

# Planguage (Expansion of the SGEP)

Turning ambiguous goals into measurable outcomes through evidence,  
not promises

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## How to Use this Booklet

This reference serves different needs. Choose your path:

### For Quick Introduction (15-20 minutes)

- Executive Summary
- Planguage in 60 Seconds
- Value Planning: Deliver → Measure → Adapt
- Impact Estimation Tables: Compare Before Building

### **For First Week Adoption (1-2 hours)**

- Planguage in 60 Seconds
- Getting Started: The First Week
- A Worked Example
- Tested Large Language Model Prompts

### **For Comprehensive Understanding (3-4 hours)**

- Read sequentially from Executive Summary through Conclusion
- Pay special attention to Impact Estimation Tables
- Study the Worked Example

### **For Reference & Tools**

- A Basic List of Planguage Keywords
- Credibility Scale
- Twelve Tough Questions
- Key Conventions

### **For AI-Assisted Application**

- How to Benefit from Planguage if One Doesn't Want Details
- Tested Large Language Model Prompts
- Use any LLM: "Find ambiguities in <your text> using Tom Gilb Style SQC"

### **For Executives**

- Executive Summary
- The Big Idea of Value Planning
- Why This Works: The Competitive Edge
- Management Role
- Management Responsibility

### **For Product Teams**

- Planguage in 60 Seconds
- Value Planning Cyclical Steps with Plan-Do-Study-Act
- A Prioritization Technique – Impact Estimation Table
- Portfolio Optimization: The Insight Most People Miss
- Getting Started: The First Week

### **For Change Agents & Coaches**

- Enable a Bill of Rights for the People Doing the Work
- Management Responsibility

- Being a Supporter
- Learning Loops

Choose your starting point based on your immediate need. All paths eventually connect.

## **Executive Summary**

### **The Business Case for Planguage**

#### **Coherent Communication**

The written form is stable, not subject to fading memory, and includes necessary details. It can be systematically improved and changed. It can be reviewed and quality-assured against high enough standards. It can be referenced in any discussion, meeting, or presentation. It can be read and reread at the individual's pace. It provides a legal record and can be referenced in contracts and legal cases. The written form allows detailed inter-relationships between planning elements to be mapped rigorously. It can easily be communicated widely geographically, independently of people's schedules.

#### **Coherent Decomposition or Experimentation**

For readability, when this booklet says 'solution-option', assume some or all of: outcome-options, solution-options, experiment-options, designs, architectures, or 'strategies' in Tom Gilb's parlance (not to be confused with strategy as defined in the SGEP). (SGEP/Strategy)

Document the primary relationships between critical objectives, solution-options, and other ideas, upwards, downwards and sideways.

If one uses an estimate or a sizing, provide evidence and sources to reduce the risk of bad decisions. When concerned with the credibility of the estimates, document the evidence and sources and use that to rate the level for each estimate. One does this for the entire package of solution-options for all goals in a management summary. Most initiatives are not so special. Whatever one is doing usually has reference cases somewhere; look for them and look at the issues they had.

Estimate the ± range for best and worst-case impacts of the solution-options. Connect Impact Estimation Tables at different related levels of planning vertically (**bottom-up and top-down**) and horizontally.

#### **Evolutionary Delivery of Stakeholder Value**

Dr. W. E. Deming told Tom Gilb, about 1983 in London, that the PDSA cycle goes on forever 'as long as there is competition.' So, there is a subtle point:

- Conventional notions like the ‘end of an initiative’ do not apply: this is a competitive process.
  - If the value delivery cycle, an experimental cycle, is short (prefer ‘one week’), the posit here is that it does not matter where one enters or exits the cycle (adaptation to PDSA). Any convenient point will be OK.
  - Beginning with “big requirements” is usually less valuable than getting experience of a base set first and then setting ‘requirements’ in an evolutionary manner. Favor ‘desirements.’ “Desirement” is a coined term used in the Scrum community to contrast with traditional “requirements.” It emphasizes that Product Backlog Items express hoped-for outcomes or hypotheses about value, not guaranteed, must-have specifications.
  - Maybe “Just get started.” Cynefin® [71] provides a leadership compass.
- Plan solution-options to be twice as effective as the goal needs and half the cost of the budgeted resources. But do not commit to actually implementing more solution-options, or more fidelity than needed.

### **The Big Idea of Value Planning**

The ‘big idea’ is that:

- If management focuses on the results in the form of measurable and critical objectives and uses these results as a constant filter on all technology, then the wrong technology cannot easily emerge or survive. This could avoid a “solution looking for a problem” pattern.
- The right technology has a better chance, an opening, to be discovered and invested in before it is too late. At the very worst, when it becomes clear that no suitable technology is available or known to one to date, one can change overly optimistic objectives and budgets to become more realistic.
- Give up early: give up seeking impossible objectives or impossible deadlines.
- We can either await improved technology in the future or provoke those inventions into reality, as the most outstanding entrepreneurs consistently do (Jobs, Edison, da Vinci, etc.).

### **Planguage & Value Planning: Evidence-Informed Product Delivery**

#### **The Core Problem**

**100 words (out of say 300) per page are typically ambiguous.**

Terms like “better,” “faster,” “available” mean different things to different people. This ambiguity causes misaligned teams, wasted effort, and failed products. Most organizations can’t answer: “How will we know if we’ve succeeded?”

## A Working Solution: Planguage + Value Planning

- **Planguage** is a keyword-driven language that quantifies the qualitative—turning vague goals into measurable objectives.
- **Value Planning** is evolutionary delivery: ship vertical slices weekly or more frequently, measure actual outcomes, let evidence reshape your malleable goals.
- Together, they create **clarity** (everyone understands the target) and **agility** (adapt based on measured results, not assumptions).

## How This Works

- Focus on value deliver, not cost-cutting
- Improve one small friction point at a time
- Measure visible benefits within weeks

## What to Do First

- Fix one low controversy overhead issue
- Adopt a small corrective action
- Realize a measurable improvement quickly

## What Management Will See

- Faster decisions, faster delivery
- Reduced operational noise
- Clear evidence before any expansion

## Why This Is Low Risk

- No reorganization announcements
- No headcount targets
- No irreversible commitments

## How Success Expands

- Benefiting teams request further improvements
- Learning guides next steps
- Cumulative gains emerge quietly

## **Management Role**

- Protect the experiment
- Judge by evidence, not promises
- Authorize continuation only after visible results

## **How to Benefit from Planguage if One doesn't want Details**

Planguage was designed for machines, so it's a fabulous AI LLM prompting language.

- ChatGPT Gilb Bot – <https://tinyurl.com/GilBotGPT>
- Grok Gilb Bot – <https://tinyurl.com/GilBot>; much as I like to avoid Grok, from my testing of these two bots, it's much better than ChatGPT. I wish there was a bot on Perplexity and Claude.
- Try the following prompt for example: using the stakeholder information and other information at <https://evolved.institute>, quantify the value proposition and provide an impact estimation table of the offerings and format it so it can be copied and pasted into a Word document.
- Then ask the LLM to “redteam” its answer. After it responds then say, “fix it.”
- But one doesn't need bots really. Beside, bots go out of date and why get limited? Tom's work is so engrained that all LLMs know about his work. See prompts at the end of this document. Or use the above prompt. I tested it on Perplexity and Claude.

## **Planguage in 60 Seconds**

Instead of: “*Improve login speed*”

Write this:

TAG: LoginSpeed

SCALE: Median seconds from app launch to account view

METER: Firebase Analytics, measured on 4G networks

STAKEHOLDER: End Users (Priority: Critical)

PAST [2024-Q4, London]: 8.2 seconds

GOAL [Release 1]: 2.0 seconds

CONSTRAINT: Must be  $\leq$  3.0 seconds

TOLERABLE: 3.5 seconds (avoid user abandonment)

WISH: 1.0 seconds

**What one gains:**

- **Unambiguous clarity:** Everyone knows exactly what “better” means
- **Measurable progress:** One can track whether one is succeeding
- **Range of outcomes:** Goal (2.0s), acceptable (3.0s), failure (>3.5s)
- **Evidence requirement:** Past performance grounds expectations

**Value Planning: Deliver → Measure → Adapt**

#### **The Weekly Cycle (with adapted Plan-Do-Study-Act)**

**PLAN** (2 hours max)

1. Define top 3-5 measurable objectives (use Planguage for critical ones)
2. List solution-options that could achieve them
3. Estimate impacts using Impact Estimation Tables (see below)
4. Pick the highest value/cost option with decent credibility

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*DO\** (rest of week)

- Deliver one complete **vertical slice** (not horizontal layers)
- A vertical slice = end-to-end feature users can use
- Example: simplified login flow (UI + backend + data) that real users try

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*STUDY\** (30-60 minutes)

- Measure actual outcomes against one’s Planguage scales
- Compare reality to estimates (Did LoginSpeed actually improve to 2.0s?)
- Spot side effects (Did abandonment rate change unexpectedly?)

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*ACT\** (30 minutes)

- **Persevere** (it’s working, keep going)
- **Pivot** (switch to different approach based on evidence)
- **Stop** (kill it—this isn’t delivering value)

![image](

*In parallel with PDSA, cultivate the work environment and climate (hence the gardening metaphor – a watering can for the plants)*

## Impact Estimation Tables: Compare Before Building

Don't guess which solution is best. **Estimate impacts on multiple expectations or limits simultaneously.**

| Expectations, Limits                               | Goal             | Solution Option: Biometric Login       |
|--|------------------|--|
| <strong>Solution Option: Progressive Load</strong> |                  | Solution Option: Cached Authentication |
| <strong>Login Speed [sec]</strong>                 | 2.0              | 2.0 ← 2.5                              |
| Source: RefCase.CompetitorA                        | Credibility: 80% | 2.0 ← 2.8                              |
| Source: ABTest                                     | Credibility: 85% | 1.2 ← 2.0                              |
| Source: TeamGuess                                  | Credibility: 40% | 25 ← 35                                |
| <strong>Dev Effort [days]</strong>                 | ≤40              | Credibility: 60%                       |
| 10 ← 15  | 5 ← 8            | Credibility: 80%                       |
| Credibility: 85%                                   | 95 ← 99          | <strong>Security Pass [%]</strong>     |
| ≥99.9  | Credibility: 50% | 99.9 ← 99.9                            |

99.9

Credibility: 95%

90 ← 95

Credibility: 65%

#### How to read:

- **1.5 ← 2.5** = best case 1.5 seconds, worst case 2.5 seconds
- **Credibility** = based on a clear scale (later in this booklet) from 0 to 1 in decimals, confidence in estimate (often multiplied by 100 to get a percentage 0-100%). Low credibility = experiment first, don't commit.
- Scan **across rows** to compare solutions on one objective
- Scan **down columns** to see a solution's complete profile

**Decision:** Progressive Load wins for Week 1 (high credibility, meets goals, low cost). One can test Cached Auth in Week 2 if needed.

### The Living Table

- Week 1: Table filled with estimates (impacts, costs) and reference cases
- Week 2: Deliver Progressive Load, measure actual results
- Week 3: Update table with measurements (e.g., credibility jumps to 95%)
- Week 4: Use evidence to decide next move

### Why This Works: The Competitive Edge

#### Traditional Approach

Write comprehensive requirements → Build everything → Hope for correct prediction → Discover 4+ months later it's wrong

#### Value Planning Approach

Write initial objectives → Deliver weekly vertical slice → Measure actual outcomes → Let evidence reshape objectives → Repeat

#### Key differences:

- **Objectives emerge from evidence**, not speculation
- **Give up early** when data shows a goal is unrealistic (in weeks, not months)
- **Right solutions get discovered** because one measures what works

- No “end” to product development—continuous evolution while there’s competition or it makes sense (other ideas might become relatively more valuable over time)

![image](

*Bias for sourced quantified evidence with credibility scores per solution option*

*Assume Resources means effort and money in this case. People are not resources.*

## Core Principles

### Quantify Critical Objectives Only

Don’t Planguage everything. Reserve it for objectives where someone could die (pharma, aerospace) or the business could die (revenue, security, scalability). Use plain language for the rest.

### Decompose by Value, Not Scope

Don’t slice work as “database layer, then API, then UI.” Slice as complete user experiences: “simplified checkout flow that 100 users can try this week.”

### Plan to Target, But Don’t Commit to Excess

Design solutions with a safety margin that could deliver on target (perhaps imagining reaching **2x the goal at half the budget**). But only build what measurements prove one needs. Adaptive delivery allows one to “trim the tail.”

### Team Credibility Matters More Than Keeping to Commitments Exactly

A rough estimate with high credibility (based on reference cases) beats a precise estimate that’s pure guesswork.

#### Credibility Scale (0-10):

- 0-3: Guess or distant analogy (experiment first)
- 4-6: Some relevant measurements (proceed with caution)
- 7-9: Proven in your organization (high confidence)
- 10: Solid long-term experience on this exact project (bank on it)

### Results Filter Solution Options within Constraints/Limits and Capacity (throughput ranges)

If a solution can’t prove its impact on measurable objectives, **don’t build it**. This principle automatically:

- Kills wrong solutions quickly
- Creates space for unexpected innovations
- Reveals unrealistic goals before they waste months
- Is a forewarning for the risk associated with options that have low credibility scores

## Getting Started: The First Week

### Monday (2 hours):

1. Pick the #1 product improvement goal
2. Write it in Planguage (TAG, SCALE, METER, PAST, GOAL, CONSTRAINT)
3. List 3 solution options that could achieve it
4. Create simple Impact Estimation Table (estimate impacts, sources, credibility)

### Tuesday-Thursday (3 days):

1. Deliver thinnest possible vertical slice of highest-value option
2. Get it into users' hands (even if just 10 users)

### Friday (2 hours):

1. Measure actual outcomes (was the GOAL hit? close?)
2. Update the Impact Estimation Table with measurements
3. Decide: persevere, pivot, or stop
4. Plan next week's slice based on evidence

**Repeat forever** (or until competition ends or it no longer makes sense to do so).

## The Bottom Line

In competitive markets, organizations that **deliver better value faster and adapt more efficiently to market needs** win. Planguage provides the language for clarity. Value Planning provides the approach for adaptiveness at speed.

**Write down measurable objectives. Deliver weekly vertical slices. Measure what happens. Let evidence reshape the malleable objectives.** That's the rhythm that keeps one competitive.

*Based on the work of Tom Gilb, pioneer of evolutionary delivery and author of Competitive Engineering. For full methodology: Value Planning: Practical Methods for Measuring, Understanding and Delivering Value.*

## Introduction

Tom Gilb's work was manually adapted in this booklet for the current times. Readability is a major factor in not calling out all adaptations. Some LLM prompts are included at the end of this booklet. For a summary of Tom's work that is true to the essence of Tom's work according to Tom Gilb, see *Value planning: Practical methods for measuring, understanding and delivering value* [493].

Plan Do Study Act (PDSA) was popularized by W. Edwards Deming and is also adapted in this booklet.

## Deemphasis

To clarify, in this booklet, there is a deliberate de-emphasis of the following:

- Any notion of context-free recipes, as “copy and paste” is generally not recommended by competent people, e.g.:
  - Any notion of “Planguage is the solution, what’s your problem?” (or opportunity)
  - Any notion of “Scrum Guide Expansion Pack is the solution, what’s your problem?” (or opportunity)
  - Any notion of Planguage + EVO/PDSA being the only viable continuous emergent strategy options
- A common misunderstanding of complexity, e.g., the prevalent mix-up of complex work (where expertise is valuable yet insufficient) and complicated work (where expertise is sufficient or can be relatively easily attained)
- **Any notion of Big Design Up Front;** while stewing in the problem/opportunity space is valuable, feedback loop speed is key
- Any notion of yearly to quarterly planning; given human nature, it leads to big batch thinking, no matter how short the delivery cycle
- The use of Specification Quality Control [484] [485] apart from finding critical ambiguities in selections of text
- The use of Tom Gilb’s Software Metrics book [494]
- The use of EVO; as adapted PDSA is sufficient (and better supported) for most scenarios
- **Fixed goals;** instead, there is a bent toward tangible-outcome-oriented malleable goals in a direction of travel
- **Any notion of Plan Do Study Act (PDSA) as a fixed loop;** PDSA is adapted here so one can enter or exit the loop at any point

## **Emphasis**

And it adds explicit emphasis to:

- Discovery work interlaced with the problem space, delivery, and value realization
- Failure demand, building on the theory surrounding side-effects that is already mentioned in Tom's work
- “Tidying up the garage”, improving team capability and the work climate while delivering valuable work

## **'I Understand'**

There is a difference between:

- I can read a request, and my vendor or team can read it the same way.
- I can read a request, and I really understand it.
- I think I understand a request, and I probably do understand the way the writer intended it.
- I read it and understood a request, and I do not know what vital specs are missing.

Whatever about uncertainty, how many people ever met a manager who would publicly argue that their critical goals, strategies, or objectives should be ambiguous and unclear? But are the critical goals ambiguous and unclear – the critical goals they write and the goals one reads?

One hundred words are typically ambiguous per page of 300 words! “Weasel words” are used such as “better,” “improvement,” and “available.” Even if the goal is wrong (but later adapted), there is generally some merit in being clear about it.

## **Reasons to be Ambiguous or Unclear**

There are reasons to be ambiguous or unclear, some valid, some not so valid. Here are some sarcastic or cynical ones:

1. I want to be able to declare success and meet any deadline; if goals are unclear, I can express my interpretation.
2. I want to sell an unproven fad, perhaps a solution looking for a problem.
3. I want to hide my ignorance, incompetence, or negligence.
4. I am worried that others will look for clarity, and that's a lot of work.
5. I don't know how to be clear and lack the motivation to find out how.
6. The stakeholders don't know what they need or want (labelled “it”) anyhow, struggle to articulate it, or I struggle to extract it.

Here are some other reasons:

1. If I quantify non-critical expectations, limits, or objectives, team members “may lose the will to live.”
2. To reduce tension, I want to approach the real objective obliquely through an indirect objective. Because I am not trusted, if I declare my true intentions directly and publicly, my words might get twisted or I might “scare the horses.”
3. I don’t grasp the problem, opportunity or stakeholder’s “struggling moment” <u>yet</u> and I’m urgently trying to figure out how.
  1. I need to decide whether to stay in the problem/opportunity space.
  2. And I need to embrace that people (more often) struggle to articulate what is wanted.
  3. I should not stay in this space for too long; there is tension to solve problems or capture opportunities sooner.

Generally, treat fuzziness in stakeholder expectations or limits as a defect. It’s clearer to be explicit about fuzziness by using <*Fuzzy Brackets*>. Planguage use is best kept for the most critical expectations, needs, or objectives. Think someone could die (Pharma, Space travel, aircraft design), or the financial health of the organization could die. Critical is in the eye of the beholder. Planguage’s sister, Specification Quality Control, is not in the scope of this booklet.

### Ambiguity

**What happens if an objective is ambiguous?** It will often get misunderstood and misapplied. **What happens if an objective is unclear and cannot be properly tested for intended delivery?** One cannot prove that it was carried out correctly. There is something one can do but few have been informed as to how, and fewer have done anything about it.

Stakeholders (including but not limited to customers) often struggle to articulate what they want or why. That said, there is still merit in clarifying what they think they want. Keep plan-quality measurements simple, low cost, inspiring, not demotivating (on the assumption people are already motivated), and direct. Realistic weekly feedback is better, cheaper, and faster.

Yes, there are times when a problem or opportunity needs to be tackled obliquely and where clarity would not be one’s friend. And the opportunity or problem should be treated as a hypothesis rather than a fact. But in many cases, there is merit in being clear about the direction of travel, even if it’s wrong. Value Planning, with further emphasis on parallel safe-to-fail experiments and an adapted Plan-Do-Study-Act, can provide the feeling: “I don’t know where we’re going, but I know how to get there” [492].

## **Value Planning through Plan Do Study Act**

Many decompose goals by scope. Try decomposing by value and prioritizing for a slice of value delivery next week using Value Planning. Tom Gilb uses Evo but is also ok with Plan Do Study Act (PDSA). As PDSA is more straight forward and better known (if less specific), we will use that instead of EVO, albeit adapted PDSA. Outside-in feedback-loops are key to learning and adaptation.

Planguage and Value Planning are like a marriage made in utopia. They fit together like hand and glove. They can apply to items at different levels of granularity, e.g., a winning aspiration (vision, mission, purpose), a (product, sub-organizational, or corporate) strategy (e.g., history, diagnosis, problem or response, deliberation on where to play and how to win [231], what needs to be true for this to work, success criteria), a North Star, an outcome-oriented Objectives & Key Results (OKRs), directions of travel, goals, ‘epics,’ initiatives, experiments, features, ‘user stories,’ ‘use cases,’ ‘job stories,’ ‘jobs to be done,’ etc. Each of those examples can suffer from a lack of unambiguous clarity. We often read or hear the same words but extract different meanings. To spend efforts more wisely, I suggest one focuses the use of Planguage for the most critical of the above.

In some contexts where the cost of getting something wrong is high (think aviation, space exploration, a high-speed rail system, energy, or fixing a health service), ignorant, ambiguous fuzziness will almost certainly cost billions. Combined with an evolutionary approach, teams can signature-detect the value; think heat-seeking missile.

## **Planguage Summary**

Planguage is a keyword-driven language whose name is derived from summarizing the words ‘planning’ and ‘language’ in one neat expression. In many contexts, the cost of getting the wrong results could put lives or the organization at risk. Think of the UK post office scandal or Boeing’s troubles 2018-2025. While vagueness is welcome for discussion, details should eventually become fit for coherence, purpose, context, and use. Its primary benefits are quantifying the qualitative and improving communication for complicated ideas (where expertise is enough) and borderline complex ideas (where expertise is valuable yet insufficient for progress toward malleable goals).

## **Planguage Benefits**

### **Ease of Use**

Planguage can be effectively taught to individuals and groups in only a few hours. With a small amount of follow-up mentoring and a catalog of examples, the results can be pretty good. One significant company still

well known today used it (and, perhaps, still does) in engineering, quality assurance, marketing, and program management. There are tweaks in this booklet that re-emphasize some key points that were there all along in Planguage and Value Planning, to reduce the risk of negative disruption over the long-term, and there also some adaptations that Tom Gilb agreed to.

### **Extensibility**

Planguage is designed to be extensible and customizable to fit local and contextual needs. This includes adding keywords and its rich structure, which allows it to create and label statements, collections, and other internal structures for reuse. These properties have made Planguage more valuable.

### **Prevention of Thinking Gaps**

One of Planguage's most potent benefits is its ability to prevent omissions when quantifying qualitative statements. Because keywords are applied for all the important dimensions, users of Planguage are more likely to include necessary information. Users praise its ability to bring issues to light through its separate, and consistent treatment of the important dimensions of quantification.

There are usually many possible levels of achievement. The question is not whether a system is consistent or performant but how consistent or performant. Planguage excels at expressing these ideas by using multiple levels of achievement by allowing for the elicitation of the best-recorded level of performance, the goal level, the tolerable level, and the level below which financial or political failure occurs.

## **A Basic List of Planguage Keywords**

Planguage paints a detailed picture of success, survival, and failure, allowing for informed decision-making.

TAG – A unique, persistent identifier

GIST – A short, simple description of the concept contained in the Planguage statement

STAKEHOLDER – A party affected by the “requirement,” “desirement,” or objective

CONSTRAINT – Limits to operate within

SCALE – Quantification units/range (think cubic units of home gas)

METER – Device for quantification (think utility meter for home gas or electricity)

**STATUS** – The intent of Status, is real time right now, Not past, not future. One can note the exact instant where one took a Status and can save them as a time series. But they are then by definition a series of Past instance, and the measurement was taken then.

**BENCHMARK** - A benchmark is a specified reference point, or baseline. There are two main types: scalar and binary benchmarks.

A scalar benchmark is normally defined using the benchmark parameters {Past, Record, Trend}.

**PAST** – Previous results

**TREND** – A historical trend based on a range or extrapolation of data

**RECORD** – The best-known results to date

**TOLERABLE** – The minimum level to avoid failure (not catastrophic, more like a level during a period where performance is inadequate)

**GOAL** - a primary numeric target level of performance will *reasonably satisfy* stakeholders, a commitment

**WISH** – A desirable level of achievement, what the stakeholder thinks they need which if we can and choose to do it becomes a Goal (committed wish)

**STRETCH** – A stretch goal; Stretch is by definition greater than Goals (settled agreed committed Level), and there is no commitment, yet (or it would be a Goal), there is just the fact that we have noted to desire, assume there is, a reason or justification, and we will return to evaluating (if we have resources, and technology to do it at all, and if we will prioritize it; in which case it become a Goal)

**DEFINED** – The official definition of a term

**AUTHORITY** – The person, group, or level of authorization

And METER can be broken down further into:

**METHOD** – The method for measuring to determine a point on the Scale

**FREQUENCY** – The frequency at which measurements will be taken

**SOURCE** – The people or department responsible for making the measurement

**REPORT** – Where and when the measurement is to be reported

### **Planguage Example**

TAG NPS

GIST Improve Net Promoter Score to what is deemed good by NPS experts

AMBITION Segment leading NPS in the region.

STAKEHOLDER Product Manager  
CONSTRAINT {current moment, end-to-end-customer-satisfaction-with-product}  
SCALE (of measure) Net Promoter Score  
METER (for feedback) high to low NPS range previous 180 days  
STATUS [USA across 50 states, 1<sup>st</sup> January 2026] 5  
TOLERABLE >0  
FAIL – starving <0  
SURVIVAL – hungry but alive – 0  
GOAL 20  
STRETCH 30  
WISH 50  
PAST [2025]: -20 <- Marketing Report [February, 2026]  
TREND -30 |<-| to +10 |->| last 18 months  
RECORD 10  
DEFINED [https://en.wikipedia.org/wiki/Net\\_promoter\\_score](https://en.wikipedia.org/wiki/Net_promoter_score)  
AUTHORITY Market Insights team  
\*\*  
\*\*

### **![image](Planguage Limits (left hand side) and Expectations (right hand side))**

*In essence, Planguage offers unambiguous clarity about a multiplicity of expectations and limits.*

*Arrows indicate scalar limits/constraints or goals, Exclamation Mark indicates failure.*

*After all, some qualities (like security) are almost infinite, and people tend not to have infinite budgets.*

## **Value Planning**

![image](Officially, the traditional approach has its place, although I have not needed to use it since 2004. Incremental is insufficient for emergent strategy unless it includes assessments of result feedback and telemetry, and adapts based on it. Value Planning is evolutionary. Scrum as described in the Scrum Guide Expansion Pack is evolutionary. But let's take a journey back in time before Scrum. Let's go back in time.)

## **Value Planning Cyclical Steps with Plan-Do-Study-Act**

If Planguage helps to establish clarity, an adaptive approach is needed to deliver slices of value, using clarity and trade-offs as a guide. Tom Gilb's approach is EVO. Value Planning is the use of EVO normally. An alternative approach to Value Planning is Plan Do Study Act (PDSA). Let's investigate PDSA.

### **Plan**

#### **Identify Critical Stakeholders**

Pinpoint critical, as in the most important or urgent, stakeholders among all stakeholders (including but not limited to internal politicians, customers, consumers, and users) and their pivotal expectations, limits, needs, "jobs," "struggling moments," and wants (collectively in Planguage called 'values') to form the foundation of objectives, <u>in relation to one's constrained environment, e.g., medical systems in England and Wales.

#### **Define and Quantify Objectives**

Based on critical scalar parameters, quantitatively establish the top ten stakeholder value objectives, detailing the who, for whom, when, where, and how. Create built-in quality, ideally competing (with each other for a bit of fun) to find errors/omissions in objectives or solution-options. It's cheaper to mend holes now but try to strike a balance; **reduce risk with an evolutionary approach**. Therefore, with some exceptions, **avoid a big design or big plan up front that delays feedback**.

#### **Solution-Options**

Identify a set of possible solution-options (one's current understanding of how one plans/hopes to achieve objectives) that can efficiently deliver the planned value levels of objectives (effectiveness at lowest costs / highest speed for delivery). Design-to-Attribute (e.g., Design-to-cost or Design-to-date) is often a more cost-effective alternative to productivity increases. Stop playing silly games like how much or when. Instead, specify and design to the constraint/limit (in an emergent way) based on the "art of the possible."

#### **Prioritize**

If there is only one solution-option there is no need to prioritize; the priority is already decided. Otherwise, evaluate and estimate the timeliness and cost-effectiveness of each critical solution-option and the associated costs (using Impact Estimation Tables as we'll see later) to help decide which solution-options one should experiment with or deploy as soon as

possible. But assess each option with a credibility score to go into battle forewarned if the options are unproven or untested for the context.

Credibility of the impact estimates and cost estimates follow a scale:

1. Wild guess, no credibility
2. We know it has been done somewhere
3. We have one measurement somewhere
4. There are several measurements in the estimated range
5. Several measurements relevant for the use case (e.g. qualifier values)
6. Several relevant measurements obtained using a reliable method
7. Have used the same solution-option previously in the organization
8. Reliable in-house measurements of same solution-option
9. In-house measurements of same solution-option correlate to external sources
10. Have previously used this same solution-option on this initiative and measured it
11. Have solid, contract-guaranteed, long-term experience of this solution-option on this initiative

### **Do – Generically Show Value Delivery This Week**

Optionally, decompose. If one decomposes, then:

- Decompose and evaluate a critical set of the multitude of expectations/limits/needs/“jobs-to-be-done”/“struggling-moments”/wants (values) and associated costs to get a more accurate picture of any solution-option’s effectiveness-at-lowest-long-term-costs (efficiency).
- Decompose a solution-option into small, delivery (or interlaced discovery-to-delivery) steps.
- Ideally sequence within throughput ranges and with relative cost-effectiveness for incremental delivery.

Allow time to innovate and time to think:

- Not much innovation arises from 100% “resource utilization” [ $<u>36$ ].
- Even if tight spots of thinking time can give rise to innovation, a lot of innovation arises during unstructured time slots.
- Allow time to cooperate, collaborate, think, and innovate/invent.
- Don’t go so close to the wire. Allow slack time, slack energy, and slack money also for the unexpected.

The main idea here is to get results and enable early learning from early feedback.

### Study

Inspect the qualitative and quantitative evidence of outcomes and side-effects. Study product telemetry and result feedback. Be careful with inductive reasoning: the conclusion is a good guess, but it's never guaranteed; it could be wrong if new cases appear. Be careful with abductive reasoning: one sees a clue and chooses the most likely explanation, even though other explanations are possible. Be extra careful with deductive reasoning: think of this as starting with a rule and applying it to a case; if the rule is true and one applies it correctly, one's conclusion must be true. In the complex space, where expertise is valuable but insufficient for progress toward malleable goals, deductive reasoning is the less frequent.

Be intentional about recognizing and estimating the positive and negative side effects of solution-options on other value objectives and constraints / limits to ensure higher-quality emergent (continuous) strategy and empirical planning – better done with data than without (it's sometimes ok for a sensible coherent group to guesstimate also).

### Act / Adjust / Adapt – Let Reality Foster Humility

It's decision time:

- Persevere: continue with trying or doing; but be careful as most people fall for the ‘sunk cost fallacy’
- Pivot: switch to another option (SpaceX excel at this)
- Stop: call it a day, a brave call and sometimes the right option; this does not happen often enough

And

- Amplify something that's working well, and
- Dampen what's not working so well, having really tried

Rinse and repeat... Plan, Do, Study, Act (intentionally skipping steps as needed)

![image](

*An evolution from the thought-leading works of W. Edwards Deming et al, inspired by works by Walter A. Shewhart et al.*

\*Cultivate the work environment and work climate in parallel to PDSA, perhaps with parallel PDSAs.

•

![image](

*Adaptations:*

- 1). Enter or exit at any point,
- 2). Cultivate the work environment and climate (hence the gardening metaphor – a watering can for the plants), and
- 3). Sometimes replace “Act” with “Adjust” or “Adapt”

![image](

*The goalposts should move if evidence tells one the goalposts are in the wrong place.*

*This is why goalposts and goals should be malleable in product development.*

*Through intentional pause and reflection, avoid execution bias [210] - the human tendency to persevere when one should pivot or stop.*

## A Prioritization Technique – Impact Estimation Table

**It feels like very prioritization argument is broken.** There is an approach that has aged like whiskey (or whisky depending on where it's from). It's the core decision-making tool in Value Planning. An **Impact Estimation Table** is a structured matrix that estimates how different outcome/architecture/design/solution/experiment ideas impact the specified objectives using absolute measurable values.

### The Basic Structure

Think of it as a comparison table:

- **Columns** = Design ideas being considered (plus a “Do Nothing” baseline)
- **Rows** = The measurable objectives from Planguage scale definitions
- **Cells** = Estimated impact using the same units as the objectives

Here's what makes it powerful: **one use absolute scale values, not percentages.**

### Why Absolute Values Matter

**Wrong approach:** “Solution A improves login speed by 60%”

**Problems with percentages:**

- 60% improvement from what baseline? 10 seconds? 2 seconds? The meaning changes drastically
- Can't compare across different objectives
- Hides whether the goal is met

**Gilb's approach:** “Design A reduces login speed from 8.2 seconds (current) to between 2.5 and 1.5 seconds (worst to best case)”

**Why this works:**

- Clear baseline (8.2 seconds currently)
- Clear target (the goal is 2.0 seconds)
- Clear estimate range (1.5 to 2.5 seconds)
- Easy to see if the goal is met (yes, even worst case of 2.5 beats the 3.0 goal constraint)

**Connection to Planguage Scale Definitions**

IETs don't stand alone. Each row references a **fully defined Planguage scale** that specifies exactly what one is measuring and what one cares about.

**Example scale definition:**

Scale [LoginSpeed, Seconds]:

Meter: Median time from app launch to account display, measured via Firebase Analytics

Past [CurrentApp, London, 4G, Q4.2024]: 8.2 seconds

Goal [Release1, Global, 4G]: 2.0 seconds

Constraint [Release1, Global, 4G]: 3.0 seconds

Wish [Release1, Global, 4G]: 1.0 seconds

Stakeholder [EndUser]: Priority = Critical

Stakeholder [ProductManager]: Priority = High

**What this tells:**

- **Meter:** Exactly how to measure it (no ambiguity)
- **Past:** Current performance with context (where, when, conditions)
- **Goal:** The target (2.0 seconds)
- **Constraint:** Acceptable limit (must be better than 3.0 seconds)
- **Wish:** Nice-to-have (1.0 would be amazing but not required)
- **Stakeholder:** Who cares and how much

The IET uses these same numbers and units. Every row in the IET corresponds to one Planguage scale definition.

## The Four Critical Elements

Each cell in an IET can contain the following pieces of information (more or less):

### 1. Impact Range Using ← Notation

**Format:** 1.5 ← 2.5 (for LoginSpeed where lower is better)

**What this means:**

- Best case: 1.5 seconds
- Worst case: 2.5 seconds
- The arrow points toward the worse value

**For objectives where lower is better** (time, cost, defects):

- 1.5 ← 2.5 means best case 1.5, worst case 2.5

**For objectives where higher is better** (revenue, security score, satisfaction):

- 90 ← 99 means worst case 90, best case 99

Why ranges? Because honest estimates acknowledge uncertainty. Single-point estimates are false precision and are prone to the ‘flaw of averages’ [234].

### 2. Source or Evidence

Where did this estimate come from?

- **RefCase.ProductName.Date** = Reference case from similar product
- **Measurement.WeekN** = Actual measured data from delivery
- **TeamEstimate** = Professional judgment from the team
- **ABTest.CompetitorX** = A/B test results
- **VendorSpec** = Vendor’s published specifications
- **Current** = Current measured performance
- **NoChange** = This design doesn’t affect this objective

### 3. Authority

Who has the expertise to make this estimate?

**Format:** Authority: Smith.ProductDeveloper or Authority: SecurityScrumTeam

This identifies who made the estimate and has the knowledge to defend it. Different authorities have different credibility for different types of estimates (Scrum has a bias toward estimates from people who do the work as they're often closest to the latest information).

#### 4. Credibility Rating (0-100%)

How confident is the authority in this estimate?

Low credibility doesn't mean "bad estimate"—it means "we should test this before committing significant effort or resources."

Credibility of the impact estimates and cost estimates follow a scale:

1. Wild guess, no credibility
2. We know it has been done somewhere
3. We have one measurement somewhere
4. There are several measurements in the estimated range
5. Several measurements relevant for the use case (e.g. qualifier values)
6. Several relevant measurements obtained using a reliable method
7. Have used the same solution-option previously in the organization
8. Reliable in-house measurements of same solution-option
9. In-house measurements of same solution-option correlate to external sources
10. Have previously used this same solution-option on this initiative and measured it
11. Have solid, contract-guaranteed, long-term experience of this solution-option on this initiative

An adaptation of credibility is to multiply the above by 10 (or treat the above as 0, 0.1...0.9, 1.0 and multiply by 100 to get a percentage).

#### A Simple Example First

Let's start with two objectives to see how this works. We're comparing three design ideas for faster mobile banking login:

```
<strong>Expectations, Limits</strong>    </p>    </block-
quote> </th> <th style="text-align: center;"> <block-
quote> <p>Past</strong> </p> </blockquote> </th> <th
style="text-align: center;"> <blockquote> <p>Goal</strong>
</p> </blockquote> </th> <th style="text-align: cen-
ter;"> <blockquote> <p>Solution Option:<br /> Do Nothing
```

<strong>Solution Option: Biometric</strong> </p> </block-quote> </th> <th style="text-align: center;"> <block-quote> <p>Solution Option:<br /> Progressive

<strong>LoginSpeed [Sec]</strong>

8.2 [2024.Q4]

2.0

8.2 Source: Current

Credibility: 95%

1.5 ← 2.5

Source: RefCase.CompetitorA

Authority: Smith

Credibility: 80%

2.0 ← 2.8

Source: ABTest.CompetitorB

Authority: Jones

Credibility: 85%

<strong>DevEffort [Days]</strong>

0

≤40

0

Source: Current

Credibility: 100%

25 ← 35

Source: TeamEstimate

Authority: TechLead

Credibility: 60%

10 ← 15

Source: TeamEstimate

Authority: TechLead

Credibility: 80%

### **How to read this:**

**The “Past” column** shows current performance:

- LoginSpeed is currently 8.2 seconds (measured Q4 2024)
- DevEffort is 0 (we haven’t built anything yet)

**The “Goal” column** shows the targets:

- LoginSpeed must reach 2.0 seconds
- DevEffort must stay within 40 days budget

**The “Do Nothing” column** shows what happens if one doesn’t build anything:

- LoginSpeed stays at 8.2 seconds
- DevEffort stays at 0 days

**The design idea columns** show estimated impacts:

#### **Biometric Login:**

- LoginSpeed: Best case 1.5 seconds, worst case 2.5 seconds (meets goal even in worst case)
- Source: Similar project at a Competitor bank
- Credibility: 80% (pretty confident based on internal reference cases)
- DevEffort: Best case 25 days, worst case 35 days (meets budget)
- Credibility: 60% (less confident on effort estimate)

#### **Progressive Loading:**

- LoginSpeed: Best case 2.0 seconds, worst case 2.8 seconds (worst case misses the goal of 2.0, but might be acceptable)
- Credibility: 85% (very confident based on internal A/B tests)
- DevEffort: Best case 10 days, worst case 15 days (well within budget)
- Credibility: 80% (confident on effort)

#### **What this reveals:**

Scan across the LoginSpeed row: Biometric looks faster, but Progressive has higher credibility and costs less effort.

Scan down each column: Progressive has balanced performance—good speed, high credibility, low effort. Biometric is faster but more expensive and the effort estimate is less reliable.

## The Full Table: Real Decision Complexity

Real decisions involve multiple objectives and trade-offs. Here's what a complete IET looks like:

Impact Estimation Table: Mobile Banking Login Redesign

Date: 2025-01-15

Authority: ProductTeam

Context: Global rollout, primarily 4G networks, iOS and Android

| Expectations, Limits | Past   | Goal  | Solution Option:<br>Do Nothing                             | Solution Option:<br>Biometric  | Solution Option:<br>Progressive                                       | Solution Option:<br>Cached                                       | Login Speed [Sec]         | Median time, app launch to account view |
|----------------------|--|---|--|--|---|--|---------------------------|---|
| 8.2                  | [London, 4G, 2024.Q4]  | 2.0 Constraint: ≤3.0  | 8.2 Source: Current Credibility: 95%                       | 1.5 ← 2.5 Source: RefCase.CompetitorA.2024 Authority: Smith Credibility: 80% | 2.0 ← 2.8 Source: ABTest.Competitor Authority: Jones Credibility: 85% | 1.2 ← 2.0 Source: TeamEstimate Authority: Brown Credibility: 40% | 12% [London, 4G, 2024.Q4] | 12% Source: Current Credibility: 95%    |
| 3% Constraint: ≤5%   | 4 ← 6 Source: UXStudy.Bio.2023 Authority: Smith Credibility: 70% | 6 ← 8 Source: ABTest.Competitor Authority: Jones Credibility: 75% | 7 ← 10 Source: TeamGuess Authority: Brown Credibility: 35% | Abandonment [%]  | Users who start login but don't complete                              |  |                           |   |

<strong>DevEffort [Days] Development and testing effort  
 0  
 Constraint:  $\leq 40$   
 0 Source: Current Credibility: 100%  
 $25 \leftarrow 35$  Source: TeamEstimate Authority: TechLead Credibility: 60%  
 $10 \leftarrow 15$  Source: TeamEstimate Authority: TechLead Credibility: 80%  
 $5 \leftarrow 8$  Source: TeamEstimate Authority: TechLead Credibility: 85%  
 <strong>SecurityPass [%] Passing security audit criteria  
 99.9% [Audit 2024.Q4]  
 $\geq 99.9\%$   
 99.9% Source: Current Credibility: 95%  
 $95 \leftarrow 99$  Source: VendorSpec Authority: SecTeam Credibility: 50%  
 99.9 Source: NoChange Authority: SecTeam Credibility: 95%  
 $90 \leftarrow 95$  Source: SecAudit.2023 Authority: SecTeam Credibility: 65%

#### How to analyze this table:

**Read across each row** to compare design ideas on one objective (but also take with a pinch of salt):

- **LoginSpeed:** Cached looks fastest (1.2-2.0 sec) but credibility is only 40%. Biometric is second (1.5-2.5 sec) with better credibility (80%). Progressive is safe (2.0-2.8 sec) with highest credibility (85%).
- **Abandonment:** Biometric wins (4-6%) and meets the constraint ( $\leq 5\%$  in best case). Others don't meet the goal reliably.
- **DevEffort:** Cached is cheapest (5-8 days), Progressive is moderate (10-15 days), Biometric is expensive (25-35 days). All meet the  $\leq 40$  day constraint.
- **SecurityPass:** Progressive maintains current security (99.9%) with high confidence (95%). Biometric and Cached both show security risks with lower credibility.

**Read down each column** to see a design's complete profile:

- **Biometric:** Fast, reduces abandonment, but expensive and uncertain security (50% credibility). Mixed profile.
- **Progressive:** Moderate speed improvement, doesn't solve abandonment well, low cost, no security risk, high credibility across all estimates. Balanced and safe.

- **Cached:** Looks great on paper (fast, cheap) but terrible credibility (35-40%) and security concerns. This is a “test first” candidate.

**Key insight:** One is not looking for the “winner.” One is looking for the **minimum set of designs needed to meet all critical goals.** Yes, sometimes there is more than one goal!

### How to Read Impact Estimation Tables

Impact Estimation Tables are **decision tools**, not predictions.

#### 1. Read Vertically (Values First)

Each row answers: “*How well does this solution-option help us move this value toward its goal?*”

If a critical value has no strong impacts, the solution-option set is incomplete.

#### 2. Read Horizontally (Solution-Option Personality)

Each column answers: “*What kind of solution-option is this really?*”

- Few rows → focused, specialist solution-option
- Many rows → systemic, architectural solution-option

#### 3. Ignore Precision, Look for Direction

The numbers are:

- Explicit
- Debatable
- Replaceable by data later

What matters is **relative impact**, not false accuracy.

#### 4. Never Add Columns Blindly

Solution-option impacts:

- Interact
- Overlap
- Sometimes cancel out
- Always check **dependencies and synergies.**

## 5. Tie Every Cell to Cost and Risk

A high-impact cell is meaningless unless:

- Cost is known
- Risk is explicit
- Learning is planned

## 6. Use Tables to Design PDSA Experiments

Good solution-options:

- Deliver value early
- Reduce uncertainty
- Earn the right to invest more

### Bottom Line

If it can't be shown in an Impact Estimation Table, it isn't ready for board-level decision-making.

## Portfolio Optimization: The Insight Most People Miss

Here's where IETs become truly powerful: **one doesn't have to pick just one design idea.**

Traditional thinking: "Which solution is best? Let's pick one and build it."

Gilb's insight: "Which **combination** of designs meets all goals at minimum cost?"

### Looking at the table:

- **Progressive alone** doesn't solve abandonment (best case 6%, goal is 3%)
- **Biometric alone** is expensive (25-35 days) and has security uncertainty
- **Cached alone** has low credibility—too risky to commit

### Portfolio approach:

#### Week 1-2: Implement Progressive (10-15 days)

- Meets LoginSpeed constraint (2.0-2.8 sec vs  $\leq 3.0$  goal)
- No security risk
- High credibility
- Cost: 10-15 days

#### Week 3: Run small experiment with Cached (1 day to prototype)

- Test if the 1.2-2.0 sec estimate is real
- Test security implications
- If credibility increases and security passes, consider implementing
- Cost: 1 day experiment

**Week 4-5: If abandonment is still above 5%, implement Biometric (25-35 days)**

- But first, get better security estimate (talk to vendor, run security audit)
- Only commit if security credibility improves
- Cost: 25-35 days (if needed)

**Total potential cost:** 10-15 days (Progressive) + maybe 1 day (Cached test) + maybe 25-35 (Biometric if needed) = 36-51 days

**But one starts delivering value in Week 2** with Progressive, and one only commits to Biometric if one actually needs it to meet the abandonment goal.

**The principle:** “Plan solution-options to be twice as effective as the goal needs and half the cost of the budgeted resources. But do not commit to actually implementing more solution-options than needed.”

Translation: Design ideas that could deliver 2x what one needs, cost half what was budgeted. But one only builds what one actually needs based on measured results.

### Multi-Level Planning: IETs Connect Vertically

IETs exist at multiple planning levels and connect to each other:

**Strategic Level** (CEO perspective):

Objective: Market Share in Mobile Banking

Design Idea: Mobile App Relaunch Initiative

Impact on Market Share: 5% ← 8% increase

Investment Required: \$500K ← \$800K

**Tactical Level** (Product Owner perspective - decomposes “Mobile App Relaunch”):

Objective: LoginSpeed, Abandonment, Security

Design Ideas: Biometric, Progressive Loading, Cached Credentials

**Implementation Level** (Product Developers’ perspective - decomposes “Biometric Login”):

Objective: Integration Time, License Cost, iOS/Android Support

Design Ideas: FaceID SDK, TouchID SDK, Third-Party Library

Each level's design ideas become objectives at the next level down. This traces strategy to implementation and ensures every technical decision supports business goals.

### **How It Evolves: From Guesses to Evidence**

The IET is a living document that evolves weekly:

#### **Week 1:** Create initial IET

- Lots of “TeamEstimate” and “TeamGuess” sources
- Credibility ranges from 35% to 85%
- Mix of reference cases and educated guesses

**Week 2:** Implement Progressive Loading (highest credibility, meets constraints)

- Deliver complete vertical slice
- Measure actual LoginSpeed: 2.3 seconds
- Measure actual Abandonment: 7.5%
- Measure actual DevEffort: 12 days

#### **Week 3:** Update the IET

The Progressive column now shows:

LoginSpeed: 2.3 seconds

Source: Measurement.Week2.London.4G

Credibility: 95%

Abandonment: 7.5%

Source: Measurement.Week2.London.4G

Credibility: 95%

DevEffort: 12 days

Source: Measurement.Week2.Actual

Credibility: 100%

#### **What changed:**

- LoginSpeed met goal (2.3 vs 2.0 target, within acceptable constraint of 3.0)
- Abandonment didn't meet goal (7.5% vs 3% goal)—we need another design

- Effort was accurate (12 days, within estimated 10-15 range)
- All credibility jumped to 95-100% because these are measurements, not estimates

**Week 3 decision:** Run Cached experiment (1-day, low risk)

**Week 4:** Cached experiment results:

LoginSpeed: 1.8 seconds (good!)

Source: Measurement.Week3.Prototype

Credibility: 90%

SecurityPass: 92% (failed security audit)

Source: Measurement.Week3.SecurityTest

Credibility: 95%

**Decision:** Don't implement Cached—security failure is unacceptable. Move to Biometric but get security clarification from vendor first.

**Week 8:** Most columns show “Measurement.Week-X” sources with 90%+ credibility. One is making decisions based on evidence, not hope.

### Connection to Decision-Making

The IET makes six critical things visible:

#### 1. Which options (for outcomes, solutions, experiments, or designs) meet which goals?

Scan across rows: Does the option's estimated range satisfy the goal/constraint?

- Progressive LoginSpeed (2.0-2.8 sec) vs Goal (2.0 sec): Meets goal in best case, meets constraint (3.0 sec) in worst case
- Biometric Abandonment (4-6%) vs Goal (3%): Meets goal in best case

#### 2. Which estimates are risky?

Scan for credibility below 60%:

- Cached has 35-40% credibility = don't commit, run experiment first
- Biometric SecurityPass has 50% credibility = get better data before committing

#### 3. What evidence is missing?

Look for “TeamGuess” or low credibility:

- Cached Abandonment: “TeamGuess, 35%” = we're just guessing, need research or test

- Biometric SecurityPass: “VendorSpec, 50%” = vendor claims aren’t reliable, need independent audit

#### **4. What are the trade-offs?**

Read down columns and compare:

- Biometric: Great user experience, questionable security, expensive
- Progressive: Moderate everything, high confidence, safe choice
- Cached: Looks cheap and fast, but low confidence and security concerns

#### **5. Can we combine designs to meet all goals?**

Look for complementary designs:

- Progressive meets LoginSpeed, doesn’t meet Abandonment
- Biometric meets Abandonment, has security concerns
- Combination strategy: Progressive first, then address abandonment if still needed

#### **6. Should we commit or experiment?**

Decision matrix:

- High credibility ( $\geq 80\%$ ) + meets goals = commit and build
- Low credibility ( $< 60\%$ ) + small cost = run experiment first
- Low credibility ( $< 60\%$ ) + large cost = get better estimates before deciding
- Doesn’t meet critical constraints = eliminate option

#### **Gilb’s Foundational Principle**

“If you cannot estimate the impact of a design idea on your critical objectives, you should not implement it.”

– Tom Gilb

The IET enforces this discipline through its structure:

#### **No vague claims allowed:**

- Not “this will be faster”
- Instead: “1.5 to 2.5 seconds based on RefCase.CompetitorA.2024”

#### **No unmeasured assertions:**

- Not “users will love it”
- Instead: “Abandonment 4% to 6% based on UXStudy.Bio.2023”

#### **No invisible uncertainty:**

- Not “about 2 seconds”
- Instead: “ $1.5 \leftarrow 2.5$  (best  $\leftarrow$  worst case)”

**No unattributed estimates:**

- Not “we think it’ll take 30 days”
- Instead: “ $25 \leftarrow 35$  days, TeamEstimate, TechLead, Credibility 60%”

If one cannot fill in all these fields with actual values, sources, and credibility ratings, one doesn’t understand the design idea well enough to build it. **Start with a small experiment instead.** The IET makes ignorance visible. And visible ignorance can be fixed with evidence. Invisible ignorance just leads to expensive failures.

## A Story from Medium Corp That Was Not Dissimilar to a Pre-Scale-Up

For a particular context, the objectives in over-simplified terms were:

- Improve the Software Development process from 0 to 30 Net Promoter Score (NPS) by six months’ time
- Delivery Value Faster by 50% by six months’ time
- Prepare for Scale-up with 50% reduction in queues by six months’ time
- Reduce % incidents of people wrong on the wrong thing by 50% by six months’ time

“As Rome wasn’t built in a day” and due to some things, that I learned about the context, I offered the following over-simplified solution-options, detailed elsewhere:

- Use either Agile Kata, Kanban, Flight Levels, Value Planning, or LeSS (or a combination of one or more of these options)
- Change the approach to sizing and forecasting, inspired by rightsizing in Kanban (work items under a maximum size, not the same size, for knowledge work at least)
- Adopt a specific flow measurement tool to enable a focus on work item aging at dailies

For the specific context, I (and others) struggled to figure out the best option(s) to try first. Work peers notice that “I don’t have a thing”, as in preferred ways regardless of context. I have some deal-breakers though, let’s call them “anti-things.” Still, after using impact estimates, costs estimates, and credibility estimates of each of those, the impact estimation table gave me (and others) food for thought. Like any prioritization technique, use it to inform decision making, not drive it; context is king.

**A Large Language Model could produce the following based on the above text**

**Context:** Development Process Improvement Initiative

**Timeline:** Target completion by six months from {real date}

**Method:** Tom Gilb's Impact Estimation Analysis

I cheated with percentages here. Sometimes I cheat using money ranges for impacts and effort using: \$-\$, \$\$-\$, \$\$\$-\$, \$\$\$-\$-\$, \$\$\$-\$-\$-\$, \$\$\$-\$-\$-\$-\$, \$\$\$\$\$-\$, \$\$\$\$\$\$-\$-\$-\$-\$\$. And that's better than nothing, as long as I get started and collect more data later.

Values within Objectives,<br /> Expectations, Limits (by six months' time)

<strong>Solution Option: Agile Kata

<strong>Solution Option: Kanban

<strong>Solution Option: Flight Levels

<strong>Solution Option: Value Planning

<strong>Solution Option: LeSS

<strong>Solution Option: Rightsizing

<strong>Solution Option: Flow Tool

Total

Dev Process NPS<br /> 0 → 30 NPS </td> <td> 30% </td> <td> 20% </td> <td> 15% </td> <td> 10% </td> <td> 15% </td> <td> 5% </td> <td> 5% </td> <td> 100% </td> </tr> <tr> <td> Value Delivery Speed +50% Faster

15%

25%

10%

20%

10%

15%

5%

100%

Scale-up Readiness<br /> -50% Queues </td> <td> 10% </td> <td> 30% </td> <td> 20% </td> <td> 5% </td> <td> 15% </td> <td> 15% </td> <td> 5% </td> <td> 100% </td> </tr> <tr> <td> Right Work Focus -50% Wrong Work

25%  
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100%

Total Impact Score

80  
90  
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65  
45  
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20  
410

Credibility (0-1.0)

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Agile  
Kata: **Assumes**  
**team**  
**buy-in**  
**and**  
**consistent**  
**practice.**  
High  
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NPS  
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tinu-  
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ture.  
Agile  
Kata  
accepts  
the  
matrix  
but  
is  
still  
impeded  
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Kan-

ban: **Well-**  
**proven**  
**for**  
**flow**  
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**tion.**

Strongest  
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and  
speed  
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Kan-  
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but  
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wrong  
work)  
and  
**re-**  
**quires**  
**or-**  
**ga-**  
**ni-**  
**za-**  
**tional**  
**will-**  
**ing-**  
**ness**  
**for**  
**trans-**  
**parency.**

Flight  
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but  
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Value  
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hence,  
LeSS  
has  
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higher  
fail-  
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risk.  
Con-  
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pilot  
test  
first  
but  
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so  
small  
as to  
be  
use-  
less.  
**LeSS**  
**flips**  
**the**  
**prod-**  
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**de-**  
**vel-**  
**op-**  
**ment**  
**or-**  
**ga-**  
**ni-**  
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**to-**  
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**ory**  
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**(over**  
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Value  
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**tion:** LeSS  
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should  
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specific  
risks

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**Quick**  
**Win:** Flow  
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**Re-**  
**view**

**Cy-**  
**cle:** Re-  
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pacts  
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**Note:** Estimates  
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- C2:  
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ity  
to  
pro-  
duce  
re-  
sults  
for  
fu-  
ture  
dis-  
cus-  
sion.

-  
Challenge teams to use their imagination, creativity, wisdom, intelligence, and all possible sources to find the smartest and best solution-options.

Test whether all rewards and recognition for one's support team are aligned with achieving the objectives;

work

-  
Em-  
power  
the  
teams  
to  
do  
the  
work  
by  
giv-  
ing  
them  
clear  
un-  
am-  
bigu-  
ous  
prob-  
lems  
to  
solve  
but  
also  
be  
hon-  
est  
about  
the  
con-  
straints  
and  
the  
lev-  
els  
of  
dele-  
ga-  
tion.  
Com-  
ply  
with  
the  
*bill*  
*of*  
*rights.*

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##  
Dis-  
cover  
or  
De-  
liver  
Solution-  
Options

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>  
On  
oc-  
ca-  
sion,  
solution-  
options  
are  
equal  
in  
over-  
all  
effi-  
ciency  
(de-  
fined  
here  
as  
ef-  
fec-  
tive-  
ness  
at  
low-  
est  
long-  
term  
costs)  
re-  
gard-  
ing  
their  
ef-  
fects  
on  
mul-  
tiple  
goals  
and  
re-  
source  
(or  
ef-  
fort)  
con-  
sump-  
tion.  
>89  
But  
imagine a  
situ-  
a-  
tion  
where

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Ad-  
just  
to  
(per-  
ceived)  
lower-  
long-  
term-  
cost  
solution-  
options.

-  
One  
will  
as-  
sume  
that  
all  
ini-  
tial  
cost  
esti-  
mates  
should  
be  
cor-  
rected.

-  
One  
will  
esti-  
mate  
all  
im-  
pacts  
on  
goal  
lev-  
els  
for  
each  
solution-  
option  
in-  
cre-  
ment  
and  
then  
mea-  
sure  
and  
record  
ob-  
served  
costs,  
to-  
gether  
with  
the  
solution-  
option  
de-  
tails  
and  
ex-  
am-  
ples.

-  
One  
will  
learn  
fast.

-  
One  
will  
con-  
sider  
re-  
design-  
ing  
the  
solution-  
option  
(find  
a  
[per-  
ceived]  
lower-  
long-  
term-  
cost  
one!)  
and  
try  
again  
if  
nec-  
es-  
sary.

-  
One  
will  
not  
waste  
time  
by  
plan-  
ning  
solution-  
options  
that  
vio-  
late  
known  
con-  
straints.

-  
One  
will  
know  
the  
con-  
straints  
and  
in-  
vent  
ways  
around  
them  
or  
try  
to re-  
move  
them

-  
which  
is  
also  
in-  
ven-  
tion.

—>  
But  
some  
ob-  
ser-  
va-  
tions  
of  
many  
or-  
gani-  
za-  
tions  
and  
man-  
age-  
ment  
plan-  
ners  
tell  
us  
that:

-  
Man-  
agers  
and  
plan-  
ners  
need  
to be  
trained  
(in  
busi-  
ness  
school  
and  
else-  
where)  
to  
de-  
com-  
pose  
by  
value.

-  
Man-  
agers  
and  
plan-  
ners  
do  
not  
prac-  
tice  
de-  
com-  
posi-  
tion  
by  
value  
in  
con-  
scious,  
ob-  
serv-  
able  
ways,  
with  
cor-  
re-  
spond-  
ing  
doc-  
u-  
men-  
ta-  
tion  
for  
their  
pro-  
cess  
and  
think-  
ing  
(there  
is no  
pol-  
icy  
to  
do  
so).  
95

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-  
Man-  
agers  
and  
plan-  
ners  
make  
ex-  
cuses  
for  
why  
it  
isn't  
pos-  
sible  
to  
di-  
vide  
solution-  
options  
by  
value  
(but  
in a  
de-  
bate  
with  
Tom  
Gilb  
one  
will  
of-  
ten  
dis-  
cover  
that  
the  
ex-  
cuses  
are  
in-  
valid).

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The  
ques-  
tion  
is  
not  
if  
one  
is  
go-  
ing  
to  
have  
a  
value  
stream  
flow;  
the  
ques-  
tion  
is if  
one  
knows  
how  
to  
de-  
com-  
pose  
solution-  
options  
of  
all  
kinds  
to  
get  
the  
value  
flow  
early,  
fre-  
quently,  
and  
in  
small  
in-  
cre-  
ments  
(<sup>97</sup>  
like  
weekly).

—  
>  
For  
ex-  
am-  
ple:  
>  
Solution-  
option:  
*AI*  
*re-*  
*moval*  
*of*  
*ques-*  
*tions*  
*in*  
*call*  
*cen-*  
*ters.*  
*[Coun-*  
*try,*  
*City,*  
*Prod-*  
*uct*  
*Line,*  
*Ser-*  
*vice*  
*Level]*

- Al  
[Country  
=  
UK,  
City  
=  
London,  
Product  
Line  
=  
Magic,  
Service  
Level  
=  
None]  
50%  
of  
Planned  
revenue.

- A2  
[Country  
try  
=  
USA,  
City  
=  
LA,  
Prod-  
uct  
Line  
=  
Magic  
Ver-  
sion2,  
Ser-  
vice  
Level  
= 24  
Hour  
Help  
J30%  
of  
Planned  
rev-  
enue.

- A3  
[Country  
try  
= Norway,  
City  
= Oslo,  
Product  
Line  
= Magic  
Version  
2,  
Service  
Level  
= {24  
Hour  
Help,  
Nor-  
we-  
gian  
Language}]  
15%  
of  
planned  
revenue.

—>  
There  
is a  
sub-  
tle  
dif-  
fer-  
ence  
be-  
tween  
de-  
com-  
posi-  
tion  
to  
build  
and  
de-  
com-  
posi-  
tion  
to  
de-  
liver  
value.  
One  
should  
be  
highly  
in-  
ter-  
ested  
in  
these  
things,  
listed  
be-  
low,  
with  
each  
in-  
stance  
of  
de-  
com-  
posi-  
tion:  
102

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The  
abil-  
ity  
to  
de-  
liver  
some  
real,  
mea-  
sur-  
able  
value,  
how-  
ever  
small,  
in a  
sin-  
gle  
value  
de-  
liv-  
ery  
cy-  
cle  
(sug-  
gest  
weekly)  
im-  
plies  
that  
the  
stake-  
hold-  
ers,  
who  
are  
go-  
ing  
to re-  
ceive  
the  
value,  
can  
do  
so.

- If weekly value delivery cycles sound like a tight squeeze, consider Lean Startup (474), which reported experiencing 60 value changes 60 times a day or more!

—  
That  
means  
one  
should  
be  
able  
to  
ac-  
quire,  
con-  
struct,  
test,  
inte-  
grate,  
and  
field  
trial  
all  
within  
a  
sin-  
gle  
(weekly)  
cy-  
cle.  
If  
this  
sounds  
strange  
or  
diffi-  
cult,  
check  
out  
the  
DORA  
re-  
port  
(279, 280).

-  
Sup-  
pose  
one  
de-  
cides  
to  
de-  
com-  
pose  
to  
these  
small-  
value  
de-  
liv-  
ery  
cy-  
cles.  
Sup-  
pose  
man-  
age-  
ment  
is  
clearly  
be-  
hind  
the  
idea;  
sup-  
pose  
one  
wants  
it to  
hap-  
pen.  
Sup-  
pose  
one  
learns  
the  
meth-  
ods  
in  
Value  
Plan-  
ning.  
Sup-  
pose  
one  
has  
imag-  
ina-  
tion

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- It  
would  
be  
best  
if  
one  
was  
not  
in-  
ter-  
ested  
in  
de-  
com-  
posi-  
tion  
like  
this:

- De-  
com-  
pos-  
ing  
to  
small  
steps  
of  
con-  
struc-  
tion  
or  
ac-  
qui-  
si-  
tion  
with-  
out  
the  
im-  
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ate  
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to  
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ploy  
to  
stake-  
hold-  
ers  
and  
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the  
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or  
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livered.

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The  
risks  
of  
fail-  
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to  
reach  
ob-  
jec-  
tives  
within  
con-  
straints  
are  
many  
and  
messy.

All  
plan-  
ners  
need  
to  
iden-  
tify  
risks,  
pre-  
vent  
risks,  
dis-  
cover  
early,  
and  
miti-  
gate  
risks.

>>  
Solution-  
option  
*A.*  
*[Coun-  
try,  
City,  
Tar-  
get,  
Prod-  
uct  
Line,  
Ser-  
vice  
Level]*

- Al  
[Country  
try  
=  
UK,  
City  
=  
London,  
Product  
uct  
Line  
=  
Magic,  
Service  
vice  
Level=  
None]  
50%  
of  
Planned  
rev-  
enue.

- A2  
[Country  
= USA,  
City = Los  
An-  
ge-  
les,  
Prod-  
uct  
Line  
= Magic  
Ver-  
sion2,  
Ser-  
vice  
Level  
= 24  
Hour  
Help  
]30%  
of  
Planned  
rev-  
enue.

- A3  
[Country  
try  
=  
Nor-  
way,  
City  
=  
Oslo,  
Prod-  
uct  
Line  
=  
Magic  
Ver-  
sion  
2,  
Ser-  
vice  
Level  
=  
{24  
Hour  
Help,  
Nor-  
we-  
gian  
Lan-  
guage}]  
15%  
±  
5%  
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of  
planned  
rev-  
enue.  
<-  
Ger-  
man  
Sales  
Plan-  
ner

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Com-  
ments  
on  
the  
ex-  
am-  
ple:  
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Prod-  
uct  
de-  
vel-  
op-  
ment  
and  
value  
real-  
iza-  
tion  
are  
of-  
ten  
less  
pre-  
dictable  
than  
the  
weather.

-  
The  
de-  
com-  
posi-  
tion  
of  
solution-  
option  
A  
into  
A1,  
A2,  
and  
A3  
helps  
de-  
fine  
a  
real-  
istic  
and  
help-  
ful  
defi-  
ni-  
tion,  
or  
‘sub-  
sets’  
of  
solution-  
option  
A.

-  
One  
does  
not  
risk  
un-  
der-  
stand-  
ing  
that  
any  
other  
op-  
tions  
are  
in-  
cluded  
or  
planned,  
yet  
these  
could  
have  
been  
in-  
ten-  
tion-  
ally  
de-  
com-  
posed  
into  
high-  
risk  
and  
lower-  
risk  
sets.

- A3 shows signs of being a bit ‘special’ because it has a set of Generic Qualifiers (Country, City), limiting consideration.

- But also permit us to ask which valid combinations have yet to be planned.

-  
The  
15%  
±  
5%  
re-  
duces  
the  
chance  
that  
any-  
one  
will  
ex-  
pect,  
or  
as-  
sume,  
15%  
ex-  
actly.

-  
There  
is a  
risk  
that  
the  
real-  
ity  
will  
in-  
form  
one  
that  
a  
Ger-  
man  
and  
a  
Sales  
Plan-  
ner  
esti-  
mated  
for  
Nor-  
way.  
This  
is a  
warn-  
ing  
that  
there  
may  
be a  
risk  
of ir-  
rele-  
vant  
com-  
pe-  
tence.

-  
The  
??  
**clearly**  
**warns**  
**that**  
**the**  
**esti-**  
**mate**  
**should**  
**not**  
**be**  
**taken**  
**seri-**  
**ously.**

There  
is a  
risk  
it is  
very  
wrong. One  
could  
ar-  
gue  
that  
is al-  
ways  
the  
case  
any-  
how,  
but  
it  
does  
no  
harm  
to  
spell  
out  
ex-  
tra  
un-  
cer-  
tainty.

—  
-  
‘Nor-  
we-  
gian  
Lan-  
guage’:  
The  
capi-  
tal  
let-  
ters  
‘N’  
and  
‘L’  
sig-  
nal  
this  
is a  
‘for-  
mally  
de-  
fined’  
term  
some-  
where.  
If it  
is  
not  
for-  
mally  
and  
ade-  
quately  
de-  
fined,  
there  
is a  
risk  
that  
the  
spec-  
ifi-  
ca-  
tion  
will  
be  
mis-  
<sub>120</sub>  
der-  
stood.

—  
-  
Hint:  
there  
are  
at  
least  
4  
Nor-  
we-  
gian  
lan-  
guages.  
Nor-  
way's  
state  
lan-  
guage  
is  
Nor-  
we-  
gian  
(with  
two  
offi-  
cial  
writ-  
ten  
stan-  
dards,  
Bok-  
mål  
and  
Nynorsk);  
Sámi  
(North,  
Lule,  
South)  
and  
Kven  
are  
rec-  
og-  
nized  
In-  
dige-  
nous/minority  
lan-  
[21]  
guages,  
with  
Sámi  
co-official  
with  
Nor-  
we-  
gian

-  
The  
State-  
ment  
Tags  
(solution-  
option  
A &  
A1  
&  
A2  
&  
A3)  
per-  
mit  
us to  
have  
a  
sin-  
gle  
tagged  
'mas-  
ter'  
plan-  
ning  
ele-  
ment,  
inde-  
pen-  
dent  
of  
up-  
dates,  
avoid-  
ing  
the  
con-  
fu-  
sion  
of  
mul-  
tiple  
ver-  
sions  
in  
mul-  
tiple  
<sup>122</sup>plans  
and  
pre-  
sen-  
ta-  
tions.  
All  
plans

>  
![im-  
age](  
style="width:6.11655in;height:3.44048in"  
>  
alt="©  
2024  
Tom  
Gilb  
A  
dia-  
gram  
of  
strate-  
gies  
A,  
B,  
and  
C.  
Like  
a  
Venn  
dia-  
gram,  
Strat-  
egy  
does  
not  
fit  
within  
Con-  
straints'  
spec-  
ifi-  
ca-  
tions.  
Strat-  
egy  
B is  
within  
two  
of  
three  
con-  
straints.  
Only  
Strat-  
egy  
a is  
within  
all  
of  
them.  
Fig-  
ure

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1.  
In-  
ves-  
ti-  
gat-  
ing  
and  
rein-  
ves-  
ti-  
gat-  
ing  
the  
'prob-  
lem  
space'  
or  
'op-  
por-  
tu-  
nity  
space'  
now  
and  
again.

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2.  
En-  
sur-  
ing  
teleme-  
try  
and  
mon-  
itor-  
ing  
are  
in  
place  
to  
dis-  
cover  
what  
peo-  
ple  
are  
us-  
ing.

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3.  
Do-  
ing  
in-  
ter-  
laced  
discovery-  
delivery  
sup-  
ported  
by  
fre-  
quent  
de-  
liv-  
ery,  
ide-  
ally  
con-  
tinu-  
ous  
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liv-  
ery.

4.  
Re-  
quest-  
ing  
feed-  
back  
and  
tun-  
ing  
value  
ac-  
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ingly.

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Value  
De-  
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ery  
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Agree  
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criti-  
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fied  
ex-  
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ta-  
tions  
and  
lim-  
its:

- Allow individuals on the team or initiative to distill their own professional critical value dimensions concerning a single objective—this often takes 5 to 30 minutes.

—  
Then,  
charge  
them,  
as a  
re-  
spon-  
sible  
team,  
to  
come  
up  
with  
a list  
of a  
max-  
i-  
mum  
of  
10  
di-  
men-  
sions  
that  
they  
can  
agree  
on  
for  
the  
pur-  
pose  
of  
the  
initiative—  
this  
of-  
ten  
takes  
one  
hour.

—  
- Point  
out  
that  
they  
can-  
not  
be  
sure  
what  
they  
agree  
to  
until  
each  
di-  
men-  
sion  
is  
de-  
fined,  
for  
ex-  
am-  
ple,  
with  
a  
scale  
of  
Measure—  
this  
of-  
ten  
takes  
thirty  
min-  
utes  
for  
each  
of  
the  
10.

—  
-  
They  
should  
not  
'agree'  
at  
the  
'tag'  
level  
but  
at  
the  
level  
of  
clear  
defi-  
ni-  
tions  
of  
the  
name  
of  
the  
con-  
cept.  
Re-  
frain  
from  
as-  
sum-  
ing  
peo-  
ple  
at-  
tribute  
the  
same  
mean-  
ing  
to a  
word.

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>  
Re-  
spect  
Sub-  
jec-  
tive  
Val-  
ues:

-  
One  
will  
note  
and  
re-  
spect  
the  
sub-  
jec-  
tive  
val-  
ues  
of  
one's  
criti-  
cal  
stake-  
hold-  
ers  
while  
try-  
ing  
to  
un-  
der-  
stand  
their  
val-  
ues  
as  
wholly  
and  
ob-  
jec-  
tively  
as  
pos-  
si-  
ble.

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-  
Why?  
So  
that  
one  
can  
de-  
liver  
value  
to  
one's  
stake-  
hold-  
ers  
and  
sat-  
isfy  
their  
needs.

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<u>To  
min-  
i-  
mize  
dis-  
so-  
nance  
be-  
tween  
ac-  
tions  
and  
words,  
try  
ap-  
peal-  
ing  
to  
the  
ex-  
pec-  
ta-  
tions  
and  
lim-  
its  
that  
rep-  
re-  
sent  
the  
self-  
interest  
of  
the  
key  
stake-  
hold-  
ers;  
Tom  
Gilb  
be-  
lieves  
this  
to  
be  
<sup>135</sup>  
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real.

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- It gives more credible data about all the multiple needs, “jobs,” or wants (values) delivered and the costs incurred.

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Management is about making choices. It is best to make choices when one recognizes limits to time, capability, capacity, and money.

An other word for ‘choices’ is prioritization:

choosing one thing ahead of another.

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- To trigger a discussion, in meetings and review views, about whether the ME-TERs (as informal as they might be, in initially specified detail) would be acceptable concerning accuracy/credibility, costs, and cultural/legal acceptance.

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- Impacts on more long-range goals (some years from now) for the same objective are considered, not just shorter ranges (this year, initial deadlines).

---

- Final prioritization is based on the initial experimental mental measures of 2 or more competitive solution-options being applied in parallel to find a winner based on actual results, not just estimates.

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tively.

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to<sup>67</sup>  
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pear.  
Then,  
it is

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**TOL-**

**ER-**

**A-**

**BLE:** sur-  
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![image](

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[189]

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- Non-quality values can be, for example, costs, time, and work capacity of systems, and one is pretty good at quantifying them.  
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or  
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**Threat:** something (person, thing, situation, circumstances) that can cause some defined class of initiative failure or lack of success.

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**Dam-**  
**age:** anything contrary to plans, including lack of performance, value delivery for objectives, or increased unanticipated resources (time, money), capability, or capacity. Or any negative attitude. sequence of an attack on a

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Loops

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Single loop learning focuses on correcting errors and improving efficiency within established policies, routines, or goals.

The core question is,  
**'Are we doing things right?'**

For example, when an old come is unsat- is-fac- tory,

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- Focus on the top-level critical ‘few’ objectives.

- Pick solution-options that have a large number of good impacts on many critical objectives at the same time.

- Prioritize immediate short-term, next week, value delivery steps to get the highest total value for the time and resources available.

- Consider all costs, not just development costs.

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- If a critical stakeholder is forgotten in Planning, there is a big danger that one will be unaware of them (unless one gets lucky, and another type of stakeholder accidentally covers the forgotten stakeholder's needs).

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> In competitive markets, the organizations that win are those that deliver value faster and more precisely than their rivals.

Planning and Value Planning provide the discipline to help make this happen.

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> At its core, Value Planning operates on one powerful principle: measurable objectives must filter every technology decision.

>>  
When one makes this real—when every solution must prove its impact on specific, measurable goals—

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> In competitive product development, uncertainty is permanent. Customer needs shift. Technologies evolve. Competitors adapt. The organizations that thrive don't eliminate uncertainty—they learn to navigate it through short cycles, clear measurement,

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**STAKEHOLDER:**

-

**Prod-**  
**uct**  
**Owner:**

Se-  
nior  
Prod-  
uct  
Man-  
ager,  
Com-  
pli-  
ance  
Plat-  
form

-

**Scrum**

**Team:**

8  
De-  
vel-  
op-  
ers  
(in-  
clud-  
ing  
se-  
cu-  
rity  
engi-  
neers)

—  
-  
**Key**  
**Stake-**  
**hold-**  
**ers:**  
VP  
Prod-  
uct,  
CISO,  
en-  
ter-  
prise  
cus-  
tomers  
**SCALE:**  
Cal-  
en-  
dar  
days  
from  
Sprint  
Back-  
log  
se-  
lec-  
tion  
to  
Done  
(de-  
ployed  
to  
pro-  
duc-  
tion)

“Sprint  
Back-  
log  
se-  
lec-  
tion”

**DE-**  
**FINED:**

Times-  
tamp  
when  
sta-  
tus  
changes  
to  
“In  
Sprint”  
\*

“Done  
(Out-  
put)”  
**DE-**  
**FINED.\***

1.  
Code  
merged  
to  
main  
branch  
2.  
Au-  
to-  
mated  
se-  
cu-  
rity  
scan  
passed  
(zero  
vul-  
nera-  
bili-  
ties  
CVSS  
≥9.0)

3.  
Inte-  
gra-  
tion  
test  
suite  
passed  
( $\geq 95\%$   
cov-  
er-  
age)  
4.  
De-  
ployed  
to  
pro-  
duc-  
tion  
Ku-  
ber-  
netes  
clus-  
ter  
(names-  
pace:  
pro-  
duc-  
tion)  
5.  
Fea-  
ture  
flag  
en-  
abled  
for  
 $\geq 1$   
user  
(if  
ap-  
pli-  
ca-  
ble)

—  
6.  
Mon-  
itor-  
ing  
shows  
≥99.5%  
suc-  
cess  
rate  
over  
24  
hours  
7.  
Stake-  
holder  
veri-  
fied  
func-  
tion-  
ality  
in  
Pro-  
duc-  
tion  
(go-  
ing  
be-  
yond  
the  
nor-  
mal  
Scrum  
re-  
quire-  
ment  
of  
“re-  
leasable”)

—  
8.

De-  
sign  
doc-  
u-  
men-  
ta-  
tion  
and  
sup-  
port  
doc-  
u-  
men-  
ta-  
tion

up-  
dated

9.

No  
roll-  
back  
re-  
quired  
within  
48  
hours

\*

“*Calendar  
days*”

*DE-  
FINED.\**

- In-  
cludes  
week-  
ends  
and  
holi-  
days

—  
-  
Cal-  
cula-  
tion:  
(End  
times-  
tamp

-  
Start  
times-  
tamp)  
/  
86400  
sec-  
onds  
+ 1  
(round-  
ing  
up  
to  
next  
inte-  
ger)

**METER**  
**METHOD:**

Start  
event:  
Kan-  
ban  
board  
sta-  
tus  
“In  
Sprint”  
times-  
tamp

1.  
**End**  
**event:**

All 9  
Done  
cri-  
teria  
met,  
and  
Ac-

cep-  
tance  
Cri-  
teria  
met

2.  
**Cal-**

**cu-**  
**la-**  
**tion:**  
(End  
times-  
tamp

-  
Start  
times-  
tamp)  
in  
cal-  
en-  
dar  
days

3.  
**Ag-**  
**gre-**  
**ga-**  
**tion:**  
Rolling  
4-6  
Prod-  
uct  
Back-  
log  
Items  
- cal-  
cu-  
late  
P50  
(50<sup>th</sup>  
per-  
centile),  
P85  
(85th  
per-  
centile),  
P95  
(95th  
per-  
centile)  
>  
**FRE-**  
**QUENCY:**

-  
Real-  
time  
dash-  
board  
up-  
dates  
(within  
5  
min-  
utes  
of  
Prod-  
uct  
Back-  
log  
Item  
reach-  
ing  
Done)

-  
Daily  
Scrum:  
Team  
views  
cur-  
rent  
Work  
In  
Progress  
age

—  
- Sprint  
Re-  
view:  
Dis-  
tri-  
bu-  
tion  
of  
com-  
pleted  
Prod-  
uct  
Back-  
log  
Items

-  
Sprint  
Ret-  
ro-  
spec-  
tive:  
Out-  
lier  
anal-  
ysis  
>  
**SOURCE:**

-  
Au-  
to-  
mated:  
Jira  
API  
→  
Grafana  
dash-  
board

-  
URL:  
http  
s:  
//ka

nb  
an  
guid  
es.o  
rg

-  
Vali-  
da-  
tion:  
Scrum  
Mas-  
ter  
spot-  
checks  
three  
Prod-  
uct  
Back-  
log  
Items  
weekly

-  
Trans-  
parency:  
Team  
room  
TV +  
Slack  
chan-  
nel  
\*

*REPORT:\**

- Cy-  
cle  
time  
dis-  
tri-  
bu-  
tion  
his-  
togram  
(0-  
60  
days,  
5-  
day  
buck-  
ets)

-  
Trend  
line:  
P50  
over  
last  
12  
Sprints

-  
Out-  
lier  
ta-  
ble:  
PBIs  
>P85  
with  
rea-  
sons

**PERFORMANCE**  
**LEV-**  
**ELS**  
**PAST**  
**(Q4**  
**2024,**  
**Sprints**  
**22-**  
**25):**

---

-  
**Sam-**  
**ple:**

10  
se-  
cu-  
rity  
fea-  
ture  
PBIs

-  
**P50:**  
42.0  
cal-  
en-  
dar  
days

-  
**P85:**  
54.0  
cal-  
en-  
dar  
days

-  
**P95:**  
59.0  
cal-  
en-  
dar  
days

-  
**Range:**  
28-  
61  
days  
(ra-  
tio:  
2.18x)  
\*

*TREND*  
(Last  
4  
quar-  
ters):\*

-  
- Q1  
2024:  
P50  
=  
47d,  
P85  
=  
58d  
- Q2  
2024:  
P50  
=  
45d,  
P85  
=  
57d  
- Q3  
2024:  
P50  
=  
43d,  
P85  
=  
55d  
- Q4  
2024:  
P50  
=  
42d,  
P85  
=  
54d  
-  
Slope:  
-1.25  
days/quarter  
(too  
slow)

—

*RECORD:*\*

28.0  
days  
(OAuth  
SSO,  
Sprint  
19,  
with  
ex-  
ter-  
nal  
consultant)

**TOLERABLE**

(Min-  
i-  
mum  
ac-  
cept-  
able

-  
Ba-  
sic  
Scrum  
com-  
pe-  
tency):

-  
**P85**  
≤  
7.0  
cal-  
en-  
dar  
days

-  
**Mean-**  
**ing:**  
85%  
of  
PBIs  
Done  
within  
half-  
Sprint

-  
**Cur-**  
**rent**  
**sta-**  
**tus:**  
**FAIL-**  
**ING**  
**by**  
**7.7x**  
(54d  
vs. 7d)

-  
**Trig-**  
**ger:**  
If  
P85  
>10d  
for 2  
con-  
sec-  
u-  
tive  
Sprints  
→  
Scrum  
Mas-  
ter  
in-  
ter-  
ven-  
tion  
\*

*GOAL  
(Good  
Scrum  
per-  
for-  
mance  
for  
the  
con-  
text):\**

- By  
**date:**  
2026-  
09-  
30

-  
**P50**  
 $\leq$   
3.0  
**days**

-  
**P85**  
 $\leq$   
5.0  
**days**

-  
**P95**  
 $\leq$   
7.0  
**days**

-  
**Per-**  
**sis-**  
**tence:**  
Sus-  
tain  
4  
con-  
sec-  
u-  
tive  
Sprints

**Business  
value:**

En-  
ables  
bi-  
weekly  
re-  
leases;  
un-  
blocks  
\$400K  
ARR  
\*

*WISH*  
*(Ap-*  
*proach-*  
*ing*  
*con-*  
*tinu-*  
*ous*  
*de-*  
*liv-*  
*ery):\**

**- By  
date:**  
2026-  
12-  
31

**P50**  
≤  
1.0  
day

**P85**  
≤  
2.0  
days

-  
**De-**  
**ploy-**  
**ments:**

≥15  
per  
Sprint

-  
**Busi-**  
**ness**

**value:**  
“Real-  
time  
threat  
re-  
sponse”  
posi-  
tion-  
ing;  
\$2M  
ARR  
op-  
por-  
tu-  
nity

\*

*STRETCH*  
(Amazon-  
style  
con-  
tinu-  
ous  
de-  
ploy-  
ment):\*

- **By**  
**date:**

2027-  
06-  
30

**P50**  
≤  
**0.17**  
**days**  
(4  
hours)

**P85**  
≤  
**1.0**  
**day**

**Commit-**  
**to-**  
**production:**  
≤2  
hours

—  
-  
**Re-**  
**quires:**

Mi-  
croser-  
vices  
ar-  
chi-  
tec-  
ture  
(\$200K,  
6  
months),  
mob  
pro-  
gram-  
ming  
with  
AI,  
or  
AI  
agent  
Prod-  
uct  
De-  
vel-  
op-  
ers  
su-  
per-  
vised  
by  
the  
hu-  
man  
Prod-  
uct  
De-  
vel-  
op-  
ers

**CONSTRAINTS**

Operational  
Qual-  
ity:

—  
-  
CON-  
STRAINT.1:  
Zero  
criti-  
cal  
vul-  
nera-  
bili-  
ties  
(CVSS  
 $\geq 9.0$ )

-  
CON-  
STRAINT.2:  
De-  
ployed  
to  
pro-  
duc-  
tion  
(not  
stag-  
ing/QA)

-  
CON-  
STRAINT.3:  
Mon-  
itor-  
ing  
con-  
firms  
op-  
era-  
tion  
( $\geq 99.5\%$ ,  
24hrs)

**Flow:**

—  
-  
CON-  
STRAINT.4:

WIP  
limit  
= 6  
PBIs  
for  
the  
en-  
tire  
Scrum  
Team  
in-  
clud-  
ing  
car-  
ry-  
over

-  
CON-  
STRAINT.5:

PBIs  
in  
Sprint  
Plan-  
ning  
 $\leq 5$   
days  
each

—  
-  
CON-  
STRAINT.6:

PBI  
>7  
days  
trig-  
gers  
de-  
com-  
posi-  
tion  
(us-  
ing  
ver-  
tical  
slices  
such  
as  
stake-  
holder  
rele-  
vant  
ex-  
am-  
ples  
or  
ac-  
cep-  
tance  
cri-  
te-  
ria)  
\*

*Budget:\**

-  
CON-  
STRAINT.7:  
≤\$15K  
per  
Sprint

—  
-  
CON-  
STRAINT.8:

Prod-  
uct  
Owner  
spend-  
ing  
au-  
thor-  
ity  
within  
limit

**DEFINED**  
**“Security**  
**Fea-**  
**ture**  
**PBI”:**

-  
Au-  
then-  
tica-  
tion,  
au-  
tho-  
riza-  
tion,  
en-  
crys-  
tion,  
mon-  
itor-  
ing,  
vul-  
nera-  
bil-  
ity  
fixes,  
com-  
pli-  
ance  
re-  
port-  
ing

- Ex-  
cludes:  
Main-  
te-  
nance,  
per-  
for-  
mance  
(un-  
less  
se-  
cu-  
rity),  
gen-  
eral  
bugs

-  
Tagged:  
Jira  
la-  
bel  
security-  
feature  
\*  
“*WIP*  
*(Work*  
*in*  
*Progress)*”  
*for*  
*CON-*  
*STRAINT.4.\**

—  
-  
**Count:**  
All  
Prod-  
uct  
Back-  
log  
Items  
(PBIs)  
in  
“In  
Progress”  
sta-  
tus  
in  
Jira  
- **In-**  
**cludes:**  
Car-  
ry-  
over  
from  
pre-  
vi-  
ous  
Sprints  
(PBIs  
started  
but  
not  
yet  
Done)

**Limit:**  
Max-  
i-  
mum  
6  
PBIs  
si-  
mul-  
tane-  
ously  
for  
en-  
tire  
8-  
person  
team

**Mea-  
sure-  
ment:**  
Count  
at  
Daily  
Scrum

**En-  
force-  
ment:**  
Team  
should  
fin-  
ish  
ex-  
ist-  
ing  
work  
be-  
fore  
start-  
ing  
new  
PBIs  
if at  
limit

-  
**Ra-**  
**tio-**  
**nale:**  
Lim-  
its  
con-  
text  
switch-  
ing;  
en-  
cour-  
ages  
fin-  
ish-  
ing  
over  
start-  
ing;  
~0.75  
PBIs  
per  
De-  
vel-  
oper  
\*

“*Decomposition*  
*Ca-*  
*pa-*  
*bil-*  
*ity”:*\*  
**Current**  
**(Sprint**  
**25):**

-  
Team  
ar-  
ticu-  
lates  
1  
tech-  
nique

—  
- 20%  
of  
PBIs  
de-  
com-  
posed  
reac-  
tively  
- 0%  
en-  
ter  
Sprint  
Plan-  
ning  
 $\leq 5$   
days  
\*

*Target  
(Goal  
state):\**

- Team  
ar-  
ticu-  
lates  
 $\geq 5$   
tech-  
niques  
- 100%  
of  
PBIs  
 $> 5$   
days  
de-  
com-  
posed  
proac-  
tively

—  
-  
≥80%  
com-  
plete  
within  
Sprint  
started  
\*  
“Feature  
*Flag*”:  
-  
Tech-  
nol-  
ogy:  
Launch-  
Darkly  
or  
simi-  
lar  
- De-  
fault:  
off  
for  
new  
flags  
-  
Roll-  
out:  
Pro-  
gres-  
sive  
(1%→5%→25%→50%→100%,  
≥7  
days)  
-  
Roll-  
back:  
<60  
sec-  
onds  
via  
dash-  
board

—

*Effort*  
*Lev-*  
*els:*\*

-

**Low:**  
≤16  
person-  
hours,  
≤2  
days,  
≤\$500,  
re-  
versible  
≤4  
hours

-

**Medium:**  
17-  
40  
person-  
hours,  
3-5  
days,  
\$501-  
\$5K,  
re-  
versible  
1-2  
days

-

**High:**  
≥40  
person-  
hours,  
≥5  
days,  
≥\$5K,  
diffi-  
cult  
to re-  
verse

—  
\*

*Credibility  
Scale  
(Tom  
Gilb).\**

- **0:**

Wild  
guess,  
no  
cred-  
ibil-  
ity

- **1:**

We  
know  
it  
has  
been  
done  
some-  
where

- **2:**

We  
have  
one  
mea-  
sure-  
ment  
some-  
where

- **3:**

There  
are  
sev-  
eral  
mea-  
sure-  
ments  
in  
the  
esti-  
mated  
range

**- 4:**  
Se-  
eral  
mea-  
sure-  
ments  
rele-  
vant  
for  
the  
use  
case

**- 5:**  
Se-  
eral  
rele-  
vant  
mea-  
sure-  
ments  
ob-  
tained  
us-  
ing  
a  
reli-  
able  
method

**- 6:**  
Have  
used  
the  
same  
solu-  
tion  
pre-  
vi-  
ously  
in  
our  
or-  
gani-  
za-  
tion

- 7:  
Reli-  
able  
in-  
house  
mea-  
sure-  
ments  
of  
same  
solu-  
tion

- 8:  
In-  
house  
mea-  
sure-  
ments  
cor-  
re-  
late  
to  
ex-  
ter-  
nal  
sources

- 9:  
Have  
pre-  
vi-  
ously  
used  
this  
same  
solu-  
tion  
on  
this  
ini-  
ti-  
ative  
and  
mea-  
sured  
it

**- 10:**  
Solid,  
contract-  
guaranteed,  
long-  
term  
ex-  
peri-  
ence  
of  
this  
solu-  
tion  
on  
this  
ini-  
tia-  
tive

**AUTHORITY**

**Product**

**Owner:**

Or-  
ders  
Prod-  
uct  
Back-  
log;  
spend-  
ing  
≤\$15K/Sprint;  
works  
on  
de-  
com-  
posi-  
tion  
with  
Prod-  
uct  
De-  
vel-  
op-  
ers  
and  
stakeholders

**Product**  
De-  
vel-  
op-  
ers:  
Self-  
manage;  
ac-  
count-  
able  
for  
de-  
com-  
posi-  
tion  
skills;  
cre-  
ate  
Sprint  
Back-  
log;  
man-  
age  
WIP  
as  
team

---

**Scrum**  
**Mas-**  
**ter:**  
Coaches  
on  
de-  
com-  
posi-  
tion;  
makes  
flow  
met-  
rics  
visi-  
ble;  
chal-  
lenges  
PBIs  
>5  
days;  
helps  
team  
main-  
tain  
WIP  
limit;  
re-  
moves  
im-  
pedi-  
ments  
with  
the  
sup-  
port  
of  
other  
change  
agents

—  
**VP**  
**Prod-**  
**uct:**  
Sets  
Tol-  
era-  
ble;  
ap-  
proves  
>\$15K;  
rolling  
wave  
roadmaps  
laced  
with  
un-  
cer-  
tainty  
###  
Adapted  
Im-  
pact  
Esti-  
ma-  
tion  
Ta-  
ble  
(columns  
and  
rows  
switched)

---

**Context:**

Sprint  
26,  
Day  
3.  
Cur-  
rent  
P85  
= 54  
days  
(7.7x  
worse  
than  
Tol-  
era-  
ble 7  
days).  
Need  
ex-  
peri-  
ments  
to  
reach  
Tol-  
era-  
ble  
quickly.

###  
Rec-  
om-  
mended  
So-  
lu-  
tion  
Op-  
tion  
for  
next  
PDSA  
loop

—

*Option*

*H:*

*Com-*

*bined*

*Work-*

*shop*

+

*Fea-*

*ture*

*Flag*

*De-*

*ploy-*

*ment\**

**Rationale:**

-

**High-**

**est**

**po-**

**ten-**

**tial**

**im-**

**pact:**

Could

reach

Tol-

era-

ble

(P85

$\leq 7d$ )

in

Sprint

26

-

**Zero**

**bud-**

**get:**

Fits

within

CON-

STRAINT.7

—  
-  
**Ad-**  
**dresses**

**root**

**cause**

+

**en-**

**abler:**

Skill

gap

+

psy-

cho-

logi-

cal

bar-

rier

-  
**Cred-**

**ibil-**

**ity**

**4:**

Sev-

eral

rele-

vant

mea-

sure-

ments

exist

ex-

ter-

nally,

though

one

hasn't

tried

this

com-

bina-

tion

—  
-  
**Low**  
**risk:**  
Re-  
versible  
in 1  
day,  
\$0  
cost

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## **11. Specification Quality Control (SQC) Checklist**

Review this specification against Planguage quality rules and identify major defects: Are all critical “requirements” quantified? Are all *<fuzzy>* terms defined? Are sources cited? Are assumptions stated? Is every “requirement” testable? Are constraints (FAIL, SURVIVAL) specified? Are stakeholders identified? Rate defect density as major defects per page.

## **12. Multi-Context “Requirements” with Qualifiers**

For this “requirement,” specify different levels for different contexts using qualifiers: [Time: Year1 vs Year3], [Place: USA vs Europe vs Asia], [Event: Normal Load vs Peak Load vs Crisis], [User Type: Novice vs Expert], [Configuration: Small vs Enterprise]. Quantify target levels for each context.

## **13. Dependency & Relationship Mapping**

For each “requirement,” document: Depends On: [other “requirements” needed first], Supports: [higher-level objectives this enables], Impacts: [requirements affected by this], Conflicts With: [requirements that compete with this], Priority: [relative importance score], Justification: [why this matters quantifiably].

## **14. Design-to-Requirement Traceability**

Create a traceability matrix showing which design ideas [Design.X] are intended to satisfy which performance “requirements” [Requirement.Y]. For each Design→Requirement link, estimate the expected impact (% improvement) and identify any “requirements” not yet addressed by any design.

## **15. Resource Budget Specification**

Specify resource constraints using: RESOURCE.Development.Time: Scale: [months], Budget: [max acceptable], Target: [planned], Spent-To-Date: [current]. RESOURCE.Development.Cost: Scale: [\$], Budget: [max], Target: [planned]. RESOURCE.Operations.Cost: Scale: [\$/month], Goal: [target ongoing cost]. Include burn rate and forecasts.

## **16. Value-Focused Thinking & Prioritization**

For each stakeholder, identify their value hierarchy: What are their fundamental values? How do they measure success? What are they willing to pay for? Quantify the economic value of each performance improvement using formulas like:  $\text{Value} = [\text{improvement \%}] \times [\text{affected users}] \times [\$/\text{per user per year}]$ .

## **17. Trade-off Analysis Between Competing “Requirements”**

Identify competing “requirements” (e.g., Speed vs Accuracy, Cost vs Quality). For each trade-off, specify: the performance attribute pair, current position on the trade-off curve, desired position, what designs move us in

desired direction, and the estimated cost of improvement. Create a trade-off matrix.

### **18. Exit Condition & Definition of Done**

For this evolutionary step or project phase, specify measurable exit conditions: Performance.Exit: [specific attribute levels that must be achieved], Quality.Exit: [defect rates or SQC scores required], Stakeholder.Exit: [approval criteria], Budget.Exit: [must be within X% of target]. Define how each will be measured and verified.

### **19. Defect Prevention & Root Cause Analysis**

For specification defects found in SQC, analyze: Type: [(critical) ambiguity, missing “requirement,” unmeasurable, etc.], Root Cause: [why it occurred], Prevention: [rule or process change to prevent recurrence], Learning: [what this teaches us]. Update your specification rules based on patterns found.

### **20. Continuous Improvement Metrics & PDSA**

Define process improvement metrics using Plan-Do-Study-Act cycles: Plan: [what improvement we'll try], Do: [implement on small scale], Study: [measure results - defect rates, cycle time, value delivered], Act: [adopt, adapt, or abandon]. Track trends over multiple cycles: Past: [baseline], Goal: [target improvement], Actual: [current measurement].

## **Key Conventions**

This booklet does not mean to impose terms or definitions on the reader. The authors respect rights of the readers and their need to define things, in any useful way for them. The authors also respect right or readers to rename any terms. The authors needed to take a position on concepts and terms to communicate and develop their ideas.

### **Stakeholder**

- A stakeholder is an entity, individual, or group interested in, affected by, or impacting inputs, activities, and outcomes. Stakeholders have a direct or indirect interest inside or outside the organization, its products, or services.
- Examples of stakeholders include customers, users, vendors, influencers, managers, colleagues, leaders, and governance, AI, and the law. Inanimate stakeholders such as the law and AI are ignored at the peril of the team doing the work and other stakeholders.
- Some stakeholders have more impact or are more impacted than others, and each can favor different factors.
- Supporting stakeholders, known as Supporters, are stakeholders who influence the organization's workflows, processes, systems, products, services, and work

environment; they do so to improve consistency with adaptiveness.

- Supporting Stakeholders should offer support that is appreciated by those doing the work.
- Value creation often requires effective, constructive collaboration with stakeholders.
- Depending on the size of the organization, examples of supporting Stakeholders include colleagues, managers, subject matter experts, marketing, HR, finance, procurement, etc.

#### **Value**

- Stakeholder value refers to any perceived need that a stakeholder (including customer) considers important, which the team delivers.
- However, stakeholders may not always be aware of what could be valuable to them.
- Observation or evidence could intentionally or unintentionally surface value and influence priorities.
- As new information arises, potentially valuable items should be identified, inspected, refined, and adapted.
- Value remains an assumption until confirmed by evidence, such as observation or measurement of outcomes.
- Value is the fulfilment of expectations, needs, “jobs,” or wants from a stakeholder’s perspective. It can encompass qualities, costs, constraints, or performance. It can be discovered or be previously unknown to the stakeholder(s).
- Examples include meeting the needs of customers, end-users, organizations, or even environmental considerations.
- Potential value refers to output that remains as inventory until validated by feedback.

#### **Risk**

- A risk is any factor that could result in a future adverse consequence.
- Risk exposure remains unpredictable even as time elapses; anticipation is key.
- Risk exposure can include market risk, problem-solution fit, product-market fit, technology, signal detection, responsiveness, compliance, remediation, poor trade-off decisions, etc.; adaptiveness supports active risk mitigation.
- For example, adaptiveness encourages a reduction in the distance between stakeholders who present problems or opportunities and the people solving with the problems or opportunities, the Product Developers, by keeping objectives focused and delivering value quickly and frequently.

#### **Result Feedback**

- Result feedback is evidence, ideally both quantitative and qualitative, that might result from changes to the product or environment; it contributes to stakeholder value, effort, resources, or costs.

### **Side Effect**

An impact by a design idea, on any “requirement” attribute, other than the direct impact(s) one primarily intended.

Notes:

- Side effects can be evaluated at a design stage and/or observed at an implementation stage, or even operational or decommissioning stage.
- Conventional usage of ‘side effect’ implies ‘negative effects,’ but positive side effects can be just as likely, and just as interesting!
- Side effects can be of the following categories:
  - ‘Intended or unintended’: ‘Intended’ means that one has chosen the design because one knew about and valued those particular side effects;
  - ‘Known or unknown’: ‘Known’ means one was aware of the existence and possibly the levels of the side effects. ‘Unknown’ means one was not initially aware of the side effects, but may have become aware of them at some later stage of considering the design (such as in testing, in a review or in operation);
  - ‘Negative, neutral or positive’

### **Evolutionary delivery**

A ‘high-value-first’ approach toward the desired goals, and seeking to obtain, and use, realistic, early feedback. Key components of evolutionary delivery include:

- Frequent delivery of system changes (steps) or experiments (sometimes multiple in parallel, ideally safe-to-fail)
- Steps delivered to stakeholders for real use or experiments run to gather learnings toward stakeholder value
- Feedback obtained from stakeholders to determine next step(s)
- The existing system is used as the initial system base
- Small steps (ideally between 2%–5% of total initiative financial cost and time)
- Steps with highest value and benefit to cost ratios given highest priority for delivery
- Feedback is used ‘immediately’ to modify future forecasts and “requirements” (John breaks out in a rash when “requirements” are mentioned, as he prefers problems to solve, opportunities to capture or “desirements”) and, also to decide on the next step

- Total systems approach ('anything that helps')
- Results-orientation ('delivering the results' is of prime concern), but John would say also how results are delivered

## Unambiguous Clarity Defined

Words in documents are often undefined which adds to confusion or misinterpretation. <u>So, let's define unambiguous clarity.

**Goal Attribute: Unambiguous Clarity**

**Tag:** CLARITY

**Definition:** *Unambiguous clarity means a goal is so clear that everyone understands it in the same way, with no chance for misunderstanding or mixed interpretations. The wording leaves no room for guessing or assumption.*

**Scale Unit:** Percentage of stakeholders who provide written interpretations of the goal that exactly match the official definition.

**Meter:** Survey all Scrum Team members and key stakeholders, asking them to write what they believe the goal means. Compare their answers to the official goal statement. Calculate the percentage that are the same.

**Verification Authority:** The Scrum Master or Product Owner checks the results. An independent reviewer (for example, a Product Developer) occasionally double-checks consistency.

**Progression Scale**

- **Tolerable:** At least 70% of stakeholders write matching interpretations of the goal.
- **Goal:** At least 85% of stakeholders write matching interpretations of the goal.
- **Wish:** At least 95% of stakeholders write matching interpretations, with any differences limited to spelling or grammar, not meaning.
- **Stretch:** 100% of stakeholders write matching interpretations, showing total, error-free shared understanding.

**How to Achieve:**

- Use clear, concrete, and simple language in all goal statements.
- Test new goal statements by having the team write or discuss what they think the goal means, then resolve any confusion.
- Update and review goal wording during each planning or Sprint Review to ensure ongoing clarity.

**Why it Matters:** In Scrum, having clear goals keeps the Scrum Team focused, makes progress visible, and avoids wasted work or conflict. With unambiguous clarity, everyone knows exactly what the Scrum Team is working toward, leading to more reliable results and a better team culture.

## Plan Quality Defined

But let's clarify 'plan-quality':

**Goal:** Plan-Quality Measurement

**Tag:** PLANQUAL

**Definition:** Plan-Quality quantifies the effectiveness, efficiency, and value produced by the planning process as expressed through measurable artefacts such as scheduling adherence, prioritization accuracy, and backlog stability.

**Stakeholders:** Manager, Chief Product Officer, Scrum Team

**Scale Unit:** Defined under each Quality Attribute

**Meter:** Primary data from Jira Flow Analytics, Audit Log Summaries, and Stakeholder Feedback Surveys stored in Confluence.

**Verification Authority:** A Scrum Team member validates internal data collection; an independent reviewer audits sampling accuracy and reproducibility each quarter.

**Quality Attribute: Simplicity**

*Definition:* Ease and speed of collecting and defining plan-quality metrics.

*Scale:* Percentage of plan-quality measures definable and collectable within a fixed time budget per iteration.

*Meter:* Randomly sample ten or at least 30% of active metrics (whichever is greater) using a documented random-number generator. Measure the time from data-source access to final metric entry using screen-recorded sessions.

*Progression:*

*Benchmark – 50% collectable within 15 minutes (June 2025 baseline)*

*Tolerable – ≥ 60% within 12 minutes*

*Goal – ≥ 80% within 10 minutes using standardized templates*

*Stretch – ≥ 90% automated capture within 5 minutes or less*

*Owner – Scrum Team*

**Quality Attribute: Economy**

*Definition:* Minimizing the cost of maintaining and operating the measurement system.

*Scale:* Total quarterly cost, using weighted mean staff rates (£60/hour for Product Developers, £75/hour for Managers) plus software licensing.

*Meter:* Derived from Jira time-tracking logs tagged PLANQUAL and verified quarterly financial reports.

*Progression:*

Benchmark – £300 per quarter (FY2025-Q3)

Tolerable – ≤ £250 (manual workflows optimized)

Goal – ≤ £150 (semi-automated collection)

Stretch – ≤ £100 (fully automated with negligible additional cost)

Owner – Scrum Team

**Quality Attribute: Motivation**

*Definition:* The degree to which plan-quality metrics inform real decision-making.

*Scale:* Percentage of metrics recorded as evidence in decision logs that result in backlog or planning adjustments.

*Meter:* Count unique metric IDs cited in Jira change logs or meeting notes where decisions reference data outcomes.

*Progression:*

Benchmark – 40% metrics influencing planning decisions (FY2025-Q3)

Tolerable – 60% referenced monthly

Goal – 80% referenced weekly

Stretch – 95% influencing at least one Sprint decision per cycle

Owner – Scrum Team

**Quality Attribute: Directness**

*Definition:* Reliance on objective artefact-based data instead of perceptions or estimates.

*Scale:* Direct Data Ratio = percentage of metrics based primarily ( $\geq 60\%$ ) on automated or traceable digital artefacts.

*Meter:* Regular review of data lineage and input sources by the Scrum Team.

*Progression:*

Benchmark – 50% direct artefact data

*Tolerable* – 60% validated system data

*Goal* – 70% automated digital sources

*Stretch* – 85% digital artefacts (manual entry  $\leq 15\%$ )

*Owner* – Scrum Team

**Quality Attribute: Feedback Frequency**

*Definition:* The elapsed time between data collection and delivery of analyzed insights to decision-makers.

*Scale:* Feedback Interval, in business days (excluding weekends and holidays, UTC-adjusted).

*Meter:* Difference between the Sprint closure timestamp in Jira and publication timestamp of the Plan-Quality report.

*Progression:*

*Benchmark* – 14 calendar days (current cycle)

*Tolerable* –  $\leq 10$  business days

*Goal* –  $\leq 7$  business days (aligned with weekly cycles)

*Stretch* –  $\leq 3$  business days (continuous automated dashboards)

*Owner* – Scrum Team

**Quality Attribute: Sampling Effectiveness**

*Definition:* Accuracy and reproducibility of plan-quality insights derived through statistical sampling.

*Scale:* Confidence interval width, measured at 90% confidence.

*Meter:* Monthly audit following these steps:

1. Randomly select at least 30 plan artefacts.
2. Analyze using three AI classifiers (Perplexity, Claude, and Grok).
3. Compare outputs for semantic consistency (cosine similarity  $\geq 0.9$ ).
4. Human Quality Reviewer rechecks 10% of samples to confirm  $\geq 90\%$  agreement.

*Progression:*

*Benchmark* –  $\pm 25\%$  margin (Q3 2025)

*Tolerable* –  $\pm 15\%$  (sufficient for trend monitoring)

*Goal* –  $\pm 10\%$  (week-to-week reliability)

*Stretch* –  $\pm 5\%$  (predictive trend accuracy)

*Owner – Scrum Team*

**<u>Or more simply in plain English:**

**Goal: Plan-Quality Measurement (PLANQUAL)**

**What is Plan-Quality?**

Plan-Quality measures how good and useful the planning process is, using clear results such as whether the schedule is followed, priorities are set correctly, and the backlog is stable.

**Who is Involved?**

- Manager
- Chief Product Officer
- Scrum Team

**How is it Measured?**

- Each quality area (attribute) has its own measurement unit.
- Data comes mainly from Jira Flow Analytics, logs, and stakeholder surveys.
- The Scrum Master checks the data, and a separate Product Developer with Quality Reviewer skills examines a sample each quarter to make sure everything is accurate and repeatable.

**Quality Attributes**

**Simplicity**

How quickly and easily plan-quality data can be collected and defined.

**How it's measured:**

- Look at a random sample often or 30% of current metrics (whichever is more).
- See how long it takes (from getting the raw data to entering the metric) using screen recordings.

**Targets:**

- 50% collectable in 15 minutes (current standard)
- At least 60% in 12 minutes (acceptable)
- At least 80% in 10 minutes with templates (target)
- 90% automated in 5 minutes or less (best)
- Responsible: Product Owner

**Economy**

How much it costs to keep the measurement system running.

**How it's measured:**

- Look at the total cost each quarter, including wages and software.
- Uses Jira logs and quarterly finance reports.

**Targets:**

- £300 per quarter (current standard)
- £250 if manual work is optimized (acceptable)
- £150 with some automation (target)
- £100 with full automation (best)
- Responsible: Product Owner

**Motivation**

How much the plan-quality data actually affects real decisions.

**How it's measured:**

- Look at the percentage of metrics mentioned in decision logs that lead to changes.
- Count unique metric IDs referenced in change logs or meeting notes.

**Targets:**

- 40% influencing decisions now (current standard)
- 60% referenced monthly (acceptable)
- 80% referenced weekly (target)
- 95% influencing at least one Sprint decision per cycle (best)
- Responsible: Scrum Master

**Directness**

How much the data depends on hard evidence instead of personal opinion.

**How it's measured:**

- Calculate the percentage of metrics based mainly (at least 60%) on automated or traceable digital sources.
- Regular checks are done by a Product Developer.

**Targets:**

- 50% from direct artefact data (current standard)
- 60% from validated system data (acceptable)
- 70% from automated sources (target)
- 85% from digital artefacts, with a maximum of 15% entered by hand (best)
- Responsible: Product Developers

### **Feedback Frequency**

How long it takes to deliver analyzed insights to people making decisions.

#### **How it's measured:**

*Measures the time (in business days) between the end of the Sprint (in Jira) and when the report is published.*

#### **Targets:**

- *14 days (current standard)*
- *10 days (acceptable)*
- *7 days with weekly cycles (target)*
- *3 days or less with continuous dashboards (best)*
- *Responsible: Scrum Master*

### **Sampling Effectiveness**

How accurate and repeatable the plan-quality findings are when using samples.

#### **How it's measured:**

- *Every month, pick at least 30 plan artefacts at random.*
- *Analyze using three different AI tools.*
- *Compare the results (need them to agree at least 90% of the time).*
- *A human checks 10% of samples to confirm over 90% agreement.*

#### **Targets:**

- *± 25% margin now (current standard)*
- *± 15% margin for trend monitoring (acceptable)*
- *± 10% margin for week-to-week reliability (target)*
- *± 5% margin for predicting future trends (best)*
- *Responsible: Product Developers*

So, is this is too much work? Are the critical goals for the context clear? While plain English can be clear, the structure of Planguage communicates ideas more clearly to AI systems. Ask a favorite Large Language Model (LLM) “find the (critical) ambiguities in the following text using Tom Gilb Style Specification Quality Control (SQC): <paste text here>” Then say, “fix it with SQC and Planguage” or “fix it.” There will be a lot of auditing and editing to do on the responses. But after carving away all unnecessary complicatedness then (close to) unambiguous clarity will help one to frame “work as problems to solve or opportunities to capture.” Planguage is often more succinct than plain English.

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