

Imagine...

....people working and living in the best possible environment for well-being and productivity. Imagine discovering previously unknown efficiency and business value potential. Imagine mastering the climate crisis by doing the right thing and doing things right.



Create a sustainable, data-driven future for your real estate business

New buildings are built smart. Existing buildings have to be made smart. And the better they are connected within a holistic ecosystem, the more value is added today and tomorrow.

What distinguishes truly data-driven real estate businesses from the others: the ability to analyze their portfolio down to a single building and in the context of their entire ecosystem. All of it starts with the creation of a deep understanding of every single building down to the very equipment and the capability to managing all data through a single source of truth.



One single source of truth.
All data in one place.
Unlimited insights.

Enable a better experience for tenants, employees and customers

/<u>@</u>

By connecting all building information in one digital ecosystem, Building Minds is making this vision a reality.

Whether corporate real estate, real estate investment or public institution, true 360° insights enable a new quality of real estate management.

Building operations become cutting edge in efficiency. Cost centers are able to generate business value. Portfolio planning pioneers in performance generation. The quality of living and working improves. And sustainability management finally unites economic and ecological value.



"Future-proofing a company for the new century involves transforming its culture and evolving its assets into value-added data that can offer a competitive edge."



Digitalize the business to make thousands of informed operational and strategic decisions every day.



Develop **agility** to quickly respond to threats, effectively mitigate risks and intelligently seize new market opportunities.



Empower **transparency** as the outcome of organizational intelligence and the ability to rely on data-based projections of the best course of action.



Perform **sustainability** and master climate change in both senses of the word – comply with legal and regulatory requirements, and leverage unforeseen business value potential.



Actionable insights at every level of corporate real estate management

Corporate real estate management is facing multiple challenges – from the identification of efficiency and cost-saving potential to the enhancement of productivity.

By leveraging 360° insights, corporate real estate management can realize immediate operational gains as well as strategic leverage.





Improved building operations

The BuildingMinds solution enables to analyze buildings down to the individual equipment and at the same time scale insights up to improve the management of the entire portfolio.

This allows to optimize the full building operations range with space management, consumption monitoring, maintenance and servicing management, service provider collaboration, compliance management, safety measure implementation, obligations management and contract management.

Increased employee productivity

The combination of space and organizational information with near-real time data from IoT opens entirely new possibilities to analyze and enhance productivity. Insights on space utilization can be combined with near real-time people count and flow, health can be improved with regards to illumination, air quality or noise reduction. And all kinds of services for employees can be optimized to ensure both better processes and output.





Effective sustainability initiatives

Nonfinancial KPIs such as a clean environmental record more and more become essential facets of both a long-term financial and reputational performance. To unlock these potentials, BuildingMinds supports to gather, harmonize and democratize all kinds of data and enrich them by industry-specific standards. Based on 360° data-driven insights, BuildingMinds supports corporates with the necessary tools to analyze, benchmark and report nonfinancial KPIs.



Sustainable real estate investment management

Future-proofing business requires both profitability in the here and now, and agile strategies for an increasingly complex future.

By integrating an unprecedented scope of data and leveraging advanced technologies for scenario planning, real estate investment managers can go beyond mere asset optimization. Data-driven business intelligence empowers to identify new business potentials and to unfold intelligent risk mitigation strategies.

Business KPIs at the fingertips

With every bit of information from building to market context in one single source of truth, business decisions on a day-to-day and strategic level are significantly improved. Finance analytics can be enriched with market information to better analyze and forecast investments. Displayed through a large variety of management dashboards, KPIs are available at the fingertips of all stakeholders.





Enhanced decision-making power

Lease management can be improved with tenant structure information, building condition determination, smart lease contract and cost management. Finally, service provider contract management becomes more powerful thanks to the combination with independent building data aggregation.

Successfully managing decarbonization

With sustainability becoming a determining business KPI, decarbonization is key to preserve and increase economic value as well as ecological balance of real estate portfolios. BuildingMinds addresses the core topics for the real estate sector based on the integration and intelligent benchmarking of data in its platform: transparency of carbon emissions, resource efficiency and future-proofing buildings against climate risk.





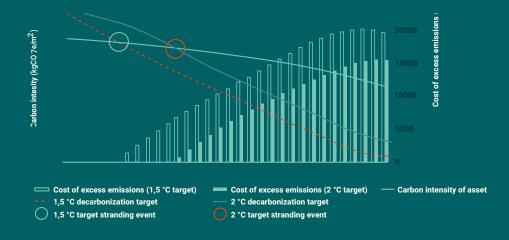
The 2050 "red-green line"

The real estate sector has the largest ecological footprint. Buildings currently account for around 39% 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.

In order to comply with the Paris Climate Agreement, new buildings' operations must be carbon-neutral by 2030 and, by 2050, all buildings will need to be carbon-neutral. In other words, carbon emissions will massively impact profitability and exponentially increase stranded asset risks.

Becoming sustainable to remain profitable

Reducing CO2 emissions from existing buildings requires investment – and it needs to happen quickly. Asset owners are managing their portfolios with horizons that often exceed decades or even longer. While a long horizon makes it possible to withstand short-term volatility, portfolios are likely to be exposed to higher levels of long-term risks such as the climate risk, which is usually not being accounted for in asset prices yet. To evaluate those factors, metrics beyond traditional financial ones must be considered.



Sustainable real estate investment management

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. By gathering all necessary data, democratizing and storing them in a single, centralized platform, real estate managers are empowered to develop effective decarbonization strategies.

Resource consumption

The BuildingMinds solution allows detailed multi-level data analysis and visualization for energy, water, waste and refrigerants including the breakdown into different energy sources like electricity, natural gas, district heating or solar energy. Automated meter readings/IoT-systems can be integrated with near-real time analysis.





Operational Carbon Footprint

The BuildingMinds solution provides automated calculation and interactive visualization of emissions from different energy sources and fugitive emissions in CO2-equivalents according to industry standards. Scope 1, 2 & 3 emissions according to Greenhouse Gas Protocol can be separated and reported.

Carbon risk analysis

The BuildingMinds solution unfolds benchmarking of building energy and carbon intensity against country and building type-specific CRREM targets based on Paris climate targets and user-defined target-setting. Finally, real estate managers can identify stranded assets, their share within portfolios and carbon penalty risk thanks to the simulation of various scenarios from carbon pricing to retrofitting and modernization impact.

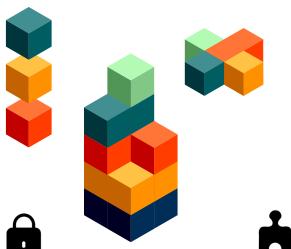




The best of two worlds: comprehensive and open

The platform, open and agnostic by heart, offers customers full ownership of their data and an unprecedented scope of insights across all real estate business areas.

Through its API first approach, the BuildingMinds platform builds a flexible ecosystem that makes it possible to connect and interact with all kinds of data for an unprecedented holistic and dynamic view on real estate portfolios. Through a constantly growing number of connectors and value-adding apps, Building-Minds makes it possible to capitalize on data value in various areas like transaction management, budget approvals, service procurement, field surveys, utility meter reading or building equipment monitoring.





True data ownership

The BuildingMinds solution ensures that data stay where they belong: in the hands of the customer.

With all data stored in a single central repository, the platform enables complete control along the entire building and portfolio life cycle. Built on the proven and secure cloud infrastructure offered by Microsoft Azure, BuildingMinds constantly enhances the security of its platform.

API-first approach

The BuildingMinds platform makes it possible to connect and interoperate with all kinds of data.

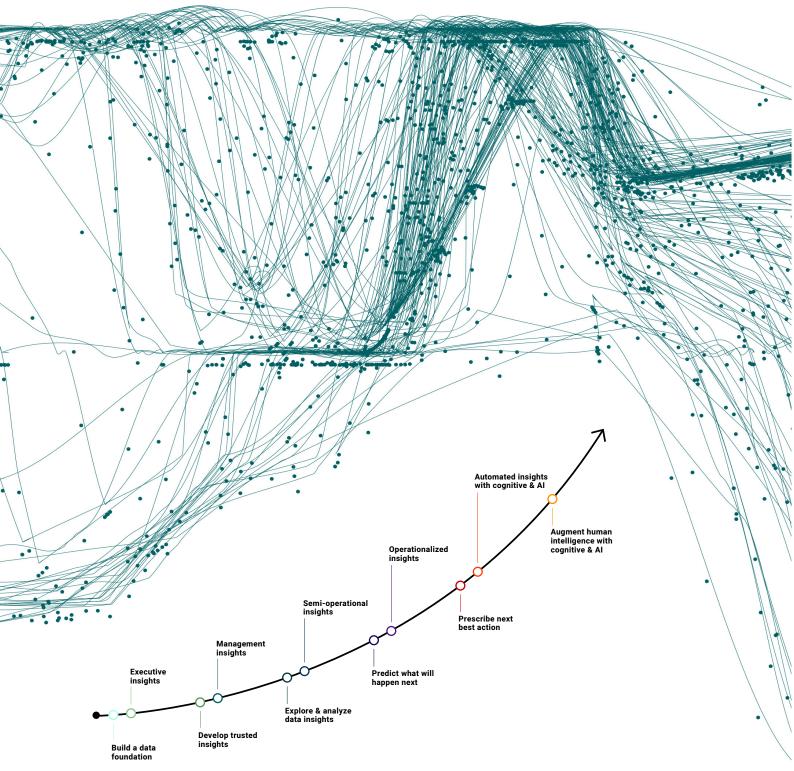
No matter which ERP software, CRM system, industry applications or customized extensions are used, data from all sources can be integrated and processed through a single pane of glass for an unprecedented holistic and dynamic view on real estate portfolios.



Microsoft

With Microsoft, one of the strongest market players provides the technical base for BuildingMinds.

Microsoft's Azure serves as the cloud platform and the jointly developed Common Data Model harmonizes all kinds of data silos in one single system. The robust and sustainable technology platform unites powerful technology with deep real estate expertise.



Source: FY

Building data-driven business agility

The seamless connection of all data makes it possible to analyze buildings down to individual equipment and at the same time scale insights up to portfolio level for a new quality of decision-making. BuildingMinds accompanies real estate businesses on every step of their journey from comprehensive data integration to the development of advanced business intelligence based on Al and deep learning capabilities.

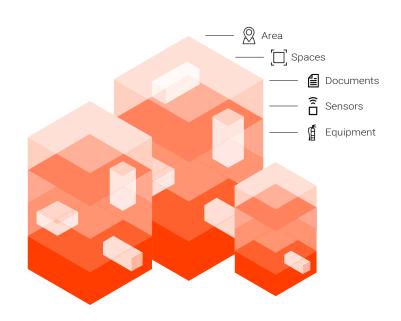
From a digital representation to meaningful insights

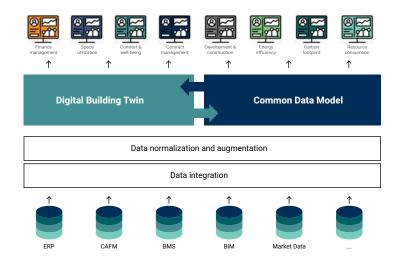
The Digital Building Twin

Together with the Common Data Model for real estate, the Digital Building Twin builds the core elements of the platform. They provide the basis for data-driven insights and the application of machine learning and artificial intelligence.

The Digital Building Twin integrates all the data sources within real estate into a single ecosystem. It's comprised of static and dynamic information and creates a highly accurate and comprehensive presentation of a building asset for all stakeholders around multiple lifecycle stages.

Digital Building Twins grow and evolve based on individual business needs and the maturity level of data. By continuously adding data sources, the more robust and meaningful the visibility, insights, and benefits it generates will become.





Management Cockpits

Thanks to the integration of a comprehensive scope of data, buildings can be managed down to individual equipment in near real-time. At the same time, insights can be scaled up to portfolio level, allowing to realize immediate operational gains as well as to forge sustainable future business strategies. BuildingMinds management cockpits empower real estate businesses to analyze and manage their portfolios using an unprecedented scope of insights – from finance KPIs to contract management, from workspace utilization to people wellbeing and from energy consumption to carbon emission management.

Common Data Model for Real Estate

In collaboration with Microsoft, BuildingMinds develops a Common Data Model (CDM) for the entire real estate industry. The CDM forms a structure in a mere data lake – a collection of schemas with entities, attributes and relationships representing the most commonly used concepts and activities in real estate.

International Building Performance & Data Initiative

The International Building Performance & Data Initiative, initiated by Building-Minds, RICS, pom+ and Microsoft, has the goal of creating unprecedented consistency and coherence for industry-related data. As a result, benchmarking by international standards, the integration of industry-specific KPIs and finally AI for advanced business intelligence becomes a reality of real estate management.

Common Data Model for Real Estate and the International Building Performance & Data Initiative:

Addressing today's challenges.

And tomorrow's.



A new level of interoperability

The International Building Performance & Data Initiative brings all of the industry's data-applicable structures, roles, processes and standards together into one foundational data framework. It covers crucial real estate management areas from operations, over market and environment to lifecycle management and coordinates them based on compatible data, cross-cluster benchmarking and industry-specific KPIs. www.ibpdi.org



Get to know BuildingMinds

Fusing the physical with the digital

We believe that without a concrete understanding of the physical building, there's no understanding of the digital. That's why our roughly 80-strong team is comprised of technology, domain and digital transformation experts with the mission of taking portfolio and building management in the real estate industry to the next level.

Based in the heart of Berlin, the BuildingMinds team is building a software-as-a-service solution consisting of a unique combination of an integrated cloud platform, a Digital Building Twin and data-driven insights. By lifting previously unknown data treasures, we support real estate investment companies and corporates to effectively combine sustainability strategies, people satisfaction goals and profitability KPIs and to future-proof their real estate businesses in a sustainable way.

The backing to be independent

In March of 2019, Schindler and BuildingMinds announced the formation of BuildingMinds, a start-up and stand-alone company. As our sole shareholder, Schindler has allocated extensive funding to give BuildingMinds the time and space to truly innovate.

"The demand for data-driven intelligence in building management and real estate asset optimization is significant and growing. Combining our industry insights with our digitization expertise will enable BuildingMinds to play a role in leading the change taking place in the sector."



Our co-innovation partners and customers

BuildingMinds is implementing the solution for corporates and real estate investment companies and driving the transformation of the real estate industry every day.

BASF - Driving change in the corporate real estate sector

BASF is one of the world's leading producers of chemicals with a worldwide portfolio of production facilities and offices – totaling more than a thousand buildings. Corporate real estate management at BASF ranges from development to utilization to disposal and comprise strategic tasks from site/property selection over building/facility services management to transactions or re-development.

Complex challenges requiring innovative solutions

Managing such a number of sites, people and processes naturally comes with an endless amount of data as well as various systems. A major pain point is isolated data silos especially in the sectors of building operation costs, sustainability, contracting and the variety of CAFM systems from service providers.

Digital transformation is the path forward

The co-innovation project with BuildingMinds is driving digital transformation of the Corporate Real estate management. Their common goal is to combine a proof of concept for step-by-step integration of all data sources into one single platform in order to manage all related processes with one solution in the future, as well as setting up Digital Building Twins and addressing issues such as leasing data, sustainability and workflow management.





Alstria - better building management in Germany

With a portfolio of over one hundred buildings and over 1.5 million sqm in five main regions across Germany, Alstria is one of the leading German real estate investment trusts with a focus on managing office buildings throughout their entire lifecycle.

Centering sustainability

Being a major pillar of both Alstria's and Building-Minds's DNA, sustainability is at the core of the joint co-innovation project with a clear goal of impacting the entire real estate industry.

A joint team of 20 people is constantly working on various work streams, which focus on the further development and definition of the Common Data Model, sustainability, document classification, and authorization concept.







Schindler is one of the world's leading providers of elevators, escalators, and moving walkways, as well as maintenance and modernization services. The Schindler Group has over 1,000 branch offices in more than 100 countries, as well as production sites and research and development facilities in the US, Brazil, Europe, China, and India.

A revolutionary project

With the renovation of the Schindler Campus in Berlin, Schindler has set out to go beyond a mere update of their physical assets. With digitalization in every detail and from the outset, Schindler sets an example and creates a proof-of concept for advanced building management in the digital age. As a second highlight project, Schindler digitalizes its biggest campus in Shanghai. The international scope of these projects marks a major milestone and sets the cornerstone for a global, truly data-driven business.







