

A Value Manifesto

‘Deliver Optimal Values Efficiently’
DOVE



DOVE in Storm, delivering ‘peace’ (Balance)



<https://tinyurl.com/DOVEmanifestoPDF>

What?

‘Values’ Focus

Manifesto Core: ‘Value’

Prime Focus:
Deliver Optimal Values Efficiently

Here are definitions of the DOVE acronym.

Deliver:

the necessary planned **values** are ***actually delivered*** to the *stakeholders* of the *system*. [Evo, VI]

Optimal:

Optimal means the *best or most favorable outcome, condition, or value achievable*, under **specific constraints or circumstances**.

It refers to the most effective or efficient way to achieve a goal, or solve a problem, given the resources, limitations, and context available. In short, it is the "best possible under the circumstances." For example, an optimal solution in business maximizes **benefits** while *balancing* **costs** and **risks**. [Optima, Multi]

Values:

Values are the **critical** (for success, avoiding failure) **needs** of your **critical** (determine your success) **stakeholders**. They include associated value-information about any well-defined *states* of any defined system, including *qualities, performance, functions, constraints, conditions, and resources*.

Efficiently:

Efficiently means *performing a task or achieving a result*, with **minimum waste of time, effort, or resources**.

It implies doing something in the best possible manner with the least amount of input for the desired output. Efficiency focuses on maximizing productivity and minimizing unnecessary costs or delays while maintaining quality. Efficiency can refer to selected aspects of the system improvement process, and the resulting system itself. [Cost Engineering, Penta]

In combination, **delivering "optimal values efficiently"** means achieving the best possible results or values, with the **least waste** of effort and resources. **Deming SPC:** This is analogous to Statistical Process Control, where values need to be stable, within control bounds, before you can start improvement (like cost reduction) and know that ‘causes are really having effects’.

We prioritize the value delivery, and improve the efficiency (reduce costs) secondarily (later).



In this striking image, a dove, symbolizing peace and hope, gracefully flies across the stormy sky. With an olive branch held firmly in its beak, this emblem of tranquility reminds us of the promise of harmony amidst times of turmoil. The image's muted palette and the contrast between the bird's purity and the dark clouds behind it evoke a sense of serenity and resilience in the face of adversity.

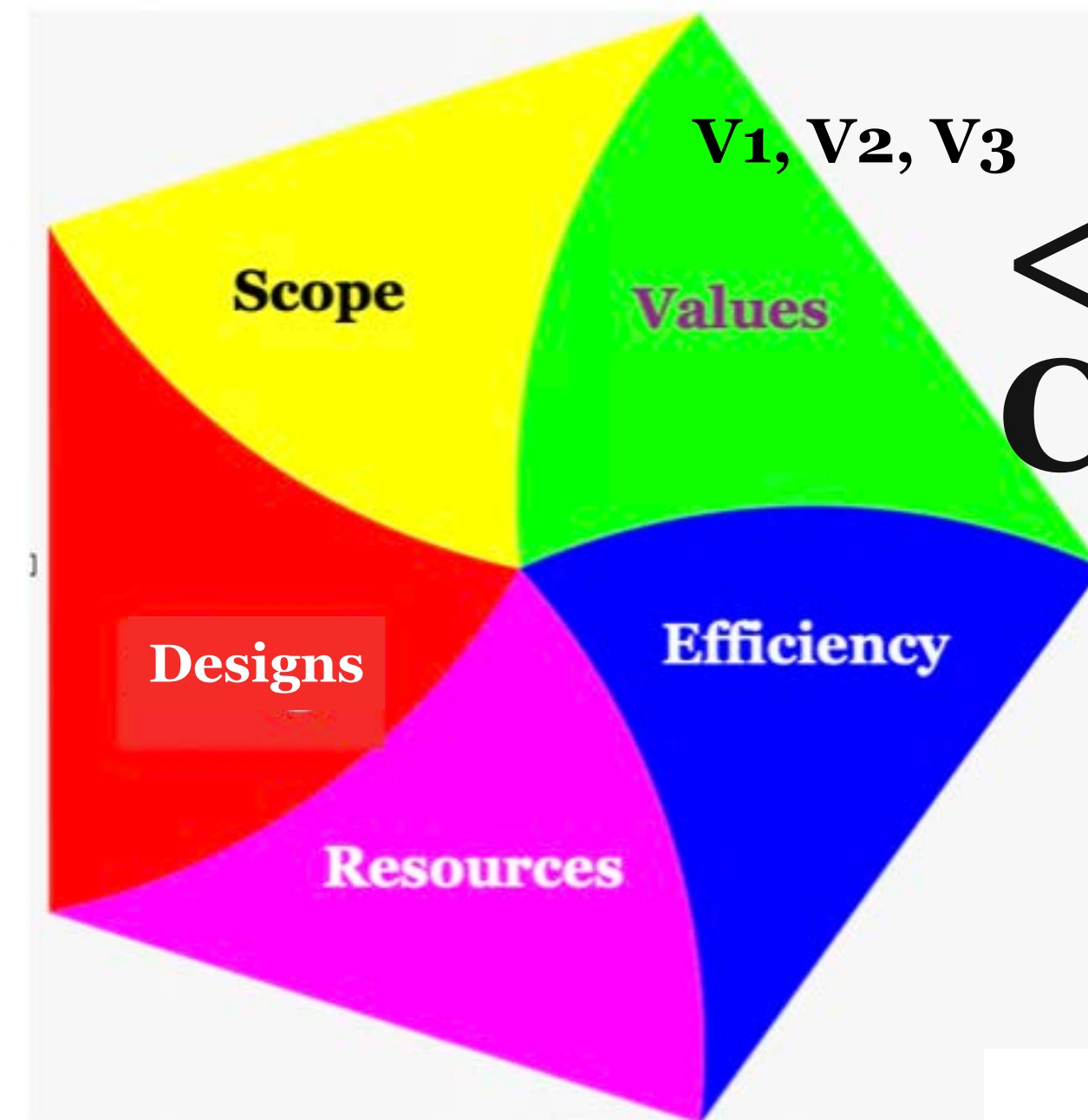
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‘Values’ consist of:

V1: System **Qualities**, desired by stakeholders. The ‘how well’ the system performs.

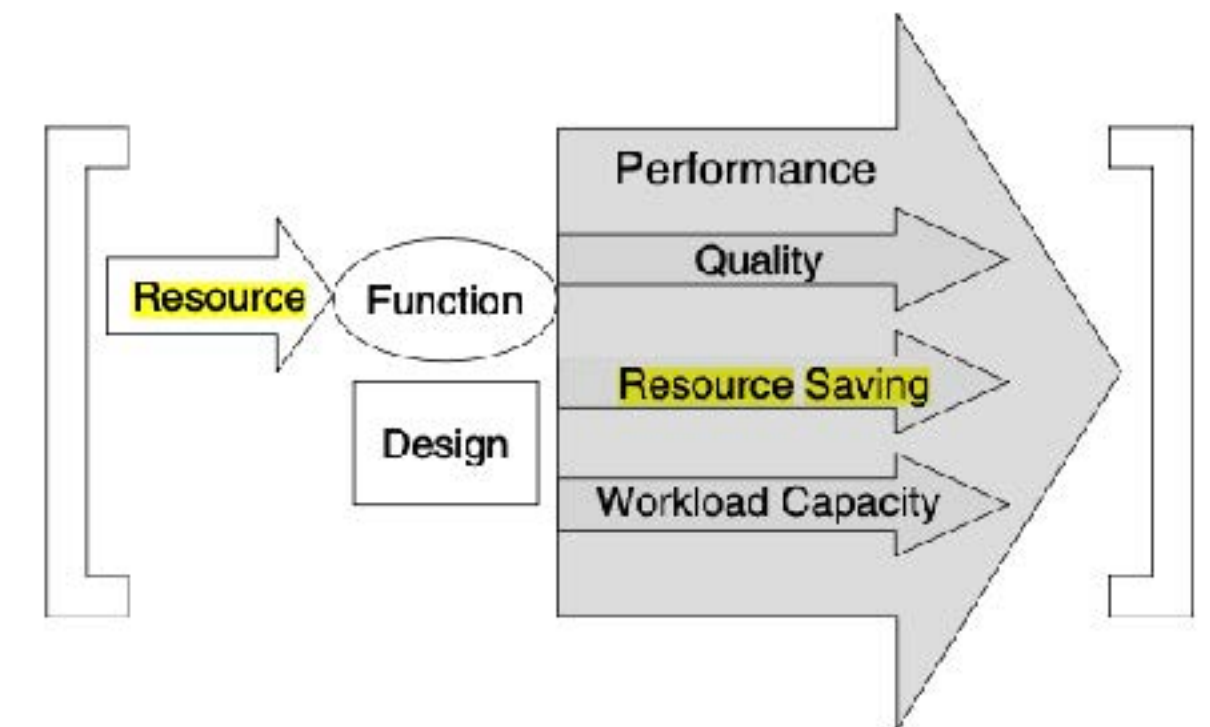
V2: System **Workload Capacity** attributes, desired by stakeholders. The ‘how much’ the system can do.

V3: **Resource Savings**. A stakeholder desire to reduce, or control, any type of resources in the system. Including people, effort, time, money, space.



← **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’.

How?

Using, *for example*, the ‘Value Improvement’ method

<https://tinyurl.com/VIpdfFREE>, See Appendix here

Or *any other* similarly efficient methods: all methods can be judged on their resulting quality (‘Values’) and efficiency of the results; in a given organization.

‘VI’ Value Improvement Plan Engineering



<https://tinyurl.com/VIpdfFREE>

This book is about a general method for planning and implementing ‘anything’.

It is a conscious attempt to ‘break free’ from conventions, terms, and poor practices. It is a conscious attempt to generalize into a single generic, but ‘tailorable’ method.

It is based on my systems engineering methods [CE] Planguage, including [EVO], [VIET], Spec QC, ETX.

The main ideas, we encourage shifts towards, are *Stakeholders* (many with many values), *Values*, (expressed quantitatively) *Design* (incremental, towards many values and constraints), *Evolutionary Value Delivery* (value flow next week on) *Method rigor and flexibility* (as in Planguage and ETX).

A 19 page core booklet, with a large optional appendix, and many free downloads to enable more depth and breadth for those who want it.

VI is offered as an absolutely free, Creative Commons, set of ideas, which anybody can use, teach, modify, improve, publish, and enhance.

Book Start 4 July 2025 © tom@Glib.com 2025. Version July 20 2025 Edited the core 20 pages, Jobs Methods
https://www.researchgate.net/publication/393805317_Value_Improvement

‘Value Improvement’ is a free-choice toolbox

I want to be clear that I do not offer ‘Value Improvement’ as a collective ‘one method’ package. I believe you should be able to try out method improvements in small experiments, in ‘EVO’ steps.

So to make that easier the [Simplan] book documents 100 elements of the VI method, which is based on Planguage and Competitive Engineering [CE].

Any one of these 100 elements, can be selected, because you suspect you need it, tried it, and measured results.

Then, *keep it if it works for you*, and *dump it if it doesn’t*.

By the way, there are *other* free books, which are also divided into ‘100 components of Planguage’.

They are Competitive Engineering [CE], Value Planning [VP], and the ‘100 Tool’ Technoscopes book [Technoscopes].

[SimPlan] SimPlan: Simple Planning Language: Designed for ‘Essence’ sharing of 100 Planguage components.

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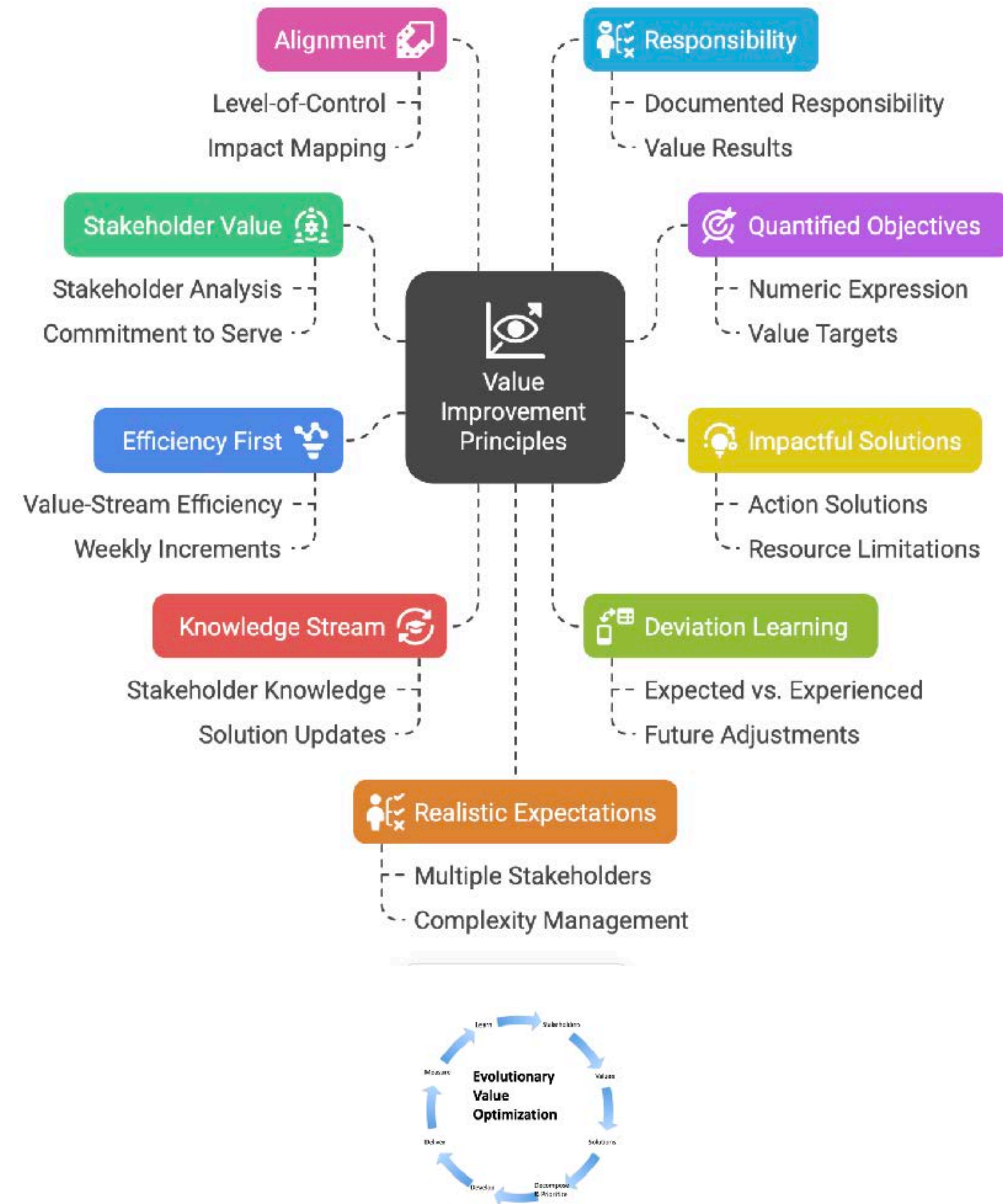
'DOVE' Principles of Value Improvement ('VI') Systems Engineering

Book = <https://tinyurl.com/VlpdfFREE>

One possible practical method for delivering Values

1. **VALUE FIRST:** Stakeholder value analysis, and commitment to deliver values, is the prime driver, of all planning, implementation and maintenance, of a given system.
2. **QUANTIFIED:** All Stakeholder Value objectives are expressed *quantitatively*.
3. **IMPACT:** All 'action solutions' are judged on their ability to meet value-delivery objectives, within resource limitations.
4. **EFFICIENCY FIRST:** Prioritization is based on value-stream *efficiency*
5. **VALUE STREAM:** Solutions will be delivered in small, like *weekly*, increments
6. **KNOWLEDGE STREAM:** Knowledge of stakeholders, values and solutions will be continuously updated; so that future decisions, and planning, is optimized and adjusted.
7. **DEVIATION LEARNING:** Every value-delivery cycle will compare numeric values-and-costs *expected*, to those *experienced*, and *learn* from it, to *adjust* the future plans and actions.
8. **ALIGNMENT:** Every level-of-control, will map numeric intent and results, about the impacts levels it supports (impacts), and also about the impact levels needed for the 'supporting values' (which impact our SOI -System Of Interest) as pre-requisites for reaching our value targets.
9. **RESPONSIBILITY:** Individuals, and small teams, will take documented responsibility, for good planning, and for delivering useful and planned 'value results'.
10. **REALISTIC:** We will normally *expect to cope with the inevitable multiplicity of critical* stakeholders, values, constraints, costs, solutions, and delivery cycles: not dangerously simplifying them to 'one or too few', yet not overwhelming ourselves with too many (like 25) at one time. [Multi].

Principles of Value Improvement





Appendix

Detail to the paper.

Just because it is easy to paste them in digitally.

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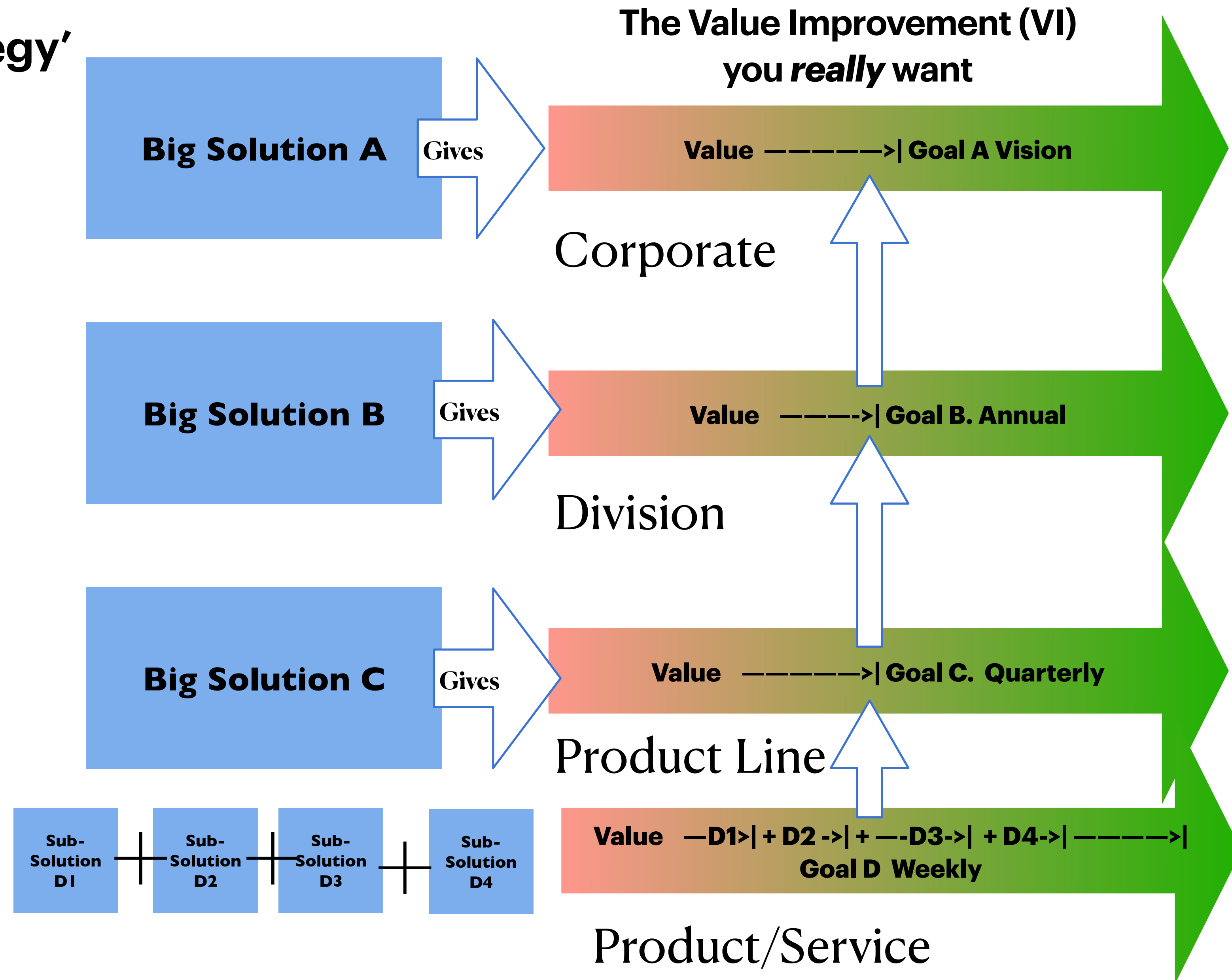
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1 Value Improvement (VI) Introduction

The Value Improvement of 'Strategy'

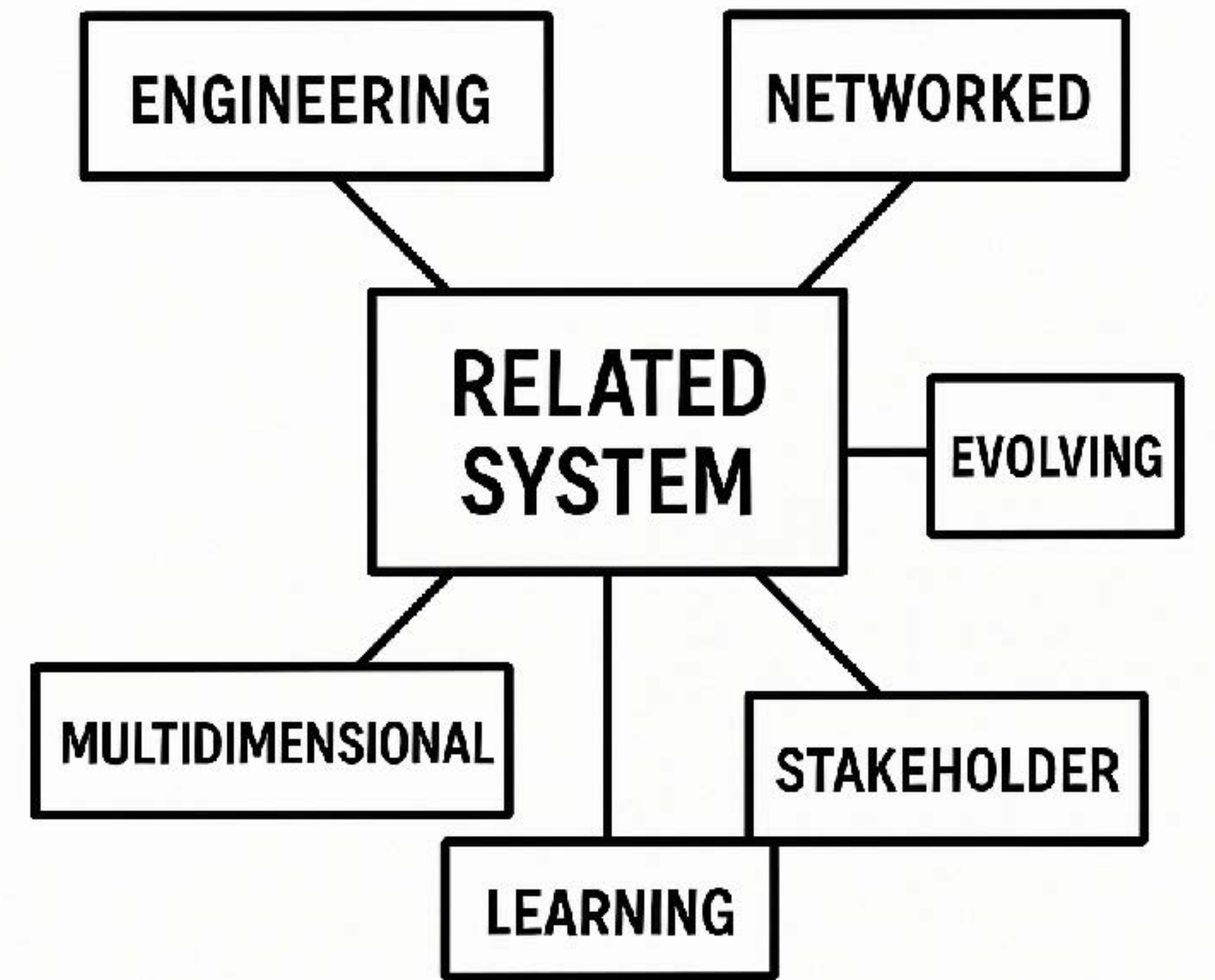
- The essence of the *older discipline known as 'strategy'* has always been to *improve the values* of something.
- We would like to radically improve the discipline, and to make it applicable to a much wider range of problems. Like **Projects, Products. [PEP, ORG, Projecteering]**
- In order to do so, we need a clean break with the past intellectual baggage of 'strategy', and other disciplines.
- So re-naming the discipline, is one step in that direction: the '**Value Improvement**' is *central*, the so-called 'strategy' is a *secondary 'means'* to that end of Value Improvement. Same with 'design', 'architecture'.
- This 'VI' creates a platform, for a range of substantially different approaches, to the processes of making organizations, and other entities, like products, better, more efficient, more useful, and more competitive.
- We are going to incorporate a large number of value improvement methods, in 'VI' that are not mentioned, or taught, in conventional 'strategy', or in *product and service* development.



2 The natures of ‘VI’ Methods

The Value Improvement (VI) Framework

- **System**
 - We will improve any system or sub-system of interest, not merely an organization. That includes any system supra-set surrounding an organization, and any sub-set of a given organization or System Of Interest. We will deal with absolutely all elements of a system which can influence our improvement needs.
- **Engineering**
 - We will apply *systems engineering*. This means *quantification* instead of ‘management BS’. It means logical thinking. It means the ability to model complex-systems, so they are more intelligible, tractable, and *digital*.
- **Multidimensional**
 - We will avoid oversimplification [Simple], and choose to boldly deal with *many* critical factors *simultaneously*. We will deal with a dozen or more stakeholders, not merely ‘customers’ and ‘users’. We will deal with *many* critical resources, not merely *time* and *capital expenditure*. We will deal with *many* values and qualities; if they are critical to our overall improvement success. We will deal with a large number of ‘concurrent ways’ (previously called ‘strategies’) of improving the total values, within our available resources. This *multiplicity* enables improving ‘competitiveness’ of any system, or sub-system of it. [Multi]
- **Networked**
 - We will assume that any System Of Interest’ (SOI) is *networked* - with a large number of other systems, and is composed of, and networked with, many sub-systems; many of them - with great power and autonomy. We will **not** assume that the top management of a system, is the *major* source of power and responsibility. ‘No’ to hierarchy: we just want well-defined critical relationships.
- **Evolving**
 - We will assume, that any system, is continuously being evolved, by many forces, like their *stakeholders*, and that we can *influence* this evolution; although ‘we’ (VI Planners) are but-one stakeholder, with *some* influence. We assume that some stakeholders, like the *law* or the *market*, might well have, greater or similar influence, to the influence *we* have.
- **Learning**
 - We assume that any system, and sub-system, can *continuously learn*, and *adapt*, based on that learning; by means of human effort, system influence, or automation. We can *improve* the learning-and-adaptation *process* of a system. Improving the learning process, quickly and painlessly, is often preferable to ‘attempting to predict the future’.
- **Stakeholder**
 - We assume the existence, for any system, of a *large* number of critical stakeholders; *each* with *several* values, and that the stakeholders need some degree of satisfaction, from some system. We assume, that if we wisely prioritize *nudging our system* to satisfy some of these stakeholder values, our system will be more-successful. We do not have to ‘win’ or ‘defeat’. We should improve, and service, our stakeholders honorably. We seek *harmonious balance (win-win)*, not ‘victory’ [Optima].



Source: Chat-GPT

RE: Roman number ‘VI’ (six) in various cultures and traditions,

the number six is seen as a symbol of completeness, beauty, high ideals, and luck

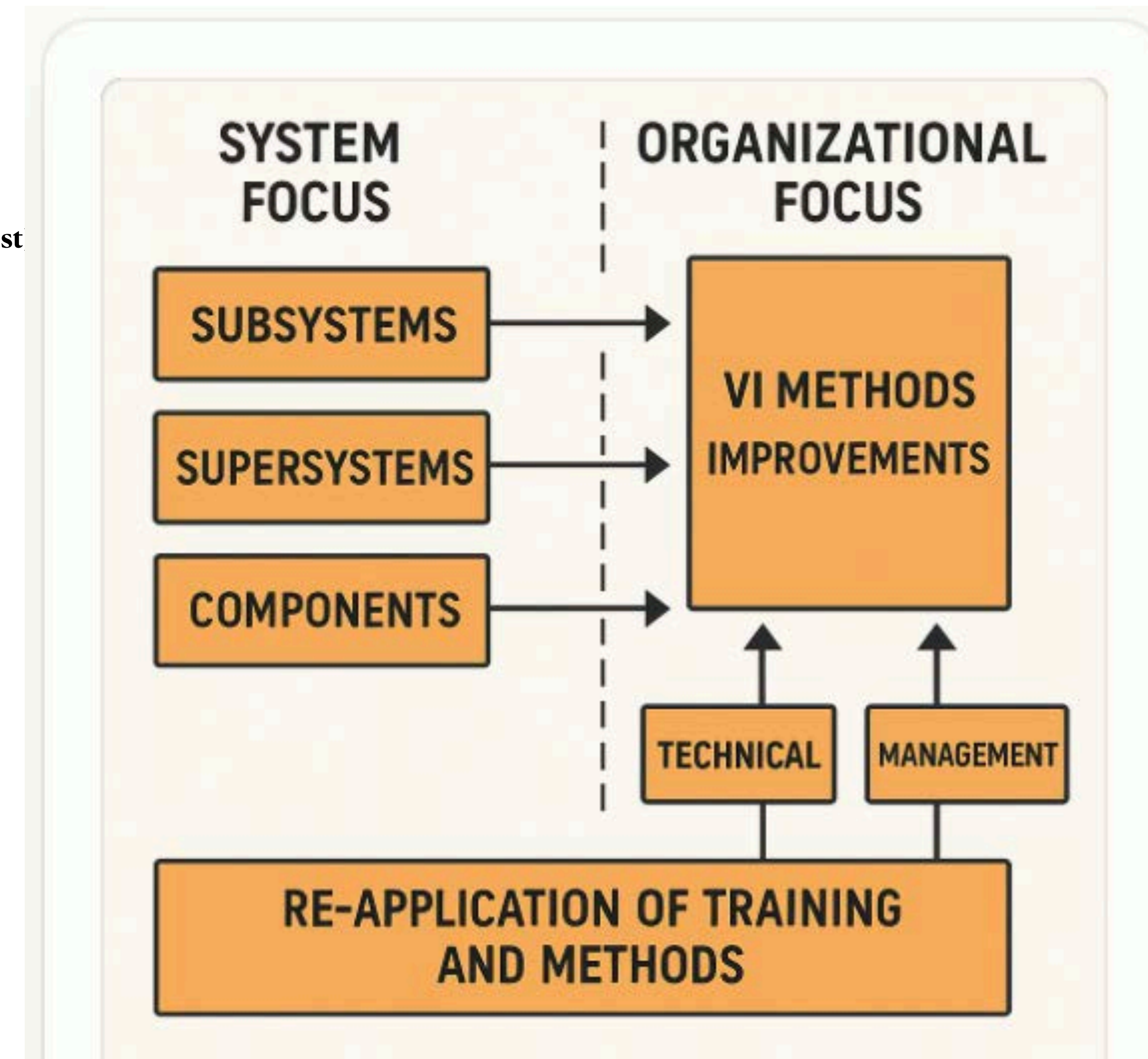
In numerology, six symbolizes

balance, responsibility, family, care, and nurturing.

In Nordic ‘vi’ means ‘We’, the total system.

2.1 The 'System' Aspect

- **System: Improve 'anything' using 'anythings'.**
 - We will improve any type of system, or sub-system, of interest, not merely an organization.
 - That includes any *system super-set*, surrounding an organization (or any system of interest and any sub-set of a given organization, or Sol.
 - We will deal with absolutely all elements of a prioritized system which can influence improvement.
 - The '**system**' focus, rather than the '*organizational*' focus, allows us to focus on Improvements, to anything of interest, using the same VI methods, throughout an organization..
 - With any subsystem, such as a product
 - With any supra-system such as a government authority or regulation
 - With any component, or set of components, however unfamiliar, or new, they might be to the VI planners.
 - Training, experience, and methods improvement and tools, which apply in one area, can be re-applied in any other systems area.
 - 'Management' methods (people, motivation) are not *essentially* different from 'technical' methods (hardware, software), for a Value Improvement point of view.
 - They all have multidimensional value-and-cost aspects, for starters.

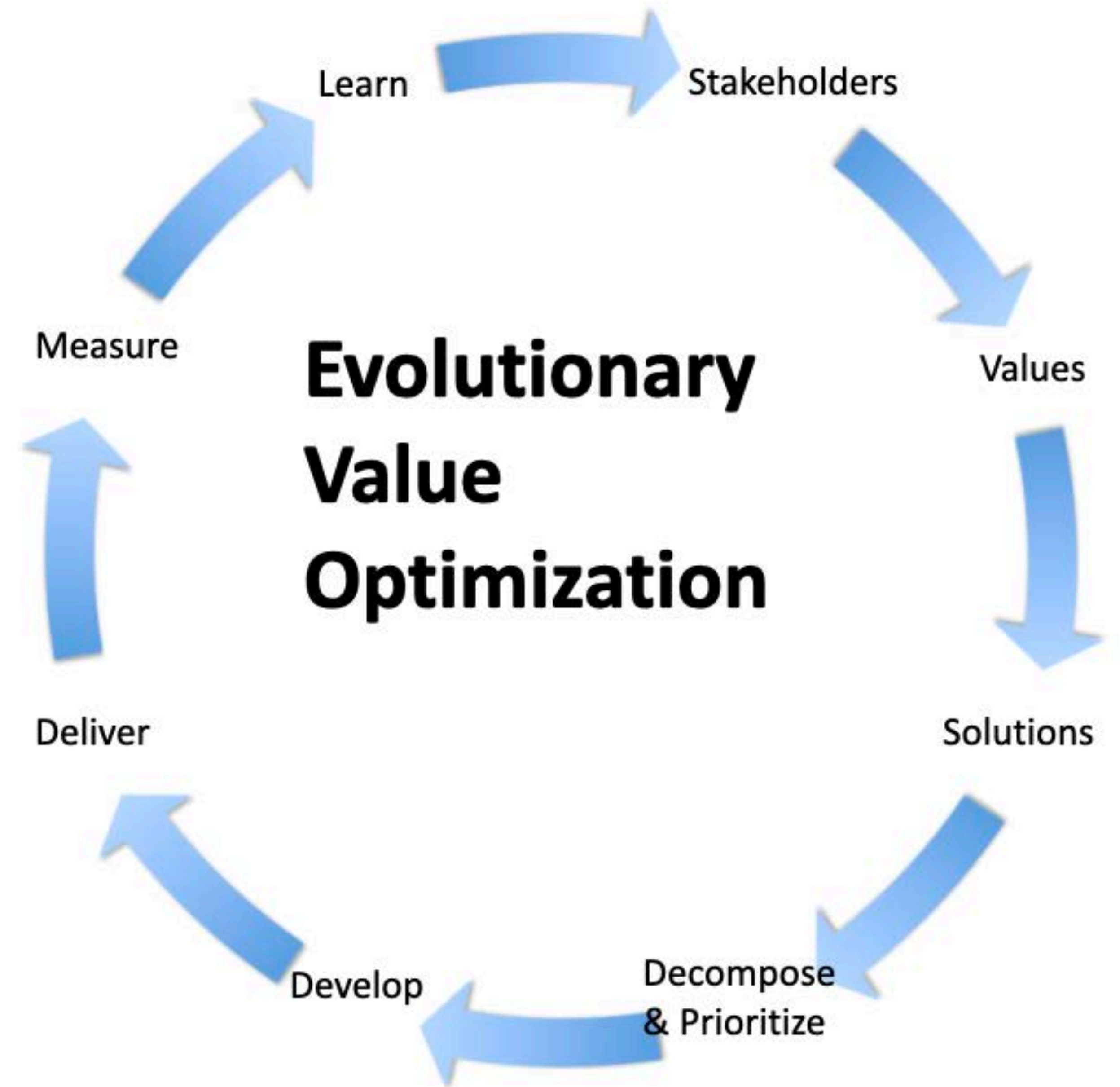


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3 A Practical Example

The Value Improvement Methods

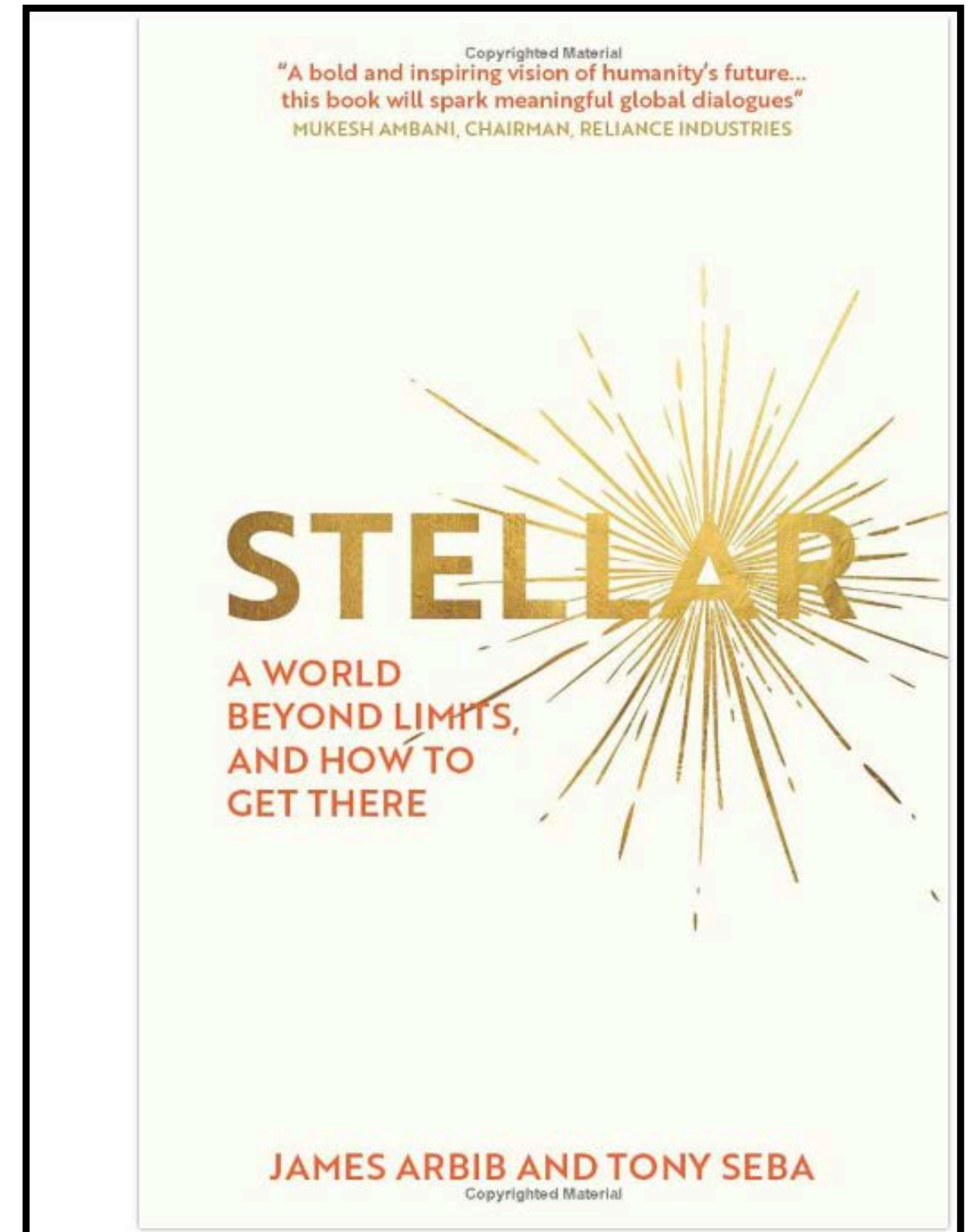
- The core of the Value Improvement method is the 'EVO Cycle' [CE, EVO].
- No matter which system is going to be Improved, EVO can be used to 'engineer' any interesting sets of Improvements.
- 'EVO-cycles' apply to the loftiest management levels, of the largest organizations; as well as to the most-detailed technological levels, or state-of-the-art systems technologies and products.



3.1 A Case Study

To get a practical feel for Value Improvement

- Let us assume we are already an Artificial Intelligence organization, like Chat-GPT, or GROK, and we are looking to improve the AI value, in the direction of Artificial *General* Intelligence (AGI)
- We know that this may take a few years, to get to initial AGI product stages, and decades - to further-develop the AGI Values
- In the meantime the world will transition into the radically different economics envisioned in 'Stellar', during the next decade or two.



3.2. A first overview advice for this case

Project: ‘Strategy for Value Improvement in an AI Company Targeting AGI’

Context:

As an established Artificial Intelligence organization (similar to ChatGPT or GROK), your strategic goal is to improve the value of your AI offerings, with a long-term focus on achieving Artificial General Intelligence (AGI). This journey will unfold over years and decades, during which the global economy is expected to transition into radically new models, as envisioned in ‘Stellar’.

Strategic Framework for Value Improvement Toward AGI

1. Define Value in the Context of AGI

- *Value improvement* should be anchored in clear, evolving definitions of what constitutes "value" for AGI: adaptability, generalization, safety, explainability, and societal benefit.
- Regularly revisit and update value criteria as technological and economic contexts shift14.

2. Multi-Stage Strategic Planning

- **Short-term (1–3 years):** Incremental improvements to current AI models, focusing on robustness, transparency, and user impact.
- **Medium-term (3–10 years):** Develop and integrate more generalizable learning architectures, expand multi-modal capabilities, and build frameworks for responsible deployment.
- **Long-term (10+ years):** Pursue AGI milestones, emphasizing alignment with human values, scalability, and adaptability to new economic paradigms14.

3. Value Chain and Innovation Strategy

- Map your AI value chain: data acquisition, model development, deployment, user feedback, and value capture.
- Foster innovation at each stage-experiment with new architectures, data sources, and feedback mechanisms to accelerate progress toward AGI1.

4. Organizational Adaptation

- Shift from hierarchical to more networked, agile structures to support rapid learning and adaptation.
- Encourage cross-functional teams, open knowledge sharing, and partnerships with academia and industry to access diverse expertise and resources4.

5. Stakeholder and Ecosystem Engagement

- Engage proactively with regulators, users, and societal stakeholders to anticipate and address ethical, legal, and social implications.

Pretty good planning advice, before I direct it to use the EVO-Cycle for planning
I am going to follow most of the advice

- Position your organization as a leader in responsible AI, building trust and legitimacy as the world transitions into new economic models46.

6. Continuous Learning and Experimentation

- Adopt a mindset of iterative experimentation: pilot new models, measure outcomes, and refine approaches based on real-world feedback5.
- Leverage agent-based and evolutionary approaches to accelerate learning and adaptation, as highlighted in advanced AI literature5.

Strategic Tools and Approaches

- **Scenario Planning:** Prepare for multiple futures, including the radical economic shifts anticipated in ‘Stellar’. Use scenario analysis to stress-test strategies and investments2.
- **Stochastic and Probabilistic Methods:** Integrate uncertainty modeling and probabilistic reasoning into decision-making to manage the inherent unpredictability of AGI development5.
- **Society-Based and Emergent Learning:** Explore collective intelligence approaches and emergent computation to foster AGI capabilities5.

Key Takeaways

- **Value improvement** for an AI company targeting AGI is a dynamic, multi-decade challenge requiring strategic foresight, organizational agility, and a commitment to responsible innovation.
- Success will depend on your ability to adapt to both technological advances and the broader economic transformations that will shape the context for AGI deployment.

"AI has the potential to disrupt much of strategy, from formulation to implementation and from theory to practice. However, understanding how this disruption will occur is challenging... The interactions between AI and strategy are multifaceted and complex. Thus, significant work, including new theoretical, practical, and methodological insights, will be required to thoroughly understand the interactions between AI and strategy."4

Recommended Next Steps:

- Establish a cross-disciplinary strategy team to continually reassess value definitions, monitor technological progress, and engage with emerging economic trends.
- Invest in research partnerships and open innovation platforms to accelerate progress toward AGI while ensuring alignment with evolving societal values.

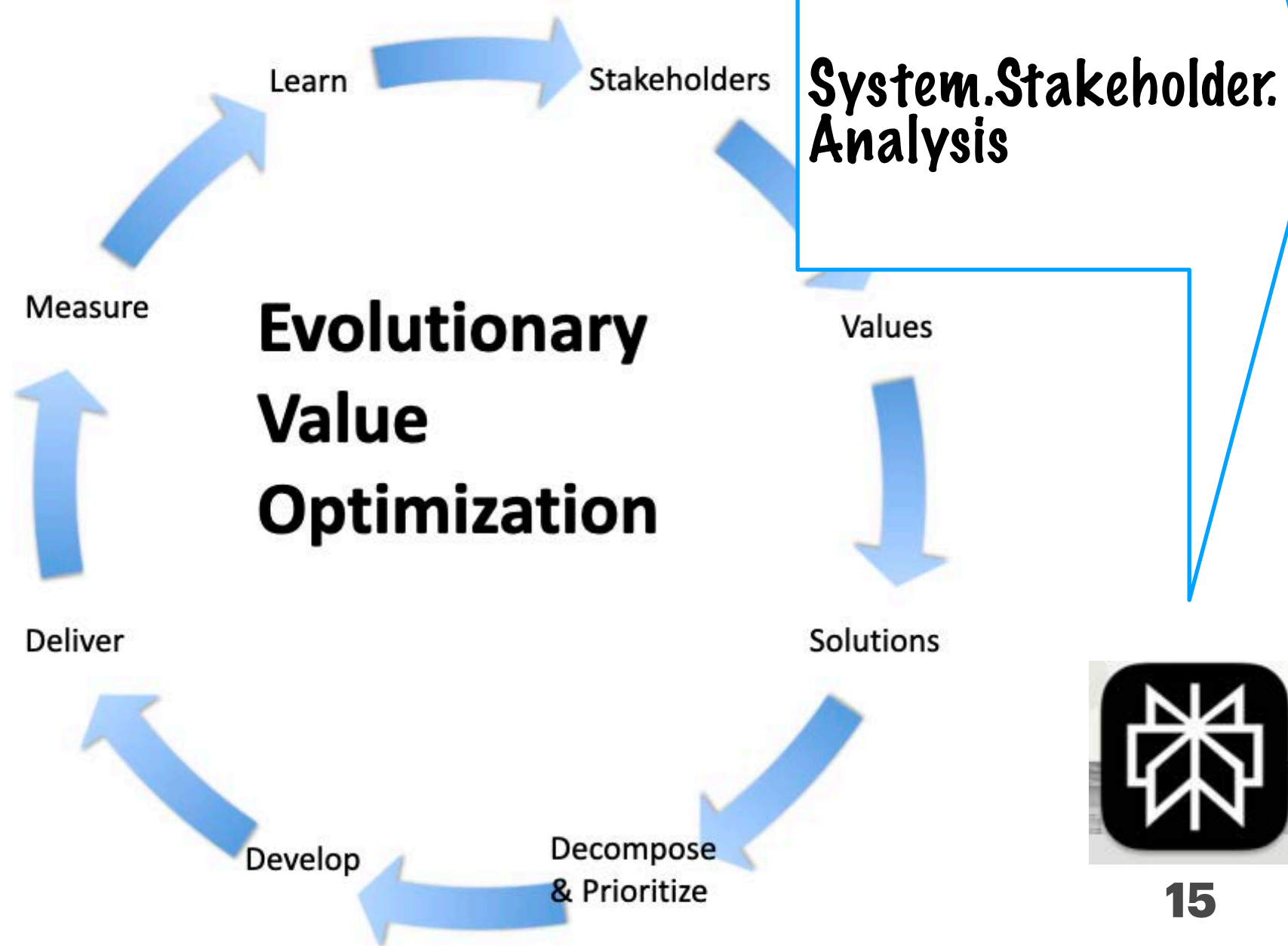


3.3.0 Stakeholders

EVO Step 1: (System.Stakeholder.Analysis)

PROMPT: EVO-cycle Step 1: suggest the 10 most critical stakeholders, including inanimate ones like laws, and incorporation specifications, in a Table. Give each Stakeholder a short mnemonic tag, next column a description or definition, then, using mnemonic Tag list 3 of their most critical Values, each in 1 column, and cite why it is a critical value.

- The only good first step is stakeholder analysis. Stakeholders are, by definition, the **source** of values and constraints
- If we started directly with ‘Objectives’, as many planning processes do, we would be illogically skipping insights
 - Understanding *multiple* stakeholder Values
 - Understanding stakeholder *power* in relation to us
 - Understanding *conflicting* values amongst stakeholders
 - Understanding *commonly held* values amongst stakeholders.

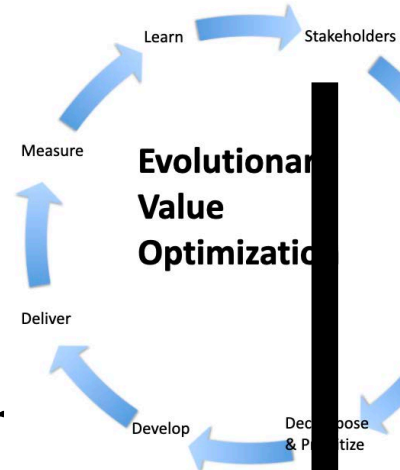


Mnemonic Tag	Stakeholder	Description/ Definition	Critical Value 1	Why Critical (1)	Critical Value 2	Why Critical (2)	Critical Value 3	Why Critical (3)
USER	End Users	Individuals or organizations using the AI system	Usability	Directly impacts adoption and satisfaction ⁴	Trust	Essential for acceptance and ongoing engagement ⁴	Safety	Users expect systems to avoid harm ⁶
DEV	Developers/ Engineers	Professionals building and maintaining AI systems	Explainability	Needed for debugging, improvement, and accountability ⁴	Reliability	Ensures system works as intended ⁴	Compliance	Must meet legal and ethical standards ⁶
DATA	Data Providers	Entities or systems supplying training and operational data	Data Quality	High-quality data is essential for effective AI ⁴	Privacy	Data must be handled lawfully and ethically ⁶	Bias Minimization	Reduces risk of unfair outcomes ⁶
REG	Regulators/ Lawmakers	Government agencies and bodies setting and enforcing AI laws	Safety Standards	Protects public from harmful AI outcomes ⁷	Transparency	Enables oversight and public trust ⁶	Accountability	Ensures clear responsibility for AI actions ⁷
ORG	Organization/ Company	The legal entity owning and operating the AI system	Profitability	Must remain sustainable to invest in value improvement ⁵	Reputation	Trust is vital in AI markets ⁵	Compliance	Legal operation is mandatory ⁶
OWN	Owners/ Shareholders	Individuals or entities with financial stake in the AI company	Return on Investment	Financial returns drive continued support ⁵	Risk Management	Owners want to avoid liability and losses ⁵	Strategic Growth	Growth ensures long-term viability ⁵
LAW	Laws/ Regulations (Inanimate)	Statutory and regulatory frameworks governing AI	Legal Compliance	Non-compliance risks shutdown and penalties ^{6,7}	Data Protection	Laws often mandate privacy and security ⁶	Human Oversight	Regulations increasingly require human-in-the-loop ⁶
INC	Incorporation Specifications	Foundational documents and rules for company operation	Governance Structure	Defines decision-making authority and processes ⁶	Liability Limits	Protects individuals and assets ⁶	Mission Alignment	Guides strategic direction ⁶
PUB	Public/Society	Broader society affected by AI deployment	Social Benefit	AI must contribute positively to society ^{4,8}	Safety	Public safety is a primary concern ⁷	Fairness	Avoids systemic discrimination and harm ^{6,8}
AUD	Auditors/ Compliance Officers	Internal or external parties ensuring adherence to standards and regulations	Transparency	Enables detection of issues and builds trust ⁶	Accountability	Ensures responsible actions and traceability ⁶	Continuous Monitoring	Ongoing oversight prevents drift and non-compliance ⁷

3.3.5 Stakeholders

Why is this step necessary?

- The logical necessity of this process (System.Stakeholder.Analysis) is
 - To discover all critical stakeholders
 - Defined as stakeholders having one-or-more values, that are **critical** to our (defined **System of Interest, SOI**) success or failure.
 - To be able to prioritize the stakeholders Values
 - Particularly the critical ones, and the most critical values in the **shorter term**
 - The ‘Why Critical’ question, points to a **higher level of concern** (Level of Impact, LOI)
 - It helps us distinguish between *our* level of concern (Level of Service, LOS) and those we Serve (SOI).
 - This is advanced *systems thinking*.
 - We are forcing ourselves to look at the ‘extended related system and culture’, *far beyond narrow* - ‘customer’, ‘shareholder’ focus.
 - We are using a *richer stakeholder definition* than usual, by including all *non-biological* stakeholders, like laws, contracts, policies, customs.
 - By identifying the stakeholder as the **source** of a **value**:
 - we can later sense *changes* at the stakeholder, which give us *changes in their Values* (Tracing, Tracking), which are potential changes our *our* prioritized requirements, derived from *their* changed values.
 - we can also sense changes in stakeholder **power**, related our System of Interest. This influences our prioritization of the stakeholder values, we might choose to adopt as *our* system requirements.
 - This systematic stakeholder analysis, leading to adoption of quantified value objectives, as a prerequisite for engineering design of solutions, is arguably an **engineering process**; not a mere blind traditional ‘craft process’ (like ‘serve shareholders financially’)
 - Systematic stakeholder analysis, is appropriate for a wide variety of systems, and appropriate for large and very-complex systems. It is an engineering tool, rather than a narrow oversimplified planning culture.



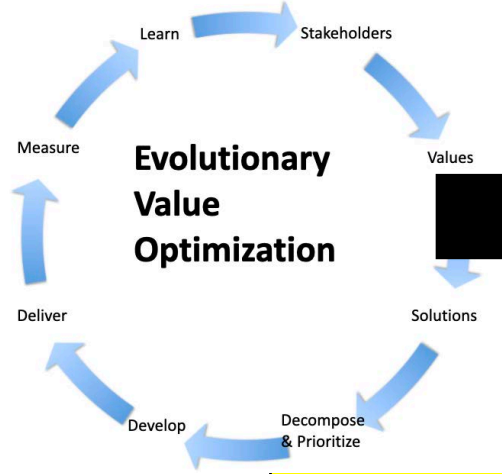
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3.4.0 Value Specification

EVO STEP 2: ‘System.Values.Specification’

PROMPT: Now select the 10 most critical Values, and specify them in Planguage in a Table, with Tag, Scale of Measure, Meter for Feedback, Status 2025 for an AI company, Minimum Tolerable Level by End 2028, Goal 2030, a Column for Stakeholders Affected Make a Separate Table with This format for all other Critical Values you suggested for stakeholders Earlier, called Deferred Value Objectives.

- We identified Values in connection with the stakeholder analysis.
- We also collected (Why this Value) some insight into the priority of the Value. What ‘higher purposes’ (POI) does it serve?
- We have enough information (stakeholder needs, stakeholder power, higher purpose) to continue ‘engineering’ the value specification. Deciding which stakeholder values we need to adopt as ‘our’ requirements.
 - At the same time we have too little information (about how much of what and when) to enable us to clearly identify *solutions* or ‘*the means to deliver the values*’.
 - And, an engineering point here, until we identify the necessary *means* (I am avoiding the obsolete term ‘strategy’) to deliver values, we *cannot logically know the costs* of resources involved. So we are far away from ‘approving’ the Value Objectives as serious commitments. We are remote from being able to commit to **our** ‘Goals’, not mere preliminary stakeholder ‘Wishes’, which are without knowledge of the consequences (side-effects, and costs))
- We need to craft a clear engineering *value-specification*, not fluffy ‘management’ or ‘politician’ blah blah. This is the central shift in planning method: *quantification*. [Quanteer]
 - We know, and AI apps know, if you do not, that all variable (e.g. can ‘improve’, be ‘better’) values *can* be defined with a *Scale of Measure* [CE, Chapter 5]
 - Obviously this allows us to *clarify how much value* the stakeholder needs (Wish level), and which level we *intend to try to deliver* (Tolerable, Goal levels).
 - This **value quantification** is the *engineering enabler* for design, for feedback, for learning, for understanding efficiency, competitiveness and profitability.



	Scale of Measure	Meter for Feedback	Status 2025	Minimum Tolerable Level by End 2028	Goal 2030	Stakeholders Affected
ExecLead	% of C-suite AI engagement & decision participation	Quarterly exec meeting minutes & project sign-offs	75 %	90 %	100 %	ORG, OWN, DEV
DataQuality	% of data sets meeting quality standards	Quarterly data audits	70 %	90 %	99 %	DEV, DATA, USER, PUB
AI-Gov	% of AI models under formal governance framework	Annual governance report	60 %	90 %	100 %	REG, ORG, LAW, AUD
UserTrust	Net Promoter Score (NPS) / Trust Index	Biannual user surveys	62	75	85	USER, PUB, ORG
Compliance	% of models compliant with all relevant regulations	Compliance audit results	85 %	98 %	100 %	LAW, REG, ORG, DEV, AUD
TeamSkill	% of AI team with advanced/updated certifications	Annual HR skill audit	55 %	80 %	95 %	DEV, ORG, OWN
RunReliability	% uptime of production AI systems	Automated uptime monitoring	97 %	99.5%	99.99%	USER, DEV, ORG
Scalability	Max. concurrent users/models supported without failure	Load testing results	10,000	100,000	1,000,000	USER, DEV, ORG
Integration	% of business processes seamlessly integrating AI	Integration audit	40 %	80 %	100 %	ORG, DEV, USER
ContinuousLearn	# of iterative model improvements per year	Model release logs	6	12	24	DEV, ORG, USER

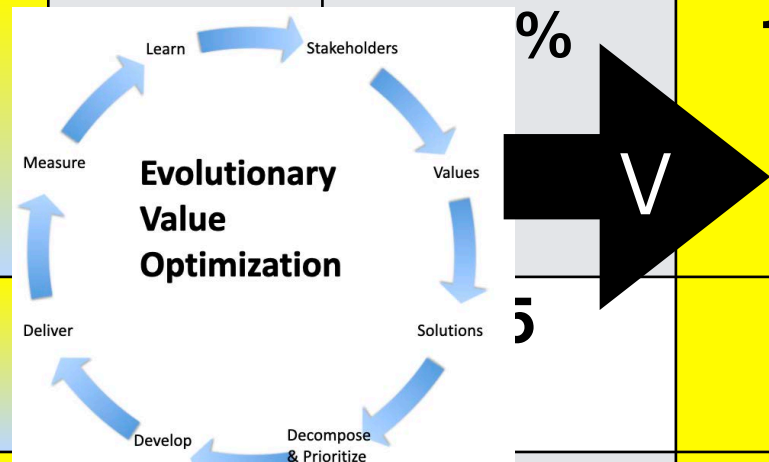



3.4.5. Value Specification

EVO STEP 2: 'System.Values.Specification'

Why is this step necessary? Is it 'engineering' ?

- Value Specification Metrics are a necessary engineering tactic.
- The definition of a value's 'Scale of Measure' is absolutely critical
 - Sometimes we are best serviced by a *set of related Scales of measure*, for example for things like Usability [CE, Chapter 5]
 - Sometimes the **Scale** can be enriched, to give a high-level model, of a complex system, using a [Scale Qualifier]
 - For example: Scale: % of [Customer Types] who use our [Product] for specific [Purposes]. [VR, SEA]**
 - There are, generally speaking, many potential Scale specifications available. Ask AI ! We need to select the ones that best reflect our stakeholders' understanding of a value. [JTBD]
 - Of course, a poorly-chosen Scale will mislead us. But smart Scales is something we can learn about in our local specific (SoI) culture, and store as 'system wisdom' [SM, CE], and reuse; and we can add new improved ideas, about Scales, to upgrade our system's capability.
- The '**Meter**' specification defines a *measurement* and *feedback* process, applicable to the particular Scale. Meters are part of 'engineering' decisions and tools.
 - There are usually many alternatives, but a Meter must fit, relate to, the Scale.
 - Any given Meter, will have *several* qualities (like *accuracy, ease of training, tools availability*), and several costs (like *financial, duration, effort, training costs, tools costs*)
 - Sometimes we need more than one Meter, for short-term and long term-purposes. For quick feedback, and *later* - for solid verification, that the improvement is *still* in place.
- There are a variety of *levels of performance* on the value Scale [CE, SEA, VR] but we can discuss **Goal** as an example.
 - Goal levels, in Planguage, are not loose aspirations. They are defined as *firm commitments*.
 - There are about 8 conditions [CE, Glossary 'Goal'] for specifying a Goal (instead of a loose 'Wish' level). These concepts are formally defined in Planguage [CE, page 366].
 - A committed ('Goal') Value level, must be *technically possible*, and *affordable*, and *prioritized*.
 - This requires us to find technically-realistic designs, to meet the Goal, by the Goal **Deadline**, and to find the resources necessary, to apply those designs, in competition with all other concurrent resource priorities (all other designs and all other value Goals).
 - This is a deep engineering logical truth, and taking it seriously, will by its nature, improve the probability of success (on time, below budget, values delivered, [Flyvbjerg])

Tag	Scale of Measure	Meter for Feedback	Status 2025	Minimum Tolerable Level by End 2028	Goal [2030]	Stakeholders Affected	
ExecLead	% of C-suite AI engagement & decision participation	Quarterly exec meeting minutes & project sign-offs	75 %	90 %	100 %	ORG, OWN, DEV	
DataQuality	% of data sets meeting quality standards	Quarterly data audits	70 %	90 %	99 %	DEV, DATA, USER, PUB	
AI-Gov	% of AI models under formal governance framework	Annual governance report	<div></div>			100 %	REG, ORG, LAW, AUD
UserTrust	Net Promoter Score (NPS) / Trust Index	Biannual user surveys				85	USER, PUB, ORG
Compliance	% of models compliant with all relevant regulations	Compliance audit results				100 %	LAW, REG, ORG, DEV, AUD
TeamSkill	% of AI team with advanced/updated certifications	Annual HR skill audit				95 %	DEV, ORG, OWN
RunReliability	% uptime of production AI systems	Automated uptime monitoring	97 %	99.5%	99.99%	USER, DEV, ORG	
Scalability	Max. concurrent users/models supported without failure	Load testing results	10,000	100,000	1,000,000	USER, DEV, ORG	
Integration	% of business processes seamlessly integrating AI	Integration audit	40 %	80 %	100 %	ORG, DEV, USER	
ContinuousLearn	# of iterative model improvements per year	Model release logs	6	12	24	DEV, ORG, USER <div></div>	

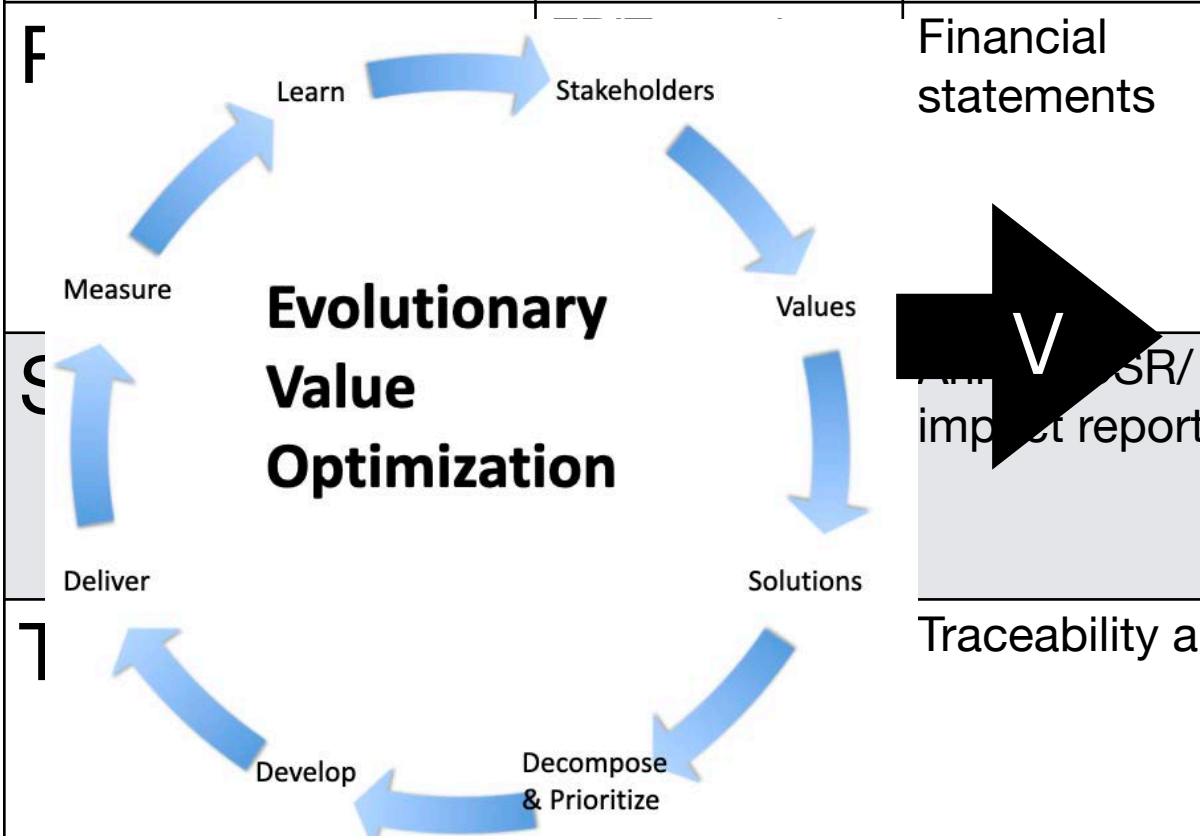


3.5 Deferred Value Priorities

Process Tag: Specification.Deferred {RO, LPO, PO}

- Once a Value is committed (Goal, Tolerable levels, not ‘Wish’) then it is *officially* prioritized.
- Notice that these ideas (Goal, Wish, Metrics) are part of our *engineering methods of prioritization* (not other oversimplified prioritization methods, which are *not* based on engineering metrics).
- There is a logical and practical necessity to keep track of Value Objectives which are **not yet**, and *might never be* made official.
- We have defined 3 categories of these ‘deferred objectives’
 - RO: *Rejected* Objectives
 - PO: *Possible* Objectives
 - LPO: *Lower Priority* Objectives
- There are always a larger number of value Objectives competing for our limited resources. But when the initial critical value set (Top Ten Critical Values) is achieved (i.e. Done, met specified Level) we can analyze the Deferred Objectives, even those rejected earlier, and prioritize another ‘batch’ of objectives.
- In this way we evolve the value stream delivery, as both, resources permit, and as changing stakeholder needs, dictate.



Tag	Scale of Measure	Meter for Feedback	Status 2025	Minimum Wish Level by End 2028	Wish 2030	Stakeholders Affected
Explainability	% of models with explainability documentation	Model documentation audit	50 %	80 %	100 %	DEV, USER, REG, AUD
Privacy	% of user data anonymized and protected	Privacy audit results	80 %	95 %	100 %	USER, DATA, LAW, REG
Fairness	% of models passing bias/fairness tests	Quarterly fairness assessments	60 %	90 %	99 %	PUB, USER, REG, AUD
	Financial statements		12 %	15 %	20 %	OWN, ORG
	SR/impact report		2	5	10	PUB, USER, ORG
	Traceability audit		40 %	80 %	100 %	USER, REG, AUD, PUB
	MissionAlign	% of projects aligned with corporate mission	Annual strategy review	75 %	90 %	100 %
RiskMgmt	# of critical incidents per year	Incident report log	5	2	0	OWN, ORG, LAW, REG
Safety	# of user harm incidents per year	Safety incident log	1	0	0	USER, PUB, REG
HumanOversight	% of critical AI decisions with human review	Oversight audit	60 %	90 %	100 %	LAW, REG, AUD, USER

3.6.0 Solutions

Process Tag: System.Solutions.Specifications

- Solutions to system improvement have many synonyms: *means, strategies, tactics, architecture, design.*
- Solutions are specific **actions** that *hope* to help us *improve* the system stakeholders' value levels.
- Solutions are only as good as the 'real improvements' that they give us, and *continue* to give, to our System of Interest.

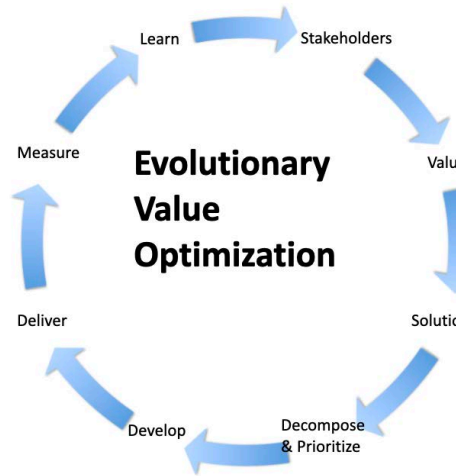


Solution Tag	Solution Description	Citations	Rough % Impact on Best-Impacted Value	Capex Estimate (EUR)	Opex Estimate (EUR)
AI-GovBoost		1, 2	90% (AI-Gov)	10M	2M/year
DataGold			80% (DataQuality)	15M	3M/year
TrustPilot			70% (UserTrust)	2M	1M/year
CompAssure		2	90% (Compliance)	8M	2M/year
SkillForge	Deploy end-to-end compliance monitoring, legal AI, and automated audit trails		60% (TeamSkill)	1M	0.5M/year
UptimeMax	Implement ongoing AI upskilling programs, certifications, and internal hackathons	5	90% (RunReliability)	40M	5M/year
ScaleSky	Upgrade infrastructure for 99.99% uptime: redundancy, cloud failover, predictive maintenance	5	80% (Scalability)	100M	10M/year
SeamlessOps	Expand scalable cloud/AI infrastructure for 10x user/model concurrency		70% (Integration)	5M	2M/year
LearnLoop	Integrate AI into all business processes via APIs and workflow automation		60% (ContinuousLearn)	3M	1M/year
ExecEngage	Set up continuous deployment and A/B testing for rapid model iteration		50% (ExecLead)	1M	0.2M/year
	Mandate C-suite AI engagement, strategic reviews, and AI-driven decision dashboards				

3.6.5 Solutions Engineering

Process Tag: System.Solutions.Specifications

- Success through engineering rigor.
- We cannot select and maintain solutions based on fashion, power, or corruption. If we do, we will fail.
- Solutions must pass a set of ‘*engineering* logic’ tests: of ‘actually delivering the value improvements’. First ‘potentially’, then ‘really’, then ‘continuously’.
 - Solutions must initially be *estimated* to contribute to the planned levels of objectives (Goal, Tolerable)
 - They must deliver the value levels *on time*, at reasonable *costs*
 - without having unacceptable *negative side-effects* on other values
 - without violating official (specified) *constraints*. [Guides]
 - Solutions need to *actually deliver* their expectations for their life-cycle, or close enough, in practice
 - They need to avoid high *risks* of failure, of the expected value-level, or of the failure from *unexpected sudden negative deviation*.
- All these considerations depend on the ability to *quantify the values*, and quantify attributes of the *solutions*, and to *measure* ‘deviation from needed improvements’.
 - Not based on intuition, or feelings, or even traditional craft and custom.
 - There are too many concurrent values to consider, and other factors, and too many stakeholders and priorities, to allow ‘simplistic thinking’ to win.
 - Complex dynamic systems, require ‘engineering’
 - Simpler systems can apply a craft.
- A large number of projects [Clegg, Flyvbjerg] fail today in one or more dimensions, and I believe the root cause is the *lack of engineering*, especially in ‘management’ (‘strategic planning’) and IT (‘Agile Transformations’).

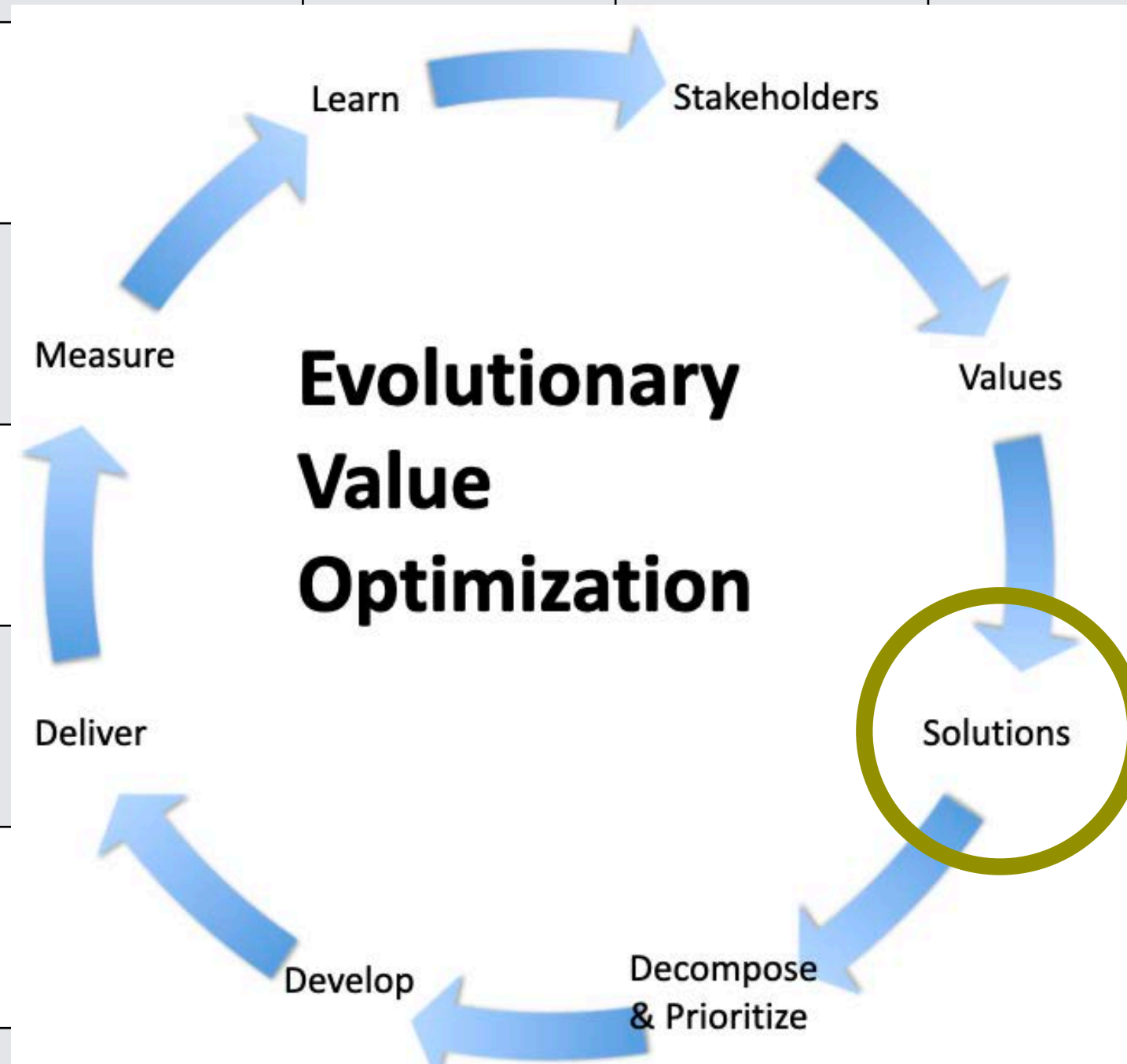


Solution Tag	Solution Description	Citati ons	Rough % Impact on Best	Capex Estimate (EUR)	Opex Estimate (EUR)
AI-GovBoost	Establish a formal AI governance board, policies, and compliance automation tools	2	90% (AI-Gov)	10M	2M/year
DataGold	Invest in automated data quality pipelines and real-time validation systems		80% (DataQuality)	15M	3M/year
TrustPilot	Launch continuous user trust and feedback analysis, including NPS dashboards		70% (UserTrust)	2M	1M/year
UpAssure	Deploy end-to-end compliance monitoring, legal, and automated audit trails	2	90% (Compliance)	8M	2M/year
TeamSkill	Implement AI upskilling programs, certifications, and internal hackathons		60% (TeamSkill)	1M	0.5M/year
UptimeMax	Upgrade infrastructure for 99.99% uptime: redundancy, cloud failover, predictive maintenance	5	90% (RunReliability)	40M	5M/year
ScaleSky	Expand scalable cloud/AI infrastructure for 10x user/month concurrency	5	80% (Scalability)	100M	10M/year
Seamless Ops	Integrate AI into business processes via APIs and workflow automation		70% (Integration)	5M	2M/year
LearnLoop	Set up continuous deployment and A/B testing for rapid model iteration		60% (ContinuousLearn)	3M	1M/year
ExecEngage	Mandate C-suite engagement, strategic reviews, and AI-driven decision dashboards		50% (ExecLead)	1M	0.2M/year

3.7 ‘Deferred Priority’ Solutions

Spec Tag: **Spec.Solutions.{RS, PS, LPS}**

- If we want to deliver selected values early, and for *sure*, then we have to give *them* priority, to ‘get done’, or to get ‘started’ before others.
- This implies that some solutions are ‘left out’ in the initial commitment to **Develop, Deliver, Measure, Learn, in the EVO cycle..**
- But, *some* solutions, will be necessary, and desired - **later on**.
- We need a systematic way to remember them, and to not leave this to individual recall.
- I have applied a simple device, of ‘keeping such deferred solutions in the system plans’, and ‘keeping them updated’, for example when new ideas surface.
- These **deferred solutions** are:
 - RS: Rejected Solutions
 - PS: Proposed Solutions
 - LPS: Lower Priority Solutions
- They are all, even the previously Rejected Solutions (RS), available for renewed consideration, along with any other potential solutions, when the time for finding suitable solutions, comes around again.

Solution Tag	Solution Description	Citations	Rough % Impact on Best-Impacted Value	Capex Estimate (EUR)	Opex Estimate (EUR)
ExplainX	Deploy explainable AI tools and model documentation frameworks	<u>2</u>	60% (Explainability)	2M	0.5M/year
PrivGuard	Enhance privacy with advanced anonymization, federated learning, and encryption				
FairAI	Implement fairness/ bias detection pipelines and diverse data sourcing				
ProfitEdge	Launch AI-driven cost optimization and revenue analytics				
SocImpact	Fund AI-for-good initiatives and public benefit projects				
TraceAI	Build traceability for AI decisions with audit logs and lineage tracking				
AlignCore	Align projects with mission via OKR (Objectives & Key Results) and impact measurement				
RiskRadar	Deploy real-time AI risk monitoring and incident response systems	<u>2</u>	50% (RiskMgmt)	3M	0.7M/year
SafeOps	Establish a safety office, user harm monitoring, and incident response protocols	<u>2</u>	50% (Safety)	1M	0.3M/year
HumanLoop	Mandate human-in-the-loop for critical AI decisions and regular oversight reviews	<u>2</u>	40% (HumanOversight)	0.5M	0.2M

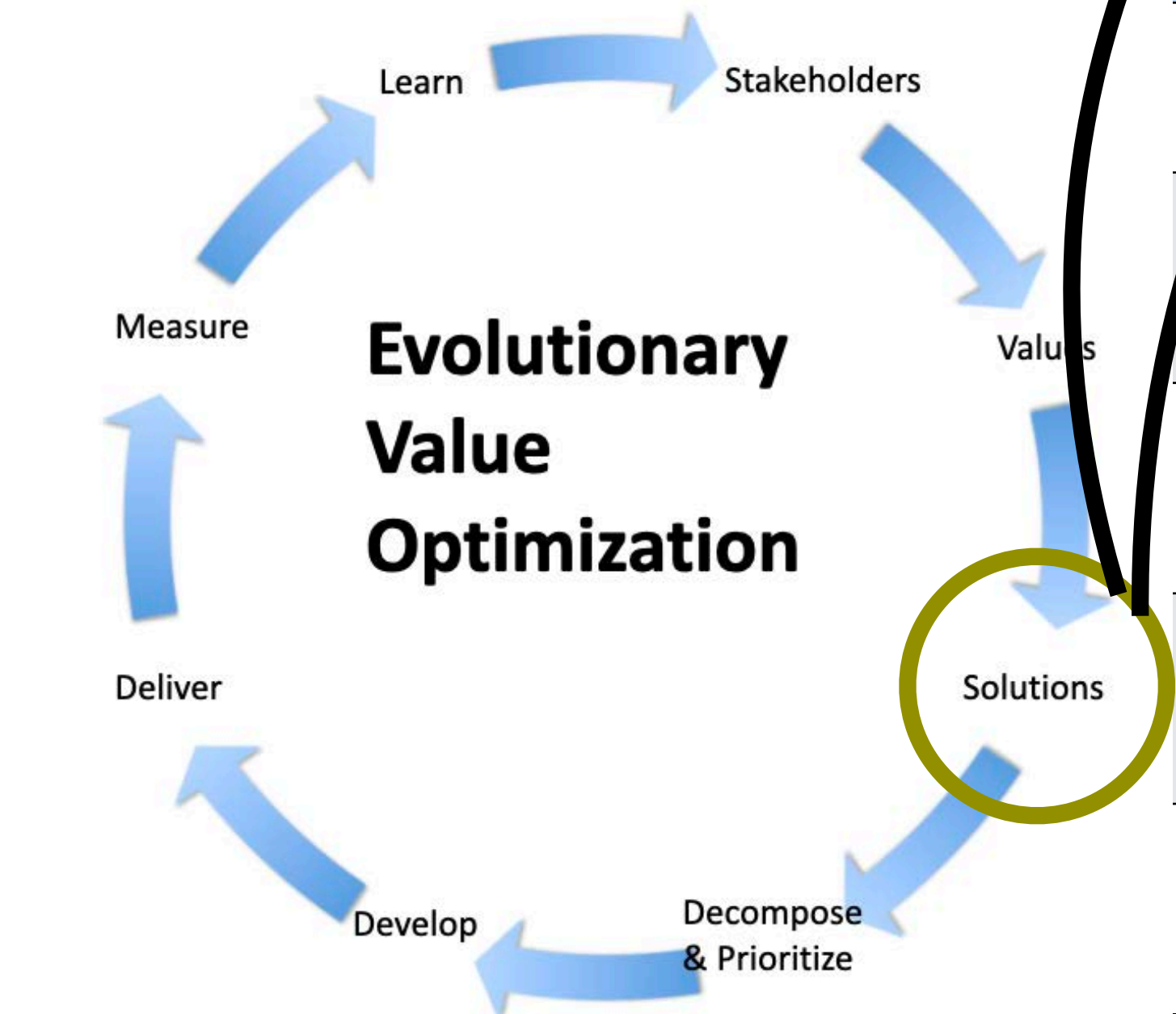


3.8 How ‘efficient’ are the solutions

An ‘engineering’ prioritization tactic

- It is generally a good tactic to *not* try to deliver all strategies at once, by the deadline. That is known as the ‘Waterfall Model’. Big Bang.
- It is generally possible to deliver one, or a few, solutions *early*.
- The selection, of which ones to start off with, can advantageously be made, based on the efficiency of the solution.
 - Efficiency is the ratio of Value/Cost, sometimes called ‘cost-effectiveness’. Sometimes called ‘profit’.
- This allows us to focus our limited attention, and skilled people, more narrowly, and more practically: on ‘getting real value’, and *learning* (weekly, monthly), rather than ‘planning’ and ‘developing’ for a whole year. Before you find out that key solutions, do not work well, at all.
- ‘Exact estimation’ of values and costs, is *not* necessary.
 - AI estimation will be good enough. *Most* of the efficient solutions, will still be in the *early* value delivery cycles, and most-importantly, we can focus on the 10% of the strategies initially, get *some* value early; and learn *quickly*; if we have problems that apply to the *next* solution delivery steps. Like ‘*failure to train or motivate the users, or customers, for successful change*’.
- Even *without* ‘value/cost prioritization’ explained above, we could fruitfully just ‘do solutions’ in any random sequence, and would still get the benefits of just ‘doing only a tenth’ of the total solution set, at once.
- Note that, *efficiency prioritization* (doing the best values/costs ratio solutions early) optimizes the value-delivery stream. Maybe we get 80% of the value in 20% of the time? That is useful for building *credibility*, for *motivation*, and for retaining *budgets* under pressure.

Rank	Solution Tag	Description	Est. % Impact on Exec Support	Capex (EUR, annualized)	Opex (EUR, annual)	Total Cost (EUR, 12 months)
1	ExecEngage	Mandate monthly C-suite AI reviews, AI dashboards, and decision workshops	50 %	200,000	200,000	400,000
			20 %	100,000	100,000	200,000
			10 %	50,000	50,000	100,000
			10 %	60,000	40,000	100,000
			8 %	40,000	30,000	70,000
			8 %	100,000	30,000	130,000
7	PartnerShow	Bring in strategic AI partners for executive Q&A	5 %	30,000	20,000	50,000
8	CommsPlan	Launch internal comms: AI vision, leadership messages	3 %	10,000	15,000	25,000
9	SuccessShare	Share AI success stories in board/exec meetings	2 %	5,000	10,000	15,000
10	Incentivize	Tie exec bonuses to AI milestone progress	2 %	0	20,000	20,000



3.9 Delivering the most efficient solution in monthly increments

Process Tag: Solution.Decompose

The AI Bot can decompose, sequence, and estimate incremental value delivery and costs.

It can also suggest which skills and responsibilities will be advantageous for each value delivery step.

Most Efficient Solution:

ExecEngage (‘Mandate monthly C-suite AI reviews, dashboards, and workshops’) delivers the largest impact (50%), for the lowest cost (EUR 400,000 over 12 months).

Monthly Value Delivery Steps for ‘ExecEngage’ solution

Total Incremental Value Delivered: 50%

Responsible Skills:

- Data analytics, business intelligence, executive facilitation, project management, AI strategy, internal communications, HR, and learning & development.

Why This Matters

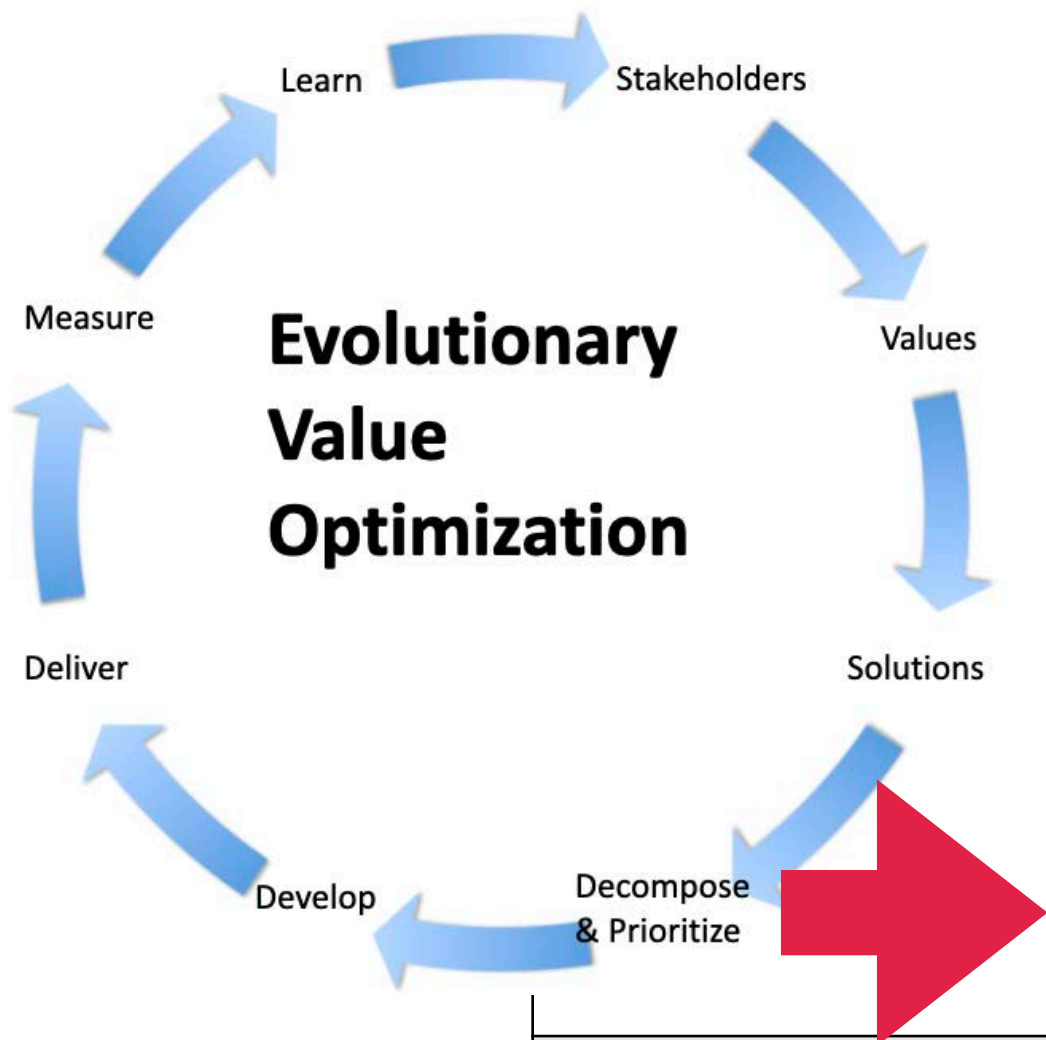
- **Executive engagement** is the foundation for AI transformation, resource allocation, and cultural adoption [237](#).
- Delivering this value early (within 12 months) helps us ensure that subsequent AI investments are aligned, visible, and sustainable.

- The **ExecEngage** solution is highly cost-effective, with clear, incremental steps and measurable outcomes.

The table at the right is a decomposition of the ‘ExecEngage’ solution into 12 monthly value-delivery steps

The AI bot has estimated the rough incremental value expected, as well as the specialists needed for each value delivery step.

It has also prioritized steps early that deliver more value, and those with less value at the end of that delivery sequence.



Month	Step Description	Incremental Value (%)	Responsible Expertise/Skills
1	Design executive AI dashboard & reporting templates	5	Data Analyst, BI Developer
2	Schedule and hold first C-suite AI review meeting	7	Project Manager, C-suite Assistant
3	Collect executive feedback, refine dashboard metrics	3	Data Analyst, Exec Sponsor
4	Launch monthly AI decision workshop with C-suite	5	AI Strategist, Facilitator
5	Integrate AI KPIs into board packs and monthly reports	5	BI Developer, Board Secretary
6	Assign AI initiative sponsors among executives	5	HR, CEO
7	Review and adjust AI project priorities based on exec feedback	5	AI Product Manager, Exec Sponsor
8	Publish internal summary of executive AI decisions	3	Comms Specialist, Exec Sponsor
9	Host external AI expert session for C-suite	4	External AI Expert, L&D Manager
10	Evaluate progress, adjust meeting cadence, update dashboards	4	Data Analyst, Project Manager
11	Share executive AI engagement results company-wide	2	Comms Specialist, CEO
12	Conduct annual review, set next year's executive AI objectives	2	CEO, Board Chair



3.10 Financial Summary to Tolerable Level

PROMPT:

If all ten top strategies were applied, and we completed them by the Tolerable level deadline, estimate the total level of the value metric achieved, by the Tolerable deadline date, and the total financial costs, and total work years

Estimated Value Level Achieved by Tolerable Deadline

If all ten top strategies for executive engagement and support are fully implemented by the tolerable deadline (end of Q2 2026), the **total level of the value metric ("% of C-suite and board actively engaged in AI strategy, decision-making, and oversight") would conservatively reach 95–100%**. This is based on the cumulative impact estimates of the strategies, with some overlap and diminishing returns accounted for.

- **Metric Achieved: 95–100% executive engagement in AI strategy and oversight by end of Q2 2026.**

Total Financial Costs

Capex and Opex Estimates (12 months):

Summing the annualized costs for all ten strategies:

Total Financial Cost:

EUR 1,110,000 for full implementation over 12 months 69.

Total Work-Years Estimate

Assuming each strategy requires a team of 2–3 FTEs for 6–12 months (with some overlap and shared resources):

- **Average FTEs per strategy:** 2.5
- **Duration per strategy:** 1 year (some shorter, some longer, but overlap assumed)
- **Total FTE-years:** 2.5 FTEs × 10 strategies = 25 FTE-years

Adjusted for overlap and shared resources: ~15–18 FTE-years is a realistic estimate for a large AI organization.

Strategy Tag	Capex (EUR)	Opex (EUR)	Total (EUR)
ExecEngage	200,000	200,000	400,000
AI-Steer	100,000	100,000	200,000
KPI-Align	50,000	50,000	100,000
StratMap	60,000	40,000	100,000
AI-Edu	40,000	30,000	70,000
QuickWins	100,000	30,000	130,000
PartnerShow	30,000	20,000	50,000
CommsPlan	10,000	15,000	25,000
SuccessShare	5,000	10,000	15,000
Incentivize	0	20,000	20,000
Total	595,000	515,000	1,110,000



3.11 Total Effort and Cost, to get to the Tolerable levels of the initial Ten Objectives

Supporting Rationale

- The value metric is directly supported by the cumulative impact of the strategies, which are designed to address all major drivers of executive engagement and oversight.
- The cost estimates align with industry benchmarks for enterprise AI change management and leadership alignment initiatives 69.
- The work year estimate reflects the need for cross-functional collaboration, but also accounts for efficiency gains through parallelization and resource sharing.

Conclusion:

By completing all ten strategies on time, an AI company can expect to achieve near-total executive engagement in AI strategy and governance, at a total cost of approximately EUR 1.1 million and 15–18 FTE-years of effort by the tolerable deadline.

Summary Table

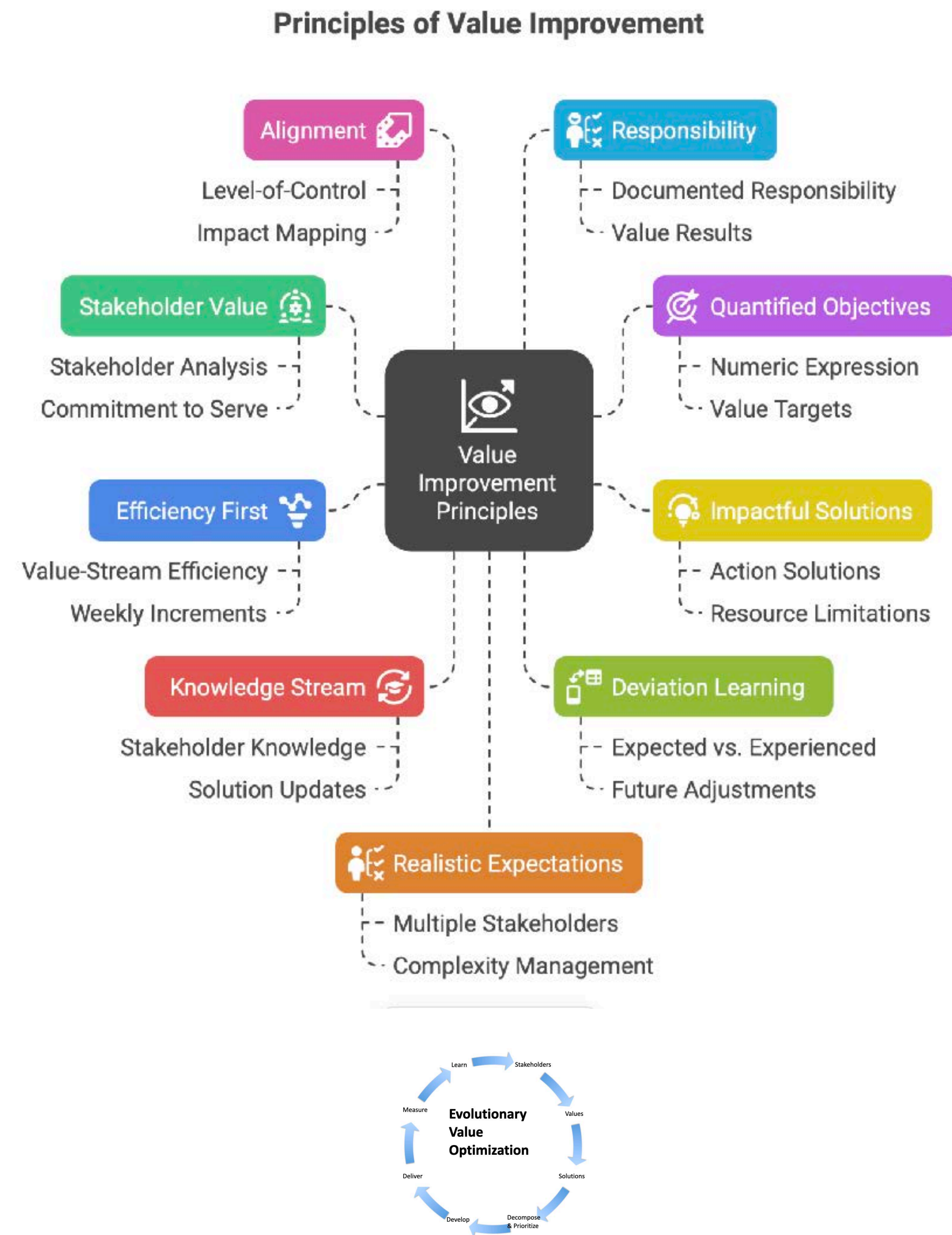
Metric/Resource	Estimate (by End Q2 2026)
Value Level Achieved	95–100% executive engagement
Total Financial Cost	EUR 1,110,000
Total Work Years	15–18 FTE-years



4. The 'DOVE' Principles of Value Improvement ('VI') Systems Engineering

Basic Ideas for Value Manifesto

1. **VALUE FIRST:** Stakeholder value analysis, and commitment to deliver values, is the prime driver, of all planning, implementation and maintenance, of a given system.
2. **QUANTIFIED:** All Stakeholder Value objectives are expressed *quantitatively*.
3. **IMPACT:** All 'action solutions' are judged on their ability to meet value-delivery objectives, within resource limitations.
4. **EFFICIENCY FIRST:** Prioritization is based on value-stream *efficiency*
5. **VALUE STREAM:** Solutions will be delivered in small, like *weekly*, increments
6. **KNOWLEDGE STREAM:** Knowledge of stakeholders, values and solutions will be continuously updated; so that future decisions, and planning, is optimized and adjusted.
7. **DEVIATION LEARNING:** Every value-delivery cycle will compare numeric values-and-costs *expected*, to those *experienced*, and *learn* from it, to *adjust* the future plans and actions.
8. **ALIGNMENT:** Every level-of-control, will map numeric intent and results, about the impacts levels it supports (impacts), and also about the impact levels needed for the 'supporting values' (which impact our SOI -System Of Interest) as pre-requisites for reaching our value targets.
9. **RESPONSIBILITY:** Individuals, and small teams, will take documented responsibility, for good planning, and for delivering useful and planned 'value results'.
10. **REALISTIC:** We will normally *expect to cope with the inevitable multiplicity of critical* stakeholders, values, constraints, costs, solutions, and delivery cycles: not dangerously simplifying them to 'one or too few', yet not overwhelming ourselves with too many (like 25) at one time. [Multi]



The Penta Model:

A simplified 'Planguage'

The 'Penta Model' was invented by Al Shalloway and Tom Gilb, as a result of discussions about the 'Iron Triangle', in 2022

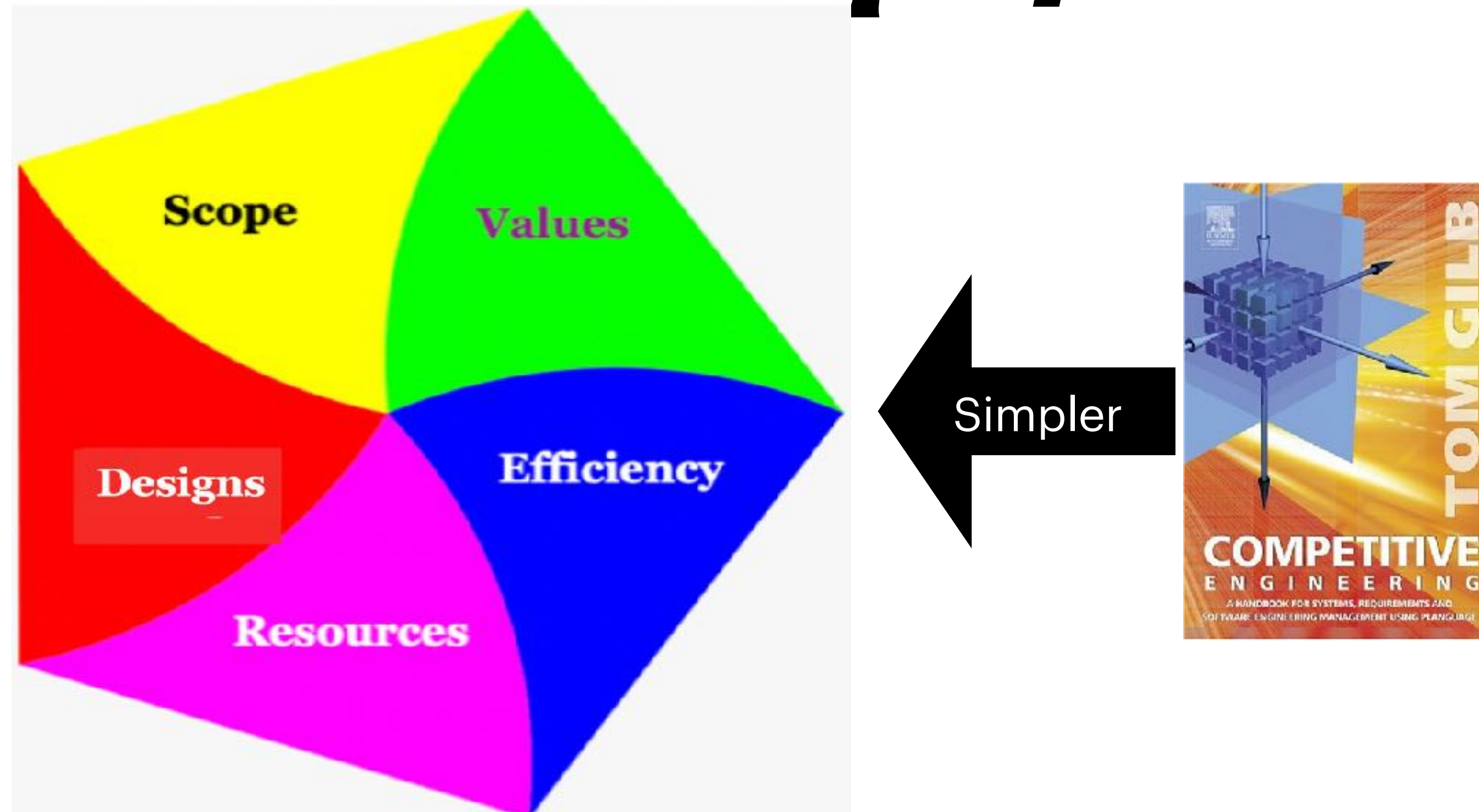
Figure 1 – The Iron Triangle of Project Management



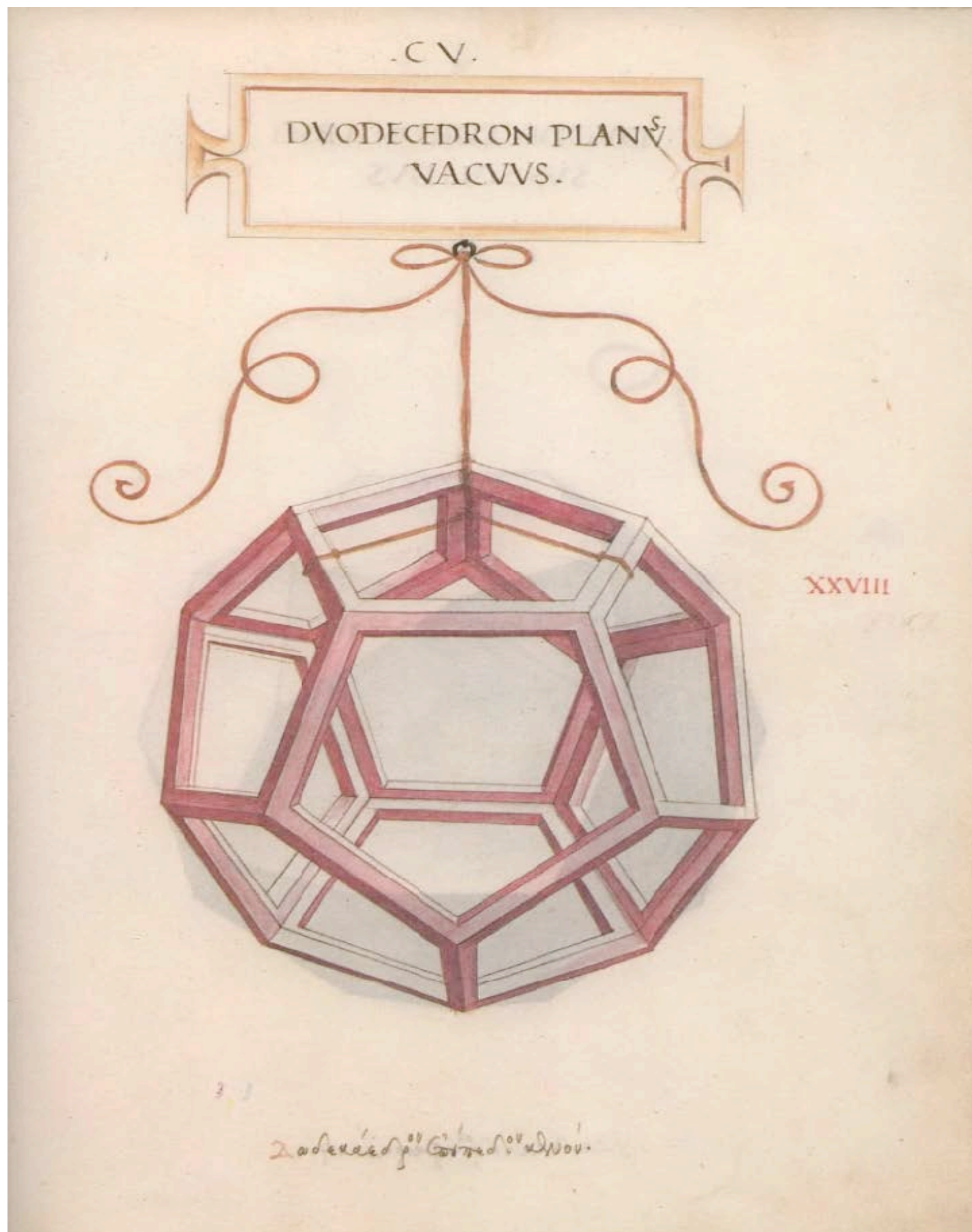
**Sorry PMI. This is 'too simple.'
Example: no 'design'**

By tom@Gilb.com

Version 25 June 2023



**Short 5+5 GilbFest Presentation
Wednesday 28th June 2023
15:20 UK, 16:20 CET**



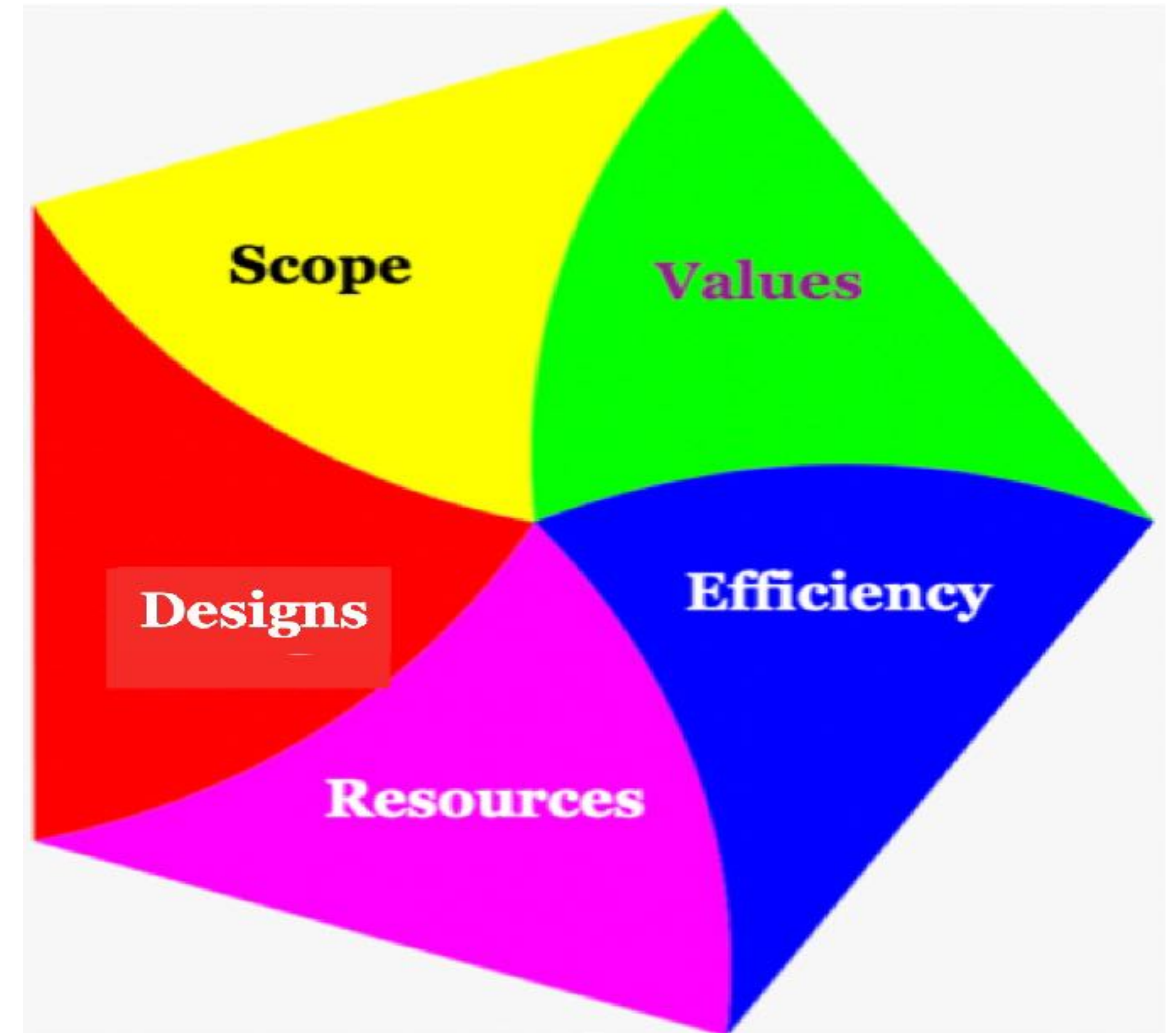
Leonardo da Vinci, Duodecedron

published on the “**De Divina Proportione**” by **Luca Pacioli** (1497).

It consists of 12 pentagons.

Da Vinci was duodecedronic, too.

- **The PENTA is a simplified model**
 - **of 5 basic *conflicting* forces**
 - **in any system,**
 - **which can be adjusted**
 - **to give a more optimum balance.**
-
- **The PENTA Forces are: Scope, Values, Efficiency, Resources, and Designs.**
 - **‘SVERD’ (Norwegian for ‘Sword’).**



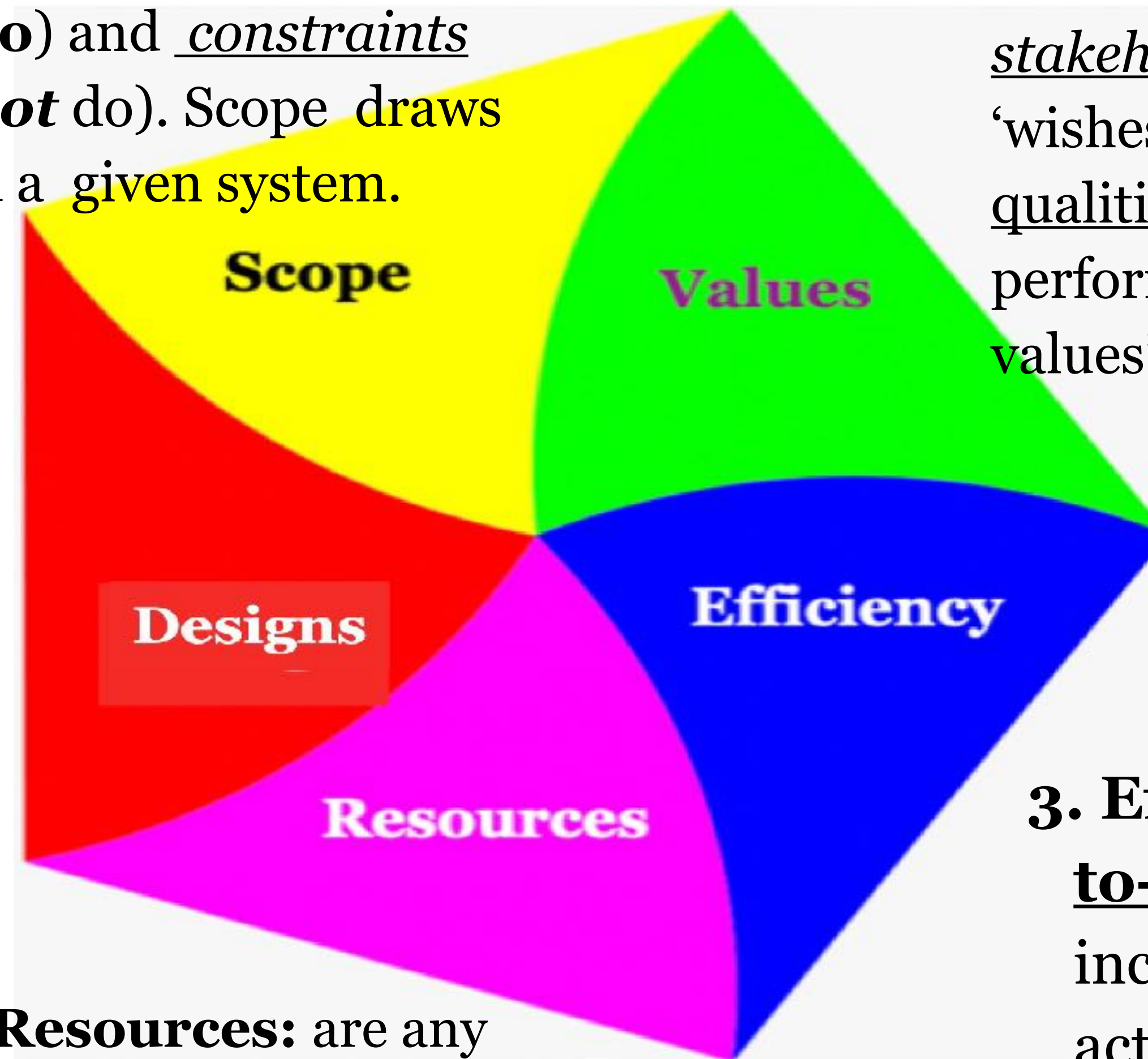
1. **Scope:** is the specified set of stakeholder- and system-functions (what it must **do**) and constraints (what it must **not** do). Scope draws a border around a given system.

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

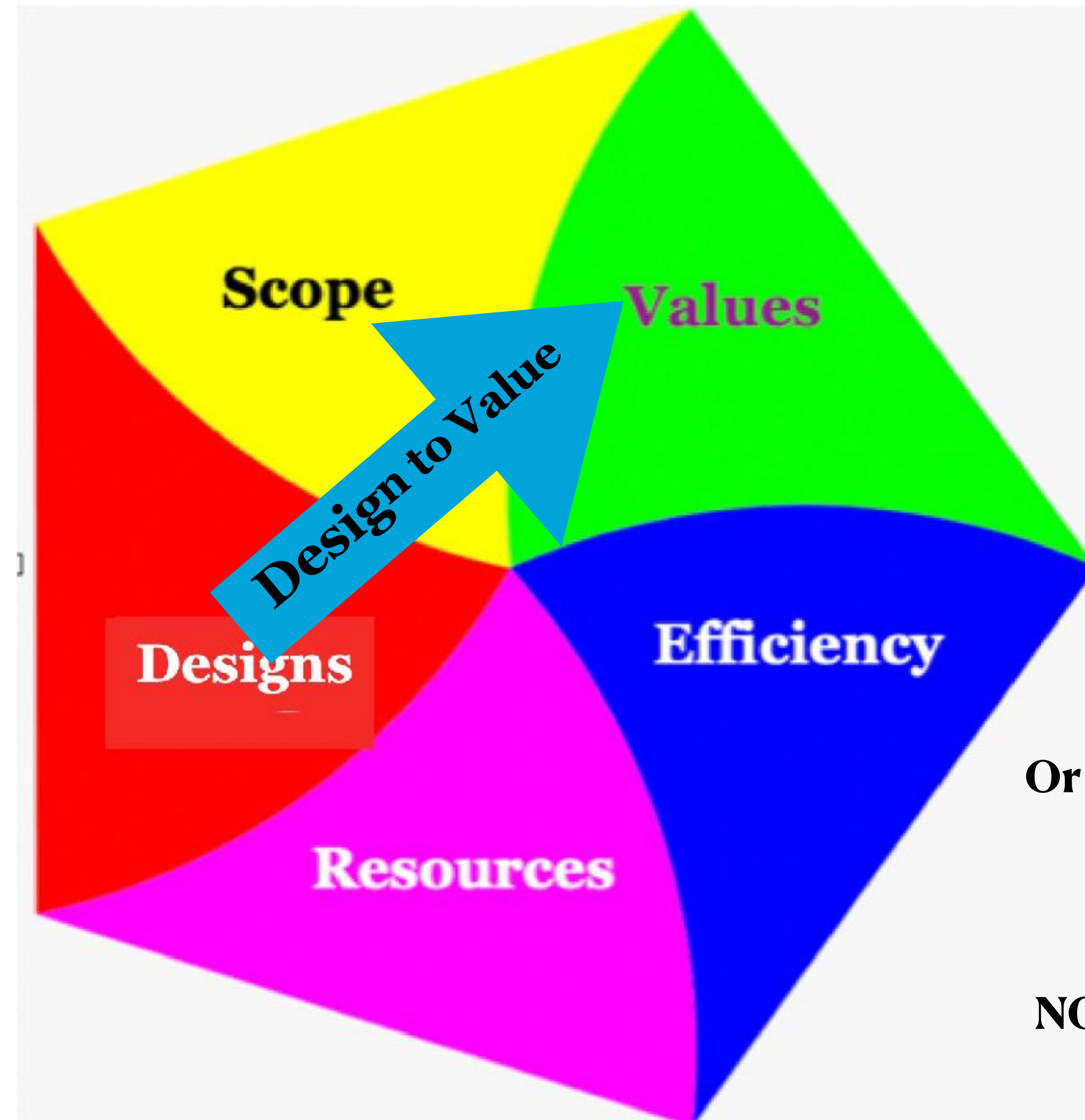
5. **Designs:** are any types of 'implementable ideas' (designs, strategies, architecture, solutions) which we use, in order to deliver Values, within Constraints.

4. **Resources:** are any *critical* and *prioritized*, set of *limited* resources for the system lifecycle, such as time, money, people, space.

3. **Efficiency:** is 'effectiveness-to- costs ratio'. *Effectiveness* includes all stakeholder-values actually *delivered*. The costs are life-cycle costs, not just 'capital' costs. This is a view outside the black box of Designs.



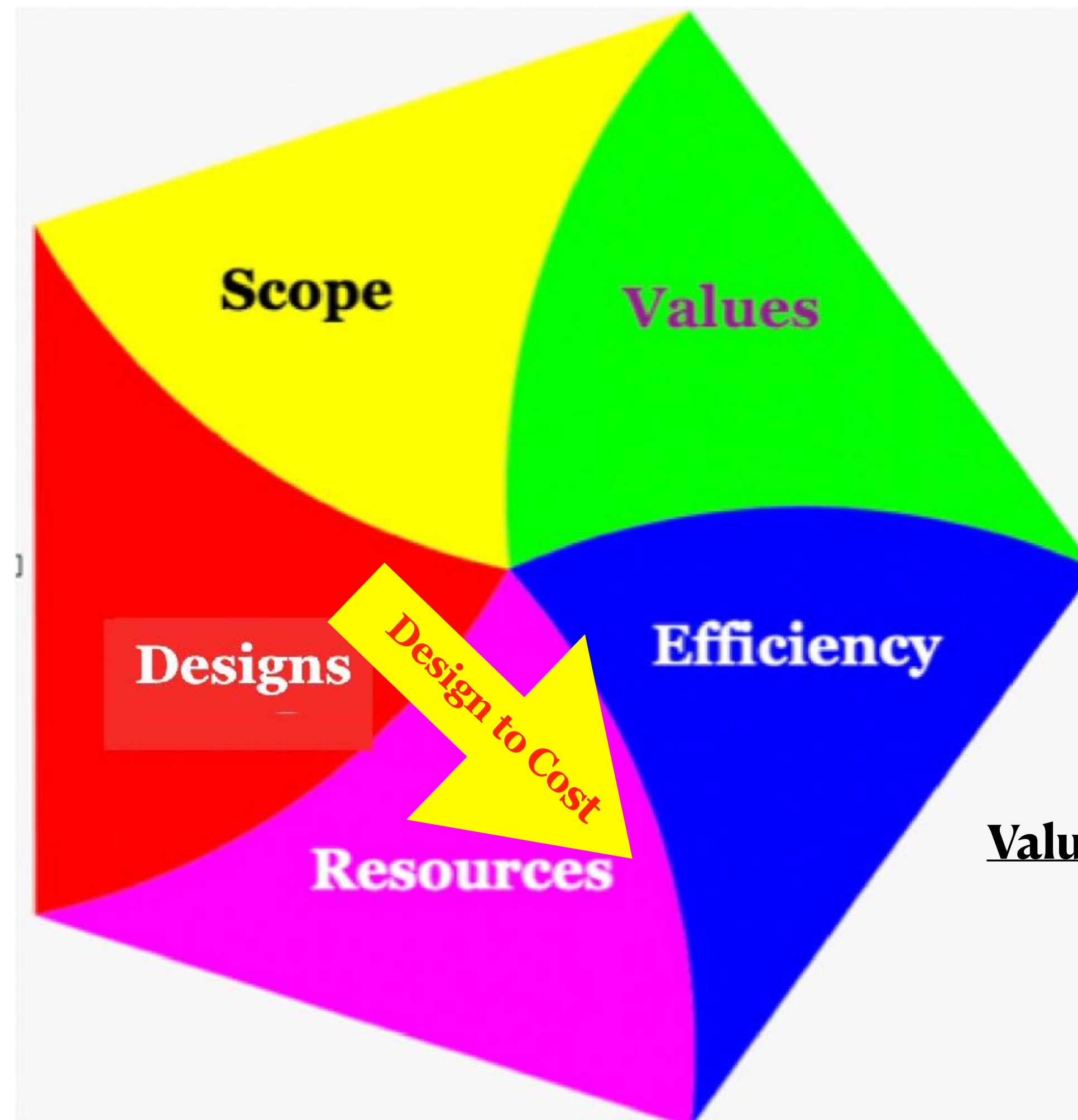
Designs can be imagined - which will give *more* Value



**Or improve many values simultaneously
with a single smart design!**
See [Cost Engineering]

**NO 'IRON TRIANGLE' RESTRICTIONS
ON GETTING BETTER RESULTS**

Designs can be changed to meet Resource constraints (budgets, deadlines)



Or both
Value improvement and cost improvement
at the same time
SEE [Cost Engineering].

**NO 'IRON' RESTRICTIONS
ON GETTING BETTER RESULTS**

Examples of Penta Specifications

Funct Tax: Compute all relevant Taxes

Design Constraint A: Avoid Patented Designs.

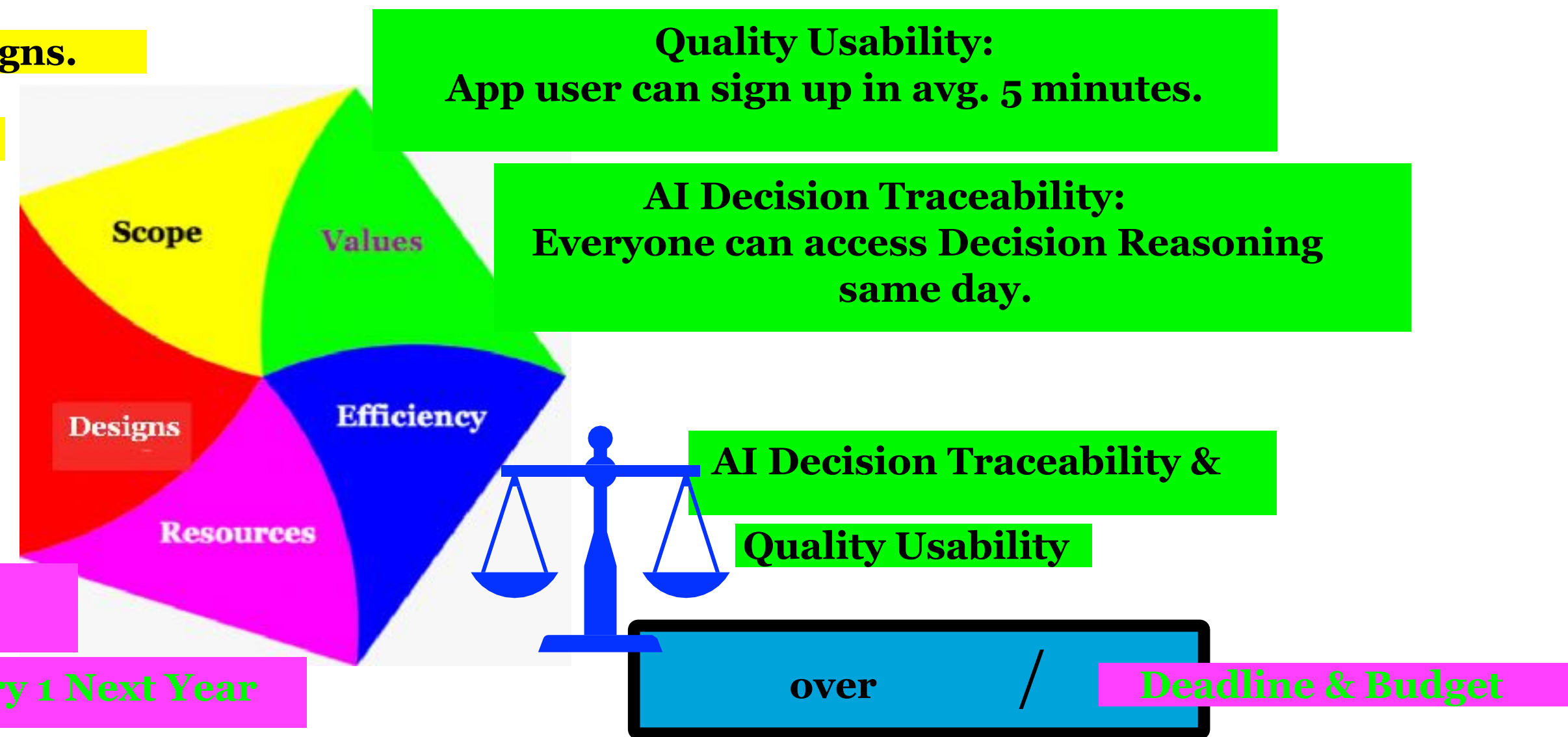
Function Constraint P: Avoid Political Bias

Strategy 1: No Cure No Pay Contract

Design D: Digital Twin

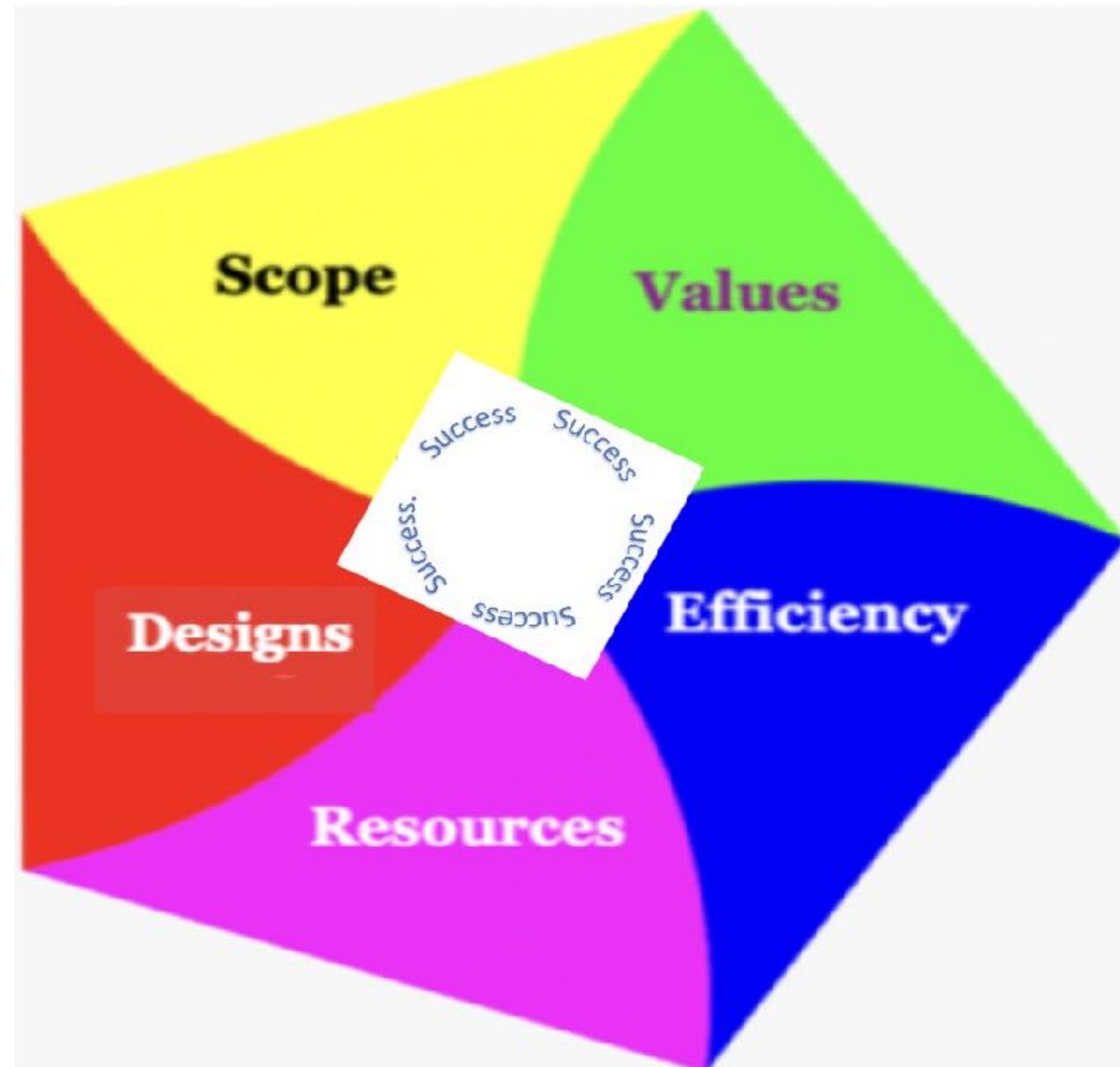
Budget: € 1 million

Deadline: : January 1 Next Year



MANAGING the balance of these critical factors

is a method for ‘successful compromises’



Tom Gilb, **SUCCESS : Super Secrets & Strategies for Efficient Delivery in Projects, Programs, and Plans**, Book Folder, tinyurl.com/SUCCESSGilb, October 2021.
FREE, VIDEO 1 HOUR WESTFALL <https://www.youtube.com/watch?v=8jnnBS-dNog>, (7 SEPT 2022)

Diagram variant Suggested by Al Shalloway's daughter, Aliza Winship-Freyer, June 2023

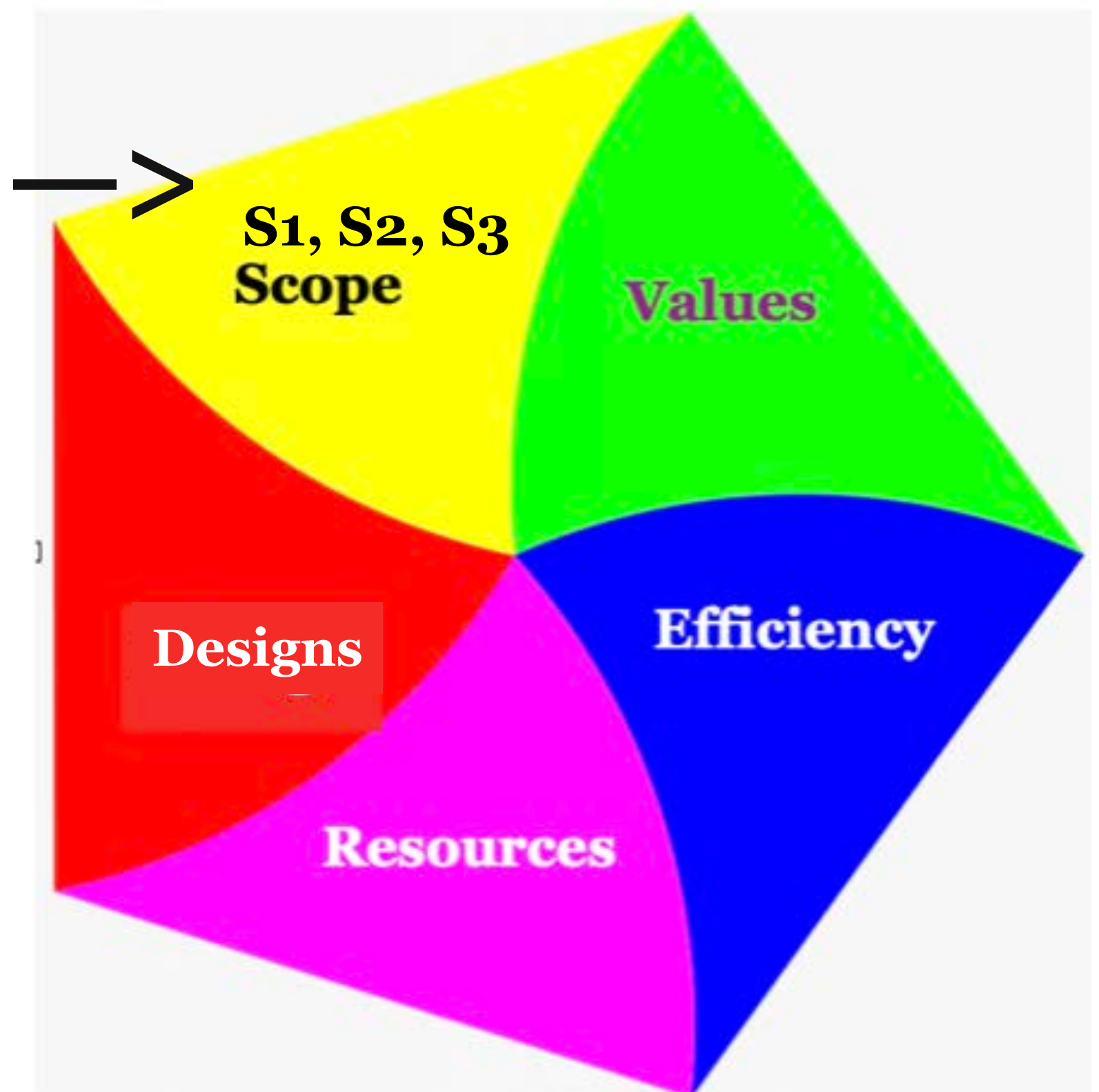
‘Scope’ Components —>

Scope consists of:

S1: Functions; what the system ‘does’

S2: Explicit Binary Constraints; what the system must do or must not do.

S3: Scalar Constraints; Value or Resource limitations. Too much or too little.

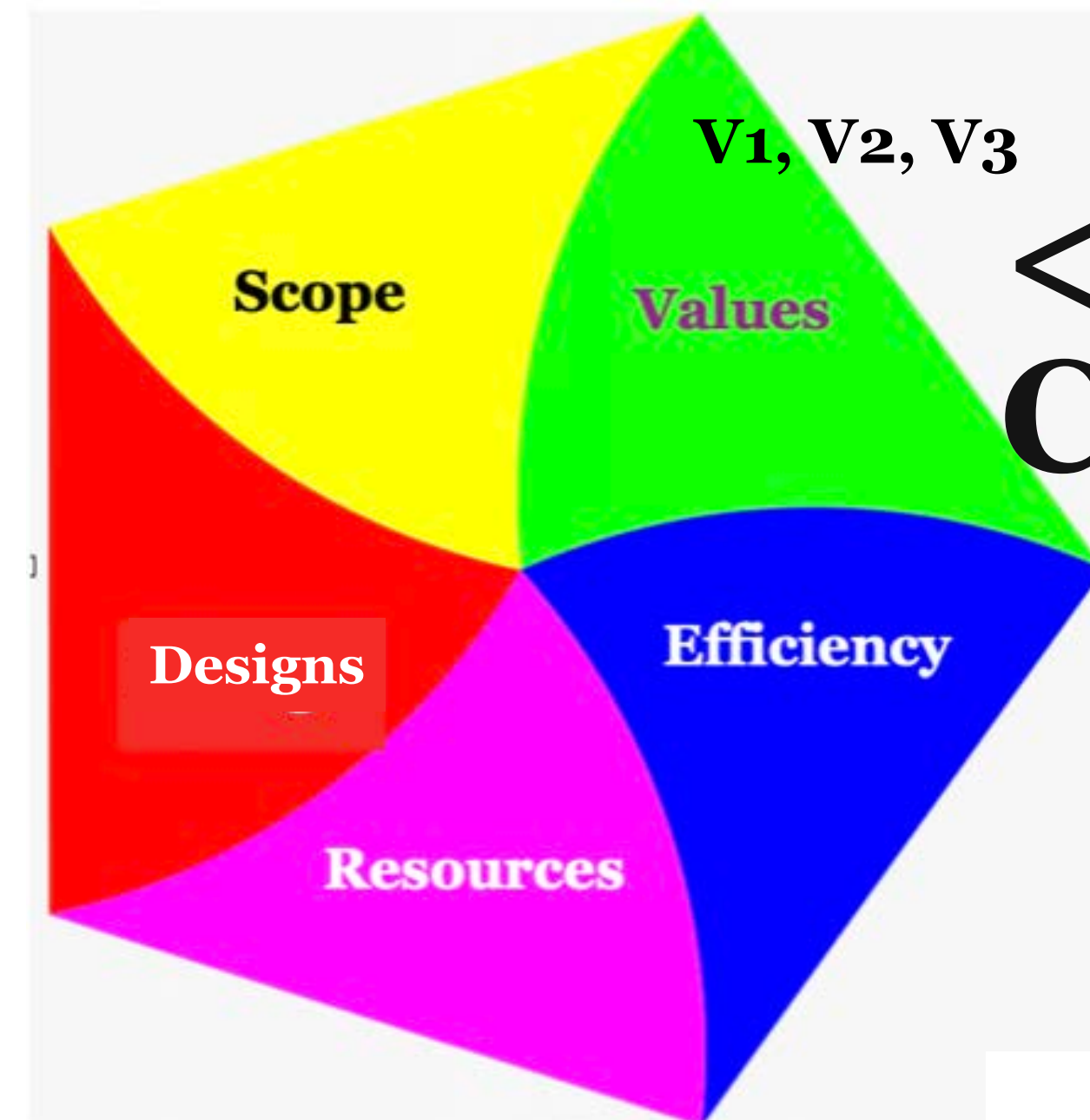


‘Values’ consist of:

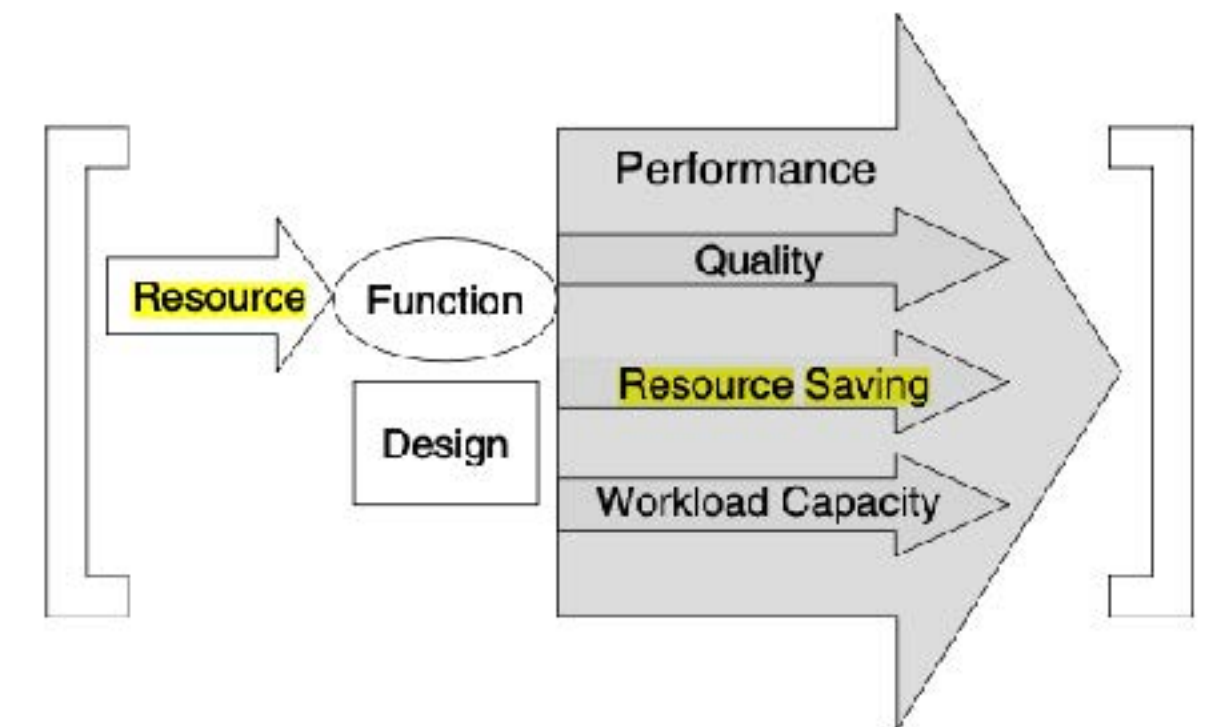
V1: System **Qualities**, desired by stakeholders. The ‘how well’ the system performs.

V2: System **Workload Capacity** attributes, desired by stakeholders. The ‘how much’ the system can do.

V3: **Resource Savings**. A stakeholder desire to reduce, or control, any type of resources in the system. Including people, effort, time, money, space.



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



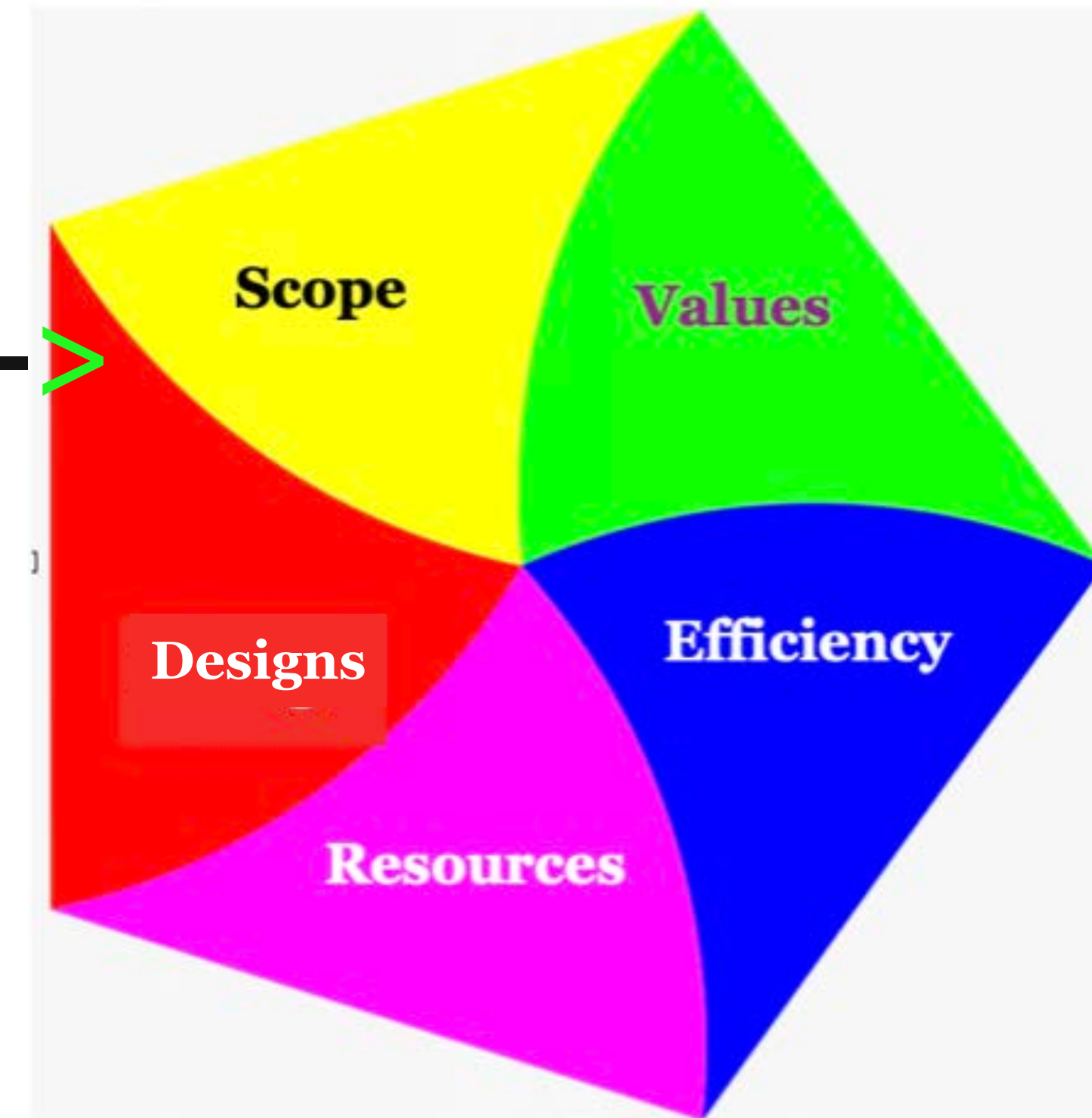
Source Competitive Engineering, Fig. G12.. This is for ‘performance attributes’, which is a synonym for ‘Values’ used by systems engineers. The [Square Brackets] are the Planguage icon for ‘Constraints’.

‘Design’ Components —>

D1: Design: Any specified, and potentially implemented, artefact; *physical, logical, or process*; which has the purpose or intent of improving the total system’s Values and Resources.

D2: Strategies: A **meta**** -design idea which *dictates a number of more-specific designs*, within its scope. *Example: ‘Buy Local’, ‘Contract for Value’.*

D3: Architecture: designs of structure and interconnection of the system. *Example: Maximum Team Size 10. SOLID Internet Architecture.*



Caption

** META: denoting something of a higher or second-order kind: *metalanguage* | *metonym*.

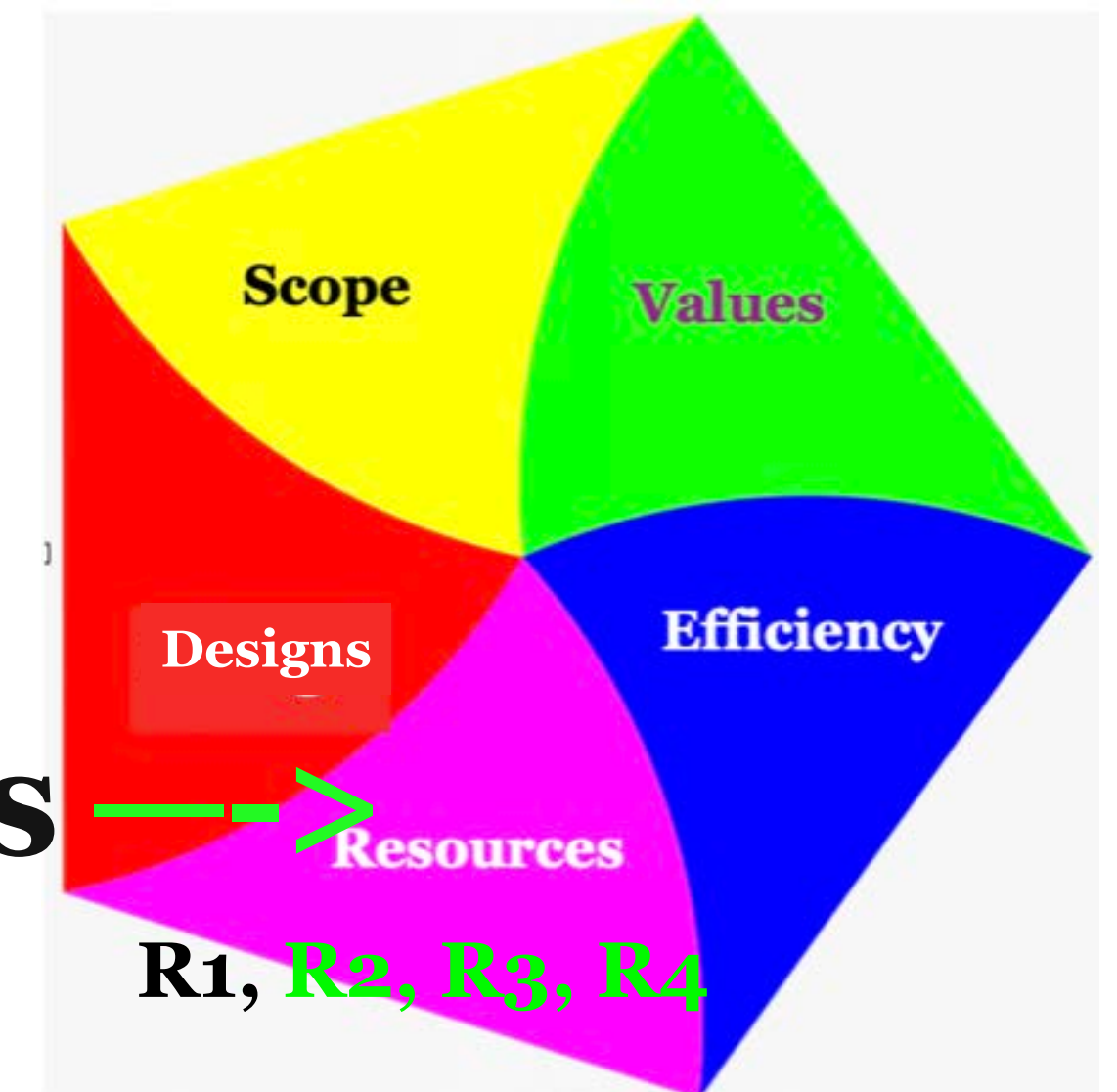
R1: Financial Resources. Capital Expenditure, Operating Expenditure, De-commissioning Expenditure

R2. Human Resources: Manual labour, Intellectual Labour, Training work.

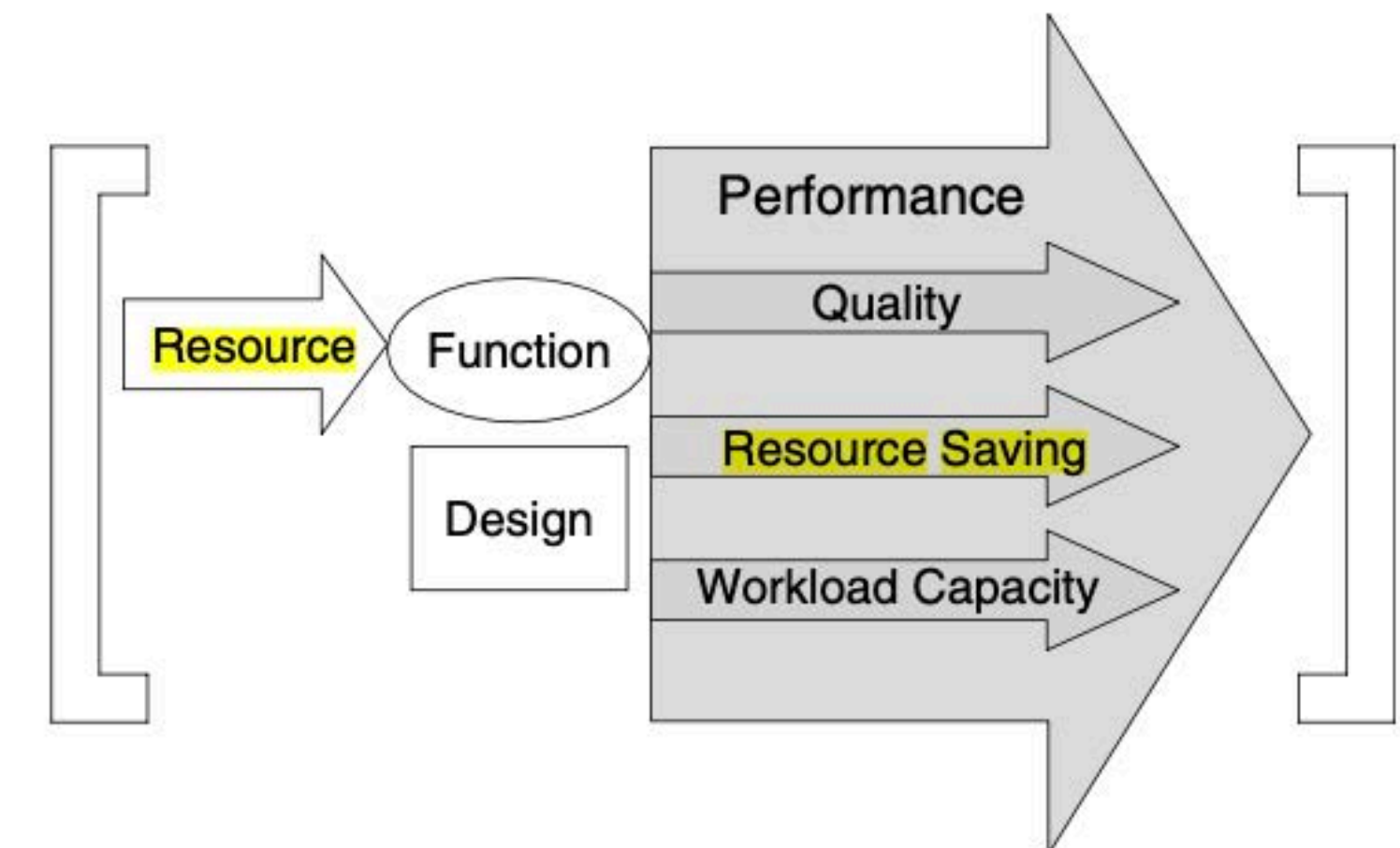
R3: Time Resources: *calendar time* to complete, *cycle time* for a process.

R4: Other Resources, like *space, sustainability, trust, credibility, loyalty.*

‘Resources’ Components



Resources are various limited fuels to create and maintain a system.

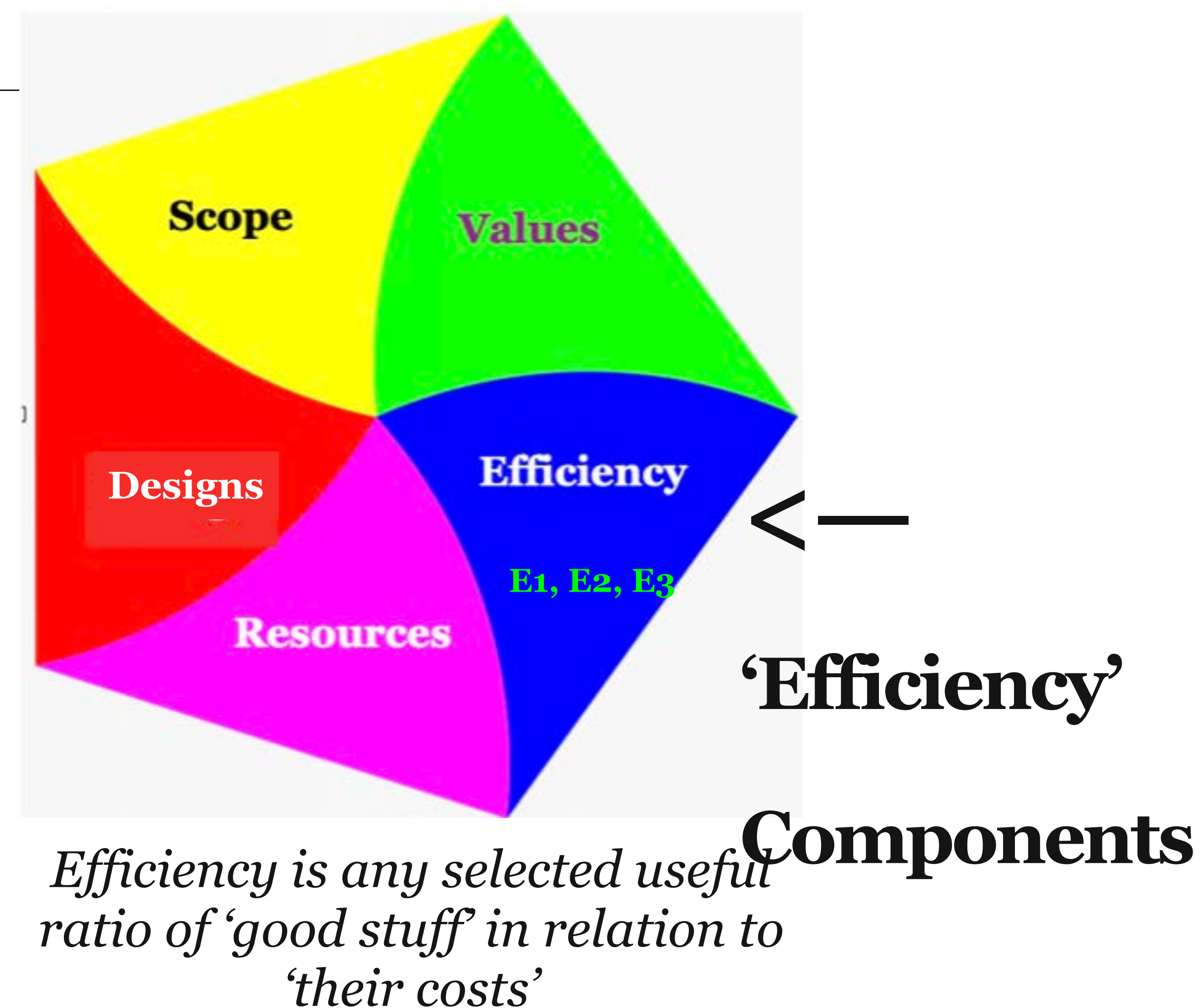


Source: ‘Competitive Engineering’, Fig. G12.. Notice the ‘Resources’ feeding the Function/Design/Values

E1: Generic Defined Efficiency. Any selected critical set of Stakeholder Values divided by any selected, useful, or available, critical set of budgeted constrained resources. $\{V_1, V_2, V_n\} / \{R_1, R_2, R_n\}$.

E2: Profitability: any defined notions of profitability. Example before taxes, long-term average.

E3: Value for Money: useful for government-like institutions, charities, ideal organizations. 'Citizen/Stakeholder Values' for 'financial expenditure', like taxes, donations. For system lifecycle or selected stages or aspects.



The Penta Model Paper Alone August 2022
<https://tinyurl.com/PentaPaper>

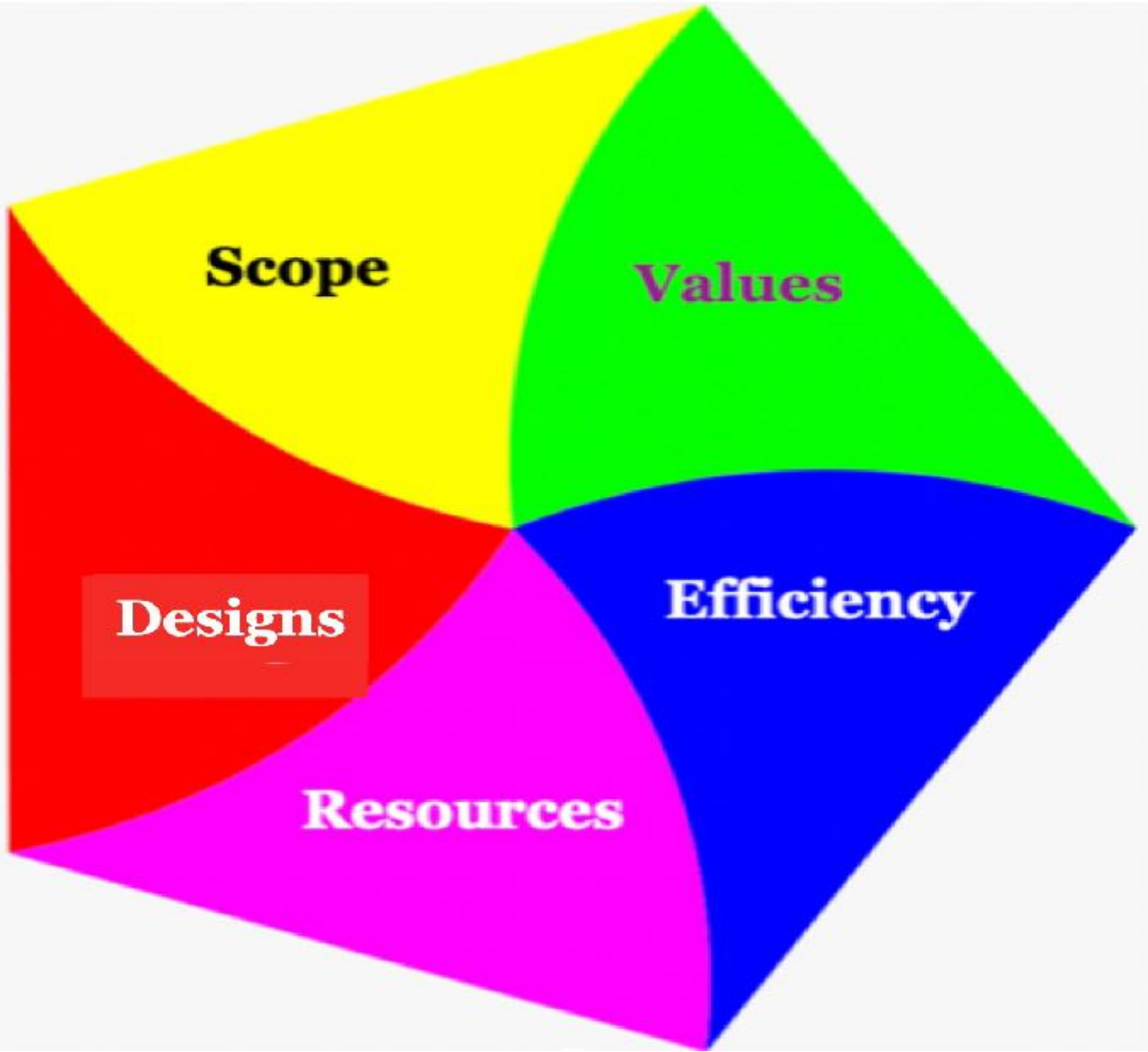


Also Chapter 4 of the [SIMPLE] book
<https://tinyurl.com/SIMPLEGilb>

<https://tinyurl.com/PentaPaper>

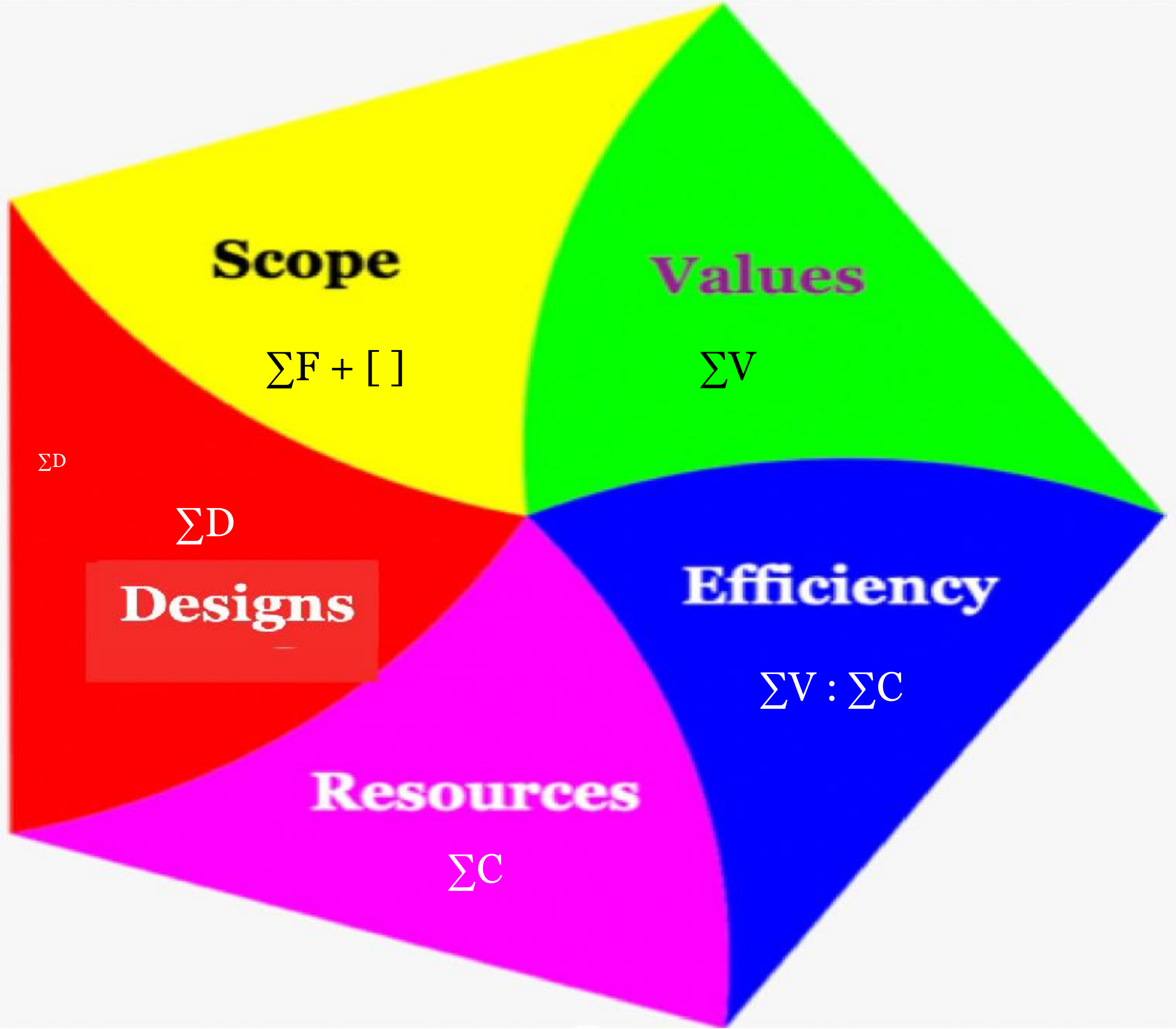
Additions to the old and ‘misleading’ Iron Triangle model *are*:

- 1. Explicit ‘design’
- 2. Generic ‘resources’
- 3. Generic ‘Scope’
- 4. “Efficiency”
- 5. Stakeholder ‘Values’, no narrow ‘quality’
- 6. Explicit Planguage connection: *quantified* values, ‘engineering’, etc.



We encourage everybody to make use of this model! Freely

Thinking of Penta in terms of sets of engineering components.



*The Penta is a high level visualization to remind us of 5 critical and related system elements. Designs, necessary to give values; also give Value side effects, and a set of costs.
But the designs must not give bad efficiency, or not give negative profitability, not give a bad $\Sigma V : \Sigma C$ Ratio.*
The Penta Model

Research Defying ‘Iron Triangle’ Myth

Platforms defy the “Iron Triangle” myth. The “Iron Triangle” is sometimes also called “The Project Management Triangle” or the “Triple Constraint” (see Figure 8, next page).

The three corners of the Iron Triangle are made up of the variables scope, cost, and schedule. According to this model, the three variables are interrelated in a zero-sum game.

Building a larger scope is thought to require more cost and time.

Conversely, to build something faster is thought to either cost more or require smaller scope or both.

The economics of platforms shows such conventional thinking to be mistaken.

SpaceX delivers far greater scope—volume and variety of space cargo—than even its proponents had imagined.

And it does it 10X cheaper and 2X faster than the conventional approach.

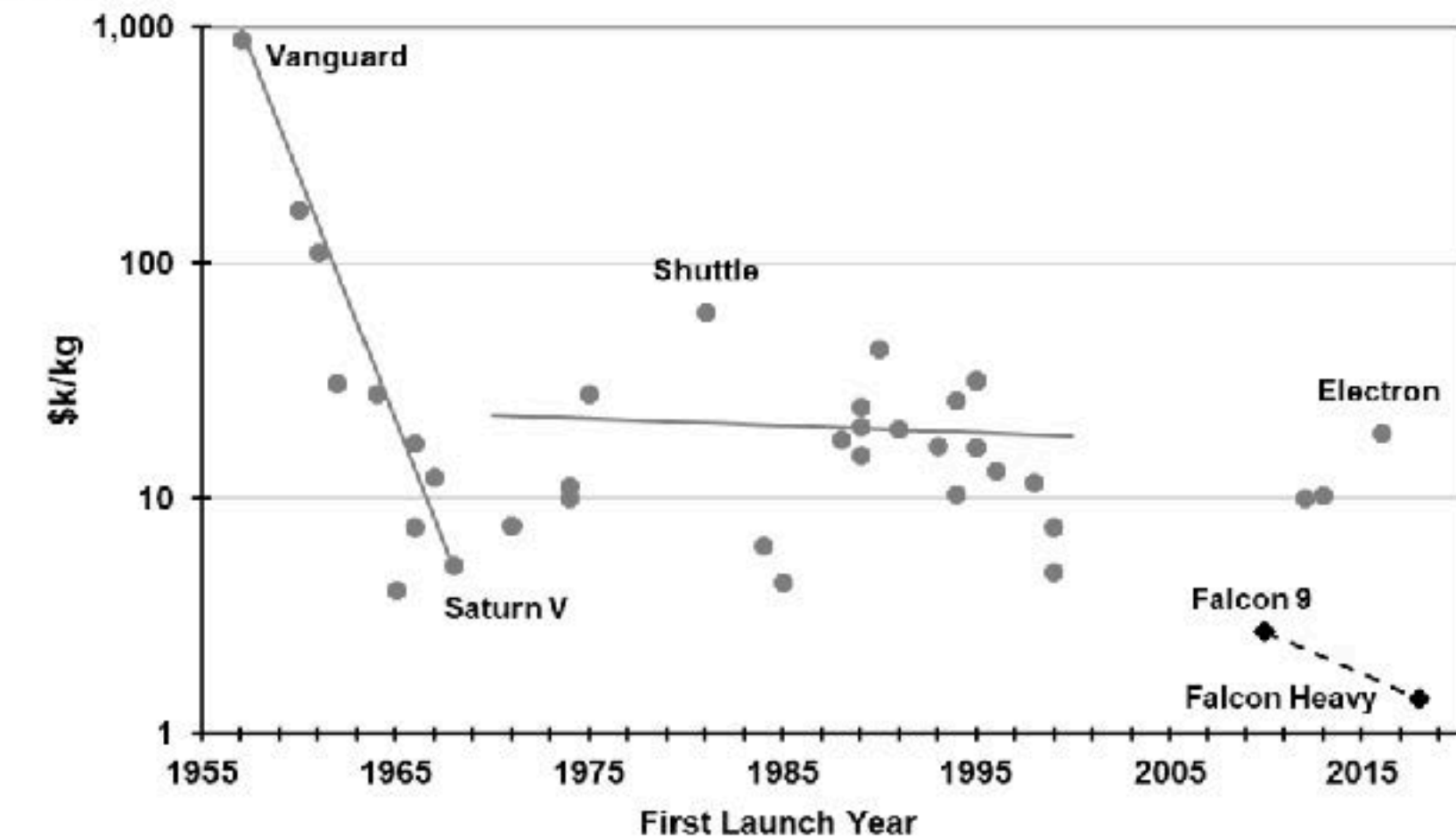
Platforms defy the Iron Triangle.

In fact, whether something can break the constraints of the Iron Triangle is a test for whether it will **scale**.

[Flyvbjerg/Ansar] Atif Ansar and Bent Flyvbjerg, 2022, "How to Solve Big Problems: Bespoke Versus

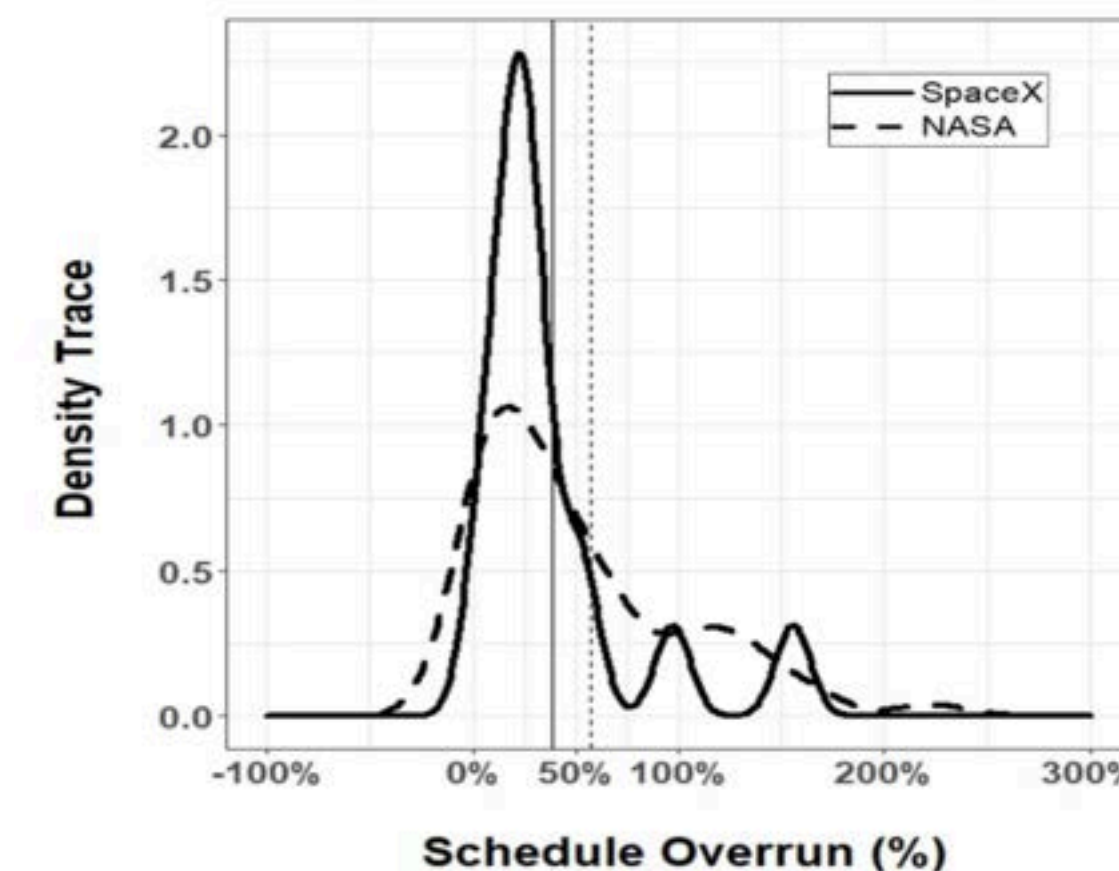
Platform Strategies," Oxford Review of Economic Policy, vol. 38, no. 2, pp. 338–368, url: <https://www.sciencedirect.com/science/article/pii/S0022169422004942>

Figure 1: Launch Cost Per Kilogram to Low-Earth Orbit (LEO) (US\$ Thousands)



Sources: Jones (2018) and Zapata (2017b)

Figure 4: Density Trace and Mean (Vertical Lines) of Schedule Overruns: NASA (N = 122) vs SpaceX (N = 15)



Source: Authors' Database

Platform architecture is a design that defeats Iron Triangle

Figure 8: The Iron Triangle Versus Platforms



Source: Authors

The ability of well-executed platforms to defy the Iron Triangle presents a source for grounded optimism in the delivery of big projects. Not all big problems are as intractable as they appear.

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