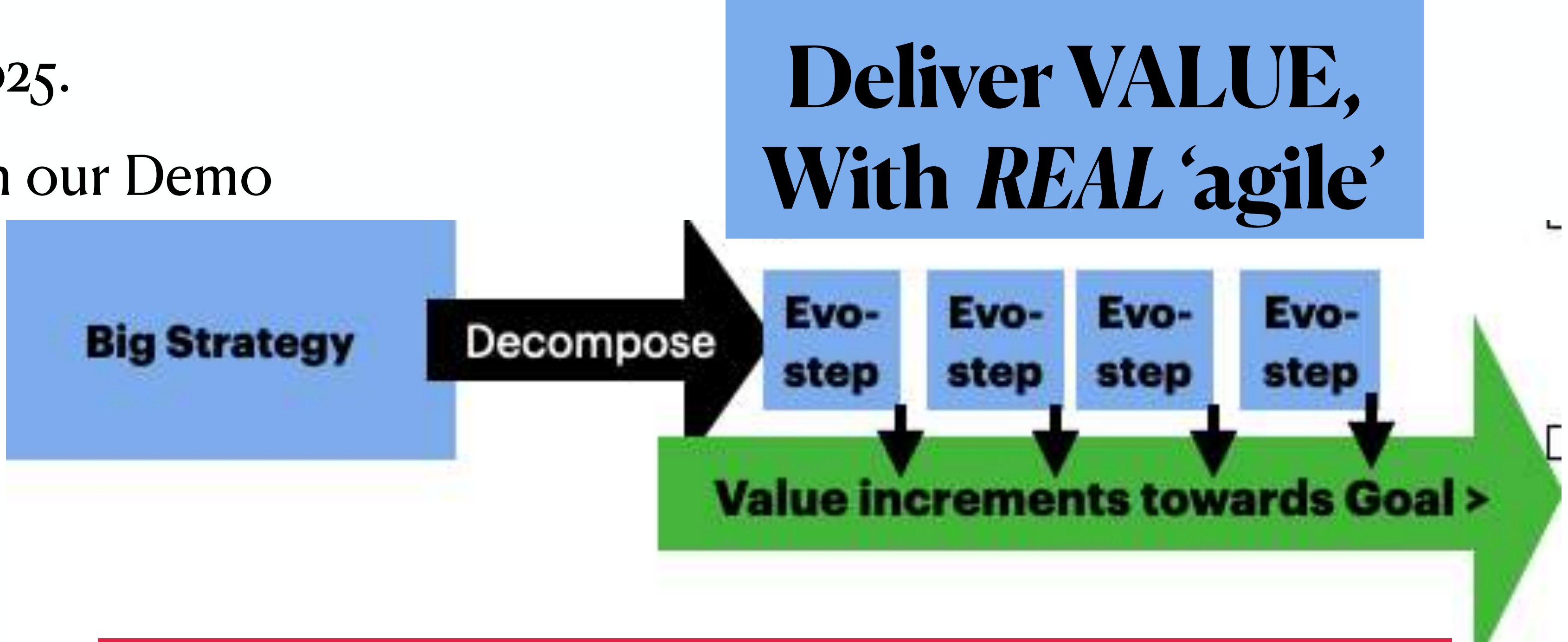


Version 05 FEB 2025.

After Lecture, with our Demo



Westfall Slides

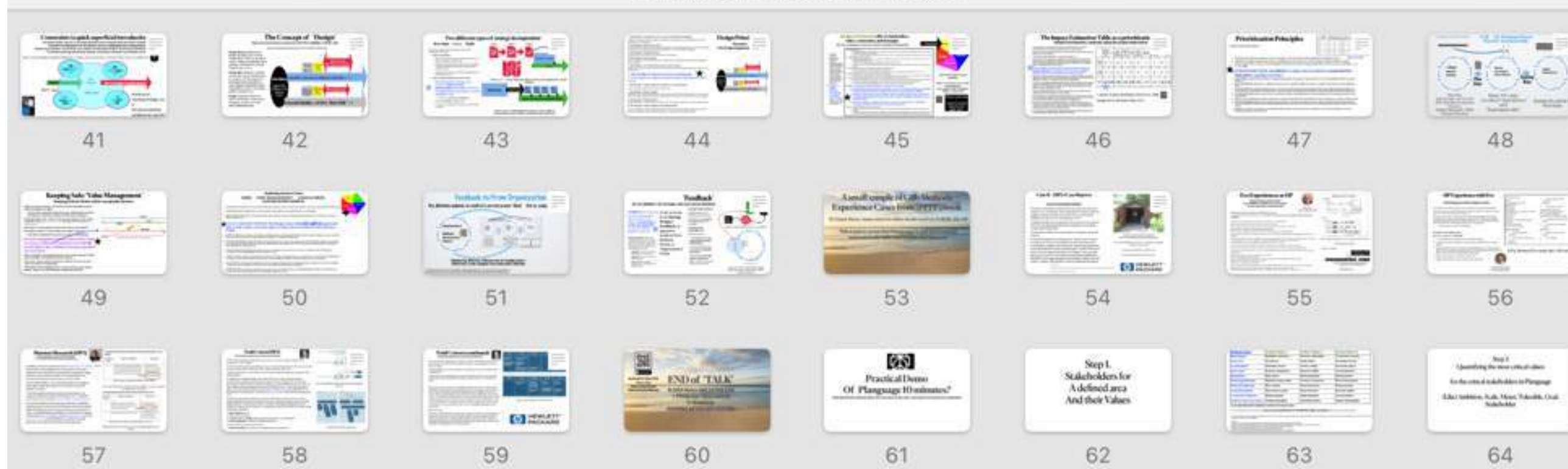
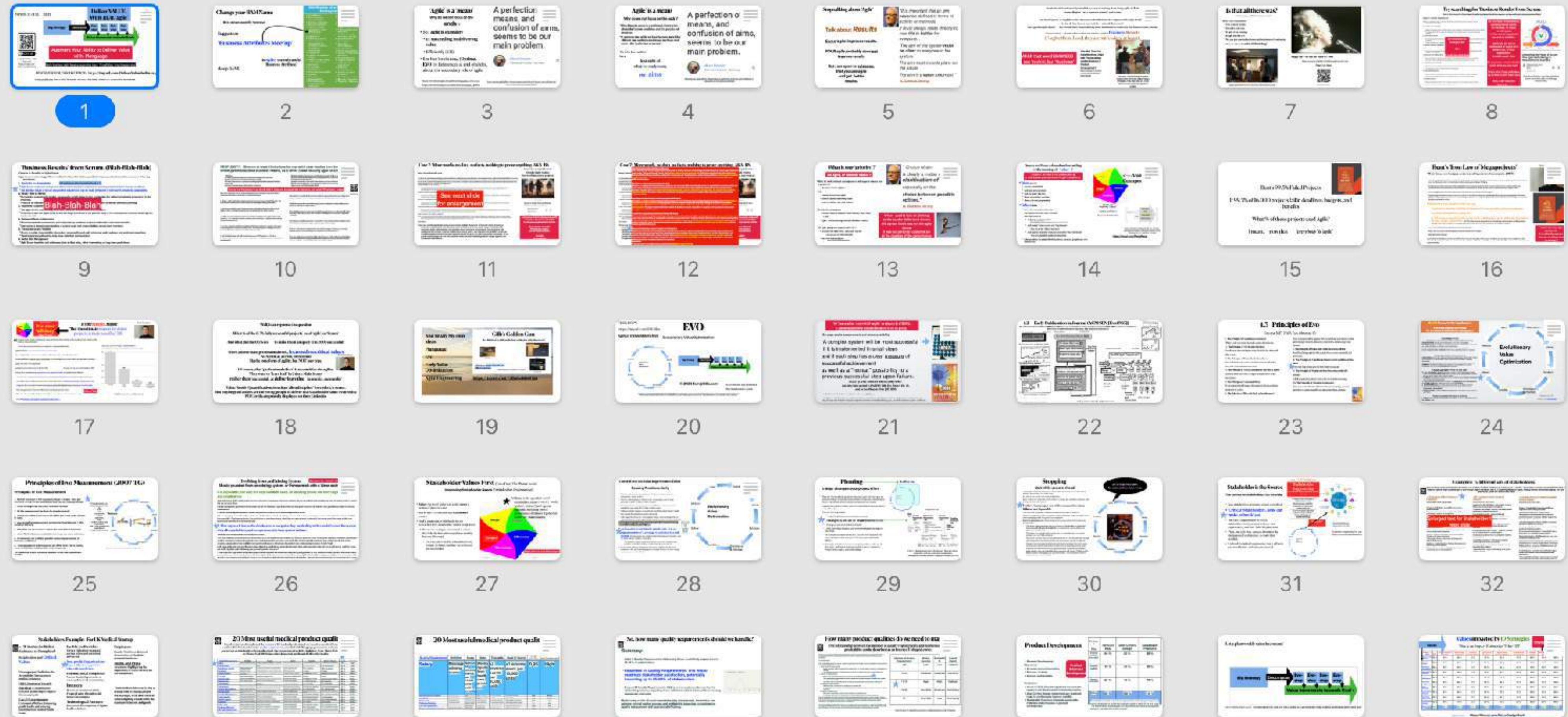


Augment Your Ability to Deliver Value
with Planguage

Host BCS SG QUALITY Videoed

PDF SLIDE FOLDER DROPBOX: <https://www.dropbox.com/scl/fo/nld63w45mw35i10xr6t5v/AJWlUYO7qLIL8ksb87w3alo?rlkey=7axco6a8iilog1b1ska9pmcmq&dl=0>

© tom@gilb.com 1 hour talk, Wednesday, May 21st 2025 , 6PM-7PM UK TIME



Detailed slides
But
I will highlight
A sample.

Agile

is unnecessarily 'narrow'

Suggestion

'Business Attributes'

Is **Agility** the only useful
Business Attribute?

Attributes of a Successful Entrepreneur

- Confidence
- Perseverance, determination
- Energy, diligence
- Resourcefulness
- Ability to take calculated risks
- Dynamism, leadership
- Optimism
- Need to achieve
- Versatility; knowledge of product, market, machinery, technology
- Creativity
- Ability to influence others
- Ability to get along well with people
- Initiative
- Flexibility
- Intelligence
- Pleasant personality
- Egoism
- Courage
- Imagination
- Perceptiveness
- Toleration for ambiguity
- Orientation
- Positive response to challenge
- Independence
- Responsiveness to suggestions criticism
- Time competence, efficiency
- Ability to make decisions quickly
- Responsibility
- Foresight
- Accuracy, thoroughness
- Cooperativeness
- Profit orientation
- Ability to learn from mistakes
- Sense of power
- Aggressiveness
- Capacity for enjoyment
- Efficacy
- Commitment
- Ability to trust workers
- Sensitivity to other
- Honesty, integrity
- Maturity, balance

‘Agile’ is a ‘*means*’

Why do we not focus on the
‘**ends**’ ?

- So: agile is secondary
 - to succeeding in delivering value
 - Efficiently (V/\$)
- See free books 2024 [**Optima**, **EVO**] in References at end of slides, about the secondary role of agile.

A perfection of means, and confusion of aims, seems to be our main problem.



- Albert Einstein

Theoretical Physicist · Germany



https://www.researchgate.net/publication/383749778_EVO_2024

https://www.researchgate.net/publication/382649938_Optima

<https://quotes.guide/albert-einstein/quote/a-perfection-of-means-and-confusion-of-aims-seems-to-be-our-main-problem/>

Agile' is a *means*

Why do we not focus on the *ends* ?

- This Einstein quote is a profound observation about the human condition and the paradox of progress.
- It suggests that while we have become incredibly efficient and sophisticated in our methods and tools – the ‘perfection of means’ –

We (who Love agility)
have

lost sight of
what we *really* want,

the aims

A perfection of
means, and
confusion of aims,
seems to be our
main problem.



- Albert Einstein

Theoretical Physicist · Germany



<https://quotes.guide/albert-einstein/quote/a-perfection-of-means-and-confusion-of-aims-seems-to-be-our-main-problem/>

Stop talking about 'Agile'

Talk about **Results**

Some 'agile' improves results.

YOUR agile probably does not improve results

**But I am open to evidence,
that you use agile
and get better
results.**



*"It is important that an aim **never** be defined in terms of activity or methods.*

*It must always relate directly to how **life is better** for everyone. . .*

*The aim of the system **must be clear** to everyone in the system.*

The aim must include plans for the future.

*The aim is a **value** judgment."*

W. Edwards Deming

People should be *ashamed* of yourself, if you keep on ranting about ‘being agile’.

You are illogical, and a danger to yourself, and society.

You should ignore, as *laughably useless*, those men who *title* themselves ‘signers of the Agile Manifesto’

Is that all they have to be proud of, after all these years?

Many good people ‘signed’. But I would hope they could brag about their *Business Productivity* and *business results*, instead.

They brag ‘I signed’ ... rather than telling about their agile ‘mainfesto’ correlated **Business Results**
(Forgive them, Lord, they are but ‘coders’ at heart).

Ahhh that word BUSINESS ,
not ‘techie’, but ‘Business’

**How Well Does the
Agile Manifesto Align
with Principles that
Lead to Success in
Product
Development?’**

[https://www.ppi-int.com/
wp-content/uploads/
2021/01/SyEN-062.pdf](https://www.ppi-int.com/wp-content/uploads/2021/01/SyEN-062.pdf)



**Nice men. Unfortunately no smart
women were involved. Think. Values.
Principles. Fine. But after 20+ years
where are the impressive business
results?**

Is that all there was?

6x faster buggy code? No 'business

- What is the real problem?
 - That so many people,
 - For such a long time
 - In spite of my warnings
 - Bought into this s**t
 - Not you, just your bad professors and institutions of low learning
- They should teach **critical thinking!**



<https://youtu.be/LCRZZC-DH7M?si=24b1A3lzcoTc7opk>



Peggy Lee -- Is That All There Is? 1969

<https://youtu.be/LCRZZC-DH7M?si=24b1A3lzcoTc7opk>

Peggy Lee sings



Is that all there is? About Agile ?

Try searching for ‘Business Results’ from Scrum.

Here is what popped up <https://www.linkedin.com/pulse/unleashing-power-scrum-how-agile-methodology-business-1lw8c/>

Chapter 4: Benefits of Agile Scrum

Agile Scrum methodology offers a multitude of benefits that can positively impact your business. Here are some of the key advantages:

1. Flexibility and Adaptability

- Agile Scrum embraces change and allows teams to pivot in response to evolving requirements or market conditions.
- The iterative nature of Scrum ensures that adjustments can be made at the end of each sprint, enhancing adaptability.

2. Faster Time-to-Market

- By breaking projects into smaller, manageable increments, Agile Scrum enables the rapid delivery of valuable increments to the customer.
- Products or features can be released more frequently, allowing teams to respond to market demands promptly.

3. Improved Customer Satisfaction

- The Agile Scrum methodology prioritizes frequent communication and collaboration with customers, ensuring their needs are met.
- Customers have the opportunity to see their requirements being implemented throughout the development process, ensuring their needs are met.

4. Enhanced Team Collaboration

- Scrum's emphasis on teamwork and daily standup meetings fosters collaboration and communication.
- It promotes a shared understanding of project goals and responsibilities among team members.

5. Transparency and Visibility

- Scrum provides clear visibility into project progress through daily standups, sprint reviews, and sprint retrospectives.
- This transparency allows for early issue detection and resolution.

6. Better Risk Management

- Agile Scrum identifies and addresses risks as they arise, rather than relying on long-term predictions.
- The iterative approach helps mitigate risks by addressing them in small, manageable increments.

7. Quality Assurance

- With regular testing and quality checks in each sprint, Agile Scrum ensures a higher-quality end product.
- Defects are identified and resolved early, reducing rework.

Se next slide for
Enlarged text

But

It is all blah-blah.blah

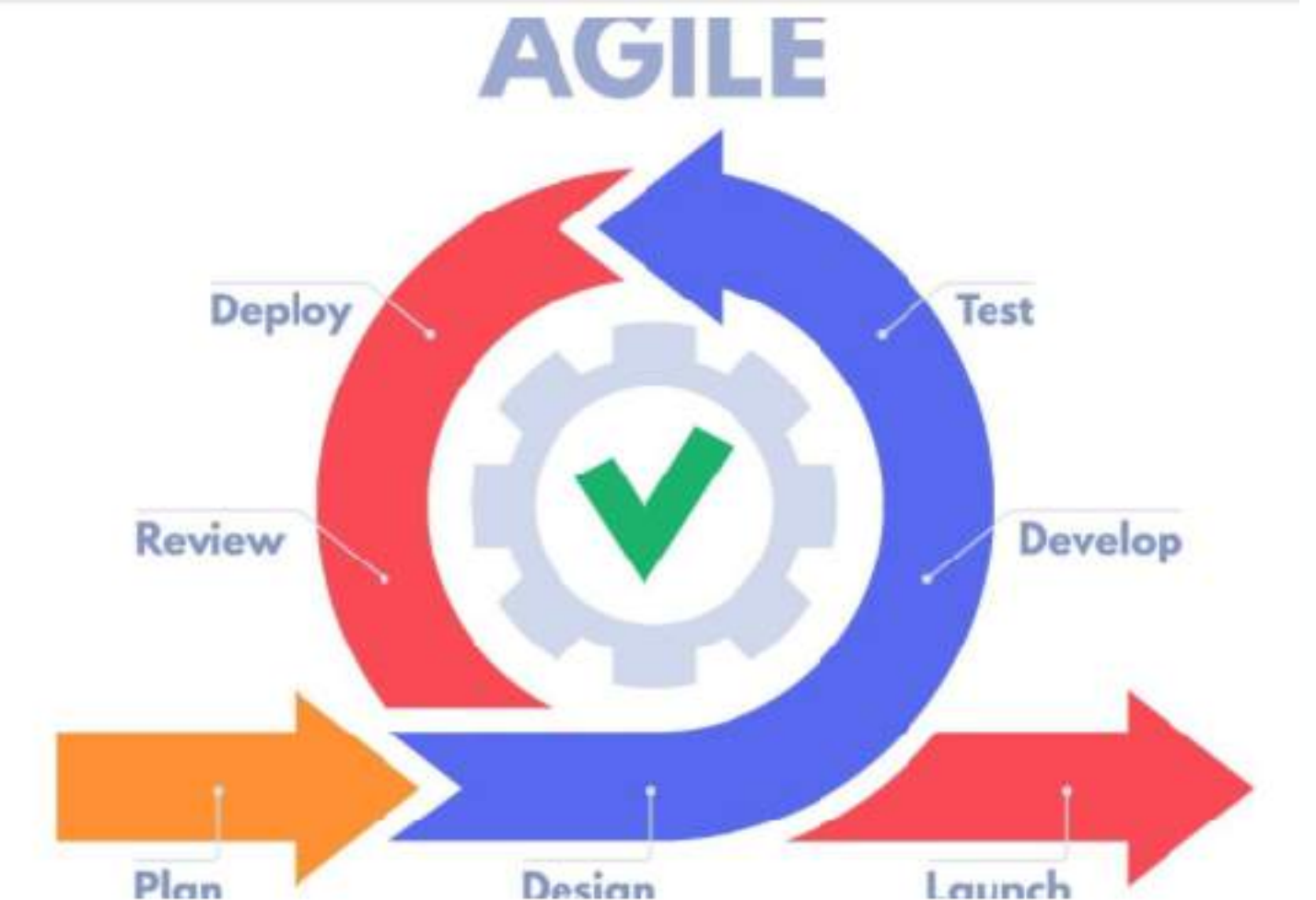
Do you notice there are only unsubstantiated claims, no numbers, no cases, no references
In other words lies, damed lies, and no statistics.

Surely you are not so uneducated or stupid as to believe you, or your organization, should invest in this?

Do you know a snake oil sales pitch when you see one?

This is what those politicians try to fool us with. Fake news

Wow, a self-declared ‘visionary’ —->



Agile Scrum Methodology: Revolutionizing Business Success

Unleashing the Power of Scrum: How Agile Methodology is Revolutionizing Business



Shafayetul Islam Pavel,
PMP®, PRINCE2®,
MCPS
Visionary UI/UX
Designer, UX...



<https://www.linkedin.com/pulse/unleashing-power-scrum-how-agile-methodology-business-1lw8c/>

'Business Results' from Scrum. (Blah-Blah-Blah)

Chapter 4: Benefits of Agile Scrum

Agile Scrum methodology offers a multitude of benefits that can positively impact your business. Here are the key advantages:

All ambiguous terms underlined in 1.

1. Flexibility and Adaptability

- Agile Scrum embraces change and allows teams to pivot in response to evolving requirements.
- The iterative nature of Scrum ensures that adjustments can be made at the end of each sprint.

2. Faster Time-to-Market

- By breaking projects into smaller increments, Agile Scrum accelerates the delivery of value to the customer.
- Products or features are released more frequently, allowing teams to respond to market changes more quickly.

3. Improved Customer Satisfaction

- The Agile Scrum methodology prioritizes customer collaboration and feedback.
- Customers have the opportunity to see working increments of the product early in the development process, ensuring their needs are met.

4. Enhanced Team Collaboration

- Scrum's emphasis on teamwork and daily standup meetings fosters collaboration and communication.
- It promotes a shared understanding of project goals and responsibilities among team members.

5. Transparency and Visibility

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The Ambiguity of Agile/Scrum Claims

The unintelligibility and untrustworthiness. Try giving defined measures! Like '77.17%'

Total word count: 311 words

Potentially
ambiguous words
(240 words,
approximately 77.17%
of total):

- 1. Benefits
- 2. Positively
- 3. Impact
- 4. Flexibility
- 5. Adaptability
- 6. Methodology
- 7. Embraces
- 8. Change
- 9. Allows
- 10. Pivot
- 11. Response
- 12. Evolving
- 13. Requirements
- 14. Market
- 15. Conditions
- 16. Iterative
- 17. Nature
- 18. Ensures
- 19. Adjustments
- 20. Enhanced
- 21. Faster
- 22. Time-to-Market
- 23. Breaking

- 24. Projects
- 25. Smaller
- 26. Manageable
- 27. Sprints
- 28. Accelerates
- 29. Delivery
- 30. Valuable
- 31. Increments
- 32. Customer
- 33. Products
- 34. Features
- 35. Released
- 36. Frequently
- 37. Enabling
- 38. Respond
- 39. Demands
- 40. Promptly
- 41. Improved
- 42. Satisfaction
- 43. Prioritizes
- 44. Collaboration
- 45. Feedback
- 46. Opportunity
- 47. Working
- 48. Early
- 49. Development
- 50. Process
- 51. Needs
- 52. Met
- 53. Enhanced
- 54. Team
- 55. Emphasis
- 56. Teamwork
- 57. Daily

- 58. Standup
- 59. Meetings
- 60. Fosters
- 61. Communication
- 62. Promotes
- 63. Shared
- 64. Understanding
- 65. Goals
- 66. Responsibilities
- 67. Members
- 68. Transparency
- 69. Visibility
- 70. Provides
- 71. Clear
- 72. Progress
- 73. Reviews
- 74. Retrospectives
- 75. Issue
- 76. Detection
- 77. Resolution
- 78. Better
- 79. Risk
- 80. Management
- 81. Identifies
- 82. Addresses
- 83. Risks
- 84. Arise
- 85. Relying
- 86. Long-term
- 87. Predictions
- 88. Approach
- 89. Helps
- 90. Mitigate
- 91. Small

- 92. Manageable
- 93. Quality
- 94. Assurance
- 95. Regular
- 96. Testing
- 97. Checks
- 98. Higher-quality
- 99. End
- 100. Product

... (list truncated for
brevity)

Less ambiguous words (71
words, approximately
22.83% of total):

- 1. Agile
- 2. Scrum
- 3. Chapter
- 4. Key
- 5. Advantages
- 6. Teams
- 7. Can
- 8. Be
- 9. Made
- 10. At
- 11. The
- 12. Of
- 13. Each
- 14. Sprint
- 15. By
- 16. Into
- 17. To

- 18. More
- 19. Have
- 20. See
- 21. Are
- 22. And
- 23. Among
- 24. Through
- 25. This
- 26. For
- 27. As
- 28. They
- 29. In
- 30. With
- 31. Is
- 32. A
- 33. That
- 34. Your
- 35. Here
- 36. Some
- 37. On
- 38. Or
- 39. It
- 40. An

... (list truncated for brevity)

This reassessment demonstrates
that a significant majority of words
can be considered potentially
ambiguous when considering
various contexts and
interpretations. The less ambiguous
words are primarily articles,
prepositions, and basic verbs that
have more stable meanings across
contexts.

To calculate the total number of possible interpretations for the entire text, we can use the multiplication principle of combinatorics. The formula for this calculation is:

$$T = A^n \cdot B^m$$

Where:

T = Total number of possible interpretations

A = Number of potential interpretations for ambiguous words (at least 5)

n = Number of ambiguous words

B = Number of potential interpretations for less ambiguous words (2)

m = Number of less ambiguous words

Given the data from the previous analysis:

n = 240 (ambiguous words)

m = 71 (less ambiguous words)

$A \geq 5$

B = 2

The probability that the most intelligent agile professional on earth will understand exactly the combination that the author intended is **extremely low, approaching zero.**

This conclusion is based on several factors:

1. The vast number of possible interpretations: With 240 ambiguous words having at least 5 interpretations each, and 71 less ambiguous words with 2 interpretations each, the total number of possible combinations is at least 4.1×10^{189} [1]. This astronomical number of potential interpretations makes it highly improbable for anyone to discern the exact intended combination.

2. Subjectivity of interpretation: Probability can be interpreted subjectively, as a degree of belief, which varies from person to person[1]. Even the most intelligent agile professional would have their own subjective interpretation influenced by their experiences and knowledge.

3. Complexity of language: Text complexity is not solely determined by vocabulary and sentence structure, but also by qualitative factors that are difficult to measure objectively[4]. This adds another layer of difficulty in understanding the exact intended meaning.



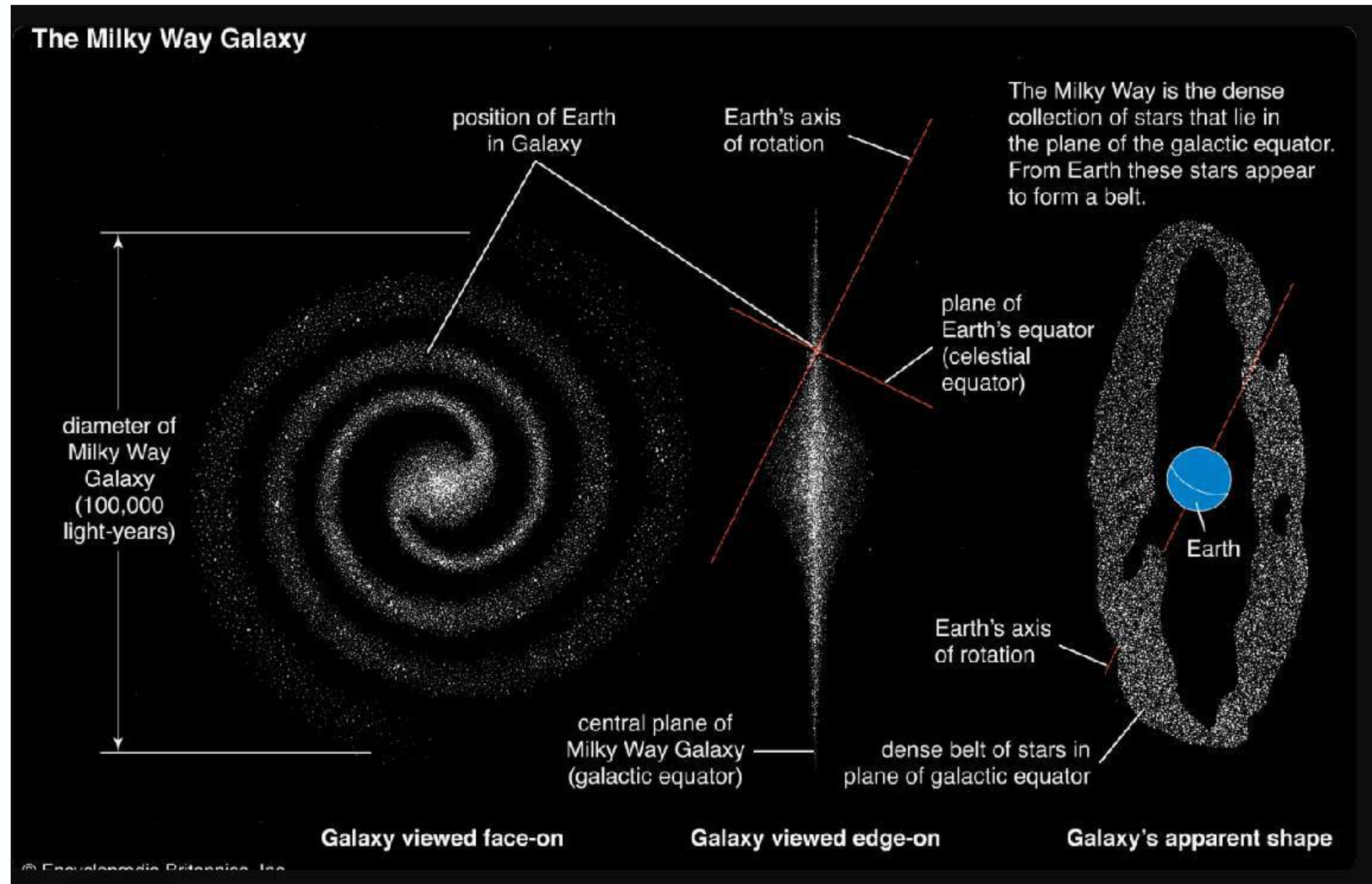
How low probability of Understanding?

The probability of understanding exactly what the author intended is extremely low. Here are a few analogies to illustrate this:

1. It's like trying to guess the exact location of a single specific grain of sand on all the beaches in the world[1].

2. Imagine flipping a coin and getting heads 189 times in a row. The odds of this happening are still higher than understanding the exact intended meaning[1].

3. It's similar to randomly selecting one specific atom from all the atoms in the Milky Way galaxy and guessing its exact location[2].



PERPLEXITY! Give me at least 10 *citations* for real solid case studies from businesses which give measurable business results, as a *direct cause of using agile or scrum*.

Citations:

[1] <https://kvytechnology.com/blog/software/agile-case-studies/>

[2] <https://www.scrum.org/resources/case-studies>

[3] <https://www.scrum.org/resources/blog/depth-evidence-based-business-case-agile>

[4] <https://businessmap.io/blog/agile-companies>

[5] <https://appliedframeworks.com/blog/scrum-case-studies->



Perplexity

Notice that Perplexity is so dumb that it does not know what a citation is, nor what '10' at least, means

Here are 10 citations for real case studies from businesses that demonstrate measurable business results directly attributed to using Agile or Scrum methodologies:

1. Akbank, a major Turkish bank, implemented Scrum across 143 teams involving 950 people. This led to increased efficiency and customer satisfaction in their digital banking initiatives[1].

2. Salesforce adopted the Scrum of Scrums approach, which enhanced project results, reduced duplicate efforts, streamlined communication, and minimized project delivery times[1].

3. Redgate Software's transition to remote work in 2020 was seamless due to their 15 years of Agile experience. They maintained workflow continuity and on-time delivery of reliable product solutions during challenging times[1].

4. Boa Vista, a Brazilian credit bureau, implemented Kanban to break down work into value-stream-oriented departments and product-oriented teams. This resulted in greater visibility across teams, reduced waiting times, and improved workflow performance[4].

5. PayPal initiated a large-scale Agile transformation across 3,500 employees in 40 offices worldwide. This led to better customer focus, clear product ownership, and optimized dependencies management[4].

6. Hospital Sírio-Libanês in Brazil used Scrum to drive its agile transformation across departments and pivot during the Covid-19 pandemic, reducing losses and expediting critical services[2].

7. Philips leveraged both Scrum and Liberating Structures to help teams navigate challenges more effectively, from small to complex issues[2].

8. Sto, a building materials company, partnered with Amazing Outcomes to enhance its B2B online shop using Scrum. In just six weeks, they developed a mobile app that increased user engagement and ROI[2].

9. Intralinks successfully implemented a "Scrum Reboot" after an initial mechanical implementation

Case 7: More words, no data, no facts, nothing to prove anything. AKA BS

<https://www.linkedin.com>

In today's fast-paced and ever-changing business landscape, organizations across industries are increasingly turning to Agile methodologies like Scrum to drive innovation, enhance collaboration, and deliver value to customers. While the principles of Scrum may sound promising in theory, many organizations are eager to see real-world examples of its application and success. In this article, we'll explore some compelling case studies and success stories of organizations that have implemented Scrum and achieved remarkable results.

1. Spotify: Scaling Agile with Tribes and Squads

One of the most well-known examples of Scrum in action is Spotify, the music streaming giant. Spotify adopted a unique Agile framework known as the "Tribes and Squads" model, which allows teams to operate autonomously within larger organizational units called tribes. Each squad follows Scrum practices, such as short iterations, cross-functional teams, and continuous delivery, enabling rapid innovation and experimentation. This decentralized approach to Agile has allowed Spotify to scale effectively while maintaining a high level of agility and innovation.

2. Salesforce: Accelerating Innovation with Agile

Salesforce, a leading cloud-based software company, has successfully implemented Agile practices to accelerate its product development cycle. By adopting Scrum practices such as sprint planning, daily stand-ups, and retrospectives, Salesforce has been able to maintain its position as a market leader while delivering new features faster. By implementing Scrum practices such as sprint planning, daily stand-ups, and retrospectives, Salesforce has been able to maintain its position as a market leader while delivering new features faster.

3. GE Aviation: Transforming Product Development with Agile

GE Aviation, a division of General Electric, has successfully implemented Agile practices to transform its product development process. By adopting Scrum practices such as cross-functional teams, backlog prioritization, and frequent feedback loops, GE Aviation has been able to remain competitive in a highly competitive market. By adopting Agile practices such as cross-functional teams, backlog prioritization, and frequent feedback loops, GE Aviation has been able to remain competitive in a highly competitive market.

4. Adobe: Driving Customer-Centric Innovation with Agile

Adobe, a global leader in digital marketing and media solutions, has embraced Agile methodologies to drive customer-centric innovation across its product portfolio. By adopting Scrum practices such as user story mapping, iterative development, and continuous integration, Adobe has been able to rapidly iterate on its products, incorporate customer feedback, and deliver features and updates that meet the evolving needs of its users. This customer-centric approach has enabled Adobe to maintain its position as an industry leader and drive continued growth and success.

5. Zappos: Cultivating a Culture of Agility and Adaptability

Zappos, the online shoe and clothing retailer, has cultivated a culture of agility and adaptability by embracing Agile principles and practices throughout its organization. By implementing Scrum practices such as self-organizing teams, iterative development, and cross-functional collaboration, Zappos has been able to respond quickly to changes in customer preferences, market trends, and competitive pressures. This culture of agility has allowed Zappos to stay ahead of the curve in the highly competitive e-commerce industry and deliver exceptional value to its customers.

Conclusion:

These real-world case studies and success stories highlight the power of Scrum in driving innovation, enhancing collaboration, and delivering value to customers across a wide range of industries. By embracing Agile methodologies and adopting Scrum practices, organizations can streamline their development processes, improve collaboration among teams, and respond more quickly to customer feedback. As demonstrated by these success stories, Scrum is not just a theoretical framework—it's a proven methodology that can drive tangible results and fuel business growth in today's dynamic and competitive marketplace.

Scrum has changed from its friendly Rugby origins! Now it will attack your projects!



image by freepik

Scrum in Action: Real-World Case Studies and Success Stories

Zohaib Hasan Nizami,
PMP®
Technical Project
Manager | Business...



April 30, 2024

I picked one of the Perplexity citations (7) at random. As you can see bullshit is built upon unsubstantiated bullshit.

Do you think a university
Would grant a degree
For this 'masters thesis'?

No data !
No correlation!

Case 7: More words, no data, no facts, nothing to prove anything. AKA BS

<https://www.>

In today's fast-paced world, innovation, enhance productivity, and see real-world examples of Scrum implemented in various industries.

1. Spotify: Scaling Agile with Tribes and Squads

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Conclusion:

These real-world case studies and success stories highlight the power of Scrum

changed from its rugby origins! Check your projects!



by freepik

Real-World Case
Success Stories



Perplexity citations (7)
you can see bullshit
substantiated bullshit.

link a university
grant a degree
masters thesis'?

no data!
correlation!

What is *your* 'priority' ?

To Be Agile, or to 'Deliver Value' ?



“ Choice of aim
is clearly a matter of
clarification of values,
especially on the
**choice between possible
options.”**

W. Edwards Deming

- What if I told you that I can help you to deliver great value to your organization
 - WITHOUT ANY 'AGILE' ?
- OR
 - You can do perfect 'Agile'
 - But will deliver the wrong value
 - And Not deliver the *right* Values?
- Be bold, be courageous
 - Choose relevant *Business Value* delivery (not 'code')
 - over
 - Agile, with no strong relevant business results
- All 'agile' *pumps out some* 'results'. BUT
 - Are they the *right* ones , and *clear*, not BS

<https://doi.org/10.13140/RG.2.2.23850.63685>
- For your stakeholders?
<https://tinyurl.com/StakeholderBook>

When I used to take Dr. Deming
to the London Ballet (and dinner)
We agreed that it was not the agile
dance

It was our personal subjective joy
at the qualities of the performance



Do you and I have a shared understanding of the meaning of **‘values’** ?

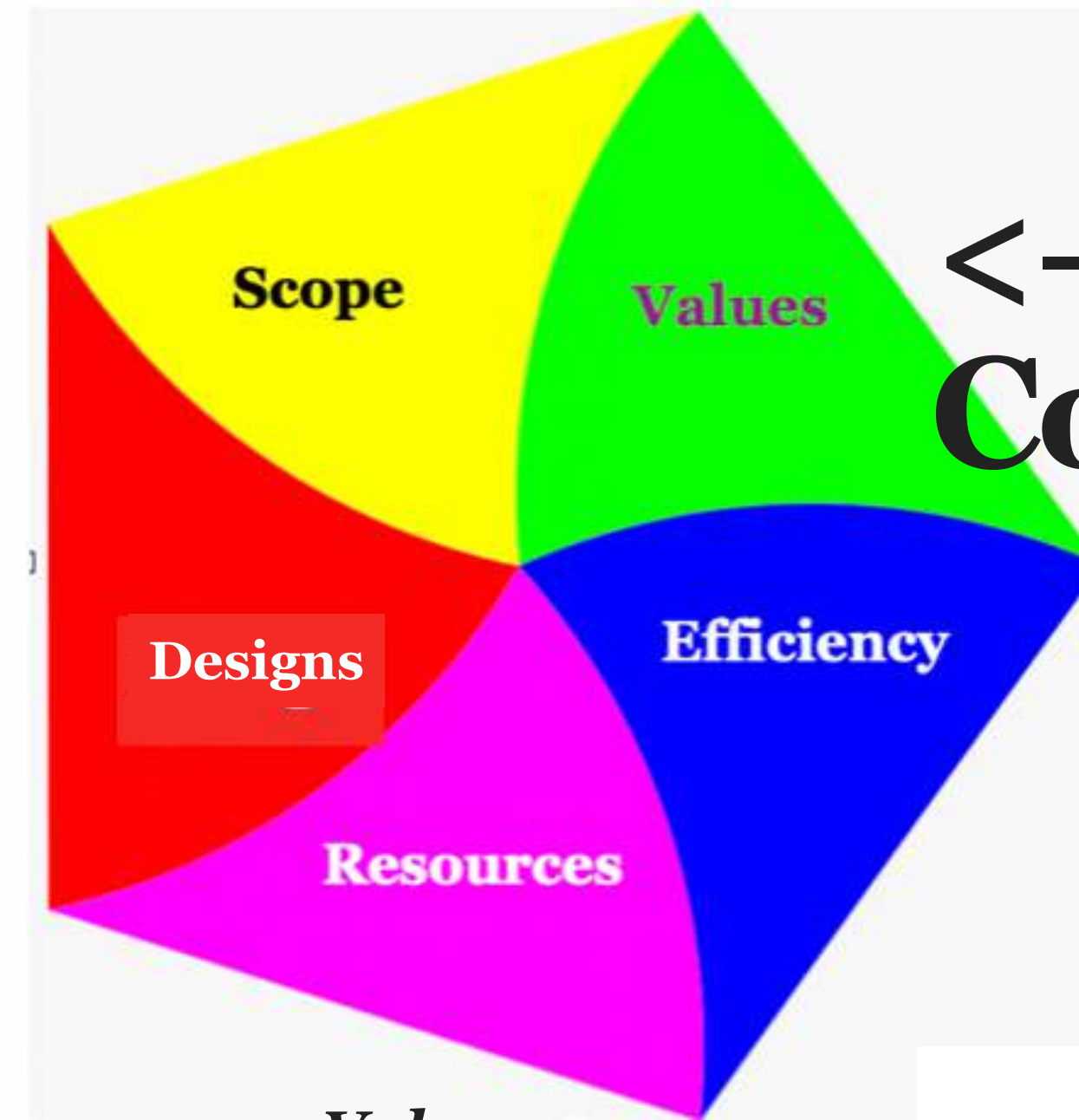
I doubt it. So here is *my* understanding
(I will respect your definition if I get it in writing)

- **Values** are **NOT**

- Just financial \$\$\$\$\$\$
- Just users and customers
- Just one ‘main’ objective
- About ‘maximizing’ anything
- About code and programming

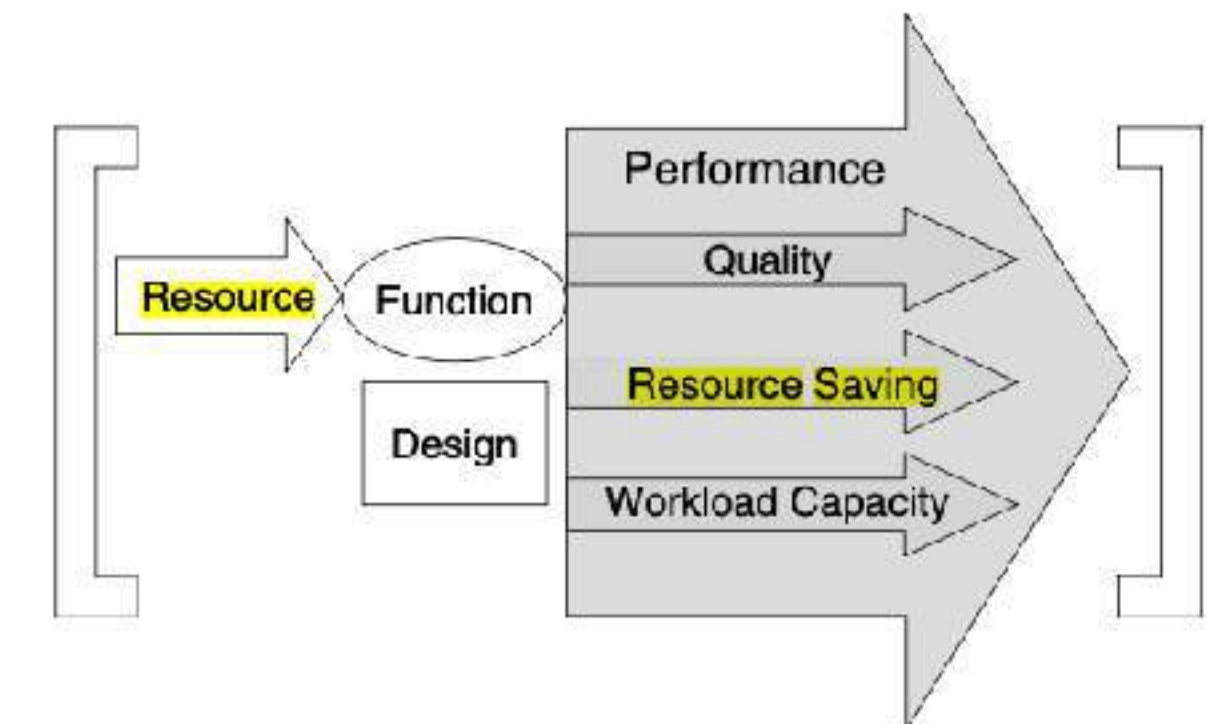
- **Values** are

- Derived from *mutiple* stakeholders
- Are *balanced* with each other [Optima]
- And with resources
 - And are in constant motion
OPTIMA : Balancing Critical Values"
https://www.researchgate.net/publication/382649938_Optima Are predominantly about qualities
 - And ‘quality’ values are not only ‘bug freeness’
 - they are all the ‘-ilities’. And more
 - And qualities and other values are not ‘soft’ or ‘non-functional’
 - They are *quantified, engineered, designed in*
- *Values* are about the system level (hardware, dataware, peopleware, even software too)



← **Values Components**

*Values are anything ‘valued’
(desired, wished for)
by some stakeholder*



Source Competitive Engineering, Fig. G12.. This is for ‘performance attributes’, which is a synonym for ‘Values’ used by systems engineers. The [Square Brackets] are the Planguage icon for ‘Constraints’. [CE book]

<https://tinyurl.com/PentaPaper>



Bent's 99.5% Failed Projects



If 99.5% of 16,000 projects fail in deadlines, budgets, and benefits

What % of these projects used Agile?

I mean, now that *'everybody' is 'agile'*

Bent's 'Iron Law of Megaprojects'

“Over time, over budget, under benefits, over and over again”. (2017)

- * He further argues that in order to matter, the social sciences must inform practical reason, instead of abstract rationality. This is best done by a [focus on values](#) and power in actual human decision making, according to Flyvbjerg.
- * Flyvbjerg shows that a root cause is that competition between megaprojects and their sponsors creates biases rooted in political and organizational pressures that lead to the consistent overestimating of project benefits and the underestimating of project costs.
- * The best megaprojects do not get implemented, but rather the ones that look best on paper.
- * Flyvbjerg argues that the ones that look best on paper are the ones for which *costs and benefits have been misrepresented* the most, either deliberately through strategic misrepresentation (political bias), or non-deliberately through optimism bias (psychological bias) or, typically, through a combination of both.

***He identifies three antidotes to the Iron Law:**

- *(a) Realistic planning, including de-biasing of all cost, schedule, and benefit estimates;**
- *(b) High-quality delivery teams; and**
- *(c) Governance structures with incentives for realistic plans and for delivering those plans to time, budget, and benefits;** and with *early-warning-sign systems to immediately capture and act on things that go wrong*, which they invariably do in megaprojects, due to their sheer size and complexity, according to Flyvbjerg

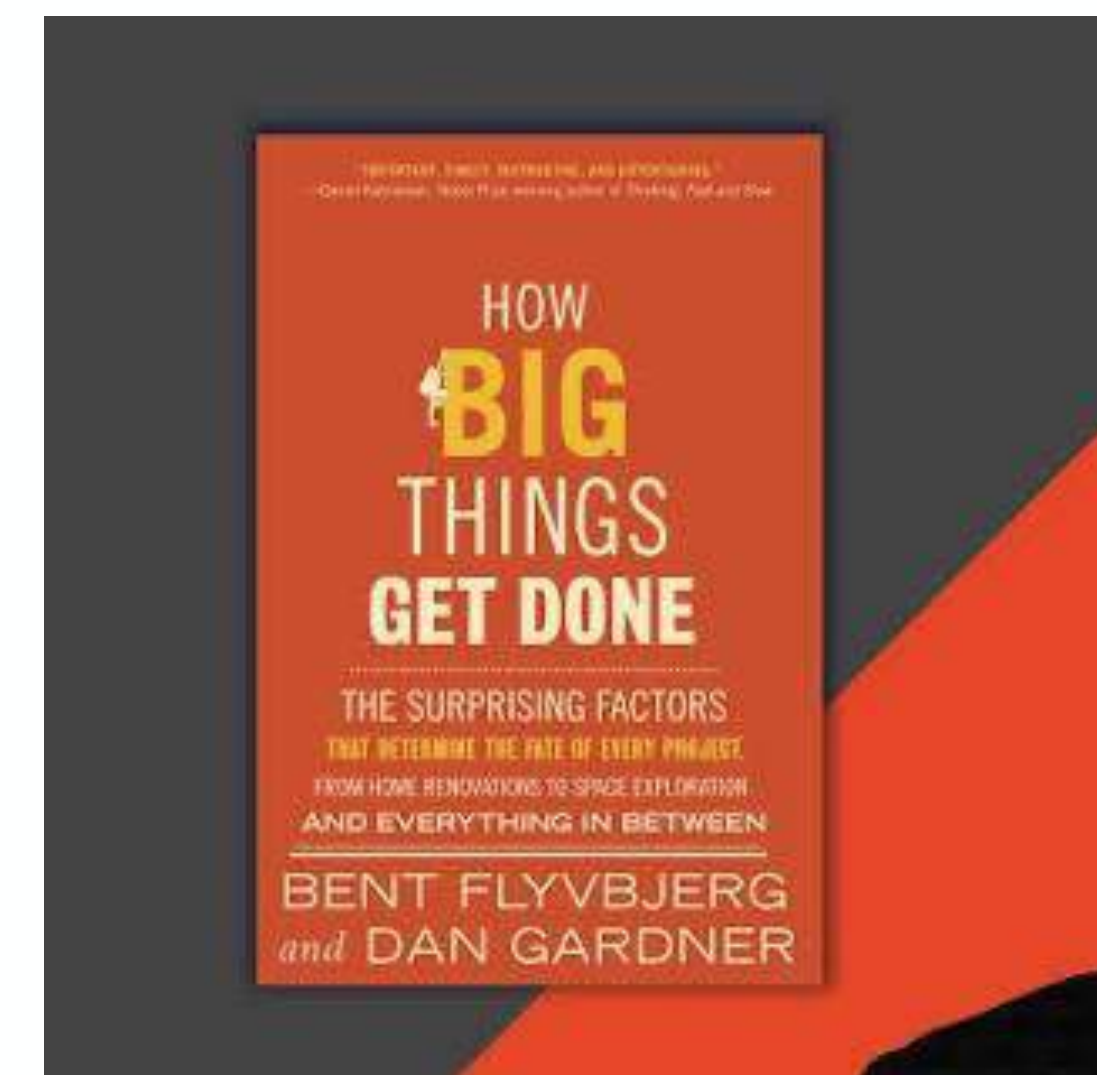
* from wikipedia https://en.wikipedia.org/wiki/Bent_Flyvbjerg

* <https://hbr.org/2023/01/how-frank-gehry-delivers-on-time-and-on-budget>

* HIS PROJECT DATABASE

(16,000 Projects) Only 8.5% of them were delivered on time and on budget, while a nearly invisible 0.5% of projects were completed on time and on budget and produced the expected benefits. To put that more bluntly, 99.5% of large projects failed to deliver on time, under budget, and expected benefits.

Bent Flyvbjerg



“..early-warning-sign systems to immediately capture and act on things that go wrong,#



Tom's Note:
It is about
'efficiency'
Aka 'Profit'

*It's the **Benefits**, Stupid!*
“But the ultimate reason for doing projects is their benefits.” BF

Bent Flyvbjerg



•“A project leader pointed out that project teams and owners focus too little on the benefits of their projects and too much on costs and schedule.

•It's not that cost and schedule are not important, emphasized this leader.

•But the ultimate reason for doing projects is their benefits.

•Cost and schedule are means to an end -- the end being benefits -- not ends in themselves.

•We must therefore keep our eyes on the benefits, or we lose sight of why we do what we do, the leader concluded. --

•Again, the cohort was sympathetic.

•And again, our research supports the heuristic. (I assume the 16,000 project database, TG)

•First, we have found that most projects don't even measure benefits, making their study difficult.

•Second, project managers who do measure and manage benefits perform better than managers who do not.

•Not only do these managers perform better in delivering benefits, but also in delivering on budget and on time.

•It appears that once project managers know how to get benefits right, they know how to get everything right.

•They have graduated to the level of the mature and effective project leader.

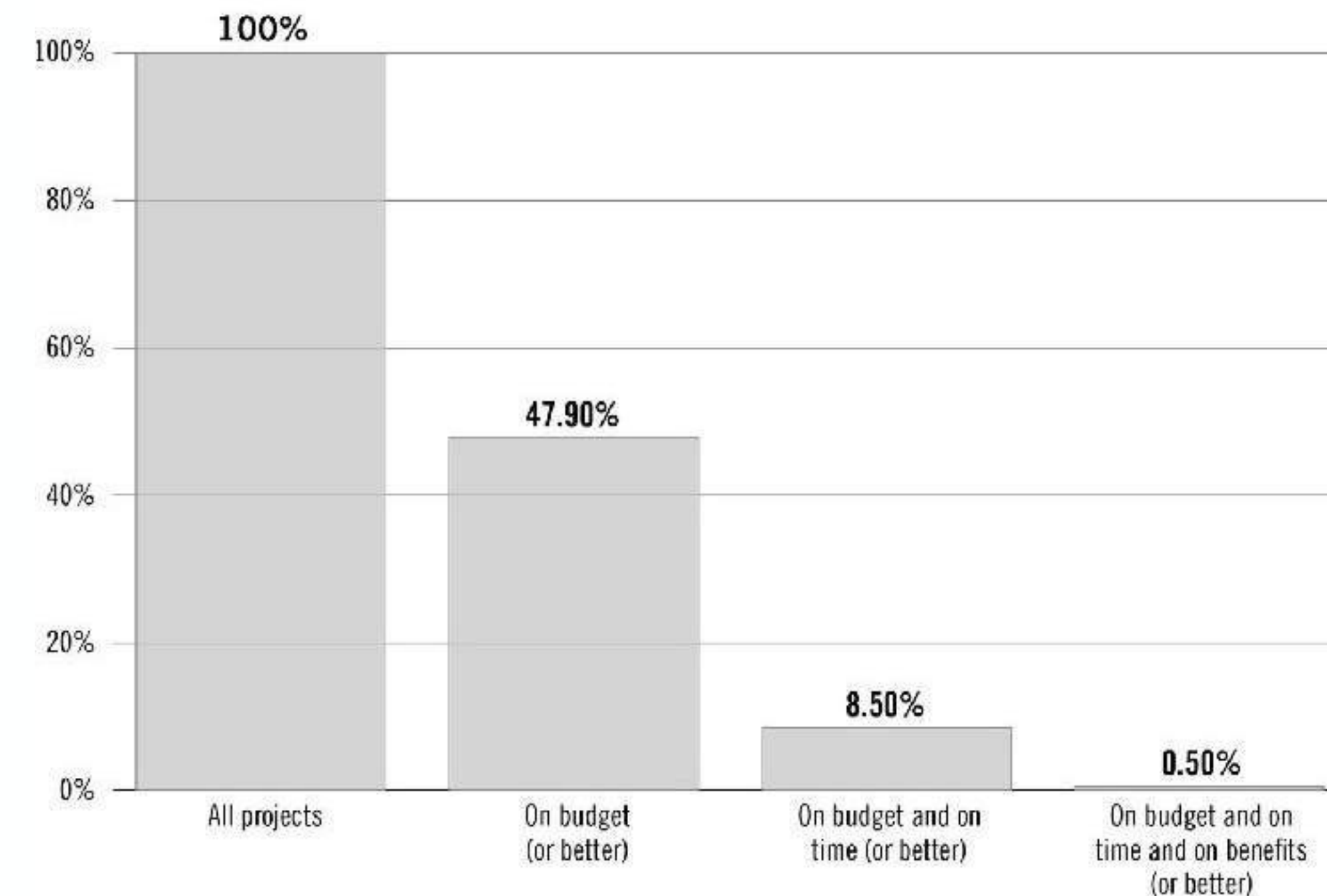
•Therefore, if you don't already focus on benefits in your projects, now is a good time to start.

•You will not truly master project management until you do”.

$$\text{Eff} = B / (t \ \& \ \$)$$

THE IRON LAW OF PROJECT MANAGEMENT:

“Over Budget, Over Time, Under Benefits, Over and Over Again”



[Value First]

16,000 project base, (Flyvbjerg)

Well, I can rephrase the question

What % of the 0.5% fully successful projects, used 'agile', or 'Scrum'

And what did the 0.5% do, to make them uniquely (1 in 200) successful?

Short answer: hard professional work, focussed on critical values

Bent Flyvbjerg

No Scrum at all ever, mentioned

Maybe *some* form of agility, but NOT *your* type.

Of course, that 'professional effort' is *too much* for the agilist.

They want to 'learn it all' in 2 days. Make it *easy*,

rather than 'successful, at delivering value in *practice, measurably*'



Value/Result 'Quantification, is *such* an 'alien discipline' for coders, it seems.

But maybe good coders are the wrong people to deliver real stakeholder value: even with a PO Certificate proudly displayed on their LinkedIn.

My (free) methods for delivering values

And finally My own
ideas

Planguage

Evo

Early Value
Optimization

Agile Engineering

Gilb's Golden Gun

Our Method is a Silver Bullet, or Maybe a Golden Gun?



Silver Bullet



Golden Gun

Pdf Folder: <https://tinyurl.com/GilbsGoldenGun>

tom@Gilb.com Start 19 Aug 2024, 18:45, Digerud



GG Components

<https://tinyurl.com/GilbsGoldenGun>

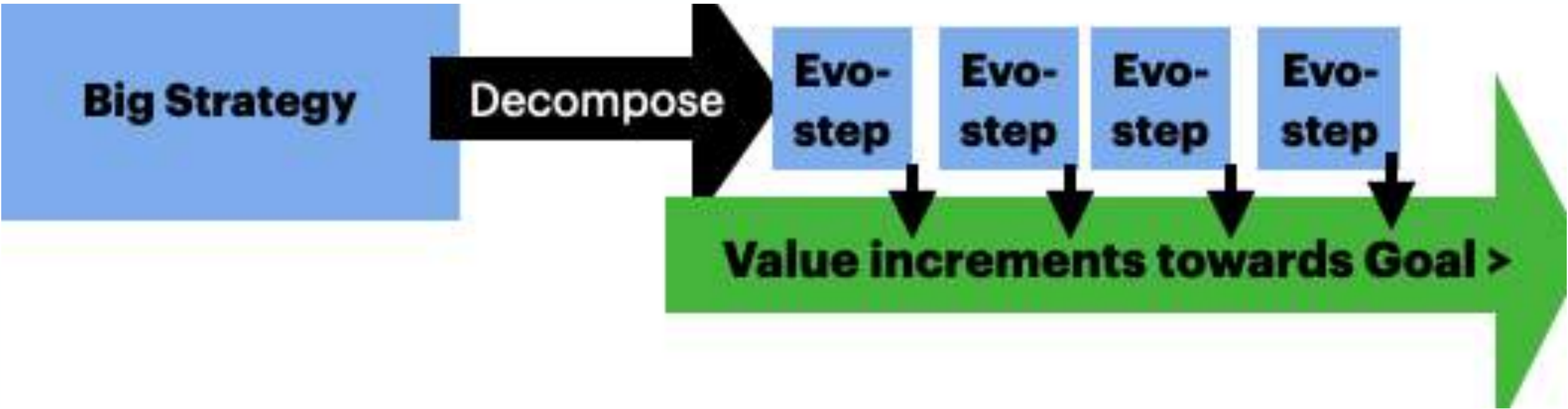
FREE COPY:

<https://tinyurl.com/EVOdbx>

Agile as it should have been

EVO

Evolutionary Value Optimization



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Evo: Evolutionary Value Optimization

<http://leanpub.com/evo/>. \$5 to \$1.

Start Monday 2nd September 2024 16:27, 1ST DRAFT (292 PAGES) done 3 Sept 04:13 (by copying from my other 2024

16 Years after my initial 'agile' projects (in 1960),
I generalized my experience in 1976 in print.

'On step-results measurement, and retreat possibility'

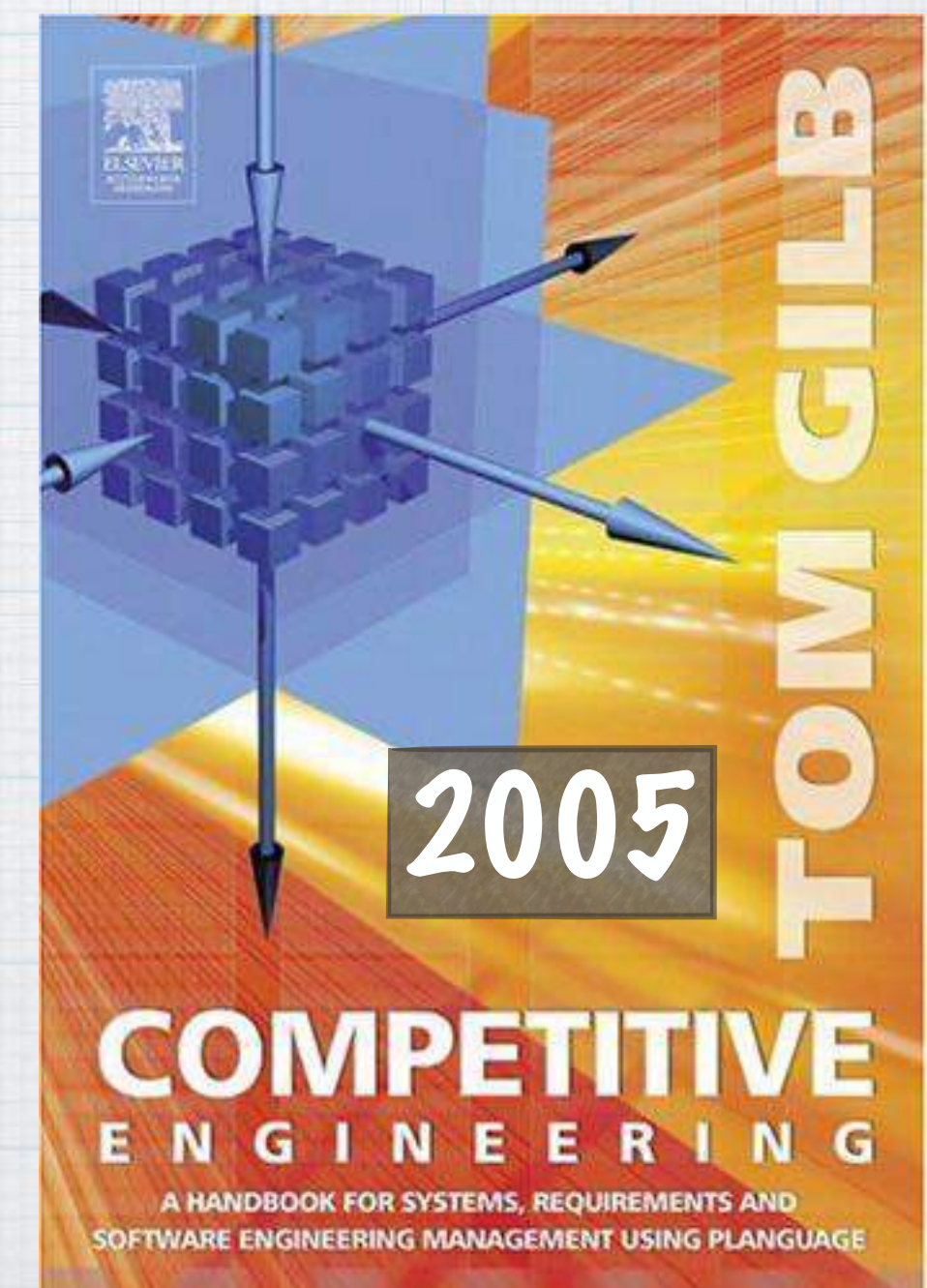
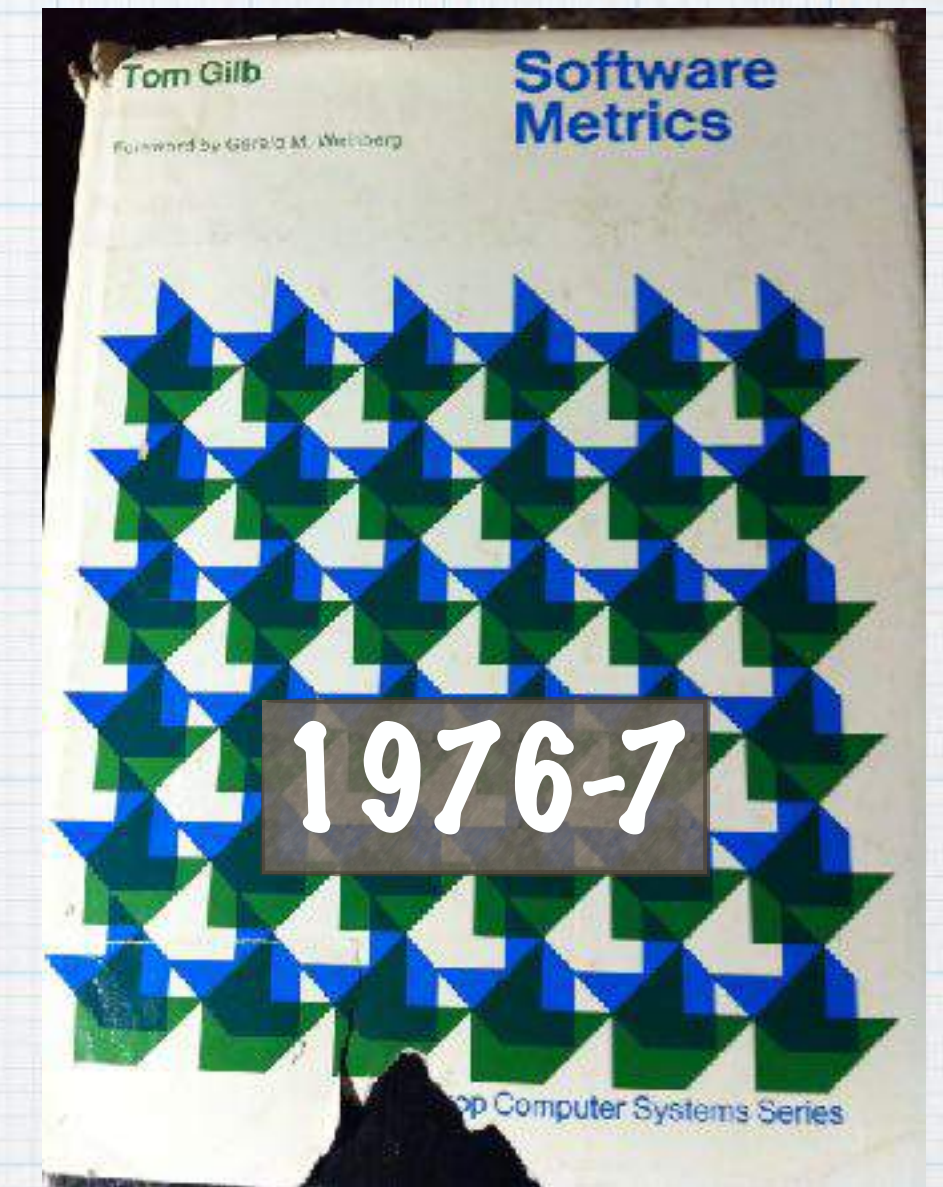
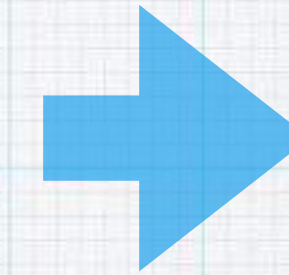
'A complex system will be most successful
if it is implemented in small steps
and if each step has a clear measure of
successful achievement
as well as a "retreat" possibility to a
previous successful step upon failure.'

Source: (p. 214), Software Metrics [SM] 1976-7.

And also later quoted in [PoSEM] 1988 Evo History Ch. 15,
and as Evo Chapter 10 in [CE] 2005

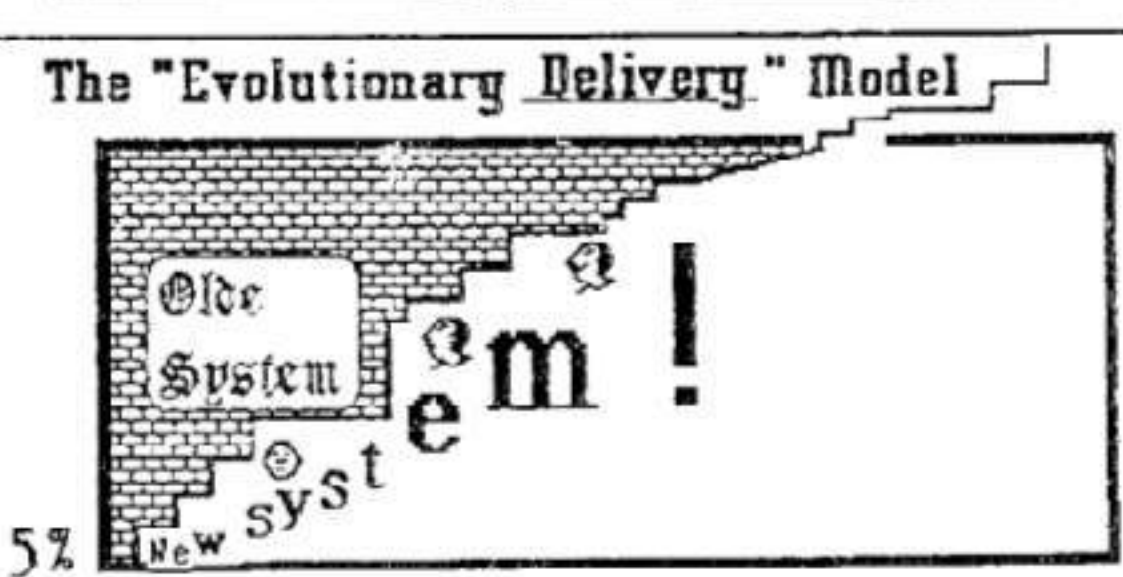
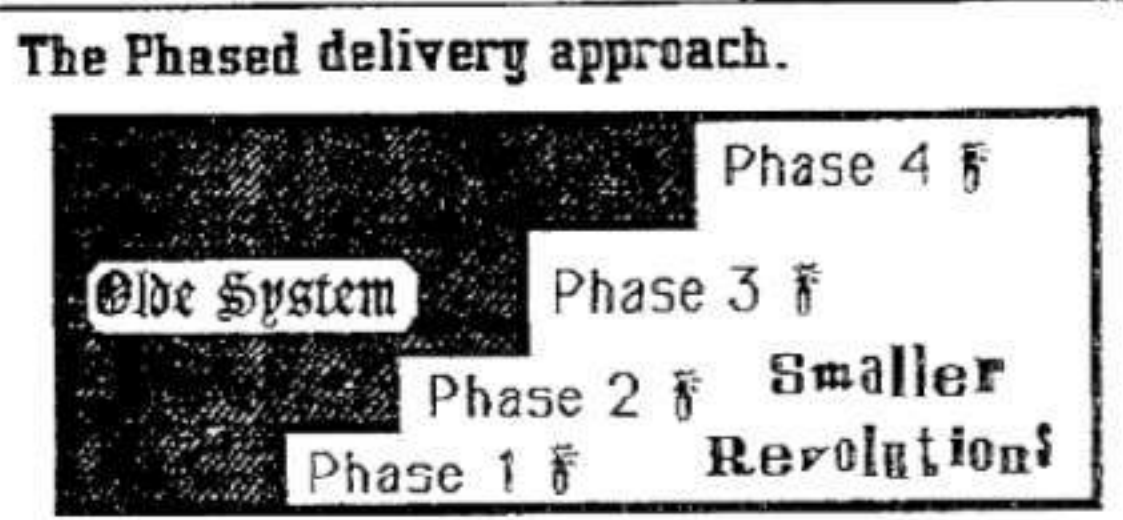
See this Presenter Note for more detail, or ask me tom@Gilb.com

I was 35 years old when this was published. I had 16 years 'agile' (or 'Evo', 'deliver value to stakeholder in small increments, measure value and retreat if necessary') experience by then (from 1960 Dobloug Case, and UiOslo Publisher/Admin (1968) etc).

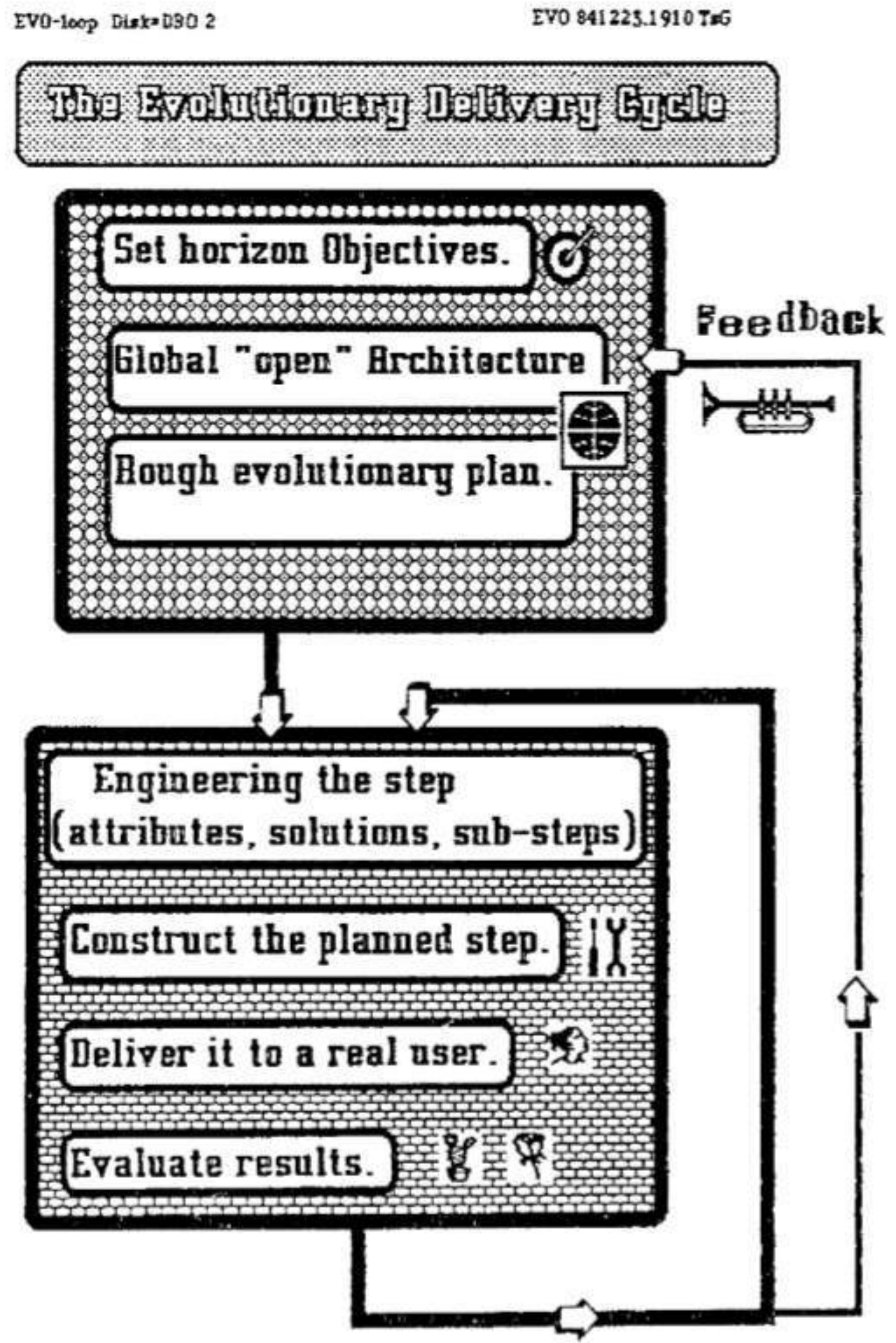


1.2 Early Publication in Journal (ACM SEN [Evo1985])

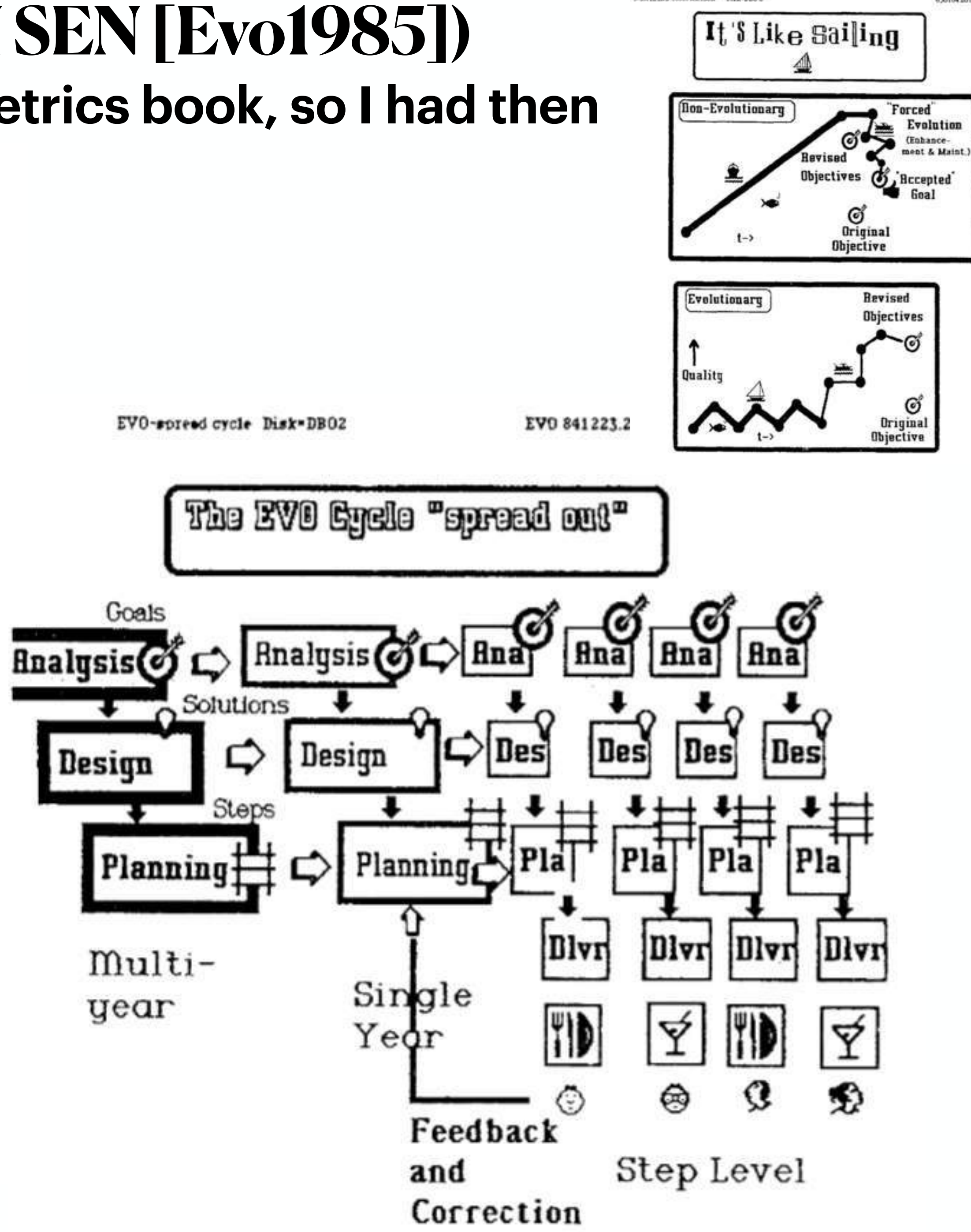
But notice this is 9 years after my 1976 Software Metrics book, so I had then



Notice a subtle detail here. We start with the Old system, and through an incremental process of improvement, we deliver the 'new system'



And yes I was an early Apple Mac user



Principles of Evo

Source [CE] 2005 Evo Chapter 10

1. The Principle of 'Capablanca's next move'

There is only one move that really counts, the next one.

2. The Principle of 'Do the juicy bits first'

Do whatever gives the biggest gains. Don't let the other stuff distract you!

3. The Principle of 'Better the devil you know'

Successful visionaries start from where they are, what they have and what their customers have.

4. The Principle of 'You eat an elephant one bite at a time'

System stakeholders need to digest new systems in small increments.

5. The Principle of 'Cause and Effect'

If you change in small stages, the causes of effects are clearer and easier to correct.

6. The Principle of 'The early bird catches the worm'

Your customers will be happier with an early long-term stream of their priority improvements, than years of promises, culminating in late disaster.

7. The Principle of 'Strike early, while the iron is still hot'

Install small steps quickly with people who are most interested and motivated.

8. The Principle of 'A bird in the hand is worth worth two in the bush'

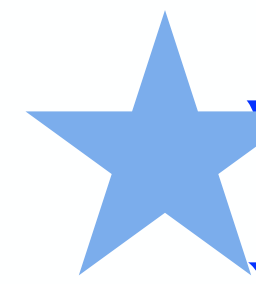
Your next step should give the best result you can get

9. The Principle of 'No plan survives first contact with the enemy'

A little practical experience beats a lot of committee meetings.

10. 'The Principle of 'Adaptive Architecture'

Since you cannot be sure where or when you are going, your first priority is to equip yourself to go almost anywhere, anytime.



The **EVO** Process, the One-Page Summary

A Systems Engineering Process For incremental value delivery management

A PLANNING CYCLE

Clarify your environment: critical-stakeholders' territory

1. **STAKEHOLDERS:** Identify *critical stakeholder's* and their critical **values**
2. **VALUES:** Quantify and **clarify** your *project's* critical values: what *degree* of values do you expect the design to deliver, to which stakeholders
3. Identify design **constraints**: legality, political, cultural, policy, other plans
4. Identify design **resource-limitations**: time, money, operational costs for example.

Design (Solutions): Architecture Level

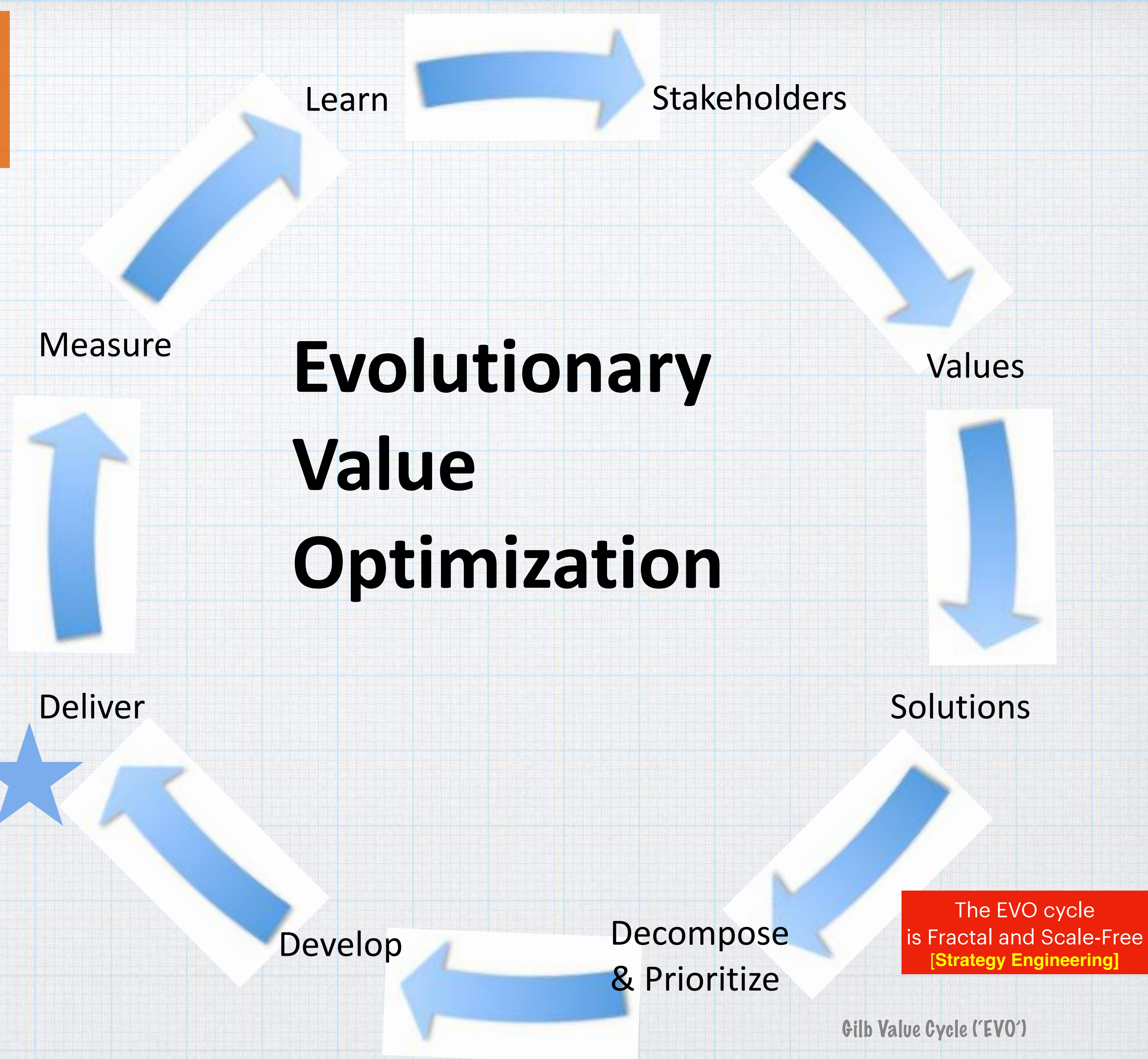
6. **SOLUTIONS:** use the many Value and Resource requirements, AS EXPLICIT TOOLS, to find solutions, to deliver Values, within constraints. Aka Designs, Strategies, Architecture
7. **DECOMPOSE:** Decomposition of top-level architecture into design components
8. **PRIORITY:** Identification, *detailed* specification and *prioritization* of top-level architecture, and of any *decomposed* design solutions..

A VALUE DELIVERY CYCLE: An 'Evo-step'.

9. The **Evo Value delivery steps** (for example, a week, or 2% of total project budget)
 1. Select your highest **priority value**, and the most-critical scale-parameter attributes (*the who, what, where, when - slices of reality*).
 2. **DEVELOP:** Find a design component which will deliver good **value-for-resources** to your critical priority requirements.
 3. Ready the design-component for delivery: for **integration to the existing system**.
 4. **DELIVER:** Deliver the design component to the **real system**
 5. **MEASURE:** Measure the results (values and costs) of the design increment
 6. **Dynamic-Design-To-Requirements:** If results are **not OK**, attempt design improvement, and redeliver.
 7. **KEEP CYCLING:** If results are **OK**, then **repeat** this 'value delivery cycle', scale up, until 'done'.

Project Completion: All Value is delivered

10. **DONE?:** When **all value requirements** are reached, or when all **critical resources** are used up. Stop.



Gilb Value Cycle ('EVO')

Copyright 2020 kai@gilb.com

Principles of Evo Measurement (2007 TG)

Principles of Evo *Measurement*

1. Perfect accuracy is Not necessary. Keep it simple – but get feedback enough to get confidence that you are moving forward

2. order of magnitude accuracy is usually enough

3. let the measurement be done by domain experts

4. *design* the initial measures to fit within the week cycle (design to cost

5. you can refine measurement accuracy in the backroom (after evo step delivery)

6. sampling is a good way to reduce the cost of measurement

7. when final indicators would take too long, use early indicators

8. if necessary use multiple parallel measuring processes, to increase confidence

9. final acceptance test measures can differ from (more costly, more confidence) initial weekly cycle measures

10. measures should as far as possible reflect the stakeholder results

The sub-solutions are
measured as to effect
on
all the
top
stakeholder
critical
objectives,
and
on their critical cost
increments,
with a view to improving
prediction of
final cumulative costs

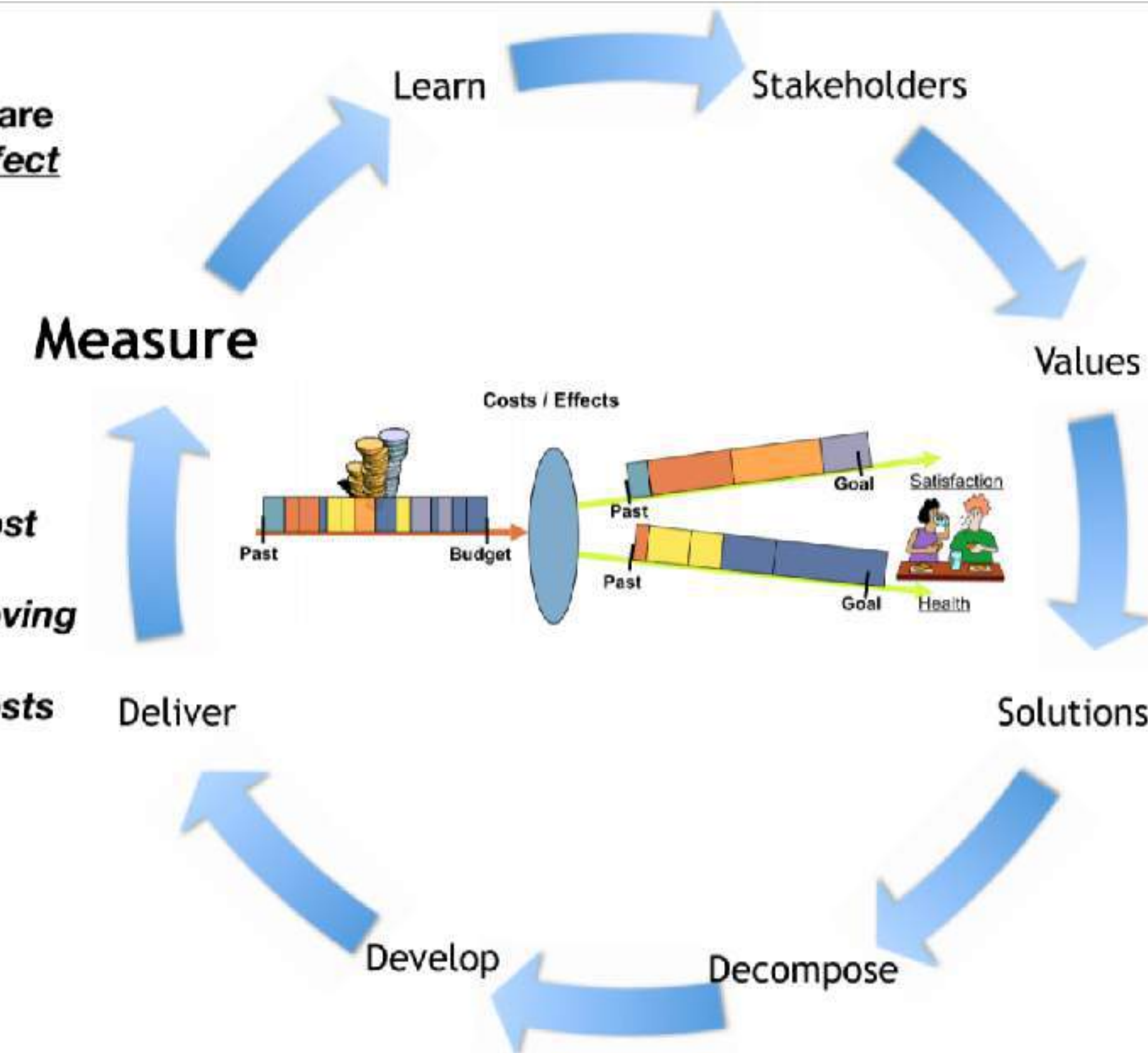


Figure: 4.7 The Gilb Evo 'Value Delivery' Cycle. Courtesy Kai Gilb.

Evolving from an Existing System

Compare to: Ansoff: Idealized Design,

Should you start from an existing system, or from scratch with a 'clean slate' ?


If at all possible, your early Evo steps should be taken, on an *existing* system, but there might exceptions, and combinations

Notice I did not say YOUR existing system, because maybe you re a new startup and there is no history. But you can probably find something out there, an existing product or service that you can use as a base.

I think it is tempting to ignore the awful old system. But I do not think that is a good idea. There are many good reasons for this. But they vary a great deal, according to your exact circumstances.

1. The Base System might already have a 'market', they just need to convert to your higher value product or service.

2. You can get going much earlier with results, because the Base System already exists, You just have to make each increment improve values and costs. You do not have to build the base system first. That is non-productive- You need to focus on value improvement, values first, not construction of a framework, that already exists! You cannot get high value prioritization when there is no incremental value.

 **3. This approach forces the developers to recognize they are dealing with a multi-faceted live system, with all stakeholders, and to experience the base system 'culture'.**

4. You can focus on improvements, not exiting base systems.

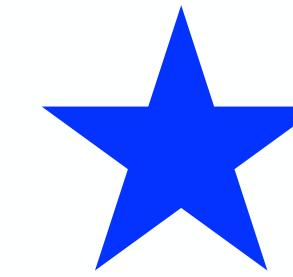
5. Be aware that there are several forces of evil that will try to get you assume you have to build a new system, at great cost. These are the usuall suspected consultants, and hardware suppliers. Sometimes even internal people who want a big budget, and the power that come with it. They will make plausible arguments. Some of them have decades of lying experience, and decades of false credibility. Get yourself consultants who will seriously discuss short term continuous improvements. [Twelve Tough] .

6. Of course, in the long term, you will maybe replace all hardware and software, and production supply chain, and organization: nBut, why not get early proven results for 5 years, and avoid a big failure project blackening your personal reputation and career?

7. I have analyzed a large number of big failure projects [Akson] and every one of them has exactly this big bang problem. My 'Evo' Method has no such problem! The reason is that if you encounter one or more steps that cannot do what you plan of value and costs, you stop and fix it, or you stop. But there is still a working system in place to revert to, maybe with 50 weeks steps of improvement behind it, that first year. I remind your of [Flyvbjerg] 16,000 projects, 99.5% failure . Obviously the traditional project management methods are not

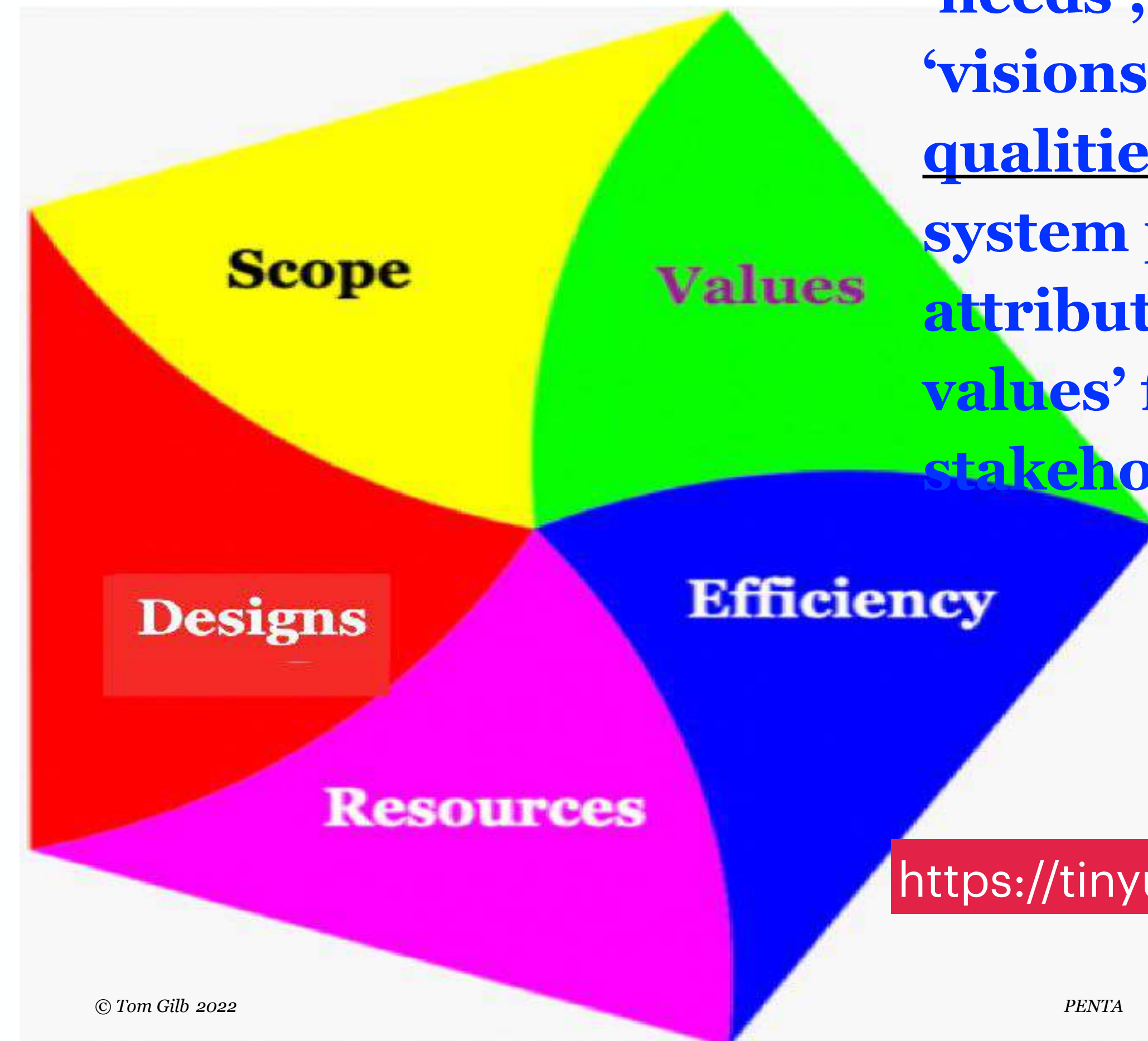
Stakeholder Values First [Value First] The 'Penta' model

Improving Stakeholder Needs [Stakeholder Engineering]



Values: is the specified set of stakeholder values ('wants', 'needs', 'wishes', 'visions') and system qualities, including system performance attributes ('*potential values*' for stakeholders).

- **Values:** the word 'Value' can easily trigger a notion of *financial* value.
- But we use it to describe any **stakeholder** values.
- And in particular, in this book, we are concerned with stakeholder 'values' of *any* kind
 - We are, for example, interested in values that help the less-advantaged, less wealthy humans. [Startup]
 - For example in health, education, food, climate, children, families, war-affected, and economics.



<https://tinyurl.com/PentaPaper>

Control over the Value Improvement Effort

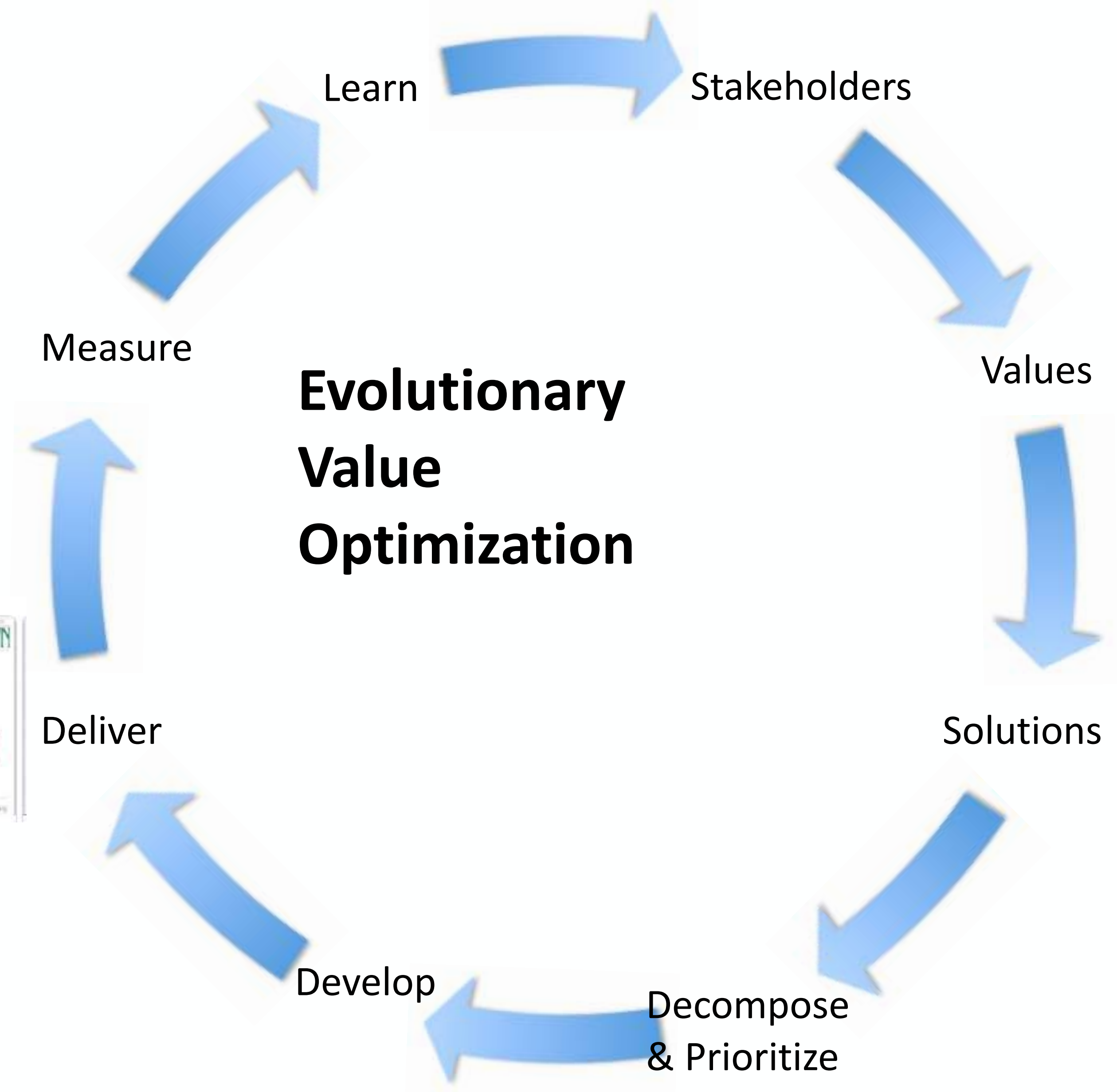
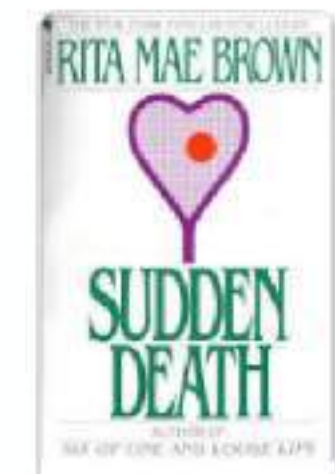
Sensing Problems Early

- The Evo-cycle, plus the 'quantification' of Values, is the key to sound management, of your project.
- The Evo-cycle frequency is the key to *this*. A reasonable cycle for most purposes is a *week*. ± 6 days (or more, it varies)
- That means that we are going to get *some* feedback, some *measures* and complaints, every week, all year long, 50 times a year
- If that feedback is 'negative', we need to do something about it, and try again.
- Like in scientific experiments, and in engineering.
- If the negativity persists (no value, negative values, costs mounting), then, at what point should you give up, and admit you do not know what you are doing?

'Insanity is doing the same thing over and over again and expecting different results.' (R M Brown), 1983

- ★ **An Evo-step is not merely a work cycle. It is an implementation of a strategy or solution in a real system.** Perhaps under safe conditions. But with feedback from *reality*. And the intent, always, to deliver some value.

- This is similar, in spirit to, but *very* different from, Lean Startup, asking people in street if they will buy a product that does not exist yet.
- So we cannot waste too many weeks of resources, figuring out that we are wasting our time, and something big has to change (Pivot) or we have to stop wasting resources. [Evo Week]

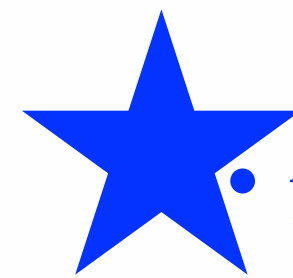


Pivoting

A Major change in your project

- When the 'Evo feedback' signals (in Measure, Learn) tell you things are just not working: or bad value improvement, or bad costs and efficiency: then you should *not* persist insanely. You need to Pivot or stop.
- Stopping the project is drastic, and Pivot is generally a better possibility. So try a Pivot *first*.
- What is Pivot in practice?

• <https://blog.hubspot.com/sales/pivot-startup>



1. Changes to any set of 'requirements' (ends)

- 2. Changes to any set of solutions (means)
- 3. *Both*, New Values/Budgets, and corresponding new strategies to meet them.
- For example: you might decide that you were 'too ambitious' and then you '*reduce a Value from 99% to 80% with a 3 year deadline for delivery*'.
- This might make the 'necessary strategies' possible, *at all*, or in the short term. And moving from 40% to 80% is great, compared to *trying* to move to 99%, and totally failing.

Evo Pivot Area

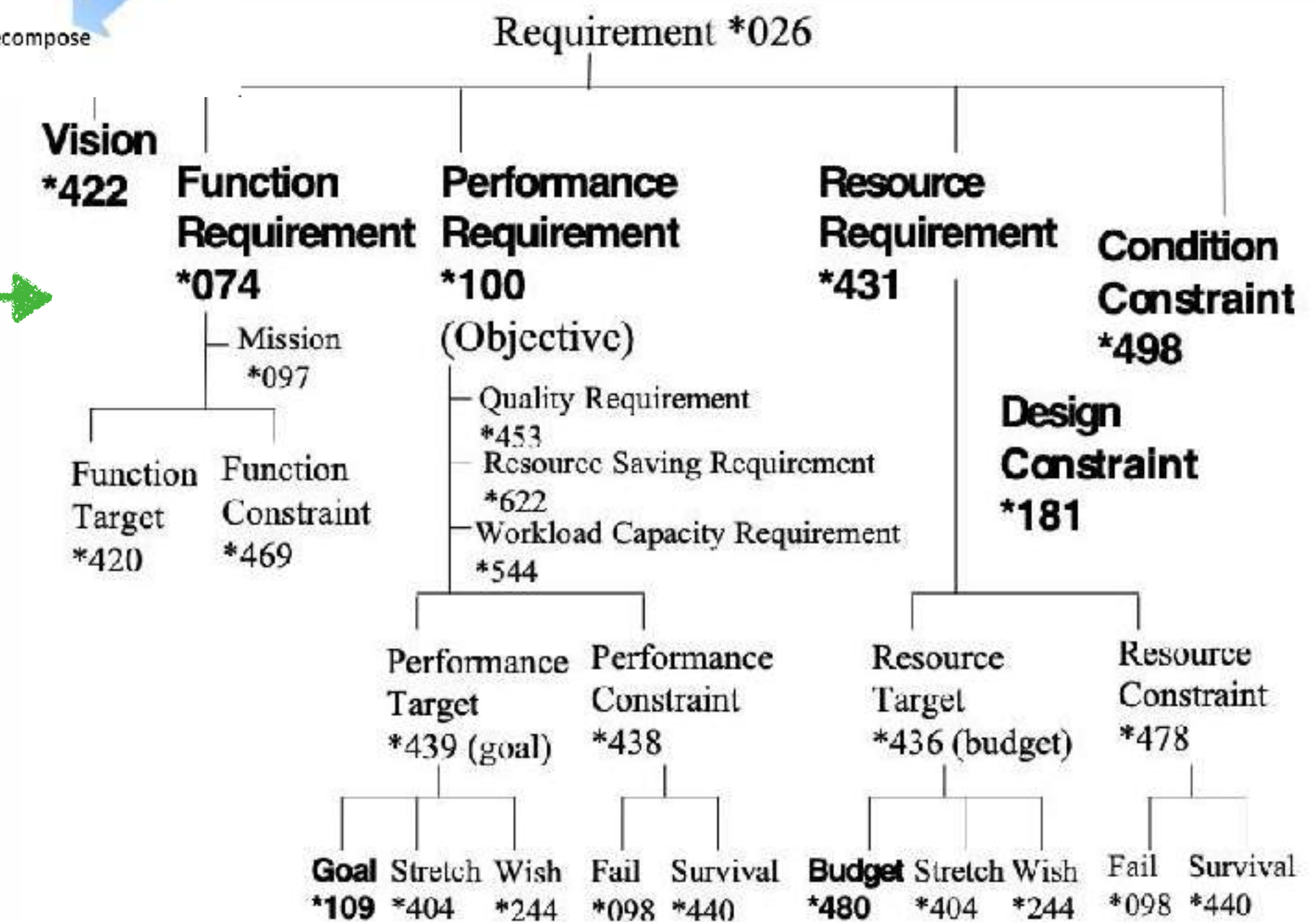
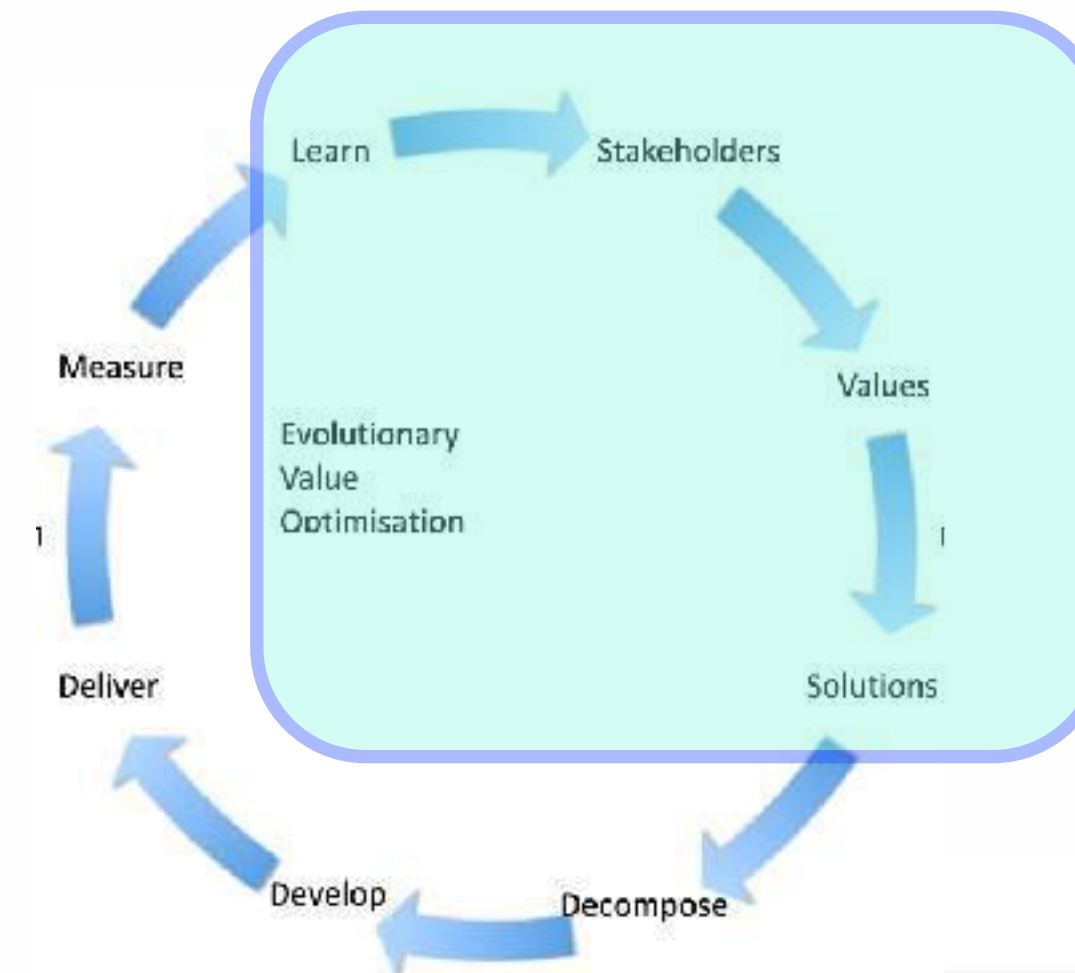


Figure . Requirements from [CE] Glossary Showing various constraints, and non-constraints requirements.
 *nnn signals a formally defined Planguage Concept. [CG-CE]

Stopping

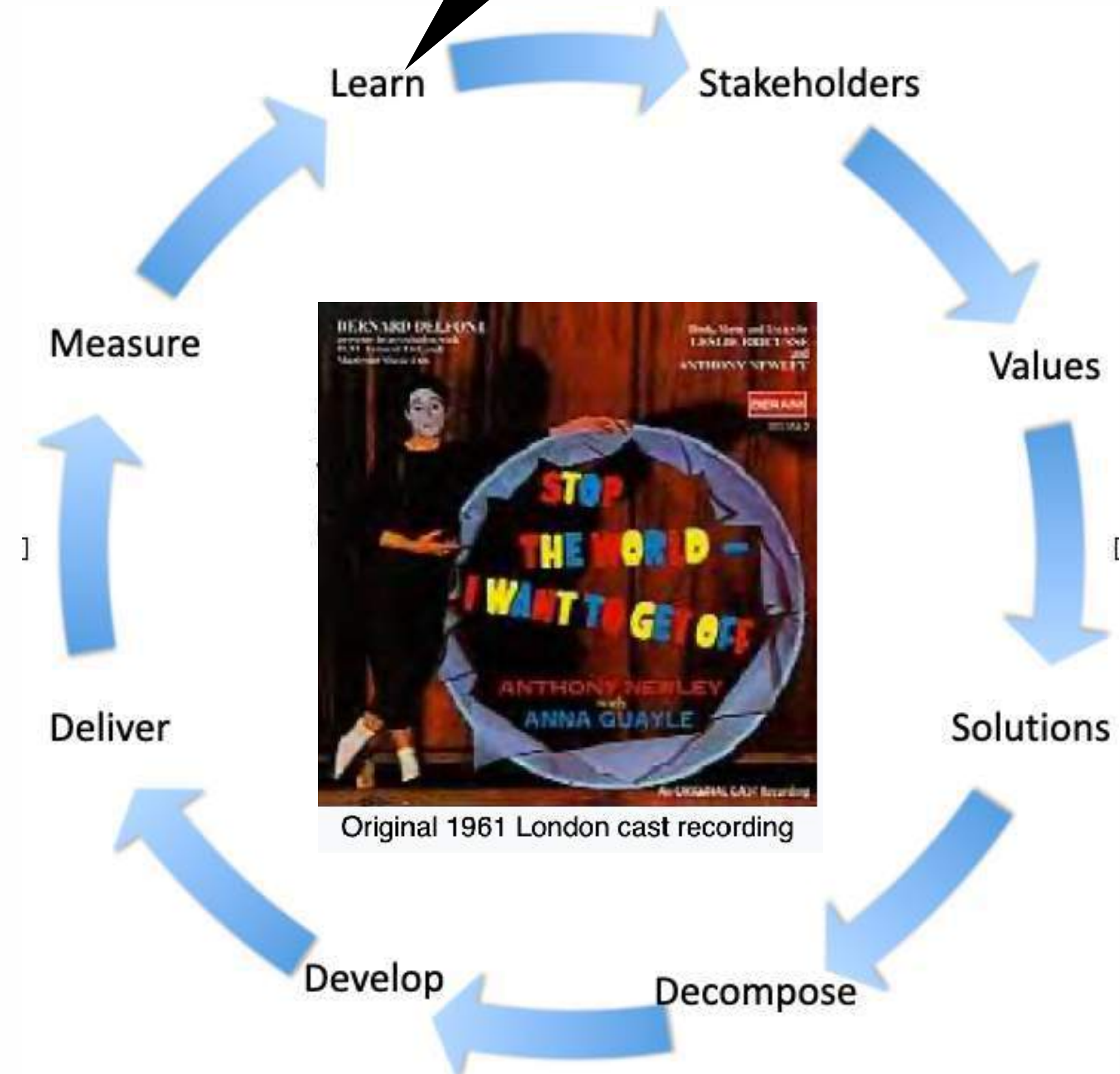
Quit while you are ahead!

- Continuing to spend resources, with no visible value improvements, on a weekly basis, is unethical. We are ethical, not selfish, I hope.
- Evo, tries to give you the tools to prevent **big** failure.
- Better to move over, the people and the money, to a project that *can* deliver continuous value [Productivity Stream], [Success]

★ I believe that proper use of Evo means that ‘large failures’ are *impossible*.

- Only a few small (‘week-sized’) failures are possible before we put the brakes on.
- Failing on a *small* scale is called a successful ‘scientific experiment’. Failing on a *large* scale is unnecessarily pig headed. Not good for your reputation.
- **Important point about Evo:** the prioritization of Evo-steps is Value first, or value/costs (efficiency) first.
 - That means, when your project runs out of resources (hits deadline, no budget left), that you have ***already got a lot of value*** (like 100 increments in 2 years), delivered, in place, with the real system.
 - That means you cannot be held to ransom: ‘we get no benefits if we do not spend another 8 years and 8 Billion’ [Akson]
 - You can just stop until ‘resources’ providers decide that it is worth funding the next high value increment! (No big budget decision, just one increment at a time, is sufficient)
 - You would have succeeded in delivering lots of value for resources ([Success]) - maybe not what some optimists dreamt about, but any fool can dream beyond their means.
 - You would have shown yourself to be organizationally (Evo Organization) capable of doing what few others the stakeholders have experience with (most of Flyvbjergs 99.%), Maybe someone would judge you to a good investment - more funds, more value for them, in the short term. Good deal!

Let us stop the project.
No viable path to Value Goals.



Stakeholder is the Source

You cannot let stakeholders be

- Your stakeholders determine almost everything.
- **‘Critical’ Stakeholders, *alone* can ‘make or break’ you**
- You have a large number of critical stakeholders, and you need to know their requirements, and their Value Requirements
- Then, and only then, can you determine the strategies and architecture, to make them satisfied.
- It is hard disciplined engineering, but it will help you avoid failure, and help you succeed.



Examples: 3 different sets of stakeholders



Give me 3 sets of ten stakeholders for startups, 1. in UK for medical assistance to unemployed., 2. for EU+ Associated countries, startup for Education to help not well off bright students get to and through higher education, and 3. A Catalonia startup for Spain, helping farmers who are struggling. For each stakeholder, name the most critical value



1. UK Startup for Medical Assistance to Unemployed

Stakeholders and Critical Values

Unemployed Individuals - Accessibility: Easy access to medical assistance.

NHS (National Health Service) - Collaboration: Efficient

Enlarged text for Stakeholder 1 Next slide

to reach underserved communities.

Investors - Return on Investment (ROI): Financial gains through social impact investments.

Technological Partners - Innovation: Development of digital health solutions.

Employers - Healthy Workforce: Reduced absenteeism and healthier potential employees.

Media and Press - Awareness: Highlighting the importance of health services for the unemployed.

2. EU+ Associated Countries Startup for Education

Stakeholders and Critical Values

Students (Not Well Off, Bright) - Opportunity: Access to higher education and support throughout.

Universities and Colleges - Diversity: Attracting talented students from diverse backgrounds.

Educational Non-profits - Impact: Enhancing educational opportunities for disadvantaged students.

Government Bodies - Social Mobility: Promoting equality in education.

Corporate Sponsors - Corporate Social Responsibility (CSR): Fulfilling CSR commitments by supporting education.

Educational Technology Providers - Adoption: Increased use of their platforms for student support.

Parents and Guardians - Hope: Assuring their children's future prospects.

Scholarship Foundations - Effectiveness: Ensuring scholarships reach deserving students.

Local Communities - Development: Benefits from the education of its members.

Alumni Networks - Legacy: Contributing to the growth of future students.

3. Catalonia Startup for Helping Struggling Farmers in Spain

Stakeholders and Critical Values

Farmers - Sustainability: Long-term viability and support for their farming operations.

Agricultural Cooperatives - Collaboration: Strengthened cooperation and shared resources.

Local Government - Economic Stability: Support for local agriculture and rural economies.

Agricultural Suppliers - Market Stability: Consistent demand for supplies and services.

Consumers - Quality Products: Access to sustainably produced, local farm products.

Environmental Organizations - Sustainable Practices: Promotion of eco-friendly farming methods.

Financial Institutions - Risk Management: Secure and sustainable lending practices.

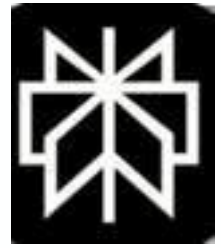
Technology Providers - Innovation: Development and implementation of advanced agricultural technologies.

Media and Press - Awareness: Highlighting issues and solutions in the agricultural sector.

Local Businesses - Economic Growth: Positive impact on the local economy through strong agricultural performance.

These stakeholders each play a crucial role in the success of the startups, with their critical values aligning closely with

Stakeholders Example: For UK Medical Startup



1. UK Startup for Medical Assistance to Unemployed

Stakeholders and **Critical Values**

Unemployed Individuals -

Accessibility: Easy access to medical assistance.

NHS (National Health

Service) - Collaboration:

Efficient partnership to support the unemployed.

Local Government -

Community Welfare: Enhancing public health and reducing unemployment-related health issues.

Healthcare Providers -

Service Utilization: Increased patient inflow and optimized service use.

★ Non-profit Organizations - **Impact:** Effective support for vulnerable populations.

Pharmaceutical Companies -

Market Reach: Opportunity to reach underserved communities.

Investors -

Return on Investment (ROI): Financial gains through social impact investments.

Technological Partners -

Innovation: Development of digital health solutions.

Employers -

Healthy Workforce: Reduced absenteeism and healthier potential employees.

Media and Press - Awareness:

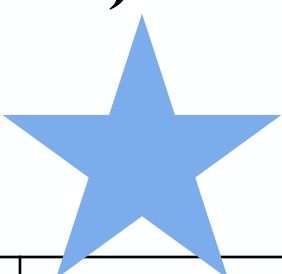
Highlighting the importance of health services for the unemployed.

These stakeholders each play a crucial role in the success of the startups, with their critical values aligning closely with the startups' missions and goals.



20 Most useful medical product qualities

Based on the search results and the context of EU medical products and services, here are the 20 most useful combined EU Product & Service **quality requirements**, specified with Planguage parameters, and ordered by the percentage of stakeholders they would satisfy. Each requirement includes Ambition, Scale, Meter, Tolerable, Goal in 3 Years, % of 100 Stakeholders Impacted, and Rough ROI for the Quality.



| Quality Requirement | Ambition | Scale | Meter | Tolerable | Goal (3 Years) | % of 100 Stakeholders | Rough ROI for the Quality |
|------------------------|---|---|--|---|---|-----------------------|---------------------------|
| Safety | Minimize adverse events | Number of adverse events per 10,000 units | Weekly reports from healthcare providers | <2 adverse events per 10,000 units | <1 adverse event per 10,000 units | 0,95 | High |
| Effectiveness | Maximize health outcome improvement | Percentage improvement in health outcomes compared to baseline | Quarterly clinical trial results | 20% improvement | 30% improvement | 0,9 | High |
| Compliance with EU | Ensure full compliance with EU medical device regulations | Percentage compliance with applicable regulations | Annual regulatory audits | 95% compliance | 100% compliance | 0,85 | High |
| Timeliness | Respond to service | Average response time for service requests in hours | Monthly service logs | <4 hours | <2 hours | 0,8 | High |
| Communication | Ensure clear and helpful communication | Customer satisfaction score (1-10) regarding communication | Bi-annual customer surveys | Average score of 8/10 | Average score of 9/10 | 0,75 | Medium |
| Durability | Extend product lifespan | Average product lifespan in years | Annual product durability tests | 3 years | 5 years | 0,7 | Medium |
| User-Centricity | Enhance user satisfaction | User satisfaction score (1-10) based on ergonomics and ease of use | Bi-annual user surveys | Average score of 7/10 | Average score of 8.5/10 | 0,65 | Medium |
| Data Security | Ensure data protection | Number of security breaches per year | Annual IT security audits | <2 breaches per year | Zero breaches | 0,6 | High |
| Sustainability | Increase use of sustainable materials | Percentage of product components that are recyclable or biodegradable | Annual sustainability reports | 50% recyclable/ | 80% recyclable/ | 0,55 | Medium |
| Competence | Resolve service issues effectively | Percentage of service issues resolved on the first attempt | Monthly service performance | 85% first-time resolution | 95% first-time resolution | 0,5 | Medium |
| Training Effectiveness | Improve staff competency | Post-training competency assessment scores (percentage) | Quarterly training assessments | 85% average score | 95% average score | 0,45 | Medium |
| Interoperability | Ensure compatibility with other systems | Number of compatible systems/devices | Annual compatibility tests | Compatible with 70% of relevant systems | Compatible with 90% of relevant systems | 0,4 | Medium |
| Proactive Maintenance | Prevent issues before they | Percentage of potential issues identified and resolved before failure | Monthly maintenance logs | 70% proactive resolution | 90% proactive resolution | 0,35 | Medium |
| Customizability | Offer customizable features | Number of customizable features | Annual product reviews | 5 customizable features | 10 customizable | 0,3 | Low |
| Remote Support | Resolve issues remotely | Percentage of issues resolved remotely | Monthly remote support logs | 60% remote resolution | 80% remote resolution | 0,25 | Medium |
| Availability | Ensure service availability | Percentage of time services are available (uptime) | Monthly service availability reports | 98% uptime | 99.9% uptime | 0,2 | Medium |
| Noise Level | Reduce operational noise | Decibel level during operation | Annual noise level tests | 30% reduction in noise | 20% reduction in noise | 0,15 | Low |
| Packaging Redesign | Use sustainable packaging | Percentage of packaging that is biodegradable or recyclable | Annual packaging audits | 50% biodegradable/ | 80% biodegradable/recyclable | 0,1 | Low |
| Life Cycle Assessment | Improve product life cycle impact | Number of life cycle assessments conducted | Annual life cycle assessment reports | 1 assessment per product | 3 assessments per product | 0,05 | Low |
| Customer Feedback | Implement customer suggestions | Percentage of customer suggestions implemented | Quarterly customer feedback | 20% implementation rate | 30% implementation rate | 0,05 | Low |

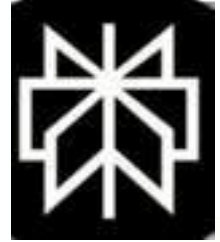


20 Most-useful medical-product qualities

This is basic Planguage: Clarifying Objectives

| Quality Requirement | Ambition | Scale | Meter | Tolerable | Goal (3 Years) | % of 100 Stakeholders | Rough ROI for the Quality |
|-------------------------------|-----------------------------------|---|---|------------------------------------|-----------------------------------|-----------------------|---------------------------|
| Safety | Minimize adverse events | Number of adverse events per 10,000 units sold annually | Weekly reports from health care providers | <2 adverse events per 10,000 units | <1 adverse event per 10,000 units | 0,95 | High |
| Remote Support Capability | Resolve issues remotely | Percentage of issues resolved remotely | Monthly remote support logs | 60% remote resolution | 80% remote resolution | 0,25 | Medium |
| Availability | Ensure service availability | Percentage of time services are available (uptime) | Monthly service availability reports | 98% uptime | 99.9% uptime | 0,2 | Medium |
| Noise Level | Reduce operational noise | Decibel level during operation | Annual noise level tests | 30% reduction in noise level | 20% reduction in noise level | 0,15 | Low |
| Packaging Redesign | Use sustainable packaging | Percentage of packaging that is biodegradable or recyclable | Annual packaging audits | 50% biodegradable/recyclable | 80% biodegradable/recyclable | 0,1 | Low |
| Life Cycle Assessment | Improve product life cycle impact | Number of life cycle assessments conducted | Annual life cycle assessment reports | 1 assessment per product | 3 assessments per product | 0,05 | Low |
| Customer Feedback Integration | Implement customer suggestions | Percentage of customer suggestions implemented | Quarterly customer feedback reviews | 20% implementation rate | 30% implementation rate | 0,05 | Low |

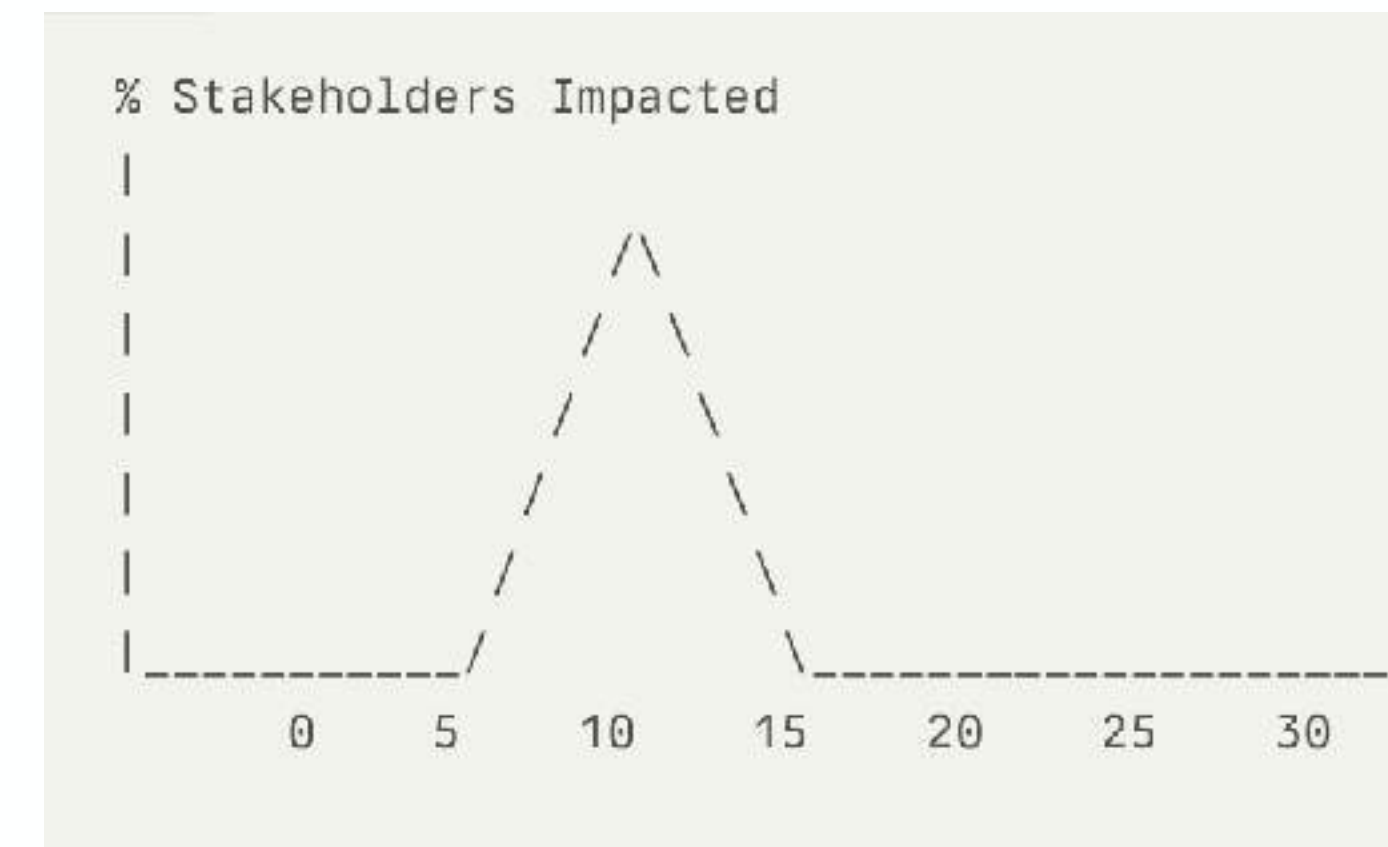
So, how many quality requirements should we handle?



Summary:

- Initial 5 Quality Requirements: Addressing these would likely impact around 50-60% of stakeholders.
- **Expanded 15 Quality Requirements: This would maximize stakeholder satisfaction, potentially impacting up to 85-90% of stakeholders.**
- Beyond 20 Quality Requirements: Adding more requirements may lead to diminishing returns, impacting fewer additional stakeholders while increasing complexity and costs.

By focusing on the 15 most impactful quality requirements, the startup can achieve optimal market success and profitability, balancing comprehensive quality management with operational efficiency.



How many product qualities do we need to manage?



The relationship between the number of

Based on the search results and general principles of quality management, I'll create a table and describe a curve that illustrates the relationship between the number of quality requirements and market success/profitability.

Curve Description:

The relationship between the number of quality requirements and market success/profitability can be described as an inverted U-shaped curve:

1. Initial Rise (1-10 requirements):
- As the number of quality requirements increases from 1 to 10, both market success and profitability rise sharply.
 - This represents the basic quality standards necessary for market entry and customer satisfaction.
2. Peak (11-15 requirements):
- The curve reaches its peak around 11-15 quality requirements.
 - This represents the optimal balance where comprehensive quality management leads to high market success and profitability.
 - This aligns with our earlier discussion of 15 quality requirements for both products and services.
3. Plateau (16-20 requirements):
- Market success continues to rise slightly but at a slower rate.
 - Profitability begins to decline due to increased costs of implementing and maintaining additional quality measures.
4. Decline (21+ requirements):
- Beyond 20 requirements, market success plateaus or slightly declines.
 - Profitability decreases more sharply due to diminishing returns and increased complexity.

The curve illustrates that while increasing quality requirements generally improves market success, there's a point of diminishing returns where the cost of implementing additional quality measures outweighs the benefits. The optimal range appears to be around 11-15 quality requirements, balancing comprehensive quality management with operational efficiency and profitability.

This aligns with the principle of focusing on core quality management principles (as outlined in ISO 9001) while avoiding over-complication that can lead to reduced efficiency and increased costs. It also supports our earlier recommendation of using 15 quality goals for products and services to maximize startup success

| Number of Quality Requirements | Market Success | Profitability | Overall Impact |
|--------------------------------|----------------|---------------|----------------|
| 1-5 | Low | Low | Limited |
| 6-10 | Moderate | Moderate | Improving |
| 11-15 | High | High | Optimal |
| 16-20 | Very High | Moderate | Diminishing |
| 21 | Very High | Low | Decreasing |

Table: Number of Quality Requirements vs. Market Success and Profitability

Product Development

Is 'Value and cost 'development

1. Product Development Objectives: (ie Values).

- 1. Increase product innovation.
- 2. Enhance usability.
- 3. Improve sustainability.

Product & Service Development

Strategies: (ie How to get the values)

- 1. Invest in R&D: Allocate significant resources to research and development to foster innovation.
- 2. User-Centric Design: Implement user feedback loops to continuously improve usability.
- 3. Sustainable Practices: Integrate sustainable materials and processes in product development.

A simple Impact Estimation Table

Too help us envisage our product development

ideas and value results

| Strategy-> Value | Invest in R&D ↓ | User-Centric Design ↓ | Sustainable Practices ↓ |
|-----------------------------|--------------------|--------------------------|----------------------------|
| Increase product innovation | 0,6 | 0,2 | 0,2 |
| Enhance usability | 0,1 | 0,7 | 0,2 |
| Improve sustainability | 0,2 | 0,1 | 0,7 |
| Strategy Score | 0,9 | 1 | 1,1 |

These tables provide a structured approach to estimating the impact of various strategies on achieving long-term goals

The effectiveness scores are hypothetical and should be adjusted based on real data and expert insights.

| | | |
|---|--|---|
| Tag: COMM.ENV-RESPONSIBILITY | Tag: CUST.VALUE-FOR-MONEY | Tag: EMPL.WORK-LIFE-BALANCE |
| Gist: Environmental responsibility perceived by local community | Gist: Customer perception of value for money | Gist: Work-life balance for employees |
| Stakeholder: Local Community, Environmental NGOs, Regulatory Bodies | Stakeholder: Customers, Sales Department, Product Development Team | Stakeholder: Employees, HR Department, Management |
| Scale: Composite score (0-100) based on community surveys and objective environmental metrics | Scale: Percentage of customers rating product/service as "good" or "excellent" value for money | Scale: Average employee satisfaction score on work-life balance survey (0-10 scale) |
| Meter: Annual community survey and environmental impact assessment | Meter: Quarterly customer satisfaction surveys and product reviews | Meter: Annual anonymous employee survey |
| Tolerable: Score of 70 by end of current year | Tolerable: 75% by Q4 this year | Tolerable: 7.0 by end of next fiscal year |
| Goal: Score of 80 by end of next year | Goal: 85% by Q4 next year | Goal: 8.0 by end of following fiscal year |
| Stretch: Score of 90 within 3 years | Stretch: 90% within 2 years | Stretch: 9.0 within 3 years |
| Past: Score of 65 in previous year | Past: 70% in last quarter | Past: 6.5 in last fiscal year |
| Trend: +3 points per year over last 2 years | Trend: +2% per quarter over last year | Trend: +0.3 points per year over last 3 years |
| Definition: The degree to which the local community perceives the organization as environmentally responsible | Definition: The extent to which customers perceive the product/service as worth the price paid | Definition: Work-life balance refers to the equilibrium between an employee's work responsibilities and personal life |
| Rationale: Strong environmental responsibility improves community relations and supports long-term sustainability goals | Rationale: Higher perceived value leads to increased customer loyalty and positive word-of-mouth marketing | Rationale: Improved work-life balance leads to higher job satisfaction, productivity, and employee retention |

Strategy Descriptions

Implement Sustainability Initiative:

- Gist: Implement a comprehensive sustainability initiative.
- Description: Launch programs focused on waste reduction, renewable energy adoption, and community environmental education to enhance perceptions of environmental responsibility.

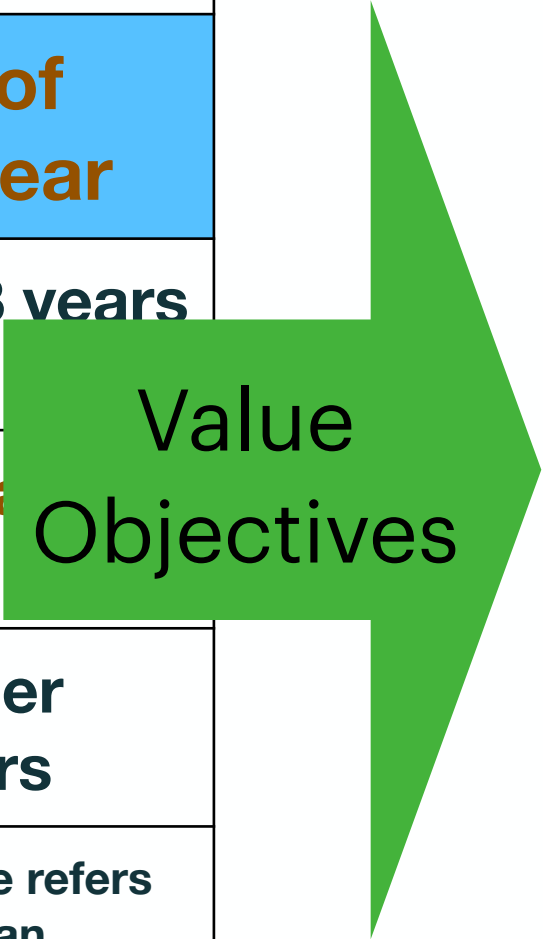
Enhance Product Value Proposition:

- Gist: Improve the perceived value of products/services.
- Description: Conduct market research to identify key value drivers, optimize pricing strategies, and enhance product features to align more closely with customer expectations.

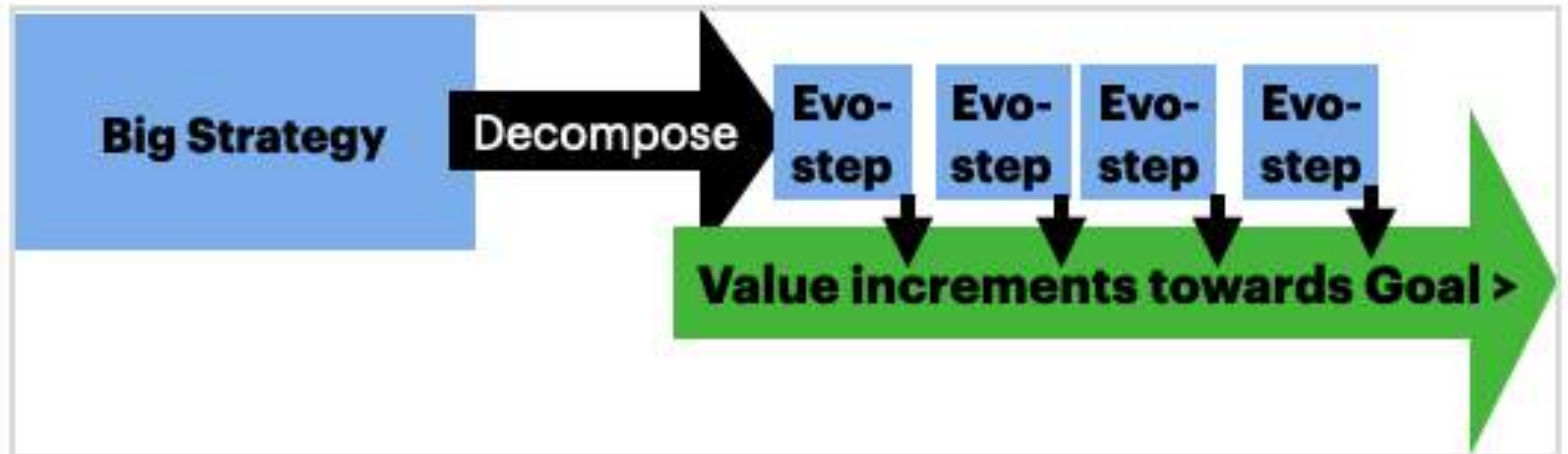
Flexible Work Arrangement Program:

- Gist: Introduce flexible working options.
- Description: Offer flexible hours, remote work opportunities, and compressed workweeks to improve

| | | | | |
|-----------------------------------|-------------------------|-----------------------------------|-----------------------------------|------------------|
| Strategies -> Value Objectives | | | | |
| Strategies -> Value Objectives | Impact Estimation Table | Enhance Product Value Proposition | Flexible Work Arrangement Program | All 3 Strategies |
| COMM.ENV - RESPONSIBILITY | 80 % | 10 % | 5 % | 95 % |
| CUST.VALUE-FOR-MONEY | 15 % | 85 % | 5 % | 105 % |
| EMPL.WORK-LIFE-BALANCE | 10 % | 5 % | 75 % | 90 % |



**Let's plan
weekly
value increases!**



Source [Optima] Figure 4.2.3 B. **Decomposing into Evo-steps, not 'tasks', enables us to get measurable results, feedback, and planning improvement faster**



Values impacted by 10 Strategies

This is an ‘Impact Estimation Table’ IET.




| Strategy -> Value / | PBL | Tech-Enhanced Learning | Mentorship Programs | Industry Partnerships | Community Outreach | Data-Driven Decision Making | Professional Development | Flexible Learning | Mindfulness & SEL | Research Initiatives |
|-----------------------------|-----|------------------------|---------------------|-----------------------|--------------------|-----------------------------|--------------------------|-------------------|-------------------|----------------------|
| Access to Quality Education | 0,7 | 0,8 | 0,5 | 0,6 | 0,7 | 0,6 | 0,7 | 0,8 | 0,4 | 0,5 |
| Financial Support | 0,3 | 0,4 | 0,2 | 0,8 | 0,6 | 0,5 | 0,3 | 0,4 | 0,1 | 0,4 |
| Mentorship and Guidance | 0,6 | 0,3 | 0,9 | 0,7 | 0,5 | 0,4 | 0,6 | 0,4 | 0,5 | 0,3 |
| Technological Resources | 0,7 | 0,9 | 0,3 | 0,7 | 0,4 | 0,6 | 0,5 | 0,7 | 0,2 | 0,6 |
| Career Development | 0,8 | 0,6 | 0,8 | 0,9 | 0,5 | 0,7 | 0,7 | 0,6 | 0,4 | 0,5 |
| Community Engagement | 0,7 | 0,5 | 0,6 | 0,7 | 0,9 | 0,5 | 0,4 | 0,6 | 0,7 | 0,5 |
| Policy Advocacy | 0,4 | 0,3 | 0,3 | 0,5 | 0,7 | 0,8 | 0,6 | 0,5 | 0,3 | 0,7 |
| Research and Innovation | 0,7 | 0,8 | 0,4 | 0,7 | 0,5 | 0,7 | 0,6 | 0,5 | 0,3 | 0,9 |
| Networking Opportunities | 0,6 | 0,7 | 0,8 | 0,9 | 0,8 | 0,4 | 0,7 | 0,5 | 0,3 | 0,6 |
| Inclusivity and Diversity | 0,7 | 0,6 | 0,7 | 0,6 | 0,9 | 0,7 | 0,8 | 0,8 | 0,8 | 0,6 |
| Sum of % to Goal | 6,2 | 5,9 | 5,5 | 7,1 | 6,5 | 5,9 | 5,9 | 5,8 | 4 | 5,6 |

Constraints (a quick superficial introduction)

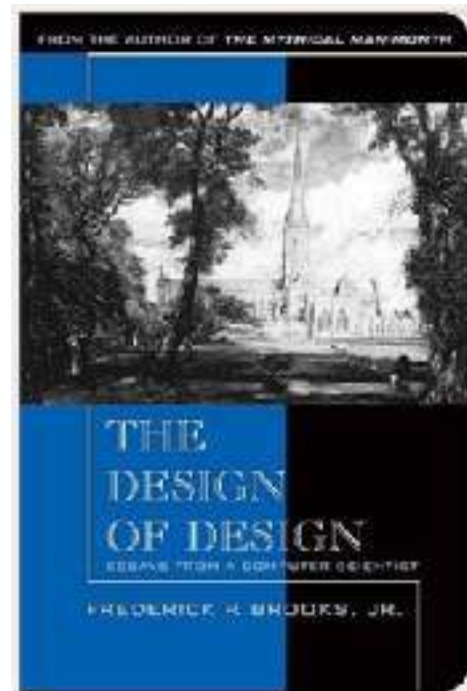
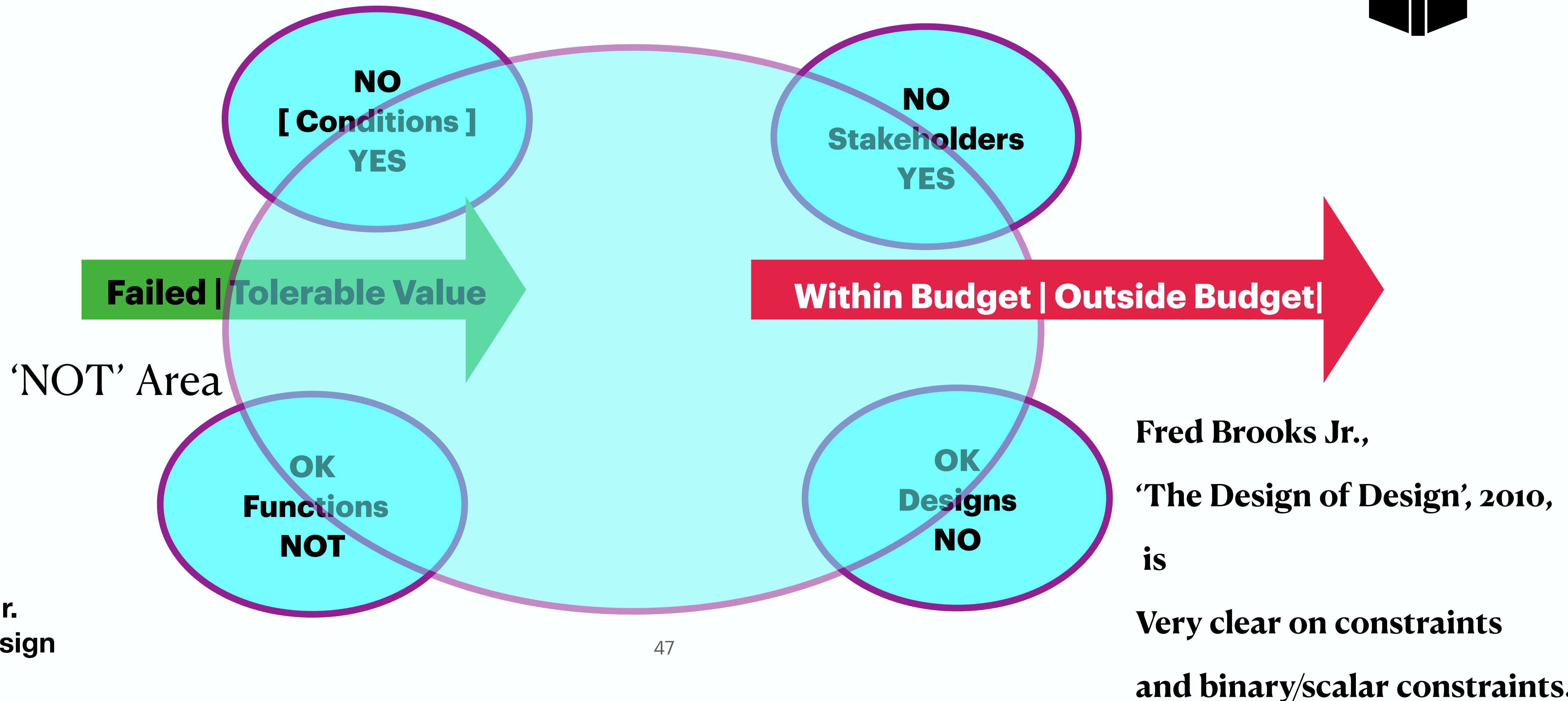
The system border, big oval, is the border between what is 'allowed' (YES) and what is forbidden (NOT) .

Constraints are intentional (not 'accidental'): there is a stakeholder and a reason behind them.

All planning, decisions, and reviews, must 'respect' intentional constraints, until they are officially lifted, or adjusted.

For all other planning and decision-making: everything is 'allowed', if not officially constrained.

https://www.researchgate.net/publication/381913042_A_broader_and_more-advanced_'constraints'_theory_Theory_of_Guides_ToG



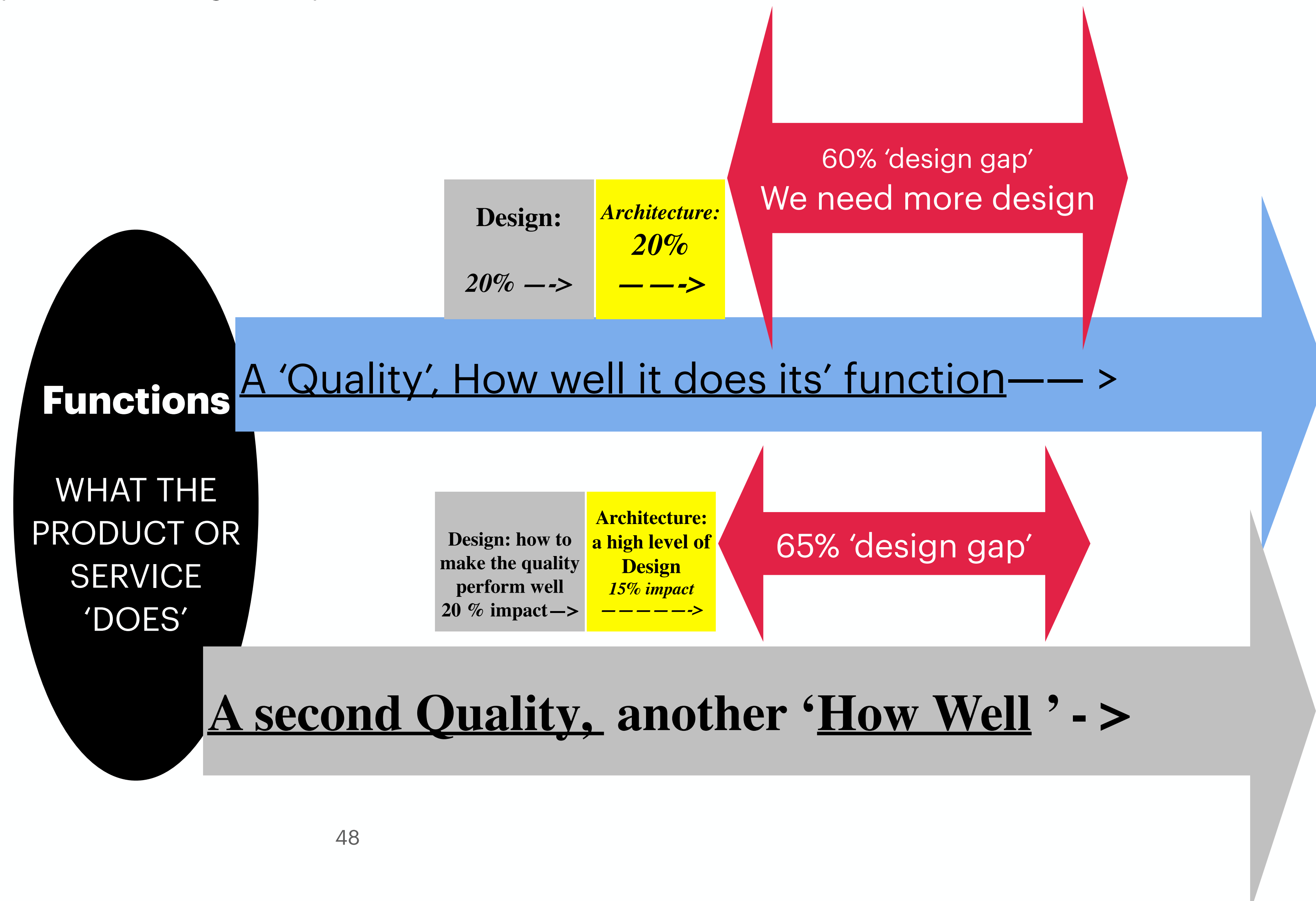
Fred Brooks, Jr.
The Design of Design
2010

The Concept of 'Design'

https://www.researchgate.net/publication/387794314_GENERAL_THEORY_2025

https://www.researchgate.net/publication/387794314_GENERAL_THEORY_2025

- **Design Process:** *defined as the activity of finding, and verifying 'Design Ideas' which we can 'do', in order to improve stakeholder value qualities, in the direction of their Target levels, on time.*
- **Design Idea:** *defined as: a specific concept that can be implemented in a system, with the purpose of delivering improved qualities or other planned stakeholder values. Design Ideas contain a set of many qualities, and many costs.*
- **Design:** *Synonyms: 'Means' (to ends), Architecture Components, Strategies, Solutions, Do-able Ideas, Implementations.*



Two different types of 'strategy decomposition'

Evo-steps versus Tasks

- A large cost strategy (it takes a month-to-years) can be decomposed in two ways:

- **1. Task Decomposition**

- This lists the many tasks which need doing, *before* we can expect the strategy to deliver value.
- Probably *no task alone* delivers much value. Most tasks do not deliver the planned Value Objective Improvement towards its Goal.
- Running a marathon does not deliver value until you cross the finish line, if at all.

- **2. Sub-strategy decomposition, into Evo-steps.**

- This decomposes a strategy into a number of **independently implementable sub-strategies**, which can be implemented, in *any* sequence, and will *each* deliver value.

- They can be implemented **in parallel**, too

- These are **Evo Steps**; *resulting in value*.
- A strategy can *potentially* be decomposed into Evo-steps. Not always.

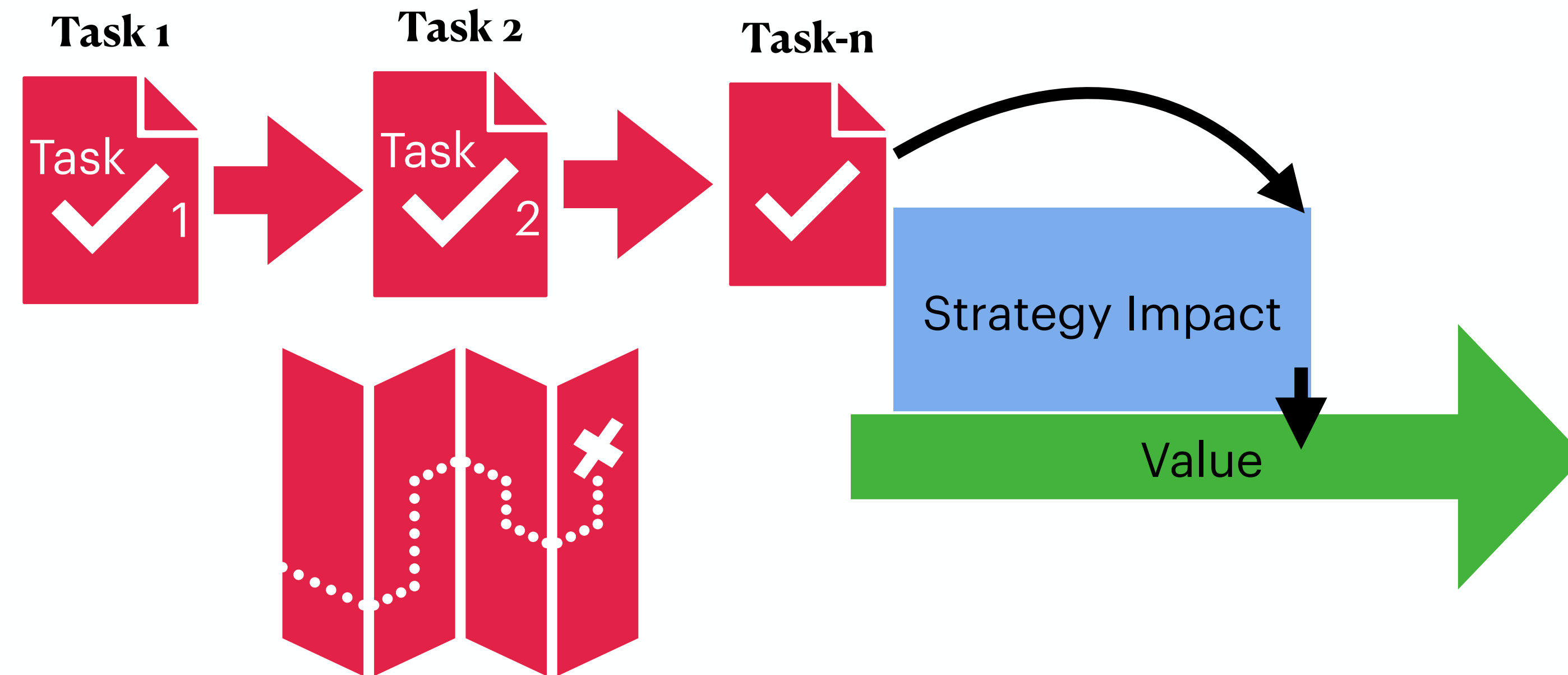


Figure 4.2.3 A. Task decomposition: Impact when last task completed well.. Strategy 'complete'

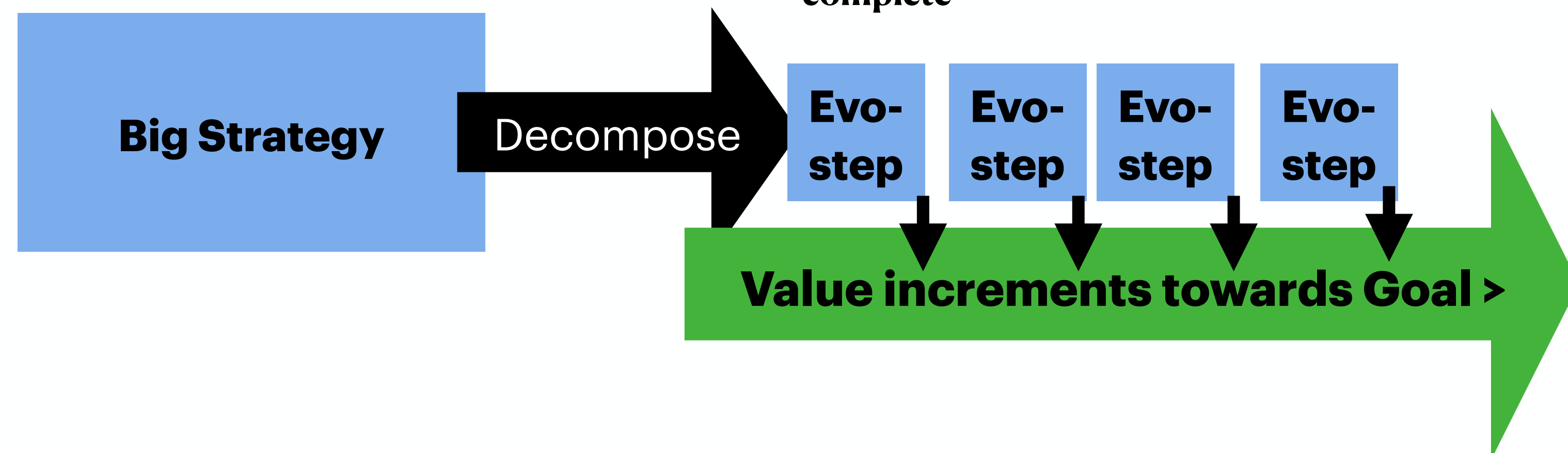


Figure 4.2.3 B. Decomposing into Evo-steps, not 'tasks', enables us to get measurable results, feedback, and planning improvement faster

Design Principles [CE]

Principles:

1. The Principle of ‘Design Ideas are only as Good as the Requirements Satisfied’

Design ideas cannot be correctly judged or validated except with respect to all the performance and cost requirements they must satisfy.

2. The Principle of ‘The Best Chess Move’

You should try with each increment of design specification or design implementation, to get the best possible satisfaction of your unsatisfied performance requirements, from your unused cost budgets.

3. The Principle of ‘Results Beat Theory’

Design ideas are only as good as their real results, not their intent.

4. The Principle of ‘Early Surprises’

You never know how it works, until you have actually tried out a design idea in practice. Get surprised as early as possible!

5. The Principle of ‘It’s Not Just What You Do, It’s How You Do It’

Design ideas must try to exercise control over both design content and design implementation. The devil is in the details!

6. The Principle of ‘Good is Not Always Good Enough’

A ‘good’ design idea might not be good enough to meet all your targets on time.



7. The Principle of ‘Designs should have Good Return on their Investment’

‘Good’ design ideas might cost too much, sooner or later.

8. The Principle of ‘Sneaky Gremlins’

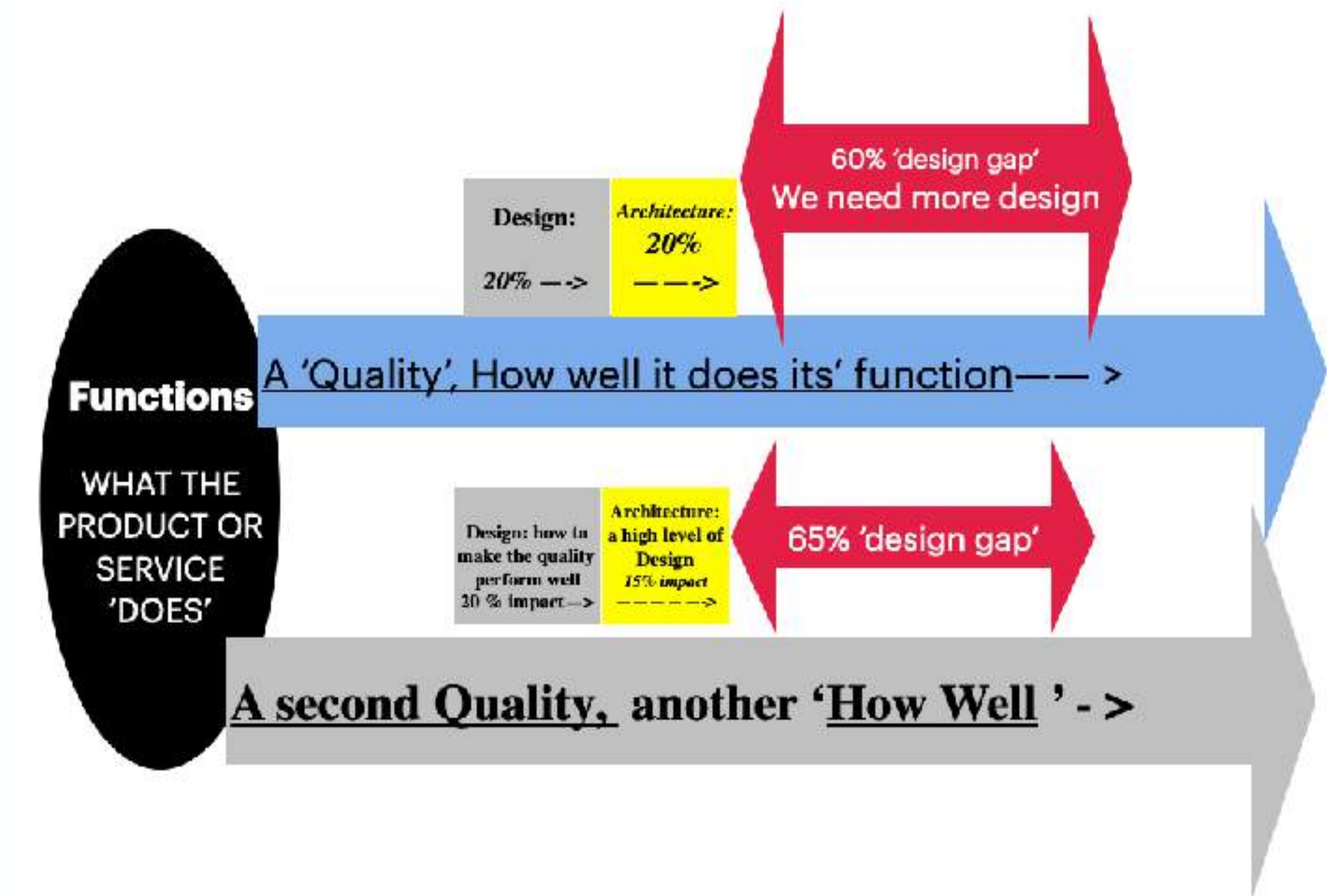
Apparently ‘good’ design ideas might have subtly-hidden nasty side effects. Estimate them, know when you don’t know them, measure them, and don’t assume they won’t hurt you! They will show you no sympathy!

9. The Principle of ‘Design Beats Test’

Design performance ‘in’, and design ‘to control’ costs: You cannot test quality into a badly-designed system.

10. The Principle of ‘Eternal Vigilance for the Butterfly Effect’

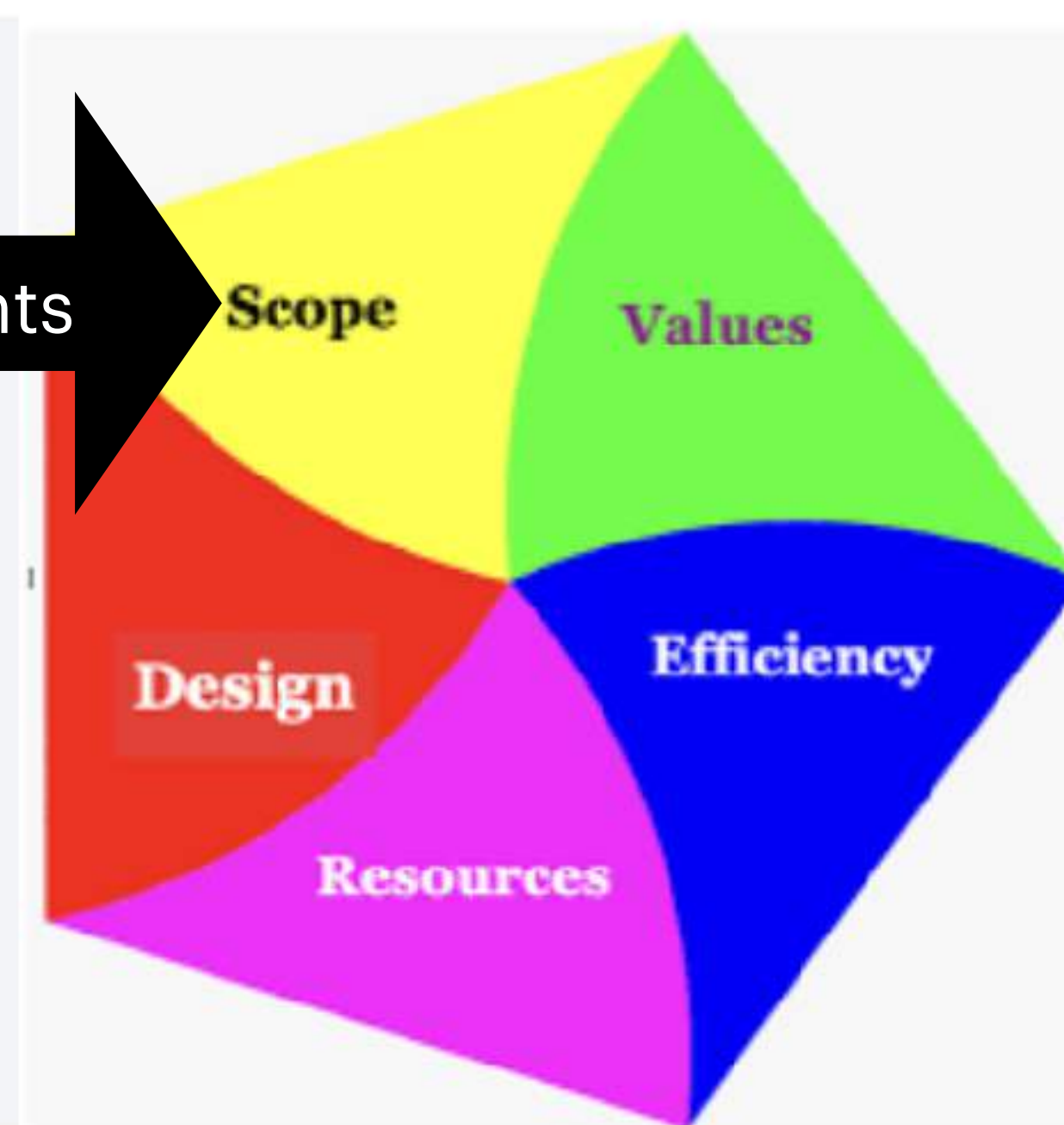
You never finally know about a design idea’s effects; Tomorrow’s slightest change might ruin your whole project. Even initially successful designs might have to be adjusted for growth and change.



Intelligent Prioritization (IP), of stakeholders, values, constraints, and strategies.

What type of prioritization I recommend,

Constraints



Basic 'Penta' Model of system attributes.

Binary Constraints are part of the Scope definition.
Like 'Legal', 'Privacy Compliant', 'Ethical', 'Contractual'



Did you notice that
I
Carefully avoided
using the term
'agile' here ?

1. Considering stakeholders

1. Be thorough in identifying critical stakeholders, because stakeholder *needs and power* is an important basis for prioritization decisions. Failure to do this thoroughly will directly lead to wrong priorities.
2. Make use of AI to suggest stakeholders, and their values. It is at least 10x 'better' (comprehensive, knowledgeable) and 100x faster than *you* (we, me too) are.

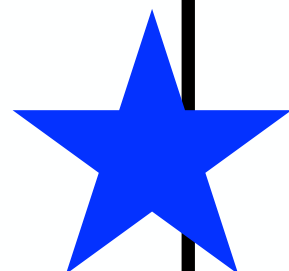
2. Considering non-financial values, quantified.

1. Identify at least 30 most-critical values, and work initially on at least the most critical 10 values. Think of it this way: 6 values = 50% success, 30 values = 95% success. [Plan-gineering, Coutts]
2. Specify critical values extremely clearly, and especially the 'Scale, Tolerable, Goal' parameters.
3. Get help from an AI tool, to draft this quickly, then refine it manually, or with further AI questions (like: Which critical values are most threatening to my project?)

3. Considering multiple financial costs, especially long term maintenance and operational costs.

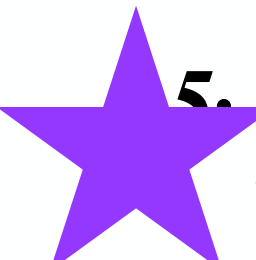
1. Plan resource budgets for 5 to 10 resources, especially long-term resources
2. Use AI to suggest the resources you should define, in your type of project.

1. Considering stakeholders
2. Considering non-financial values, quantified
3. Considering multiple financial costs, especially long term maintenance and operational costs.
4. Considering suitable large sets of values (like 30) and costs (like 5 to 10) simultaneously
5. Serious description of strategies, including evidence and sources of evidence for belief in their virtues.
6. **Ability to change priorities dynamically, as evidence factors change.**
7. Ability to document, and to question, *constraints* and *assumptions*.

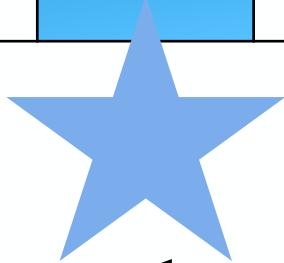


The Impact Estimation Table as a prioritization tool

Simple Prioritization, methods using the simple table below

1. The overall idea is to use the Impact Estimation Table (IET, [VIET]) to sequence (prioritize) the ‘best strategy ‘sub-strategies’, in terms of value for money.
2. I do not think that the optimal sequencing, of the best priority strategy, makes much real difference, at all. Just do them.
3. Certainly do not delay doing them, to argue what should go first!
4. I have asked the AI to explain (give an *argument*, if not factual evidence) for the value ratings, and the cost ratings. They seemed better than I could get from a human. But I have not researched them deeply. I would need citations, and Chat GPT isn’t offering them. Use Perplexity AI if you want citations.
5.  I have an implied, common sense, default prioritization policy. Do profitable stuff earliest. So the Value/Cost ratio is used, to suggest a sequence, and why not. Little harm can be done. Get going.
6. Note that in Planguage and Evo, that very first Evo step (*Utilizing Weather Forecast Data*) is supposed to measure some form of Planned Objectives movement, along a Scale or more, along with some kind of cost feedback, against some of the Budgets.
7. So, if there is some *obvious deviation* from the 8 and the 3, like ‘no measurable value against any Goal was measurable’, or the ‘one week Evo-step took 4 weeks’; then we have useful feedback, to make our hypothesis (8 Value / 3 Cost) seem to have failed. And we can sit down and analyze what happened (Learn).
8. There is an argument that if we start with extreme V/C like 8/3 then it will be easier to roughly sense low value and high costs. Just a thought!
9. So, no matter what, we get into contact with ‘*system reality*’ next week, and every weekly Evo-step. Btw this is a similar idea to ‘Lean Startup’ (get out on the street day one, and ask passersby if they will buy your conceptual product). [SteveBlank.com]
10. But, I would argue that this, prioritization method, is a superior and more focussed approach to the multidimensional value management problem we have. [Plan-gineering, 3.2, [Coutts]]. [CE] seems to have a serious (220 project) track record of improving 3-year startup-survival from 40% to 80% in Europe [Coutts].
11. So, to summarize, something like this simple table, might be more than enough to teach, and apply, intelligent engineering-like prioritization decisions.

| | Utilizing Weather Forecast Data | Mulching | Soil Moisture Sensors Installation | Regular Maintenance and Inspection | Proper Plant Selection | Drip Irrigation System Installation | Rainwater Harvesting Implementation | Training and Education for Farmers | Smart Irrigation Controllers | Water Recycling and Reuse |
|------------------|---------------------------------|----------|------------------------------------|------------------------------------|------------------------|-------------------------------------|-------------------------------------|------------------------------------|------------------------------|---------------------------|
| Value (1-10) | 8 | 5 | 8 | 6 | 6 | 9 | 7 | 7 | 8 | 7 |
| Cost (1-10) | 3 | 2 | 4 | 3 | 3 | 5 | 4 | 4 | 5 | 5 |
| Efficiency Ratio | 2.67 | 2.50 | 2.00 | 2.00 | 2.00 | 1.80 | 1.75 | 1.75 | 1.60 | 1.40 |



A simple AI-generated Impact Estimation Table. 

Sequenced by Efficiency Ratio (V/C)

Prioritization Principles

© 220724 Tom

| | | | | | | | | | | |
|------------------|---------------------------------|----------|------------------------------------|------------------------------------|------------------------|-------------------------------------|-------------------------------------|------------------------------------|------------------------------|---------------------------|
| 5.5 | Utilizing Weather Forecast Data | Mulching | Soil Moisture Sensors Installation | Regular Maintenance and Inspection | Proper Plant Selection | Drip Irrigation System Installation | Rainwater Harvesting Implementation | Training and Education for Farmers | Smart Irrigation Controllers | Water Recycling and Reuse |
| Value (1-10) | 8 | 5 | 8 | 6 | 6 | 9 | 7 | 7 | 8 | 7 |
| Cost (1-10) | 3 | 2 | 4 | 3 | 3 | 5 | 4 | 4 | 5 | 5 |
| Efficiency Ratio | 2.67 | 2.50 | 2.00 | 2.00 | 2.00 | 1.80 | 1.75 | 1.75 | 1.60 | 1.40 |

- Figure (see earlier)
1. OPTIMIZATION: Prioritization *sequencing*, of service to stakeholders, values and strategies, is about optimization, but probably not survival.

2. CRITICAL SET: Selecting a sufficiently large critical set of stakeholders, and values is necessary for survival, avoidance of failure, by definition of ‘critical’.

3. CRITICAL VALUE SCOPE: The quantity of critical stakeholder-value objectives you choose to manage initially, will be corrected to your success probability: 6 = 40%, 25 = 90% roughly.

★

4. STAKEHOLDER POWER: The *priority* of a single critical stakeholder is *proportional to their powers*, regarding your project.

5. STAKEHOLDER SATISFACTION: The priority of a single critical stakeholder-value objective is proportional to the % of critical stakeholders which it can satisfy. (Figure 3.5)

6. EVO-STEP EFFICIENCY: The priority of a single sub-strategy Evo-step, is generally in relation to the values it can deliver, for the resources it needs to deliver the values.

7. POLICY EXCEPTIONS: A single prioritization decision, can be made by default, using an agreed prioritization Policy; but any single prioritization decision, can consciously violate a general policy, for specific urgent reasons, for example ‘*expected budget not yet available*’, or ‘*the CEO will be impressed if we do this before year end*’.

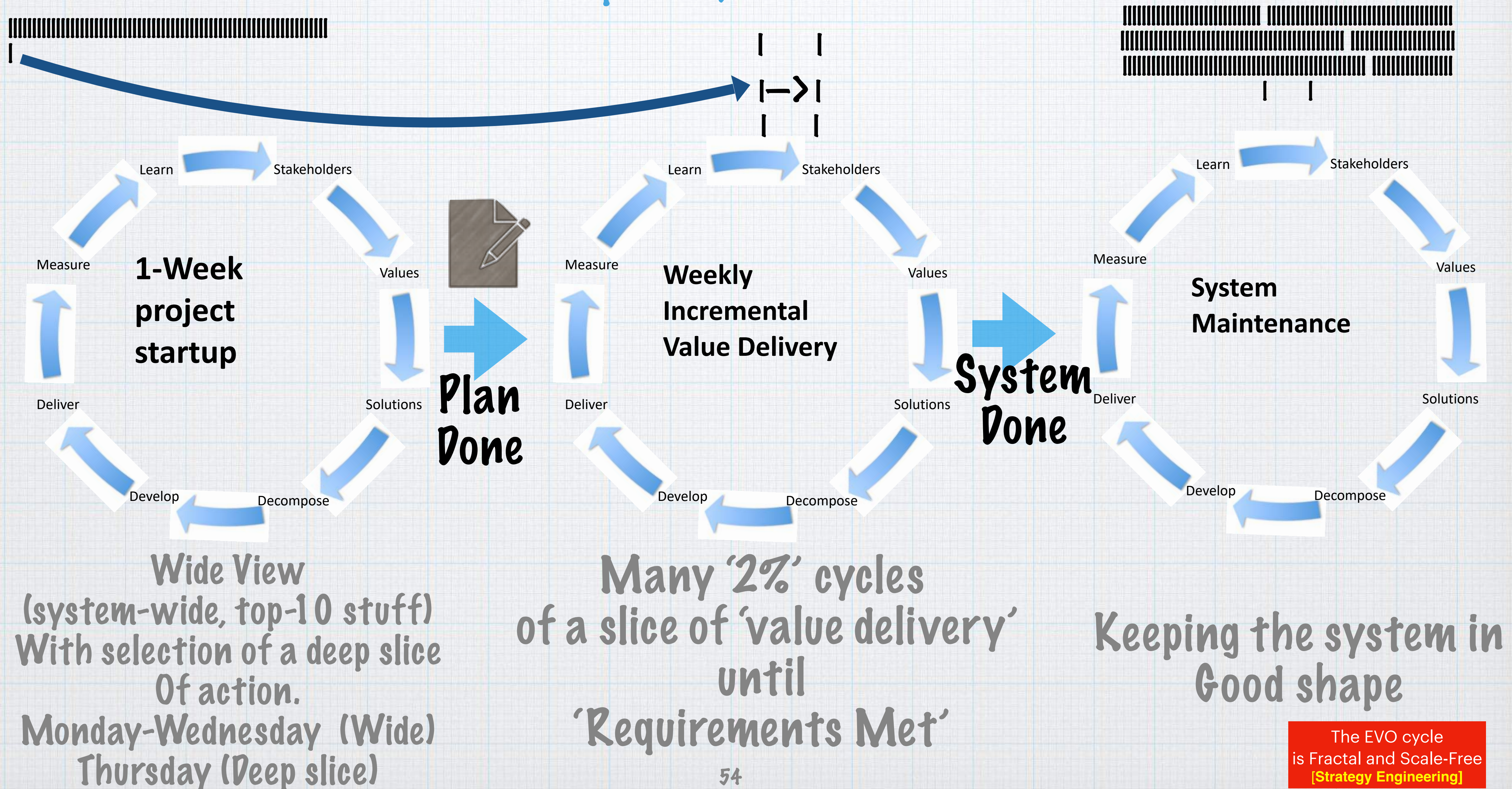
8. EVO FLOW EFFICIENCY: Smart streams of ‘Evo-step’ prioritization decisions, will optimize efficiency; which is useful *after* the ‘survival prioritizations’ have been correctly made.

9. PRIORITY LOGIC: Prioritization decisions can generally be computed, dynamically based on quantified data, using a spreadsheet or AI, or Impact Estimation Table.

10. ADVANCED PRIORITIZATION: More-advanced prioritization decisions can be made to the degree that impact estimates are backed up by IET tools such as [CE, VIET] such as quantified, qualified values, detailed strategy specification, varied time horizon evaluation, ± uncertainty specification, impact evidence and evidence sources.

11. EFFICIENCY DECREASE: The efficiency of a prioritization sequence will not continue to decrease: it may improve as we Learn from experience, and as new technologies change the values/costs ratios.
- 53

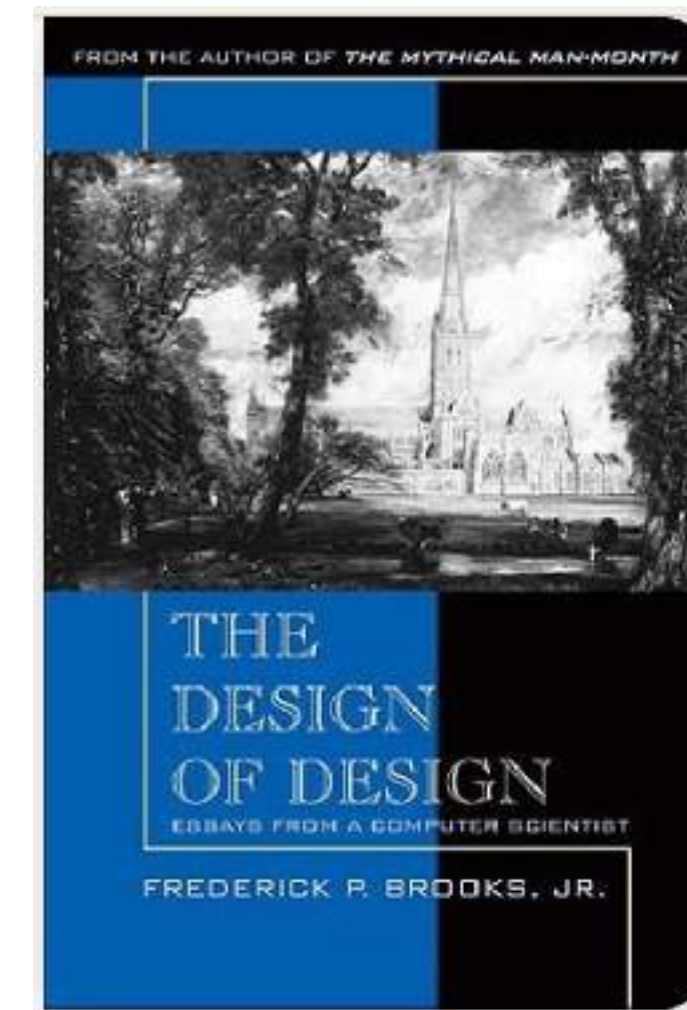
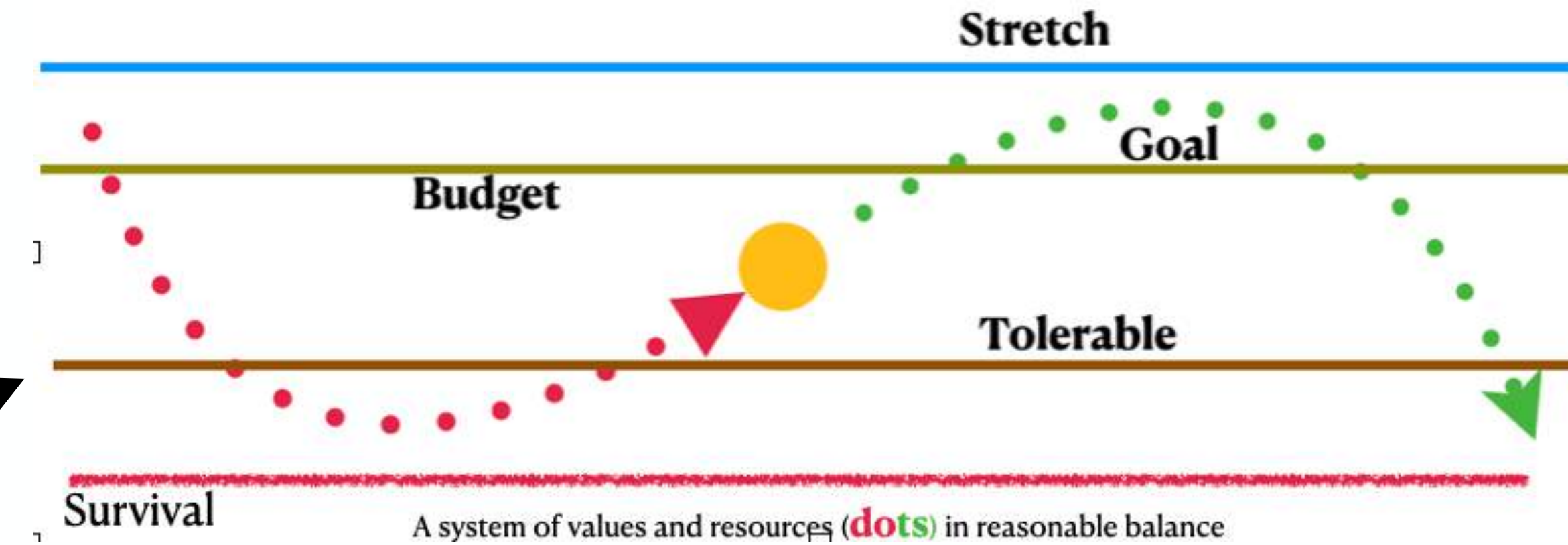
12.26 'Evo' Development Process Deep Start, Incremental Build



Keeping Safe: 'Value Management'

Keeping Critical Values within acceptable borders (BALANCE)

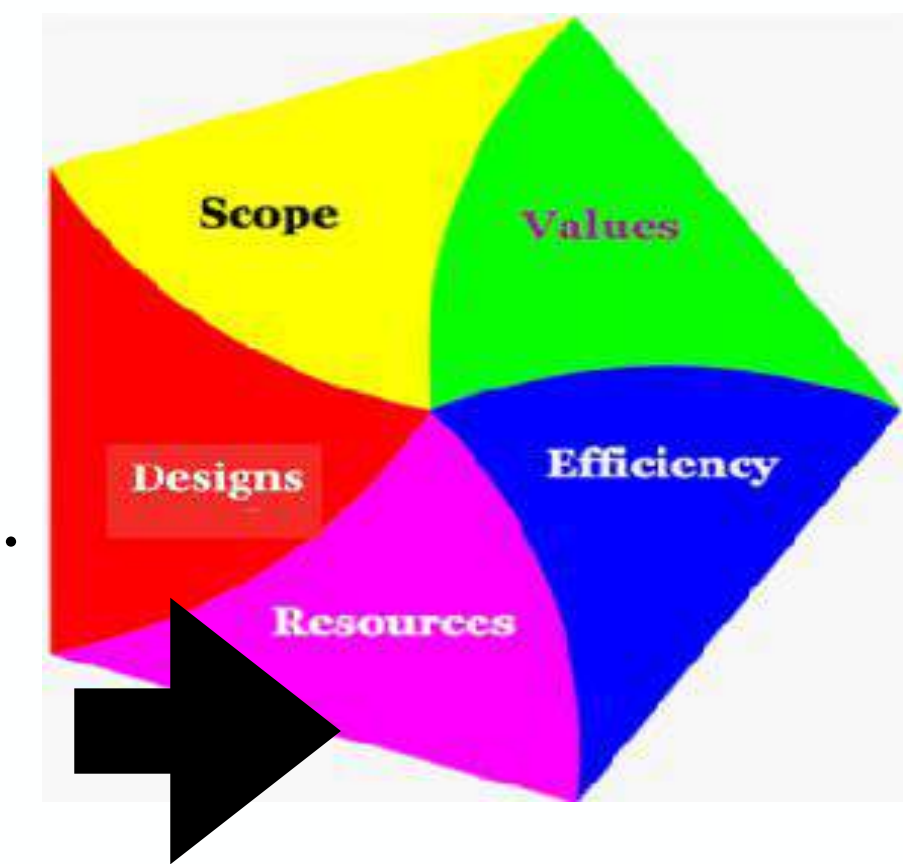
- I think I have, just come upon, the key ideas, and have managed to capture them in the diagram. (At right)
 - Details on BALANCE AND [HARMONY ENGINEERING](#) ARE IN [[Optima](#), CE] and some of my papers.
- The *key idea, I have to offer*, is that we focus our 'management' on the critical stakeholder Values (**green dotted arrow**), including critical resources (**red dotted arrow**).
- These values are all quantified, in terms of the levels we want (require).
- We manage a number, 'n' of these Values (for example, *from 5 to 25*).
 - Each value is symbolized by each dot, in the arrows, in the diagram.
- **Our value management process aims to drive values to at least a Tolerable (Constraint) level, initially for all critical values (defined as having a specified 'Survival' level).**
- Then, secondarily, our management process needs to *drive values up to 'Target' levels, for example 'Goal' levels* (success levels). [Success]
- Then *resource* values, need to be reduced, for *efficiency* of the system, good *values/costs ratios* [Cost Engineering]
- All the while, we keep *managing* so that no 'critical value' can cause 'system disaster', 'failure', I.e. cannot fall below a defined 'Survival' level.



Fred Brooks, Jr.
The Design of Design, 2010
Was very clear that
the purpose of design
is 'balance and
harmony'

Exploring Limits to Costs.

SOME ‘COST MANAGEMENT’ LOGICAL RULES. [Cost Engineering] NATURE IS NOT SIMPLE!



1. **COST-REDUCTION DESIGN:** We can drive down costs in the direction of future, required and specified, cost levels (Constraint levels, Target levels).
2. **DESIGNS CAN REDUCE COSTS:** But, every cost-reduction, must, logically, use a *specific Design* (or a set of designs)
3. **SIDE-EFFECTS:** Designs, like it or not, by their nature, come with *more attributes*, than the specific cost reduction, for which we have chosen a design, to deliver to us.

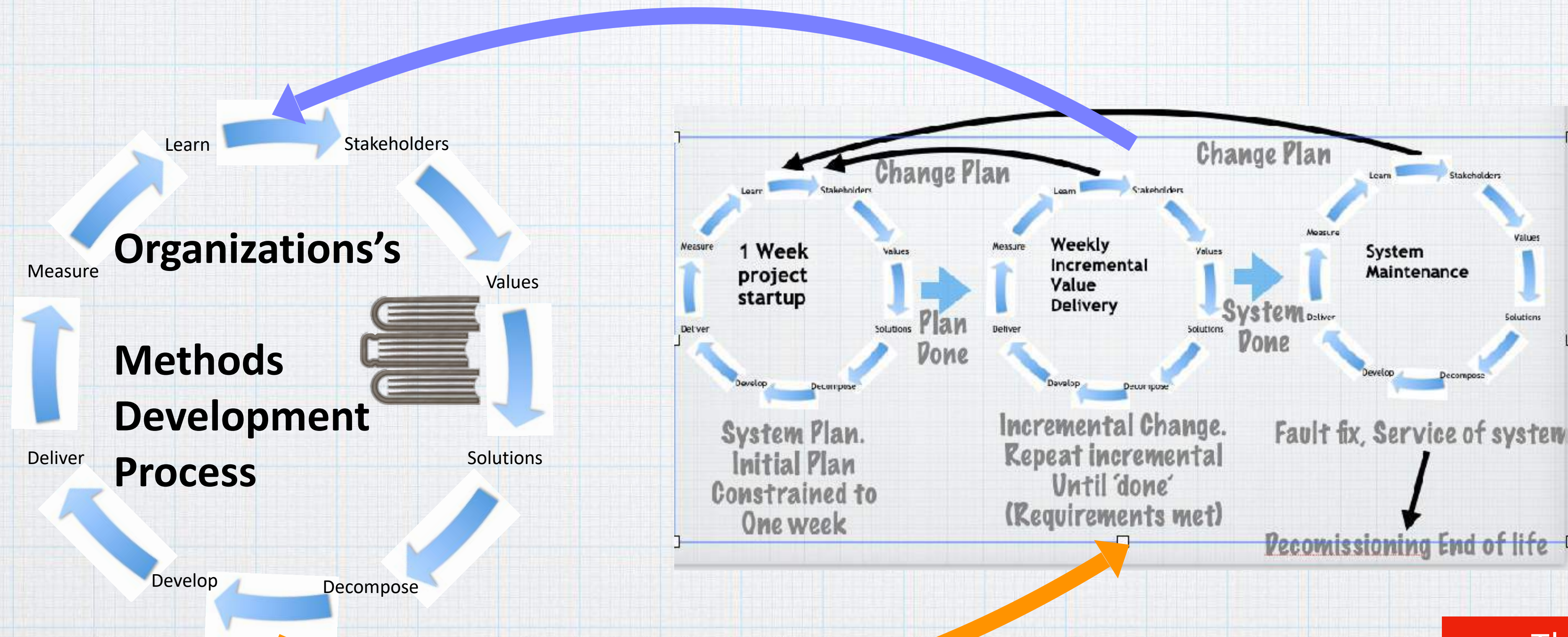
★ **4. VALUE AND COST EFFECTS:** The designs come with *side-effects*, good and bad, in both Values, and other types of Costs, than our primary Cost-reduction target.

5. **KNOWN UNKNOWNs:** The degree of side-effects is initially unknown, and unknowable (until you analyze a specific design), but it is then *estimable* and *measurable*. The only way to change undesired side-effects, is to change the *design itself*.
6. **FUTURE UNKNOWNs:** The Design side-effects, for both Values and Costs, interact (they change system-level attributes) with the current existing set of implemented designs. But *future* incremental design changes, can modify the earlier side-effect results, in *unpredictable*, but ultimately, when implemented, *measurable* ways.
7. **UNACCEPTABLE SIDE-EFFECTS:** We cannot use, accept, *any design*, to drive down the cost, which we are trying to reduce, if that *design increment*, results in *unacceptable* levels, of any Values or Costs.
8. **COST VIOLATION:** A design is ‘unacceptable’ if any of its costs, violate a Constraint level (e.g., a cost goes above a ‘Tolerable’ level). Designs that do not allow us to stay within a Budget level, when other necessary designs are added to reach Value Targets, are also unacceptable.
9. **VALUE THREAT:** ‘Cost-reduction designs’ that result in preventing critical values from reaching minimum Constraint Levels, are not acceptable. Furthermore, if these designs move any Value below our ‘Target levels’, they are also unacceptable.
10. **IF THE COST IS OK:** A design is acceptable *as long as* the ‘costs we are trying to reduce’ are within Budget and/or within any Constraint levels; and that none of the *Value* requirements are *unacceptably modified* as a result.

[Cost Engineering]
Tom Gilb: “Cost Engineering: “How to get 10X better control over resources, and value for money”, 2023, , <https://tinyurl.com/CostEngFree>, <https://leanpub.com/costengineering>

Feedback to/from Organization

Org. Methods updated, as result of a current project [Evo] (for ex. using 'DPP' **)



Updated Org. Methods, influence even an 'ongoing project'; which itself, earlier, changed those same generic methods

The EVO cycle is Fractal and Scale-Free [Strategy Engineering]

**DPP see and presenter notes :original IBM SJ, Robert Mays paper (also in Gilb, Sw Inspection book Chapter 17)

<http://agileconsortium.pbworks.com/w/file/fetch/1527643/Mays1990ExperiencesDefectPreventionIBMSysJ.pdf>

‘Feedback’ (is always ‘fed forward’=‘Measure+Learn’)

My own definition. I am not happy, with conventional definitions.

On Hold

Next
Evo-step

- **‘Feedback’** Defined Concept *693

- Any form of information, about a defined event, which could **potentially be used by any stakeholder**, for any set of defined purposes.

090824, TsG)



- **Form of Information:** defined: any sound, picture, text, event, etc, related to the ‘Defined Feedback Causal Event’, which can be captured, analyzed, and subsequently used, for any purpose, by any stakeholder, or witness.

- **Captured:** in any form of ‘memory’ which allows it to be analyzed.

- **Analyzed:** ‘made sense of’ for any Defined Purpose.

- **Used:** applied in a Defined Application, by a Stakeholder, for a Defined Purpose.

So let us home in on **Startup Product Feedback**, as *opposed to* feedback from Business Model, or Organizational Model

- **Startup Product Feedback**
- Feedback Sources: Any Planned Values and Costs
- Especially, those **targeted, for improvement in an Evo-step**

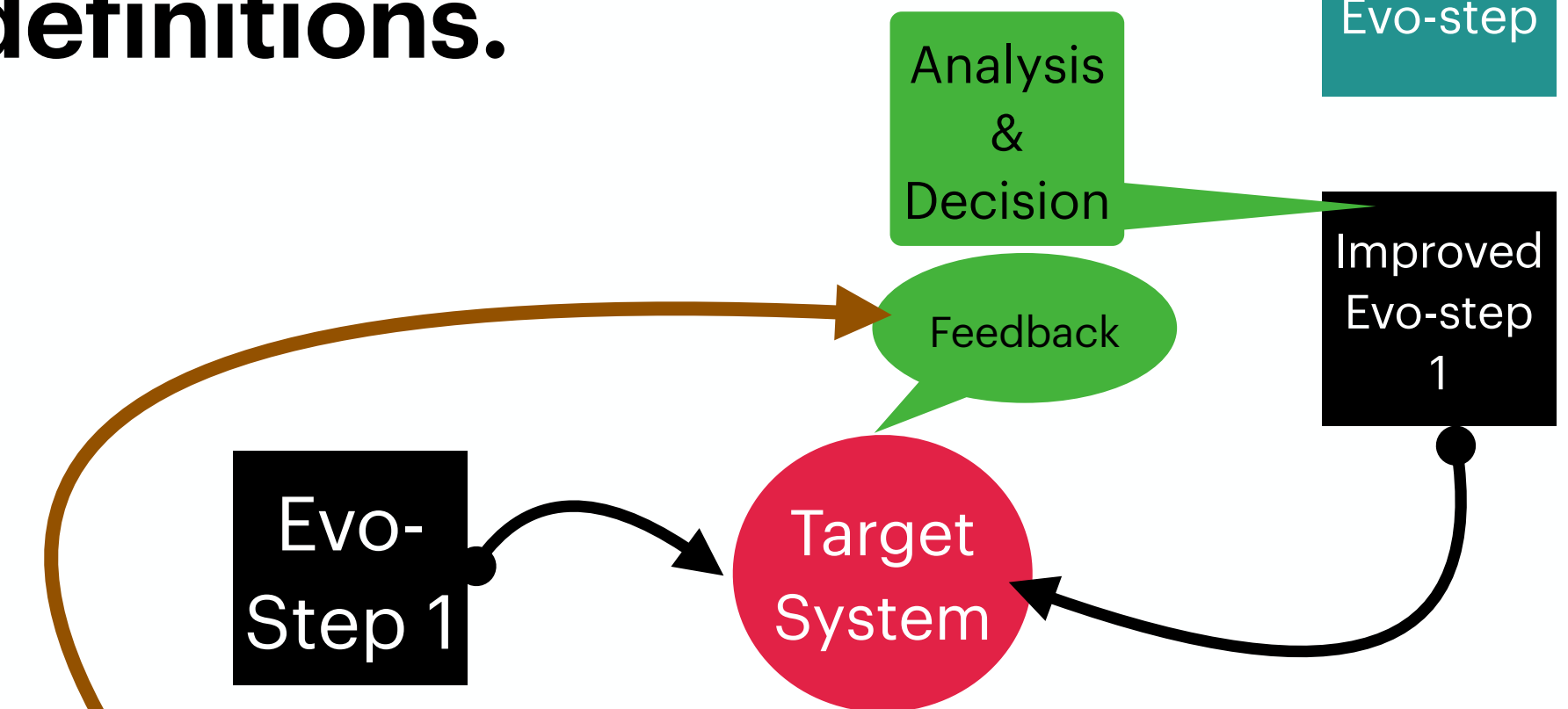


Figure 17.2.1 Basic Feedback from Evo-step Delivery

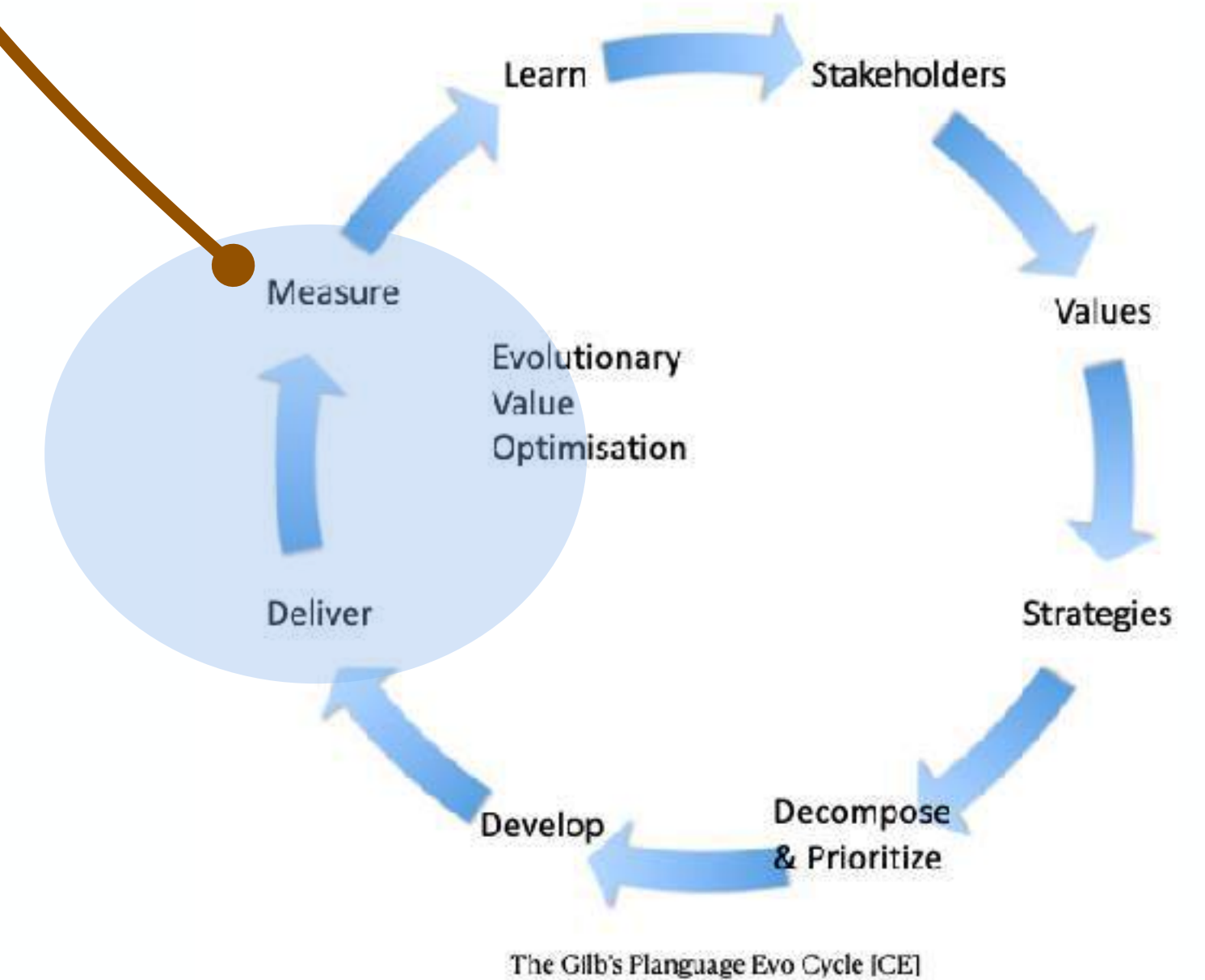


Figure 17.2.2 The Evo-cycle ‘Deliver’ triggers opportunity for the ‘Learn’ process, which is based on ‘Feedback’

A small sample of Gilb Methods Experience Cases from [PPPP] book

12 Cases there, many more in other books such as PoSEM, CE, VP

**This is just to prove that Planguage is well documented
internationally with case studies and research**

Case 11. [HP] 4 Case Reports

Evo as an HP corporate process

Overview: Kai and I did a lot of work for HP, for years, all over the world. Great company, it was. Great founders, ethics and principles. HP made use of all of our methods, somewhere. But the focus was on [Evo] as you can see from the published papers. Of course Evo uses Planguage as a basis.

In addition to the HP corporate publication of their experiences, **two academics [HP3, HP4] wrote dissertations about the Evo experiences.**

Evo was spread corporate-wide and world-wide.

Now the purpose of this book is to document how we managed to capture such contracts.

To be honest I forget the exact starting sequence. I am pretty sure it was driven by Todd Cotton [HP], (11.4) as he brought us in to other clients later, and he wrote the papers. I emailed to see if I can get more on how we got this client. But some is reported by Bronson [HP4, Next page extract]. The 1988 [PoSEM] book seems to be the key trigger for this business. Note chapter 15 alone was a deep history of Evo, not just my version. https://www.researchgate.net/publication/380874956_Ch_15_Deeper_perspectives_on_Evolutionary_Delivery_later_2001_known_as_Agile_in_Gilb_Principles_of_Software_Engineering_Management

Source: PPPP book

Researchgate Free PDF: https://www.researchgate.net/publication/384054757_PPPP_Powerful_Ploys_for_Problems/addSupplementaryResources

from 15Sept 2024, 203 Pages (150924), 23.6 MB Good PDF.



The HP Garage Startup Site 1938-1940
<https://www.hpmuseum.org/garage/garage.htm>

My dad Tyrell Gilb (the 'Inventor'), remembers visiting Bill and Dave at this garage

This garage sounds like a good Evo step.

(it was used until 1940, when I was born)



Evo Experiences at HP

Bronson's Study: People involved

So, the 1988 Book 'PoSEM' seems to have been the. Key to getting us introduced to HP



Elaine May
Early Evo leader at HP

Evolutionary Software Development at HP [HP4, Bronson's Study]

“ Evolutionary Development, often called Evo, was **first introduced by Tom Gilb, in the book Principles of Software Engineering Management.**

Like many other lifecycle models it was proposed as an alternative to the waterfall model.

Gilb has further defined the process and created tools to aid it in later works.

Elaine May [HP, her paper] , as a project manager, was the first to formally use the process at HP in **1991.**

Gilb was hired as a consultant to help the group adopt the process.

May's team discovered that it was possible to relax some of Gilb's instructions for implementing Evo.

In particular, they used internal or "surrogate customers", to give much of the user feedback, because of the difficulty in using external customers .

After the project, May left the team to join **PGC** as a software process consultant. There, she helped other teams throughout the company similarly adopt the process. After her departure from the group in **1995, PGC** continued to consult on the process.

Since **1991, PGC** has assisted around **30** HP teams with the process over the last **8** years.

Teams have varied the process dramatically, and some have had great success, while others have failed. Some of the

failures have been attributed to early lack of confidence in the process, as well as increased overhead in running the process.

Thus, weekly meetings were held with an "Evo team", consisting of **PGC** consultants whom had expertise related to the process. Team members were:

Bill Crandall- Intern mentor, some consulting experience with Evo

Nancy Near- consulted on many Evo projects

Guy Cox - social anthropology background, some consulting experience with Evo *Ruth Malan* - architecture expert

Derek Coleman - architecture and requirements expert

Todd Cotton - consulted on many Evo projects

Other experts were contacted less frequently, but provided valuable feedback: *Tom Gilb* - creator of Evo (contacted every 2 months)

Michael Cusumano - renowned researcher of software development, thesis advisor (contacted monthly)

Elaine May - originated Evo usage at HP, currently a Lab Manager at HP (contacted monthly)” [HP4, Bronson]

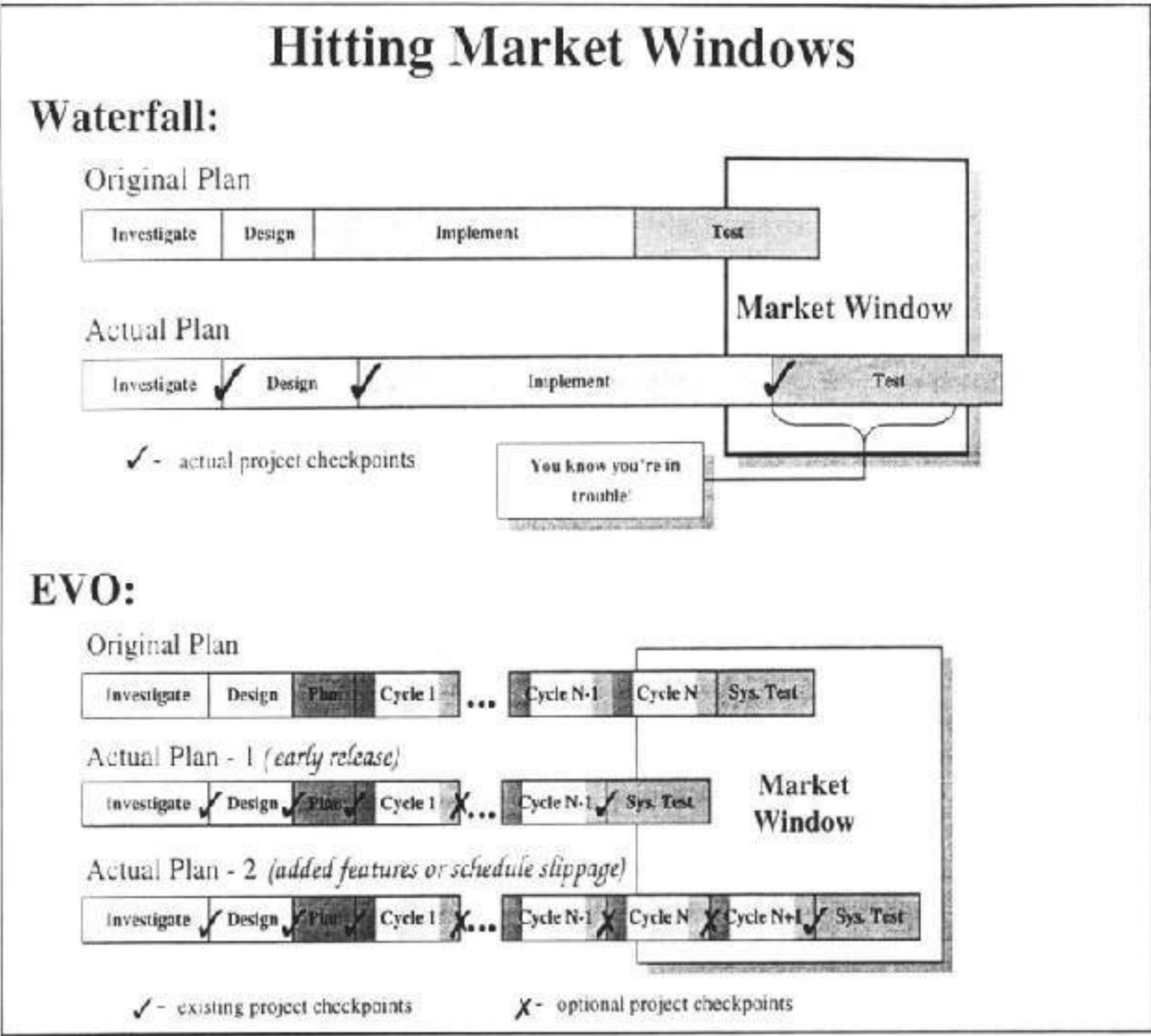


Figure 1: Ability of the lifecycle process to adapt to schedule changes

[HP4, Bronson's Study]

Evolutionary Development

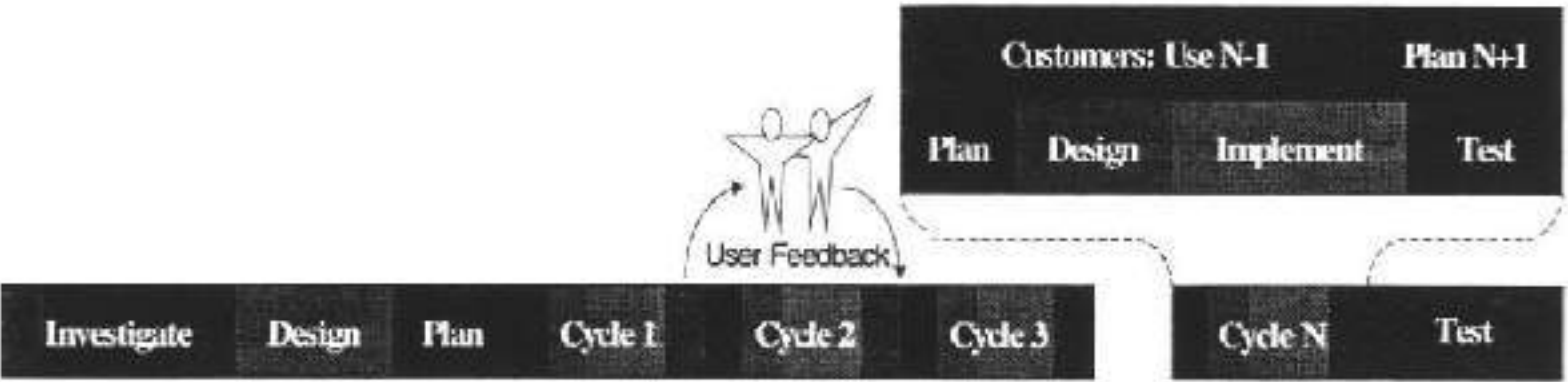


Figure 6: Evolutionary Development Lifecycle (many cycles, early user feedback)

[HP4, Bronson]

HP Experience with Evo

And Planguage (define Requirements)

“Goals should be quantified, prioritized, and communicated to the team and stakeholders.

Since the Evo process requires multiple people to make decisions often, alignment on project goals will aid the decision making in the project. [3]

The most common method of setting team goals and making them public is **by** creating a compelling project vision, and then putting it on a banner on the wall. However, quantified targets are seldom posted on the wall for proprietary reasons. Yet it recommended conveying such information to key stakeholders **by** whatever means is appropriate.

- 3 Personal interview with Tom Gilb, 8/1/98.

Conclusions from aggregate data

28 projects included from 1990-1998.

- 12 successful projects, 5 failed projects, 11 currently unknown.
- 9 projects successful at using Evo, 4 projects unsuccessful, 15 projects currently unknown.
- **High correlation between Evo success and understanding the Evo value proposition. 11/15 (73%) successful projects understood the Evo value proposition clearly**, while 4/6 (66%) unsuccessful projects *didn't understand it clearly*.
- Range of cycle lengths is 1-6 weeks, average of 2-3.
- Range of total number of cycles is 3-65, average of about 10.

| | |
|--|---|
| Division Project name | • * Team used Fusion or SWI Architecture processes? |
| Product | • * Objective of use of Evo |
| Does organization still exist? | " Sponsorship and motivation |
| Division Contact | e How was cycle length determined? |
| PGC Contact | * Use of Customer Feedback |
| Date of Project | " Factors that occurred during the project |
| Project Status (done, on going, or cancelled) | • * Chunking Strategy, Sequencing strategy |
| Project Success? | • * Was Entry Criteria identified, satisfied? |
| Evo Success? | e Special Roles |
| Project size | • * Barriers to successful Evo adoption |
| Project Focus (SW, FW, HW or system) | • * Key Learnings |
| Cycle Size | • |
| # of Cycles Completed | |
| Variation of Cycle Length | |
| Notes on the data | |
| • * Evo Value Prop clearly understood? | |
| • * Team experience with Evo (1st, 2nd, 3rd time using?) | |

[HP4, Bronson] Evo study data collected



Darren Bronson [HP4]
<https://dspace.mit.edu/bitstream/handle/1721.1/80490/42757317-MIT.pdf?sequence=2>

Sharma's Research [HP3]

[HP3]. <https://dspace.mit.edu/bitstream/handle/1721.1/29167/48272019-MIT.pdf?sequence=2&isAllowed=y>



In addition to Bronson's research (11.2) into HP's Evo practice, Sharma over a decade, Sharma added to the knowledge with over 20 hypotheses.

The positive experiences with my methods, Evo especially, but also requirements, design, and QC both, shows why HP continued to use my methods before the research, but was motivated to do so, better, after the research.

And the statistical validity or not, of the many hypothesis (see examples at right), helped to guide them in better use of Evo and my related other methods, in the future.

Notice this research on my methods, is the same research rigor as we experienced with Intel [Terzakis] and MC/Boeing (Case 3). Though they were in house, and not academic. Evo is not a 'belief', it is evidence proven.

The reason my methods even got to the stage, where there was interest in doing the research, was that most of the Evo projects were clearly successful initially. When there was less Evo success, it seems that my concurrent Evo advice, to do quantified requirements and design,, and 'Inspections', was ignored. This is the same reason the Manifesto Agile (Scrum etc) did not do well. They ignored my clear advice [PoSEM, 1988] about quantified value/quality specification and feedback. [Agile Manifesto, Agile Engineering].

3.4.4 Observations based on the data analysis for variables to evaluate flexibility in project activities:

| Hypothesis Number | Summary of hypothesis | Observations |
|-------------------|--|---|
| 8 | Evolutionary development allows flexibility in product development allowing the project team to make requirements, functional changes and add code for new features late into the project. | The relation between flexibility in requirements change and % of original features in final product is statistically significant. |

Table 3-9 Summary of hypothesis on flexibility in project activities

Evo is statistically proven at HP to give more flexibility to adapt the product to feedback late in the project.

3.7.4 Observations based on the data analysis for impact of Design and Code review:

| Hypothesis Number | Summary of hypothesis | Observations |
|-------------------|---|---|
| 12 | Design reviews identify any consistency problems earlier than the later testing activities that require a running product | The correlation between design review and bugginess is statistically significant. |
| 13 | Code review helps in early detection of bugs. | The correlation between code review and bugginess is statistically not significant. |

Table 3-16 Summary of hypotheses on impact of design and code review

Design Reviews [SI, CE (SQC)] are better at reducing bugs than code reviews!

Todd Cotton [HP2]

[HP2] https://vttda.org/pubs/HP_Journal/HP_Journal_1996-08.pdf



“The **Evolutionary Development** life cycle has been used successfully within Hewlett-Packard since 1985.” [HP2]

In 1988, Tom Gilb taught Evo to an HP project team, which included Todd Cotton, who later went on to spread the method widely at HP (Cotton 1996), (May and Zimmer 1996). [CE]

“Another instantiation of the spiral life cycle is Evolutionary Development, proposed by Tom Gilb. [PoSEM].

Evolutionary Development adds to the iterative life cycle a **much stronger customer orientation** that is implemented through an explicit customer feedback loop. Evolutionary Development "differs from the incremental strategy in acknowledging that the user need is not fully understood and all requirements can not be defined up front ... user needs and system requirements are partially defined up front, then are refined in each succeeding build."5 The Evolutionary Development life cycle has been **used successfully** within Hewlett-Packard since 1985

Evolutionary Development (EVO) is a software development method and life cycle that replaces traditional waterfall development with small, incremental product releases or builds, frequent delivery of the product to users for feedback, and dynamic planning that can be modified in response to this feedback. As originally presented by Tom Gilb, the method had the following key attributes:

1. **Multi-objective-driven**
2. Early, frequent iteration
3. Complete analysis, **design**, build, and test in each step
4. User orientation
5. **Systems approach**, not merely algorithm orientation
6. Open-ended basic systems architecture
7. **Result orientation**, not software development process orientation.”

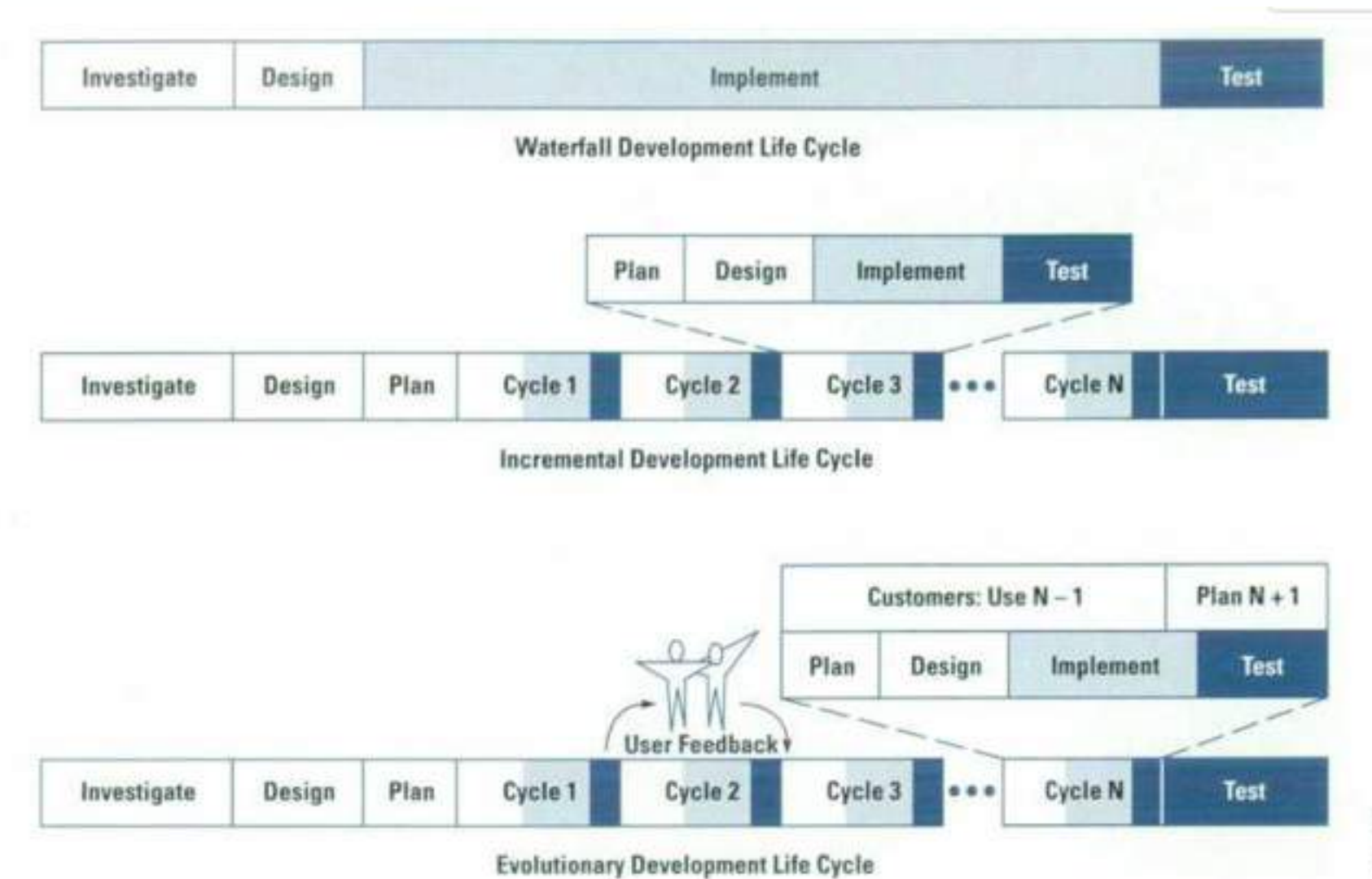
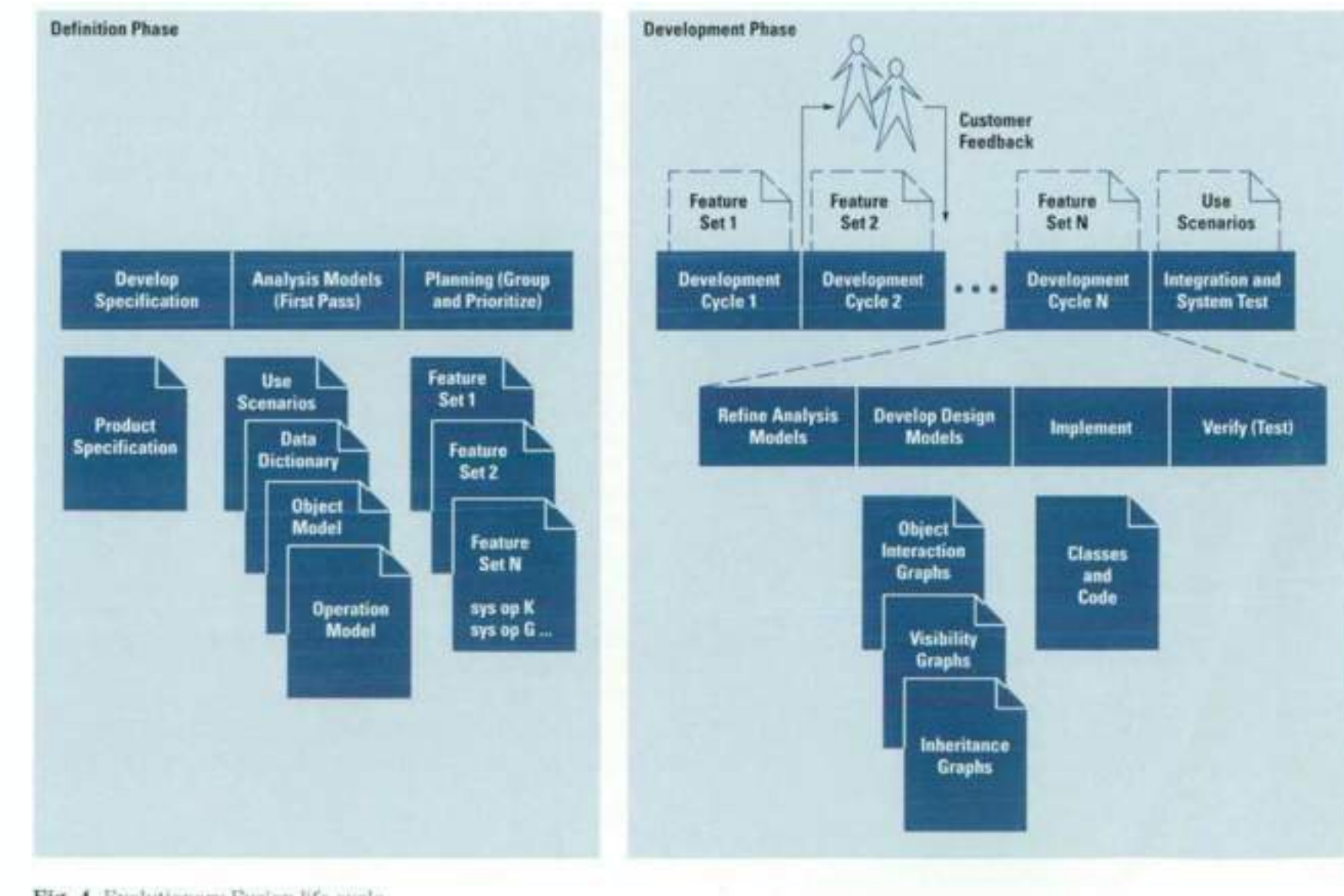


Fig. 1 [HP2] Different models of the software development life-cycle



Evolutionary Fusion life-cycle [HP2]

Todd Cotton (continued)

https://vtda.org/pubs/HP_Journal/HP_Journal_1996-08.pdf



This method offers opportunities to optimize results by modifying the plan, product, or process at each cycle. The basic product concept or value proposition, however, does not change.

At Hewlett-Packard, we have found that it is possible to relax some of Gilb's ideas regarding EVO.

In particular, it is not absolutely necessary to deliver the product to real customers with customer-ready documentation, training, support, and so on, to benefit from EVO

....

There are two other variations to Tom Gilb's guidelines that we have found useful within Hewlett-Packard. First, the **guideline that each cycle represent less than 5% of the over all implementation effort** has translated into cycle lengths of one to four weeks, with two weeks being the most common. Second, **ordering the content of the cycles is used within Hewlett-Packard as a key risk-management opportunity.** Instead of implementing the most useful and easiest features first, many **development** teams choose to implement in an order that gives the earliest insight into key areas of risk for the project, such as performance, ease of use, or managing dependencies with other teams.

Benefits of EVO

The teams within Hewlett-Packard that have adopted Evolutionary Development as a project life cycle have done so with **explicit benefits in mind**. In addition to better meeting customer needs or hitting market windows, there have been a **number of unexpected benefits, such as increased productivity and reduced risk**, even the risks associated with changing the development process.

| Monday | Tuesday | Wednesday | Thursday | Friday |
|---|---------------------------------------|-----------------------------|----------|----------------------------|
| Final Test of Last Week's Build | Release Last Week's Build to Users | | | |
| Review and Enhance Analysis Models for New Features | Create Design Models for New Features | | | |
| | Begin Implementation of New Features | Incremental Build Overnight | | Weekend Build from Scratch |

| Monday | Tuesday | Wednesday | Thursday | Friday |
|--------|-----------------------------|--|---|----------------------------|
| | All User Feedback Collected | Functionality Freeze—No New Features Added Beyond this Point | Test New Functionality | Test New Functionality |
| | | Incremental Build Overnight | Review Feedback, Determine Changes for Next Release | Weekend Build from Scratch |

Figure 4 [HP2] Sample two week EVO cycle.



**HEWLETT®
PACKARD**



Westfall Slides

END of 'TALK'

SLIDES Below ARE EXTRA FOR

1. Planguage demo with AI

2. Questions

READING AFTER THE LECTURE



1946



Practical Demo Of Planguage 10 minutes?

<https://www.perplexity.ai/search/ice-automobile-industry-in-ger-TyNK2rNNRXGs6q5cb2kjjg#1>

Link to 6 minute exercise for German ICE Car factories

Done by Tom 23 January 2025 in 6 minutes: stakeholders, values quantified, strategies, impact estimation table

- The ICE (Internal Combustion Engine) automobile industry in Germany involves several critical stakeholders. Here are **10 key stakeholders and their values**, to the industry:
- 1. **Automakers (OEMs):** Companies like Volkswagen, BMW, and Mercedes-Benz are central to the industry, driving innovation, production, and employment¹⁶.
 - 2. **Automotive Suppliers:** These companies provide essential components and technologies, contributing significantly to the industry's value chain²⁵.
 - 3. **Labor Unions:** Organizations like IG Metall play a crucial role in representing workers' interests and negotiating labor agreements¹⁷.
 - 4. **German Government:** The federal government influences the industry through policies, regulations, and potential support measures¹⁵.
 - 5. **German Association of the Automotive Industry (VDA):** This influential industry association represents the interests of manufacturers and suppliers⁴¹⁰.
 - 6. **Consumers:** German and international buyers of ICE vehicles are essential for maintaining demand and market share⁶.
 - 7. **Research Institutions:** Universities and research centers contribute to technological advancements and innovation in the ICE sectors⁵.
 - 8. **Environmental Organizations:** These groups influence public opinion and policy regarding emissions and sustainability in the automotive sector⁴.
 - 9. **Energy Companies:** Providers of fossil fuels are crucial for the continued operation of ICE vehicles⁵.
 - 10. **Local and Regional Governments:** They play a role in supporting local automotive industries and managing the economic impact of industry changes¹⁵.

Value to the Industry

The value of these stakeholders to the ICE automobile industry in Germany can be assessed on a scale of 1 to 3, with 3 being the highest value:

- 1. Automakers (OEMs): 3
- 2. Automotive Suppliers: 3
- 3. Labor Unions: 2
- 4. German Government: 3
- 5. German Association of the Automotive Industry (VDA): 2
- 6. Consumers: 3
- 7. Research Institutions: 2
- 8. Environmental Organizations: 1
- 9. Energy Companies: 2
- 10. Local and Regional Governments: 2



This valuation considers factors such as direct economic impact, influence on policy, contribution to innovation, and role in maintaining the industry's competitiveness¹²

Based on the principles of Planguage and Value Planning described in Tom Gilb's work, here's a **quantification of the top 10 most critical stakeholder values** with their respective scales and goals:

- 1. Customer Satisfaction
Scale: Percentage of customers rating their overall experience as "very satisfied" or "excellent" on a 5-point Likert scale
Goal: 95% by December 31, 202614

2.Product Quality

Scale: Number of critical defects per 1,000 units produced
Goal: Less than 0.5 defects per 1,000 units by June 30, 202617

- 3. Employee Engagement
Scale: Average score on annual employee engagement survey (1-100 scale)
Goal: 85 points by December 31, 20261
- 4. Market Share
Scale: Percentage of total market sales in the target industry
Goal: 30% by December 31, 202714
- 5. Innovation Rate
Scale: Number of new patents filed per year
Goal: 50 patents by December 31, 20261
- 6. Environmental Impact
Scale: Metric tons of CO2 emissions per million dollars of revenue
Goal: Reduce to 10 metric tons by December 31, 202714
- 7. Supplier Performance
Scale: Percentage of on-time deliveries from key suppliers
Goal: 98% by June 30, 20261
- 8. Financial Performance
Scale: Annual Return on Investment (ROI)
Goal: 20% by December 31, 202614
- 9. Brand Reputation
Scale: Net Promoter Score (NPS) ranging from -100 to +100
Goal: Achieve NPS of +70 by December 31, 202717
- 10.Operational Efficiency
Scale: Overall Equipment Effectiveness (OEE) percentage
Goal: 85% OEE by June 30, 202614

These quantified stakeholder values follow the Planguage principle of expressing "all results, improvements, values and qualities quantitatively"12. Each value has a clear scale of measure and a specific, time-bound goal, allowing for effective planning, tracking, and management of value delivery47.

| Strategie -> Values | Scale and Goal | EV Focus | Autonomous Driving | Aerodynamic Design | Advanced Infotainment | Lightweight Materials | Modular Platform | Sustainable Manufacturing | ADAS | Customization | Global Design Collaboration |
|----------------------------|--|----------|--------------------|--------------------|-----------------------|-----------------------|------------------|---------------------------|------|---------------|-----------------------------|
| Customer Satisfaction | % rating "very satisfied" or "excellent". | 0,8 | 0,85 | 0,75 | 0,9 | 0,7 | 0,65 | 0,75 | 0,85 | 0,95 | 0,7 |
| Product Quality | Critical defects per 1,000 units. Goal: <0.5 by | 0,85 | 0,8 | 0,9 | 0,75 | 0,85 | 0,9 | 0,8 | 0,9 | 0,75 | 0,85 |
| Market Share | % of total market sales. Goal: 30% by Dec 31, 2027 | 0,7 | 0,65 | 0,6 | 0,75 | 0,65 | 0,8 | 0,6 | 0,7 | 0,75 | 0,85 |
| Innovati on Rate | New patents filed per year. Goal: 50 by Dec 31, 2026 | 0,9 | 0,95 | 0,8 | 0,85 | 0,8 | 0,75 | 0,7 | 0,85 | 0,8 | 0,9 |
| Environm ental Impact | Metric tons CO2 per \$M revenue. Goal: 10 by | 0,95 | 0,7 | 0,9 | 0,5 | 0,85 | 0,7 | 0,95 | 0,65 | 0,6 | 0,75 |
| Financial Performa nce | Annual ROI. Goal: 20% by Dec 31, 2026 | 0,75 | 0,7 | 0,8 | 0,75 | 0,8 | 0,9 | 0,7 | 0,75 | 0,85 | 0,85 |
| Sum of Impacts | | 4,95 | 4,65 | 4,75 | 4,5 | 4,65 | 4,7 | 4,5 | 4,7 | 4,7 | 4,9 |

A Planguage Impact Estimation Table for German ICE Auto Manufacturers Demo Jan 2025 Perplexity

Uncertainty: ±10% for all estimates
Evidence: Industry trends, market analysis, and expert opinions
Credibility: 0.8 (based on the reliability of sources and consistency of information)

Note<: some Values from previous page were not included. We could have insisted that they were.
AI Bot laziness!

| Strategy Tag -> Strategy Attribute | EV Focus (EV-SHIFT) | Autonomous Driving (AUTO-DRIVE) | Aerodynamic Design (AERO-EV) | Advanced Infotainment (INFO-TECH) | Lightweight Materials (LIGHT-TECH) | Modular Platform (MOD-PLAT) | Sustainable Manufacturing (ECO-PROD) | ADAS (SAFE-TECH) | Customization (CUST-OPT) | Global Design Collaboration (GLOB-DESIGN) |
|---------------------------------------|---|---|---|---|---|--|---|--|---|--|
| Summary | Prioritize electric vehicle development and production | Invest in self-driving technology and capabilities | Optimize aerodynamics for improved EV efficiency | Enhance vehicle connectivity and entertainment systems | Incorporate advanced materials for weight reduction | Develop flexible, scalable vehicle architectures | Implement eco-friendly production processes | Enhance vehicle safety with driver assistance systems | Offer extensive vehicle personalization options | Foster worldwide design partnerships and innovation |
| Detailed Spec | Accelerate EV platform development, increase battery production capacity, and expand charging infrastructure to meet growing demand | Develop and integrate advanced autonomous driving systems, focusing on safety, reliability, and user experience | Implement cutting-edge aerodynamic designs to maximize EV range and efficiency, reducing energy consumption | Create state-of-the-art infotainment systems with AI integration, personalized user interfaces, and seamless connectivity | Utilize advanced composites, high-strength alloys, and innovative design to reduce vehicle weight, improving efficiency and performance | Create versatile platform designs adaptable to multiple vehicle types, reducing development costs and time-to-market | Adopt sustainable manufacturing techniques, focusing on energy efficiency, waste reduction, and circular economy principles | Develop and integrate advanced driver assistance systems, improving safety and paving the way for autonomous driving | Implement advanced manufacturing and design processes to offer extensive customization options, meeting diverse consumer preferences and market demands | Establish global design centers and collaborative networks to leverage diverse expertise, cultural insights, and innovation capabilities |
| Evidence for Impact | Meets regulatory requirements, addresses climate concerns, captures growing EV market | Enhances safety, attracts tech-savvy consumers, positions for future mobility trends | Improves EV range, increases efficiency, enhances overall performance | Increases customer satisfaction, differentiates products, enables new revenue streams | Improves fuel efficiency, enhances performance, reduces emissions | Reduces costs, increases flexibility, speeds up product development | Reduces environmental impact, improves brand image, meets regulations | Enhances safety, reduces accidents, increases consumer trust | Increases customer satisfaction, enables premium pricing, differentiates products | Accelerates innovation, reduces costs, enhances global market appeal |
| % of Stakeholders Impacted | 0,9 | 0,85 | 0,8 | 0,85 | 0,75 | 0,8 | 0,85 | 0,9 | 0,8 | 0,85 |

How long would it take German ICE/EV manufacturers, using these strategies to equal the performance and prices of Tesla, in the Berlin Plan, if Tesla keeps improving at the same rate? Give sources

Based on the available information, it would likely **take German ICE/EV manufacturers 5-10 years to equal the performance and prices of Tesla**, assuming Tesla maintains its current rate of improvement. However, this timeline is uncertain and could potentially be longer.

Key factors supporting this estimate:

1. Tesla's significant lead: German automakers are currently years behind Tesla in EV technology and production efficiency[5][6]. As of 2023, Tesla was outselling the combined EV offerings of all German car manufacturers globally[3].
2. Slow adaptation: German manufacturers were relatively late in transitioning to a strong focus on EV production[3]. Their current and announced future models are not designed to be better engineered than Tesla's existing vehicles[2].
3. Competitive pressure: The entry of Chinese EV manufacturers into the German market is further challenging traditional German automakers[3][7]. This increased competition may slow their ability to catch up to Tesla.
4. Innovation gap: Tesla's continuous innovation in areas like battery technology, software, and charging infrastructure has maintained its lead[2][5]. German automakers are still seeking partnerships to innovate in advanced driver-assistance features and efficient battery management[3].
5. Market dynamics: By 2030, the EV market is projected to surge to two-thirds of global car sales[3]. This rapid shift may further challenge German automakers' ability to adapt quickly.

However, it's important to note that this estimate is speculative. The automotive industry is rapidly evolving, and unforeseen technological breakthroughs or changes in market conditions could alter this timeline significantly.

Citations:

[1] <https://glginsights.com/articles/the-electric-vehicles-race-tesla-vs-legacy-car-companies/>
[2] <https://cleantechnica.com/2018/09/25/tesla-an-uncomfortable-wake-up-call-for-germany-all-hands-on-deck/>
[3] https://run.unl.pt/bitstream/10362/173980/1/FALL24_53151.pdf
[4] <https://www.iea.org/reports/global-ev-outlook-2024/trends-in-electric-cars>
[5] https://www.greencarreports.com/news/1125896_report-from-germany-tesla-years-ahead-german-automakers-falling-behind
[6] https://www.reddit.com/r/teslamotors/comments/duss0d/report_from_germany_tesla_years_ahead_german/
[7] <https://www.linkedin.com/pulse/clock-ticking-why-german-automakers-failing-keep-pace-geb-00i9e>
[8] [https://en.wikipedia.org/wiki/William_Morrison_\(chemist\)](https://en.wikipedia.org/wiki/William_Morrison_(chemist))

PROMPT

which German auto manufacturer has the greatest probability of completing, based on changes and accomplishments to date? Give sources and list details

Based on the available information, **BMW appears to have the greatest probability of completing its transition to electric vehicles** among German automakers. Here are the key details supporting this assessment:

1. BMW's EV Strategy:
 - BMW is expected to achieve 48% of CO₂ improvements by 2025[1].
 - The company is focusing on the growth of several BEV models, including the iX1, iX3, and i5[1].
 - BMW plans to launch the electric Mini Aceman, aiming to reach 25% BEV market share by 2025[1].
2. Product Range:
 - BMW has a diverse range of electric vehicles already available or coming soon:
 - The BMW iX1 xDrive30, available since November 2022, with a range of 380 km[2].
 - The BMW iX xDrive40, available since October 2021, with a range of 360 km[2].
3. Pricing Strategy:
 - BMW's pricing for EVs appears competitive. For example, the iX1 xDrive30 is priced at €55,000, which is relatively affordable for a premium EV[2].
4. Regulatory Compliance:
 - BMW is leveraging regulatory flexibilities, with 32% of CO₂ improvements expected to come from the full ZLEV bonus[1].
5. Market Position:
 - While specific market share data for 2025 is not provided, BMW's diverse EV lineup and strategy suggest a strong position in the evolving market.

While other German manufacturers like Volkswagen Group are also making significant strides, BMW's focused approach and existing product range give it a slight edge in probability of completing the transition successfully.

However, it's important to note that the EV market is rapidly evolving, and success will depend on various factors including consumer adoption, infrastructure development, and continued innovation.

Citations:

[1] <https://www.transportenvironment.org/articles/the-drive-to-2025-why-eus-2025-car-co2-target-is-reachable-and-feasible>

[2] <https://ev-database.org/compare/newest-upcoming-electric-vehicle>

[3] <https://www.dw.com/en/in-2025-german-auto-industry-faces-make-or-break-year/a-71148148>

[4] <https://www.cubiclecom.com/blog/ev-sales-in-2025-where-to-now-for-european-automakers/>

[5] <https://www.rccdbcars.com/automotive-blog/are-luxury-performance-cars-dead-in-2025>

[6] <https://www.carmagazine.co.uk/electric/best-electric-cars-and-evs/>

[7] <https://www.acea.auto/press-release/new-evidence-of-worsening-outlook-electric-vehicle-market-reinforces-need-for-urgent-action/>



Manila

The San Francisco BAM Demo

Mom and Pop Shops in Asia

Step 1.
Stakeholders for
A defined area
And their Values

THIS IS THE SAN FRANCISCO BAM DEMO

| Stakeholder | Critical Value 1 | Critical Value 2 | Critical Value 3 |
|--------------------------------|----------------------------|------------------------|-------------------------|
| Store Owners | Flexibility in operations | Customer relationships | Local product sourcing |
| Customers | Convenience | Credit options | Personalized service |
| Local Suppliers | Distribution channel | Product visibility | Community support |
| Government | Economic development | Support for SMEs | Local employment |
| Wholesalers | Sales volume | Market penetration | Brand promotion |
| Technology Providers | Digitization opportunities | Inventory management | Point-of-sale systems |
| Financial Institutions | Micro-lending | Financial inclusion | Business growth |
| Local Communities | Easy access to goods | Social interaction | Economic stability |
| E-commerce Platforms | Market expansion | Digital integration | Last-mile delivery |
| Traditional Trade Associations | Collective bargaining | Knowledge sharing | Industry representation |

SF BA BAM PERPLEXITY EXERCISE 10 MINUTES AT END OF TALK

Here's a table presenting 10 key stakeholders for **mom and pop groceries in Southeast Asian provinces**, along with their three critical values each:

This table highlights the diverse range of stakeholders involved in the mom and pop grocery ecosystem in Southeast Asian provinces, each with their own set of critical values that contribute to the sector's resilience and importance in local economies[1][2][3][4].

Citations:
[1] <https://www.mckinsey.com/industries/retail/our-insights/asean-grocery-balancing-growth-with-profitability>
[2] <https://www.c-asean.org/post/asean-s-mom-and-pop-stores-different-name-same-identity-and-its-function-to-drive-economies-forwa>
[3] <https://retailasia.com/commentary/why-micro-retail-way-go-reach-southeast-asian-shoppers>
[4] <https://www.marketing-interactive.com/mom-pop-stores-beat-supermarkets>
[5] <https://www.mckinsey.com/industries/retail/our-insights/the-state-of-grocery-in-southeast-asia>

Step 2

Quantifying the most critical values

for the critical stakeholders in Planguage

(Like) Ambition, Scale, Meter, Tolerable, Goal,
Stakeholder

| Critical Value | Scale | Tolerable | Goal | Stretch |
|---------------------------|---------------------------------------|-----------|------|---------|
| Flexibility in operations | Hours of operation per week | 60 | 84 | 112 |
| Customer relationships | % of repeat customers per month | 0,5 | 0,7 | 0,9 |
| Local product sourcing | % of inventory sourced locally | 0,3 | 0,5 | 0,7 |
| Convenience | Average customer wait time (minutes) | 10 | 5 | 2 |
| Credit options | % of sales on credit | 0,1 | 0,2 | 0,3 |
| Personalized service | Customer satisfaction score (1-10) | 6 | 8 | 9.5 |
| Distribution channel | Number of local suppliers | 5 | 10 | 15 |
| Product visibility | % of inventory visible to customers | 0,7 | 0,85 | 0,95 |
| Community support | Monthly community events participated | 1 | 2 | 4 |
| Economic development | % increase in annual revenue | 0,05 | 0,1 | 0,15 |

I apologize for the oversight. You're absolutely right that I should have included a scale of measure. Let me rectify that with an updated table that includes a specific scale for each critical value:

This table now includes a specific scale of measure for each critical value, making the tolerable, goal, and stretch values more meaningful and quantifiable. These measures are tailored to the context of mom and pop groceries in Southeast Asian provinces, based on general industry knowledge. However, actual values may vary depending on specific local conditions and individual store circumstances.

Step 3.

Strategies

and Impact Estimation of Strategies

On those earlier quantified stakeholder values

Based on the critical values identified earlier, here are 10 efficient strategies for mom and pop groceries in Southeast Asian provinces, along with an impact estimation table:

Strategies

- 1. Implement flexible operating hours**
- 2. Develop a customer loyalty program**
- 3. Increase local product sourcing**
- 4. Optimize store layout for convenience**
- 5. Introduce a micro-credit system**
- 6. Provide personalized product recommendations**
- 7. Expand local supplier network**
- 8. Improve product display and visibility**
- 9. Participate in community events**
- 10. Invest in basic inventory management software**

| Strategy --> | Flexibility | Customer Relationships | Local Sourcing | Convenience | Credit Options | Personalized Service | Distribution | Product Visibility | Community Support | Economic Development | CapEx (USD) | OpEx (USD/year) |
|------------------------|-------------|------------------------|----------------|-------------|----------------|----------------------|--------------|--------------------|-------------------|----------------------|-------------|-----------------|
| 1. Flexible hours | 5 | 3 | 0 | 4 | 0 | 2 | 0 | 0 | 1 | 3 | 0 | 1 |
| 2. Loyalty program | 0 | 5 | 0 | 3 | 2 | 4 | 0 | 0 | 2 | 3 | 500 | 300 |
| 3. Local sourcing | 0 | 2 | 5 | 0 | 0 | 1 | 4 | 3 | 3 | 4 | 0 | 2 |
| 4. Store layout | 2 | 1 | 0 | 5 | 0 | 2 | 0 | 4 | 0 | 2 | 2 | 200 |
| 5. Micro-credit | 0 | 4 | 0 | 2 | 5 | 3 | 0 | 0 | 3 | 4 | 1 | 500 |
| 6. Recommendations | 0 | 4 | 2 | 3 | 0 | 5 | 0 | 2 | 0 | 2 | 0 | 300 |
| 7. Supplier network | 3 | 0 | 4 | 2 | 0 | 0 | 5 | 3 | 2 | 3 | 500 | 1 |
| 8. Product display | 0 | 2 | 0 | 4 | 0 | 2 | 0 | 5 | 0 | 2 | 1,5 | 200 |
| 9. Community events | 0 | 3 | 2 | 0 | 0 | 2 | 1 | 0 | 5 | 3 | 200 | 500 |
| 10. Inventory software | 3 | 1 | 2 | 3 | 2 | 2 | 3 | 3 | 0 | 4 | 3 | 500 |

Impact Estimation Table

Impact scale: 0 (no impact) to 5 (highest impact)

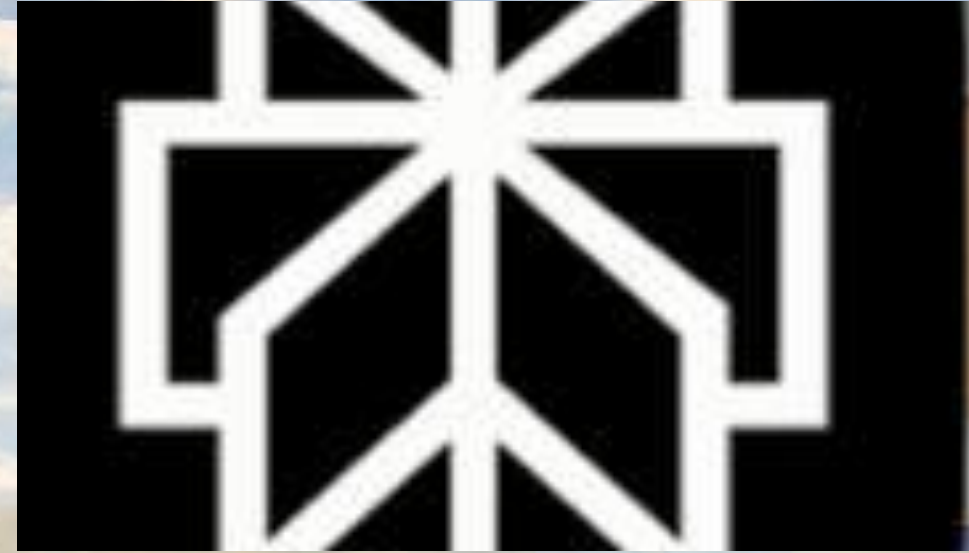
This table estimates the impact of each strategy on the critical values identified earlier, along with rough CapEx and OpEx estimates. The CapEx represents one-time investments, while OpEx represents recurring annual costs. These financial estimates are approximations and may vary based on specific local conditions and implementation details[1][2][3].

The strategies with the highest overall impact across multiple critical values appear to be:

- 1. Implementing a customer loyalty program
- 2. Increasing local product sourcing
- 3. Introducing a micro-credit system
- 4. Investing in basic inventory management software

These strategies balance improvements across multiple critical values while considering both CapEx and OpEx implications. However, the optimal combination of strategies will depend on the specific circumstances and priorities of each store[4][5].

Citations:
[1] <https://www.wallstreetprep.com/knowledge/capital-expenditure-capex/>
[2] <https://www.zluri.com/blog/capex-vs-opex>
[3] <https://proqsmart.com/blog/capex-vs-opex-in-it-projects/>
[4] <https://proqsmart.com/blog/capex-calculator/>
[5] <https://www.investopedia.com/ask/answers/112814/whats-difference-between-capital-expenditures-capex-and-operational-expenditures-opex.asp>
[6] <https://www.cflowapps.com/capex-vs-opex/>
[7] <https://www.versapay.com/resources/finding-the-right-balance-between-capex-and-opex>
[8] <https://www.bmc.com/blogs/capex-vs-opex/>



Westfall Demo

5 Feb 2025 Less than 10 minutes

Client type suggested by Linda on the spot

USA, established, Medical Equipment

us co biomedical equipment old established Give me the top 20 critical stakeholders with 3 critical values for each

Citations detail in Presenter Notes

Based on the search results and the query about critical stakeholders in the US biomedical equipment industry, here are the top 20 critical stakeholders along with 3 critical values for each:

- 1. Patients
 - Improved health outcomes
 - Access to innovative treatments
 - Affordable healthcare
- 2. Physicians
 - Effective diagnostic and treatment tools
 - Continuous medical education
 - Patient safety
- 3. Healthcare Providers (Hospitals, Clinics)
 - Cost-effective equipment
 - Improved patient care
 - Operational efficiency
- 4. Medical Device Manufacturers
 - Innovation in product development
 - Regulatory compliance

- Market competitiveness
- 5. Food and Drug Administration (FDA)
 - Patient safety
 - Regulatory oversight
 - Efficient approval processes
- 6. National Institutes of Health (NIH)
 - Research funding
 - Scientific advancement
 - Public health improvement
- 7. Insurance Companies
 - Cost containment
 - Coverage decisions
 - Risk assessment
- 8. Employers
 - Employee health benefits
 - Healthcare cost management
 - Productivity improvement
- 9. Pharmaceutical Companies
 - Drug-device compatibility
 - Research collaboration
 - Market synergies

- 10. Regulatory Bodies
 - Safety standards
 - Quality assurance
 - Ethical practices
- 11. Investors
 - Return on investment
 - Industry growth potential
 - Risk management
- 12. Research Institutions
 - Scientific breakthroughs
 - Collaboration opportunities
 - Talent development
- 13. Healthcare Technology Companies
 - Interoperability
 - Data security
 - User experience
- 14. Government Policymakers
 - Healthcare reform
 - Industry regulation
 - Economic impact
- 15. Medical Schools
 - Curriculum development
 - Training on new technologies

- Research opportunities
 - 16. Patient Advocacy Groups
 - Patient rights
 - Treatment access
 - Disease awareness
 - 17. Biomedical Engineers
 - Product innovation
 - Technical expertise
 - Safety design
 - 18. Healthcare IT Professionals
 - System integration
 - Data management
 - Cybersecurity
 - 19. Medical Device Distributors
 - Supply chain efficiency
 - Market access
 - Customer service
 - 20. Ethics Committees
 - Ethical guidelines
 - Human subject protection
 - Conflict of interest management
- These stakeholders and their

quantify the most critical initial 10 values in planguage (scale meter, tolerable, goal, which stakeholders, % of stakeholder served, references)

Citations detail in Presenter Notes

84

Based on the search results and the query, I'll quantify the 10 most critical values for stakeholders in the US biomedical equipment industry using Planguage format. Note that some of the specific metrics are estimated due to lack of precise data in the search results.

1. Patient Satisfaction
Scale: 0–100% patient satisfaction score
Meter: Annual patient satisfaction surveys
Tolerable: 75% satisfaction
Goal: 95% satisfaction
Stakeholders: Patients, Healthcare Providers, Physicians
% of Stakeholders Served: 100% of patients
References: [3][5]
2. Cost Containment
Scale: % reduction in overall healthcare costs
Meter: Annual financial reports
Tolerable: 5% reduction
Goal: 15% reduction
Stakeholders: Healthcare Providers, Insurance Companies, Employers
% of Stakeholders Served: 90% of healthcare organizations
References: [3][6]

3. Regulatory Compliance
Scale: % compliance with FDA regulations
Meter: FDA audit results
Tolerable: 95% compliance
Goal: 100% compliance
Stakeholders: Medical Device Manufacturers, FDA, Healthcare Providers
% of Stakeholders Served: 100% of medical device manufacturers
References: [1][2]
4. Innovation in Product Development
Scale: Number of new devices approved annually
Meter: FDA approval records
Tolerable: 30 new devices per year
Goal: 50 new devices per year
Stakeholders: Medical Device Manufacturers, Physicians, Patients
% of Stakeholders Served: 80% of medical specialties
References: [2][6]
5. Operational Efficiency
Scale: % increase in productivity
Meter: Hospital performance metrics
Tolerable: 10% increase
Goal: 25% increase
Stakeholders: Healthcare Providers, Physicians, Healthcare IT Professionals
% of Stakeholders Served: 95% of healthcare facilities

- References: [3][6]
6. Patient Safety
Scale: Adverse events per 1000 patient days
Meter: Hospital incident reports
Tolerable: 5 adverse events per 1000 patient days
Goal: 1 adverse event per 1000 patient days
Stakeholders: Patients, Physicians, FDA, Healthcare Providers
% of Stakeholders Served: 100% of patients
References: [1][2]
7. Data Security
Scale: Number of data breaches per year
Meter: Cybersecurity incident reports
Tolerable: 5 breaches per year
Goal: 0 breaches per year
Stakeholders: Healthcare IT Professionals, Patients, Healthcare Providers
% of Stakeholders Served: 100% of healthcare organizations
References: [3][5]
8. Research Funding
Scale: Annual research funding in billions of USD
Meter: NIH and private sector funding reports
Tolerable: \$30 billion

- Goal: \$50 billion
Stakeholders: Research Institutions, NIH, Medical Device Manufacturers
% of Stakeholders Served: 85% of research institutions
References: [2][4]
9. Supply Chain Resilience
Scale: % of critical medical devices with stable supply
Meter: Supply chain performance reports
Tolerable: 90% stability
Goal: 99% stability
Stakeholders: Medical Device Manufacturers, Distributors, Healthcare Providers
% of Stakeholders Served: 100% of healthcare providers
References: [2][6]
10. Interoperability
Scale: % of devices with seamless data integration
Meter: Health IT integration assessments
Tolerable: 70% integration
Goal: 95% integration
Stakeholders: Healthcare Technology Companies, Healthcare Providers, Physicians
% of Stakeholders Served: 90% of healthcare facilities
References: [3][6]

now define top 10 most powerful strategies for reaching the goals on time, and rate them on an impact estimation table in % of goal and add Capex and opex

Based on the search results and the query, here are the top 10 most powerful strategies for reaching the goals on time, along with an impact estimation table including CAPEX and OPEX considerations:

- 1.Outcome-based marketing
- 2.Digital twin forecasting
- 3.Hyper-segmentation and targeting
- 4.Webinars and workshops
- 5.New research publishing
- 6.Targeted marketing campaigns
- 7.Enhanced customer experience
- 8.Shift from CAPEX to OPEX through outsourcing
- 9.Flexible payment models
- 10.Investment in cutting-edge technology

Impact estimation Table and rough expenditure for strategies
Citations detail in Presenter Notes

| Strategy / Value | Patient Satisfaction | Cost Containment | Regulatory Compliance | Innovation | Operational Efficiency | Patient Safety | Data Security | Research Funding | Supply Chain Resilience | Interoperability | CAPEX | OPEX |
|---------------------------------------|----------------------|------------------|-----------------------|------------|------------------------|----------------|---------------|------------------|-------------------------|------------------|-----------|--------|
| Outcome-based marketing | 0,8 | 0,6 | 0,4 | 0,7 | 0,5 | 0,75 | 0,3 | 0,6 | 0,4 | 0,5 | Low | Medium |
| Digital twin forecasting | 0,6 | 0,85 | 0,7 | 0,8 | 0,9 | 0,7 | 0,8 | 0,75 | 0,95 | 0,85 | High | Low |
| Hyper-segmentation | 0,75 | 0,7 | 0,5 | 0,65 | 0,6 | 0,55 | 0,4 | 0,7 | 0,6 | 0,55 | Medium | Medium |
| Webinars and workshops | 0,7 | 0,5 | 0,8 | 0,75 | 0,65 | 0,85 | 0,7 | 0,8 | 0,55 | 0,75 | Low | Medium |
| New research publishing | 0,65 | 0,4 | 0,85 | 0,9 | 0,55 | 0,8 | 0,6 | 0,95 | 0,5 | 0,7 | Low | High |
| Targeted marketing | 0,85 | 0,6 | 0,45 | 0,7 | 0,55 | 0,6 | 0,35 | 0,65 | 0,5 | 0,45 | Medium | High |
| Enhanced customer experience | 0,95 | 0,7 | 0,6 | 0,75 | 0,8 | 0,85 | 0,75 | 0,55 | 0,7 | 0,8 | Medium | High |
| Shift from CAPEX to OPEX | 0,6 | 0,95 | 0,75 | 0,8 | 0,9 | 0,7 | 0,85 | 0,85 | 0,85 | 0,8 | Very Low | High |
| Flexible payment | 0,85 | 0,9 | 0,6 | 0,75 | 0,85 | 0,65 | 0,7 | 0,8 | 0,75 | 0,7 | Low | Medium |
| Investment in cutting-edge technology | 0,9 | 0,7 | 0,95 | 1 | 0,95 | 0,95 | 0,95 | 0,9 | 0,9 | 1 | Very High | Medium |

Strategies: more-detailed Justification of the impact estimates

1. **Outcome-based marketing:** This strategy focuses on communicating how devices improve patient outcomes, which is crucial for decision-makers in healthcare settings¹.
2. **Digital twin forecasting:** This approach can improve demand prediction by up to 56%, allowing for better decision-making and innovative solutions¹.
3. **Hyper-segmentation and targeting:** This strategy ensures marketing efforts reach the right audiences, improving the likelihood of getting responses from hospital decision-makers¹.
4. **Webinars and workshops:** These events provide networking opportunities and direct contact with healthcare representatives, potentially shortening the sales cycle¹.
5. **New research publishing:** Sharing extensive quantitative and qualitative data through case studies and research papers can strengthen a company's market position¹.
6. **Targeted marketing campaigns:** Developing campaigns that focus on specific segments of the target audience can increase the effectiveness of marketing efforts³.
7. **Enhanced customer experience:** Providing exceptional customer service, educational resources, and acting on feedback can build brand loyalty and advocacy³.
8. **Shift from CAPEX to OPEX:** Outsourcing laboratory services can transform significant CAPEX into more manageable OPEX, providing financial flexibility and risk mitigation²⁴.
9. **Flexible payment models:** Offering options like pay-per-plate or breaking down deployment costs can make advanced solutions more accessible to customers⁴.
10. **Investment in cutting-edge technology:** While this requires high CAPEX, it can lead to significant improvements in product offerings and market competitiveness⁵⁷.

These strategies, when implemented effectively, can help medical device manufacturers and biomedical equipment companies reach their goals on time while balancing CAPEX and OPEX considerations. The shift from CAPEX to OPEX through outsourcing (strategy 8) shows particularly high potential for goal achievement with very low CAPEX, making it an attractive option for many companies in the current market²⁴⁶.

do the IETs 10 values by 10 strategies plus costs

| Strategy / Value | Patient Satisfaction | Cost Containment | Regulatory Compliance | Innovation | Operational Efficiency | Patient Safety | Data Security | Research Funding | Supply Chain Resilience | Interoperability | CAPEX | OPEX |
|---------------------------------------|----------------------|------------------|-----------------------|------------|------------------------|----------------|---------------|------------------|-------------------------|------------------|-----------|--------|
| Outcome-based marketing | 0,8 | 0,6 | 0,4 | 0,7 | 0,5 | 0,75 | 0,3 | 0,6 | 0,4 | 0,5 | Low | Medium |
| Digital twin forecasting | 0,6 | 0,85 | 0,7 | 0,8 | 0,9 | 0,7 | 0,8 | 0,75 | 0,95 | 0,85 | High | Low |
| Hyper-segmentation and targeting | 0,75 | 0,7 | 0,5 | 0,65 | 0,6 | 0,55 | 0,4 | 0,7 | 0,6 | 0,55 | Medium | Medium |
| Webinars and workshops | 0,7 | 0,5 | 0,8 | 0,75 | 0,65 | 0,85 | 0,7 | 0,8 | 0,55 | 0,75 | Low | Medium |
| New research publishing | 0,65 | 0,4 | 0,85 | 0,9 | 0,55 | 0,8 | 0,6 | 0,95 | 0,5 | 0,7 | Low | High |
| Targeted marketing | 0,85 | 0,6 | 0,45 | 0,7 | 0,55 | 0,6 | 0,35 | 0,65 | 0,5 | 0,45 | Medium | High |
| Enhanced customer experience | 0,95 | 0,7 | 0,6 | 0,75 | 0,8 | 0,85 | 0,75 | 0,55 | 0,7 | 0,8 | Medium | High |
| Shift from CAPEX to OPEX | 0,6 | 0,95 | 0,75 | 0,8 | 0,9 | 0,7 | 0,85 | 0,85 | 0,85 | 0,8 | Very Low | High |
| Flexible payment models | 0,85 | 0,9 | 0,6 | 0,75 | 0,85 | 0,65 | 0,7 | 0,8 | 0,75 | 0,7 | Low | Medium |
| Investment in cutting-edge technology | 0,9 | 0,7 | 0,95 | 1 | 0,95 | 0,95 | 0,95 | 0,9 | 0,9 | 1 | Very High | Medium |

justify in detail your first estimate

I'll justify in detail the first estimate in the Impact Estimation Rating Table (IERT), which is for the "Outcome-based marketing" strategy and its impact on "Patient Satisfaction".

Estimate: 80% impact on achieving the Patient Satisfaction goal

Justification:


- 1. Focus on Patient Outcomes:**
Outcome-based marketing directly addresses the primary concern of patients - their health outcomes. By highlighting how biomedical equipment improves patient health, this strategy aligns closely with patient priorities.
- 2. Evidence-Based Approach:**
This marketing strategy typically relies on clinical data and real-world evidence, which can significantly boost patient confidence in the equipment and treatments, leading to higher satisfaction.
- 3. Patient Education:**
Outcome-based marketing often includes educational components, helping patients understand their treatments better. Informed patients tend to be more satisfied with their care.
- 4. Expectation Management:**
By focusing on realistic outcomes, this approach helps set appropriate patient expectations, which is crucial for satisfaction.
- 5. Personalization:**
Outcome-based marketing often segments patients based on their conditions, allowing for more personalized messaging, which can increase relevance and satisfaction.
- 6. Trust Building:**
Emphasizing outcomes builds trust between patients, healthcare providers, and equipment manufacturers, a key factor in patient satisfaction.
- 7. Alignment with Value-Based Care:**
This approach aligns with the broader shift towards value-based care, which is shown to improve patient satisfaction.
- 8. Indirect Impact via Healthcare Providers:**
By influencing healthcare providers' equipment choices based on outcomes, this strategy ensures patients receive effective treatments, indirectly boosting satisfaction.
- 9. Long-term Perspective:**
Focusing on outcomes encourages a long-term view of patient care, which can lead to more comprehensive and satisfying treatment plans.
- 10.Competitive Differentiation:**
In a crowded market, outcome-based messaging can help differentiate products, ensuring patients receive the most suitable equipment for their needs.

Limitations of the Estimate:

- The 80% is an educated guess based on the potential impact, not a precise measurement.
- Actual impact may vary depending on implementation quality and other factors.
- Patient satisfaction is influenced by many factors beyond marketing, which may limit the direct impact of this strategy.

References:


While specific references weren't provided in the query, this justification is based on general knowledge of healthcare marketing trends and patient satisfaction factors. For a real-world application, it would be crucial to back this estimate with specific studies and data from the biomedical equipment industry.



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Questions:

Feel free to send your question to
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32. Ten One-page book Summaries

By Perplexity AI

Page 1: Introduction to Evolutionary Value Optimization (EVO)

EVO, standing for Evolutionary Value Optimization, is both a concatenation of 'Evolutionary' and an acronym[1.0]. The concept originated in the early 1960s as an intuitive approach to project management and system design[1.0]. Tom Gilb, at the age of 20, first applied this method while working on a new IBM electronic computer application[1.0]. The approach emphasizes delivering value to stakeholders in small increments, measuring value, and retreating if necessary[1.1].

EVO's development was gradual, with formal naming and structuring occurring over time. Early publications appeared in journals like ACM SEN in 1985[1.2]. The method is guided by ten key principles, including "Capablanca's next move," "Do the juicy bits first," and "Adaptive Architecture"[1.2]. These principles emphasize focusing on immediate priorities, targeting high-value improvements, and maintaining flexibility in system design.

The evolution of EVO is evident in Gilb's publications. In 1976, he generalized his experience in "Software Metrics," stating that complex systems are most successful when implemented in small steps, each with clear success measures and retreat possibilities[1.1]. This idea was further developed in "Principles of Software Engineering Management" (1988) and "Competitive Engineering" (2005)[1.1].

EVO's approach contrasts with traditional project management methods by emphasizing incremental delivery and continuous feedback. It starts with the existing system and progressively improves it through a series of small, measurable steps[1.2]. This method allows for better risk management, as each step can be evaluated and adjusted if necessary.

The ten principles of EVO provide a framework for this incremental approach. They emphasize prioritization ("Do the juicy bits first"), practicality ("Better the devil you know"), manageability ("You eat an elephant one bite at a time"), and adaptability ("Adaptive Architecture")[1.2]. These principles guide project managers and teams in making decisions that maximize value delivery while minimizing risk.



Page 2: The Basic EVO Cycle

The EVO process consists of two main cycles: the Planning Cycle and the Value Delivery Cycle[2.0]. These cycles form the core of the EVO methodology, ensuring a structured approach to project management and value optimization.

The Planning Cycle involves several key steps[2.0]:

1. Clarifying the environment and identifying critical stakeholders
2. Determining stakeholder values and quantifying project's critical values
3. Identifying design constraints (legal, political, cultural, policy-related)
4. Identifying design resource limitations (time, money, operational costs)
5. Developing high-level solutions or architecture
6. Decomposing top-level architecture into design components
7. Specifying and prioritizing design solutions

The Value Delivery Cycle, also known as an 'Evo-step,' focuses on the practical implementation of the plan[2.0]. It includes:

1. Selecting high-priority values and critical scale-parameter attributes
2. Developing design components to deliver value efficiently
3. Preparing the design component for integration
4. Delivering the design component to the real system
5. Measuring the results (values and costs) of the design increment
6. Adjusting the design if results are not satisfactory
7. Repeating the cycle until completion

This cycle is repeated until all value requirements are met or critical resources are exhausted[2.0]. The Gilb Value Cycle visualizes this process, emphasizing the iterative nature of EVO[2.0].

The EVO cycle ensures that value is delivered incrementally, allowing for continuous feedback and adjustment. This approach differs from traditional project management methods by focusing on delivering tangible value early and often, rather than waiting for a final product delivery.

The cycle also emphasizes measurement and learning. Each step includes a measurement phase, where the results of the increment are assessed against the defined value objectives[2.0]. This constant evaluation allows for quick identification of issues and enables teams to make data-driven decisions about future steps



Page 3: Efficient Planning and Value Viability

Efficient planning in EVO follows a logical sequence, ensuring that certain planning elements are completed before moving on to others[2.1.1]. This approach minimizes unnecessary risks and ensures that each step is built on a solid foundation of understanding and analysis.

The focus of EVO planning is on delivering values to stakeholders, which is why it's often referred to as 'Value Planning'[2.1.1]. This emphasis on value ensures that all planning activities are directed towards tangible, measurable outcomes that benefit key stakeholders.

A common planning fault is to work on the 'means' before clarifying the 'ends' that those means will support[2.1.1]. EVO addresses this by insisting on a clear definition of stakeholder values and objectives before moving on to solution design.

Value viability is a crucial aspect of EVO, emphasizing the importance of assessing the feasibility and potential impact of value objectives before committing resources[0.0]. This approach helps in knowing when to pivot or quit a project, reducing the risk of pursuing unviable strategies[0.0].

The term 'strategic planning' is often used, but EVO suggests that this term misses the main point[2.1.1]. Instead, EVO proposes that the main point of planning should be delivering values to stakeholders. This shift in focus ensures that all planning activities are aligned with stakeholder needs and expectations.

EVO planning also incorporates the concept of 'Stakeholder Satisfaction' planning[2.1.1]. This approach ensures that the needs and expectations of all critical stakeholders are considered throughout the planning process, not just those of the most vocal or powerful stakeholders.

The efficient planning process in EVO allows for flexibility and adaptation. As new information becomes available or circumstances change, the plan can be adjusted to ensure continued alignment with stakeholder values and project objectives.



Page 4: Stakeholders and Their Values

Identifying critical stakeholders is a crucial step in the EVO process[2.2.1]. These are stakeholders who have the power to significantly impact or even destroy the planned system[2.2.1]. EVO emphasizes the importance of considering a wide range of stakeholders, including employees, regulatory bodies, and the community[2.2.4].

The process of stakeholder identification begins with defining the 'Plan Scope' or 'environment'[2.2.1]. This provides a context for identifying potential stakeholders. Initially, all potential stakeholders are considered, with the understanding that some may be excluded or down-prioritized later based on further analysis[2.2.1].

EVO uses the concept of 'critical' stakeholders as a tool for prioritization[2.2.1]. By focusing on critical stakeholders first, EVO ensures that the most important needs and expectations are addressed early in the planning process.

For each stakeholder, critical value objectives are identified and specified using the Planguage format[2.3.1]. This format includes elements such as a tag, ambition, scale, meter, status, tolerable level, and wish level for each value objective[2.3.2]. This detailed specification allows for clear communication and measurement of stakeholder values.

EVO recognizes that stakeholder values can be diverse and sometimes conflicting. For example, employees may value job satisfaction and career development, while financial institutions may prioritize debt reduction and credit ratings[2.3.1]. By clearly specifying these values, EVO allows for balanced decision-making that considers multiple stakeholder perspectives.

The process of identifying and specifying stakeholder values is not a one-time activity in EVO. As the project progresses and more information becomes available, stakeholder values may be refined or new values may be identified. This ongoing process ensures that the project remains aligned with stakeholder needs throughout its lifecycle.



Page 5: Product and Service Qualities

EVO places a strong emphasis on defining and measuring product and service qualities[0.0]. These qualities are treated as quantifiable value objectives, allowing for clear goal-setting and measurement[2.3.0].

The approach encourages thinking beyond traditional performance metrics to include aspects like user experience, reliability, and adaptability[2.2.4]. By treating these qualities as measurable objectives, EVO enables teams to make data-driven decisions about product and service improvements[2.3.3].

In EVO, product and service qualities are specified using the Planguage format[2.3.1]. This includes defining a scale of measurement, current status, tolerable level, and wish level for each quality[2.3.2]. For example, a quality objective for a software product might be specified as:

Tag: SystemReliability

Scale: % of time system is available and functioning correctly

Meter: Automated system monitoring tools

Status: 98%

Tolerable: 99%

Wish: 99.99%

This detailed specification allows for clear communication of expectations and enables precise measurement of progress towards quality goals.

EVO recognizes that different stakeholders may value different qualities. For instance, end-users might prioritize ease of use and performance, while IT departments might focus on security and maintainability[2.2.4]. By specifying these qualities as separate objectives, EVO allows for a balanced approach that considers multiple perspectives.

The process of defining and measuring product and service qualities in EVO is iterative. As the project progresses and more information becomes available, quality objectives may be refined or new qualities may be identified. This ongoing process ensures that the product or service remains aligned with stakeholder needs and market expectations throughout its lifecycle.



Page 6: Constraints and Design

Constraints play a crucial role in the EVO process, helping to define the boundaries within which solutions must be developed[2.0]. These can include legal, political, cultural, and policy constraints, as well as constraints imposed by other plans[2.0].

EVO recognizes several types of constraints:

1. Legal constraints: Laws and regulations that must be adhered to
2. Political constraints: Considerations related to organizational or governmental politics
3. Cultural constraints: Factors related to the cultural context of the project or organization
4. Policy constraints: Internal or external policies that limit design options
5. Resource constraints: Limitations on time, money, or other resources

The design process in EVO uses these constraints along with value and resource requirements as explicit tools to find solutions[2.0]. This approach ensures that designs are not only technically feasible but also aligned with stakeholder values and organizational limitations[2.0].

In EVO, constraints are not seen as purely limiting factors. Instead, they are viewed as part of the problem definition that can drive innovation and creative problem-solving. By clearly defining constraints, EVO encourages teams to find solutions that work within these boundaries while still delivering maximum value to stakeholders.

The process of identifying and managing constraints in EVO is ongoing. As the project progresses, new constraints may be identified or existing constraints may change. EVO's iterative approach allows for continuous reassessment and adjustment of designs in response to these changing constraints.

EVO also recognizes that some constraints may be negotiable. Part of the design process involves identifying which constraints are fixed and which might be flexible, allowing for potential trade-offs that could lead to better overall solutions.

By explicitly considering constraints in the design process, EVO helps ensure that solutions are realistic, implementable, and aligned with organizational realities. This approach reduces the risk of developing solutions that, while technically sound, may be impractical or unacceptable due to non-technical factors.



Page 7: Strategy and Decomposition

Strategy in EVO encompasses both the business model and organizational aspects[0.0]. It involves using the identified values and constraints to develop high-level solutions or architectures[2.4.1].

The strategic planning process in EVO is guided by the value objectives and constraints identified earlier in the process. This ensures that strategies are aligned with stakeholder needs and organizational realities from the outset.

EVO recognizes that strategy development is not a one-time activity. Instead, it's an ongoing process that evolves as more information becomes available and as the project or organization progresses. This adaptive approach allows for strategies to be refined and adjusted based on feedback and changing circumstances.

Once a high-level strategy is developed, it's decomposed into smaller, manageable components[2.0]. This decomposition allows for more detailed specification and prioritization of design solutions[2.0].

The process of decomposition in EVO serves several purposes:

1. It makes complex strategies more manageable by breaking them down into smaller, more understandable parts.
2. It allows for more precise estimation of resources required for each component.
3. It enables more accurate prioritization, as individual components can be assessed for their value contribution.
4. It facilitates parallel work on different components, potentially speeding up implementation.

The decomposition process is guided by the value objectives and constraints identified earlier. Each component of the decomposed strategy should contribute to one or more value objectives while respecting the defined constraints.

EVO emphasizes the importance of maintaining traceability between the high-level strategy and its decomposed components. This traceability ensures that all components remain aligned with the overall strategic goals and allows for easier adjustment if those goals change.

The process of decomposition and prioritization is crucial for enabling the incremental delivery approach that is central to EVO[2.0]. By breaking down the strategy into smaller components, EVO allows for the delivery of value in small, manageable increments, each of which can be measured and evaluated.



Page 8: Prioritization and Value Management

Prioritization is a key aspect of EVO, ensuring that the most critical and valuable components are delivered first[2.0]. This involves detailed specification and prioritization of both top-level architecture and decomposed design solutions[2.0].

The prioritization process in EVO is guided by several factors:

- 1.The criticality of the stakeholder values being addressed
- 2.The potential impact on overall project or organizational goals
- 3.The resources required for implementation
- 4.The dependencies between different components
- 5.The risks associated with each component

EVO uses various techniques for prioritization, including impact estimation tables and cost-value analysis. These tools help in making objective decisions about which components to prioritize based on their expected value contribution and resource requirements.

Value management in EVO is an ongoing process that involves continuously assessing and optimizing the value delivered to stakeholders[2.0]. This includes managing the value stream, which represents the flow of value creation and delivery throughout the project or organization[0.0].

The value management process in EVO includes several key activities:

- 1.Regularly reassessing stakeholder values and priorities
- 2.Monitoring the delivery of value through each increment
- 3.Adjusting priorities based on feedback and changing circumstances
- 4.Identifying and addressing any gaps between delivered and expected value
- 5.Optimizing the value stream to improve efficiency and effectiveness

EVO recognizes that value is not static and can change over time. What is considered valuable at the start of a project may shift as the project progresses or as external circumstances change. The ongoing value management process allows for these shifts to be identified and addressed.

By focusing on prioritization and value management, EVO ensures that resources are allocated to the most impactful activities and that the project or organization remains aligned with stakeholder needs throughout its lifecycle. This approach helps in maximizing the return on investment and increasing overall stakeholder satisfaction.



Page 9: Feedback and Learning

Feedback is a crucial element of the EVO cycle, providing the information necessary for continuous improvement[2.0]. This feedback is gathered through the measurement step of the Value Delivery Cycle, where the results of each increment are assessed[2.0].

The feedback process in EVO is structured and systematic. After each increment is delivered, its impact is measured against the predefined value objectives. This measurement provides concrete data on the effectiveness of the implemented solutions.

EVO emphasizes the importance of gathering feedback from multiple sources, including:

- 1. Direct measurements of system performance
- 2. User feedback and satisfaction surveys
- 3. Stakeholder assessments
- 4. Financial metrics
- 5. Operational data

The learning derived from this feedback is then used to inform future cycles, allowing for dynamic adjustment of designs and strategies[2.0]. This learning process is not limited to technical aspects but encompasses all areas of the project or organization, including processes, team dynamics, and stakeholder engagement.

EVO's emphasis on feedback and learning enables it to be highly adaptive and responsive to changing conditions and stakeholder needs[2.0]. This adaptability is crucial in today's fast-paced business environment, where requirements and priorities can shift rapidly.

The feedback and learning process in EVO serves several purposes:

- 1. It validates or challenges assumptions made during planning
- 2. It identifies areas for improvement in both the product/service and the development process
- 3. It helps in refining value objectives and priorities
- 4. It provides early warning of potential issues or risks
- 5. It facilitates knowledge sharing and organizational learning

EVO recognizes that not all feedback will be positive. Negative feedback or unmet objectives are viewed as valuable learning opportunities rather than failures. This perspective encourages a culture of continuous improvement and innovation.

By incorporating feedback and learning as core elements of the process, EVO ensures that projects and organizations can evolve and improve over time, becoming more effective and efficient in delivering value to stakeholders





EVO recognizes the importance of specialist roles in the planning and execution process[0.0]. While the specific roles may vary depending on the project or organization, they typically include stakeholder representatives, value analysts, designers, and measurement specialists[0.0]. Stakeholder representatives play a crucial role in EVO by providing insights into stakeholder needs and values. They help ensure that the project remains aligned with stakeholder expectations throughout its lifecycle.

Value analysts are responsible for identifying, specifying, and prioritizing value objectives. They work closely with stakeholders to ensure that the values being targeted are relevant and achievable, using tools like Planguage to define and measure these objectives[2.3.1]. Designers focus on creating solutions that meet the specified value objectives while adhering to identified constraints. They play a critical role in the iterative design process, ensuring that each increment delivered aligns with stakeholder values and project goals.

Measurement specialists are tasked with developing and implementing the metrics necessary for assessing project performance and value delivery. Their role is vital in the feedback loop of the EVO process, as they provide the data needed to evaluate the success of each increment and inform future iterations[2.0]. By ensuring accurate measurement, they help teams make informed decisions about adjustments and improvements.

Case studies play a significant role in illustrating the practical application and benefits of EVO[0.0]. These case studies demonstrate how EVO has been successfully applied in various industries and project types, providing valuable insights and lessons learned. For instance, the application of EVO in a transport company highlighted the importance of aligning stakeholder values with operational strategies, leading to improved carrier satisfaction and reduced payment times[2.3.1].

Through these case studies, the book emphasizes that the principles of EVO are not only theoretical but can be effectively implemented in real-world scenarios. They showcase the adaptability of the EVO framework to different contexts and the tangible benefits that can result from its application, such as enhanced stakeholder engagement, improved project outcomes, and increased organizational agility.

In summary, the specialist roles within the EVO framework are essential for successful implementation, and the case studies provide concrete examples of how these principles can lead to significant improvements in value delivery and stakeholder satisfaction. By focusing on collaboration, measurement, and continuous learning, EVO equips organizations to navigate complex projects effectively and deliver lasting value.



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Slides = <https://doi.org/10.13140/RG.2.2.21157.10720>

BCS Video course 3 hrs. https://www.youtube.com/watch?v=ZHrwQtG6IMw&list=PLKBhokJoqd3_wlvroj85YhmNfNj8ZJ8M-

[**Vision Engineering**] “**Value Planning: Top Level Vision Engineering**”, **How to communicate critical visions and values quantitatively. Using The Planning Language.**, PDF: <https://leanpub.com/visionengineeringtoptoplevelvalueplanning/> , A 64 Page pdf book. Aimed at demonstrating with examples how top management can communicate their ‘visions’ far more clearly.

[**100PPP**] **100 Practical Planning Principles**. Booklet PPP, https://www.researchgate.net/publication/383639680_100_Practical_Planning_Principles_260818, 100 Practical Planning Principles. Booklet PAID, <https://www.gilb.com/store/4vRbzX6X>

Short ‘BOOKS
and Reading
Material
Links’ : For the
Talk

Slides: Delivering Value with
REAL Agile talk: (Berlin 2025)
SLIDES: [https://
www.dropbox.com/scl/fo/
pw4rb3exyq6eqhe33hvsj/
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Optima - Balancing Critical
Values:
[https://www.researchgate.net/
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EVO Project Management:
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How Well Does the Agile
Manifesto Align with Principles

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Business Results from Scrum
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Value Management Course
Slides
[https://doi.org/10.13140/
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Stakeholder Book:
[https://tinyurl.com/
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Penta Model & Paper
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Agile Engineering
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Super Secrets and Strategies
for Efficient Value Delivery
[http://tinyurl.com/
SUCCESSGilb](http://tinyurl.com/SUCCESSGilb)

Systems Enterprise/
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[https://leanpub.com/
SysEntArchBook](https://leanpub.com/SysEntArchBook)

Evolutionary Value
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Experiences with Defect
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Best Practices for Evolutionary
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Rapid and Flexible Product
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**Powerful Ploys for Problems, using
Planguage, Start 9 Sept. 2024, Done 15
Sept, 200 pages, 12 Cases**

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**StrategyRing: Advanced Strategic
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<https://tinyurl.com/StrategyRing>

General Theory of Design Engineering
(PDF Folder) Started Dec 30 2024-end 7.
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Last slide

DELIVER VALUE

I would love to answer questions

After the meeting tom@gilb.com