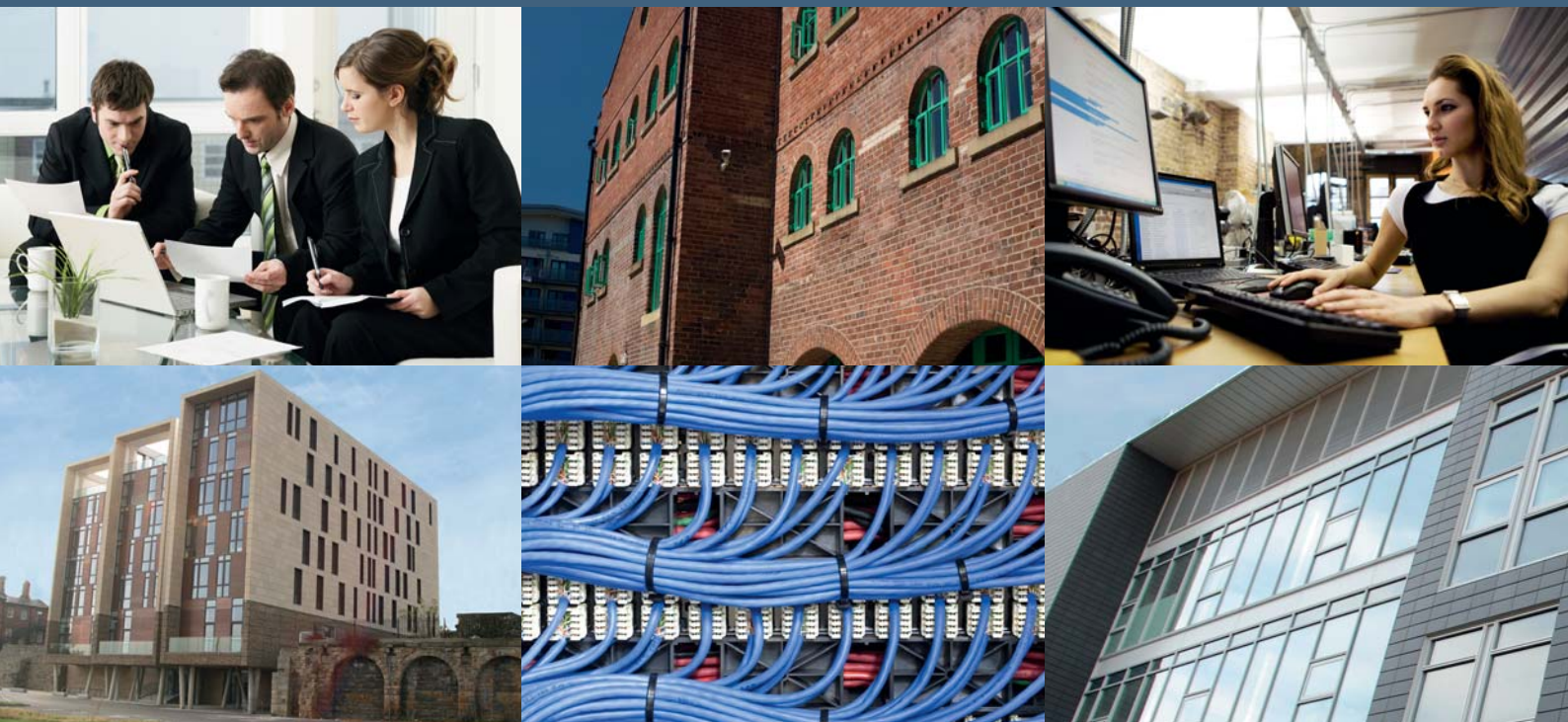


PAS 700:2009

Provision of ICT facilities and services in workplaces

Specification



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Foreword

This Publicly Available Specification (PAS) was sponsored by Yorkshire Forward¹⁾ and developed by the British Standards Institution (BSI). It came into effect on 16 April 2009.

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- Lambert Smith Hampton
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- UK Business Incubation
- W2 Networking Limited t/a The Wired Workplace

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Information about this document

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1) www.yorkshire-forward.com

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Presentational conventions

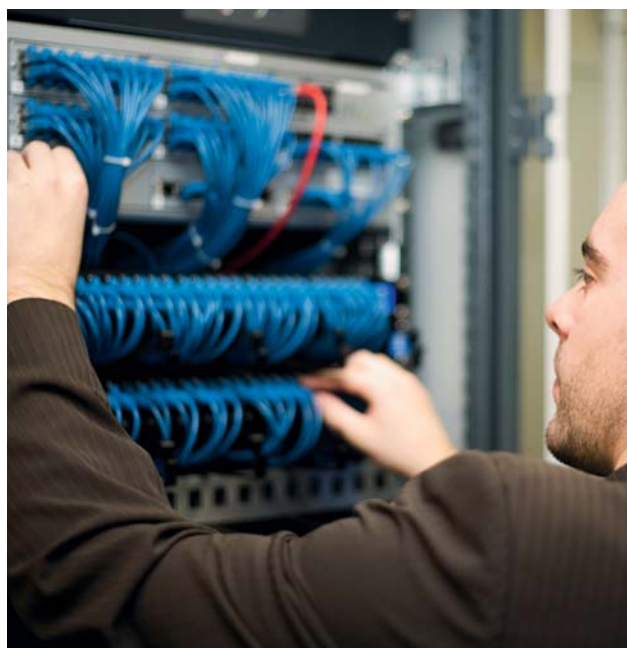
The provisions of this PAS are presented in roman (i.e. upright) type. Its requirements are expressed in sentences in which the principal auxiliary verb is “shall”.

Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.

Contractual and legal considerations

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a PAS cannot confer immunity from legal obligations.



0 Introduction

0.1 Background

When an occupier moves into a workplace there is usually some effort required to set up ICT facilities and services. This could either be a simple task or a major challenge depending on what is already in place. There may be unforeseen costs in bringing in a broadband connection from a distant telephone exchange or routing telecommunications cables through solid concrete floors.

The extent of installed ICT facilities, and the ease with which ICT services can be deployed has become a significant consideration for organizations choosing to relocate.

This PAS provides a specification covering most common ICT facilities and services. It cannot and does not provide a comprehensive specification or even a "shopping list" of all of the ICT facilities and services that an occupier might require.



0.2 Layering of ICT facilities and services

ICT facilities and services are implemented in layers. This PAS splits ICT facilities and services in buildings across four layers. Layers 1 and 2 are facility based. Layers 3 and 4 are service based. Each layer is dependent on the layers below it for operation, i.e. layer 3 services require layer 2 facilities to work.

- **Layer 1: Building** – covers the characteristics and facilities of the building itself and their suitability for ICT usage. It includes ductwork, risers and other permanent facilities necessary for the deployment of cabling. It also covers aspects of flooring, lighting, power and physical security that relate to ICT usage.
- **Layer 2: Infrastructure** – covers the ICT facilities within the building such as cabling, communications rooms, wiring closets, wireless networking, network security, power supplies and the availability of external services such as the Internet.
- **Layer 3: Basic services** – covers essential services such as telephone and Internet connections and their related support.
- **Layer 4: Extended services** – layer 4 builds upon layer 3 to include other ICT services such as telephone and video conferencing, VPN support, hosting and co-location services.

This PAS uses the four-layer concept to assist in identifying which ICT facilities and services are implemented in a given workplace and in determining whether those facilities and services meet the requirements of this PAS.

0.3 Workplace types

0.3.1 General

Workplaces are made available in varying states of readiness for an occupier to move in. The building(s) or parts of a building that comprise a workplace may be marketed in many different ways, including with descriptions such as "shell and core", "category A", "category B" or "turnkey". Each of these terms indicates a differing state of readiness and each requires a different level of investment in order to prepare the workplace for occupation.

This PAS divides the range of workplace offerings into two groups, those that are sufficiently fitted and serviced to be ready to occupy, known as "ready-to-occupy workplaces" (defined in 3.2.2), and those that are not, known as "part-fitted workplaces" (defined in 3.2.1). This division is made in consideration of two

large and distinct groups of prospective occupiers:

- Occupiers that are looking for a workplace where they can quickly establish themselves with little or no investment in infrastructure.

This market is served by many kinds of managed workspace offerings including business centres, science and technology parks and business incubation centres. These types of workplaces are usually rented rather than purchased and are often multi-tenanted campuses with some of the operator's staff located on site. Basic services such as electrical power, heat, light, telephone and the Internet will already be installed and readily available to a new occupier. Such workplaces are likely to be of interest to occupiers that do not wish to make an investment in any particular workplace and its infrastructure, perhaps because they are a small business, in transition or because they simply prefer to outsource.

- Occupiers that are looking for a workplace where they can install their own infrastructure and procure their own services.

These types of workplaces are likely to be purchased or secured on a long lease because of the investment required. Such workplaces are likely to be of interest to occupiers that wish to reduce costs in the long term or that have particular specifications and the skills to procure the installation of the required ICT facilities and services.

The primary focus of this PAS is the ICT facilities and services in office spaces rather than for industrial processes, outdoor working, transport, etc. However, the two categories of part-fitted and ready-to-occupy workplaces were selected to allow for a wide range of business uses and the reader may apply the principles of this PAS to a spectrum of situations from office spaces within industrial premises to home working.

Despite the focus on workplaces that are offices, one other distinct category of workplace is specifically included within the scope of this PAS, the public workplace (defined in 3.2.3). Although the occupier never "moves in", this workplace type is given special consideration because it is commonly available and will be used by many office workers.

Public workplaces are provided with ICT facilities and services for the use of visitors or the general public. They include for example services provided in public libraries, waiting rooms at railway stations, conference rooms in hotels, exhibition halls and WiFi hotspots in cafes. It does not include the public access areas in a part-fitted or ready-to-occupy workplace, such as meeting rooms and reception areas.

The terms part-fitted, ready-to-occupy and public workplaces are defined in 3.2.1, 3.2.2 and 3.2.3 respectively and are accompanied by notes that provide further information and some examples.

0.3.2 Requirements for each workplace type

This PAS specifies the provision of ICT facilities and services in part-fitted, ready-to-occupy and public workplaces. It recognizes that within each of these three workplace types there is a spectrum of offerings. Some part-fitted workplaces will be little more than a shell and others may have been recently vacated and simply need the services re-connecting; some ready-to-occupy workplaces will only have basic services and others may have a wide range of additional services on offer; some public workplaces will simply be WiFi hotspots and others will be business centres in hotels with audio visual and printing facilities.

This PAS identifies for each workplace type a set of minimum requirements for the provision of ICT facilities and services and a set of further requirements for additional facilities and services if provided. Table 1 describes in detail how the requirements in this PAS apply to each workplace type.

0.4 ICT-ready work areas, potential work areas and user capacity

An important consideration of this PAS is that the number of potential work areas (defined in 3.4.2) in a workplace will usually be greater than the user capacity (defined in 3.3.2) of a workplace to allow for flexibility in the configuration of the space. This means that ICT-ready work areas (defined in 3.4.1) will not be set up at every potential work area.

0.5 Operators, occupiers and service level agreements

Workplaces and their related ICT facilities and services are made available under a wide range of contractual arrangements, for instance, they may be let, sublet or purchased. This PAS aims to deal with all of the possible scenarios by using the term "operator" for the provider of the workplace and the ICT facilities and services, and the term "occupier" for the occupiers of the workplace and the beneficiaries of these facilities and services. Often the operator will be a middle-party and not the owner of the building or the ultimate supplier of the ICT facilities and services.

A key principle throughout the PAS is that occupiers have service level agreements (SLAs) with operators and operators have SLAs with providers further up the contractual chain.

1 Scope

This PAS specifies requirements for the provision of ICT facilities and services in a workplace. The requirements are divided into four layers and cover:

- a) layer 1: the building (see Clause 5);
- b) layer 2: the infrastructure (see Clause 6);
- c) layer 3: basic services (see Clause 7); and
- d) layer 4: extended services (see Clause 8).

NOTE 1 *Guidance on the layered approach to ICT facilities and services is given in the Introduction (see 0.2).*

The primary focus of the PAS is office spaces. It allows for three workplace types:

- 1) part-fitted workplace;
- 2) ready-to-occupy workplace; and
- 3) public workplace.

NOTE 2 *Guidance on workplace types is given in the Introduction (see 0.3).*

This PAS specifies the requirements that are applicable to each workplace type (see Table 1).

It is applicable to workplaces located in part of a building, in a whole building or on a campus.

It is applicable to:

- those specifying ICT facilities and services for a workplace, including architects, developers, agents, operators and occupiers; and
- those wishing to assess the ease of deployment, extent, usability, reliability and flexibility of ICT facilities and services in a workplace or potential workplace.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

BS 6701, *Telecommunications equipment and telecommunications cabling – Specification for installation, operation and maintenance*

BS EN 50173-1, *Information technology – Generic cabling systems – Part 1: General requirements*

BS EN 50173-2, *Information technology – Generic cabling systems – Part 2: Office premises*

BS EN 50173-5²⁾, *Information technology – Generic cabling systems – Part 5: Data centres*

BS EN 50174-1, *Information technology – Cabling installation – Part 1: Specification and quality assurance*

BS EN 50174-2, *Information technology – Cabling installation – Part 2: Installation planning and practices inside buildings*

BS EN 60603-7 (series), *Connectors for electronic equipment*

IEEE 802.11, *IEEE standard for information technology – Telecommunications and information exchange between systems – Local and metropolitan area networks – Specific requirements – Part 11: Wireless LAN medium access control (MAC) and physical layer (PHY) specifications* (Available for free from: <http://standards.ieee.org/getieee802/portfolio.html>.)

2) BS EN 50173-5:2007 is in the process of being amended.

3 Terms and definitions

For the purposes of this PAS the following terms and definitions apply.

3.1 buildings

3.1.1 campus

workplace comprising more than one building

3.1.2 workplace

place where work requiring the use of ICT facilities and services may be carried out

NOTE 1 In the context of this PAS, workplaces include offices, office facilities in industrial campuses and public workplaces such as public libraries and conference rooms in hotels.

NOTE 2 A workplace may be part of a building, a whole building or a campus.

NOTE 3 Some requirements will also be relevant to home working and mobile working, but home working and mobile working are not the primary focus of this PAS.

3.2 workplace types

NOTE These classifications of the market offering of the workplace (see 0.3.1) are provided in order to identify the relevant specifications using Table 1. These classifications consider the market offering of the whole building and not the level of fit-out of the ICT facilities and services in particular.

3.2.1 part-fitted workplace

workplace type that requires further fitting-out before it is ready to occupy

NOTE Part-fitted workplaces will generally include those that are marketed as:

- a) shell and core – where the office areas are left as a shell ready to be fitted-out to category A [see item b)] or to category B [see item a) of Note to 3.2.2] and common areas, such as the main entrance and reception, lift and stair cores, lobbies and toilets, may be fitted out to a higher specification or even completed and furnished; and
- b) fitted-out to category A – this varies between developers but usually indicates that the space has been largely prepared for use as an office, including raised floors, suspended ceilings, finishes to walls, blinds and the installation of the mechanical and electrical services throughout the office space.

3.2.2 ready-to-occupy workplace

workplace type that is ready for use as an office

NOTE Ready-to-occupy workplaces will generally include those that are marketed as:

- a) fitted-out to category B – this usually means that the

space has been completed in accordance with the operator or occupier's specific requirements. This may include partitioning, carpets, reception facilities, kitchen facilities, meeting rooms, selected finishes and lighting and perhaps even furniture. Category B buildings sometimes have additional services which may include ICT services. Carpets, floor boxes and grommets may be present in a category A or a category B building, but often they are left until category B so that the occupier can specify them; and b) turnkey – this is where the category B specification [see item a)] is such that the workplace is ready for occupation.

3.2.3 public workplace

workplace type where ICT facilities and services are made available for the use of visitors or the general public

NOTE This includes for example public libraries and conference rooms in hotels. It does not include the public access areas in a part-fitted or ready-to-occupy workplace, such as meeting rooms and reception areas.

3.3 roles

3.3.1 user

person using the ICT facilities and/or services in the workplace

3.3.2 user capacity

maximum number of users that can be accommodated in a workplace

NOTE The Health and Safety Executive provides guidance on user capacity.

3.3.3 subscriber

person or organization buying an ICT service on behalf of (a) user(s)

3.3.4 communications service provider

external organization that provides communications services to a workplace

3.4 work areas

3.4.1 ICT-ready work area

area in a workplace for use by one user at any one time, which is provided with ICT facilities and services and is ready for use

NOTE 1 Requirements for ICT-ready work areas are not applicable to potential work areas, whereas all requirements for potential work areas are applicable to ICT-ready work areas.

NOTE 2 An ICT-ready work area does not necessarily include a desk and may just be somewhere a user connects to a wireless network or where a telephone point is provided.

3.4.2 potential work area

area in a workplace where an ICT-ready work area may be set up

NOTE The number of potential work areas in a workplace will usually be greater than the user capacity (defined in 3.3.2) of a workplace to allow for flexibility in the configuration of the space. This means that not all potential work areas will be “converted” to ICT-ready work areas (defined in 3.4.1).

3.5 information and communication technology (ICT) facilities and services

NOTE The term “ICT” is used in preference to “IT” in this PAS to make it explicit that telephone facilities and technologies such as wireless mobile telecommunications are included.

3.5.1 ICT facilities

physical layer of cables and equipment that is used to deliver ICT services

NOTE Guidance on the layered approach to ICT facilities and services is given in the Introduction (see 0.2).

3.5.2 ICT services

services delivered over the ICT facilities and services related to the provision of the ICT facilities and services

NOTE 1 Guidance on the layered approach to ICT facilities and services is given in the Introduction (see 0.2).

NOTE 2 The Internet is an example of an ICT service delivered over the ICT facilities. Technical support is an example of an ICT service related to the provision of ICT facilities and services.

3.5.3 co-location

provision of shared space for the installation and hosting of subscribers’ ICT facilities

3.5.4 pathway

defined route for a cable between termination points

3.5.5 distributor

point where cables interconnect or cross-connect using either passive or active equipment

