

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

*

*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		
Progressive Load		Cached Authentication
Login Speed [sec]		
2.0		
1.5 ← 2.5		
Source: RefCase.CompetitorA		
Credibility: 80%		
2.0 ← 2.8		
Source: ABTest		
Credibility: 85%		
1.2 ← 2.0		
Source: TeamGuess		
Credibility: 40%		
Dev Effort [days]		
≤40		
25 ← 35		
Credibility: 60%		
10 ← 15		
Credibility: 80%		
5 ← 8		
Credibility: 85%		
Security Pass [%]		
≥99.9		
95 ← 99		
Credibility: 50%		

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, 1st 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

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 quantitate 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
```

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

LoginSpeed [Sec]

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%

DevEffort [Days]

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: Do Nothing	Solution Option: Biometric	Solution Option: Progressive	Solution Option: 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%					

Expectations, Limits </p> </block-quote> </th> <th style="text-align: center;"> <block-quote> <p>Past </p> </blockquote> </th> <th style="text-align: center;"> <blockquote> <p>Goal </p> </blockquote> </th> <th style="text-align: center;"> <blockquote> <p>Solution Option:
 Do Nothing</p> </blockquote> </th> <th style="text-align: center;"> <blockquote> <p>Solution Option: Biometric</p> </blockquote> </th> <th style="text-align: center;"> <blockquote> <p>Solution Option: Progressive</p> </blockquote> </th> <th style="text-align: center;"> <blockquote> <p>Solution Option: Cached</p> </blockquote> </th> <th>Login Speed [Sec]</th><th>Median time, app launch to account view</th>

	DevEffort [Days]	SecurityPass [%]
0	Development and testing effort	Passing security audit criteria
Constraint: ≤ 40		
0	Source: Current Credibility: 100%	Source: Current Credibility: 99.9%
25 \leftarrow 35	Source: TeamEstimate Authority: TechLead Credibility: 60%	Source: VendorSpec Authority: SecTeam Credibility: 50%
10 \leftarrow 15	Source: TeamEstimate Authority: TechLead Credibility: 80%	Source: NoChange Authority: SecTeam Credibility: 95%
5 \leftarrow 8	Source: TeamEstimate Authority: TechLead Credibility: 85%	Source: SecAudit.2023 Authority: SecTeam Credibility: 65%
99.9% [Audit 2024.Q4]		
$\geq 99.9\%$		
99.9% Source: Current Credibility: 95%		
95 \leftarrow 99	Source: TeamEstimate Authority: TechLead Credibility: 80%	Source: VendorSpec Authority: SecTeam Credibility: 50%
99.9	Source: NoChange Authority: TechLead Credibility: 85%	Source: NoChange Authority: SecTeam Credibility: 95%
90 \leftarrow 95	Source: SecAudit.2023 Authority: TechLead Credibility: 65%	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 ≤ 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 ≤ 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,
 Expectations, Limits (by six months' time)

Solution Option: Agile Kata

Solution Option: Kanban

Solution Option: Flight Levels

Solution Option: Value Planning

Solution Option: LeSS

Solution Option: Rightsizing

Solution Option: Flow Tool

Total

Dev Process NPS
 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
 -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%
15%
25%
30%
5%
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5%
100%

Total Impact Score

80
90
70
65
45
40
20
410

Credibility (0-1.0)

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- C2:
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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;

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- 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!

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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-
¹⁰⁶
ning.
Sup-
pose
one
has
imag-
ina-
tion

- 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-
me-
di-
ate
con-
se-
quent
abil-
ity
to
de-
ploy
to
stake-
hold-
ers
and
mea-
sure
the
ben-
efits
de-
liv-
ered
or
not
de-
liv-
ered.

>
The
risks
of
fail-
ing
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%
??
of
planned
rev-
enue.
<-
Ger-
man
Sales
Plan-
ner

—
>
Com-
ments
on
the
ex-
am-
ple:
-

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-
¹²⁰
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
¹²²plans
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

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.

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

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

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

Fos-
ter
Evo-
lu-
tion-
ary
Value
De-
liv-
ery
>
Agree
on
criti-
cal
quan-
ti-
fied
ex-
pec-
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.

—>
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.

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

—
-
<u>To
min-
i-
mize
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so-
nance
be-
tween
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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
¹³⁵
the
rea-
son
his
work
sticks.

Ex-
peri-
men-
ta-
tion
>
The
clear
ad-
van-
tages
of
'ex-
peri-
men-
ta-
tion,'
of
try-
ing
out
an
solution-
option
and
mea-
sur-
ing
its
ef-
fects,
are:

—
It en-
cour-
ages
the
team
to
think
through
all
system-
level
“re-
quire-
ments”
(peo-
ple,
mo-
tiva-
tion,
inte-
gra-
tion
with
the
cur-
rent
sys-
tem,
etc.)—
all
the
things
needed
to
make
value
real.

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

- It
moves
one
to-
wards
value
ob-
jec-
tives
and
im-
proves
team
ex-
peri-
ence,
con-
fi-
dence,
and
pride.

-
Some
mainly
pon-
tifi-
cate
in
meet-
ings
while
oth-
ers
de-
liver
the
goods
and
get
on
with
it.

-
One
could
ad-
just
plans
to fit
pock-
ets
with
Dy-
namic
De-
sign
to
Cost
(take
the
de-
sired
cost
as a
con-
straint,
and
PDSA
to-
ward
it).

-
When
evid-
ence
is
lack-
ing
about
po-
ten-
tial
value,
ex-
peri-
ment
with
AI,
dis-
cover
what
not
to
de-
liver,
and
de-
liv-
ery.

-
Con-
sider
par-
allel
safe-
to-
fail
ex-
peri-
ments
to
im-
prove
can-
dor
and
im-
prove
elapsed
times.

-
Try
out
the
win-
ners
of
rough
fore-
casts
in a
quick,
rough
way.
- Go
with
the
re-
sults.

—
-
‘Tidy
the
garage’
as
‘bad
stuff
scales.’
Af-
ter
clean-
ing
up,
and
after
try-
ing
all
op-
tions
to
im-
prove
value
de-
liv-
ery
with-
out
scal-
ing,
only
then
scale
up if
needed. The
first
rule
of
scal-
ing
is
not
to
scale.

-
And
mea-
sure
again.
Dump
los-
ing
ideas
fast
but
not
so
fast
not
to
give
them
a
real
chance.

—
>
![im-
age](
style="width:6.12361in;height:3.44444in"
>
alt="©
2024
Tom
Gilb
Strat-
egy
A -
more
cost
than
Strat-
egy
B
for a
Func-
tion,
both
strate-
gies
have
"re-
source
re-
main-
ing"
Strat-
egy
A -
more
im-
pact
Esti-
mate
for
Strat-
egy
A
than
Strat-
egy
B
Per-
f₄₅
mance
Gap
in
Strat-
egy
B
Fig-

De-
com-
pose
by
Value

A
Word
of
Cau-
tion:
Big
Sys-
tem
Re-
place-
ments

—
>
Tom's
view:
Al-
ways
as-
sume
that
value
de-
liv-
ery
in-
cre-
ments
can
best
be
de-
liv-
ered
us-
ing
the
'old
sys-
tem'
as a
base.
>>
Tom
has
a
point;
sys-
tem
re-
place-
ments
tend
be
mas-
sive
fail-
ures.
My
work
in⁴⁷
cluded
a
lever-
age
point
res-
cue,

Evolve
Rev-
olu-
tions

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Try
not
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lis-
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duc-
tive
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gu-
ments
about
'build-
ing a
great
new
fu-
ture
sys-
tem'
re-
plac-
ing
an
old
sys-
tem
all at
once. There
is no
proof
of
that
ar-
gu-
ment,
and
the
re-
sult
is of-
ten
much
worse.

- It's
gen-
er-
ally
bet-
ter
to
make
teams
prove
they
know
what
they
are
do-
ing
in
prac-
tice
early. Make
them
con-
front
mea-
sur-
able
real-
ity
and
learn,
learn,
and
learn
early.

-
The
most
suc-
cess-
ful
rev-
olu-
tions
are
made
by a
se-
ries
of
moun-
tain
goat
steps
of
change.
One
works
to-
wards
larger
long-
term
goals,
one
prac-
tical
step
at a
time,
as
sure-
footed
as
moun-
tain
goats.

It
seems
to
be
how
¹⁵¹some
highly
suc-
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ful
or-
gani-
za-

—
>
![im-
age](
style="width:6.19861in;height:3.48663in"
>
alt="©
2024
Tom
Gilb
Not
de-
com-
posi-
tion
for
this:
Build
1..4
then
de-
ploy
and
mea-
sure
More
Like
This:
Emer-
gent
strat-
egy
Cre-
ate
and
de-
ploy
in-
cre-
ment
or
ex-
peri-
ment
Get
feed-
back
Tweak
R  2
alize
value
Rinse
Re-
peat
Fig-
ure

Eval-
ua-
tion
of
Pri-
ori-
ties

—>
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

instead of another.

I pre-

-
What
scope
of
mea-
sure-
ment
would
be
roughly
able
to
give
sat-
is-
fac-
tory
feed-
back
for
the
pur-
pose
at a
cost
that
seems
rea-
son-
able?

- To declare that one fully intends to measure results in practice.

- To remind one to build the measurement costs into the cost estimates for the solution-options.

- 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.

—>
Ad-
di-
tional
com-
puta-
tions
to
clar-
ify
risks:

-
The
un-
cer-
tainty
fac-
tor
is in-
tro-
duced,
and
the
least
opti-
mistic
end
of
the
range
for
ob-
jec-
tives
and
costs
is
used.
 $60 \pm$
 $40 =$
20,
20 is
the
'least
opti-
mistic'
end.

-
The
cred-
ibil-
ity
score
(0.0
none,
to
1.0
per-
fect)
is
mul-
ti-
plied
by
the
esti-
mate
to
get a
more
pes-
simistic
esti-
mate.
Ex-
am-
ple:
0.5
cred-
ibil-
ity x
60%
=
30%.

-
The
Cred-
ibil-
ity
score
is
based
on
fac-
tual
evi-
dence
for
the
esti-
mate
and
the
source
of
those
facts.

- 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.

—>
Au-
to-
matic
pri-
ority
com-
puta-
tion
is
most
use-
ful
when
look-
ing
at
sev-
eral
sce-
nar-
ios,
and:

-
There
is
a fre-
quent
need
to re-
prioritize
(like
weekly
for
each
ini-
tia-
tive,
or
many
ini-
tia-
tives)

—
Many
fac-
tors
(e.g.,
10
ob-
jec-
tives
and
10
solution-
options)
need
to
be
eval-
u-
ated
si-
mul-
tane-
ously.
Avoid
over-
simplification.

In
criti-
cal
in-
dus-
tries,
there
is a
mul-
ti-
plic-
ity
of
ex-
pec-
ta-
tions
and
lim-
its
that
¹⁶⁵need
to
be
sat-
is-
ficed.

-
There
is a
need
for
trans-
parency
in
decision-
making:
ac-
count-
abil-
ity
to
boards,
steer-
ing
com-
mit-
tees,
elec-
torates,
press,
me-
dia,
and
the
pub-
lic;
the
side
ef-
fect
is
one
en-
sures
that
vari-
ous
ini-
tia-
tives
have
a
sound
ap⁶⁶
proach
to
their
decision-
making.

—
>
It's
like
ask-
ing
“What
if?”
so
that
even
a
‘los-
ing
solution-
option’
pro-
po-
nent
sees
why
their
ideas
lose
and
maybe
ac-
cepts
de-
feat
grace-
fully
or
fights
back
con-
struc-
tively.

>>
It is
the
(first)
pri-
ority
to
sur-
vive,
not
tb⁶⁷
die
or
dis-
ap-
pear.
Then,
it is

—

TOL-

ER-

A-

BLE: survival, border-line, threatened with death constantly.

—
OK: absence

of pain and discomfort, but much improvement desired

—
- **GOAL:** quite
sat-
is-
fied,
suc-
cess-
ful,
only
marginally
help-
ful
de-
sire
to
im-
prove
this

- **STRETCH:** a
level
bet-
ter
than
the
Goal
but
with
marginal
value
for
some
stake-
hold-
ers
and
in-
stances
if
the
price
is
right.

-
IDEAL: a
theo-
reti-
cal
state
of
max-
i-
mum
per-
fec-
tion,
not
at-
tain-
able,
not
sus-
tain-
able
in
prac-
tice,
or
not
eco-
nom-
ical.
Like
100%
avail-
abil-
ity
24/7.
Is
there
infi-
nite
ca-
pac-
ity
or
bud-
get?

—>
One
might
plan
for a
range,
a
com-
fort
zone,
or a
'land-
ing
zone'
rather
than
an
ex-
act
num-
ber.
![image](

—
Generally,
be-
yond
the
world
of
Plan-
guage,
evi-
dence
can
be
qual-
ita-
tive
or
quan-
tita-
tive,
but
Tom
Gilb
strongly
leans
to-
ward
quan-
tita-
tive.
Tom
even
did
a
TedX
talk
on
how
to
quan-
tify
love!
[189]

*Source
refers
to
where
that
evi-
dence
was
col-
lected.
One
could
also
use
Au-
thor-
ity
which
means
an
au-
thor-
ita-
tive
source.*

—
>
Cred-
ibil-
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ex-
presses
the
strength
of
be-
lief
in
and
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va-
lid-
ity
of,
in-
for-
ma-
tion.
Within
Im-
pact
Esti-
ma-
tion,
cred-
ibil-
ity is
usu-
ally
as-
sessed
for
the
evi-
dence
and
sources
sup-
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ing
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cific
in⁷⁴
pact
esti-
mate.
Cred-
ibil-
ity
is ex-

! [image] (

*A
sim-
pli-
fied
ver-
sion
of
the
pre-
vi-
ous
im-
age.
Assume
Re-
sources
means
ef-
fort
and
money
in
this
case.
Peo-
ple
are
not
re-
sources.*

—
Health
warn-
ing:
esti-
mates
are
just
esti-
mates.
Some
ar-
gue
one
is
mul-
ti-
ply-
ing a
ques-
tion
mark(impacts)

by a
ques-
tion
mark
(cred-
ibil-
ity)
and
di-
vid-
ing
by
an-
other
ques-
tion
mark

(costs).

There
is an
ele-
ment
of
truth
to
that.

Ho-
ever,
when
one
con-
tinu-
ally
re-

Consider
money
or
value
points
for
value.
But
for
ef-
fort,
con-
sider
esti-
mated
num-
bers
of
items
(but
not
sub-
tasks)
to
de-
liver
the
goal.

Co-
her-
ent
Qual-
ity
Man-
age-
ment

—> A
‘qual-
ity’
de-
scribes
‘how
well
the
sys-
tem
func-
tions;’
fo-
cus
on
‘how
well.’

> —
Tom
Gilb
>>
What
is
com-
mon
prac-
tice
with
‘qual-
ity’
plan-
ning?
If
one
was
cynical:

—
One
does
not
de-
fine
the
many
qual-
ities
one
is
con-
cerned
with
at
all
(one
just
says
the
nam-
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words,
like
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rity')

-
One,
even
less
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quently,
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qual-
ities
so
that
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can
be
seri-
ously
planned
for
(like
a
99.9%
chance
to
de-
tect
hack-
ing')

-
One
doesn't
even
have
a de-
cent
defi-
ni-
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of
'qual-
ity',
but
one
uses
the
word
of-
ten
('im-
proved
qual-
ity').

-
Qual-
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are
not
the
only
val-
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that
need
to
be
man-
aged
in
‘val-
ues
ob-
jec-
tives.’

Tom
Gilb’s

ex-
peri-
ence
was
that
they
are
among
the
most
criti-
cal
for
most
stake-
hold-
ers
(ask
stake-
hold-
ers
what
they
most
want
to
im-
prove
and
ex-
pect
70%

—
- Non-quality values can be, for example, costs, time, and work capacity of systems, and one is pretty good at quantifying them.
![image](

—
Here
the
ex-
pec-
ta-
tions
for
the
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“Ser-
vice
Avail-
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Risk
Man-
age-
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Some
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cepts:

-
Risk: any
fac-
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that
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verse
con-
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quence.
It
com-
bines
{(Threat
or
At-
tack)
&
Miti-
ga-
tion}.

-
Threat: something (person, thing, situation, circumstances) that can cause some defined class of initiative failure or lack of success.

- At-
tack:this
hap-
pens
when
the
threat
be-
comes
real,
emerges,
and
po-
ten-
tially
does
or
can
do
some
dam-
age
to a
sys-
tem.

-
Dam-
age: any-
thing
con-
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to
plans,
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mance,
value
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tives,
or
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sources
(time,
money),
ca-
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or
ca-
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Or
any
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of
an
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Mit-
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tion: any
act,
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One
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out
fail,
early
mea-
sur-
able
im-
prove-
ments
in
the
di-
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tion
of
criti-
cal
ob-
jec-
tives
or
"jobs
to be
done,"
and
con-
tin-
ued
progress

—
- Staff
need
to be
trained
and
coached
to
do
these
things.

Clean-
room

—>
The
ma-
jor
in-
no-
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tion
in
Clean-
room
(there
were
many)
was
the
small
2%
(monthly
for
years)
value
de-
liv-
ery
steps.
The
2%
value
de-
liv-
ery
steps
act
to-
gether
with
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in¹⁹²
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Learn-
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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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Dr. Ju-
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(Qual-
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Con-
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Hand-
book,
Ju-
ran
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[490]
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Pro-

- 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.

-
Pick
the
solution-
options
with
the
best
values-
for-
costs
in
the
'worst-
worst'
case.

-
Make
sure
that
sup-
plier
con-
tracts
are
based
on
value
for
pay-
ment.

—>
![image](
style="width:4.94949in;height:2.78402in")
>
alt="©
2024
Tom
Gilb
Ice-
berg
Above
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line:
AC-
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TION
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wa-
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line:Documentation
Train-
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Here
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things
one
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do
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plan-
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and
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solution-
options
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help
sup-
port
teams
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liver
value:

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Guide
that
man-
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ment's
job
is
to re-
move
any
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riers
to
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value;
ask
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Visit
teams
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way
that
the
truth
emerges

[10].

- Sit
down
with
real
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and
try
to
find
out
how
one
can
help
them.

-
Continuously
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Continuously
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-
“What
could
I do
to
help
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liver
value
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ter?”

—
“Has
man-
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ment
taken
the
need
for
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seri-
ously?”
or
- “If
you
were
in
my
shoes,
what
is
the
most
use-
ful
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would
make
to
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value
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- Ex-
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-
Make
a list
of
the
three
worst
ob-
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to
progress.

-
Ask
one
of
the
teams
or
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tives
to
list
the
five
worst
bar-
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to
their
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progress.

-
Fig-
ure
out
how
to re-
move
one
of
them,
re-
move
them,
and
tell
how
it
was
(al-
ready)
done.
Rinse
and
Re-
peat.

Cau-
tion

Keep
a
Writ-
ten
List
of
Stake-
hold-
ers

—>
Keep
a
writ-
ten
list
of
top
stake-
hold-
ers
with
ev-
ery
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cal
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tive
and
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ery
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option.
Here
is
why
one
should
keep
the
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ble:

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—
These
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or
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tive.

- 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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-
One
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The
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a
lack
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stake-
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needs
or
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tence,
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Con-
clu-
sion:
From
Plan-
ning
to
Value

> 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.

The
Foun-
da-
tion:
Write
It
Down

—>
The
power
starts
with
some-
thing
de-
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tively
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ple:
writ-
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the
‘desirements’—

what
one
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achieve—
in
clear,
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terms.

Not
vague
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user
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spe-
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Be-
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Mak-
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Con-
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—>
Plan-
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For
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and
sources.

For
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but
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How
'De-
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Emerge
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Con-
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One
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start
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Week
1

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>
Scale
[Lo-
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Speed]:
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Am-
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Time
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Week
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—>
Evidence shows the 2-second target is unrealistic on 3G networks (60% of users). The desirement evolves again, now differentiating by network conditions and focusing on perceived speed through ²²⁶ prescriptive gressive load-ing. This is adap-

Con-
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Here's
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There
is no
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**Start
any-
where.**

If
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ideal),
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Jump
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liver
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ver-
tical
slice,
mea-
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the
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sults,
adapt.

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Learn
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fore
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Rather
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front,
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Let
real
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They
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dence,

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**Give
up
early.**

When
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Don't
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six
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#####

The
Big
Idea:
Let
Re-
sults
Fil-
ter
So-
lu-
tions

> 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—

**Wrong
so-
lu-
tions
die
quickly.**

That
“in-
no-
va-
tive”
tech-
nol-
ogy
that
doesn’t
move
the
met-
rics?
It
can’t
sur-
vive
when
re-
sults
are
visi-
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weekly.

-
Right
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When
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tions.
The
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months.

One
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#####

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Work-
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and
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Plan-
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ments.'
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ments

#####

The
Path
For-
ward

> 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,

About
the
au-
thor:
Tom
Gilb

—>
Tom
Gilb
(born
USA
1940,
Hired
at
IBM
1958)
is
the
au-
thor
of
10
pa-
per
books,
and
over
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jects.
His
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Goal:
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Fea-
ture
De-
liv-
ery
TAG:
SecProd.CycleTime.2026.Q1

GIST:

Trans-
form
from
dys-
func-
tional
large-
batch
de-
liv-
ery
to
com-
pe-
tent
Scrum
prac-
tice,
where
se-
cu-
rity
ex-
per-
tise
en-
ables
rapid,
small-
batch
pro-
duc-
tion
re-
leases
to
en-
able
result-
feedback
and
value
con-
fir-
ma-
tion
of 44
dis-
con-
fir-
ma-
tion.

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
 ≥ 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
(50th
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

-
Busi-
ness

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
 ≥ 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
 ≤ 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-
cryp-
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
 ≤ 5
days
*

*Target
(Goal
state):**

- Team
ar-
ticu-
lates
 ≥ 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,
 $\leq \$500$,
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:
Several
measure-
ments
rele-
vant
for
the
use
case

- 5:
Several
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

**Credibility
caveat:**

At cred-
ibil-
ity 4,
this
is
based
on
ex-
ter-
nal
evi-
dence,
not
our
own.
One
should
treat
Sprint
26

as a
mea-
sured
ex-
peri-
ment
to
raise
cred-
ibil-
ity
to
6-7
for
fu-
ture
use.

—

*Alternative
if
seek-
ing
higher
cred-
ibil-
ity.*
Op-
tion
E
(Spike)
has
cred-
ibil-
ity 6
(we've
done
spikes
be-
fore)
but
pro-
vides
no
di-
rect
cy-
cle
time
im-
prove-
ment.
Could
do
spike
first
to
de-
risk
Op-
tion
H.*

—
Alternative
if
bud-
get
avail-
able
and
will-
ing
to
ac-
cept
lower
cred-
ibil-
ity:
Op-
tion
D
(Ex-
ter-
nal
Coach)
at
cred-
ibil-
ity 4
pro-
vides
ex-
pert
guid-
ance,
\$1,500
in-
vest-
ment.

Tested
Large
Lan-
guage
Model
(LLM)
Prompts
us-
ing
Plan-
guage

>
Tom
Gilb's
work
is so
es-
tab-
lished
and
clear,
that
it is
ideal
as a
LLM
prompt-
ing
lan-
guage.
Here
is
the
top
20:
>>
1.
**Stake-
holder**
&
“Re-
quire-
ments”
**Anal-
ysis**

>>
Iden-
tify
the
top
stake-
hold-
ers
and
for
each
spec-
ify
their
criti-
cal
per-
for-
mance
“re-
quire-

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: Value = [improvement %] × [affected users] × [\$ 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\s tracking logs tagged PLANQUAL and verified quarterly financial reports.

Progression:

Benchmark – £300 per quarter (FY2025\s Q3)

Tolerable – ≤ £250 (manual workflows optimized)

Goal – ≤ £150 (semi\s automated collection)

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

Owner – Scrum Team

Quality Attribute: Motivation

Definition: The degree to which plan\s quality metrics inform real decision\s 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\s 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\s 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 – ≤ 10 business days

Goal – ≤ 7 business days (aligned with weekly cycles)

Stretch – ≤ 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 ≥ 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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