Construction Operations
Building
Information Exchange

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Chair

COBIE

Facility Maintenance & Operations Committee

buildingSMART
International Alliance for Interoperability

buildingSMARTalliance
a council of the National Institute of Building Sciences

National BIM Standard
an initiative of the National Institute of Building Sciences
Conception & Definition Phases
Identify items from the specifications that will require warranty information

Procurement & Execution Phases
Collect information as items are ordered and delivered such as who is warranting, when the warranty starts, how long is the warranty period, what preventive maintenance is required to keep the warranty in force

Utilization & Closure Phases
Read the information collected directly into your CMMS software to ensure that the warranties are supported

Information is captured at point of origin and flows through the phases of a facility
Typical Product Information Submittals

- Safety precautions
- Operator procedures
- Operator service requirements
- Environmental conditions
- Preventive maintenance plan & schedule
- Troubleshooting guides & diagnostic techniques
- Wiring & control diagrams
- Spare parts & supplies
- Corrective maintenance man-hours
- Warranty
- Training requirements
- Special tools
- Contractor information
Problem - Building documentation is fragmented, and not organized . . .

Standard Practice for O&M Submittals
Impacts on facility managers

- warranty terms unknown
- unknown PM requirements
- unknown system, equipment design criteria
- Spare parts suppliers
- Where is valve 5?
Requirement = Savings Opportunity

equipment specs & location

plan

manage

design

build

mfg. data & as-installed location

package mfgs. O&M documents

operate

job crawl ~ 25K

eliminate paper handling, warranties, job plans

load equipment, warranties, job plans
Structured for design, construction, O&M

Implement with Excel or commercial software
Next – Manufacturers and Vendors match with COBIE

- Technical Data – PDF format
- Possible future links to URL or XML database
-Specifier’s Properties Information Exchange
Basis For SSC’s A-3 Test Facility Product Model
MasterFormat and the Building Information Model (BIM) Standards

NASA and buildingSMART. The National Aeronautics and Space Administration (NASA) and its U.S. Army Corps of Engineers and Naval Facilities Command partners are leading the way in making construction specifications support the concepts embedded within buildingSMART.

- **BIM and UniFormat** were utilized to construct the A-3 Test Facility Product Structure Model