

Digital Twins

Empowering the Next Era of Net-Zero Carbon Buildings



According to ISO30173, Digital Twin technology is including simulation and optimization of buildings. Using IEA certified tool (Energy Plus) as core simulation engine, Digital Twin technology can enhance energy saving, environment comfort, and reduce users compliant. Through the integration of HVAC system, it can support the energy Saving and long term carbon neutrality.

◆ The Advantages of Decarbonization with Digital Twins



Carbon simulation optimizes lifecycle costs and green procurement.



Enhances building design and management processes.



AI predicts building operation and maintenance risks.



AI-driven HVAC control achieves near-zero energy consumption.



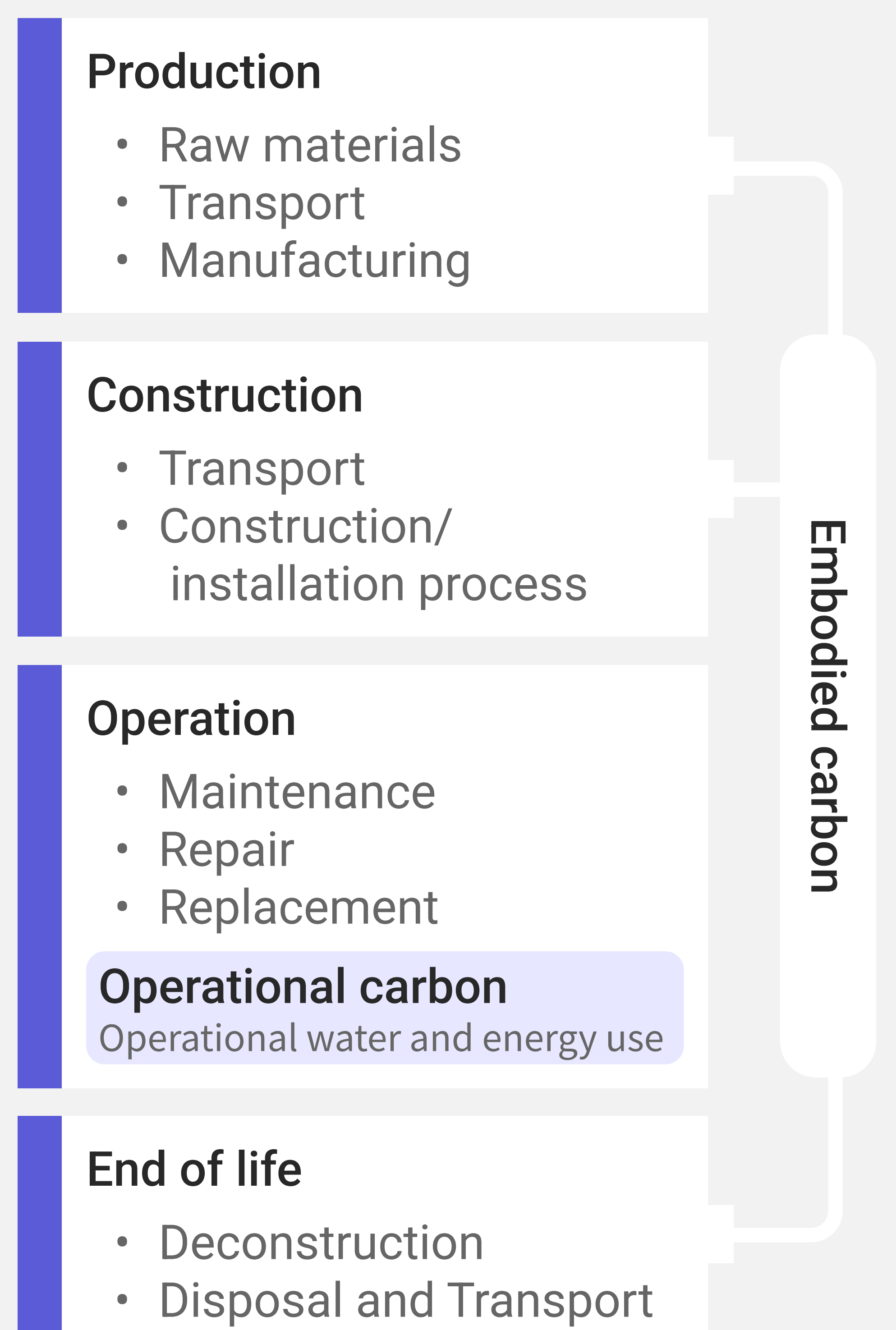
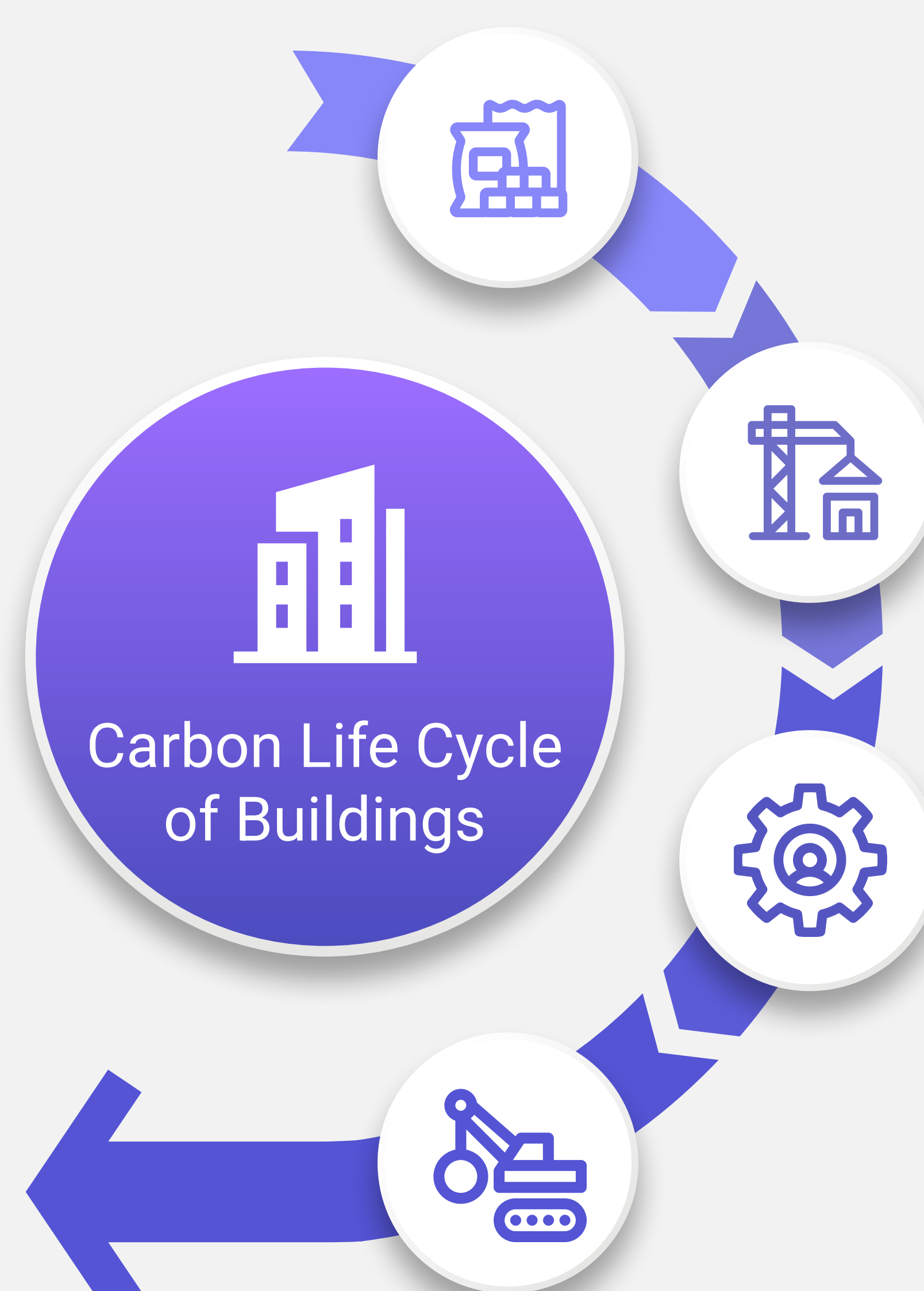
Improves management efficiency, saving time and labor costs.

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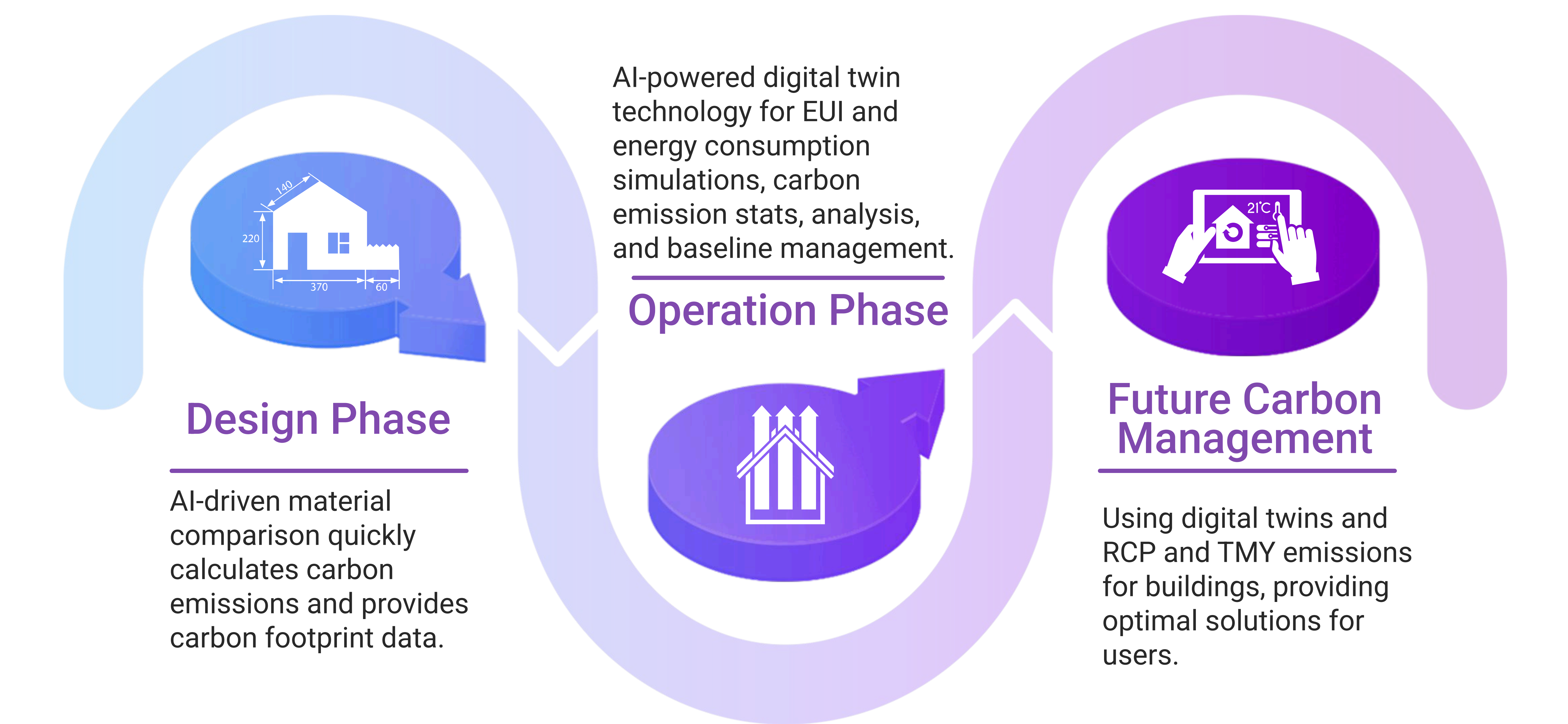
Building Digital Twin driven AI

According to the UNEP, buildings contribute around 40% of global carbon emissions, with one-fourth being embodied carbon hidden in materials up to demolition process, while the remaining three-fourths comes from operational use.

Source : 2021 Global Status Report for Buildings and Construction, UN Environment Programme



Our Building Carbon Management Platform utilizes digital twins simulation for long-term and short-term optimization strategies. It calculates and manages carbon emissions from materials, operations, and future emissions, enabling users to analyze carbon footprints and predict future emission reductions to ensure carbon neutrality across the building's lifecycle.



◆ The Benefits for Your Business

Reduce carbon report production by 50% yearly.	Estimation over 80% carbon emissions across the lifecycle.	Reduce building electricity costs by 10%.	Reduce average building energy consumption by 20 EUI (Kwh/m2.yr).
50% / yearly	80% over	10%	20EUI (Kwh/m2.yr)

◆ Proven Cases

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| New Taipei City Shulin Arts Center | TSMC South, North, and Hsinchu Plant |
| Tpark- Taipei Far Eastern Telecom Park | Chiayi County Machouhou Industrial Park |
| Huayou Factory of Foxconn Headquarters | Medical Center of Hualien Tzu Chi Hospital |
| New Taipei City Government Second Administration Center | |

