

A focus on the environment and sustainability: issues that are not new for Arper. But how to tackle these complex problems in a considered, responsible way?

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Arper and the environment

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How can we bring together creativity and attention to the environment? How can the freedom of the former and the limits imposed by the latter result in elegant and functional solutions? We need new visions and crossover innovation, we need an ability to view limits as opportunities rather than obstacles. The environmental performance of a product is the impact of the individual phases on its life cycle. While the design phase is essential, all the other phases are equally important and include selecting the raw materials, production processes, transport, use and the end of life phase which together determine the total number of resources used and the emissions generated. Life Cycle Assessment is a process that analyses the environmental impact of a product or a service throughout its entire life cycle, making it possible to take action to make every phase more efficient and improve overall environmental performance. The road to improvement implies a process that involves the entire supply chain and end customers and stimulates an exchange of ideas and close collaboration between the parties.

The value of certifications in an environmental programme is given by the criteria and controls imposed by the independent organization that manages them and the opportunity to communicate the objectives achieved clearly and impartially. The environmental marks that follow the international ISO 14024 and 14025 standards represent the most reliable and serious evaluations.

The path Arper has taken is characterized by a growing commitment: in 2006, Arper adopted the ISO 14001 environmental management system and in 2007 it introduced the use of the LCA tool and subsequently obtained product certification that highlighted the various aspects of the results obtained.

The EPD (Environmental Product Declaration) is an ecolabel that involves an obligatory LCA study and compliance with a series of pre-determined product category rules. The registering body, the Norwegian

NHO, is an official member of the GedNet circuit and the EPD is officially recognized worldwide. GREENGUARD certification meets the need to guarantee the air quality of interiors and achieves this through an analysis and controls made by third parties. GREENGUARD also makes it possible to obtain credits for LEED-CI (Commercial Interiors), specifically for commercial interiors. LEED (Leadership in Energy and Environmental Design), instituted and managed by the U.S. Green Building Council, is the world's most recognized certification of environmental compatibility of buildings. It is based on assigning "credits" for each of the six major categories and includes levels of certification that vary according to the number of credits obtained. The system is very similar to the one used by the Australian Green Building Council which is responsible for the Green Star system. A group of Arper chairs complies with its high standards.

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Presentation of the environmental policy

The environmental project undertaken by Arper began in 2006 by obtaining ISO 14001 certification (environmental management system) and whose earliest results were produced in March 2008, when Arper obtained EPD environmental product certifications for Catifa 46, Catifa 53 chairs (trestle version and four-legged / solid colour and two-colour versions) and in April 2009 for Babar stool.

The key factors that have led the company to undertake this road include the desire to achieve excellence in all aspects of the product, with attention paid to the details and to those who work with us, including suppliers, associates or customers.

The objective is to minimize the environmental impact through policies that involve each stage of our operations, from the processing of the raw materials to the actions of our associates, creating long lasting products that play a role in the life of

our stakeholders every day and making our homes and offices more inviting.

Specifically, the Arper programme is comprised of three main elements:

- environmental management (ISO 14001)
- eco-design (LCA - Life Cycle Assessment)
- environmental communication (EPD - environmental product declaration or the voluntary product certification outline that provides measurable data on the environmental impact of the product life cycle)

The certification obtained are just the beginning and allow the company to successfully confront development of new products in an eco-compatible light, promoting a process of constant improvement.



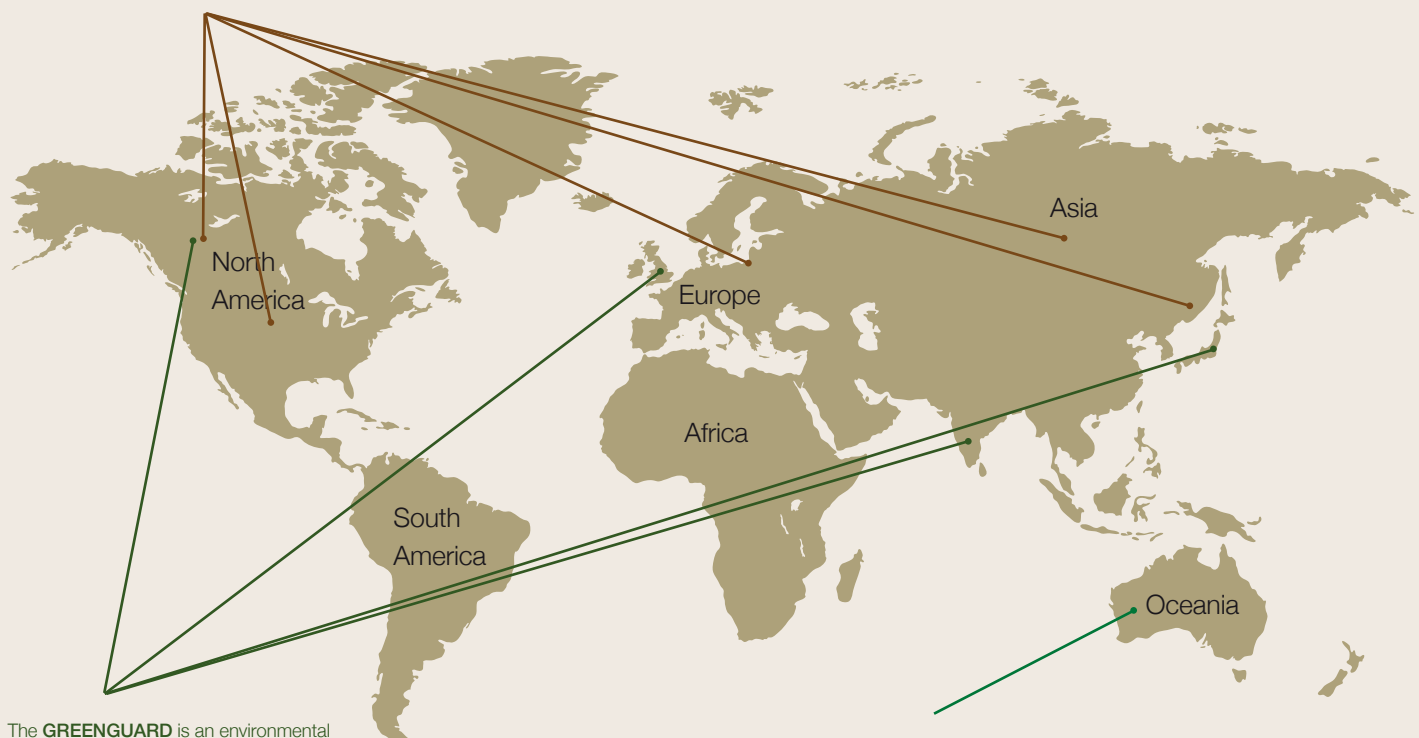
Some of the aspects through which Arper seeks to attain quality for its products and services. We have already met some of these goals, which are illustrated in the certifications; however, for Arper this is not a point of arrival but an on-going process that involves all aspects of the company's life.

Arper's global environmental project

Arper's global environmental policy is expressed in a company-wide philosophy shared by the entire organization. Arper aims to minimize its environmental impact through programmes that involve every stage of its operations. The long-term project undertaken by the company is inspired by a strong sense of responsibility which encourages people to find new solutions that are compatible with the environment.

The objective is to set in motion a virtuous cycle which includes and can benefit the people who work with Arper around the world. In addition to the studies that have led to obtaining EPD certification, Arper has also obtained Greenguard certification for all its chairs and is focusing its attention on other environmental assessment criteria, such as Green Star certification for Australia.

EPD (Environmental Product Declaration) is a type III ecolabel used by companies to publicise their products' environmental performance. The procedure to obtain the certification involves an obligatory LCA study and compliance with a series of pre-determined product category rules. The procedure also envisages an external certification and, finally, registration.



The **GREENGUARD** is an environmental assessment system developed by the GEI (Greenguard Environmental Institute) which sets out a suite of standards for measuring the emissions of materials and products used inside buildings. Arper has obtained the certification for the "GREENGUARD Indoor Air Quality Certified" programme which analyzes emissions of construction materials, furnishings and finishes and for the "GREENGUARD for children and schools" programme which analyses the chemical emissions of materials/products/furnishings used in schools, offices and other buildings considered particularly sensitive. (www.greenguard.org)

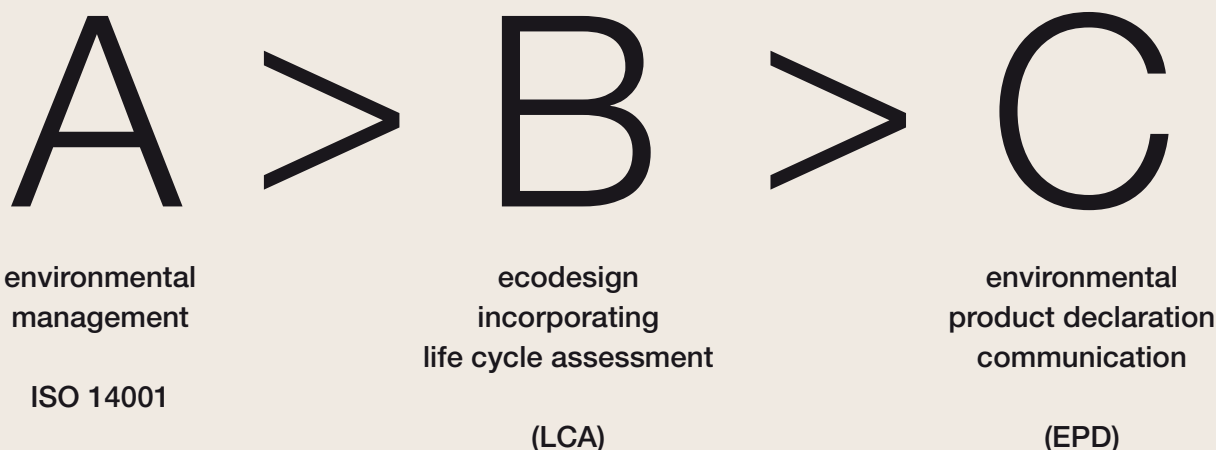
The **GREEN STAR** is a voluntary environmental assessment system run by Australia's Green Building Council to assess the environmental impact of buildings. The system has been developed to establish measurement standards for "green" buildings, identify the impacts of product life cycles and increase awareness of the environmental benefits produced by buildings that meet certain requirements. The categories in Green Star's assessment system

evaluate environmental impact as a direct consequence of the area in which the project is carried out, its design, construction and the maintenance of the building itself. Green Star's assessment criteria are applied to the whole building: the structural/architectural part and its interior design and furnishings. Some of Arper's chairs now meet the requirements of this system. (www.gbcaus.org)

The ABC of environmental philosophy: Product Stewardship

In light of the constant focus on excellence in all aspects of our products and our relations with stakeholders, Arper has embarked on a clearly defined environmental policy in the form of a Product Stewardship programme. Under this principle, all the parties involved in

a product's life cycle share responsibility for any impacts on human health and the natural environment resulting from the management of its production, use and end-of-life stages. More specifically, this Arper programme can be divided into three main components:



Company and product certifications: the difference

Before explaining more fully what the environmental certifications obtained by Arper actually mean, we first need to explain the distinction between product and company certifications. Since 1997, Arper has been certified ISO 9001, which means that we have successfully implemented and applied a quality system that complies with that standard. The ISO 9001 standard enables corporate processes to be monitored to ensure that they focus on improving the effectiveness and efficiency of the organisation as well as customersatisfaction.

Since 2006 Arper has also been certified ISO 14001. This voluntary international standard is applicable to all categories of enterprise and defines how an effective environmental management system should be developed. Both certifications (ISO 9001 and 14001) are company certifications. EPD, on the other hand, is a certification linked to the individual product and concerns not the company but the products considered by the life-cycle study. Arper has begun with Catifa 46, Catifa 53 and Babar.

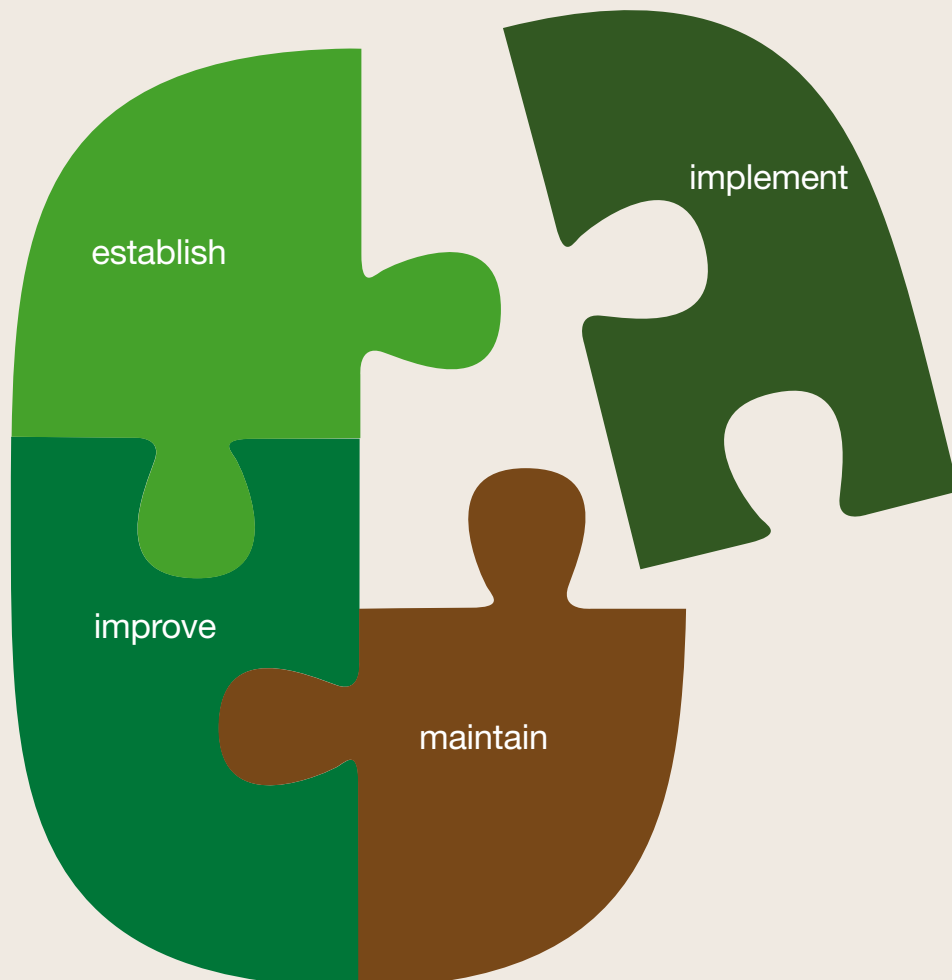
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What is ISO 14001?

ISO 14001 is an international standard developed about 10 years ago. Recognised globally, it defines how an effective environmental management system should be developed. ISO 14001 certification is not compulsory: it is the outcome of a voluntary choice by companies who decide to establish/implement/maintain/improve their own environmental management system. The standard does not specify environmental performance levels but shows

that the certified organization has a management system in place to control the environmental impact of its activities and takes a systematic approach to achieving consistent, effective and sustainable improvements.

Since 2006, Arper has satisfied these requirements for the design, development and manufacture (throughout the assembly and control stages) of its chairs, tables and furnishings.



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Why LCA

Life Cycle Assessment



The LCA methodology applied to Catifa 53, Catifa 46 and Babar has enabled us to evaluate their environmental impact throughout their life cycle by carrying out an in-depth analysis of each stage of

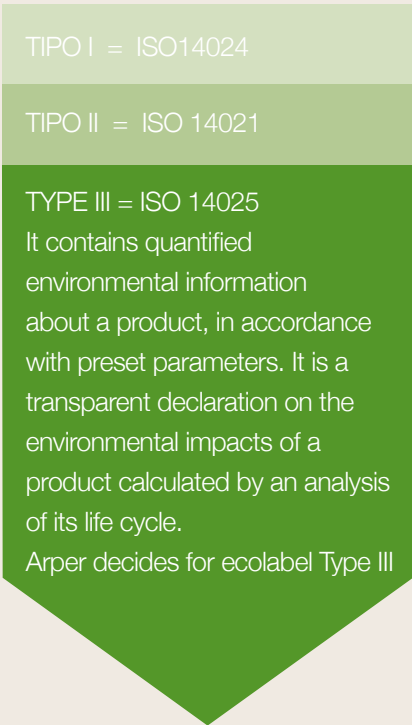
the process. This encompasses the raw materials, extraction and treatment of the materials used, transportation, assembly of the chairs, packaging, distribution, use and end of life.



EPD Certification

Catifa 53, Catifa 46 (the trestle and 4-leg models in mono- and bi-colour polypropylene) and Babar obtained the Environmental Product Declaration (EPD) in March, under the Norwegian NHO system. EPD, like all type III (ISO 1405) ecolabels, consists of a document through which a company communicates the environmental performance of its products on the basis of pre-determined parameters and in a fair and transparent way. The reliability and accuracy of the information are guaranteed by external certification and registration by the appropriate body.

For Arper, this is one of the first concrete goals achieved since we began to use Life Cycle Assessment (LCA) as an instrument for environmental improvement. Applying the LCA methodology to Catifa 53, Catifa 46 and Babar has enabled us to assess the environmental impact of our products. The method covers their entire lifespan by conducting in-depth analyses of each stage of the process: the raw materials used and the extraction and treatment of these materials, transportation, assembly, packaging, distribution, use, and end-of-life. By adopting this methodology, supported at all times by LCA experts, Arper obtained the EPD after external certification and registration by Norway's NHO. NHO is an official member of the Global Type III Environmental Products Declaration Network (GedNet), which harmonises EDP programmes developed by individual countries at the international level. GedNet is recognised in Canada, Denmark, Japan, Germany, South Korea, Norway, Sweden, China and the USA.

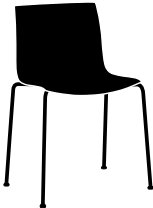
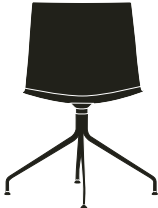
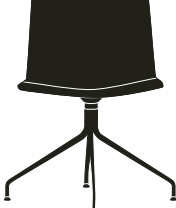



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EPD Certification

The following table summarizing the EPD illustrates the key results of the analysis. It specifies the carbon footprint, energy consumption and percentage of recycled and recyclable material in each product.

The results are based on a life-expectancy of 15 years (period indicated in the EPD requirements). For all chairs, the certification refers to the mono-colour and bi-colour polypropylene versions. On request, Arper can provide the complete EPD for the products in question.

				
CATIFA 46 4 leg	CATIFA 46 trestle	CATIFA 53 4 leg	CATIFA 53 trestle	BABAR
Carbon footprint: (CO2 eq.)	Carbon footprint: (CO2 eq.)	Carbon footprint: (CO2 eq.)	Carbon footprint: (CO2 eq.)	Global warming: (CO2 eq.)
19kg	27kg	22kg	30kg	61 kg
Total energy consumption :	Total energy consumption :	Total energy consumption :	Total energy consumption :	Total energy consumption :
456MJ	622MJ	536MJ	715MJ	1235MJ
Percentage of recycled material:	Percentage of recycled material:	Percentage of recycled material:	Percentage of recycled material:	Percentage of recycled material:
41%	52%	30%	48%	55%
Percentage of recyclable material:	Percentage of recyclable material:	Percentage of recyclable material:	Percentage of recyclable material:	Percentage of recyclable material:
99%	>99%	>99%	>99%	92%

*calculated by Arper S.p.a.

What is Greenguard?

GREENGUARD is one of the requirements for the LEED-CI (Leed Certification Program for Commercial Interiors), established by the U.S. Green Building Council (USGBC) (United States). This evaluation system helps architects, interior designers and their customers make sustainable choices and build high quality interiors. To achieve the requirements of the LEED-CI, furnishings and fixtures must be GREENGUARD certified or fall within the levels established by the programme.

GREENGUARD certification is validated by the GEI (GREENGUARD Environmental Institute), an independent, non-profit organization that supervises the GREENGUARD programme. The programme provides a suite of standards for measuring the atmospheric emissions of materials and products used in buildings. The standards for certification include a series of tests and analyses on samples of Arper chairs in all their models and variations.

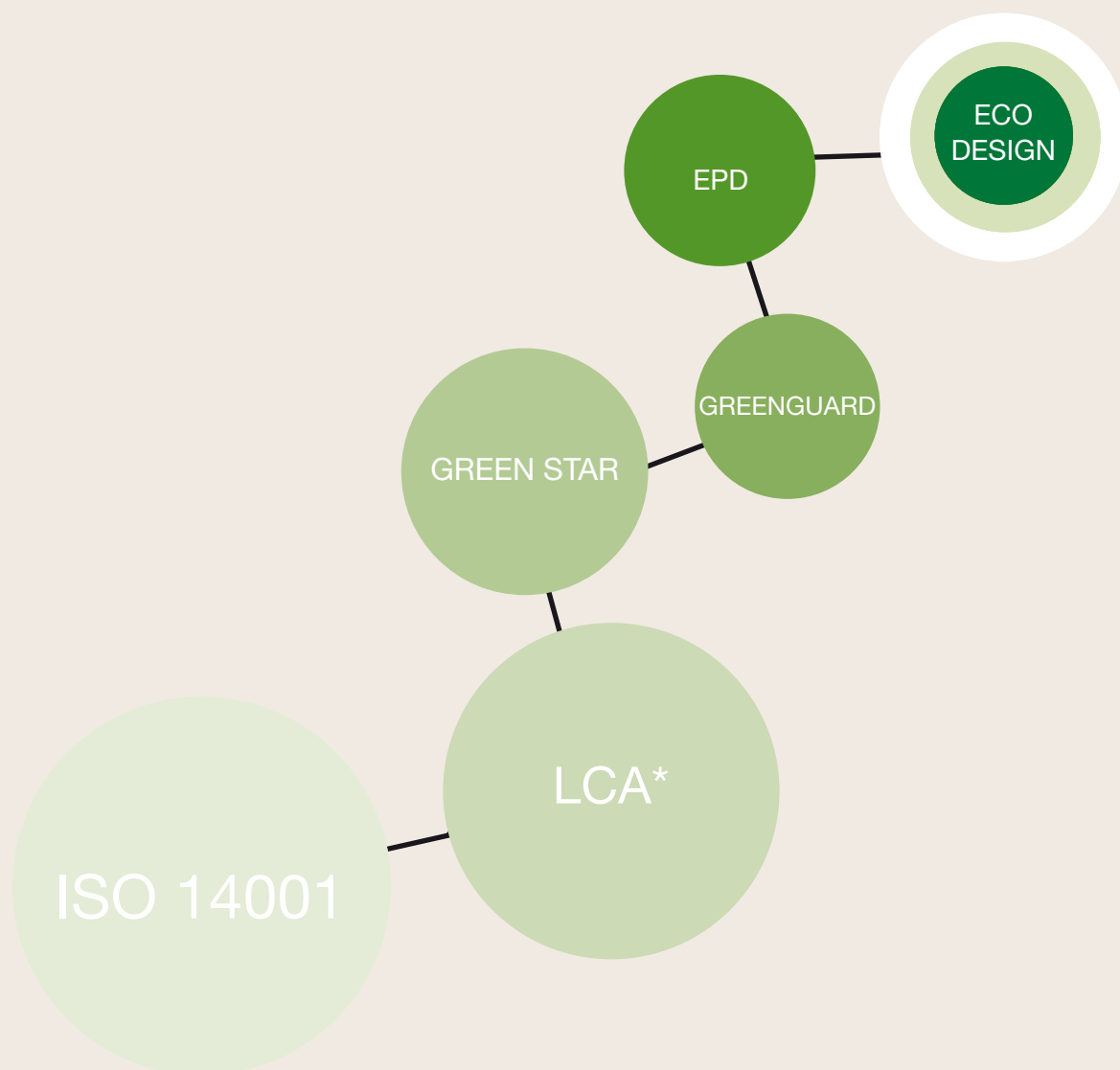
(www.greenguard.org)



Future projects

The company and product certifications obtained by Arper are a starting point that will enable us to continue on our chosen pathway and develop new products from an environmentally-friendly perspective.

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* more explication on page 4, 5 and 6

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