

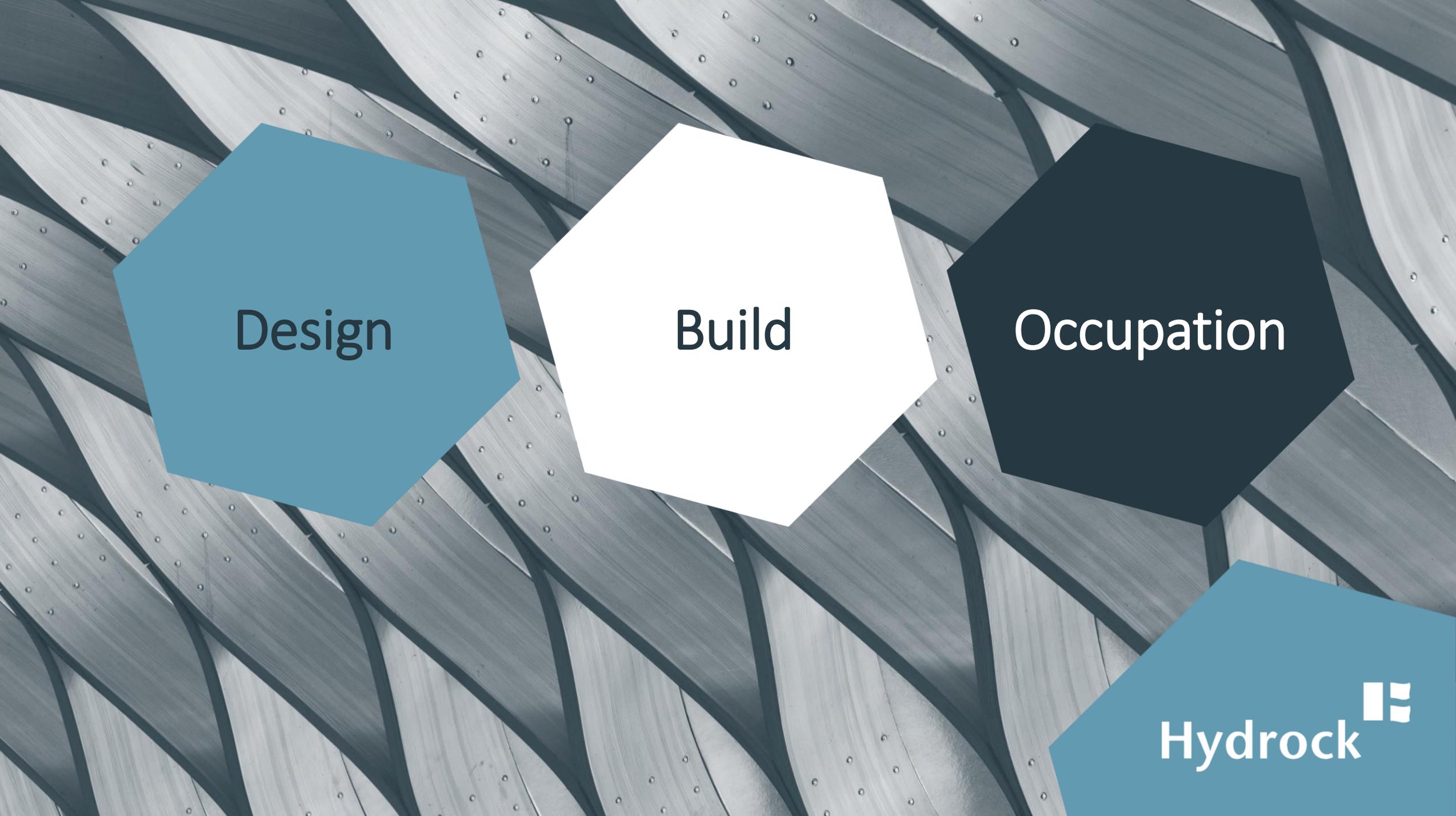
Digital Golden Thread

A Delivery Method for the Capture of Data to create a Building Safety Case

18th May 2022



Chris Chennell
Director – Fire
Safety Division



Design

Build

Occupation

Hydrock 



14 June 2017: Grenfell Tower



July 2020: Draft Building Safety Bill published



August 2020: Presented to Parliamentary Committee, scrutinised by the Housing, Communities and Local Government Select Committee

1



2023: Building Safety Act implemented

2017

2020

2021

2022

2023

2024

2



2022-23: Building Safety Act anticipated

2023-24: Transition period expected



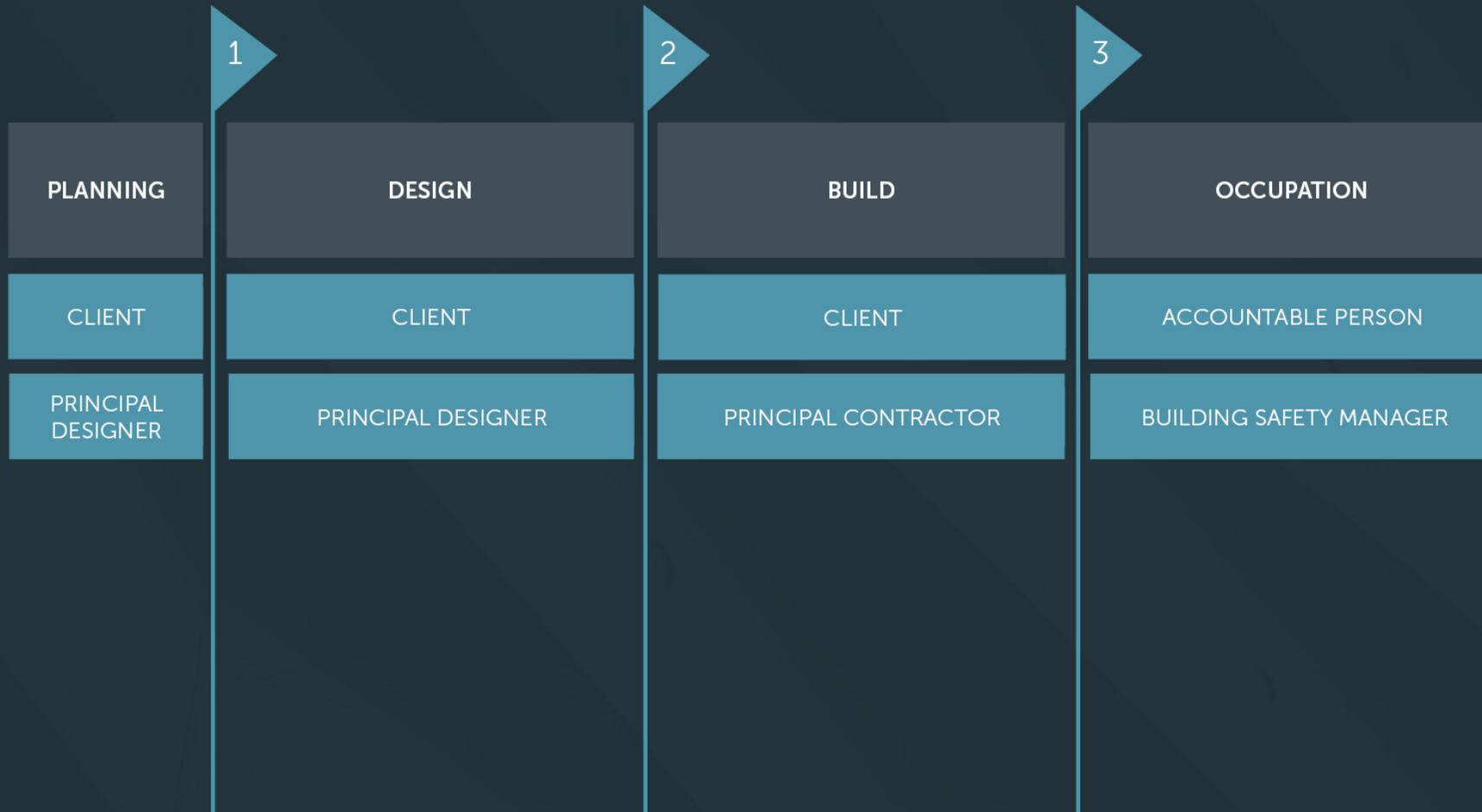
February 2021: Revised Building Safety Bill published



Building Safety Regulator

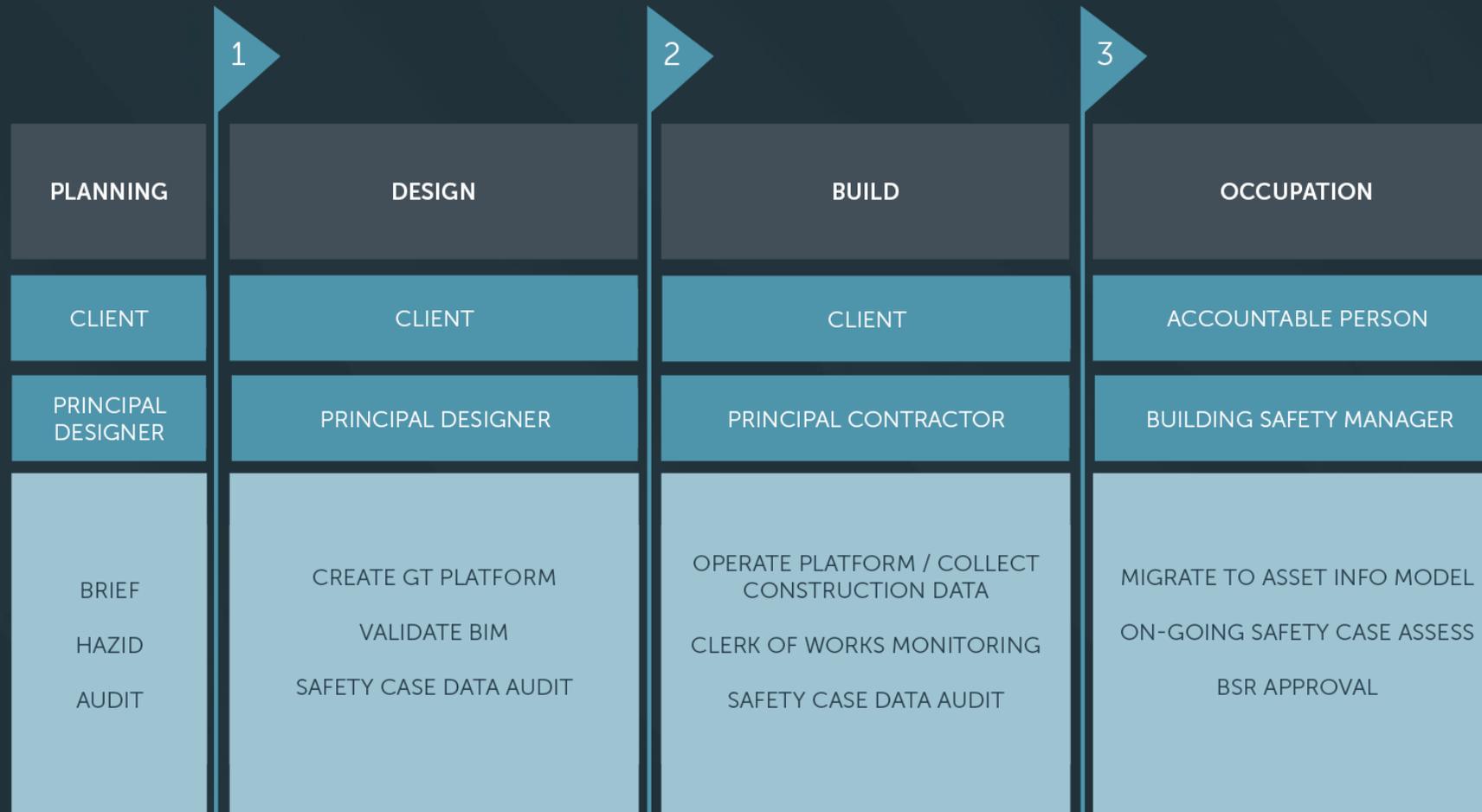
- Overseeing the safety and performance of buildings
- Helping and encouraging improved competence across the built environment
- Leading the implementation of the new regulatory framework for high-rise buildings

Digital Golden Thread



DIGITAL
GOLDEN
THREAD

Digital Golden Thread





Building Safety Case

Safety case principles for high-rise residential buildings

Building safety reform – Early key messages

‘Major Accident Hazard’

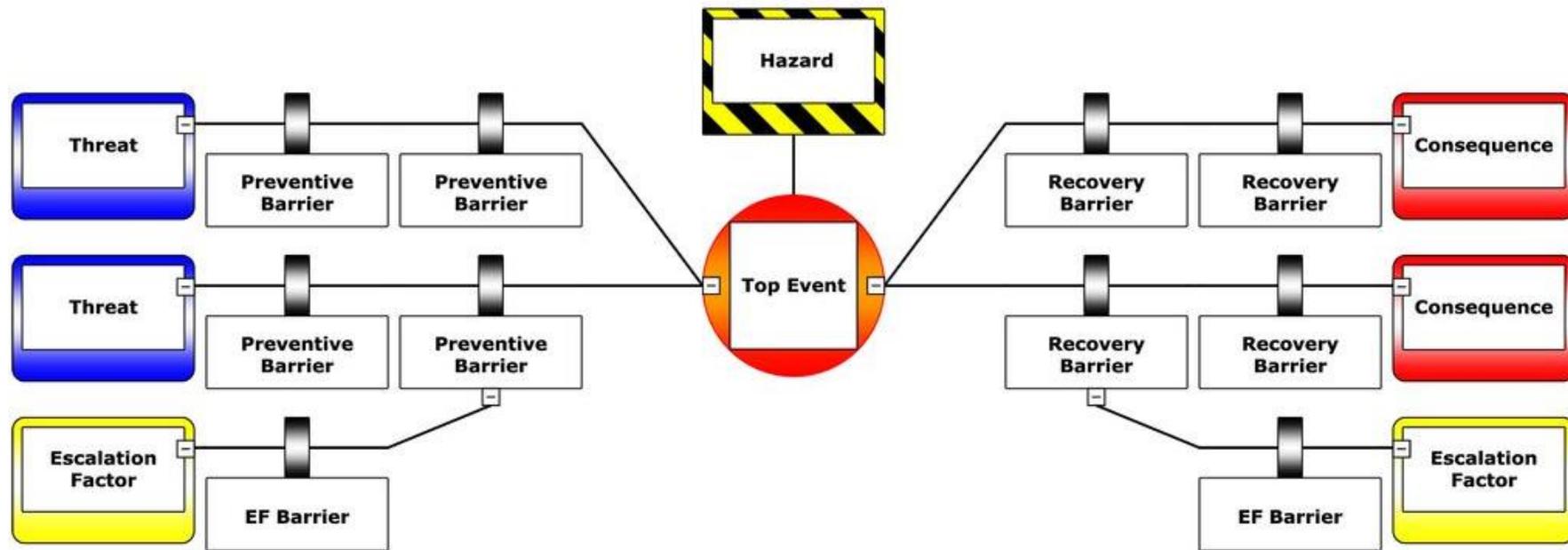
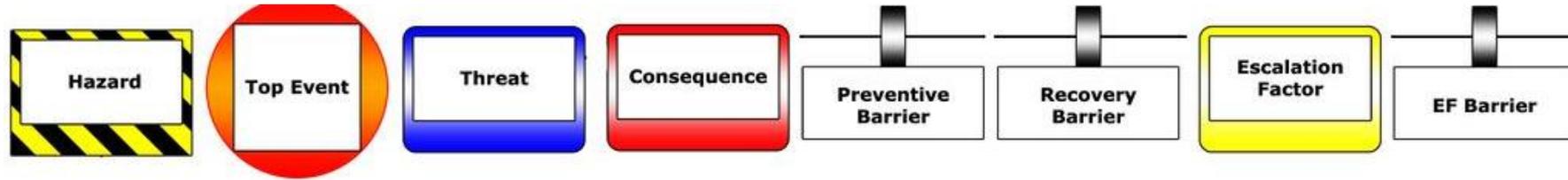
an occurrence that has the potential to adversely impact the health or safety of many people. For example, multiple injuries or deaths, or serious damage to property.

HAZID

Session:	1							
Node/Step:	Fire - Single floor scenario							
Parameter::	We have assumed a fire has started in the building and we are aiming to determine all the potential initiators and hazards (problem we have here, for example, is that a fire on a single floor may consequently lead to the other scenarios).							
ID No	Keyword/ Guideword	Hazard	Causes	Unmitigated Consequences (Qualitative)	Safety/Control Measures	Actions	Actionees	Notes
Composition change Concentration								
Corrosion	MORE	Extreme weather leading to corrosion of building material	Degradation of building structure	Evacuation routes are restricted	Escape routes have weather protection / envelope Escape routes are manufactured from corrosion resistant materials			This is an example of evacuation not fire
Electrical	MORE	Electrical sparks leading to ignition of flammable materials	Faulty electrical equipment	Fire in residential area	Fire detection and suppression Fire doors Compartmentation			
				Fire in communal area that could spread to other floors	Fire detection and suppression Fire doors Compartmentation			
		Sparks from hot works in workshop adjacent to building	Fire in refuse area could spread to building	Design of refuse areas – away from building				
		Overheating electrical appliances leading to ignition of flammable material	Faulty electrical equipment					
		Unattended electrical appliances						

HAZID

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ID No	Keyword/ Guideword	Hazard	Causes	Unmitigated Consequences (Qualitative)	Safety/Control Measures	Actions	Actionees	Notes
Fire loading	MORE Excess of building material	Increased fire loading in property	Outside design intent / assumption	Potential fire	Fire detection and suppression Fire doors Compartmentation			
		Increased fire loading in refuse areas	Poor house keeping	Potential fire	Design of refuse areas – provide sufficient storage in the correct area			
			Poor design of refuse areas	Potential fire	Design of refuse areas – away from building			
Flow Level	MORE Electrical sparks in communal areas	Increased fire loading in communal areas	Poor house keeping	Potential fire	Fire detection and suppression			
		Increased fire loading from flammable building materials		Potential fire	Fire doors Compartmentation			
Maintenance	LATE Overheating electrical equipment	Degradation of building fabric	Degradation of building structure	Evacuation routes are restricted	Maintenance schedule			
Other Temperature	MORE Unattended electrical appliances	Higher external temperature during summer months	Potential to ignition of flammable materials on building roof					
		High temperature from						



Digital management

Data

Angle to datum	Backup power type	Minimum operation period	Operation pressure minimum	Fire exit type	Fire exposure direction	Life safety element	Fire protection method	Resistance provided
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Competency

Door and block number	Door type reference tag	Installer certification	Installed by (name)	Date of installation	Financial inspection (date and name)
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Timestamp

Name	Created by	Created on
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Photo

Image	Image (handover)
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BS 8644-1. Digital management of fire safety information Part 1. Design, construction, handover, asset management and emergency response. Code of practice

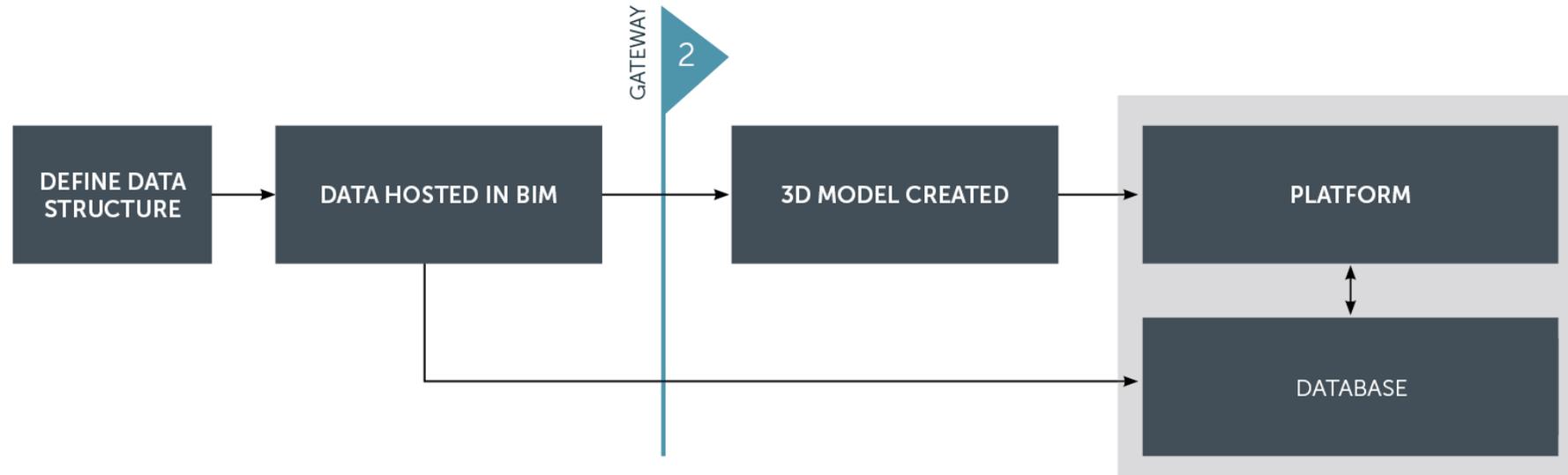
Market share

	Year 1	Year 2	Year 3
Total available market (£)	296	296	184
Safety cases (existing and new)	169	169	91
Gateways (new)	54	54	54
Other costs (existing)	73	73	39

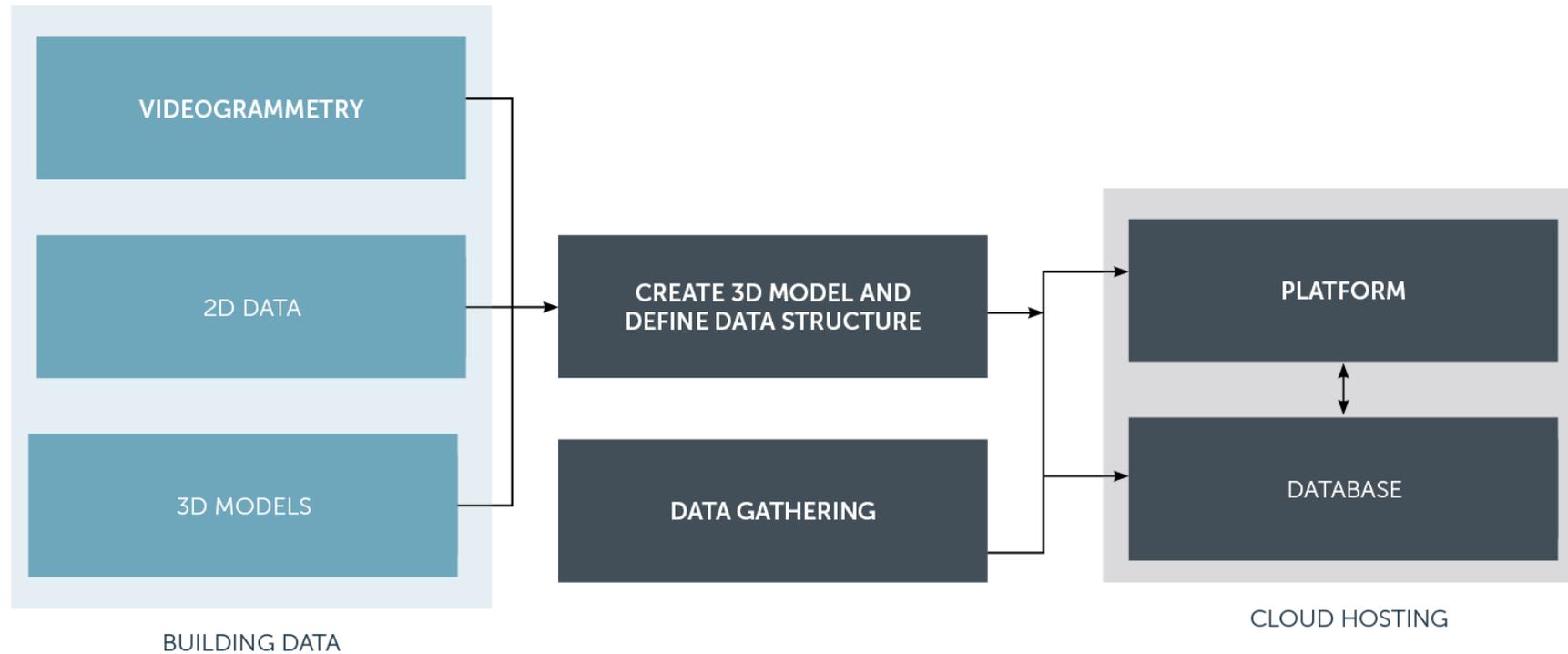
Ministry of Housing, Communities & Local Government, “Building Safety Programme Monthly Data Release England 31 March 2021,” 2021

Ministry of Housing, Communities & Local Government; Department for Levelling Up, Housing & Communities, “Impact Assessment: factsheet,” 2021.

Platform – New Build



Platform – Existing





Final Thoughts

ALMONDSBURY
BIRMINGHAM
BRISTOL
CAMBORNE
CARDIFF
EDINBURGH
GLASGOW
GLOUCESTER
HALE
LEEDS
LONDON
LUTTERWORTH (KTA)
MANCHESTER
NEWCASTLE
NORTHAMPTON
PLYMOUTH
PLYMPTON (KTA)
SOUTHAMPTON
STOKE-ON-TRENT
TAUNTON

ENGINEERING | ENERGY | SUSTAINABILITY

Hydrock 