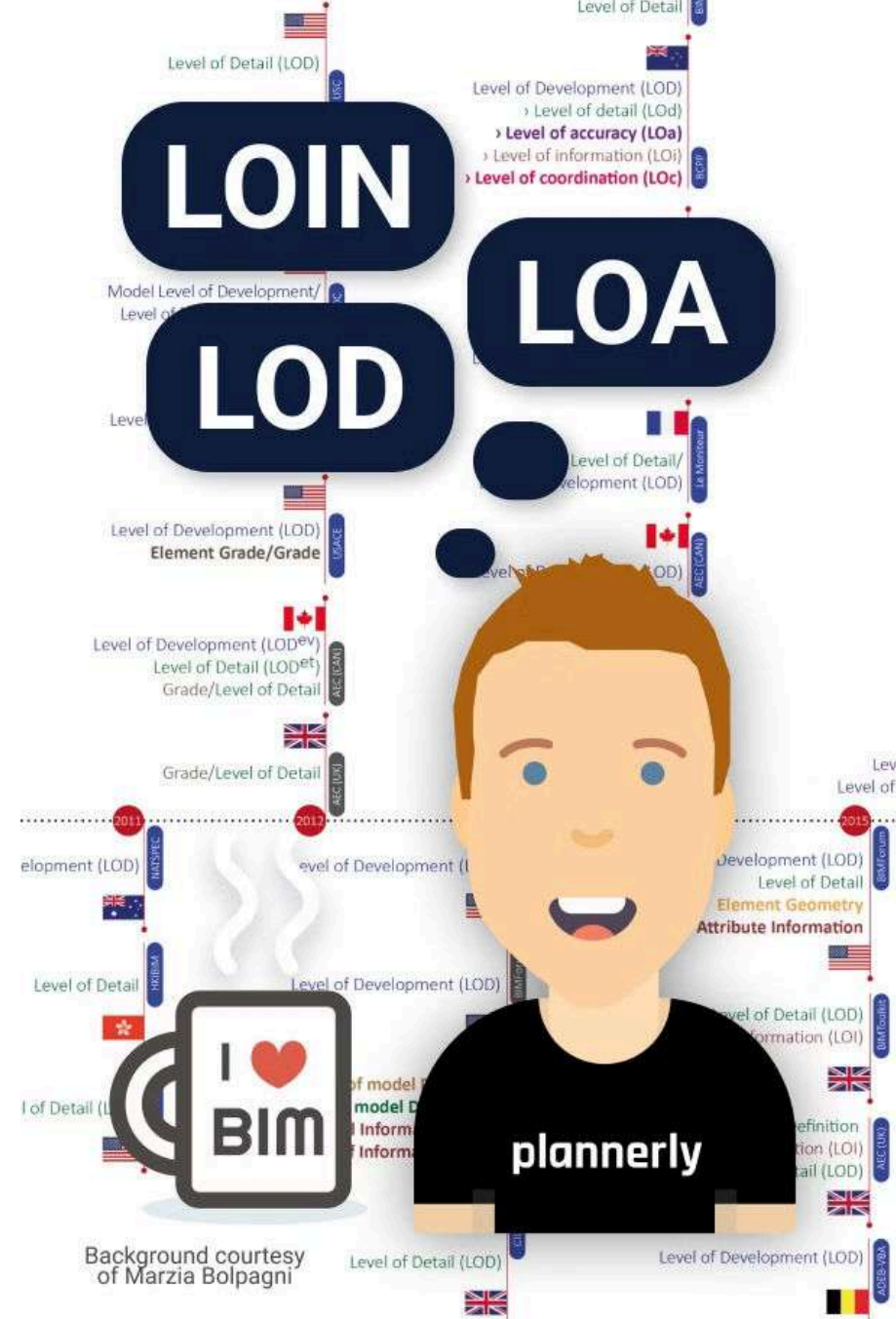


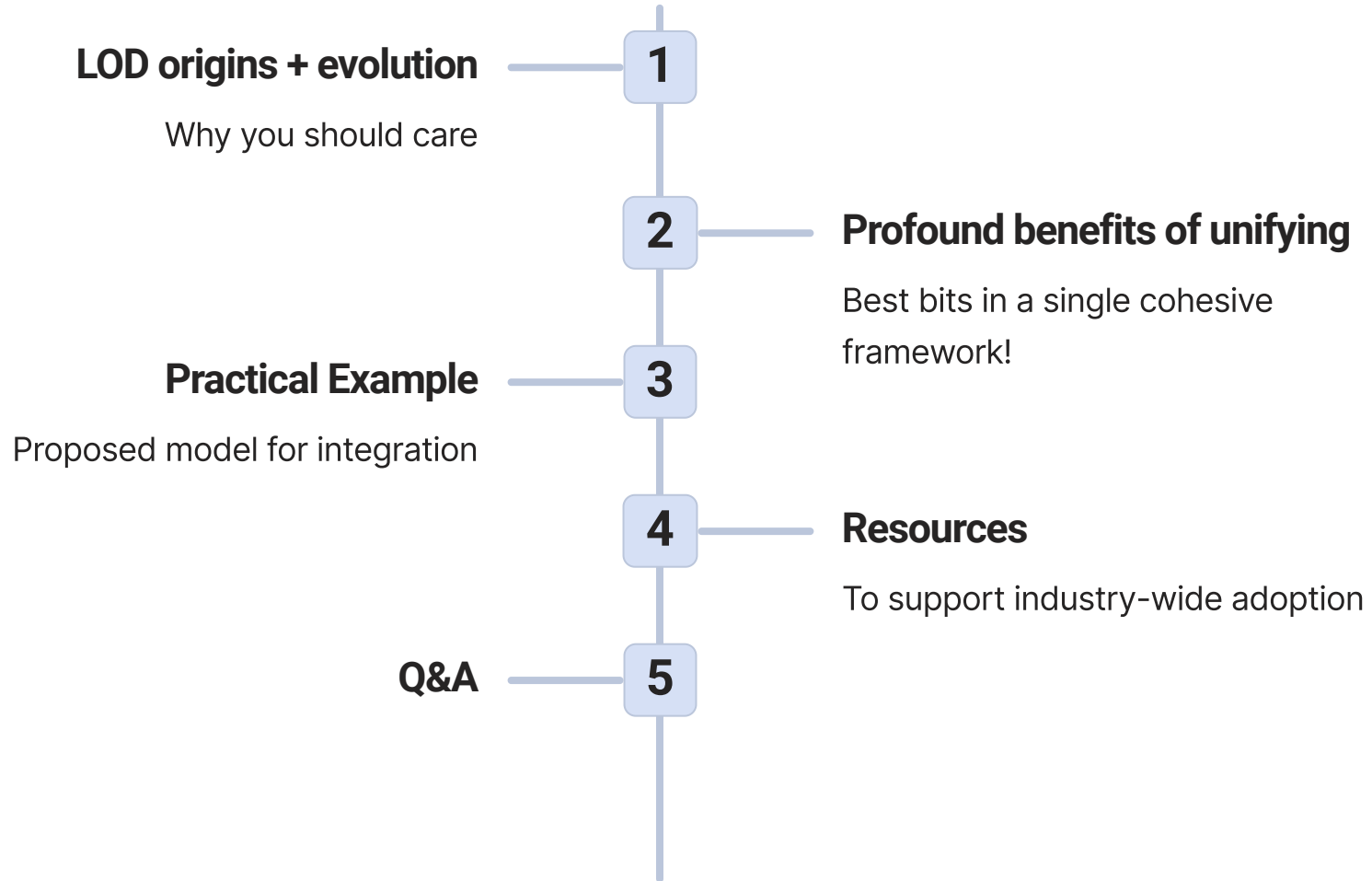
From Fragmentation to Unity:

Integrating LOD, Level of Information Need, and LOA

 by Clive Jordan



Agenda



**Be prepared, it's a pretty scary journey
with some crazy acronyms...**



Key Terms

1**LOD**

Level of **Detail** (LOD) referred to **geometric detail**

2**LOD**

Level of **Development** (LOD) **more than just geometry** - geometric and non-geometric precision, content, degree of maturity, comprehensiveness, completeness, information...

*Note: **LOD** also became Level of **Definition** (combining detail and information)*

3**LOA**

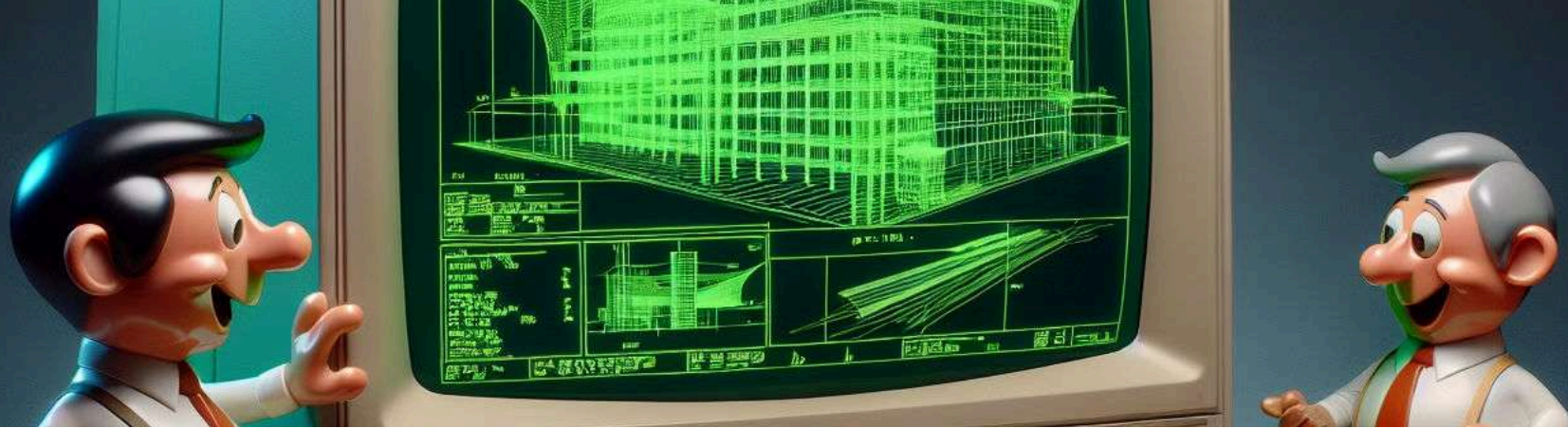
Level of **Accuracy** (LOA) specifies **measured or represented accuracy** - crucial for as-built documentation

4**Level of Information Need (not LOIN)**

A **framework** (EN 17412 standard) to define **geometry, documentation and information requirements**

Attempting to avoid unnecessary over or under-modeling/production of information

Let's start from the beginning



The origins of LOD

A computer graphics and 3D modeling term used since the 1980s.

Driven by the need to optimize performance and manage complexity.

The basis used to describe geometric requirements for BIM...

LOD for BIM (Building Information Modeling)

LOD Origin

**First introduced in 2005 by
Graphisoft / Vico Software**

Served as a tool to define
requirements for element
geometry

LOD Purpose

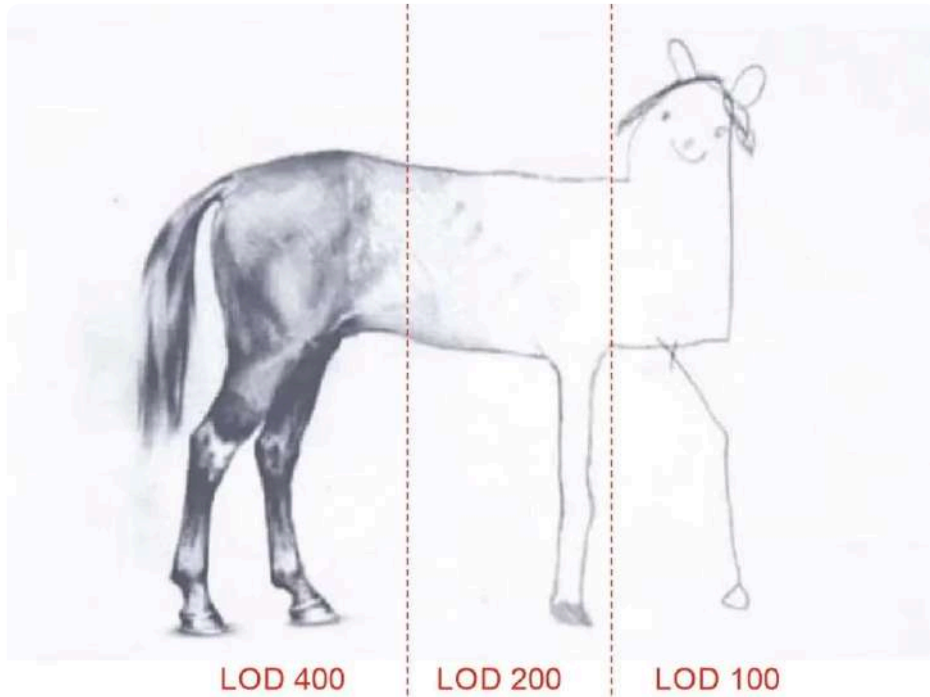
Model geometry used **to
calculate quantities**

LOD Evolution

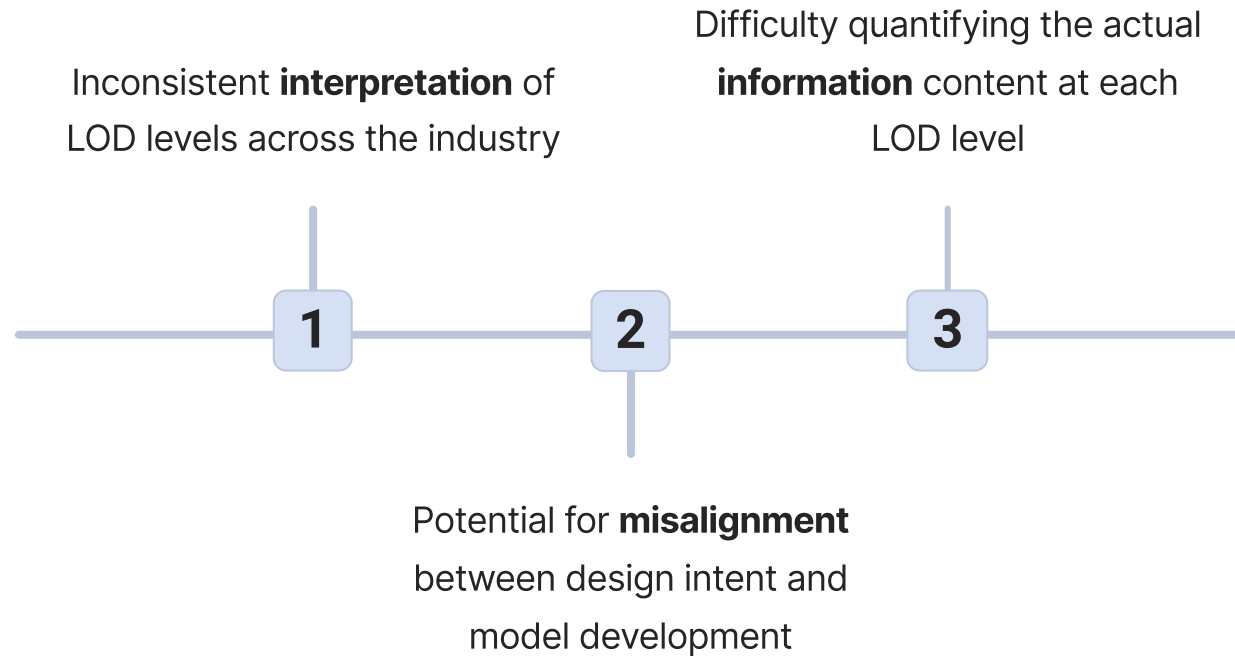
As the AEC industry
embraced BIM more widely,
the need for **standardized
LOD specifications** became
apparent.



LOD 100 to LOD 500



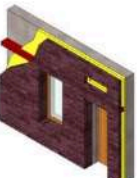



But it wasn't so simple



Trimble



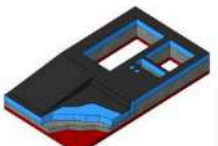
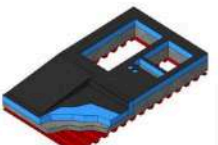
Trimble Buildings Composite Wall

Model Classes	Trait	Definition	Image	
M3	Approximate Element Types and Sizes, Initial Diversification			
	Diversification:	Basic diversification by material and construction method. One typical size used to model all instances of similar types. Any purely structural layers modeled as part of the architectural layer(s). Composite modeled as a single solid.		
	Scope:	Medium		
	Geometry:	Modeled with closely matching rectangular cross sectional geometry. Slanted elements modeled with ±5 degree tolerance.		
	Penetrations:	Windows and doors only.		
M4	Detailed Element Types and Sizes, Diversification per Spec			
	Diversification:	Thickness, composite structure and type per schedules. Purely structural and architectural layers modeled separately. All non-load bearing architectural layers modeled with a single solid. All load bearing structural layers modeled with a single solid.		
	Scope:	Average		
	Geometry:	Wall layers modeled with exact rectangular cross sectional geometry (as solid wall types). Modeled with exact inclination.		
	Penetrations:	Windows, doors and main MEP runs.		
M5	Detailed Element Types and Sizes, Fabrication Level			
	Diversification:	Material, thickness, type per schedules and additional properties. Different layers of the composite are modeled separately. Adjacent layers of similar properties are modeled as a single layer.		
	Scope:	High		
	Geometry:	Wall layers modeled with exact rectangular cross sectional geometry (as solid wall types). In-wall components modeled as separate solids with exact enveloping geometry. Modeled with exact inclination.		
	Penetrations:	Windows, doors and modeled MEP runs.		
M6	High level of detail (simplified Virtual Mock-up and Fabrication)			
	Diversification:	Material, thickness, type per schedules and additional properties. Different layers of the composite are modeled separately. Adjacent layers of similar properties are modeled separately.		
	Scope:	High		
	Geometry:	Wall layers modeled with exact rectangular cross sectional geometry (as solid wall types). In-wall components modeled as separate solids with exact cross sectional geometry. Modeled with exact inclination.		
	Penetrations:	Windows, doors and modeled MEP runs.		

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Trimble

Trimble Buildings Composite Slab

Model Classes	Trait	Definition	Image	
M3	Approximate Element Types and Sizes, Initial Diversification			
	Diversification:	Basic diversification by material and construction method (e.g.: prefabricated vs. in-place). One typical size used to model all instances of similar types. Structural and architectural layers modeled in a single solid. Composite modeled as a single solid.		
	Scope:	Medium		
	Geometry:	Modeled with closely matching rectangular cross sectional geometry. Slopes and changes in slope are modeled with ±5 degree tolerance. Elevation changes smaller than 12" are disregarded. Contours follow structural drawings.		
	Penetrations:	Only stair and elevator openings modeled.		
M4	Detailed Element Types and Sizes, Diversification per Spec			
	Diversification:	Thickness and type per schedules. Purely structural and architectural layers modeled separately. All architectural layers modeled with a single solid. All structural layers modeled with a single solid.		
	Scope:	Average		
	Geometry:	Slab layers modeled with exact thickness. Profiled layers modeled with exact enveloping rectangular geometry. Sloped elements placed with exact slope. Contours are determined during the constructability analysis of design drawings.		
	Penetrations:	Elevator openings, staircases and mechanical shafts are modeled, placed as holes in the slab.		
M5	Detailed Element Types and Sizes, Fabrication Level			
	Diversification:	Thickness, type per schedules and additional properties. Different layers of the composite are modeled separately. Adjacent layers of similar properties are modeled as a single layer.		
	Scope:	High		
	Geometry:	Slab layers modeled with exact thickness (as solid slab types). Profiled layers modeled with exact enveloping rectangular geometry. In-slab components modeled as separate solids with exact enveloping geometry (as solid beam types).		
	Penetrations:	Pipe/vent sleeves and column block outs are modeled.		
M6	High level of detail (simplified Virtual Mock-up and Fabrication)			
	Diversification:	Thickness, type per schedules and additional properties. Different layers of the composite are modeled separately. Adjacent layers of similar properties are modeled separately. Decking modeled separately from concrete - flutes modeled.		
	Scope:	High		
	Geometry:	Slab layers modeled with exact thickness (as solid slab types). Profiled layers modeled with exact enveloping rectangular geometry. In-slab components modeled as separate solids with exact enveloping geometry (as solid beam types).		
	Penetrations:	Pipe/vent sleeves and column block outs are modeled.		

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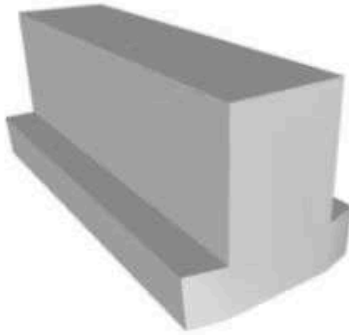
Aspects and Classes?

ASPECTS AND CLASSES			MPS MATRIX		
ASPECTS	CLASSES	DESCRIPTION	TARGET LOD	ASPECTS	
MODEL 'M'	M0	No Model		M	E S
	M1	Building/Spatial/Room Massing	000	M0	E1 S1
	M2	Building elements with approximate dimensions (SD)	050	M0	E2 S2
	M3	Building elements with design dimensions (DD)	100	M1	E2 S2
	M4	Construction Model (CD)	200	M2	E3 S3
	M5	Fabrication / Virtual Mockup	300	M3	E3 S3
	M6	As Built	400	M4	E4 S3
	E1	Division Level Ranges	450	M4	E5 S4

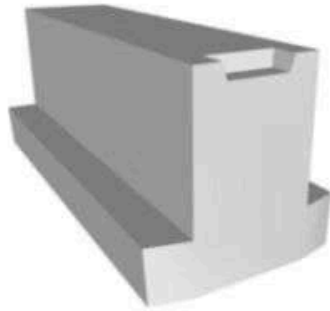
A Shift Towards Level of Development (LOD)

1. As the limitations of the traditional **Level of Detail (LOD)** approach became more apparent, the industry recognized the need for a more comprehensive and information-centric framework.
2. The concept of **Level of Development (LOD)** emerged, focusing on the degree of completeness and reliability of information rather than just geometric detail.
3. The shift towards LOD aimed to **address the misalignment between design intent and model development**, ensuring that the model accurately reflects the project's information requirements at each stage.

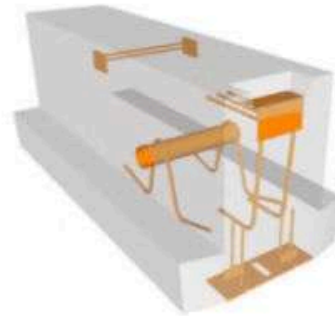
LOD Updates



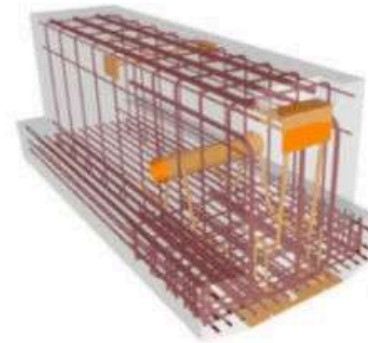
LOD 200



LOD 300



LOD 350



LOD 400

⚠ 100, 350, 500, Components, Information

Limitations of Level of Development concept

1. The **BIM Forum LOD concept** tried to cram too much information into a single numerical scale, making it difficult to precisely define and communicate exact requirements.
2. The LOD framework **lacked flexibility**, often forcing project teams to choose a level that didn't exactly match their needs, leading to over/under modeling and information management challenges.
3. The **subjective nature** of defining LOD levels resulted in inconsistencies, as different stakeholders interpreted the same levels differently.

The introduction of Level of Accuracy (LOA)

Capturing Data Quality

LOA focused on the precision of geometry

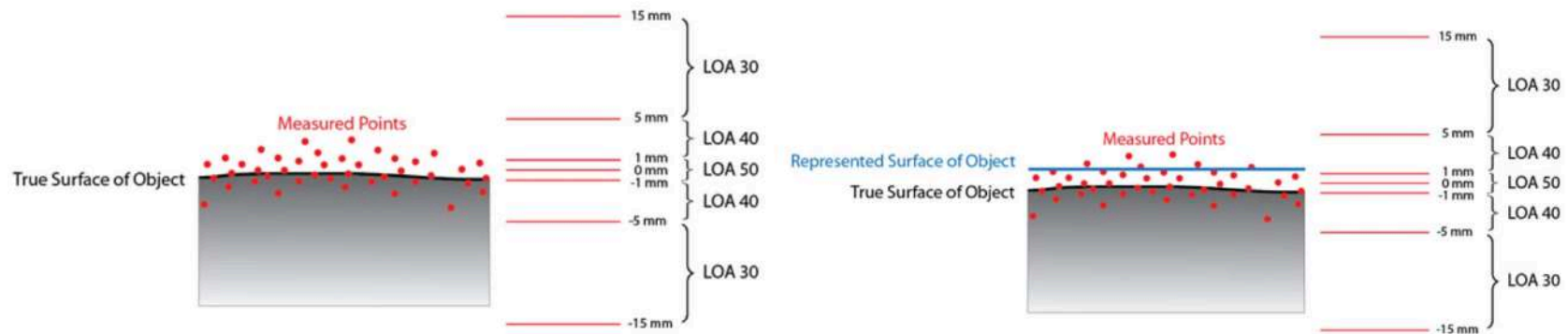
Quantifying Uncertainty

LOA establishes clear guidelines for assessing accuracy

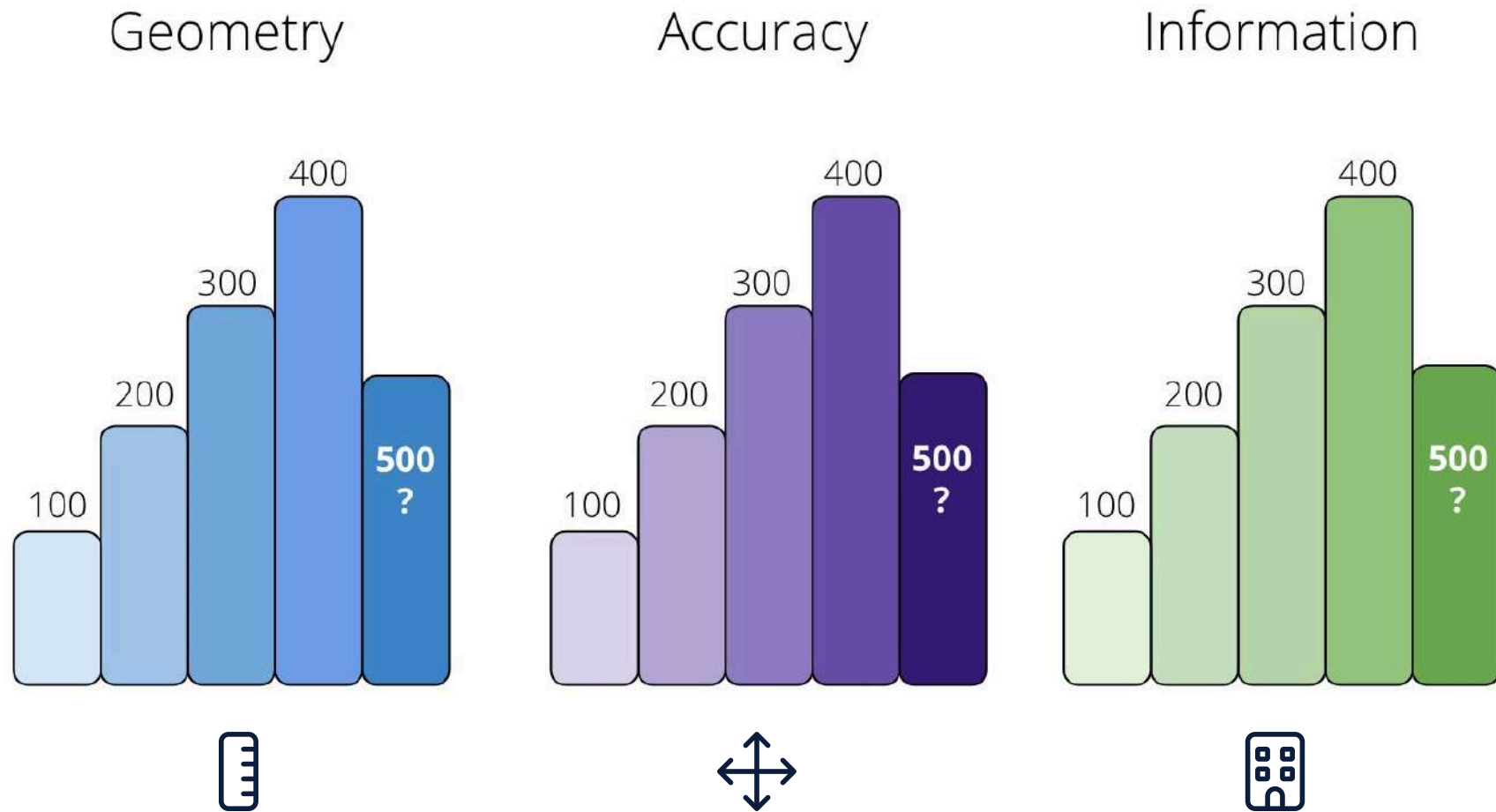
Decision-Making

Understanding accuracy leads to informed decisions

Measured and represented accuracy:



LOA Relation to LOD 500



Definition of LOA

Level of Accuracy (LOA) is a measure of the precision and reliability of the data represented within a BIM model.

It is particularly critical in the later stages of a project, when the as-built documentation must accurately reflect the constructed reality to enable efficient facility management and operations.

Importance in LOD 500

LOA plays a crucial role in achieving LOD 500, which represents the highest level of detail in BIM models. At this stage, the model is expected to accurately depict the as-built conditions of the facility, including all components, systems, and their exact spatial relationships. LOA ensures that the model's data meets the required level of precision and can be relied upon for operations and maintenance activities.

Impact on Facility Management

High levels of accuracy in BIM models are essential for effective facility management and operations. With precise as-built data, facility managers can optimize maintenance schedules, plan renovations and retrofits more efficiently, and ensure the safety and compliance of the built environment throughout its lifecycle.

What needed to happen

1 Clarify information requirements

Define the specific **data and documentation** requirements

3 Develop more robust standards

Establish **clearer guidelines** for assessing and achieving the desired LOD/LOD

2 Align stakeholder expectations

Ensure all parties understand the **purpose** and limitations of LOD/LOD

4 Emphasize information quality

Focus on the accuracy, reliability, and usability of model data, **not just geometry**

Development of LOIN (EN 17412)

Rationale for LOIN

The introduction of the Level of Information Needs standard was driven by the recognition that **LOD was not sufficient** to ensure the right information was available at the right time. LOIN addresses the need for a more comprehensive and structured approach to information management.

Key Milestones

The development of LOIN standards involved collaboration between industry organizations and subject matter experts. Key milestones included the release of the **ISO 19650 series**, which integrated LOIN as a core component, and the ongoing efforts to align LOIN with other BIM standards globally.

Benefits of LOIN

By specifying the precise information requirements for each phase of a project, LOIN helps ensure that information models are not only graphically detailed but **also contain the necessary data to support decision-making**. This leads to improved coordination, reduced rework, and more efficient project delivery.

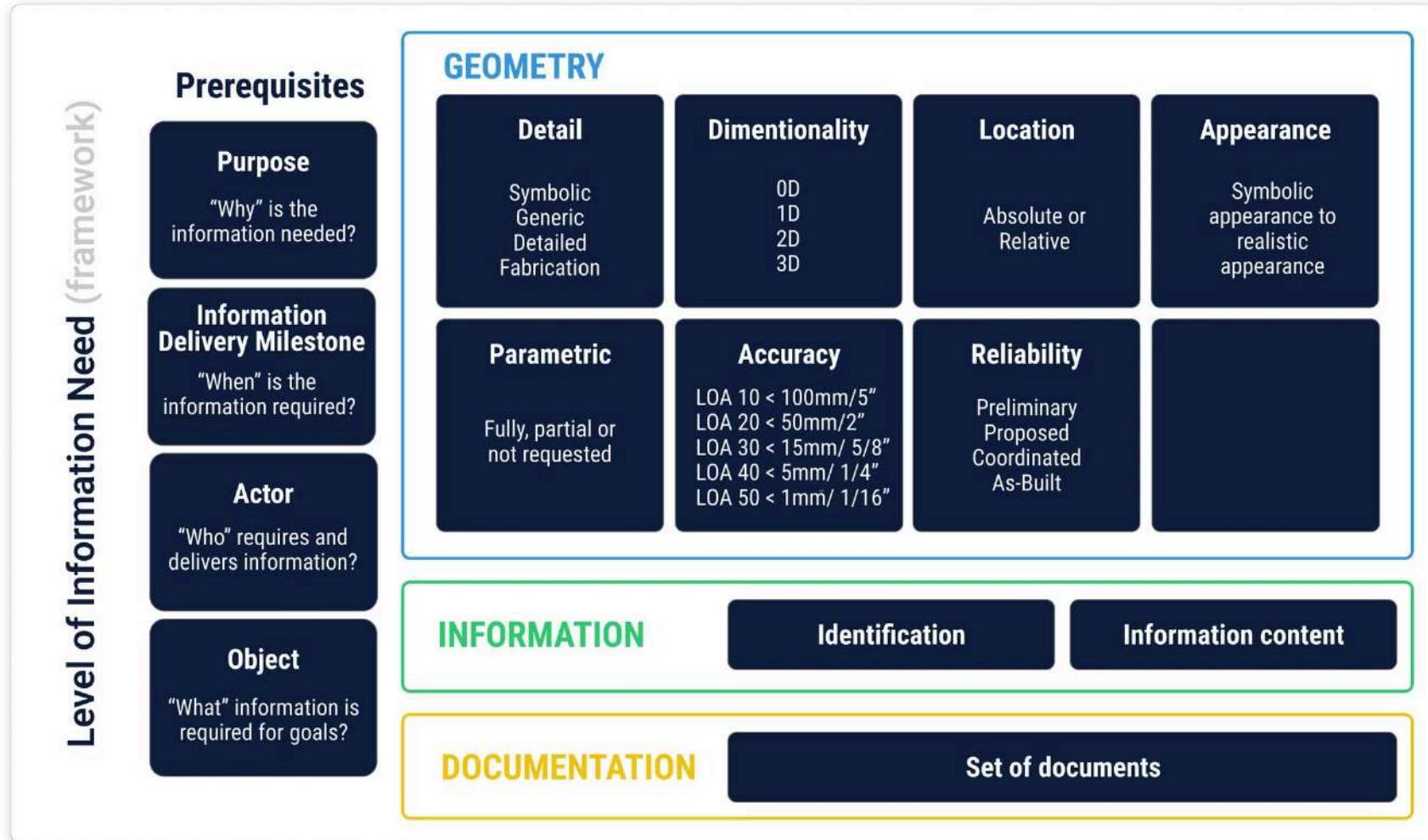
Challenges of Adoption

Despite the clear benefits of LOIN, its widespread adoption has faced some challenges, including the need for cultural change, training, and alignment with existing BIM workflows. Overcoming these obstacles is crucial for unlocking the full potential of using the Level of Information Need framework in projects.

Level of Information Need

The Most Simple Approach

Level of Information Need (framework)



Purpose - why is BIM/Information required?

Structural Estimate	MEP Coordination	Asset Handover	




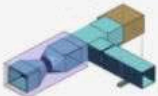


Purpose: why is BIM required?

Project Milestones and BIM Uses following Level of Information Need

What scope is needed?

	Structural Estimate Nov 15 - Dec 1	MEP Coordination Jan 24 - Mar 31	Asset Handover Jun 21 - Oct 1	
>  Wall Foundations				
>  Steel Structure				
>  Stairs				
>  HVAC				









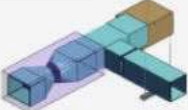









What other activities or deliverables are needed?

	Structural Estimate Nov 15 - Dec 1	MEP Coordination Jan 24 - Mar 31	Asset Handover Jun 21 - Oct 1	+
>  Wall Foundations				
>  Steel Structure				
>  Stairs				
>  HVAC				
 Appoint Information Manager				
 Define EIR				

What scope is needed?








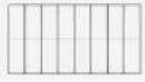

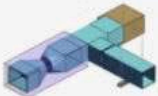





What Project Tasks?

How much is required?

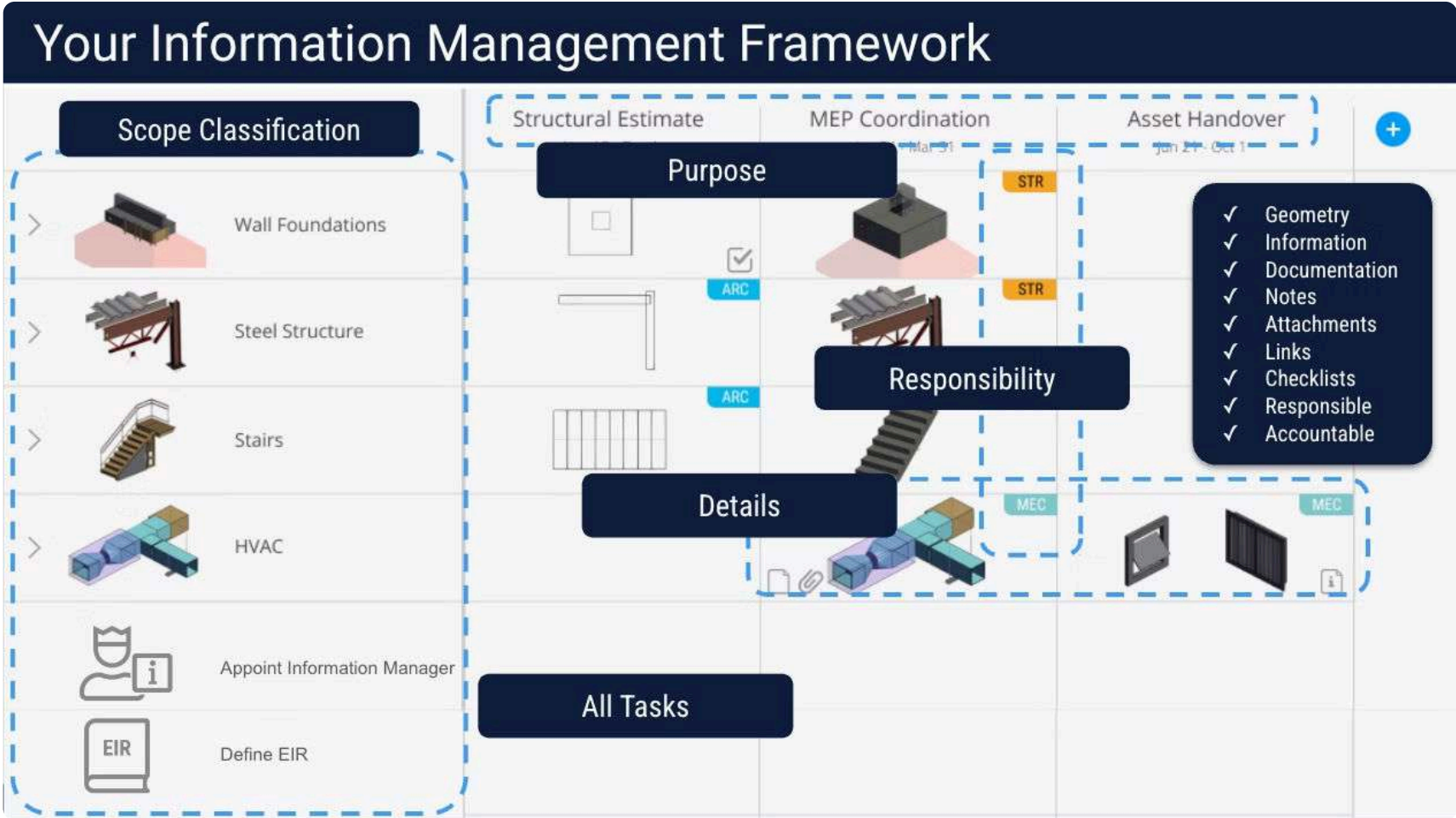
	Structural Estimate <small>Nov 15 - Dec 1</small>	MEP Coordination <small>Jan 24 - Mar 31</small>	Asset Handover <small>Jun 21 - Oct 1</small>	
>  Wall Foundations	 <input checked="" type="checkbox"/>			
>  Stairs				
>  HVAC		  	 	
>  Plumbing		 	 	

How much is required for each Milestone?

Who is responsible?

	Structural Estimate Nov 15 - Dec 1	MEP Coordination Jan 24 - Mar 31	Asset Handover Jun 21 - Oct 1	
>  Wall Foundations	 ARC	 STR		Who is responsible?
>  Steel Structure	 ARC	 STR		
>  Stairs	 ARC	 STR		
>  HVAC		 MEC	 MEC	
>  Plumbing		 PLU	 PLU	

Show Handover



Describe And Attach Useful Information

Clearly define Geometry, Documentation and Information requirements - LOD, ISO 19650, Level of Information Need, Client/Company Standard Specifications, links to resources

The screenshot displays a software interface for task management. A central task card is titled "Concrete Stairs" with a sub-label "LOD 350". The card includes a "Description" field with detailed technical requirements for erection drawings, a "Checklist" with three items, and an "Attachments" section containing a precast concrete stairs specification document. A "Delete Task" button is visible at the bottom right of the card. In the background, a sidebar lists various construction categories like "Wall Foundation", "Steel Structure", "Plumbing", and "Appointment". A "Asset Handover" section is also visible on the right side of the interface.

Concrete Stairs
LOD 350

Description
Erection drawings shall show dimensions for proper fabrication; reinforcing steel sizes, grades and locations; inserts accessories and handling methods; calculations for reinforcing; details, sections, jointing, anchoring, and all other necessary information.

Checklist

- Check position of any cast-in accessories
- Check minimum width clearances
- Check all stairs connect to floors

Attachments

- [PRECAST CONCRETE STAIRS SPEC](#)
- [Spec Link](#)

Activity

Comment or @mention

Clive Jordan updated the description on Concrete Stairs
Jul 27, 2020 4:49 PM

STR

Asset Handover
Jun 21 - Oct 1

Wall Foundation

Steel Structure

Plumbing

Appointment

Delete Task

Add Checklists And Attachments To Help The Team

The screenshot displays the Plannerly software interface. On the left, a vertical list of task categories includes Wall Foundations, Steel Structures, HVAC, Plumbing, and Appoint Information Manager. The 'Appoint Information Manager' task is selected, showing a detailed view with a checklist and an embedded video. A callout box highlights the description and checklist sections.

Appoint Information Manager
Unassigned | AP

Description
Example tasks from the UK BIM Framework to assign the key information management tasks to individuals - documented from the RACI matrix in Annex A from ISO 19650-2

Checklist

- Appoint individuals to undertake the information management function ISO 19650-2: 5.1.1
- Establish a scope of services for the information management function (if appointing a third party) ISO 19650-2: 5.1.1
- Establish the tasks to be provided as part of the scope of services (if appointing a third party) ISO 19650-2: 5.1.1
- Establish the authority that the appointing party will delegate to the prospective lead appointed party or third party (if delegating the authority to a prospective lead appointed party or third party) ISO 19650-2: 5.1.1
- Establish the competency (knowledge or skills) that the individuals undertaking the function will need (applicable whether delegating or not) ISO 19650-2: 5.1.1

Attachments

plannerly - December 2021.mp4

Tracking:
MILESTONE: Stage 2
DATES: None
STATUS: Pending

Asset Handover
Jun 21 - Oct 1

Callout Box:
Add a description, include checklists and embed videos to describe the task more clearly.

Level of Information Need (framework)

Level of Information Need (framework)

Prerequisites

Purpose
"Why is the information needed?"

Information Delivery Milestone
"When is the information required?"

Actor
"Who requires and delivers information?"

Object
"What information is required for goals?"



Importance of LOD, LOIN, and LOA in BIM

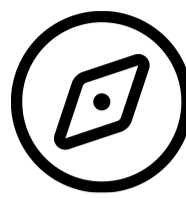
1



Collaboration

These standards facilitate effective collaboration among stakeholders by ensuring that everyone is working with the appropriate level of information and accuracy at each stage of the project. This fosters better communication, reduces misunderstandings, and streamlines decision-making processes.

2



Efficiency

By defining clear guidelines for information requirements and accuracy levels, LOD, LOIN, and LOA help optimize resource allocation and prevent unnecessary over-modeling or under-modeling, leading to increased efficiency and cost-savings throughout the project lifecycle.

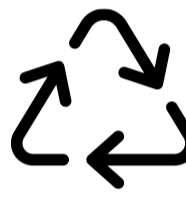
3



Quality Assurance

These standards ensure that BIM models meet the required levels of detail, information, and accuracy, contributing to better quality control and assurance processes. This, in turn, minimizes errors, rework, and potential legal disputes, ultimately leading to higher-quality construction projects.

4



Lifecycle Management

By establishing clear guidelines for information delivery and accuracy requirements throughout the project lifecycle, LOD, LOIN, and LOA facilitate seamless transitions between project phases and enable efficient facility management and operations after construction is complete.

Clarifying Expectations

The integration of LOD, LOIN, and LOA standards helps set clear expectations for model deliverables and information requirements throughout the project lifecycle. This alignment ensures that all stakeholders understand the level of detail, data, and accuracy needed at each phase, reducing the risk of misunderstandings and delays.

Ensuring Appropriate Use

By defining the appropriate levels of detail, information, and accuracy, these standards help guide the use of BIM models for specific purposes, such as design, construction, or facilities management. This prevents the misuse of models and ensures that they are leveraged effectively to support decision-making and project delivery.

Improving Coordination

The integration of LOD, LOIN, and LOA facilitates better coordination among project team members, as they can align their work and expectations based on a common understanding of model development and information requirements. This enhances collaboration, reduces rework, and increases the overall efficiency of BIM-driven projects.

Challenges with Separate Standards

Challenge	Impact
Lack of Alignment	Having separate standards for LOD, LOIN, and LOA can lead to misalignment and inconsistencies in information delivery, resulting in inefficiencies and potential conflicts between stakeholders.
Siloed Workflows	Separate standards can perpetuate siloed workflows, where different teams work with different levels of detail and information, hindering collaboration and integration.
Increased Complexity	Managing multiple standards and ensuring compliance across all fronts can add significant complexity to BIM projects, especially for large-scale or complex endeavors.
Quality and Accuracy Issues	Misalignment between LOD, LOIN, and LOA can lead to quality and accuracy issues in the final deliverables, potentially causing rework, delays, and legal disputes.

The Case for Integration



Clarity + Collaboration

By integrating LOD, LOIN, and LOA into a unified framework, project teams can work more seamlessly, with a shared understanding of model development and information requirements. This fosters better communication, reduces conflicts, and enables more effective collaboration among stakeholders.



Enhanced Efficiency

Integrating these standards can streamline BIM workflows, eliminate redundancies, and reduce the time and resources required to manage multiple, independent frameworks. This leads to more efficient project delivery, lower costs, and better overall value for clients.



Quality and Risk Mitigation

Aligning LOD, LOIN, and LOA ensures that information accurately represent the physical conditions and needs of a project. This, in turn, would minimize errors, rework, and potential legal disputes, ultimately mitigating risks and improving project outcomes.



Standardization Benefits

By integrating these standards, the industry can move towards a more consistent and streamlined approach to BIM implementation. This promotes widespread adoption, facilitates training and education, and enables better data interoperability across projects and organizations.

But how do we deliver the requirements?

Level of Development	Information Requirements for Information Management	Information Requirements for Information Management	Information Requirements for Information Management	Information Requirements for Information Management	Information Requirements for Information Management	Information Requirements for Information Management
Level of Development	Information Requirements for Information Management	Information Requirements for Information Management	Information Requirements for Information Management	Information Requirements for Information Management	Information Requirements for Information Management	Information Requirements for Information Management

plannerly

Task	Start	End	Priority	Status
Task 1	2023-01-01	2023-01-15	High	Completed
Task 2	2023-01-15	2023-02-01	Medium	In Progress
Task 3	2023-02-01	2023-02-15	Low	Not Started
Task 4	2023-02-15	2023-03-01	High	In Progress
Task 5	2023-03-01	2023-03-15	Medium	Not Started
Task 6	2023-03-15	2023-04-01	Low	In Progress
Task 7	2023-04-01	2023-04-15	High	Not Started
Task 8	2023-04-15	2023-05-01	Medium	In Progress
Task 9	2023-05-01	2023-05-15	Low	Not Started
Task 10	2023-05-15	2023-06-01	High	In Progress

Traditional Approach to:

Information Requirements

Phase	Task	Start	End	Priority	Status
Phase 1	Task 1.1	2023-01-01	2023-01-15	High	Completed
	Task 1.2	2023-01-15	2023-01-30	Medium	In Progress
Phase 2	Task 2.1	2023-01-15	2023-02-01	High	Not Started
	Task 2.2	2023-02-01	2023-02-15	Medium	In Progress
Phase 3	Task 3.1	2023-02-15	2023-03-01	Low	Not Started
	Task 3.2	2023-03-01	2023-03-15	High	In Progress
Phase 4	Task 4.1	2023-03-15	2023-04-01	Medium	Not Started
	Task 4.2	2023-04-01	2023-04-15	Low	In Progress
Phase 5	Task 5.1	2023-04-15	2023-05-01	High	Not Started
	Task 5.2	2023-05-01	2023-05-15	Medium	In Progress
Phase 6	Task 6.1	2023-05-15	2023-06-01	Low	Not Started
	Task 6.2	2023-06-01	2023-06-15	High	In Progress

Phase	Task	Start	End	Priority	Status
Phase 1	Task 1.1	2023-01-01	2023-01-15	High	Completed
	Task 1.2	2023-01-15	2023-01-30	Medium	In Progress
Phase 2	Task 2.1	2023-01-15	2023-02-01	High	Not Started
	Task 2.2	2023-02-01	2023-02-15	Medium	In Progress
Phase 3	Task 3.1	2023-02-15	2023-03-01	Low	Not Started
	Task 3.2	2023-03-01	2023-03-15	High	In Progress
Phase 4	Task 4.1	2023-03-15	2023-04-01	Medium	Not Started
	Task 4.2	2023-04-01	2023-04-15	Low	In Progress
Phase 5	Task 5.1	2023-04-15	2023-05-01	High	Not Started
	Task 5.2	2023-05-01	2023-05-15	Medium	In Progress
Phase 6	Task 6.1	2023-05-15	2023-06-01	Low	Not Started
	Task 6.2	2023-06-01	2023-06-15	High	In Progress

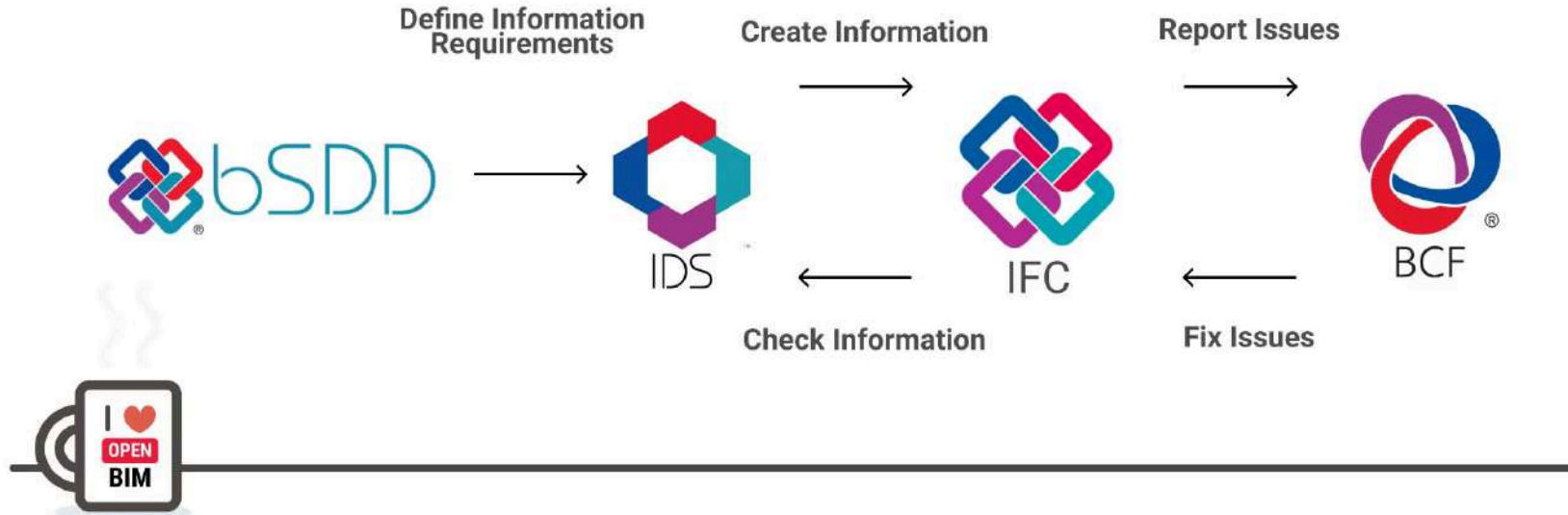
Phase	Task	Start	End	Priority	Status
Phase 1	Task 1.1	2023-01-01	2023-01-15	High	Completed
	Task 1.2	2023-01-15	2023-01-30	Medium	In Progress
Phase 2	Task 2.1	2023-01-15	2023-02-01	High	Not Started
	Task 2.2	2023-02-01	2023-02-15	Medium	In Progress
Phase 3	Task 3.1	2023-02-15	2023-03-01	Low	Not Started
	Task 3.2	2023-03-01	2023-03-15	High	In Progress
Phase 4	Task 4.1	2023-03-15	2023-04-01	Medium	Not Started
	Task 4.2	2023-04-01	2023-04-15	Low	In Progress
Phase 5	Task 5.1	2023-04-15	2023-05-01	High	Not Started
	Task 5.2	2023-05-01	2023-05-15	Medium	In Progress
Phase 6	Task 6.1	2023-05-15	2023-06-01	Low	Not Started
	Task 6.2	2023-06-01	2023-06-15	High	In Progress

Traditional Results



So what's a better way?

IDS is the better way (openBIM)



Taking the best parts

- The **LOD Specification** is a great start for **graphical** representation
- **Level of Information Need** (EN 17412) is a great information requirements **framework**
- buildingSMART's **IDS** (Information Delivery Specifications) is the start of a great **technical** framework

Integrating these complementary specification, standard and technical solutions into a unified framework will streamline information management workflows, eliminate redundancies, and promote consistent adoption across the industry.

As the industry moves towards adopting ISO 19650 and other international standards, there is a unique opportunity to incorporate the integrated LOD, LOIN, and LOA model into these frameworks. This would ensure consistency and interoperability across global projects, facilitating collaboration and improving project outcomes on an international scale.

Example of IDS - it's simple!

Impact of Integration on the Industry

Improved Collaboration

The integration of LOD, LOIN, and LOA will foster improved collaboration among stakeholders by ensuring that everyone is working with the appropriate level of information and accuracy at each stage of the project. This will reduce misunderstandings, streamline decision-making processes, and enhance project delivery.

Increased Efficiency

By aligning information requirements with accuracy levels, an integrated approach will optimize resource allocation and prevent unnecessary over-modeling or under-modeling. This will lead to increased efficiency, reduced rework, and potential cost savings throughout the project lifecycle.

Enhanced Quality and Risk Mitigation


A unified framework will ensure that BIM models meet the required levels of detail, information, and accuracy, contributing to better quality control and assurance processes. This, in turn, will minimize errors, rework, and potential legal disputes, ultimately mitigating risks and improving project outcomes.

Improved Facility Management

With accurate and comprehensive as-built information, the integration of LOD, LOIN, and LOA will enable more efficient facility management and operations. Facility managers will have access to reliable data for maintenance, renovations, and compliance, extending the benefits of BIM beyond construction.

Resources:

The openBIM Workflow



The openBIM workflow

BIM Requirements

For example:
There should be at least one stair, and every Stair must have a property Number/Riser and that u

Require

buildingSMART International


23:17

YouTube

The openBIM Workflow

Hear from buildingSMART International Technical Director Léon van Berlo who discusses the openBIM workflow. The openBIM workflo...

Level of Information Need



The graphic shows a workflow process with a central circular gauge displaying 83%. The workflow includes steps like 'Verify Tasks', 'Model Status', and 'Drag n Drop'. A large dark blue circle on the right contains the text 'BIM MANAGEMENT VIDEOS'. The text 'The Complete BIM Management Workflow with plannerly' is overlaid on the left side.

BIM
The Complete
BIM Management
Workflow
with plannerly

83%

Verify Tasks

Model Status

Drag n Drop


BIM
MANAGEMENT
VIDEOS

Plannerly

Understanding Level of Information Need (LOIN) in BIM Pr...

Understanding Level of Information Need (LOIN BIM). We explore the concept of Level of Information Need in BIM projects and showing ...

Level of Information Need



BIM & LOD & LOIN

LOD UPDATES

BIM MANAGEMENT VIDEOS

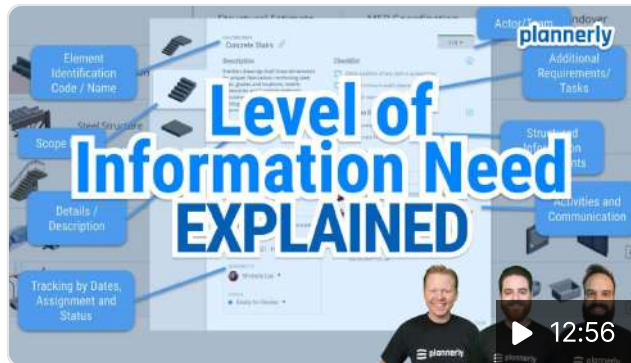
04:00

YouTube

How to use LOD 100-500 | Intro & Recent Updates | Maste...

In this video, I'll take you through a quick intro on how to use the LOD BIM Forum Specification (LOD 100 - 500) with Plannerly. Discover...

Level of Information Need



plannerly

Element Identification Code / Name

Scope

Details / Description

Tracking by Dates, Assignment and Status

plannerly

Additional Requirements/ Tasks

Standard Information

Activities and Communication

Level of Information Need EXPLAINED

12:56


YouTube

Explaining 🙌 Level of Information Need 🙌 for BIM and 🌐 ...

To implement Level of Information Need you must first be prepared!
It is critical to define: 1. the purpose of the information exchange...

ISO 19650 in Five Minutes:



 YouTube



ISO 19650 in five minutes

THREE RESOURCES  - ISO 19650 Explainer Videos:

<https://www.plannerly.com/what-is-iso-19650> - ISO 19650 Process...

ISO 19650 Training



 YouTube



ISO 19650 Explained

Understand the ISO 19650 workflow with simple EIR and BEP explanations. ...and many other ISO documents for BIM projects!...

IDS Resources:

buildingSMART international

HVAC Exhaust Air Duct
Member: Program
View Estimates

Information	Value	Unit	Color
Length	100	ft	Blue
Pressure Drop	1	in. WG	Red
Flow	100	CFM	Green
System Class... Supply Air Return Air E...	1	ft	Yellow

IDS!

SmartLearnBIM

plannerly

I ❤️ IDS

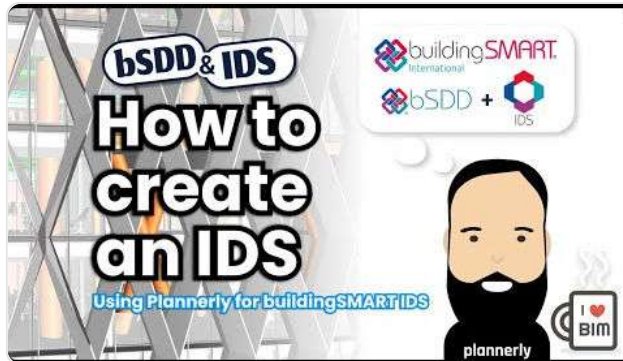
IDS Export Now on ALL Plans!


Plannerly

buildingSMART IDS - Unlocking Building Efficiency: Plann...

Plannerly offers the buildingSMART IDS export on all plans, taking building efficiency to the next level! Learn how this game-changing...

IDS: Structured Information Requirements



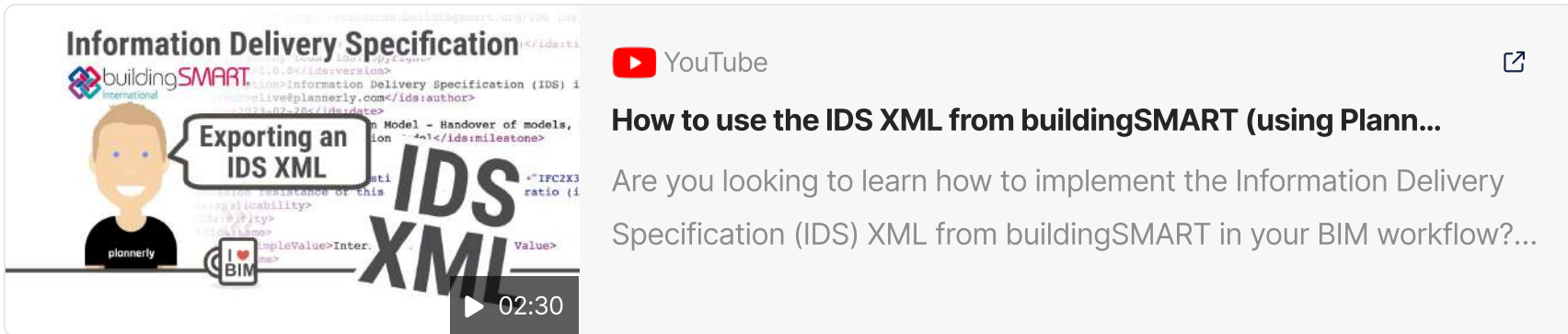
 YouTube



IDS buildingSMART

Offering valuable insights into the world of Building Information Modeling (BIM) and the innovative technologies shaping the...

Resources:



The image shows a YouTube video player interface. The video title is "How to use the IDS XML from buildingSMART (using Plann...". The thumbnail features a man with a speech bubble that says "Exporting an IDS XML". The background of the thumbnail includes the buildingSMART logo, the text "Information Delivery Specification (IDS)", and "IDS XML". A play button and a duration of "02:30" are visible at the bottom of the video player.

Information Delivery Specification

buildingSMART international

Exporting an IDS XML

IDS XML

02:30

YouTube

How to use the IDS XML from buildingSMART (using Plann...

Are you looking to learn how to implement the Information Delivery Specification (IDS) XML from buildingSMART in your BIM workflow?...

YouTube Training Series: [LINK](#)



YouTube



Plannerly BASICS

This exciting Information Management and BIM training is designed to enhance your BIM skills significantly! Divided into three parts -...

Key Takeaways

1. The **evolution** of Level of Detail/Development/Definition (LOD) standards in BIM expanded to more than geometry
2. LOD evolution aimed to capture not just geometric detail, but also the **maturity** and **reliability** of the model information
3. The limitations of LOD led to the development of **Level of Information Need**
4. Level of Information Need is a framework → could **benefit from incorporating LOD**
5. Adding the benefits of **Level of Accuracy enhances** the framework for As-built documentation
6. The combined approach delivered using **buildingSMART IDS** is the optimum combination!

Thank You! 😊



Clive Jordan - Co-founder, Plannerly

Ask me about our solution to "get your company ISO 19650 compliant in 60 days"

Contact: clive@plannerly.com