

Gathering23

Accelerating BIM adoption

Barriers to BIM Implementation for Cost Management in the Irish Construction Industry

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Presenter

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TO ATHLONE
for the 6th CitA BIM Gathering

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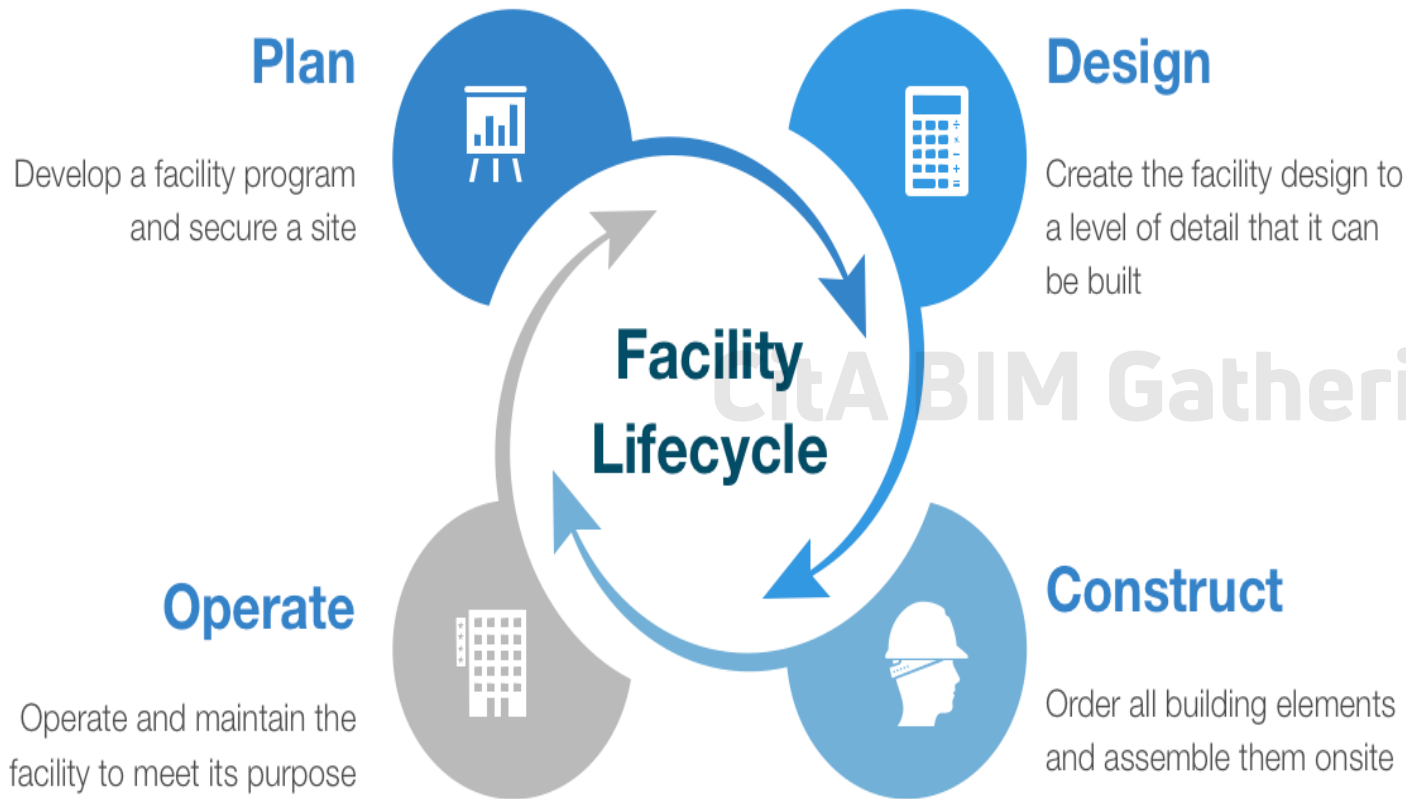
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**Presentation
Outline**

- **Introduction/Background**
- **Problem Statement**
- **Research Objectives**
- **Methodology**
- **Research Findings**
- **Conclusion**



Building Information Modeling (BIM) is the holistic process of creating and managing information for a built asset



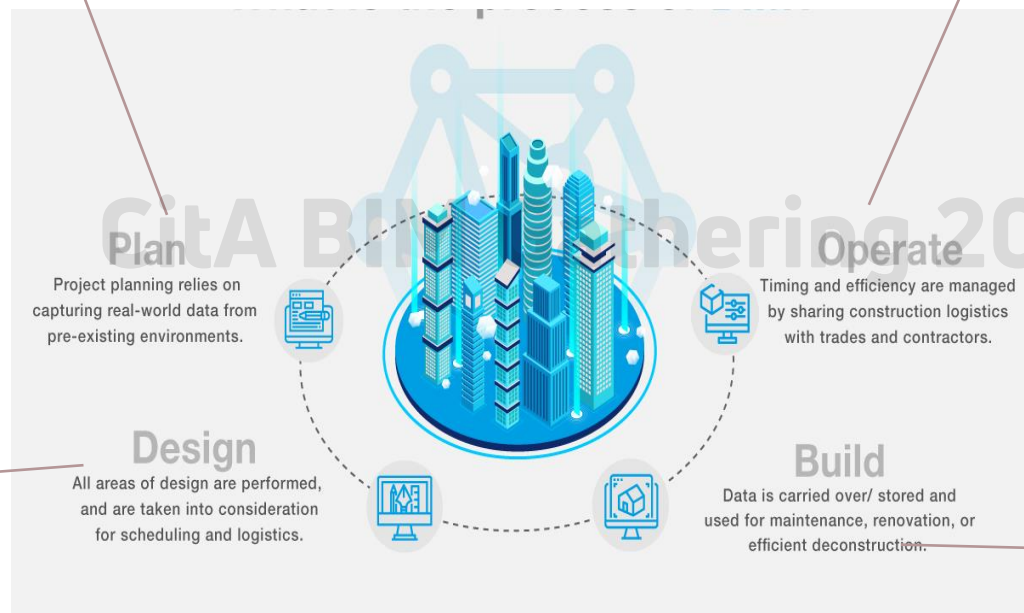
BIM Flows through these phases of Construction

What is the process of **BIM**?



- Feasibility Analysis
- Preliminary Cost Estimating
- Cost Advising

- Cost Analysis
- Budgeting for Maintenance
- Budget Control



- Cost Planning
- Cost Checking
- Detailed Estimate
- Tender Documentation

- Cost Control
- Valuation of Variations
- Advice on Claims
- Final Account

BIM software for QS



SYNCHRO™





Government Initiatives and Mandates

- National BIM Council
- BIM mandate

Industry Collaboration and Standards

- BIM Innovation Capability Programme (BICP)
- BIM Excellence Initiative (BEI)
- ISO 19650
- International Construction Measurement Standards (ICMS)
- Agreed Rules of Measurement 5 (ARM5)

BIM Education and Training

- Construction Industry Federation (CIF)
- CiTA
- Universities and Colleges



New children's hospital in Dublin



M11 Gorey to Enniscorthy motorway



Dublin Airport Central Development

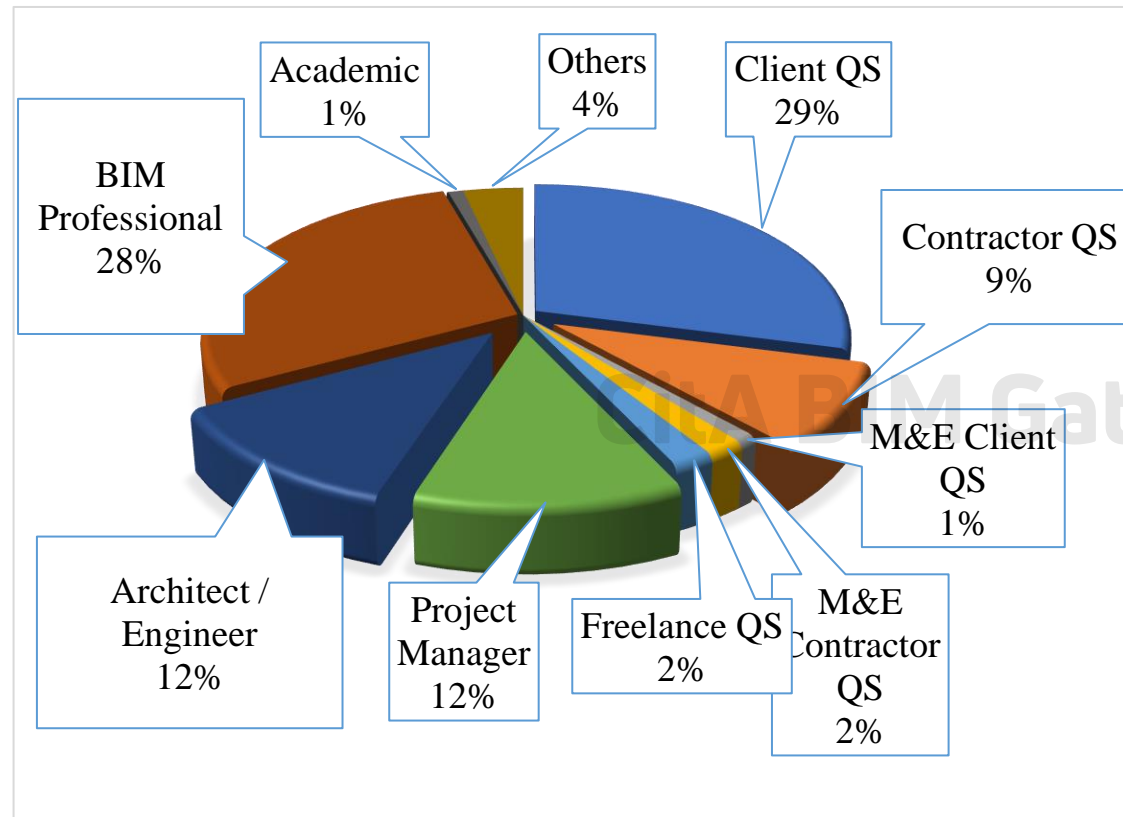
BIM survey of 2019

Top 10 Barriers to BIM adoption in Ireland

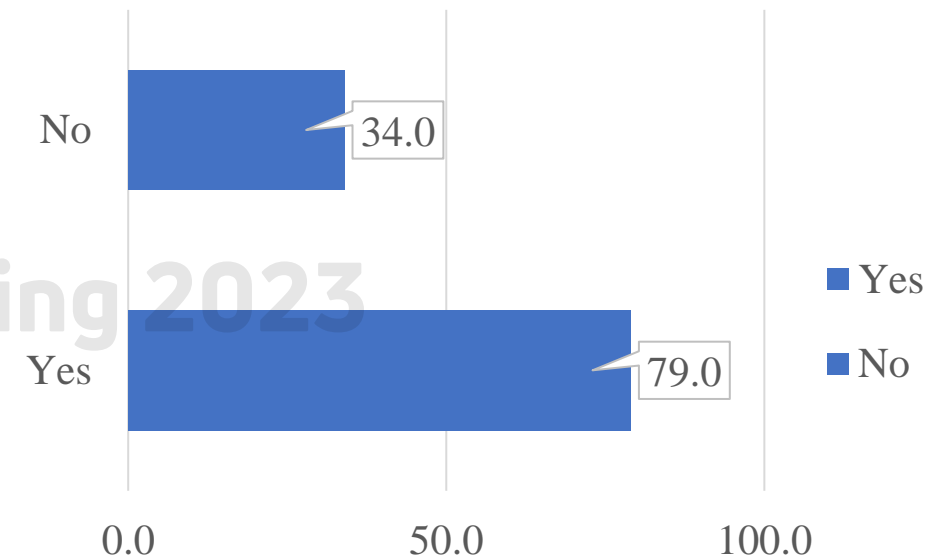
SN	Barriers	Ireland	UK
1	Lack of in-house Expertise	74%	63%
2	No Client Demand	67%	65%
3	Lack of training	67%	59%
4	No time to get up to speed	56%	48%
5	No established contractual framework for working with BIM	48%	36%
6	Cost	48%	51%
7	Difference in expertise among collaborating parties in a project	41%	28%
8	Lack of Standardized tools and protocols	41%	33%
9	Don't see the benefit	30%	15%
10	Lack of collaboration	30%	33%

The aim of this article is to investigate these barriers to BIM adoption and the implementation, to ascertain if they still exist in the Irish construction industry and to reveal any new impending challenges the construction players face with a focus on the construction cost management

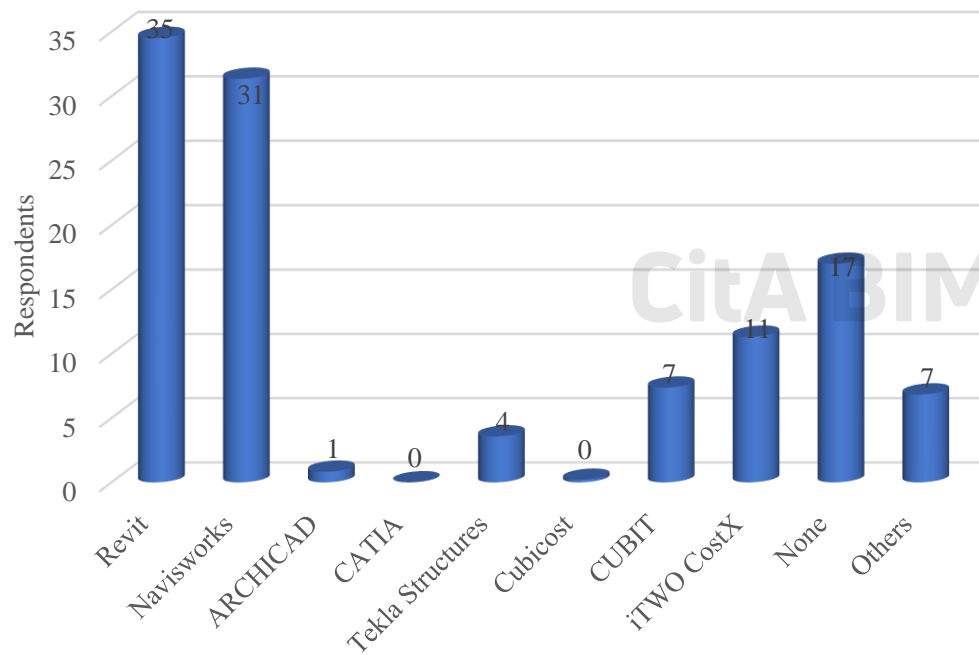
- ✓ A quantitative approach was adopted, and an online 5-point Likert scale survey was designed and administered to construction professionals in the Republic of Ireland
- ✓ Descriptive statistics, and Severity Index (SI) statistics were subsequently deployed in the analysis of data



Role of Respondents



Response on Existence of BIM Barriers



Barrier ID	Barriers	SI	Mean	SD	Ranking
BBCM1	Lack of awareness	0.636	3.180	1.180	1
BBCM6	Resistance to change	0.630	3.150	1.046	2
BBCM9	Differences in expertise among collaborating parties in a project	0.625	3.120	1.070	3
BBCM8	Lack of standardised tools and protocols	0.616	3.080	1.070	4
BBCM7	Skills shortage	0.612	3.060	1.055	5
BBCM3	Lack of training	0.611	3.050	1.059	6
BBCM10	Lack of collaboration	0.598	2.990	1.319	7
BBCM12	No Government enforcement	0.596	2.980	1.018	8
BBCM11	Limited knowledge & experience	0.595	2.970	1.138	9
BBCM2	Lack of understanding	0.593	2.960	1.017	10
BBCM4	No time to get up to speed	0.593	2.960	1.322	11
BBCM13	Lack of adoption in public procurement	0.536	2.680	1.112	12
BBCM5	Cost (hardware & software)	0.469	2.350	1.132	13

- ✓ Addressing these barriers will require a concerted effort from industry stakeholders, government, and educational institutions
 - To promote awareness
 - Provide the much-needed training and education to Quantity Surveyors and other key professionals
 - Develop standardization, and
 - Address legal and contractual implications of introducing BIM into traditional contract settings

A nighttime photograph of a stone bridge with multiple arches spanning a river. In the background, a large church with a dome and two towers is illuminated. The scene is reflected in the calm water of the river. The sky is a deep twilight purple.

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THANK YOU