

Cruise & Ferry

REVIEW

THE GLOBAL GUIDE TO PASSENGER SHIPPING

SS/24



CONNECTED CRUISING

Greg Martin of SES explains how technology can deliver smart ship operations and satisfy guests



NEW LOVE

John Padgett of Princess Cruises talks Sun Princess



SUSTAINABILITY

Kelly Craighead of CLIA discusses cruise decarbonisation

Getting the measure of sustainability

Interior products are often informally assigned with a sustainability rating during the selection process for newbuild and refurbishment projects. Jon Ingleton polled supporters of the SMI Declaration to establish which criteria should be prioritised

Specifiers of interior products for passenger ships are all mindful of sustainability performance. But few judge it by the same criteria.

Manufacturers find themselves having to provide different data for each prospective client and can be urged to follow several different certification pathways. This inconsistency creates confusion and cost, and it's stalling the industry's ability to consistently deliver more sustainable interiors.

Cruise & Ferry Review asked supporters of the Sustainable Maritime Interiors Declaration (see www.sustainablemaritimeinteriors.com) what they considered to be the most important criteria for product sustainability. Responses were ranked and grouped into top fives for each of four lifecycle phases: design, manufacturing, product use and end of life (see table on page 150).

Sustainable design

Circular design was the criteria most frequently suggested. It embodies all the criteria discussed here and must be considered in any sustainable product determination. Design can change the world. Resource depletion, waste and pollution are consciously designed choices.

The Ellen MacArthur Foundation summarises it neatly: "Circular design is about designing interventions at different levels of the system. It is about unlocking value at every stage of the process by maintaining the materials already in use, increasing the number of users for every product, and using practices that have regenerative outcomes for nature."

The easiest, and perhaps most conclusive, way for a buyer to verify circular design is through trusted certification programmes, such as Cradle to Cradle, EU Ecolabel or Nordic Swan Ecolabel (see table on p154).

The principles of 'rethink' and 'reduce' are fundamental to circular design and both rely on imagination and innovation. "Our company is continuing to push boundaries through design and innovation for future sustainable efforts," says Willie Trager, interior design manager at Holland America Group. Led by director of interior design My Nguyen, the group inspires product and material designers to rethink, reduce and otherwise innovate – rewarding leaders with encouragement, support, pilot projects and sales.

Social and ethical considerations are designed into products by choice or left out through neglect. Manufacturers must consider the social impact of the products they take to market or risk significant





brand contempt. “This includes fair labour practices, ethical sourcing of materials and adherence to human rights standards,” says John Drake, sales director at Skopos Fabrics. “Prioritise fair wages, safe working conditions and support for local communities.”

While less relevant for land-based interiors, weight is a factor for ships. “It affects emissions throughout the ship’s lifetime,” says Tapani Wendelin, vice president of Almaco. “By reducing weight, the ship will consume less energy for propulsion.” According to René Dupont, senior director of Ege Carpets, there may be opportunities for manufacturers to offer weight saving options – by sacrificing unnecessary functionality, features or otherwise.

Design for value tends to favour reducing material volumes and manufacturing complexity, which should lead to reduced costs. But, as Dansk Wilton marketing manager Lone Ditmer highlights: “The requirements for increased documentation and sustainability leads to greater costs. There is great price pressure and the cost ends up furthest down the value chain with the weakest links.” If sustainable design isn’t rewarded it will stagnate. The measure for the design for value criteria might be a product price range that’s deemed fair by buyers and suppliers.

Sustainable manufacturing

Demand for sustainable products is growing fast. “Manufacturers of

physical products find themselves on the front lines of sustainability. In part, that’s because their customers demand cleaner, lower-carbon products right now,” says McKinsey & Company, in the 2022 article titled ‘Building sustainability into operations’.

“All suppliers should be transparent and document the carbon footprint of its products,” says Philip Korsholm Bjerg, head of cruise and transport at Kvadrat, a point echoed by numerous respondents. Adding a carbon footprint criteria into purchasing decision-making, through the Carbon Trust or a similar body, demonstrates that the manufacturer is working to reduce a product’s carbon footprint – perhaps the purest measure of sustainability intent.

Product sustainability

The most important criteria for product sustainability, according to SMI Declaration supporters

Group	Criteria	Scope	Measure
Design	Carbon footprint	Trusted Lifecycle Assessment analysis of product design through every stage of life?	Yes/no
	Social design	Trusted Social Lifecycle Assessment that evaluates socioeconomic impact?	Yes/no
	Design for value	Designed to a verified minimum quality standard at acceptable price point	Product cost
	Weight reduction	Designed to optimise product weight for aesthetic and functional needs	Weight
	Rethink and reduce	Design for multifunctional use and with less natural resources?	Yes/no
Manufacturing	Carbon footprint	Certified full lifecycle carbon footprint data disclosing total greenhouse gas emissions	CO2e
	Healthy product	Certified full ingredient disclosure with no toxic, restricted or otherwise harmful content?	Yes/no
	Recycled material	High and known percentage (by weight) of recycled material used in the product	Percentage
	Renewable material	High and known percentage (by weight) of renewable material used in the product	Percentage
	Sustainable packaging	All product packaging made from recycled materials?	Yes/no
Product use	Design for maintenance	Provision of instructions for simple, effective and sustainable maintenance?	Yes/no
	Design for repair	Easy to repair by on-site team or qualified partners (and good availability of spare parts)?	Yes/no
	Design for refurbishment	Provision of a simple guide to easily refresh, upgrade and modernise the product?	Yes/no
	Design to last	Durability enables minimum life guarantee (and long projected in-use lifespan)	Years
	Design for reuse	Product can be reused on land or at sea without need to overcome reuse regulatory hurdles?	Yes/no
End of life	End of life collection	Supplier will collect the product at end of current useful life to recirculate in part or whole?	Yes/no
	Design for disassembly	Has the supplier provided simple to follow instructions for disassembly?	Yes/no
	Design for remanufacture	Will returned products or product components be reused to create new products?	Yes/no
	Design for recycling	Can the product be easily separated into homogeneous materials and recycled?	Yes/no
	Reduced waste	Low or no percentage of the product (by weight) will eventually be incinerated/landfilled	Percentage

Mathieu Petiteau, the newbuilding and R&D director at Ponant, is among a group of buyers championing the use of recycled materials. “Incorporate materials from a recycling channel into your product,” he urges. “The aim is that the final product should eventually be made from 100 per cent recycled materials.” Odigitria Ventouri, the head of marketing at Innovation Lounges, agrees and encourages adding more renewable materials into the product material mix. An environmental product declaration will verify the volume of recycled and renewable material used and is an easy measure for buyers.

Industry stalwart Hans Lagerweij, emphasises the need to ensure that products are healthy. “Opt for products free of harmful chemicals like formaldehyde, volatile organic compounds

or flame retardants that can pollute indoor air and harm human health,” he says. “Look for certifications like Greenguard or Oeko-Tex Standard 100.”

Respondents were unanimous that problems with packaging could be resolved through the use of recycled and recyclable packaging materials. Regulatory change in many geographies is forcing a new approach that will variously ban single-use plastics and require 100 per cent of packaging to be recyclable, compostable or reusable.

Sustainable product use

Designing products to last yields multi-dimensional benefits, according to Dansk Wilton’s Ditmer. She says: “Choose a high-quality product that has a long life span and keep the product in the first lifecycle for as long as possible.

This is also better than changing the product after a short lifecycle just because it can be recycled.” She also points out that lifespan isn’t just about material quality: “Lighter colours are more sensitive to wear and tear so even though a product per definition has a long lifespan this might be compromised by other factors.”

Magician chief executive Mark Henderson knows a thing or two about repairing products: “We used microfiche in the Royal Navy that showed a diagrammatic breakdown of each item and part numbers so you didn’t have to replace a whole chair, for instance, but could simply order two worn out replaceable armrests.” Supply chain managers should explore how component parts can be used. Modular construction means easily replaceable



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parts and, although maybe initially expensive, the lifetime of an item is extended.

There's a subtle difference between repair and refurbish and the two are often conducted together. Design for repair makes used products easy to fix using existing materials whereas design for refurbishment makes used products easy to renew with additional materials. Both are important approaches to improving the sustainability of products, and both were high priorities in our poll.

There's a surprisingly high environmental cost to thorough product maintenance. Karine Bouttier, product manager at Gerflor, explains: "When looking at the lifecycle analysis of a vinyl flooring, most of the carbon footprint comes from the raw materials (51 per cent) and maintenance (27 per cent) stages. Sustainable practices must first focus on these two key items." Good maintenance guidance provided by suppliers can dramatically reduce environmental costs, particularly if it eliminates the necessity for chemical cleaning and reduces water use.

Reuse is considered to be one of the medium loop, or life extension, strategies within the 9R Framework of the circular economy. It can represent extension of a product's lifespan for either the same purpose, or an entirely different function, through reusing a product's components to create a new product.

Perhaps we can also find a way to be more accepting of product flaws that come from use. Liz Schneider, owner of Liz Schneider Interiors, says: "I believe the evolution of design and its relationship to the earth relies on us to approach interior design as an experience. Meaning, we create and execute more timeless interior concepts and rely on experience such as interactions, entertainment, meals and overall guest experience to evolve and change with time. I see furniture design being more authentic in the blemishes we often reject."

Sustainable end of life

Lifecycle responsibility may be the answer to controlling, reducing and eliminating waste. Ton Van Middelkoop, business development manager at Bureau Veritas, says: "I believe all stakeholders in the industry have an obligation to ensure products are not only sustainably sourced and produced but should also be fully recyclable/reuseable [such] that a product manufacturer takes responsibility for the entire life cycle of a product rather than to leave it for our next generation to deal with the consequences."

While recycling is one of the longest loops (focused on creative material application) of the R strategies, requiring equipment, material and energy to create new value, it has become an imperative attribute for interior products. Manufacturers and buyers alike can no longer ignore end-of-life planning. "[We should] consider the ease of recycling or upcycling the product at the end of its life," says Dimokritos Zervakis, project manager of Decon, who embraces "circular

IN QUOTES

"Operational sustainability is hard to see for passengers. Interior sustainability can be visible at every step onboard. Most sustainable products are innovative and tell a story, so let them speak and interact with passengers."

Greta Galminé, Head of Quality, Aros Marine

"The commitment of clients and consumers is needed so that the efforts from the industry to enable customers to reach their respective sustainability goals lead to success."

Bruno Lehmann, Head of Product Management, Continental

"[We need to] build up reference cases, learn from them and share experiences – like our new Swap2Zero project."

Mathieu Petiteau, Newbuilding and R&D Director, Ponant

"By adopting SBTi's guidelines, we ensure that our actions are based on robust scientific evidence, providing a strong foundation for achieving net-zero emissions."

Philip Korsholm Bjerg, Head of Cruise and Transport, Kvadrat

"A commitment from owners to pay more for sustainability should be an additional line in the budget. There are so many options, but they all cost more."

Dafydd Watkins, Head of Global Cruise Sales, Panaz

"[We need to] identify and compare commonly used materials in ship interiors today and find alternatives that are more sustainable."

Jason West, Managing Director, WDC Creative

"Less greenwashing and profiteering from sustainability implementations and more doing things for the greater good and for the generations to come."

Willie Trager, Interior Design Manager, Holland America Group

"We need to see all actors committed to embrace a total cost of ownership, assessing and disclosing the environmental impact of their practises and products."

Francesca Panatta, Interior Manager, Holland America Group

"All our initiatives are to ensure we contribute to a circular economy, for example all our alpaca wool bedding is made from sustainable programmes. Our latest is to move all our wool products to an Ecological Outcome Verification standard [and] if we can increase this by 20 per cent then we could move our products to being carbon positive rather than carbon neutral."

Paul Whittey, Managing Director, Biosnooze

"Raise passenger awareness of the fabrics used in the cabins and the public areas that they will use during their journey as it was produced using sustainable raw materials and production processes."

Alessia Bertani, Sales and Customer Service, Testori

"More flexibility on existing norms is needed. For instance, IMO MED fire specification precludes the use of fabrics free of chemical fire retardant additives which achieve the European fire norm EN1021 but fall just short of IMO fire testing."

Carine Equeter, Vice President, Morbern Europe

"Good signage design with long-lasting and 100 per cent recycled materials supports our client's sustainability goals. And demand for these sustainable choices is increasing, rapidly."

Jan Metsola, CEO, Cainby

FEATURE

design principles to minimise waste and promote recycling.” The products that are most easily separated into homogenous materials have the best metrics for recycling.

Recycling considerations go far beyond just a product level. “One of the key arguments that should be brought forward is the general legislation in the various countries in which ships are being produced,” says Sascha Gill, vice president of sustainability at Cruise Lines

International Association (CLIA). “The European Union has recently launched a legal framework (ship recycling) that clearly determines how a ship produced in Europe must be recycled. With this in mind, it becomes very clear what materials you can use in order to build a vessel.”

Design for disassembly has multiple benefits and has become an important feature of sustainable products. “Interior items should be easily disassembled for recycling to alternative use,” says Jason

West, managing director of WDC Creative. He calls for “not using too many materials and keeping designs minimal and functional.” Very few products take this approach as far as it can go today, leaving an open opportunity for innovative manufacturers to take the lead in many product categories.

Product buyers are increasingly eager to ensure a productive second life for products when they are taken off a ship. Francesca Panatta, interior manager at Holland America Group, was one of many respondents asking “is there a leasing or a take-back scheme in place?” While maritime examples are currently rare, product leasing is expected to grow considerably in the coming years.

Remanufacturing is similarly underutilised as a product sustainability approach, for now. While product designers are starting to adopt design virtues that better enable remanufacturing (such as modularity, standardisation and ease of disassembly), the product path back to the factory currently has too many hurdles, economic rather than desire.

Sum of all the parts

Collectively, the poll’s top five criteria in the four groups (see table) provide a fairly robust framework for measuring the sustainability of any interior product. Turning this set of criteria and measures into a workable process to rate interior products will require further investigation. It would then be possible to generate a weighted score for each measured criteria to give products an overall sustainability rating. The simplicity of it is very appealing.

It isn’t surprising to note that this model draws significantly from the 9R Framework – an approach that has earned widespread favour in the industry, including with Tillberg Design of Sweden. Read about how they are tackling sustainability in our interview with one of the firm’s partners, Helena Sawelin, on page 156.

Similarities can also be found through pursuing an approach based on SDG Compass guidance. YSA Design is on

EU drives sustainability action

The EU has several initiatives focused towards net zero by 2050. Key programmes and legislation include:

- Chemicals Strategy for Sustainability
- Circular Economy Action Plan
- Circular Economy Monitoring Framework
- Construction Products Regulation
- Corporate Sustainability Due Diligence
- Corporate Sustainability Reporting Directive
- Critical Raw Materials Act
- Ecodesign for Sustainable Products Regulation
- Environment Action Programme to 2030
- EU Taxonomy
- European Green Deal
- Green Claims Directive
- Packaging and Packaging Waste
- Regulation on deforestation-free products
- Ship Recycling Regulation
- Strategy for Sustainable and Circular Textiles
- Textiles Ecosystem Transition Pathway
- Waste Framework Directive
- Zero Pollution Action Plan

Trusted certification

Product sustainability certification programmes most trusted by SMI Declaration supporters

1	Cradle to Cradle Certified	Version 4.0 and Material Health Certificate
2	Environmental Product Declaration	No consensus on certification provider
3	Forest Stewardship Council	FSC Recycled, FSC 100% and FSC Mix
4	Global Organic Textile Standard	Certification of entire textile supply chain
5	EU Ecolabel	Covering product groups relevant to maritime
6	ISO 14001	Company-wide environmental management
7	SBTi validated	Science Based Targets for organisational emissions
8	Product Carbon Footprint	Majority referenced Carbon Trust
9	ISO 16000	A series of standards for indoor air quality
10	Oeko-Tex	Standard 100, Made in Green and Eco Passport
11	UL Greenguard	Chemical emissions standard
12	B Corporation	Company social and environmental performance
13	Floor Score	Indoor air quality certification for flooring
14	Nordic Swan Ecolabel	Covers entire product lifecycle
15	Blue Angel	Government of Germany’s product ecolabel



SUSTAINABLE MARITIME INTERIORS

3deluxe | Accomar Marine Interior AS | ADDrienne | Adventure Golf & Sports | Agua Fabrics Ltd | Albatros Expeditions | Almaco Group Oy
 Amtico International | Andriali Corporation | Antarctica21 | Aqua Expeditions | Aquafil SpA | Architex | Arivo fze llc | Aros Marine | Arper Spa
 Ashley Wilde Group | Assam Bengal Navigation | Best of Europe International | BG Studio International | Biosnooze | Bolici | Bolidt Synthetic
 Products & Systems | Bromic Heating | Cairo Marine Design | Cape May-Lewes Ferry | Carbonze | Century Cruises | Chelsom Ltd | Chi Design Italia srl
 Circular Symbiosis | Cita Design | Cita Marine Furniture & Architecture | Citizen Good Consulting | Columbia Blue | Columbia Cruise Services | Columbia
 Shipmanagement | Continental AG | Cristallux | Cruise & Ferry Review | Cruise Quality Consult | Cruise Ship Interiors Expo | Cubik3 Innenarchitekten GmbH | Dampa Aps
 Dansk Wilton A/S | Decon S.A. | Design Studio Berg+ | DFI Dauerflora International GmbH | Digitech365 GmbH | Dormakaba Deutschland GmbH | Edelstein oü
 Edelstein Special Oy | Ege Carpets | Elite Exhibitions | Elmo Leather | Estonian Marine and Manufacturing Initiative | Eumar Design | Forbo Flooring Systems
 Forest Group (Ned) BV HQ | Fortissimo Textiles GmbH | Fresolori.de GmbH | FZ Collection LLC | Garnica Plywood | Gelen Marine Ltd. | Gerflor | Gerolamo Scorza S.p.A.
 Global Marine & Hotel Interiors, Inc. | Globally We Design | Grohe S.p.A. | Gruppo Mastrotto spa | Gudbrandsdalens Uldvarefabrik | Hamburg Messe und Congress GmbH
 Holland America Line International Federation of Interior Architects/Designers | Innovabed Contract Bedding BV | Innovation Lounges Marketplace | Interior Proman
 GmbH | Interni TPC | Irish Ferries | JLA Media | JOI-Design | Kerry Johns Ltd | Kudos Dsign | Kvadrat A/S | LightScene Studio | Liz Schneider Interiors | Loipart AB
 Magic Man | Magitex Décor Manifattura A. Testori di G. SpA | Marine Interiors Cruise & Ferry Global Expo Hamburg | Marine Leather | Maritime Montering Group AS
 Material Cabinet Ltd | Material Maintenance MaMa Oy | Matrix Ship Management Ltd | Meyer Turku Oy | Meyer Wells | Mivan Ltd | MJM Marine | Morbern Europe
 Morbern Inc | Moroso SpA | Mystic Cruises, S.A | NIT Naval Interior Team | Njords Ark A/S | Nordblu Ltd | Ocean Outfit | Odense Maritime Technology A/S
 Oliver Design sl | OSK Design | Panaz Fabrics Pfleiderer Deutschland GmbH | Ponant | Prolance Marine Flooring | Radici Marine | ReFlow | RMP Analytics Ltd | Saapunki
 Marketing Ltd | Savi | SD Marine Interiors Seabourn | SeaDream Yacht Club | Seaquest Marine Systems Pte Ltd | Seatrade Europe / Hamburg Messe | Shaw Interiors
 Shipshape Consulting | Shores Europe Aps Shores Global LLC | Silvia Iraghi | Skopos Fabrics Limited | SMC Design | SMM | Solarglide Limited | Spear Green Design
 Stroodles | Studio Dado Inc. | Sudiles | SunStone Maritime Group A/S | The Deluxe Group | Tillberg Design of Sweden | Tomas Tillberg Design | Trident BMC | Trimline
 Limited | Tudor Rose | TVV Marine Lighting oy | Uber Boat by Thames Clippers | Ulster Carpets | UnCruise Adventures | Vistona Limited | Volume Creative | Vyy
 Wasaline/NLC Ferry/Kvarken Link | Waterless Co Inc WDC Creative | Wilton Carpets | WT&C Innovates Inc. | YSA Design

Over 300 companies and individuals support the Sustainable Maritime Interiors Declaration. Visit www.sustainablemaritimeinteriors.com to register your support and join our community.

this pathway: “We have recently initiated the implementation of SDG Compass in order to structure our sustainability measures,” says CEO Anne Mari Gullikstad. “This is making a framework for our sustainability plan and will help in following up the results. Our intention is to regularly evaluate our plan and measures and make sure that we utilise any opportunity to achieve the SDGs.”

The model developed from the responses of SMI Declaration supporters may require refinement, but it does demonstrate that stakeholders can come together to create a workable system that can be used across the industry. As Ditmer says: “Perfect is the enemy of good.” In this instance, the pursuit of perfection could stall the urgent need to take a good first step.

Of course, buyers must be sufficiently motivated to make good choices. “It is important to be able to demonstrate the value of more sustainable passenger

ship interiors to the decision-makers at the top of the corporations. The perception remains that sustainable interiors are more expensive so we need to be able to demonstrate the finances in a more tangible way,” says Karen Argue business development manager at The Deluxe Group.

Petra Ryberg, owner of Design Studio Berg+, says: “I believe there is need for regulations. Make sustainability measurable and put data to it. Make it mandatory, similar to other IMO standards.” Mandatory or otherwise, a common accord is non-negotiable. Paul Pringle, managing director of Solarglide, says it is necessary “that both supplier and customer are working off the same hymn sheet. If one isn’t, the effort of the other is wasted.”

If sustainable maritime interiors is not within IMO’s purview then we must look to others to take the lead. Perhaps CLIA or Interferry could step into this realm? **CFR**



THE SUSTAINABLE MARITIME INTERIORS DECLARATION

The SMI Declaration aims to make a meaningful contribution to sustainability performance improvement throughout the ship interior lifecycle via informed stakeholder guidance, and in full support of the UN Global Compact’s Ten Principles. It outlines seven commitments to champion environmental change and inspire other stakeholders to build and maintain more sustainable ship interiors.

Read the full SMI Declaration at: bit.ly/49APne3