



BUILDING INNOVATION
Conference

Don't Mind the Gap

Exploring the Intersection of BIM and Digital Twins



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Enthusiast





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Dan Feinberg

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Client Advisor | Whitepaper Author |
DTC AEEO co-chair





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Cindy Baldwin

President & Founder of VDCO Tech |
buildingSMART USA Executive
Committee & Chair | CM-BIM | CM-Lean





Who are you?

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Why we're here



BIM

Building Information Management (BIM)

The acquisition, analysis, retention, retrieval, and distribution of built environment asset information all within an information processing system.

Building Information Model (BIM Model)

Digital representation of physical and functional characteristics of a built environment asset.

Building Information Modeling (BIM Modeling)

Generating and using a shared digital representation of a built asset to facilitate design, construction, and operation processes to form a reliable basis for decisions.



DIGITAL TWIN

A virtual representation of real-world entities and processes, synchronized at a specified frequency and fidelity.

...transform business by accelerating holistic understanding, optimal decision-making, and effective action.

...use real-time and historical data to represent the past and present and simulate predicted futures.

...motivated by outcomes, tailored to use cases, powered by integration, built on data, guided by domain knowledge, and implemented in IT/OT systems.

About the position paper



Public Perception

Use Cases

Execution

Data Frameworks

Public Perception



Groups and Organizations

Current State of Definitions

Influential Forces of Change

Tools and Practices

Use Cases



Use-Case Applicability

State of Standards

Physical-Digital Relationships

Execution



Agility and Simplicity

Minimum Viable Products (MVP)

Asset Lifecycle Management

Scalability

The Creation of BIM and Digital Twin

Expanding the Horizon

Data Frameworks



Data Requirements

Data Structure

Decoupled Data

Exchanging Information



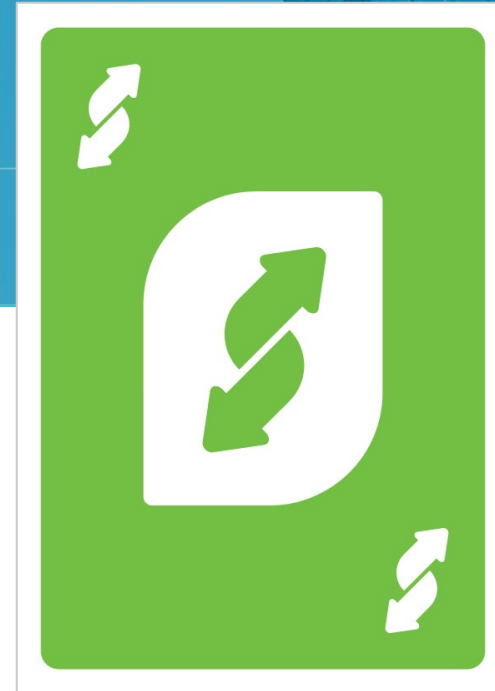
How this session will work

**Intro of
9 of the 17
positions**

**Uno cards
to show
interest**

**Vote and
feedback
using Menti**

Your role and responsibility

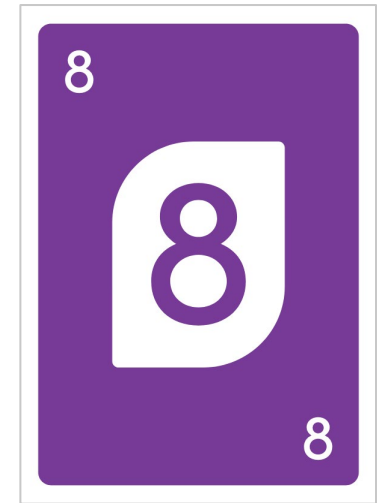


Express your interest on each of the positions

You each have 4 cards, 1 of each color which represent your perspective

The number on your cards is not relevant to the voting - just the color

Show your opinion with a card, and we'll ask some to share their thoughts



Express your interest on each of the positions

Light Blue



Very interesting
to me and my
work

NIBS should
focus most on
this position

Dark Blue



Somewhat
interesting to
me and my work

NIBS should
consider this
position

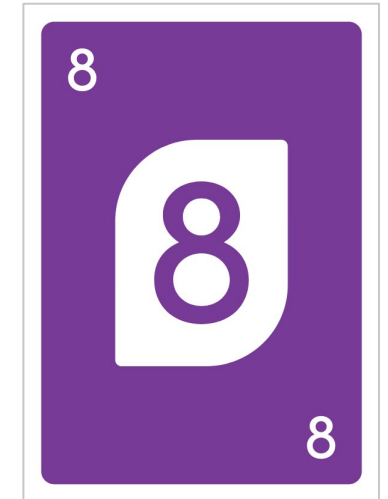
Bright Green



Not interesting
to me and my
work

NIBS should not
prioritize this
position

Purple



I abstain

I can't relate to
this topic

Same as not
voting



Public Perception

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Influential Forces of Change

Public Perception

Very interesting
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work



Somewhat
interesting to me
and my work



Not interesting to
me and my work



I abstain - I can't
relate to this
topic



Groups and Organizations

The groups and organizations that shape policy for BIM and Digital Twin practitioners across communities are prolific, engaged, and seek collaboration.

Public Perception

Very interesting
to me and my
work



Somewhat
interesting to me
and my work



Not interesting to
me and my work



I abstain - I can't
relate to this
topic



Current state of Definitions

General understanding of BIM and Digital Twin definitions is evolving towards maturity, and practitioners are aware of the need to improve communication and comprehension across the industry.

Public Perception

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work



Somewhat
interesting to me
and my work



Not interesting to
me and my work



I abstain - I can't
relate to this
topic



Influential Forces of Change

Forces impacting the perception of BIM and Digital Twin remain overlooked in many professional discussions on the relationship between these two approaches.

Public Perception

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**Groups and
Organizations**

**Current State of
Definitions**

**Influential Forces of
Change**



Use Cases & Execution

**Use-Case
Applicability**

State of Standards

Scalability

Use Cases & Execution

Very interesting
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Somewhat
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Not interesting to
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I abstain - I can't
relate to this
topic



Use Case Applicability

Use Cases offer the clarity and direction needed to maneuver within a complex digital ecosystem and to extract maximum value.

Use Cases & Execution

Very interesting
to me and my
work



Somewhat
interesting to me
and my work



Not interesting to
me and my work



I abstain - I can't
relate to this
topic



State of Standards

Existing BIM and data interoperability standards provide a foundation for supporting Digital Twin Use Cases while remaining open to integrating future advancements.

Use Cases & Execution

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work



Somewhat
interesting to me
and my work



Not interesting to
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relate to this
topic



Scalability

A BIM Model is generally focused on a “single capital asset” while a digital twin is generally intended to expand the horizon to a broader scale.

Use Cases & Execution

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**Use-Case
Applicability**

State of Standards

Scalability



Data Frameworks

Data Requirements

Data Structure

**Information
Exchange**

Data Frameworks

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interesting to me
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topic



Data Requirements

A fundamental difference between BIM and Digital Twin execution is in the nature of their static and dynamic data requirements.

Data Frameworks

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work



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and my work



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relate to this
topic



Data Structure

BIM can be used as a basis for
executing Digital Twin.

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interesting to me
and my work



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topic



Information Exchange

Information sharing in BIM is based on file exchange using multiple platforms, while in Digital Twin, it is based on digital threads that enable a Digital Twin system of systems.

Data Frameworks

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Data Requirements

Data Structure

**Information
Exchange**

Q&A

Stay in touch

(and Uno Card drawing)

<https://arcg.is/1Lm0b4>



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Building Innovation Conference 2024



Thank You