Complexity (Expansion of the SGEP)

Cynefin Framework Kind of Explanation unofficial & unauthorized

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2026-01-18T09:00:00Z

Cynefin®

Cynefin® [1-6] offers a compass for leadership decision-making. It was popularized by the HBR article 'A Leader's Framework for Decision Making' by Dave Snowden and Mary Boone in 2007 and again in 'Managing complexity (and chaos) in a crisis - a field guide for decision makers inspired by the Cynefin framework', also known as the 'EU Field Guide.' Its premise is that one should act differently depending on the dynamics of the space. It is often oversimplified. A given problem could exist in all domains simultaneously, each having different aspects.

A phase shift refers to an often abrupt transition between domains, particularly from the ordered to chaos, triggered when a system's constraints (rules, habits, boundaries, and feedback) are misaligned or collapse. It marks a fundamental change in system behavior where previous methods of control or understanding no longer work.

Not all aspects of Product development are complex. The Scrum Team, for a given situation, might need to consider a variety of phase shifts between:

- Ordered: Key idea: Stability, routine, best/good practice, expertise
  - Expertise is sufficient, and cause and effect are predictable or knowable
  - Response options not limited to: Apply best/good practices, follow rules, use expert analysis, do individual research

  - Metaphors: Hard to barely frozen ice cube, pleasant weather, or chess/sudoku
  - Nature example: A modern, climate-controlled glasshouse–predictable, controlled, planned growth
  - Product example: Resolving a tricky technical issue by consulting experts and analyzing logs
- Complex [1-6], where expertise is valuable but not enough, and one can only understand why things happened after the fact. Key idea: emergence, safe-to-fail experiments
  - Responses not limited to:
    * Encourage learning and adaptation
    * Trying several small, parallel, safe-to-fail experiments
    * Fostering fresh thinking through cognitive diversity and collaboration
    * Borrowing solutions from other places if they might help
    * Testing out smart guesses or informed hunches to see what works
  - This is all while following helpful guidelines that encourage good results to develop naturally
  - Metaphors: Flowing water, rainy weather, or poker
  - Nature example: Bramble thicket–everything is entangled, connections are unpredictable
  - Product example: Experimenting with different features or solutions informed by user feedback, e.g., A/B testing new Product ideas
- Chaotic:
  - Negative: Key idea: Destructive crisis, breakdown, urgent action
    * Responses not limited to: Take immediate action to restore order, prioritize safety, do something quickly without making matters worse
    * Metaphors: Shattering ice or uncontrolled explosion, toxic gas, tornado, earthquake, wildfire, or a riot in a stadium
    * Nature example: Natural disaster (e.g., tsunami)–sudden, destructive, unpredictable
    * Product example: Responding to a critical security breach by isolating

systems and deploying emergency fixes

  - Positive: Key idea: Generative disruption, rapid innovation
    - Response options not limited to: Disrupt intentionally, encourage creativity, harness energy, e.g., hackathon, incubator, 'Innovation Friday'
    - Metaphors: Controlled explosion (steam engine), fireworks, or festival bonfire
    - Nature example: Forest fire clearing old growth for new plants–ecosystem renewal
    - Product example: Rapidly pivoting a Product during a market disruption to seize new opportunities (e.g., launching a feature in response to a competitor's move)

Liminality is an 'in-between' stage, like a threshold. The often less-sudden phase shifts happen in the liminals:

- In the liminal between complex and ordered, this is Scrum's default sweetspot:
  - Ordered-Complex:
    - From expert analysis to adaptive exploration
    - Responses not limited to: Relax some rules, introduce experimentation, prepare for emergence
    - Metaphors: A melting ice cube, cloudy weather, switching from chess to poker
    - Nature example: Seasonal thaw–rigid ice giving way to flowing streams and new growth
    - Product example: When a routine process stops working, encourage the team to try different approaches
  - Complex-Ordered:
    - Responses not limited to: Turn creative discoveries into expert routines; stabilize innovation, observe and codify successful patterns; transition to standardization
    - Metaphors: Slush (between ice and water), fog lifting after rain, switching from poker to chess
    - Nature example: River delta forming channels–from unpredictable to stable flows

        - Product example: Taking a successful experimental feature and turning it into a documented, repeatable process

- In the liminal between complex and chaotic:
    - Complex–Chaotic (positive):
        - A situation where constraints need to be relaxed to create time and space for innovation or invention. Key idea: The edge of creativity, risk, and innovation
        - Responses not limited to: Loosen constraints, encourage experimentation, seek breakthrough ideas
        - Metaphors: Boiling water (on the edge of steam), thunderstorm breaking out, Improvizational theater, or jazz jam session
        - Nature example: Volcano creating new land–creative transformation at the edge of chaos
        - Product example: Running a high-risk innovation hackathon to generate disruptive ideas
    - Complex–Chaotic (negative):
        - Key idea: A destructive move into crisis
        - Responses not limited to: Rapidly re-impose constraints, stabilize the situation, prevent further breakdown
        - Metaphors: Exploding pressure cooker, sudden tornado or flash flood, game pieces thrown in anger, game board upended
        - Nature example: Sudden landslide–loss of structure, destructive transition
        - Product example: Failed Product launch confusion, and urgent need to regain control
    - Chaotic-Complex: Getting out of chaotic–regrouping
        - Response options not limited to: Sense emerging order, start probing, encourage collaboration, and pattern recognition
        - Metaphors: Steam condensing to water, calm after a hurricane, restarting a sports game after a storm
        - Nature example: Pioneer species colonizing after fire–new growth after disturbance

        - Product example: After a crisis, regrouping the team to experiment with new ways of working or new Product directions

- Aporia (paradoxical liminal): sitting with paradox for new insight, perhaps after realizing the situation at hand was not as it seemed
    - Response options: Hold ambiguity, encourage reflection, allow new understanding to emerge
    - Metaphors: Triple point (solid, liquid, gas coexist), standing in the eye of a storm, solving a riddle
    - Nature example: Estuary where river, sea, and land meet–all states and possibilities coexist
    - Product example: The team is stuck between conflicting strategies or visions and should briefly pause to reflect and realign.
- A rarely considered phase shift due to difficulty level: Chaotic-Orderly liminal
    - Response options: Impose strong constraints, re-establish rules and structure
    - Metaphors: Ice rapidly refreezing, cold snap after a storm, referee is successfully strict after chaos
    - Nature example: A Dam is successfully built after a flood–a wild river suddenly contained and controlled
    - Product example:
        - After a major production outage or Product crisis, a cross-functional crisis team rapidly stabilizes the situation with clear, minimal rules and temporary protocols
        - Once the immediate danger is past, these are iteratively refined and formalized into sustainable, balanced processes, avoiding overcorrection or excessive bureaucracy

One phase shift is particularly sudden and negative, that is, the ordered-chaotic liminal:

- Response options: Recognize fragility and over-confidence, act quickly to restore boundaries and safety
- Metaphors: Ice cracking into shards, sudden and violent hailstorm, game rules suddenly thrown out
- Nature example: Frozen lake breaking up in spring–stable surface suddenly shattering
- Product example: A stable Product process suddenly breaks down due to an unexpected event (e.g., major outage)

References

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