

CASE STUDY

Panattoni Park Kojetín Building Amazon

The robotic distribution center at **Panattoni Park Kojetín** is the **first fully multi-storey industrial building** in the Czech Republic.

This unique project combines **innovation**, **ecological responsibility**, and **advanced technology** to meet the client's demand for a comprehensive solution and to push the boundaries of industrial real estate development.

The building meets the **highest sustainability standards** and was designed with a focus on **long-term functionality** and **minimal environmental impact**. This approach sets a **new benchmark** for industrial development not only in the Czech Republic, but across Europe as well.

CLIENT'S REQUEST

Construction of a **multi-storey and distribution center**, equipped with **environmentally friendly state-of-the-art robotic technology**.

PANATTONI SOLUTION

Thanks to its proven experience with similarly complex projects, **Panattoni delivered a unique solution** for this development. The project involved the **design and construction of the first fully multi-storey industrial building** in the country, meeting **high sustainability standards**, enhancing **energy efficiency**, and minimizing **environmental impact**.

The building achieved **BREEAM New Construction Outstanding certification**, with a strong focus on energy self-sufficiency and ecological footprint reduction.

The project also featured the **revitalization of a brownfield site**, bringing positive economic benefits to the region.

CONSTRUCTION PROCESS

The project was completed in **record time between 2021 and 2023**.

- **Brownfield Regeneration:** Before construction began, sedimentation tanks from a former sugar factory were remediated. The site was cleared of environmental burdens and transformed into a modern logistics hub.
- **Logistics:** A total of 6,800 reinforced concrete panels were delivered to the site by train, replacing 2,267 truck deliveries and significantly reducing CO₂ emissions.
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PROJECT DESCRIPTION

PROJECT TYPE	LOCATION
Built to suit (BTS)	Kojetín, Czech Republic
TOTAL AREA	BUILT-UP AREA
187 000 m ²	51 000 m ²
BUILDING HEIGHT	CLIENT INDUSTRY
27 meters	E-commerce
JOBS CREATED	PHOTOVOLTAIC CAPACITY
2000	4 MWp



CLIENT

Amazon is a global technology company focused on **e-commerce and cloud computing**. The robotic distribution center in Kojetín plays a key role in Amazon's European logistics network and supports the company's commitment to efficiency, innovation, and sustainability.

Developed in collaboration with Panattoni, the facility serves as a showcase of technological and environmental innovation, featuring a photovoltaic power plant that supplies over 68% of the site's energy needs. This project marks a major milestone in Amazon's journey toward carbon neutrality.



KEY BENEFITS

FOR THE CLIENT

- A modern distribution center meeting the highest standards of quality and sustainability
- Increased efficiency of logistics operations through automation
- Reduced operating costs thanks to energy self-sufficiency

FOR THE REGION

- Creation of 2,000 jobs, driving regional economic growth
- Enhanced infrastructure, including bike paths, bus stops, and relaxation zones
- Support for the local economy through community partnerships

FOR THE ENVIRONMENT

- Reduction of CO₂ emissions by 6,310 tons annually and improvement of biodiversity
- Use of renewable energy sources and construction waste recycling

SUSTAINABILITY AND ENVIRONMENTAL IMPACT



Construction Waste Recycling

100% of demolition waste was recycled and reused, for example, as backfill material for the surrounding sedimentation ponds.



Water Efficiency

Potable water use is reduced by **60.8%**, saving **15,140 m³** annually, with **leak detection systems** in place.



Transport Infrastructure

The project includes the construction of **16 new bus stops** and access roads to improve connectivity.



Renewable Energy Sources

The building is not connected to any fossil energy sources. Heating is provided by air-to-water heat pumps, which supply **75% of hot water needs**.



Biodiversity

Planting of **300 trees**, **750 shrubs**, and installation of **beehives** enhanced the site's ecological balance.



Energy Efficiency

A **4 MWp photovoltaic system** covers **25% of total energy consumption**, including robot operations and equipment.



E-mobility

30 charging stations for electric vehicles have been installed.



Materials

15.15% of materials used are certified with **ISO 14001**, **BES**, or **FSC** standards.



CERTIFICATION

BREEAM NEW CONSTRUCTION OUTSTANDING, SCORE: 89.4%.

All systems were integrated with detailed sub-metering, ensuring efficient energy use and lower operating costs. The roof was designed without skylights, allowing full utilization for the installation of 8,590 monocrystalline photovoltaic panels.

TECHNOLOGICAL AND INNOVATIVE ASPECTS

- **Robotic Systems:** Automation of logistics processes reduced energy consumption by 6% and significantly improved efficiency.
- **Passive Design:** Passive features minimize the need for heating and cooling, while external blinds ensure optimal daylight control.
- **Sub-Metering:** Detailed energy monitoring enables cost optimization and immediate issue detection.

The building ranks among the **most advanced logistics centers in Europe**, setting **new industry standards** through its innovative technology approach.

TECHNICAL SPECIFICATIONS OF THE BUILDING

Energy Self-Sufficiency

68.2% of total energy consumption is covered by a 4 MWp photovoltaic system.

Lighting

LED lighting with energy-efficient control modules to minimize consumption.

Thermal Insulation:

Wall panels: 0.89 W/m²K, Roof panels: 0.129 W/m²K

PRŮKAZ ENERGETICKÉ NÁROČNOSTI BUDOVY

výkaz prodeje vzdálené č. 4074/2020/50, o hranopříslušenství energií, v výkazové č. 204/2020/50, o energetické náročnosti budovy

Ulice, č.p./č.o.:				
PSČ, obec:	Kojetín			
K.ú., parcel č. k. d.:	Kojetín (667897), 1330/1; 1330; 1279, 6606-6654			
Typ budovy:	Budova pro výrobu a skladování			
Celková energetický vzdálená plocha:	188366,3 m ²			
KLASIFIKAČNÍ TŘÍDA				
Primární energie z neobnovitelných zdrojů				
Mimořádná depozitá	A	4		
Vážná depozitá	B	80		
Depozitá	C	107		
Mírně depozitá	D	154		
Nehospodárná	E	211		
Vážně nehospodárná	F	248		
Mimořádně nehospodárná	G			
ROZDĚLENÍ DODANÉ ENERGIE				
MWh/rok				
Energetické provozní - 32 72,4 (84 %)				
Cestovna - 157,5 (3,3 %)				
UKAZATEL ENERGETICKÉ NÁROČNOSTI				
Měsíční energetický auditní průkaz na budovu				
0,16 kWh/m ² d	A			
Měsíční potřeba tepla na vytápění				
7 kWh/m ² d	A			
Celková dodaná energie				
26 kWh/m ² d	A			
Vytápení				
9 kWh/m ² d	A			
Chlazení				
1 kWh/m ² d	B			
Návštěvníci				
6 kWh/m ² d	A			
Úprava vlnkostí				
-				
Příprava tepelné vody				
1 kWh/m ² d	C			
Osvětlení				
10 kWh/m ² d	B			
Energetický specialista: Ing. Vojtěch Lexa				
Ověřování č.: 1094				
Kontakt: vojtech.lexa@energomec.cz				
Iv. č. průkazu: 315253-1				
Vydáváno dne: 25.06.2022				
Podpis:				