



Data Interoperability

Accelerate your Capital Project Return-on-Investment with Data Interoperability

Organizations implementing significant capital programs struggle to acquire, assimilate, and organize the data required to properly operate and maintain their facilities after turnover from the builder. The end result is significant additional cost and effort on the part of the owner to collect (or re-collect) needed data to feed Enterprise Systems that support operations, maintenance and financial control of their facilities and assets.

This challenge traces back to a pretty simple concept: The data required (and therefore generated) by the designer and builder is a separate, yet overlapping, set of data to what is required by the owner to operate and maintain the facility.

Our organization is uniquely positioned with experts in design and construction as well as experts in facilities and asset management to provide solutions and services that bridge this gap when it is most cost-effective to do so—while the facility is being designed and built!

Arora’s Enterprise Solutions Group begins the Data Interoperability process by establishing data standards and delivery procedures, then extracts asset data from BIM, CAD, and GIS deliverables. This data includes location, warranties, OEM manuals, barcodes, parts diagrams and other pertinent maintenance information. Our team then helps clients to develop maps and centralize this critical maintenance information using the data standards created initially to ensure the smooth integration of these disparate pieces of data into enterprise asset management systems, work request applications such as Arora ATLAS®, a Digital Twin, Virtual Reality, or other desired automation technologies.

Whether you are a designer/builder looking to enhance your value to your customers or you are an owner looking to fully exploit the promise of proactive/predictive maintenance or a digital twin, we can help you!

	OWNER	DESIGNER / BUILDER
BENEFITS	<ul style="list-style-type: none"> Reduce Time to ROI on Capital Projects Reduce Administrative Burden on Technical Resources Reduce Overall Asset Life Cycle Costs Improve Operations and Maintenance Efficiencies 	<ul style="list-style-type: none"> Reduce Risk Associated with Project Deliverable Acceptance Offer Additional Revenue Generating Services to Customers Improve Efficiencies in Design and Construction Processes
SERVICES & SOLUTIONS	<ul style="list-style-type: none"> End to End Data Management Services on Capital Projects Data Delivery Standards Data Libraries and Templates Data Integration Tools Data Deliverable Creation and Curation Services 	

PHASE	PRIMARY OBJECTIVE	ACTIVITIES / SERVICES
PLANNING	Organization Standards to Govern All Capital Projects	<ul style="list-style-type: none"> ▪ Definition of Asset Data Standards ▪ Definition Digital Data Delivery Process Standards (BIM-based) ▪ Establish Geospatial Data Governance Standards ▪ Creation of Digital Data Delivery Templates
DESIGN	All [Planned] Project Assets Identified, Named and Numbered	<ul style="list-style-type: none"> ▪ Train Design Team on Design Phase Data Delivery Standards ▪ Facilitate Implementation of Data Delivery Systems and Templates ▪ Define Project Master Asset List and LOD Matrix ▪ Collect Asset Description and Asset Identification Data ▪ Review Validate Data at “100% Design” for Standard Adherence
CONSTRUCTION	All [Planned] Project Assets Linked to Product Submittal Data (Make, Model, Specs, O&M)	<ul style="list-style-type: none"> ▪ Train Construction Team on Construction Phase Data Delivery Standards ▪ Facilitate Implementation of Data Delivery Systems and Templates ▪ Collect Asset Type, Specification, Warranty and O&M Data ▪ Review Validate Data at “Approved for Construction” for Standard Adherence
COMMISSIONING	ALL [Installed] Project Assets Updated with Field Verified Data	<ul style="list-style-type: none"> ▪ Train Commissioning Team on Commissioning Phase Data Delivery Standards ▪ Facilitate Implementation of Data Delivery Systems and Templates ▪ Collect Asset Specific Data, Label Assets, and Field Verify Data ▪ Link Assets with Corresponding Control and Monitoring Systems (SCADA, BMS, etc.) ▪ Review Validate Data at “As Built” for Standard Adherence
FACILITY HANDOVER	Seamless Delivery and Integration of All Digital Asset-related Data	<ul style="list-style-type: none"> ▪ Preparation of BIM for FM Models ▪ Preparation of Integration Ready Data Sets (COBie) ▪ Integrate Model and Data Sets with Enterprise Systems