

3.6: Methods for Improving Product and Service Design

It's "Integrated Product Development"

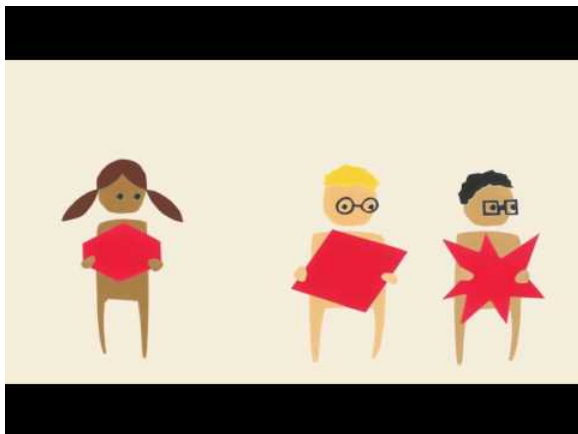
development process and the need to improve product and service design. The video is interesting because the speaker walks you through the development process. An integrated product development process that includes steps for improving products and services that already exist is



ion of the text. You can view it online here: <http://pb.libretexts.org/b/?p=68>

to IDEO"

ormation on additional methods for improving product and service design using DQ. IDEO is an exemplar for the innovation process. IDEO can provide you many tools and connections as you move forward in your career.



ion of the text. You can view it online here: <http://pb.libretexts.org/b/?p=68>

meets customer needs.

ices goods or provides services—sees Job 1 as furnishing customers with quality products. The success of a business depends on its ability to develop products that meet those needs at a low cost. Karl Ulrich and Steven Eppinger, *Product Design and Development*, 2nd ed. In other words, effective product development results in goods and services that can be sold at a profit. In addition, it results in high-quality products that can be developed in a timely, cost-efficient manner. Accomplishing these goals entails a collaborative effort by individuals from all functional areas including representatives from engineering, design, and manufacturing), marketing, accounting, and finance. In fact, companies often have cross-functional areas who work together as a [project team](#) throughout the product development processes. This approach allows individuals to be put to work as the product is being developed.

ion

fficult, and the success rate is low. On average, for every successful product, a company has twelve failures. At this rate, the firms on research and development. Tony Ulwick and John A. Eisenhauer, “Predicting the Success or Failure of a New Product Concept,” *The /Event_Center/I@WS/I@WS_paper3.html* (accessed May 11, 2006). There are several reasons why product development is such a

ce your jogging shoes lighter than your competitors’, but if you do, they probably won’t wear as well. They could be of higher might price themselves out of the market).

undreds of decisions that must be made quickly and with imperfect information.

s a lot of time and money, there’s always pressure to make sure that the project not only results in a successful product but also gets it e first to market with an otherwise desirable new product can cost a company a great deal of money.

resources to developing new products. Your supermarket, for example, can choose from about one hundred thousand items to carry acts every year. Unfortunately, the typical supermarket can stock only thirty thousand products. Steve Hannaford, “Slotting Fees and /5/08.html” (accessed May 11, 2006).



ion of the text. You can view it online here: <http://pb.libretexts.org/b/?p=68>

es—New Coke, anyone?

ies by which a product idea is transformed into a final product. It can be broken down into the seven steps summarized in [Figure 10.6](#)

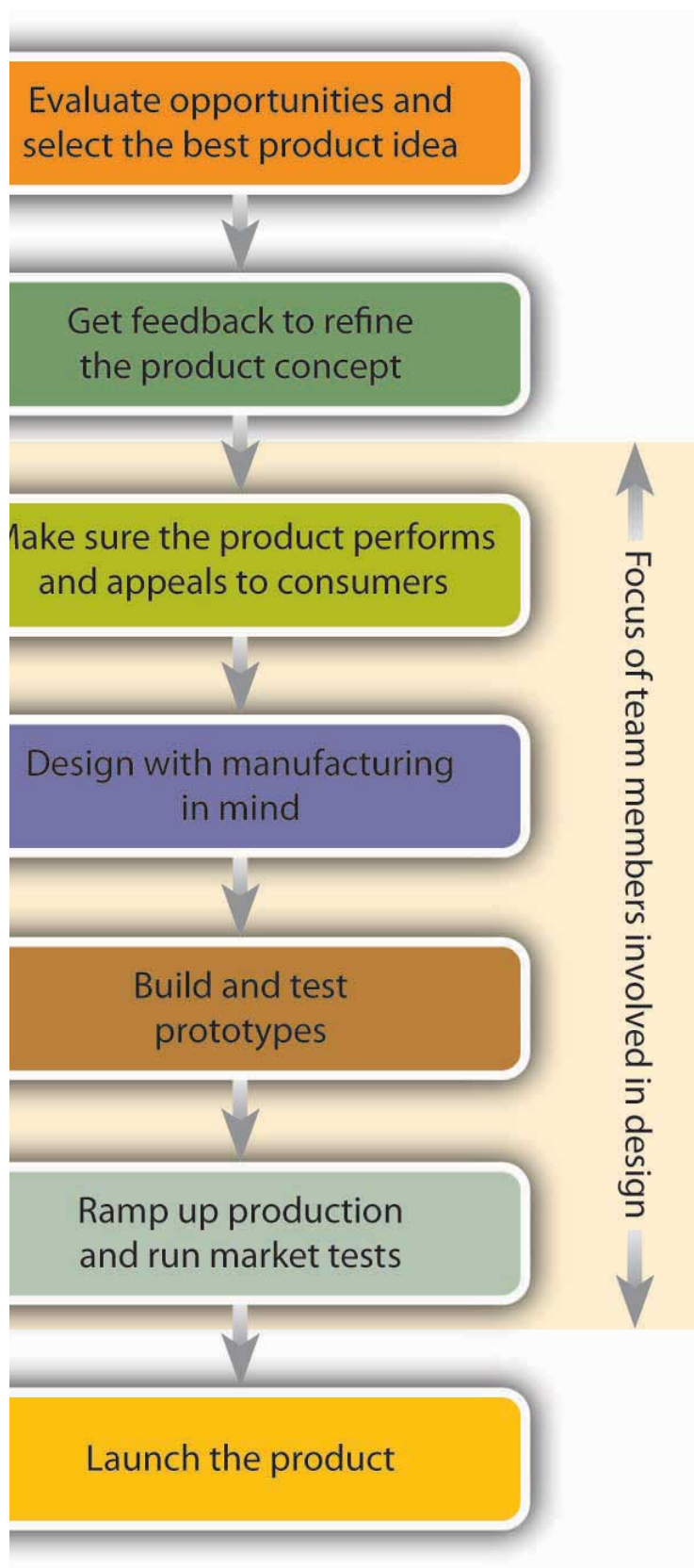


Figure 10.6 The Product Development Process

Product Idea

not only one product idea. But existing organizations often have several ideas for new products, as well as improvements to existing ones. Individuals within the organization or from outside sources, such as customers. Typically, various ideas are reviewed and evaluated by a committee of ideas for development. They may rely on a variety of criteria: Does the proposed product fill an unmet need of our customers? Will it be financially successful? Do we have the resources and expertise to make it?

An initial **product concept** that describes what the product might look like and how it might work. Members talk both with other people to identify customer needs and the benefits that consumers will get from the product. They study the industry in which the product will be sold and brainstorm various *product designs*—that is, the specifications for how the product is to be made, what it's to look like, and what

the team will revise the product concept, probably pinpointing several alternative models. Then they'll go back to potential customers to test the various alternatives. Based on this feedback, the team will decide what the product will look like, how it will work, and what

3 Consumers

Finally, what components it will require, and how it will be assembled. It will decide whether the product should be made in-house or purchased in-house, the team determines where parts will be obtained. During this phase, team members are involved in design work to ensure the product is easy to use and maintain.

the product, and some methods are more expensive than others. During the next phase, therefore, the team focuses its attention on making a design working to minimize the number of parts and simplify the components. The goal is to build both quality and efficiency into the

product and tested to make sure that the product meets the customer needs that it's supposed to. The team usually begins with a preliminary model. If initial customers, a more sophisticated model will then be developed. The process of building and testing prototypes will continue until a final, best possible product. The final prototype will be extensively tested by customers to identify any changes that need to be made before

the product is trained in manufacturing and assembly processes. Products turned out during this phase are carefully inspected for residual flaws. The product is then sent to customers for testing and feedback.

the team and makes the product available for widespread distribution.

The team identifies the unmet needs of consumers and to develop products that meet those needs at a reasonable cost. This is an effort by individuals from all areas of the organization: operations management (including representatives from engineering, design, marketing, and finance).

Team members often work together as **project teams** throughout the **product development process**, which consists of a series of activities that

1. Identify the

2. Develop a

3. Create a prototype that describes what the product might look like and how it might work

4. Test the prototype with consumers

5. Refine the product with quality and efficiency into the manufacturing process

6. Launch the product

7. Monitor the product during which employees are trained in the production process

product idea. Now, identify the steps you'd take to design, develop, and bring your product to market.

CC licensed content, Shared previously

- Integrated Product Development. **Authored by:** Thomas J. Howard. **Provided by:** DTUbroadcast. **Located at:** <https://youtu.be/BHRI2FMbG9A>. **License:** *CC BY: Attribution*
- Introduction to IDEO. **Provided by:** IDEO. **Located at:** <https://youtu.be/4vV5Z-4VN5w>. **License:** *CC BY-SA: Attribution-ShareAlike*
- Product Development. **Provided by:** Saylor Academy. **Located at:** https://saylordotorg.github.io/text_exploring-business-v2.0/s14-07-product-development.html. **License:** *CC BY-NC-SA: Attribution-NonCommercial-ShareAlike*

3.6: Methods for Improving Product and Service Design is shared under a [not declared](#) license and was authored, remixed, and/or curated by LibreTexts.