Concept Creation Thinking

Idea In Short

Many organizations improve products inside categories that other people defined. A smaller number invent the category itself, such as Cirque du Soleil, which merged circus and theater into a new kind of entertainment. Design researchers Armand Hatchuel and Benoit Weil offered a formal way to think about this. Their C-K theory separates concepts, which are ideas with no verdict yet on truth, from knowledge, which holds what we can already test. This article explains the difference, shows how new concepts expand what a team knows, and gives a practical routine for building a concept that does not yet have a name.

Most companies compete inside categories that someone else named. Banks compete as banks, circuses compete as circuses, and software firms compete in lists that analysts publish each year. Occasionally a firm changes the list by defining a new kind of offering that did not exist before. Such moves seem to arrive by genius, yet researchers have described reasoning patterns behind them. This article follows one such account, then turns it into a routine that teams can use to generate new categories and mental models.

Concepts and knowledge

Armand Hatchuel and Benoit Weil introduced C-K theory at an engineering design conference in 2003. Their paper states that the theory's central proposition is a formal distinction between Concepts and Knowledge, and it models the dynamics of design as a joint expansion of a space of concepts and a space of knowledge through four operators.1 The idea sounds abstract, and it describes a familiar experience in innovation work.

The knowledge space holds propositions that you can test, such as "this material withstands 200 degrees" or "customers in this segment pay for fast delivery." The concept space holds propositions that you cannot yet test, such as "a bank that has no branches and no app." Wikipedia's summary notes that a concept in this theory is a proposition without a logical status, meaning that nobody can say whether it is true or false.2 Its first draft came from

Hatchuel, and he then developed it with his colleague Weil.

The distinction matters for managers because ordinary planning works only in the knowledge space. A business case needs numbers, and numbers need known facts. A new category has few facts at the start, so a team that insists on proof before exploration will never leave the existing categories.

Why undecidable ideas help

A later description of the theory explains why the unprovable idea does useful work. In C-K design theory, the designer models a desirable but partially unknown object, and the object is undecidable while one applies the initially available knowledge.3 The same text describes the theory, from a cognitive point of view, as a set of methods for overcoming fixation.

The mechanism is simple. When a team states a concept that current knowledge cannot settle, the team must learn something new to judge it. A concept such as "a car that nobody owns" cannot be judged with existing data, so the team must study usage patterns, insurance, parking, and trust. The study creates new knowledge, and the new knowledge in turn suggests new concepts.

Hatchuel and Weil describe this as co-evolution. Another summary of their work describes design as the interplay between two spaces with different structures and logics, one for concepts and one for knowledge, and says the theory captures the generation of new objects and new knowledge.4 Managers can read the lesson as a rule of thumb. A bold concept earns its keep by raising questions that lead to knowledge nobody had.

Creating a category

A well-known business example shows concept creation at work. In their 2004 Harvard Business Review article, W. Chan Kim and Renee Mauborgne told the story of Cirque du Soleil, which a group of street performers founded in 1984. The authors explain that in breaking through the boundary traditionally separating circus and theater, the company made a new and profitable blue ocean from within the industry's boundaries, and that in blue oceans demand is created and not fought over.5

Read through the C-K lens, the Cirque move began as a concept that old knowledge could

not judge: a show with the story and staging of theater and the acrobatics of a circus. Nobody knew whether adults and corporate clients, who had drifted away from the traditional circus, would come. The company had to learn about audiences, staging, and pricing before it could say. Each lesson produced new constraints and new options.

The lesson for leaders is that categories often form at boundaries. Look at the line between two established offerings, and ask what you would get by merging them, or by removing the feature that defines each one. The question does not guarantee a hit, although it generates concepts that rivals within a single category will not consider.

A routine for building concepts

A team can make concept creation systematic with a five part routine. First, write a concept in one bold sentence that names a category or model, such as "a hospital that treats the home as the primary ward." Keep the sentence short and avoid hedges, because vagueness hides the questions. Second, list what must be true for the concept to work, and mark which of those items the team already knows.

Third, turn each unknown into a question and rank the questions by cost. The cheapest, quickest questions come first, since early answers reshape the concept. Fourth, gather the knowledge through interviews, prototypes, desk research, or small pilots. Fifth, revise the concept in light of the answers, and write a new version.

Repeat the cycle several times. After each round, the concept should look sharper, narrower, and more testable. A concept that never changes after contact with knowledge is probably not being tested, and a concept that collapses at the first fact was probably too thin to start with.

Concepts as mental models

Concept creation also applies to ideas inside a company. A mental model is a concept about how something works, such as "a customer is a transaction" or "a customer is a relationship." Changing the model changes the questions people ask and the data they collect. Leaders who reframe a concept can shift behavior without any new policy.

To practice, take a core term in your business and write three alternative definitions. For a

school, "student" might mean a learner, a customer, or a future alumnus. Each definition suggests different services, measures, and priorities. Test the definitions by asking which one generates the most interesting questions, and which one your own data can start to answer.

A hypothetical walk-through

Picture a regional publisher whose newspaper revenue is falling. The standard concept is a digital newspaper, and every competitor has built one. The team writes a new concept instead: "a local information service that residents join like a club." The sentence cannot be judged yet, so the team lists the unknowns. Would residents pay a membership fee? Which services would they value beyond news? What would the members expect in return?

Each question leads to a cheap test. The team interviews thirty residents, runs a small paid newsletter, and hosts two neighborhood meetings. The answers narrow the concept to a membership that bundles local alerts, event listings, and a question-and-answer service with city staff. The example is invented, yet it shows how a concept that began as an unprovable sentence turned into a testable offering through a sequence of small experiments.

Cautions

Concept creation can drift into fantasy. A team may produce many striking propositions that no available knowledge could ever support, so insist that every concept have a first test that can run within weeks. Keep the discipline of asking what you would need to learn, and who can help you learn it.

Novelty is also not value. A new category must meet a need that people will pay for or support. Check each concept against a real user or a real constraint early, and avoid mistaking the excitement of a clever phrase for evidence of demand.

Finally, remember that the examples of successful categories come from survivors. Many bold concepts failed, and the record of those failures is thin. Treat the stories as illustrations of a reasoning pattern and not as proof that following the pattern will bring success.

- 1A new approach of innovative design: an introduction to C-K theory

- 2C-K theory
- 3C-K design theory
- 4C-K design theory: an advanced formulation
- 5Blue ocean strategy

Summary

Concept creation thinking treats a new category or mental model as something you can build deliberately. C-K theory distinguishes concepts from knowledge and models design as a joint expansion of both spaces, and examples such as Cirque du Soleil show how breaking an industry boundary can open uncontested ground. The method asks teams to state a bold proposition, discover what they must learn to test it, and revise the proposition as knowledge grows. It rewards patience and honesty about what remains unknown. Write one concept sentence this week about a category that does not yet exist in your field, list the five questions you cannot answer about it, and begin with the cheapest one.