Launch Pad

From mediocre concepts to very successful launches—Insights from Pixar on developing great products

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Pixar has produced an amazing series of commercially successful movies. This article distills insights from Pixar's Ed Catmull on their approach to successful movie production. These principles may conflict with some concepts regarded as best practices in new product development.

On September 26, 2008, I met Ed Catmull when he was awarded the first Randy Pausch Prize in McConomy Auditorium on the Carnegie Mellon University campus (see Image 1). He accepted the award in the same auditorium where Randy Pausch delivered his inspirational "The Last Lecture." Catmull has won many other awards (including multiple Academy Awards), but this award was in recognition of creating an environment that thrives on cross-disciplinary synergy.

Dr. Catmull is a computer scientist, a cofounder of Pixar, and the president of Pixar and Disney Animation Studios. Pixar has produced a string of hit movies since 1995 using a peer-driven process for solving problems.

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Typical product development

In many organizations, the new product development process is dominated by a search to find the best product concepts. The number of funded projects is managed by discarding or delaying project proposals. After a project is funded, there may be an extensive design stage (big-design-up-front (BDUF)). During development, the number of projects in the portfolio may be reduced by killing projects. Typically, development is process-centric and serialized. Such organizations are likely to have a hierarchical structure and contracts are awarded to the lowest bidder that can meet the project specifications and deliver a product that meets the requirements.

Catmull's organization is different. He believes that the role of development is not to impose a series of gates. He believes that "the goal of development is not to find good ideas. It is to put together teams of people that function well together."

He believes in the primacy of people over ideas. He wrote "If you give a good idea to a mediocre team they will screw it up; if you give a mediocre idea to a great team they will either fix it or throw it away and come up with something that works."[1] He has stated that "two thirds of our theories are good. One third of our theories is a crock. I don't know which one third will be unsuccessful before they are tried."

Millions of Ideas

The pursuit at Pixar can be characterized as successfully searching rather than avoiding failure. Teams strive to find and implement the best integrated solutions, not the expedient or obvious, reductive solutions. Throughout production, there are millions of ideas and decisions. The culture at Pixar enables a multitude of ideas and decisions to become cohesive and synergistic. All the contributions (from the seemingly small to the alleged to be vital) impact the viewers' impression of the released version of the movie. (see Exhibit 1).

Ed Catmull, a cofounder of Pixar, and the president of Pixar and Disney Animation Studios, shares insights on developing great movies at McConomy Auditorium on the Carnegie Mellon University campus on September 26, 2008. The award for the first Randy Pausch Prize is displayed next to Catmull.
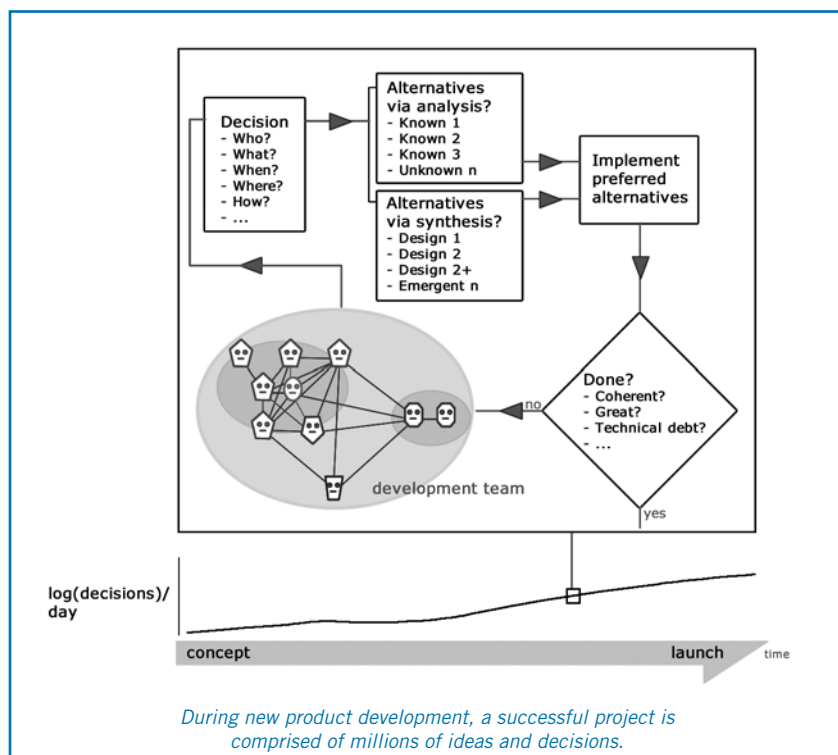
The impact of showing work in an incomplete state

The practice of working together as peers is reinforced during daily reviews—dailies. Work is shown in an incomplete state to the team. This facilitates learning and communication, which inspire people to be more creative and assists communication throughout the team.

Showing work to everyone impacts the definition of *done*. Showing work in an incomplete state reduces the potential for one group to perfect the wrong thing. This transparency reduces re-work and reduces technical debt. A given sequence isn't done until it is done across all the disciplines (such as animation, lighting, sound effects, and music) and they have integrated their contributions successfully.

The Director makes the final decisions. This applies to work shared during the dailies as well as work-in-progress shown to Pixar executives. At Pixar, this group of master film makers, known as the Brain Trust, only gives advice. Except for a very few situations, they do not wield their authority regarding the movie. The team selects and implements solutions.

During new product development, a successful project is comprised of millions of ideas and decisions.

SOURCE: The author.

Culture catalyzes collaboration

Companies such as Google have credited policies such as "20 percent time" for part of their success. Such a philosophy enables engineers to explore ideas that are not necessarily part of their current assignments or outside of their primary expertise. This results in the creation of many projects; a few of these are expected to be developed beyond alpha and beta status to that of a released product.

In contrast, Pixar has relatively few projects. Teams are encouraged to improve existing ideas. Team members are trained to amplify each other's strengths within a culture of learning.

Their in-house program is called Pixar University. Its crest features the Latin inscription *alienus non diutius* (alone no longer) that provides a valuable insight into collaboration at Pixar. The organization invests for the long term.

Pixar offers every employee the opportunity to continue their education for up to four hours every week. Classes enable all employees to learn about topics that include drawing and animation.

The classes catalyze more. They provide continual opportunities for interaction. Everyone from an executive like Catmull to an accountant becomes more observant. They hone their ability to detect signal from noise. Because the environment at Pixar fosters an interest in the entire process of developing a successful movie, this creates an environment that is characterized by more

> "Showing work in an incomplete state reduces the potential for one group to perfect the wrong thing."

than cooperation and synchronization. Catmull stated "Our job (as contributors to the success of a movie) is to make other people look good." This attitude facilitates collaboration in the development process.

The influence of Steve Jobs at Pixar

Steve Jobs has influenced the development at Pixar in multiple ways. He has contributed financially and facilitated collaboration.

Success didn't come quickly. Jobs' financial investment in Pixar began in 1986. Toy Story, Pixar's first major commercial success, was released in 1995. Jobs supported the company through several failures and he funded the team's education. During this period, a cohesive team formed and that was a pre-requisite to their success.

Jobs also provided design input for the Pixar campus. The essential facilities of each building are centrally located. The center space facilitates people crossing, which spurs conversation and collaboration. Adjacent to that central space are private, quiet venues for artists and technicians.

Attempts to copy success

The validation of Pixar's efforts is evident from the number of commercially successful movies they have produced. Their metrics for value are not proxies derived from internal measures such as lines of code or boasting about their technical accomplishments. The validation occurs at each movie's release. The value increases when a viewer recommends the movie to their friend.

They acknowledge that "some want to go to a safe place (for innovation) but there isn't one." They push the boundaries.

Pixar's success has prompted others to attempt to copy Pixar's ideas. In most cases, the imitators have not been successful because they don't have the same culture and talent. Catmull professed "talent isn't evenly distributed."

The teams at Pixar execute in a different way than most. They enable more success factors to emerge through a combination of analysis and synthesis (design) in an environment that thrives on synergy. Because of the collaboration of technologists and artists, Pixar is a paragon of the qualities honored by the Randy Pausch Prize.

This paradigm may push the boundaries of how individuals describe the roles. Re-stating an idea from Clinton Keith, In a cross-disciplinary team that is measured by the value added to a successful new product, the role of an animator (or any other specialty such as artist, programmer, engineer, or writer) shifts to new product developer that specializes in animation.[2] V

Endnotes

1. Ed Catmull. "How Pixar Fosters Collective Creativity", *Harvard Business Review*, Vol. 86. #9. September 2008.
2. Clinton Keith, *Agile Game Development with Scrum*, p 227 (Addison-Wesley 2010).