Building Infrastructures for Healthcare ICT Code of Practice - Project Overview

IET Standards

The issue
The delivery of safe, efficient and cost-effective health care is already critically dependent on digital technology and this dependency is increasing constantly not only for IT and voice systems but also for:
- imaging equipment and other networked medical devices (of which there are more and more);
- facilities/estates systems as such those for: CCTV, access control, alarms, building management.

However, these systems and services cannot be delivered if the network cabling, server rooms, telecomms cabinets, wireless access point locations and other aspects of building infrastructure needed for ICT are inadequate.

There is plenty of feedback from experts in the field and other anecdotal evidence to show that the infrastructures of many healthcare buildings are unable to meet current, let alone future, demand. Shortcomings are not confined to old buildings. There are known to be several quite new hospitals in which the ICT-related building infrastructure has been seriously compromised.

How has this happened?
Though lack of funding is sometimes an issue, it is not necessarily the primary factor and - in any case - the recurring costs of rectifying problems almost invariably exceed the investment that would have been needed to set up the infrastructure suitably in the first place. Some of the key causes of the shortcomings are as follows.
- Because this type of major project is relatively infrequent in most NHS organisations, there is often a lack of experience in specifying, procuring and maintaining the infrastructure in question.
- Unclear accountability and/or responsibilities because, in many NHS organisations, the relevant infrastructure is typically within the remit of both IT on the one hand and Estates/Facilities on the other. It is often the case that neither has the necessary understanding of the other's area.
- Cabling installers and other suppliers are frequently required to work to specifications which are incomplete or unclear. This is because many NHS organisations or their contractors do not have the necessary expertise in this area.
- In new building or large refurbishment projects, there are usually many levels of subcontracting and in some cases the lead or prime contractors do not pay enough attention to the specification and the installation of the infrastructure in question.
- Installers accustomed to office and similar premises are sometimes unaware of special requirements (such as infection control or 24/7 occupation of clinical areas) in healthcare.
- The infrastructure is rarely, if ever, audited or subjected to independent scrutiny.

What's the solution?
There is widespread consensus that the lack of accessible and relevant standards or even guidance on the topic is one of the main causes of problems.

There are several British Standards (particularly the BS EN 50173, BS EN 50174 and BS EN 50600...
series) as well as other documents which address building infrastructures for ICT. They are, however, relatively long and need some expertise to apply effectively. Many of the requirements are not relevant to healthcare and there are also many options to select from.

To address this, IET Standards has been sponsored to develop a Code of Practice (CoP) specifically for healthcare buildings (of all types including hospitals, clinics and GP surgeries). The CoP will be free of charge to all NHS organisations. It will be formally endorsed by the NHS as well as a number of professional bodies as definitive guidance. The CoP is aimed at all key stakeholders including:

- NHS ICT specialists including CIOs and CCIOs;
- NHS Estates/Facilities specialists;
- Specialists in Medical Imaging, PACS, Medical Physics, etc.;
- Healthcare premises owners, developers and landlords;
- Building design and construction professionals including architects, engineers and builders;
- ICT industry (cabling and other infrastructure-related companies, suppliers of healthcare IT systems).

Development process - how to help

IET Standards\(^1\) has a track record in developing standards (particularly the Wiring Regulations) and guidance, such as codes of practice, on a wide range of topics. Two examples\(^2\), which happen to address cybersecurity of ports and ships, are currently available free of charge (as, in the case of this project, their development was sponsored) and these give an idea of the style and format of the forthcoming CoP.

IET Standards adopts a rigorous and highly collaborative approach when developing a CoP. The document is drafted by a project team whose work is overseen by a steering or technical committee (TC) on which all key stakeholders should be represented. The TC typically meets 3 or 4 times over a period of around a year. Once a full draft suitable for widespread review has been developed, formal (public) consultation takes place and for that a review panel is needed.

We are looking for TC or review panel members who either have relevant experience or are potential users and would like to influence the development of the CoP. In this connection we are approaching a wide range of professional bodies including the IET and BCS (British Computer Society) as well as trade associations. We are also inviting senior eHealth representatives from each of the home countries. All significant contributions will be credited in the finished document. If you are interested in participating in the project, please contact one of the following:

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To avoid any doubt, the project is concerned with ensuring that the infrastructure in healthcare premises can support existing and foreseeable demand for digital technology or services. It will not address the selection, configuration or management of ICT (e.g. servers) or other digital equipment.

\(^1\) [https://www.theiet.org/resources/standards/](https://www.theiet.org/resources/standards/)

\(^2\) [https://www.theiet.org/resources/standards/cyber-security.cfm](https://www.theiet.org/resources/standards/cyber-security.cfm)