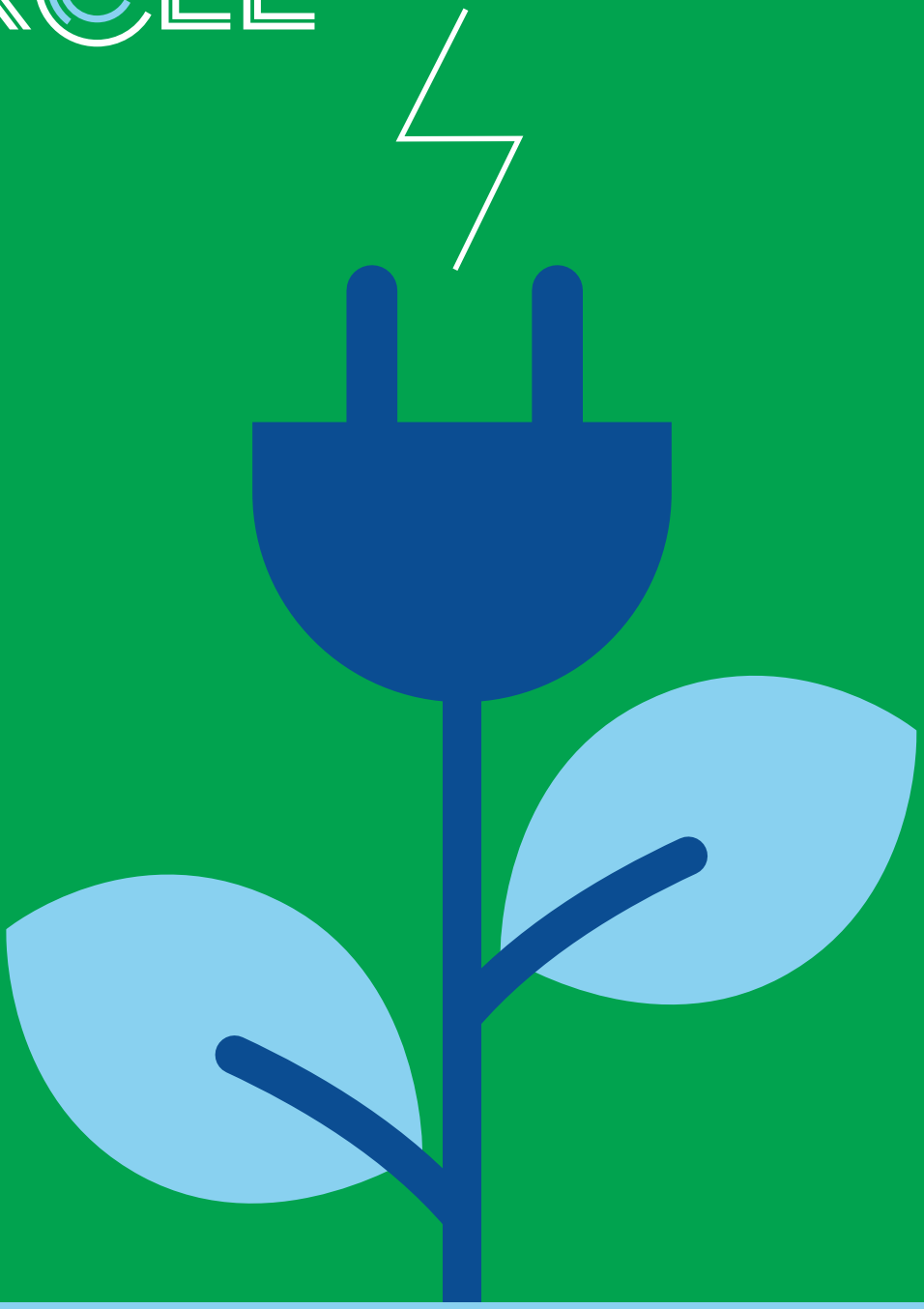
CIRCLE

MANUAL

CIRCULAR ECONOMY IN GRAPHIC DESIGN



CHAPTER I

ELECTRONIC CONSUMPTION AND THE IMPACT THAT DESIGNS HAVE ONLINE

1.1 CHAPTER I
INTRODUCTION AND REGULATIONS

Electronic consumption and the impact that designs have online can contribute to the environmental impact of graphic design. The digitalization of the economy and the increase of the use of electronic devices such as smartphones, laptops, and servers, are leading to an increase in energy consumption and electronic waste.

Due to Eurostat in 2020, 10.3 kg of electrical and electronic equipment waste were collected per inhabitant in the EU.

Graphic designers can contribute to reducing energy consumption and electronic equipment waste in several ways.

SOME EXAMPLES INCLUDE:

- **MINIMIZING THE USE OF ELECTRONIC DEVICES**
  by using digital tools such as CAD and graphic design software, designers can reduce the need to print designs and reduce the use of electronic devices.
- **MAXIMIZING THE LIFESPAN OF EQUIPMENT**
  by proper maintenance and upgrading when necessary, rather than replacing it with new equipment.
- **USING DIGITAL TOOLS THAT ARE ENERGY-EFFICIENT**
  by using digital tools that are energy-efficient and have a lower environmental impact, designers can reduce their electronic consumption.
- **POWERING OFF EQUIPMENT WHEN NOT IN USE**
  and using power management settings to reduce energy consumption.
- **RECYCLING OR PROPERLY DISPOSING OF ELECTRONIC EQUIPMENT**
  at the end of its life.
- **SUPPORTING INITIATIVES AND REGULATIONS**
  that promote the reduction of electronic waste
- **ENCOURAGING THE USE OF SUSTAINABLE MATERIALS**
  by encouraging the use of sustainable materials, designers can reduce the environmental impact of electronic consumption.

It is also important to be aware of the environmental impact of the devices and equipments used and to choose products that have been sustainably produced, in terms of energy and resources used in their production and disposal.

1.1 CHAPTER I
INTRODUCTION AND REGULATIONS

The European Union has several regulations that address the environmental impact of electronic consumption.

SOME EXAMPLES INCLUDE:

- **THE EU'S ENERGY EFFICIENCY DIRECTIVE**[1] which requires member states to set targets for energy efficiency and to promote the use of digital tools in design, as they can significantly reduce energy consumption.
- **THE EU'S CIRCULAR ECONOMY ACTION PLAN**[2] which aims to promote the use of digital tools in design, as they can significantly reduce the environmental impact of design by reducing the need for physical materials and minimizing waste.
- **THE EU'S E-WASTE DIRECTIVE**[3] which addresses the environmental impact of electronic waste by promoting the collection, treatment, and recovery of waste electrical and electronic equipment (WEEE).

In the following chapters of the Manual, we will explore all of these topics in more detail.

NOTE

1— https://energy.ec.europa.eu/topics/energy-efficiency/energy-efficiency-targets-directive-and-rules/energy-efficiency-directive_en

2— https://environment.ec.europa.eu/strategy/circular-economy-action-plan_en

3— https://environment.ec.europa.eu/topics/waste-and-recycling/waste-electrical-and-electronic-equipment-weee_en

1.2 CHAPTER I
TIPS AND TYPES FOR GRAPHIC DESIGN TEACHERS

Graphic design teachers can introduce the topic of electronic consumption and the impact that designs have online in the curriculum in a number of ways

- **DISCUSS THE CONCEPT OF DIGITAL SUSTAINABILITY**
  Explain to students the importance of reducing the carbon footprint of digital design and the role of sustainable design practices in reducing the impact of digital communication on the environment.
- **EXPLORE THE IMPACT OF DESIGN ON THE ENVIRONMENT**
  Teach students how design decisions can impact energy consumption and greenhouse gas emissions associated with digital devices and data centers.
- **ENCOURAGE ENERGY-EFFICIENT DESIGN PRACTICES**
  Teach students about tools and techniques for designing for low energy consumption, such as optimizing images and videos for low-bandwidth use, and reducing file sizes.
- **PROMOTE SUSTAINABLE DIGITAL DESIGN STRATEGIES**
  Introduce students to strategies for reducing the environmental impact of digital design, such as using sustainable hosting services, adopting green power sources, and minimizing the use of disposable devices.
- **EXPLORE ALTERNATIVE DESIGN TECHNOLOGIES**
  Teach students about alternative technologies and processes for designing and producing digital media, such as virtual and augmented reality, 3D printing, and other environmentally friendly design methods.
- **ASSIGN PROJECTS THAT ENCOURAGE SUSTAINABLE DIGITAL DESIGN PRACTICES**
  Assign projects that challenge students to consider the impact of their design choices on the environment, and encourage them to develop creative solutions for reducing the carbon footprint of digital design.