

A person is shown in silhouette, sitting in a meditative lotus position on the peak of a mountain. The background features a dramatic sunset or sunrise with a bright sun low on the horizon, casting a warm, golden glow across the sky and the silhouetted mountain ranges. The sky is filled with soft, wispy clouds. The overall mood is peaceful and contemplative.

Role of mindfulness for building an external mind for group consensus- A quasi-experimental approach

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Disclaimer: The paradox of professors presenting on mindfulness



Abstract

Role of mindfulness for building an *external mind* for group consensus- A quasi-experimental approach

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The new world signals a shift in power accumulation from individual positions to networks. Such a shift requires collaboration, ***collective consensus*** and key skills. The role of dialogue in extending reach to the audience and effectiveness in building the foundations of group consensus. Literature survey on **collective mindfulness** and **systems thinking** is reflected upon to establish a gap in research. It then discusses and compares the methods used in co-creation useful in creating such a consensus. In particular, Stafford Beers ***Team Syntegrity*** is illustrated and critically examined for its effectiveness in ***policy making*** and bringing out a ***shared vision***. We argue that the **co-creative** process may improve significantly with an explicit “collective mindfulness” intervention. Results from a **quasi-experimental study** with 24 students are analysed to understand how such an intervention can improve convergence to a consensus faster. We finally discuss the implications of the study in the field of strategy, education and policy.

- **Keywords:** Mindfulness, Policy, Strategy, knowledge management, cybernetics, Pali

Literature Survey

Source	Link	Description	Key finding	Possible Gap
Wolpert,1999	https://arxiv.org/abs/cs/9908014	Collective intelligence as a multi agent system where each agent runs a reinforcement learning algorithm	Collective intelligence as a machine learning algorithm where there is little or no centralized control. Inspiration from social systems.	Human intelligence and communication
Galesic et.al 2023	https://doi.org/10.1098/rsif.2022.0736	Beyond collective intelligence: Collective adaptation	Answering questions such as why collectives sometimes fail to reach seemingly obvious solutions, how they change their strategies and network structures in response to different problems and how we can anticipate and perhaps change future harmful societal trajectories.	Importance of interaction with dialogue
Leimeister, 2010	https://link.springer.com/article/10.1007/s12599-010-0114-8	Collective Intelligence	“How can people and computers be connected so that – collectively – they act more intelligently than any individuals, groups, or computers have ever done before?” - Swarm intelligence	IT enabled research in social web
Gregg,2010	https://dl.acm.org/doi/abs/10.1145/1721654.1721691	Designing for collective intelligence	A collective intelligence application is one that harnesses the knowledge and work of its users to provide the data for the application and to improve its usefulness.	Human intelligence
Woolley et.al, 2015	https://doi.org/10.1177/0963721415599543	Collective Intelligence and Group Performance	Two influences on a group’s collective intelligence: (a) group composition (e.g., the members’ skills, diversity, and intelligence) and (b) group interaction (e.g., structures, processes, and norms). We also call for more research to investigate how social interventions and technological tools can be used to enhance collective intelligence.	Tasks instead of dialogue for interaction in groups

Collective intelligence & self-organization

Source	Link	Description	Key finding	Possible Gap
Leitao etal, 2022	https://doi.org/10.3390/electronics11193213	C ollective Intelligence in Self-Organized Industrial Cyber-Physical Systems	Challenges for implementing collective intelligence in industrial CPS namely decentralization, emergency, intelligent machines and products, infrastructures and methods, and human integration and ethics	Dialogue
<u>Heylighen</u> ,2013	https://doi.org/10.1007/978-3-642-32817-6_10	I nvestigated by means of multi-agent computer simulations and social psychological experiments for complex adaptive systems	Self-organization and collective intelligence were the basic mechanism is the reinforcement of synergetic interactions and the suppression of conflictual ones.	Rhythm and discord during interactions
<u>J.Salminen</u> ,2012	https://arxiv.org/abs/1204.3401	C ollective Intelligence in Humans: A Literature Review	Micro, macro and emergence levels for collective intelligence. Human, trust, swarm intelligence , bias etc.	importance of mode of interaction i.e. dialogue
Banathy,2003	https://www.jstor.org/stable/44428815	D ialogue: The Method of Choice in Collective Communication	Story of dialogue and evolutionary journey and it's importance in our evolution of consciousness. The Greek Agora project. Shared mind and collective intelligence	The Indian knowledge system
F. Dignum et.al, 2001	10.1093/jigpal/9.2.289	C reating collective intention through dialogue	4 stages of cooperative problem solving and intervention by persuasion using structured dialogue	Size of team
I. Roberts,2023		H ow Can Collective Intelligence Enhance Democracy?	Human-centred design principles for empowering individuals engaging with deliberative technologies	Ancient systems

Collective intelligence & dialogue

Source	Link	Description	Key finding	Possible Gap
Benkler,2008	https://libros.metabiblioteca.org/handle/001/277	Collective intelligence: creating a prosperous world at peace	Emerging models are explored for digital deliberative democracy, self-governance, legislative transparency, true-cost accounting, and the ethical use of open sources and methods.	Method of dialogue
Surowiecki,2004	https://www.asecib.ase.ro/mps/TheWisdomOfCrowds-JamesSurowiecki.pdf	Wisdom of crowds	The aggregation of information in groups, resulting in decisions that, he argues, are often better than could have been made by any single member of the group.	Method of intelligence transmission, dialogue
Dyer,2020		The Return of Collective Intelligence: Ancient Wisdom for a World out of Balance	Draws on recent findings in New Paradigm science, traditional teachings from indigenous groups from North, South, and Central America and Siberia, as well as sacred geometry, deep ecology, and expanded states of consciousness	
S,Kumar		Quantum Sanskrit: A Self-Evolving Fractal-Harmonic Linguistic Framework for AI	Ancient texts and AI applications	Dialogue as a method of transmission

Comparative Chart

Types of learners	Understands	Knowledge gains	Teaching method?	Teaching topic
Advance learner	instantly just listening	listening from others & thinking himself	Letters & words	process
Intermediate learner	With explanation	listening from others, not thinking himself	Sentence and parts of speech	loss, process
Slow learner	With association, indulgent, close attachment of good friends	Not listening from others, nor thinking himself	Word-meaning and explanation of idea	benefit, loss, process

^[1] A advanced leaner has two understandings from what is listened and what is analyzed, intermediate learner has only understanding from what is listened but not have understanding from analysis i.e. he don't have capacity to analysis he needs explanation, but a low learner don't have understanding either from direct listening or analysis, thus he should be guided. Nettipakaraṇa p.8

^[2] The Buddha teaches an advanced learner through letters (akkhara) and words (pada), an intermediate learner through sentence (vyañjana) and parts of speech (ākāra) and a slow learner through word-meaning (nirutti) and explanation (niddesa). Ibid. p.9

^[3] Buddha teaches (nissaraṇa) to an advance learner, (ādinava) and (nissaraṇa) to an intermediate learner and (assāda), (ādinava) and (nissaraṇa) to a slow learner. Ibid. n.7

Meanings of Three Learners in Actual Pali Terms:

- Advance Learner: Who understands instantly when something is revealed (Ugghaṭitaññū)
- Intermediate Learner: Who knows when something is explained (Vipaṇcitaññū)
- Slow Learner: Who needs to be guided (Neyya) because he can't understand easily.
- Ref.
- Kaccāyana. (1961). *Netti-pakaraṇa: With extracts from Dhammapāla's commentary* (E. Hardy, Ed.). Pali Text Society. p.8
- Kaccāyana. (1977). *The Guide (Netti-pakaraṇa)* (Bhikkhu Ñāṇamoli, Trans.). Pali Text Society.

2. Characteristics of Three Learners:

- Who understands the doctrine just at the time when it was uttered (udāhaṭṭavelāyaṃ) is an advanced learner.
- Who understands the comprehended words (saṃkhittena bhāsitassa) are analyzed elaborately (vitthārena vibhājiyamāne) is an intermediate learner.
- Who understands the doctrine during questioning (paripucchato), concentrating (yoniso manasikaroto), associating with a good friend (kalyāṇamitte sevato bhajato payirupāsato) in such serial process (evaṃ anupubbena), is a slow learner (neyya).
- Ref.

Based on the Puggalapaññatti p.41, also translated by B. C Law p.58)

3. There three kinds of understanding:

- Understanding from what is listened (sutamayī paññā): Understanding from what is listened from the teacher (satthā) or a classmate similar to teacher (garuṭṭhānīyo sabrahmacārī), this understanding comes from others (paratoghosā).
- Understanding from the thinking or analysis (cintāmayī paññā): Understanding based on the analysis on what has listened, this understanding comes from himself (paccattasamuṭṭhitā).
- Understanding from cultivation (bhāvanāmayī paññā): Understanding from cultivation through previous two understanding, thus this understanding comes from both from himself and others but with a attention with to its source (yoniso manasikāra).

Pali Text References:

- Characteristics of three learners Pali text:

Katamo ca puggalo ugghaṭṭitaññū? Yassa puggalassa saha udāhaṭṭavelāya dhammābhisamayo hoti. Ayaṃ vuccati puggalo ugghaṭṭitaññū.

Katamo ca puggalo vipaṇcitaññū? Yassa puggalassa saṃkhittena bhāsitaṃ vitthārena atthe vibhajiyaṃ dhammābhisamayo hoti. Ayaṃ vuccati puggalo vipaṇcitaññū.

Katamo ca puggalo neyyo? Yassa puggalassa uddesato paripucchato yonisomanasikaroto kalyāṇamitte sevato bhajato payirupāsato evaṃ anupubbena dhammābhisamayo hoti. Ayaṃ vuccati puggalo neyyo. Puggalapaññatti p.41, also quoted in *Netti-aṭṭhakathā p.24, Chaṭṭha Saṅgāyana CD-ROM Version 3.0*; Vipassana Research Institute, Dhammagiri, 1999. Retrieved from <https://www.tipitaka.org> . See also A.ii.p.135.

- Three kinds of understanding pali text:

yassa satthā vā dhammaṃ desayati aññataro vā garuṭṭhānīyo sabrahmacārī, so taṃ dhammaṃ sutvā saddham paṭilabhati. Tattha yā vīmaṃsā ussāhanā tulanā upaparikkhā, ayaṃ sutamayī paññā. Tathā sutena nissayena yā vīmaṃsā tulanā upaparikkhā manasānupekkhā, ayaṃ cintāmayī paññā. Imāhi dvīhi paññāhi manasikārasampayuttassa yaṃ ñāṇaṃ uppajjati dassanabhūmiyaṃ vā bhāvanābhūmiyaṃ vā, ayaṃ bhāvanāmayī paññā.

Paratoghosaṃ sutamayī paññā. Paccattasamuṭṭhitā yoniso manasikārā cintāmayī paññā. Yaṃ parato ca ghosena paccattasamuṭṭhitena ca yonisomanasikārena ñāṇaṃ uppajjati, ayaṃ bhāvanāmayī paññā.

- Three understandings in three learners Pali text

Yassa imā dve paññā atthi sutamayī cintāmayī ca, ayaṃ ugghaṭṭitaññū. Yassa sutamayī paññā atthi, cintāmayī natthi, ayaṃ vipaṇcitaññū. Yassa neva sutamayī paññā atthi na cintāmayī, ayaṃ neyyo. Nettipakaraṇa p.8

- Teaching methods of three learners Pali text:

Tattha bhagavā akkharehi ca padehi ca ugghaṭṭeti, byañjanehi ca ākārehi ca vipaṇcayati, niruttīhi ca niddesehi ca vitthāreti. Tattha ugghaṭṭanā ādi, vipaṇcā majjhe, vitthāraṇā pariyosānaṃ. Soyaṃ dhammavinayo ugghaṭṭiyanto ugghaṭṭitaññūpuggalaṃ vineti, tena naṃ āhu “ādikalyāṇo”ti. Vipāṇcīyanto vipaṇcitaññūpuggalaṃ vineti, tena naṃ āhu “majjhekalayāṇo”ti. Vitthāriyanto neyyaṃ puggalaṃ vineti, tena naṃ āhu “pariyosānakalyāṇo”ti. Ibid. p.9

- Teaching contents of three learners Pali text:

Tattha bhagavā ugghaṭṭitaññussa puggalassa nissaraṇaṃ desayati, vipaṇcitaññussa puggalassa ādīnavaṇca nissaraṇaṇca desayati, neyyassa puggalassa assādaṇca ādīnavaṇca nissaraṇaṇca desayati. Ibid. n.7

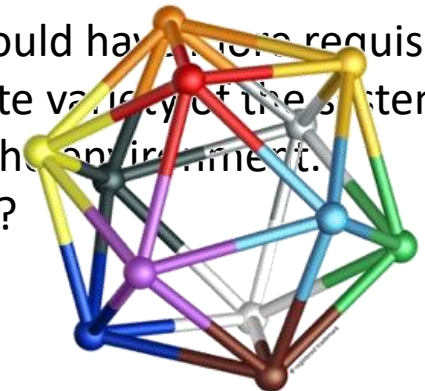
Relevance of research in today's world

- Networks are more predominant than individuality
- Mis-information
- Herd mentality
- Control of democracy
- Educational fabric

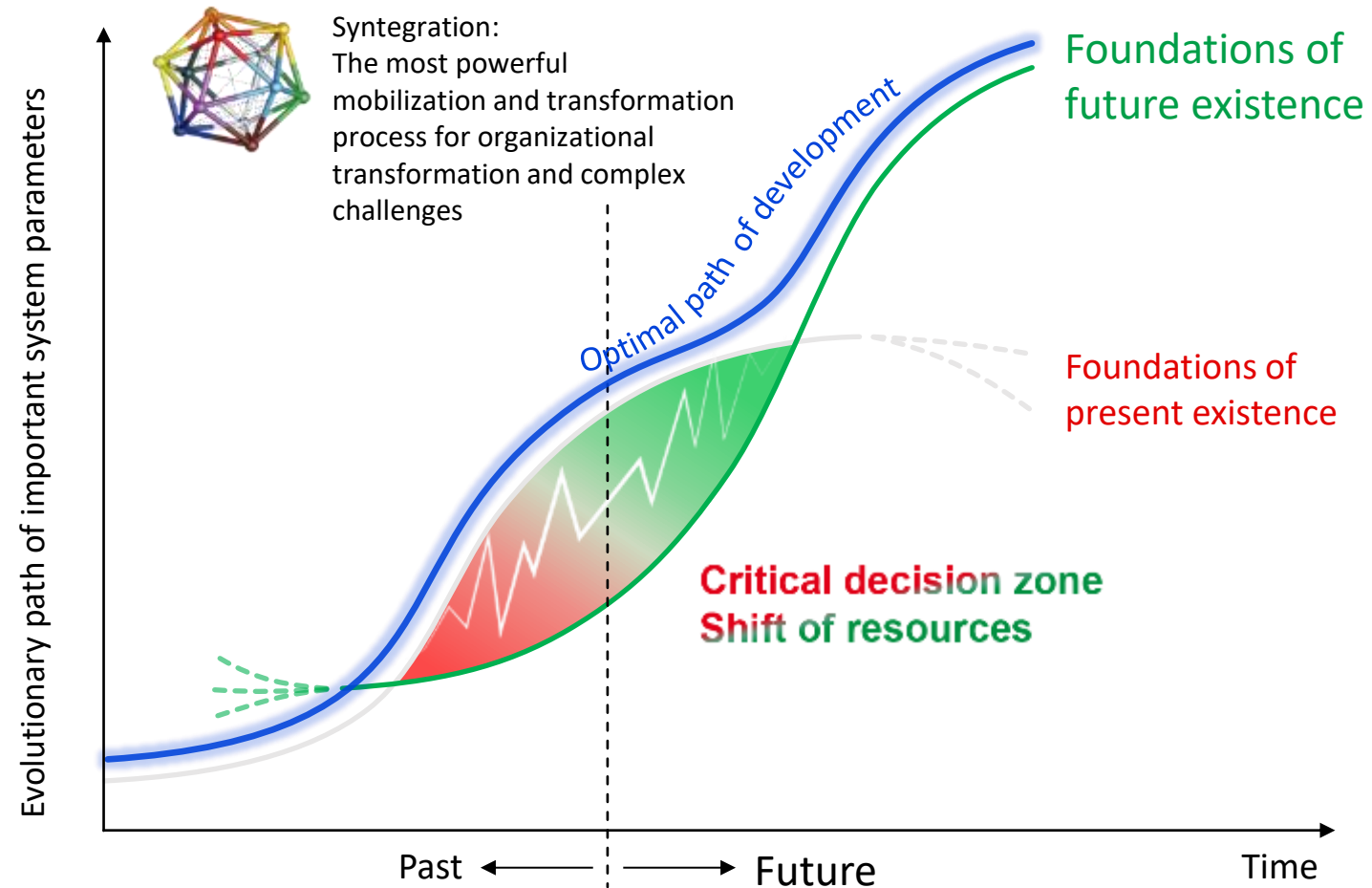
Cybernetics

- Dynamic Complexity:
Complexity is Structural complexity which is due to interconnectedness.
The other type is dynamic complexity which arises due to:
 - a) Nonlinearity
 - b) Accumulation
 - c) Feedback
- Cybernetics i.e. Science of communication and control was developed in the 1950s but was not adopted in the fullest way.
- Cybernetics talks about requisite variety i.e. to have a sustainable system, the system should have more requisite variety than the environment. Projects are inherently complex systems and if the requisite variety of the systems is more than the project environment it would be capable of handling disruptions from the environment.
- Natural systems have the method of *self regulation*. How can we bring that into projects?

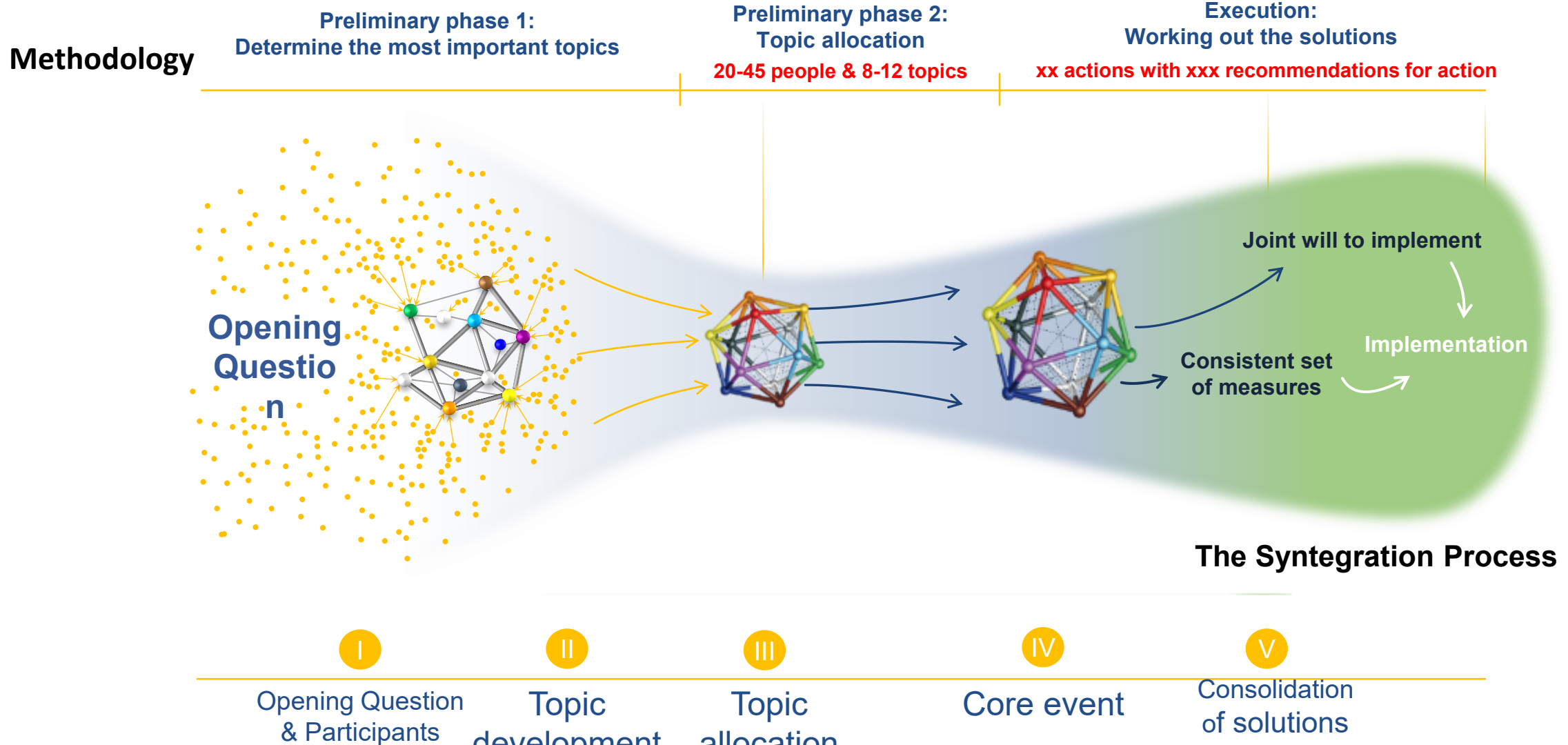
Syntegration® : “*Tensegrity in knowledge Systems to bring out the tacit knowledge.*”



Theoretical Framework



Team Syntegrity



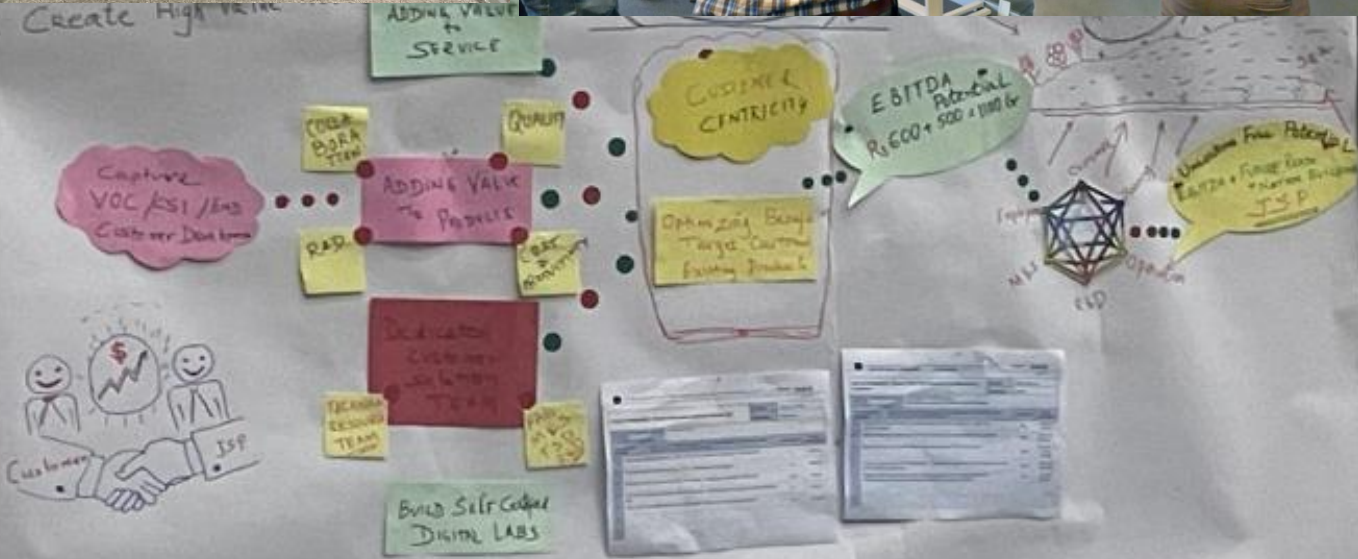
The Facilitation



The Market Place

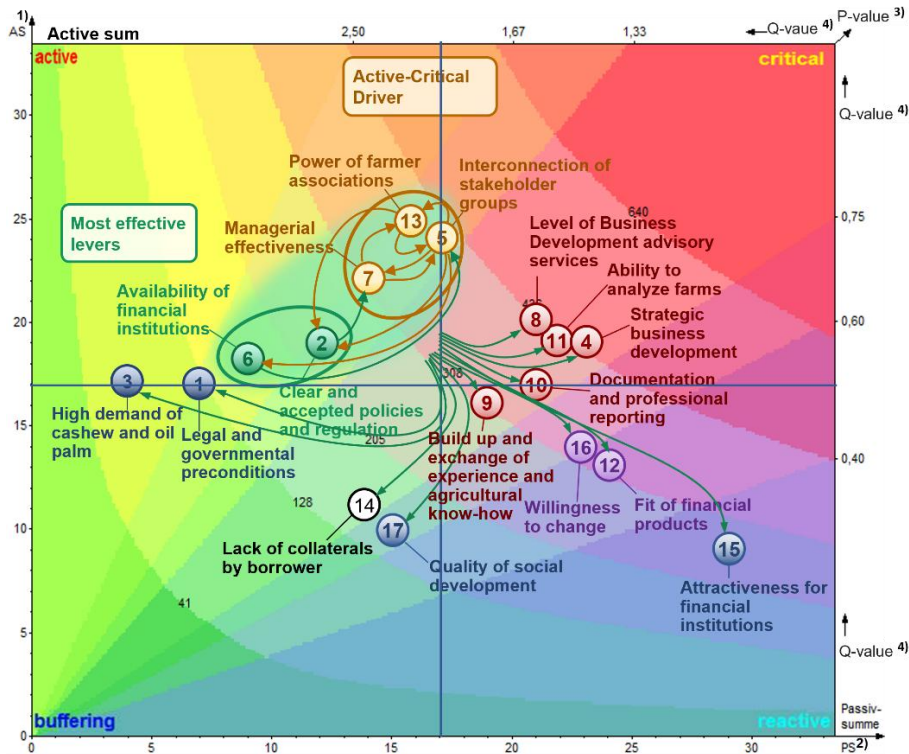


The Planery



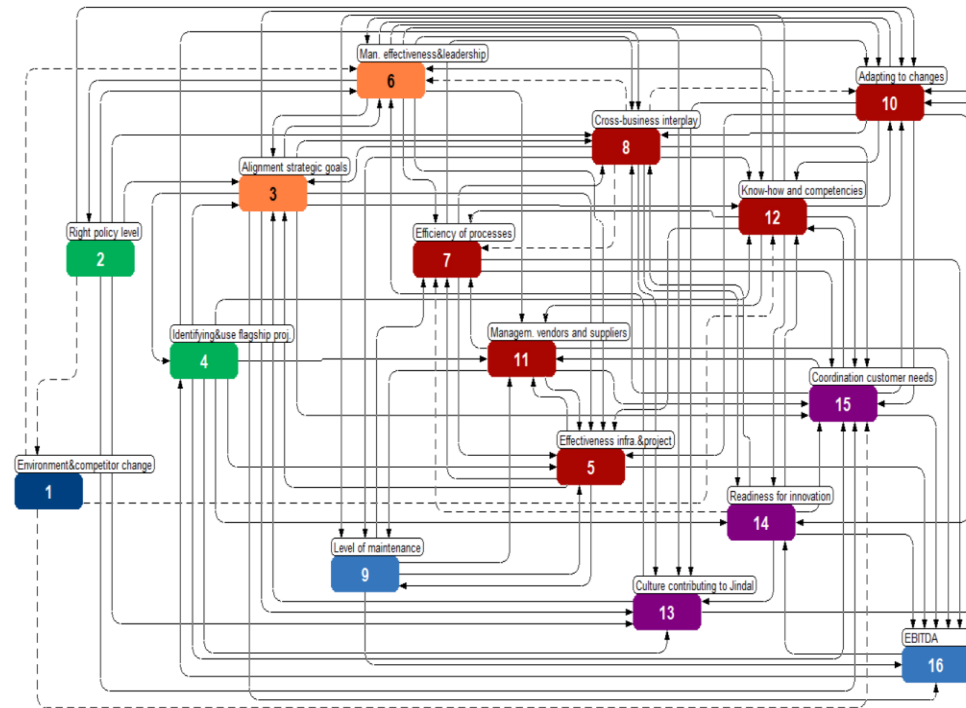
The Co-creation by the team

Key Results



Cross Impact Matrix

All discussions summarised in an interconnected system-cybernetic model to identify levers and drivers for systemic change



Sensitivity Model

Confirming effect: the more the more / the less the less
Opposite effect: the more the less / the less the more

The 16 influencing factors whose interconnectedness can only be recognized with system-cybernetic methods. The "X-ray image/MRI" of "Project System".

The quasi-experimental study

How do we build a resilient & Secure CRM system for an emerging Solar Company ?

Country:	India
Industry:	Management Education
Location:	Delhi
Date:	13-12-2025
Program Director	Prof. Basudeb Mukherjee
Facilitator	Dr. Sarojkant Singh ,, Susmita Kolya

The Group

- The group consisted of MBA Students in 1st year at **ADAMAS UNIVERSITY**. Individual Profiles and personality types were assessed and immersed in 14 days Cyber security and Project Management Course
- The Age group was from 22 to 23 years.
- Number of people 24

The Problem & Structuring

- The group was given a broad statement i.e. How can we build a resilient and secure CRM system?
- Participants were divided into various groups to co-create a solution
- Setting out Intent and topic orientation.
- After the opening question is floated, participants provide challenges and Topics are formed and voted. As per votes participants are allotted to topics.

60 mins

Exploration Iteration 1

- For 2 hours the groups explore the 24 topics in pairs and critics.
- 1 hr cross topics are discussed
- 1hr Learning consolidated for all topics
- 30 Mins de-brief for Iteration 2

4 hrs

Diffusion Iteration 2

1 hr Group formation cross topic meet and synthesize

- 30 mins SD capture

90 mins

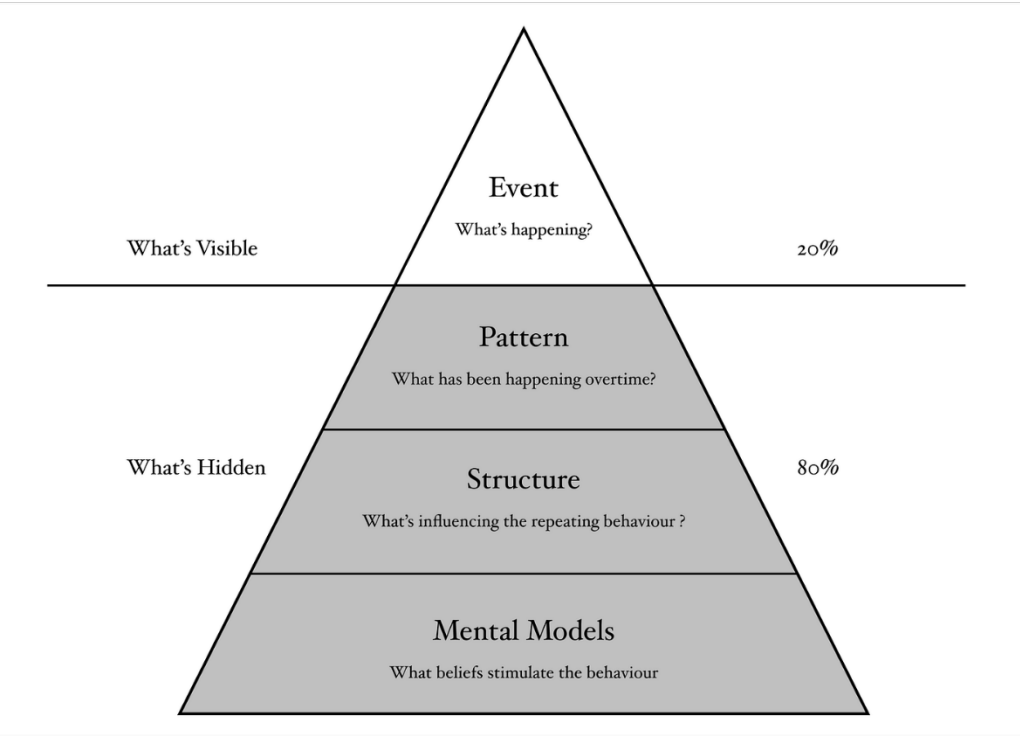
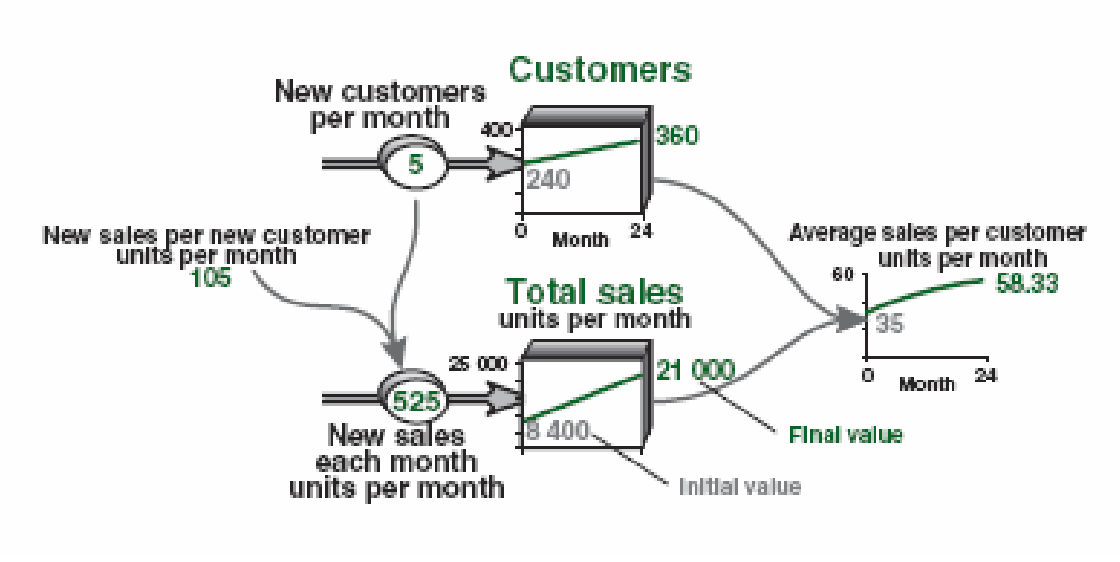
Coherence Iteration 3

6 clusters for major cluster topics discuss and synthesize.

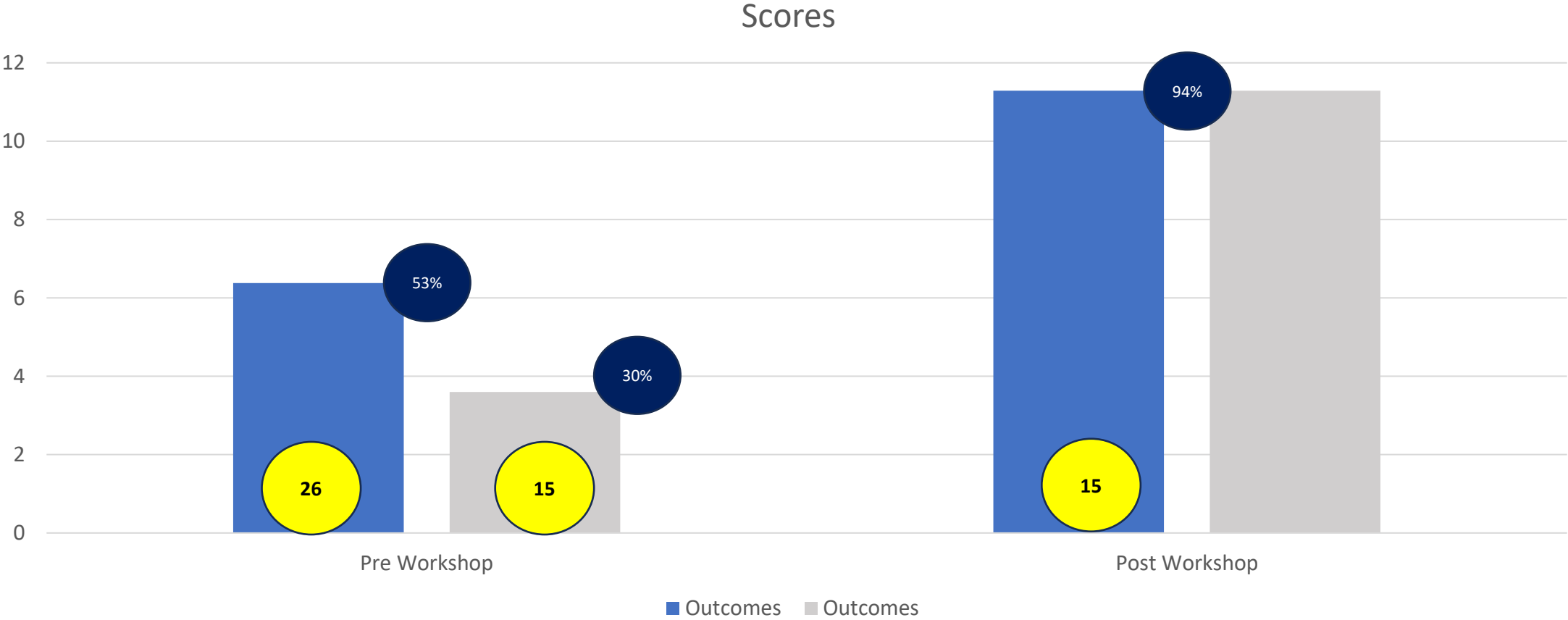
Levers and SD capture

7 hrs

System Dynamics



Pre & Post Workshop Learning Outcomes



Intervention of *mindfulness*

- Creation of External mind through facilitation
- The process of synte-gration relies on *reverberation*, i.e. like an echo effect, where ideas and insights from one group is transferred to the other, breaking the siloed effect.
- With mindfulness, being open to ideas without *bias* may have an *accelerated impact*.
- Research on failure modes of the process could be scrutinized and experimented and robustness could be established.

Policy Implication

- Consensus building with diverse stakeholders
- Enhancing learning outcomes

THANKS