Practicing Resilience and Promoting Safety.
A Learning Approach for Teams.

KAMOS®x-ch

A Forward-Looking Analytical Method for Anticipative Learning in Teams.

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KAMOS – A Learning Approach for Teams.

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KAMOS®x-ch is the forward-looking analytical method for teams committed to anticipative learning. It acknowledges the actual organizational conditions to enable careful and effective action even under critical pressure.

Difficult and stressful work is an inherent cause for errors – decisions can have unexpected consequences or reveal themselves as dangerous. The results can be challenging and taxing experiences for individuals and teams alike. The KAMOS learning approach considers the given organizational circumstances and resources under which and with which people work and perform their functions. It reshapes mindsets and risk-based thinking in trial practice to create new insights, awareness, and mindfulness. Its aim is to train and practice mindful interaction and establish more confidence and resilience for the future.

What is KAMOS®x-ch?

KAMOS is a facilitated learning process for teams: Collective and mindful mental operational simulation. Developed by X-CHALLENGE CONSULTING from a combination of mind and practice-centric methods, it engages with key insights from current high reliability organizing, sense-making, and clinical quality and risk management research.

KAMOS is used to test critical functions and activities for their risks, simulated in the mind and validated in trial practice, constantly revisited and continuously improved. KAMOS is circular in essence, enabling change at different stage on different levels.

Who is the target user of KAMOS?

KAMOS is an ideal approach for professionals and specialists already working in or intending to work in a stressful environment, in which they need to execute difficult tasks or make critical decisions under pressure. In its application, it brings together the same people who need to master a challenging task together in their actual practice (Gartmeier, Gruber, Hascher, & Heid, 2015, S. 259 ff.).

Which strategy does KAMOS follow?

KAMOS reinforces the participants' anticipatory abilities and forward-looking resilience. Risk-based thinking and organizational practices that enable collective mindfulness become a natural habit. The participants use specific communication models[1] as chosen by their organization's leaders.

The purpose of KAMOS is to avoid unwanted risks and to immediately recognize and respond competently to any unexpected consequences. Constant loops of exploration and reflection helps reveal and act on potential improvements.

The approach needs to be embedded in the organization to enable continued self-organized learning processes by providing the required resources in terms of time and capital.

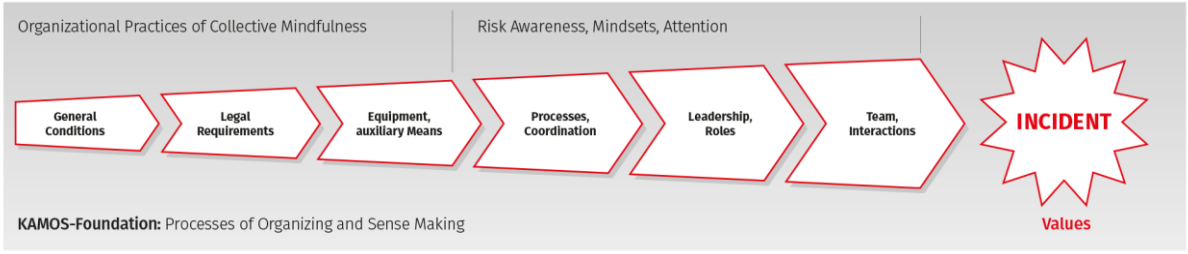
Where can KAMOS deliver an important contribution?

Safety and reliability are dynamic non-events and complex outcomes that need constant attention and a continuous effort. It also means committing as intensively to processes of sustainable performance as to the pursuit of efficiency (Weick & Sutcliffe, 2016). Patient safety means the absence of unwanted events (Sens, et al., 2018, S. 85). Risks should be managed to minimize unwanted consequences for patients and members of staff alike. This also implies going beyond statistical likelihoods to practical eventualities.

Resilience has captured the attention of official institutions (as part of the requirements for critical infrastructures) and researchers. Kathleen M. Sutcliffe and Timothy J. Vogus (Cameron, Dutton, & Quinn, 2008, S. 185 ff.) *specify organizational resilience as follows: 'resilience refers to the maintenance of positive adjustment under challenging conditions'*.

KAMOS focuses on actual practice!

KAMOS considers the organizational circumstances to keep teams functioning, even under pressure.



Grounded in Processes of Organizing and Sense-Making

The processes of organizing (Weick, 1985) and sense-making (Weick, 1995) are closely interconnected and interdependent. Both are social in nature. Yiannis Gabriel explains their link in *Managing the Unexpected* (Weick & Sutcliffe, 2016, S. 31-32): Organizing is the constant effort to find order in our perceptions, experiences, and expectations.

[1] For effective communication models, cf. p. 7

Perceptions, experiences, and expectations are key: Expectations are the foundations of virtually all intentional actions. They are grounded in experience: Often, they hold true – often, they do not. Such implicit assumptions determine the choices made in human behaviour.

Expectations are only corrected once they reveal themselves to have negative consequences. People tend to be very lax in what they accept as confirmation of their expectations, but strict in rejecting evidence to the contrary (Weick & Sutcliffe, 2016). This is a tendency only reinforced under pressure. Understanding and staying aware of this process is indispensable when trying to manage risks.

Sense-making happens in interaction and is grounded in our social identity. People attempt to see the meaning of situations that they are actively experiencing. This flow of active experience only stops abruptly when events take an unexpected turn – after the fact. This is the point where sense-making comes to the fore (Weick, 1995).

What is needed is the type of organizational practice that helps manage the unexpected and reinforce confidence and resilience. KAMOS can contribute to this.

Organizational practices of collective mindfulness

Karl E. Weick and Kathleen M. Sutcliffe (Weick & Sutcliffe, 2003) (Weick & Sutcliffe, 2010) (Weick & Sutcliffe, 2016) spent many years on investigating organizations producing highly reliable performance in high risk environments (HRO). The ability to master the unexpected is essential for such organizations. Weick and Sutcliffe recognized five shared behavioural principles that promote collective mindfulness at such organizations.

The Five HRO Principles

The identified principles help maintain an essential way of thinking or mindset, constantly revisit and update accepted interpretations, and find the most plausible explanations for given situations. This enables organizations to recognize key problems and find possible countermeasures (Weick & Sutcliffe, 2010). Specific definitions and the relevant mindsets for each of the principles (Vogus & Sutcliffe, 2007) (Vogus & Sutcliffe, 2007) (Weick & Sutcliffe, 2016) are proposed:

1. Principle: Being Preoccupied with Failure
    a. Definition
    We are working with constant care and conscientiousness, because we acknowledge the possibility of unexpected events endangering our safe and secure order. That is why we are pre-emptively and pro-actively engage in analyses and discussions.
    b. Mindset
    Acknowledging doubt, establishing a critical spirit, because failure comes from the same place as success

2. Principle: Being Reluctant to Simplify Interpretations
    a. Definition
    We think about our assumptions and beliefs to get a more complete and nuanced picture of current activities.

   b. Mindset
      Accepting multiple interpretations, reserving simpler expectations for the last possible moment, and keeping a balance between knowing and doubting

3. Principle: Being Sensitive to Operations
   a. Definition
      We always engage and share information about the human and organizational factors influence safety as a whole.
   b. Mindset
      Using opportunities to refresh the picture of the actual events and discover details and interpretations that might have been missed

4. Principle: Committing to Resilience
   a. Definition
      We develop the ability to discover failures that have already happened and errors that have already been made, to limit their effects, and to recover before their consequences intensify.
   b. Mindset
      Being honest about own capabilities and being ready to learn in real time

5. Principle: Deferring to Expertise
   a. Definition
      When pressure mounts (urgent incidents, crises), we move the authority to take decisions to people with the best expertise for the given problem, irrespective of their position.
   b. Mindset
      Accepting that expertise might not be found at the top of the hierarchy; understanding that nobody can know all the details.

The first three principles promote anticipation and encourage us to challenge current assumptions and generate new interpretations from other vantage points. Principles 4 and 5 call for agile and flexible action with steady mental focus. All five principles together enable collective mindfulness that keeps us capable of coping with contradicting rationalities.

Trust and respect are keys for honest and open communication in teams.

Mindfulness is a topic explored by Ellen J. Langer ever since the 1970s (Langer, 1989), (Langer, 2015), (Ie, Ngnoumen, & Langer, 2014), applying a western definition of as '*an active state of mind characterized by novel distinction-drawing that results in being*

- *situated in the present;*
- *sensitive to context and perspective; and*
- *guided (but not governed) by rules and routines'.*

Kathleen M. Sutcliffe and Timothy J. Vogus have surveyed the status quo of organizational mindfulness research (Ie, Ngnoumen, & Langer, 2014, S. 407 ff.) and identified much need for more

inquiry in this area. Annette Gebauer and Fabian Brückner (Gebauer & Brückner, 2018) explored individual mindfulness training and their effects on organizations. KAMOS engages with both individual and organizational practices of mindfulness to encourage more mindful performance in the workplace.

Values

In their book *'Managing the Unexpected',* Weick and Sutcliffe wrote about the work of two important researchers, Yiannis Gabriel and Tony Watson (Weick & Sutcliffe, 2016, S. 121). Yiannis Gabriel suggested that values are '*fundamental beliefs about what is important, right, good, and desirable',* whereas Tony Watson took a more immediate look at sense-making, communication, and active practice in the face of the unexpected, which includes a sense for the meaning of values. He suggested: '*Culture is the system of meanings shared by the members of a group of people that define what is good and what is bad, what is right and what is wrong, and what the members of the group consider the appropriate way of thinking or acting.'*

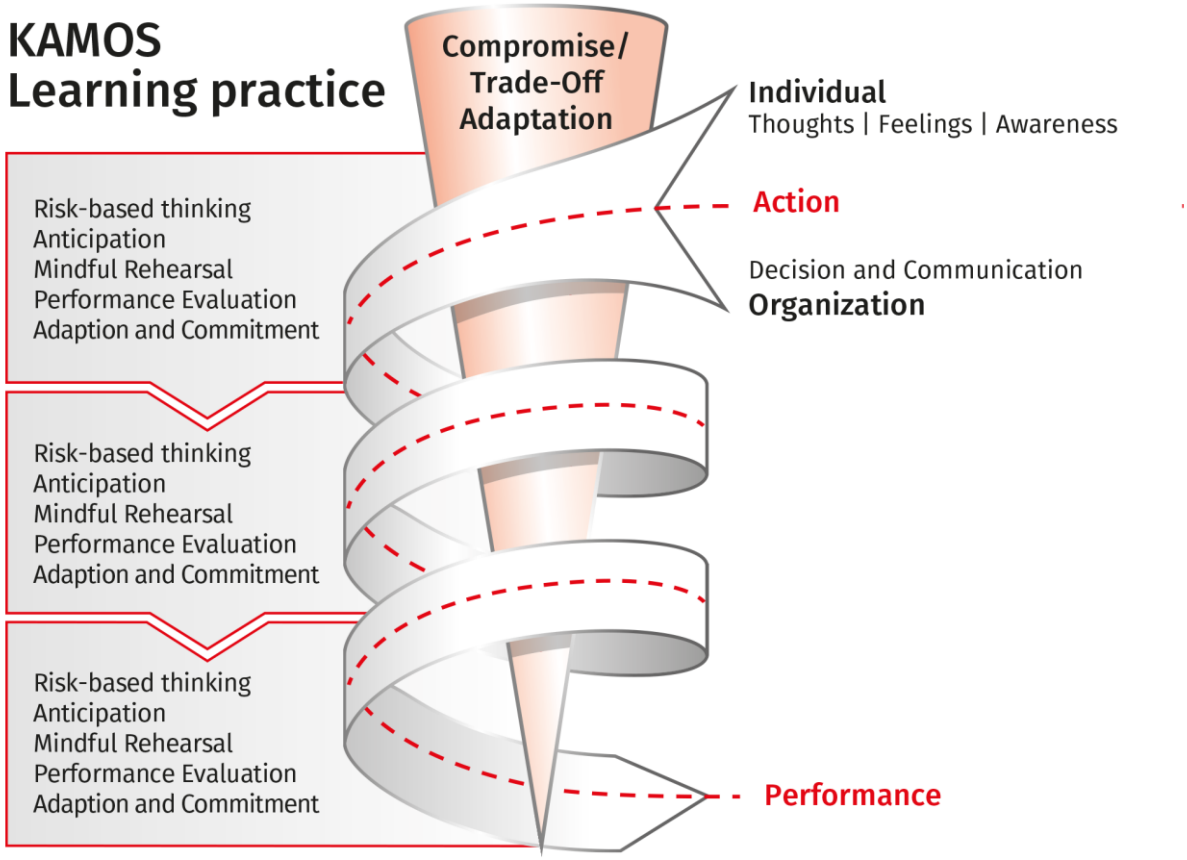
Culture is no static state, but a dynamic entity. It keeps evolving in constant processes of learning about what works and what does not work. The term 'safety culture' has entered common parlance to define the practices relating to safer work. When the principles of collective mindfulness are actually practised, the two seemingly contradictory values of stability and flexibility both need to exist – a contradiction reconciled by the KAMOS learning practice.

KAMOS: Circular Learning on Multiple Levels

The process of learning works on multiple levels and does not proceed in a linear direction.

Organizational Level	Individual Level	
- Structures	- Mindsets	
- Processes	- Risk-Based Thinking	
- Regulation	- Perceptions	
- Leadership	- Awareness	

KAMOS means learning as a team with a consistent focus on the actual planned or impending activity. KAMOS takes all factors and forces of influence seriously and intends to stimulate processes of learning even on levels beyond the specific scope in hand.



How you benefit from KAMOS®x-ch

Intensive preparation for difficult challenges that might entail risks for patients and/or staff.

Immediate recognition and response to the unpredictable consequences of unexpected turns of events.

New insights to be discussed, documented, integrated, and revalidated in a process of simulation.

Consistently risk-centric thinking, anticipating risks and avoiding unwanted consequences.

Support for and continuous improvement of organizational processes and practices.

Stimulation and active progress in the learning process to prepare for the difficulties of future tasks.

Several communication models tried and tested for their effectiveness in risk management integrate well with KAMOS:

6-R-Rule

(Source:https://www.thieme.de/statics/dokumente/thieme/final/de/dokumente/tw_pflegepaedagogik/abb-36-04-6-r-regel.jpg):

Originally proposed by Reinhardt Jünemann, a logistics and materials management specialist, the 6-R rule's flexibility and lack of a fixed definition has allowed its versatile adaptation to a diverse range of sectors and industries. The medical industry can benefit from:

F O D Foreign Object Damage (Weick & Sutcliffe, 2016, S. 50):

A routine procedure for identifying objects that could potentially cause harm. It covers two aspects: Becoming aware of signs that actual developments deviate from the expected course and acknowledging the fact that any system is fallible.

OODA-Loop (van Stralen, Spencer, & Inozu, 2017, S. 191 ff.):

Abbr.	Loop portion	Description and benefit OODA Loops
O	Observe	Observe the situation; after the 'act' function, the 'observe' function also matches what we predicted with what actually happened; this is not necessarily an in-depth evaluation. Discrepancy, interruption, or outlier
O	Orient	Process and synthesis of observations using culture, experience, and physiology; a real-world function and does not simply orient to the situation. When rules compete, conflict, or do not apply. Decentralization through the ability to integrate other OODA loops. Decision migration to those with less experience
D	Decide	Develop the hypothesis to test; decide on a course of action. Reduces need for excessive information
A	Act	Take the action and test the hypothesis; this is the interface between the decision-maker and the environment. Inexperienced individual, novel technique or situation, 'black swan event'
L	Loop	Note the effect of action in the 'observe' function. Continuous interaction with the real world Testing your possible worlds

Speaking Up *(Edmondson, 2012, S. 53)* ***:***

'Candid communication allows teams to incorporate multiple perspectives and tap into individual knowledge. This includes asking questions; seeking feedback; talking about errors; asking for help; offering suggestions; and discussing problems, mistakes, and concerns'.

STICC *(Weick & Sutcliffe, 2016, S. 35-36)**:***

Das Vorgehen nach diesem Modell ist geeignet, die Situationskompetenz der Betroffenen zu stärken und sicherzustellen, dass alle das Gleiche verstehen.

Abbr.	**Loop portion**	**Content**
S	Situation	In my view, that is what's going on here
T	Task	and that's what we should do.
I	Intent /Target	We should do it because of these reasons.
C	Concern	We should observe the factors xy and when they change, we have to adapt.
C	Calibrate	Please, talk now to me. The 5th step is sometimes rendered into 3 specific questions: Tell me, if you a) do not understand something, b) are not able to fulfill something or c) perceive something I do not see

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