US AND OTHER INTERNATIONAL CERTIFICATIONS FOR SUTAINABLE DESIGN FURNITURE

Learning Objectives:

1. US and other international certifications that define the grade of sustainability of furniture products
2. Which materials are considered sustainable
3. Which manufacturing processes/policies are considered sustainable
4. How sustainable products improve the quality of spaces

General Information

Delivery

In-class and Distance Learning

Classification

Intermediate

Designation

HSW

Instructor

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1. US and other international certifications that define the grade of sustainability of furniture products

FSC certification guarantees that the harvesting is controlled to prevent the phenomenon of deforestation.

The chain of custody is also ensured through this certification: the certified wood is tracked and traceable through the entire supply chain.

FSC is a non-profit organization, which promotes the responsible management of forests worldwide.

FSC Labels are:

- FSC 100%
- FSC Recycled
- FSC Mix

1. US and other international certifications that define the grade of sustainability of furniture products

It refers to a regulation established by the California Air Resources Board (CARB) that aims to reduce formaldehyde emissions from composite wood products such as particleboard, medium-density fiberboard (MDF), and hardwood plywood.

This certificate ensures healthy indoor environments and the protection of customers well-being.

CARB 2 regulations was adopted in 2016 as TSCA Title IV, becoming a national standard.

CARB2 is primarily a US regulation. However, this authority has cooperated with other international organizations to promote similar practices.

1. US and other international certifications that define the grade of sustainability of furniture products

The certified product is made of 100% regenerated wood and sourced through a circular economy process.
It is part of the ECO LABEL program, based on ISO 14024 and global standard environmentally labeling.
This certificate can be applied to different industries, such as furniture and building materials.

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Strict U.S. federal regulations on formaldehyde emissions require furniture manufacturers to comply with the TSCA Title IV nr.08 ver. 04/24.

These regulations involved wood products, such as hardwood plywood, particleboard and medium-density fiberboard (MDF). TSAC also authorizes EPA to determine other requirements for the manufacturing process to meet, such as lead-based paint. All of this falls under the TSCA Certification.

TSCA is primarily a US federal law and regulation.

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AEO certified manufacturers are committed to security, reliability and legal compliance with World Customs Organization (WCO) standards.

This certification also enables to issue customs certificates, promoting the legal international trading.

AEO is a volunteer program offered by national custom authorities.

By participating into this program, companies are considered trusted partners and may benefit from expedited treatment and fewer inspections at the custom borders.

This also results in significant cost savings for businesses.

1. US and other international certifications that define the grade of sustainability of furniture products

ISO certified companies are committed to ensuring the constant quality of the products, the manufacturing process, the customer service, logistic and all the other departments involved, known as Quality Management System (QSM).

The ISO Certification recognizes those companies that operate under standards of excellence.

Obtaining ISO 9001 certification requires the successful completion of an external audit, and the fulfillment of the criteria set forth in the ISO 9001 standard.

1. US and other international certifications that define the grade of sustainability of furniture products

This certification rules recycled contents in products, with the aim of ensuring transparency and traceability throughout the supply chain.

GRS verifies the use of recycled materials, tackles social and environmental standards and restrains the use of harmful chemicals.

This certification is not mandatory, but a voluntary standard companies choose to pursue.

RECYCLED 100 claim standard

Global Recycled Standard

1. US and other international certifications that define the grade of sustainability of furniture products

Certification for textiles and leathers that ensure that products are free from harmful substances also produced following ethical and safe conditions.

OEKO-TEX includes multiple certifications categories:
- Standard 100
- Made in Green
- Leather Standards
- Organic Cotton

Transparency and accountability during the supply chain are ensured through the promotion of responsible practices and driven innovation.

2. Which materials are considered sustainable

Wood that comes from responsibly managed forests.
Trees are responsible harvested, which means limiting tree cutting, restricting harmful pesticides and protecting indigenous community and wildlife habitats.

Products can be made of:

- 100% wood sourced from certified forests
- recycled materials
- Combination of materials from certified forests and recycled sources

2. Which materials are considered sustainable

Materials like hardwood, plywood, medium-density fireboard – known as MDF – particleboards and any finished good containing at least one these materials.

Materials and finished products need to be tested by a CARB approved third-party certifiers (TPCs)

2. Which materials are considered sustainable

- Wood and Agrifiber panels, such as: particleboard, MDF, hardboard, engineered wood siding and trim
- Recycled Wood Fiber, such as: post-consumer or post-industrial recycled wood materials
- Locally sourced Wood: to minimize transport emissions
- Renewable Materials, such as: Bamboo and cork
- Other Building Materials, such as: plasterboards, chipboards, plywood (if certified)
- Fabrics and textiles made of regenerated natural raw materials like wool and other recycled materials such as plastic (GRS and OEKO-TEX Certifications)

2. Which materials are considered sustainable

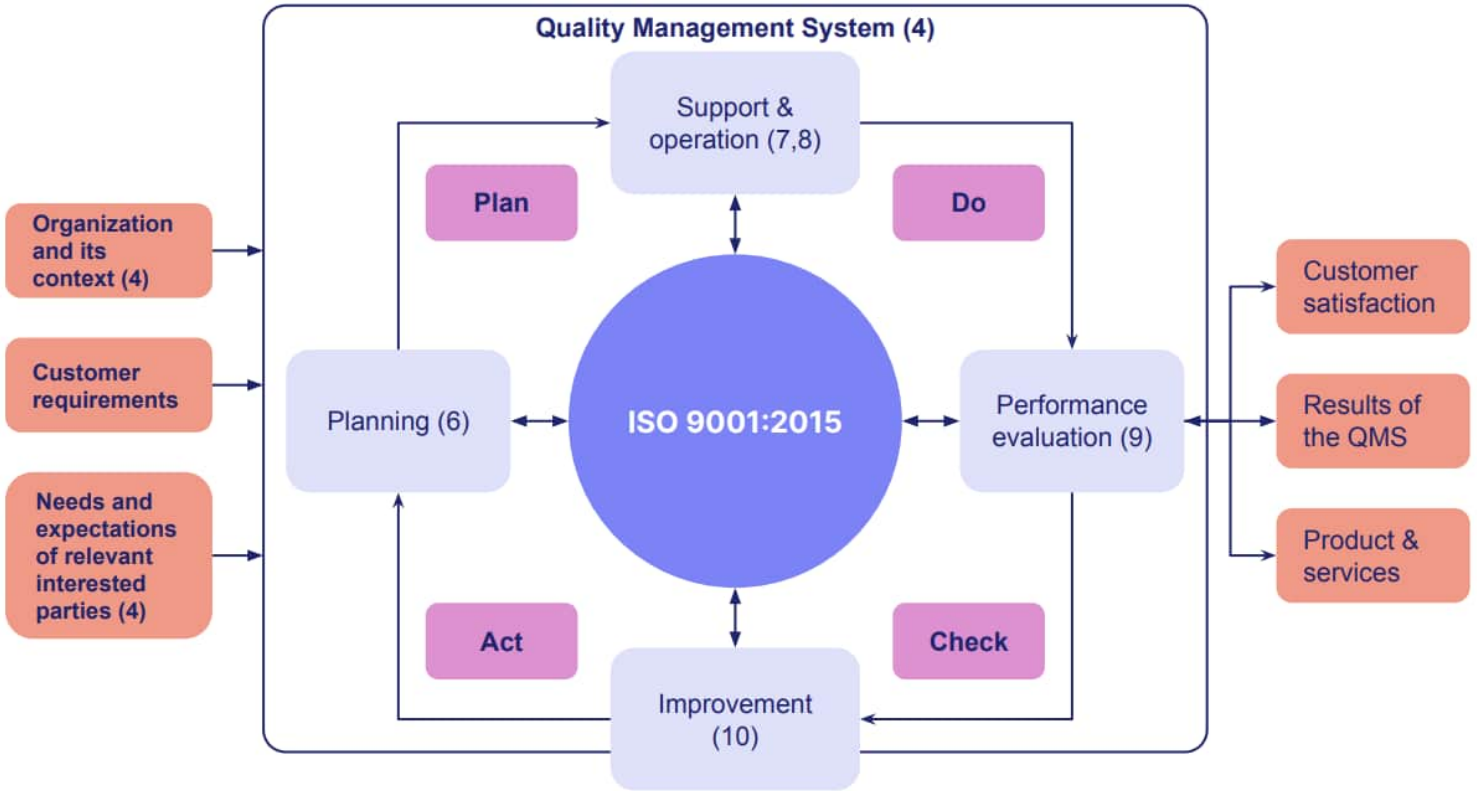
Several materials, especially those containing chemicals that people could come into contact with during their use or disposal:

- cleaning products (dish sopa, laundry detergent, ect…)
- personal care items (fragrances, cosmetics, etc…)
- paint and coating
- furniture
- faucets (because of the lead content)
- construction materials (adhesive, sealants, etc..)
- industrial chemicals
- manufacturing processes (e.g.: lacquering process of furniture through water-based paint)

3. Which manufacturing processes/policies are considered sustainable

Typical of manufacturing and service industries:

- Documentation Tools: established and maintained QMS. It includes: detailed documentation of policies, procedures and records.
- Training Resources: personnel training on the principles and requirements of ISO 9001. For example through: accredited on-line courses and other training materials.
- Chain management: suppliers are required to be ISO 9001 certified to ensure a consistent quality level of the products and raw materials outsourced as well as of the services provided.
- Compliance with labor standards and minimization of environmental impacts during the production process.



3. Which manufacturing processes/policies are considered sustainable

The use of photovoltaic systems and other alternative renewable energy sources (e.g., wind power) focuses on minimizing the environmental impact of manufacturing processes. Renewable energy sources also help reduce energy waste and promote the recycling and reuse of materials.

While wind power is often limited to specific geographic areas, photovoltaic systems are less restricted in this regard. However, their performance varies seasonally: during summer, solar panels can generate up to 100% of their renewable energy capacity, whereas in winter, this drops to approximately 70%.

3. Which manufacturing processes/policies are considered sustainable

The automation of specific manufacturing processes, such as painting chambers, has led to a healthier working environment. Factory workers are now less exposed to air pollution and less involved in the manual handling of large, potentially dangerous equipment that can cause both minor and serious injuries. Additionally, investment in technologically advanced machinery, along with ongoing worker training, contributes to the responsible and efficient use of equipment

3. Which manufacturing processes/policies are considered sustainable

Fair labor practices, suitable and safe workspaces, same opportunities through the principles of social equity to all employees, constant trainings.
A fair and inclusive workplace fosters higher employee morale, greater productivity, and enhanced innovation. Companies that promote greater social equity are generally more stable, resilient, and better prepared to address environmental and economic challenges.

4. How sustainable products improve the quality of spaces

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Quality spaces are the combination of choices made during the design and products selection processes and focused on three main principles.

WELL-BEING

HEALTH

ENVIRONMENTAL RESPONSIBILITY

4. How sustainable products improve the quality of spaces

WELL-BEING - Improved Visual Appeal and Design

Unique and Natural Look

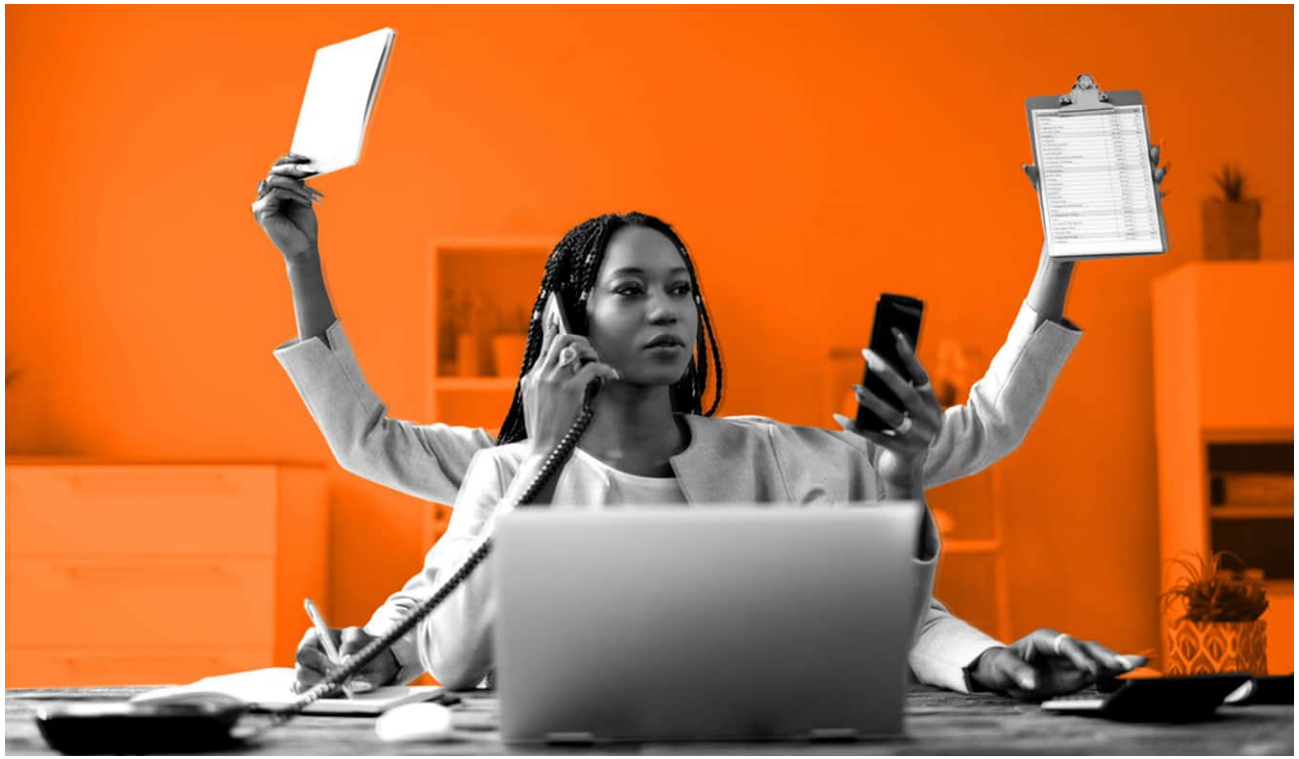
Choosing sustainable products that incorporate natural materials, like bamboo, regenerated wood and recycled plastic provides a natural and distinctive look.

Sustainable furniture offers customization options, enabling it to be tailored to individual needs and styles while supporting environmental responsibility.

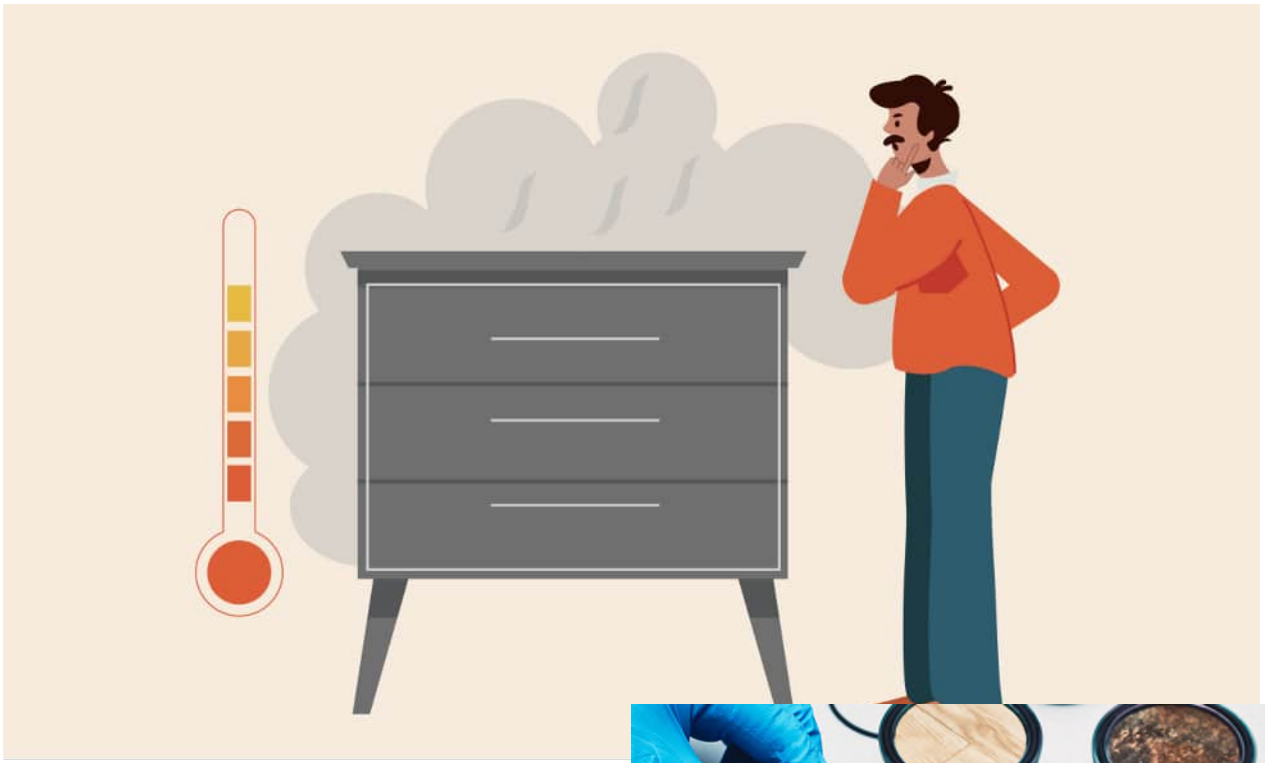
4. How sustainable products improve the quality of spaces

WELL-BEING – Improved Employee Productivity

In office environments, eco-friendly furniture can enhance air quality and foster a positive atmosphere, contributing to a healthier and more productive workspace.



4. How sustainable products improve the quality of spaces



HEALTH - Improvement of Indoor Air Quality

Lower VOC Emissions

Sustainable furniture is made with materials that contain significantly lower levels of volatile organic compounds (VOCs)—chemicals that can be released into the air and harm indoor air quality.

By minimizing VOC emissions, sustainable furniture can ease allergy symptoms and lower the risk of respiratory issues linked to indoor air pollution.

4. How sustainable products improve the quality of spaces

HEALTH – Stress Reduction

A thoughtfully designed sustainable space can foster a sense of calm and relaxation, helping to reduce stress and enhance overall well-being.

4. How sustainable products improve the quality of spaces

ENVIRONMENTAL RESPONSIBILITY – Reduced Environmental Impacts. Long term Investement

Sustainable furniture frequently incorporates responsibly sourced materials, helping to reduce deforestation and support sustainable forestry practices.

Recycled materials and durable, long-lasting designs help minimize waste and contribute to a circular economy.

Opting for eco-friendly furniture helps lower the overall carbon footprint of both homes and workplaces.

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THANK YOU FOR YOUR ATTENTION