tion of product complexity as the most essential recognizable feature is not only one of the parameters that need to be consid-
ered when designing capital goods. Design's social responsibil-
ity in relation to capital goods is mainly to create industrial
equipment that is easy for the user to operate.
Aesthetic format expression and the application of corporate in-
dustrial design to capital goods is important because it helps cap-
tal goods manufacturers to stand out in a highly competitive mar-
et through the recall factor of a (+) brand and the development
of (+) product families. Here, introducing and integrating design
into every (-) product development phase and every product level
(from (-) components to (-) packaging) plays an essential role.
 Capital goods design is not just a "special" design discipline,
but it is one of the most complex and diverse, and involves and
integrates the many skills of design. 540  

> Automobile Design

CAR DESIGN
CHARACTER DESIGN

The term "character design" is usually used in the context of ani-
mated film, comics, and games in which there are one or more
fictionalized characters with whom the audience is meant to
identify. In addition to determining the character's physical ap-
ppearances, the process may involve choosing his or her patterns
of speech, body language, actions, and so on. Fully developed
character designs are an important part of the production pro-
cess in these contexts, and may ultimately determine whether
or not the final product is successful on the market.
Character designers utilize a variety of techniques, most of
which are dedicated to figurative representation. In 3D (+) ani-
mation, characters are designed using three-dimensional meth-
ods such as mechatronics, character models, and motion tracking.
In recent years, at the time of interest has increased interest in
the field, the definition of character design has expanded to in-
clude character-driven design jobs outside of the film, comic, and
game industries. The Pictografia Conference (www.pictogra-
菲a.com) was recently established to discuss new developments
and contributions in character design.

> Auditory Design, Textile Design, Game Design, Illustration, Screen Design

COATING

The increasing demand for functionality and appearance has
made a product's "coating"—the application of a specifically
designed surface layer—an important element of the design
and production process. Coatings add functional and/or aesthet-
ic value (+ Aesthetics) to a variety of products ranging from
cars to pharmaceuticals. They are primarily used to insulate or
provide protection against environmental influences such as
heat, corrosion, or mechanical strain. They can also be used to
change an object's surface material properties such as electrical
cconductivity, elasticity, or water or air permeability.
There is a range of processes available for applying exteriorly
and permanently adhesive surface layers to an object. These include
various chemical, mechanical, thermal, or thermo-chemical pro-
cesses like vaporizing and spraying, or immersion in electro-
plating baths. Coatings are often quite complex in and of them-
 selves, consisting of several separate coating layers that per-
form different yet coordinating functions.
In addition to defining the physical and chemical proper-
ties of an object's surface, coatings play an important role in
the interface between consumer and product. By determining the
outward appearance (color, (+) aesthetic features) of any given prod-
uct, coatings can often be key factors in determining its market suc-
cess or failure. In a world where it often is important to identify
where the functions and attributes of a

designed product are increasingly difficult to distinguish from one
another, coatings have also become critical to the process of prod-
uct differentiation and (+) branding.
In recent years, as developers have come to fully recognize the sig-
nificance of coatings in brand recognition, aesthetics, and functionality,
advances in design technologies have made it possible to provide
an increasing number of products with sophisticated, and func-
tion-specific, designable coatings. A growing number of products
today are designed with coatings intended to address specific (+) target
groups through the use of aesthetic (+) styling. In this way,
coatings are also significant at the aesthetic level (+ + Aesthetics),
reflecting the general socio-cultural (+) trends of the market at any
given moment. In an age where production cycles are getting
shorter and product differentiation is key, coatings are taking on
a new degree of significance for designers today. 543  

> Customization, Interface Design, Materials

COLLABORATIVE
DESIGN

Until relatively recently, design was commonly perceived as a
predominantly individual activity; the designer, trained in his or
her (+) craft, was expected to identify, frame, and solve a design
problem on his or her own, and in isolation from others. In the twenty-first
century, however, this perception of the (+) design process is
becoming increasingly removed from actual practice. Designers
today routinely work in teams, collaborating to create pro-
cesses and products that reflect the different kinds of expertise
amongst the team members—and designers who are not skilled
as collaborators are increasingly unlikely to be successful.
Even in the most technologically individualistic ventures, designers
have always worked with others, whether directly or indi-
reality. The needs and desires of clients and end-users for in-

From the broader view, the consuming public's embrace or
disavowal of a designer's work is a large-scale collaboration with
the designer, noticeably influencing what the designer does
next. All design always has been and always will be collaborative
in the sense that multiple parties contribute, influence, and
require iterative change in what any given designer does.

Design as a process is able to alter activities that have often been
conceptualized as isolated practices but in reality require collabora-
tive and dialogic content (as argued by multiple social scientists
and theorists). For instance, design is collaborative in the same
sense that the team's player's score depends not only on the team's
player's own efforts, but also on the opposition's not returning it-
or in the sense that in collaboration, a speaker shifts and modi-

COLLECTIONS
COMMERCIAL
COMMUNICATION DESIGN
COMMUNICATIONS

The word ‘communication’ means ‘to make common’. It is de-
rived from the Latin ‘communicare’ which means ‘to share’ or
‘to make common’. Communication is a combination of two
(focused on ‘together’; ‘common’) and means
(‘to share’). As a literal translation from the
Latin, ‘communication’ can be described as
something along the lines of ‘sharing ideas between the same units’. This descrip-
tion of the word leads to a crucial and, alt-

On reflection, the paradox inherent in a universally accepted de-

definition of communication is that those who par-
ticipate in communication are prone to a shared language and
consequent knowledge of all the relevant signs (including gov-
tures, body language, fashion), which excludes those who do not

collaborate. The process involves the same human dynamics that are present in
any other group effort, with dimensions of power, politeness,
social distance, and cross-cultural differences clearly at work.

Although many design teams still utilize group (+) hier-

Research is currently being conducted into the dynamics of de-
sign teams, and although it is unlikely that definitive outcomes

leading successful collaborations will be reached, it is clear that
understanding collaborative work will become an increasingly im-
portant element of putting together teams, facilitating their
work, and training the next generations of designers.

1. Communications, Interaction, Participatory Design, Problem
Solving

- Design Museums, Fashion Design
- Advertisement
- Graphic Design, Visual Communication
Design Dictionary

Perspectives on Design Terminology