

BIMFORUM

GSA's Journey to Open-Standard Model-Based Deliverables

Ilana Hellmann, GSA National BIM Program Expert

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#BIMForumED



Founding
Organization



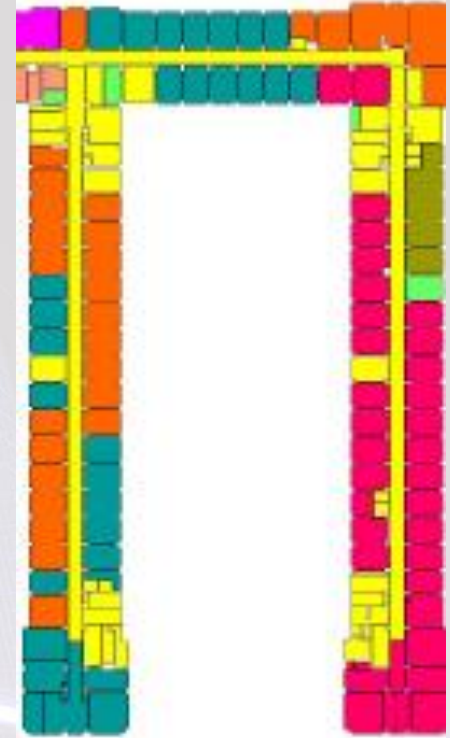
Learning Objectives:

- Understand the driving factors behind GSA's evolving model-based deliverable requirements
- Understand GSA's current deliverable requirements for design and construction
- Understand how GSA uses data captured from new deliverables to improve facility and asset management

BIM started out as a design tool.

GSA's FIRST REQUIRED BIM DELIVERABLE
in 2007:
Spatial Program BIM at Final Concepts

All project design deliverables and construction
contract documents continued to be 2D.



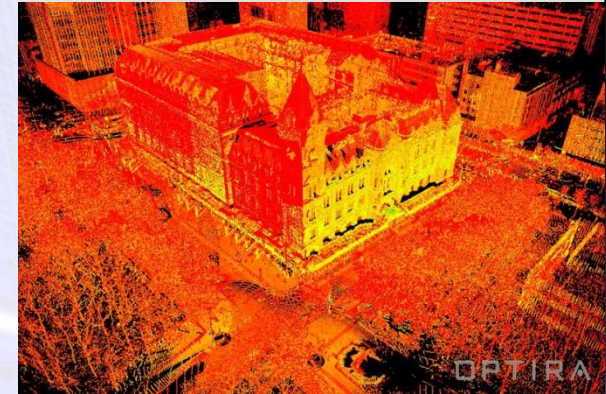
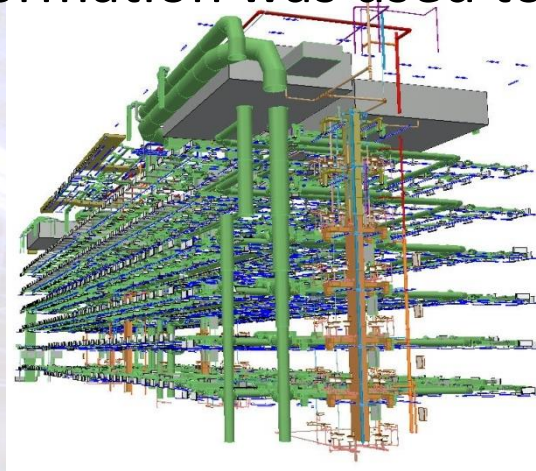
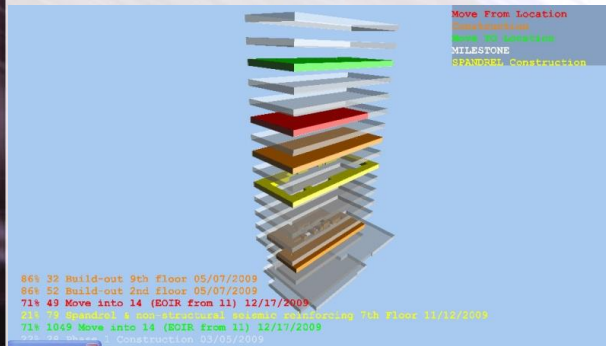
GSA published the first volumes of the BIM Guide Series in 2007.
www.gsa.gov/bim

The BIM Guide Series provided guidance for project teams that wanted to use BIM in design beyond the minimum requirements.

The BIM Guide Series has always reflected GSA's commitment to open standards.

Numerous pilot projects were executed across the country.

Pilot projects were used to test workflows and technology and to measure value. This information was used to improve and update the BIM Guide Series.



With time, the value of BIM in construction was established.

GSA updated our BIM Guides to include construction-phase applications for BIM technologies.

GSA's deliverable requirements remained unchanged.

What happens to the BIM after construction?

GSA started a cross-business-line project in 2011 to explore how BIM information generated during design and construction could be stored and reused during operations and maintenance.

And so the Central Facility Repository project was born.

Business line workshops developed more than 75 use cases for CFR:

- Asset management at a building and campus level
- Emergency response: fire and life safety equipment, egress paths
- Operations and maintenance: visualization of equipment, linked to electronic manuals and equipment cutsheets
- Accurate existing conditions information for new design projects
- Energy management: comparison between design and performance data

2014

GSA’s Central Facility Repository (CFR) is a secure system providing reliable access to **current, accurate** facility information across our business lines.

IFC



2014

GSA's National Computerized Maintenance Management System (NCMMS) is a collaborative tool to plan, maintain, and track maintenance information.

COBie



2014 brought significant changes to GSA's approach to deliverables:

- BIM Execution Plan and BIM Scorecard
- BIM documentation at every project stage from concept design to as-builts
 - BIM deliverables in native and IFC file formats
 - 2D CAD and SDM drawings derived from the BIM
- standardized “NCMMS open-standard” data (COBie)

GSA BIM Guide Series

Series 01: Overview (2007)

Series 02: Spatial Program Validation (2007)
- UPDATE IN PROGRESS

Series 03: Laser Scanning (2009)

Series 04: 4D Phasing (2009)

Series 05: Energy Performance (2012)
- UPDATE IN PROGRESS

Series 06: Circulation & Security Validation

Series 07: Building Elements
- IN DEVELOPMENT

Series 08: Facility Management (2011)

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Ilana Hellmann, PE, LEED AP
GSA National BIM Program Expert
ilana.hellmann@gsa.gov
212.264.2475

