



A History of Product Design

It's time to pick your spots, specialization has begun.

In the 15th Century, as the Middle Ages were transitioning into the Renaissance, people in European population centers wanted to have the same items in their homes and workplaces. News of these useful or desirable items soon spread along trade routes to the far corners of the civilized world.

Emerging Design Centers: Large workshops began to emerge in places such as Florence, Venice, Nuremberg, and Bruges where groups of collocated artisans replicated designs in larger volumes. Apprentices took 7 to 14 years to learn and become a Master. Demand growth quickly outpaced this approach as a solution.

Pattern Books: The use of drawings to act as instructions on how to construct something was first developed by architects and shipwrights during the Italian Renaissance. By the early 16th Century competitive pressures led to the emergence of “pattern books” in Italy and Germany, which were collections of engravings illustrating decorative forms and motifs for application to a wide range of products. And, importantly, the design took place well in advance of manufacturing.

Emerging Industrial Centers: In the 17th Century, growth in monarchies led to large government-operated centers epitomized by the Gobelins Manufactory, opened by Louis XIV in Paris in 1667. Hundreds of craftsmen, artists, decorators, and engravers turned out everything from tapestries and furniture to metalwork and coaches. This model was replicated in many cities, including the famous Meissen porcelain factory near Dresden in 1709. As long as reproduction remained craft-based, however, quality declined as scale increased.

The Industrial Age: The emergence of industrial design as a discipline mirrored the growth of industrialization and mechanization in Great Britain in the mid-18th Century. The term “industrial design” was first used in 1839 to describe how the school of St. Peter instructed draftsmen how to prepare patterns for silk manufacture.

Industrial Design: The first attributed use of the term “industrial design” in 1919 is credited to Joseph Claude Sinel, a self-proclaimed “industrial designer.” However, many argue that the discipline began at least a decade before. Christopher Dresser is generally considered the first independent indus-

trial designer. Then there is the *Practical Draughtsman's Book of Industrial Design*, printed in 1853. Together, these data points anchor the beginning of design as a profession between 1850 and 1900.

Common Design Skill Sets: The Rhode Island School of Design was founded in 1877. But, it was not until the Carnegie Institute of Technology opened its design program in 1934 that historians began to recognize design as a profession. For the next 50 years, until the appearance of consumer electronics devices, the profession remained in the hands of individuals whose talents were sought as employees or consultants.

The Design Industry: By the 1980s, business demand for design skills had grown to the point where profitable design consultancies could be formed. Firms like Alessi (1921), Teague (1926), Design Concepts (1967), Frogg Design (1969), and others pre-date this period, but then growth exploded. Driven by broadening consumer electronics markets, the advent of global competition, shortening product life cycles, and the rapid evolution of CAD into 3D design and surface modeling, design grew from a profession into an industry. RKS (1980), Continuum (1983), Seymourpowell (1984), KartenDesign (1984), IDEO (1991), and dozens of other companies were in business by the mid-1990s.

Design Specialization: During the past 30 years, User Interface Design has already separated from generalized Industrial Design as a specialty. Sustainable Design is close behind and Additive Design is on the doorstep as 3D printing matures into Additive Manufacturing. Meanwhile, Design for the IIoT and IoT and Design for Big Data Analytics will both soon distinguish themselves as well. If you are a designer, or an engineer who does a lot of designing, this would be a good time to read the tea leaves and pick your spots accordingly. Trade schools and academic institutions now offer specialty degrees, and history tells us that is a meaningful development. **md**

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