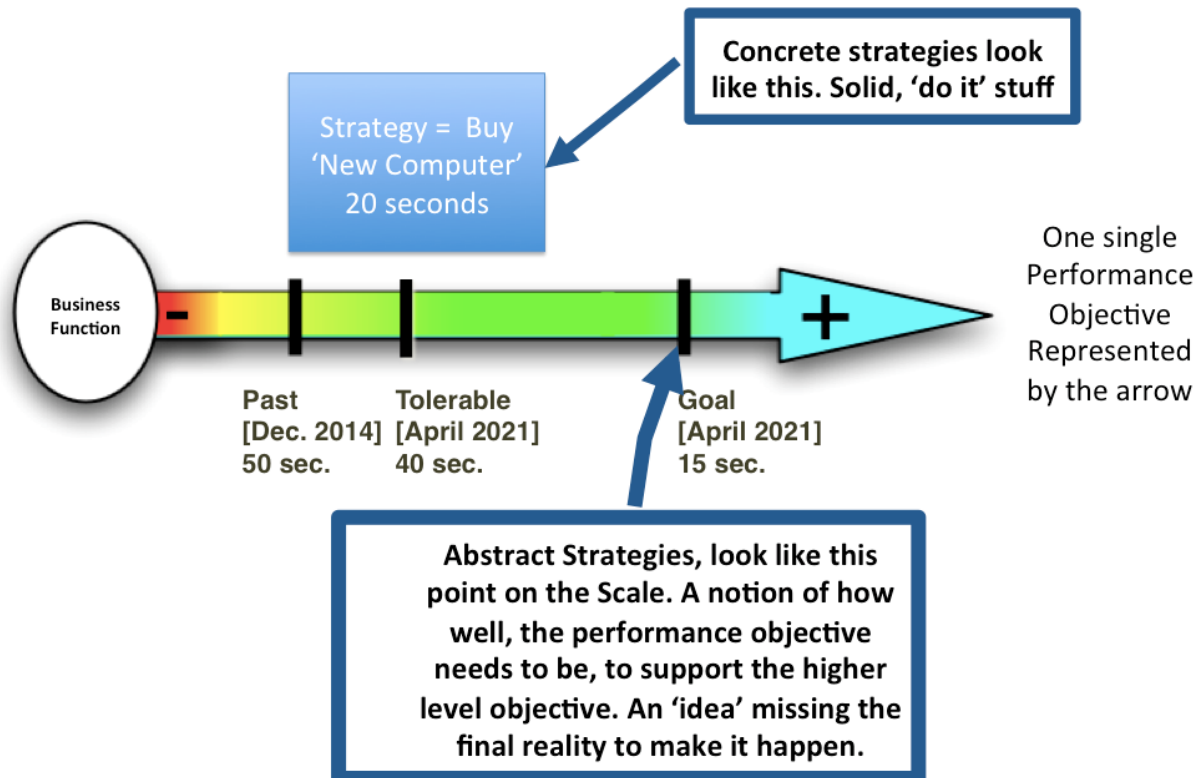
Concrete strategies look like this. Solid, 'do it' stuff

Strategy = Buy 'New Computer' 20 seconds

One single Performance Objective Represented by the arrow

Business Function

Past [Dec. 2014] 50 sec.

Tolerable [April 2021] 40 sec.

Goal [April 2021] 15 sec.

Abstract Strategies, look like this point on the Scale. A notion of how well, the performance objective needs to be, to support the higher level objective. An 'idea' missing the final reality to make it happen.

*Figure 3 F. The difference between concrete strategies (just do it), and abstract strategies (be 'this good', (somehow)). That abstract strategy level will support the next level of objectives up. **If** we can find suitable concrete strategies for reaching the Goal level.*

2. **Concrete Strategy**: a specific decision is made regarding the *real-world means* for supporting the objectives, on the level above it. A concrete strategy will give you 'whatever results it will give you', even if it does not in fact support the next level up, as intended.

So, committing to a concrete strategy, that *fails* to deliver our expectations, is not a good idea. It might be better to formulate it as an abstract strategy, and declare that, 'the means that *in fact satisfies* the targets', is the 'only real' right strategy.

Example of concrete strategies.
• *Layoff 50% of Temporary Workers*
• *Double the number of Permanent Hire Trainees.*
• *Use Supplier X*
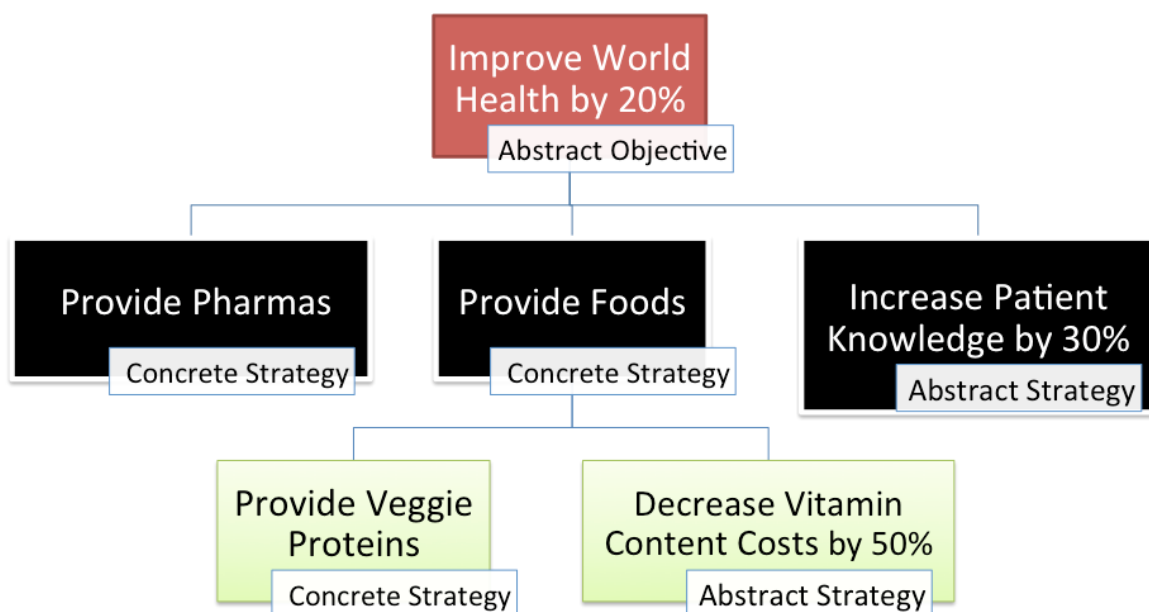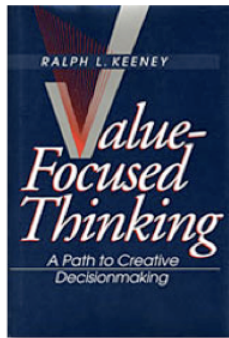• *Drop Product Line Y*

Figure 3 G. Strategies can be concrete (just do it) or abstract (let us achieve it), but the abstract ones, need, at some point, to have concrete ideas behind them.

Keeney's: Levels of objectives.

- — **1. Fundamental Objectives**
  - • **(above us)**
- — **2. Generic Constraints**
  - • **(our given framework)**   **Constraints**
  - • Political Practical
  - • Design Strategy Formulation Constraints
  - • Quality of Organization Constraints
  - • Cost/Time/Resource Constraints
- — **3. Strategic Objectives**
  - • **(objectives at our level)**
- — **4. Means Objectives:**
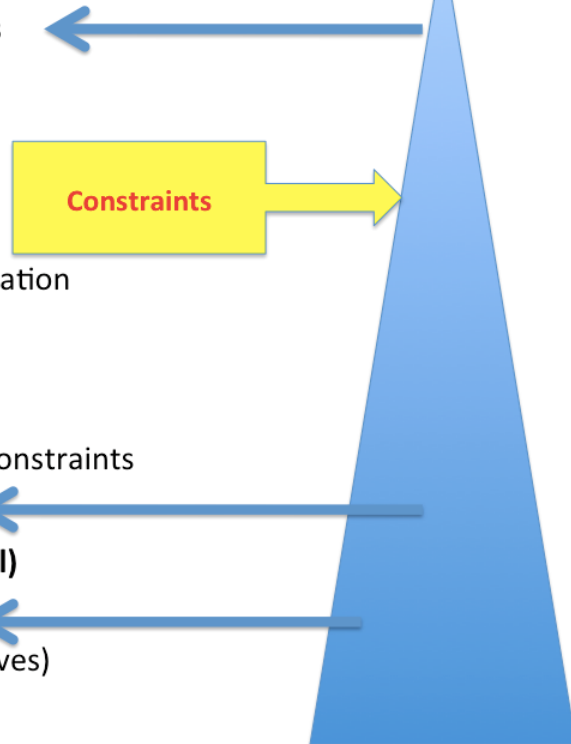 - • (*supporting* our objectives)

Figure 3 H.   Keeney's Levels of Responsibility and perception. All of these will have to operate by respecting a number of constraints. Constraints include budgets, deadline, and conformance to law, culture, policy and other agreements that apply.

In practice, the planner is always concerned with multiple objectives, and multiple constraints, that need to be dealt with 'simultaneously' in the planning process.

Simultaneously means that we want to achieve all performance target objectives, within all resource constraints, and by respecting all other known constraints. We will be looking for a set of strategies to achieve that balance.
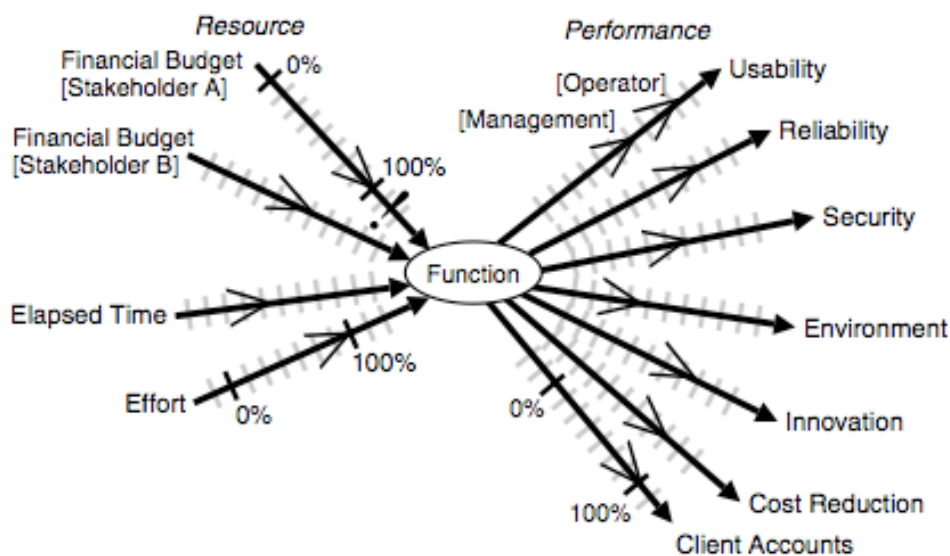

*Figure 3 I: A model of an Abstract Strategy, with defined function, and **multiple** performance and cost attributes. The arrowhead on the scale (--->---) arrow, represents a goal or a budget level.*

Strategy Specification Standards
We need to have something better than letting strategy planners just write down any set of words they feel like writing, and calling it a strategy.

The strategies have to be specified, and evaluated so that they credibly will meet the multiple performance objectives, within all constraints.

Here are some ideas of some basic standards, which we can use to encourage good practice when planning strategies.

Basic Rules for Strategies: General Principles

1. The **Detail** of the Strategy specification must be sufficient to **allow reasonable estimation** of all critical performance and cost attributes we can expect.
2. The **detail must be sufficient** to **correctly determine** if we have violated any applicable **constraints** (for example Core Values).
3. Estimation of the **expected range of impact** on the primary objective shall be made.
4. Estimation of the **side effects** on all **other objectives** shall be made.
5. The resources needed to **install, operate, and decommission** the strategy shall be estimated.
6. Analysis of whether the strategy alone, or *together with any other strategies* **violates any known applicable constraints** (starting with Core Values) needs to be made.

These considerations are intended to ensure that the specified strategies are intelligible enough to evaluate, with regard to their intended purpose (improving at least one objective), and with regard to all other side effects of interest (other objectives, resources, constraints, risks).

They help us answer the question: "Is the Strategy well-specified ? ".

They do not yet answer the question: 'Do we have the right strategy?" – but they lay the basis for asking and answering that question.

Deriving A Complete Set of Strategies

Let us imagine
- we had 10 Top Level Objectives, and 10 Top Level Strategies.
- Let us further imagine that each strategy was estimated to satisfy a different objective's target-levels on-time, exactly (±0% deviation from the estimate).
- Let us also assume that no objective or strategy seems to violate any constraint (starting with Core Values)

In this simple-world 'model' we could say that we **seem to have enough** strategies to satisfy all our objectives. There are no constraint violations. We are ready to proceed to actually delivering the strategies, and seeing the target performance of our organization emerge measurably.

In our real world we will need to manage strategy finding by:

• adding proposed strategies **incrementally** to the total set of strategies, until we seem to have **enough strategies**, even with uncertainty, to proceed. Until we have enough 'safety factor'.

• keeping our eyes open for each new proposed strategy, to see that it does **not violate** any constraints. Not least, resource constraints (time, effort, money).

• even when we seem to have a sufficient set of strategies, we can consider 'optimizing', for example to find **equally powerful strategies at much lower costs**, or with lower risks.

• keeping track of this strategy selection and evaluation process, **using a tool** – better than human intuition.

• We will suggest an **Impact Estimation Table** is a very good tool for this purpose. We discussed this to a limited degree above (Figure 2 A – example of Impact estimation).

Part 4. Quality Control of Strategies

Strategy QC for Clarity
We can perform a review (Specification Quality Control, SQC, [2, Chapter 8] of **the strategies, as a set** with regard to the rules we outlined above.

These rules and considerations amount to *making sure that we **have enough detail** to 'reasonably assert' that the strategies have a fighting chance to reach our objectives.*

If we pass this first test (fighting chance), then we are ready for the more-critical question:

"Are the strategies *really* going to be sufficient to reach our objectives, on time, within budget?"

This question still has two phases, for **Complicated** systems
(where there are no easy answers about what will happen when you mix various strategies in a cooking pot):

- **Phase one**: model and estimate the big picture on an Impact Estimation Table.

- **Phase Two** (a series of incremental cycles of testing and measuring the strategy implementation): add one single promising strategy to your current environment: see what really happens: measure all performance effects, and all costs.

o   This is essentially the same as a Deming 'Plan, Do, Study, Act' cycle.

o   But we have our own way of describing it.Below.
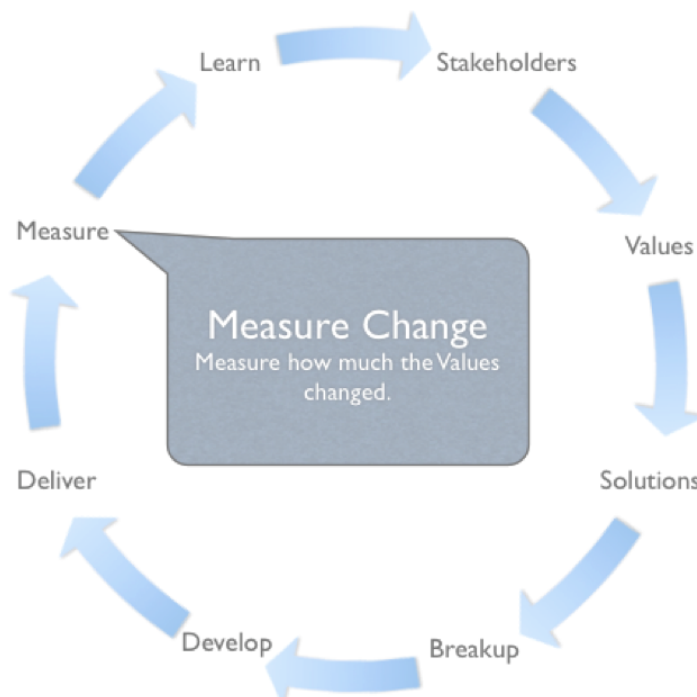
Figure 4 A. The Evolutionary Value Delivery Cycle. This encourages a step by step exploration of strategies and sub-strategies, measuring what really happens in practice, in a Complicated system. Locking in good results, and rejecting bad results quickly.

The *initial* IE Table is a set of estimates. It is a hypothesis. 'If we use these strategies, then we believe we can get these results".

But, in our real world of organizations, internationalization, and technology and new economics: nobody really knows. Nobody can estimate very accurately. Lots of things can turn out differently from our estimate, our hypothesis.

So, we have two options:
- **Big Bang**: build the new system using all the suggested strategies implemented, and committed at once. And pray.
  o People have been using this method widely for years, and the history is discouraging. We get too many really bad surprises.
- **Little Bangs**: we add small increments of our strategy hypothesis to the existing system, and see what happens. Like good management scientists we learn what is true and works well enough to keep. We learn what does *not* work. Dump it. Do not scale up. And continue the search for things that work better.
  o We gradually build up a series of strategies that really work.
  o Our 'worst failures', are small efforts, experiments, which 'succeed' in proving that we should not integrate them into our real system, and we should not scale up using them.
  o We feed the good results that we *choose* to keep *in place*, **into the Impact Estimation table**: now we are doing the 'results accounting'. We can compare to the 'Budgeting' of the original value and cost estimations.
  o We are gradually building up a picture of how good we are getting, and what it costs.
  o We can more easily see the gaps to our valued Goals, and see the remaining resources, budgets and deadlines; and decide intelligently what to do about them all.

'Little Bangs' (cute, I could not resist the name), we call it the **Evolutionary Value Delivery** method, or '**Evo'**, for short. Is nothing new. It has been good practice in science, engineering, management and society, not to mention nature, for a long time. It works.

But somewhere along the way, with business school academics, rather than practicing business titans (Jobs, Musk, Edison), we totally lost the plot.

One documentation of this is Hopper's excellent history, The Puritan Gift [2]. Deming, Out of the Crisis is another excellent source on the matter [9]. There are many, in our references.

Impact Estimation (IE) of Strategies: QC of Power.

Design Ideas ->	Technology Investment	Business Practices	People	Empowerment	Principles of IMA Management	Business Process Re-engineering	Sum Requirements
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 month on 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 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*	

Table Part 4. Actual Impact Estimation table for US Army Persinscom System.

The above example shows the use of an IE Table to evaluate a set of management strategies (named in the top row) against a set of quantified objectives (referred to in the left hand column).

We can see the *rough relative power of each strategy* in the row 'Sum of Performances'.

We can see the rough *impact of all strategies, on each single objective* in the column 'Sum Requirements'.

We can *monitor cost and time resources* relative to a stipulated budget in the two rows 'Money' and 'Time'.

We can get some idea of each strategy's *value for money* by looking at the bottom row.

The % estimate is
• computed from a 'real scale' (like 'seconds') estimate for each objective (usually), in relation to a 0% baseline (like 'Past').

What is the expected impact, using the scale of measure defined for each objective.

The expected impact is:
• based on specified 'evidence' for the estimate
• based on specified 'sources' of the evidence

And each estimate includes:
• ± uncertainty or range of possible results ('65%±20%')
• a 'Credibility' category (itself based on evidence and source) of 0.0 (none) to 1.0 (Perfect).

This means we can *chose to be* quite *rigorous*.

Management can insist on rigor, on the part of those working out the tables, so they have a more-solid decision-making basis.

But it is not uncommon, initially, to be less rigorous, to get a quick feeling for how the planning is going, and the weaknesses that are glaring at us.
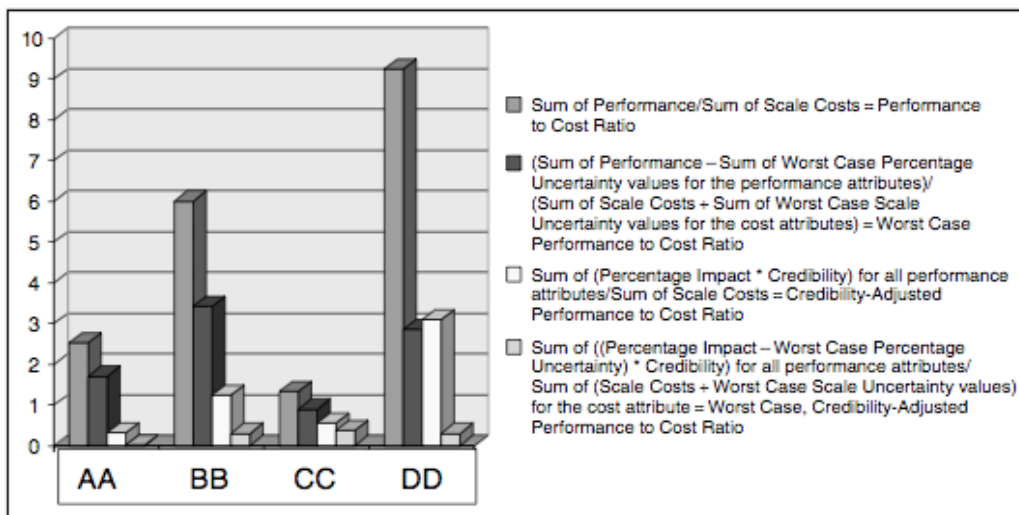
Figure 4 B: Management can look at the strategies from various risk level points of view. Source [2, p.287]. This is a top level summary from a tool built by Kai Gilb. Most of our clients build their own local tools using spreadsheets.

It is quite an amazing experience, to sit in planning meetings and presentations where this quantified environment, for objectives and strategies is present. This discussion is systematically focused on the weak points in the overall plan, which are numerically very visible.

The discussion is incredibly 'logical' and based on the ground rules:

- "Can you give that strategy such a high estimate, from such an incompetent source?"

- " Who cares if the strategy is so great for Security, we can see the damaging side effects for all other critical objectives, and the totally unknown, not-guaranteed cost and time aspects. Forget it! Find something better!"

- "Well, that is a great strategy, if you are an optimist, but we need to be sure it works, and there are far too many risky and dodgy circumstances surrounding it, documented in our planning. We have to go with the sure things that are also available in our plans".

- "We could only go for that strategy, if it can be *easily removed*, without financial and time loss, if it fails in smaller incremental trials; and if we get much more credible contract guarantees from the supplier, who is not very credible as far as our analysis goes."

Photo 4 Real London Bank, where there was a fantastic different logical planning discussion, based on quantified objectives, and quantification of the strategies.

Business meeting should always be like this, but very rarely are. Planguage is a balanced accounting system for management decision making, with the non-financial values being as-well-quantified as the financials.

Summary Part 4 Quality Control of Strategies:
The main idea, at this level of review, is to make sure that we have *probably* got a *reasonable* set of strategies, capable of helping us reach our target levels of objectives, on time.

We need, above all, to worry about obviously weak strategies and obviously weakly covered objectives.

Management likes to see a 'safety factor' of 2x to 4x. Especially if they are committing to an irreversible decision on this basis.

However, our ability to accurately estimate impacts and costs is inadequate. and cannot blindly be trusted for big irreversible decisions.

The IE Table is only one intermediary tool; hopefully better than what you are using at this stage today.

If we really want to make sure that our strategies will meet our targets, then we have to deploy them *incrementally,* and track the results, learning as we go. The 'Evolutionary' Strategy Implementation method. Part 5 below.

Part 5. Evolutionary Deployment of Strategies

Assuming we have a strategy set without obvious failings, as *yet*; we will normally insist that the strategies are implemented in small increments.

I have had good multi-decade experience using a guideline of 2% (of resources like budget or time to market) as a value-delivery step size.

The important thing is that the step size is small enough to
* limit risks of failure,
* to get something done in the short term,
* to keep up pace and motivation,
* and to allow us to see cause-and-effect more clearly.

I have seen that most top managers do not seem aware of how easy and possible it is to decompose *any large plan* into a series of smaller, incremental value delivery, plans.

Their subordinates are not helpful in suggesting this either.

There are however a large number of known tactics [2, page 314, fig. 10.6, "20 ways to decompose systems into small steps") [URL16] for decomposition. Most of them are based on simple imaginative common sense.

The key idea here is that top management adopt a planning policy that large plans *will* be implemented in small (2%) steps. No arguments! Most people can figure it out, under pressure to do so. The rest can be trained!

Some simple decomposition ideas are:
* Do one strategy at a time
* Do one sub-strategy at a time
* Do strategies in one location successfully, then scale up.
* Do not try to get the final target objective at once, increment your way towards it!

The Principles of Tao Teh Ching (500 BC)

"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"

One of the most important opportunities you have, when you adopt this planning method, is that you can get very rapid and visible results.

You choose by planning, exactly which results to go for initially, and you can chose the ones with the best value for money, by looking for high numbers on an Impact Estimation table.

You can make sure your organization knows what it is doing, step by step, and if not, things are stopped, or corrected, before time and financial drain make you look like a foolish manager.

You can also delegate the power to get the job done, based on the objectives. Then you leave it to your subordinates to find out which strategies really work, and which do not.

A Simplified Evo Process
Background: A simplified version of the Evo process to use on small projects. It also serves to help understand the larger, full-scale Evo process.

Evo 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).

Evo 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.

Evo 3: Define approximately 4 budgets for your most limited resources (for example, time, people, money, and equipment).

Evo 4: Write up these plans for the goals and budgets (try to ensure this is kept to only one page).

Evo 5: Negotiate with the key stakeholders to formally agree the goals and budgets.

Evo 6: Plan to deliver some benefit (that is, progress towards the goals) in weekly (or shorter) increments (Evo steps).

Evo 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.

Evo 8: On a single page, summarize the progress to date, towards achieving the goals and the costs incurred.
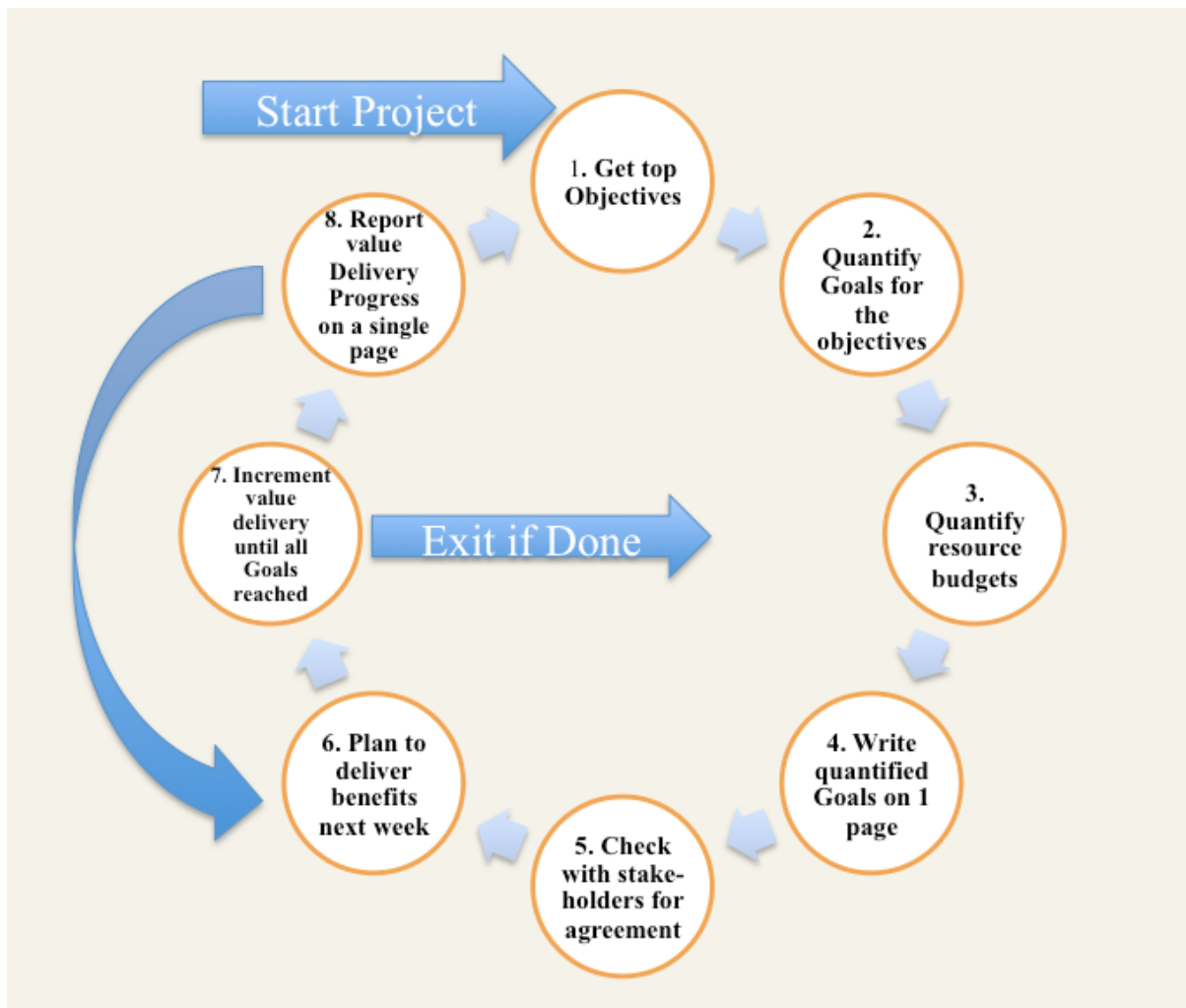
Figure 5 A. One view of the 'Evo', value delivery process.

'Evo' Project Management Policy

- **Efficiency:** The project manager and the project will be judged exclusively on the relationship of progress towards achieving the goals versus the amounts of the budgets used.

- **Creativity**: The project team will do anything legal and ethical to deliver the goal levels within the budgets.

- **Value Reward**: The team will be paid and rewarded for benefits delivered in relation to cost.

- **Freedom**: The team will find their own work process and their own design.

- **Feedback**: As experience dictates, the team will be free to suggest to the project sponsors (stakeholders) adjustments to 'more realistic levels' of the goals and budgets.
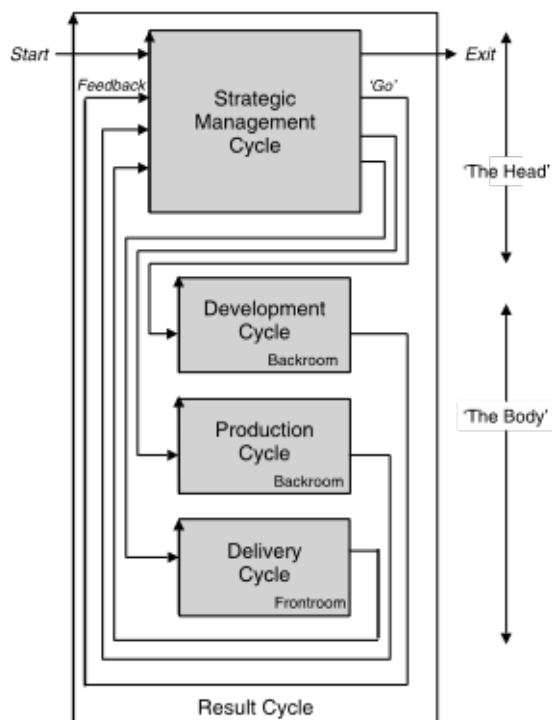
Figure 5 B.   Another model of the 'Evo' process.

The Head manages the project.

1. T**he backroom development cycle** (like a kitchen preparing many desserts and soups, and roasting a lamb) can run in parallel and develop things that take more than one delivery cycle, to ready for integration into the system. See also Fig. 6.3 and Fig. 5.1 for Backroom visualization.

2. **The backroom production cycle** will get *everything* ready for implementation, in addition to the basic development of an implementable strategy (dishing the food onto plates in the kitchen).

3. **The delivery cycle**, in the front room (like waiters delivering food to guests) of delivery to stakeholders, will do whatever it takes to create real measurable value for stakeholders.

The backroom/front-room concept:
1. allows you to keep a steady rhythm of value deliveries, in spite of the fact that some strategies need more time to develop and ready, than a single cycle.
2. allows parallel development, with value delivery.

Summary: Value Planning at the Vision Engineering Level.

• Core Business Ideology can be translated into clarified and quantified statements.

• Strategies can be quantitatively related to quantified objectives.

• Strategies can be implemented in small incremental steps, to give early results, organizational learning and no-fail projects.

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