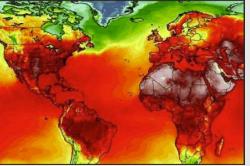
Using Lifecycle BIM for Sustainable Operation & Maintenance







Earth Yet Again Breaks Mark For Hottest Summer On Record



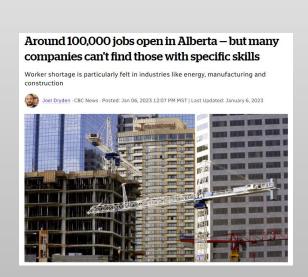


Unplanned plant outage, hot Alberta weather, line issue all contributed to Monday night's grid alert: AESO

"progress and growth are impossible if you always do things the way you've always done things"

Wayne Dyer





Carbon taxes
have the
potential to act
as a hugely
powerful engine
for change





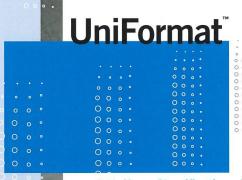
Decide what assets to track (and what not to)

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Structured data is embedded into the model



Using industry best practices



A Uniform Classification of Construction Systems and Assemblies









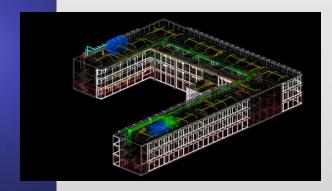






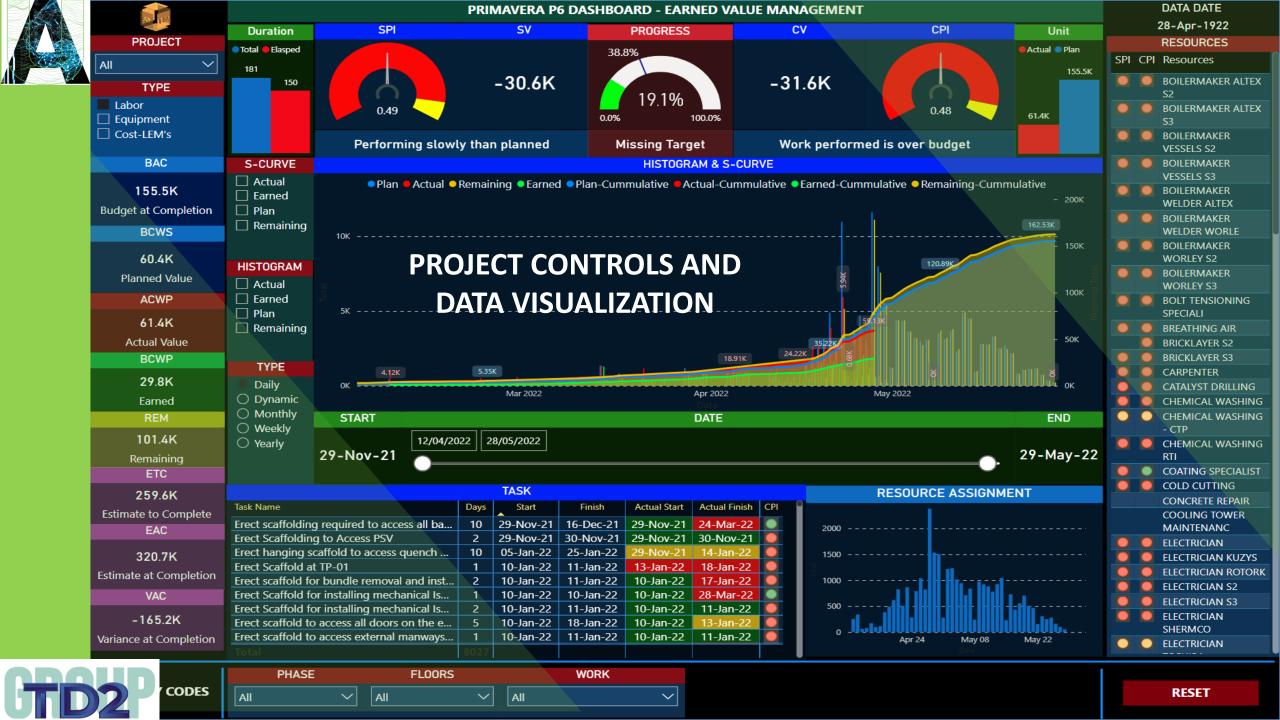
Bef	Parameter	Example Value	Notes	Typical Author (See ARI Table Tros specific)	Propert Requirement (VMA)
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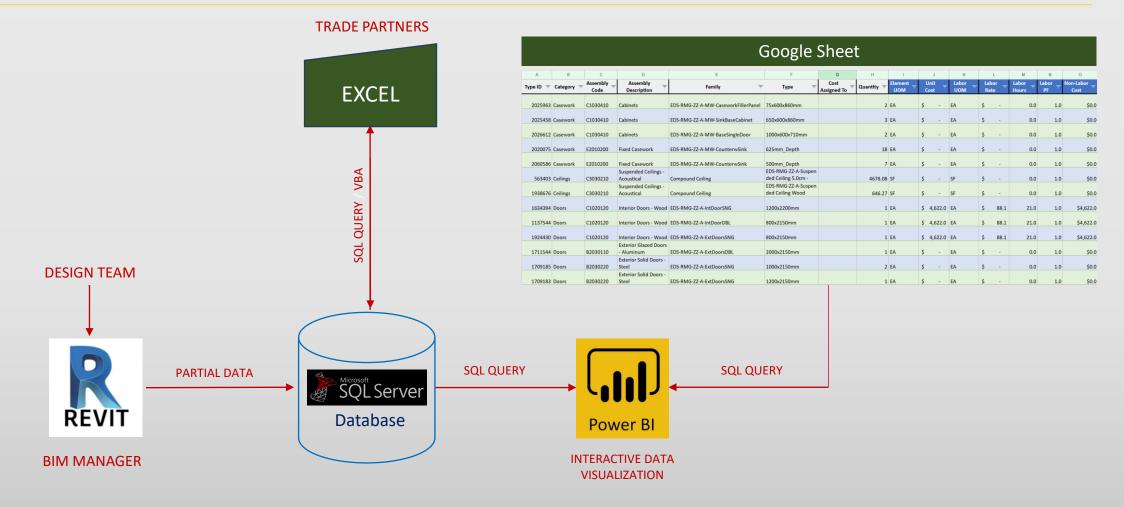








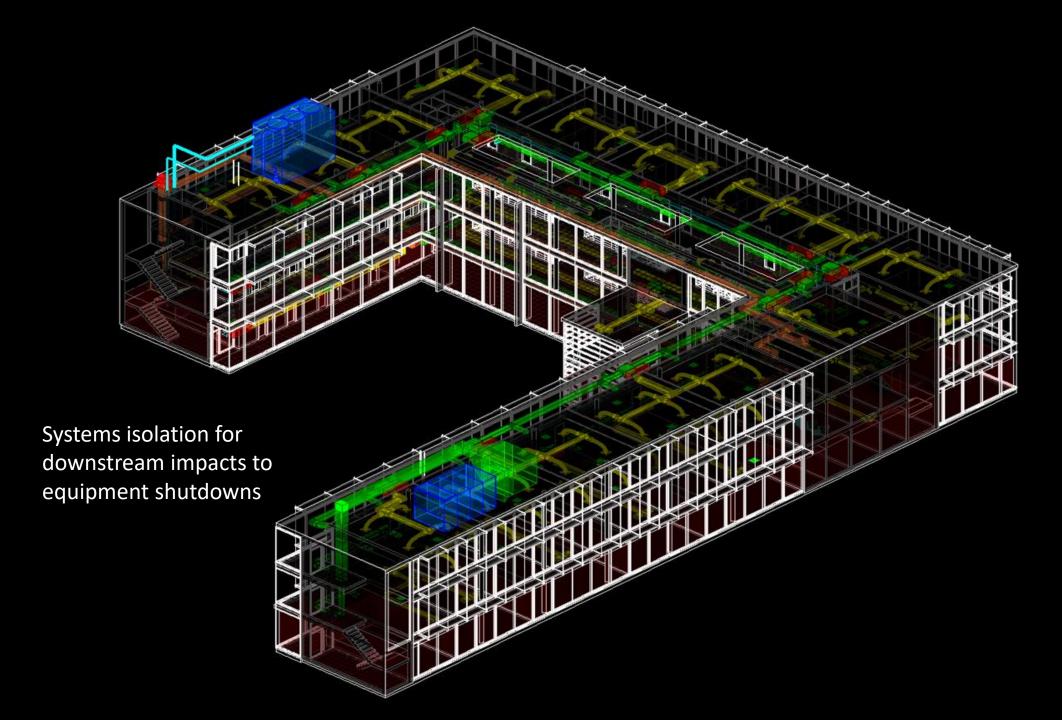
BIM – Revit Cost Estimating System









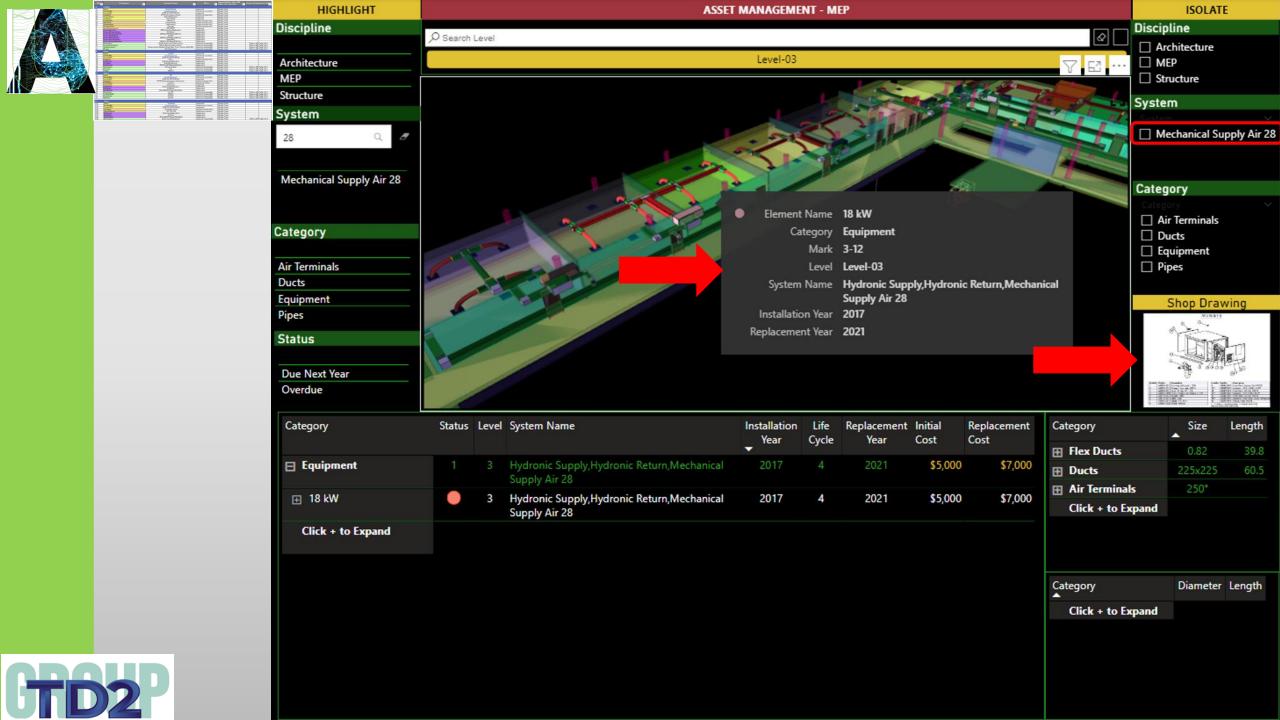


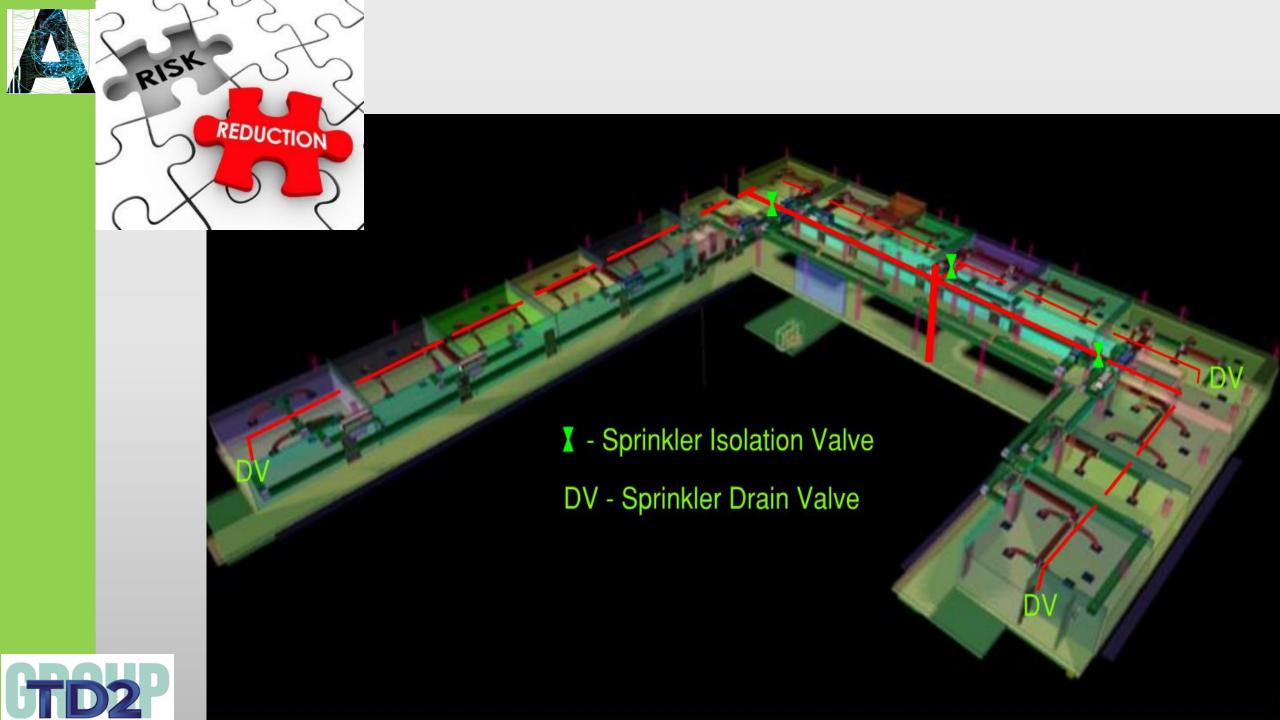




ENERGY CONSUMPTION & PRODUCTION DATA VISUALIZATION











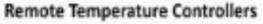












Honeywell Zio Family



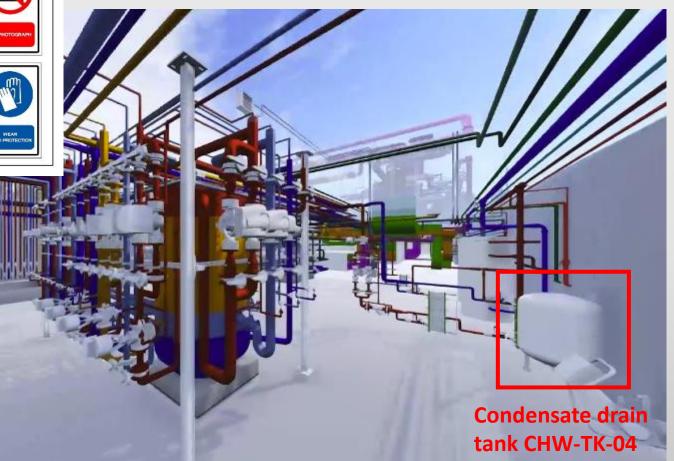


Pro-Watch Security Management System Biometric & Smart Card Readers LobbyWorks Visitor Management









Job Hazard Assessment

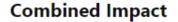
Recommended PPE

Incident Reports









- Overall savings: 15% to 35% in total operational costs for buildings and campuses when these technologies are implemented in synergy.
- Examples of Combined Savings:
 - Enhanced collaboration between teams leading to fewer design and construction errors.
 - Optimized lifecycle management from design through operation.

Industry-Specific Results:

- Healthcare: Up to 25% in operational savings due to streamlined maintenance and space management.
- Commercial Real Estate: Savings of 15% to 30%, especially in large corporate campuses due to energy-efficient smart building technologies.
- Education/University Campuses: Up to 20% reductions in facility management costs by using digital twins for maintenance and building performance optimization.

These technologies are showing promise in reducing costs, increasing efficiency, and improving overall building performance across various industries.











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