

*Amplifying Outcomes*

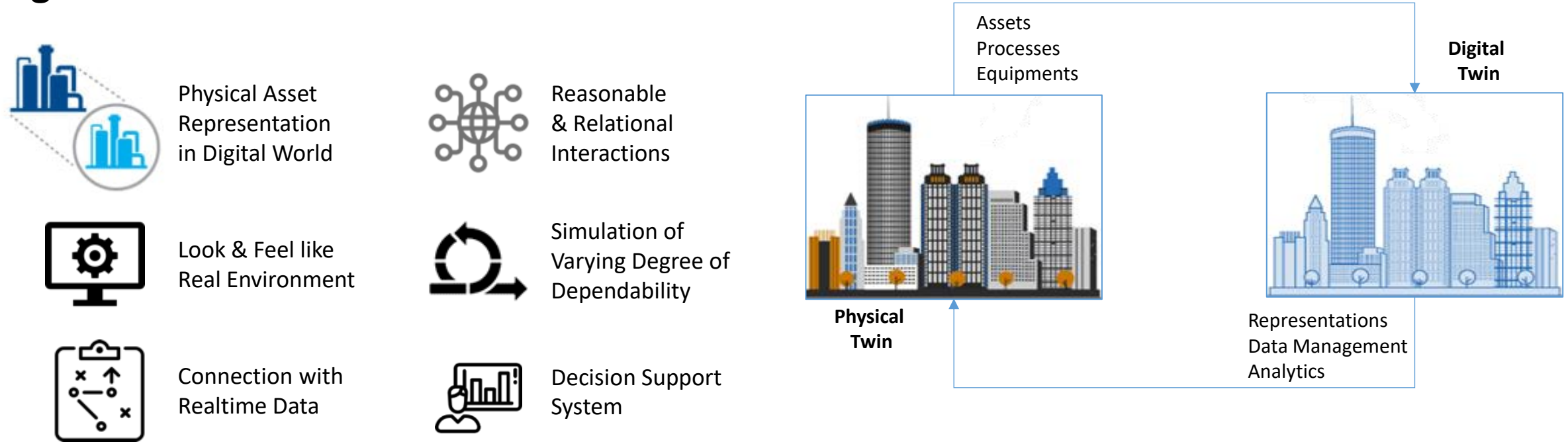
*Digital Twin for Efficient  
Operations and Effective  
Management of Resources*



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Pune (HQ) | Ahmedabad | Bangalore | Mumbai | Delhi | Chennai | Frankfurt | London | Los Angeles | Chicago | Detroit | Appleton

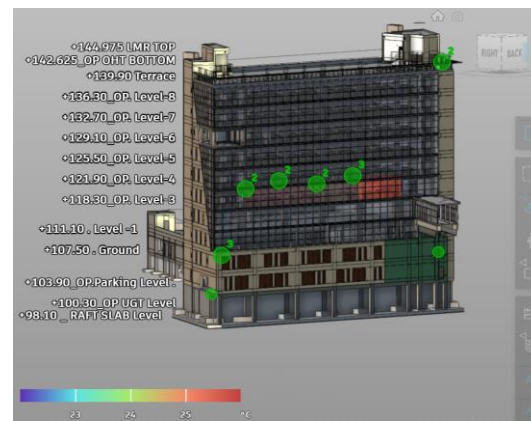
# Digital Twin – Introduction



# Digital Twin with Autodesk Tandem – Corporate Office

## Business Case – DT of Corporate building

## Equipment Monitoring



### Key Design Principles of Digital Twin

**Heat Maps** – Visualization of Data distribution and classification connected with respective spaces



**Digital Twin** – Ability to import IFC and Revit Model



**Streaming & IoT Integration** – Easy integration with IoT data, Real-Time Visualization of Sensor Data



**Predictive Analytics** – Historical Data Analysis & Predictive / Preventive & Prescriptive Modeling



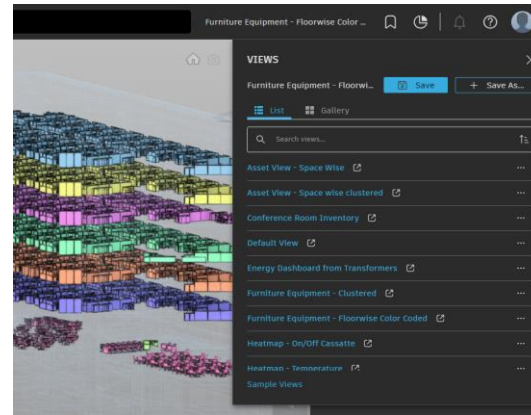
**Inventory Management** – Easy to manage inventory for facility operations.



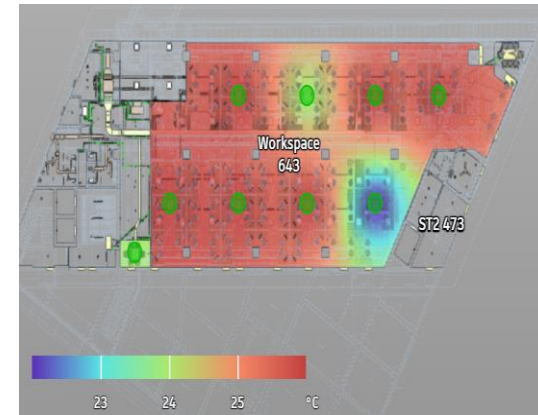
**Connections** – Ability to generate workflows with human tasks for approvals. & Integration with Cloud platform



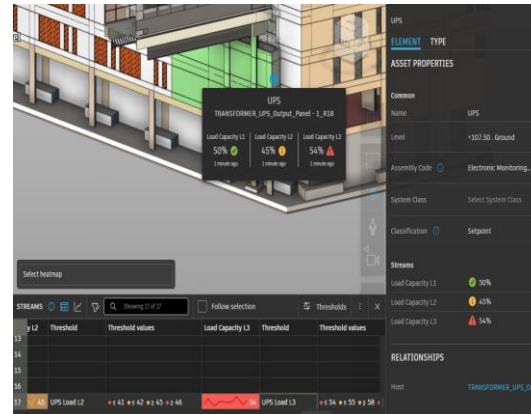
### Facility Management



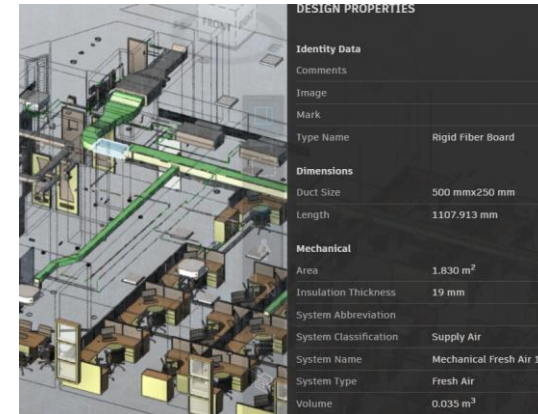
### System Heatmaps



### Alerts & Notification for IoT System



### (Air Flow Simulation)



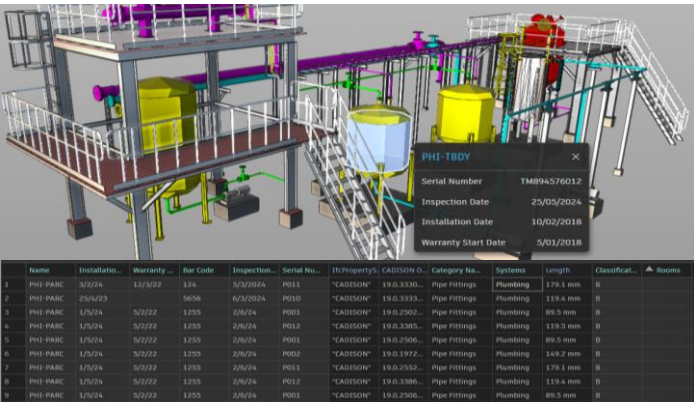
# Digital Twin with Autodesk Tandem – Plant



## Business Case

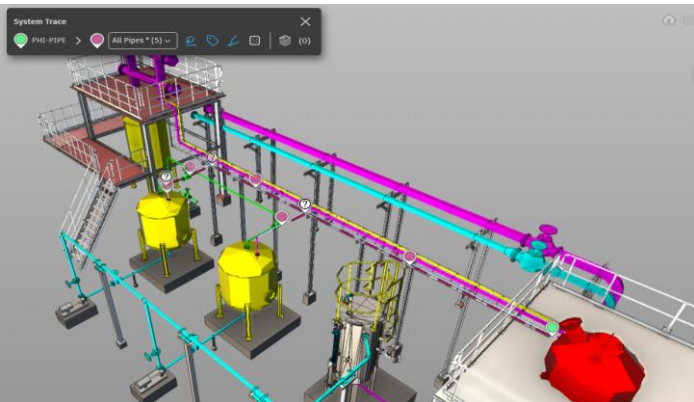
Digital twin allows for real-time monitoring of the working plant, providing insights into its current lifecycle stage and predicting potential future issues.

Enables proactive maintenance planning by analyzing performance data and allowing preventive maintenance of plant.



## Plant Inventory Management

Inventory management becomes more efficient as it facilitates accurate tracking of spare parts and materials usage, optimizing inventory levels and reducing unnecessary stockpiling.



## System Tracing

System tracing will help users understand system elements & pipe routing in context. This simplifies the navigation of complex models by illustrating the path & element within a system.

✓ Connected Components

✓ Connected Enterprises

✓ Connected Corporates

✓ Connected Businesses



- ✓ **Reduced Energy Costs** – We achieved approximately 10% improvement in optimizing energy utilization.
- ✓ **Reduced Downtime and Maintenance Costs** – We target to achieve up to 15% reduction in maintenance costs and zero downtime.
- ✓ **Realtime Monitoring** – Real-time Data Analysis helped us to establish processes to improve our decision-making and improvement in allocating resources.
- ✓ **Improved Asset Maintenance** – Using the visualization/simulations in Tandem we are able to create notifications for proactive maintenance.
- ✓ **Decision Support System** – Realtime notification using emails, SMSs, Slack etc...

**Thank You!!!**

