

A timeline on recycling development

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[1960]

1960s Life Cycle Assessment (LCA) of environmental and energy impacts of a given product or service from raw material production to disposal including all transportation involved.

1960 *The Waste Makers* by Vance Packard, first criticisms of programmed obsolescence.

1962 Decree 2414/1961, the regulation of troublesome, unhealthy, harmful and dangerous activities. First regulation of waste and hazardous substances to human health in the workplace in both public and private companies, rural or urban.

1963 *First Things First* Manifesto by Ken Garland «in favour of the more useful and more lasting forms of communication» signed by 22 designers and published in «The Guardian». Updated in 1999.

1968 Rome Club Internacional organization of scientists, politicians & businessmen investigate global problems including the environment.

1969 Earth Day is an annual day of worldwide events to increase the awareness and appreciation of the Earth's natural environment pioneered by John McConnell at a UNESCO Conference in San Francisco.

[1970]

1970 universal recycling symbol created for a contest for art and design students to raise awareness of environmental issues sponsored by Container Corp of America Co. Won by Gary Anderson, a 23-year-old Californian college student.

1970 *Craddle to Craddle*, concept formulated initially as the Loop Economy by Walter R. Stahel, a holistic, economic, industrial and social framework that seeks to create systems that are efficient and essentially waste free.

1971 *Designing for the Real World* by Victor Papanek presents an innovative vision of a survival plan in a world where our energy and resources are running out.

1972 *Limits to Growth* from the MIT scientists, report on the dangers of an ecological catastrophe on a global scale.

1973 Petrol crisis, first signal that the planet's resources are limited.

1974 Des-In Collective in the Superior School of Design in Offenbach am Main (Hochschule für Gestaltung) led by Jochen Gros. Designs using tyres, offset printing plates, tea boxes and clock mechanisms in their products.

1975 European directive 75/442 waste elimination, measures to prevent environmental impact of waste: recycling incentives, prevention, and transformation of waste and penalize behavior harmful to the environment.

1976 «Potential for Substituting Manpower for Energy» research report by Walter Stahel and Genevieve Reday sketched the vision of a circular economy, and was published in 1982 as a book.

1977 Blue Angel eco-labeling in Germany was the first European programme designed to help consumers identify products that offer environmental benefits.

[1980]

1986 AENOR certification in Spain for an organization, product, process or service that meets the requirements defined by standards or technical specifications.

1987 «Brundtland Report»: «Our Common Future» where the concept of sustainable development is defined.

1989 Ceres (Coalition for Environmentally Responsible Economies) integrates sustainability into capital markets for the health of the planet and its people, its Global Reporting Initiative (GRI) is the international standard for corporate reporting.

1989 Ecological Design Association in England and its journal «Ecodesign» coined the term «eco-design».

[1990]

1990 «More from Less exhibition» at the Design Council (UK) aimed at the environmental responsibility of designers.

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FASHION: 1990

Saako Design de Ines Brito and Joana Gouveia (portuguese in Barcelona) transforming the portuguese jersey fabric into unique neckwear and selling in V&A Museum in London.

1992 Programa

LIFE+ by the European Union with 447 projects in Spain, 105 focus on environmental innovation, the rest on nature conservation and information & communication.

1992 «Hannover

Principles» by Michael Braungart and William McDonough for the Hannover Expo 2000 in Germany, to encourage sustainability in the design profession.

1992 The UN

Framework Convention on Climate Change (UNFCCC), within the Earth Summit at Rio de Janeiro.

1993 Forest

Stewardship Council (FSC) international, non-governmental eco-label organisation dedicated to promoting responsible management of the world's forests.

1993 EcoReDesign

official project in Australia and one year later in the Netherlands with EcoDesign, leaders in the implementation of the «Life Cycle Analysis».

1993 Droog Design

created in Amsterdam, a conceptual design group that creates products (many involving recycling see Rag Chair by Tejo Remi), projects and events around the world.

1993 eco-labeling of washing machines programme launched in EU (first company accredited: Hoover, UK).

FASHION: 1993 Vacas

Flacas [Lean Cows] (Carolina Azcona and Miriam Cobo, Madrid), take advantage of surplus stocks, recycling materials such as napkins and tablecloths, gloves, zippers, scarves, dust rags. Their designs appear in press, in Almodóvar's films and are worn by celebrities.

1994 «Triple Bottom

Line» term by John Elkington to maximise economic, environment and social benefits by the elimination of negatives with an emphasis of ethical responsibilities of «people, planet and profit».

1994 Spanish Assoc. for Recovery of Social Economic & Solidarity to coordinate activities related to the protection of the environment & labour reinsertion.

1994 upcycling/downcycling first recorded use of these terms was by Reiner Pilz.

1994 Directive 94/62/CE on packaging and packaging waste (European Parliament and Council), all member states must recycle 25-45% of packaging for landfill. This includes aluminum, glass, steel, plastic, paper and cardboard.

1995 Entorno Foundation a private non-profit making organisation that works in the development of sustainability as business a opportunity.

1995 Drap-Art is created in Barcelona, colectivo of emerging artistas known for their work with rubbish, junk and waste, they organise the annual International Festival of Artistic Recycling of Catalonia.

1995 Spanish Law 3/1995 establishing safeguards to protect workers from occupational hazards, this includes waste and harmful substances.

PRODUCT: 1995 Imanol Ossa recycles materials from his father's company and objects found in the street, turning them into useful objects with a new life.

FASHION: 1996

Tytti Thusberg (Finnish designer in San Sebastian) recycles rubbish to make clothes.

1997 Working Group on Sustainable Product Development, UN launches an International directory of Sustainable Design.

1997 Kalundborg Industrial Ecosystem in Denmark, where the outputs of some companies are absorbed as in-puts in the manufacturing processes of neighboring businesses.

1997 Kyoto Protocol regarding climate change is signed in Kioto, Japan.

1997 Spanish Royal Decree 1627/1997 on minimum safety and health, establishes security arrangements for workers in the construction and civil engineering fields.

1997 Spanish Law 11/1997 packaging and packaging waste, Royal Decree 782/1998, to prevent and reduce the environmental impact of packaging and waste management of packaging throughout its life cycle.

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1998 European Law 10/1998 State of waste, to prevent waste production, establish the legal status of its production and management and promote reduction, reuse and recycling, regulates contaminated soils in order to protect the environment and people.

1999 Natural Capitalism: Creating the Next Industrial Revolution by Paul Hawken, Amory Lovins and Hunter Lovins, a critique of traditional industrial capitalism.

1999 European Directive 99/31, measures and procedures to reduce the environmental impact of waste on human health and quality of natural resources.

1999 Spanish Decree 93/1999 management of batteries and used accumulators. The Spanish Autonomous Communities develop programmes for waste management to reduce the heavy metal content of these elements, remove, promote the marketing of batteries with less hazardous materials and promote research on ways of recycling.

1999 Exhibition Re(f)use (design & environment), with 115 objects made from recycled and biodegradable materials in the Primavera del Diseño (Barcelona).

[2000]

2001 Book Crossing conceived by Ron Hornbaker, the practice of leaving a book in a public place to be picked up and read by others, who then do likewise.

2001 Spanish Royal Decree 1481/2001 regulates the disposal of waste by landfill. It establishes a legal and technical framework, regulating characteristics of landfills, their proper management and operation.

2001 Spanish Law 6/2001, amending 1302/1986, **Environmental Impact Assessment,** clarification on the impossibility of states to default in advance in the process of environmental impact assessment of waste.

2001 Basurama (collective created from the Madrid School of Architecture) dedicated to the investigation, production and cultural management of productive processes, waste and creative possibilities.

2002 Braungart and William McDonough publish «*Cradle to Cradle: Remaking the Way We Make Things*» following WR Stahel's Loop Economy.

2002 Slow Food in Spain (movement created in Italy in 1986 and signed in Paris in 1989), had diffusion in Spain with the participation of journalists, investigators and gourmets.

2002 MAM/304/2002 Order European Waste List, in Europe publishes the operations for recovery and disposal of waste.

2002 Directive 2002/96/EC Waste Electrical and Electronic Equipment (WEEE). In force since 2005 to promote recycling, reuse and recovery of waste from this equipment.

2002 Spanish Law 16/2002 integrated prevention and control of pollution. To reduce and control air, water and soil pollution, by means of a system of prevention and control to protect the environment.

2003 The Freecycle Network created by Deron Beal in Arizona, distributes free items for reuse or recycling and has 9 million members in 75 countries.

2003 Law 5/2003 Waste in the Community of Madrid, promotes waste reduction, reuse, recycling and other forms of recovery. Regulating contaminated soils in order to protect the environment and human health.

INTERIORS: 2003 Trashformaciones by Pablo and Blas Montoya (artists/ designers in Castellón) with their environmental projects and management of a waste disposal company.

FASHION: 2003 Ecolínea (Madrid), recycling to promote employment for people at risk of social exclusion, transforming Almodovar film posters into clothes.

GRAPHIC DESIGN: 2004 the collection of children's books «Recycle & Build» edited by Anaya, from the illustrator, Javier Solchaga, and creator of ephemeral sculptures using everyday objects to encourage creativity from recycling.

2005 Directive 2005/20/EC amending 94/62/EC, with a deadline of 2006 (except for new member countries) for members to comply with the regulations concerning packaging and packaging waste.

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2006-2009 Platform21 an incubator for a new design museum in Amsterdam that proposed a more inclusive and democratic approach in showcasing design, see their Repair Manifesto.

2006-2016 Madrid regional plans for recycling of urban and industrial waste, updating of vehicles, recycling of electronic equipment and dealing with contaminated soils.

2006 «6000km» Project Basurama looks where all we produce ends up and makes visible the hidden landscapes on the city outskirts.

PRODUCT: **2006 Bicycle carpet** by Nani Marquina and Ariadna Miquel with 100% recycled rubber.

FASHION: **2006 «Together» by Camper** with designers Jasper Morrison, Hella Jongerius, Ronan and Erwan Bouroullec, Fernando and Humberto Campana, Jaime Hayon creating shoes from recycled and organic materials, with ethical values.

2007 Bag agreement (distributing & manufacturing organisations in Catalonia) to reduce consumption of single use bags.

PRODUCT: **2007 «I'm not just a box for Camper»** by Guillem Ferrán, costumers may re-use the shoebox.

FASHION: **2007 Assaad Awad** (Lebanese designer in Madrid) designs, creates, upcycles and customizes jewels and accessories for Lady Gaga, Maya Hansen, Thierry Mugler and Juanjo Oliva.

2008 A 13% reduction in Municipal waste produced in Spain in the past 5 years (according to Eurostat).

2008 El REbost initiative by Espiral in Barcelona, with free workshops for schools and institutions, promoting reuse as a raw material in arts education activities and environmental awareness.

2008 Spanish Directive 98/2008 on waste disposal, provides measures to protect the environment and human health by preventing or reducing the negative impacts of the generation and waste management, reducing overall impacts of the use of resources and the improvement of efficiency.

Product: **2008 Field of Probabilities Lamp** for the dining room, using materials from construction sites by the architect Carlos Arroyo.

FASHION: **2008 Waste** (by Benjamin Mordoh in Barcelona) collection of bags using discarded materials recovered from the automotive industry to manufacture unique products.

2009 Ecofont typeface by Spranq is freeware from design firm Spranq in Holand, it saves 20% on toner.

2009 first European Week of Waste Reduction (EWR), project supported by the LIFE+ programme.

2009 1st European Prizes for the Prevention of Waste goes to Bullicio de Ropa (Catalonia) an association who recycles clothes.

2009-2012 Low Cost Zero Waste municipality project involving various European cities, including Barcelona. Encouraging waste prevention via home composting pilot projects.

2009 Ecodesign Directive 2009/125/EC framework to set mandatory ecological requirements for energy-using and energy-related products sold in all states (includes boilers, lightbulbs, TVs and fridges, which are responsible for around 40% of all EU greenhouse gas emissions).

2009 XV Conference on Climate Change in Copenhagen, Denmark.

PRODUCT: **2009 Fun&Basics presents Ecoalf** 100% recycled fabrics and 100% recyclable, made from PET plastic bottles and fishing nets.

FASHION: **2009 Elena García** Spanish fashion designer in London designs designs, using traditional techniques, and ecofriendly textiles for women of all ages.

PRODUCT + INTERIORS: **2009 Pöko Design** in Barcelona, Scholtus Petz (from Luxembourg) describes herself as an eco designer who creates/ decorates her home using only recycling.

[2010] **2010 Efeverde.com** environmental website of the EFE (Spanish news agency since 1939).

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PRODUCT: 2010 Noche en Blanco project by Zuloark (in Madrid), recycled elements from building sites to create an area of fun in Madrid's Gran Vía. Later used in fringe areas.

PRODUCT: 2010 Imaginarium launches the backpack «Travel Organizer» 1.0 Ecoalf – see 2009.

FASHION: 2010 project for Cruzcampo Light, by José Castro (winner of the L'Oréal 2009 prize) creates dresses and a jacket reusing beer cans of more than 14,000 pull rings.

FASHION: 2010 in the 52nd Edition of Cibeles Fashion Week, in El Ego several proposals for recycling.

2011 Excedentes-Excess by El Ranchito (experimental artistic collective in the Matadero, Madrid) workshops & exhibition on the recollection of food unsold in establishments.

2011 Fall of 20% in deposits of electronic residues in Madrid with respect to last year, old models are not being renewed.

2011 Recycling Culture project by publicist Raúl Casañas consists of leaving his books and records that he no longer uses in different countries as he travels.

2011-2015 Madrid Town Hall's Plan for Improving Air Quality includes measures that favor energy efficiency & sustainability.

2012 Cradle to Cradle Products Innovation Institute, a non-profit organisation for product certification is created by MBDC consultants (McDonough Braungart Design Chemistry).

2012 «Towards the Circular Economy: Economic & business Rationale for an Accelerated Transition», report commissioned by the Ellen MacArthur Foundation and developed by McKinsey & Company.

FASHION: 2012 Waste<Less a new line of jeans made from recycled plastic bottles and food trays from Levi's.

WEB-LOGGRAPHY

News agency specialising in ecology, part of EFE Agency (founded in 1939): www.efeverde.com
General Association of Consumers: www.asgeco.org
Madrid's Community Consumers: www.madrid.org
Foundation Entorno, companies in Spain contributing to the improvement of the environment: www.fundacionentorno.org
Slow Fashion Spain (platform for sustainable fashion): www.modasostenible.es
Online design publication: www.monografica.org
Deposit/Refund System: www.retorna.org/es
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