

Sustainability Planning

2 Hour 'Course' for BCS SPA/Quality

Based on the Book = <https://tinyurl.com/UNGoalsGilb>
These slides are at = <http://concepts.gilb.com/file24>
and <https://tinyurl.com/SustainabilityPlanningSlides>

A Video afterward will appear at URL= https://www.youtube.com/playlist?list=PLKBhokJ0qd3_wlvr0j85YhmNfNj8ZJ8M-

(General site of videos, SPA and my courses and talks)

The following videos are there now: Technoscopes, Value Requirements, Value Design, Value Management, and Value Agile
There are no prerequisites for this course, but all previous courses will give additional detail for further study.

(share freely on social media and with friends)

By Tom Gilb, in Norway (Kolbotn, near Oslo)
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Sustainability Planning

Sustainability Planning Guidance for getting your critical values: quickly, clearly, effectively balanced and continuously¹

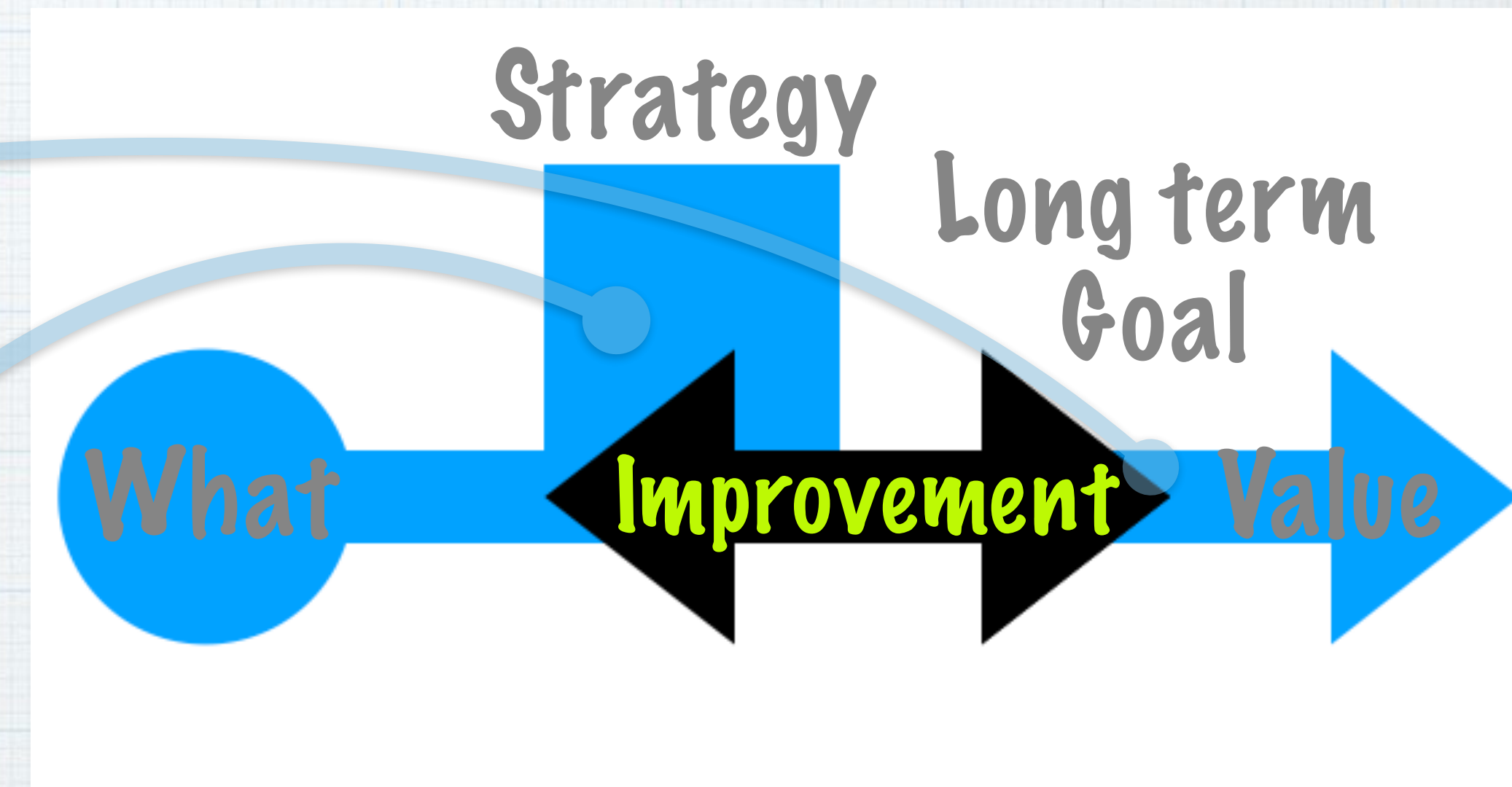
Tom Gilb

Pawel Nowak: Initiator.
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Short Summary of 'Sustainability Planning'

- * **'Sustainability Planning'** is defined here as
 - * 'planning to reach a set of *competing* 'human and other stakeholder' values',
 - * with a view towards long-term value achievement, with balanced priorities and intelligent use of all development and operational resources.
- * **'Sustainability Values'** can be expressed as
 - * *degrees* of those values,
 - * in various *dimensions* (time, people, circumstances).
- * To deliver to sustainability goals levels, we need to have -
 - * ***extremely clear value-goal*** statements.
- * Then we need
 - * 'smart design' or 'problem solving', to find **strategies**
 - * to reach our goals,
 - * within our constraints
 - * (like legal, ethical, fairness, time, and financial).

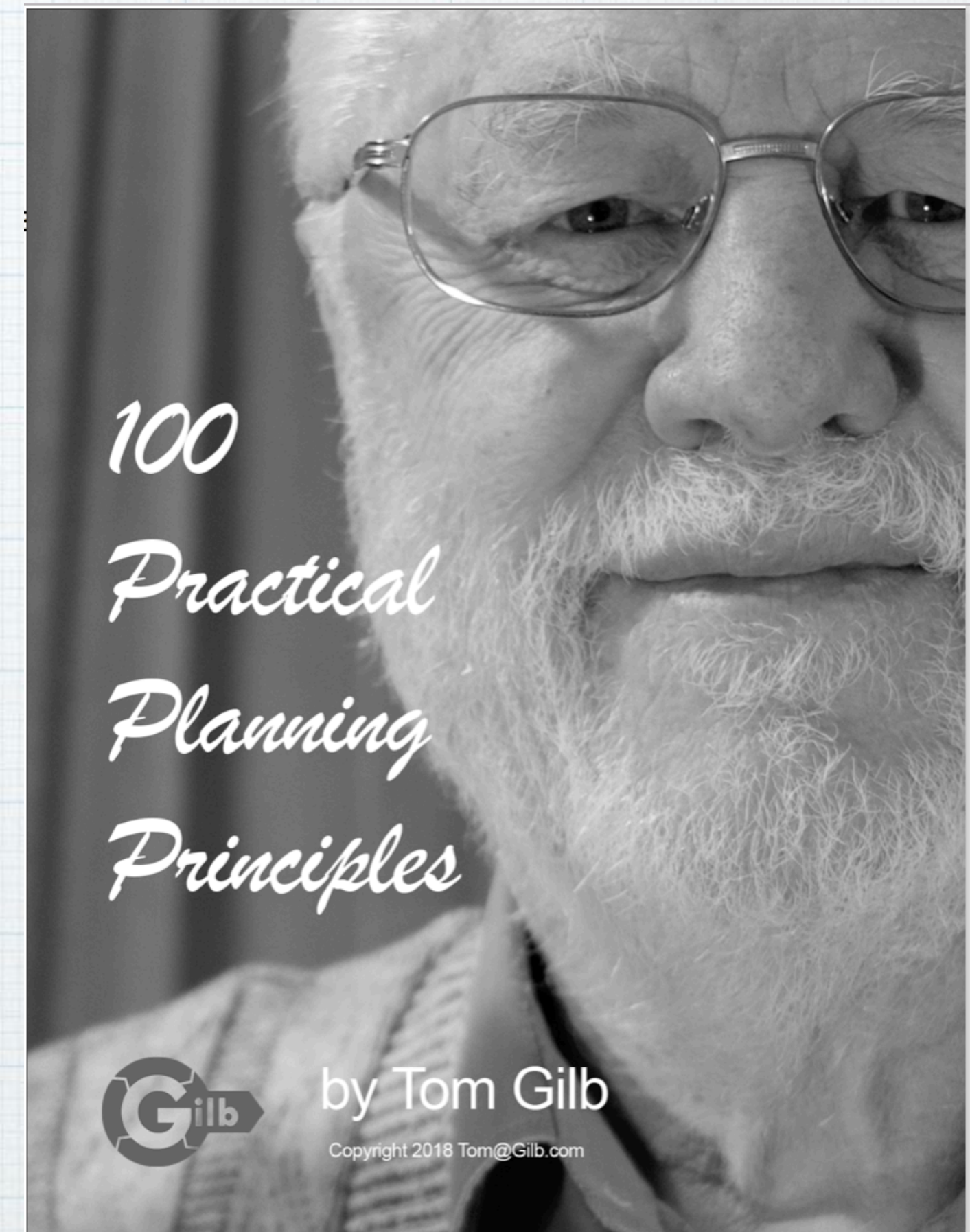


This course in a graphical 'nutshell'

Method Background

- * 'Planguage'
 - * Our advanced planning language
- * ValPlan.net
 - * Our automated planning tool for Planguage
- * Various Books and Papers
 - * In these slides, such as
 - * 'Competitive Engineering',
 - * 'Value Planning' and
 - * '100 PPP.'

— — — — >



<https://www.gilb.com/store?tag=books>

Intended Audience: planners and managers

- * Exceptionally smart planners
- * Idealists (want to do the best they can)
- * Very ambitious and energetic champions of better methods
- * Planners who realise *how bad* 'conventional planning' is today
- * People who want to help 'save the world', quickly and effectively
- * People who will *fight* to get effective plans in place, and implemented in *practice*.

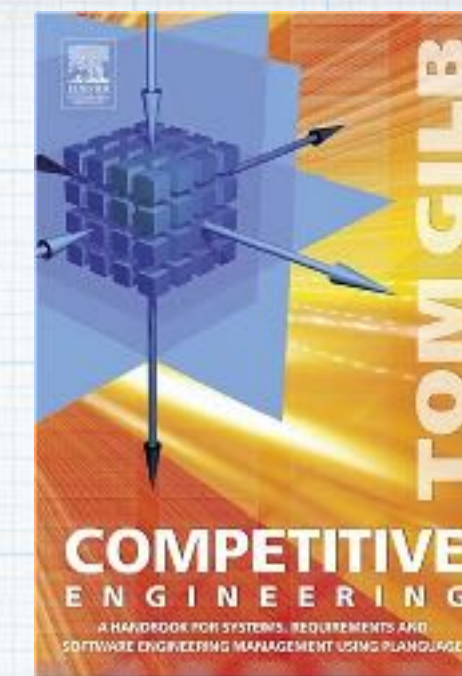
* WHO IS WASTING THEIR TIME HERE?

- * Conventional thinkers
- * Who just follow convention and
- * Oversimplified practices
- * And do not *really* care if projects fail
- * And if the world falls more apart



Our Special Contribution to the Sustainability Cause

- * There are many voices, commenting in depth, on the UN SDG Planning Quality (Ref. H, I, J, K, L).
 - * See Presenter Notes, this slide,
 - * or book, <https://tinyurl.com/UNGoalsGilb> (free)
- * I agree with their analysis about **lack of clarity** and **conflicting priorities**. But I don't think they are offering good enough solutions.
- * This course will go into more detail
 - * on exactly **WHY** the Goals and Targets are **unclear**,
 - * and *exactly what we can do in practice* to encourage the UN and others, to write *much* clearer Goals,
 - * to **separate real Goals** from mere 'suggested' strategies,
 - * and to **prioritize Goals** and strategies more logically.
- * We will base our methodology
 - * on a Planning Language we have developed,
 - * so that there is a **solid, free, methods-basis**,
 - * which can be used: not just off-hand observations.
- * I believe that this very-basic *clarification* of the stated Goals,
 - * is a **pre-requisite to any intelligent** political and academic discussion of the Goals.



Value Planning

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 (VP) 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.

Technical Detail and Real Examples:

My TEDx Talk <http://tinyurl.com/GilbTedx>, "All Qualities Can Be Quantified". 18 minutes.

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<https://tinyurl.com/UNGoalsGilb>



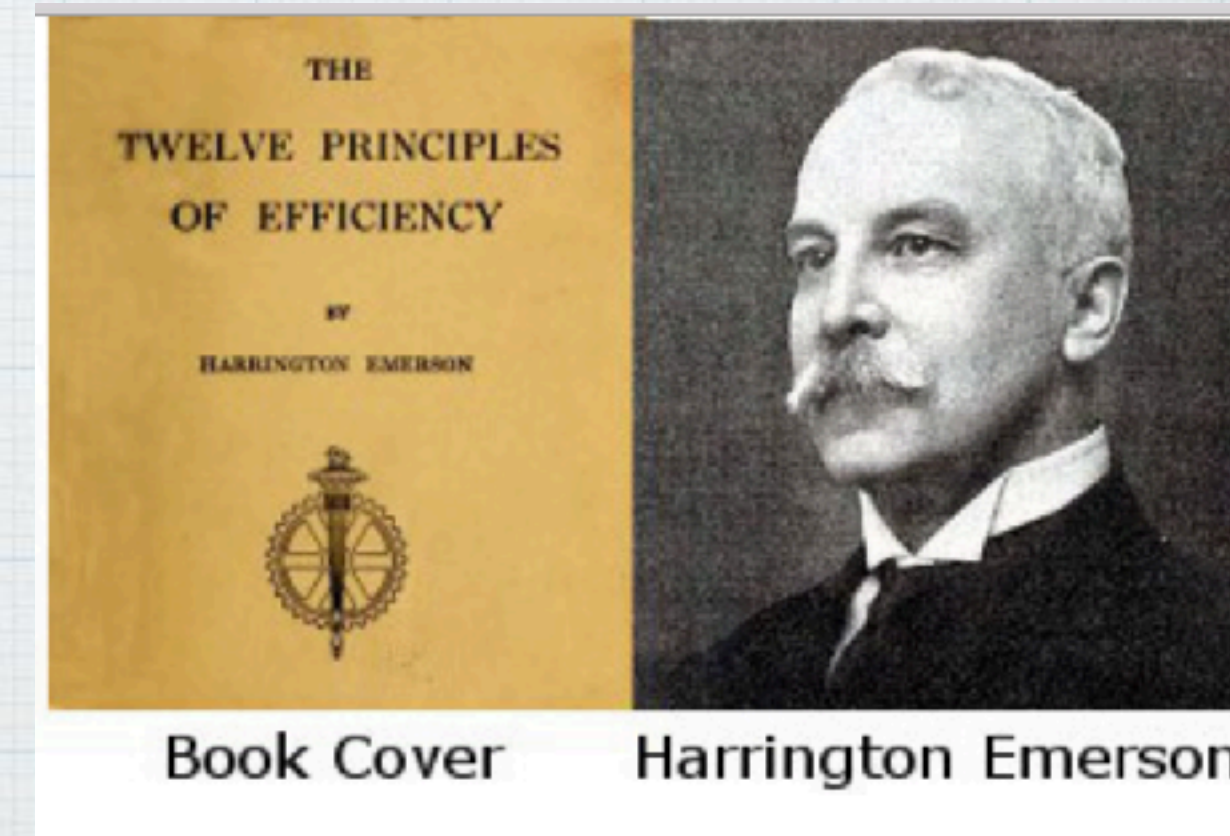
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on request

Sustainability Planning Principles

Details in the following slides

1. **EXTREME CLARITY IS BASIC:** Extremely *clear* goals are the basis for extremely good and relevant sustainability value improvement.
2. **GENERALITY NEED NOT BE VAGUE:** General sustainability-value goals *can* be decomposed, into extremely-specific, clear, and *measurable* goals.
3. **'MANY GOALS, MANY SOLUTIONS', NEEDS BALANCE:** You will always have in mind many *concurrent* goals, and they will compete with each other, for resources: so you are going to have to balance and prioritize intelligently
4. **BE CAREFUL TO ASK FOR WHAT YOU REALLY WANT:** You need to be very conscious of the difference between 'Ends' (Value Goals) and 'Means' (Strategies for delivering the Ends), so that you really get your intended sustainability value improvements, no matter that the best strategies are surprising, and might emerge *later*, than your initial goal planning.
5. **SIDE-EFFECTS WILL 'GET YOU' LATER ANYWAY, SO CONSIDER THEM EARLY:** There is nothing as simple as the 'right strategy' for a single sustainability goal: all strategies will have 'side effects' on most other competing sustainability goals, and they will impact a variety of constraints ('laws' for example) and costs ('maintenance costs' for example).
6. **SUSTAINABILITY REQUIRES ENGINEERING:** Sustainability is a **systems engineering** problem area: it is not suitable for narrow and emotional political slogans and arguments. You have to consider many factors in your environment, and you will need to quantify and measure, like other engineers and scientists do. If you are not 'up' for such discipline, then keep away from Sustainability, you might destroy the planet!
7. **ESTIMATION POSSIBLE, KNOWLEDGE NEEDS MEASUREMENT:** It is possible to get a pretty good overview of the potential results, and costs of all solutions for all sustainability goals: which helps your presentation, discussion, prioritization and decision-making. But final knowledge of how things work in the short and long-term will require continuous measurements, in a dynamic and complex situation.
8. **PLAN TO LEARN FAST:** The big trick in such a complex environment is not merely 'to plan well', but to 'plan to *learn quickly*' *what really works; and to continuously evolve strategies to meet changing and clarified needs.*
9. **REAL RESULTS REQUIRE CLEARER PLANS:** If your sustainability planning is left the way it is now, you will probably get disappointing results, and in a too-distant future. If you lead a change in the directions pointed out here, then you can expect, and prove, that you will get early measurable results in the short term, which will continuously improve, towards the longer term.
10. **WIN FAST, ADD WINNINGS:** The scope of most all sustainability efforts is overwhelmingly complex, so we need to use systematic methods to decompose into practical do-able detail in the short term, while never losing sight of the big picture.

- “As to *methods*, there may be a million and then some, but **principles** are few.
- Those who grasp **principles** can successfully select their own *methods*”.
- Harrington Emerson,



1. **EXTREME CLARITY IS BASIC:** Extremely *clear* goals are the basis for extremely good and relevant sustainability value improvement.

Goal 10:

“Reduce inequality within and among countries”

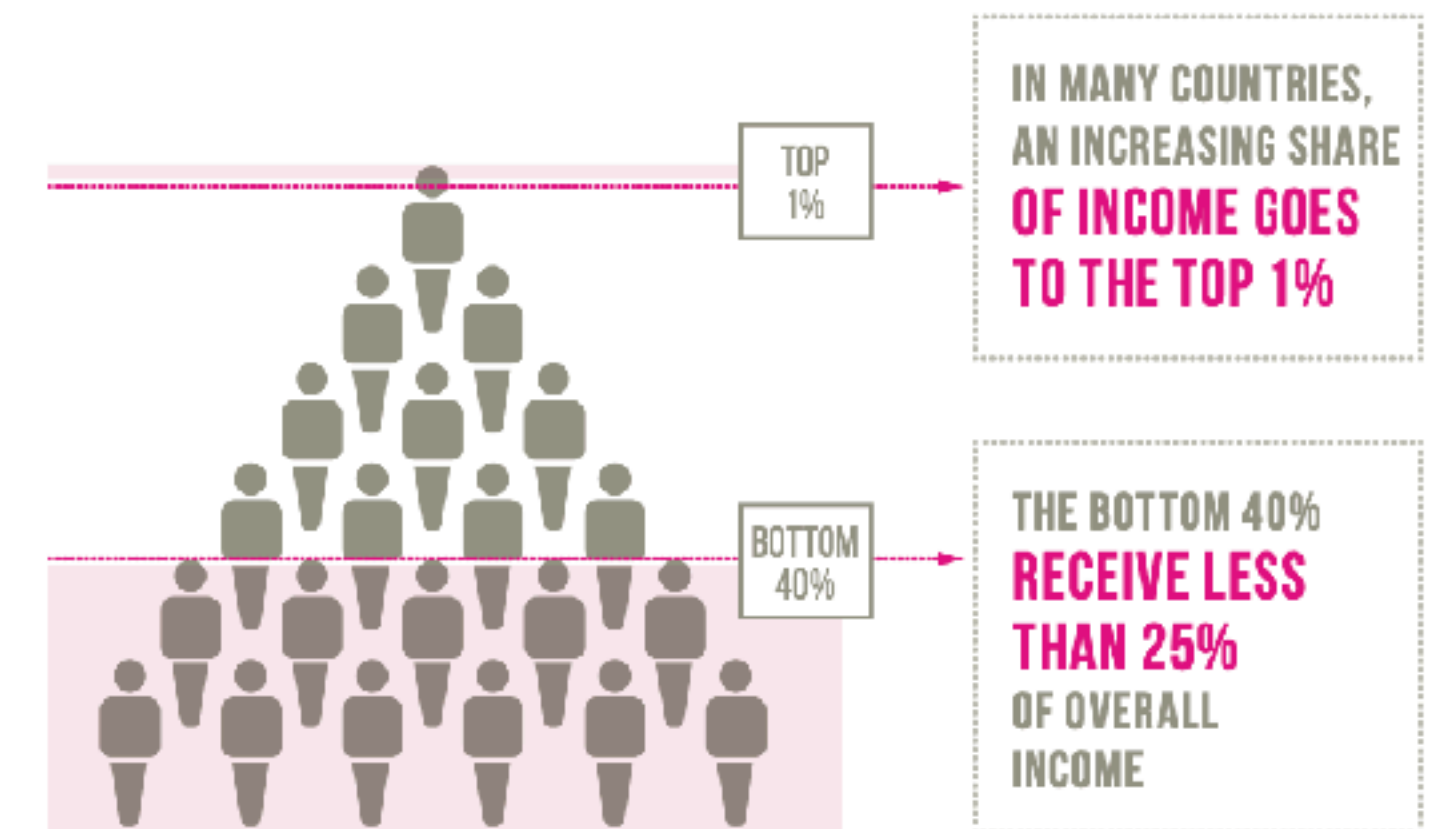
1. How *much* do we aim to reduce?

2. How can we *define* ‘inequality’?

3. Is ‘country’ the most or only *useful* area to consider?

4. What does ‘Among’ countries *mean*?

IN MORE THAN HALF
OF THE 92 COUNTRIES WITH DATA,
**INCOME OF THE
BOTTOM 40%
OF THE POPULATION**
↑ ↑ ↑
GREW FASTER THAN
THE NATIONAL AVERAGE
(2011–2016)



“The only use of a fuzzy goal
is to get political consensus and enthusiasm
about people’s misunderstandings.”

© Tom Gilb 2020

2. GENERALITY NEED NOT BE VAGUE:

General sustainability-value goals

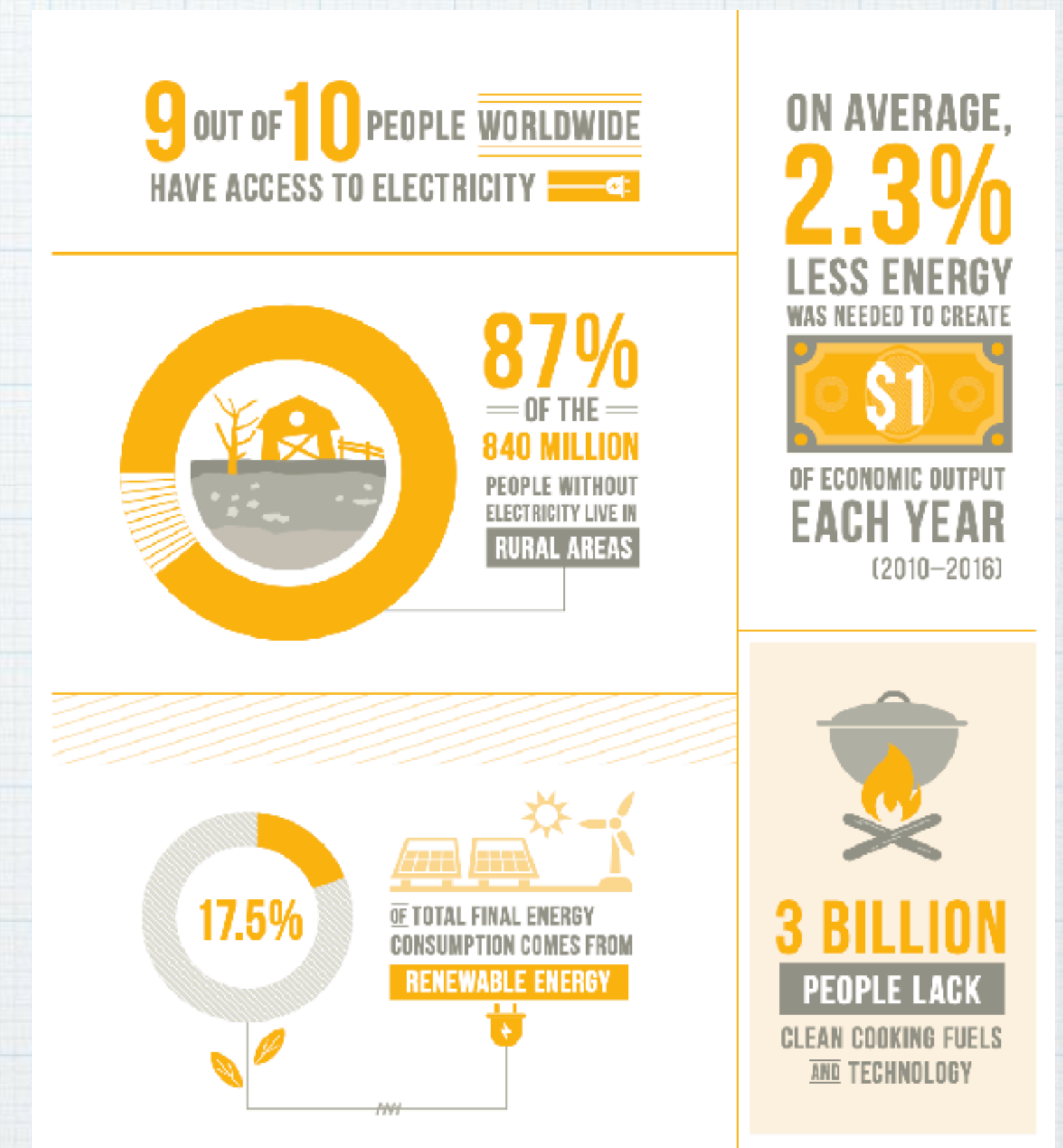
can be decomposed,

into *extremely-specific*, clear, and *measurable* goals.

- * Goal 7: Affordable and Clean Energy
- * “Ensure access to affordable, reliable, sustainable and modern energy”
- * Identify all ambiguous, general words
 - * “Ensure access to affordable, reliable, sustainable and modern energy”
- * Three strikes and your idea is ‘out’

We can START with fuzzy words,
but if that is the end,
then the end is near!

TSG 260620



You will ??? Die today

Quiz: what does one single unintelligible word do to any sentence?

2. **GENERALITY NEED NOT BE VAGUE:**
General sustainability-value goals
can be **decomposed**,
into **more-specific, clear, defined**, and possibly *measurable* goals.

* **Goal 7: Affordable and Clean Energy**

* **“Ensure access to affordable, reliable, sustainable and modern energy”**

* **Define these many words!**

[Scale Parameters]/
[General Terms] defined as
a set of **conditions** or
possibilities

G7 Energy Access

Level: Business, Status: Not Determined Type: Value, Labels: no Labels

Is Part Of: [TOP 17 Goals](#)

Goal [Energy Recipients = **Home**, Ensured Access = **Energy Subsidy**, Affordable Energy = **Small Kit Home Solar**, Reliable Energy = **24/7 Minimum**, Sustainable Energy = **Solar Energy**, Modern Energy = **Electricity**] @ 2030 : 100 <- tag simple arbitrary non perfect examples of Scale Parameters and decomposition to various conditions, in order to define an Energy requirement

Ambition Level: “Ensure access to affordable, reliable, sustainable and modern energy”

Stakeholders: Architecture Engineering And Construction (AEC), Dwelling Owner, Government Innovation Agencies

Scale:
% [Energy Recipients] who get [Ensured Access] for [Affordable Energy] [Reliable Energy] [Sustainable Energy] and [Modern Energy]

Target Time Units: Year

Affordable Energy: defined as:

General term
Subset
Selected

← General term
used to define Scale

Affordable Energy: defined as:

Inverter, Battery, Solar Panels Charge Controller, CCTV Installation, Small Kit Home Solar, Bore Hole Drill

Energy Recipients: defined as:

Home, Apartment, Office, Shop, Factory, Government Building, Mobile Homes, Refugee Camps, Schools, All Other Recipients, ✓

Ensured Access: defined as:

National Access Law, State Access Laws, Local Communal Laws, Energy Subsidy, Cooperative Energy ✓ ?

Modern Energy: defined as:

Electricity, Gasoline, Diesel, Wood, Manual Generation, ✓

Reliable Energy: defined as:

24/7 Minimum, 24/7 Full Supply, Backup Power Locally, Backup Fuel Supply, ✓

Sustainable Energy: defined as:

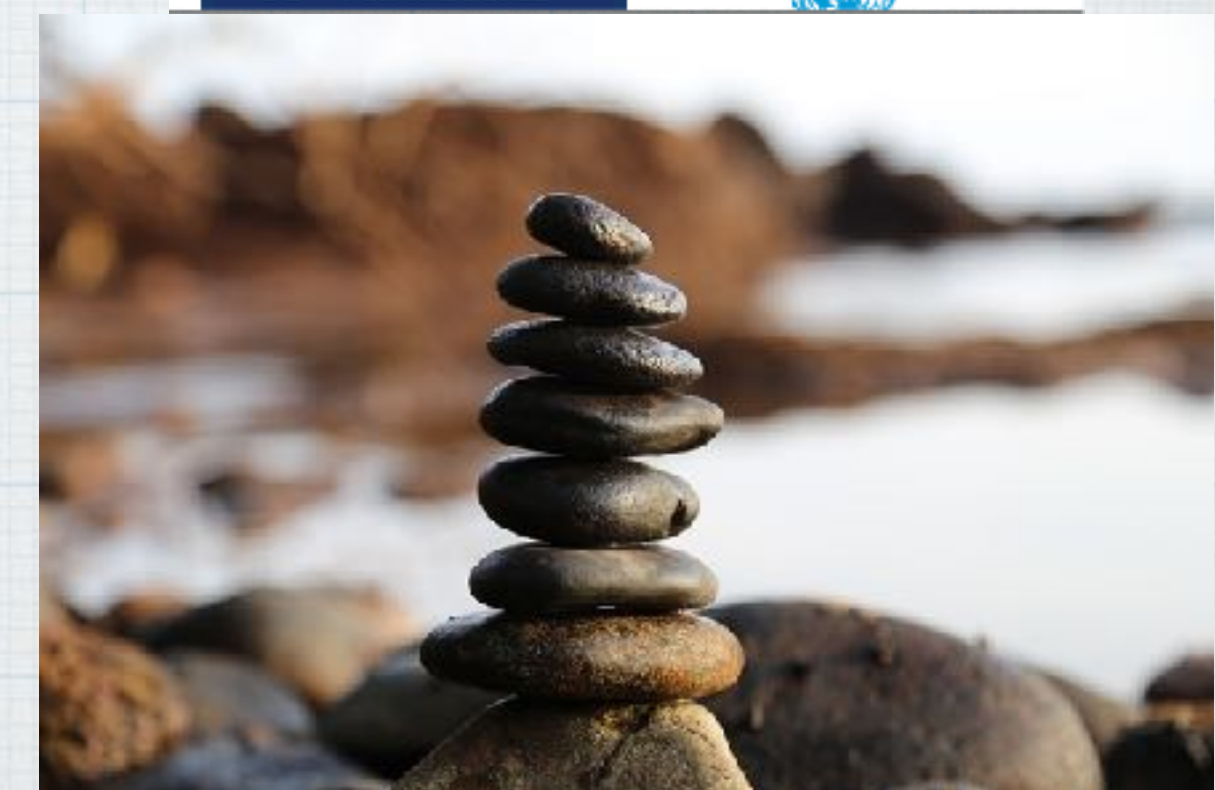
Wind Energy, Wave Energy, Waterway Energy, Solar Energy, Sustainable Agriculture Energy, ✓

General term
Total Subset
← Defined

3. 'MANY GOALS, MANY SOLUTIONS', NEEDS BALANCE: You will **always** have to deal with, many concurrent goals, and they will **compete** with each other, for **resources** : so you are going to have to **balance and prioritize Goals** intelligently

- * How do you **prioritise** the 17 concurrent UN Goals ?
 - * Exactly what **practical mechanisms** can you use to understand the priority, of one goal, over another ?
 - * How do the very-many stakeholders determine or influence **priorities** ?
 - * What if everything is changing rapidly and in hidden ways ?
- * How can you **satisfy** them all ? (all stakeholders, all goals)
 - * What does it mean 'to satisfy' a stakeholder ?
 - * How do you know the '**costs**' of Goal satisfaction?
 - * How do you know the **duration of efforts** to reach Goals on time ?
 - * How can you know, or estimate, if the **technology** is good enough,
 - * or cost-effective enough yet, to satisfy the goals ?

THE 17 GOALS





4. BE CAREFUL TO ASK FOR WHAT YOU REALLY WANT:
 You need to be very conscious of the difference between
 ‘**Ends**’ (Value Goals) and ‘**Means**’ (Strategies for delivering the Ends),
 so that you really get your **intended sustainability value improvements**.
 Even when your ‘best strategies’ turn out surprisingly bad,
 and even deliver results *later*, than your initial goal planning specified.



Link words detect
 ‘means’ in the ‘ends’

“In April 2020, the United Nations released a framework for the immediate socio-economic response to COVID-19, as a roadmap to support countries’ path to social and economic recovery.

It calls for an extraordinary scale-up of international support and political commitment to **ensure that** people everywhere have access to essential services and social protection.

The socio-economic response framework consists of five streams of work:

1. Ensuring that essential health services are **still available and protecting** health systems;
2. **Helping people cope with adversity, through** social protection and basic services;
3. Protecting jobs, supporting small and medium-sized enterprises **through** economic response and recovery program
4. Guiding the necessary surge in fiscal and financial stimulus **macroeconomic policies work for** the most vulnerable and strengthening multilateral and regional responses; and
5. Promoting social cohesion **and investing in** community-led resilience and response systems.



These five streams **are connected by** a strong environmental sustainability and gender equality imperative to build back better.

The UN Secretary-General has stressed that the recovery from the COVID-19 crisis must lead to a different economy.”

* This example is from recent COVID-19 updates to UN Goal 8 ‘Decent Work and Economic Growth’

* The underlined and bold words are ‘link words’

* They link ‘ends’ and ‘means’

* This helps us see the difference between UN Goals (ends) and suggested UN Strategies

* Notice that both of these are badly defined, ambiguous,

* Goals are not quantified
 helping people cope with adversity,

* Strategies have no estimate impact on the bad goals
 social protection and basic services;

* This is one of the 17 goals

* And there are 7 link-word cases, in this Goal alone.

* And dozens of unclear words, political slogans. So this is *not* a basis for serious planning and economic decisions, and prioritization.

* Simple question: which one of the 7 or so strategies, at left, would you do in the short term, and why? (difficult to answer because of fuzziness)

MEDIAN HOURLY PAY OF
 MEN IS **12% HIGHER**
 THAN THAT OF WOMEN



ONE FIFTH
 OF YOUNG PEOPLE
ARE NOT IN
 EDUCATION,
 EMPLOYMENT
 OR TRAINING



5. SIDE EFFECTS WILL 'GET YOU', LATER, ANYWAY, SO CONSIDER side-effects EARLY:

It is oversimplification to think in terms of
the 'right strategy' for a single sustainability goal:
all strategies will have 'side effects' on most other competing sustainability goals,
and they will ALSO impact a variety of constraints ('laws' for example)
and ALSO impact costs ('maintenance costs' for example).

* If this is the main intended
value effect of a strategy

Main

How many 'side-effects'
can one chess piece
position have?

Side

* Then, all these other impacts
on our Goals, are 'side effects'

Requirements	S1 End Poverty	S2 End Hunger Str...	S3 Healthy Lives	S4 Quality Educatio
G1. Poverty (Decomposed) Status: 0 → Goal: 100 % of sub-gΔ%:	95 95 % 85%	???? 0 % ???	???? 0 % ???	???? 0 % ???
G2 End Hunger Status: 0 → Goal: 100 % of sub-gΔ%:	42 42 % 42%	96 96 % 96%	???? 0 % ???	Δ:???? Δ%: 0 % ???
G3 Healthy Lives Status: 0 → Goal: 100 % of sub-gΔ%:	42 -42 % -42%	23 23 % 23%	???? 0 % ???	???? 0 % ???
G4 Quality Education Status: 0 → Goal: 100 % of sub-gΔ%:	5 5 % 5%	-12 -12 % -12%	???? 0 % ???	???? 0 % ???
G5 Gender Equality Status: 0 → Wish: 100 % of sub-gΔ%:	-5 -5 % -5%	0 0 % 0%	???? 0 % ???	???? 0 % ???
G6 Water And Sanitation Status: 0 → Wish: 100 % of sub-gΔ%:	???? 0 % ???	42 42 % 42%	???? 0 % ???	???? 0 % ???
G7 Energy Access Status: 0 → Goal: 100 % of sub-gΔ%:	0 0 % 0%	3 3 % 3%	???? 0 % ???	???? 0 % ???
G8 Employment And Growth Status: 0 → Goal: 100 % of sub-gΔ%:	33 33 % 33%	-12 -12 % -12%	???? 0 % ???	???? 0 % ???

Let me introduce a concept you need for Sustainability planning
Multi-Dimensional Thinking and Decision-Making .
HOW MANY TENNIS BALLS CAN YOU JUGGLE WITHOUT DROPPING ANY?

6. SUSTAINABILITY REQUIRES ENGINEERING:

Sustainability is a systems engineering problem area:
it is not suitable for narrow and emotional political slogans and arguments.

You have to consider many diverse related factors in your environment,
and you will need to quantify and measure critical values, like other engineers and scientists do.
If you are not 'up' for such discipline, then keep away from Sustainability, you might destroy the planet!

* Overview diagram
over an
engineering
problem

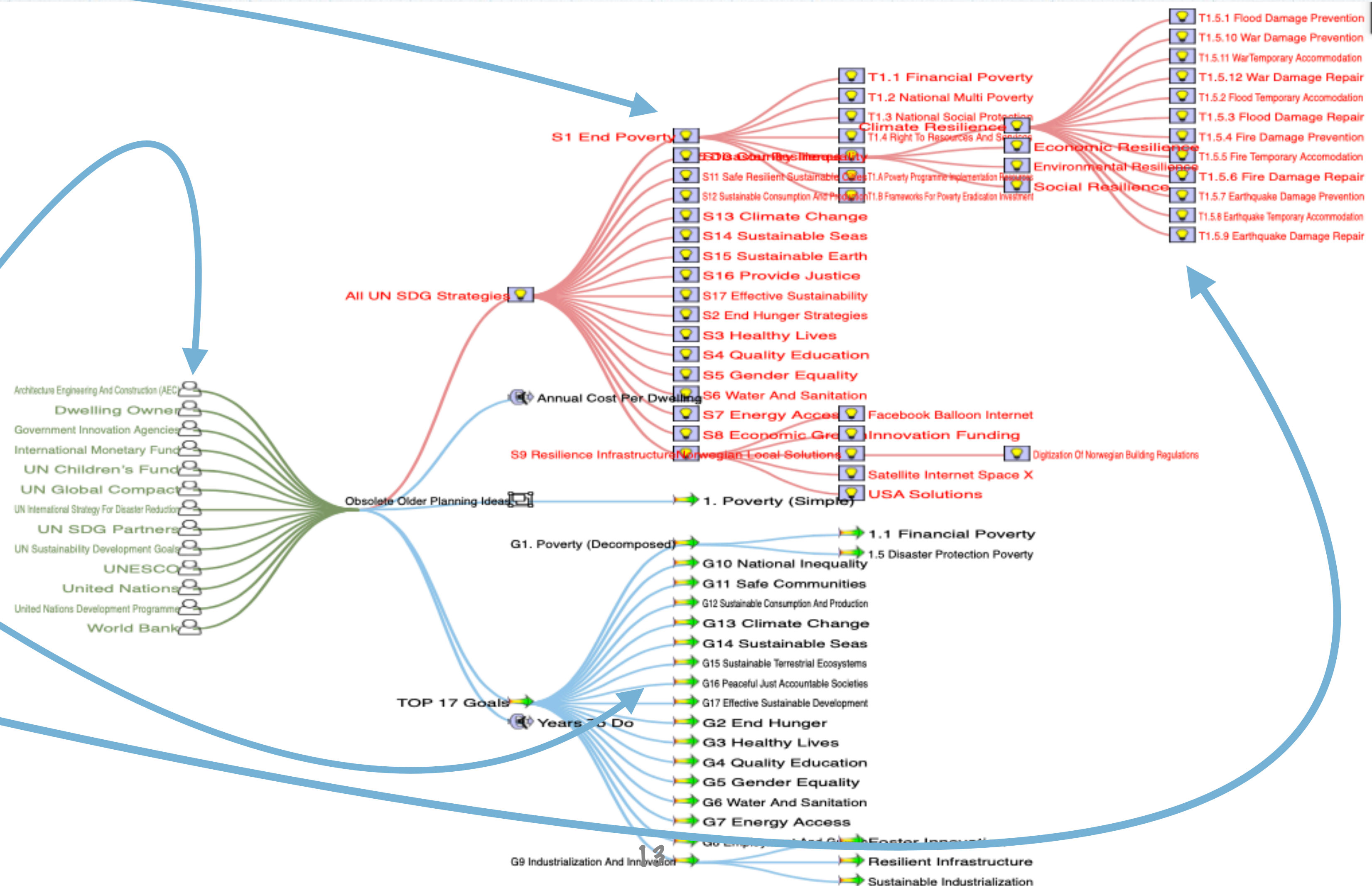
* The top level only

* Stakeholders

* Value
Objectives

* Solutions

* Decomposed
solutions

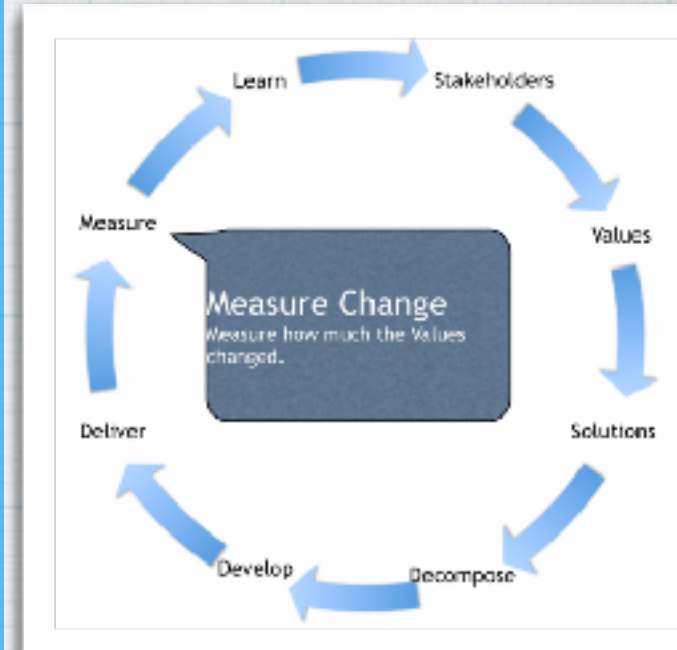


7. Your 'Means' (Strategy) Impact **ESTIMATION is POSSIBLE,**
Real KNOWLEDGE NEEDS 'MEASUREMENT': later

It is possible to get a 'pretty good overview' of the potential results,
and costs, of all solutions, intended to deliver to your sustainability goals, by estimation
This helps your presentations, discussions, prioritization and decision-making.

But final **knowledge** of how things work
in the short and long-term will require

continuous measurements, in a dynamic and complex situation.



* Simple table of

* 2 Strategies which impact

* 1 Goal

* 1 Cost

* When we try to estimate, like this

* We force ourselves to **think clearly**

* We have **better data** to present our opinions

* We have something to **compare** against what
really is **measured** when we plug in the
strategies to our system.

Requirements	💡 T1.5.1 Flood Dama...	💡 T1.5.2 Flood Temp...
1.5 Disaster Protection Pov... Status: 50 ➔ Goal: 60 % #Succes... % Success Level in [Building] [Resil... [Building = Health Power 📅 2030	5 55 % #Suc... 50 % <div><div>50%</div></div>	5 55 % #Suc... 50 % <div><div>50%</div></div>
Sum Of Values: Σ%:	50 %	50 %
Annual Cost Per Dwelling Status: 5 ➔ Budget: 1 Cost for t... Cost for the strategy as % of Dwellin... No qualifiers 📅 2030	-3.5 1.5 Cost fo... 88 % <div><div>88%</div></div>	-0.5 4.5 Cost fo... 13 % <div><div>13%</div></div>
Sum Of Development Resources: Σ%:	88 %	13 %
Value To Cost:	0.60	3.80

Quiz: what is the difference between the 2 strategies

T1.5.1,

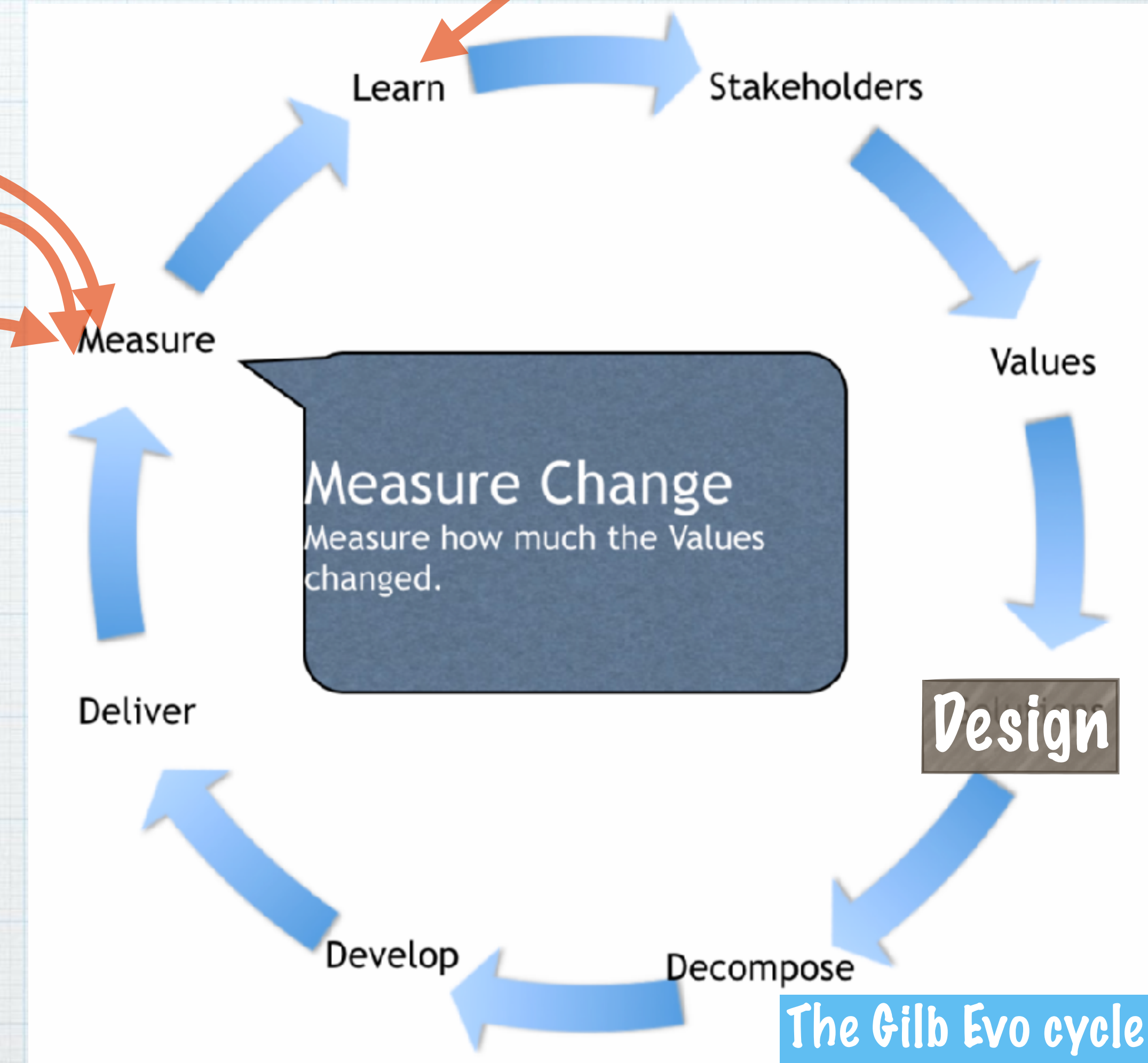
T1.5.2

8. PLAN TO LEARN FAST:

The big trick in such a complex environment is not merely 'to plan well', but to 'plan to *learn quickly*' what *really works*; and to continuously evolve strategies to meet *changing* and clarified *needs*.

My Principles of 'Dynamic Design to Requirements'

1. It is easier to *measure* accurately than to *predict* accurately.
2. It is **faster to *adjust* a bad design**, than to figure out the *right* design to begin with.
3. Even small systems can be complex, so frequent incremental *measurement* of progress is smart.
4. Everything can interact with everything else, now and in future, so incremental measurement of critical factors is the only safe way to keep score.
5. It is better to 'design to a cost' you require, than to 'estimate a design cost' you can't afford.
6. It is easier to 'design to a stakeholder *value* level' than to just *hope* your design will meet that level.
7. Estimation of design impacts, helps sort out 'probably good design' early.
8. Only *measurement* of design value-delivery and design-costs will confirm that you got it right.
9. Designs interact with all other system designs, past and future, compounded by changing stakeholder needs - and consequent re-design.
10. Small incremental steps of design, greatly simplify understanding of complex design.



9. REAL RESULTS REQUIRE CLEARER PLANS:

Plan to get **early measurable results in the short term**, which will **continuously improve, towards the longer term**.

* This table has made some estimates of what we are expecting from the

* **strategies** (S1 etc)

* on the **Goals** (G1 etc.)

* and the **resources** (Annual cost, Years to Do)

* This is one type of plan

* Expected results and costs

* We can use it to compare with actual results, and adjust our plans based on deviation from expectations

* 'Dynamic Design to Plan'

Top Level Table UN Sustainable Development Goals

From Level: **Level?** To Level: **Level?**

Settings... + Add + Sort Duplicate... Undo... Δ: INCREME Help me!

Requirements	S1 End Poverty	S2 End Hunger Str...
G1 Poverty (Decomposed) Status: 0 → Goal: 100 % of sub-g...	Δ: 95 95 %	???? 0 %
G2 End Hunger Status: 0 → Goal: 100 % of sub-g...	Δ: 42 42 %	96 96 %
G3 Healthy Lives Status: 0 → Goal: 100 % of sub-g...	Δ: -42 -42 %	23 23 %
G4 Quality Education Status: 0 → Goal: 100 % of sub-g...	Δ: 5 5 %	-12 -12 %
G5 Gender Equality Status: 0 → Wish: 100 % of sub-g...	Δ: -5 -5 %	0 0 %
G6 Water And Sanitation Status: 0 → Wish: 100 % of sub-g...	Δ: ???? 0 %	42 42 %
G7 Energy Access Status: 0 → Goal: 100 % of sub-g...	Δ: 0 0 %	3 3 %
G8 Employment And Growth Status: 0 → Goal: 100 % of sub-g...	Δ: 33 33 %	-12 -12 %
Sum Of Values:	Σ%: 128 %	140 %
-X) Annual Cost Per Dwelling Status: 5 → Budget: 1 Cost for t...	Δ: -1 25 %	-0.5 13 %
-X) Years To Do Status: 0 → Budget: 170 Years to d...	Δ: 3 2 %	4 2 %
Sum Of Development Resources:	Σ%: 27 %	15 %
Value To Cost:	4.70	9.30

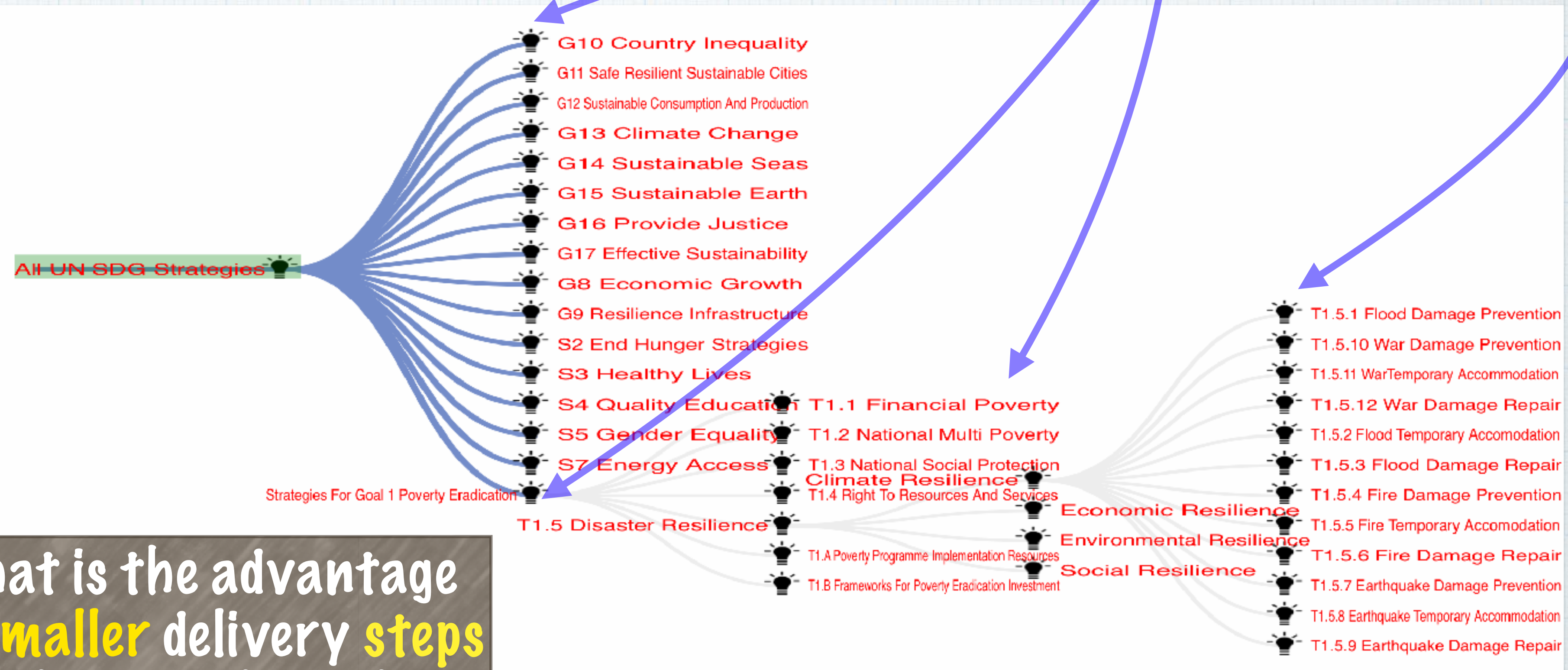


Quiz: how can you estimate
How effective a strategy is
For you
If you do not have a numeric Goal?



10. **WIN FAST,** **ADD UP Your WINNINGS:**
 The scope of most all sustainability efforts is overwhelmingly **complex**,
 so we need to use systematic methods
 to **decompose** into practical **do-able detail** in the short term,
 while never losing sight of the **big picture**. Long Term.

Here is an example
 of **decomposing Sustainability**
 strategies into smaller do-
 able sub-strategies



Quiz: what is the advantage
 Of doing **smaller** delivery **steps**
 Rather than batching the
 Steps by 10X?

Hint ->

Another prioritization approach,
 is to prioritize amongst 'detailed levels'
 of strategy ideas, because some of them
 can deliver especially-good values and costs.

Chapter 1.



UN-Clear Sustainability Goals



A selection of The UN 'Targets' and Indicators for SDG1 (End Poverty)

sustainabledevelopment.un.org



SUSTAINABLE DEVELOPMENT GOALS
KNOWLEDGE PLATFORM

HOME

SDGS

HLPF

STATES

SIDS

UN SYSTEM

STAKEHOLDERS

ABOUT

1.5

By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters

1.5.1

Number of deaths, missing persons and persons affected by disaster per 100,000 people

1.5.2

Direct disaster economic loss in relation to global gross domestic product (GDP)a

1.5.3

Number of countries with national and local disaster risk reduction strategies

1.A

Ensure significant mobilization of resources from a variety of sources, including through enhanced development cooperation, in order to provide adequate and predictable means for developing countries, in particular least developed countries, to implement programmes and policies to end poverty in all its dimensions

1.A.1

Proportion of resources allocated by the government directly to poverty reduction programmes

1.A.2

Proportion of total government spending on essential services (education, health and social protection)

<- 20
Pitfalls



<- 28
Pitfalls



Let me spell it out, to leave no doubt in your mind.

1. Notice 1.5 and 1.A 20 and 28 pitfalls. By my rough count these statements contain 20 (1.5) and 28 (1.A) ambiguous and undefined words.

1. Like 'resilience', 'exposure', 'ensure', 'significant', 'dimensions'.

2. There is **no hope of any 2 people on the planet understanding** all such terms as intended by the author (UN).

3. Two 'Fuzzys' (1.5 and 1.A) **do not make a Clear Idea** (SDG1), (End Poverty).

4. If all (48+) ambiguous terms were *somewhere* defined, it might *help* reduce ambiguity.

5. But there is **no** hint or pointer to such a **glossary** in the UN material. But there are some glossaries! See later.

6. So everyone is on their own.

7. Dictionary definitions will not be helpful.

2. In a **desperate attempt to clarify or define**, they **specify a few 'measures'** (Indicators 1.5.1 etc, and 1.A.1 etc.).

But guess what? **Same ambiguity problem!** What is a '**disaster**'? What are '**resources**'?

If there were some UN statistics for *these* categories, they *should be referenced, right here*.

1. This is a **messy mixture of ends and means**, many levels of them.

2. Phrases like 'in order to' [1A] and 'to (end poverty)' [1A] are what I call '**link words**'. They link a suggested **means** (*strategy, solution*) to a specified **end**.

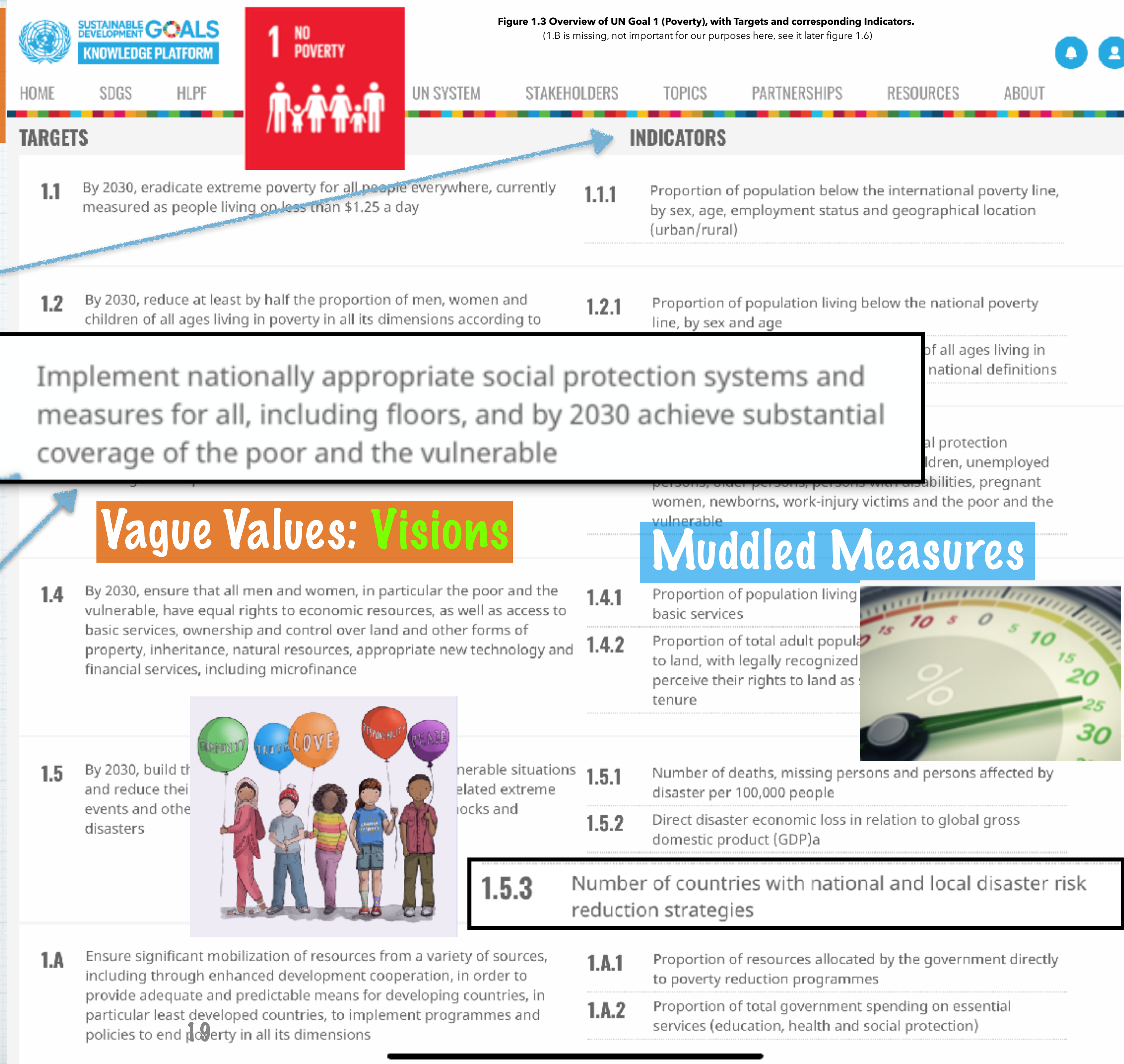
3. The situation is that **we have not defined 'end poverty' at all**.

We have suggested some **specific strategies** ('mobilization of resources' (1.A), 'predictable means') (1.A) to reach a **badly-defined goal** ('end poverty').

Premature specification of strategies to solve badly-defined problems, is a bad planning idea.

4. We *cannot know* if these various nice-sounding ambiguous strategies are **cost-effective**, because we do **not have a clear definition** yet of 'end poverty', **to judge them by**.

1.3 What can we constructively do to improve a Goal like UN SDG 1 'End Poverty'.



* Let us take a look at the UN SDG 1 again.

*The Top Level says

* **“End poverty in all its forms everywhere.”**

* **Indicators’** are

- * an *attempt* to find,
- * perhaps existing, statistical information,
- * that can tell us about past levels, and future improvements or changes.

* Indicators are **not yet important enough** to ‘take a position on’ here,

- * **because** we need *first* to sort out the **unclear Goal, and Target** statements themselves,
- * **before** we can even discuss if the *indicators* actually reflect our Poverty Ideas.

* If we use these indicators **prematurely**, then we risk

- * **managing the *wrong* Poverty ideas.**

* So, we are now going to focus on The **Poverty definitions.**

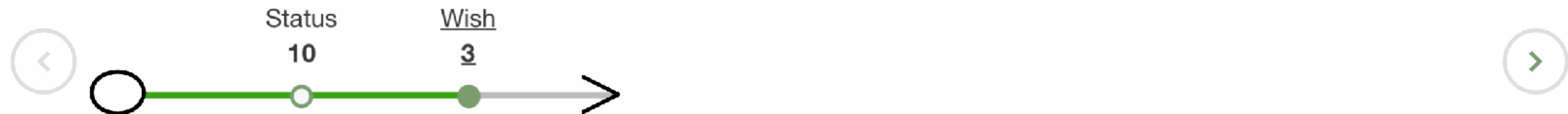
* **What values are we actually trying to improve?**

Figure 1.4

An attempt to define
a general Scale of Measure, for the Poverty Goal.
BUT THIS IS 'TOO SIMPLE' BECAUSE POVERTY IS 'COMPLEX'
(and the Scale is a bit messy too)
We have structure, we have quantification: but it is not really useful.

Show Sidebar

1. Poverty (Simple)

Level: Product, Type: Value, Labels: - 

Wish [Poverty Form = **Financial Income**, Area = {**Central America, South America**}, Poverty Scale = % **Below Minimum Financial Income Per Day in \$**] @ 2030 : **3** \$ <- Tsg

Ambition Level: End poverty in all its forms everywhere

Stakeholders: UN SDG Partners, UN Sustainability Development Goals, United Nations.

Scale: % [Poverty Form] in [Area] as quantified by [Poverty Scale]

Did you notice how this parallels the Ambition?

Status: 10 \$ [Poverty Form = **Financial Income**, Area = {**Central America, South America**}, Poverty Scale = % **Below Minimum Financial Income Per Day in \$**] Wh.

Wish: 3 \$ [Poverty Form = **Financial Income**, Area = {**Central America, South America**}, Poverty Scale = % **Below Minimum Financial Income Per Day in \$**] When

How to derive a Scale from a vague Ambition Level (or user story)

“By 2030, build the **resilience** of the **poor** and those in **vulnerable situations** and reduce their **exposure** and **vulnerability** to **climate-related extreme events and other economic, social and environmental shocks and disasters**”

Figure 1.8. The Poverty Target 1.5. I have stated as an Ambition Level. I have made bold or underlined, terms needing definition because of their ambiguity.



Tag.Scale:

Figure 1.9 A Scale of measure for Target 1.5 (interpreted) is defined, and the ambiguous words are defined as sets of options, or attributes.

% #Success Level# in [Building] [Resilience] for [Vulnerable] in [Situations] to [Shocks].

Templates ▾

Building: defined as:

Economic Power, Health Power, Communications Ability, Recovery Speed, Relocation Capability, ...

Resilience: defined as:

Avoiding, Escaping, Resisting, Recovering, ...

Shocks: defined as:

Climate, Economic, Social, [Environmental]

Environmental: defined as:

Earthquake, Flood, Avalanche, Fire

Situations: defined as:

Individual Poverty, Family Poverty, Communal Poverty, National Poverty, Epidemic Hit,

Success Level: defined as:

The attainment of Resilience for the defined circumstances. EG Avoided %.

Vulnerable: defined as:

Poor, Physically Exposed, Weak Health, No Network Fallback, Insufficient Insurance, Insufficient Savings, Employment Problems, .

Notice 3 levels of **problem decomposition** here

1. Decompose values by defining a Scale
2. Decompose Scale into [Parameters]
3. Decompose [Scale Pars] into Conditions
4. Further decomposition is possible. See next slide

[Scale Parameters]

- * Each Scale-parameter is further defined,
 - * by more-specific sets of things, which **define** the Scale Parameters.
 - * These are called Scale Parameter *Conditions*.
 - * Example: [Shocks] = {Climate, Economic, Social, Environmental}.

- * When setting Goals,
 - * we can select any **Condition combinations**,
 - * or sets of **one or more** of them,
 - * to suit our purposes.
 - * For example, the set 'Recovery Speed, Recovering Physically Exposed, Epidemic Hit, and Social'

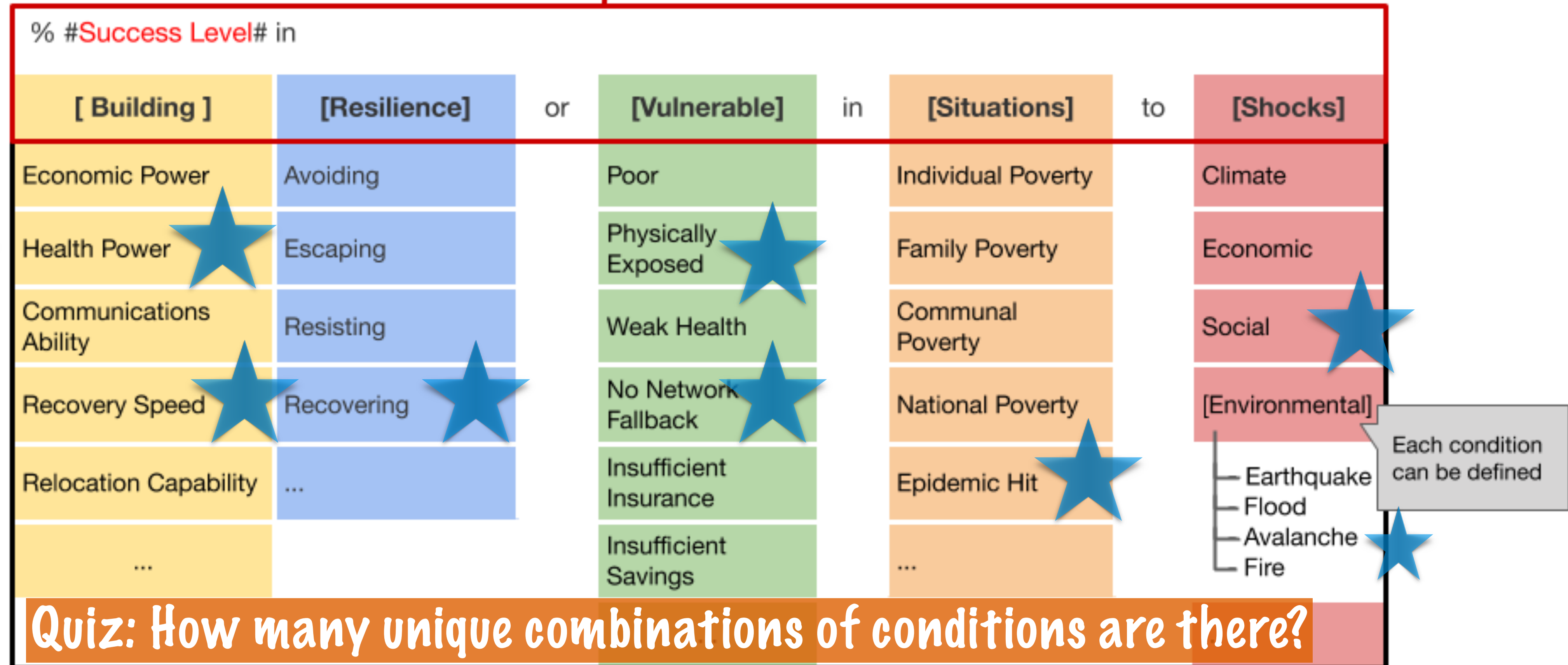
- * This enables us to see the **whole picture**, the **entire environment**.
 - * One spec at a time

Defining a structured scale of measure

Figure 1.10.

This example explains the structure of a defined Scale of measure, with 5 Scale-parameters (general dimensions, needing definition).

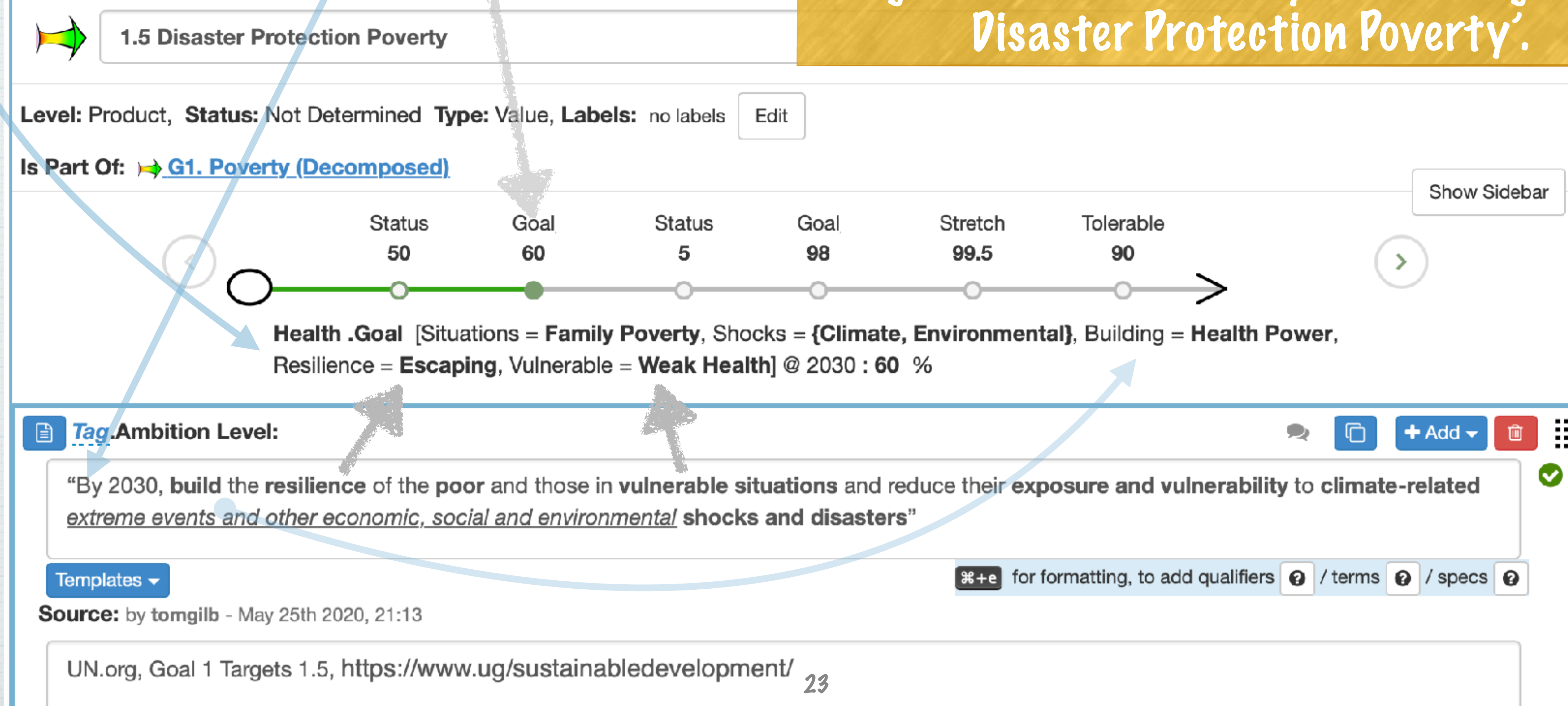
Graphic by anna.maria.karlowska@gmail.com, 2019



- * But we can select smaller slices of the total environment, that we want to specify Goals (numeric improvement levels) for,
 - * because they, in particular, are 'more cost-effective'
 - * or 'need to be done earlier' than the longer-term deadline for *all* of the other items. This is **PRIORITIZATION**
- * With the defined Scale, for Target,
 - * we can document the current level (50%,
 - * and set a specific numeric Goal for 2030 (60%, for example)
- * This is a sub-set of all possible and all necessary Goals, we *can* choose to set.

Using the Scale, to define useful points of the scale,
Like benchmarks, constrains and targets

Figure 1.11 A summary of our Target '1.5 Disaster Protection Poverty'.

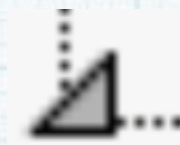
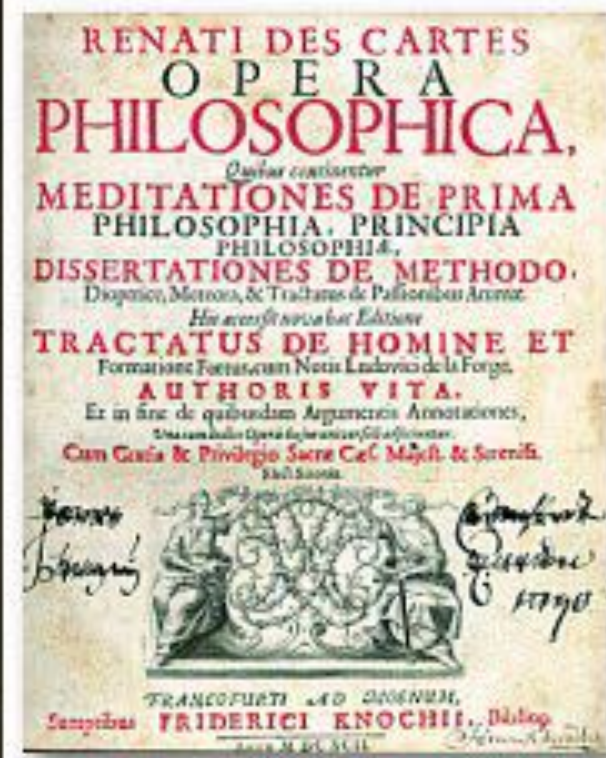


UN Value Decomposition, 2nd level

* Decomposition

* Is a tactic for definition

* Cartesian



Values and Resources



1. Poverty (Decomposed)

1.1 Financial Poverty

1.2 Poverty In All Dimensions

1.3 Social Poverty

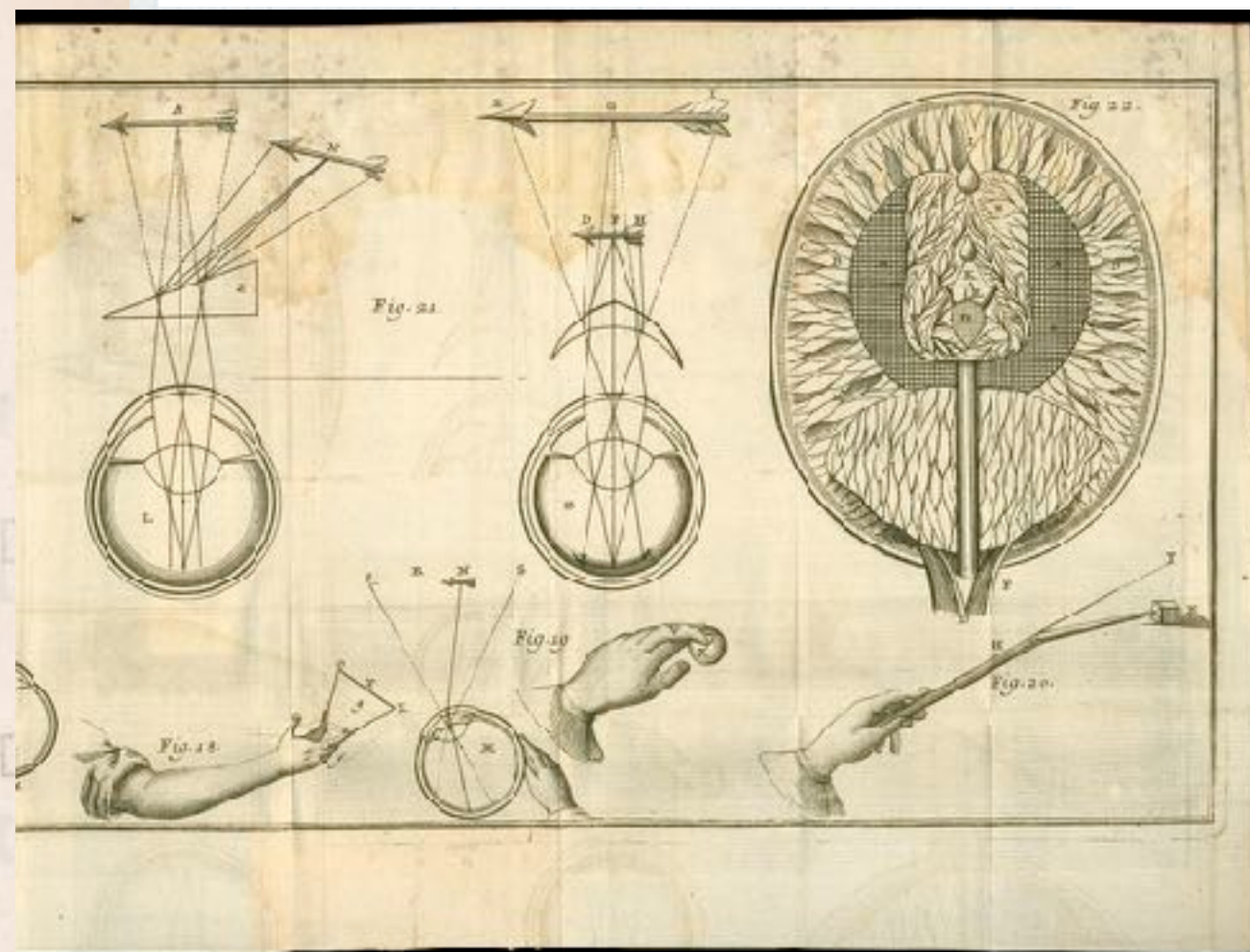
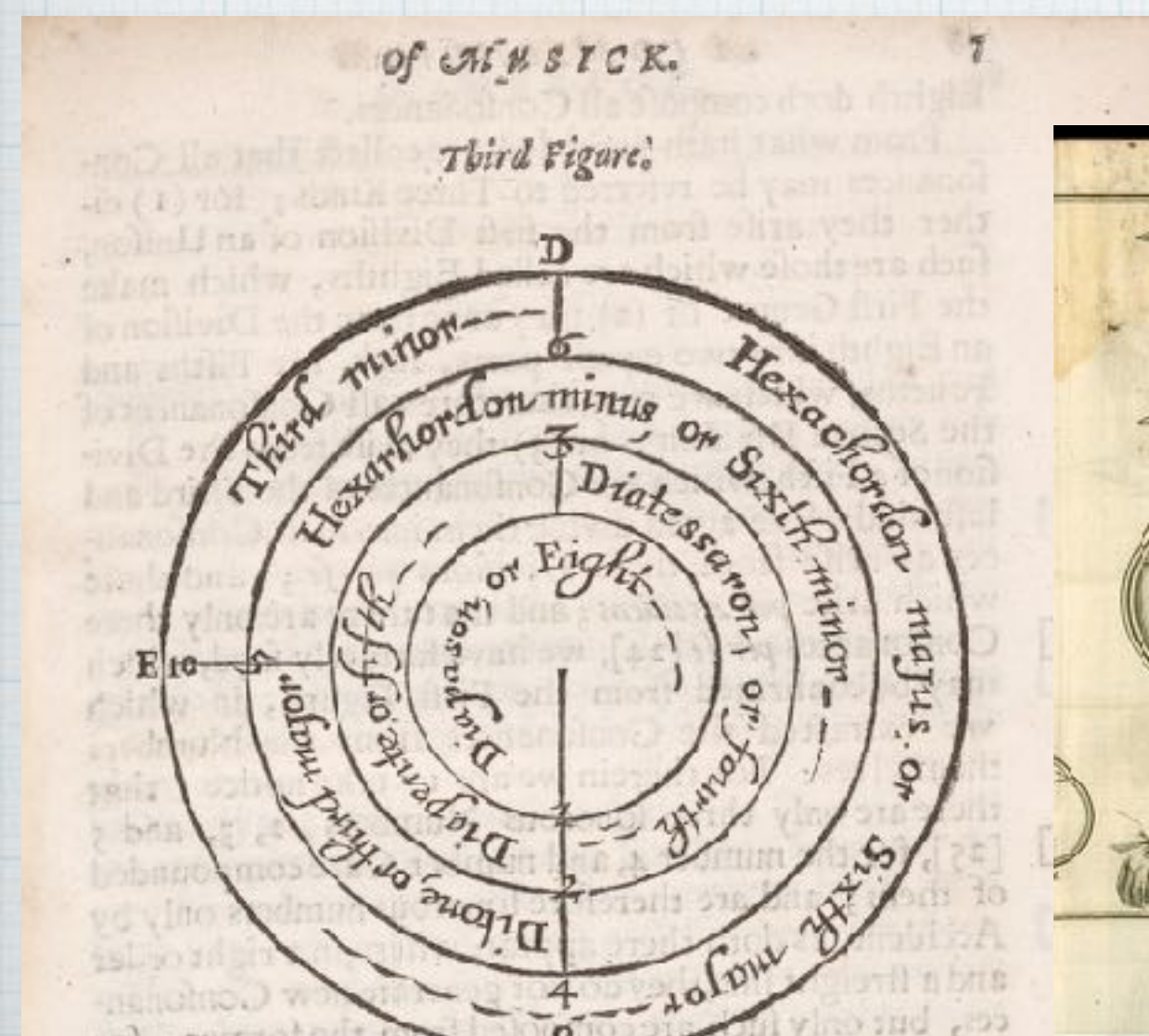
1.4 Resources. Poverty

1.5 Disaster Protection Po

1.A National Poverty Reduct...

1.B Investment Frameworks...

Figure 1.12. UN Sustainability Development Goal 1, Poverty. Defined by a set of 7 'UN Targets'.



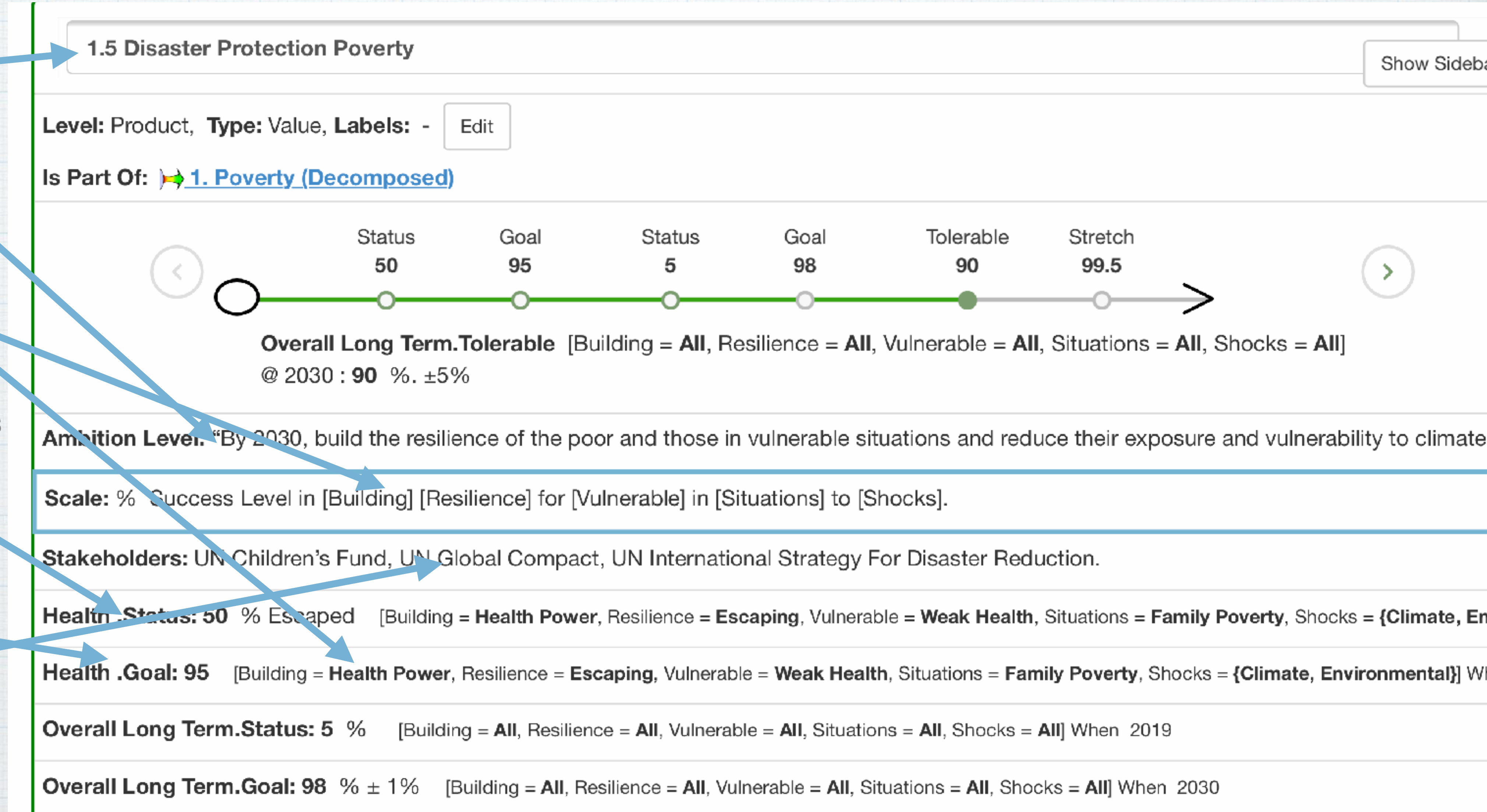
Value Clarity Steps:

Figure 1.13. An overall summary of the 1.5 UN Target, as 'translated into Planguage' by us.

We added the 'Overall Long Term' Status and Goal, which encompasses all the Scale Parameter Conditions. That encompasses the whole system for this Value (all Scale Parameter Conditions, for all Scale Parameters, for UN Target 1.5)

* Value Definition Steps

1. Name Tag
2. Copy and respect original fuzzy statements.
3. Analyse Ambition
4. [Scale Parameters]
5. [Parameter] Conditions
6. Review with domain experts
7. Analyse Benchmarks
8. Set Constraints
9. Set Targets
10. Find stakeholders



Some added features ±, Tolerable, Stretch

* Figure 1.14.

*Extending our performance requirement specification.

* Each requirement (Tolerable, Goal, Stretch) can have a range ($\pm 5\%$, $\pm 1\%$, $\pm 0.5\%$), a 'Landing Zone' (Intel term).

* In addition, the **Tolerable** statement sets a **lower limit of expectation**:

- * a **worst acceptable case**.
- * **Below this level we have formally failed.**

* The **Goal** specification defines a **successful level**.

* The **Stretch** level says,

- * we are not demanding or expecting this level.
- * We are not sure it can be done, so far ahead of time.
- * But it would in fact have some stakeholder value
 - * if we can find a way to get to the Stretch level.
- * So do not give up efforts when you get to the Goal level.



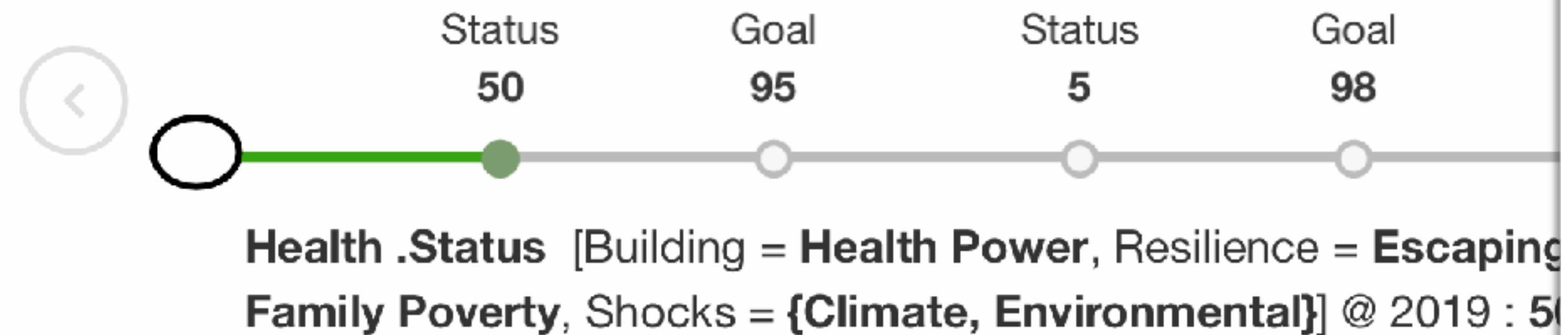
Adding the 'Meter' parameter specification: defining a process for measuring delivery and getting feedback

1.5 Disaster Protection Poverty

Level: Product, Type: Value, Labels:

Is Part Of:  1. Poverty (Decomposed)

Quiz
How many Meters do you need?
How many Meters can you have?



Ambition Level: "By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to hazards."

Scale: % Success Level in [Building] [Resilience] for [Vulnerable Situations]

Notes: Meters MUST match scales

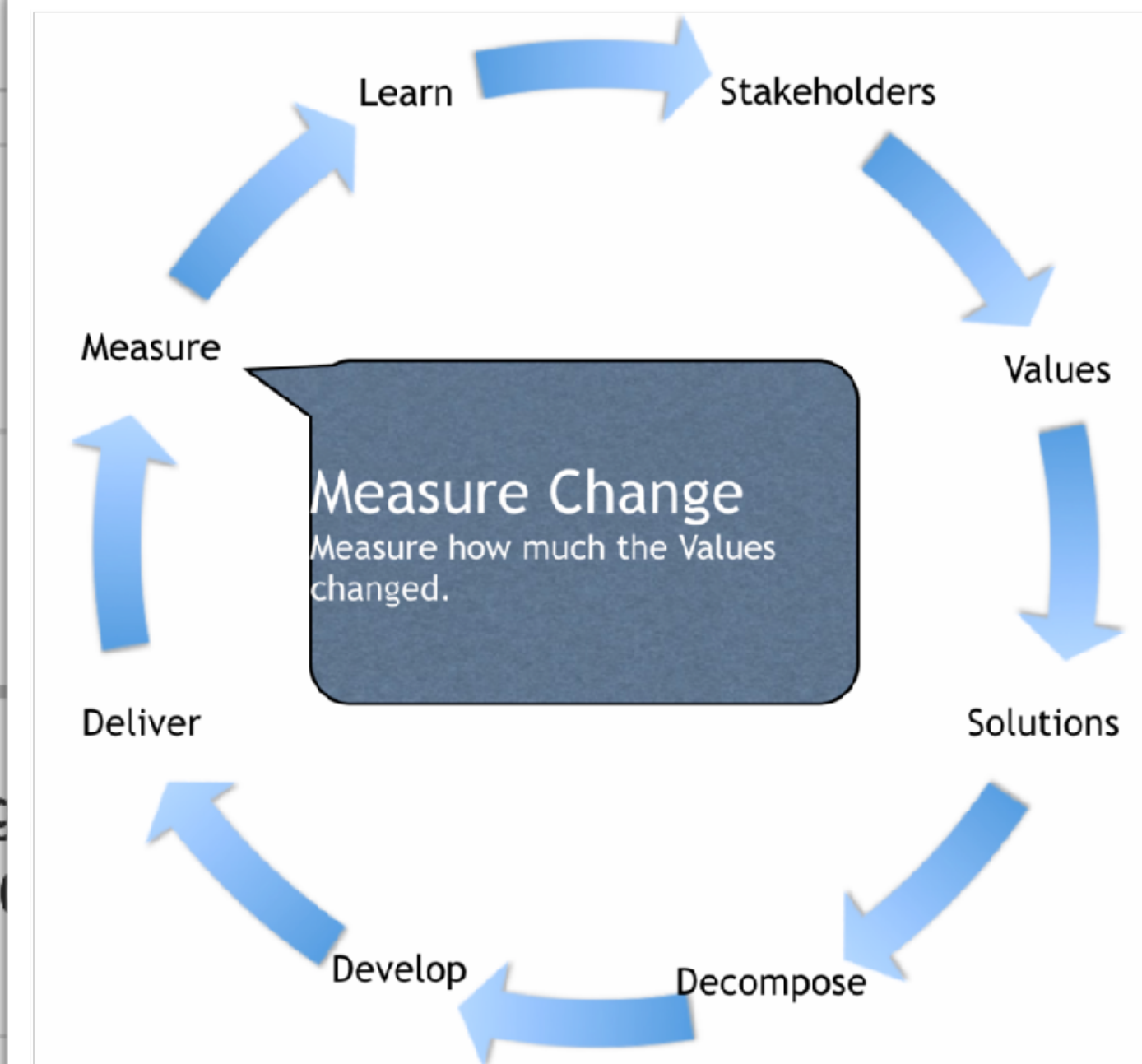
Local Measurement Short Term.Meter: Use the Tracking Database <http://www.sdg-tracker.org> to the best of your ability and budget.

Official UN Reporting.Meter: For reporting from the UN to anyone else, the UN requires officially approved statistics and measuring.

Stakeholders: UN Children's Fund, UN Global Compact, UN International Strategy For Disaster Reduction.

Health .Status: 50 % Escaped [Building = Health Power, Resilience = Escaping, Vulnerable = Weak Health, Situations = Family Poverty, Shocks = {Climate, Environmental}]

Health .Goal: 95 [Building = Health Power, Resilience = Escaping, Vulnerable = Weak Health, Situations = Family Poverty, Shocks = {Climate, Environmental}]



Tagging
Meters

Background Specification

*In general the uses of background specifications,

* are about:

1. Risk Management
2. Priority Management
3. Understanding Levels, Dependencies and Relationships
4. Decomposition
5. Quality Control and Quality Assurance

02:03 Thu 5 Sep

valplan.net

81%



Overall Long Term.Tolerable [Building = **All**, Resilience = **All**, Vulnerable = **All**, Situations = **All**, Shocks = **All**]
@ 2030 : **90** % . ±5%

Show Sidebar

Ambition Level: "By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate change and natural disasters."

Scale: % Success Level in [Building] [Resilience] for [Vulnerable] in [Situations] to [Shocks].

Local Measurement Short Term.Meter: Use the Tracking Database <http://www.sdg-tracker.org> to the best of your ability and budget.

Official UN Reporting.Meter: For reporting from the UN to anyone else, the UN requires officially approved statistics and measuring processes, to .

Stakeholders: UN Children's Fund, UN Global Compact, UN International Strategy For Disaster Reduction.

Health .Status: 50 % Escaped [Building = **Health Power**, Resilience = **Escaping**, Vulnerable = **Weak Health**, Situations = **Family Poverty**, Shocks = {Climate, Env.}

Health .Goal: 95 [Building = **Health Power**, Resilience = **Escaping**, Vulnerable = **Weak Health**, Situations = **Family Poverty**, Shocks = {Climate, Environmental}] Wh.

Overall Long Term.Status: 5 % [Building = **All**, Resilience = **All**, Vulnerable = **All**, Situations = **All**, Shocks = **All**] When 2019

Overall Long Term.Goal: 98 % ± 1% [Building = **All**, Resilience = **All**, Vulnerable = **All**, Situations = **All**, Shocks = **All**] When 2030

Responsible: WHO

Owner: UNESCO

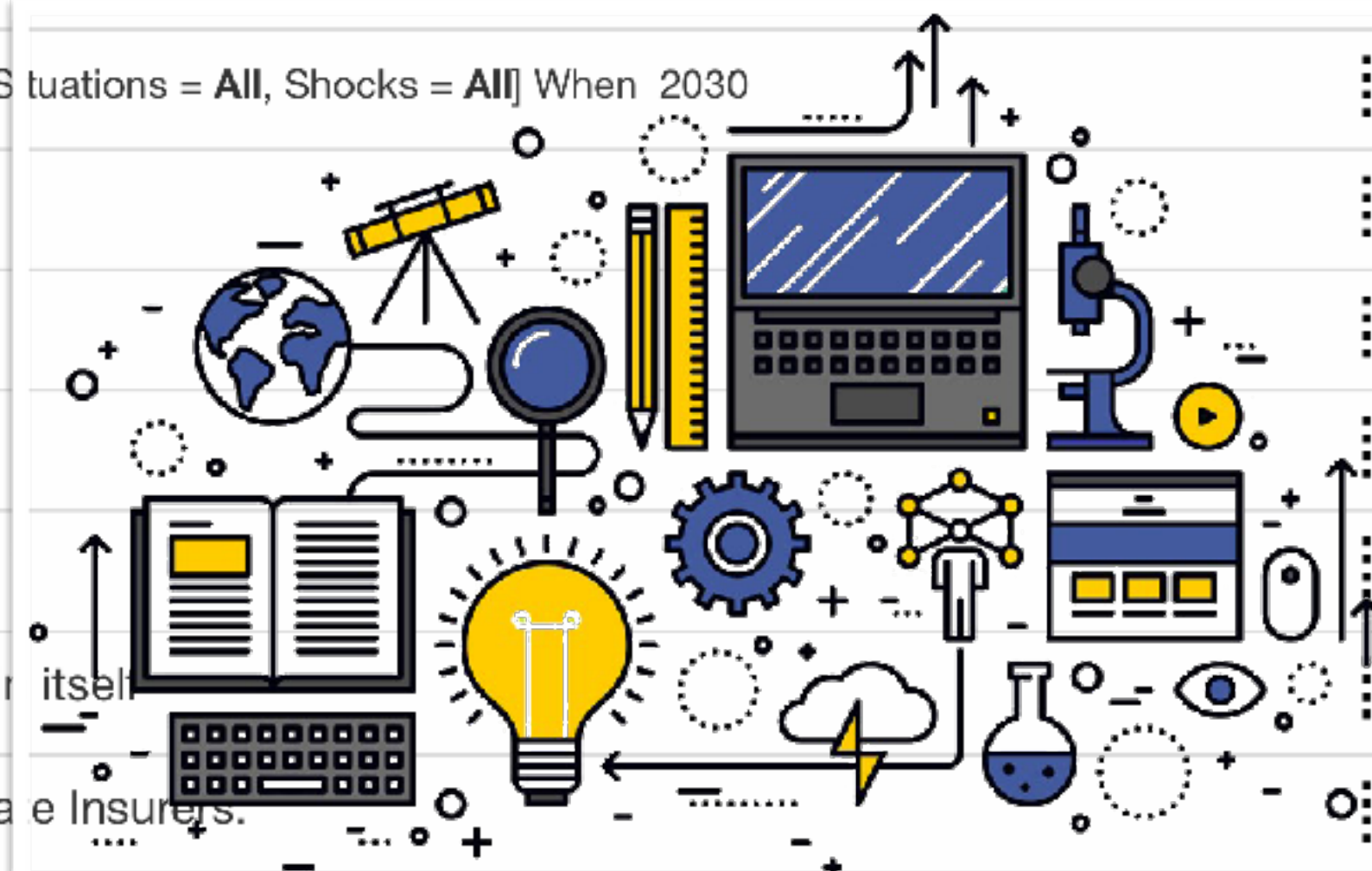
Issue: IssueAction Is there enough funding for Zambia Ask World Bank

Risk: RiskMitigation The Annual Meetings are not frequent enough Use Internet

Rationale: Disaster Protection is a means to reduce poverty situations, not an end in itself

Dependencies: We are dependent on National Laws, National Economics and Private Insurers.

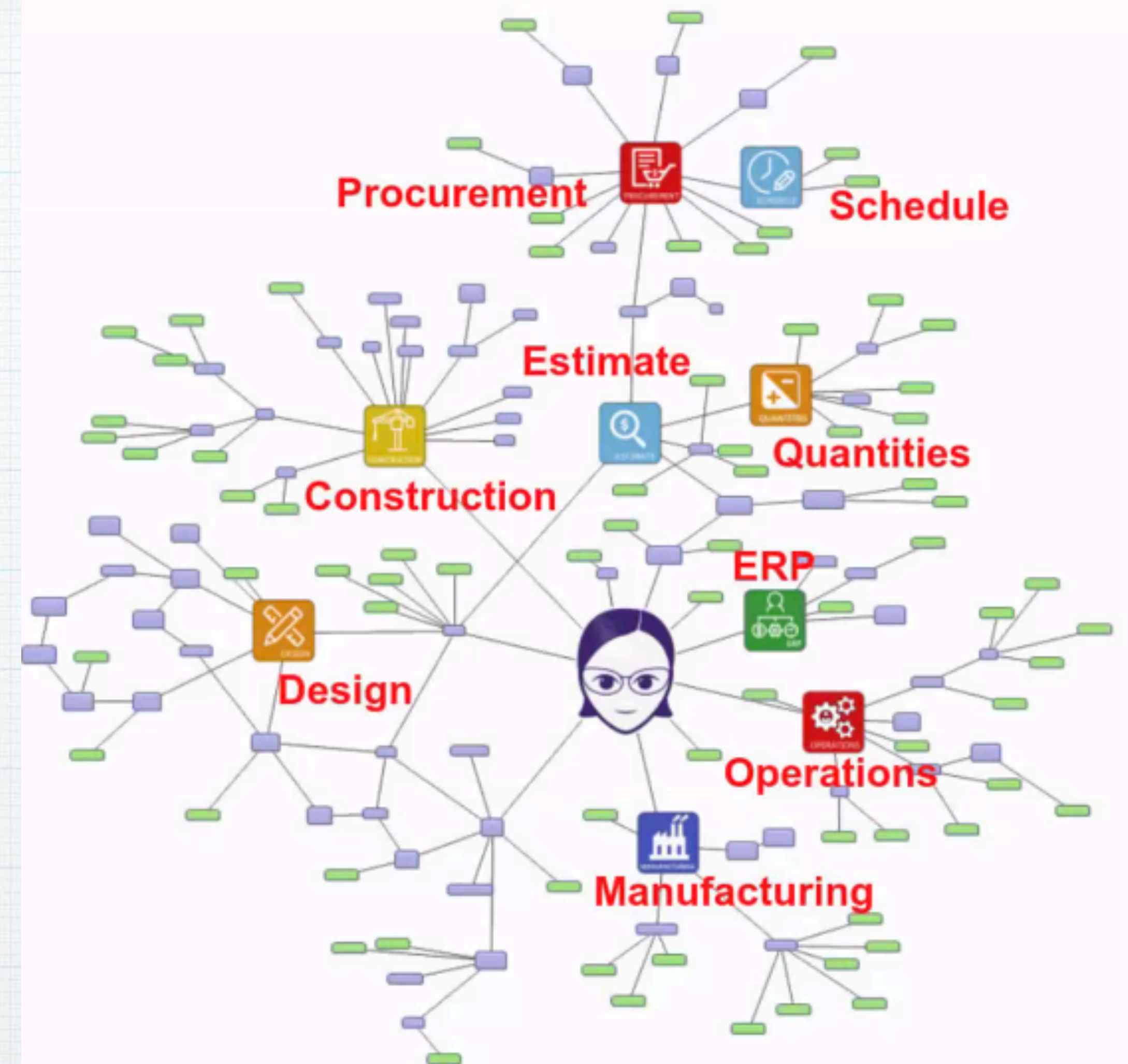
Assumption: AssumptionConsequence This strategy objective will be approved at the Committee Annual Meeting If not, we need to deprioritize it.



Organizing Plans for International Consumption Automatically

Some thoughts about digitalization of UN Plans

- *UN Plans are not digitised
- *There is no Plan Database to tie it all together, scattered sources and change
- * UN should have a Database to give partners and planners a flying start (like quantified, defined)
- *We go one step further.
- *The Goals should exist,
 - *together with their Background specifications,
 - * in one single Master Version,
 - *updated,
 - *quality controlled,
 - *on the Internet,
 - *accessible to all valid approved partners.



A Business Partner of mine, using my methods Is doing advanced AI digitisation Of everything to with industrial specifications This might be a tool, or at least technical inspiration For UN Planning, 'Building the World'

Lack of UN Plan Structure and Standardization

- * The specifications should be machine readable and More-intelligible,
 - * not merely text in documents,
 - * the machine should be able to understand exactly what type of specification it is reading.
- * The Planguage format with all Parameters standardized, and spelled out, is a pretty good start.
- * But machine intelligibility of databases can be done even better if we want to.
- * Right now this UN stuff is totally unstructured text.
- * I do not think in this day and age that is good enough for an effort of this global scope.
- * The whole point is that a great many partners constantly act on the Goals continuously.
- * We need to enable that to happen. Enable the apps as it were.
- * One point worth making in the UN context
 - * is that well-defined structures, like Planguage,
 - * are a step in the direction of making the plans available in different languages.
 - * There are tools out there now to handle digitised planning
 - * ValPlan.net and Graphmetrix.com.
- * There is no way we can use automatic translation of the UN Goals and Targets that I have seen and partly discussed here.
- * They are unintelligible to humans, and translation will give 'Garbage Out'.
- * Planners should also be able to extract what they need currently, and present it with appropriate simplicity.
 - * For example display 'just the Ambition Level'.



- Each stakeholder has full control and ownership of their data
- Information is finally linked, available when needed, and actionable
- Cloud hosted or on-premise
- Enables complete peer-to-peer and SaaS global supply chain collaboration

A Business partner, using my Competitive Engineering ideas as a framework, is doing advanced AI digitisation of everything to with industrial specifications This might be a tool, or at least technical inspiration For UN Planning, 'Building the World'

In this view we can imagine all UN Partners Having access to all related planning information for their projects

Requirements (Goal Statements) Maturity Dimensions



* From Prof. Gerrit Muller, w Permission

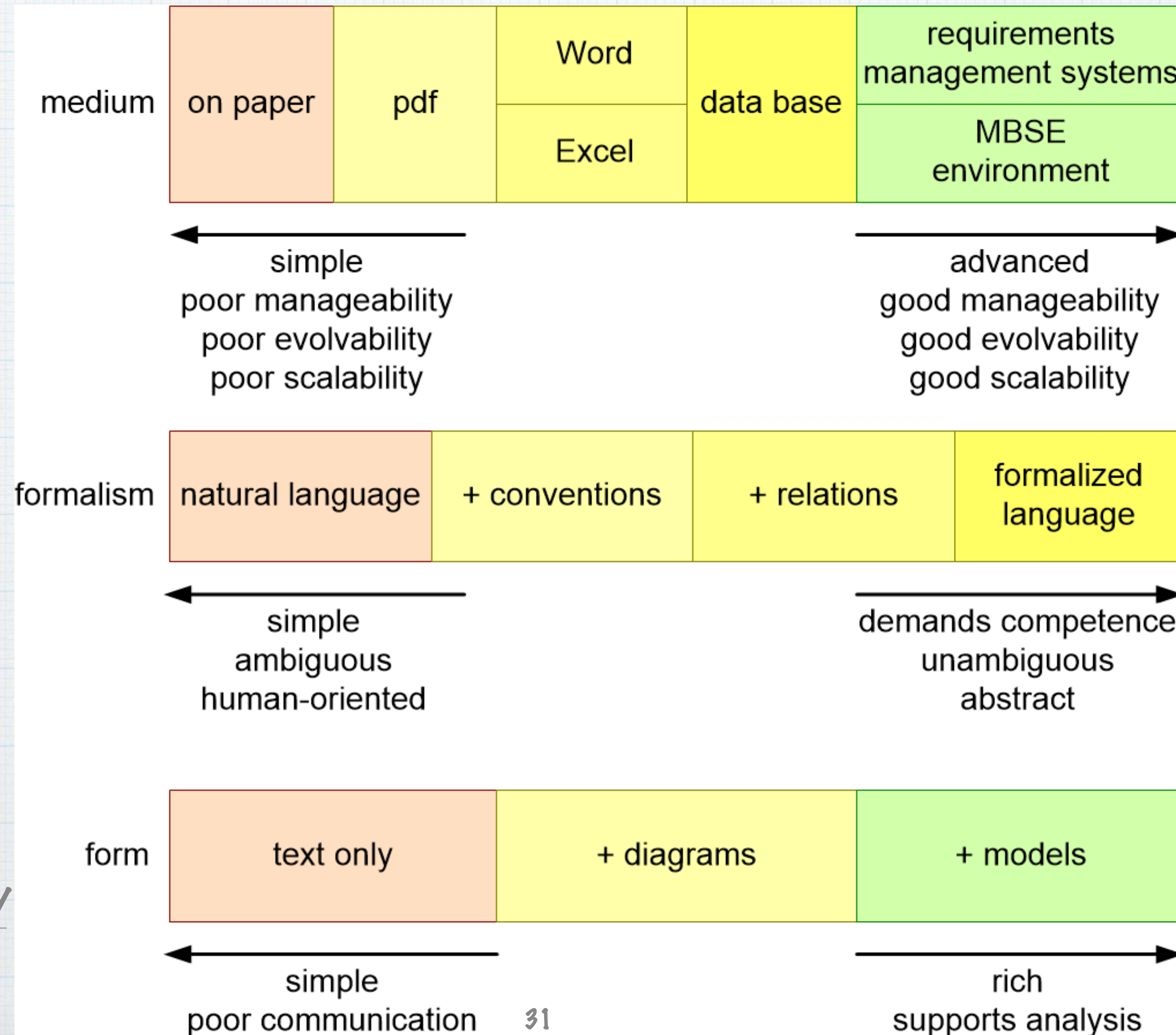
* gerrit.muller@gmail.com

* Email of 240520

* Part of Digital session for Uni S Norway,

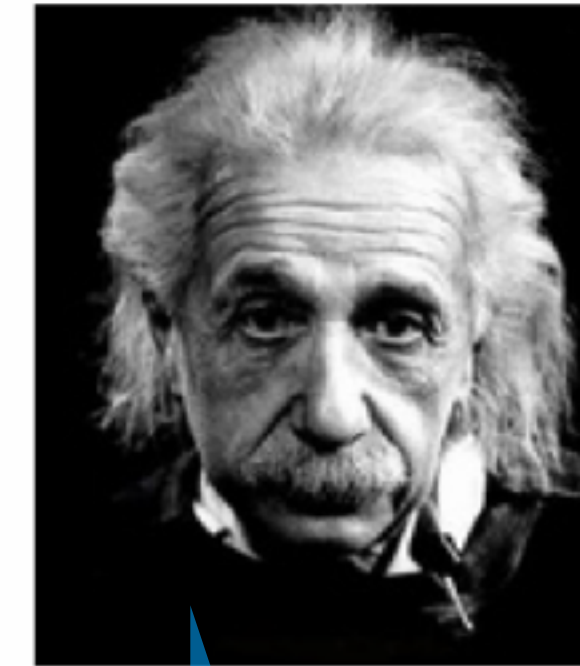
* 29 May 2020

* <https://nettskjema.no/a/149280>



Chapter 3. Levels of Sustainability, Perception, and Responsibility.

- * This **ends-means confusion** is bad for planning, because:
 - * then you, without further analysis,
 - * Implement a particular **means**,
 - * because it **seems** to be your 'ends'.
- * You risk implementing a means
 - * that does *not* achieve your ends.
- * You risk implementing a means
 - * that has *bad side-effects* on your *other* ends.
- * You risk implementing a means
 - * which takes far too much *time, money or maintenance costs*
- * Parties with hidden agendas can sneak in *their* agenda (a *means*)
 - * under cover of it being the *only way* for you to reach your ends.
- * You will never know about other, possibly better, means,
 - * because there will be no process to find them.
- * You cannot hope to make use of 'new technology'
 - * which emerges *after* you have stated your goals
 - * (with the 'means' now 'baked into' the 'goal').
 - * You are stuck in yesterday's strategies.
- * The 'means' is often a very concrete implementable idea,
 - * so you no longer feel tempted to
 - * really clarify and structure the Goal (ends).
 - * The ends 'drift away' as a nice-sounding background.
 - * But Goals *are* primary reasons for funding efforts and projects,
 - * and Goals need clarity,
 - * and agreement or consensus
 - * on the 'clear Goal versions



"The perfection of means and the confusion of ends seems to be our problem."

— Albert Einstein

2 Levels of Concern: End-Means

"Protecting jobs, supporting small and medium-sized enterprises, and informal sector workers

Fuzzy Value

Link Word

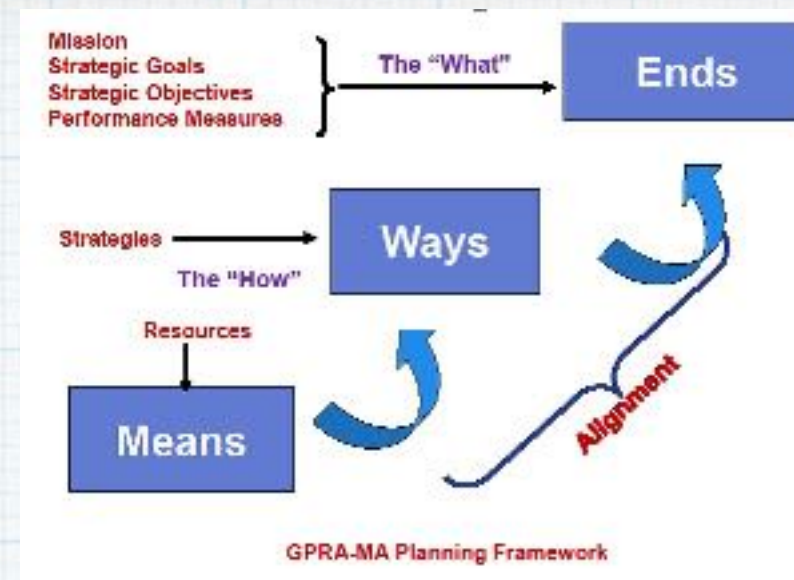
through

Fuzzy Means

economic response and recovery programmes; ..."

From examples slide 11, '3' Covid-19 Response

Some Principles of what to do about ends-means confusion. Perhaps better called: 'Ends & Ways' ->



- * 1. **Keep primary ends**
 - * (what you really want to improve,
 - * (no matter what 'means' you should choose, later, to achieve them)
 - * **quite separate from means,**
 - * and make 'ends' (Goals) quite clear and measurable.
- * 2. **State all potentially interesting 'means' to meet your ends clearly,**
 - * and keep them separate
 - * as 'potential means'
 - * not as the only 'givens'.
- * 3. **Evaluate**
 - * by estimating potential effects on your primary ends
 - * (say, eliminate poverty)
 - * the degree of improvement you can expect,
 - * based on experience and evidence. (Chapter 7)
- * 4. **Specify the evidence for improvements**
 - * in writing for use in review, control, credibility.
 - * Tell people where you got your '30% effect',
 - * so they can check it out.
 - * Do not merely 'assert' effectiveness.
- * 5. **Do a similar estimation of the side effects of your strategy**
 - * on all other concurrent top-level goals (the other 16 UN SDG).
 - * Make sure there are no horrific negative side-effects
 - * (like stealing funds from the poor to pay the rich)
 - * affecting these other cherished values.
- * 6. **Do resource analysis:**
 - * what are the time, people, money impacts of the suggested strategies?
 - * Both in the short term and for the life cycle of operation.
 - * Make sure we can actually afford the strategy,
 - * and that we choose strategies,
 - * with otherwise similar effects,
 - * which are cheapest, fastest, and less skills-consuming. (Chapter 5).

* Does this all seem time consuming and difficult to you?

UN Goal 14 Targets: **Link Analysis**

14.1 By 2025, prevent and significantly reduce marine pollution of all kinds, **in particular from** land-based activities, including marine debris and nutrient pollution

14.2 By 2020, sustainably manage and protect marine and coastal ecosystems **to avoid** significant adverse impacts, **including by** strengthening their resilience, and take action for their restoration **in order to achieve** healthy and productive oceans

14.3 Minimize and address the impacts of ocean acidification, **including through** enhanced scientific cooperation at all levels

14.4 By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, **in order to restore** fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics

14.5 By 2020, conserve and sustainably use coastal and marine areas, consistent with domestic and international law and based on the best available scientific information

14.6 By 2020, prohibit certain fisheries subsidies **which contribute to** overcapacity and overfishing, eliminate subsidies that **contribute to** illegal, unreported and unregulated fishing and refrain from introducing new such subsidies, **recognizing that** appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the World Trade Organization fisheries subsidies negotiation

14.7 By 2030, increase the economic benefits to Small Island developing States and least developed countries from the



Chapter 4. Responsibility Levels

Why do we need responsible* planners?

* assigned, named, by specification object, and parameter

1. They are motivated to do a better job.
2. They can be credited for excellent ideas.
3. We can ask them about their reasoning, background.
4. They can be quality controlled, reviewed and take responsibility for editing, corrections and following standards.

What happens when there is no specific transparent responsibility for planning?

1. Bad plans persist massively, and no one can or will do much about it.
2. The results we want for society will either not happen, or cost too much time and money.

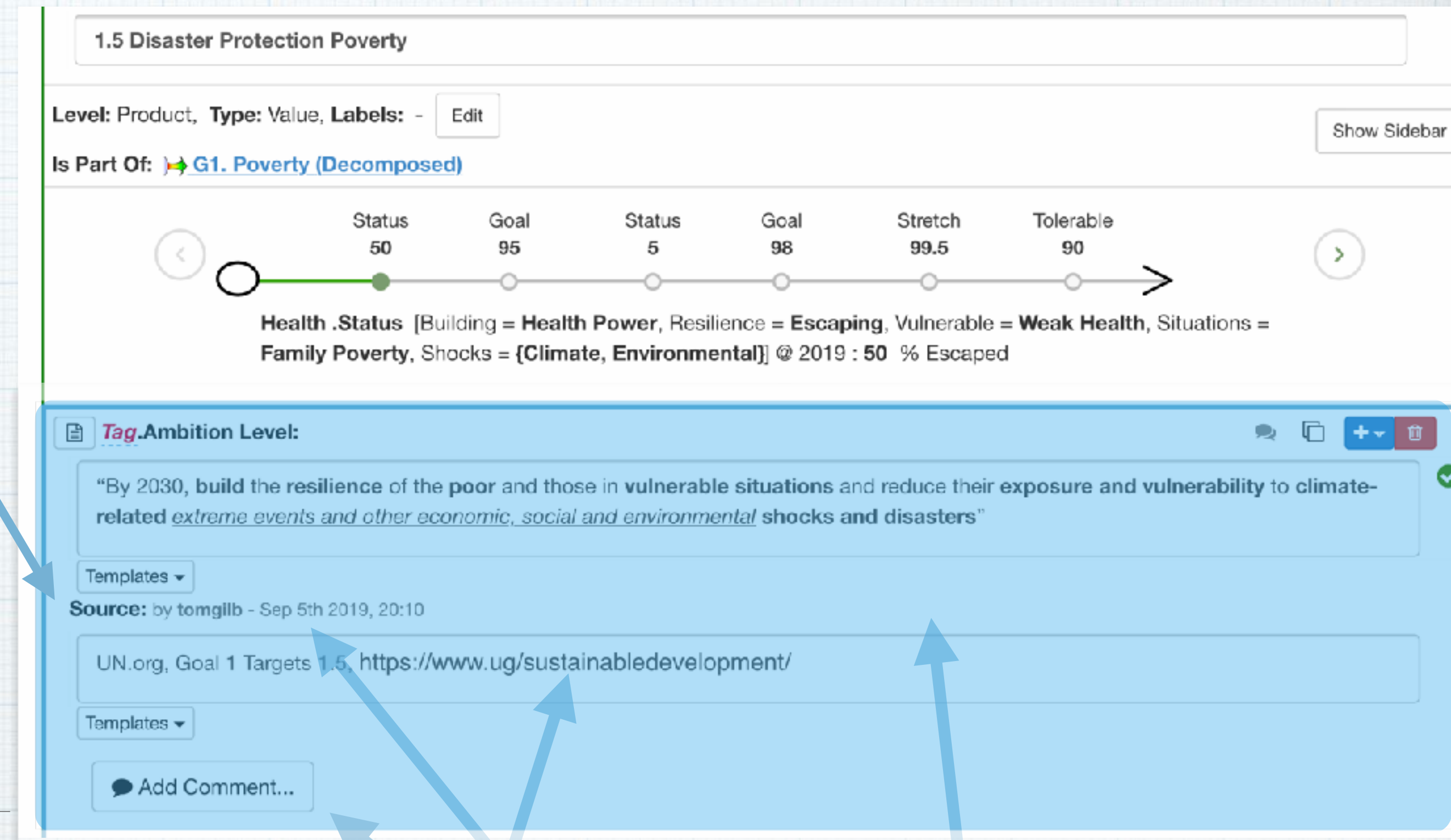


Figure 4.1 The 'Ambition Level' window is open.

I can see who keyed in the specification, and when.
I can also see a live URL link to the original text, as well as its original names.
I can add any number of comments to this from multiple sources.
I can 'manage' the specification responsibly.

Some examples of Responsibilities

Owner: a Specification Owner, parameter name shortened to Owner, has the exclusive right and responsibility for updating a given Specification Object, such as a requirement.

Stakeholder: an entity; human, organizational, or document, from which we can derive needs, demands, resource limits, constraints, and any form of information, which can be acknowledged as our potential project requirements, and specified formally and clearly as a requirement. A 'requirement source'.

Implementation Responsible: a person (or group) which has taken responsibility for actual practical implementation of a design object. This can be for a requirement level (reach the requirement Goal), or for a design (deliver the design and try to get the maximum value from it).

User: a person who personally and physically interacts with a system.

Value Analyst: analyzes stakeholder needs, and priorities, and selects critical stakeholder needs and specifies them as requirements, at least at the 'Wish' level (potential Goal requirement).

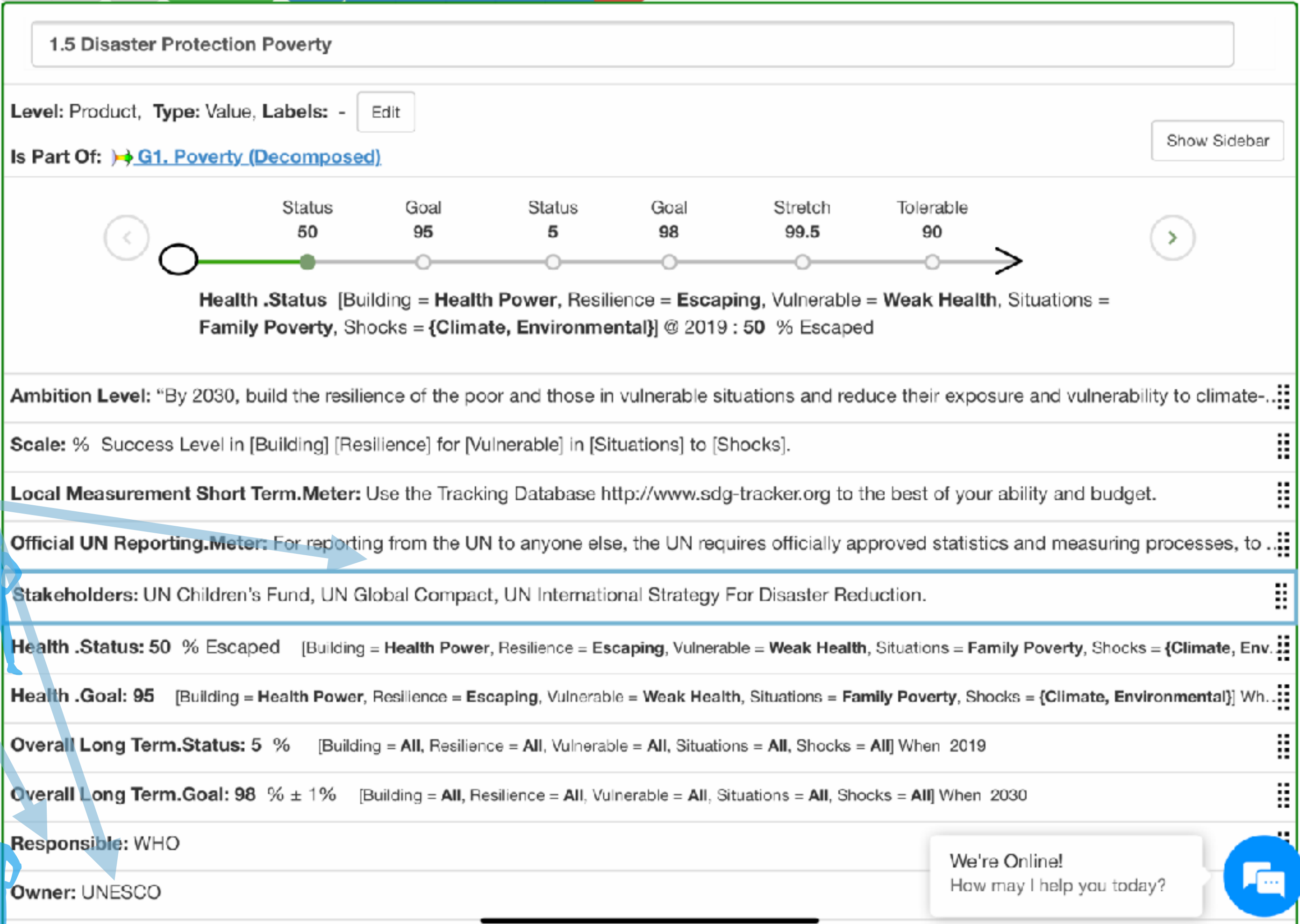
Value Architect: A person or team, who sits at the Apex of the system, and synchronizes all ongoing efforts in order to get maximum necessary value for available resources. Manages the top critical values, and the top-level design architecture.

Value Design Builders: people and organizations who build stuff, physically, logically or organizationally, any design component or related activity.

Value Designer: a generic (all possible design areas) designer (or team) who undertakes to identify possible design components to reach a Value Requirement level, on time. To research them as to all side-effects and costs, documenting such facts in the design object and corresponding Value Tables. The Value Designer might hand over exploration of a design idea to a Value Engineering Specialist.

Value Director: the person, or group, responsible for focusing on the Value Delivery, and reporting to a steering committee or Board about the plans and accomplishments to date, in Value Delivery.

Value Engineering Specialist: a designer with a narrow speciality (usability, security, performance, organizational improvement, AI) who is updated on the state of the art, and has a good international network of people and sources to find good specialist designs.



Chapter 5. Sustainability Constraints and Costs

- * **Clear goals are just a good basis for understanding costs.**
- * The problem is
 - * that the real and final costs are not determined by the Value Goal *alone*.
- * Clear goals '*narrow in*' the possible cost range.
 - * But that range. can be unhelpfully large.
 - * How does 'between 10 and 100 billion' sound to you?
- * The logical truth is that
 - * the real cost is not determined finally by the Goal.
 - * Costs are determined by the actual real strategy you finally choose to use,
 - * or change to in the middle of operations
 - * and much more.
- * The 'means' decides the costs.
 - * The 'ends' just move costs to a limited area or range.
 - * The narrowed range, is the 'costs of all known potential solutions'.
- * How much does a cheap strategy cost, compared to an expensive one?
 - * Well the difference is easily 10 to 1, and 100 to 1, or perhaps much more.
- * That means that if you want low costs, for time , people, money:
 - * you need at *least* to have smart designers, strategic planners, and architects -
 - * to help you find the cheapest options.
- * And you need to
 - * ask them to do it,
 - * and *motivate* them with a budget,
 - * and *rewards* for finding smart options.
- * But it is still not so simple.
 - * The real final cost of a strategy is not just dependent on the strategy specification alone.

Credibility - adjusted:	Σ±%:	150 %	103 %	4 %	42 %	32 %	
Worst Case Cred. - adjusted:	Σ±%:	117 %	84 %	0 %	31 %	18 %	
✈ Capital Cost £	Δ:	500k + 60k	???? + 0	90 + 1	45 + 30	256k + 32k	✓
Status: 0 → Budget: 3.584m £	=:	500k £	0 £	90 £	45 £	256k £	21 ± 3 %
Pounds to deliver the initial set of:		14 ± 2 %	0 ± 0 %	0 ± 0 %	0 ± 0 %	7 ± 1 %	
No qualifiers	%:	21 % (x 0.5)	0 % (x 0.0)	0 % (x 0.0)	0 % (x 0.0)	11 % (x 0.4)	
31st December 2020		14%	???	0%	0%	7%	Show Sidebar
✈ Calendar Cost, Days	Δ:	1k ± 50	???? ± 0	60 ± 5	400 ± 200	60 ± 20	✓
Status: 0 → Budget: 1k days	=:	1k days	0 days	60 days	400 days	60 days	152 ± 26 %
days, the time taken to implement [D...		100 ± 5 %	0 ± 0 %	6 ± 1 %	40 ± 20 %	6 ± 2 %	
[Defined Tasks = All...]	%:	150 % (x 0.5)	0 % (x 0.0)	12 % (x 0.0)	80 % (x 0.0)	12 % (x 0.0)	
30th June 2022		100%	???	5%	40%	6%	
✈ Full Time Equivalents 4.5	Δ:	5k + 500	15k + 2k	30k + 10k	25k + 50k	50k + 1k	⚠
Status: 140k → Budget: 200k Pounds	=:	145k Pounds	155k Pounds	170k Pounds	165k Pounds	190k Pounds	208 ± 106 %
£	Δ%:	8 ± 1 %	25 ± 3 %	50 ± 17 %	42 ± 83 %	63 ± 2 %	
No qualifiers	%:	12 % (x 0.5)	38 % (x 0.5)	100 % (x 0.0)	84 % (x 0.0)	166 % (x 0.0)	
2018		8%	25%	50%	42%	83%	
✈ Maintenance Costs £/ann.	Δ:	0 ± 0	200 ± 7	13 ± 5	220 ± 10	52.8k ± 10k	✓
Status: 0 → Budget: 1m ann.	=:	0 annual...	200 annual...	13 annual...	220 annual...	52.8k annual...	5 ± 1 %
£ cost per Year	Δ%:	0 ± 0 %	0 ± 0 %	0 ± 0 %	0 ± 0 %	5 ± 1 %	
No qualifiers	%:	0 % (x 0.5)	0 % (x 0.2)	0 % (x 0.0)	0 % (x 0.0)	8 % (x 0.4)	
2022		0%	0%	0%	0%	5%	
Sum Of Development Resources:	Σ±%:	122 ± 8 %	25 ± 3 %	56 ± 18 %	82 ± 103 %	101 ± 6 %	
Worst Case:	Σ±%:	130 %	28 %	74 %	185 %	107 %	
Credibility - adjusted:	Σ±%:	183 %	38 %	112 %	164 %	197 %	
Worst Case Cred. - adjusted:	Σ±%:	65 %	14 %	0 %	0 %	6 %	
Value To Cost:		2.50	10.10	3.80	1.70	1.00	
Ratio (Worst Case)		1.70	7.40	2.00	0.60	0.40	
Ratio (Cred. - adjusted)		0.80	2.70	0.00	0.30	0.20	
Ratio (Worst Case Cred. - adjusted)		1.80	6.00	0.20	30.80	3.20	

The lower part of an Impact Estimation Table

Left-and column are resources we have decided to control

The middle 4 columns are different Strategies

The right hand column is a sum of costs if all strategies are used.

The lower row is Values/Costs ratios for Strategies

Real strategy costs depend on:



Real 'strategy' costs depend on:

1. The **detailedness** and **clarity** of the strategy
2. The **honesty** and **capability** of the actual sub-supplier or implementor (the council, the nation)
3. **Conflicting factors**: other Goals might get prioritized, and then you will lose time, people and money to do what you planned.
4. **Outside changes**: recession, new governments, scandals, national budget cuts.

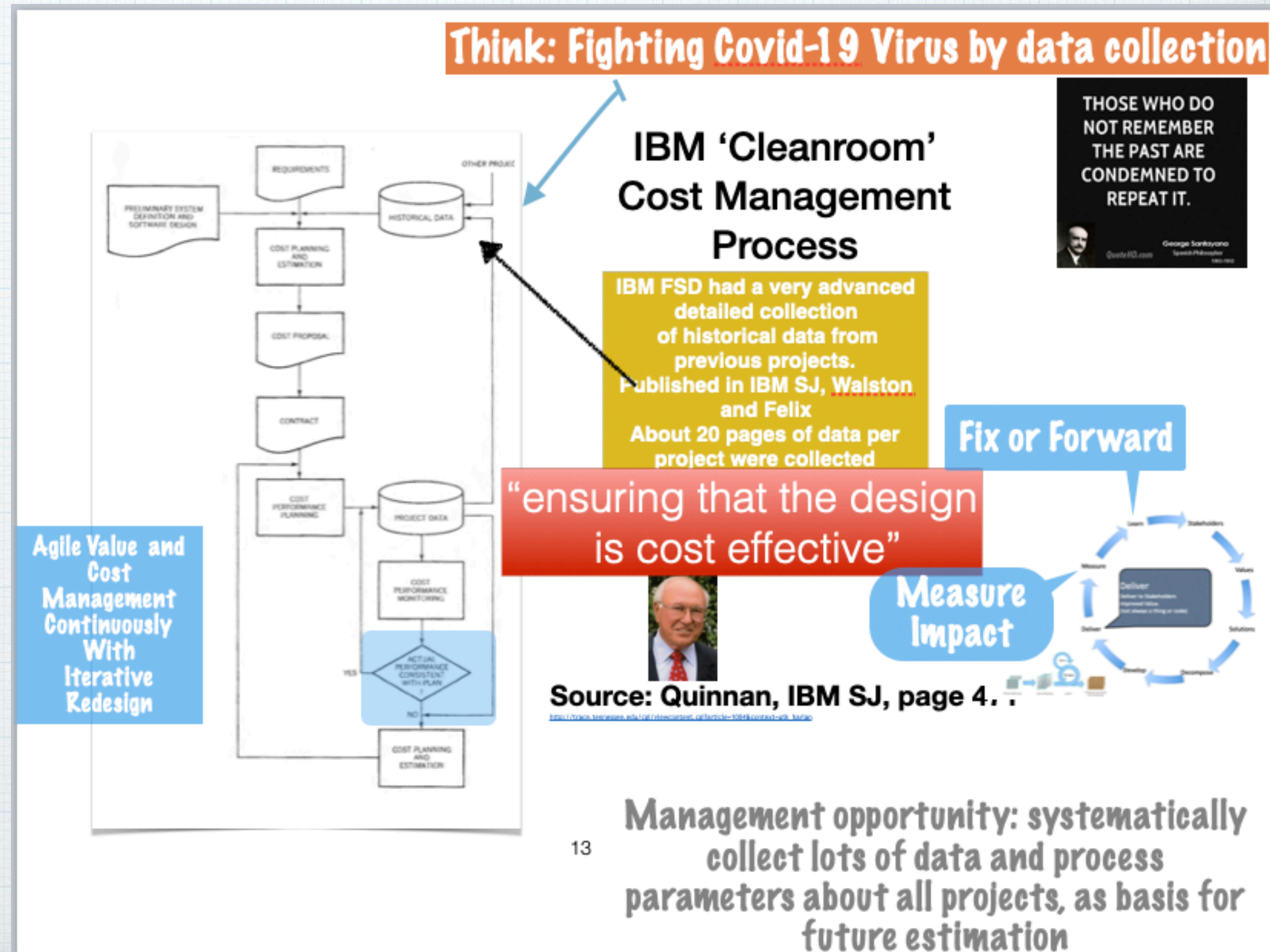
So how can we get reasonable control over costs in the complex real world? You need....

So how can we get reasonable control over costs in the complex real world? You need....

- * Clear and detailed requirements,
 - * as inputs to strategy planners and implementors.
- * Clearly specified strategies,
 - * which 'cannot be misunderstood'.
- * Decomposition of big strategies
 - * to a number of smaller strategies, independently implementable.
- * Gradual incremental implementation of the detailed strategies,
 - * to *learn* about real costs,
 - * and to get consequent, improved, strategy formulation,
 - * and improved implementation processes.
- * Learning, by quickly modifying poor strategies,
 - * and measuring resulting costs,
 - * and then using that knowledge
 - * to improve costs going forward,
 - * while incrementing sustainable values delivery.

So this is not simple, like 'ignoring costs totally', as in the UN Planning.

But no nation has unlimited time or money for sustainability development. In fact the very notion of Sustainability, demands we manage the costs in the short-term *and* the long-term (sustain in long term).



Chapter 6. Sustainability Strategies

The Means for delivering the sustainable development Values.

Here is a draft *framework* for one (Goal 1, End Poverty) strategy (aka means, solution):



Figure 6.2.

I have detailed my empty framework with 4 different named sub-strategies for T1.5. 'Disaster Resilience'

Now maybe it is time to put some real substance to them, and see if they will be able to meet my Goals?

Top Level

T1.5 Disaster Resilience

Level: Product, Type: Solution Idea, Labels: - Edit

Is Part Of: [Strategies For Goal 1 Poverty Eradication](#)

Tag Summary:

"By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters"

Templates ▾

Source: by tomgilb - Sep 5th 2019, 18:28

<https://www.un.org/sustainabledevelopment/> and <https://stats.unctad.org/Dgff2016/people/goal1/index.html>

Templates ▾

tomgilb added a comment - 14 minutes ago - edited by tomgilb - 11 minutes ago

This is the exact quotation of the official Target 1.5, which I used to develop a corresponding quantified Goal 1.5. I am now going to use the same input to try to derive some detailed strategies to achieve the goal.

Add Comment...

Press to show editing toolbar.

Description:

Types of strategies required.

Resilience Strategies: for climate, economic, social, environmental shocks.

Exposure Strategies: for climate, economic, social, environmental shocks.

Chapter 7. Evaluating Strategy Effectiveness and Costs.

The basics of 'Impact Estimation' tables

* **The question we need to ask of any strategy is: how effective is it for reaching my value goal level, on time?**

* In this case we have

- * estimated that, if we *implement* this design (T1.5.1 Flood Damage Prevention)
- * we will, by 2030, increase the successful level from today's status level (50% Success) by 5% points.
- * We will have improved 50% of the way to our Goal.
 - * That is 5% of the desired 10% improvement.

* If this is true, then that is a pretty good design.

- * We now have a basic **strategy-impact language**,
 - * for discussing how good our strategies are.
 - * A number, not nice words, indicate **how effective** a strategy is *expected* to be.

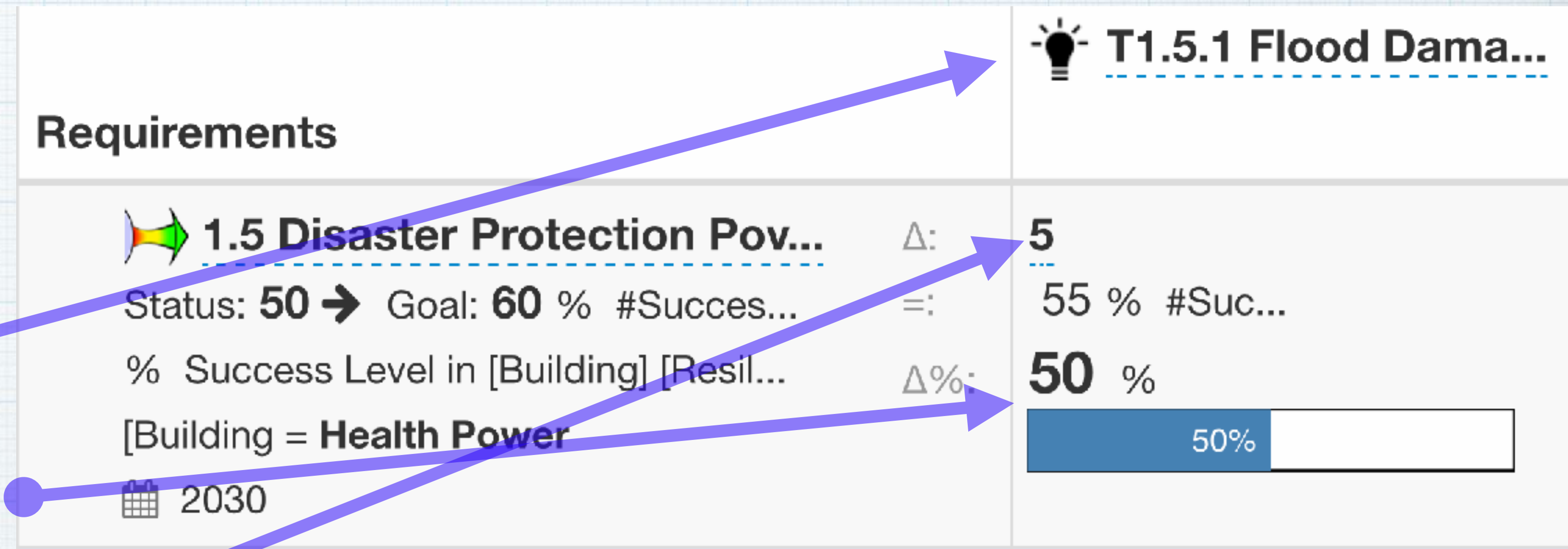


Figure 7.1. A very basic 'effectiveness relationship', between a strategy and a requirement.

We have *two design* 'impact languages'

1. Exactly how effective? 2. How close to our Requirements are we?

We have *two* 'impact languages', and we use them **both** for different purposes.

- * The **real Scale** units increment (Delta-symbol 5) says 'how much we expect to improve'. This keeps us in touch with our Goal specifications, and reality.
- * The '**% of way to Target**', tells us
 - * how **sufficient** for meeting a future target or constraint our strategy is
 - * (50% of the way to Goal),
 - * and how **insufficient** it is
 - * (we need a strategy to fill the gap, and thus to get the **other** 50% of the way towards our Goal, by 2030).
 - * This measure is used for all Goals and strategies; and it keeps us in touch with how good our plans are.
 - * The bar gives us a quick visual feel for how good our plans are for purpose.

* The UN plans, like much other planning, **limit themselves** to simply claiming 'this is the strategy', or 'this is a good strategy'.

* Like embedding strategies in their Targets

* But they do not attempt to make any clear, numeric claim for *how effective* the strategy is expected to be.

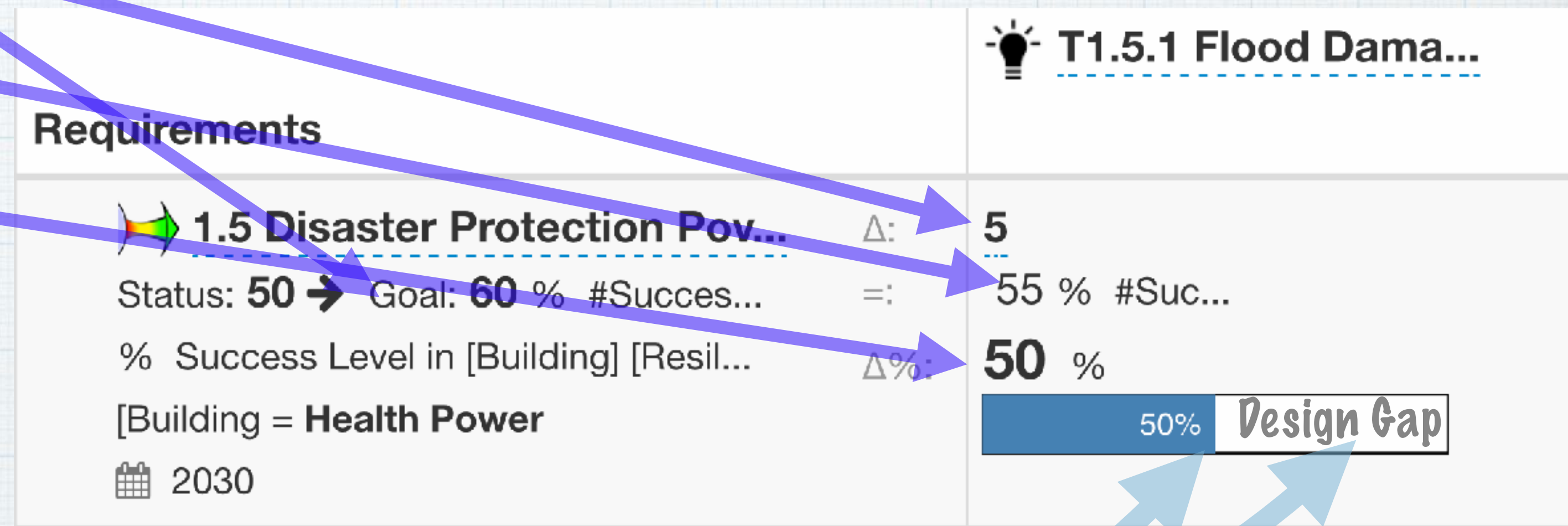


Figure 7.1. A very basic 'effectiveness relationship', between a strategy and a requirement.

There are two different planning-worlds cultures:

Strategy X is very effective for Goal 3.

Strategy X will meet 50% of our numeric Goal by 2030

* Poetry Planning versus Logical Planning.

- * The first one is 'Planning Poetry'. Sounds nice.
- * The second is Logical Planning. Based on Engineering and clear thinking.
- * If you really care about sustainability, and sustainable planning,
 - * you cannot accept the 'poetry planning' as a useful tool.
 - * You have to use clarity, logic and reason.
 - * Just like all scientists, good managers, and engineers always try to do.
- * That is the core idea of this course.
- * Unfortunately a lot of people, and planning cultures, do *not* practice logic.
- * They practice poetry.
 - * But Planning Poetry leads to failure and delays.
- * There is a reason for the existence of science and engineering.
 - * It is to increase the success of complex and large-scale problems.
- * You know that,
 - * and that 'Poetry' is inappropriate to the complexity of this UN World Sustainability Goals problem area.

Poetry

Logic

Goal 9 targets



9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure to support economic development and human well-being, focus on affordable and equitable access for all

9.2 Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry's share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries

9.3 Increase the access of small-scale industrial and other



Foster Innovation

Level: Business, Type: Value, Labels: - [Edit](#)

Is Part Of: [G9 Industrialization And Innovation](#)



Wish [Innovation Types = **New Construction Methods**, Industrial Sectors = **Construction Industry AEC**, Locations = **Norway**] @ ? : **42** % Productivity Improvement <- *Tom and Haakon play game*

Ambition Level: Foster Innovation of all types in all sectors in all parts of the world

Stakeholders: Government Innovation Agencies.

Scale: % Average Improvement of Productivity for [Innovation Types] in [Industrial Sectors] in [Locations]

Status: **0** % [Innovation Types = **New Construction Methods**, Industrial Sectors = **Construction Industry AEC**, Locations = **Norway**] When 14 Oct

Wish: **42** % Productivity Improvement [Innovation Types = **New Construction Methods**, Industrial Sectors = **Construction Industry AEC**, Loca

Relations:

A method for verifying claims about strategy effectiveness.

A method for verifying claims about strategy effectiveness.

- * For each 'means -> ends' relationship,
 - * we can insist
 - * (by mandating our Rules, or Standards)
 - * that 'strategy effectiveness claims'
 - * are backed up by facts,
 - * just as in the medical field.

The strategy value-estimate verification-process is:

- * You write down your **evidence**
 - * (or write the blunt truth, 'taken from thin air', 'guesstimate', 'fake news', or 'intentional lie')
- * You document the **source** of your evidence,
 - * so others can quality control your interpretation of it.
 - * And then you also know you cannot 'just lie'.
- * You can then rate the **credibility**
 - * on our scale of 0.0 (worthless claim), to 1.0 (guaranteed)
- * As a sophistication,
 - * you could indicate the best/worst case range, by adding a \pm .
 - * As in ' 5 ± 2 '. We call this the '**uncertainty**'. It gives us a range, rather than an exact number.

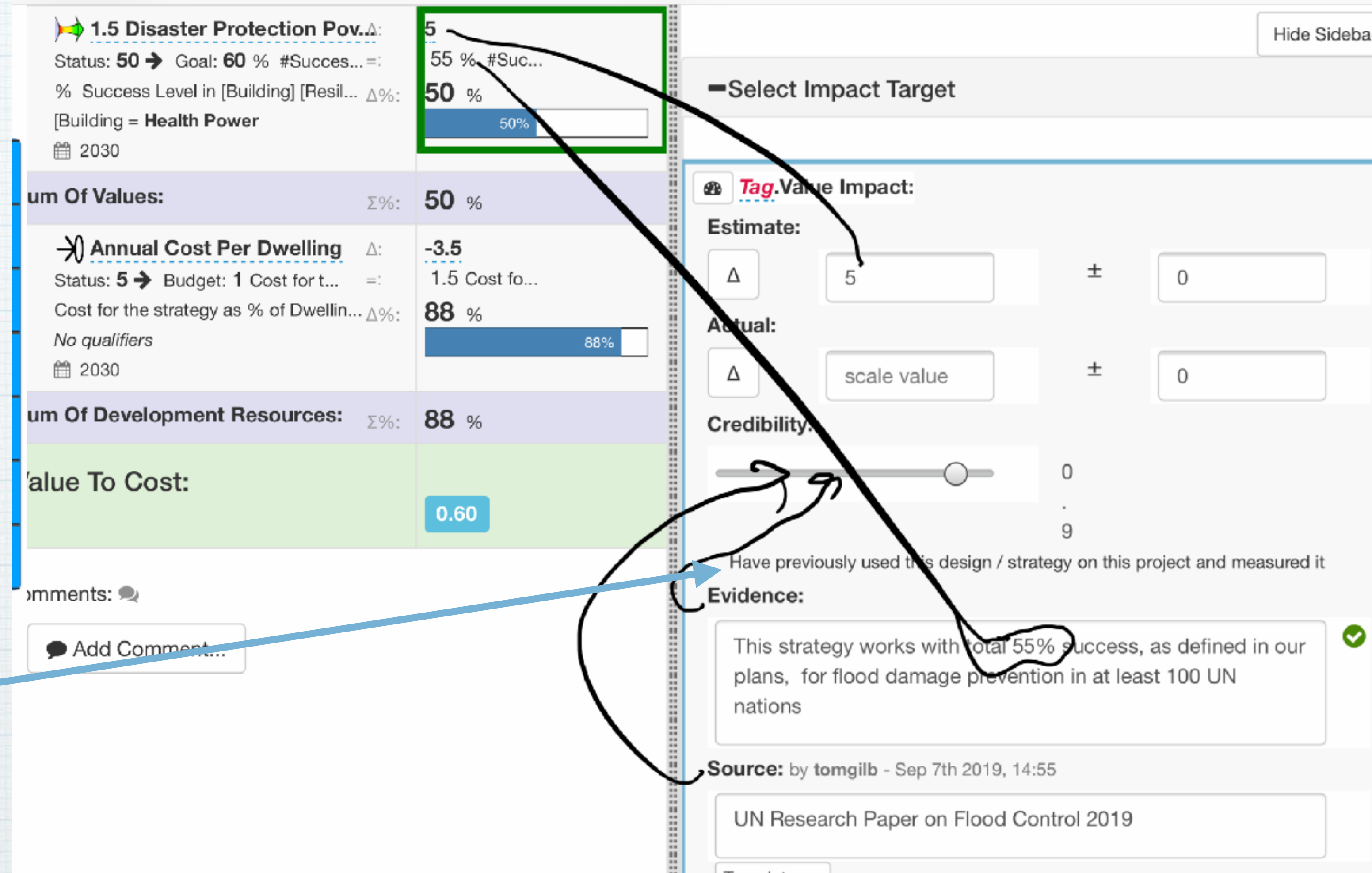


Figure 7.2 The evidence and source for the estimate of '42'. The Evidence for your 5% improvement estimate, and the Evidence Source are documented in a detail window for the estimate cell upper right.

These two factors lead to assigning a Credibility number (0.9 out of 0.0 to 1.0)

The 'Strategy Impact', and 'Efficiency' Question

The precise question here is,
 exactly how far can I expect to get,
 towards my 'Disaster Protection
 Poverty Goal level,
 by my 2030 deadline,
 if I implement the proposed
 strategies?
 Flood Damage, or Flood Temp.






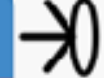



	💡 T1.5.1 Flood Dama...	💡 T1.5.2 Flood Temp...
Requirements		
 1.5 Disaster Protection Pov... Status: 50 → Goal: 60 % #Succes... % Success Level in [Building] [Resil... [Building = Health Power  2030	5 55 % #Suc... 50 % 	5 55 % #Suc... 50 % 
Sum Of Values:	50 %	50 %
  Annual Cost Per Dwelling Status: 5 → Budget: 1 Cost for t... Cost for the strategy as % of Dwellin... No qualifiers  2030	-3.5 1.5 Cost fo... 88 % 	-0.5 4.5 Cost fo... 13 % 
Sum Of Development Resources:	88 %	13 %
Value To Cost:	0.60	3.80

Figure 7.3. We add in a cost estimate for the strategy.

We have 2 sub-strategies, and both are rated equally effective.

But T1.5.2 is 1/7 of the cost of the other.

So the value-to-cost ratio says we should prefer the cheaper strategy, or at least do it first.
 Another question is, 'What if we do both strategies? Is the effect cumulative (50%+50%).

Chapter 8. Decomposing Sustainability Strategies for Quick Results

UN Planning does decomposition, but badly. Chance fuzzy lists.

Strategies for Goal 1 Poverty Eradication



Why are we decomposing strategies?

1. To find very specific actionable ideas, where we can see the effects on our goals, and see the costs.
2. To simplify a very large complex set of strategies, into an organized and intelligible, analyzable list of strategies.
3. To find small (short implementation time, low cost) strategies, that we can implement incrementally, get cumulative results, and learn what works, and *then* improve strategy definition, in order to improve cost-effectiveness when later versions are implemented.
4. So that we have a fair chance of understanding the numeric impacts and costs of strategies, using an Impact Estimation Table. Smaller more-focussed, well-defined strategies help us understand costs and effects.
5. So that we can *sequence* the 'incremental strategy implementation' to 'high-values for resources', early.
6. So that we can systematically advise our stakeholders, as to which sets of these strategies are appropriate to *their* goals and constraints; and which ones might be marginal, untested, or irrelevant.
7. To develop a coherent well-organized set of strategies, so that they are not scattered in various documents, and put under various *misleading headings* (like the 'UN SDG Targets')
8. To subject each, and all, of the identified strategies to a *necessary discipline* of **clear definition, effect and cost evaluation, selection, change management, and prioritization**; which is not possible with the scattered badly-written strategy ideas many planners produce.
9. To facilitate *regional* translation into action, to define the local actions which are stimulated by the Goals and Targets.

T1.5.1 Flood Damage Prevention

Level: Solution, Type: Solution Idea, Labels: - [Edit](#)

Is Part Of: [Climate Resilience](#)

Tag Summary:

Build High:

1. Building regulations will demand building on high enough supports. 1 meter.
2. Government will help finance conversion of older houses
3. Waterproof moats around ground floor required, to keep water out of cellars, as it streams past houses

Templates ▾

Source: by **tomgilb** - Sep 9th 2019, 14:27

Tom Gilb, as designer or strategic planner

Templates ▾

tomgilb added a comment - 4 days ago - edited by **tomgilb** - 4 days ago

This design is only appropriate in some localities. The content of the design needs to be tailored to a variety of flood areas, hilliest, levels and frequency of floods, and current state of housing. So this design can serve as a rough idea that needs appropriate variety in a locality.

The notion of 'implementation independence' and 'definite value delivery'

Critical decomposition rules, for agile/evo value delivery prioritization

The notion of 'implementation independence' and 'definite value delivery'

There are some constraints on the decomposition, which I take for granted, but I know others do not, so I will spell them out right here.

Every time you decompose a strategy, each sub-strategy must then:

1. Be **implementable independently** of the others, in that decomposed set (no sequence dependencies)
2. Each one of the sub-strategies must be capable of **delivering some value**: some 'measurable progress towards our Goal levels' (planned **improvement** is a necessity).
3. No sub-strategy can violate any critical constraint. For example legality, secrecy, security, cost-uncertainty.

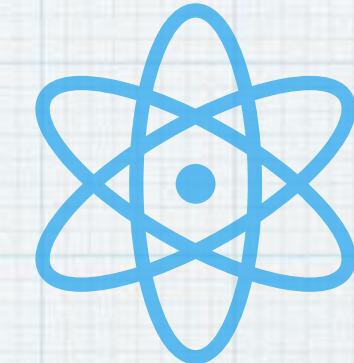
This is not *most* people's way of decomposing things.

- * Most people tend to decompose strategies into *preliminary processes*
 - * (design, meetings, approvals, Quality Control), bill of materials lists, and building blocks:
 - * most of which deliver **no measurable planned Goal value**,
 - * when implemented alone, incrementally, at all.

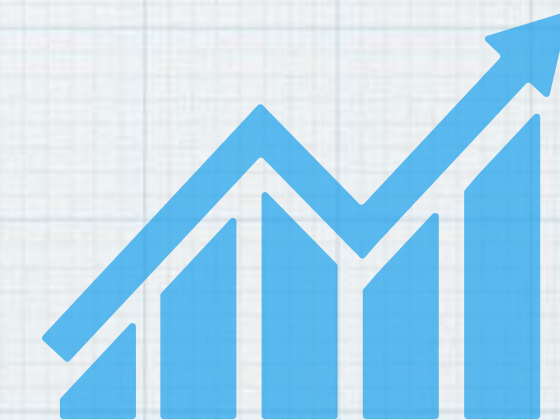
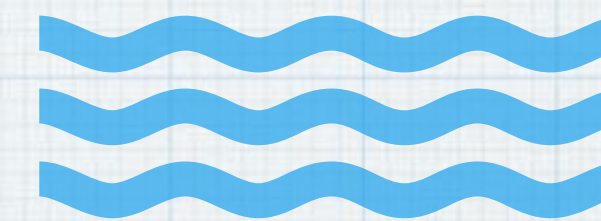
They have a Big Bang mentality, they need to get an **incremental value delivery mentality**.

Great international results **evolve**, they do not magically appear in 2030.

*



Dependencies. —> Big Bang



Independent components —> Value Stream

Chapter 9. Prioritizing Sustainability Strategies

How can we evaluate and select the best strategies?

- * How does the UN Sustainable Development Goal plan prioritize?
- * The answer is that it *does* prioritize certain development goals above others,
 - * and it also delegates prioritization to nations
 - * and other groups who are actually implementing change actions.
 - * That is fine. Leadership and visions, and delegation of decision-making power.
- * The question we are asking here, is detailed and practical:
 - * how can **local** action implementers,
 - * make smart choices,
 - * amongst the range of many possible actions, they are faced with.

	💡 T1.5.1 Flood Dama...	💡 T1.5.2 Flood Temp...
Requirements		
🏠 1.5 Disaster Protection Pov... Status: 50 ➔ Goal: 60 % #Succes... % Success Level in [Building] [Resil... [Building = Health Power 📅 2030	Δ: 5 =: 55 % #Suc... Δ%: 50 % 50%	5 55 % #Suc... 50 % 50%
Sum Of Values:	Σ%: 50 %	50 %
👁️ ➔ Annual Cost Per Dwelling Status: 5 ➔ Budget: 1 Cost for t... Cost for the strategy as % of Dwellin... No qualifiers 📅 2030	Δ: -3.5 =: 1.5 Cost fo... Δ%: 88 % 88%	-0.5 4.5 Cost fo... 13 % 13%
Sum Of Development Resources:	Σ%: 88 %	13 %
Value To Cost:	0.60	3.80

Figure 9.1

The basics of choosing strategies: Value for money.

Here are some underlying principles of prioritization.

Here are some underlying principles of prioritization.

1. The actions (strategy implementations) you choose, will determine the values and costs which you in fact have prioritized, to deliver and incur.
2. If you want to prioritize certain values, or goals, then you need to select the strategies, which you estimate will be most-effective, in delivering those goals.
3. The strategies you are considering, will impact multiple values and multiple costs at once: so you are forced to consider that overall picture.

Simplification to one dimension is dangerous, and can harm other critical goals and budgets.

4. The bigger the costs and impacts of your choice, the more worthwhile it is, to spend effort, on better planning, before you make that choice.

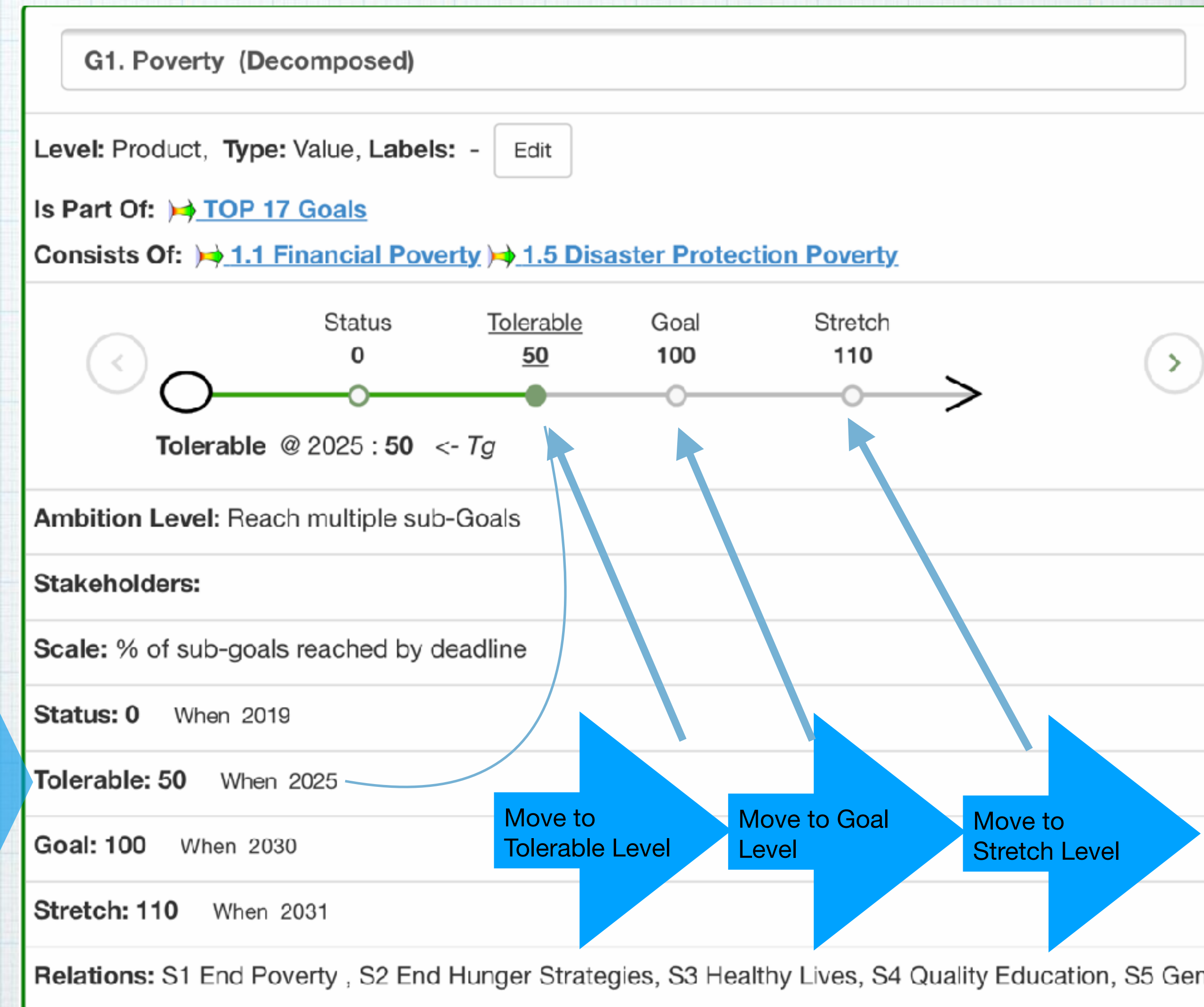
5. At some point you will need to manage the 'risk factors' of evaluation: 'credibility' and 'uncertainty'.

6. At some point you cannot, accurately enough, make the best choices by pre-planning.


You will therefore have to resort to smaller-scale implementation, measurement of results, and improvement or rejection of specified strategies.

7. Too-early prioritization of any Goals or Strategies risks being overturned by external factors in politics, economics and technology.

PRIORITY



Top Level UN Goals and Strategies Table

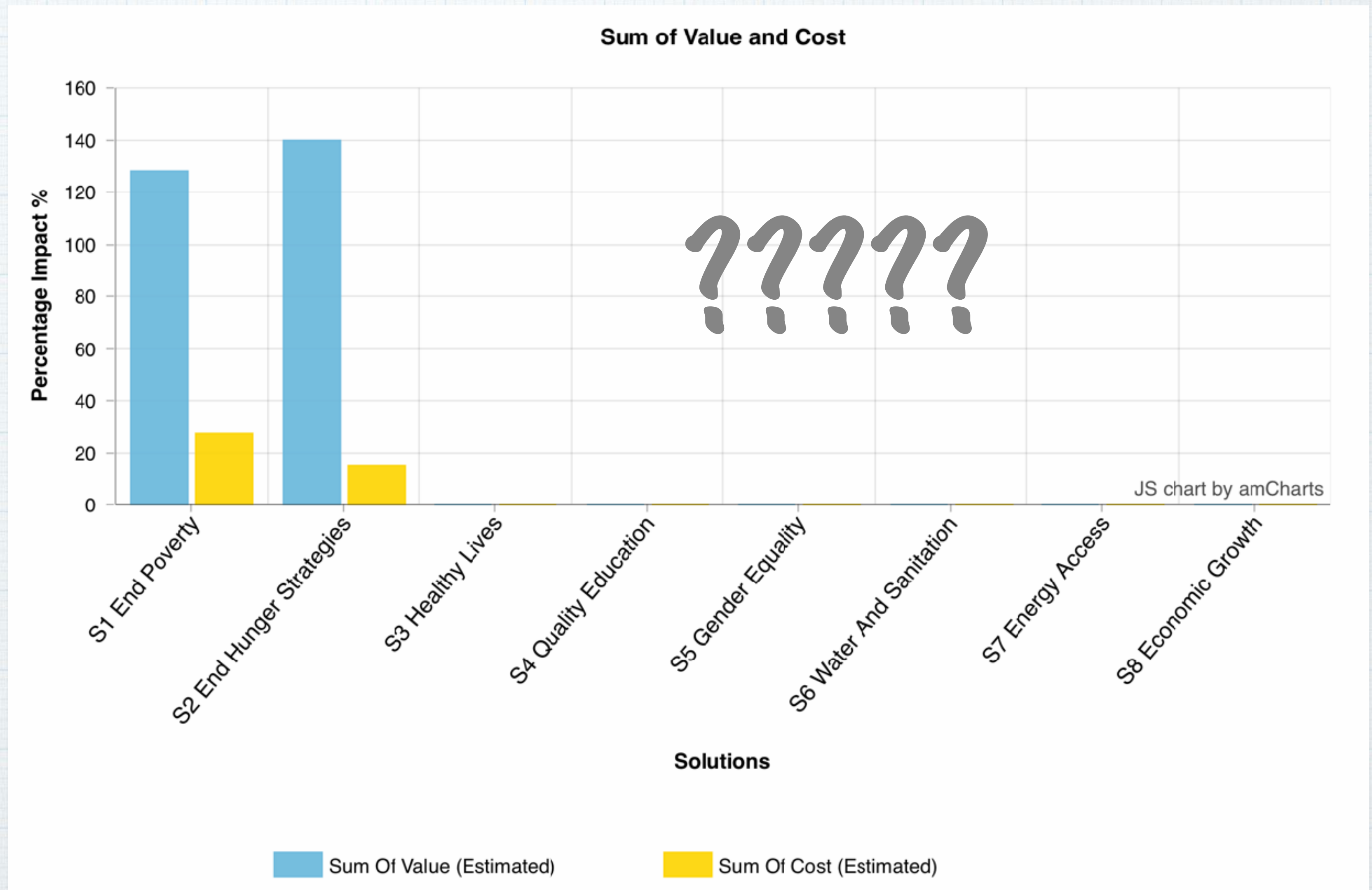
Top Level Table UN Sustainable Development Goals								
From Level: Level? To Level: Level?								
Settings... + Add Sort Duplicate... Undo... Δ: INCREME Help me!								
Requirements	S1 End Poverty	S2 End Hunger Str...	S3 Healthy Lives	S4 Quality Education	S5 Gender Equality	S6 Water And Sani...	S7 Energy Access	S8 Economic Growth
G1. Poverty (Decomposed) Status: 0 → Goal: 100 % of sub-g... Δ: 95 Δ%: 95 %	95 95 %	???? 0 %	 三才孔子 名丘字仲尼 春秋鲁国曲阜人	???? 0 %	???? 0 %	???? 0 %	???? 0 %	???? 0 %
G2 End Hunger Status: 0 → Goal: 100 % of sub-g... Δ: 42 Δ%: 42 %	42 42 %	96 96 %		???? 0 %	???? 0 %	???? 0 %	???? 0 %	???? 0 %
G3 Healthy Lives Status: 0 → Goal: 100 % of sub-g... Δ: -42 Δ%: -42 %	-42 -42 %	23 23 %		???? 0 %	???? 0 %	???? 0 %	???? 0 %	???? 0 %
G4 Quality Education Status: 0 → Goal: 100 % of sub-g... Δ: 5 Δ%: 5 %	5 5 %	-12 -12 %		???? 0 %	???? 0 %	???? 0 %	???? 0 %	???? 0 %
G5 Gender Equality Status: 0 → Wish: 100 % of sub-g... Δ: -5 Δ%: -5 %	-5 -5 %	0 0 %		???? 0 %	???? 0 %	???? 0 %	???? 0 %	???? 0 %
G6 Water And Sanitation Status: 0 → Wish: 100 % of sub-g... Δ: ???? Δ%: 0 %	???? 0 %	42 42 %		???? 0 %	???? 0 %	???? 0 %	???? 0 %	???? 0 %
G7 Energy Access Status: 0 → Goal: 100 % of sub-g... Δ: 0 Δ%: 0 %	0 0 %	3 3 %		???? 0 %	???? 0 %	???? 0 %	???? 0 %	???? 0 %
G8 Employment And Growth Status: 0 → Goal: 100 % of sub-g... Δ: 33 Δ%: 33 %	33 33 %	-12 -12 %		???? 0 %	???? 0 %	???? 0 %	???? 0 %	???? 0 %
Sum Of Values:	Σ%: 128 %	140 %	0 %					0 %
-X) Annual Cost Per Dwelling Status: 5 → Budget: 1 Cost for t... Δ: -1 Δ%: 25 %	-1 25 %	-0.5 13 %	???? 0 %	???? 0 %	???? 0 %	???? 0 %	???? 0 %	???? 0 %
-X) Years To Do Status: 0 → Budget: 170 Years to d... Δ: 3 Δ%: 2 %	3 2 %	4 2 %	???? 0 %	???? 0 %	???? 0 %	???? 0 %	???? 0 %	???? 0 %
Sum Of Development Resources:	Σ%: 27 %	15 %	0 %	0 %	0 %	0 %	0 %	0 %
Value To Cost:	4.70	9.30	Infinity	Infinity	Infinity	Infinity	Infinity	Infinity

“When you know a thing, to hold that you know it; and when you do not know a thing, to allow that you do not know it - this is knowledge.”

Chapter 10. Presenting Sustainability Plan

* A Value and Cost Bar Chart

* Derived from previous table

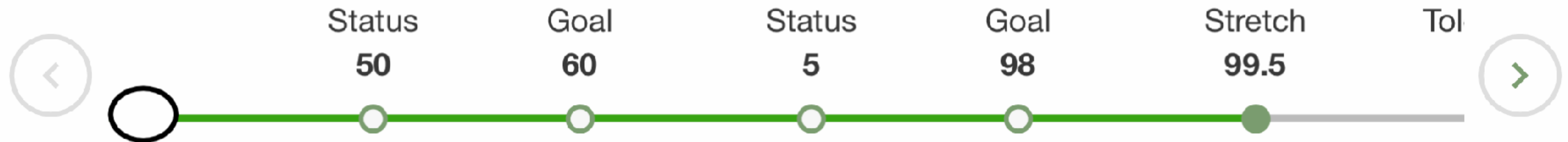


Presenting Value Levels

1.5 Disaster Protection Poverty

Level: Product, Type: Value, Labels: -

Is Part Of:  [G1. Poverty \(Decomposed\)](#)



Overall Long Term.Stretch [Building = **All**, Resilience = **All**, Vulnerable = **All**, Situations = **All**, Shocks = **All**] @ 2030 : **99.5** % \pm 0.5 %

Figure 10.2 A Scale diagram for the value 'Disaster Protection Poverty', focusing on the Stretch level, but giving overview of many other levels.

	💡 T1.5.1 Flood Dama...	💡 T1.5.2 Floo
Requirements		
1.5 Disaster Protection Pov.Δ: Status: 50 ➔ Goal: 95 % #Succes...Δ%: % Success Level in [Building] [Resil... [Building = Health Power 📅 2030	<div>42</div> <div>93 %</div> <div>93%</div>	<div>????</div> <div>0 %</div> <div>????</div>
Sum Of Values: Σ%:	93 %	0 %
Sum Of Development Resources: Σ%:	0 %	0 %
Value To Cost:	Infinity	Infinity

Comments: 💬

💬 Add Comment...

Presenting Detail
with Expansion Windows

Hide Sidebar

Select Impact Target

[Frequency] for [Vulnerability] in
[Situations] to [Shocks].

🏷️ Tag.Value Impact:

Estimate:

Δ 42 ± 0

Actual:

Δ scale v ± 0

Credibility:

0 9

Have previously used this design / strategy on this project and measured it

Evidence:

This strategy works with 93% success, as defined in our plans, for flood damage prevention in at least 100 UN nations

Source: by tomgilb - Sep 6th 2019, 18:22

UN Research Paper on Flood Control 2019

52

Chapter 11. Sustainability Decision-making.

What kind of decisions would we want to make, regarding a UN Sustainable Development Goal plan?

Here is a sample of ideas. Some of the answers are covered earlier in the book.

1. Is the Goal clear enough?
2. Is the Goal detailed enough?
3. Do we have a complete enough set of (Stakeholders, Goals, Strategies, etc.)
4. Have we followed all agreed rules of specification (so we have a well-written plan)?
5. Do the Scales of measure really reflect the essential values of the stakeholders?
6. Do we have effective enough strategies defined?
7. Have our strategies respected our defined constraints? (Legality, Privacy, etc.)
8. Have we decomposed values and strategies, so they are detailed enough for our purposes?
9. Which Prioritization policies and methods should we use?
10. Are the plans good enough to delegate to our remote stakeholders via the internet?
11. Which strategies should we prioritize, to get going with, first?
12. Are the strategy implementers able to get numeric feedback in the short term, and adjust their strategies in near real time, for better success?
13. Are stakeholders able to share their local experiences with the wider community, especially numerically, about value levels, strategy impacts, and costs?
14. To what degree are good-quality specifications and evaluations reusable, in other contexts, as specified in this plan?



Chapter 12. Sustainability Project Management: The Evolutionary Value Optimization method.

Here is an outline of the 'Evo' method as I see it in the UN Sustainability context.:

- 1.The strategies must be decomposed to a small-enough size (maybe a week or month of effort)
 - 2.The strategies which are ready for real-world implementation, can be prioritized, if there are limited resources (people, time, money, recipient areas): prioritized by 'estimated effects over estimated resources-needed'
 - 3.The results (value effects, costs) of each small implementation are measured reasonably well, and compared with estimates.
 - 4.If results are disappointing, try to redesign the strategies, and try again, hoping for better results.
 - 5.Keep on doing this, even massively in parallel (many countries at same time) and keep track of overall progress towards Tolerable (worst-acceptable levels planned).
 - 6.When all Tolerable levels are reached, continue until all Goal (success) levels are reached.
 - 7.As this is a large long-term effort, you need to continuously check for stakeholder changes:
 - 1.In values
 - 2.In resources
 - 3.In constraints
 - 4.In available strategies and their costs
- And keep your plans updated, at all times.
8. When all Goals are reached, if you have any resources left, consider attempting to reach some priority Stretch levels.

*



UN Sustainable Development Concept Glossary

UN Sustainable Development Concept Glossary

(See -Planguage method Glossary' above for planning process concepts)

Action: Strategy implementations.

Affordable: can be acquired by defined stakeholders who need it and value it, by some practical means. From their own income, sponsored, bartered, worked for.

Clean (energy, water): does not contribute to defined forms of pollution, or it is significantly less than previous options.

Climate: air level planetary phenomena. Rain, snow, winds, clouds, air, polluted air, temperature, floods. Relating to expectations, duration, damage, difficulty of living in

Community: a defined group which has defined things or interested in common.

Crisis: (Climate Crisis): a dramatic change affecting people, animals, plants, which threatens existence, or normality.

Education: any form of training, teaching, coaching, self-teaching, home-teaching, internet supported, video supported, mentoring or experience which is intended to improve defined capabilities of people.

Emergency: a fairly sudden change in living situation for people, animals, plants, glaciers which threatens normal or past conditions, in dramatic ways.

Global: affecting or involving more than one geographic area, more than one continent.

Goal: (as used in UN Plan): an ideal future state for people and planet, specified for agreement to work towards, within a defined time frame.

Green: (Greener): something consuming limited resources in a sustainable or renewable way.

Institution: any formal or informal (cultural) body which can influence change.

Objective: a future state of a value, not necessarily an improvement, but typically protecting, defending and perhaps improving that value, of human stakeholders, or non humans stakeholders (animals, plants, earth)

Peace: a human state of 'not-war'. Not fighting. Not threatening to fight. The degree to which humans can turn their attention from 'survival' to 'improvement of other objectives'.

Peacekeeper: (Blue Helmets): official (ie UN, EU) or unofficial and informal bodies or devices (laws, culture, volunteers) which effectively help prevent conditions moving towards war, fighting, attacks, or destruction of values, of buildings, or nature.

Poor: people and communities unable to afford or supply themselves with specific values (food, education, healthcare, safety, equality, and more), with their own or outside assistance. People deprived of defined values below a defined level.

Poverty: long term inability for defined people (possibly other living entities on the planet) to supply themselves with defined levels of defined values (like food, shelter, education, equality, protection, escape to better places).

Justice: the degree of protection, of any defined entity (people, culture, animals, plants, earth) according to higher ideals (like UN Declarations), laws, customs, strategies for reaching the ideals; to prevent exploitation, ignoring plight, misuse, and to redress the balance effectively, when the balance has been upset.

Refugees: any defined people, or animals forced to undesirably leave their normal habitat, in order to seek protection from some negative actions, or from potential actions against their acknowledged, or inalienable rights.

Smallholding: any defined area, or trade sphere, which is the primary source of income or subsistence for a family, or a small group.

Subsistence Farmer: a land farmer, of plants or animals, a fisherman or herder which is largely dependent on their local production, but does not expect or have a significant surplus, and might not even meet basic needs with this alone.

Sustainability: the state when any process does not eat up more resources than it generates.

Sustainable: describes any process which does not eat up more resources than it generates.

Sustainable Development: any *development* process which does not eat up more resources than it generates.

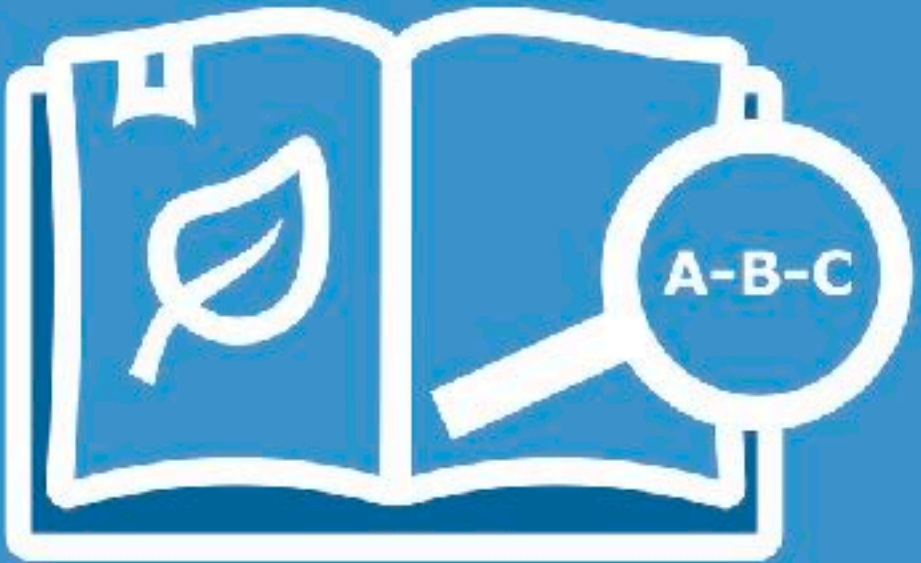
Sustainable Development Goals (SDG): the UN defined 2030 horizon SDG as published.

Target: (as used in UN Plan): *should* be defined as: specific planned levels and dimensions of the higher level Goal. These 'Targets' are not actually specified in such a consistent manner. A lot of 'means' mixed in them.

Universal Health Coverage:: defined levels of health assistance, for defined people, which are their right, irrespective of poverty levels.



ArchDaily's SUSTAINABILITY GLOSSARY



Biodegradable: Any substance or material that can be decomposed by living organisms (usually, bacteria).

Biodiesel: Biodiesel is a healthier, more sustainable alternative of fossil fuels, which can be produced from vegetable oil, animal fats, and waste cooking oil.



<https://www.archdaily.com/915866/archdailys-sustainability-glossary-a-b-c>

Sustainability Planning

2 Hour 'Course' for BCS SPA/Quality

Based on the Book = <https://tinyurl.com/UNGoalsGilb>
These slides are at = <http://concepts.gilb.com/file24>, and
<https://tinyurl.com/SustainabilityPlanningSlides>

Video afterward will appear at URL= https://www.youtube.com/playlist?list=PLKBhokJ0qd3_wlv0j85YhmNfNj8ZJ8M-

(General site of videos, SPA and my courses and talks)

The following videos are there now: Technoscopes, Value Requirements, Value Design, Value Management, and Value Agile
There are no prerequisites for this course, but all previous courses will give additional detail for further study.

(share freely on social media and with friends)

By Tom Gilb, in Norway (Kolbotn, near Oslo)
tom@Gilb.com (questions welcome)
www.Gilb.com (lots of materials!)
[@ImTomGilb](https://twitter.com/ImTomGilb) (Twitter).
www.linkedin.com/in/tomgilb

Sustainability Planning

Sustainability Planning Guidance for getting your critical values: quickly, clearly, effectively balanced and continuously¹

Tom Gilb

Pawel Nowak: Initiator.
Under Creative Commons, and Copyright Tom Gilb 2019



Possible addition is the book appendix for Goal 9

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See Presenter notes for this slide
or the S P book itself

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Note: as a new detailed one-off references and their possible URLs will be given as a page footnote.
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Farhana Sultana
Syracuse University, USA

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Reprints and permission: sagepub.co.uk/journalsPermissions.nav DOI: 10.1177/2043820618780788 journals.sagepub.com/home/dhg

Geographers should engage with development and the Sustainable Development Goals (SDGs) by utilizing not only the theoretical and methodological tools from our various subfields but also through advocacy, expanding the role of public intellectuals and holding institutions and people to account. If we want emancipatory politics and transformations in development, we need to challenge and improve what is done in the name of SDGs, keeping central the issues of social justice and ethical engagement. This is perhaps the most critical thing geographers can undertake going forward in order to dismantle the master's current house.

"Liveman identifies some of these aspects of geographical contributions, as well as the importance of demonstrating the fallacy of relying heavily on quantifiable indicators, measurements, and aggregation, which the SDG suffers from, albeit less than the MDGs. Indeed, one of the aspects of the SDGs (in comparison with the MDGs), from the perspective of its proponents, is that the SDGs avoid the over- simplification, quantitative-driven, and simplistic goals of the MDGs. However, the 17 goals and dozens of targets are fuzzy, ambitious, often unimplementable and contradictory, and perhaps even hubristic. While the SDGs are supposed to be aspirational, they're open to interpretation, cap- ture, and subject to abuse by those with power. Also, the SDGs are supposed to be transformative, but exactly how that may be is still unknown."

(I) **Professor Mitu Sengupta**
"Transformational Change or Tenuous Wish List? A Critique of SDG 1 (End Poverty in All its Forms Everywhere)"
Socialalternatives.com, ISSN: 0155-0306,Vol. 37:1 2018

TSG copy file "soc_37_vol_37_1_small.pdf" (in Others Papers, Sustainability)

from the paper:

"The SDGs may be critiqued in several different ways. We may ask, for example, whether the giant spawl of 17 goals and 169 targets that comprise the new agenda are actionable; about the types of policies and laws that they will spawn. We may ask questions about the process through which they were created; about whose voices were dominant and whose, perhaps, were left out. All of these are good questions. In this article, however, I will evaluate the SDGs – with a focus on SDG 1 (end poverty in all its forms everywhere) – against the standard that is set out by its own authors. Based on a close reading of the goal, I will ask whether SDG 1 does, in fact, present a "supremely ambitious" vision of a world without poverty, especially in light of what we know about poverty today and the means to eradicate it, and also in light of Agenda 2030's professed commitment to human rights. I argue that SDG 1 merits praise for making some clear advances over the MDG's flagship poverty goal (MDG 1). However, the politically cautious language through which it is expressed puts at risk any genuinely "transformational" visualisation of the future." page 12.

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Ryerson University, Toronto, Canada: She has a PhD in Political Science from the University of Toronto, and a Master of Arts and Bachelor of Arts (Honours) in Political Science from McGill University.

(J) Jason Hicel
"The contradiction of the sustainable development goals: Growth versus ecology on a finite planet"

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Very Last slide, go back