



Unleash Sustainability in your warehouse –
Dive into the market

Logimat 2024


Miebach



Jakob Stary

Consultant, Munich, Germany

Education & Experience

- M.Sc. Global Logistics & Supply Chain Management, Kühne Logistics University, Hamburg - Best Graduate
- 2017 Miebach Consulting, USA
- Joined Miebach Consulting MUC in 2021

Specialization

- Supply Chain Strategy
- Sustainable Supply Chains
- Network Studies
- Supply Chain Modelling and Visualization
- Data Analytics

Experience and Expertise

- 8 network studies mainly for industry product clients
- 2 pure sustainability projects – Sustainable warehouse design and retrofit
- Leading Workstream Network Design for the CoE Sustainability since 2022
- Lead CoE Sustainability Services since 2024

Summary

- Consultant at Miebach Consulting
- Specialized in Supply Chain Strategy & Sustainability
- Lead Centre of Excellence Sustainability

“There are no passengers on spaceship earth. We are all crew.”

Marshall McLuhan

The demand for green warehouse certifications has arrived in the logistics industry



“No major 3PL undergoing a LEED certification under the newly LEED warehouse classification schema.”

“Further, you only find three large, well known, 3PLs with LEED certified warehouses.”

Forbes, 2015



This picture has changed

- By the end of 2023 1.400 LEED certified WHs
- 150 new certifications in 2023 – 50% of them achieved a platinum or gold certification

Prioritization of sustainability in SCM and evolvement of a responsible organization are key imperatives for success

Pressure by legislative requirements

Directives on national and European level set **stringent targets**

- **Climate Protection Act in Germany** (passed 2021)
- **New European Green Deal** - Carbon-neutrality until 2050



Stakeholders' expectations and changing customer behavior

- **Customers and Investors** are growing an **environmental conscience**
- A broad **social acceptance** and the **company's image** is heavenly influenced by sustainability



Emissions as a main cost factor of the future

- **Integration** of transport sector into **EU Emissions Trading System** (~45€/ton CO²)
- **Carbon Border Adjustment Mechanism (CBAM)** to impose **CO2 taxes** on imports to the EU



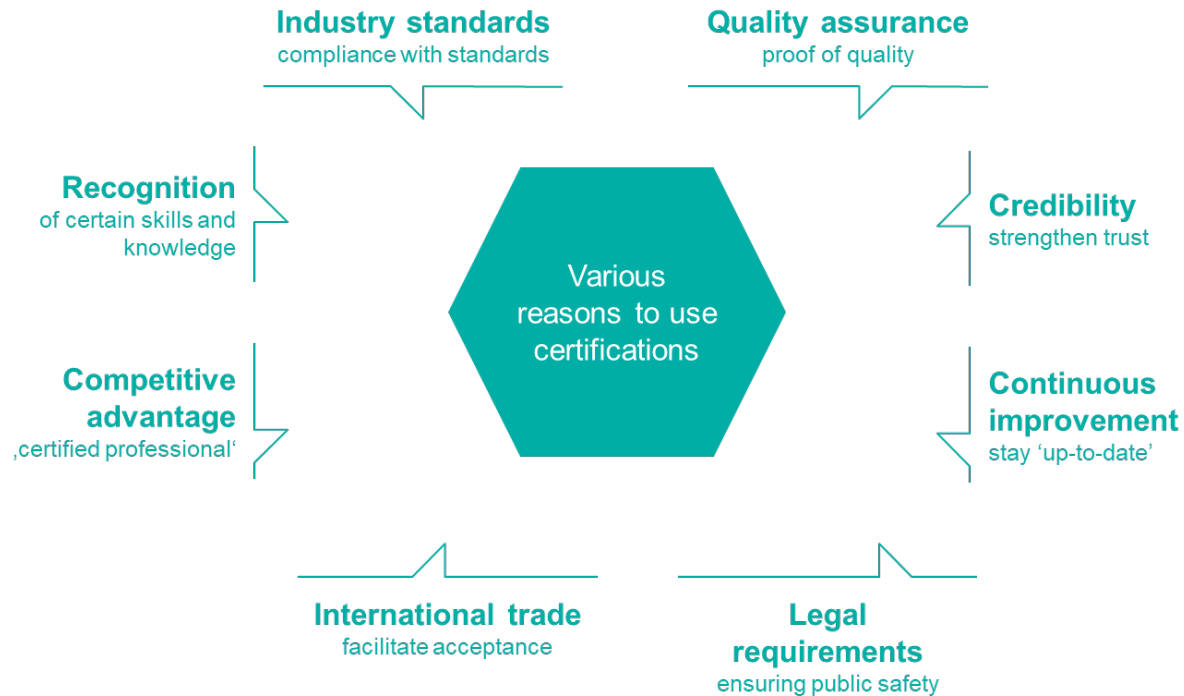
Technology as an enabler

- Progression of **electrification**, **efficient engines** and **alternative fuels** for transportation
- Technological advances in **rail transport** (automatized shunting yards/ digital automatic coupling)











Pursue of sustainability in logistics clearly exceeded the ethical dimension and companies need to act short-term

Working with sustainability certifications has become part of our daily project work – Still only limited level of knowledge in the market



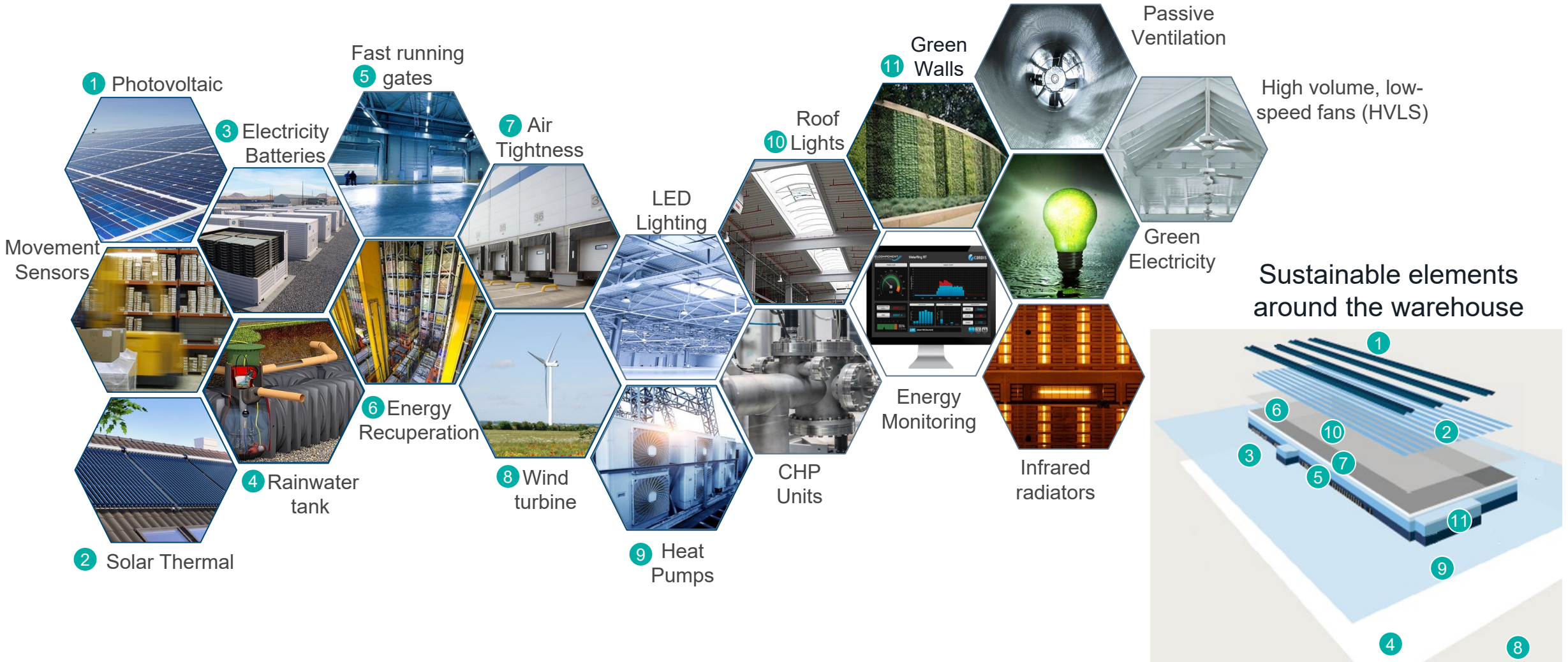
Variety of sustainability certifications on the market

<p>LEED</p> <ul style="list-style-type: none"> Green building classification system Defines standards for environmentally friendly, resource-saving and sustainable construction 	<p>BREEAM</p> <ul style="list-style-type: none"> Rating system for new construction of commercial buildings considering sustainability aspects Entire life cycle of buildings considered 	<p>DGNB</p> <ul style="list-style-type: none"> Certification system to make sustainable construction practically applicable, measurable and comparable Implement holistic sustainability quality as a planning and optimization tool 	<p>WELL</p> <ul style="list-style-type: none"> Standard for buildings for well-being Focus on holistic health and comfort of building occupants 
<p>DIN EN ISO 14001</p> <ul style="list-style-type: none"> Requirements for environmental management systems International environmental management standard Applicable to both manufacturing and service-providing companies 	<p>EMAS</p> <ul style="list-style-type: none"> Community system of environmental management and auditing for organizations that want to improve their environmental performance For companies, service providers and administrations 	<p>EPC</p> <ul style="list-style-type: none"> EPC is a rating scheme to summarize the energy efficiency of buildings Minimum energy efficiency standards (MEES) enforces an EPC rating of E or higher for granting new leases 	<p>Ecovadis</p> <ul style="list-style-type: none"> Provides holistic corporate social responsibility (CSR) ratings ESG risks and compliance, sustainability goals & positive impact through improvements in the value chain's sustainability performance 

“Landlords and developers don't have an excuse not to go for green certifications because there's a lot of pressure from the markets and they have to look at the valuation of their future buildings at the end of the day.”











Elke Kornalijnslijper, Head of Energy and Sustainability Services, Southeast Asia, JLL

Integrating sustainable design elements in greenfields & evaluating sustainable optimization of brownfields to drive sustainability



“The Tube” received BREEAM 5-star certificate & generates 4-times its own energy demand with PV

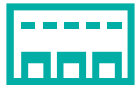


-  Multi-User Warehouse in Tillburg, NL operated by Rhenus
-  BREEAM Outstanding 5-star certificate (99,48%)
-  11.620 solar panels generating 4-times own energy demand saving 3k t CO₂
-  70% of light energy saved with automatic dimming LEDs & natural lighting
-  Technology that monitors water and energy consumption to boost efficiency
-  Triple-glazed windows and extra insulation help keep the building airtight
-  Rainwater is harvested from the roof reduces potable water demand
-  Charging points for EVs installed at parking facility to stimulate use of EVs
-  Gas-free heating with an air-heat pump reduces carbon footprint
-  Building is energy positive and carbon neutral



The ambition to achieve more sustainable warehouses still faces challenges – Jack of all trades device does not exist

Complexity for retrofitting



- Embodied emissions from construction cannot be tackled
- Static and architectural conditions restrict possible solutions



Decisions driven by monetary savings



- All sustainability innovations are ultimately measured in terms of investment and monetary savings
- Pure sustainability motivation is rare



Varying scopes of sustainability



- Focus mostly on environmental sustainability and especially GHG
- Social sustainability, e.g. ergonomics, move into the focus



Regulatory complexity



- Corporate Sustainability Reporting Directive, Due Diligence Act, Green Certifications
- Regulations and standards complicate the endeavor to more sustainability



Decisions not in the sphere of influence



- Decision-making authority ends with own warehouses
- 3-PL locations are not considered



No silver bullet to achieve sustainability goals – Customized solutions are required!

Your opinion and experience!



Have we reached the peak or is the change only just beginning?

Sustainability will shape the warehouses of the future and will challenge businesses to adapt their way of working.

Miebach, 2023

EV trucks are gigantic 18-wheeled batteries, a few of these trucks charging concurrently at WHs compares to the electricity load drawn by a small town – for which the grid is not prepared.

Sustainable BIZ, 2022

Solar panels are set to become mandatory for warehouses – The EU Solar Rooftop Initiative requires solar installations on all new public and commercial buildings by 2026...

European Parliament, 2024

Miebach Consulting



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