Module 2: Product Development

Lesson 2 - Innovation

OVERVIEW

In this lesson, students will explore the idea of innovation and gain a fundamental understanding of why the concept is important in business.

KEY TERMS

Disruptive innovation / disruption

Innovation

Invention

Patent

Product innovation

OBJECTIVES

1. Differentiate between invention and innovation.
2. Describe why innovation is important to a business.
3. Identify the four categories of innovation.
4. Provide an example of each of the three types of innovation.

This Lesson Bundle Includes:

- Innovation - Lesson Outline
- Innovation - Presentation Slides
- Industry Application - Related Links
- Infographic - Amazon's Business Model Innovation
- "10 Inventions that Changed Business History"- Inventions Discussion Presentation Deck

WHAT IS AN INVENTION?

An **invention** is the creation of a unique or original device, method, or process. Inventions could also be an improvement upon a machine or product or the creation of an entirely new process for creating something. An **inventor** is an individual or person who creates or discovers the invention itself.

Inventors often seek to protect their inventions through patents. According to the United States Patent and Trademark Office, a patent is the grant of a property right to the inventor. A patent provides the inventor with legal protection of the invention so others cannot copy the work. However, the process of obtaining a process can be complicated and expensive, and patent rights typically last just 20 years.

Patented Inventions Throughout History:

- **Airplane:** After waiting more than three years for the patent to be awarded, U.S. Patent 821,393, was granted on May 22, 1906, to Wilbur and Orville Wright for "new and useful improvement in Flying Machines."[1]
- **3D-printer:** The patent for a 3D-printer was ahead of its time. The original filing outlined the basic technology used by most of today's 3D printers and was issued in 1986, setting the stage for the future of 3D-printing.
    - 3-D printers today are capable of printing anything from running shoes to bridges and rocket engines.

DISCUSSION TOPIC

When you think of great inventions, what do you think of? What is one example of a product or service that you use in your everyday life that would qualify as an invention? Do you think that product or service has been patented?

To see a list of some of the best inventions in history, review the "10 Inventions that Changed Business History" presentation deck in class. Think about how each of the inventions has changed the way we live, work, and communicate. How might each of these inventions relate to what you are learning about business and marketing?

What other inventions might be as influential as those reviewed in this slide deck? Which are the most significant in your lifetime? Why?

WHAT IS INNOVATION?

Innovation is not the same thing as ***invention***. **Innovation** in business is the process of conceptualizing, developing, and introducing new ideas, workflows, methodologies, services, or products. An invention is a completely new and unique object or idea while innovation happens when an improvement takes place with an existing object or idea.

From an entrepreneurial perspective, innovation is important because the development of something innovative creates value that can drive consumer demand. Innovative products and services catch the attention of consumers who may find the innovation incentive enough to make a purchase. In a way, innovation is really about problem-solving. How can a business solve a problem in a way that improves the customer experience or improves efficiency in a way that it can become more profitable?

Innovation also provides opportunities to distinguish a business from its competitors. Sometimes even the smallest of innovations can provide a business with a competitive advantage. As it has often been said, a business does not need to "reinvent the wheel" to develop or modify the products and services that provide consumers with value. Innovation is not just

1 https://airandspace.si.edu/exhibitions/wright-brothers/online/fly/1903/patenting.cfm

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limited to a product or service either, innovation occurs in all areas of business, like creating a new way to organize and file customer data or a new method of accounting that could help improve a company's bottom line.

Why is Innovation Important?

Entrepreneurs and businesses can capitalize in a variety of ways from innovation.

Examples of innovation include:

- Creation of new products
- Modification of existing products
- Inspiring creativity and competitive balance
- Developing methods for reducing costs
- Creation of new machines or tools that increase productivity
- Creating workflows that improve profit margins
- Establishing marketing innovations that increase sales

Types of Innovation

There are two primary types of innovation in business:

1. **Incremental**
2. **Disruptive**

1. Incremental Innovation

Incremental innovation involves gradual, consistent upgrades and updates to a product or service. These upgrades and updates typically provide only slightly better versions of the product or services. increasing concepts, products, or services that are phased, gradual, and sustainable in the existing market.

Apple's iPhone provides an excellent example of incremental innovation. With each new product release, the company reveals new product features, adding value for consumers through innovation. While each release provides varying levels of innovation, each captures the attention of consumers and drives purchase decisions. Over time, Apple offers gradual upgrades, ranging from the size of the device, longer battery time, improved camera features, and modernized look and feel. The product changes but the core functionality does not, and it is consistently improved through incremental innovation.

2. Disruptive Innovation

Disruptive innovation (or **disruption**) is when an idea is introduced that creates new value within an existing market by doing things in a way that has not been done before, or by creating an entirely new market altogether. When a disruptive innovation is powerful enough to break down existing market barriers, they have the potential to turn non-customers into customers.

For example, Uber disrupted the transportation market as an app-related business that developed an alternative mode of transportation to taxi services. The service that allowed users to get from location to location using a smartphone and cashless service, transparent pricing (previously a concern when taking a taxi), all while customers could track routes and share updates with family and friends disrupted the transportation market. The innovation resulted in a completely new market, spawning an entire generation of rideshare platforms.

Innovation Categories

1. **Products**
2. **Services**
3. **Processes**
4. **Business models**

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1. Product Innovation

The most common innovation category is product innovation. **Product innovation** is the process of improving upon existing product characteristics in an effort to develop a better, more desirable product.

Often, product innovation is reflected in the latest version of existing products, such as a new version of Apple's AirPods or Amazon's line of Echo products. Product innovation can feature new technologies never seen before or small improvements on existing technologies. Businesses rely on market research and consumer feedback to determine the enhancements and improvements that require innovation.

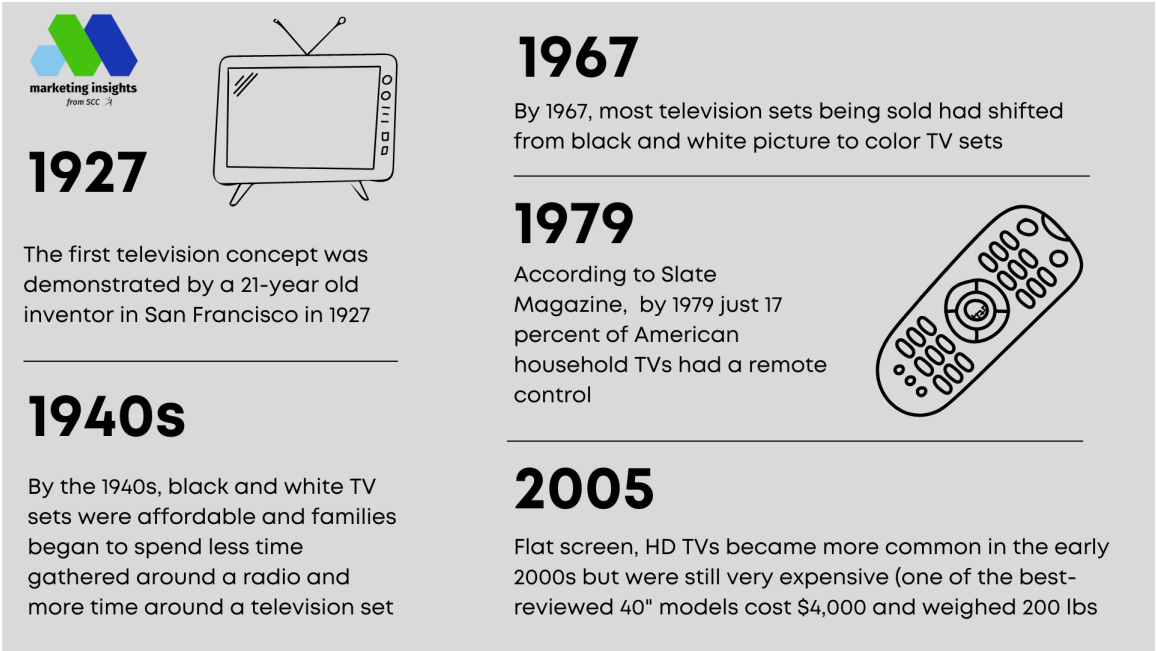
DISCUSSION TOPIC

Mercedes-Benz touts its product innovation on its website, stating "Every innovation concept has the same goal: to create a better and more sustainable product. Our pioneers transform innovations into applications, develop them to the series production stage, and thus safeguard the pioneering role played by Mercedes-Benz products. Because they set standards and keep this goal in mind from the initial idea through to its implementation." The website highlights Mercedes-Benz product innovations, ranging from autonomous driving to technology (including an image of a flying car) and product design.

Click here to visit the website. Review the website and discuss why product innovation is important to Mercedes-Benz from a business and marketing perspective. What innovation might we see next from the luxury auto brand? What innovation might consumers be excited about?

For a great example of product innovation, consider televisions. Historically, television sets have seen a wide range of innovation:

- Black and white to color picture
- Tube television to projection to flat screen
    - Over time, televisions have become thinner and much less heavy
- Standard definition to high definition to 3D and 4K (and 8K)
- Introduction of accessories like remote control, VCR, DVD, Blu-Ray, streaming and devices like TiVo, Roku, AppleTV
- Advancements in programming
- Manufacturing improvements to make the product more affordable



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2. Service Innovation

Innovation applies to more than just product categories. Service innovations can be just as important and influential. Service innovation can describe an entirely new concept, like Uber and rideshare services, or an improvement upon a business's existing ability to impact the customer experience at any level.

While Uber represents a service innovation that changed an entire industry, other service innovations impact how a business operates and serves its customers.

To illustrate an example of how a business can innovate in the service space, let's explore the new drive-thru concept Taco Bell introduced in 2022. According to QSR Magazine's annual study, Taco Bell already offered the fastest drive-thru experience among fast food chains in the U.S. The 2021 report suggests the average wait time in a Taco Bell drive-thru is around 4 minutes and 28 seconds per visit. However, its order accuracy and overall customer service scores ranked 9th among the top 10 U.S. drive-thrus.

So, why would drive-thru innovation be important to Taco Bell? Not only will an improved customer experience bring repeat customers and help to build brand loyalty, but decreasing the time customers spend in drive-thru lines while improving order accuracy and customer service will ultimately lead to increases in profitability.

So how did Taco Bell innovate?

- "Taco Bell Defy", the name of the futuristic new restaurant concept, was created to better serve the ordering habits of the modern, post-pandemic consumer
- "Taco Bell Defy" is a multi-level building with four drive-thru lanes, three of which are dedicated to pickup orders in which food is dropped to customers from above via a cylindrical "proprietary vertical lift."
- The new restaurants also feature digital screens that allow customers to check in with QR codes, speeding up order times for both drive-thru customers and third-party delivery drivers
- According to Taco Bell, the new "Taco Bell Defy" restaurant concept aims to reduce customer wait times in the drive-thru from 4 minutes and 28 seconds to under 2 minutes
    - Click here to read a press release from Taco Bell discussing the new concept for more details on "Taco Bell Defy" (and count the number of times the word "innovate" is used)

3. Process Innovation

Process innovation does change the product or service itself, but rather the methods by which those products and services are created. Process innovation is designed to improve efficiency and productivity. This innovation could include processes that speed up production times, cut the cost of production and delivery, or increase revenue. This often occurs with advancements in technology.

Process Innovation Example

For example, the airline industry has benefited from innovation in software that allows for maximizing revenues through dynamic pricing on airfares. Airlines evaluate a wide variety of factors when determining the price of available seats.

Variables include:

- Supply and demand
- Flight times
- Availability
- Seasonality
- Competitor pricing
- Booking time
- Seasonality

Innovative software has allowed them to adopt dynamic pricing strategies that manage all those variables in real-time, keeping the cost of an airline ticket influx as the airline strives to maximize revenue for each flight. This type of process innovation allows airlines to better predict consumer behavior and shifting market conditions in a way that it can manage inventory to maximize revenue. Similar innovation has been adopted in other industries, like hospitality (hotel room rates), sports, and entertainment. Uber's "surge pricing" represents an excellent example of dynamic pricing.

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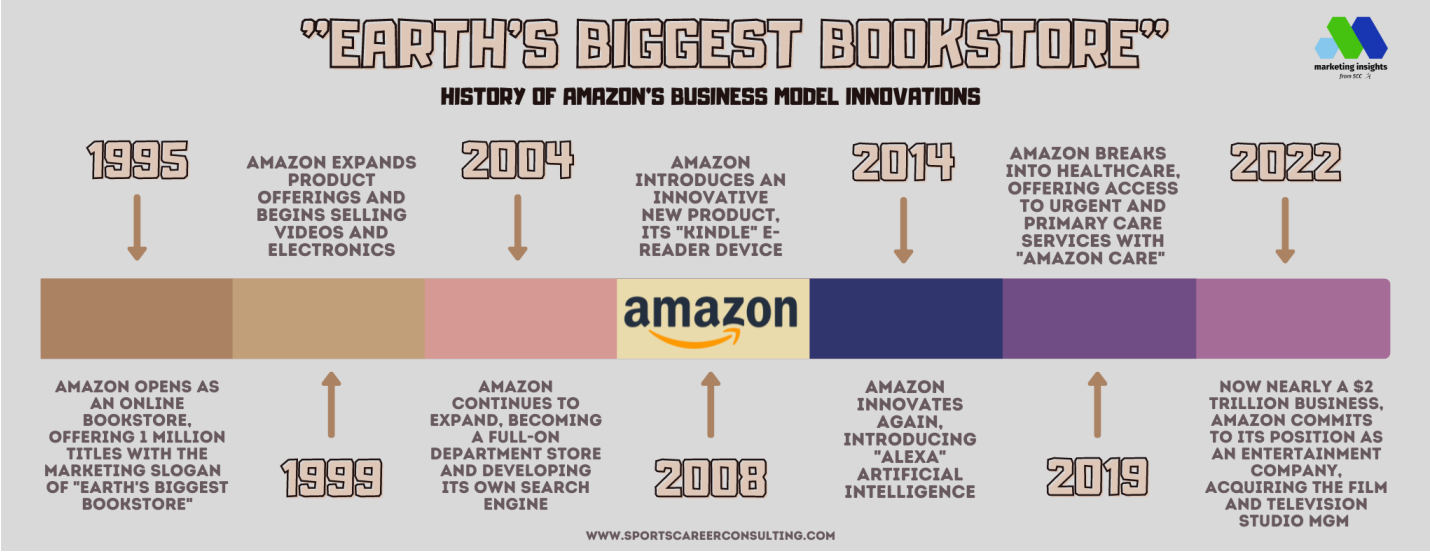
4. Business Model Innovation

A business model is a company's overall plan for generating a profit. The model explains the type of product or services the company sells, how it promotes and markets those products or services, and the expenses the business will incur. When a company innovates its business model, it changes the entire way the company operates. This can occur through a fundamental and significant change in pricing or delivery strategies, like a company pivoting its business model to reflect a subscription-based pricing model vs. traditional pricing.

Amazon represents a great example of business model innovation. When it launched in 1995, Amazon positioned itself as the "Earth's biggest bookstore", offering the largest selection of books anywhere on the globe. Today, Amazon is the Earth's biggest *marketplace*, period. Amazon has become a trillion-dollar business because it has consistently leaned on business model innovation for company growth.



KEY TAKEAWAY

An *invention* is the creation of a unique or original device, method, or process. Inventions could also be an improvement upon a machine or product or the creation of an entirely new process for creating something.

Innovation is not the same thing as *invention*.

Innovation in business is the process of conceptualizing, developing, and introducing new ideas, workflows, methodologies, services, or products. It describes the process an individual, business or entrepreneur undertakes to create innovative resources.

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INDUSTRY APPLICATION

Connect your classroom with industry examples by reviewing the following news stories relating to concepts covered in this lesson:

Disruption - This robotic beehive wants to save the bees

Disruption - The 85 Most Disruptive Ideas in Our History

Innovation - Starbucks' Next Big Innovation: Coffee Infused with Olive Oil

Innovation - Space Tourism Lifts Off: Virgin Galactic opens ticket sales to the general public

Innovation - Amazon's Astro home robot is 'Alexa on wheels'—and much more

Innovation - Chipotle Introduces Autocado, a Robot That Makes Guacamole

Innovation - How Taco Bell Became the Most Innovative Fast Food Chain

KEY TERMS DEFINED:

Disruptive innovation / disruption: When an idea is introduced that creates new value within an existing market by doing things in a way that has not been done before, or by creating an entirely new market altogether.

Innovation in business is the process of conceptualizing, developing and introducing new ideas, workflows, methodologies, services, or products.

Invention: The creation of a unique or original device, method, or process. Inventions could also be an improvement upon a machine or product or the creation of an entirely new process for creating something.

Product innovation: The process of improving upon existing product characteristics, whether it be improving an existing product, or creating an entirely new product to meet the needs of a consumer.

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