In our rapidly shifting technological, economic, and social environment, organizations must endeavor to keep pace, adapt, and survive.
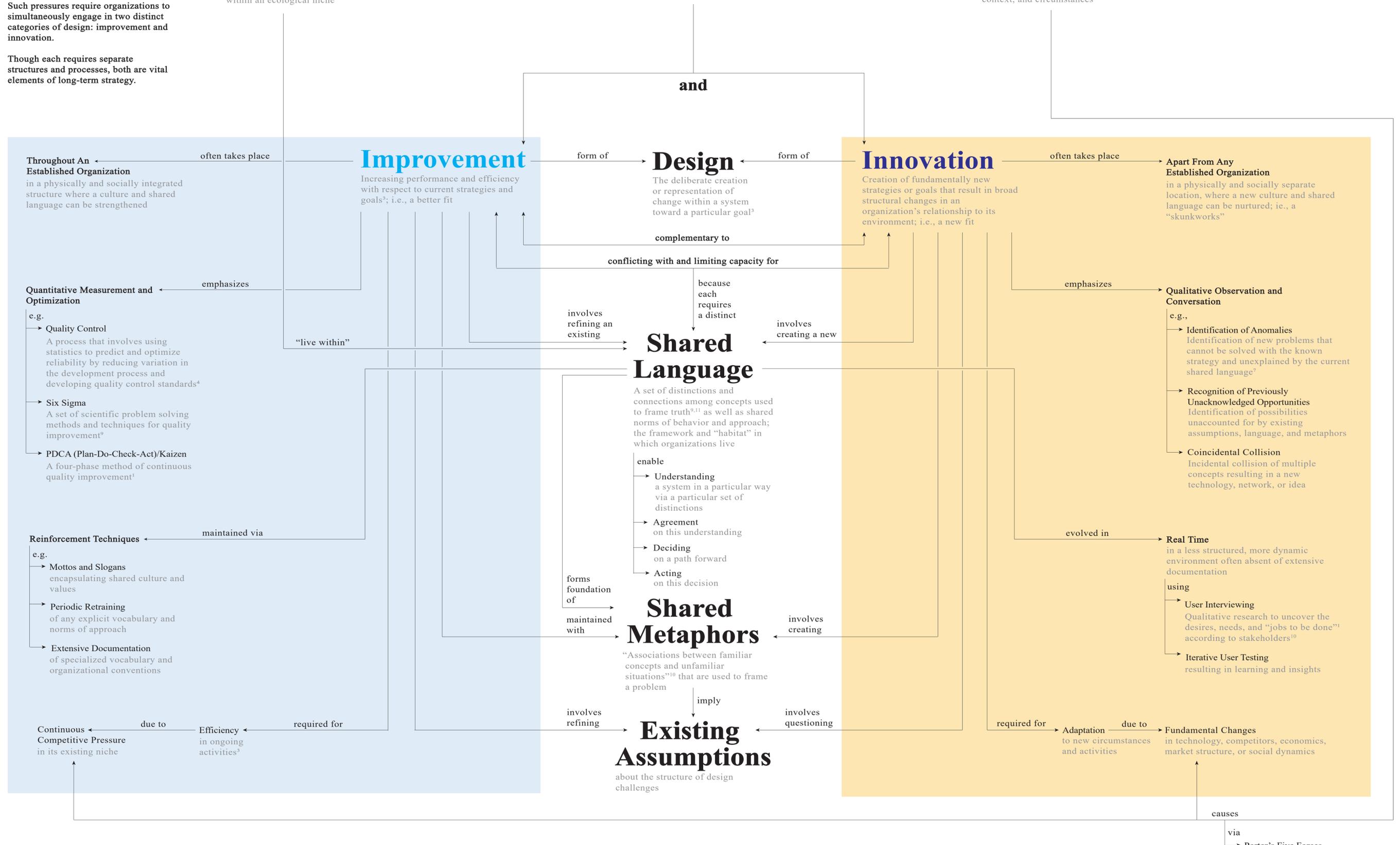
Such pressures require organizations to simultaneously engage in two distinct categories of design: improvement and innovation.

Though each requires separate structures and processes, both are vital elements of long-term strategy.

An Organization's Long-Term Survival in a Dynamic, Competitive Environment

A living, adaptive system[1]; e.g., a company, team, person, or species within an ecological niche

Material, social, economic, technological, and other surroundings, context, and circumstances

requires both

and

Improvement
Increasing performance and efficiency with respect to current strategies and goals[3]; i.e., a better fit

form of

Design
The deliberate creation or representation of change within a system toward a particular goal[5]

form of

Innovation
Creation of fundamentally new strategies or goals that result in broad structural changes in an organization's relationship to its environment; i.e., a new fit

often takes place

Throughout An Established Organization
in a physically and socially integrated structure where a culture and shared language can be strengthened

often takes place

Apart From Any Established Organization
in a physically and socially separate location, where a new culture and shared language can be nurtured; ie., a "skunkworks"

complementary to

conflicting with and limiting capacity for

emphasizes

Quantitative Measurement and Optimization

e.g.

- **Quality Control**
  A process that involves using statistics to predict and optimize reliability by reducing variation in the development process and developing quality control standards[4]

- **Six Sigma**
  A set of scientific problem solving methods and techniques for quality improvement[6]

- **PDCA (Plan-Do-Check-Act)/Kaizen**
  A four-phase method of continuous quality improvement[1]

emphasizes

Qualitative Observation and Conversation

e.g.,

- **Identification of Anomalies**
  Identification of new problems that cannot be solved with the known strategy and unexplained by the current shared language[7]

- **Recognition of Previously Unacknowledged Opportunities**
  Identification of possibilities unaccounted for by existing assumptions, language, and metaphors

- **Coincidental Collision**
  Incidental collision of multiple concepts resulting in a new technology, network, or idea

because each requires a distinct

involves refining an existing

involves creating a new

"live within"

Shared Language
A set of distinctions and connections among concepts used to frame truth[9-11] as well as shared norms of behavior and approach; the framework and "habitat" in which organizations live

enable
- **Understanding** a system in a particular way via a particular set of distinctions
- **Agreement** on this understanding
- **Deciding** on a path forward
- **Acting** on this decision

Reinforcement Techniques

maintained via

e.g.

- **Mottos and Slogans**
  encapsulating shared culture and values

- **Periodic Retraining**
  of any explicit vocabulary and norms of approach

- **Extensive Documentation**
  of specialized vocabulary and organizational conventions

forms foundation of

maintained with

evolved in

Real Time
in a less structured, more dynamic environment often absent of extensive documentation

using

- **User Interviewing**
  Qualitative research to uncover the desires, needs, and "jobs to be done"[1] according to stakeholders[10]

- **Iterative User Testing**
  resulting in learning and insights

Shared Metaphors
"Associations between familiar concepts and unfamiliar situations"[10] that are used to frame a problem

involves creating

imply

Continuous Competitive Pressure
in its existing niche

due to

Efficiency
in ongoing activities[3]

required for

involves refining

Existing Assumptions
about the structure of design challenges

involves questioning

required for

Adaptation
to new circumstances and activities

due to

Fundamental Changes
in technology, competitors, economics, market structure, or social dynamics

causes

via

Porter's Five Forces
A set of factors that determine competitive intensity, including market dynamics such as globalization[14]

Inspired by

[1] Pawar, M. (2018, February 8). *Organizations as Living Systems: Lessons from Human Physiology. The Systems Thinker.* https://thesystemsthinker.com/organizations-as-living-systems-lessons-from-human-physiology/

[2] Petersen, Peter B. "Total quality management and the Deming approach to quality management." Journal of management History (1999).

[3] Schön, D., *The Reflective Practitioner,* Chapter 3, "Design as a Reflective Conversation with the Situation," page 76.

[4] Deming, W. Edwards (1986), *Out of the Crisis,* Cambridge, Massachusetts: Massachusetts Institute of Technology, ISBN 9780911379013, OCLC 13126265, retrieved 2013-12-07 (Originally published in 1982 as Quality, Productivity, and Competitive Position, OCLC 9234321).

[5] Pyzdek, Thomas, and Paul Keller. *Six sigma handbook.* McGraw-Hill Education, 2014.

[6] Skhmot, N. (2017, August 5). *Using the PDCA Cycle to Support Continuous Improvement (Kaizen). The Lean Way:* https://theleanway.net/the-continuous-improvement-cycle-pd

[7] Kuhn, Thomas S. *The structure of scientific revolutions.* University of Chicago press, 2012.

[8] Norman, Don. "Technology First, Needs Last." Jnd.org, Jnd.org, 3 Dec. 2018.

[9] Pangaro, P. "Notes on the role of leadership and language in regenerating organizations." (2002).

[10] Constable, Giff. "Talking to humans." Giff Constable 1 (2014): 71.

[11] Star, S. and Griesemer, J. "Institutional Ecology and 'Translation' of Boundary Objects: Amateurs and Professionals In Berkeley's Museum of Vertebrate Zoology, 1907-39," Social Studies of Science, 1989, pages 387-41.

[12] Christensen, Clayton, and Michael Raynor. *The innovator's solution: Creating and sustaining successful growth.* Harvard Business Review Press, 2013.

[13] Ries, Al, and Jack Trout. *Positioning: The battle for your mind.* McGraw Hill, 2001.

[14] Porter, M. E. (2008). The five competitive forces that shape strategy. *Harvard business review,* 86(1), 78.