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Concept Paper

Achieving Organisational Alignment, Safety and Sustainable Performance in Organisations

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Abstract: When looking at socio-technical systems from a systems thinking and systemic perspective, it becomes clear that mental models govern the behaviours and determine the achievements of socio-technical systems. This is also the case for individuals, being systems themselves and, as such, being elements of those socio-technical systems. Individual behaviours result from individual perceptions (mental models). These individual behaviours ideally generate the desired outcomes of a system (team/organisation/society) and create value. However, at the same time, mental models and the associated individual behaviour also bring about unwanted consequences, destroying or diminishing value. Therefore, to achieve safety and to attain sustainable safe performance, understanding and managing mental models in organisations is of paramount importance. Consequently, in organisations and society, one needs to generate the required mental models that create successes and, at the same time, to avoid or eliminate damaging perceptions and ideas in order to protect the created value. Generating and managing mental models involves leadership; leadership skills; and the ability to develop a shared vision, mission and ambition, as this helps determine what is valuable and allows for aligning individual mental models with those that preferably govern the system. In doing so, it is possible to create well-aligned corporate cultures that create and protect value and that generate sustainable safe performance. To achieve this aim, a systemic organisational culture alignment model is proposed. The model is based on the model of logical levels of awareness according to Dilts (1990), Argyris's ladder of inference (1982) and the organisational alignment model proposed by Tosti (1996). Furthermore, ISO 31000 (2009, 2018) and its guidance are proposed as a practical tool to accomplish this alignment and sustainable safe performance in organisations. Altogether, these elements define Total Respect Management as a concept, mental model and methodology.

Keywords: sustainability; safety; risk; performance; systems thinking; mental models; ISO 31000; leadership; alignment; Total Respect Management



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1. Introduction

1.1. Context

This concept paper is the third article in a row, with each step building further on a concept on achieving safety and performance in organisations proactively. These articles have been written in a way that they can stand alone. However, together, they form a concept answering three questions from the same coherent perspective on risk, safety and performance:

- How can risk, safety and performance be understood?
- How can risk, safety and performance be regarded from a systemic perspective?
- How can safety and performance be achieved proactively?

Together, the answers presented in these articles provide the perspectives and the mental models that help proactively achieve safety and performance in organisations.

As such, these articles contain the building blocks of a concept, an approach, we have named “Total Respect Management”. It is a systemic and integrated methodology useful in leading and managing any organisation in a volatile, uncertain, complex and ambiguous environment. This third article ties everything together and provides a brief view on what Total Respect Management entails.

1.2. A Systemic Perspective and Integrated Solution

In our article “Safety Science, a Systems Thinking Perspective: From Events to Mental Models and Sustainable Safety”(2020), we concluded the following:

“In our ever more complex and connected world, the safety of systems depends on the interactions and performance of the much smaller sub-systems. A proactive way to reach safety of systems is therefore to focus on the performance of the sub-systems at ever deeper levels of detail within the concerned system. It would therefore be interesting to study how mental models and these smaller subsystems relate and how they affect risk, safety and performance in the concerned socio-technical systems. Discovering appropriate empowering mental models, as well as finding relevant harmful mental models, would then allow to work with and develop mental models that generate safety and eliminate unwanted events. This should be made possible at an individual, corporate and societal level, to create an environment where people can be safe in any aspect of life.

To be able to do so, it is of the utmost importance to organise and structure dialogue to create and disseminate the corresponding mental models that generate and allow for this dedicated focus and attention to detail (the role of leadership). At the same time, it is important to discover how the sub-systems interact and create value or produce unwanted events that can be avoided (the role of risk management). Hence, it is necessary to simultaneously consider risk, safety (including security) and performance of even the smallest sub-systems and aim to reduce the number of failed objectives by continuous improvement, creating and maintaining safety in a sustainable way (the role of excellence)” [1].

In this third concept paper, we consider the different aspects of this conclusion, reflect on the role of mental models and establish ways to work with them.

- What are the challenges and the possible solutions when working with mental models?
- What about the mental models related to risk, safety and performance?
- How can safety and excellent performance in organisations be achieved?

To build further on our conclusions, we look at concepts such as “leadership” and “alignment” to propose our own “Dynamic Cultural Alignment” and “Dynamic Organisational Alignment” models. Subsequently, we elaborate on how this model can be used as an instrument to create an aligned organisational culture, focussing on risk, safety and performance and working by means of dialogue, attention to detail, continuous learning and dedicated improvement, using the guidance contained in ISO 31000 as a practical tool.

1.3. Practical Approach of This Paper

First, we make clear how safety and performance can (and should) be understood in this context of organisational alignment, safety and performance and why leadership skills are of paramount importance.

Next, we expound upon the role of leadership in establishing alignment through determining and developing mental models in organisations, focussed on objectives and their achievement, and subsequently, we illuminate how the alignment of these mental models can be envisioned.

Finally, we explain how ISO 31000 [2,3] can be used as a tool in aligning mental models and in structuring dialogue in organisations, how this increases one’s quality of perception for better decision making and how this leads to continuous improvement. As such, ISO 31000 serves as a tool in achieving the desired alignment, the required focus and dedicated

attention to detail, delivering the continuous improvement needed to reach safety and excellent performance proactively.

2. The Importance of Mental Models in Achieving Safety and Performance in Socio-Technical Systems

2.1. Systems, Mental Models and Levels of Perspective

Meadows described a system as a set of things—people, cells, molecules, etc.—interconnected in such way that they produce their own pattern of behaviour over time. She also stated that a system can be buffeted, constricted, triggered or driven by outside forces. However, the system's response to these forces is characteristic of itself, and that response is seldom simple in the real world [4].

The consequence of this statement is that different systems—and certainly socio-technical systems—react differently to similar events, causing different results. When these results are “unwanted”, the best solution is not necessarily reactively putting barriers around the events to contain them but rather changing the system in a proactive way so that it produces different, “wanted” results instead of the “unwanted” outcomes.

Kim [5] states that systemic structures generate patterns and events (Figure 1) but are very difficult to see.

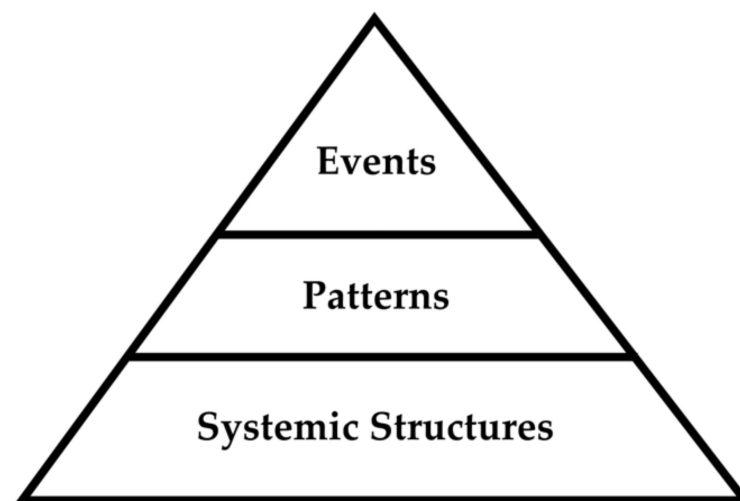


Figure 1. Systemic structures [5].

Kim also declared that a richer insight into systems can be gained by adding two more levels of perspective: mental models and vision. According to Kim, mental models are the beliefs and assumptions one holds about how the world works and, as such, they are the systemic structure generators. Vision, in his view, is seen as the picture of what one wants for the future and it is the guiding force that determines the mental models one holds as important when pursuing goals. He proclaimed that the levels of perspective framework (Figure 2) can help go beyond responding only to events and can begin looking for actions with a higher leverage and that each level offers a distinctive mode of action.

The most basic mode of action is “reactive” to counter events. More leverage is obtained when discovering patterns and when “adapting” to accommodate what is happening. A higher action mode is to act on the level of the “systemic structures”, for instance by redesign, reorganisation, reengineering, etc., and to be “creative” in doing so. However, successfully altering systemic structures often requires a higher leverage action mode and a change in mental imagination of what the new structures ought to be and what is to be changed. Therefore, the action mode becomes “reflective”, questioning one’s assumptions and building new mental models. According to Kim, the highest leverage is achieved on the level of “vision”.

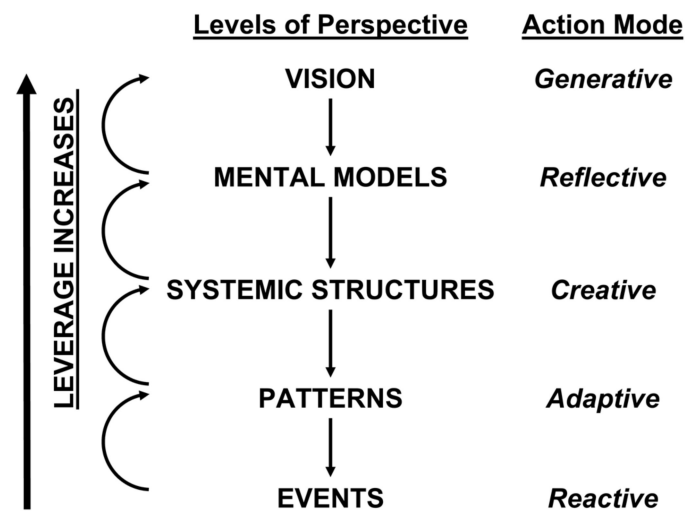


Figure 2. Levels of perspective [5].

However, changing mental models is a difficult and painful process, as mental models are the results of many years of experience and are difficult to alter. However, at the level of “vision”, new ideas can be envisioned, and the action mode becomes generative, bringing about matters that did not exist before.

According to Jones et al. [6], people’s ability to see and represent the world accurately is limited and unique to each individual. Therefore, mental models are incomplete and inconsistent images and interpretations that are context dependent. These mental models can change corresponding to specific situations at hand, adapting to continually changing circumstances and evolving through learning over time.

Although it is clear that a higher level of perspective offers the possibility of higher leverage, Kim [5] also indicates that not every issue needs a higher level of perspective to obtain a high leverage. There is the possibility of high leverage at every level of perspective, as this depends entirely on the issue at hand. For example, when a fire breaks out, it is best first to react very quickly to this event and to only seek higher levels of perspective and be more proactive in preventing fires breaking out afterwards.

Senge [7,8] stated the following: “the problems with mental models lie not in whether they are right or wrong. By definition, all models are simplifications. The problems with mental models arise when they become implicit, when they exist below the level of awareness and remain unexamined. Deeply entrenched mental models can impede learning and can overwhelm even the best systemic insights.” Nevertheless, bringing mental models to the surface and challenge them opens up opportunities and can accelerate learning.

2.2. Mental Models of Risk and Safety

How one perceives the concepts “risk” and “safety” can also be based on deeply entrenched mental models that possibly impede learning. For example, for some people, these concepts are considered antonyms, while others in past decennia have expanded their view on this matter.

Since the end of the previous century, these conceptions have seen an evolution in the ways we look at them, for example, as expressed in the ideas by Möller et al. [9], stating that safety is more than the antonym of risk, or by Slovic and Peters [10], who point out the importance of individual perceptions when dealing with risk. Furthermore, there are concepts such as Safety-I and Safety-II [11], where Hollnagel indicated that things going right is the larger part of safety but that this is rarely considered. In recent years, many scholars have approached these subjects from different angles, not necessarily coming to similar conclusions. More particularly, the introduction of a new (standardised) definition of risk a decade ago in the ISO 31000 standard has caused a lot of turmoil and discussion,

dividing the world of risk specialists into believers and opposing non-believers that seem to dismiss this newer and broader definition of risk.

ISO 31000 defines risk as the “effect” of “uncertainty” on “objectives”. According to the ISO, an effect is a deviation from “the expected” and uncertainty is a state of (even partial) deficiency of information related to the understanding or knowledge of an event, its consequences or its likelihood. However, the ISO does not define the term “objectives”, and this is problematic, as this definition is only valid when the concept “objectives” is understood in its most encompassing sense. However, when one understands “objectives” being anything of value, anything a (sub)system needs or wants, one could say that this is the shortest and, at the same time, most complete definition of risk possible, as it incorporates all three elements that define risk in a most concise way. Anything added makes the definition more specific and less general and consequently subtracts from its meaning. Risk and “objectives”, “uncertainty” and “effect” can be considered similar to fire, which needs “fuel”, “oxygen” and a certain level of “heat” to exist. When leaving one of these three elements out, there is no risk. When an uncertain effect does not affect any objective, it is simply the probability of an event having likely consequences because no value is attributed to this event. When viewed this way, one can say that the ISO 31000 definition is an expansion of the traditional perspective on risk, including specifically the objectives at risk. Therefore, one could say that the intrinsic and expected value of an objective is now also incorporated in this broader definition, allowing us to include the possibility of both positive and negative effects on objectives, something that is missing in a traditional view on risk. Although one can argue otherwise, there is always room for improvement regarding a specific objective, opening up the positive side of risk.

As such, “the effect of uncertainty on objectives” (risk) is what can be considered the likelihood of an event combined with its likely associated consequences that can either be beneficial or detrimental to an objective or that can even be both at the same time. The question is not which mental model is right or wrong, but foremost what can be learned from a new and expanded mental model regarding the concept risk that mainly focusses on objectives rather than purely on uncertainties.

In his article “The risk game”, Slovic [12] already noticed that traditional approaches to risk assessment and risk management, where risk is viewed as an objective function of probability and adverse consequences of adverse events that can be objectively quantified, was insufficient, arguing for a new approach and highlighting the subjective and value laden nature of risk and its impact on decision making [13]. In his view, risk does not exist “out there”, independent from our minds and cultures, waiting to be measured [14]. He stated that humans invented the concept of risk to help them understand and cope with the uncertainties of life. Indeed, risk is about what humans value and each human values things differently. As such, the ISO definition of risk responds very well to the concerns expressed by Slovic.

For example, take a group of people going for a hike in the mountains. A traditional risk perspective focuses on possible events and, amongst others, evaluates the risk of falling rocks and the likelihood of impacting the group of people with all or some of its possible consequences. For a traditional approach to risk assessment, the risk is the same for every individual in the group, as they are all in the same situation. Traditional approaches do not consider the personal objectives of each member in the group because it is very difficult to know how every individual values their own “health and safety”. However, then, without knowing this value, the considered risk is just the probability of an event, and because the expectation is that rocks should not fall down on a group of people, every outcome is regarded as a negative outcome, as, generally, it is assumed that everyone values their health and physical integrity in the same way. However, arguably, this is not the real risk every individual takes or runs. With a focus on “objectives”, another, more diverse picture presents itself. Maybe there is a person in the group that has no objectives at all, no desires, no goals and no needs. This person could not care less what happens and does not care about life or death or injury. What is the real risk to this person? Maybe there is

a person in the group that has a very imminent death wish because life is not what this person wants? Do these people run the same risk as a person that is looking forward to meeting their loved ones at the end of their journey? The value attached to the objective “life” determines the risk much more than any probability of an adverse event. Without these individual objectives, it is not risk that one deals with but just the probability of an (adverse) outcome that can be valued differently by different people. ISO 31000 defining risk as “the effect of uncertainty on objectives” provides a different, expanded view on the issue. Phrased in another (longer) way, one could also say that risk is that which makes maintaining and achieving one’s objective(s) uncertain because objectives and how they are valued matter in determining what risks are. The effect of uncertainty is about the things that could or could not happen and, as a result, impact one’s objectives. It means that the possible consequences of these rather expected or unexpected events influence the actual outcome of one’s objectives. Therefore, risk, in a sense, is a possible deviation of expected results regarding objectives. Of course, this deviation can be positive, negative or even both, depending on what objectives one considers, which time frame one observes and which value is expected because risk is a complex matter, related to an unknown future, concerning all of one’s objectives. These objectives can be not only conscious and explicit but also unconscious and implied.

For instance, one could consider two people, both playing the lottery. Both invest exactly the same amount of money, for example, EUR or USD 1000. A traditional perspective on risk calculates exactly what the risk is. The probabilities are known, and the value is also a given. However, is this the correct risk for both people, and is it really the same? This is impossible to know without further investigation because one does not know the value that the amount of money represents for that person. One also does not know the objectives that are involved in this situation for both people. What if one of those people is a multi-millionaire, for which EUR 1000 is just a number and of insignificant value. The risk is mostly positive because missing this amount of money does not mean much as no other objective is affected by the outcome of the event, while only winning is significant enough to make a difference. In essence, for this person, the risk is low, as the probability of gain is also very low. However, what would be the case for a person that invested all of their possessions in hopes of winning? Surely, for this person, a lot of his objectives are affected by the outcome of the event, making a huge difference between winning or losing. The risk for this person is mostly negative because the odds are not that good and losing that money can make a huge difference while winning can also make a huge difference, but this is highly unlikely. As such, the risk for this person is high, although the value of the money and the probabilities related to the event and its direct consequences are exactly the same for both people. Nonetheless, the risk for both is entirely different because the number and importance of the objectives that are affected by the end result are distinct. This example makes it clear that risk is, in the first place, about the objectives that can be affected and much less about the uncertainties involved, although both are important.

This approach towards risk and risk management, focused on objectives, is different from the traditional way, focused on uncertainties and probabilities. It requires a different way of assessing and dealing with risk. It is a different mental model concerning risk that also opens up a wider perspective on safety and performance when objectives are at the core of their definitions.

2.3. Looking at Risk Is Looking Proactively at Safety and Performance

How one looks at things is how one perceives reality and determines one’s mental models. As such, one also develops mental models of the concepts “safety” and “performance”.

In 1999, Rochlin stated the following:

“As is the case for risk, safety may also be defined formally or technically in terms of minimizing errors and measurable consequences, but it is more appropriate to adopt the principle used by Slovic in his social studies of risk and note that safety does not exist ‘out

there' independent of our minds and culture, ready to be measured, but as a constructed human concept, more easily judged than defined" [15].

Le Coze stated that

"One of the major challenges in safety science is to develop methodologies and systems that are able to proactively capture and recognise situations and patterns that have the potential to provoke severe accidents. This instead of being obliged to use reactive approaches, such as learning from accident investigations when disasters already occurred" [16].

In systems thinking, it is important to zoom out and to see how elements are linked or related and how they influence each other. It offers insight into what the dynamics are and how a system behaves. It is widely understood that risk and safety are related and that safety and performance are related. When looking at risk, safety and performance from a holistic "objectives" perspective, it becomes clear that risk, safety and performance are concepts dealing with the same thing: objectives.

Concerning the concept risk, this has been made clear by the ISO definition of risk. However, safety is also a concept that is linked to one's objectives. Positive effects of uncertainty on one's objectives are in general considered to improve one's safety (Safety II thinking). Additionally, negative effects of uncertainty on one's objectives are usually judged as being more unsafe (Safety I thinking). Similarly, the resulting value attributed to one's objectives is what characterises one's performance. When the effects of uncertainty and all other actions undertaken to reach, achieve or maintain an objective provide a negative deviation of the expected value of this objective, this is normally considered a bad performance, whereas a positive effect on those objectives is deemed a good performance. Looking at risk, safety and performance in this way and linking this with a time perspective, one could say that the state of one's objectives at a certain time determines one's risk, safety and performance (Figure 3).

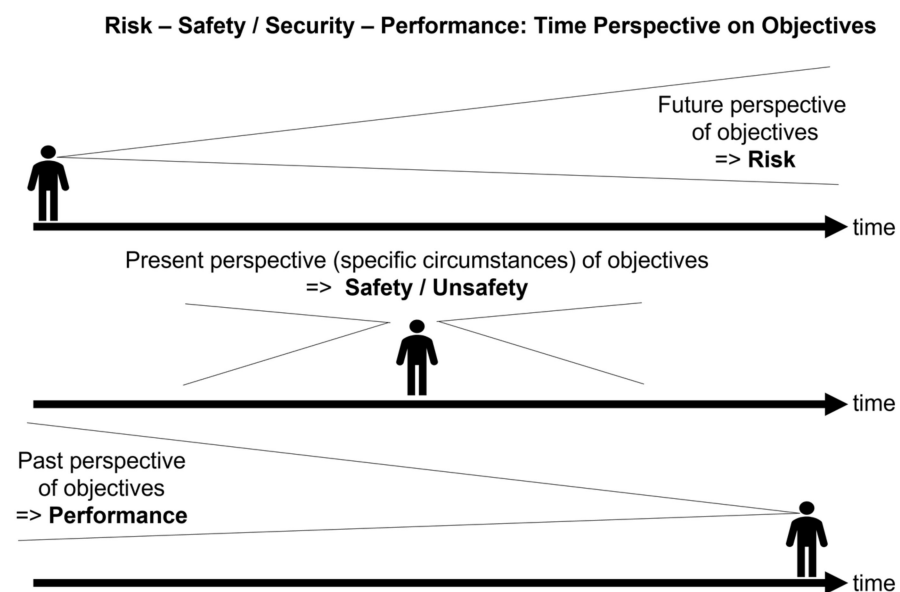


Figure 3. Time perspective on objectives.

The possible (uncertain) effects on objectives seen in the future create and determine one's risk. The possible (uncertain or not) effects on one's actual objectives in the present characterises one's safety. Finally, the actual effects on one's objectives (in the past) defines one's performance. In other words, risk, safety (in its most encompassing sense, including security) and performance are the same thing: the status of the effects on one's objectives. The only difference is the time perspective that these different concepts represent [17].

Risk, safety and performance require a focus on objectives, being clear about what they are, how they can be valued and knowing how they can be managed. The ISO definition

of risk immediately provides which elements need to be considered. First, there are the “objectives” themselves, and only then, there are the “effects” of “uncertainty” that can affect those objectives that can be treated and optimised.

Looking at objectives from different time perspectives to reflect risk, safety and performance and to understand that these concepts are fundamentally the same thing is a fundamental mental model and starting point for this concept paper. Positive effects increase safety and performance, and negative effects decrease safety and performance. However, the future makes these effects always uncertain, corresponding to the effect of uncertainty, whether these effects are perceived or not.

3. The Systemic and Integrated Perspective of the Cynefin Framework

3.1. Five Domains That Define One's Quality of Perception

“Systemic” indicates a holistic view on reality. “Integrated” on the other hand means that various parts or aspects of an approach are linked and coordinated. The Cynefin framework, displayed in Figure 4, is a way to approach reality in both a systemic and an integrated way, delivering a clear view on one's environment in its largest sense (which is the meaning of the Welsh word cynefin) and how to deal with this reality. As such, it offers insight into the methodologies needed to improve or alter the mental models related to one's reality.

In a way, this model describes the different states of one's quality of perception, meaning how well one understands a situation one is in and how well one's mental models coincide with that specific reality. The framework distinguishes between order and disorder and uses these distinctions to match problems and their contexts with methods, tools and techniques that lead to solutions. While organisations seek order, stability and predictability, they also need a level of flexibility, adaptability and innovation to cope with an ever faster changing society and its reality. Cynefin helps in interpreting this reality and offers how to cope with this [18].

The framework divides reality in four specific domains. Each domain relates to the degree of complexity and the understanding of the reality one finds oneself in. The Cynefin framework's value resides in the fact that it prescribes a set of behaviours and practices that are appropriate for a given domain. For example, it provides insight on how to think and act in order to move from complete ignorance (no mental model of the situation) and chaos (very confusing and jumbled mental models) towards the full understanding (clear, sharp and correct mental models) of reality in the simple domain. In essence, applying the steps in different domains, going from chaos towards simplicity, is about learning and adapting one's mental models, which in turn helps increase one's “quality of perception”. One can only perceive the reality one is confronted with, and thinking and acting in accordance with the different domains is appropriate and needed to increase awareness and understanding to achieve higher levels of perception.

3.2. The Importance of Leadership and Leadership Skills in Dealing with Mental Models

Another insight that the Cynefin framework offers is the kind of leadership behaviour fitting the different domains of the framework in order to obtain the best possible results of the actions taken. The model can be understood as follows (Figure 4).

The domains to the left of the model are referred to as being the “unordered” domains (complex and chaos), while the two domains to the right are also referred to as “ordered” (complicated and simple), where a certain order can be established [19].

Each domain is linked to the level of awareness and understanding of reality it represents, ranging from a complete lack of knowledge and understanding in the domain of so-called “chaos” to broad knowledge and understanding in the “simple” domain, after passing the complex and complicated domains, where knowledge and understanding is still lacking and where one still needs to learn. In the simple domain, everything is clear. Cause–effect relationships are fully known and understood. It is where the best practices reside. However, this is only the last phase of a learning process and often impossible to

reach when situations are Volatile, Uncertain, Complex and Ambiguous (VUCA) due to the continuing change that organisations and society face today.

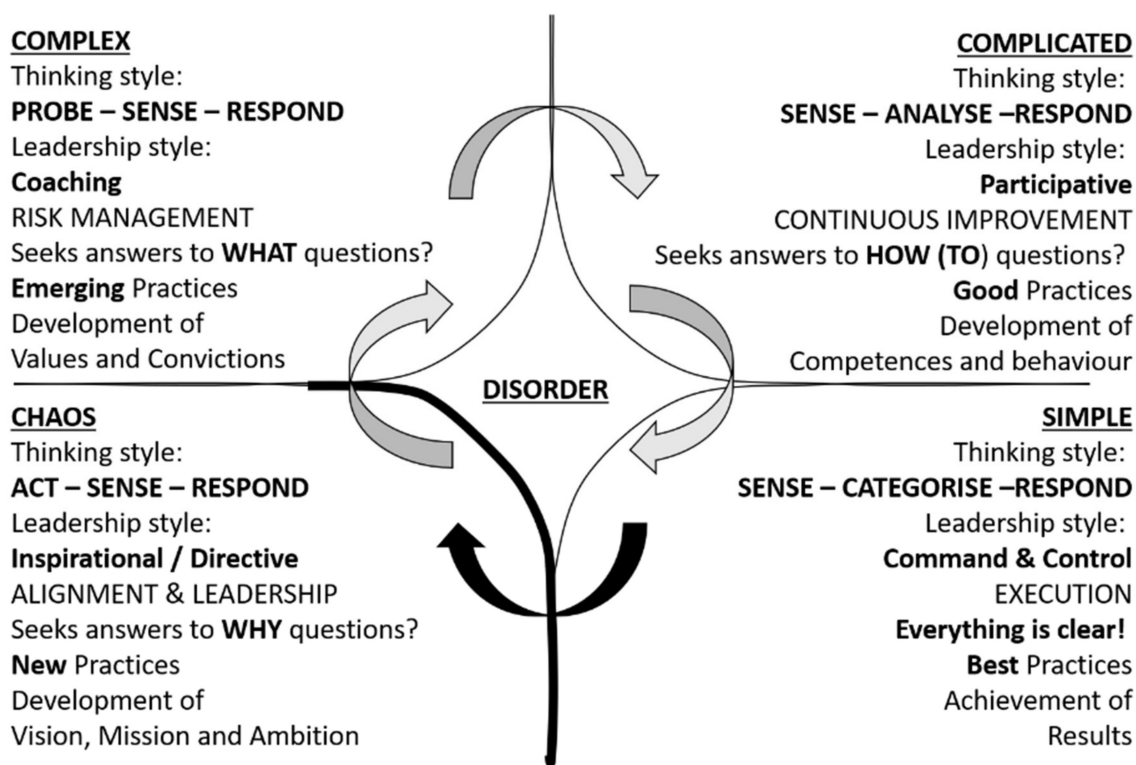


Figure 4. Cynefin framework (inspired by [19]).

When one is unaware of things or unknowledgeable about matters, according to Snowden, one finds oneself in the domain of “chaos”. In this domain, one is unable to establish any cause–effect relationship, not even after events take place. Chaos first requires one to “act” upon events and, then to “sense” what happens and consequently to “respond” with appropriate actions to what occurred. In chaos, charismatic or directive leadership is needed to create a purpose (objective) and a direction to proceed in because, in chaos, one requires clear concepts (vision) and directions (purpose/objectives) in order to create structure and meaning. As soon as clear concepts and direction are established, one has to deal with the complexities that surround these objectives (risk). This requires a different attitude as one creates a form of order in chaos. It allows us to learn things and to move towards the complex domain. Here, one has to deal with the cause–effect relationships that could not be established beforehand, but which can be distinguished and studied afterwards when the effect of uncertainty on objectives turned into a performance that can be observed and investigated. In the complex domain, it is important to “probe” first, then to “sense” and finally to “respond” to what one has sensed. This typically is the domain of risk management, where the effect of uncertainty on objectives can be envisaged and where different scenarios or options can be identified and developed. In the complex domain, leadership is more of the supportive kind (paternal/matriarchal), focused on coaching and development, facilitating the exploration of new ideas, possibilities and innovation. This allows one to develop and move from the complex domain towards the complicated domain, as a sense of order emerges [19].

The right approach in the complex domain establishes order and leads to the “complicated” domain. Here, relationships between cause and effect are still not always very clear, but with some effort, they can be determined and studied before they produce outcomes. Once in the complicated domain, the approach should be “sensed”, “analysed” and “responded to”. Here, one requires less attention in the form of coaching, but gradually, as

one's self-leadership develops, there is a need for support and possibility participation in decision making itself. Therefore, in the complicated domain, a participative leadership style is a most appropriate way to conduct leadership. It is where analysis and evaluation of options and situations provide the possibility to continuously improve. Finally, one arrives at the lowest degree of (perceived) complexity in the "simple" domain. This domain is characterised by the fact that cause-effect relationships are "one on one", easy to discern, known and understood. In the simple domain, the appropriate way to approach situations is to "sense", "categorise" and "respond". Therefore, in the simple domain, command and control are appropriate. Simple concepts neither allow for much room for interpretation nor provide the freedom the other domains offer [19].

A fifth domain, named "disorder", is meant for moments and situations where one cannot clearly determine in which of the four domains one resides [19].

The different reasoning-in-action strategies summarised above underscore the capacity to continuously sense or monitor reality. In the ordered domains, this involves monitoring and feedback of fact-based-information, allowing for continuous improvement. In the unordered domains, this requires the capability to gather information and to discover events and patterns early enough so that a response to these new perceptions can be set up and attempted. Ideally, organisations discern these patterns while they are still small and emerging [20,21].

It needs to be stressed that the different domains relate to how well one knows and understands the matters one is dealing with. It is obvious that the more "VUCA" matters are, the more they are complex or even chaotic. However, even when matters are simple for one person, they can still be chaotic or complex for people with a lesser quality of perception regarding those matters. What is "simple" for specialists can be very "complex" for laymen. In Table 1, the insights the model offers are summarised.

Table 1. Cynefin domains and their features.

Action in the Different Domains and Their Features				
	Chaos	Complex	Complicated	Simple
Cause-effect relationship	No idea about it		Established beforehand,	
Thinking style	Act-Sense-Respond	Only established afterwards	after analysis	Easily established beforehand
Leadership style	Inspirational or Directive	Probe-Sense-Respond	Sense-Analyse-Respond	Sense-Categorise-Respond
Practices	New	Coaching	Participative Good	Command & Control Best
Logical levels development	Vision-Mission-Ambition	Emerging	Competences & Behaviour	Environment-Context
Main concern	Alignment & Leadership	Values & Convictions Risk & Management	Continuous Improvement	Execution & Results

As mentioned earlier, learning and development dictate one's state of mind and the domain one is in, which is related to a situation one is in. The model also shows that leaders play an important role in the process of learning and increasing one's quality of perception because leaders help people develop and improve their quality of perception using appropriate methods of reasoning and adopting the corresponding leadership styles for the people they lead, taking into account the domain these people find themselves in. Adequately adopting these different leadership styles requires a variety of leadership skills, ranging from developing a vision to which everyone can relate to a wide range of communication skills in dealing with the different levels of the quality of perception that exists in organisations.

In his article "What leaders really do" Kotter stated the following: "Leadership and management are two distinctive and complementary systems of action. Each has its own function and characteristic activities. Both are necessary for success in an increasingly complex and volatile (business) environment. Leading an organisation to constructive

change begins by setting a direction—developing a vision of the future (often the distant future) along with strategies for producing the changes needed to achieve that vision” [22].

To put it clearly, “Leadership is creating a world to which people want to belong”. This quote by Gilles Pajou indicates what leadership really is about, which is creating an image of the future where people can relate to and for which they are willing to abandon the “world” they are currently in [23].

Another perspective on leadership is offered by Nicholls [24]. He stated that there are three fundamentally different perspectives of leadership. He defined these as Meta, Macro and Micro.

Meta leadership creates a “movement” in a broad general direction (such as clean energy, human rights or glasnost); it links individuals, through the leader’s vision, to the environment. It is the overarching vision that inspires and creates followers.

Macro leadership is the next step and is fulfilled in two ways: pathfinding and culture-building. Pathfinding can be seen as finding the way to the successful future that is envisioned. Culture-building can then be regarded as drawing people into a purposeful organisation, traveling along the chosen path and exploiting the opportunities that arise. Macro leadership influences individuals by linking them to the entity—be it the whole organisation or just a division, department or team—by giving answers to questions such as the following: What is our purpose or goal? What is my part in the story? What is in it for me? What is expected of me? Why should I commit myself and make an effort? In the process, the leader creates committed members of the organisation contributing to the cause.

Micro leadership on the other hand is about the choice of leadership style to create an efficient working atmosphere and to obtain the cooperation necessary in finishing the job by adjusting one’s style to directing people in organisations in the accomplishment of a specific job or task. On a micro level, leadership involves considering one’s individual state and capabilities with respect to the perceptual filters and motivations of one’s collaborators in order to define and achieve specific objectives in a particular environmental context.

One could say that meta leadership is required to allow people to leave the domain of chaos and that macro leadership is necessary to make sense of our VUCA world in the complex domain, but micro leadership is required at each of the perceptual domains that the Cynefin framework offers, related to the quality of perception one has at a specific moment and for the specific task executed to reach the destination that is envisioned.

“If the leadership style is correctly attuned, people perform willingly in an efficient working atmosphere, creating a world to which people want to belong” [24]. It involves a mixture of all three different perspectives on leadership and their associated aptitudes.

4. Organisational Alignment

4.1. The Importance of (Organisational) Alignment

“To have your ducks in a row”, “To put all the wood behind one arrow”, “Getting everyone on the same page”, and “Putting all noses in the same direction”: there are many expressions that indicate what alignment is about and what its purpose is. It is about bundling and streamlining ideas (mental models) and efforts in order to get better results. Thus, organisational alignment is the degree to which an organisation’s design, strategy and culture cooperate to achieve the same desired goals [25]. Organisational alignment is an inward-looking process that is crucial for organisational effectiveness [26]. Studies have revealed that the structural alignment of an organisation depends in part on the extent to which the objectives of the organisation are made clear to employees, as it helps to align their own goals with those of the organisation, facilitating the achievement of these overall goals. Employee enhancement plays a role in this process, as it assists in achieving the objectives by providing opportunities to improve necessary skills of individuals and to improve or clarify knowledge about their individual roles and goals. As a consequence, this allows for autonomy and involvement in decision-making processes, in a group or as individuals. Leadership is also of crucial influence in developing alignment. Leaders

have to make clear that their co-workers operate in accordance with the organisational objectives. Studies have also indicated that leadership is more effective when leaders provide task-oriented guidance, so people know what is expected, and when they also demonstrate interpersonal (social) support and congruent behaviour. This is also true for upper management. When these conditions are met and alignment is achieved, this is most likely to positively influence organisational commitment and organisational satisfaction (the way people feel themselves fit in organisations). The opposite is also true, where a lack of alignment generates discomfort and reduces organisational and job satisfaction [27].

The importance of alignment and, more particularly, of the alignment of visions and objectives becomes even more obvious when one considers what, in general, causes the greatest dangers for society and organisations. Different visions lead to different mental models and, as such, generate different objectives. When these objectives are conflicting, negative effects of uncertainty arise. Terrorism, for example, is a very clear illustration of non-alignment of mental models and conflicting objectives on a societal level because many terrorist objectives are exactly opposite to the societal, organisational, and individual objectives they oppose [28]. Likewise, different visions and objectives between states and unions of states have always triggered conflicts and initiated wars with all their negative effects on individual, organisational and societal aspirations. However, also, within organisations, non-aligned or even conflicting objectives, deliberate or unconscious, are constant factors that generate effects of uncertainty on objectives (risk). They bring about adverse effects, affecting the objectives of the organisation or even society as a whole. In almost every major accident or disaster in organisations or society, non-alignment of objectives (conscious and deliberate, or unintentional and unaware) can be discovered as contributing factors. Therefore, it is of the utmost importance to align individual mental models in organisations, especially regarding vision, missions and ambitions with those of the organisation, as a first step in managing the effects of uncertainty on objectives in organisations because non-alignment of mental models and objectives is a major risk source that can and should be managed most prominently.

4.2. The Logical Levels of Awareness and Leadership

In *“Applying systems thinking to analyse and learn from events”*, Leveson [29] questions a.o., the mental model that assumes that increasing the reliability of individual system components also increases safety. She stated: *“Safety and reliability are different system properties. One does not imply nor require the other. A system can be reliable and unsafe, or safe and unreliable. In some cases, these two system properties are conflicting, i.e., making the system safer may decrease reliability and enhancing reliability may decrease safety.”* Giving examples of these objectives that sometimes conflict, she also stated that reliability is a component property but that safety is not. According to Leveson, safety is a system property and that, as complexity grows in the systems we operate in, accidents caused by dysfunctional interactions among elements of the system become more likely. As such, safety needs to be managed at a systems level and not at a component level. However, this does not mean that reliability as a component property in achieving safety is unimportant. There are too many examples that show that reliability is a key component property in achieving safety and performance. However, this is the case when the objectives of those key components are aligned with the overarching systems’ objectives. The ideas forwarded by Leveson, in the first place, underscore the importance of a systemic view on organisations before dealing with reliability, with a focus on the different objectives involved, their importance, how they relate and how they can be aligned.

One of the possible hierarchies that can be used to provide a quick judgement of the level of importance of an objective is the concept of the logical levels, attributed to Dilts and Bateson. Dilts [23] defined the logical levels as leadership skills in applying the concept of Bateson [30], who recognised “natural hierarchies of classification” in processes of learning, change and communication. Dilts [31,32] called logical levels “an internal hierarchy in which each level is progressively more psychologically encompassing and impactful” [33].

This means that an impact at a higher “logical level” is perceived as being more important. The scientific problem with the originally proposed logical levels is the fact that the upper levels, as defined by Dilts, are considered “spiritual” [34]. However, it is less of an objection when “spiritual” is replaced by “inspirational”. The inspiration of socio-technical systems lies in their purpose and the vision, mission and ambition that determine the objectives that matter and how they can be valued.

In their article “Organizational change: A critical challenge for team effectiveness”, Goodman and Loh [35] described the logical levels related to change. It provides a good basis on how an objective increases in importance when this concerns higher logical levels. The logical levels, in increasing level of importance, can be described as follows [36]:

- **Environment** is the lowest logical level and refers to what is outside the system: the place and time (where and when) the system pursues its objectives.
- **Behaviour** refers to specific actions: what each system does. This is the outward display of having successfully applied the key expected behaviours for achieving or safeguarding a particular objective.
- **Capabilities** are also referred to as “competencies”. These are the skills, qualities and strategies, that characterise the system. They are how actions of the system are executed. They often need to be defined, taught and practised in order to support the achievement and safeguarding of objectives. This also includes technology and other tools that are used to conduct specific behaviour and to reach specific results.
- **Values and Beliefs (rules):** “Values” are what an individual or team/system holds to be important, so they act as the drivers for what the system does. “Beliefs” are what an individual or team holds to be true and therefore influence what the system does and how it acts.
- **Identity** is how a system sees itself; it consists of the core beliefs and values that define it, and which provide a sense of “what the system is”.
- **Purpose** refers to the larger system of which the system is part. It connects to a wider purpose: “for whom?” or “what else?”

Using Dilts’ model of logical levels to distinguish different levels of importance in objectives therefore provides a powerful tool to determine and assess the impact of an objective on a socio-technical system. As such, the model offers a systemic view on individuals and organisations related to the alignment of objectives. Dilts [23] states the following:

“Any system of activity is a subsystem embedded inside of another system, which is itself a subsystem embedded inside of another system, and so on. This kind of relationship between systems and subsystems naturally produces different levels or hierarchies of processes. The levels of process within a social system or organization correspond closely to the levels of perception and change that we have identified for individuals and groups—i.e., environment, behaviour, capability, beliefs and values, identity and ‘spiritual’. Each level of process involves progressively more of the system. Change in identity, for instance, involves a much more pervasive change (and, consequently, more risk) than a change at a lower level. It is a much simpler issue to change something in the environment or in a specific behaviour than to change values or beliefs.”

Figure 5 illustrates what Dilts declares. At each logical level, objectives can be noticed. The higher the logical level, the more important these objectives are because, the higher the logical level, the more subordinate objectives are involved at lower levels to achieve or maintain this higher level objective. This means that objectives situated at a higher logical level are more valuable.

Additionally, when systems and their objectives are not part or only partially part of the system’s higher logical levels, non-alignment occurs (Figure 5). Most problematic is when this non-alignment turns into a conflict. The higher the level on which this conflict occurs, the more conflicting objectives become involved, creating more negative risks, unsafety and a lack of performance for the concerned system(s).

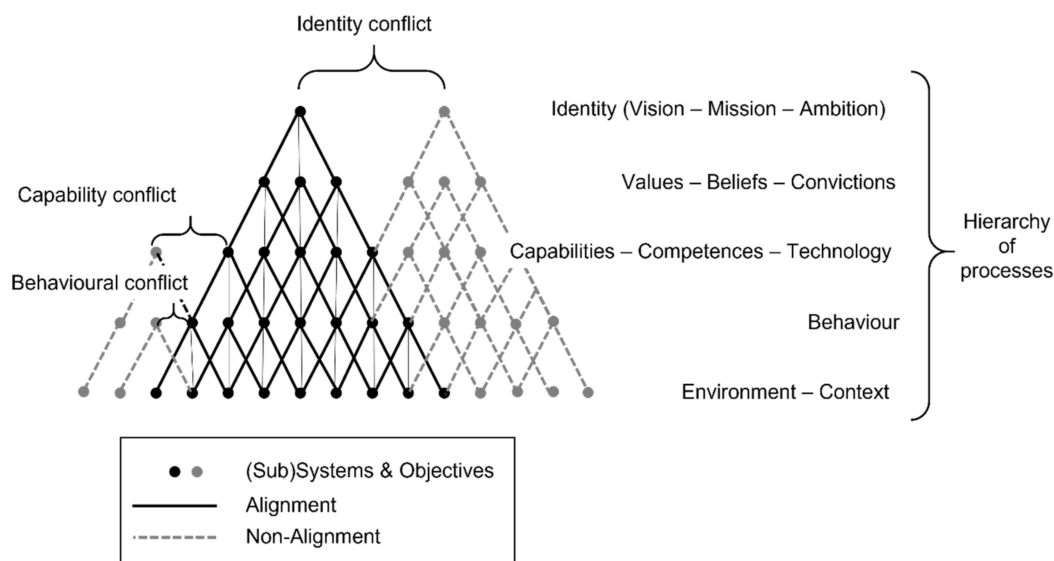


Figure 5. Logical levels—Inspired by Dilts [23].

4.3. A Dynamic Cultural Alignment Model—Flywheel of Alignment

One can also consider the hierarchy of logical levels from a “mental model” perspective and relate it to individuals and organisations. It shows how mental models can determine situations and action. How one looks at reality determines what is important not only to individuals but also to organisations. Purpose comes from a vision that translates into a mission and ambition. To become aware and to build a clear, unified and shared vision of reality therefore become of paramount importance in aligning the logical levels. This is both valid for an individual perspective as well as an organisational view on reality.

Although Dilts considers “Identity” as a separate level, one could also consider “Identity” as being the whole of all logical levels together (Figure 6). People identify themselves by their environment, where they come from (region, nationality, culture, etc.), what they do or the competences they have (e.g., being a painter, a researcher, a taxi driver, etc.). One also identifies people by the values and beliefs they adhere to (religion, politics, nutritional choices, etc.). Additionally, all of these “characteristics”, at different logical levels, shape the filters with which the world is viewed. For individuals, the higher levels of awareness are difficult to become aware of. What exactly one’s purpose is, how this relates to reality and how one views this reality is something one, in general, does not contemplate about. It is why people end up in situations they are not happy about, as the perceived reality of their environment does not fully correspond with these higher levels of awareness, creating a lack of alignment and generating conflicting objectives. By itself, people have different “role identities” related to what one does but one rarely discovers one’s true identity, aligned with the inspiring purpose that energises and fulfils one’s aspirations.

The same is true for organisations. Here, one can say that, instead of “true identity”, one can consider the whole of all logical levels as being the “true culture” of the organisation. The more these levels are aligned, the easier this culture is recognised and the stronger it becomes.

Today, most successful organisations are aware of the importance of common values that are characteristic of the organisation and that need to be respected by its stakeholders. However, although shared values are very important, it is only an alignment at a lower logical level that is pursued. Shared values do not necessarily represent shared ambitions or a shared mission. In general, shared values lack the power of inspiration and should rather be a result than an aim in and of itself. Much more powerful are the shared vision, mission and ambition because, when mental models at this level of awareness are shared and recognised, they become a persistent force and guidance for all members of the

organisation. This force and this guidance boost safety and performance when they are values that are aligned with and have been recognised in the vision of the organisation [37].

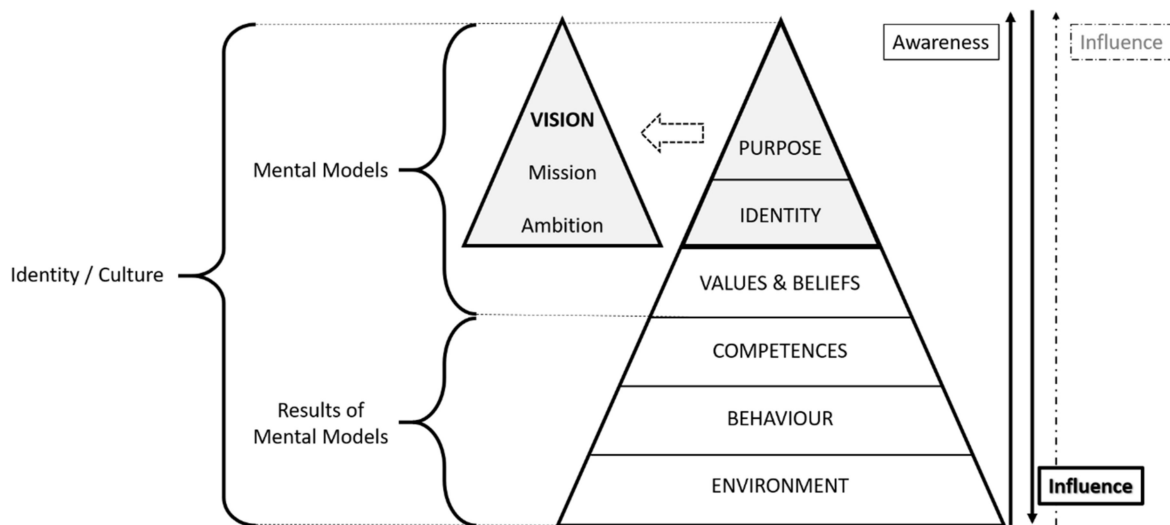


Figure 6. Based on the logical levels of awareness Inspired by Dilts [23].

Dilts also emphasises the following:

“One of the most important aspects of effective and ecological communication and change is the congruence between the ‘message’ and the ‘messenger.’ On a personal level, a healthy and effective person is one whose own actions are aligned with his or her capabilities, beliefs, values and sense of identity or mission. A person’s sense of role and identity is a dynamic process related to several different factors:

- One’s sense of mission or purpose (which evolves with one’s cycle of development in life);
- One’s view or vision of the larger system in which one is a part (a “spiritual” perspective); and
- One’s role in relation to the organisational and family systems in which one is a member.

The concept of different ‘levels’ of change provides us with a powerful road map for bringing the various dimensions of ourselves into alignment in order to realize our goals and visions. Each of these different levels is embodied through successively deeper and broader organizations of ‘neural circuitry.’ As one moves from the simple perception of the environment, for instance, to the activation of behaviour within that environment, more commitment of one’s mind and body must be mobilized” [38].

As indicated earlier, the key to successful change and organisational alignment is an inspiring vision. A vision of the past, present and future reveals a path to a better future that people want to belong to. This is for individuals and organisations alike because individuals are at the core of any organisation, as it is their mental models that shape and govern the organisation. Building a shared vision in organisations is creating a shared understanding of the deeper purpose of the organisation and its destiny because not all visions are equal. Only visions that tap into this deeper sense of purpose and that translate into the objectives of a mission and ambition fitting the organisation make this vision and purpose genuine and true. It then has the power to generate aspiration and dedication to belonging to the world envisioned. However, this vision also needs to come from the people who care for the organisation and who have a collective sense of its underlying purpose. Building a shared vision therefore is a process that requires respect, openness and dialogue at every level of the organisation. It is the construction of a common understanding of a

shared map of reality and the deliberate choice of an itinerary to an inspiring and engaging destination [7,8].

The importance of developing this common purpose, where corporate goals also become personal objectives is supported by Berg. In his article “The role of personal purpose and personal goals in symbiotic visions” [39], he stated the following:

Engagement was defined by Bakker, et al., as a positive and pleased state of mind, categorized by vigour, commitment, and captivation, commonly understood to generate higher levels of energy and a strong connection to work. Boyatzis, Smith, and Beveridge also connected engagement with increased energy, focus and drive through their research on “Positive Emotional Attractors. (PEA)” They validated this theory by linking PEA to physical stimulation—identifying the physiological activation that occurs during the actual experience of an elevated state of engagement, hopefulness, and future orientation. When reaching for a personal vision one is engaged, emotionally and physically, in moving toward an overarching goal. The goal becomes meaningful and purposeful enough to impact their energy, their focus and their drive. This is also supported by the evidence that the desire to achieve one’s “ought self,” or the self that we feel we ought to be, is less than the desire to reach for our ideal self. When we are working to accomplish a goal or vision that is not our own, we are less driven.

Vision and how one views reality are closely related to the attitude one adopts when looking at the past, present or future. The ladder of inference (Figure 7) [7,40,41] is a common mental pathway of increasing abstraction, often leading to misguided beliefs. The only visible parts are the directly observable elements, which are the data at the bottom of the ladder and the actions resulting from decisions at the top of the ladder. These actions are the result of self-generating beliefs that remain largely untested. One adopts those beliefs because they are based on conclusions that are inferred from what one observes, added to past experiences [42]. The ladder of inference provides insight in the way people perceive reality as it is and which attitude they have developed due to this perception. For example, when situations are perceived to be satisfactory and good enough, this focus provides evidence for this inference and anything that contradicts this conclusion is dismissed. Hence, it is difficult to create a vision of better and more, as the need for improvement is not perceived and the attitude is one of acceptance of a status quo. However, a different reality can be perceived when it is possible to establish the mental model that, within a certain context, everything can and should be improved whenever possible. In other words, there is always room for improvement and it is also a moral obligation to pursue excellence. Elements requiring improvement are noticed and a changed attitude, with a focus on improvement, is developed. This altered attitude in its turn allows for the development of a new perception of reality. This perception creates a vision concerning the need for a better future, requiring improvement and change [37].

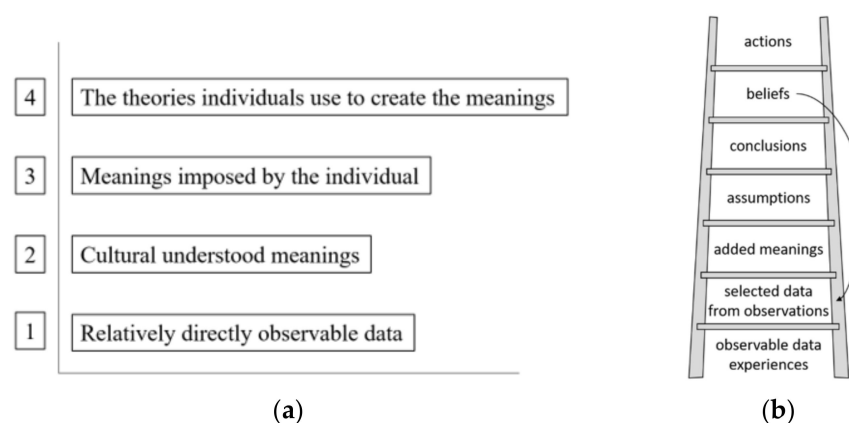


Figure 7. Ladder of inference according to (a) Argyris [40,41] and (b) Senge [8,42].

A first and crucial phase in alignment in organisations is discovering and altering individual attitudes, and aligning them as much as possible with the attitude that the organisation needs. Kotter [22] stated that alignment is more of a communication challenge than a design problem. Alignment always involves talking to many individuals. This involves not only subordinates but also supervisors; peers; staff in other parts of the organisation; as well as other stakeholders, such as suppliers, government officials or customers. Anyone involved in implementing a vision and its associated strategies or who can help or impede implementation can be relevant. This is a huge communication challenge because alignment messages are not automatically accepted just because they are understood. It all depends on credibility. One has to believe the story. Credibility, amongst others, depends on the background of the person delivering the message, the content of the message itself, the communicator's reputation regarding integrity and trustworthiness, and the consistency between words and deeds. Leaders need to "talk the walk" and most certainly "walk the talk" when they seek alignment. They are the first example. Managing organisations with design of systems and structures helps normal people complete routine jobs successfully, every day. Leadership however has a different calling. It is about achieving grand visions, which continuously involves a lot of energy. Therefore, it is the leader's duty to motivate and inspire people to energise them. This does not happen by pushing them in the right direction, as control mechanisms do, but by paying attention to fundamental human needs such as a sense of belonging, recognition and self-esteem because fulfilling these needs provide a sense of achievement, a sense of control over one's life and the power to live up to one's ideals [22]. These emotions touch people profoundly and therefore provoke powerful reactions that trigger the right attitude to expand one's reality and to understand and welcome the new reality presented by the vision of the leader.

This first crucial step in organisational alignment is represented in Figure 8a, where leaders have to confront the mental models and ladders of inference of their "followers". They have to show people a different and more inspiring reality, provoking the right attitude to embrace the vision the leader develops. It is the fundamental "why" that Sinek talks about in his book *Start with why: How great leaders inspire everyone to take action* [43]. Once this most difficult step is achieved, the organisational alignment can follow the hierarchy of logical levels, determining the objectives at each logical level aligned with the objectives of a higher level. Again, this is a communication challenge, where leaders need to communicate in the form of dialogue to choose the appropriate objectives people believe in. At a strategic level, this involves the mission, ambition, and values and convictions that are important to achieve what is envisioned (Figure 8b). In that regard, Canals [44] declared:

"Leadership development programs should either have a clear purpose in terms of their design and goals or may end up in an expensive and sometimes useless initiative that consumes people's time and resources, and may generate a cynical view of the diverging pathways between the firms' mission and the real life in the organization. Moreover, leadership programs should also help participants understand better the implications of the firm's mission on the different corporate policies and decisions regarding customers, people, shareholders and other stakeholders, and the corporate culture and values that should be present in making those decisions."

What can be named a "mission" is the action required to close the gap between the current reality and the envisioned future, while the ambition translates the identity of the organisation into objectives. Surely, the ambitions of a multi-national organisation completely differs from a local SME with only a local reach; in the same way, this is completely different from a public service or a government agency. At the operational level, these strategic objectives translate into the objectives regarding competences (including technology), behaviour and context needed to achieve the overarching objective and aligned with the higher strategic logical levels (Figure 8c). The mental models developed at the strategic level dictates what is necessary and in line with the adopted vision, mission and ambition, congruent with the values and convictions that support the vision. At each

level, each step is a feedback loop in itself. The most prominent influence moves clockwise. However, a counter clockwise influence can also be present. Together, they are needed to adapt and improve where necessary and to make the alignment more powerful.

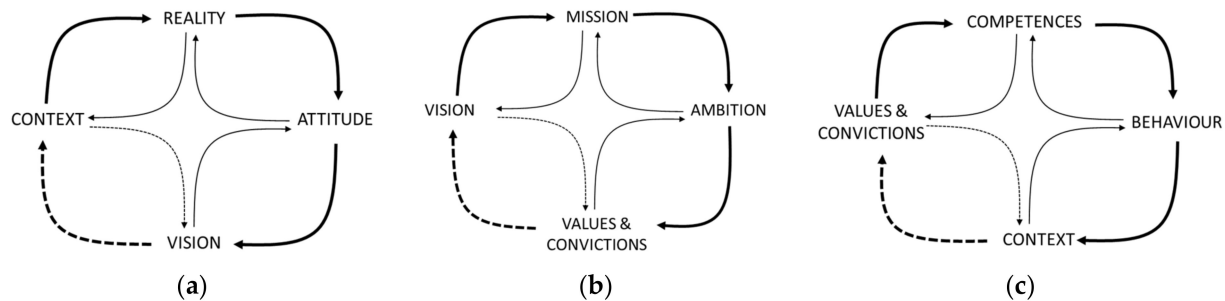


Figure 8. (a) Ladder of inference (Direction and orientation.), (b) Strategic alignment (Overarching objectives) and (c) Operational alignment (Specific and detailed objectives).

The loops described above form a whole. They connect the ladder of inference with the strategic component, which results in the operational component, in the form of parts of the process, creating an aligned identity and a corporate culture [37]. In essence, the three loops form an individual leadership process when each step is used to align oneself with the vision one adopts, resulting in aligned leadership, congruent with one's vision. At the same time, these steps can also be used as the levels of change to lead people in volatile, uncertain and complex situations, as all three elements together form a dynamic organisational culture alignment model, with which an organisation can align itself and its stakeholders with its vision (Figure 9). The better this alignment is executed, the stronger the corporate culture becomes, aligned with the vision, mission, ambition and values that matter. When high performance and safety are important values, this should automatically involve a specific attention to risks related to the objectives present at all logical levels of the organisation (Cfr. Section 2.3).

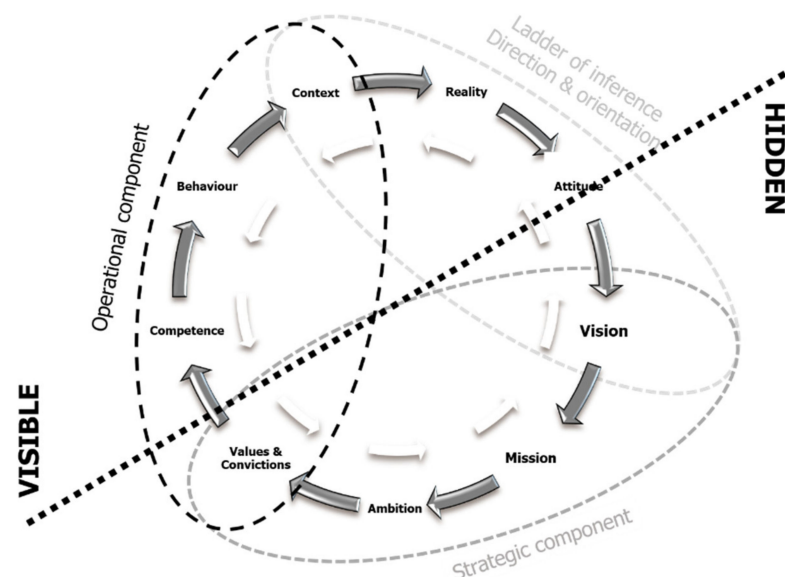


Figure 9. Dynamic cultural alignment model—flywheel of alignment [37].

4.4. A Dynamic Model to Align Organisational Strategy and Culture

The flywheel of alignment is an instrument of vertical alignment in organisations, aligning individuals, and the organisation as a whole to create a strong corporate culture. However, organisations also develop strategies to reach their aims. Both strategy and

culture need to work in concert to perform well. Still, the statement “Culture eats strategy for breakfast” (attributed to Peter Drucker post-mortem 2006) indicates that a strategy chosen by higher management can easily be dismissed due to an organisational culture that is not aligned with the strategy taken. This claim also indicates that it might be meaningful to spend efforts picking or developing the right strategy to reach one’s objectives and to align it as close as possible with the existing corporate culture. However, it is also possible to enhance the organisational culture to fit a desired strategy first, for instance when this is needed as a result of a merger or another crucial change in the organisation [37].

In their book *Strategy synthesis*, De Wit and Meyer [45] stated that there is no such thing as a common understanding of what strategy is. They even said that a sharp definition of strategy would be misleading, as there are so many different and strongly differing opinions on most of the key issues. The presence of these conflicting views indicates that strategy cannot be summarised into a widely accepted definition. However, complexity theorists define strategy as the unfolding of the internal and external aspects of the organisation that result in actions in a socioeconomic context. As such, one could say that strategy consists of selected organisational arrangements an organisation needs and uses to achieve its aim. Most organisational alignment studies deal with aligning these organisational arrangements with the chosen strategy. For instance, how can IT solutions (tools) support the organisations processes or what kind of processes are necessary to achieve the strategic aims. However, these punctual alignment issues focused on strategy often miss the systemic approach that is necessary to align these solutions to the people and the corporate culture they represent. Ideally, these organisational arrangements also fit the culture that identifies the organisation.

A model that considers this aspect of alignment is the organisational alignment model proposed by Tosti. He stated: “The concept of alignment applies to both the external alignment of the organizations with its community, marketplace, and business environment, and the internal alignment of the organizations across the levels of administration, operations and job. Internally the organization should be aligned around the results the organization is striving to achieve” [46]. According to Tosti and Jackson, organisational alignment is connecting strategy, culture, processes, people, leadership and systems to best respond to the demands of the organisation. Organisational alignment requires compatibility between the strategic and cultural pathways and necessitates consistency within them (Figure 10) [47].

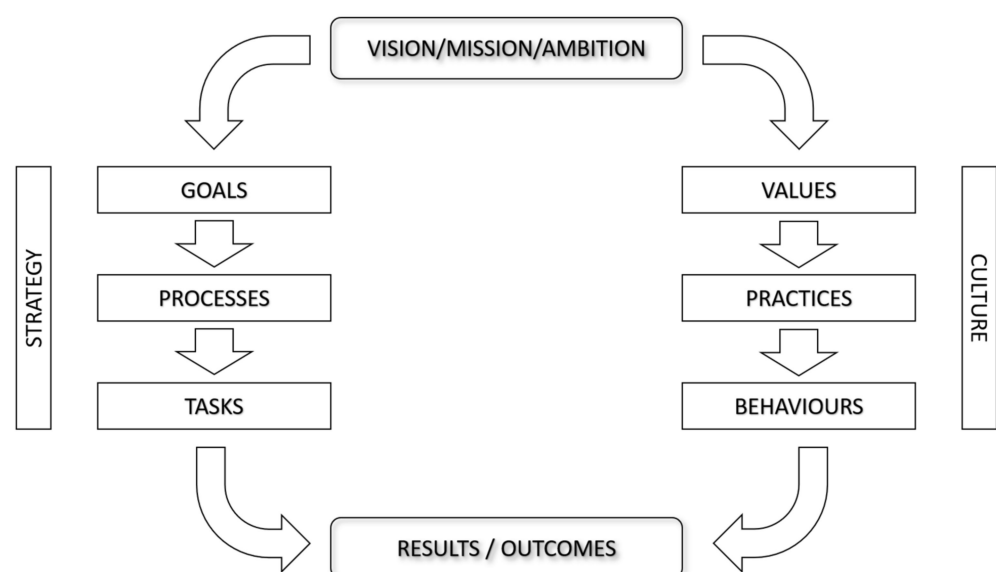


Figure 10. Organisational alignment model [46].

Amarant and Tosti [48] stated that thinking systemically, viewing performance as the result of a system is essential to performance improvement because performance is

a function of all of the systems' variables. Reducing attention to actors overlooks most important sources of performance variance that occur at other levels of the organisation. They identified three levels of organisational complexity:

- **Organisational Level (Goals/Values).** An organisation is a dynamic entity that must be managed and governed by people. This requires executives, functional managers and administrative systems to lead the organisation as a whole.
- **Operations Level (Processes/Practices).** The processes that guide people's work are intended to convert inputs into goods or services that provide customers with value. Within each process are sequences of tasks that are supported by management.
- **People Level (Tasks/Behaviour).** The actor is central to the system [48].

Tosti stated that results depend not only on the processes people follow but also on how one behaves when executing those processes (practices). Behavioural practices of groups and individuals can make the difference between merely adequate results and outstanding results. In the worst case, poor practices can destroy good processes. He believed that creating and maintaining a balanced and aligned organisation requires decisions about both organisational direction and intent and regarding what is important about the way it operates. This responsibility of the organisation's leadership constitutes a critical factor that needs to be considered in attempts to improve performance because they have the broadest impact on mobilising the organisation to succeed. However, there is little attempt by many organisations to ensure that these practices are aligned with the desired results [49]. Strategy is implemented tactically by making sure that the three levels of organisational complexity are vertically aligned to achieve results. This is performed to the design and execution of operational processes. This requires using the strategy and mission as a means of aligning goals and objectives, then aligning processes with those goals, and finally aligning the tasks that people perform with the processes [46].

When one combines their knowledge of the organisational alignment model and the insights of the flywheel of alignment, one can construct a dynamic organisational alignment model, as depicted in Figure 11.

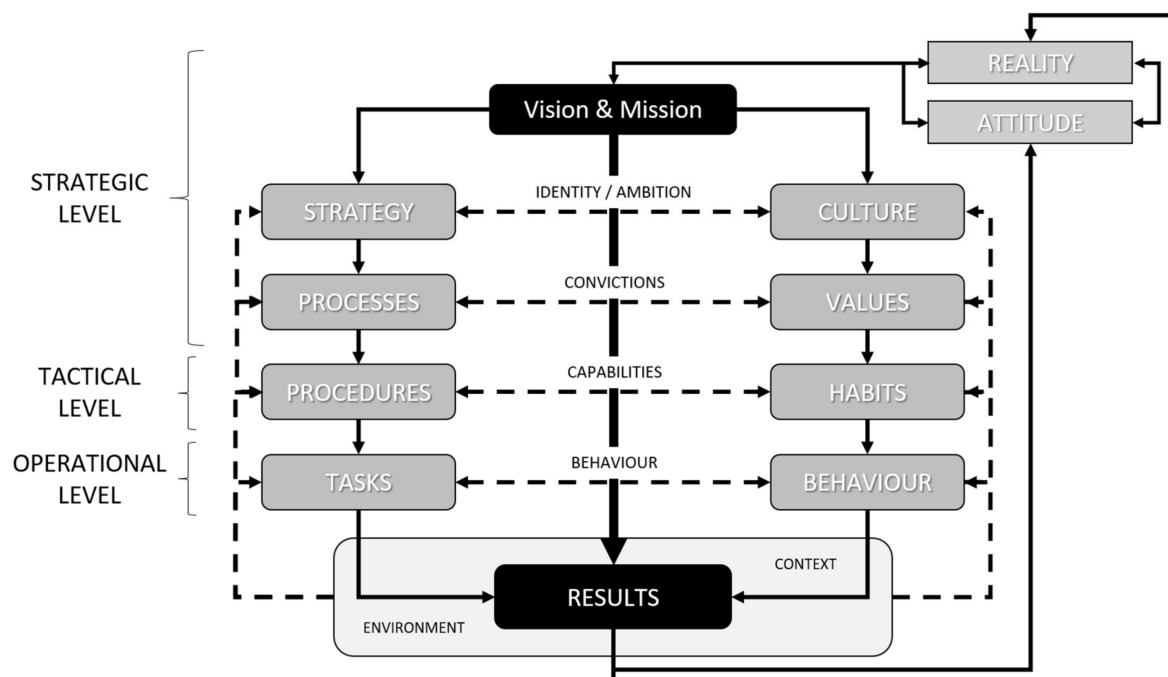


Figure 11. Dynamic organisational alignment model [50].

In the central top to bottom arrow of the model, one can find the logical levels of the individual stakeholders {XE "stakeholders"} making up the organisation. Ideally,

these individual logical levels are based on a shared vision {XE “vision”} and mission {XE “mission”}, leading to individual but aligned ambitions, connecting the individual identities to a corporate identity {XE “identity”} and culture {XE “culture”}. On the right side of the model, the organisational culture is represented by all of its components, while on the left side of the diagram, the column represents the elements that make up a strategy. How stakeholders perceive their results and the organisational context and how a culture and a strategy feed into reality {XE “reality”} is represented by the closed loop of attitude and reality, explained earlier as the function of one’s ladder of inference and of the flywheel of alignment. This element of attitude and perception of one’s reality closes the loop connecting the actual results that are achieved in a specific organisational context, with the overall (shared) vision and mission of the organisation and its stakeholders. When vision, mission and ambition are clear and powerful, the mental model {XE “model”} is created, and alignment can start [50].

5. ISO 31000 as a Practical Tool to Reach Alignment, Safety and Performance in Organisations

5.1. Observations Regarding ISO 31000

From the beginning of this century, noteworthily, focus on risk management increased. There is a great conviction that risk management provides a fitting tool for assessing the conflicts inherent in exploring opportunities (to create value), on the one hand, and avoiding losses, accidents and disasters (to protect value), on the other [51].

In their article “Implementing Bayesian networks for ISO 31000: 2018-based maritime oil spill risk management: State-of-the-art, implementation benefits and challenges, and future research directions”, Parviainen et al. [52] stated:

“The ISO 31000:2018 International Standard on Risk Management (ISO 2018) provides guidelines for integrated risk management for all types of organizations and is therefore in essential role in communication of academia and industry. The use of the ISO 31000:2018 standard has also been suggested as a suitable basis for the evaluation of Pollution Preparedness and Response (PPR) risk management and for dealing with uncertainties when assessing oil spill risks in industry activities. As the main focus has been on industry activities, there is a need to improve the link of the academic scientific work to the ISO 31000:2018 standard.”

The title of the ISO 31000 standard [2,3] is “Risk management—guidelines”. It is a guidance standard on how to manage risk in organisations independent of the size, sector or industry to which the organisation belongs. Unfortunately, this standard is often disputed, and it seems that it is not always properly understood by some risk specialists. Mostly, the critique is in regard to the elements of the proposed vocabulary and seems to be based on the mental models that governed risk management in the twentieth century. This mental model is based on the early developments of risk management in the financial/insurance industry, focused on loss, and the engineering world, focused on component reliability. This mental model is based on uncertainties in the form of probabilities and statistical evidence (cfr. Section 2.2). Regarding their criticism, Olechowski et al. [53] stated the following:

“A number of authors have critically examined the ISO 31000 standard as a whole. Aven (2011) critiques the uncertainty- and risk-related vocabulary of the standard from a reliability and safety point of view. The author argues that the guide fails to provide consistent and meaningful definitions of key concepts. In a broader critique of the standard, Leitch (2010) concludes that the standard is vague and lacks a mathematical base. He attributes the vagueness to the process, given that the standard was created from a consensus-based process involving people from all over the world, speaking different languages. Although it is important to conceptually examine the fundamental definitions on which the standard is built, neither of these papers involve actual evidence to evaluate the effectiveness of the ISO 31000 standard, and its potential for impact in industry.”

The experts in risk assessment accustomed to this twentieth century mental model employ various, often complex, mathematical models to calculate the levels of risk for very

precise and well-defined objectives related to the reliability of components of a system, where a deviation from an expected result is always negative. Seen from this twentieth century mental model regarding risk, this critique is therefore understandable and, for engineering and component reliability, the objective and the cause–effect relationships are always apparent. It is a consideration for risk on a component level. This type of risk management is the domain of experts who often work in specialised departments in organisations, often in a silo context, where risk management is separate from other departments or operations of the organisation.

However, while entirely suited to assessing the risks related to the reliability of components of a system, this mental model regarding risk is inappropriate for the VUCA that world organisations operate in. This became noticeable in the second half of the twentieth century when a number of events showed the inability of these risk management silos to cope with the changing realities, and the variability and management of objectives in organisational operations. New paradigms regarding risk and risk management with a broader, more systemic focus emerged. It is a different perspective on risk, based on a different mental model, leading to concepts such as Operational Risk Management (ORM) or Enterprise Risk management (ERM) and, ultimately, ISO 31000 as an overarching set of mental models regarding the management of risk in organisations and even for society as a whole. These concepts, which are more focused on objectives involved with systems instead of the restricted view on the components of a system, also focus on the creation of value instead of solely trying to protect value, with an understanding that results can surpass expectations [17].

In the same article, Olechowski et al. [53] also stated:

“Empirical evidence from the statistical analysis suggests that the ISO 31000 is indeed a promising guideline for the establishment of risk management in the engineering management community. Adhering to the risk management principles at a high level was found to be a significant factor in better reaching cost, schedule, technical and customer targets, in addition to achieving a more stable project execution. We believe that this provides evidence of the potential for the principles to form the basis of a project risk management body of knowledge and to have a strong impact on the professionalization of the risk management function.”

The twentieth century perspective comes from a risk analysis point of view. However, “risk analysis” is just a component of the system “risk assessment”, which in turn is only a component of the overarching system “risk management”. Looking at ISO 31000 from an analysis perspective therefore does not make sense because risk management is so much more than the analysis or assessment of risk. In fact, ISO 31000 involves even more than just management. It covers all domains of the Cynefin framework and involves leadership as much as management.

Lalonde and Boiral [54] stated:

“The new ISO 31000 risk management standard makes several important contributions to a field that still has relatively few benchmarks. On the one hand, the generic nature of the standard may help to better identify and manage a variety of risks including threats to the environment, public health and food safety issues, threats to critical infrastructure, hazards presented by certain products, and interruption of the supply chain. This diversity of risks tends to broaden the scope of the standard’s applicability to a wide range of situations and organizations. On the other hand, the standard suggests a methodical and structured approach to how to manage risks. As Purdy points out, while this approach may seem relatively conventional, the standard does succeed in integrating into a single concise and practical model a considerable amount of knowledge accumulated from research on multiple aspects of the field which is widely scattered in the literature and thus difficult to take into account.”

Additionally, other authors welcome this broader view on risk management. In their article “Risk management in public sector: A literature review”, Ahmeti and Vladi [55] concluded:

“The key finding of this research was that risk management is neither an optional nor a volunteer tool in the whole management of an organization; it is a must for every type of organization if they want to assure the achievement of their strategic goals and objectives. Risk is a threat or an opportunity, which cannot be eliminated completely and requires an effective management. Accordingly, our risk attitudes and risk perceptions may be influenced by a number of factors—even if we are not aware of such an influence.”

Furthermore, in an article “Analysis of international risk management standards (advantages and disadvantages)” [56], the authors declared:

“In conclusion, ISO 31000, besides being a very effective tool for enterprise risk management, is also applicable as a base for more specialized standards. Consequently, it is important that these standards have the same basis or comparable to the ISO 31000 standard, especially in terms of the vocabulary and terminology used. The creation of ISO 31000 is motivated in particular by the fact that the risk management industry has always applied a variety of standards for risk management and also the terminology used has unmet standardisation, thus making communication of risk information more difficult. Despite the numerous of criticisms of this standard, its contribution to better risk management in the organization remains indisputable”.

In contrast with the traditional risk management concepts, ISO 31000 is a truly systemic approach to risk for organisations or even individuals and society, covering the different levels of quality of perception of the Cynefin framework. It is completely different from the analytical tools based on mathematical concepts and models that are more appropriate for the complicated and simple domains, where cause–effect relationships are established and known. ISO 31000 is comprehensive and generic. Hence, it cannot be specific because specificness is opposite to comprehensiveness. The more specific one is, the less comprehensive one is. For comprehensiveness, less is more. In fact, one could see ISO 31000 as a generic and nonspecific management standard because any type of management in essence is risk management focused on a specific type of risk, covering a specific overarching objective (quality, health, environment, food safety, business continuity, etc.) which is in line with what was concluded by Ahmeti and Vladi, and Lalonde and Boiral. It is also why ISO developed new, more specific standards for specific risks, such as travel risks, legal risks or emerging risks (ISO 31022, 31030 and 31050, at the moment of this writing, all still under development).

To encompass everything therefore also involves being vague, leaving room to fill in what is necessary for the specific case it is used for. Surely, it is one of the reasons why it is not based on mathematics, as mathematics belong to the specific tools that can be used within a specific context. This perfectly fits with the ISO 31000 philosophy and principle of customisation and can perfectly be performed while adhering to the ISO 31000 guidance. ISO 31000 does not need to be “mathematical”, as any mathematical tool can be used in an ISO 31000 context. This standard has a different vocation. The purpose of ISO 31000 is organising (risk) management in organisations and society in order to facilitate the use of any specific tool needed to create or protect value, whether these (mathematical or other) tools already exist or still need to be discovered because ISO 31000 plays a role at a completely different level from the tools and standards that are the bread and butter of seasoned risk professionals. Most standards are focused on how to conduct tasks related to the assessment and management of risk, while ISO 31000 deals with why it is necessary and what needs to be taken into account. As such, it is a meta standard, covering the important aspects of leadership, management and decision making based on vision and objectives, as it can be used for any objective. Whether individual, organisational or societal, all objectives can be managed by the same process. It just needs to be tailored to the circumstances for which it is needed. ISO 31000 therefore is not destined to be used by risk professionals but by any manager and by anyone making decisions when things are not entirely clear or uncertain. This is fundamentally different from the more specific risk management standards and tools based on “mathematics” that solely concern the analysis of risks that have already been identified because this guidance standard is more appropriate for

laypeople in the field of risk and risk management. It is why it needs a simple, concise and limited vocabulary regarding the concepts related to risk and risk management that are easy to be understood by people who are not highly educated risk professionals and vague enough to be comprehensive. Specific jargon is not helpful when trying to disseminate a concept throughout an organisation that everyone can relate to, as mentioned by Ahmeti and Vladi. Consequently, a limited set of definitions easily understood by everyone seems to be useful in standardising risk management in organisations and society as a whole.

5.2. ISO 31000 as a Leadership Tool for Alignment and the Management of Value in Organisations and Society

5.2.1. Purpose and Principles

The purpose of risk management is to create and protect value. To achieve this aim, ISO 31000 proposes a set of principles, a framework and a process, together with a limited number of definitions to create a standardised vocabulary regarding risk and its management. The original standard dates from 2009 and a revised version was issued in 2018. This newer version is much more concise, but unfortunately, this new version has also lost some important information. Maybe the full potential of the 2009 version was not recognised by everyone, as one of the critiques stated that this initial version was too ambitious to comply with. However, ISO 31000 is not something to comply with. It is something to align with, and that is a different story. It is one of the fundamental misunderstandings regarding this standard. One does not need to comply with ISO 31000; one needs to customise it for maximum performance, aligned with the ambitions of the organisation and tailored to its particularity, its resources and its capabilities.

The systemic nature of ISO 31000 resides in the fact that it clearly states what its purpose is (creation and protection of value) and the recommendation of a set of mental models (principles) that can generate a system that is beneficial for the management of risk and valuable to the organisation [53]. These principles (Table 2) are fundamental and need to be seen together, as it is the combination of all of the principles (mental models) together that is needed for best performance. The principles [2,3] are as follows:

Table 2. ISO 31000 principles.

2009 Version	2018 Version
<ul style="list-style-type: none"> • Risk management creates and protects value * • Risk management is an integral part of all organisational processes • Risk management is part of decision making ** • Risk management explicitly addresses uncertainty ** • Risk management is systematic, structured and timely • Risk management is based on the best available information • Risk management is tailored • Risk management takes human and cultural factors into account • Risk management is transparent and inclusive • Risk management is dynamic, iterative and responsive to change • Risk management facilitates continual improvement of the organisation 	<ul style="list-style-type: none"> • Purpose: Value creation and protection * • Integrated • Structured and comprehensive • Customised • Inclusive • Dynamic • Best available information • Human and cultural factors • Continual improvement (risk management is continually improved through learning and experience)

Although improvements are to be noted in the 2018 version of the standard, it is hardly the case for the way the principles have been revised. One wonders why. Was it due to the criticism encountered, a conservative reaction of practitioners, or a lack of understanding of the importance of these principles as new mental models necessary to align an organisation towards effective risk management and improved performance? A

most disappointing change is the last principle, where the acknowledgement that risk management is beneficial to the whole organisation has disappeared because, as indicated by the study of Olechowski et al. [53], an effective implementation of these principles makes a positive difference for the organisation.

Altogether, the principles (old or new) form a set of basic mental models that need dissemination at all levels of the organisation. Leadership of the organisation should set an example of how to adopt these principles as individual, personal values and beliefs. It is also necessary to explain why these principles are important by indicating which organisational purpose and ambitions these values serve. They have to translate these values into personal, individual objectives and explain how these objectives are supported by aligned goals on the lower logical levels of competences, behaviour and context, as indicated in Section 4.2 and Figures 5, 6 and 11. As such, leadership determines what is important when belonging to the organisation and how the organisation operates according to these principles. Then, it also shows how one can recognise these principles in its daily operations.

For instance:

- Why and how does managing risk create and protect value?
- What does it mean to integrate risk management in all organisational processes, and how does one recognise this?
- How does risk management deal with uncertainty, and how is this part of making decisions?
- How is risk management structured, and how does it support timely action when making decisions? How can it be comprehensive?
- What does it mean “best available information”? Additionally, how can the best available information be gathered timely in a structured way?
- How will the organisation customise risk management in a way that it supports its daily operations? How can one recognise risk management in its customised way? How does this principle impact the other principles, such as “being inclusive and transparent”?
- How does the organisation and its leadership take the human and cultural factors into account?
- Why, how and when does the organisation make sure that an appropriate level of inclusiveness and transparency can be assured and for whom?
- Why and how is risk management dynamic, iterative and responsive to change?
- How can risk management improved and how does this positively impact the organisation?

These are just a few examples of questions for which the answers should form the starting point for developing specific objectives on the levels of competences, behaviour and context. Behaviour congruent with the leadership and translation of these answers into actual competences (including the use of technology) and specific behaviour creates a context that contains and shows all these principles, and this is what really counts when implementing ISO 31000.

In essence, when alignment around these principles takes place, they have the potential to generate a culture of openness and appropriate, effective and communication, which in turn leads to a better trust level among team members [57,58]. Church [59] noted that “good communication is usually described as a combination of being open, honest, participative or direct with others.” (Elements that are easier to be found in the 2009 set of principles than the amended 2018 ones). Furthermore, following these principles with congruent behaviour instils trust. Additionally, research demonstrates that trust has a positive impact on many aspects, including job satisfaction and organisational success [60]. Anyway, these principles and their translation into concrete objectives are the foundation on which ISO 31000, its implementation and its use in organisations by means of the process should be built.

5.2.2. Framework

In 2009, the ISO defined the risk management framework as a set of components that provide the foundations and organisational arrangements for designing, implementing

and monitoring, reviewing and continually improving risk management throughout the organisation [2]. In 2018, the ISO stated that framework development encompasses integrating, designing, implementing, evaluating and improving risk management across the organisation, adding the step of integration in the framework process [3]. The purpose of the risk management framework (Figure 12) is to assist the organisation in integrating risk management into significant activities and functions throughout the organisation because the effectiveness of risk management depends on its integration into the governance of the organisation, including decision making [3]. At the same time, this framework is an improvement process, improving risk management in one's organisation, and consequently, this improves its decision making and develops the organisation as a whole. It should also be the translation of the guiding principles into the specific elements of that improvement process, always starting with the commitment of top leadership, giving a mandate and showing commitment for the organisation to adopt the ISO 31000 guidance.

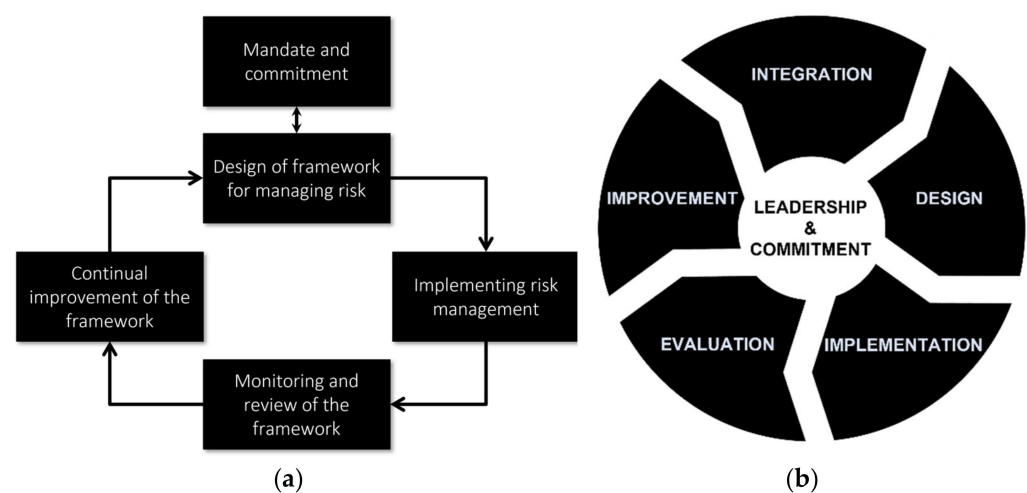


Figure 12. (a) ISO31000 framework (2009) and (b) ISO31000 framework (2018).

The initial set-up of the 2009 version clearly shows the “Plan”, “Do”, “Check” and “Act” of the well-known PDCA improvement cycle (Figure 12a). The improvement to this framework in 2018 is highlighted by the emphasis on the necessity of the leadership commitment to the cause of implementing risk management throughout the organisation (Figure 12b). It is the central driving force necessary for success in this endeavour. Without it, very little is achieved. Another improvement is the step “integration” in the improvement process, as integration at all levels and all functions is an essential success factor for the implementation of ISO 31000 in organisations. As such, it needs a specific and dedicated attention. Unfortunately, often, these two elements are poorly implemented or completely missing in organisations that try to adopt ISO 31000. Amongst others, top management should demonstrate leadership and commitment by issuing a statement or policy that establishes how the organisation acts in the pursuit of its goals, ensuring that the necessary resources are allocated. Top management also needs to assign the authority, responsibility and accountability to manage risk at appropriate levels within the organisation and to be very clear about risk ownership [3].

This statement is in fact an expanded version of what can be developed to integrate the principles into the organisational culture. It is an important element of leadership communication that creates clarity regarding the organisations strategy and how it implements this strategy. Surely, this statement or policy needs to be discussed with the relevant stakeholders of the organisation, including employees, to assure alignment. Aligned with the principles, this generates trust, commitment and alignment. Research clearly shows that leadership communication practices play an integral role in developing and sustaining the employee commitment. Employee commitment is one of the most important measures of leadership success and essential for successful change. Hence, it is also crucial when

implementing ISO 31000. Worker commitment reaps benefits far beyond improved organisational performance. Organisations with high trust cultures have distinct managerial communication practices that emerge to encourage organisational commitment because organisational loyalty is best nurtured when communication practices take place in an organisational culture that places high value on and engenders trust in employees [61]. Reina and Reina [62] identified communication trust as one of the four major components of cultures that embody trust in the workplace.

Furthermore, the framework can be seen as a guide to how to align the organisation with its vision, mission, ambition and strategy by determining how communication and decision making, two of the most crucial organisational processes, are developed by implementing the ISO 31000 process as an important instrument.

The “integration” step is a needed reflection on how the organisation is structured and how it operates to see and determine how the risk management process can be fitted into its daily operations. It is a preparatory step before developing a ((risk) management) plan in the design of the framework.

The “design” part of the framework is crucial because it is the blueprint on which the organisation structures and formalises decision making and communication at all levels of the organisation. It contains the following elements:

- Understanding the organisation and its context;
- Articulating the risk management commitment;
- Assigning organisational roles, authorities, responsibilities and accountabilities;
- Allocating resources (including labour and technology); and
- Establishing communication and consultation

In essence, these steps relate to the vision, mission and ambition of the organisation, linking it to its current reality and how the organisation manages the effects of uncertainty on its objectives. In fact, it is making a plan on how to structure its management processes, decision-making and communication throughout the organisation. Every organisational objective has its related risks, and these risks need to be linked to assigned risk ownership, required resources (including time, labour and technology) and means of communication to manage them (including technology and protocols).

Once it is clear how the organisation pursues its ambitions, how it needs to be structured, who has risk ownership over what, which resources are allocated, how people communicate and use the ISO 31000 process in making decisions and how they use it to learn and improve, then another plan needs to be developed, linking the goals of the design to more specific objectives at the lower logical levels, for instance,

- How does the organisation develop and implement the competences (procedures, technology, knowledge, etc.) needed to execute the ((risk) management) plan?
- What is the expected behaviour of the members of the organisation in dealing with risk (from top to bottom)?
- Which changes in the organisational context need to be made to make things happen?
- How is the ISO 31000 process tailored and used at different levels, departments and operations of the organisation to facilitate and improve decision making?

These are just a few examples of questions that need a clear answer and a plan to be executed. When this plan is ready, it needs “implementation” by using wisely the allocated resources.

The true benefit of ISO 31000 is its build-in self-improvement because one of its foundations is the iterative nature of this never ending process. The implementation of the plan and its results need constant monitoring and review because this allows us to “evaluate” and learn what is still missing, what works and what fails. As such, this knowledge provides the basis for “improvement” of all elements of the framework, including leadership commitment.

5.2.3. Process

The ISO 31000 process (Figure 13) is the actual working element of this standard. Although the principles and the framework are crucial, they only serve to make the use of the process possible and successful. The process is what has to be used by everyone whenever operations and decisions are not in the simple domain of daily routine. Even then, this process can be used to improve those daily routines, as everything that is necessary to maintain or achieve the objectives of the organisation can be monitored and reviewed by this process. In fact, it is a generic management process that can be used to manage anything when properly understood.

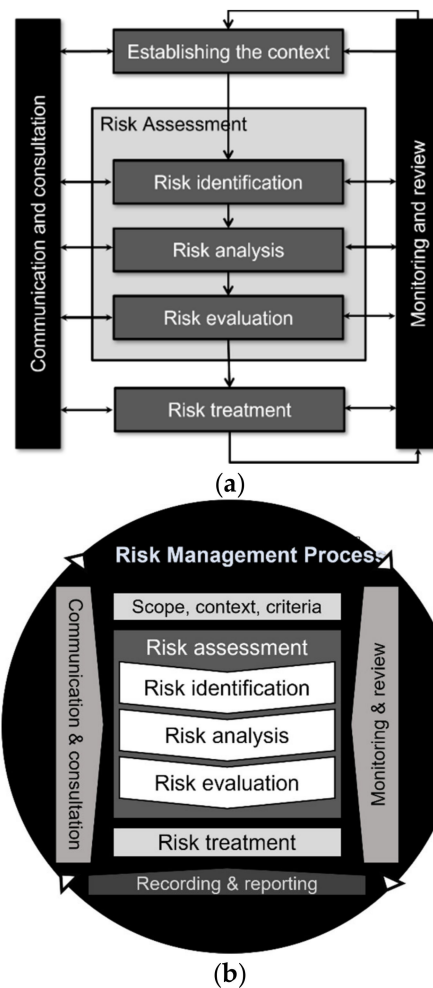


Figure 13. (a) ISO31000 process (2009) and (b) ISO31000 process (2018).

The term “risk management process”, used for this universal management process, is misleading because, due to the traditional connotation linking risk only with hazards, danger and loss, one often uses it only to manage hazards and dangers. In that regard, this process is therefore often seen as another risk assessment tool and reduced to its bare minimum. Adopting a different mental model regarding risk, aligned with the ISO standard, offers a completely different use of this process and makes it possible to operate it as an instrument of organisational alignment and the management of objectives, ranging from aims related to daily routine operations to the objectives of a change or to manage the uncertainties involved in new and innovative projects.

The main difference between the 2009 (Figure 13a) and 2018 (Figure 13b) versions of this process consists of the added aspect of recording and reporting. Otherwise, the changes are to be found in the graphic representation of the process and a different way

to indicate its iterative nature. Despite the fact that recording and reporting can be very important in larger organisations, it is not always the case in smaller ones, but inherently both representations fit the process well. However, the 2009 form of the process clearly shows with arrows how the iterations can be understood. The arrows connect the essential steps of “communication & consultation” on one side, and “monitoring & review” on the other side, indicating that, at each step, it is always possible to take one or more steps back when one notices something that is not clear or missing, as at each step, feedback loops are present. This seems less obvious in the 2018 representation, possibly leading to the idea that the iteration is not only within the process but only of the process itself. As such, the 2009 representation offers a better understanding of its possibilities as an alignment tool in organisations.

Another essential piece of information that has been lost in the 2018 standard is about the understanding of the crucial part of communication and consultation in following this process. In the 2009 version, communication and consultation was defined as follows:

“Continual and iterative processes that an organization conducts to provide, share or obtain information and to engage in dialogue with stakeholders regarding the management of risk”. Where it was also specified that *“Consultation is a two-way process of informed communication between an organization and its stakeholders on an issue prior to making a decision or determining a direction on that issue”.* Furthermore, it also stated that *Consultation is a process which impacts on a decision through influence rather than power. It is an input to decision making, not joint decision making”* [2].

In the 2018 version, one can find the following description: *“Communication seeks to promote awareness and understanding of risk, whereas consultation involves obtaining feedback and information to support decision-making”.* In essence, both versions of the standard try to convey the same message. However, the notion of “dialogue” seems to be lost in the new version. This could easily lead to a very formal way of communication, trying to obtain information for decision making and disseminating information in an effort to make stakeholders aware of and to let them understand the risks. As such, communication and consultation could become a top-down process, with little involvement of employees and other members of the organisation. However, Dennis Tourish declared that

“Critical upward communication improves decision making in organisations. Without it, senior management teams become out of touch with the mood of their people, and underestimate or miss emerging problems in their marketplace. They are more likely to produce strategies that are misaligned with the perceptions of their employees. The possibility of successful strategic implementation is therefore dramatically reduced. This suggests that two way communication and critical feedback is vital to organisational success” [63].

Tourish his findings indicate the importance of conducting communication in the form of dialogue. It also emphasises the importance of trust, as one only provides critical upward communication when sufficient trust is present. This is certainly true in the context of ISO 31000 and related decision making. How one structures and applies communication in an organisation is an important way to implement and show the ISO 31000 principles. For instance, dialogue, based on inclusiveness and transparency, taking human and cultural factors into account, support the principle of using the best available information, leading to better decision making and improved performance.

Looking at the ISO 31000 process, one can distinguish three different levels requiring different participants (stakeholders) to take part in the process. “Communication & consultation” on one side and “Monitoring & review” on the other side are parts in which anyone can participate. When an organisation is open to feedback, anyone can see and report a deficiency, mistake or shortcoming regarding an objective. Likewise, anyone, at every step, can contribute by adding information to the process via the communication and consultation part. These are the steps that are ideal to obtain the best available information to feed the process because every member of the organisation and even other relevant external stakeholders, such as experts, customers, suppliers or others, can become involved.

A second level can be found in the centre of the process, it is a part of the process that can require the use of very specific tools and the involvement of experts to assess risk. It is the part that is commonly well understood by risk practitioners. It is often what is regarded, from a traditional viewpoint, as being the risk management function in organisations. Last, but most important, are the elements of the process that are directly linked to the risk owner, the manager, the team or individual who knows what is needed, required or wanted and who has the authority, the competences and the resources to take decisions in those matters. They are also the ones who can make sure the decisions regarding these matters are executed and implemented. Managers taking the risks are the ones that should start the process and who are also responsible for its execution.

Starting the process, one sets the scope of the issue at hand. This fits within a certain context (internal and external to the organisation), which determines the reality of the process. This first step of the process is also necessary to determine the specific objectives involved and to develop clear criteria for these objectives. Therefore, this first step of the process can be seen as the equivalent of the strategic part of the dynamic cultural alignment model, where the risk owner expresses his or her vision on the context, connecting this vision to the concerned objectives and provides criteria to provide a clear picture of what is important (valuable) and what needs to be achieved or maintained. It is the information needed with which the specialists can start their work. Additionally, this first step needs communication and consultation as well as monitoring and review to build a shared vision, to explain the mission and ambition to develop engaging objectives and to choose commonly understood criteria that align with the values and convictions of the organisation. It is an essential part of the ISO 31000 process, where alignment takes place in a very practical way. This can happen in any team at all levels, departments or sections of the organisation. It is a crucial step that needs to be reached before taking the process to the next stage. At the same time, it is a golden opportunity to create alignment regarding any objective of the concerned organisation. Creating clarity in this first step of the process already eliminates a lot of uncertainties and risks. It is a step where possible conflicts and their associated risks can be discovered and solved before they even exist when dialogue and trust generate mutual understanding and alignment. However, the success of this first step heavily depends on what should already be present in the statement of the leadership commitment and the content of the framework. Without this content, alignment is less certain, as the overarching vision and its related information are lacking.

Once the first step is completed, the situation can be assessed. Risk assessment is often understood as identifying hazards and finding solutions to those hazards. However, for ISO 31000, risk assessment is about finding the best way to maintain and/or achieve the objectives. For this, both positive and negative risk sources, and their possible effects on the objectives involved are important. These risk sources and their possible effects need to be identified and described. Again, the best available information is needed to accomplish this step in order to build a risk profile for the issue and the subject objectives at hand.

When a comprehensive risk profile is available, further analysis can then determine which options can be developed to achieve or maintain the concerned objectives. For simple issues, this analysis can be quick and easy. However, for larger or more complex projects, this can be a huge task using very specific tools handled by experts. Options can involve new objectives at lower logical levels. When the context and criteria (reflecting the organisational values) are clear, it is more likely that these objectives are better aligned with the organisational purpose and values.

When options have been developed, these options can then be evaluated against the criteria established in the first step of the process. The evaluation should eliminate options that do not fit with the criteria, which allows us to avoid non-aligned objectives. However, at this step, it can also become clear that the criteria should be reviewed or that new options still need to be developed when criteria are not met.

Finally, a selection needs to be made amongst the options that fit the criteria. Additionally, in this step of the process, one can further align the organisation, selecting the most

appropriate option, translating this option into new objectives that need to be achieved or maintained. In this regard, the objectives concern the controls that need to be implemented to optimise the risk for the objective(s) for which the process is used in the first place.

Obviously, this process can be used for any objective. The only difference is the time and effort used to go through the process. In its shortest form, this process only takes seconds. However, when matters are complex and when many iterations are necessary, it can even take years before a solution is actually implemented. It should be the organisation's ambition to have its members always use this process when making decisions, considering what is important for the organisation as a whole.

5.2.4. Vocabulary

Many scientific articles emphasise the importance of well-taught vocabulary for students. It allows for a better understanding and leads to better performance [64]. Vocabulary knowledge is likewise multidimensional and complex in nature. An effective use of a specific vocabulary requires a combination of different types of knowledge. What is the definition of a word? How does it relate to other words? What are its specific connotations in different contexts? Particularly an abstract, conceptually sophisticated word is thought to develop incrementally over time, with students gaining additional information about a word with each meaningful, contextualised encounter with it [65]. This is certainly true for the concept risk and its related vocabulary. Consequently, when trying to align people, it is helpful to also standardise the vocabulary regarding the specific concepts used in the organisation. That is why ISO 31000 also proposes a standardised risk vocabulary.

6. Total Respect Management

6.1. Respect

Respect in the way we intend to use the word is an expression originally derived from the Latin word *respectus*. In its turn, *respectus* comes from the verb *respicere*, which means "to look again", "to look back at", "to regard" or "to consider someone or something". In other words, the original meaning of the word "respect" holds the connotation of giving someone or something your dedicated attention in order to obtain a better view on the matter or to give it some thought, particularly to come to a better understanding. When used in the context of Total Respect Management, this is exactly how the word "respect" needs to be understood. It is a concept indicating a very specific attitude, which is a dedicated and appropriate focus on a certain subject, person, object or situation in order to come to a deeper understanding of an issue and its context and to be capable of making the right decisions. It is a basic attitude to be developed and ingrained in an organisational culture. It is a means of leverage that leads to a better understanding of individual and organisational issues, subsequently allowing for appropriate decision-making and action in the pursuit of individual and organisational objectives [37].

Total Respect Management is abbreviated TR³M, as it is about respecting people (through leadership), respecting profit (through risk management) and respecting the planet (through continuous improvement with a focus on excellence and sustainability). These three dimensions are of paramount importance for TR³M in determining the mental models that should govern the organisation and its leadership.

People feel respected when they count, when they matter and when they are listened to. It is why the communication and consultation part of the ISO 31000 process is a crucial part of this process, as it allows leaders and managers to express their vision and to translate this in a mission and ambition, reflected by the objectives they pursue. The values of the organisation are then manifested by the guiding criteria set by the leadership of the organisation. At the same time, this process provides the opportunity to listen and capture people's ideas on issues that matter. At each step of the process, the appropriate stakeholders/people can be involved, creating alignment with the corporate objectives, capturing ideas and perceptions and making them feel as if they are part of decision making while increasing one's quality of perception on these matters, which in turn provides for

better decision making. When properly understood, the ISO 31000 process is a structured dialogue that can be used for any issue by any leader or manager to show respect for people because, when leaders genuinely consult and communicate with the members of the organisation and take into account what they learn in the process, this generates trust and trust generates better and more accurate information. When managers and leaders act oppositely, when they do not listen to people and do not take them seriously; thus, the opposite result follows.

Using the ISO 31000 process also results in respecting profit, as options can be weighed and the most sustainable and profitable one's can be selected and improved over time, maximising the total profit over time.

Additionally, stakeholders outside the organisation are important in this process. When sustainability is an important objective and guiding mental model, options in favour of the planet can be selected, assessed and improved. Hence, attention to these aspects is also showing respect to the planet.

6.2. Total

Total Respect Management is an inclusive management philosophy and methodology with a focus on the whole. This focus leads first and foremost towards an organisational attitude, allowing businesses to align strategic objectives, strategy and culture ideally with societal needs and requirements. It is a general method to progress towards an optimal performance (or Safety-II), achieving more with less. Its philosophy is based on the fact that performance and safety are two sides of the same coin and that it is necessary to address both sides in a balanced way. It is also an integrated methodology to line up performance and performance management with the safety of core objectives of an organisation and society as a whole. In essence, TR³M consists of a balanced and integrated combination of leadership (respecting people), management (respecting profit) and excellence (respecting the planet) in order to obtain a desired performance and sustainable results [37].

7. Concerns

Implementing integrated methodologies in organisations is a difficult task that requires a lot of preparation and dedication. In general, organisations look for quick fixes, an easy way out with minimum effort and maximum result. Leadership and management often look for methods that can be implemented without disturbing higher management. Unfortunately, this does not work for a "Total" concept, where each part is important and needs implementation. This means a considerable investment in time, people and money when implementing this concept, as it requires leadership development, ISO 31000 implementation and a continued effort in improving what is not great yet.

For TR³M, leadership development is crucial, aiming for level 5 leadership, as described by Collins [66]. This means, among others, the capacity to let go of one's ego; to be able to be vulnerable; and to genuinely listen to people, something that can be (very) difficult for some leaders. Additionally, a comprehensive implementation of ISO 31000, in line with its guidance, is problematic because this requires every member of the organisation to develop a certain level of comprehension of this standard and the use of its process throughout the organisation, starting with the leadership of the organisation. Often, this standard is regarded as a concern for risk managers, while it should be the concern of every leader and manager. As a result, most ISO 31000 frameworks in organisations are underdeveloped and the use of the principles as guiding mental models is lacking.

For TR³M, it is also vital that the little things matter. Attention to detail and a relentless pursuit of improvement of what can be improved concerning as much as possible objectives at all logical levels should, in the end, result in an aligned and excellent organisation, creating value for itself and its stakeholders. However, this is a level rarely achieved, as other elements of the concept are habitually missing.

It was our purpose to implement, test and measure this TR³M concept in an organisation, starting at a team level within that organisation. Unfortunately, up to now, no

organisation was found willingly and audacious enough to make the investment in time and people, as these resources are often lacking. As such, the validity of this theoretical concept still needs a practical test in future research.

8. Conclusions

In this paper, we explored the consequences of a systemic approach concerning the concepts risk, safety and performance. We subsequently explored the role of leadership and the importance of alignment to propose a “Dynamic Cultural Alignment model” (Flywheel of Alignment) and a “Dynamic Organisational Alignment model”, with which organisations can align its members with the vision, mission and ambition of the organisation and its strategy.

We showed how the ISO 31000 principles can be used as powerful mental models to facilitate organisational alignment and consequently offered an outlook on how ISO 31000 can be used as a practical organisational alignment tool to achieve safety and performance in organisations proactively.

Finally, we briefly discussed Total Respect Management as an integrated and systemic way to achieve safety and sustainable performance in any organisation.

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