

REAL WORLD CONNECTIONS

One example of product and component development is the work of Lincoln Industries, a leading supplier of high-quality coatings and finishes for a variety of industries. Lincoln Industries employs a team of engineers and technicians who work to develop innovative coating solutions that meet the specific needs of their clients. For example, Lincoln Industries has developed a specialized coating system for agricultural equipment that protects against corrosion and wear, extending the lifespan of the equipment and reducing maintenance costs.

CONCEPT Product and component development involves the creation and improvement of products and their associated components through a systematic process of design, testing, and implementation.



BACKGROUND

The history of product and component development dates to the early 20th century, with the emergence of mass production techniques and assembly-line manufacturing. During this time, engineers began to focus on standardization and quality control to improve efficiency and reduce costs. In the mid-20th century, advancements in computer technology and automation led to the development of computer-aided design (CAD) and computer-aided manufacturing (CAM) tools. These revolutionized the product development process. In the late 20th century, globalization and increasing competition led to a greater focus on innovation, speed to market, and customer satisfaction. Today, product and component development in technical process engineering continues to evolve, with a growing emphasis on sustainability, digitalization, and collaboration across global supply chains.