

## **CREATING PATHWAYS TO THE FUTURE**

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### **Abstract**

This paper dwells into how the *Sustainable Operating System Initiative*® (SOSI®) conveniently facilitates an organization shape its future with a Purposeful Strategy, by creating DNA-justified Pathways. Similarly, a country can fashion the society its population aspires to, by scaling-up this strategic endeavor. But to start with, we must *Dare to Rethink* the whole approach if we are to avoid collapse. *Systems Thinking* provides the footing.

The road has stopped, and to make sense of the future, an organization has to shape its own. One of the many dangers in a disrupted and turbulent world, is to act with yesterday's logic. Conventional ways of forward-planning are no more suitable in this era of accelerated non-linear change and increasing complexities. Pathways are more befitting. But to create Pathways, uncertainty and chaos must be embraced, and the thinking must be systemic and critical, hence the need for an appropriate methodology. With an applied transdisciplinary methodology, guiding frameworks and straightforward procedures for Managing Complexity, SOSI® can also inspire Systemic Leaders, Managers, Policy and Decision-makers to co-create innovative Pathways in accordance with the DNA of their organizations, or country, and the environment.

SOSI® builds on its *Value, Capability, Availability and Flexibility* concept to uncover the uniqueness (DNA) that characterizes an organization. In order to succeed in a competitive and complex environment, an organization must do equally well in all domains. By identifying high-leverage intervention-points with the *Dimensions Surfacing Heuristics* (DSH), and re-engineering its DNA to level-up the weaker trait-domains, the organization builds resilience and anti-fragility. Subsequently, with strategic foresight and back-casting, it can create previously unimaginable possibilities and adjustable ways in a chosen direction – its purposeful Pathways forward.

### **Keywords**

Systems Thinking, Purposeful Strategy, Organization's DNA, Domain Leveling-up, Systemic Leadership

### **Introduction**

Today's challenges are not linear, nor are they just more complicated than before; they are complex and systemic. Organizations are operating in increasingly interconnected, disrupted and turbulent environments, and managing complex situations is a challenge to Leaders, Policy & Decision-makers, Managers, and Forecasters alike. Data-based projections that assume a predictable future have become archaic. Stochastic predictive-models, like those commonly used by Meteorological Services, are too often off the mark, while Climate Change is affecting the planet at a much faster rate than previously assumed. The frequency of

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exceptional events is on the rise, and technology and AI are having exponential ascendancy in their applications. It's an era of accelerated non-linear change, and the way forward is too unclear and perilous to many; collapse is looming in many spheres.

Unprecedented complexities caused by connectivity, interconnectivity, turbulence, disruptions, emergence, instability, uncertainty, diversity, polarization, inequalities, disinformation, climatic and other changes, overwhelm conventional management and forecasting methods, as there's primarily a lack of understanding, awareness and preparedness at various levels. Development and growth strategies in organizations are too often deployed as Roadmaps, which are quite simplistic and limiting in approach as they are based on deterministic concepts. The road has stopped, and to make sense of the future, an organization has to create its own. Hence the need for an apt leadership to facilitate the transformation into a sustainable and sought after future for all.

In this paper, I dwell into how the *Sustainable Operating System Initiative*® (SOSI®) can be applied to shape the future of organizations. First, I expound on how an organization can 're-engineer' its unique set of characteristics – its DNA, thus allowing it to strive for its future with confidence, resolve, and a definite competitive edge. Apt Leaders, Managers, Policy and Decision-makers, together with their teams, are inspired to produce Pathways, with soft system-optimization as part of their strategic undertakings, in a co-creation process, thus casting the construct for Systemic Leadership.

Before presenting the basis for *Creating Pathways to the Future*, I will briefly describe the supporting SOSI® Methodology and its flagship tool, the *Dimensions Surfacing Heuristics* (DSH) – these are explained in more details in my recent book (*Managing Multi-Dimensional Complexities in Organizations*, 2025). But before that, let's understand what an organization is, in our context, and accordingly, its DNA, with the insightful V-C-A-F concept.

### **An Organization's DNA**

From a system-perspective, an organization, in any sphere, is acknowledged as an open-dynamic, socio-technical system. Open-dynamic systems interact and evolve within the Eco-system of which we are all part, and constantly interact with each other, directly or indirectly. Internally, an organization is also influenced by its own sub-systems and components (actors, entities, parts), in-house & external feedback, and other factors which may or may not be apparent. Besides, there are on-going interactions at the societal level. All these interactions influence an organization in space and time, in ways that are related to its particular traits, and contribute to its successes and/or failures. In this respect, we are not in control, so to say; the system is! But a system's state can be changed on purpose, by permanently displacing its equilibrium to another state or comfort zone (2025, pp. 15-16).

An organization's traits (inherent qualities, tendencies, strengths, weaknesses) are identified from its Value, Capability, Availability and Flexibility (V-C-A-F) domains, which are acknowledged as necessary and sufficient trait-domains in this concept. V-C-A-F thus collectively embody the organization's unique set of characteristics, which I call its DNA, analogous to a person's DNA. Such a premise adds to the perspective of seeing systems as living organisms, over and above the *Brain-Organs-Nervous System* metaphor (viz. in the Viable System Model-VSM). Additionally, an organization's DNA complements the *Head-Hands-Heart* philosophy when addressing the contributions of its individuals (viz. in human-centered approaches to management), since it affects the way people behave and react. The foregoing sets the basis for purposefully re-engineering the traits of an organization.

The V-C-A-F of an organization may be defined as follows:

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- VALUE: The value it provides to, and as perceived by, its community and the society.
- CAPABILITY: How resilient and sustainable it is to face disruptions, risks, uncertainties.
- AVAILABILITY: Its degree of accessibility, visibility, responsiveness in different situations.
- FLEXIBILITY: Its inherent ability to anticipate and adapt to changes and disruptions.

Interestingly, the V-C-A-F concept allows for an organization’s DNA to be known with DSH in a systemic intervention. The *good*, the *bad* and the *ugly* characteristics of an organization come to the fore, and, eventually, the *ugly* is modified using systemic tools and methods, informed by an appropriate methodology (SOSI®). Traits to be re-engineered is a matter of choice, but the *ugly* ones are the most obvious candidates for significant improvements during system-optimization. As illustration, the following table compares three unique sets of characteristics – the DNA of Organizations X, Y & Z. Note that other insightful characteristics (in each domain) may also be revealed during the DHS probing process, and together, they establish the uniqueness of an organization’s DNA. To exemplify, I have listed only one in each domain, with the *ugly* ones in italics (my choice here).

**Exhibit 1.** Illustrating the DNA of Organizations.

	<b>DNA</b>		
<b>DOMAIN</b>	<b>ORGANIZATION X</b>	<b>ORGANIZATION Y</b>	<b>ORGANIZATION Z</b>
<b>Value</b>	Culture of Togetherness	<i>Culture of Conflict</i>	Culture of Trust
<b>Capability</b>	Efficiency-focused	Process-focused	Cost-focused
<b>Availability</b>	<i>Opacity in Decision-making</i>	Safe Workplace	Community Interaction
<b>Flexibility</b>	Command & Control	Autonomous Work-groups	<i>Multiple-level Hierarchy</i>

As a matter of priority, Organization X may choose to address its decision-making process to enhance its Availability, Organization B its ethos to better its Value, and Organization C its number of hierarchical levels to improve its Flexibility. More on this leveling-up process later.

An organization is also a purposeful system. The purpose of a system may be explicit or implied, and the system can provide different purposes to different people at different times. But a corporate statement of purpose explicitly formulates and upholds the integration of an organization’s Cause, Culture, Coherence, and Competence within the Eco-system, for a mutually beneficial interdependent relationship. A Corporate Purpose is also a shared vision with meaning, and a strategic intent with a clear sense of direction. It further allows people to think and act beyond their rationality – be innovative. An organization must, therefore, have (or develop, adopt, and cultivate) a truly Meaningful, Authentic, Sustainable, Thoughtful, Engaging, and Relevant (M-A-S-T-E-R) Corporate Purpose that can enhance adherence, trust, innovation, and boosts engagement within its community, in sustainable and transparent ways – a true sense of purpose is, after all, a greatly satisfying thing in life!

### The Need for Systemic Leadership

Since organizations are complex systems (open, dynamic, interconnected, emergent), it is imperative that their Leaders become proficient in Systemic Leadership. In other words, they must be able to go well beyond the conventional ‘Command & Control’ management, and, amongst others, view complex situations with multiple lenses to accommodate all perspectives, see unintended consequences, recognize emergence, challenge assumptions to broaden the horizon, be more inclusive, promote doing the right things before doing them right, and seek continual improvements to foster resilience and anti-fragility. More than ever, they must be able to come out of their comfort zones, and be strategically apt to shape their organizations’ own future (rather than copying others, e.g., with Benchmarking, Best Practices, and Ready-made solutions) by proceeding methodologically, with an overarching purpose, for its greater good.

Jackson’s CST/CSP (2024) provides the basis for managing complexity in society, and in organizations in general. But there’s also a need for resolute and purposeful leadership at the system’s level to drive transformations. SOSI®, as an applied *Systems Thinking* methodology, provides this platform. With its multi-perspectival approach, SOSI® probes the organization’s V-C-A-F with intent, soft-optimizes the system of interest, and facilitates an appropriate strategy in the face of turbulence, wickedness, disruptions, uncertainty, chaos, and evolution, in order to create a desirable and viable future. In practice, some may view the transdisciplinary and academic realm of *Critical Systems Thinking* as too arduous to grasp, but with SOSI®, Leaders can easily see and understand what’s beyond the tree that hides the forest, and accordingly, do the right things, avoid quick-fixes and reductionist policies, have an inclusive and relational approach, manage complexities in pragmatic ways, avoid the ‘capacity-trap’ (i.e., relying solely on capacity-building), and lead the way when the road has stopped. In this respect, Systemic Leadership may be understood as the ability to See and Understand, Manage and Optimize Systems. This is the S-U-M-O principle in SOSI®, and it enables the Systemic Leadership so indispensable in today’s era of accelerated non-linear change. Hence, this need is suitably addressed with SOSI®.

### SOSI® Methodology

The *Sustainable Operating System Initiative*® was introduced in July 2020 to help organizations become more resilient, sustainable and agile in the wake of severe disruptions caused by the Covid-19 pandemic and the ensuing escalations in complexity in all spheres (economic, social, operational, organizational, environmental). SOSI® advocated systemic awareness and leadership to develop organizations’ preparedness to face many more disruptions to come. A second-order SOSI®, which integrated interpretive *Systems Thinking* alongside the initially dominant ‘functionalist’ approach, was formalized in 2023 to cater as well for the less obvious dimensions of the complex issues found in organizations during my systemic interventions. But the V-C-A-F concept has always been fundamental in SOSI®.

The foundation of SOSI® rests on the assumption that organizations are socio-technical, open-dynamic systems that are also purposeful. SOSI® has a transdisciplinary methodology rooted in applied *Systems Thinking*, and makes use of situation-dependent methods to address and manage complex issues, which are either ‘solved’ (in its Problem-solving Mode), or ‘dissolved’ (in its Systems-optimization Mode). A SOSI® intervention iterates through the A-P-I-M (Assessment, Planning, Implementation, Monitoring) Cycle for continual improvements (2025, pp. 67-71). A variety of methods across the diverse *Systems Thinking* approaches, and Customer Relationship, Quality and Project Management techniques, are used in parallel or in combination, as the situation dictates. The methodology, multi-method pluralism and mix-method pragmatism of SOSI®, together with some prescribed intervention-methods, including the formalized Cost-of Quality (C-O-Q), are explained in my book (2025) as practical step-wise procedures, with case-examples.

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SOSI® emphasizes the importance of surfacing all the dimensions of the identified complexities during a systemic intervention. This is achieved by integrally probing the trait-domains, and more.

### Dimensions Surfacing Heuristics

DSH is the systemic tool which helps expose the multiple dimensions of complex issues during structured group discussions involving all levels and functions of the organization. It has a structured, inclusive, and collaborative framework. The resulting consensus and replies to the designed questions not only reveal the specific dimensions of the issues the organization faces, but also pave the way to model its ideal state. By iterating through the A-P-I-M Intervention Cycle, all the dimensions of a complex situation eventually come to the surface and can thus be appropriately and confidently addressed during the systemic interventions. DSH also helps identify the high-leverage intervention-points essential to re-engineer the organization's DNA, in an endeavor to reach the ideal state and become more competitive, on its journey toward the future.

DSH poses 25 questions (in descriptive and normative modes) to probe the V-C-A-F domains of an organization, its relationships with the environment (with a double-materiality consideration), and the dynamic interrelationships of the whole, with respect to a set of general dimensions (2025, pp. 42-43). The specific factors influencing a complex issue being addressed are revealed when answering the probing questions, to describe the actual state of affairs, and to seek the ideal state of the organization (2025, pp. 80-82). Refer further to my book for the basis, structure and probing method of DSH, and the framework for its application to multi-level complex problems.

By simplifying the task of coming up with the multiple dimensions of a complex issue, DSH enhances the choice of systemic approaches and methods to address it. During an intervention, DSH also significantly helps practitioners to understand and frame complex problems, address multiple issues at a time, harmonize the different worldviews across the whole organization, and shape ideal-seeking responses relative to the M-A-S-T-E-R Purpose of the organization. During the probing process, one gets a good grasp on its inherent characteristics as well. Hence, DSH also provides the means to identify its DNA.

Furthermore, with its inclusive and collaborative approach, DSH contributes to reduce the risk of resistance-to-change, thus further boosting the organization's capability and ability to manage complex challenges. DSH also creates supportive work-environments, and enhances well-being and resilience by involving and empowering employees – DSH makes them feel more valued and heard, thus boosts their engagement, collaboration and commitment to the organization, thereby improving efficiencies.

### Managing Complexity

VUCA (Volatile, Uncertain, Complex, Ambiguous), BANI (Brittle, Anxious, Non-linear, Incomprehensible), and other acronyms are commonly used to describe the nature of a complex issue. But a complex situation can also be Adaptive, Turbulent, Evolving, Unbounded, Tangled, so much so that its effects develop and emerge in time, in stages and at different levels. Such is the nature of a Wicked Problem or Mess, which is a multi-level complex establishment in its own rights.

Due to the level of complexity to cope with, managing organizations today is fundamentally different from what it was yesterday. Policies and decisions can have unintended consequences in the medium to long term – many of today's complex situations may very well be due to yesterday's reductionist approaches and

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quick-fix solutions, however well-intended they might have been. *Cakes-not-Baked* and *Cobras-in-the-Room*, in public and private sectors alike, are hindering organizations from operating at their optimal potentials, if these are not already leading them on a downward trend. An easy way out of a complex situation very often leads back in, e.g., relying on Capability build-up, and ignoring the need to level-up Value, Availability and Flexibility in parallel, is like strengthening only one of the four pillars that support a bridge with an exponentially increasing load; the bridge will certainly collapse. It is therefore crucial to understand the possible systemic behaviors in response to dynamic situations, as a first step toward managing complexities in organizations. For more of systemic behavioral laws, refer to my book (2025, pp. 18-29).

Challenges in organizations, and in society in general, are systemic and rapidly evolving, and reductionist ways of tackling them are failing, thus further aggravating the overall situation. Evolving and far-reaching ways of thinking are therefore required. For the purpose of managing complex issues in an organization, SOSI® critically takes a multi-perspectival approach, and categorizes the related complexities into five categories, as follows:

- People-Societal Perspective & Complexity – Factors relating to ‘Creating Value from a People-Societal Perspective’ (Cultural, Political, Environmental). These socio-ecological aspects are Purposeful and related to human values, fairness, trust, attitude and to the well-being of People in the organization, community, or society in general. Religious-Spiritual aspects may also be essential considerations here.
- Operational Perspective & Complexity – Factors relating to ‘Improving the Resilience, Productivity & Sustainability of the Organization’. Machine, Technology and Process are explicitly considered here. The aim is to achieve better overall operational effectiveness, improve efficiencies, performance, and utilization of resources, and to leap-gain on the productivity of the organization, for improved resilience and sustainable growth. Capabilities and Capacities are improved.
- Organizational Perspective & Complexity – Factors associated with the ‘Enhancing of the Organization’s Viability, Accessibility, Visibility and Responsiveness’ in different situations. However, since Decision-making by people are not always ‘rational’ (due to opinion, emotion, bias, fear), consideration is also given to ‘irrationality’ during adaptation and survival, and to how the Control & Flow of Information/Disinformation, affect integrity, stability, and coherence.
- Power Perspective & Complexity – Factors associated with the ‘Organization’s Ability to Anticipate & Adapt to Changes’ in the face of existing rules and regulations, inflexible authority, limiting boundaries, and restrictive practices. It also considers State, Patriarchal, or Hierarchical-Legal Power having the authority to impose things/views. Often, the problem with an organization’s Flexibility is that the Power who can change it, is the same which has created it in the first place. All influential factors in the Exercise of Power may be to the detriment of equality, empowerment, emancipation, inclusion, and self-development.
- Dynamic Perspective & Complexity – This makes explicit the Interrelationships factors (BIPs: Behaviors, Interactions & Patterns) among the different components of the organization. It seeks to shed light on non-linear linkages, causes and effects in space and time, possible leverages within the system of interest, and unintended consequences.

All these influential factors can be acknowledged as the general Dimensions of any complex issue. This multi-perspectival set of dimensions can be summarized as follows:

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- In the Value domain: Culture, Religious practices, Politics & the Environment (People-Societal Dimensions).
- In the Capability domain: Technology, Machine & Process (Operational Dimensions).
- In the Availability domain: Decision-making & Information/Communication Structure (Organizational Dimensions).
- In the Flexibility domain: Exercise of Power (Power Dimensions).
- In the Whole organization: Behaviors, Interactions & Patterns (Dynamic Dimensions).

To manage complexities in an organization, a SOSI® intervention can either be in a Problem-solving or in a System-optimization mode. In the Problem-solving mode, a *Problem-classification Chart* guides users to the ‘appropriate’ general dimensions related to generic complex problems (2025, pp. 74-76). In this mode, one complex problem is tackled at a time. In the System-optimization mode, multiple issues found in V-C-A-F (the trait-domains) can be addressed concurrently, such that the whole organization is soft-optimized (2025, pp. 33-35). In this mode, the problems are dissolved rather than solved, and future-anticipated issues can be addressed. Instead of focusing on what’s wrong, System-optimization focuses rather on what’s possible, hence providing the organization with a good Strategic Fit.

### Domain Leveling-Up

As a strategic priority, an organization may find it worthwhile to address some undesirable characteristics in one (or more) of its ‘weaker’ trait-domains, to level it up to match the others. This is particularly important in an environment whereby it does not suffice to be excellent in one area only, but to be equally proficient in all, in order to thrive in a competitive environment, or to provide a suitable and commendable level of service to the community at large. For example, a *Fire & Rescue Service*, with a good response time (Availability), but lacking some essential resources (Capability), is inefficient and unreliable in emergency situations. Such a blatant weakness was observed in January 2024, when Mauritius was hit by a cyclone. Emergency Responders were short of basic, but essential, tools to rescue trapped drivers and pedestrians in flooded zones.

To address such level-imbalance among trait-domains, a Leveling-up process is being particularly advised in this paper. DSH can help reveal some high-leverage intervention-points for Leveling-up. The process forms part of the Problem-solving mode of SOSI®. The fundamental features of this mode are:

- Formulate the problem (solution is highly dependent on problem-framing)
- Search for, Establish & Confirm (S-E-C) the fundamental causes of problem symptoms (causes & effects are not related in time & space)
- Determine the dimensions of the problem (use the *Problem-classification Chart*)
- Use fitting methods to ‘solve’ the problem (situation-dependent methods)

Bearing in mind that results may take time to appear, that desired changes in mindset and attitude, for example, can meet with more resistance, and also the need to be ready to address emergence of new behaviors, the Leveling-up process (or *DNA Re-engineering*) runs as follows for the weaknesses identified in a particular domain:

1. Identify the specific weaknesses (the *Ugly*) within that weaker trait-domain.
2. Carry out the intervention as per the Problem-solving Mode procedure.
3. Go through the A-P-I-M Cycle for continued leveling-up.

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As a case-example, I had the opportunity to level-up the Availability-domain of a large sweater-manufacturing enterprise. Both its Sales and Production teams were good in their own respect (Capability-wise), but vis-à-vis its external (buying) customers, the responsiveness of the enterprise was quite poor – external queries were frequently attended to with delays or with wrong information. The root-cause of the problem was found to be the silo-type functioning of these two departments, causing a break-down in proper information flow between them, within a culture of *superiority of function*. Using Checkland's *Soft-System Methodology* (2025, pp. 61-63) during Team-Building sessions, the problem was solved. People in both departments started interacting with a true team spirit and trust, since they had now understood each other's constraints and requirements, and became reciprocally supportive. Eventually, the external customers were satisfied to have timely and reliable responses from the enterprise, and became more understanding and collaborative.

### Purposeful Strategy

A variety of factual and perceived issues (pertaining to environment, product, value, market, price, service, quality, competencies, operations, machines, people, technology, costs, etc.) can be addressed during System-optimization without having to compromise on any. Moreover, for an organization in a competitive environment, it is not just a matter of being better at what it does, but being different at what it proposes and does, thus creating its unique selling proposition, which is related to the organization's DNA to a great extent. Soft-optimization is known to provide good balance, in terms of consistency and coherence, between Strategic Positioning (SP) & Operational Effectiveness (OE), and the resulting Strategic Fit (SF) can effectively lock out competition – it becomes difficult for competitors to match everything an organization does, or is perceived to be doing, well (2025, pp. 10, 30-31). The organization thus churns out what I call a Sustainable-Value Differential-Output – its SVDO (2025, p. 35), which is a far better proposition than just a quality or branded product and service, since it features its Value, Capability, Availability and Flexibility with a good SF.

Nowadays, it is also rightly argued that interventions copied from elsewhere, can do more harm than good to an organization, if measures such as Benchmarking, Best Practices, and Ready-made Solutions, are copy-pasted, without considering the specificity of the organization (its DNA & SF). Conversely, the organization can reach its ideal (future) state with System-optimization. I summarize below the System-optimization procedure in SOSI®.

- Determine the major issues in the V-C-A-F domains
- With DSH, determine the dimensions of these issues
- Choose fitting systemic methods (multi/mix-methods)
- Coordinate the phased-intervention & monitor progress
- Anticipate & address unintended consequences and risks
- Reflect on achievements & go through A-P-I-M Cycle again

System-optimization can thus be conveniently used as a strategy stemming from the Corporate (M-A-S-T-E-R) Purpose; I call this a *Purposeful Strategy* toward the creation of the organization's own future, one in which it would be difficult for competitors to match. But this is beyond just imagining its future; the organization has to resolve to creating it, collectively. To do so, an organization cannot rely on ways which are not adapted for this. In addition, it must be able to unlearn the inappropriate behaviors, tactics, and customary popular or appeasing responses, to events. For these reasons, SOSI® opts for a three-tier approach to ensure the organization's development and sustainable growth (present & future) in a complex

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environment (non-linear, unpredictable, evolving, uncertain, volatile, turbulent). Accordingly, a *Purposeful Strategy* is about:

1. Managing its Present: Level-up; Resilience; Manage Complexities.
2. Addressing Emerging Trends, Uncertainties, Risks: Preparedness; Anti-fragility.
3. Shaping its Future: Strategic Foresight; Back-casting; Create Pathways.

First of all, the organization must, if necessary, level-up its trait-domains such that V-C-A-F are all, more or less, on the same level of proficiency. As mentioned earlier, it does not suffice for an organization to excel in one area only. The nature of competition is such that it can be addressed with determination and assurance – in order to compete sustainably and competitively for the future, an organization must be able to do well in practically all areas (e.g., production, service, technical, marketing, sourcing, development). In parallel, it must be able to address and tackle its constraining and complex issues effectively (viz. Problem-solving & System-optimization in SOSI®).

In focused group discussions and reflections with foresight, and using Ackoff's *Interactive Planning* (IP) method for example (2025, pp. 59-60), an organization should be able to adapt its strategies to anticipated and emerging trends, risks and uncertainties, on a continual basis. In this manner, it enhances its preparedness, and hence its anti-fragility, against future-anticipated problems and risks. With *Ends, Means* and *Resource* Planning stages in IP, multiple Pathways can purposefully be co-created, evaluated, initiated, adjusted and adopted, by back-casting (planning backwards in stages) from the desired *Ends*, under different provisos. An organization can thus shape its desired future, in stages, in line with its M-A-S-T-E-R Purpose.

### Pathways, not Roadmaps!

Foresight is like mentally projecting the organization into a desired future (say, 5-10 years from its present) in which it would thrive. But without a purposeful and systemic approach to get there, this vision would be nothing more than wishful-thinking. Strategic foresight is needed. Fittingly, foresight within the Purposeful Strategy is about transforming the organization to reach new heights. Such strategic foresight includes the creation of previously unimaginable possibilities and adaptable ways, in a chosen direction. Concretely, this involves conceptualizing what should its Value to the community and to society be then – what would their evolving needs be, what Capabilities would it require to achieve these, how Available should it be to its community (people, customers), and with what Flexibility should it operate. This start with an assessment of the organization's DNA, its current situation, emerging trends, anticipated threats and opportunities, known evolutionary changes, and other considerations (at both the national & international scenes). Pathways are adaptable not only to these, but also to unknown unknowns that can crop up during the journey to the desired future.

The direction of travel toward the organization's future (its sought SP, V-C-A-F levels & DNA, and relationships within the Eco-system) is set in accordance with its M-A-S-T-E-R Purpose. From this sought-future, the organization can plan backward in stages (back-casting), and strategize on how to possibly achieve these new levels of V-C-A-F in support of its journey, keeping in mind the probable disruptions, uncertainties, and risks, and providing for further adjustments along the way. Accordingly, feasible Pathways are co-created (worked-out, evaluated, proposed, and preferred). Necessary and purposeful adjustments in the shaping process can be brought about periodically, with regular monitoring of the rapidly changing and emerging situations, and with better insights as time evolves. Thus, the Means-Planning and Resources-Planning of the IP process can be updated. Along a particular path, Snowden's *Cynefin Framework* (2007) can be useful in addressing complex and chaotic situations, to make a punctual decision

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whenever the need arises. For example, in a complex situation like whether to adopt a fast-emerging technology, the organization can *Probe, Sense and Respond*, while in a chaotic one like an unexpectedly severe disruption (a natural catastrophe), it can *Act, Sense and Respond*. Pathways thus allow for uncertainties, disruptions and risks to be addressed, with fairly good level of confidence and resolve, before or as they occur, and quickly in an accelerated chaos. Pathways are continually revisited and fashioned with each iteration through the A-P-I-M Cycle, while maintaining the set direction. Thus, Pathways unfold as they are trekked, allowing the organization to stay in control of its general course toward the sought-future.

Unlike a Roadmap, which assumes a pre-determined state (a predictable future) that can be reached in a systematic way, Pathways are adaptable systemic ways to move ahead in a chosen direction – they can and should be adjusted in relation to the influential (on-going, anticipated, unexpected) developments in society, in the environment, in legislation, in technology, in information transmission, and to other changes too. For comparison-sake, one may think of a Roadmap as a finalized route to reach a destination (or some stated goals), irrespective of initially unknown obstacles and accelerated changes along the way, and Pathways as a journey to the sought-future (with a direction, not goals); a journey in which the trails are continually assessed and chosen as the terrain unfolds.

It should also be noted that Pathways are not Scenario Planning as in Futuring. The latter is more about assuming various possible futures, and planning (forward) accordingly. Hence, in Scenario Planning, an organization does not create its own future, but rather prepares itself for the different eventualities, often with linear projections, forecasting or simulation, which may involve some degree of confidence based on past records, events, developing trends, and scanning of the horizon. But the future cannot be assumed to be a continuation of the past anymore, even with probabilistic considerations. This is why, rather than Scenario Planning and Roadmaps, the co-creation of Pathways driven by a resolute Systemic Leadership, especially in an environment of accelerated change, is strongly called for.

### Scaling-Up

A country measures its progression mainly in terms of its annual GDP-growth, but it would be unwise to believe that a model predominantly based on this can warrant a sustainable future for the well-being of its whole population. On the contrary, this model has aggravated societal and other issues to unprecedented complexities. In an increasingly complex, well-informed and demanding society, it is reasonably proper to aspire for more meaningful societal, environmental, sectoral and economic advancement criterions. Yet, public institutions, with their traditional structures and approaches to policy and decision-making, are lagging behind to adapt, innovate, and produce the necessary transformations in response to such aspirations, and accordingly, the government is unable to address complexity and its challenges effectively. Often, measures taken are reductionist, decisions are made on ad-hoc basis, and policies do not produce sustainable results as anticipated. Lacking inclusiveness and inter-sectoral coherence, the national approach is generally far from being efficacious, for the greater good of current and future generations.

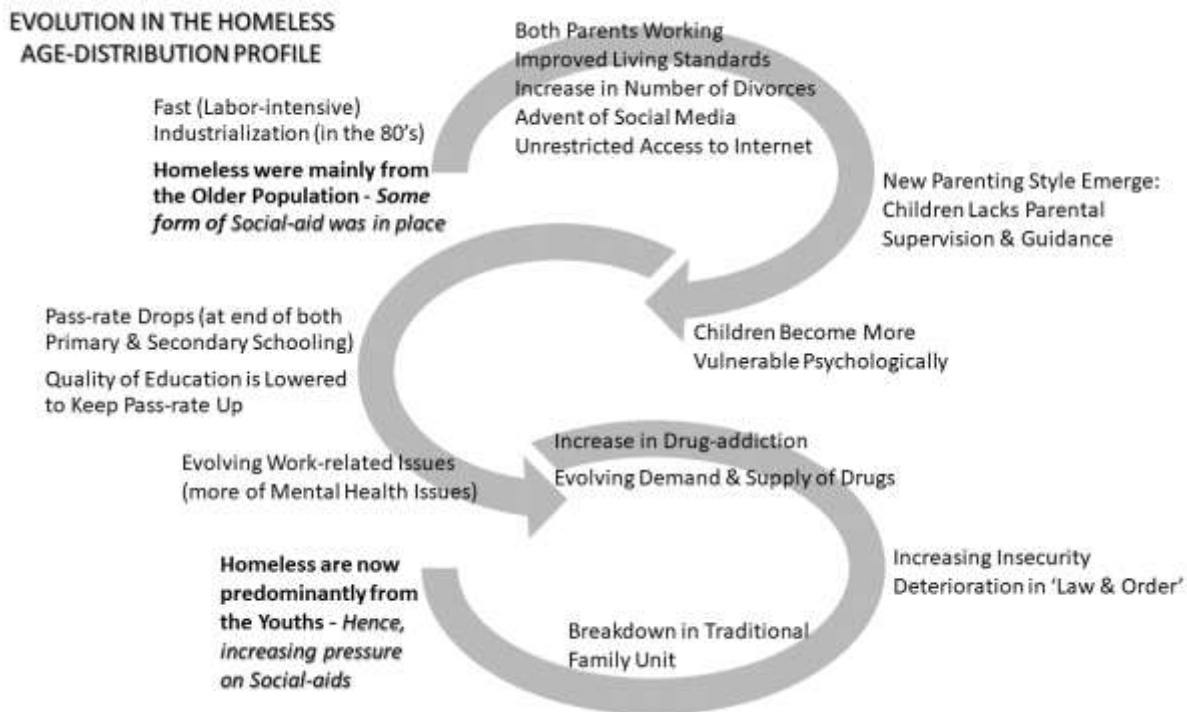
To illustrate, let me refer to a wicked problem in Mauritius: Poverty. For the most part, measures such as providing direct social aids within a welfare program, have been deployed to try reduce the level of Poverty, both in absolute terms and as a percentage of total population. The root-causes are still assumed to be financial and economic mainly. While this might have been the case a couple of decades back (in a situation of high unemployment, relative under-development of the country, and limited trade and access), the situation has greatly evolved since. With one of the highest per-capita income in Africa, a situation of near full-employment and unlimited access to almost everything, Mauritius today relies a lot on imported labor (highly qualified, skilled, and semi-skilled) in many sectors. Meanwhile, the drug-addiction problem is

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getting out of hand, cost-of-living is sky-rocketing, country-wide insecurity is on the rise, and the number of fatal and serious road-accidents remains worryingly high year after year.

One of the components of Poverty in Mauritius is the issue of homelessness. According to a field-expert I was listening to recently, the reasons behind homelessness are quite a few. The *Homeless-Age-Distribution* profile used to be very skewed towards the upper age-groups (above 50 years), but nowadays, it is noted that young people (below 30 years) dominate this profile. The field-expert explained that it has to do with the country's (fast) industrialization and development, and the consequent adaptive changes in parenting patterns when both parents are in full-time employment. This in turn has contributed to drug-addiction and other problems in the country. The nature of work-related issues has also evolved. Based on the explanations of the field-expert, I have tried to make explicit the non-linear relationships and causes, in the evolution of the age-profile of the homeless – cf. the triple-loop causal diagram hereafter, which also exposes the effect on social-aids in the national welfare program.

**Exhibit 2.** Illustrating the Non-Linear Relationships & Causes in the Evolution of the Homeless Profile.



The flawed-strategy to tackle Poverty in Mauritius has been to consider it as a linear problem, complicated at best. It would have been more considerate to recognize it as a mess, so entangled is it with other social and economic wicked problems (such as homelessness) that have all been fast evolving over the past forty years. With a strategy that is obviously not working to curb the trend, Poverty can only deteriorate further in Mauritius. The *Riding a Dead Horse Strategy* metaphor – a Native American proverb saying that when the rider realizes that the horse is dead, the best strategy is to dismount – is quite appropriate here. It would be a first big step if government realizes that it is riding a dead horse as far as tackling Poverty and the other societal issues are concerned; from there, it must have a national strategy to address Poverty, and by

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extension, homelessness, in an integrated manner. Poverty is a multi-level complex establishment that should be treated as such. It is worth noting here that DSH provides a framework to effectively address multi-level complex issues (2025, pp. 82-85).

The country can and should create the future its population aspires to, a future which is more inclusive, sustainable, equitable, safer, and happier. By purposefully shaping its destiny in ways that will primarily enhance the value, viability and leadership of its government (including local-governments) to improve country-wide safety and security, effectively handle a growing drug-addiction scourge, reduce inequalities and poverty, eliminate marginalization and discrimination, and tackle the high cost-of-living (I see all these as messes, so entangled, adaptive, and growing in complexity are they), a country can instate fairer and more profound criterions related to societal and environmental well-being. Therefore, to start with, the country must assess its current levels of V-C-A-F (across all sectors), improve the resilience of its productive economic and financial sectors, and buildup their anti-fragility, while addressing (national and international) uncertainties, risks, turbulences, and emerging trends and behaviors. These must be done on a continual basis.

The Purposeful Strategy and Domain Leveling-up frameworks can be scaled-up to public (policy and decision-making) institutions for the creation of sectoral Pathways to the future. After assessing the V-C-A-F levels of all its economic, social and environmental sectors, the country can then level them up as necessary. Thereafter, each sector must create its own Pathways, with strategies that emanate from an overarching purpose (a M-A-S-T-E-R Purpose for the country). For coherence, it is crucial that all sectors adhere to this national purpose so that their Pathways converge. An unflinching systemic focus on the fair needs, inclusiveness and well-being of the individual, the population, and society in general, within a balanced and sustainable economic growth, can provide public policy and decision-making bodies the essential purpose in designing next-generation-institutions, transform the way in which society is organized (e.g., healthcare, education, banking, manufacturing, agriculture, urbanization, commuting, safety & security, energy-sourcing & consumption, nature & biodiversity), and create a future the present generations will not be blamed for.

## Conclusion

The transformation of an organization into its sought-future state is not only achievable, but a requirement for its survival, development, and sustainable growth, in an increasingly disrupted, complex and competitive world. I have been advocating the need to rethink organizations ever since witnessing the severe disruptions at national and global levels during the Covid-19 pandemic:

*the road has stopped and the future is no more a continuation of the past... this discontinuity may even be part of a series of discontinuities still to come... leaders [have] to think their Organizations differently... [and] must decide whether they want to continue managing the present or to create their own future, whether to continue responding to the events when they happen or to take charge of their future by learning to live with chaos and uncertainties, by learning to think beyond uncertainty and by learning to generate order out of chaos!... how does [the Organization] constantly reposition itself against the future? (2020).*

In such a disrupted world, the *Sustainable Operating System Initiative*® provides an organization, in any sphere, with a transdisciplinary and pragmatic methodology to strategically manage its complex issues, re-engineer its DNA, level-up its Value, Capability, Availability and Flexibility trait-domains, and create

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flexible Pathways to its desired future, with a Purposeful Strategy, supported by the *Dimensions Surfacing Heuristics* and systemic methods to explore and optimize its whole system of interest. A co-creative transformation process can greatly contribute to further motivate the individuals within the organization, by empowering them in a continual learning environment, and by giving them a high sense of purpose and a coherent direction toward the better future they collectively seek.

Strategy without a M-A-S-T-E-R Purpose is worth little in ensuring the future of the organization in a rapidly changing and an increasingly complex environment. Unfortunately, conventional corporate exercises, like forecasting, budgeting and planning, still assume linear, quite predictable, deterministic, and unambiguous tomorrows in general. They often contradict, and usually conspire to prevent, the organization stretching to what is desirable, well beyond what is currently feasible. One of the numerous and grave dangers in times of frequent disruptions and turbulence is to act with yesterday's logic. But the chaos caused by disruptions and turbulence can also be opportunities for creative thinking and innovations, to achieve new heights. The Purposeful Strategy, informed by the SOSI® Methodology, is a systemic way for organizations to tap into such opportunities, to become anti-fragile, and in parallel, to continually create the Pathways that would take them into their sought-future, despite uncertainties and risks, known and unknown. It is a co-creation process that shapes and secures the organization's future. Hence, Systemic Leadership is more than ever essential to face today's challenges, and build tomorrow's organization in parallel.

A country too, has to constantly imagine and implement purposeful ways to build a thriving society, in harmony with its Eco-system, for the benefit of its present and future generations. In order to drive such transformations, all productive sectors of its economy (both private and public), and all structured mechanisms of its society, should be able to embrace a comprehensive and coordinated approach. Their leaders should have the ability and competence to See and Understand, Manage and Optimize Systems. They should be able to put into practice the well-informed ideas which are generated by the involved for the concerned, in sustainable ways that will bring about the desired changes effectively. This paper, which extends on the soft system-optimization concept developed in my book (2025) aims to help willing organizations, including government, achieve these methodologically, for their greater good. We owe this to ourselves, to our children, and to our grandchildren.

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