

Eight Attributes of Contract Furniture

Course Description

What drives furniture decisions in the commercial built environment?

1 Aesthetics

2 Quality

3 Craftsmanship

4 Safety

5 Performance

6 Health & Wellness

7 Sustainability

8 Verifications

Learning Objectives

1

Understand the importance of original and authentic design, process controls in manufacturing, construction methods for wood and upholstered furniture, and how this impacts safety.

2

Recognize how furniture contributes to the health and wellness of occupants including chemical exposure, ergonomics and the importance of ethical companies.

3

Evaluate important dimensions of planetary health, and the sustainability attributes associated with common materials used in the manufacture of commercial furniture including wood, metal, plastic and fabric.

4

Examine the importance of relevant certification schemes and discuss the value they contribute toward safety, wellness and sustainability of product evaluations.

Aesthetics

“Design in essence is simply the careful consideration of every aspect of the product – Who is it for? How will it be used? And how can it be made?”

– Grant Featherston, 1968



“The essential fundamental of all design is human use.”

– Grant Featherston

Aesthetics - Evaluation Tools

Best of NeoCon

- Criteria/Qualities
- Product Description
- Contribution to the Built Environment
- Solution
- Functionality
- Flexibility
- Quality/Durability
- Aesthetics
- Innovation
- Environmental Sustainability
- List Pricing



HiP Award Criteria

Interior Design's HiP at NeoCon Awards is a recognition program "Honoring Industry People and Innovative Products." This unique initiative honours commercial industry pioneers and achievement in product applications. Entries are submitted by and voted on by the A&D community.



Red Dot Award: Product Design

This international award dates back to 1955. It seeks to honour the best products created each year. Judging criteria:

- | | |
|------------------------|----------------------------------|
| • Degree of innovation | • Symbolic and emotional content |
| • Functionality | • Product periphery |
| • Formal quality | • Self-explanatory quality |
| • Ergonomics | • Ecological compatibility |
| • Durability | |



reddot award
product design

Quality and Craftsmanship

The materials world is everything. A quality material is the right material.

Choose real materials. Avoid materials that lack the inherent properties that are required to serve your purpose.

Wood Manufacturing Process

Joinery

Solid, Plied and Veneered Woods

Foam and Fabric

The Manufacturing Process



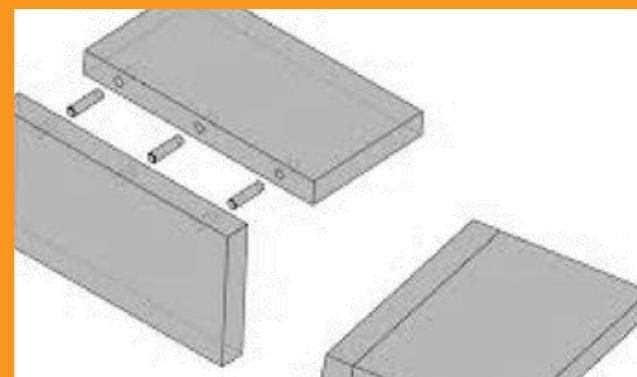
“Quality furniture is made with precision and accuracy in tooling and materials.”

– Doug Britton, Davidson Plyforms

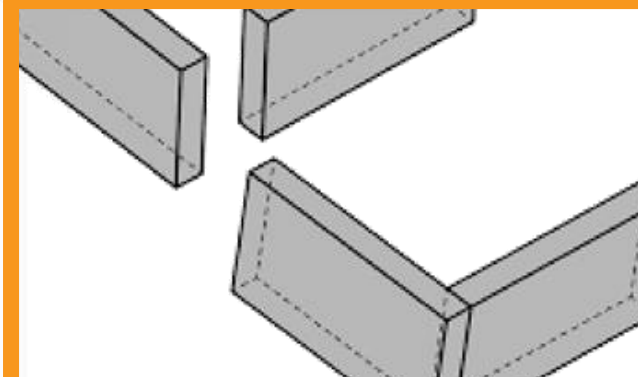
Wood Manufacturing Process



Dovetail



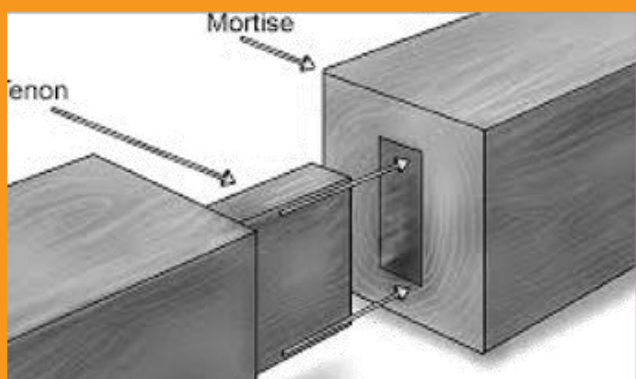
Dowel Joints



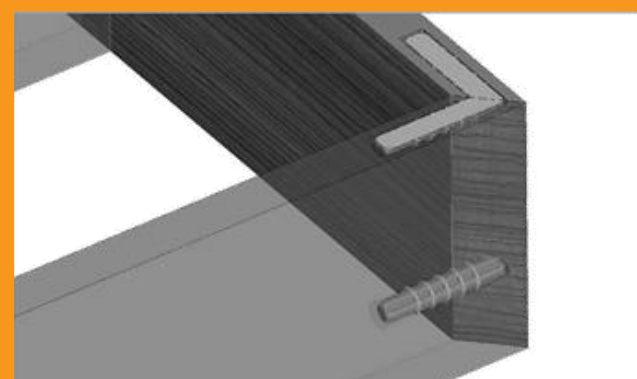
Butt Joint



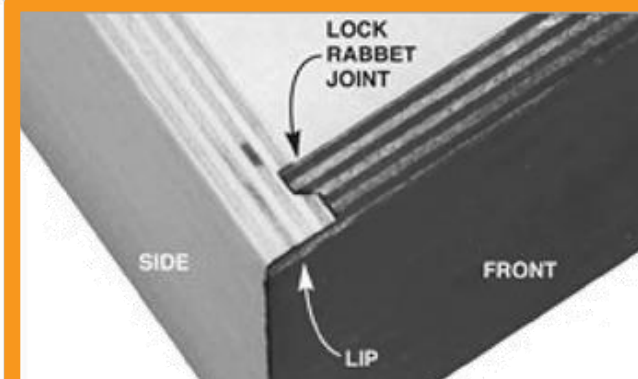
Butterfly



Mortise and Tenon



Mitre Joint



Rabbet Joints

Solid Woods



Advantages

Solid wood furniture is durable and easy to repair. Scratches? Dents? Water marks? Stains? It's all repairable with solid wood.

Considerations

Solid wood is affected by atmospheric conditions and can warp or bow if not properly stabilized. It is also a relatively heavy material.

Plied Woods

The definition of a ply is a layer of fabric, wood or a strand of fibre. An example of a ply is a layer of wood glued into a sheet of plywood.

Advantages

This technique allows a material that is not inherently flexible to become so.

Moulded plywood creates strong and lightweight furniture products.

Considerations

Glues and binders typically contain VOCs.

Thin or poorly constructed plywoods may peel or have inconsistent grains lacking visual appeal.



Real Wood Veneer

The ancient art of wood veneer can be used to make products of superior quality.

Advantages

High quality veneered wood panels are highly stable and are not prone to warping, splitting or bowing.

Real wood veneer adhered to high quality core materials results in boards that are stronger than natural wood and use less material.

Endless design capabilities of veneer patterning.

Considerations

While veneer can be done well, craftsmanship varies with corners and seaming.

Laminate can be mistakenly termed veneer.



Foam

The desire for lounge pieces in commercial environments is on the rise. The pieces need to look casual and residential, but provide support for a working posture. The foam is a critical component to this, as is the upholstery method.

Advantages

Commercially upholstered pieces have unique manufacturing considerations around foam and upholstery that will be necessarily different than those which would be found – and may even be desirable – in furniture intended for residential applications. Commercial-grade foams are more durable, higher density for comfort and support, and are engineered to meet flammability guidelines.

Considerations

Specify foam that complies with flammability guidelines without the use of added chemical flame retardants.

Lounge seating sales in North America were up 19% in 2016-2017, and are growing above 8% in first half of 2018.



Fabric

A piece of upholstered furniture is only as good as the fabric covering when it comes to the user's impression of that furniture's quality and aesthetics.



Evaluation Tools:



Flammability



Colourfastness



Crocking



Physical Properties



*

Abrasion Resistance

*ACT® Registered Certification Marks

Safety & Performance

Quality furniture goes beyond what you can see and extends into how it will perform in the space over time.

Here is the list of tests that are performed for general office seating as an example:

- Arm Durability
- Arm Strength
- Backrest Durability
- Backrest Strength
- Caster/Base Durability
- Drop Test
- Footrest Durability
- Leg Strength
- Seating Durability
- Stability Tests
- Structural Durability
- Swivel Test
- Tablet Arm Strength
- Tilt Mechanism Test



Mark of Assurance



BIFMA creates standards and guidelines for the industry. Furniture that meets BIFMA standards has been evaluated for safety, durability and structural performance requirements that are necessary in commercial environments.

Beyond this, BIFMA has standards and guidelines for indoor air quality, emissions and the definitive multi-attribute sustainability standard behind LEVEL certification.

User-safe Furniture & Performance Materials

“There is a troubling trend in commercial furniture. Thankfully it’s not prevalent, yet. Furniture with inferior construction that won’t hold up to normal commercial wear and tear. It may be cheap, but there is reason for that.”

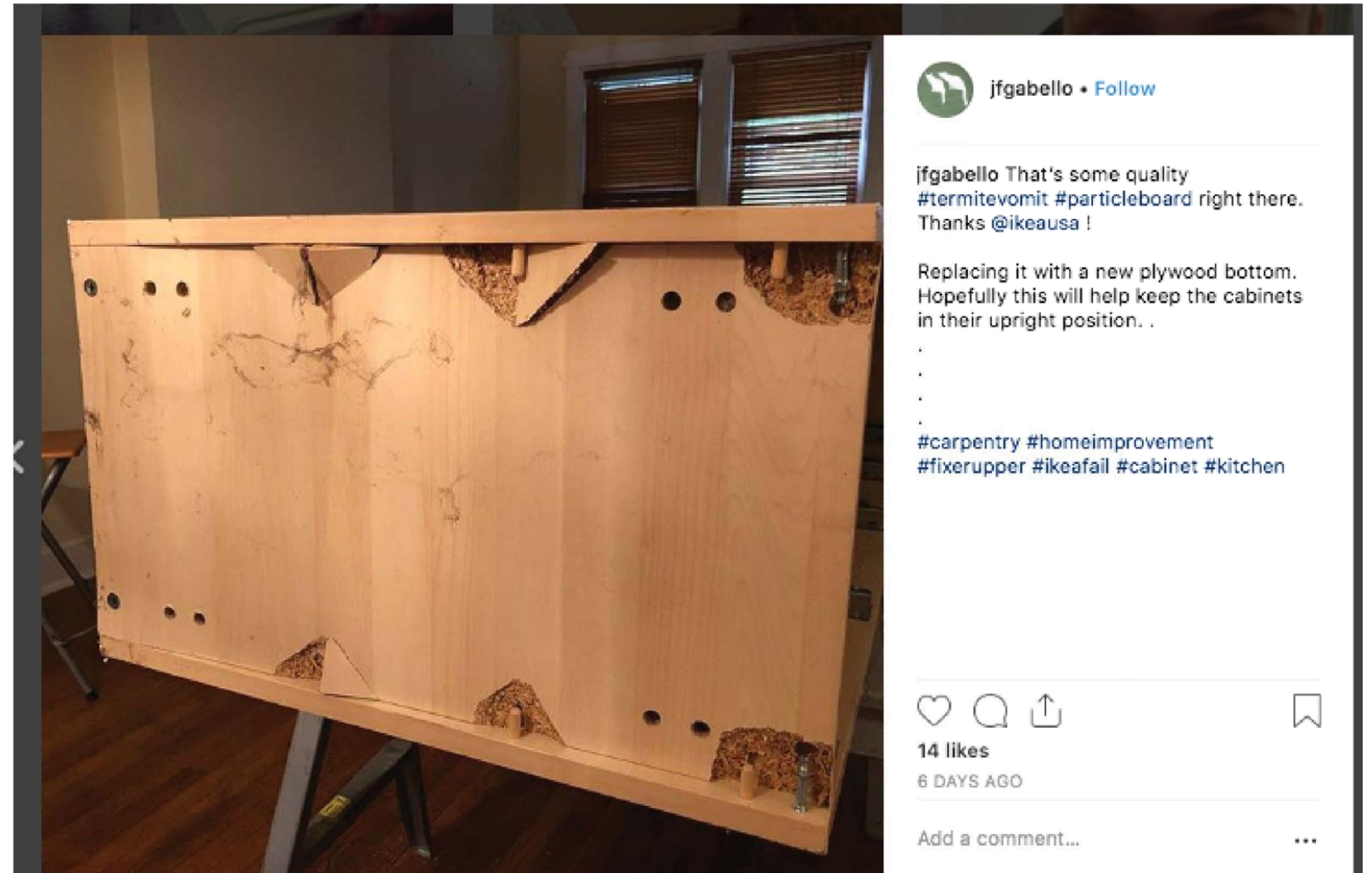
– Mitch Bakker, IDA Design



<https://www.flickr.com/photos/jeffdjevdet/18127475885>

Pitfalls of Low Quality Materials

Furniture must be designed, engineered and manufactured to meet all of the appropriate tests that are relevant for the commercial environment where it will be used.



https://www.instagram.com/p/BokNSTng5wP/?utm_source=ig_web_button_share_sheet

A large, red, tufted sofa is the central focus of the image. It is positioned in a living room with a stone fireplace on the left and a wooden coffee table in front of it. The background shows a glimpse of another room with a dining table and chairs.

The Cost of Failures

“There’s not a ton of margin padding in the furniture industry, so you don’t have the ability to come up with the quality of a \$3,000 couch and offer it at \$600.”

— John Humphrey, Greycork

From the blogosphere:

“Soon Hezel’s dream of sophisticated sofa stewardship broke down, literally. Her sofa, which by the end of 2016 had already lost a number of buttons, collapsed after a leg snapped off. What she and others found was that their \$1,200 sofa was flimsier than balsa wood in a stiff wind.”

Warranty

The depth of the warranty is an indicator of the manufacturers' self-assessment of quality and how they value the continued obligation to the end-user.

Typical industry standard from a historically commercial supplier who also has more residentially focused brands –geared to a commercial sales model:

- Standard usage (single shift - 40 hours per week):
 - Desk, conference and task chairs 10 years
 - Lounge seating 10 years
 - Multi-purpose stacking chairs 10 years
 - Tables 10 years
 - Textiles 1 year
- 24 hour usage:
 - Desk, conference and task chairs 4 years

Quality Furniture Checklist

Wood

GOOD
solid wood, real wood veneer and layered plywood

BAD
thin plywood, untested particleboard, pressboard or fiberboard, knots and cracks, soft and easily scratched surfaces

Joints

GREAT
dovetail, mortise and tenon

GOOD
reinforcing corner blocks dowels, screws

BAD
nails, visible glue

Drawers

GREAT
dust panels, floating bottoms

GOOD
metal glide rails, stops

BAD
wood-on-wood sliding

Frame

GOOD
even, level with floor

BAD
twists, creaks, wobbles

Cushions

GOOD
firm foam wrapped in padding, protective inner cover, reversible cushions

BAD
bare foam, loose fill without internal sectioning

Upholstery

GOOD
aligned patterns, skirts with lining or weights

BAD
skimpy padding along arms and back, loose material that puddles and sags

Health, Wellness, Sustainability



Health, Wellness, Sustainability

All of these attributes overlap and relate to each other.
Let's look at the measurements and verifications.

Indoor Air Quality
(IAQ)

Materials

Ergonomics

End of Life

Manufacturing

How it's Made

How it's
Produced

Waste

Carbon
Footprint

Corporate Social
Responsibility

Healthy Materials — IAQ

The Objective

Controlling common pollutants indoors can help reduce the risk of indoor health concerns.

The Verification

There is a test protocol that was developed by BIFMA which is incorporated into well known programs that offer certifications for low VOC emissions, such as Greenguard (UL) and Indoor Advantage (SCS).

Legislation

CDPH Standard Method v1.1
California Specification 01350
TSCA Title VI (EPA formaldehyde reduction)
CARB (CA formaldehyde reduction).



for illustrative purposes only

UL GREENGUARD is a trademark of UL LLC



INDOOR ADVANTAGE GOLD
FURNITURE

Healthy Materials — Chemistry

The Objective

Understanding and reducing the use of toxic chemicals in manufactured products can help reduce the use and potentially impact health and wellness.

Evaluation Tools

There are several tools available to help specifiers identify the ingredients in products they consider.



Healthy Materials — Chemistry

Evaluation Tool: CAL 133 aka TB 133

The Objective

Containing the spread of fire through highly flammable materials like foams, fabrics and other materials.

The Challenge

This seemed like a law that was designed to help the public but has been characterized as “a redundant test standard that causes confusion within the industry and presents unnecessary health risks”. The State of California has repealed TB 133.

Wellness – Ergonomics

The Objective

Decrease fatigue and discomfort through product design. Ergonomics also encompasses visual ergonomics, height flexibility, standing support and active design.

Evaluation Tools

ISO 9241-3
ISO 9241-5
BIFMA G1-2003 Ergonomics Guideline



Occupant Wellness

Objective:

How design, operations and behaviours within the places where we work, learn and heal can be optimized to advance human health and well-being.

Evaluation Tool:

The WELL Building Standard

Materials:

- VOC Reduction
- Emission Control
- Hazardous Material Reduction
- Enhanced Material Precaution
- Material Transparency

Movement:

- Active Design -- getting people to move
- Visual and Physical Ergonomics



Sustainability



Product Sustainability Considerations

Evaluation Tools

Climate neutral materials



Product Sustainability
Considerations

Evaluation Tools

Climate neutral materials



LCA



Product Sustainability
Considerations

Evaluation Tools

Climate neutral materials



LCA



Efficient use of materials



Product Sustainability
Considerations

Evaluation Tools

Climate neutral materials



LCA



Efficient use of materials



Bio-based renewable materials



Product Sustainability
Considerations

Evaluation Tools

Climate neutral materials



LCA



Efficient use of materials



Bio-based renewable materials



Recycled content



Product Sustainability Considerations	Evaluation Tools			
Climate neutral materials	 LIVING PRODUCT CHALLENGE™			
LCA	 LIVING PRODUCT CHALLENGE™			
Efficient use of materials	 LIVING PRODUCT CHALLENGE™			
Bio-based renewable materials	 LIVING PRODUCT CHALLENGE™			
Recycled content	 LIVING PRODUCT CHALLENGE™			
Recyclable and biodegradable materials	 LIVING PRODUCT CHALLENGE™			

Product Sustainability Considerations		Evaluation Tools			
Climate neutral materials	 LIVING PRODUCT CHALLENGE™				
LCA	 LIVING PRODUCT CHALLENGE™				
Efficient use of materials	 LIVING PRODUCT CHALLENGE™				
Bio-based renewable materials	 LIVING PRODUCT CHALLENGE™				
Recycled content	 LIVING PRODUCT CHALLENGE™				
Recyclable and biodegradable materials	 LIVING PRODUCT CHALLENGE™				
Extended product responsibility	 LIVING PRODUCT CHALLENGE™				

Product Sustainability Considerations	Evaluation Tools			
Climate neutral materials	 LIVING PRODUCT CHALLENGE™			
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Efficient use of materials	 LIVING PRODUCT CHALLENGE™			
Bio-based renewable materials	 LIVING PRODUCT CHALLENGE™			
Recycled content	 LIVING PRODUCT CHALLENGE™			
Recyclable and biodegradable materials	 LIVING PRODUCT CHALLENGE™			
Extended product responsibility	 LIVING PRODUCT CHALLENGE™			
Solid waste management	 LIVING PRODUCT CHALLENGE™			

Product Sustainability Considerations		Evaluation Tools			
Climate neutral materials	 LIVING PRODUCT CHALLENGE™				
LCA	 LIVING PRODUCT CHALLENGE™				
Efficient use of materials	 LIVING PRODUCT CHALLENGE™				
Bio-based renewable materials	 LIVING PRODUCT CHALLENGE™				
Recycled content	 LIVING PRODUCT CHALLENGE™				
Recyclable and biodegradable materials	 LIVING PRODUCT CHALLENGE™				
Extended product responsibility	 LIVING PRODUCT CHALLENGE™				
Solid waste management	 LIVING PRODUCT CHALLENGE™				
Water management	 LIVING PRODUCT CHALLENGE™				

Sustainability – End of Life

The Objective

Reduce the 17 billion pounds of office assets that end up in US landfills annually.

The Opportunity

Extended product responsibility to develop a circular economy.

Innovation needed to reframe the conversation that furniture is a disposable commodity vs a durable good.



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Sustainability – Frequently Used Materials

Wood

Choose wood harvested from managed forests and that carries certification labels, like FSC®



Metal

Choose recycled when available



Plastic

Choose recycled when available and examine process chemistry



Fabric

Seek products carrying a FACTS sustainability certification



Sustainability – Corporate Social Responsibility

The Objective

Ensure that company's efforts improve humanity or the environment.

The Verification

Look for standards that evaluate the manufacturing process and the organization as a whole.

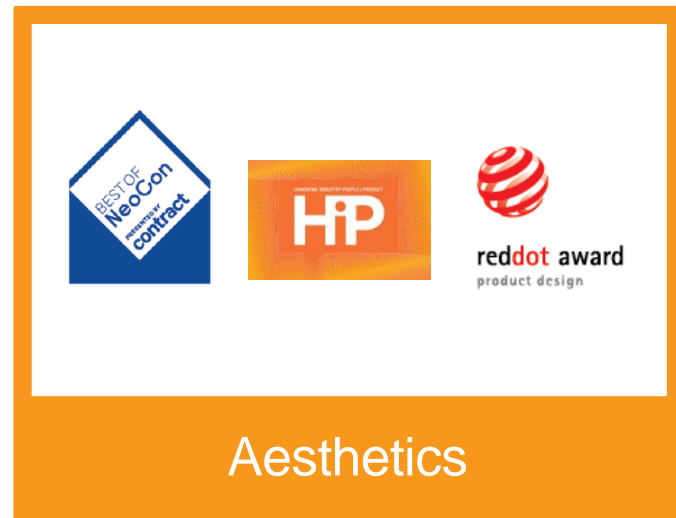
Just.SM



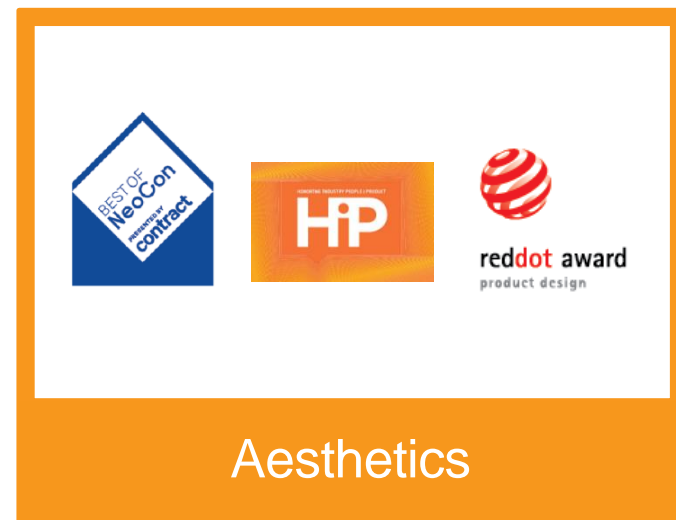
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Eight Attributes of Contract Furniture



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Aesthetics

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ASSOCIATION



association
for
contract
textiles



reddot award
product design

Quality



Craftsmanship

Eight Attributes of Contract Furniture



Aesthetics

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Quality



Craftsmanship

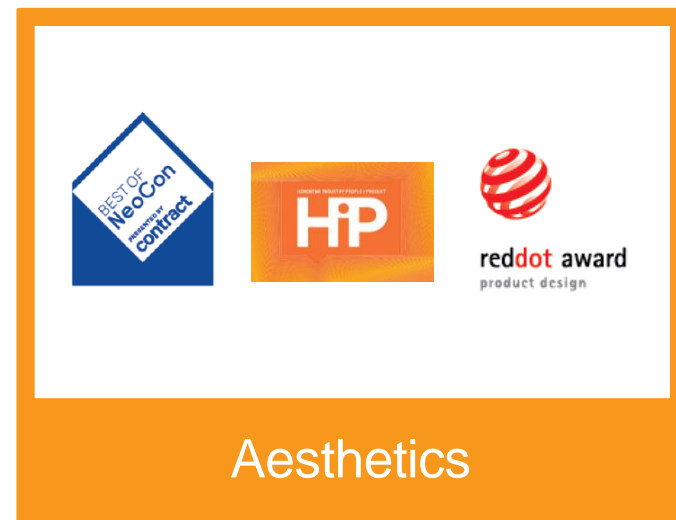
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ASSOCIATION



association
for
contract
textiles

Safety

Eight Attributes of Contract Furniture



Eight Attributes of Contract Furniture



Aesthetics

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product design

Quality



Craftsmanship

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Safety

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textiles

Performance



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Health & Wellness

Eight Attributes of Contract Furniture



Aesthetics



Quality



Craftsmanship



Safety



Performance



Health & Wellness



Sustainability

Eight Attributes of Contract Furniture



Aesthetics



Quality



Craftsmanship



Safety



Performance



Health & Wellness



Sustainability



Verifications

Verifications: Shortcuts to Assurance

Relying on multi-attribute standards can save time.



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association
for contract
textiles

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FURNITURE
MANUFACTURERS
ASSOCIATION

Summary

Critical factors for evaluating furniture and making purchasing decisions:

The goal is to balance these principles to create the best possible space for the client.

1 Aesthetics

2 Quality

3 Craftsmanship

4 Safety

5 Performance

6 Health & Wellness

7 Sustainability

8 Verifications

Learning Objectives

1. Understand the importance of original and authentic design, process controls in manufacturing, construction methods for wood and upholstered furniture, and how this impacts safety.
2. Recognize how furniture contributes to the health and wellness of occupants including chemical exposure, ergonomics and the importance of ethical companies.
3. Evaluate important dimensions of planetary health, and the sustainability attributes associated with common materials used in the manufacture of commercial furniture including wood, metal, plastic and fabric.
4. Examine the importance of relevant certification schemes and discuss the value they contribute toward safety, wellness and sustainability of product evaluations.

Eight Attributes of Contract Furniture

We wish to thank:



Thank you.

Annex slides

The information on the following slides is additional and not intended to be presented to your audience.

It is for your optional further investigation.

Attributes Defined

Our discussion of Aesthetics will focus on the importance of authentic design. Beauty can't be empirically measured. Indeed, the wide array of what each of us would call "good design" is what adds to breadth of choice for clients. Nonetheless, we do look to design awards as one measure of excellence in aesthetics.

Quality and Craftsmanship go hand in hand. We'll look at construction techniques and best practice industrial processes for commercial furniture.

Health, Wellness and Sustainability are rich topics that could easily support their own CEUs. In this presentation, we will focus our Health & Wellness conversation on healthy materials and the role of ergonomics. For Sustainability, we will transition into the most relevant planetary impacts of furniture.

Safety and Performance of commercial furniture should be a given. We will provide information on the industry standards that have been developed to ensure that your selections are not compromising these critical features.

Many of the attributes we'll discuss have some type of conformance program. Verification programs that are robust and vetted are another excellent tool to help in the furniture selection process. We will introduce you to many of the major ones and explain their role.

Authenticity Matters



Plied Woods

“I do especially like the high end [veneer] that is not so much veneered for an artificial misrepresentation, as a substitute for real wood, but for its structural strengths, stability and of course its supremely wide span. Seal its surfaces and edges well, use resins and bonds impervious to water and chemicals, and it will likely last for a century or two....”

– Paul Sellers, Master Woodworker

The definition of a ply is a layer of fabric, wood or a strand of fibre. An example of a ply is a layer of wood glued into a sheet of plywood.



Frame Construction (residential perspective)

The background of the slide features several hand-drawn sketches of furniture frames. At the top, a sketch of a chair frame is labeled 'FSC CERTIFIED WOOD STRUCTURE' with an arrow pointing to a leg. To the right, a sketch of a low-profile frame is labeled 'LOW'. Below that, a sketch of a sofa frame is labeled 'PACKAGING?'. At the bottom, a sketch of a chair frame is labeled 'SPECIFY HIGH RECYCLED CONTENT FOR METAL PARTS' with an arrow pointing to a leg. The sketches are drawn in a simple, illustrative style with some shading.

- Frame construction
- In high end pieces, frames are meticulously constructed throughout, regarding the application of the furniture in advance. Legs are designed to be removed and replaced if damaged and cushions can easily be reupholstered. In lower end furniture, the legs are usually constructed directly into the frame so if you damage the leg you are out of luck. Lower end furniture often does not have layers in the cushions making it much harder to reupholster.

Materials

Foam

Too soft feels like you're lounging at home.
Too thin and it will fail with use.

If the foam in your sofa cushions is not up to the task, it can start to disintegrate and lose its rebound-ability in a short time. The sagging cushions can make the whole piece of furniture appear old and tired, and make it very uncomfortable for sitting.



Sit-stand Desks

Sit-stand desks are linked to increased productivity, better mental concentration and improved overall health

- ATLANTA, GA—A new study finds that adjustable workstations—commonly known as “sit-stand desks”—may be beneficial in reducing sedentary behaviour and supporting health outside the workplace. Study results were recently published in the International Journal of Workplace Health Management (IJWHM). Funded by the American Society of Interior Designers (ASID) Foundation’s Transform grant, interim study results were announced on the ASID website last year. The final study, “Stand Up to Work: Assessing the Health Impacts of Adjustable Workstations,” found that sit-stand desks are linked to increased productivity, better mental concentration and improved overall health in employees who used sit-stand desks over a 12-month period. Most employees reported that the sit-stand desks had a positive impact on their health outside the workplace.
- “What makes this study different from any other sit-stand desk study—which is also what made it worthy of peer review and publication—is the combination of its long duration and its inclusion of complementary qualitative data,” says lead researcher Dr. Elizabeth Garland, associate professor at the Icahn School of Medicine at Mount Sinai. “Most studies conclude after just a few months. Ours lasted a full year. This allowed us to assess both the objective and subjective health impacts of sit-stand desk usage, from perceived stress and well-being to measurable changes in sedentary behaviour.”

Structural Testing (for seating)

Test	Standard BIFMA Test Parameters
Seating Durability – Cyclic	125 lb load dropped 3" onto the seat 100,000 times per seat 165 lb force applied to both front corners of one seat 20,000 times
Seating Strength	Functional Load: 225 lb load dropped 6" onto the seat one time per seat Proof Load: 300 lb load dropped 6" onto the seat one time per seat
Backrest Durability – Horizontal Cyclic	75 lb per seat horizontal force simultaneously applied to the backrest 120,000 limes
Backrest Durability – Vertical Cyclic	200 lb per seat vertical force applied to the backrest 10,000 times
Backrest Strength – Horizontal	Functional Load: 150 lb per seat horizontal force simultaneously applied to the backrest one time Proof Load: 250 lb per seat horizontal force simultaneously applied to the backrest one time
Backrest Strength – Vertical	Functional Load: 200 lb per seat vertical force simultaneously applied to the backrest one time Proof Load: 300 lb per seat vertical force simultaneously applied to the backrest one time
Armrest Durability – Horizontal Cyclic	100 lb horizontal force applied to the armrest 50,000 times
Armrest Durability – Vertical Cyclic	150 lb vertical force applied to the armrest 10,000 times
Armrest Durability – Angular Cyclic	90 lb force at 10 degrees, applied to each armrest 60,000 times
Armrest Strength – Horizontal	Functional Load: 100 lb horizontal force applied to the armrest one time Proof Load: 150 lb horizontal force applied to the armrest one time
Armrest Strength – Vertical Functional	Functional Load: 200 lb vertical force applied to the armrest one time Proof Load: 300 lb vertical force applied to the armrest one time
Leg Strength – Front and Side	Functional Load: 75 lb vertical force applied to the leg side one time Proof Load: 113 lb vertical force applied to the leg side one time

Ergonomics – Worth the investment

Ergonomics reduces costs.

Ergonomics improves productivity.

Ergonomics improves quality.

Ergonomics improves employee engagement.

Ergonomics creates a better safety culture.

Active Design Strategies

WELL Standard has a comfort feature that includes thermal, acoustic, visual and ergonomic criteria, not only considering ADA accessibility, but also protection from noise generated inside and outside the building... including “Quickstand” sit-stand desks complete with... ergonomic setup of monitor arms and adjustable under-desk keyboard trays.



Building Rating Systems



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Eight Attributes of Contract Furniture

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Section 2 Furniture Construction

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- Architect Magazine, Q&A: Greycork’s John Humphrey
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Section 3 Health, Wellness Sustainability

- EPA, Introduction to Indoor Air Quality
<https://www.epa.gov/indoor-air-quality-iaq/introduction-indoor-air-quality>
- HPD Collaborative, HPD The building industry’s leading open standard <https://www.hpd-collaborative.org/>
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<https://www.c2ccertified.org/get-certified>
- International Living Future Institute, A Declare Label Answers Three Questions,
<https://living-future.org/declare/declare-about/>

- Chemical Watch, California proposes change to furniture fire safety,
<https://chemicalwatch.com/69802/california-proposes-change-to-furniture-fire-safety-regulation>
- Clean Technica, A Hidden Waste Stream: 9 Million Tons of Office Furniture Goes to Landfills Annually
<https://cleantechnica.com/2017/11/07/a-hidden-waste-issue-8-5-million-tons-of-office-furniture-goes-to-landfills-annually/>
- Sustainable Business Toolkit, Sustainability in Metal Processing – Current Trends and Insight
<https://www.sustainablebusiness toolkit.com/sustainability-in-metal-processing/>

Section 4 Shortcuts to Assurance

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<https://resources.workstationindustries.com/blog/the-benefits-of-purchasing-ansi-bifma-certified-laboratory-chairs>

BIFMA

The following is a list of acronyms contained within the CEU: Eight Attributes of Contract Furniture. Each is followed by a brief description and a link for more information.

ACT

Association for Contract Textiles, the not for profit trade association for commercial fabrics.

<https://contracttextiles.org/>

ANSI

American National Standards Institute, the organization overseeing the creation, promulgation and use of thousands of norms and guidelines that directly impact businesses.

<https://www.ansi.org/>

BIFMA

Business and Institutional Furniture Manufacturers Association, the not for profit North American trade association for commercial furniture

<https://www.bifma.org/>

C2C

Cradle to Cradle, an independent, multi-attribute product sustainability certification program.

<https://www.c2ccertified.org/>

CAL 133

California 133 is synonymous with Technical Bulletin 133 (TB 133), which is a flammability test procedure for seating furniture used in public occupancies in which the entire piece of upholstered furniture is tested.

<http://faq-cal133.info/>

CARB

California Air Resources Board, is the “clean air agency” in the government of California.

<https://ww2.arb.ca.gov/>

CDPH

California Department of Public Health, among other things, this governmental organization has developed a test, Standard method v1.1, for volatile organic compounds in indoor environments.

https://www.cdph.ca.gov/Programs/CCD/PHP/DEODC/EHLB/IAQ/CDPH%20Document%20Library/CDPH-IAQ_StandardMethod_V1_2_2017_ADA.pdf

CEU

Continuing Education Unit, needed by many design practitioners to maintain affiliation memberships. IDCEC administers these programs for interior designers.

<https://www.idcec.org/Pages/Forms/Public/About/About.aspx>

CSR

Corporate Social Responsibility, a self-regulating business model that helps a company be socially accountable to stakeholders. Widely used term, no single definitive source.

<https://www.investopedia.com/terms/c/corporate-social-responsibility.asp>

DfE

Design for the Environment, an approach to product design that incorporates the impact of design decisions on human health and the environment. (DfE is also the original name of a US Environmental Protection Agency (EPA) program, created in 1992, that provides information regarding safer chemical formulations for cleaning and other products. EPA renamed its program “Safer Choice” in 2015.)

<https://www.epa.gov/saferchoice>

Facts

The branded mark for the third-party certification program for the NSF/ANSI 336-2011 Sustainability Assessment for Commercial Furnishings Fabric. This brand is owned by ACT.

<https://contracttextiles.org/facts-sustainability-certification/>

FSC

Forest Stewardship Council, a global not for profit organization concerned with responsible forestry. A range of certification programs identify the scope of compliance for the chain of custody of wood between the forest and the finished product.

<https://ic.fsc.org/en>

HPD

Health Product Declaration, the HPD Collaborative is an open, voluntary, stakeholder consensus standard to help industry report on building product content and associated health information.

<https://www.hpd-collaborative.org/>

HSW

Health Safety and Welfare, a specific designation for certain CEUs. For IDCEC, 75% of the course content must conform to certain designated topics.

https://www.idcec.org/images/content/download/en/FAQ_CEU%20Providers%20Final.pdf

IAQ

Indoor Air Quality, is a measure of indoor air pollution and health. Refers to the air quality within and around buildings and structures, especially as it relates to the health and comfort of building occupants.

<https://www.epa.gov/indoor-air-quality-iaq/introduction-indoor-air-quality>

ISO

International Organization for Standardization, the body that develops and publishes a wide variety of standards including quality, sustainability, and health.

<https://www.iso.org/home.html>

JUST

Not an acronym, but a transparency program that works like a nutrition label for just and equitable organizations. Administered by the International Living Future Institute (whose other programs include Living Building Challenge, Living Product Challenge, and Declare).

<https://living-future.org/just/>

LCA

Life Cycle Assessment, a tool that can be used to evaluate the potential environmental impacts of a product, material, process, or activity.

<https://www.epa.gov/saferchoice/design-environment-life-cycle-assessments>

LEED

Leadership in Energy and Environmental Design, a third-party certification system for green buildings. Administered by the US Green Building Council (USGBC).

<https://new.usgbc.org/leed>

LEVEL

Not an acronym, but the branded mark for the third-party certification program for the ANSI/BIFMA e3 Furniture Sustainability Standard. This brand is owned by BIFMA.

<http://www.levelcertified.org/>

MDF

Medium Density Fiberboard, a pressed wood fiber substrate commonly used in commercial furniture. Also available in high (HDF) and low (LDF) density versions.

Generic wood industry term, many sources available on line

OSB

Oriented Strand Board, a pressed wood substrate made up of strands or flakes. Commonly used in commercial furniture. Generic wood industry term, many sources available on line

SCS

Scientific Certification Systems, Inc., an independent testing and certification company that also developed the Indoor Advantage program to certify products for low VOC emissions.

<https://www.scsglobalservices.com/services/indoor-air-quality-certification>

TSCA

Toxic Substances Control Act of the US government. TSCA Title VI establishes formaldehyde emission standards identical to the California Air Resources Board (CARB) limits.

https://www.epa.gov/sites/production/files/2018-04/documents/small_entity_compliance_for_formaldehyde_standards-general_audience_4.20.2018.pdf

UL

Underwriters Laboratory, an independent testing and certification company that also maintains the Greenguard program to certify products for low VOC emissions.

<http://greenguard.org/en/CertificationPrograms.aspx>

VOCs

Volatile Organic Compounds, are emitted as gases from certain solids or liquids. VOCs include a variety of chemicals, some of which may have short- and long-term adverse health effects.

<https://www.epa.gov/indoor-air-quality-iaq/volatile-organic-compounds-impact-indoor-air-quality>

WELL

Not an acronym, the third-party certification system for buildings developed by the International Well Building Institute.

<https://v2.wellcertified.com/v2.1/en/overview>