Section 14 of the (Yellow Book) Guide D covers a wide range of subject matter with lots of interdependencies so I have put together this presentation as a “mind map” rather than the usual PowerPoint bullet lists.
• Section 14 covers collection, management and exchange of data with lifts (and to a lesser extent with escalators)

• It is a subject area undergoing rapid and continual change

• As a result there is little standardisation in an area which needs to provide many different types of users and stakeholders with consistent points of reference.

• So Section 14 is unusual because, due to the lack of published standards, the text instead makes reference to marketing material from both equipment suppliers and service providers – though this is purely for the purposes of example and is no way a recommendation.

• In this respect, the 2020 version is already out-of-date and it is likely that the 2025 Section 14 will begin the same path as soon as it is published!
Lift surveys are often conducted to indicate the likely demand patterns in an existing building, for example, as part the design study prior to a modernisation.

By their nature are labour intensive and therefore cover only one or two representative days.

However, with the advent of destination control call stations it is possible to conduct longer term surveys with automated data-collection for example to tune parameters of the controlling algorithm with the objective of improved demand handling and performance (reduced energy consumption), which is covered in the following subsection...

In the 2025 version I want to say a bit more about who owns the data.
The next two sub-sections cover a shared set of subjects - mainly for lifts but with a subset also relevant to escalators and moving walkways.

**Data-logging** – extraction and recording of raw data from the lifts

**Data-management** - storage, processing, and analysis

**Data presentation** – which involves understanding the audience

This is a mixture of equipment and services

With all these capabilities, it is very important to understand **who benefits** and in **what ways**.

It is important not to be carried away by the gadgetry and to be wary of implementation **incompatibilities** that may lead to **customer lock-in**.

**Who owns the data** – beyond the statutory requirements of GDPR and the management of personal data.

The **raw data belongs to the owner of the lifts** which generates it. That is used by a service provider, possibly to “teach” an AI system for fault identification and prediction.

The prediction information thus belongs to the service provider. If the building owner changes service provider what access rights should they have to the **knowledge base to which they have contributed**?
Not simply a technical solution – people, process & technology:

• All staff in the suppliers and users businesses
• All business processes - a way of working

• Involves all phases from product design to operation maintenance to decommissioning

Use of third party software libraries and expert collaborators is recommended to ensure continuing protection against the latest evolution of threats.

A number of specifications and guides have been developed and more are in the pipeline: These document aspects where the domain of lift systems is a special case of a more generic specification, though often this is fairly simplistic - at the level of shaft communications and access to motor-rooms and similar.

The technical subjects of encryption, firewall and VPN, user authentication tend to describe how to prevent access, but a new range of APIs is being developed to provide access to specific functionality and these urgently require a standardised set of user roles and associated access permissions that are specific to lift domain.

This would provide a reference point and a means of verification that reassures a customer that each supplier’s offering provides a satisfactory level of cyber security.

I am not aware of any works in progress to provide this – any audience suggestions?

• BS ISO 8102-20:2022 ISO/TC 178 N 1041

Planned:
• ISO Technical Report - "Remote Software Updates for lifts and Escalators" planned publication date Apr 2024
• There is a proposal from ETSI for an interface for elevators. For this the (ELA) task force defines the domain knowledge for elevators.
A common **networked** control and monitoring system for building management (particularly a “smart” building) is a sensible objective. Also a common management and reporting platform.

There is however, a significant difference between the usual BMS subjects – Heating, Lighting, Ventilation, Alarms, etc – and lifts because of the **rate at which events occur** and the variety of **types of event** in a system of lifts.

Currently, the most commonly communication protocol for BMSs is **BACnet** and some lift controllers can feed information into BACnet.

**Authorisation** to use functionality according to **user role** is particularly important in this context.
A lot could change or be about to change in the including possible areas of development:
• **Smart buildings**

• **Confederated digital twins** including people-flow (UK Digital Twin Hub may approach this in future)
also: National Cyber Physical Infrastructure; Connected Places Catapult