

CoreNet Global & Hochschule Fresenius Heidelberg präsentieren:

MaSTERTALK[®] ReAL ESTATE

Die neue immobilienwirtschaftliche Webinar-Reihe von CoreNet Global und der Hochschule Fresenius Heidelberg

13.04.2021

MasterTalk #12

Referenten:

DIGITAL TWIN-

**Planerische Spielerei oder
strategischer Werthebel?**

Building Management Systeme in der Immobilienwirtschaft



Marianne Janik
Area Vice President and
CEO
Microsoft Germany



Jens Müller
Chief Executive
Officer
Building Minds



Prof. Dr. Thomas Glatte
Professor für
Immobilienwirtschaft
Hochschule Fresenius





Sustainability. Good for Business

Decarbonization management for real estate

Berlin, February 2021, **BuildingMinds**

Key CxO sustainability priorities

CTO | Tech

Looks at how sustainability trends can be thought into processes related to data and hardware and drive innovative products or services

CHRO | People

Thinks sustainability preferences into company culture, training and talent interaction to create engagement.

COO | Operations

Prepares for impact of sustainability trends on sourcing requirements and demands to reduce carbon emissions and costs simultaneously.

CEO | Strategic

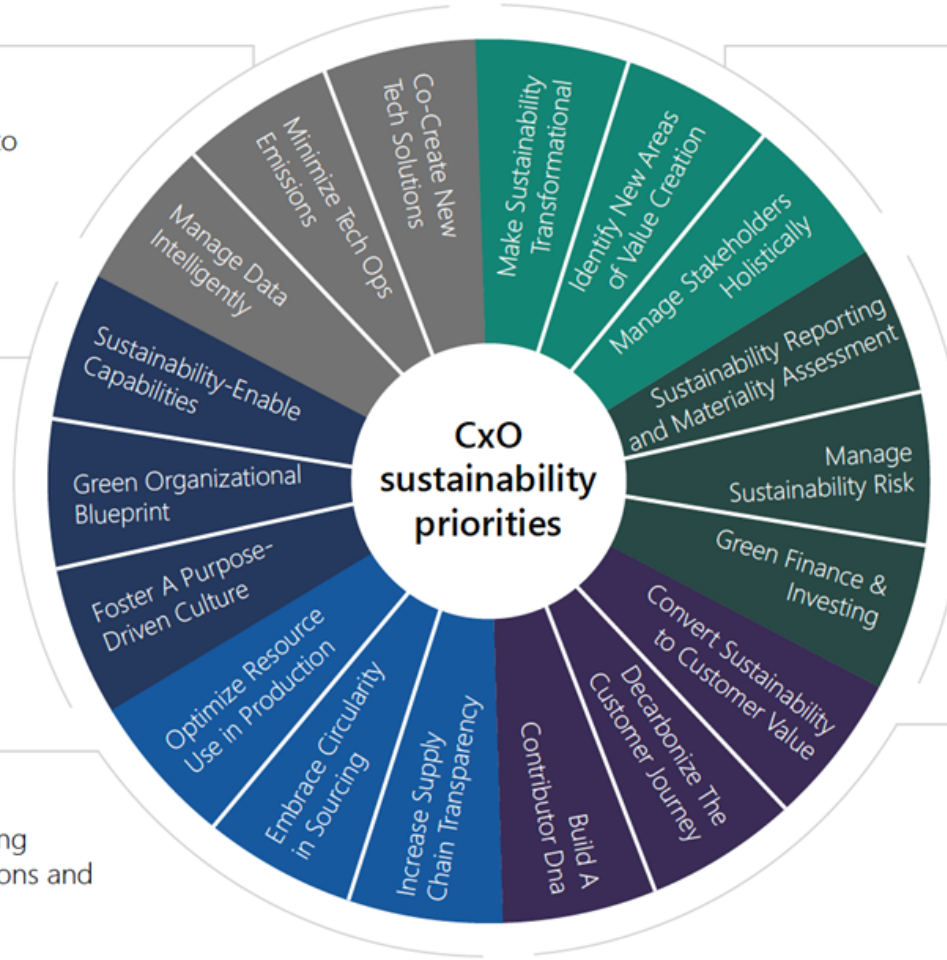
Evaluates strategic threats and opportunities arising from sustainability trends and defines future visions, goals and positioning of the company.

CFO | Financial

Understands how sustainability topics impact financial planning and reporting, as well as compliance and capital allocation decisions.

CCO | Commercial

Recognizes how sustainability trends affect customer behavior and re-thinks sales processes, branding, marketing and public relations accordingly.



BuildingMinds addresses the key sustainability concerns



Megatrends such as decarbonization and digitalization are already disrupting the real estate industry.

BuildingMinds' platform provides easily accessible and transparent information, supporting real estate owners and investors to analyze, monitor and benchmark building performance. This enables responsiveness and supports informed decision-making.



Analyzing building resource performance and identifying efficiency opportunities in terms of environmental performance can be a daunting task. Yet, the benefits of increasing resource efficiency are substantial.

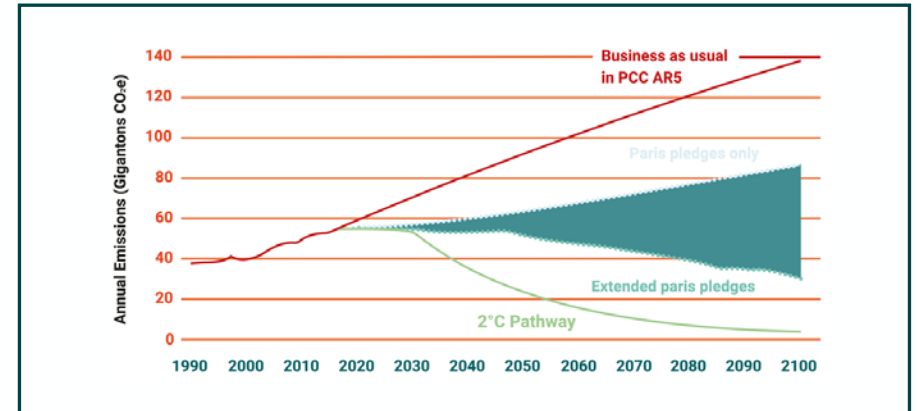
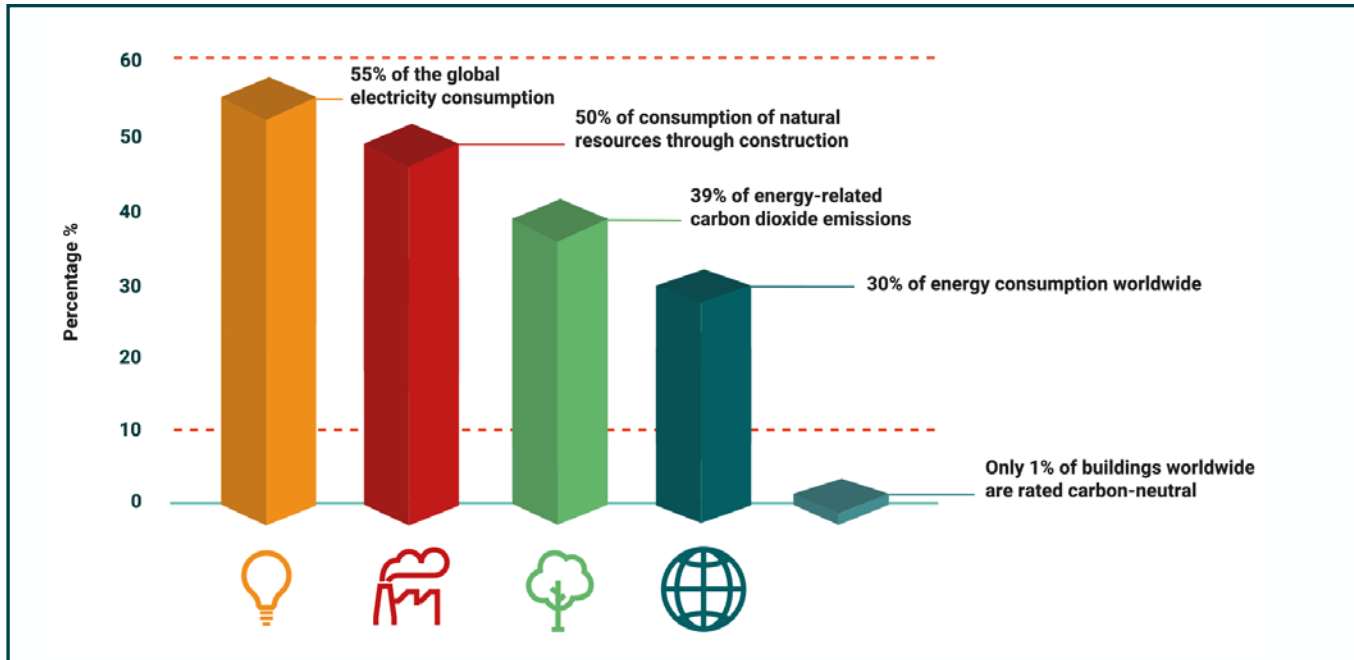
By analyzing operational and embodied building performance in terms of energy, CO₂ emissions, water consumption and waste, BuildingMinds improves its customers' resource efficiency resulting in reduced costs and related sustainability benefits ('Green Premium').



Climate change poses a range of challenges for the real estate industry. On the one hand, there are physical risks such as rising sea levels and more frequent extreme weather events. On the other hand, the transition to a low-carbon economy comes with risks due to stricter regulatory requirements and an increased demand for sustainable buildings.

BuildingMinds supports its customers in reducing climate risks and getting prepared for the requirements of the global green economy.

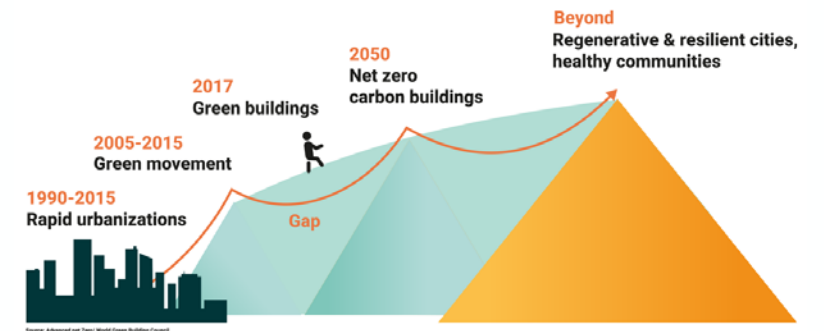
The great deal of responsibility of the real estate industry



According to the World Green Building Council, in order to comply with the Paris Climate Agreement, **all new buildings must be carbon neutral by 2030 and, by 2050, all buildings will need to be carbon neutral.**

The real estate footprint

- Buildings currently account for around 38% of energy-related carbon dioxide emissions – more than the transport sector
- According to the Coalition for Urban Transitions, buildings are responsible for 58% of urban carbon emissions
- And only 1% of buildings worldwide are rated carbon neutral.
- Buildings are responsible for around 30 percent of final energy use and over 55 percent of global electricity consumption



The BuildingMinds approach

About BuildingMinds



Launched in 2019



Located in Berlin and Shanghai



80 domain and digital transformation experts

Solution and approach

- A SaaS platform for real estate building and portfolio management
- Solution scope enables the management of real estate building portfolio from a holistic portfolio view down to a single building along the entire lifecycle
- Empowering business intelligence for customers through
 - > leveraging the width and wealth of Microsoft solutions,
 - > digital twin technology,
 - > and a low-code API first integration approach

Customer focus

BuildingMinds supports owners or managers of large real estate portfolios, focusing on corporate companies with owned and leased real estate and institutional real estate management companies. Exemplary customers: Alstria, BASF, Schindler

Mission

Unleashes the power of data for customers, empowering them to build a sustainable, profitable and data-driven future for their real estate businesses.

The major pain points BuildingMinds addresses



Connecting a fragmented market and system landscape

The BuildingMinds platform finally connects what was trapped in silos. Via open APIs data from multiple systems are integrated and harmonized in one single source of truth. The new level of transparency and consistency results in a new quality of data-driven insights.



Building the future standard that enables advanced insights

Together with Microsoft and under the umbrella of IBPDI, BuildingMinds develops a Common Data Model (CDM) for real estate is the key to finally utilize all necessary data in the real estate ecosystem, enabling benchmarking, advanced analytics and finally the implementation of AI.



Decarbonization management – “Do the right thing right”

The need for decarbonization is THE business risk and value driver. The BuildingMinds solution addresses the core issues for the real estate sector: transparency of carbon emissions, resource efficiency and future-proofing buildings against climate risk and the requirements of the global green economy.

Key drivers of change in the real estate industry



Ecological sustainability



Well-being productivity space on demand

What moves the real estate industry

Buildings account for 38% of global carbon emissions – meeting climate goals will cause stranding risks, lead to increased operational cost and finally impact reputation and market value.

The pandemic caused a shift to flexible workplace (space on demand) management that is able to ensure collaboration for people productivity while meeting changing health/ safety demands.

How this is relevant for companies

- Optimization of energy consumption
- Evaluation and reduction of the operational carbon footprint
- Analysis of the embodied carbon footprint
- Building a cashflow-optimized decarbonization planning
- Efficiently conduct sustainability reports

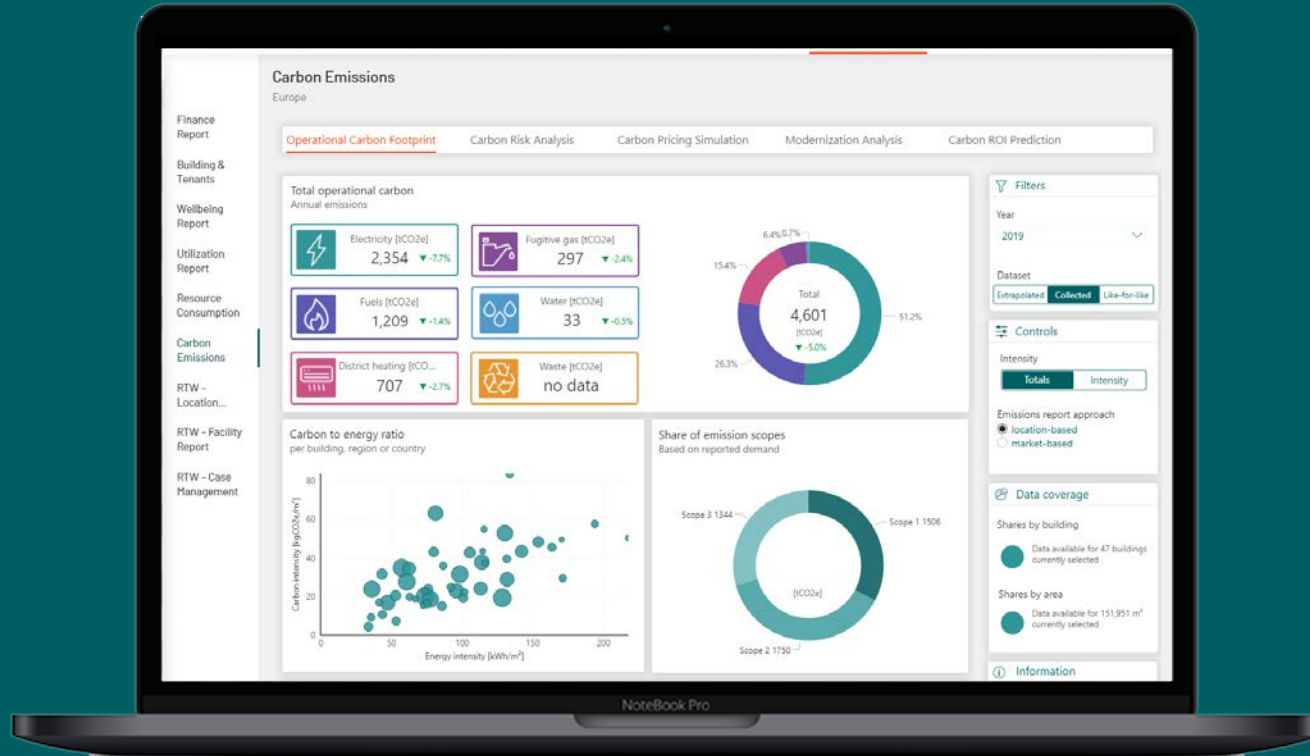
- Optimization of workspaces to ensure employee safety and health
- Create the best-possible workplace conditions to increase employee productivity

How BuildingMinds supports

- Consumption monitoring and optimization
- Operational carbon footprint analysis
- Embodied carbon footprint analysis
- Carbon risk analysis and modernization planning
- Scenario planning and action simulations

- Workspace utilization analysis
- Well-being monitoring including temperature, air quality, light
- Health and safety management
- People count and flow monitoring
- Soft service optimization

Energy consumption & carbon footprint



Overview of resource consumption

- Aggregated consumption data from portfolio down to building level for all types of energy, water and waste

Overview of operational carbon footprint

- Total carbon emissions from portfolio down to building level for electricity, district heating, fuels, water and waste

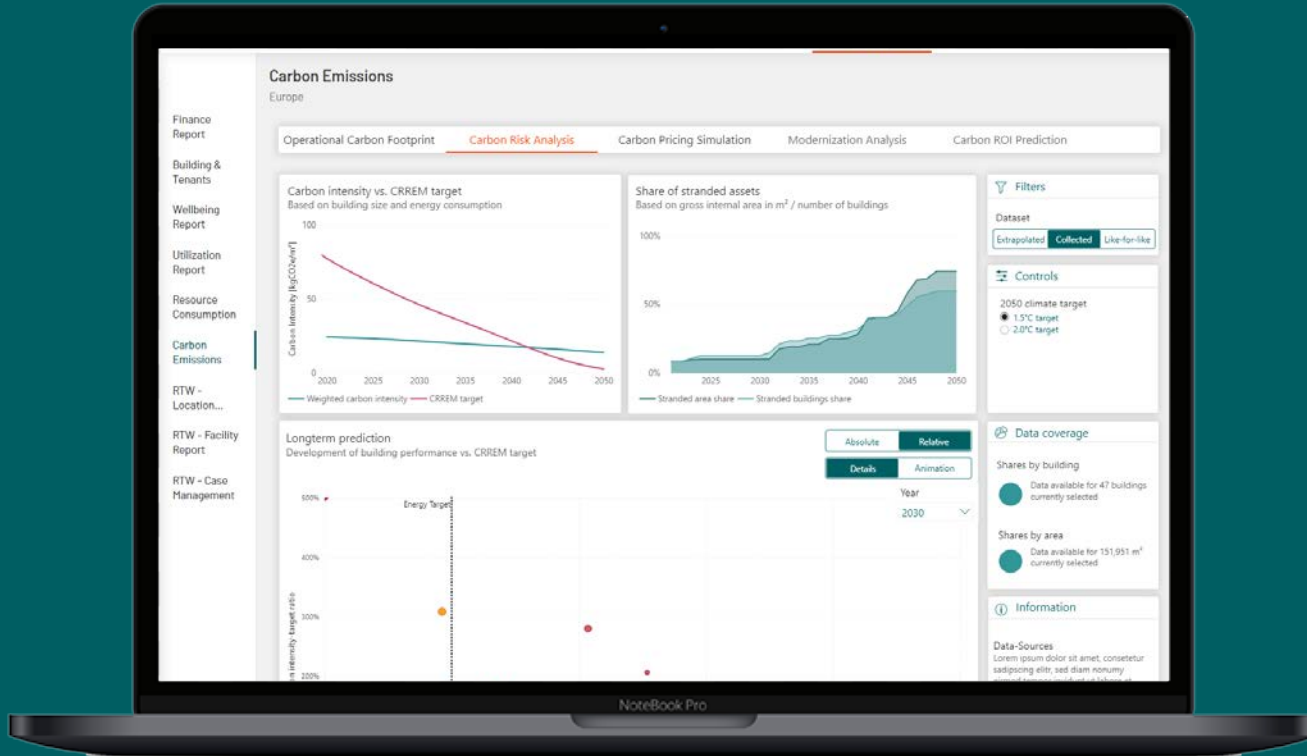
Energy consumption and carbon emission details

- Breakdown into different energy sources
- Intensity figures (per sqm) for portfolio, sub-portfolios, business units, regions or individual buildings
- Separation and reporting of scope 1, 2 & 3 emissions (from owner- or tenant-perspective according to Greenhouse Gas Protocol)
- Development of energy consumption and emissions over time

Embodied carbon footprint

- Estimation of embodied carbon from portfolio down to building level based on RICS Database
- Option for detailed calculation of embodied carbon footprint based on Digital Building Twin

Carbon risk monitoring



Stranded asset monitor

- Overview of energy-intensity and carbon-intensity in comparison to CRREM targets based on Paris climate targets (max. +2°C, better +1.5°C)
- Building performance development over time based on energy mix and predicted consumption
- Overview for entire portfolio, regions, business units or individual buildings

Simulation of decarbonization endeavors

- Calculation of operational carbon savings from transition to more sustainable energy sources or modernization efforts
- Estimation of carbon invest of modernization efforts (construction and materials) and break-even / "carbon ROI"

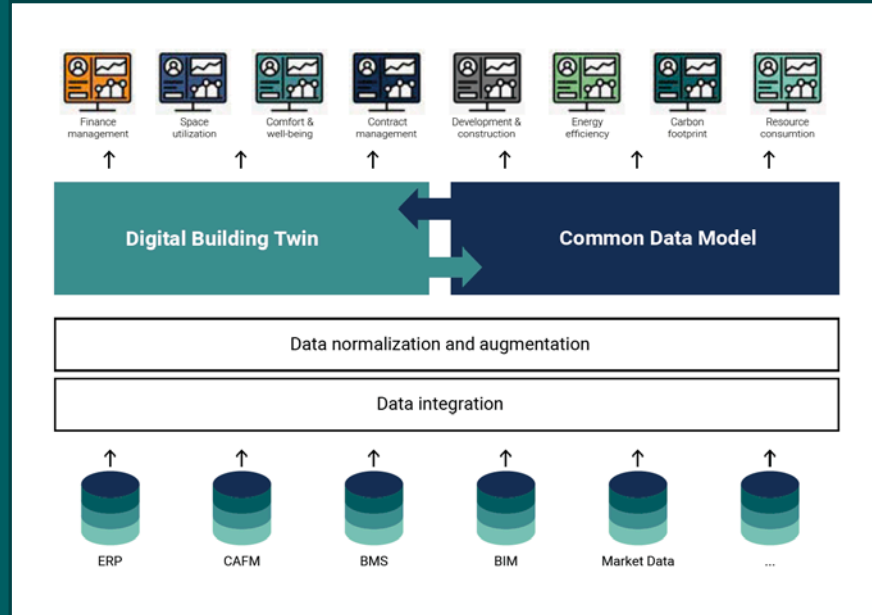
Simulation of Carbon Pricing

- Setting individual carbon prices in €/tCO₂e to predict the impact on portfolio value and compare savings from modernization efforts
- Option to include carbon offset initiatives to carbon footprint calculation and carbon risk prediction





What moves the industry and how BuildingMinds can support

The BuildingMinds platform





Reaping the potential of technology, BuildingMinds developed a platform that integrates advanced building analytics, KPI tracking and predictive building management. The platform is based on an industry-specific common data model (CDM), Machine Learning and Artificial Intelligence.



BuildingMinds solution

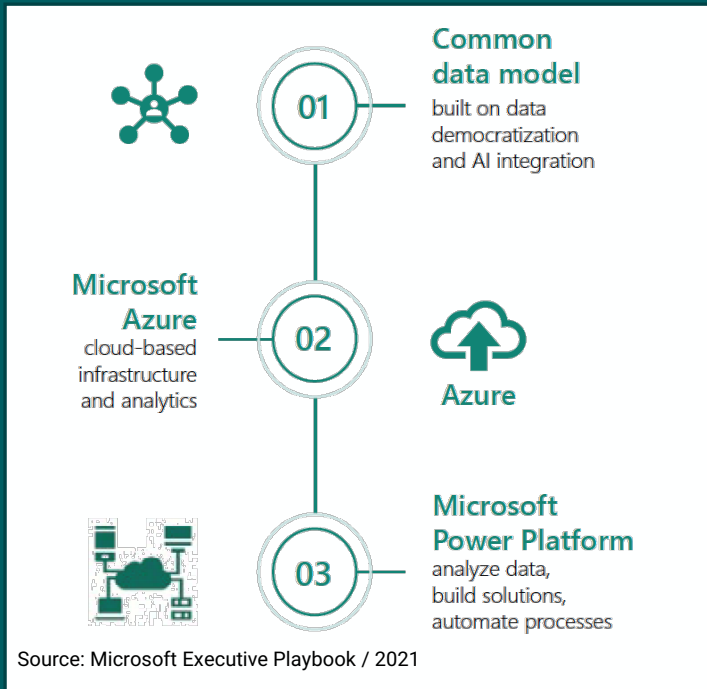
-  Flexible Data Onboarding
-  Data Coverage / Extrapolation
-  Transparency & Reliability
-  Compatibility / Reporting

Sustainability

-  Energy Consumption
-  Carbon Footprint
-  Carbon Risk Monitoring
-  Portfolio Analysis

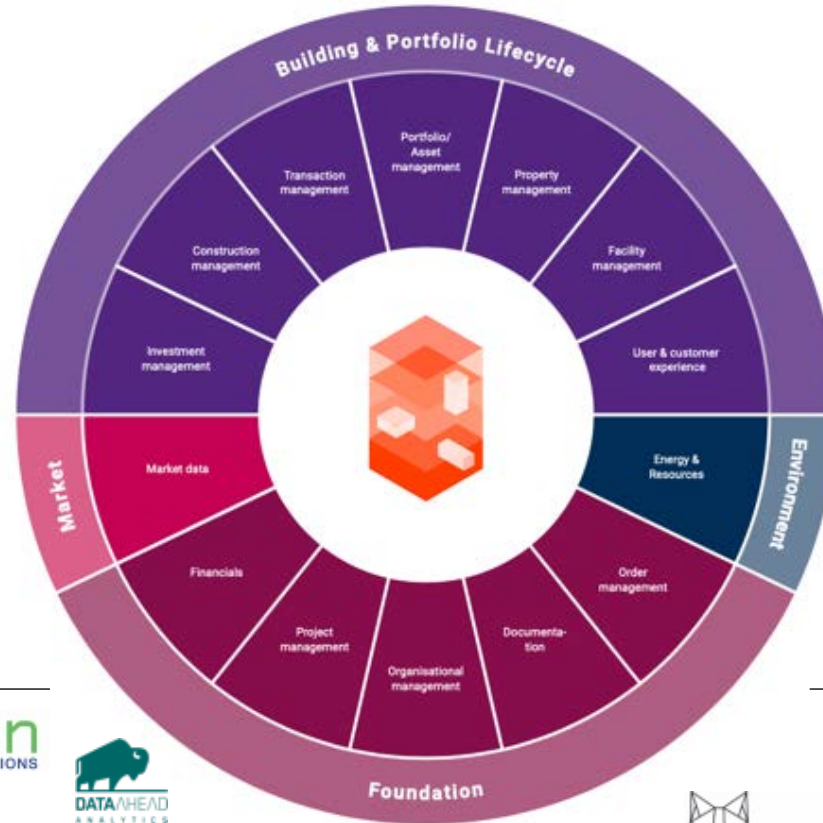
Common Data Model for real estate

The CDM is being developed together with Microsoft as a key partner. This enables the development of a Digital Building Twin, which provides data-driven insights and full transparency around building performance, from a strategic portfolio level down to a granular building focus. The platform enables real estate asset optimization across the entire building ecosystem based on unprecedented insights, transparency and real-time information.



Source: Microsoft Executive Playbook / 2021

IBPDI: Creating the Common Data Model for real estate



Website: www.ibpdi.org

GitHub: <https://github.com/ibpdi>

LinkedIn: <https://www.linkedin.com/company/ibpdi/>

YouTube:

https://www.youtube.com/channel/UC4KyJR_1bH8vezhO9hcDRFw

Email: contact@ibpdi.org



ChillServices



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Thank you!

