

The role of environment and human ecology in  
sustainability of textile industries.

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**HOHENSTEIN INSTITUTE.** Competence in Textiles.



## Fields of Activity

### AT A GLANCE

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- ▶ Clothing Technology
- ▶ Consumer Tests
- ▶ Hygiene and Biotechnology
- ▶ Function and Care
- ▶ Textile Testing
- ▶ Technical Academy
- ▶ Corporate Communications and Reserach Marketing

## Accreditations & Certifications



Lab accredited according to DIN EN ISO/IEC 17025



European notified test and certification authority no. 0555 for personal protective equipment (PPE)



Member institute of the International Test Association for Applied Protection against UV Radiation



Member of the International Association for Research and Testing in the Field of Textile Ecology (Oeko-Tex)



Member institute of Oeko-Tex International



Internationally recognized inspection authority for down and feathers, recognized by the International Down and Feather Bureau (IDFB)



Professional linen care, according to RAL-GZ 992/1, 992/2, 992/3



Monitored hygiene in hotels

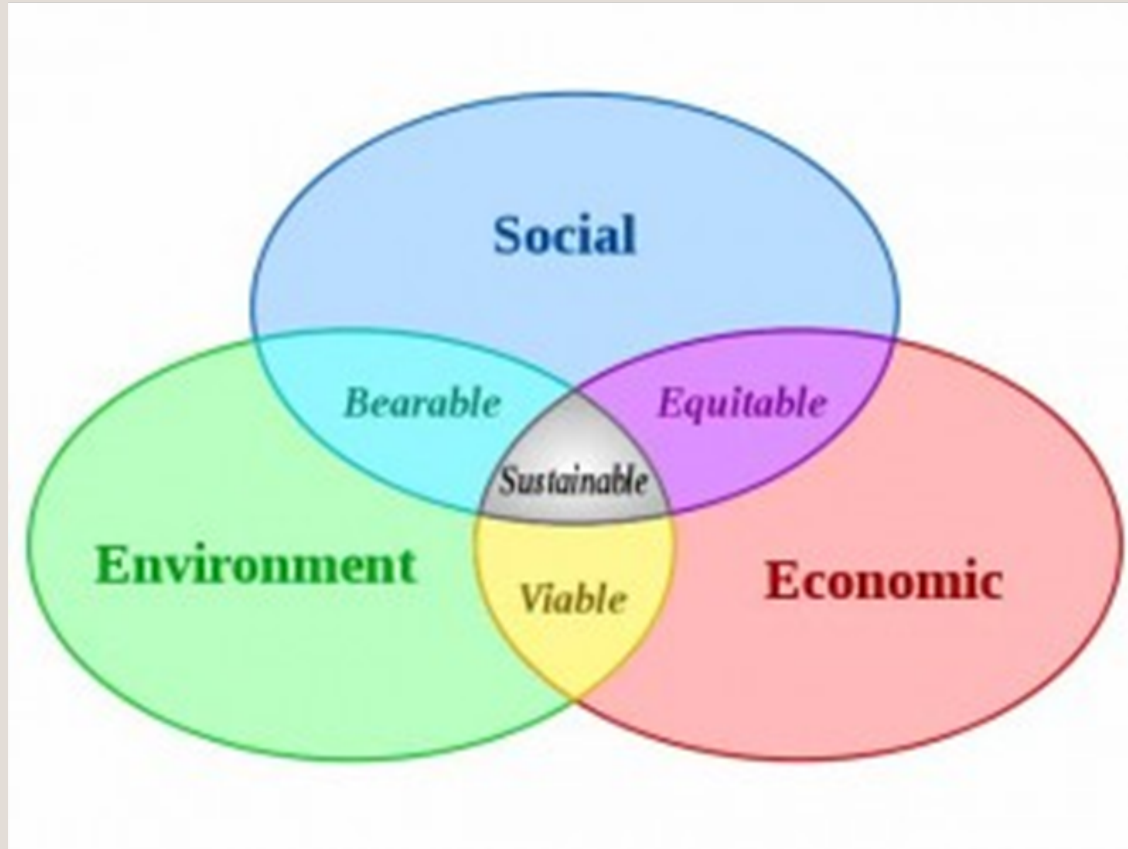


Testing of medical compression hosiery



The accreditation applies for the test methods listed in the certificate marked <sup>z</sup> in the report

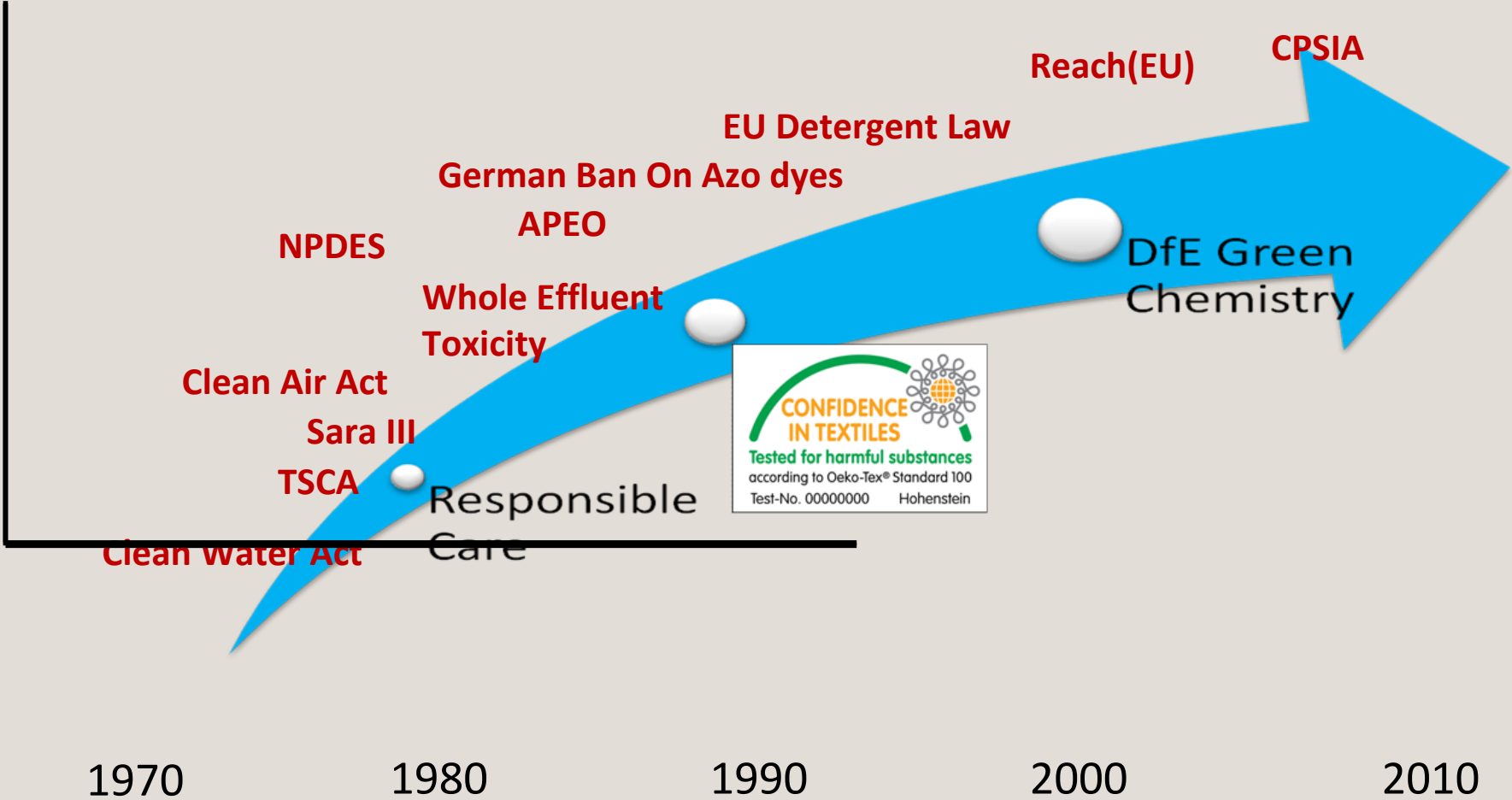
# What is Sustainable?



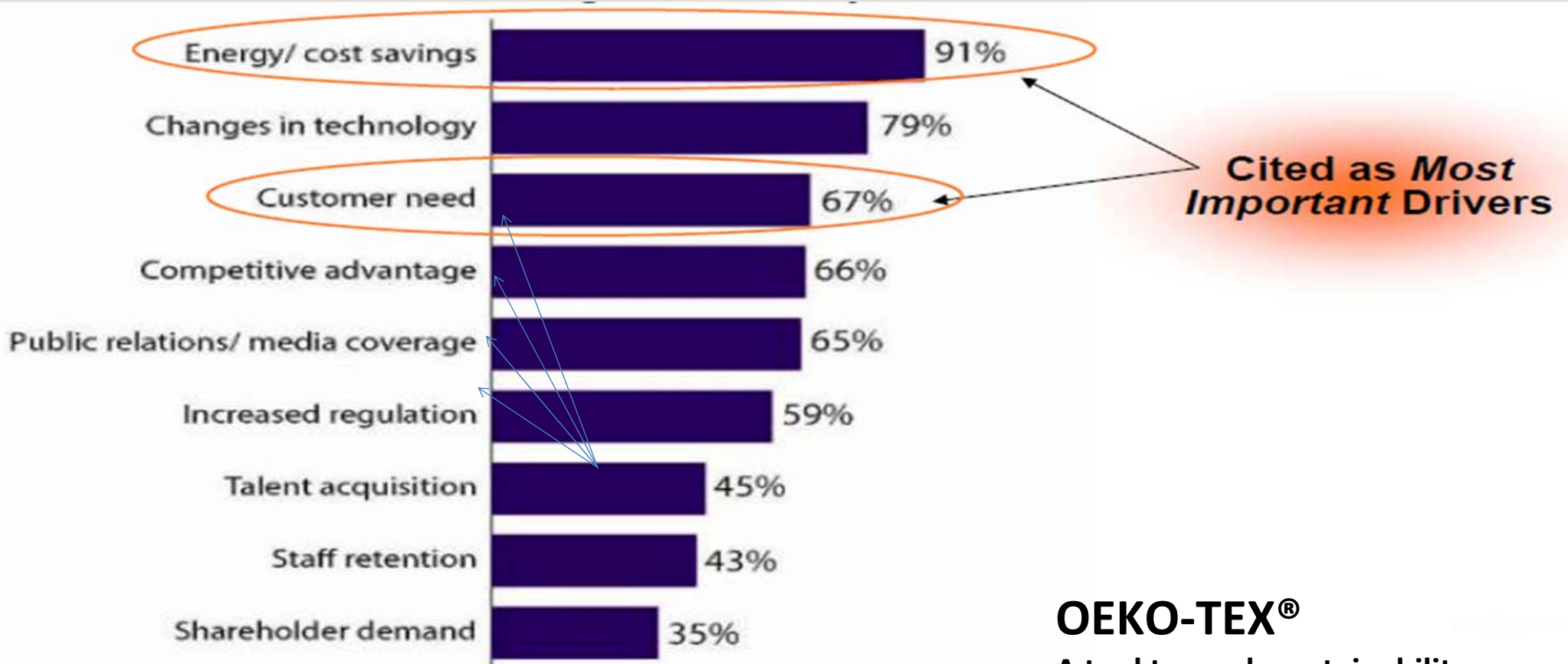
# 8 Reasons Sustainability Is Not A Fad

1. **Population Crisis Will Force the Issue**
2. **The Climate Crisis is permanent**
3. **The Energy Crisis is permanent**
4. **It's personal: Me, my kids, my grandkids vs. spotted owl**
5. **Investors, Banks, and Economists care: Factoring climate change and energy crisis risks into rates and decisions**
6. **Mainstream media is on board: Regular, in-depth coverage**
7. **Politicians are reacting: Political courage is building**
8. **Clean technology is changing the game: We are on the cusp of a new generation of clean-tech products and services**

# Sustainability Drivers: Regulations & Response



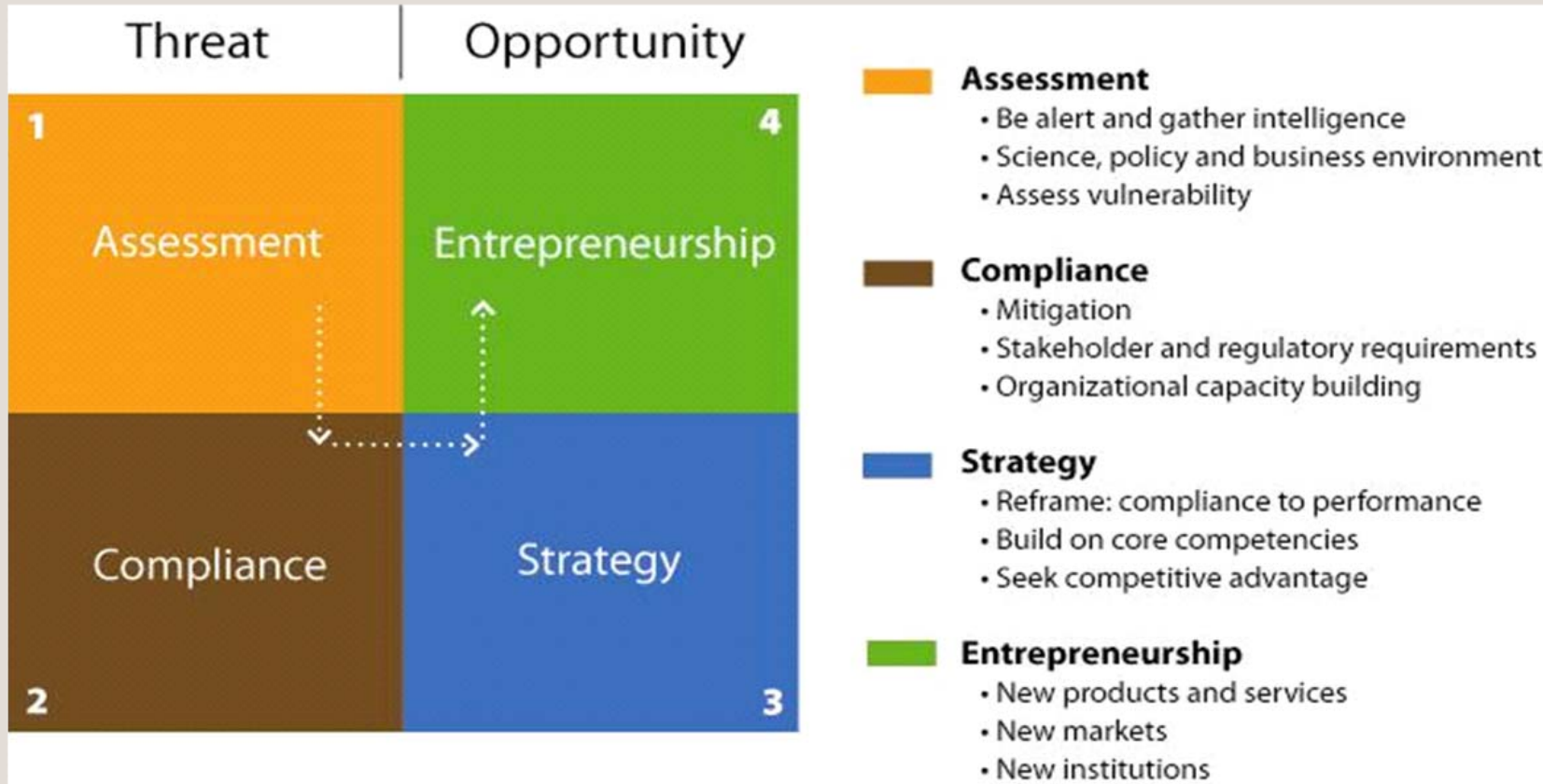
# Sustainability Drivers



**OEKO-TEX®**  
A tool towards sustainability

C-suite survey of 203 large U.S. enterprises, Feb.-Mar. 2009  
Siemens / McGraw-Hill Construction presentation about the  
Greening of America Corporate SmartMarket Report, Greenbuild, Nov. 2009

# Sustainability: Key Driver of Innovation



# How to become a Sustainable Society

To become a sustainable society, we must eliminate our contribution to the progressive ...



... **buildup of substances extracted from the Earth's crust**, (e.g. heavy metals and fossil fuels)



... **buildup of chemicals and compounds produced by society**, (e.g. dioxins, PCBs, and DDT)



... **physical degradation and destruction of nature and natural processes** (e.g. over-harvesting)

... and eliminate our contribution to conditions ...



... **that undermine people's capacity to meet their basic human needs** (e.g. unsafe working conditions and not enough pay to live on)

# *We Can* Become A Sustainable Organization!

- It takes less material to do a job because we have engineered it so well.
- We do not create any waste.
- Waste from one operation is food for another.
- Every process is examined as part of a system.
- We continually improve.

In the long run:

- Decreases costs
- Increases opportunities
- Lowers liabilities
- Improves community
- Improves environment
- Creates a place where the best people want to work

# Oeko-Tex® Standard 1000

The testing, auditing and certification system for environmentally-friendly operations

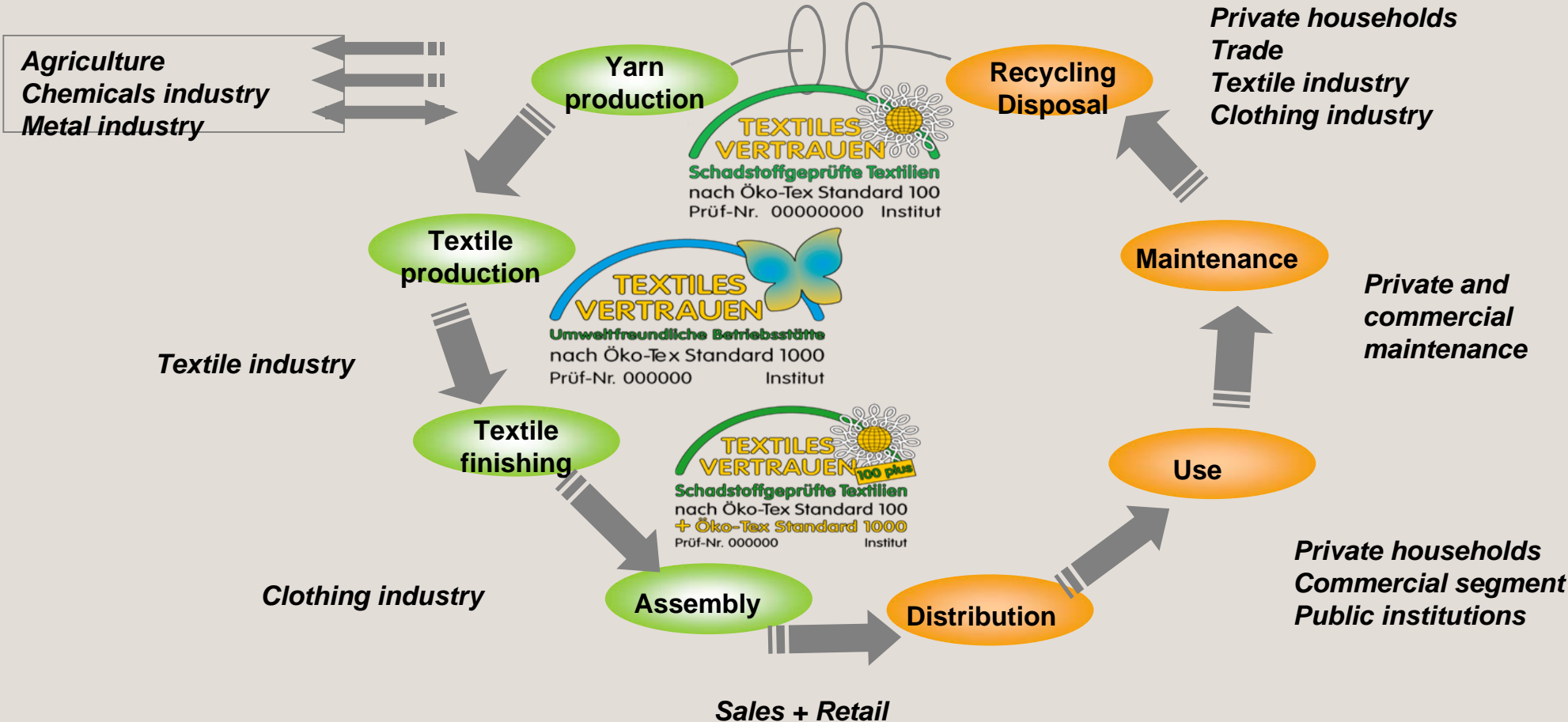


*The Oeko-Tex® system. Worldwide. Uniform. Secure.*

# Textile Touch Points: Polymer through Disposal



# Production according to Oeko-Tex® Standard 1000



## ***Criteria for Oeko-Tex® Standard 1000***

- **Compliance with national laws**
- **Use of environmentally-friendly production technologies, chemicals, dyes and tools etc.**
- **Observance of defined specifications regarding waste air emissions, waste water treatment, waste disposal, dust formation, noise**
- **Optimised use of energy resources and materials used**
- **Compliance with defined specifications for social working conditions and occupational safety**
- **Proof of quality and environmental management system**
- **Product certification according to Oeko-Tex® Standard 100 (at least 30% of entire output)**



## *Oeko-Tex Standard 1000 - Production ecology*

- Optimised use of resources:

- > Water
- > Energy/Electricity
- > Tools and resources
- > Fuels etc.

- Optimised measures with regard to environmental interfaces:

- > Waste air
- > Waste
- > Waste water
- > CO<sub>2</sub>



## *Oeko-Tex Standard 1000 - Production ecology*

- Use of environmentally-friendly production technologies:

- > no chlorine bleach
  - > no prohibited azo dyes
  - > no allergenic dyes
  - > no chlorine-organic carriers
  - > no pesticides
  - > no tensides, textile detergents or cleaning and degreasing agents which are harmful to the environment
  - > no printing systems based on heavy gasoline
  - > exclusion of PCP, TBT
  - > no SVCH substances on the REACH candidate list
- etc.



## *Oeko-Tex Standard 1000 - Social aspects*

- Occupational safety / social requirements:

- > optimised workplace conditions regarding:
  - noise (e.g. insulation, hearing protection)
  - dust (filter systems)
  - no chemicals which are harmful to health
- > wages commensurate with performance
- > no child labour
- > regulated work and vacation time
- > no discrimination and forced labour etc.
- > required measures to secure occupational safety and health management



## ***Oeko-Tex Standard 1000 - Environmental management system***

- **Establishment of an environmental management system**  
**= Certification prerequisite**

### **Measures:**

- > **Status-quo analysis and definition of required activities**
- > **Initial environmental audit + continuous improvements**
- > **Clear definition of environmental goals + environmental representative(s)**
- > **Regular employee training for implementation of environmental goals**
- > **Preparation of an environmental handbook  
(ongoing documentation, targets/programs, responsibilities...)**
- > **Audit plan to review applied measures**



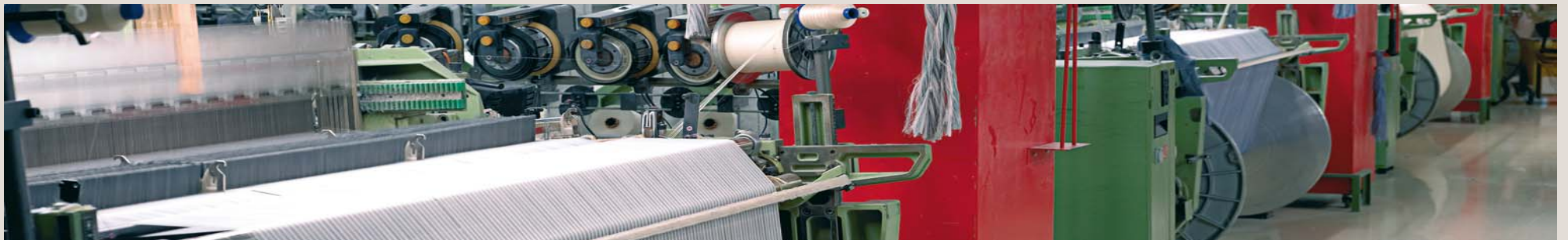
## ***Oeko-Tex® Standard 1000 - the comprehensive standard***

**=> the only environmental certification system that is especially tailored to the textile and clothing industry**

**=> allows for a comprehensive assessment of an operation's environmental and social performance**

**(as compared to other environmental management systems which only partially cover the relevant areas)**

**=> full recognition of other management systems  
e.g. ISO 9000, ISO 14000, EMAS**



## ***Oeko-Tex Standard 1000 - Advantages for companies***

- **specialy aligned to the needs of the textile and clothing industry**
  - **available worldwide, independent standard**
  - **clear and firmly defined criteria and limits**
  - **competitive advantages through improved image and credibility**
  - **marketing argument for own products**
  - **improved employee identification through inclusion/co-responsibility**
  - **cost savings through efficient production processes, relieves resources, limits emissions, keeps waste at minimum etc.**  
-> **meaningful combination of economic and ecological interests**
  - **allows for an overall statement regarding the origin of a product (-> Oeko-Tex® Standard 100plus label) – across all stages**
- 
- A person wearing a blue shirt and glasses is seen from the side, interacting with a control panel in a factory environment. The background shows industrial machinery and a bright, slightly hazy atmosphere.

Thank you very much for your kind attention.

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