

**FINISHES & INTERIORS SECTOR** 

# Managing a systemised approach to construction

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### **Jim Parlour** Head of Technical, FIS

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### Our speakers





#### **AI Walker**

UCL



#### **Peter Long**

Divisional Fire and Certification Director Optima Products



**Tony Millen** Managing Director, Fire DNA **FIS Headline Sponsor** 



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### Al Walker – UCL

### Why systems thinking is essential to compliance

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Compliance isn't enough.

### What is a system?



### "an interconnected set of elements that is coherently organised in a way that achieves something"



Meadows (2009) System Thinking: A Primer.

What is systems thinking?



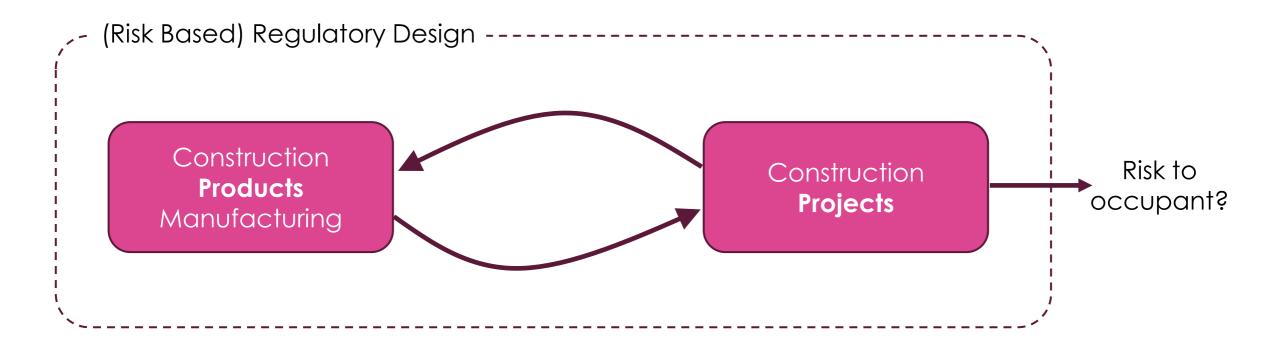


https://femdijkman.blogspot.ch/2014/07/rechtsgelijkheid.html

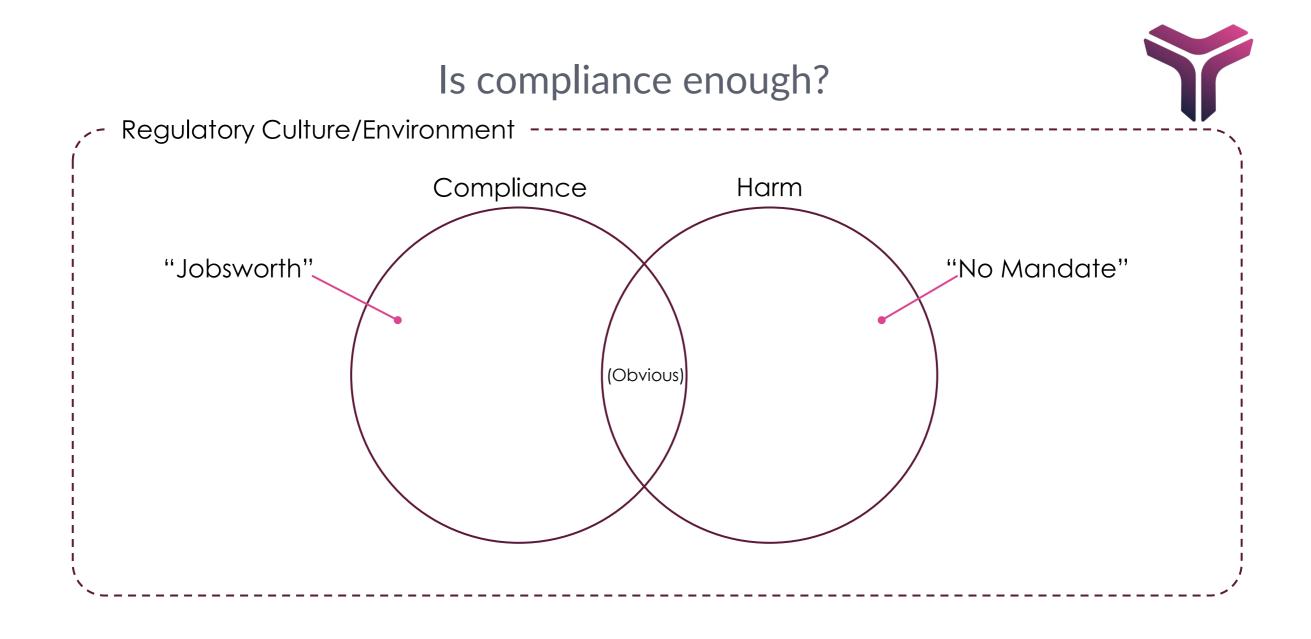
Total Flow | Compliance isn't enough

7





### How might systems thinking improve compliance?







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Adapted from: https://www.businessillustrator.com/product/obstacles-to-business-agility-cartoon/

Total Flow | Compliance isn't enough



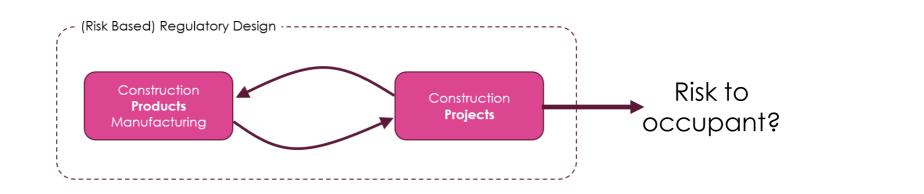
### "Culture arises from actions in the world, ways of doing things which may never be articulated, and which may not be capable of articulation.

# So, it follows that cultural change is an evolutionary process from the present, not an idealised future state design."

Dave Snowden - OMG, its culture change time https://thecynefin.co/omg-they-want-to-change-the-culture/?srsltid=AfmBOopphjGt\_ROn1zgFJg9WsKsPiMndT57gDnvA3CXpud7XPqKkiqEU

Total Flow | Compliance isn't enough

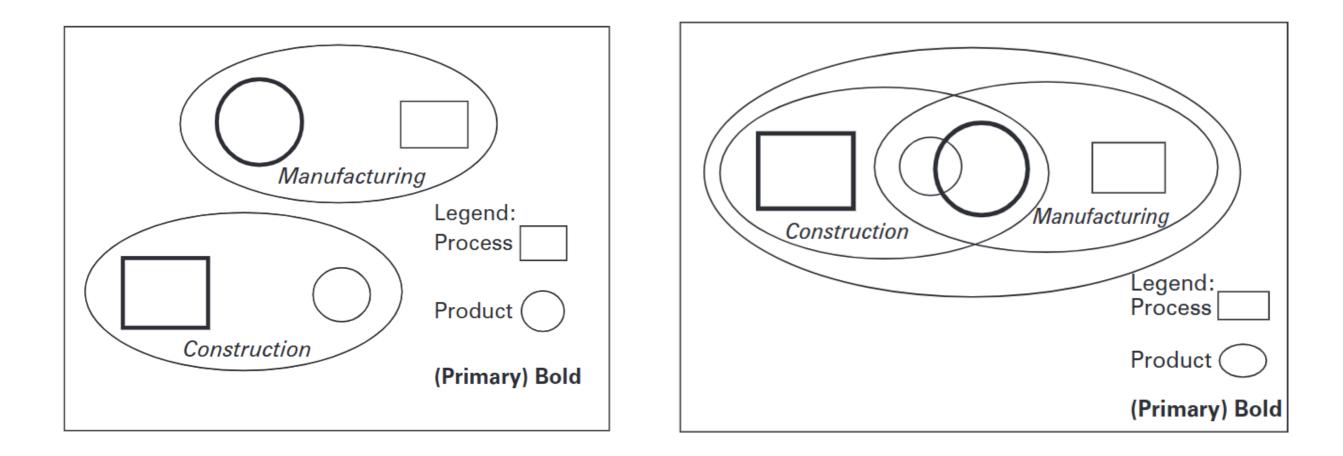
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# "The main findings are that the culture existing in construction has significant differences to that found within the manufacturing industries.

It will not be possible to transfer management tools from one industrial sector to the other without substantial redesign."

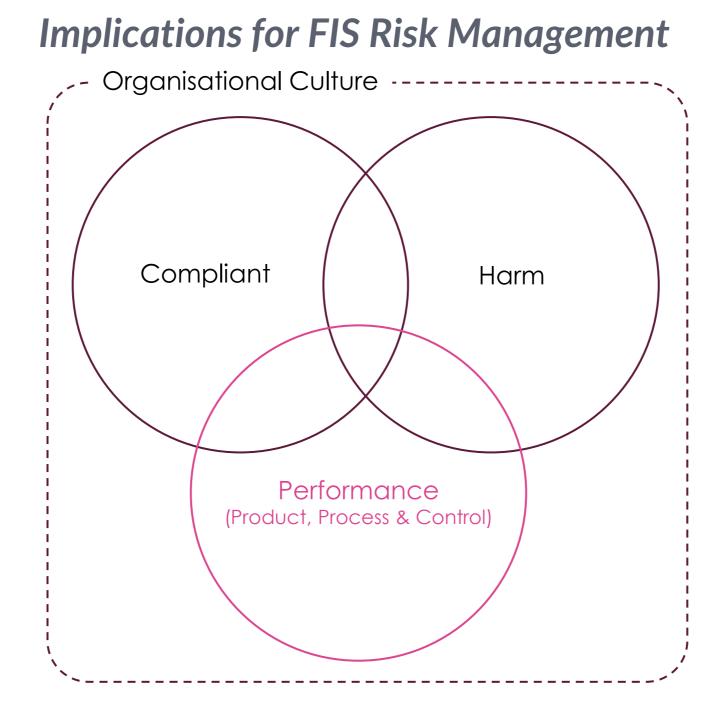
Riley and Clare-Brown (2001, p. 1) Comparison of cultures in construction and manufacturing industries



# What does that mean for designing and implementing a *"golden thread"*?

Fernández-Solís (2008) - The systemic nature of the construction industry

Total Flow | Compliance isn't enough







Compliance isn't enough.



### **Peter Long** Divisional Fire and Certification Director, Optima Products

### Testing, classification and real-world performance

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# Managing a systemised approach to construction

Testing, classification and real-world performance

Peter Long

Fire & Certification Director, Optima Systems





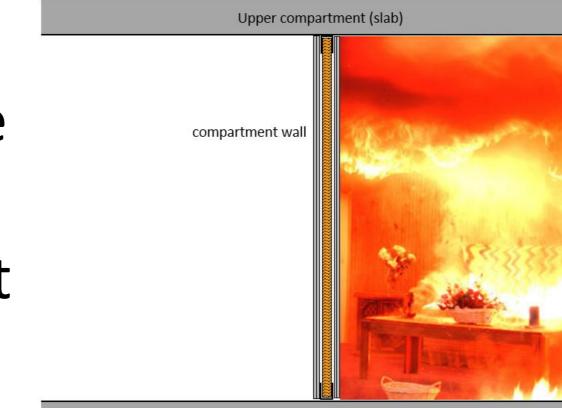
## What is a system?

# A set of connected things or devices that operate together

# **Compartmentation**?







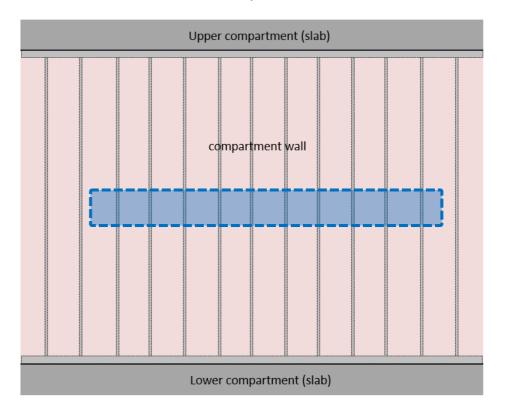
Lower compartment (slab)



# Contain a fire to the compartment of origin





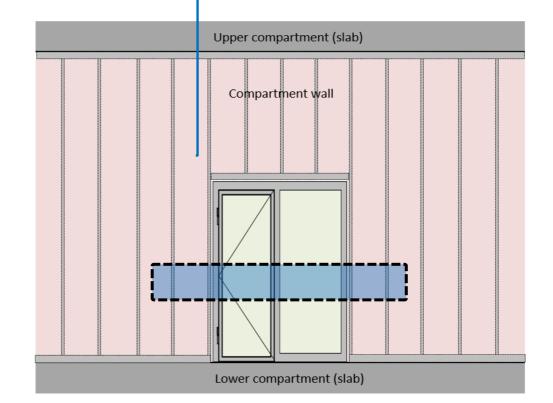


### 1. the solid wall







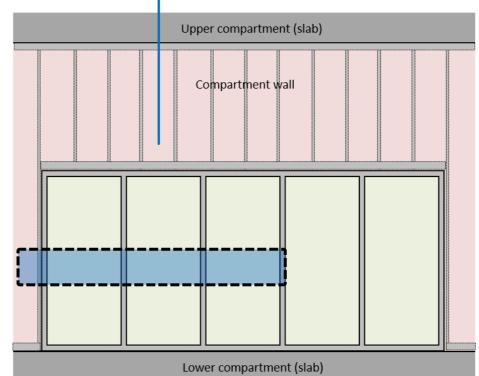


### 2. a fire door







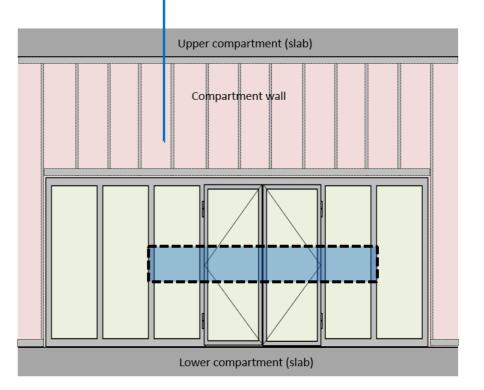


# 3. fixed glazing





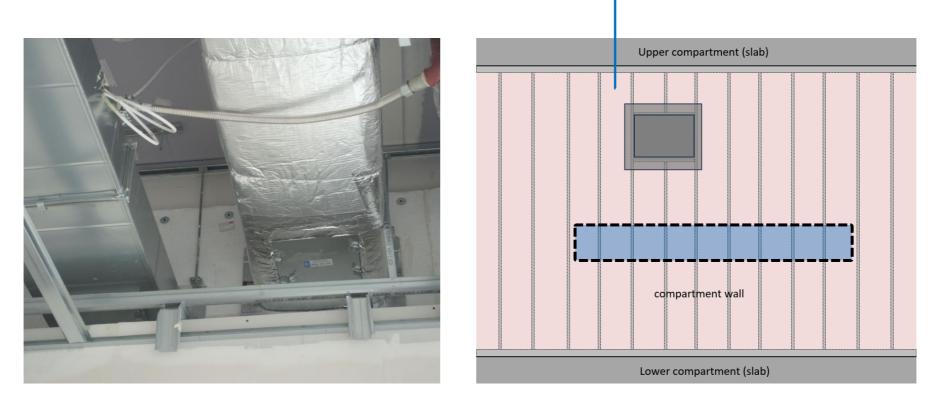




## 4. fire door & glazing





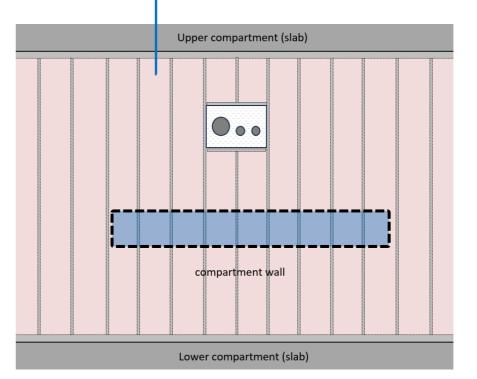


## 5. ducts with dampers









# 6. pipework







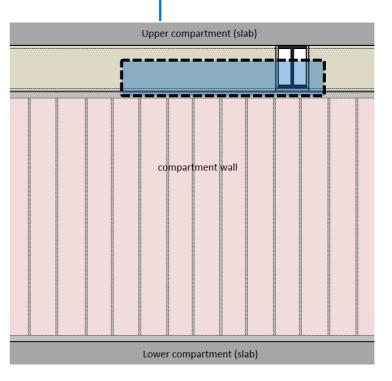
<b>ہے ۔ (ماداد) کا میں ایک میں ایک میں ایک ایک ایک ایک ایک ایک ایک ایک ایک ایک</b>				
	98 <b>. 9</b> 999 <b>. 9</b> 99	3 /2008 /2008	<b>2000</b> 2000	
	compar	tment wall		
Lower compartment (slab)				

## 7. fire-stopping to composite slab







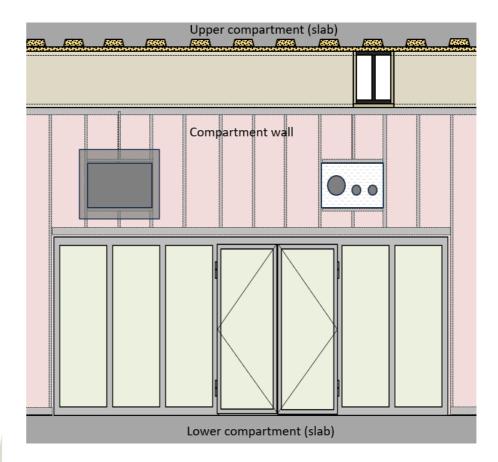


### 8. wall under structural steel





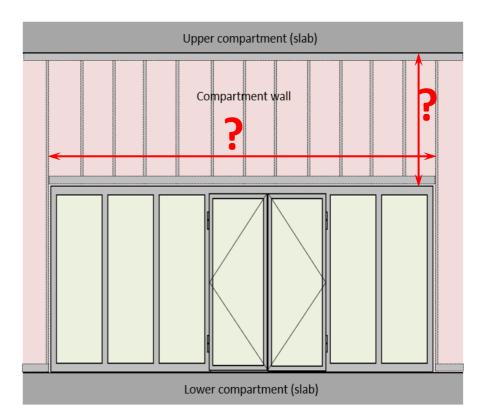
Do all these individual details work when they come together **as a system**?







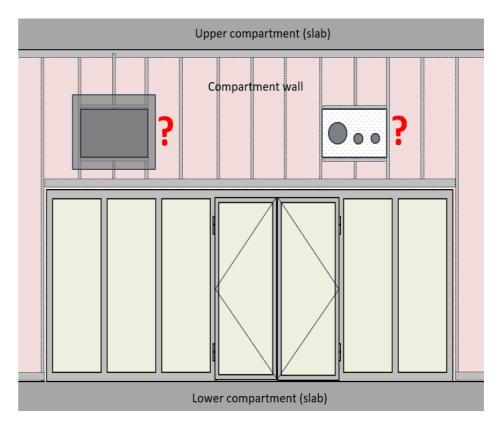
# Are the size & construction of the bulkhead covered by fire test evidence as a supporting construction?







# Does the tested bulkhead construction allow standard tested methods of penetration?





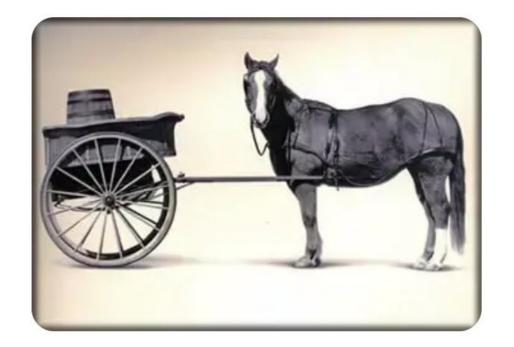




Does the compartmentation work **as a system** according to the evidence?







# We need to stop putting the cart before the horse and have multitrade collaboration much earlier





### **Tony Millen** Managing Director, Fire DNA

### The Information Management Mindset

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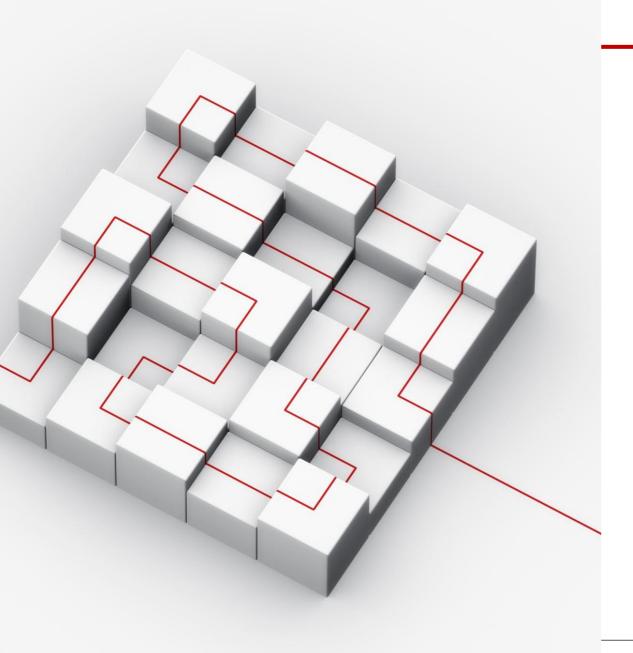
### The Information Management Mindset

Tony Millen FIS Conference 2025









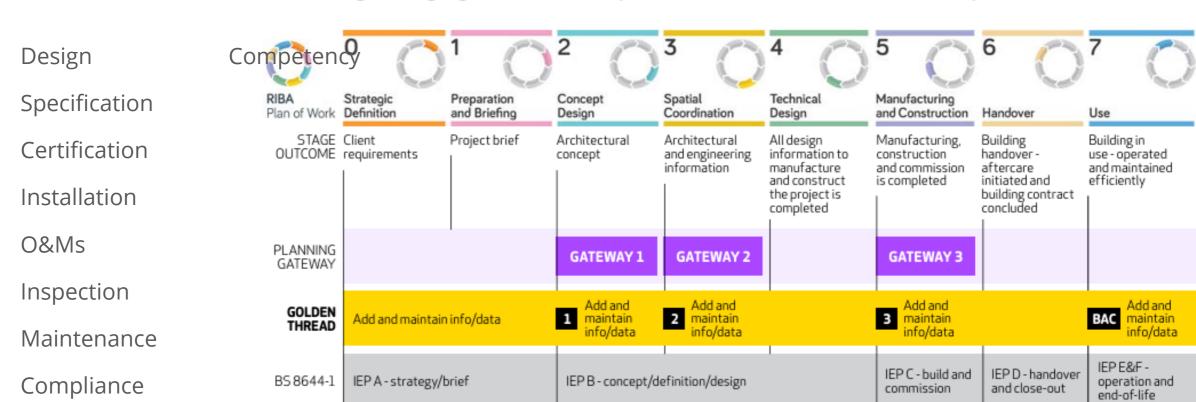
# **Discussion Points**

- Critical data points (planning / construction / occupation)
- Recognising micro to macro systems
- Silo effect and the O&M data puzzle
- The human vs technology factors
- Our data spine model

## **Critical Data Points**





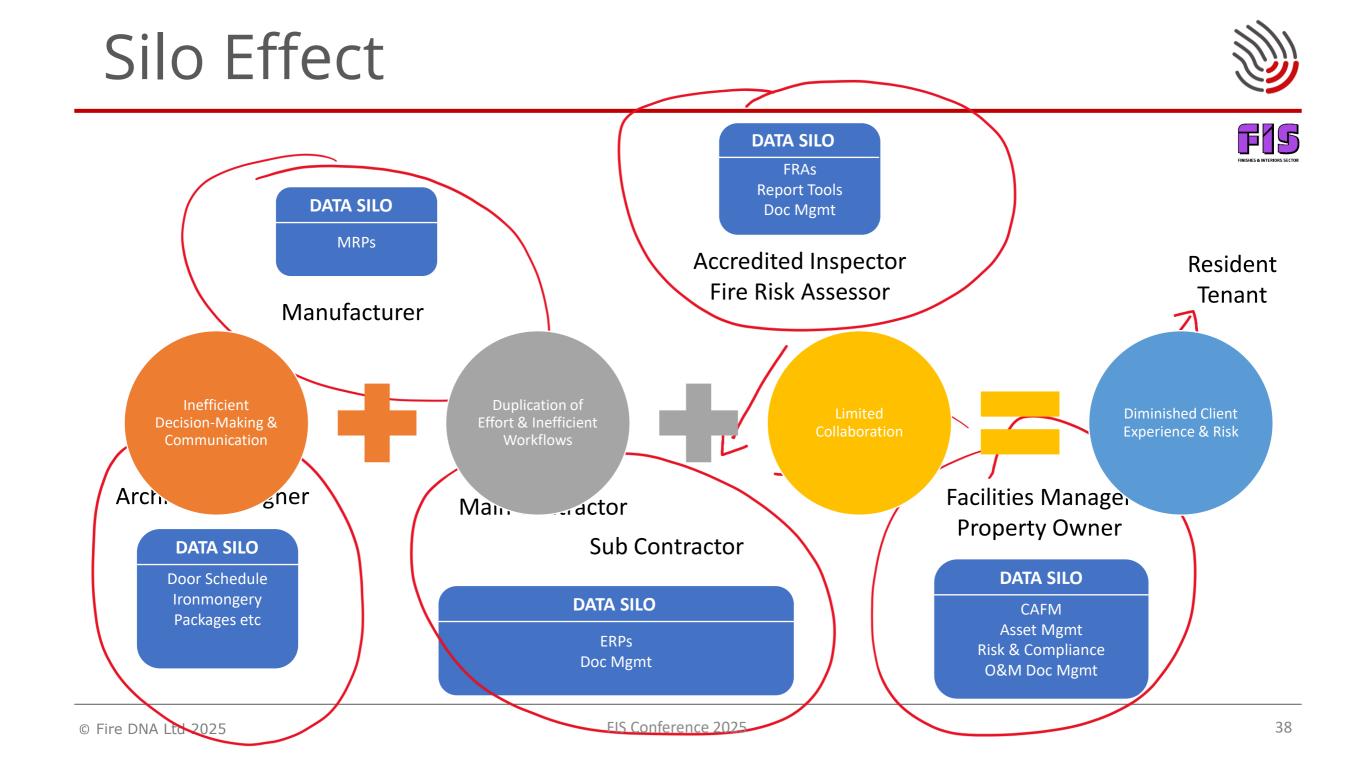


#### Figure 2: Aligning BS8644-1 to Gateways and Plan of Work (based on information courtesy of Siderise)



### System compatibility is critical but so is data completeness, accuracy and accessibility

**SLAB** Building Suspended Ceiling Floors **Steel Stud Wall** Stud and track system Pattresses Insulation Major systems (ie. Compartments Type Fixings forming a collection of mini Fire protection (putty pad) Board types & layering systems) Finishings **Service Penetrations** Mini systems (ie. Walls / Barriers / Services Materials Partitions possibly containing Firestopping method micro systems) **Door Elevations** Leaf Vision panel Frame Micro systems (ie. openings) Overpanel Side panels Seals & intumescents Architectural ironmongery **Raised Floor SLAB** 



## **O&M** Data Puzzle

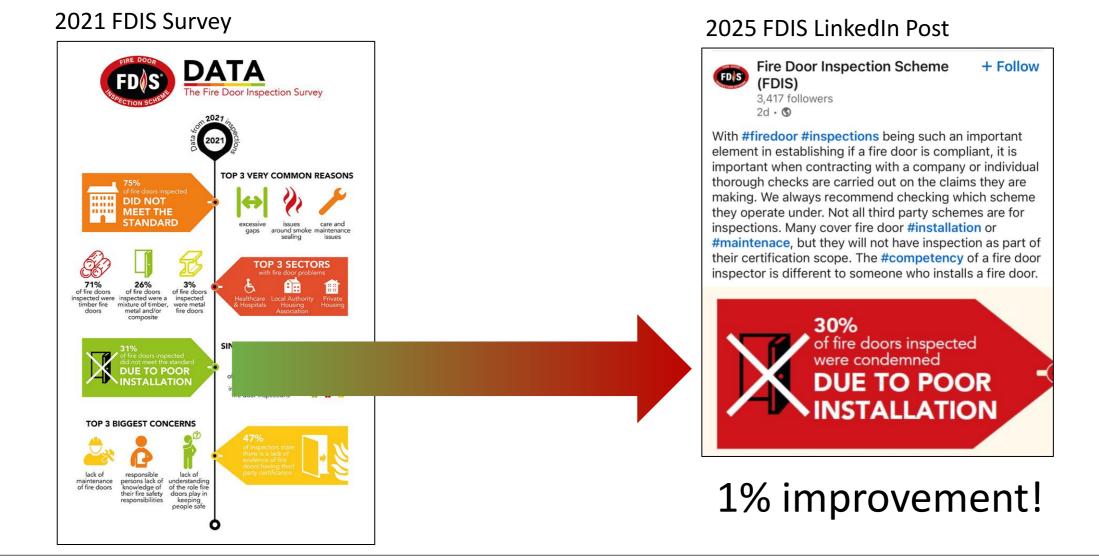




### So what's changed in the last few years?







# Where's the problem...



#### Example Human Factors

Competency Skills Behaviour Culture Knowledge Morals Need



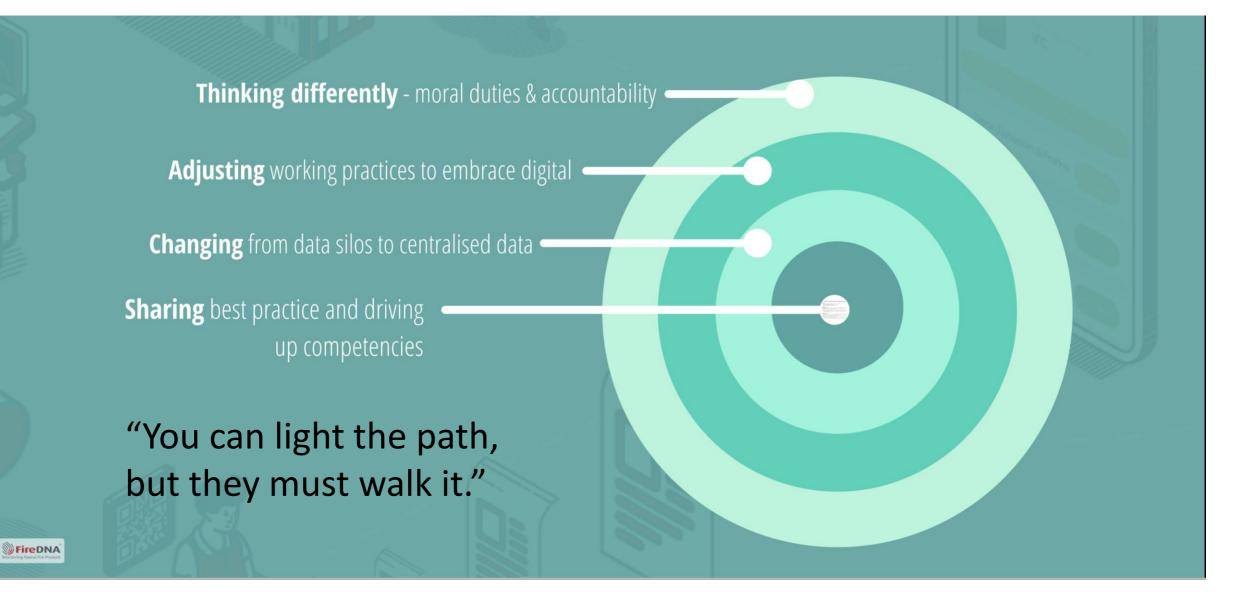


#### **Example Technological Factors**

Suitability Cost Time Common Standards Usability Accessibility

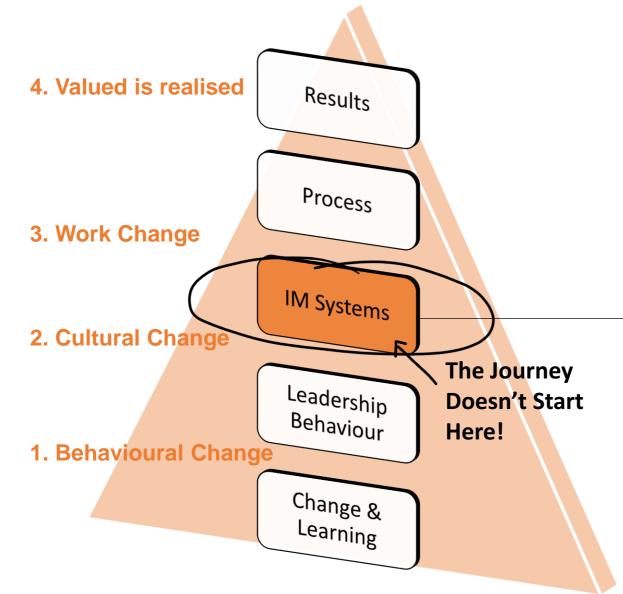
## Starts with behaviour & culture





# Organisational Transformation





**Data Integration**: Implementing systems that allow seamless data sharing and integration across different departments and stakeholders. This can be achieved through the use of **centralised databases or cloud-based platforms** that provide real-time access to information

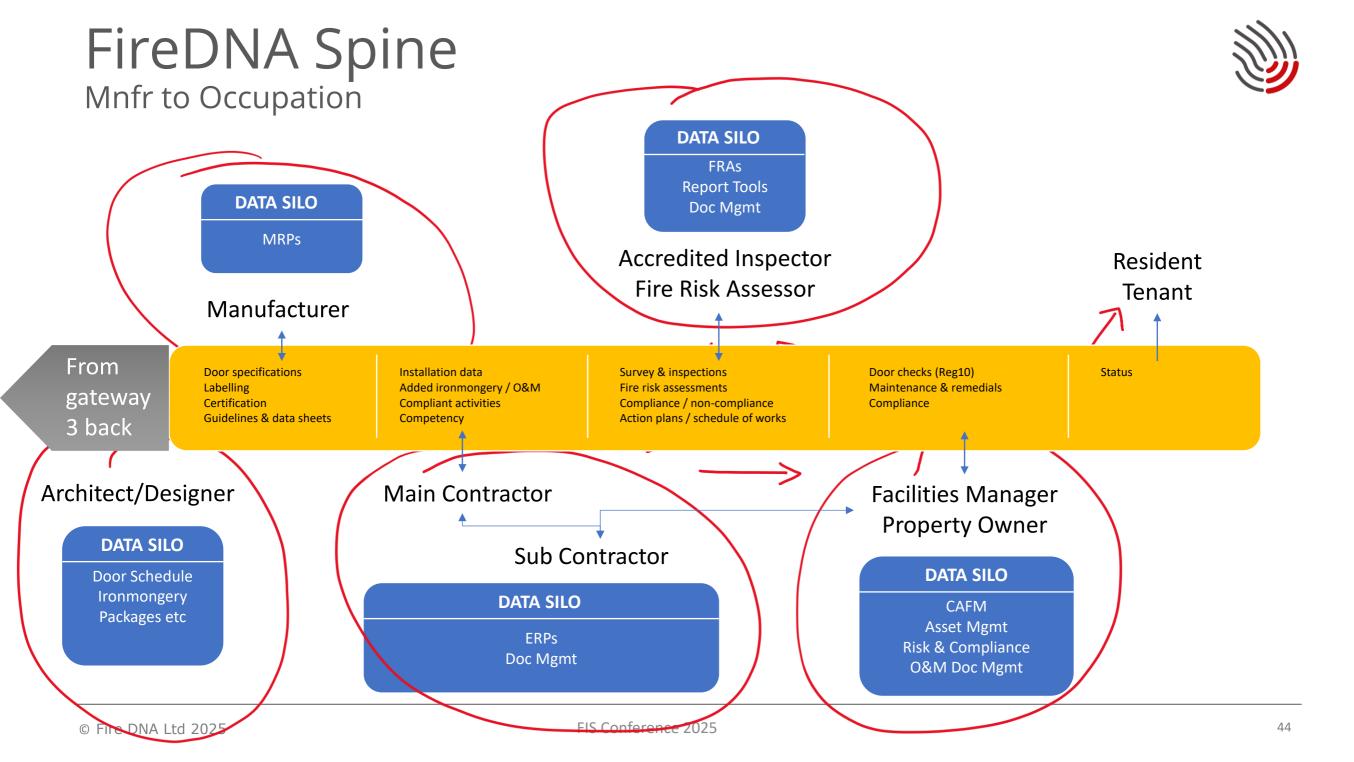
**Standardisation**: Establishing common standards for data entry, storage, and retrieval to ensure consistency and accuracy. This includes using standardised formats and protocols for data exchange

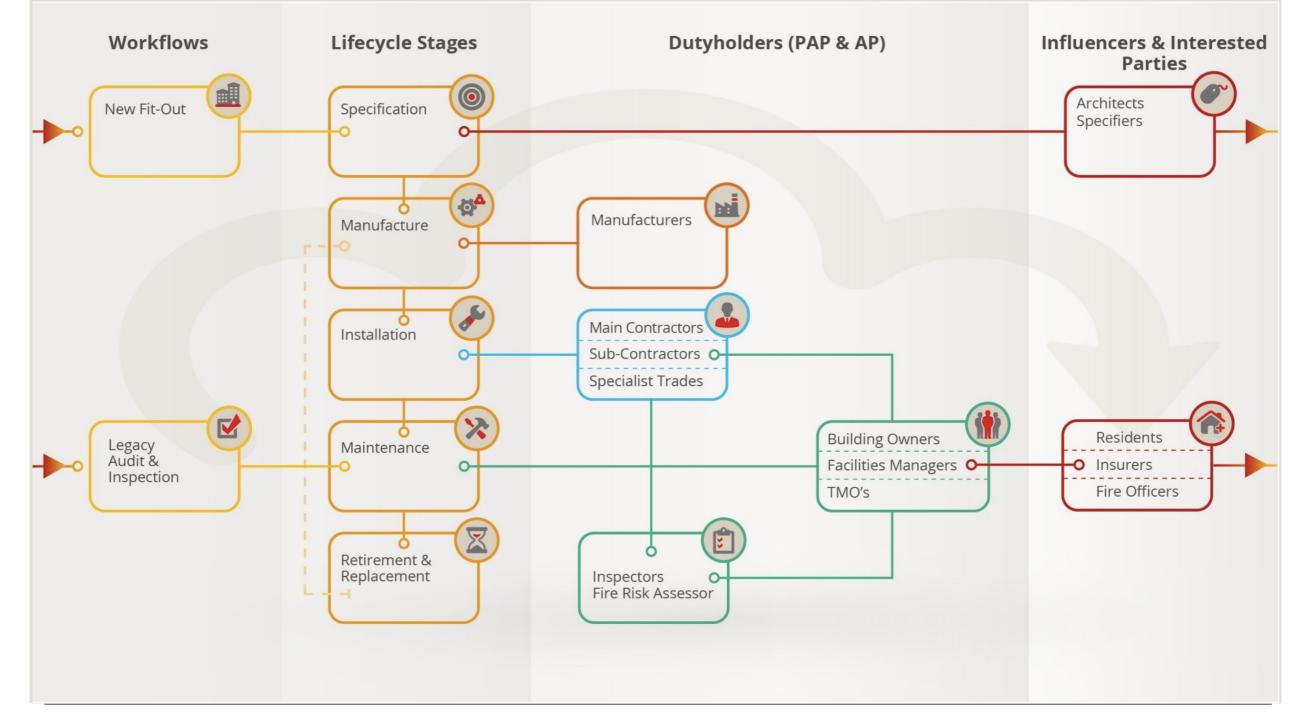
**Collaboration Tools**: Utilising collaboration tools and platforms that facilitate communication and teamwork among stakeholders. These tools can help break down barriers and encourage the sharing of information

**Training and Competency**: Providing training and resources to ensure that all stakeholders are competent in using the information management systems and understand the importance of data sharing

**Transparency and Accountability**: Promoting a culture of transparency and accountability where data is accessible to those who need it, and there is a clear audit trail of data usage and modifications

**Regular Audits and Reviews**: Conducting regular audits and reviews of information management practices to identify and address any issues related to data silos





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# Panel Debate

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By Kingspar

We'll be right back