

Cynefin and sense-making in the digital world

KAIMAR KARU

AGENDA

- 1) Transformations, implementations, and big-bang changes
- 2) The much-coveted Digital Transformation
- 3) Why is it all so difficult?
- 4) Complexity, sense-making, and decision-making
- 5) The Cynefin framework
- 6) Continuous incremental improvement



PRESENTER: KAIMAR KARU

IT Operations and Support

Software Development

Project Management

IT Service Management

Agile & DevOps

Teaching and Professional Training

Complexity science













Appreciating good beer



@kaimarkaru

CHANGE IS CONSTANT

BUSINESS CHANGE







But often, the 'why' and 'how exactly' of change initiatives is unclear.

With the best explanation being "but everyone else …".

DIGITAL TRANSFORMATION

Figure out how to leverage technology to help the organization succeed.

And pay attention to the following:

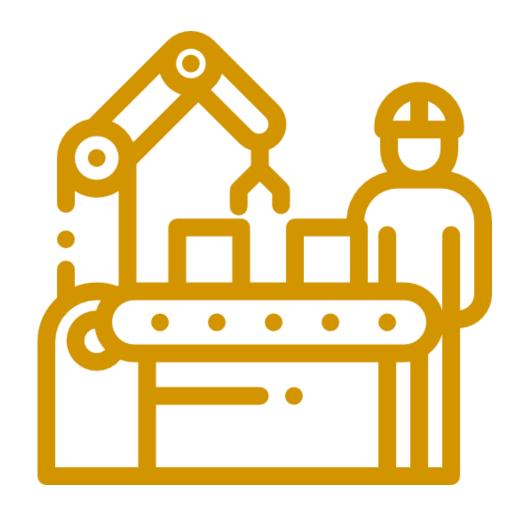
- » Adopt a service mind-set
- » Focus on customer objectives to co-create customer value
- » Increase resilience to be able to learn from experiments
- » Reposition leaders as enablers, not order-givers
- » Challenge the status quo in the organization
- » Streamline processes, procedures, and the use of data



Apply methods and tools most suitable in the given context

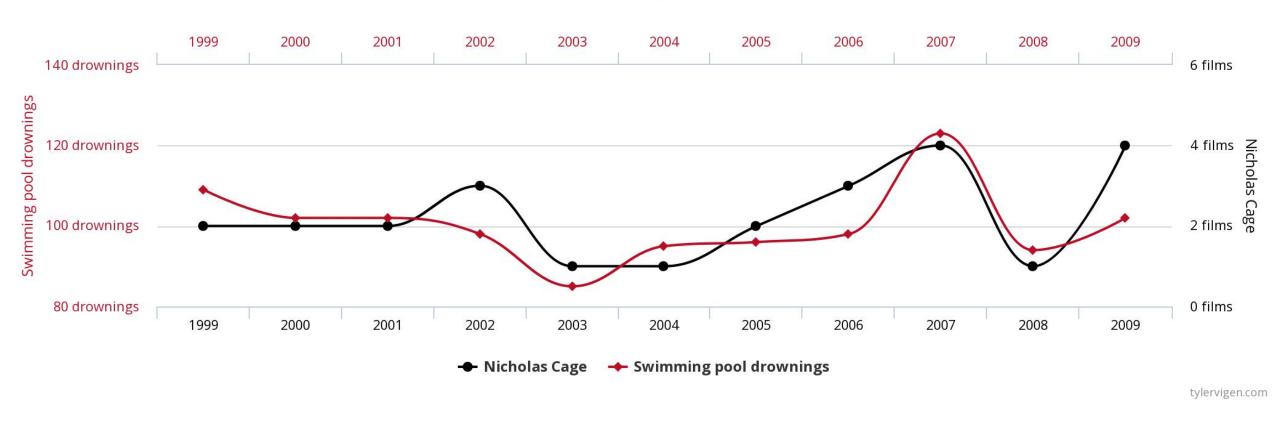
CHALLENGES

THE HAWTHORNE EFFECT



Number of people who drowned by falling into a pool correlates with

Films Nicolas Cage appeared in



www.tylervigen.com/spurious-correlations

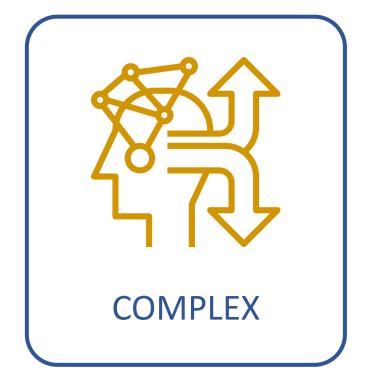


UNDERSTANDING THE CONTEXT

THREE TYPES OF SYSTEMS







"A system is a network governed by constraints that create coherence." *Cognitive Edge* A complex system is a system composed of interconnected parts that as a whole exhibit one or more properties not obvious from the properties of the individual parts.

CHARACTERISTICS OF COMPLEX SYSTEMS

- Patterns repeat by accident
- » The system is dispositional, not causal
- The system lightly constrains the agents
- » The agents modify the system with their interactions
- » Coherency appears in retrospect but not in advance
- » Actions will always have unintended consequences
- Engineering the future state is not possible
- » Hindsight does not lead to foresight

How can we make sense of the world so we can act in it?

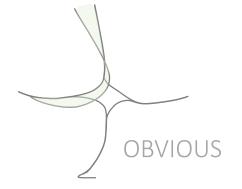
David Snowden, 'Multi-ontology sense making; a new simplicity in decision making', 2005



CYNEFIN TO THE RESCUE



OBVIOUS DOMAIN





ONE RIGHT ANSWER EXISTS

COORDINATION



Best practice



Fixed constraints

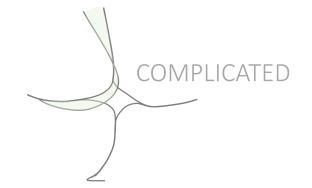


Perceivable and predictable cause-and-effect relationships



Respond with a known solution

COMPLICATED DOMAIN







Good practice



COOPERATION

POTENTIALLY, MORE THAN ONE

RIGHT ANSWER TO CHOOSE FROM



Governing constraints

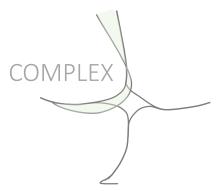


Cause-and-effect relationships knowable but not obvious



Respond with a chosen solution (plan)

COMPLEX DOMAIN











PROBE

SENSE

RESPOND



Exaptive practice



Make use of experimentation



Enabling constraints



Cause-and-effect relationships known only in retrospect



Respond with actions to move to the complicated domain

THERE ARE NO RIGHT ANSWERS BUT MULTIPLE HYPOTHESES CAN BE **CREATED**

COLLABORATION



CHAOTIC DOMAIN





Novel practice



Focus on stabilization



No effective constraints



Cause-and-effect relationships not perceivable



Respond with action to move to another domain



ACTING FAST IS MORE IMPORTANT
THAN LOOKING FOR THE RIGHT
ANSWER

COMPLIANCE



THE CYNEFIN FRAMEWORK



Enabling constraints

Exaptive practice

Multiple (conflicting) coherent hypotheses

Action required

Novel practice

No effective constraints

ACT-SENSE-RESPOND

CHAOTIC

COMPLICATED

SENSE-ANALYSE-RESPOND

Governing constraints

Good practice

Multiple answers to choose from

One answer exists

DISORDER

Best practice

Fixed constraints

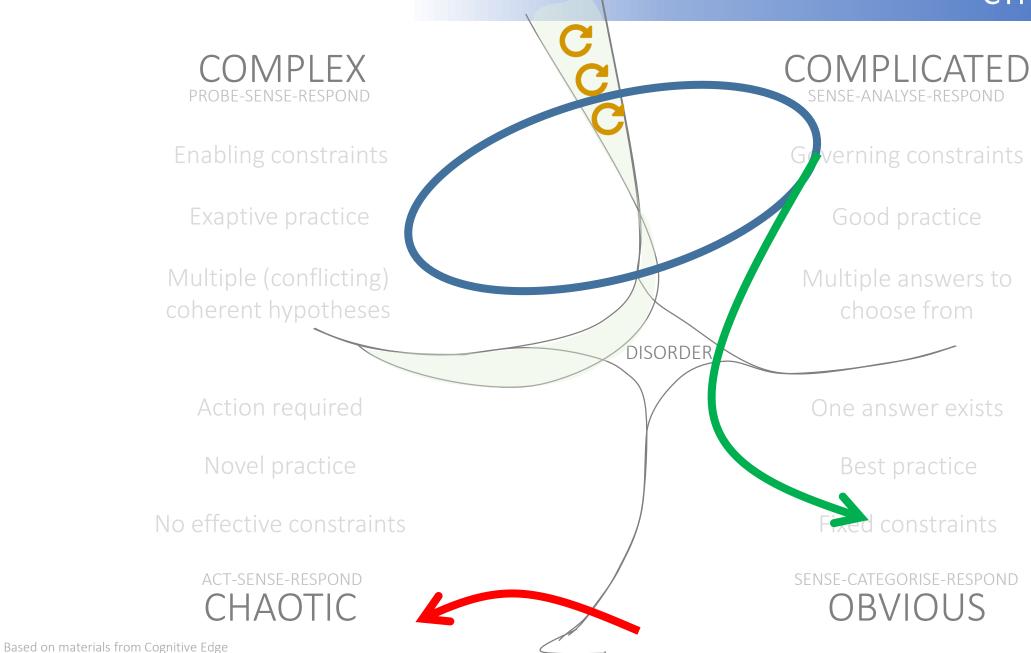
SENSE-CATEGORISE-RESPOND

OBVIOUS

Based on materials from Cognitive Edge



CYNEFIN DYNAMICS



EXAMPLES

(TO ILLUSTRATE, NOT TO CATEGORIZE OR DEFINE)

EXAMPLE: INCIDENT MANAGEMENT

COMPLICATED

» 2nd/3rd level support (SMEs) (short to medium resolution time)

DISORDER

» Major incident resolution

COMPLEX

Brainstorming and trialing

Swarming

CHAOTIC

- » 1st level support (playbooks)
- » Automated incident resolution

OBVIOUS

EXAMPLE: PROJECTS

COMPLEX

 Projects with high level of uncertainty, requiring experiments
 e.g. product R&D or innovation

» Projects in crisis or with unknown scope / business rationale

CHAOTIC

COMPLICATED

Projects with knowable risks,
 requiring specific expertise
 e.g. implementing an ERP solution

DISORDER

» Routine, low-risk projects with clear estimates

e.g. building a new simple web site

OBVIOUS

ÜBER-SIMPLIFIED HEURISTICS

COMPLEX

COMPLICATED

No-one can figure out what to do (and evidence supports conflicting hypotheses)

Someone can figure out what to do (and not all have to agree, choose an option)

DISORDER

Someone must do something NOW (and stabilization is most important)

Someone knows what to do (and everybody agrees)

CHAOTIC

OBVIOUS

Based on materials from Cognitive Edge

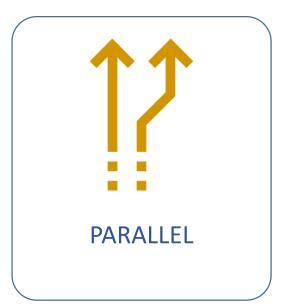


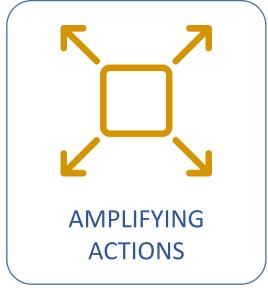
- » Avoid conflict by knowing where you are
- » Understand the (un)certainty levels
- » Avoid the illusions of causality and predictability
- » Differentiate between predictability and dispositionality
- » Avoid estimations becoming promises
- » Separate between 'knowable' and 'knowable in hindsight'
- » Choose the most suitable tools and methods

CONTINUOUS INCREMENTAL IMPROVEMENT

PORTFOLIO OF PROBES FOR COMPLEX SYSTEMS



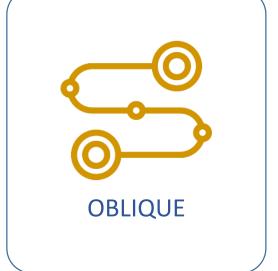






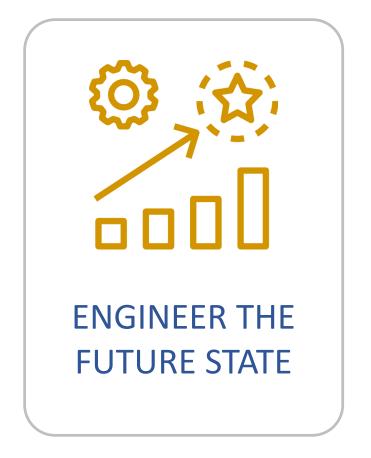




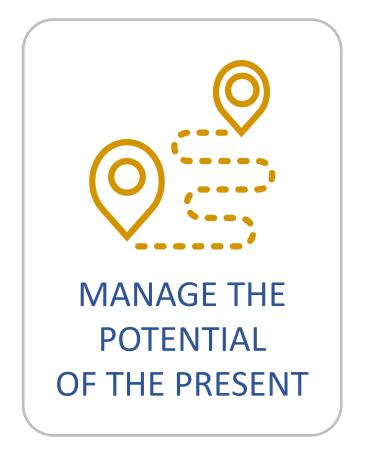




Based on materials from Cognitive Edge



VS.



Look not for the shiny end goal, but for the adjacent possible.

Get in touch



@kaimarkaru



linkedin.com/in/kaimar



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