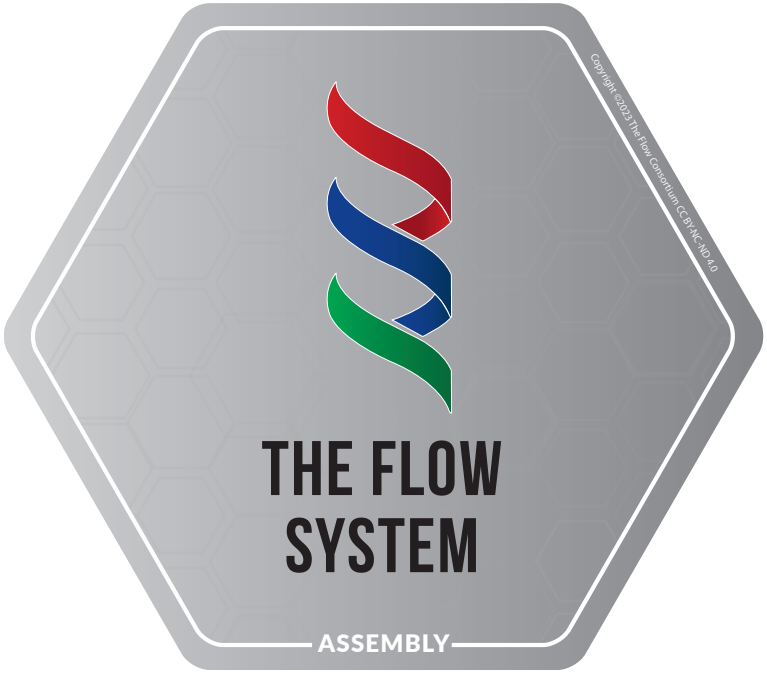
THE FLOW SYSTEM
ASSEMBLY
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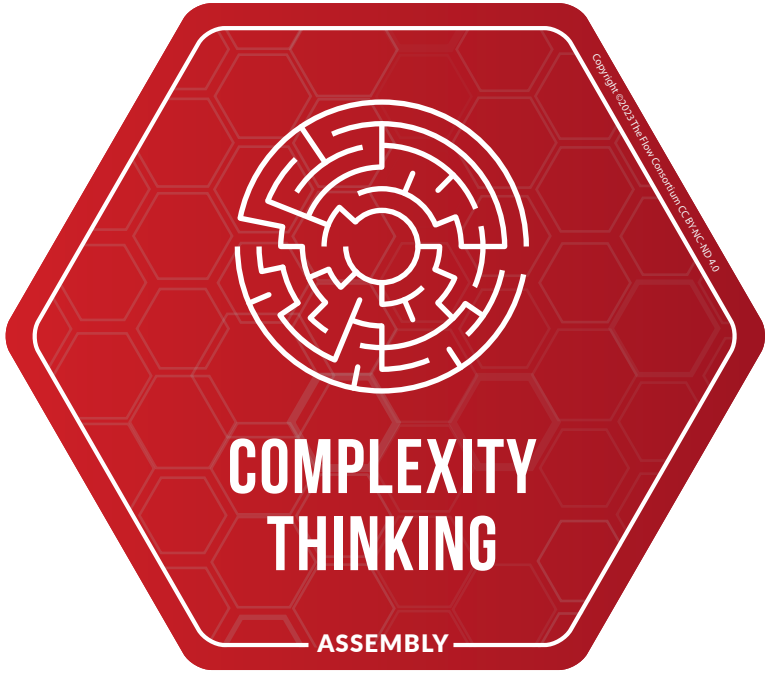
COMPLEXITY THINKING
ASSEMBLY
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DISTRIBUTED LEADERSHIP
ASSEMBLY
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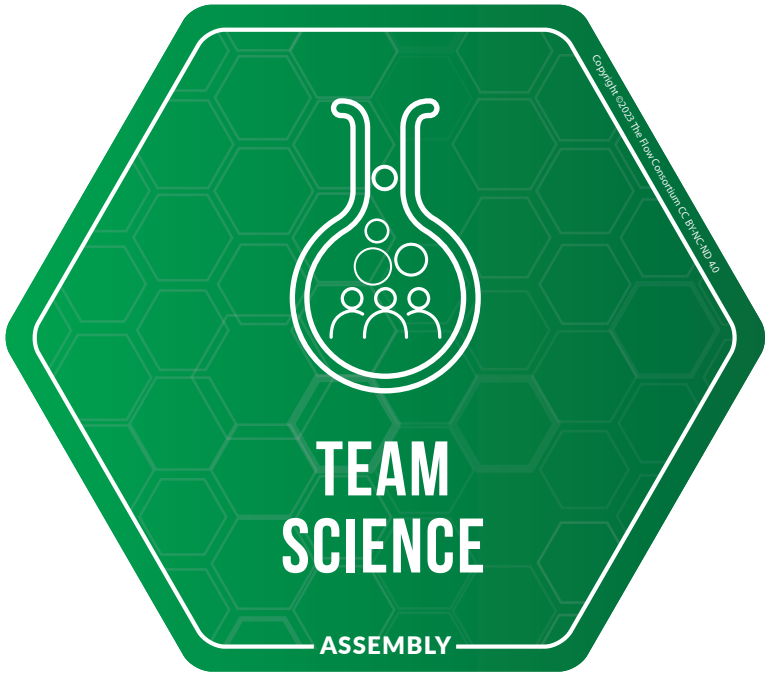
TEAM SCIENCE
ASSEMBLY
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Complexity Thinking
A new form of thinking to aid the understanding of uncertainty and complex adaptive systems.

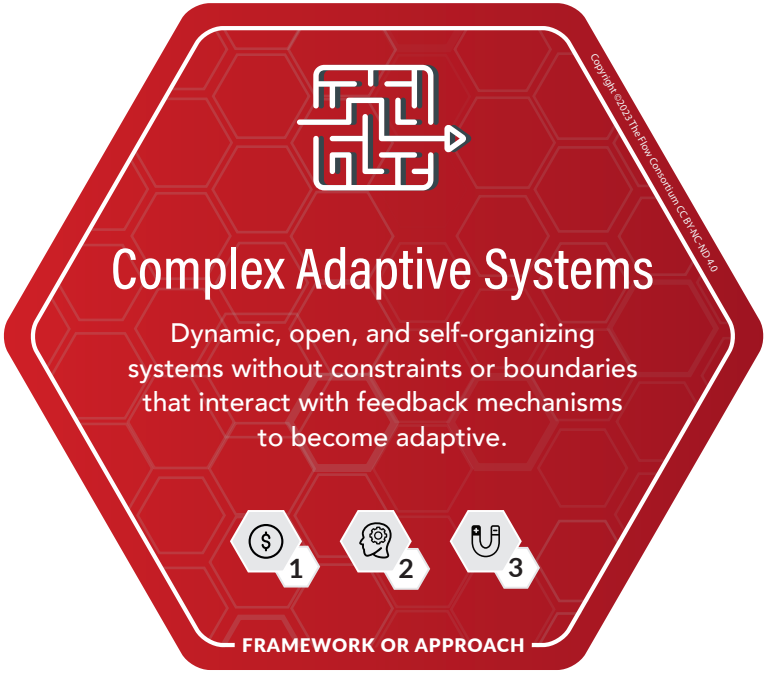
The Flow System
A system of learning and understanding of how to operate in complex environments. The Flow System consists of the Triple Helix of Flow that entangles the three helixes of complexity thinking, distributed leadership, and team science.

Team Science
A multidisciplinary field that studies all things related to collaborations, teams, and small groups in the workplace.

Distributed Leadership
A leadership model that integrates several leadership theories that address complexity and support team-based organizational structures. Distributed leadership is a holistic model that crosses functional lines within an organization while supporting several levels of analysis (individual, team, mult team system, executive/organizational).

Lean Thinking

The Flow System has the Toyota Production System and The Toyota Way as its foundational principles (customer first, respect for humanity, eliminate waste, continuous improvement, respect for people).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Complex Adaptive Systems
Dynamic, open, and self-organizing systems without constraints or boundaries that interact with feedback mechanisms to become adaptive.
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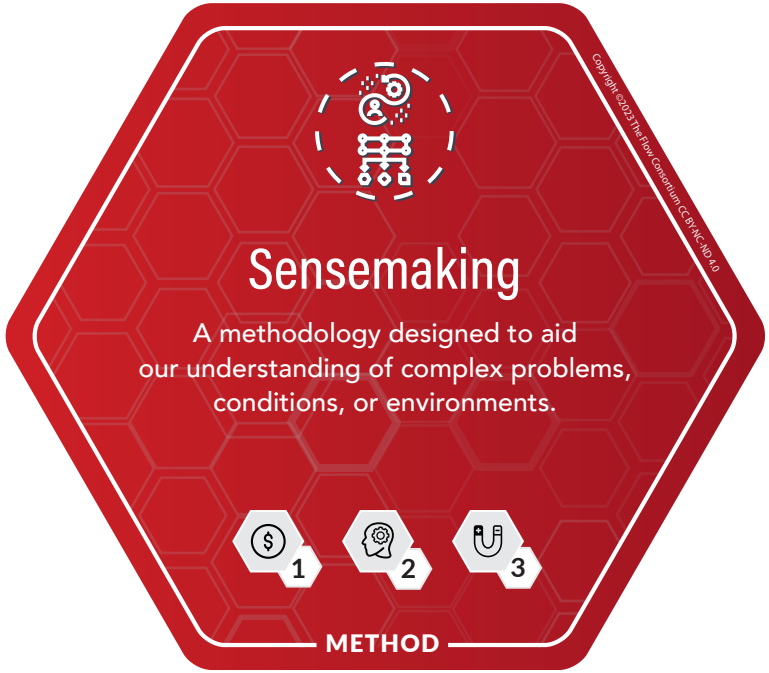
2
3
FRAMEWORK OR APPROACH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Sensemaking
A methodology designed to aid our understanding of complex problems, conditions, or environments.
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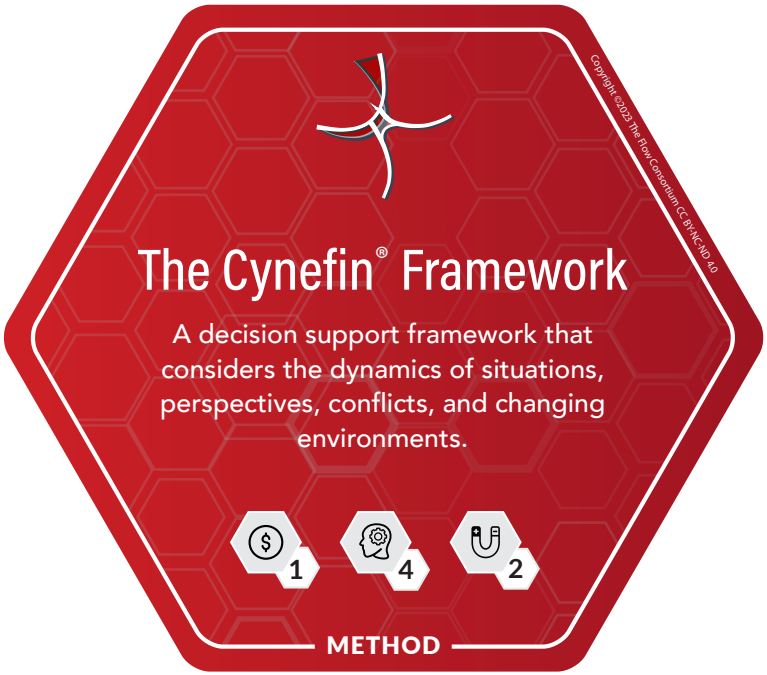
2
3
METHOD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The Cynefin® Framework
A decision support framework that considers the dynamics of situations, perspectives, conflicts, and changing environments.
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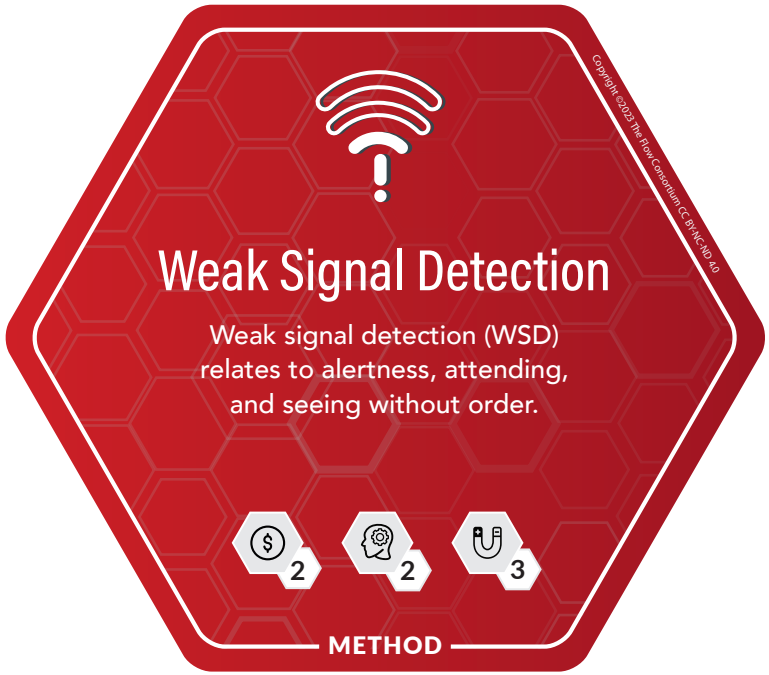
4
2
METHOD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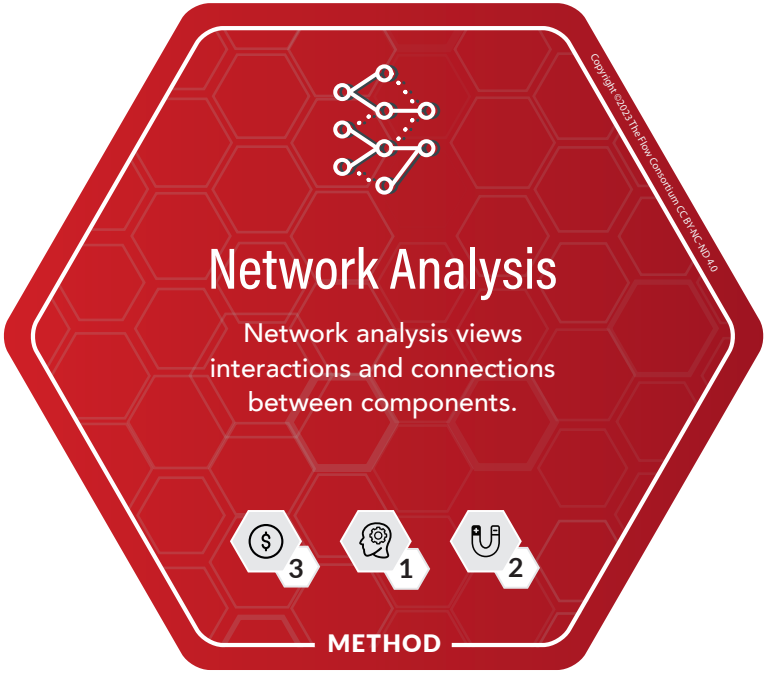
Weak Signal Detection
Weak signal detection (WSD) relates to alertness, attending, and seeing without order.
2
2
3
METHOD

Sensemaking
aids agents in their interpretation of ambiguous, complex, unknown or unexpected events involving multiple processes and interactions resulting in representative actions.

Complex adaptive systems (CAS)
are dynamic, open, and self-organizing systems with limited constraints and feedback mechanisms. CASs are dynamic, they continuously learn to adapt to external forces and emerge to new states to meet unique environmental needs.

Weak signal detection (WSD)
is a method for detecting signs of future changes at an early stage, and involves identifying opportunities and threats that exist in the environment.

Cynefin (kuh-nev-in)
is a Welsh word that signifies the multiple factors in our environment and the experiences that influence us in ways we can never understand. The Cynefin framework consists of three ontological states—order, complexity and chaotic—and five domains: clear, complicated, complex, chaotic, and aporia/confused (Snowden, 2021).


Network Analysis
Network analysis views interactions and connections between components.
3
1
2
METHOD
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Storytelling and Narratives
Knowledge creation through people externalizing their sense of understanding.
1
2
4
METHOD
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Empirical Process Control
Interchanges between organizational knowledge (knowledge of an organization) and individual knowledge (knowledge in an organization) require empirical process controls to deliver value to the customer.
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METHOD
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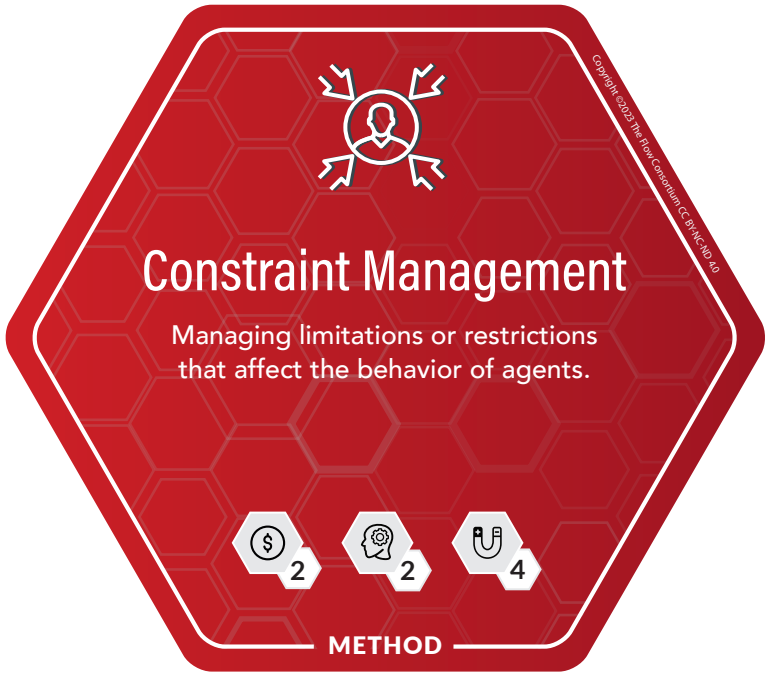
Constraint Management
Managing limitations or restrictions that affect the behavior of agents.
2
2
4
METHOD
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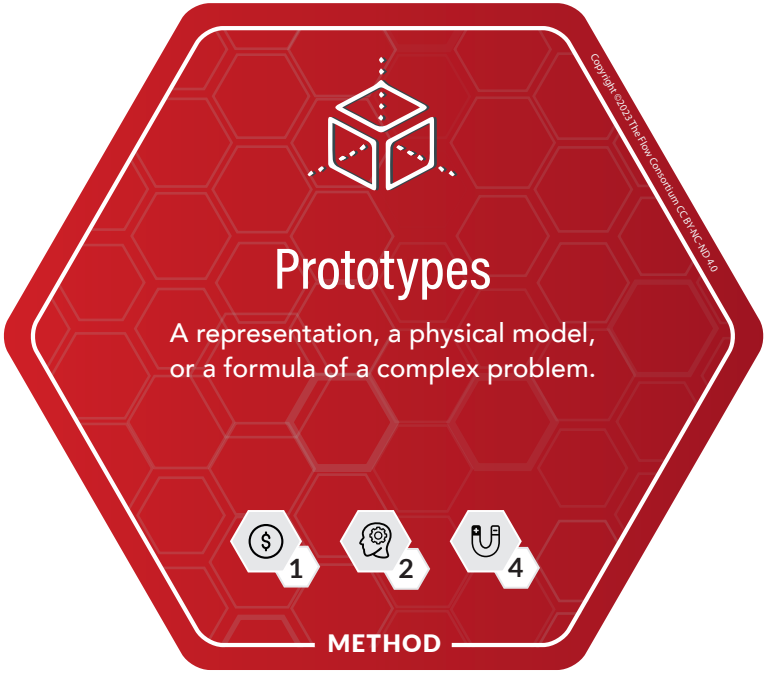
Externalization of people's experiences
and sense of understanding. Through narratives (a spoken or written account of connected events) and stories we can begin to form a more significant representation of what is occurring in complex environments.

Network analysis
allows us to view the interactions, or linkages, between components, such as in the interactions between teams or between organizations. Applying network analysis to social systems is known as social network analysis (SNS).

Constraints
affect the behaviors of agents. They are self-derived and cognitively constructed. Knowing when to implement enabling constraints and remove inhibiting constraints becomes essential for teams and organizations in complex environments.

The interchanges
between "knowledge of an organization" and "knowledge in an organization" require empirical process controls for delivering value. Four general steps: empirical observation, theory development/refinement, operationalization and empirical testing, and theory testing/modification.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Prototypes
A representation, a physical model, or a formula of a complex problem.
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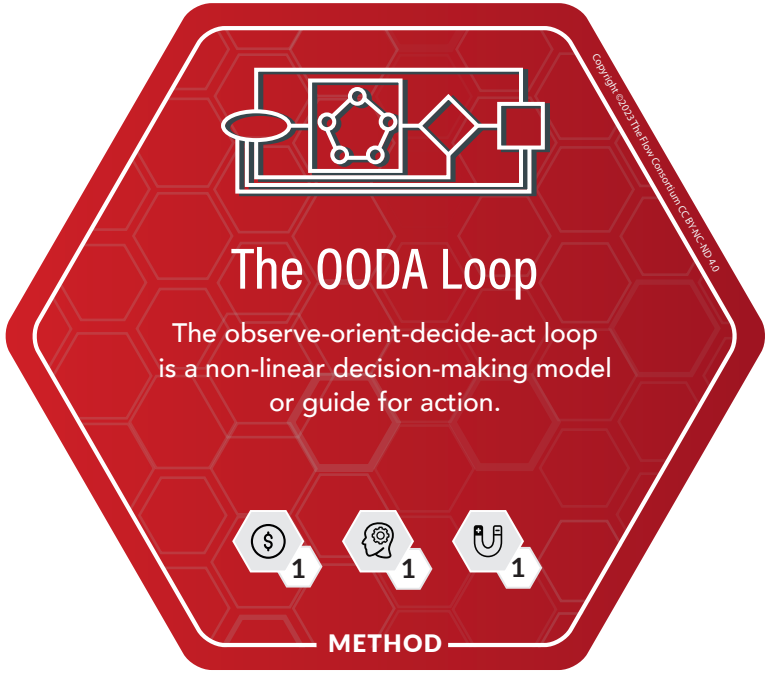
4
METHOD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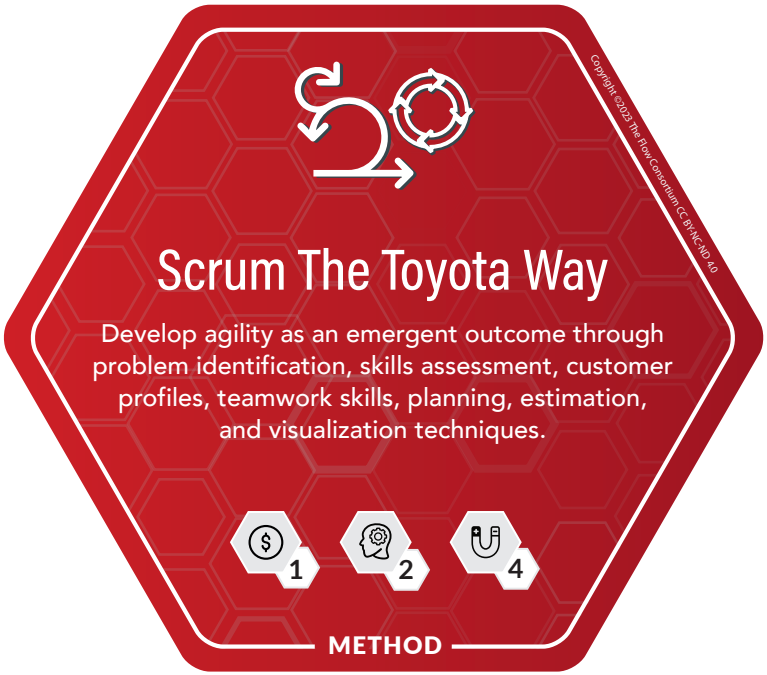
The OODA Loop
The observe-orient-decide-act loop is a non-linear decision-making model or guide for action.
1
1
1
METHOD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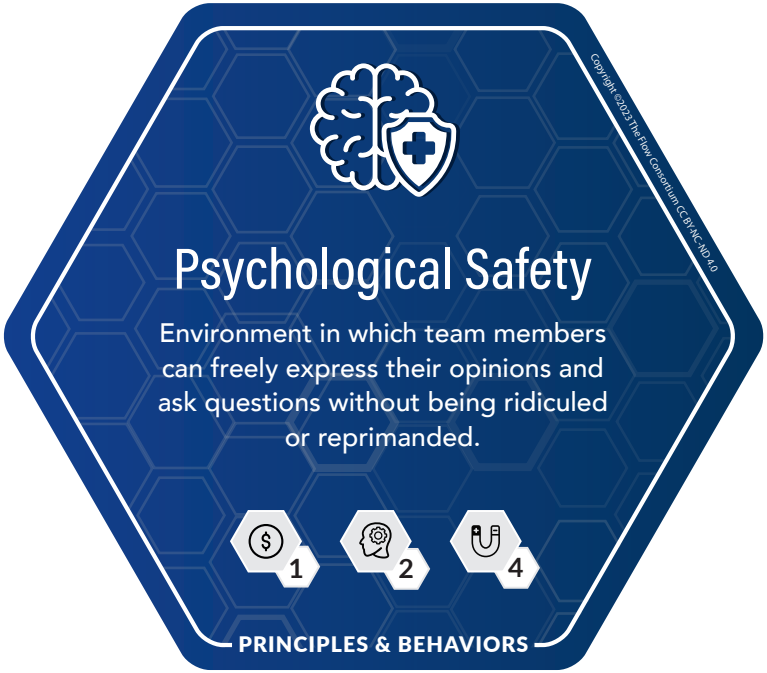
Scrum The Toyota Way
Develop agility as an emergent outcome through problem identification, skills assessment, customer profiles, teamwork skills, planning, estimation, and visualization techniques.
1
2
4
METHOD

The OODA loop
is a dynamic depiction of one's decision-making processes. There are four primary stages (observe, orient, decide, act) with feedback and feedforward loops. The OODA loop is not linear and entry can begin at any of the four stages, depending on the context or situation.

A prototype
is a representation, a physical model, or a formula of a complex problem. Through continuous testing and refinement, prototypes make a part of a complex problem concrete, contributing to a better understanding of complexity.

Scrum the Toyota Way
is a training program designed to enable organizations to understand the boundaries between systems thinking approaches and complexity thinking strategies through the application of the Scrum framework as a behavioral pattern, as well as a range of tools and cognitive skills.


Psychological Safety
Environment in which team members can freely express their opinions and ask questions without being ridiculed or reprimanded.
1
2
4
PRINCIPLES & BEHAVIORS
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Active Listening
A pattern of listening. Active listening is a communication method that allows all parties the benefit of understanding the message.
1
1
3
METHOD
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Leader's Intent
Leaders focus on desired outcomes (intent and guidance) rather than specific results. Individuals and teams are free to find their way.
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1
3
PRINCIPLES & BEHAVIORS
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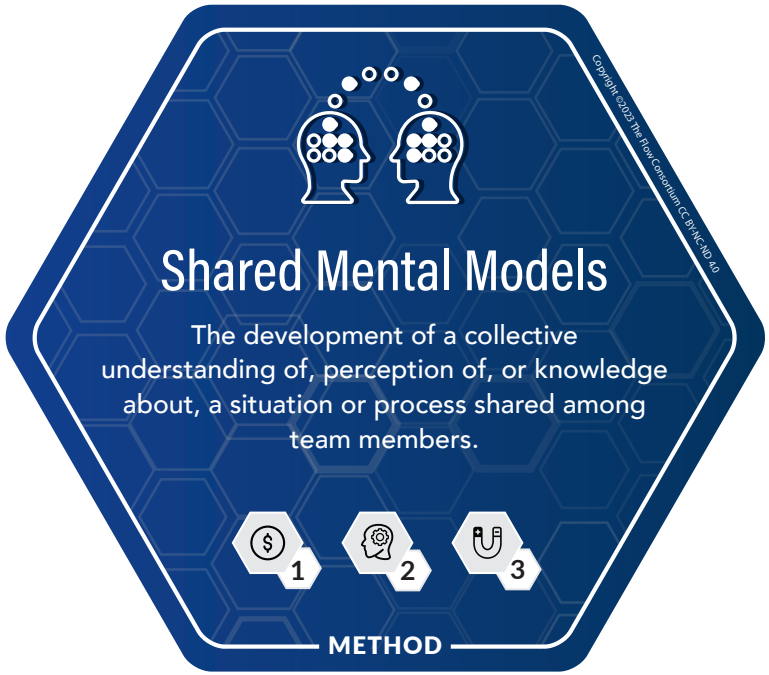
Shared Mental Models
The development of a collective understanding of, perception of, or knowledge about, a situation or process shared among team members.
1
2
3
METHOD
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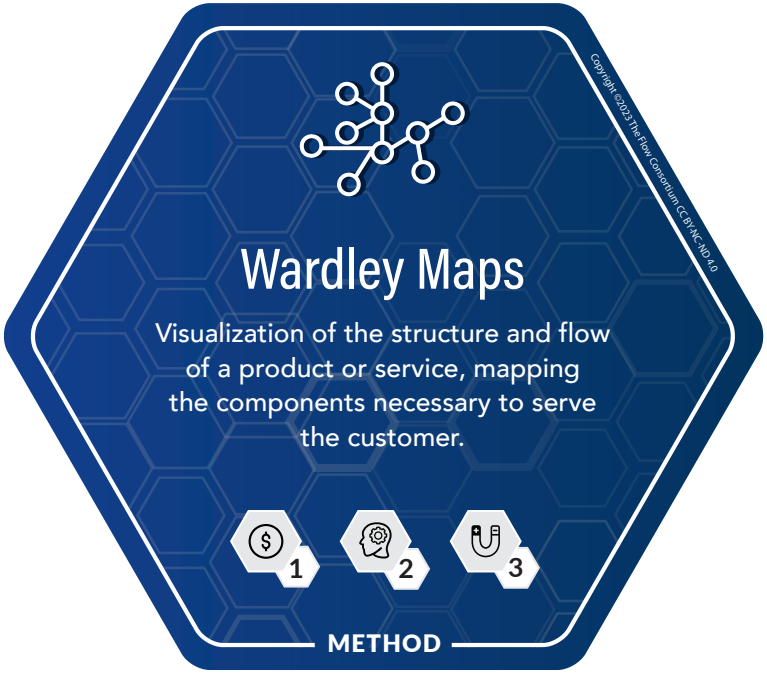
Active listening is an essential leadership characteristic that can be developed. It is the process of listening attentively while someone else speaks, paraphrasing and reflecting what was said, and withholding judgment or giving advice.

Psychologically safe environments are where team members can freely express their opinions and ask questions without being ridiculed. The best descriptor is that team members and employees are free to be candid (Edmondson, 2019) as long as their views and criticisms remain professional.

Shared mental models (SMM) represent the cognitive structures shared between members. All members must have a shared understanding of the problem, processes, goals, definitions, and available resources. Members also need to know the competencies and skills of other members.

Leaders must be capable of communicating their vision and expected outcomes (intent and guidance) to their followers and teams. Leaders fix the environment, not the people. Leaders make it safe to fail, not stressful. Leaders acknowledge competencies and skills.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Wardley Maps
Visualization of the structure and flow of a product or service, mapping the components necessary to serve the customer.
1
2
3
METHOD


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Decision Making
Decision making is a collective activity involving discussion and debate to make the best selection among several alternative options.
1
2
1
METHOD


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A
B
C
Bias Toward Action
A leadership technique that empowers both leaders and teams to make their own decisions in times of uncertainty.
1
1
1
PRINCIPLES & BEHAVIORS


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Collaboration
The process of two or more people, teams, or organizations working together to complete a task or achieve a goal or an outcome.
1
2
3
PRINCIPLES & BEHAVIORS

Decision-making
is a continuous process that draws on our abilities, experiences, and motives. Team decision-making involves an agreement of the problem, access to all necessary information, resources and the requisite knowledge skills, and abilities of team members.

Wardley maps
visualize the structure of a product or service, support a leader's situational awareness, aids in developing shared mental models, and highlights activities that are visible and invisible to the customer.

A form of interaction
among knowledge creators to complete a task or goal. Effective collaboration requires communication, active listening, team planning, knowledge sharing, diversity, requisite resources, shared goals, and an ability to be creative.

Bias towards action
is a leadership technique that empowers both leaders and teams to make their own decisions in times of uncertainty. Developing a bias towards action is the combination of a willingness to take initiative, act boldly, and accept risk.


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Coaching
Coaching is a role that is designed to assist employees and team members in increasing their capacity, allowing them to manage their processes, to develop their full potential, and to become independent.
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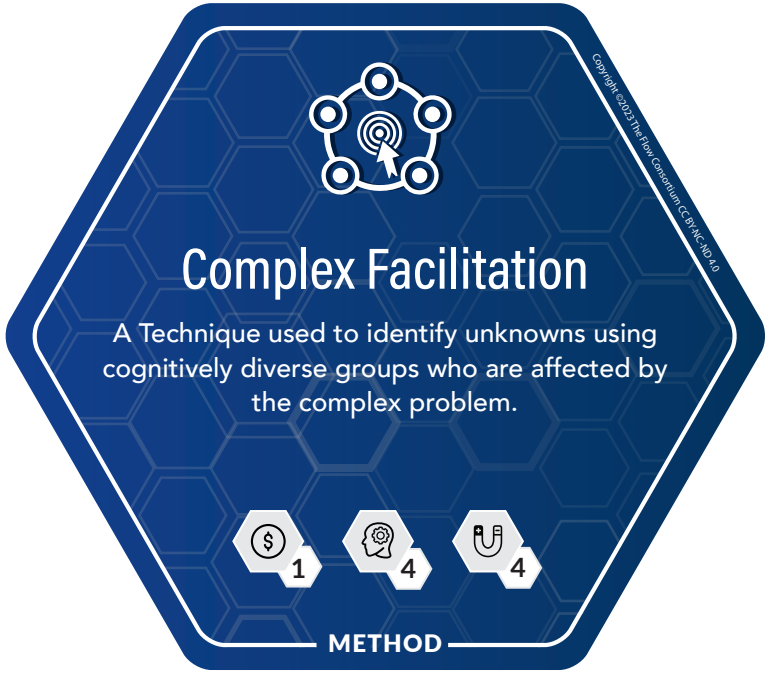
METHOD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Complex Facilitation
A Technique used to identify unknowns using cognitively diverse groups who are affected by the complex problem.
1
4
4
METHOD


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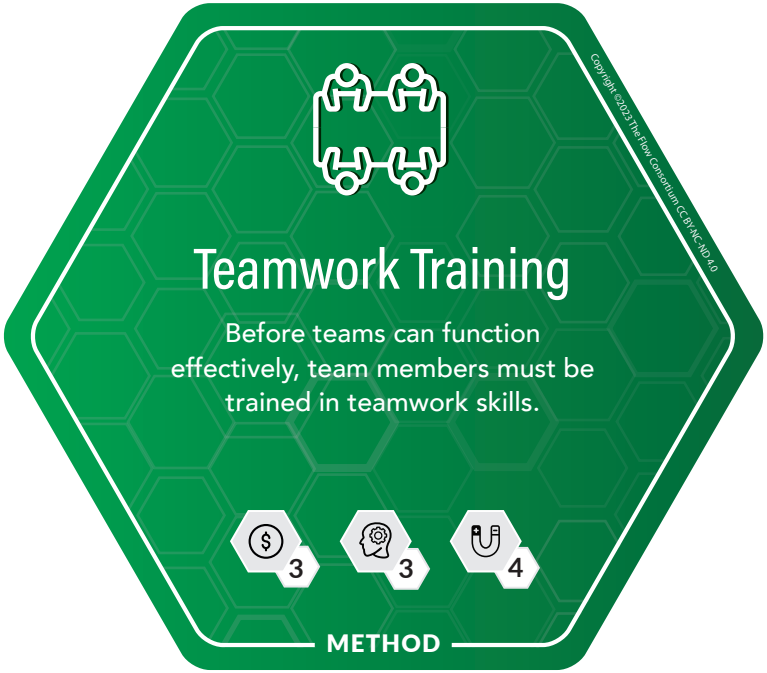
A
B
C
Organizational Design
A step-by-step methodology that identifies dysfunctional aspects of workflow, procedures, structures, and systems, and realigns structures to fit current organizational goals.
1
2
2
METHOD

Complex facilitation
techniques purposefully introduce uncertainty into the process. Complex facilitation is designed to get participants comfortable with navigating uncertainty, the unknown, ambiguity, etc. It is designed to get participants uncomfortable with being uncomfortable.

Coaching
involves developing skills and techniques, motivating team members, instilling meaning and clarity to work, providing feedback, helping others to coordinate activities, and supporting team members to become self-leading and independent.

Organizational design
analyzes processes, people, and movement. The following steps aid leaders in understanding:
Step 1: Understand process from end to end.
Step 2: How people interact with the process.
Step 3: Understand how people move in relationship to the process, work, or objects.
Step 4: Movement of objects and materials.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Teamwork Training
Before teams can function effectively, team members must be trained in teamwork skills.
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3
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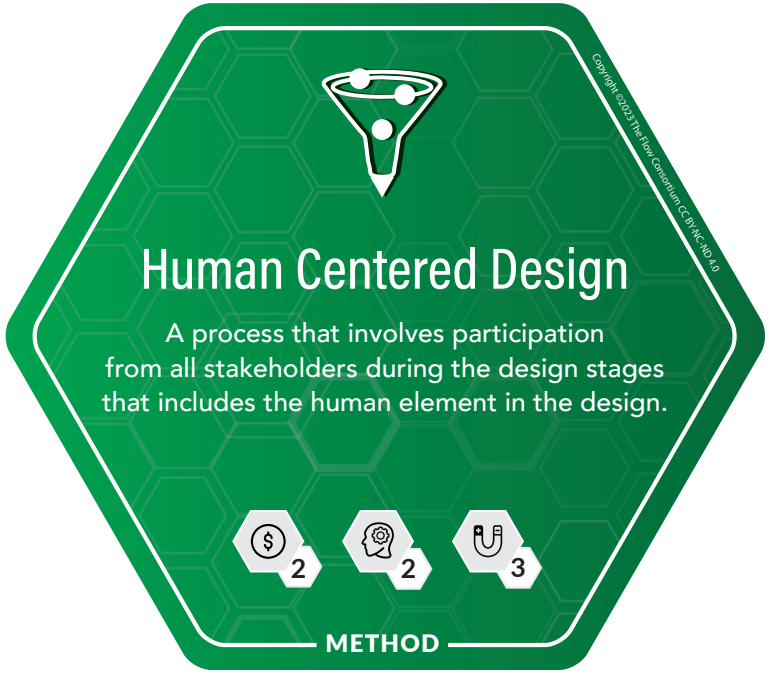
METHOD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Human Centered Design
A process that involves participation from all stakeholders during the design stages that includes the human element in the design.
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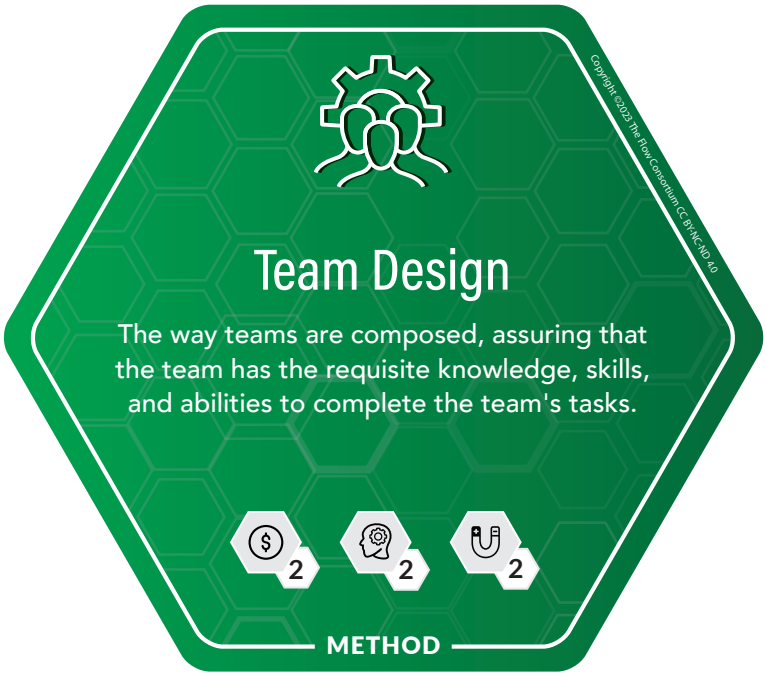
METHOD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Team Design
The way teams are composed, assuring that the team has the requisite knowledge, skills, and abilities to complete the team's tasks.
2
2
2
METHOD


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Goal Identification
The desired outcome expected over a specific period.
2
2
3
METHOD

Human-centered design
involves participation from all stakeholders (e.g., community members, customers, designers, employees, manufacturers, suppliers) during the design stages. Human-centered design places the uset, customer, and stakeholders at the center of the design process.

Teamwork Training
is an approach in which teams are used to increase individual procedural knowledge and proficiency in doing a job (taskwork), along with developing interpersonal skills (teamwork), to function cohesively as a unit or team (performance).

Goal identification
is the desired outcome expected over a specific period. Goals occur at different levels of analysis. Proximal goals are specific to individual teams, and distal goals connect proximal goals to broader organizational outcomes.

Team Design
ensures team members have the knowledge, skills, and abilities to accomplish their stated tasks. Team design takes into consideration: the type of team, type of tasks, technical skills required, team size, teamwork skills of members, and goal alignment.


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Situational Awareness
The perception one has of their environmental elements.
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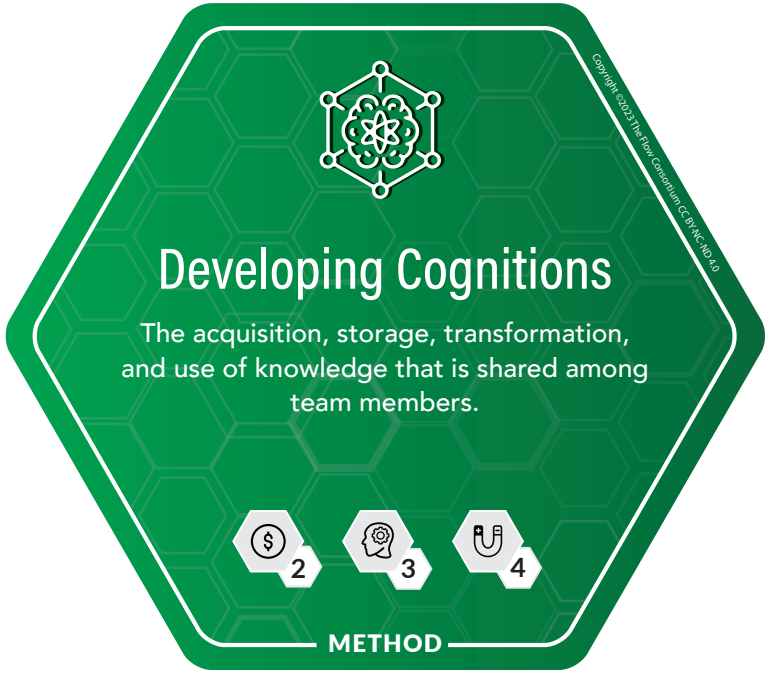
METHOD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Developing Cognitions
The acquisition, storage, transformation, and use of knowledge that is shared among team members.
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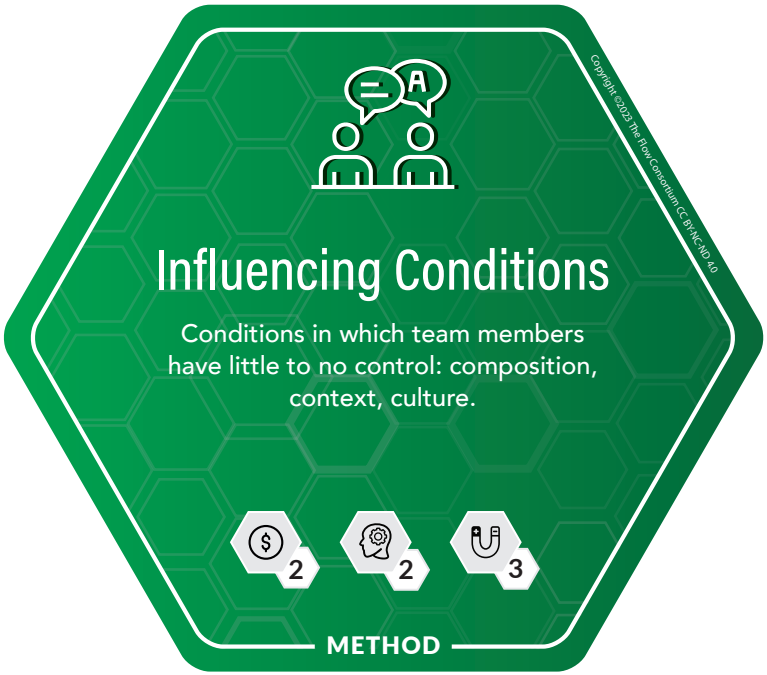
METHOD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Influencing Conditions
Conditions in which team members have little to no control: composition, context, culture.
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2
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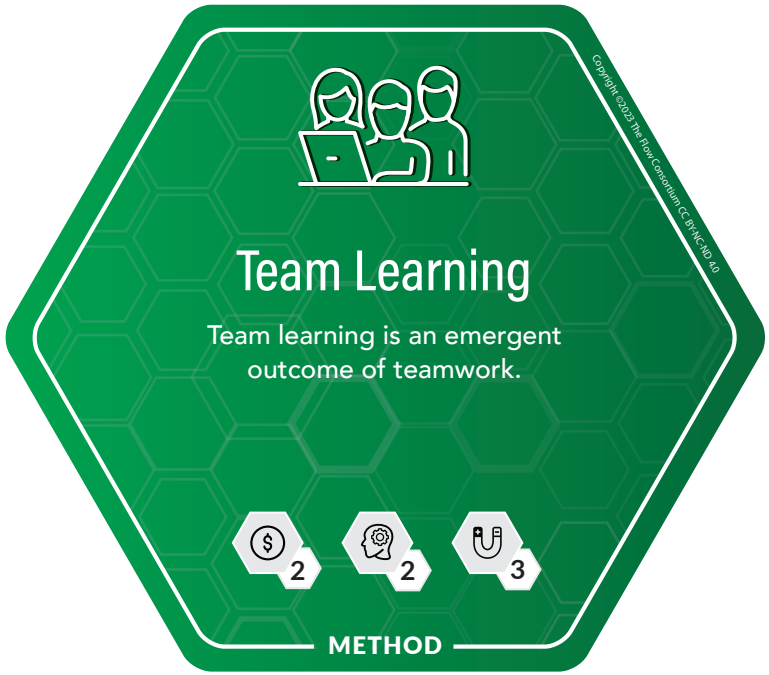
METHOD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Team Learning
Team learning is an emergent outcome of teamwork.
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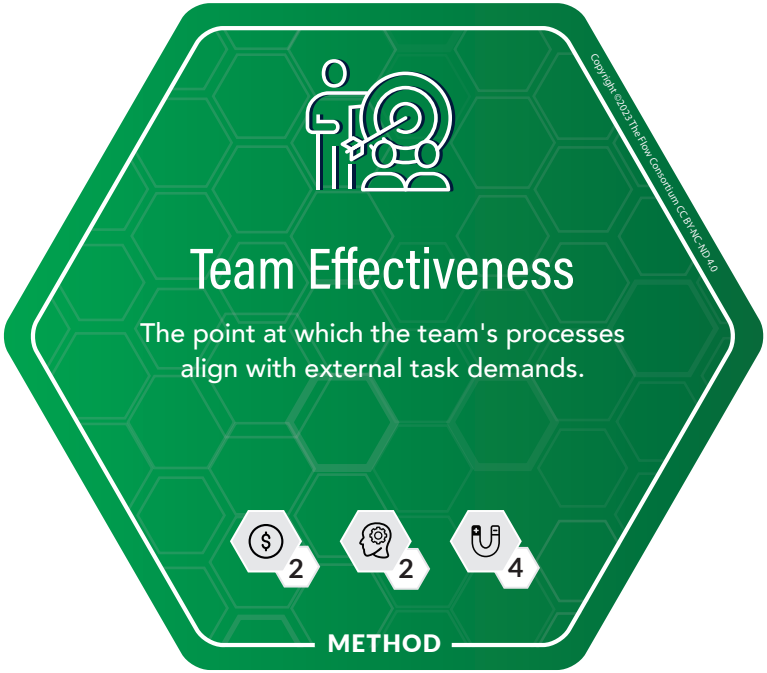
2
3
METHOD

Individually, developing cognitions involves developing knowledge, skills, and dispositions. At the team level, members need to know: who is working on what task; members' knowledge, skills, and experiences; what external contacts members might have; and what resources are available to each member.

Situational awareness involves perceptions of elements in the environment, comprehension of the current situation, and projection of future states.

The acquisition of knowledge, skills, and abilities of team members through interactions and experience as an ongoing reflective process. A shared outcome of team member interactions.

Team members have little control over influencing conditions: composition, culture, context. Team members need to manage core processes: cooperation, conflict, coordination, communication, coaching, and cognition.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Team Effectiveness
The point at which the team's processes align with external task demands.
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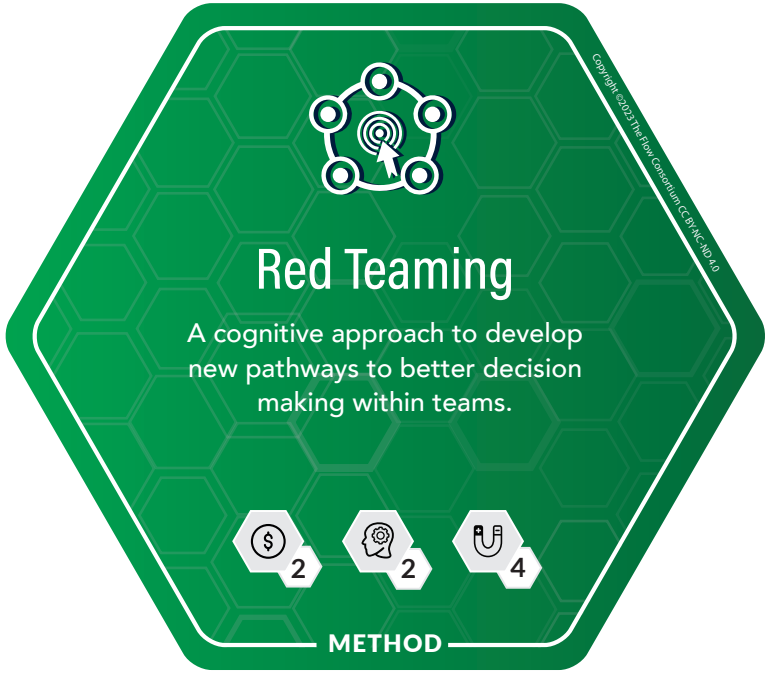
2
4
METHOD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Red Teaming
A cognitive approach to develop new pathways to better decision making within teams.
2
2
4
METHOD


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Multiteam Systems
Two or more teams working toward a common superordinate goal (distal goal, MTS goal).
2
3
4
METHOD

Red teaming
rigorously challenges plans, policies, systems, or assumptions by adopting an adversarial approach. Red teaming utilizes a set of tools and techniques designed to mitigate cognitive bias, enhance critical thinking skills, create self-awareness, and improve empathy.

Team effectiveness (TE)
is a function of teamwork (TW), taskwork (TK), performance (PF), team member satisfaction (CV), and customer satisfaction (CV).
TE = TW + TK + PF + CV

Multiteam systems (MTS)
are defined as two or more teams working towards a common superordinate goal (distal goal or MTS goal). Multiteam systems are structured so that each team has its own set of goals (proximal goals) and has at least one shared goal with the MTS (distal goal).