

DECISION-MAKING

UPSIDE DOWN

&

RIGHT-SIDE UP

Towards a Common Ideal within Reach

- 'Short Odesys Story' -



Design – A Constructive Way Forward Towards a Common Ideal Within Reach!

In Greek mythology, Zeus tasked the Titan brothers Prometheus and Epimetheus with the creation of mortal life on Earth. Epimetheus, the 'after-thinker' and embodiment of knowledge, bestowed upon each animal a unique gift to compensate for its weaknesses and to fulfil its place in the cosmos. Thus, a harmonious whole emerged, in which nature unfolded in perfect balance. Prometheus, the 'forward-thinker' and embodiment of ability, discovered, however, that humankind had been forgotten. Vulnerable and incomplete, the human being stood empty-handed in creation. To right this injustice, Prometheus stole fire from the gods – the symbol of warmth, creativity, and the power to create – and gifted it to humanity. This fire offered not only a practical means of survival, but also the inner willpower to create and to build a better future. With “hammer and iron,” determination and collective strength, humankind gained the ability to develop solutions and shape its own future.

This Promethean fire – the burning will to create – is what makes the human being unique. It symbolizes the bridge between spirit and matter, between ideals and reality. Design lies at the heart of this: forging plans for a tangible outcome, transforming existing situations into feasible solutions based on human intentions, interactions, and values – all within physical and social boundaries or constraints. Design is not merely how something looks or feels. Design is how – and whether – it works. Everyone is a designer whenever they use their strength to turn ideals into the best possible solutions – whether it's a story, a travel plan, or a bridge.¹ That is a genuine human blessing of pure value!

People in (public) management roles often discuss social and societal issues without fully considering the physical realities involved. They resemble those who wish to build a bridge without ever having learned the fundamental principles of mechanics. Effective decision-making¹, however, demands an *integration* of what is socially desirable with what is physically feasible. Without this integration, decision-making will inevitably fail, because nature cannot be fooled, and people are inherently unwilling to be forced.

The current energy transition is a striking example of this. It is largely a matter of decision enforcement—or even decision manipulation—where the ends justify the means, and individual values appear powerless. The media are filled with stories about wind turbines and energy solutions that leave stakeholders without real choice. Local authorities defend their plans as the ‘best solution,’ yet communities feel sidelined. A constructive dialogue is missing, causing the transition to remain stuck in imposed policies rather than generating value for the whole system. Social wellbeing becomes healthy when we *associate* the individual with the collective, where the strength and engagement of each person reinforce the collective by their willingness to let go for the greater whole—which ultimately also benefits themselves.

Initiatives such as tailored or direct democracy, citizens’ assemblies, and inclusive participation through climate tables promise change but often fail due to the illusion of free choice and the absence of a design-oriented approach. Independent experts and participants are selectively chosen based on their ‘climate attitude.’ This frequently leads to a narrow focus on a biased solution, drafted by one of the stakeholders, within a limited framework. Such tunnel vision blinds people to alternative possibilities. For a real transition, a profound integration of social and societal desires with physical feasibility is essential, supported by open and sincere collaboration. This requires a fundamental revision of decision-making: shifting from reactive and closed to proactive and transparent. Moving beyond the illusion of advisory referenda, towards an actual design-

¹ Compare ‘**Entscheidungsgestaltung**’ (GER) of ‘**Besluitvorming**’ (NL), both implying a designing, forming, or shaping approach to decision-making.

driven *preferendum* — a process that unites individual preferences and collective values within a socially and physically feasible design space of possible solutions.

Such an approach requires letting go of existing thought patterns and embracing an open-ended mindset: the four-step thinking of Odesys (Open Design Systems). This marks a fundamental shift from reactive thinking to forward-thinking, through four modes of thought: systems, design, social, and slow thinking. A strategy that could have suited the ingenious Odysseus — not a battle, but a smart way out of complex situations. See the Odesys Thinking intermezzo below.

Odesys Thinking: a fourfold forward-thinking approach to problem solving!

The functioning of a system is never merely the sum of its parts, but emerges through differences and conflicts in interaction ('systems'). Only by confronting systemic conflicts and bridging differences can we co-design constructive solutions for the whole ('social'). In doing so, existing systems are developed further into desirable and feasible ones ('design'). Quantitative 'glass-box' models support this process ('slow'). For inspiration, the following examples illustrate aspects of 'systems, design, slow, and social thinking'.

- 1. Village and Bridge ('design-systems-social')** In a village, the residents dreamed of building a bridge to reach the market on the other side. However, since everyone worked independently without coordination, the project failed—collapsing during its very first test. The failure stemmed from a focus on individual tasks and interests, with no regard for the bigger picture. With the guidance of a wise master builder, the villagers learned to co-design and think systemically. This led to a forward-looking and sustainable solution: a pre-aligned design plan in which intention and feasibility were integrated—becoming the key to success..
- 2. Company and Strategic Plan ('design-systems-social')** At a company, employees aimed to better serve their customers through a new strategic plan. Marketing, IT, and Sales each worked separately, relying on customer surveys. Without alignment and with little understanding of the customers' actual needs, the plans failed to come together—resulting in promises they could not deliver on. A design consultant helped the team realise that the issue wasn't the ideas and intentions themselves, but the lack of integration between those ideas and practical feasibility. By first co-designing and integrating their initiatives, they developed a robust and workable strategy.
- 3. Team and the Lake ('systems-social')** In a village, a team was responsible for managing a large lake. Each team member had a specific task: one monitored the water level, another checked the water quality, and a third observed the fish population. One day, a member noticed a decline in fish numbers in their zone, but the issue was recognised too late and had already spread across the entire lake. They enlisted the help of a system integrator, who showed them a simple truth: collaborate and share insights to serve the greater whole. The team realised they couldn't operate in isolation but needed to manage the entire ecosystem together. Over time, the ecosystem recovered..
- 4. Elevator and Mirror ('systems-design')** In an office building, a team was responsible for maintaining the elevators. Although the elevator functioned technically well, several complaints about delays prompted the team to carry out a thorough inspection. They replaced components and ensured everything was in working order. Yet despite their efforts, the elevator remained slow and uncomfortable. Then, one team member—a systems architect—decided to try something simple: he installed a mirror inside the elevator. This small idea led to a remarkable change: passengers began to feel more at ease while waiting, as they could see themselves and adjust their posture. By zooming out, it became clear that the problem was not the technical functioning of the elevator, but the experience of the people using it..
- 5. Carrot and Kale ('slow')** You're at the market and stop at a vegetable stall. A sign reads: "A kale and a carrot together cost €1.10, and the kale costs one euro more than the carrot." You only want a carrot, make a quick calculation, and hand the vendor €0.10 before walking away. But the vendor runs after you and gives you €0.05 back. Calmly, he explains the math using two equations with two unknowns. "The kale costs €1.05 and the carrot €0.05," he says. Had I just taken a moment to think, I wouldn't have nearly overpaid. Fortunately, the vendor was kind enough to come after me. I later learned he was a mathematician..
- 6. Teacher and Balloons ('social')** In a school corridor, balloons lay scattered, each attached with a name tag of a student. The teacher asked the students to find their own balloon. Before he could finish his instruction, the students panicked and rushed through the corridor without a plan, causing some balloons to burst and others to remain unfound. The teacher stopped the group and said, "If you had first calmly thought it through and made a plan, you could have quickly found your own balloon." He explained, "If everyone had randomly picked one balloon, one by one, everyone would have had one. Then, standing in a circle, you could have passed each balloon to its rightful owner, one at a time." "Think before you act," he added thoughtfully. Finally, he shared an Ubuntu story, illustrating that in the tribe it's natural not to look out only for yourself, because true happiness comes when we are all happy together.

Systems thinking Social & Design thinking Slow to:

Agree First, Act Feasibly, Adapt Flexibly and Arrive at a Best Fit for Common Purpose

When making decisions on complex problems, we need a holistic framework that unites ‘systems thinking, design thinking, and slow & social thinking’. This enables us to address challenges in their interconnectedness and as a whole, aiming to bring a common ideal within reach. It is not about personal success, equality, or absolute truth, but about collective value rooted in human free will and equality. The formation of free will within an equitable or equiforming² frame of reference makes maximal group value creation possible.. This requires associating interests, bridging differences, integrating feasibility and desirability, and creating an ‘infinite’ solution space that allows finding a ‘best fit’ for a common purpose, rather than sustaining the illusion of free choice. This solution space is a dynamic window of opportunity where, through the logic of ‘*ap-peacement*’ —not by consensus but by constructively engaging with differences— the highest shared value emerges, leading to the co-creation of a common ideal within reach. Odesys has developed such an integrative methodology, which brings about a paradigm shift in decision-making. It is based on the following three ‘**upside-down**’ principles:

1. **Reversing from closed and post-decided to upfront openness:** Rather than selecting a suboptimal solution through referendum-style analysis from a predefined set of alternatives, Odesys reverses the process. Its proactive Referendum design approach centres on an ‘infinite’ solution space. Here, the best-fitting solution is identified through the integration of interests, preferences, and feasibility — shifting from decision-enforcing to open-ended decision-making from the very start — **configuration : design thinking**³.
2. **Transforming from subsystem differentiation to system integration:** Rather than analysing the physical behavior of a single subsystem in isolation (“what is technically possible”), Odesys transforms the process into a socio-physical system integration (“what is both desired and feasible”). This enables the discovery of a best-fitting configuration — shifting from a fragmented approach to a systemic whole that unites ideality and reality— **integration : systems thinking**⁴.
3. **Turning from vertical hierarchy to horizontal association:** Instead of vertically imposing a composite, closed solution from a single stakeholder⁵, Odesys rotates the process 90 degrees toward an open and social design approach. Based on individual preferences and interests, and within an equitable physical and social framework, the best-fitting alternative is identified through the highest aggregated preference value —shifting from top-down to free, equal, and together — **association : social thinking**⁶

² **Equitable, or ‘equiforming’** (the Dutch ‘gelijkvormend’), means that there are equal conditions or similar constraints to reach a solution within a decision- or design space.

³ **Design thinking**, as described by Herbert Simon, is a process in which existing situations are intentionally transformed into desired states through creative problem-solving and iterative decision-making (see also other major design thinkers such as Jan Eekels, Norbert Roozenburg, and Donald Schön).

⁴ **Systems thinking**, as described by Russell Ackoff, refers to the insight that a system is never simply the sum of its parts, but rather the result of their integrative mutual interaction. Improving the whole rarely succeeds by optimizing the performance of just one or a few parts (See also other major systems thinkers such as David Bohm, Bernard Lievegoed, and Peter Senge).

⁵ An active **stakeholder** is a **participating** decision-maker, a decision-taking stakeholder, or a directly involved co-decider. This aligns with the distinction between the **horizontal** bazaar model (open and engaged) and the **vertical** cathedral model (closed and exclusionary).

⁶ **Social thinking**, as described by Rudolf Steiner, refers to the threefolding principles of the social organism: fraternity within the ‘economic goods sphere’ (value), freedom in the ‘personal development sphere’ (will), and equality (dignity) in the ‘judicial agreements sphere’ (agreements). Their “living-apart-but-together” (LAT) relationship ensures the

Because carrying out these three modes of thinking and finding the best solutions for complex systems within a group often exceeds human cognitive capacity, Odesys has developed a neutral, objectifying, and quantitatively supported ‘glass-box’ computational model called Preferendus. This open decision-support tool functions as an extra organ of perception during the decision-making process, supporting the search for the highest aggregated preference value within the solution space — a space shaped by human preferences and physical performance. It serves as a kind of compass, guiding the way toward the best possible outcome within a given context. The Preferendus gives form to ‘**slow thinking**’⁷ and enables deliberative decision-making, completing the fourfold *forward- and holistic-thinking* process of Odesys. As a tool positioned between human and technology, Preferendus both ‘reflects and talks back’. Odesys and its Preferendus aim for a feasible solution that optimally satisfies all stakeholders. This is not a half-baked compromise made in hindsight, but a proactive strategic synthesis — *a best-fit for common purpose*. In this way, decisions are *neutrally* and *transparently* substantiated – solidified – and *co-created from the whole*. It marks a true turning point in participatory decision-making, enabling complex problems to be solved efficiently and conflicts to be confronted effectively: not just advice, but decisive action!

What makes Odesys’ decision-making approach truly unique and innovative? It is this: the human-centred design methodology Odesys employs goes beyond pseudo-democratic principles such as “majority rules” or “leaving no one behind” and embraces the core values of freedom (“will”), equality (“dignity”), and fraternity (“value”) in a pure, direct form of *open-diacratic*⁸ decision-making aimed at the best fit for the whole (“well-being”). This open design approach is a conscience of freedom: a *diaductive*⁹ process that simultaneously unites the individual freedom of stakeholders and the degrees of freedom of the physical system to find a best-fitting synthesis for the whole within social, physical, and moral boundaries, and thereby dissolving the paradox of freedom¹⁰. In this way, “plans are forged,” and Odesys discovers a constructive path to a feasible solution that maximally satisfies all stakeholders — *decision-making decidedly an art*. Only by transparently confronting creative conflicts can we arrive at the best-fitting solutions within the ‘*infinite in-between space*’ of possibilities. This requires a process of *social-physical fitting and*

uniqueness and independence of each domain, allowing them to strengthen one another and collectively create maximum social well-being.

⁷ **Slow thinking** (**‘deliberative’**), as described by Daniel Kahneman, refers to a thoughtful, analytical thinking process (as opposed to instinctive) for **deliberate** and rational decision-making, where logical reasoning and, when relevant, quantitative solidification play a key role (see his System I: instinctive versus System II: deliberative thinking).

⁸ **Diacracy** (from Greek *dia-* meaning ‘in-between multiple’ and *kratein* meaning ‘to govern’) is a system in which power or influence is distributed horizontally across different layers or sub-elements of a whole, without central authority, so that each element retains its own autonomy and collaborates through the social-physical in-between space to achieve a common goal. Note that ‘diacracy’ is also a blend of ‘direct democracy’ and ‘dialogue’.

⁹ **Diaduction** (from Greek *dia-* meaning ‘between multiple’ and Latin *ducere* meaning ‘to lead’) is the process of emergence (‘leading out’) of a unifying force arising between and from different layers or sub-elements of a whole. This force organically comes together or articulates itself through the in-between space to achieve a common goal.

¹⁰ The **paradox of (design) freedom** is this: if each individual designs from their own (moral) freedom — shaped by their will — and enters into dialogue with others within an equitable and harmonising frame of reference, the most valuable and healthy solution for the whole can diaductively emerge. Precisely through these individual differences, a shared movement is set in motion: a process of genuine collective value formation. In this way, designing becomes a conscience of freedom, where the following holds true: “A social life is only truly healing when, in the mirror of the human soul, the whole community is reflected — and within the community, the strength of each individual lives,” as expressed in Rudolf Steiner’s social basic principle (linked to his social basic law).

measuring. Moving from advice to action in an open diacracy rather than a closed democracy, decision power is shared with value across time and space, with respect for everyone's will. This is where Odesys makes the difference—where direct-democratic or consent-sociocratic decision-making leaves opportunities untapped: on the way towards a best-fit for common purpose!

Odesys follows a preferendum approach. Where a referendum presents a limited set of options side by side and merely counts the number of votes for and against, a preferendum actively unites preferences. It bridges differences to arrive at a best-fitting outcome within the relevant context. In other words: where the bookkeeper statically places numbers next to and under each other as the basis for retrospective decision-making, the Odesys designers go a step further. They approach the challenge dynamically and systemically, from the outset, through a socially threefold perspective — as a preferendum interplay *of* each other, *with* each other, and *for* each other. Thus, the Odesys designers are true bridge-builders, working by the adagium: 'to improve the world, *start together* and *act from the whole*'¹¹.

The new Odesys methodology integrates the preferences and interests of stakeholders with the physical performance of the system. It offers robust and neutral support in identifying the best-fitting solution — the one with the highest aggregated preference value rather than the lowest monetised costs, as seen in many one-sided economic models. In this way, all interests are expressed within a single, uniform preference space¹² — the only truly relevant metric for decision-making — allowing for objective measurement and mathematically sound calculations. The Preferendus, grounded in Preference Function Modelling (PFM) theory¹³, is Odesys' quantitative decision-support tool — a decision model that ultimately leaves the final say to the human user. This open-ended design process transcends conventional technical modelling approaches by focusing on the human preferences that truly make a difference. Technical models are often reduced to mere opinions based on hypotheses, describing only the behaviour of the material object. If only the 'technicians' and 'economists' had realized that their puzzle represented just a part of a larger whole. The Preferendus modelling reflects the interplay between the preferences of the subject (the 'normative model') and the multiple possible performances of the object (the 'descriptive model'). Consequently, the modelling has not degraded into merely 'an opinion of a model' or even a 'meaningless model', but actively integrates the involved 'meaningful' opinions of stakeholders into a maximally guiding decision.

¹¹ A **system** can consist of a **whole** of inorganic or organic subsystems. The Odesys designer views humans and their decision-making community as a socially threefold organism: freedom, equality, and fraternity—a social threefolded system. This aligns with concepts such as the mutual aid principle, the movement from "I to we," and the idea of acting "**for the greater good**" or "**for the better whole**." It also resonates with the artistic and philosophical insights of Friedrich Schiller and Rudolf Steiner, who expressed that "humans are meant to be for one another, not one through the other... all men shall become brothers..".

¹² Merk op dat **alle doelen uniform** worden gemaakt binnen één preferentieruimte, in plaats van dat één doel—**geld**—dominant is en alle andere doelen gemonetariseerd en daarmee absoluut of 'objectief' gemaakt worden. Geld is geen centraal doel op zich, maar slechts één van de subjectieve belangen, uitgedrukt in voorkeur: 'wat is het je waard'.

¹³ The preference and measurement theory of Jonathan Barzilai - '**Preference Function Modelling**' (PFM) - addresses fundamental shortcomings in traditional decision-making theories by mathematically modelling preferences correctly and consistently. PFM employs proper measurement scales and mathematical operations defined within a one-dimensional affine preference space. Odesys extends the application of **PFM** from multi-criteria decision analysis (MCDA) to multi-objective design optimization (MODO).

The Preferendus identifies the best-fitting solution using the IMAP optimization method¹⁴ by selecting the option with the highest aggregated preference value for the group. In this way, the Preferendus functions as a pure common value design compass—standing in contrast to the one-sided cost radar of a bookkeeper’s approach. Odesys and its Preferendus harness co-creative (“art-full”) intelligence rather than merely artificial (“art-less”) intelligence (AI). *Art-full and art-less* thus go hand in hand: the qualitative power of human experience and judgement is united with the quantitative computing power of AI¹⁵, to arrive at a best-fitting solution for the whole.

Odesys offers an open, integrative systems design methodology for addressing complex challenges and finding solutions that unite ideality and reality. It enables us *to liberate complexity* by aligning individual human freedom and their motives with the system’s degrees of freedom and its capabilities. A problem is only genuinely solved when we are collectively liberated from it. To reach that point, two foundational principles of problem-solving apply:

(1) **Letting go in order to find**: only when you can let go of the solution and instead ask yourself, “*What problem am I actually trying to solve?*”, does space open up for a true solution to emerge. Put differently: if you are searching for a solution, you must know where to look — but what you are looking for, you must let go of in order to find the right one. You have to take distance to gain an overview of the problem as a whole. Only through *striving* for an *ideal* does the path toward a solution open up. But as soon as that striving hardens into an absolute goal, it limits the freedom to discover a best-fitting solution.

(2) **Playing together to score** - only when we are willing to approach problem-solving as a game with, by, and for each other, can complexity truly be liberated. Seeing oneself in the other opens the path to healthy and novel solutions. From the whole, for the whole, and into a whole, we co-create solid outcomes, transforming initial creative conflicts into the fulfilment of what is truly ‘enough’ for the whole: satisfaction¹⁶. When no one is offside, and everyone plays the ball within the lines and into the open interspace, the team can perform at its best — a game of being *free, equal, and together*.

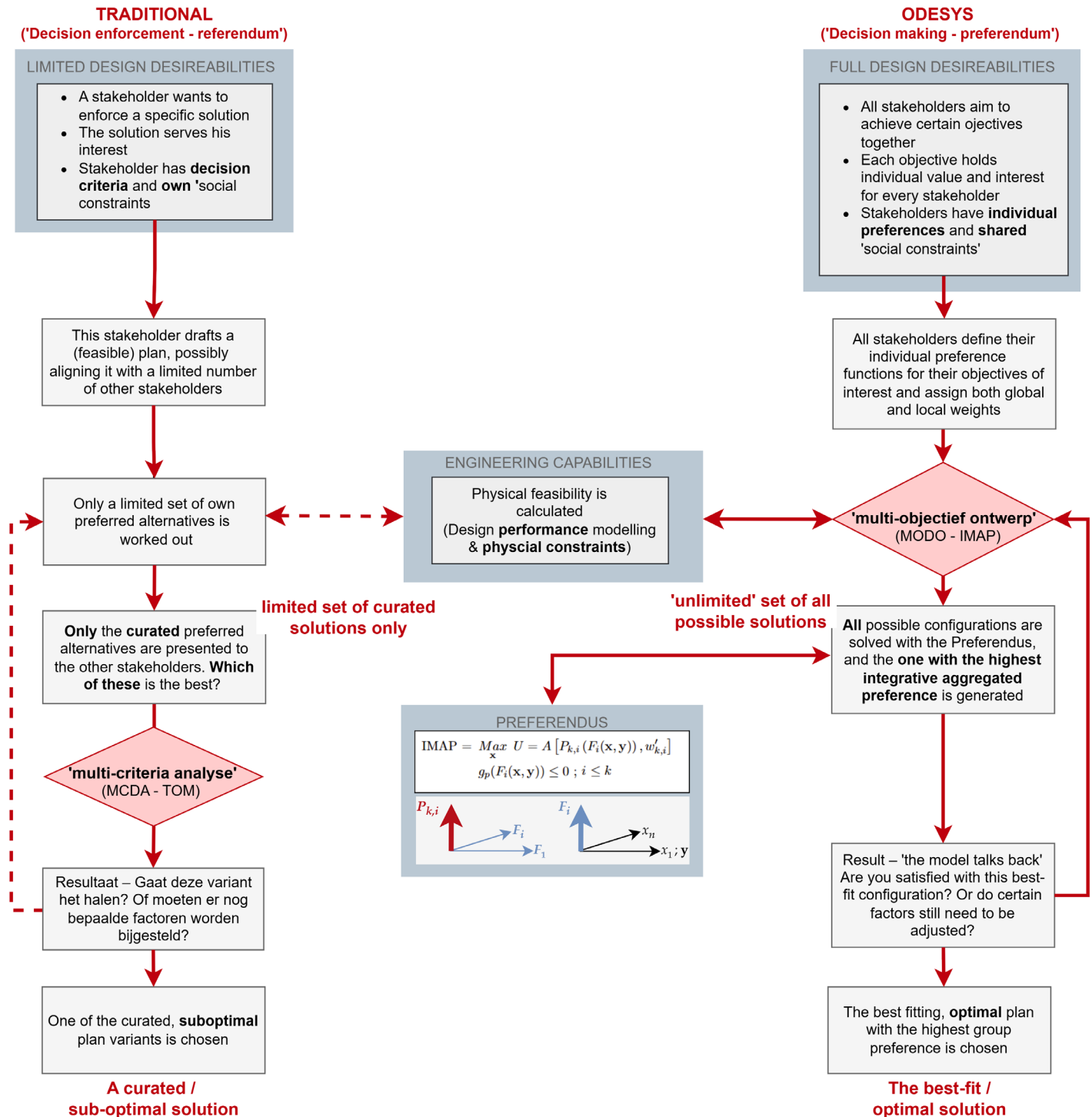
Finally, Odesys transforms idealistic ‘dreamwork’ into valuable ‘teamwork’ through fourfold forward-thinking from the whole — via a unique synergy of “Systems Thinking Social” and “Design Thinking Slow.” In this way, becoming aware of an ideal that turns into reality forms the true union of a team, where satisfaction does not arise from consensus, but from constructively confronting differences.

¹⁴ **IMAP** stands for *Integrative Maximization of Aggregated Preference* and is a state-of-the-art preference-performance-based optimisation method that outperforms existing multi-objective optimisation methods by integrally connecting subjective preferences and objective performances within a single decision space, and is based on a mathematically rigorous foundation.

¹⁵ A study published in Nature (July 2024) demonstrates that all **artificial intelligence (AI)** models trained on **AI**-generated data rapidly degrade into incoherent output — a phenomenon known as ‘model collapse’. This occurs because errors accumulate exponentially across successive generations, significantly diminishing output quality. To prevent this, it is essential to maximise human judgment and ensure AI training remains grounded in diverse and high-quality human input, thereby avoiding a total model collapse that yields nonsensical results..

¹⁶ A conflict is truly dissolved when all parties are **appeased** — that is, **brought to peace, fulfilled** in their needs, and thereby sufficiently **satisfied**.

Below is a schematic comparison of the traditional referendum approach ('decision enforcement') and the Odesys Preferendum approach ('decision-making')¹⁷.



¹⁷ Note that **MCDA** stands for Multi-Criteria Decision Analysis, **MODO** stands for Multi-Objective Design Optimisation, and **TOM** stands for Trade-Off Matrix