

**Submitting Country, Organization, Company**

Italy, Orange Fiber S.r.l.

**If Organization or Company, please indicate the approximate number of employees**

8

**Title of the action**

Orange Fiber: Sustainable fabrics' production and life cycle management

**Upload an image**

**Relevant Website**
<http://orangefiber.it/>
**Partners**

Lenzing, Boniser

**Type of initiative**

Private initiative

**Description of action**

Orange Fiber is the Italian innovative SMEs that patented and manufactures circular fabrics from citrus juice by-products with enhanced sustainability, brand strength and communication to reshape final consumer and brands' engagement.

In particular, the product portfolio entails high quality fibres, yarns and finished textiles with a soft appeal for a greener fashion industry, empowering brands who are looking for eco-responsible textile value chains.

In contrast to a multi-layered and dispersed textile industry, since the beginning Orange Fiber acted as supply chain integrator, enabling changes in all the steps, lowering environmental pollution, usage of water, fertilizers, and food crop land.

Our final goal is to establish Orange Fiber as an enabler of sustainability and innovation in diverse industries through a totally green and transparent production of new materials from waste, by-products and renewable sources, representing not only a solid alternative to traditional and polluting materials but also a point of reference for sustainability. In these regards, through our strong brand building,

marketing and communication we aim to be an influencer of masses of final consumers and fashion industry players for a more conscious, green and transparent system of consumption, production and competition.

Our action is featured in our integrated approach for our sustainability strategy. We cover the sustainable management of all the steps of the value chain in a cradle-to-cradle perspective: Sustainable materials as starting point: Our products are bio-based, biodegradable and compostable derived from the upcycling of by-products from the citrus juice industry as peels, seeds and leaves, from which we extract a cellulose pulp apt to be spun

Green and short supply chain: Our partners are meticulously selected according to sustainable practices, low chemical, water and resources usage, environmental product and process certifications and proximity. We co-located our production plant with Boniser S.r.l., specialised in the juice and active principles extraction from fruits. Our partner for fiber making is Lenzing Group, who stands for ecologically responsible production of specialty fibers made from the renewable raw material wood and drives many new technological developments.

Certification strategy: Our products, process and business are in progress to undergo a very broad spectrum of sustainability assessments and certifications: Lifegate GRI sustainability assessment, LCA analysis of our fibre and finished fabrics, B-Corp Certification, OEKOTEX Standard 100, Recycled Claim Standard, OK-Biodegradable in Soil, Water, Marine, OK-Compostable Home and Industrial

Digital transparency: We are planning to partner up with an European specialist provider of smart digital technologies and software in order to enable the digital identity of our fabrics and prolong their lives as much as possible. Thanks to this partnership we will be able to provide our fashion brand customers with QR labels, RFID tags and NFC threads in order to make much more information available to them and final consumers in regards to material passport, supply chain characteristics and life cycle data. Final users will be able to get engaged with an app in order to find instructions and tools for the best and more sustainable options for garments care, washing and drying as well as for their repair, reuse, recycling and disposal.

Press & Social media: We receive massive attention from traditional and new media and accordingly exploit these channels to promote more conscious lifestyles and more accurate knowledge about fashion materials and environmental impacts, counteracting greenwashing and fake news. In these regards, LifeGate is our partner in the development of consistent communication campaigns and in accompanying the company in defining a future roadmap that gives value to the positive impact created. LifeGate has been a benefit company point of reference for sustainability issues since 2000.

This integrated approach fosters concrete positive impacts on a broad scale, since in this way we do not only produce and commercialize low-impact materials but we can go much further than those volumes and influence consumption habits of masses of people all over the world.

### **Type of action**

Traceability

Transparency

### **Please select the specific area/s of the action**

Research and Development of Innovative Solutions

Awareness and Education

Collaborative initiatives

Business management systems or instruments

## **Scope of the action, including a description of the value chain processes that are covered**

### **Objective**

Spread the use of more sustainable materials in fashion since globally improved material mixes could deliver 41 million tonnes of GHG emissions savings and a 1% increase in circular model market share reduces emissions by 13 Mn tCO<sub>2</sub>e.; Achieve triple bottom line of environmental, social and economic sustainability in our business; Establish trust and transparency along the supply chain and towards consumers through certifications and assessments; Integrate the supply chain and align efforts towards decarbonization of each step; Educate brands and fashion consumers with easy but specific information for more sustainable approaches towards production, consumption and competition; Engage consumers in reusing and returning clothes for recycling

### **Commitments**

We work to alter business-as-usual practices among industry manufacturers and fashion brands, finding the synergies among different actors and building strong partnerships for concrete results in innovation.

### **Value chain scope**

Cradle to cradle: From raw materials extraction not rival to food consumption, to fiber making through certified, measurable and green processes, to low impact spinning and weaving, to fashion design co-innovation, till the most environmentally fitting disposal of the products containing our fabrics, driving their repair, reuse and correct biodegradation or recycling.

## **Timeframe and/or milestones for the action**

In February 2014 Orange Fiber was formed as Italian Innovative Startup with headquarters in Catania. In December 2015, thanks to the funds of Smart&Start by Invitalia, the first pilot plant for the extraction of citrus pulp opened in Sicily and the company completed the first fabric production. In April 2017 the first fashion collection created with the exclusive Orange Fiber fabric by Salvatore Ferragamo is presented. Between April and June 2019 the sustainable fabrics from citrus juice by-products have been included in the H&M Conscious Exclusive Collection and have been used to create a limited edition of ties by the artisan brand E. Marinella. In October 2020 the company completed the creation of a new plant in Sicily and produced the first ton of a new sustainable fibre contributing to craft the future of the Fashion Industry in a greener way. In July 2021 the new partnership with Lenzing Group was officialized for the development of a more sustainable product through innovative production methods. From 2022 on, thanks to our scale-up and sustainability strategy Orange Fiber will strengthen its commercialization and continue research and development activities for new low-impact products from different alternative feedstocks.

## **Reference instruments and sources used**

GRI standards  
Sustainable Development Goals  
EPD guidelines  
LCA analysis  
B-Corp Certification  
OEKOTEX Standard 100  
Recycled Claim Standard

OK-Biodegradable in Soil, Water, Marine  
OK-Compostable Home and Industrial

### **Expected benefits and impact for the stakeholders involved**

Enhanced visibility of compliance with sustainability requirements by industry actors/partners along the entire value chain

Enhanced traceability of the social/environmental/ethical attributes of product(s)/materials along the value chain; for example, for origin, quality, sustainability performance, and compliance with health and safety requirements for consumers and workers

A measurable impact on sustainability in value chains over time, eventually verified through life-cycle assessments and/or sustainability certifications

Enhanced environmental and socially responsible consumption and production, and circularity of the value chain, that may be relevant to and inspire other countries and industry actors/partners

### **Stakeholders involved**

Business and industry associations

Consumers and consumer associations

Investors/shareholders

### **Key performance indicators for the action**

% savings in water, chemicals and virgin resources

% final clothing volumes reused, recycled mechanically, recycled chemically

Number of brands and final consumers reached

Engagement rate with consumers

Volume of sustainable OF fabrics sold to brands

### **Good practices**

<http://orangefiber.it/process/>

### **How has this UNECE-UN/CEFACT Call to Action contributed to strategic engagement and/or public awareness in support of your commitment?**

We believe in the power of collaboration and partnerships and therefore we participate to this UNECE-UN/CEFACT Call to Action because we find it to be the perfect environment to further define our sustainability strategy and further measure the related positive impacts in order to create a network of aligned actions and knowledge for the fashion industry of the future. Our mission combined with our brand strength and communication strategy creates the synergetic mix for the sensibilization of our community and network of consumers and producers, in order to drive widespread behavioral and industrial changes.

**Link to relevant goal(s) and specific target(s) of the United Nations**

