



# The buildingSMART International Virtual Summit Spring 2022

Monday 28th March - Friday 1st April 2022

Helping clients and users control their digital destiny



The buildingSMART International Virtual Summit Spring 2022

主催：buildingSMART International

残り時間 0日:0時間:0分

説明

Welcome to the buildingSMART International Virtual Summit Spring 2022.

**Helping clients and users control their digital destiny.**

This summit brings together professionals from the built asset industry in the development and use of international standards and solutions.

## buildingSMART Internationalバーチャルサミット報告

国際土木委員会



# サミット概要

## 開催期間

2022年3月28日 | 開会

2022年3月29日～3月31日 | 分科会セッション

2022年4月1日 | 閉会

## 分科会のセッション数

Airport Room 1

Building Room 3

Construction Room 4

Infrastructure Room 3

Product Room 4

Railway Room 3

Regulatory Room 3

SEM Room 1

Technical Room 4

**About this Summit**

55 countries in attendance

Top 5 countries for attendance:

- Switzerland (72)
- Germany (68)
- **Japan (69)**
- China (62)
- UK (60)

*Thank You*

**The 5th Virtual Summit**

- **833 registrations**
  - 35 sessions
- 94 presentations
- 103 speakers

658 chat messages

1100+ replay viewings to date

8.6/10 average rating (out of 90 votes)

buildingSMART  
Foundation

# 新分科会の提案 SEM : Sustainability Energy Management

## 持続可能エネルギー管理分科会の必要性

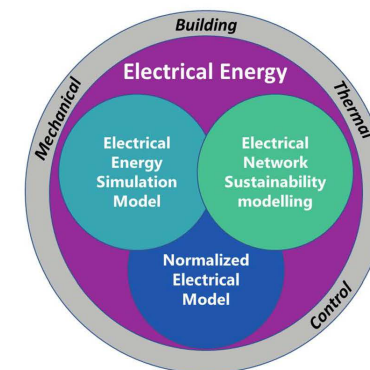
### 電力、弾力的で持続可能な建物のデジタル移行を効率的に加速

- 建物内の効率的で持続可能な電気ネットワークを設計する能力
- 電気ネットワーク（設計、施工、運用）の効率
- 電力消費動作をシミュレートする機能
- 仮想および物理的な電気ビルネットワークの接続



## SEMRの成果物

- IFCをNormalized Electrical Model (NEM)で強化し、電気ネットワーク設計ソフトウェア (CADおよびCAE) と稼働中のソフトウェア (ビル管理システム、電力監視システム) の相互運用性を実現
- 電気デジタルツイン
- 電気エネルギーのシミュレーションモデルを提案
- 持続可能性への影響を計算するための計算モデルを提案



# bSI 各国支部と企業メンバー

## Chapter Community Engagement



© buildingSMART International 2022



## Members - Multinational



© buildingSMART International 2022



## Strategic Advisory Council – A Major Force



© buildingSMART International 2022



## Members - Standard



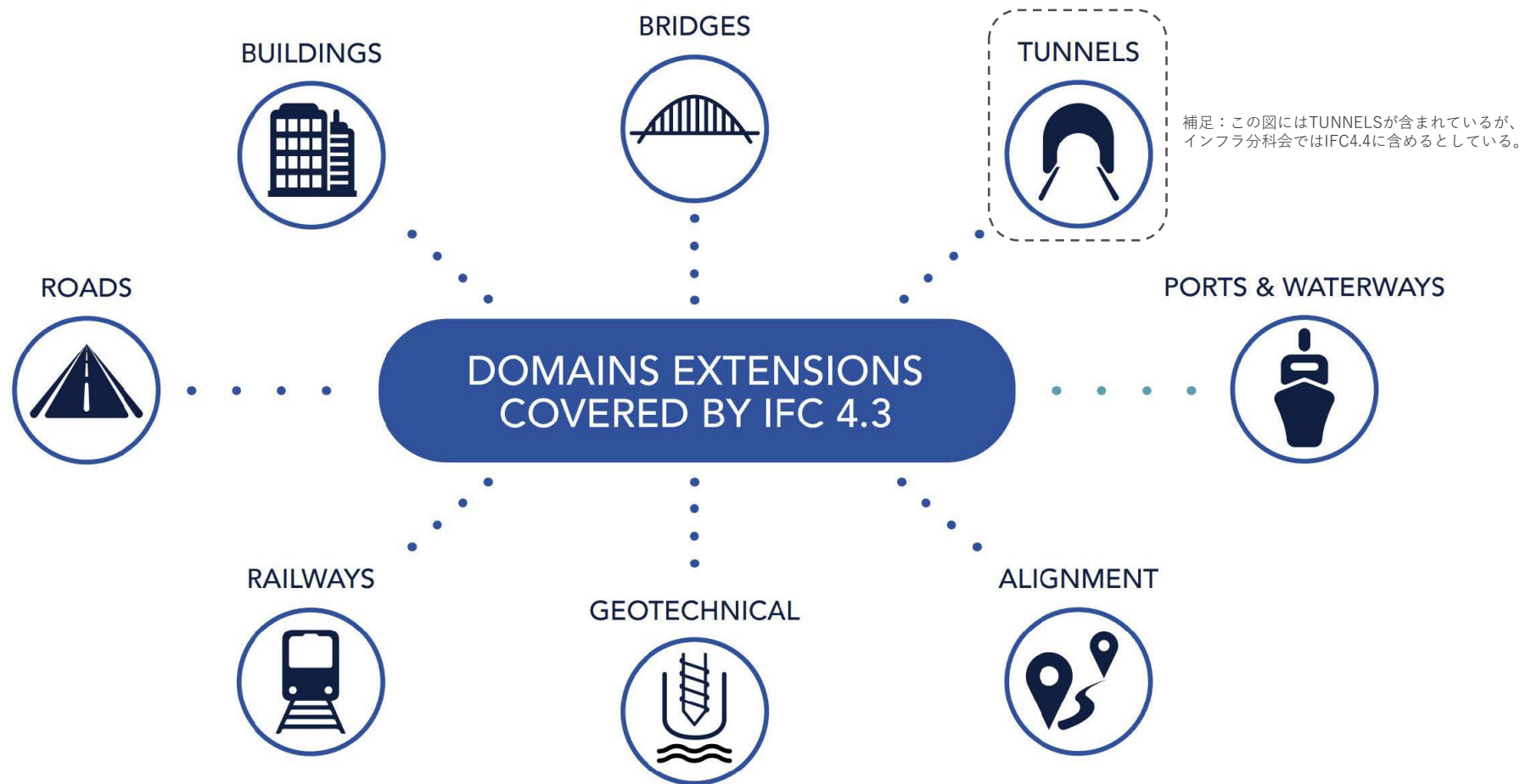
© buildingSMART International 2022



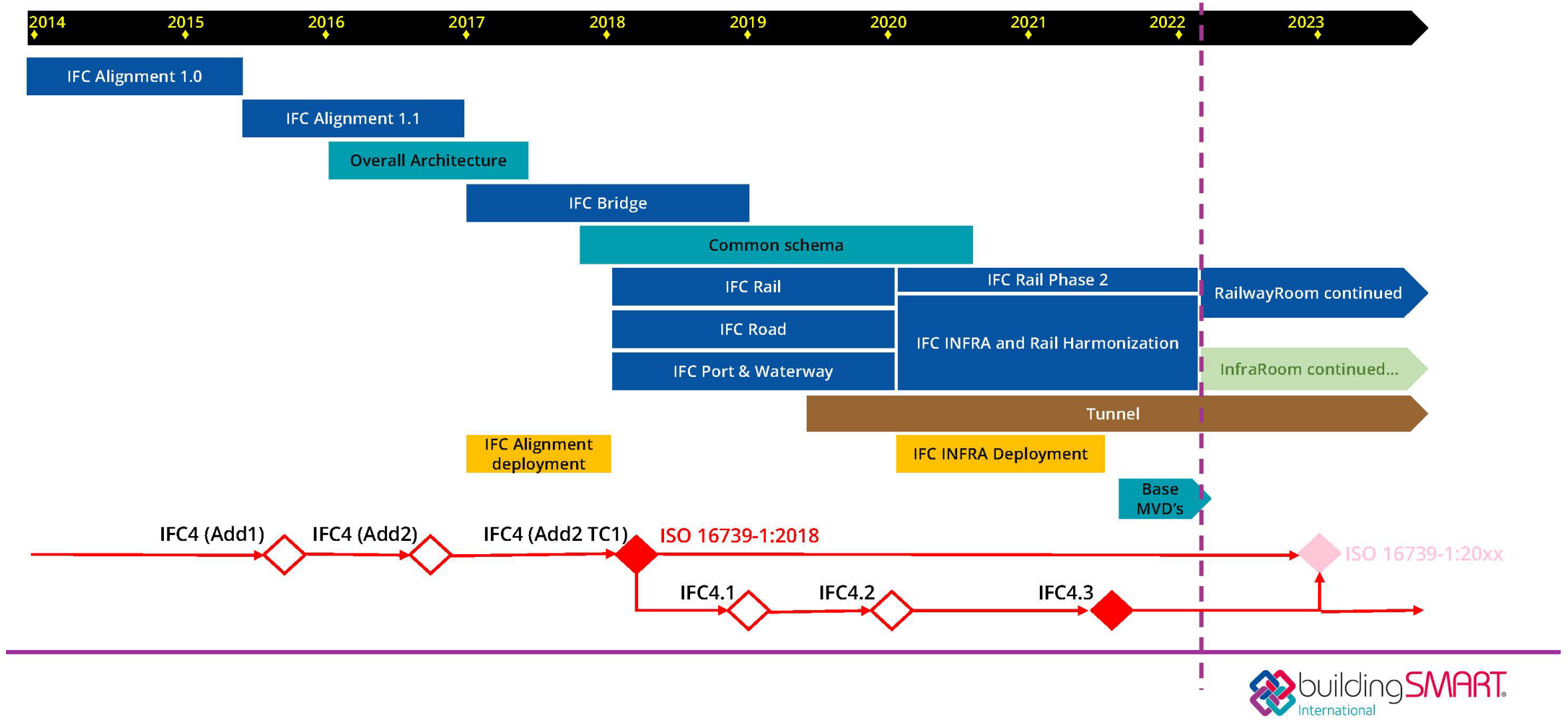
## IFC4.3

---

# IFC4.3の対象領域



# IFC4.3の開発経過



# ISOの状況 (2022.5.11)

ICS

## ISO/WD 16739-1

### Industry Foundation Classes (IFC) for data sharing in the construction and facility management industries – Part 1: Data schema

#### ABSTRACT

The proposed revision of ISO 16739-1:2018 focusses on additions to the data schema and reference data to further support the infrastructure domains, particularly for bridges, roads, rails, ports and waterways and common foundations, such as alignment, terrain, strata and earthworks. The scope of the proposed revision is in line with the overall scope mention of ISO 16739-1:2018 "to include data definitions for infrastructure assets over their life cycle as well". The general scope and title of ISO 16739 being an international standard for "data sharing in the construction and facility management industries" remains valid.

#### GENERAL INFORMATION

Status : Under development

Edition : 2

Technical Committee : ISO/TC 59/SC 13 Organization and digitization of information about buildings and civil engineering works, including building information modelling (BIM)

ICS :



This standard contributes to the following Sustainable Development Goal:

9

#### LIFE CYCLE

##### PREVIOUSLY

PUBLISHED  
ISO 16739-1:2018

##### NOW

UNDER DEVELOPMENT  
ISO/WD 16739-1

Stage: 20.20 ~

00 10 20 Preparatory 30 40 50 60 90 95

20.00  
2022-02-17  
New project registered in TC/SC work programme

20.20  
2022-03-21  
Working draft (WD) study initiated

20.60  
Close of comment period

20.99  
WD approved for registration as CD

#### GOT A QUESTION?

Check out our FAQs

#### Customer care

+81 3 5272 749 08 88

customerservice@iso.org

Working hours:

Monday to Friday - 09:00-12:00, 14:00-17:00 (UTC+1)

## INTERNATIONAL HARMONIZED STAGE CODES

STAGE	SUBSTAGE	60	90	92	93	98	99
		COMPLETION OF MAIN ACTION	DECISION	REPEAT AN EARLIER PHASE	REPEAT CURRENT PHASE	ABANDON	PROCEED
00 PRELIMINARY	00.00 Proposal for new project received	00.20 Proposal for new project under review	00.60 Close of review			00.98 Proposal for new project abandoned	00.99 Approval to ballot proposal for new project
10 PROPOSAL	10.00 Proposal for new project registered	10.20 New project ballot initiated	10.60 Close of voting	10.92 Proposal returned to submitter for further definition		10.98 New project rejected	10.99 New project approved
20 PREPARATORY	20.00 New project registered in TC/SC work programme	20.20 Working draft (WD) study initiated	20.60 Close of comment period			20.98 Project deleted	20.99 WD approved for registration as CD
30 COMMITTEE	30.00 Committee draft (CD) registered	30.20 CD study/ballot initiated	30.60 Close of voting/ comment period	30.92 CD referred back to Working Group		30.98 Project deleted	30.99 CD approved for registration as DIS
40 ENQUIRY	40.00 DIS registered	40.20 DIS ballot initiated: 12 weeks	40.60 Close of voting	40.92 Full report circulated: DIS referred back to TC or SC	40.93 Full report circulated: decision for new DIS ballot	40.98 Project deleted	40.99 Full report circulated: DIS approved for registration as FDIS
50 APPROVAL	50.00 Final text received or FDIS registered for formal approval	50.20 Proof sent to secretariat or FDIS ballot initiated: 8 weeks	50.60 Close of voting. Proof returned by secretariat	50.92 FDIS or proof referred back to TC or SC		50.98 Project deleted	50.99 FDIS or proof approved for publication
60 PUBLICATION	60.00 International Standard under publication		60.60 International Standard published				
90 REVIEW		90.20 International Standard under systematic review	90.60 Close of review	90.92 International Standard to be revised	90.93 International Standard confirmed		90.99 Withdrawal of International Standard proposed by TC or SC
95 WITHDRAWAL		95.20 Withdrawal ballot initiated	95.60 Close of voting	95.92 Decision not to withdraw International Standard			95.99 Withdrawal of International Standard

Download a printable version (PDF)



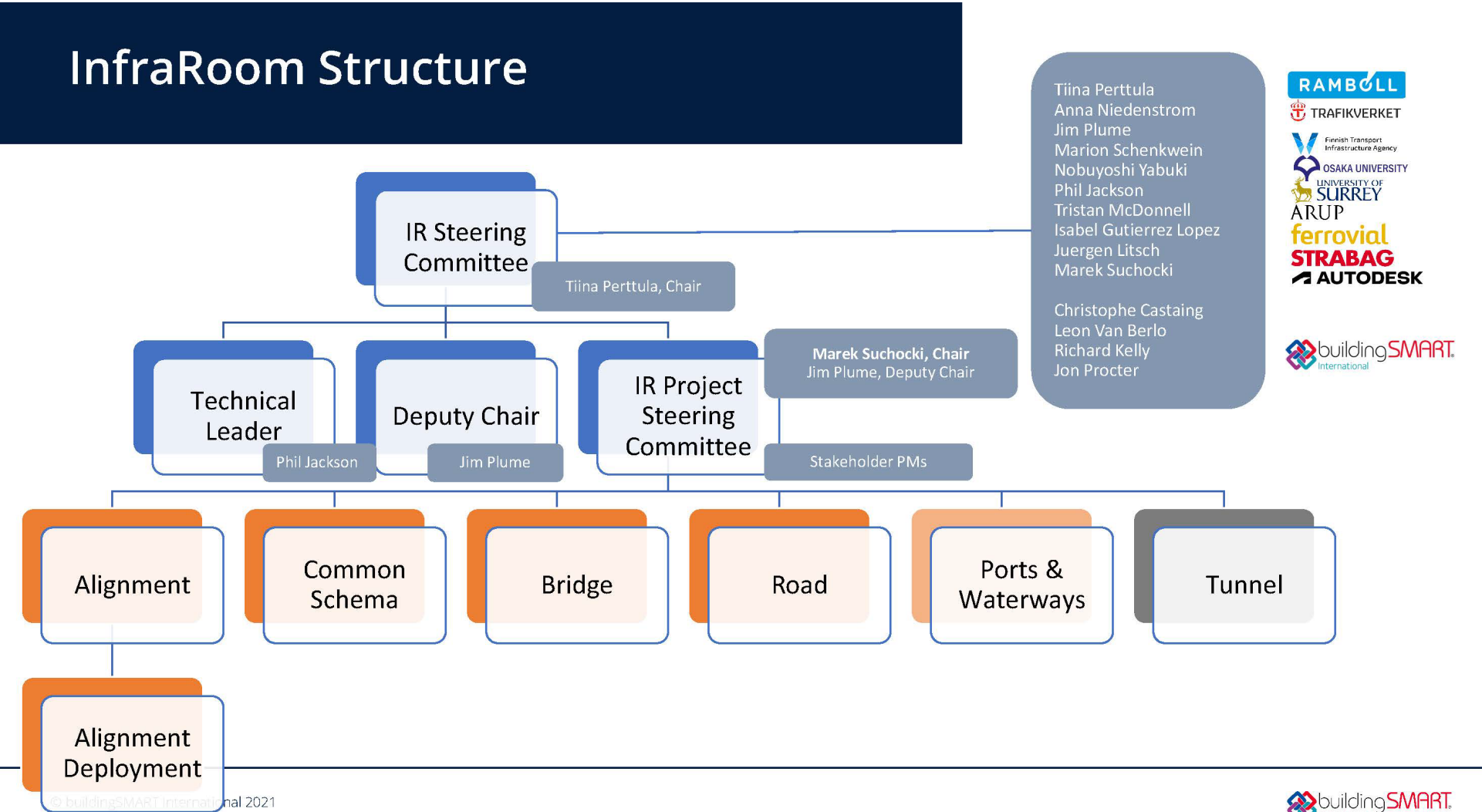
# (参考) IFCとISO16739の関係

Version	Name (HTML Documentation)	ISO publication	Published (yyyy-mm)	Current Status	HTML	EXPRESS	XSD	pSet XSD	OWL HTML	RDF	TTL
4.3.dev	<a href="#">IFC4.3.dev</a>	Final version expected mid 2022; published by ISO in 2023	Continues updates	Under development <b>開発中</b>	<a href="#">Latest HTML</a>	<a href="#">GitHub output</a>		<a href="#">PSD output</a>			
4.3.RC4	<a href="#">IFC4.3 Infra/Rail deliverable</a>	-	2021-07	Under voting by SC							
4.2.0.0	<a href="#">IFC4.2</a>	-	2019-04	Withdrawn	<a href="#">ZIP</a>	<a href="#">EXP</a>	<a href="#">IFC4x2.xsd</a>	-			
4.1.0.0	<a href="#">IFC4.1</a>	-	2018-06	Withdrawn	<a href="#">ZIP</a>	<a href="#">EXP</a>	<a href="#">IFC4x1.xsd</a>	-	<a href="#">ifcOWL IFC4.1</a>	<a href="#">RDF</a>	<a href="#">TTL</a>
4.0.2.1	<a href="#">IFC4 ADD2 TC1</a>	ISO 16739-1:2018	2017-10	Official	<a href="#">ZIP</a>	<a href="#">EXP</a>	<a href="#">IFC4.xsd</a>	-	<a href="#">ifcOWL IFC4 ADD2 TC1</a>	<a href="#">RDF</a>	<a href="#">TTL</a>
<b>現在の国際標準としてのIFC</b>											
4.0.2.0	<a href="#">IFC4 ADD2</a>	-	2016-07	Retired	<a href="#">ZIP</a>	<a href="#">EXP</a>	<a href="#">IFC4_ADD2.xsd</a>	-	<a href="#">ifcOWL IFC4 ADD2</a>	<a href="#">RDF</a>	<a href="#">TTL</a>
4.0.1.0	<a href="#">IFC4 ADD1</a>	-	2015-06	Retired	<a href="#">ZIP</a>	<a href="#">EXP</a>	<a href="#">IFC4_ADD1.xsd</a>	-	<a href="#">ifcOWL IFC4 ADD1</a>	<a href="#">RDF</a>	<a href="#">TTL</a>
4.0.0.0	<a href="#">IFC4</a>	ISO 16739:2013	2013-02	Retired <b>廃版</b>	<a href="#">ZIP</a>	<a href="#">EXP</a>	<a href="#">ifcXML4.xsd</a>	<a href="#">PSD_IFC4.xsd</a>	<a href="#">ifcOWL IFC4</a>	<a href="#">RDF</a>	<a href="#">TTL</a>

# インフラ分科会

---

# インフラ分科会の体制



# 今後の取り組み

## IFC Tunnel – in progress

作業は進行中で2022年の夏に完了予定

その後、IFC4.4としてリリースされるかIFC4.3のアップデートの可能性

### Work Packages

- P1 WP1 Contribution to Common Schema
- P1 WP2 Requirement analysis (V1/v2)
- P2 WP3 IFC Tunnel Candidate Standard
- P1 WP4 International Consensus
- P2 WP5 IFC Tunnel Deploymt (sw vendors support)
- P1 WP6 Project Management

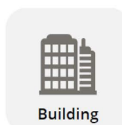


## IFC Landscaping and Urban Planning

IFCスキーマの表現に対するサイト、景観、都市計画の分野での知識の不足または専門知識の適用に対処するための2020年からの提案。

### Proposed Work Packages

1. Site & Landscape IDM
2. Urban Planning IDM
3. Analysis of Extant Solutions
4. Schema Proposals for IFC5
5. Schema Enhancement Proposals for IFC4 (optionally also IFC2x3)
6. MVD Proposals for IFC5



## AM Handover

### Asset Management Handover

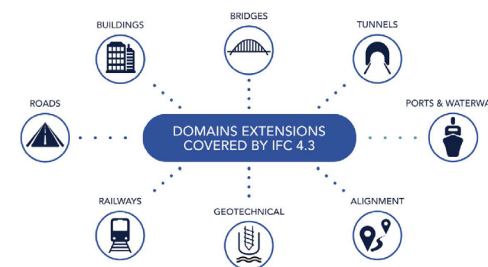
#### 作業提案

FMハンドオーバーの再構成：すべての資産管理データハンドオーバー（垂直および水平）のコアフレームワークの機器メンテナンス仕様

モジュラーフレームワークを使用した将来のAMHデータ交換のユースケースをキャプチャして指定するための新しい方法論を改良および定義

#### Initial Use Cases:

- Equipment Maintenance (FMH-EM)
- Bridge Management Handover?
- Road MH? Rail MH?



## Ports & Waterways Phase 2

IFC for Maritime and Environmental Management “IFC Maritime”



### Facilities and Locations

1. Protection & Environmental
  - a. Coastal Protection
    - i. Sea walls
    - ii. Embankments
  - b. Erosion Protection
    - i. Groynes & Barriers
  - c. Flood Protection
    - i. Dams/Levees
    - ii. Sluices & Control Gates
    - iii. Weirs & Water control structures
2. Maritime Networks & Systems
  - a. Waterway networks
  - b. Canal networks
  - c. Flood protection networks
3. Maritime Power Generation

### Processes

1. Asset Management, Operation & maintenance
  - a. Inspections including underwater
  - b. Maintenance of as-built asset models
  - c. Operational planning & logistics
2. Geology & Environmental
  - a. Silting/Deposition
  - b. Erosion and transport
  - c. Water, tide & wind
  - d. Flooding and water management





# IFC Tunnelの状況（2）



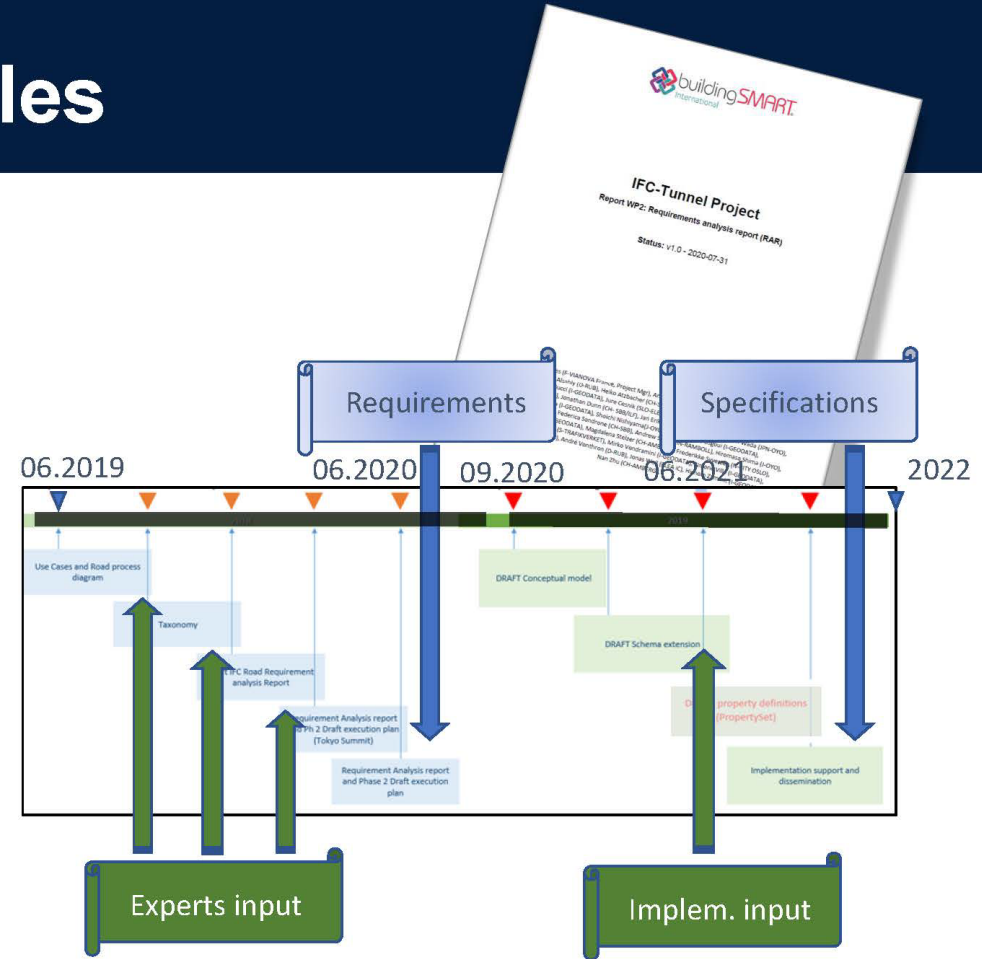
## IfcTunnel – Deliverables

### Phase 1: Requirements

- Geopositioning & geometries ←
- Soil/rock conditions ←
- Construction methods ←
- Systems serving the function ←
- Uses cases (30u) ←
- Requirements refinement (v2) ←

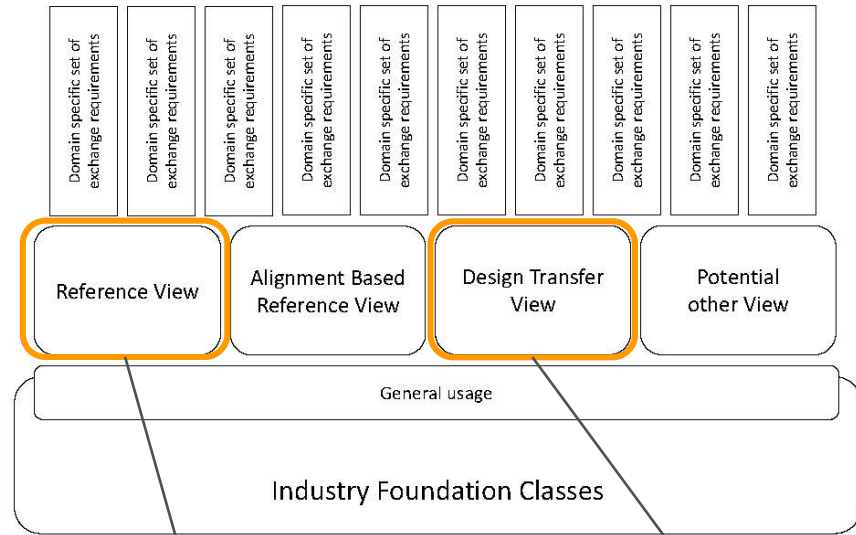
### Phase 2: Specifications (4.4)

- Domains taxonomies (DD) ←
- UML Conceptual model (3x) ←
- Xpress schema ←
- HTML documentation ←
- Exchange requiremtns / Tests ← 2022
- SW implementers support ← 2022



# bSIにおけるIFC4.3のModel View Definition (MVD) 開発

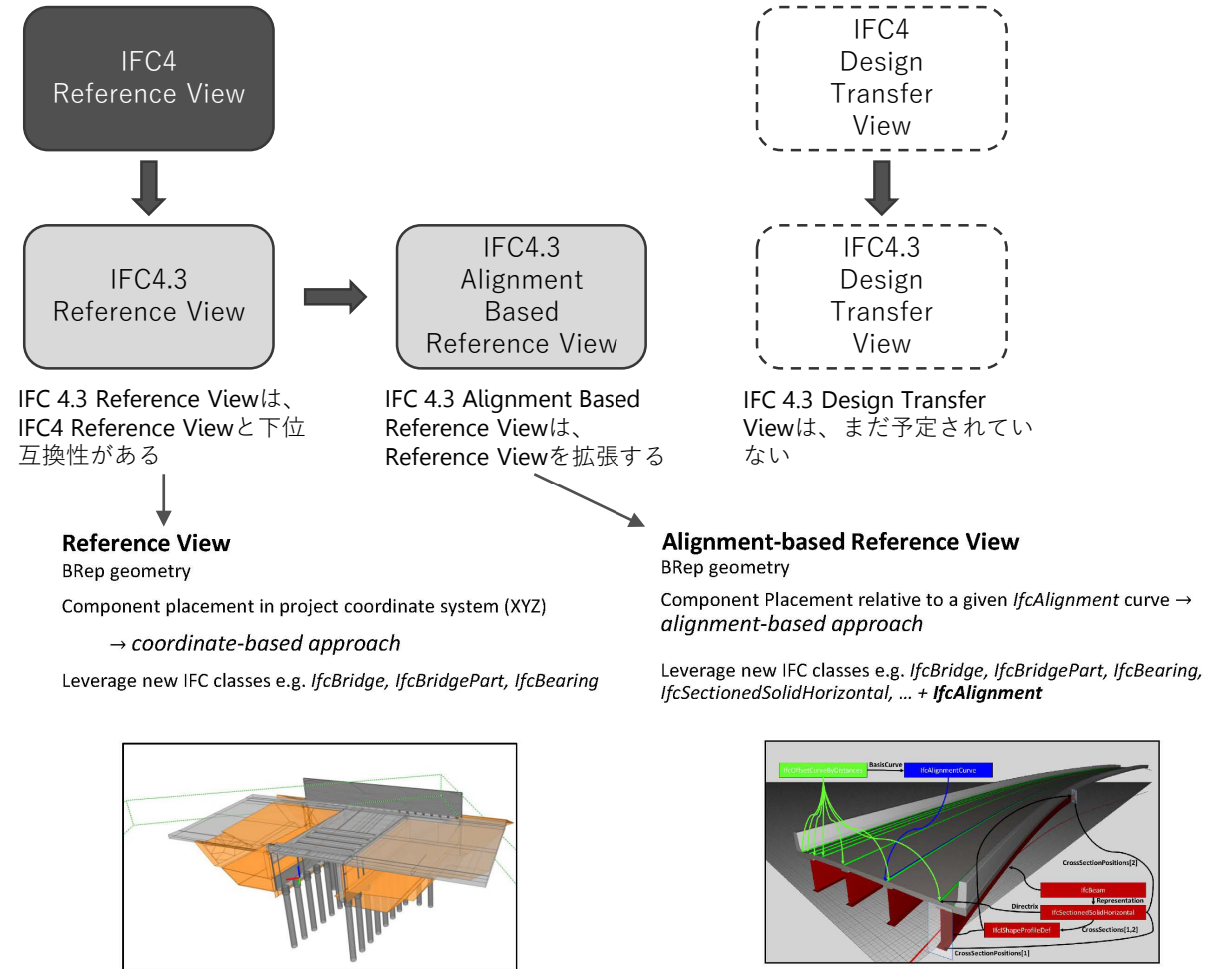
## MVDの種類



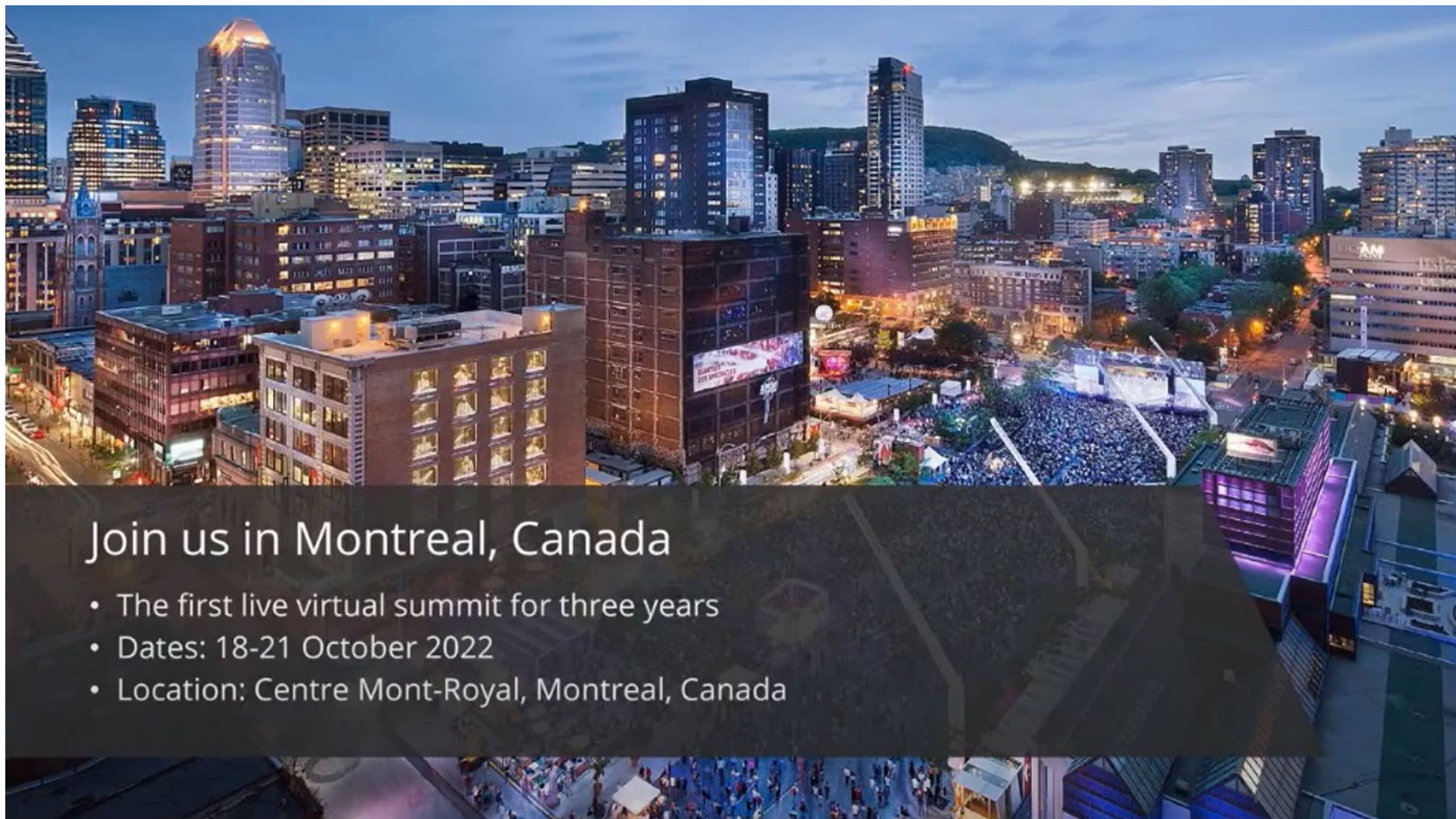
**Reference View**は、一般的なモデルの交換と調整のためのMVD。読み取り専用（編集不可）であり、モデルの所有権が作成者（送信者）にある厳密な参照モデルとして考えられている。Reference Viewは、干渉チェックおよびネイティブモデルの背景としてモデルを追加するために使用する。

**Design Transfer View**は、モデルを引き渡して次の作業者がさらに編集する可能性を想定した、より詳細なMVD。使用頻度は、Reference Viewに比べてはるかに少ない。

## IFC4.3に関するMVDの種類



# 次回開催



## Join us in Montreal, Canada

- The first live virtual summit for three years
- Dates: 18-21 October 2022
- Location: Centre Mont-Royal, Montreal, Canada



御覧いただきありがとうございました

国際土木委員会

