Service Desk

Service Desk Contents

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Key

Glossary term: Glossary term Cross reference: Cross reference



Framework for ICT Technical Support



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SD 1 Introduction to Service Desk

Aim

Is there a place in your school where you can log faults, request new equipment and find out how to use software? If not, it's time to discover the advantages of having a service desk.

SD 1.1

SD 1.2

Objectives

The objectives of this section are to enable you to:

• understand how recording calls and keeping records can benefit the school

The aim of this section is to introduce the topic of the service desk and to help you implement the process in your school with a minimum of preparation and training.

- understand how the single point of contact could work for you
- understand at which stage to make contact with a technician
- decide how to enable users to log calls and make requests
- show how the call log can form the basis of a knowledge base
- understand how using the service desk will help the technical support function become more effective
- decide how the service desk can help gather details for the reports described in FITS.

SD 2 Overview

The concept of the Service Desk is to provide help for all ICT users in the school.

The service desk is the single point of contact between IT and users, where they can submit enquiries, log incidents, obtain help and request change. The principal responsibility of the service desk is to enable communication with users and to enable actions to resolve events affecting the use of computer systems.

The service desk not only handles incidents, problems and questions, but also provides an interface with customers – for example to request equipment moves, software installations or help on how to use a system. The role of single point of contact at the service desk can also perform some aspects of financial management and configuration management, while also helping with the production of reports and other administrative functions in other areas of FITS.



2.1

How a service desk works

When users have a problem, complaint or question, they want answers quickly. More importantly they want a result – their problem solved.

The service desk can start very simply by being a place to log calls about incidents and should be the single point of contact between the school and technical support staff either based internally or externally. There are three ways of operating a service desk which have increasing levels of complexity:

- 1. paper-based systems
- 2. simple spreadsheets or database systems
- 3. advanced service management systems.

For each system the first step is to log the call:

• logging incidents and making requests.



Paper-based systems

Many service desks start as paper-based systems. We have listed the advantages and disadvantages of these in the table below.

	Benefit	Disadvantage
Simple to set up and maintain	•	
Individuals can record and update details and solutions	•	
Minimum amount of detail is recorded	•	
Incidents can only be logged; call tracking is not available		•
Often the calls are not prioritised		•
Often the written solution will not aid new call diagnosis		•
Difficult to produce reports from paper based systems		•
If the system is simply a technician with a notebook, it will always be reactive		•

Good processes, procedures and documentation will not enhance a paper-based system.

SD (2.1.2)

Simple spreadsheets or database systems

The table below shows the benefits and disadvantages of electronic systems.

	Benefit	Disadvantage
Improved efficiency as calls can be prioritised and tracked	•	
Accuracy by using a standard way of recording the call	•	
Fast access to past solutions	•	
Availability of management information about known errors and call histories	•	
The system does take time to set up		•
Users need to be aware of how it works		•
The data should be backed up – even if to just a floppy disk		•

These systems are not usually sophisticated enough to be used for looking at incident trends or be integrated with configuration details and change requests to create management reports.



Advanced service management systems

The table below shows the capabilities of today's advanced service management systems.

	Benefit	Disadvantage
Manage, track and monitor requests	•	
Allow priority levels to be set for incidents	•	
Provide response time advice to the user	•	
Manage, track and monitor contractual obligations with technical support providers	•	
Track staff resources and workflows	•	
These systems will also integrate with the other essential service components as described by FITS, for example, the management of assets and configuration	•	
The cost of these systems may make them prohibitive to schools with a small IT infrastructure and small budget		•

They are well placed in bigger schools with many different technical systems to support, although this makes them a disadvantage to some primary schools.

SD (2.1.4)

Logging incidents and making requests

There are various ways to log incidents and make requests. The success of the method used depends on the size of the school and the flexibility of those providing technical support.

- Corridor approach
- Visit office
- Paper record of call
- Phone or email
- Interactive

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Corridor approach

This is a similar way of logging calls as the 'visit office' approach. If a user simply stops a passing technician or person providing technical support to tell them about a fault, they may not even have the opportunity to write down the details of the incident. The user is confident they have 'logged' the incident or request and then feels let down when the call is not acted upon appropriately.

SD (2.1.4.2) Visit office

The user visits the technical support office to report an incident or make a request. This approach inspires confidence in the user – they have discussed the problem with technical support and know that action will ensue.

If those providing technical support are besieged with visitors and do not have time to prioritise their workload or start working on the incidents, this method does not benefit anyone. The staff providing technical support feel they are very busy, but not prioritising their work reduces their effectiveness. This reactive situation does not embrace best practice. SD (2.1.4.3)

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Paper record of call

The user completes a paper form with details of the incident and posts it in an in-tray used by support staff. The tray is often placed in staff rooms or near reception. Multipart copies are useful in giving users a copy of the details they have logged.

The success of this system relies on technical staff collecting the forms and allocating priorities sufficiently quickly to encourage staff to continue using the system. It will fail if users find their form still in the in-tray later in the day.

(2.1.4.4) Registering details by phone or email

In schools which use external service desks, users may use phone or email to speed up the process of logging calls. The user must be armed with information about the system they are calling about, which may include an allocated asset tag number and machine type.

The speed of response is not determined by the speed with which the call can be logged. Users may become frustrated if they are required to provide lots of information to the support team, only to find that the response is not what they anticipated. It is important to make all users aware of the agreed response times with this service.

SD (2.1.4.5) Computer interactive

The user uses a simple online form to log the incident or request. The form is easy to follow and is automatically sent to the technical support team. Having completed the form, the user should be confident that the call will be acted upon and will wait for a response from the support team within the published response time.

Because there is no interaction with a person, it is particularly important to respond within the published response time, or users will quickly avoid this method and use the 'corridor' approach instead.

SD (2.1.4.6) Service Desk calls – Details to be recorded

- Information about the incident or request
- User impact
- Service desk details (to be completed by the single point of contact)
- Resolution

SD 2.2

Who uses a service desk?

Any organisation that needs to understand its technical support requirements will start by implementing a service desk. It will help to put all incidents and requests through a single point of contact to understand what the organisation's needs are and how it is currently addressing them.

Most organisations provide service desks for IT support, building support, HR support – in fact for any department with which staff need lots of interaction. The service desk can be expanded to provide a range of services in the school.

Using the tools and advice on this website will help match the service desk to your school's needs. While case studies can be helpful, knowing your own requirements completely will be fundamental in setting up the technical support required in your school.



Types of service desk

Simple computer systems can accommodate simple methods for logging incidents, making requests and changes (for example, recording into a notebook). When these systems become complex, the simple methods are no longer able to function effectively.

There are three types of service desk:

- informal or basic
- structured or intermediate
- · interactive or advanced.

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Informal or basic service desk

This may involve the 'corridor approach' method of logging calls, which can work in a small school or where the calls per week are fewer than 10.

Some schools that have adopted a structured set-up of the network and computers using standard hardware and software configuration may be able to adopt a basic service desk. If you usually get the same type of calls and have guides about how to fix them, you really don't need to keep extensive detail.

The best way of gauging which service desk will work in your school is for users and those providing technical support to discuss the current situation, highlighting the benefits and pitfalls of each option in your school.

The informal method cannot work successfully in a school that has only a few people providing technical support and yet has many computer systems to support.

Structured or intermediate service desk

This approach recommends providing strict rules about how to log calls, how to approach technical support staff and how to keep user updated with the status of their logged calls. This method may be a first step in trying to provide good technical support in a school with many computers to support. Eventually, once everyone understands the process, the school can move towards an interactive service desk.

These are some of the key steps in the process using a structured or intermediate service desk approach:

- The school ensures that all calls are logged through an agreed system and the corridor approach is not accepted.
- Users are to give technical support staff and others providing technical support as much detail as possible to enable the technician to stand the best chance of solving the problem.
- Staff providing technical support are to ensure that the resolution of the incident is documented and that the user informed when the system is fixed.
- If the fix will take some time, the technician is to update the person reporting the incident and is to find an alternative system that can be used.

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Interactive or advanced service desk

A mature approach to the service desk involves selecting some users to provide local support within their department with the full co-operation of the technical support department. This means:

- dialogue between those providing technical support and users will ensure co-operation and understanding of the computer systems in use
- there is no worry that users will purchase anything outside a pre-approved list and then ask for it to be installed
- those providing technical support will release their knowledge through other staff, notes, training materials and knowledge bases
- those providing technical support work with the school leaders in developing a strategy for all areas of ICT.

This should provide a good platform for best practice in technical support.

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Why have a service desk?

Why decide to have a process to log calls about incidents and making requests?

Computer systems can grow very large from small beginnings. This often appears to happen overnight without being planned and takes users and technicians by surprise. Eventually the management and support of such an environment becomes very expensive, time consuming and frequently an exercise in futility.

There is nothing more frustrating than calling for technical support and getting passed around until you find the right person to speak to – provided, of course, that they are not out at lunch or on holiday or have just gone home.

(2.4.1.1) Benefits of a local service desk in a school

A 'service desk' or 'single point of contact' in a school can provide benefits that are cost effective.

Using a common shared database

Using a common shared database of calls – which can be paper based, on a spreadsheet or in a database – will provide benefits.

- The 'single point of contact (SPOC)' role may enter the call details into a central log that will take the task of recording the information of the fault away from a teacher.
- To reduce time in resolving a call, the log is used for checking how the same incidents were previously resolved (where possible). This is done by using the search functionality within the spreadsheet software.
- The approach will improve the service offered to users and the users' perception and overall satisfaction.
- The call log is used to track progress on calls and ensure that action has been taken.
- Non-technical staff can spot common problems.
- School leaders responsible for budgets and management actions can monitor service levels.
- Decisions on future enhancements can be made by accessing information from the log, to aid in deciding which problem areas to address.

Using a common reporting process

A common way to log incidents and make requests has the following benefits.

- The simple effective incident/request forms should be quick to complete.
- · An incident only requires reporting once.
- The log sheet should be simple and easy to use.
- The form should be easy for all staff to complete and pass to single point of contact.
- Using the same form ensures that, where there are the same difficulties in reporting incidents or making requests, these are spotted.
- It is simple to check when incidents are not effectively resolved, or action has not been taken when required.

Ensuring compatibility of hardware, software and network infrastructure

The service desk can assist school leaders and technicians with strategic planning as they have an understanding of the standard hardware and software currently in use in the ICT infrastructure. The advantage of this is:

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- A standard approach reduces complexity and cost.
- Technicians and those providing technical support can share knowledge of similar set-ups, which can aid in a quick resolution of incidents.
- Users receive training that is appropriate to the same type of equipment. For example – printers, projectors and white boards.
- The network can be monitored using approved tools.
- There should be no misleading configuration requirements.
- Keeping copies of a standard PC configuration that can be copied quickly to other PCs.
- Updates can be made to the standard PC configuration effectively.
- Fixing bugs on one PC and transferring the fixes to other PCs, before they are affected by bug.
- More meaningful management information for informed decisions.
- Better managed infrastructure and control.

Using the same escalation processes and the same communication process

- The single point of contact (SPOC) should check all incident/request forms to
 ensure that they contain enough information for the technician or person dealing
 with the call form.
- The SPOC can log calls to the technician using an agreed, known process this will aid in the technician's understanding of the call.
- SPOC can report on resolutions quickly to the users in the school when the technician has completed the work – due to familiarity with the communication process.
- There will be improved teamwork and communication.
- The users have increased access to support through the single point of contact for communication and information.

Additional benefits to be gained by computerising the service desk

If you computerise a service desk everyone knows what is happening, because requests are accessible by all support staff. The turnaround of user requests is faster, yielding improved efficiency and request tracking, escalation and workflow is improved.

Better information is available in the form of on-line access to:

- known errors, solutions and request histories
- external knowledge sources
- management information is more accessible and accurate
- duplicate, lost or forgotten requests are eliminated
- skilled staff and resources are better used
- complex support tasks and calculations are made easier.

Improved communication about calls

Having a service desk leads to improved communication between technical support and the user during the reporting, diagnosis and resolution of the call. The advantages of this are:

- · better quality and speedier turnaround of calls logged and user requests
- an enhanced focus on a proactive approach to service provision
- a reduction in the negative focus sometimes placed on technicians.



Benefits of a provider's service desk

If the provider of technical support has a service desk that can be contacted by the school, the school and the provider benefit in the following ways.

Providers making localised skills known and available to the school's service desk

- The school's single point of contact is aware of the skill level of the technician.
- · Users do not need to know the skills or abilities of the technician.
- Providers attempting to train staff to use a similar approach will be confident of the service they can provide to the schools.
- Providers will ensure that the technician knows about any special set-ups in the school or any special requirements.
- Providers will attempt to provide the appropriate skill level of technician to complete the work required.

Establishing common processes across all locations and, where possible, common procedures

- Standard form to register incidents and requests.
- Standard log book to record all faults and resolutions: technicians use the same forms in each school they work in.
- Improved usage of ICT support resources and the increased productivity of teaching staff.
- The provider's single point of contact (SPOC) should check all fault forms to ensure that they contain enough information for the technician to start work on the call.
- A third-party provider will train staff to use a similar approach to resolving faults, to enable different technicians to visit the same school if the usual technician is unavailable.

Passing requests to the technician automatically

- The provider should ensure that the technician can always make contact with the school's single point of contact (SPOC).
- The provider's computerised system should enable updates and progress to be entered from on site or off site.
- The third-party provider should ensure that the school will be kept informed of progress.
- The technician is more aware of the details of the incident before visiting the school.
- Planning the resolution can start before the technician arrives at the school.

Compatible systems ensuring strong ICT skills from the technicians

- A standard approach reduces the complexity of the incident and the cost of the resolution.
- Technicians sharing knowledge of similar set-ups can speed the resolution of incidents.
- A knowledge of how the systems work is established, for example what can overload the file server's memory.
- It should be fairly simple to swap out equipment if the replacement is configured identically.
- Familiarity breeds confidence, and using similar equipment shouldn't frighten a user that may be lacking in confidence.



What happens without a service desk?

Where there is no service desk in place, in either a small or large school, the same problems will occur.

- The budget holders have limited knowledge of how much technical support is required and the cost.
- · Incomplete information will exist about an incident.
- There is no record of the calls or requests made.
- A computer could be broken for a while as others assume that someone has reported it.
- It is difficult to track the progress of a call.
- Each new incident takes the same time to resolve, as no previous history is available.
- It is difficult to find the resolution from the person providing technical support.

SD (2.4.1.4) Why record service desk calls?

Why keep a central log of calls?

- There is little evidence about the satisfaction element of how quickly a fault is resolved, as some schools seem resigned to the fact that demands that are more urgent would cost them more.
- Primary schools should have a higher level of support, including technician supported help desks at the very minimum. They should aim to have their calls resolved within the time that is acceptable to the school and not constrained by budget-imposed time limits.
- If the school is unhappy with the service provided, it needs evidence to show where the provider failed its service level agreement.

Common support problems in schools

Many support departments are under pressure to improve service and reduce costs. They tend to work in reactive mode, spending vast amounts of time fire fighting and generally keeping their heads above water.

The current situations in many schools include:

- no structured support mechanism in place for the teaching staff
- low user confidence/perception
- an outgrown user-support system
- support resource under managed
- continually fire-fighting
- · the same problems being resolved repeatedly rather than eliminated
- · support staff continually interrupted in their planned tasks
- an over-dependency on key staff (What do you do when your technician leaves?)
- a lack of focus
- unco-ordinated and unrecorded change taking place because people are too busy to keep records
- an inability to cope with changes in the school, because people are too busy to react to changes
- staff resource/cost requirements being unclear
- an inconsistent quality of call response and response times

- no management information available (decisions being based on I think rather than I know)
- no accurate record of ICT equipment
- no accurate record of the network set-up.

SD (2.4.1.5) Prioritising requests and a common approach

Prioritising requests and a common approach allows for common reporting on incidents.

- A single point of contact (SPOC) should spot trends wherever possible prior to contacting the technician.
- The SPOC can ensure that the urgent problems are addressed first.
- The SPOC can ensure that progress reports from the technician are acted upon when there are difficult incidents (that is, monitor progress of a call).

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2.4.2.2

What does a service desk cost?

A well run service desk that has been designed to meet the school's needs should be cost effective.

- Knowing that calls will be recorded and passed to the person providing technical support will benefit the users.
- Knowing that calls will be prioritised and that best use will be made of the technical staff's time will benefit the budget holder.
- Knowing that the school is able to understand its systems and have a fair idea of the incidents logged will benefit those providing technical support.

Ongoing costs include:

- staff costs for running the system
- training costs for new staff
- updates to logs and reports
- PC and printer upkeep costs.

Time required to run a service desk

Time required to run a service desk? It all depends!

If your school logs fewer than 10 calls per week, it may be simpler to find someone to take on the role of running the service desk as part of their normal daily activities than if you log over 30 calls per week.

If you have decided on the best method for logging calls that suits your school (logging incidents and making requests), then the time constraint will be less. For example – a school with over 300 PCs and one or two staff providing technical support may find that the technical support staff will struggle for time, if the method of logging calls is the visit office or corridor approach.

How much does it cost to set up a service desk?

The initial set-up costs for providing a service desk could include:

- · PC, printer and networking costs
- design of paper forms, online call-logging system, incident log
- · design of reports
- staff training.

SD 3 Implementation guide

In summary, the service desk is the single point of contact between IT and users, where users can submit enquiries, log incidents, obtain help and request changes.

In a small school there will usually be one person looking after the service desk. This person will take the incident sheets from the staff, enter brief details in a log and then contact the technician or person providing technical support. The service desk then does the follow-up work, ensuring that teaching staff know when a fault has been fixed, that technicians are made aware of all the details of the incident and that the school leadership are aware of potential problems.

This guide explains how to implement a service desk.

- Define what needs to be done SD 3.1 Thinking about how the service desk will be used and who will use it makes an important contribution to how you will set it up. If you enable all incidents and requests to be logged through the service desk this will allow: calls to be logged (not necessarily dealt with) out of school hours damaged equipment to be reported by caretakers and cleaners technicians to log calls that others may be able to deal with. If you set up your service desk so that calls can be logged using forms, answer phones or email, you will not always need to have a person manning it. SD 3.1.1 Get leadership commitment Make sure that management commitment, budget and resource are available before you consider setting up the service desk. Ensure that the proposed solution aligns with your school's strategy and vision. Define clear objectives and deliverables. Involve and consult the school staff. Sell the benefits to support staff. Prepare the implementation SD 3.2 Preparation is key to introducing anything new, so take time to read this section. Before identifying your needs, consider what you want to achieve. This is an opportunity to re-evaluate the way you have traditionally delivered technical support in the school.
 - Don't just take your existing call-logging procedures and follow-up actions and then put them into use at the service desk.
 - Rethink the processes and activities of what currently happens.
 - Choose which areas to improve and which processes to remove.
 - Get input from those who would benefit from the service desk.
 - You need to sell the idea to the other staff, so make it appeal to yourself first.

SD (3.2.1)

Identify the users of a service desk

Anyone who comes into contact with using computer equipment or the results of using it is potentially a customer of the service desk.

This would probably include:

teachers

- classroom assistants
- students
- administration staff
- technicians
- head teachers.

You also need to think about others that would benefit from being able to make requests or log incidents through the service desk:

- technical support staff
- governors
- caretaker
- cleaners.

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3.2.2 Identify who will staff the service desk

- The person manning the service desk needs good interpersonal skills.
- The person manning the service desk should not be the person providing technical support (because they will be somewhere providing technical support!)
- The person manning the service desk does not need to be technical, but does need to be organised.
- The service desk could be part of another role performed by an existing member of staff.
- Remember that the service desk will enable the person providing technical support to concentrate on that work and not the details of how to log a call.

SD (3.2.2.1) Single point of contact

Where schools do not provide a single point of contact, this can create problems when teaching staff and technicians need to discuss an incident or request. School staff reporting an incident may not always be available when the technician arrives to fix it, which can create delays. Therefore, schools should provide a single point of contact who is familiar with the details of an incident when registering a support call with a technician or third-party support provider. This is most important where technical support is external to the school (for instance, provided by an LEA or third-party support company).

SD (3.2.2.3) How to provide a single point of contact

- 1. Agree how calls will be recorded.
- 2. Decide how much extra work is involved in recording details of incidents and requests.
- 3. Decide which role in the school provides access for teaching staff and those providing technical support and can accommodate the additional work of maintaining the call log.
- 4. Ensure that the technical support providers and school staff know who is the single point of contact.

SD (3.2.2.3) Who will be the single point of contact?

The role of single point of contact could be an additional function to the following staff, but this is best left to the school to decide.

- School administration staff
- ICT co-coordinator

- Classroom assistant
- Nominated teacher
- Network manager
- Technical support staff
- Other nominated staff
- SD 3.2.3

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3.2.4

Decide where the service desk will be located

- If you are introducing the concept of a service desk for the first time, be aware that people need to trust the system and so often need something tangible!
- The service desk may well get visitors, phone calls, forms dropped on the desk so it needs to be located somewhere accessible.
- You want to make the customers feel confident that their calls and requests will be recorded accurately by logging them with a customer-focused service person.
- The decision about where to place the service desk is as important as choosing who should staff it.

Establish methods of communication

- Communicate the idea of a service desk throughout the school.
- Ensure that everyone knows how to use the service desk for all computer equipment incidents and requests.
- Ensure that everyone knows there is no exception to this rule.
- Ensure that everyone understands how this will free up the person providing technical support to actually do that role.
- Ensure that everyone understands that breaking these rules even slightly will cause the system to fail.
- Ensure that the school leaders are seen to be following these rules and not bending them because of their position!
- (3.2.5) Plan your training

Have a training plan for:

- customers on how to use the service desk
- service desk support staff on their role
- staff providing technical support on their interaction with the service desk
- any third-party suppliers on their interaction with the service desk
- school leaders on their interaction with service desk.

Decide how to introduce the training, which could be:

- through notes
- someone showing each person individually
- to set up a training session.

SD (3.2.6)

Decide about workload monitoring

Establish the confidence of the staff using and manning the service desk by having the workload monitored and the approach reviewed every month.

Decide what is to be monitored before the launch of the service desk, with the minimum being:

• the number of incidents and requests made through the service desk each week

- the types of requests that take the most time to record
- which customers appear to need the most support.

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Assess the impact on services and users

- Ensure that implementing a service desk is going to bring you benefits and not problems.
- Check the potential for something to go wrong, what you can do about it and have a fallback plan.
- You should be prepared to pass a critical eye over your plans and identify where problems can occur with the process.

Risk analysis

There is lots of information about how to do risk analysis, but knowing your school should help you identify where the problems could occur.

Identify the potential risks and what you can do to mitigate them.

Fallback plan

When you create the implementation plan, create a fallback plan.

The fallback plan is a plan for how to cope if things don't work as expected with the implementation. For example – if your staff (users of the service desk) cannot all receive the planned training, provide written materials and have someone who now knows how it works show the novice user what to do.

Prepare the call log

- Decide how many incidents and other calls are likely to be logged each week.
- Check which would be the best method of logging these incidents see SD 2.1.4 Logging incidents and making requests.
- Agree which details to record with the staff and technicians. See content of call log.
- Create the call log.

SD 3.3 Implement

- Have a plan
- Follow the plan
- Have a fallback plan

SD (3.3.1) The implementation plan

Implementation plan for introducing a service desk

Identifier	What	When	Who
1	Decide who will be your service desk users		
2	Decide which type of service desk to introduce		
3	Decide who will staff the service desk		
4	Decide where the service desk will be located		
5	Decide which additional furniture or equipment is required		
6	Obtain the additional furniture or equipment		

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Implementation plan for introducing a service desk			
ldentifier	What When Wh		Who
7	Decide how incidents and requests will be logged		
8	Decide how incidents and requests will be passed to technical support staff		
9	Decide how resolutions will be written up and recorded		
10	Decide who carries out follow-up actions and how that will be done		
11	Decide on the review process		
12	Create an incident/request sheet		
13	Create a service desk call log		
14	Create the review forms		
15	Create training materials for users on how the service desk will operate		
16	Decide how to keep staff informed		
17	Plan your first communication about the service desk to the school		
18	Prepare a pilot group to run for approximately one month		
19	Carry out the pilot and pilot review		
20	Feedback changes into the system from the pilot review		
21	Plan the launch date of the service desk		
22	Ensure that enough of the incident/request sheets are available		
23	Test any computerised systems from each PC they are available on		
24	Train the users and service desk support staff		
25	Train the staff providing technical support on how the process works		
26	Launch the service desk		
27	Carry out the first review and feedback to all		

SD (3.3.2)

How to communicate the process to existing users

- Involve your customers and ask them what they need.
- Adopt a phased implementation approach.
- Involve and consult your support staff.



What to include in your initial service desk charter

- That diagnostics checklists should be available
- Description of what these are: incidents, requests and problems
- Single point of contact (SPOC) details and responsibilities
- Hours of cover in school
- Hours of cover from a service provider or those providing technical support
- · Aims of the service desk
 - 1. To enable incidents and requests to be dealt with quickly and effectively
 - 2. To ensure that an incident only requires reporting once
 - 3. To ensure that those providing technical support understand the details to enable them to resolve incidents as quickly as possible
 - 4. To provide a system that is up and running, even if only a temporary repair, but to ensure it is fixed completely within a specified time
 - 5. To get best value for money from those providing technical support by providing good quality information about incidents and requests
 - 6. To ensure that requests meet the school's internal ICT policy and that purchases are approved through the agreed processes
 - 7. To report on trends, common incidents and their resolution to the staff that find them helpful
 - 8. To support information to school leaders on ICT areas that require more attention or expenditure

SD 3.3.2.2

Sample letter to users about introducing the service desk

Dear ...,

Introduction of the new service desk to our school

We have decided to introduce a service desk in the school to handle all computer equipment incident and requests calls. In order to understand the needs of the school we have undertaken a study to identify specific ICT needs. From this study it has emerged there are several major areas where it is felt improvement is required:

- general improvement in all areas of service provision
- provision of a single point of contact for all incidents, requests and queries
- to be kept informed of progress of incidents you have encountered through to final resolution
- to know what services are available.

The service desk will allow you, the customer, to register incidents, queries and requests, or maybe just talk something over. The initial benefits to you will be that:

- you will be kept informed at all times
- · training needs will be highlighted
- · there will be earlier identification of problem areas affecting service
- you will have a clear understanding of the services available to you.

Upon registering your incident or request, you may be asked for a few details, such as your name and details of the incident or request, and you will then be given a reference number.

The start date of the new service is scheduled for xxxxxx. More details will be given nearer the start date.

SD	3.4	Service Desk resources
		These resources may be used in the implementation and operation of the service desk.
SD	3.4.1	Service Desk checklists and handbooks
		A useful addition to your support toolkit is the user handbook. This should contain:
		 useful hints and tips for solving incidents on commonly used applications and equipment
		 any preliminary checks or information that may be required before calling the desk (for example, noting service name, screen numbers or error codes).
		Importantly, it should tell the user what to expect when they call and what will happen. The provision of a quality service is only achievable when customers and service desk staff work together.
SD	3.4.2	Service Desk forms
		Incident/request sheet (see Appendix A)
		User guide to completing the incident/request sheet (see Appendix B)
		• Service desk guide to completing the incident/request sheet (see Appendix C)
		Call log (see Appendix D)
		• Service desk guide to completing the call log (see Appendix E)
SD	3.5	Post-implementation review
		It is the customers' perception that, in the end, defines whether the service desk is meeting their needs, rather than availability statistics or transaction rates.
SD	3.5.1	Service Desk workload monitoring

Establish the confidence in the use of the service desk by having the workload monitored and reviewed monthly. The minimum that should be monitored is:

- the number of incidents and requests made through the service desk each week
- the types of requests that take the most time to record
- which users appear to need the most support.

User satisfaction analysis and surveys

Satisfaction surveys are an excellent method of monitoring user perception and expectation and can be used as a powerful marketing tool. However, several key points should be addressed to ensure success.

- Decide on the scope of the survey.
- Decide on the target audience.
- Clearly define the questions.
- Make the survey easy to complete.
- Conduct the survey regularly.
- Make sure that the users understand the benefits.
- Publish the results.
- Follow through on survey results.
- Translate survey results into actions.

SD

3.5.2

SD

(3.5.3)

Measurements

- Do not set targets that cannot be measured.
- Ensure that customers are aware of what you are doing, and why.
- Establish a baseline before discussing formal service level agreements (SLAs) with customers.
- Maintain measurements of what is necessary and viable for instance if your staff think that they need feedback on response times, then measure them!

SD (3.5.3.1) Decide how to measure the results

- Decide and set targets for a manageable number of objectives for the effectiveness of the service desk.
- This task requires careful consideration, because after implementation the review will be compared with reality.
- Before making changes, it is critical to understand the levels of service you are providing now with the current resources available.

SD 4 Operations guide

The service desk is usually operated by a non-technical person referred to as a single point of contact (SPOC). The role can be solely to log, track and update technical support calls. There is an opportunity to develop the role to include non-technical aspects of some of the other FITS processes.

SD (4.1

Who carries out Service Desk operations?

The main operator of the service desk is the single point of contact. The technician's role is to concentrate on technical work and it is a better use of their technical skills if the administrative work is performed by a capable administrator.

The single point of contact role is described in roles and responsibilities. Other important roles:

- school leader responsible for budgets and passing information throughout the school on how technical support is to function
- the users who need to understand how to report incidents or make requests effectively
- the technician who needs to understand how the single point of contact at the service desk can support their role, leading to an efficient technical support function.

SD 4.2

4.2.1

SD

How to operate the Service Desk

The roles from selected FITS processes are described in this guide to show where the service desk function could operate.

Service Desk operation of Incident Management

Full details of how to operate incident management can be found in the Incident Management operations guide (see InM 4). The administration roles considered suitable for operation by the service desk are shown below.

Single point of contact	Likely
Technician	Unlikely

18

Refer to the service desk guides to completing the incident/request sheet (see Appendix A) and the call log (see Appendix D).

SD 4.2.2

Service Desk operation of Problem Management

A summary of the process is detailed in the Problem Management process.

Full details of how to operate problem management can be found in the Problem Management operations guide (see PrM 4). The administration roles considered suitable for operation by the service desk are shown below.

Single point of contact	Likely
Technician	Unlikely

SD (4.2.2.1)

Single point of contact

- · Checks that the incident sheet has been correctly completed
- Checks that the incident has been passed through for problem management by either the service desk or the technician
- · Adds the necessary details to the call log
- Updates the user with progress reports
- Keeps track of the problem and issues appropriate reminders to the technician
- · Completes the appropriate forms at call closure

SD 4.2.2.2 Technician

- Spots trends of incidents to pass through the problem management process
- Completes the incident diagnostics sheets
- · Updates the incident sheets
- Passes information to the user and service desk on the progress of the problem
- Utilises the knowledge base, known errors and diagnostics made available
- Discovers the root causes of problems
- Provides solutions to problems
- Updates the knowledge base and known errors log.

SD 4.2.3

Service Desk operation of Configuration Management

Full details of how to operate configuration management can be found in the Configuration Management operations guide (see CoM 4). The administration roles considered suitable for operation by the service desk are shown below.

CMDB Administrator	Suitable
Configuration manager	Unsuitable
Implementer	Unlikely

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SD (4.2.3.1)

(4.2.4)

SD

CMDB administrator

- Has full access to the configuration management database (CMDB)
- Maintains the configuration management database
- Processes final stage of requests for change and incident/requests
- Has administrative skills
- May be an administrator or a technician

Service Desk operation of Financial Management

Full details of how to operate financial management can be found in the Financial Management operations guide (see FM 4). The administration roles considered suitable for operation by the service desk are shown below.

Financial manager	Unsuitable
Financial administrator	Suitable

SD (4.2.4.1) Financial administrator

- Is responsible for notifying the financial manager of all ICT expenditure as it is incurred
- Will have some authority for purchasing ICT equipment
- May be responsible for allocating equipment
- May be one or many ICT staff
- May be technical or non-technical
- Must understand the importance of accounting for costs
- Should be able to use a spreadsheet

Service Desk operation of Network Monitoring

Full details of how to operate network monitoring can be found in the Network Monitoring operations guide (see NM 4).

SD 4.2.6 Service Desk operation of Preventative Maintenance Full details of how to operate preventative maintenance can be found in the

4.2.5

SD

Service Desk operation of Service Continuity Management

Preventative Maintenance operations guide (see PvM 4).

Full details of how to operate service continuity management can be found in the Service Continuity Management operations guide (see SMC 4). The administration roles considered suitable for operation by the service desk are shown below.

SD (4.2.7.1)

Service continuity recovery team

- · Participates in the testing and invocation of the service continuity recovery plan
- Includes technical staff for technical procedures

Service continuity manager	Unsuitable
Service continuity recovery team member	Suitable and likely

20

- Includes users for testing and during actual invocation
- Includes departmental representatives for communication and co-ordination (in testing and in invocation)
- Is led by the service continuity manager

SD (4.2.8)

Service Desk operation of Service Level Management

Full details of how to operate service level management can be found in the Service Level Management operations guide (see SLM 4). The administration roles considered suitable for operation by the service desk are shown below.

Service manager	Unsuitable, but may take on delegated administrative tasks such as:
	report preparationdocumentation of service catalogue.
End-user representative	Unlikely, but may represent ICT as a user

SD (4.2.8.1)

Service manager

- Is responsible for service level management
- · Is responsible for leading service and service level negotiations with end-users
- · Is responsible for publishing a service catalogue
- Is responsible for publishing service level agreements
- Is responsible for all underpinning contracts with other departments or third parties
- Is responsible for producing service reports
- Is responsible for reviewing service reports, internally in ICT/technical support and with end-user representatives
- Convenes and chairs service review meetings

SD (4.2.8.2) End-user representative

- · Represents a particular user group or department
- Is one of a number of end-user representatives ensuring full representation
- · Is aware of all services used by the group or department they represent
- Has an understanding of the application and importance of the services used in their area
- Receives service reports
- · Attends service review meetings or user groups
- Is a point of escalation for ICT issues concerning other members of their group or department

SD (4.2.9)

Service Desk operation of Release Management

Full details of how to operate release management can be found in the Release Management operations guide (see RM 4). The administration roles considered suitable for operation by the service desk are shown overleaf.

Release manager	Unsuitable
Build developer	Unlikely
Acceptance tester	Unlikely generally, but likely for ICT software
Installer	Possible, depending on how technical the service desk is or how good the instructions are!

SD (4.2.9.1)

Acceptance tester

- Tests the functionality of new hardware and software
- Takes the user perspective on whether the product does what it was intended to do
- · Liaises with the build developer to agree test criteria and perform tests
- Does not need to be technical
- · Must be familiar with the requirements of the product being tested
- Is likely to be an end-user

SD (4.2.9.2) Installer

- · Installs new equipment in response to user requests
- Must use the install build checklist and the appropriate build procedure to execute all installations
- Liaises with build developer for assistance if necessary
- · Refers any issues with build procedures to build developer or release manager
- Will be a technical person
- Will probably be involved in day-to-day incident management

SD (4.2.10) Service Desk operation of Change Management

Full details of how to operate change management can be found in the Change Management operations guide (see ChM 4). The administration roles considered suitable for operation by the service desk are shown below.

Originator	Unlikely
Initial approver	Unlikely
Peer reviewer	Unlikely
Implementer	Unlikely
Final approver	Unsuitable
Change manager	Unsuitable, but may take on delegated administrative tasks such as:
	 preparation of change advisory committee meeting agenda and minutes
	collation of requests for change for approval.

SD 4.2.10.1 Char

Change manager

- Vets requests for change for clarity and completeness before issuing to change advisory committee
- Issues the agenda and minutes for the change advisory committee
- · Chairs the change advisory committee
- · Is responsible for the minutes of the change advisory committee
- May delegate administrative tasks
- Is often the person responsible for ICT or ICT technical support
- Does not need to be technical

SD 5 Roles and responsibilities

Any organisation that needs to understand their technical support requirements will start with implementing a service desk. It will help them put all technical requirements through a single point of contact to understand what their needs are and how they are currently addressing them.

Most organisations provide service desks for IT support, building support, HR support – in fact anywhere that staff need lots of interaction with a department.

Using the tools and advice we have given will help you to match the service desk to your school's needs. While case studies can be helpful, knowing your own requirements completely will be fundamental in setting up the technical support required in your school.

Identify who will staff the service desk

- The person manning the service desk needs good interpersonal skills.
- The person manning the service desk should not be the person providing technical support (because they will be somewhere providing technical support!)
- The person manning the service desk does not need to be technical, but does need to be organised.
- The service desk could be part of another role performed by an existing member of staff.
- Remember that the service desk will enable the person providing technical support to concentrate on that work and not the details of how to log a call.

SD (5.1.1)

SD

5.1

Single point of contact

Where schools do not provide a single point of contact, this can create problems when teaching staff and technicians need to discuss an incident or request. School staff reporting an incident may not always be available when the technician arrives to fix it, which can create delays. Therefore, schools should provide a single point of contact who is familiar with the details of an incident when registering a support call with a technician or third-party support provider. This is most important where technical support is external to the school (for instance, provided by an LEA or thirdparty support company).

SD (5.1.2)

How to provide a single point of contact

- 5. Agree how calls will be recorded.
- 6. Decide how much extra work is involved in recording details of incidents and requests.

- 7. Decide which role in the school provides access for teaching staff and those providing technical support and can accommodate the additional work of maintaining the call log.
- 8. Ensure that the technical support providers and school staff know who is the single point of contact.

SD (5.1.3)

Who will be the single point of contact?

The role of single point of contact could be an additional function to the following staff, but this is best left to the school to decide.

- School administration staff
- ICT co-coordinator
- Classroom assistant
- Nominated teacher
- Network manager
- Technical support staff
- Other nominated staff

SD 6 Review of Service Desk

The purpose of this section is to help you review your implementation and ongoing operation of the service desk, check your understanding of the process, examine what a successful implementation should look like and consider what you have achieved by introducing it into your school. This will help you to assess how successful its introduction has been and point you back to the relevant sections in the Service Desk process that you should revisit to make improvements, if these are necessary.

Start by reading the sections included in the recap of Service Desk. When you have refreshed your memory and considered your own implementation alongside these descriptions, work through the checklist to identify any areas you should revisit and perhaps re-implement or reinforce.

SD 6.1

Recap of Service Desk

The overview describes the Service Desk process, while the implementation guide provides step-by-step instructions on the planning and introduction of a service desk. The operations guide shows the work of the single point of contact at the service desk and the administrative support that this can contribute to the other FITS processes. You will also find the roles, with responsibilities, and the resources grouped together in separate areas for quick reference.

Check your understanding of the process by going through sections SD 6.1.1 to SD 6.1.4 below.

Step	asks						
Define what needs to be done.	• Get the school leaders to commit to the process.						
	Decide which method to use for logging calls.						
	Decide how to record incidents and requests.						
	Decide how to provide training and feedback.						

Step	Tasks
Prepare to implement.	 Identify the users and staff of the service desk. Describe the concept of the single point of contact. Decide on location, communication and monitoring.
Implement the service desk.	Follow the implementation plan.Produce a letter to users and a service desk charter.
Service desk resources	 Incident/request sheet Call log Instructions on the use of the service desk forms
Post-implementation review	Workload monitoringAnalysis, surveys and measurements
 SD 6.1.2 What you should expect now You have a process for loggi You have introduced a funct All users are familiar with th The technicians understand not the users. All staff understand the app and now refrain from loggin SD 6.1.3 What you should have achies A standard way of recording A method of communication Historical information about Reports and feedback on th Knowledge about the time for 	w that you have implemented a service desk ing calls with a single point of contact. tion in the school called a service desk. e method for logging incidents. that they receive calls from the service desk and woach for logging calls through the service desk ing calls directly with the technician. wed through the service desk g and logging incidents and requests in between the user and technician via the service desk t calls to individual equipment t failure rates of equipment e calls logged and resolved taken to resolve incidents and requests
 Information about the amount A consistent approach to ca Information about the number have been logged 	unt of technician time required to resolve all requests Ils and their required actions ber of calls currently outstanding and how long they
SD 6.1.4 Benefits of having implement • One person or location avail • A common call-logging prov • Complete information about • Recorded information about • Availability of information al • Previous history about equit • Knowledge about how muct	nted a service desk lable to all users cess for users, the service desk and technicians it incidents and problems t all calls made – incidents and requests bout the progress of a call and all actions taken so far pment such as installations and fixes th technical support is required and the cost

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6.2

Checklist

Use this checklist to identify any areas of your service desk that have not been successful. Then reinforce them by revisiting and re-implementing the relevant section of the FITS process.

Characteristics of a successful implementation	FITS section not yet been	to revisit if implementation has successful
Everyone understands the process for logging an incident or making a request.	Appendix B	User guide to completing the incident/request sheet
Calls made to the service desk are recorded.	Appendix E	Service desk guide to completing the call log
Service desk staff check every incident sheet for completeness.	Appendix C	Service desk guide to completing the incident/request sheet
The Service Desk process is understood by those participating in it.	SD3.3.2 SD2.4.4.1	How to communicate the process to existing users Benefits of a local service desk in a school
The incident sheet is available.	Appendix A	Incident/request sheet
The call log is available.	Appendix D	Call log
The service desk workload is monitored and analysis and measurements are reported.	SD3.5	Service Desk post-implementation review
How to operate the Service Desk for the other FITS processes.	SD4.2	How to operate the Service Desk

If the above characteristics are all true of your school, congratulations on implementing a successful service desk! The next steps for you are to continue operating the process as described in SD 4 Service Desk Operations guide and establish the process firmly. Work through the above checklist at regular intervals to help you check that everyone involved continues to carry out all aspects of the process. You can then refer to the relevant sections above to address any shortfalls as they arise.

Appendices

SD Appendix A Incident	t/rec	quest	sheet
------------------------	-------	-------	-------

			Name	of persor	1		Date &	lime of	Incident or					
	_						request							
Details of incident	or reque	st – c	ontinue o	overleaf i	necessary									
Equipment require	ed for use	by	Sugge	sted alterr	native equipme	ent	Alterna	tive eq	uipment set u					
-1-1-1			(date a	and time)			by (dat	e and ti	me)					
Service desk t	o com	plet	e											
Number of users a	ffected (p	lease	e circle)		System usa	ge in	hours p	er weel	(please circle					
1, 2-5, 6-10,	11-30,	30+			1, 2-10,	11-2	20, 20+							
Self service available to user	Check II	ncide	nt log	knowle	iser dge base	kno	eck schoo wledge	on internet						
Y/N	Y/N			Y/N		Y/N			Y/N					
Technician require	d	Tec dat	hnician o e and tin	or 3 rd part ne	y contacted –	ontacted – date and time of								
Y/N														
Incident to be reso at next scheduled	olved visit	Da ⁻ sch	te of nex reduled v	t /isit	Does incide Change Mar	nt reo nager	quire nent	w-up date						
Y/N		Y/N	1		Y/N			Y/N						
User notified of ac	tion	No (da	tificatior ite and ti	n given me)	Incident/rec	quest	owner	nical support ded by						
Y/N		Y/N	1		Y/N		Y/N							
Incident resolver	Incident resolver						Equipment that caused the incident							
How was the incid	ent resolv	/ed? (Add furt	her page	s as necessary	r)								
Further action req	uired													
Was aguinment to	moved, in	stalle	ed or swa	apped	Configurati	on-m	anagem	ent dat	abase update					
as a result of this is	ncident/m	st?												

You can download the template from the FITS website

[http://www.becta.org.uk/tsas/index.cfm?refsect=ntss&bcsect=default§= servdesk&id=dw1039].



published September 2003



Date closed													Lcall_log_xl nane 1 of
Summary of incident													im
Further action required													
Resolution - fixed/not fixed/no action/follow up													support/ a
Date action occurred													rg.uk/techicals entember 2003
Date action expected													//www.becta.o published Si
Summary of initial action taken													http:/
Incident or problem													
Name of person													
Equipment unique ID													
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You can download the template from the FITS website

[http://www.becta.org.uk/tsas/index.cfm?refsect=ntss&bcsect=default§=serv desk&id=dw1040].



Glossary

10Base-T	A networking standard that supports data transfer rates up to 100 Mbps (100 megabits per second). 10Base-T is based on the older Ethernet standard but is 10 times faster than Ethernet; it is often referred to as Fast Ethernet. Officially, the 10Base-T standard is IEEE 802.3u. Like Ethernet, 10Base-T is based on the CSMA/CD LAN access method.
AppleTalk	Inexpensive LAN (local area network) architecture built into all Apple Macintosh computers and laser printers. AppleTalk supports Apple's LocalTalk cabling scheme, as well as Ethernet and IBM Token Ring. It can connect Macintosh computers and printers, and even PCs if they are equipped with special AppleTalk hardware and software.
Asset	Component of a business process. Assets can include people, accommodation, computer systems, networks, paper records, fax machines, etc.
Availability	Ability of a component or service to perform its required function at a stated instant or over a stated period of time. It is usually expressed as the availability ratio: the proportion of time that the service is actually available for use by customers within the agreed service hours.
Availability Management	To ensure that ICT services are available for use consistently as agreed.
Bandwidth	The amount of data that can be transmitted in a fixed amount of time. For digital devices, the bandwidth is usually expressed in bits per second (bps).
Baseline	A snapshot or a position which is recorded. Although the position may be updated later, the baseline remains unchanged and available as a reference of the original state and as a comparison against the current position.
Bridge	A device that connects two LANs (local area networks), or two segments of the same LAN that use the same protocol, such as Ethernet or Token Ring.
Buffer	A temporary storage area, usually in RAM. The purpose of most buffers is to act as a holding area, enabling the CPU to manipulate data before transferring it to a device.
Build	The final stage in producing a usable configuration. The process involves taking one or more input configuration items and processing (building) them to create one or more output configuration items (eg software compile and load).
Capacity	Ability of available supply of processing power to match the demands made on it by the business, both now and in the future.
Capacity Management	To ensure that all ICT processing and storage capacity provision match present and evolving needs.
Category	Classification of a group of configuration items, change documents, incidents or problems.
Change	The addition, modification or removal of approved, supported or baselined hardware, network, software, application, environment, system, desktop build or associated documentation.

Change Management	The managed and recorded introduction of changes to hardware, software, services or documentation to minimise disruption to ICT operation and maintain accurate configuration information.
Client	The client part of a client/server architecture. Typically, a client is an application that runs on a personal computer or workstation and relies on a server to perform some operations. For example, an email client is an application that enables you to send and receive email.
Client/server architecture	A network architecture in which each computer or process on the network is either a client or a server. Servers are powerful computers or processes dedicated to managing disk drives (file servers), printers (print servers) or network traffic (network servers). Clients are PCs or workstations on which users run applications. Clients rely on servers for resources such as files, devices and even processing power.
Configuration management database (CMDB)	A database which contains all relevant details of each ICT asset, otherwise known as a configuration item (CI), and details of the important relationships between CIs.
Configuration Management	Implementing and maintaining up-to-date records of ICT hardware, software, services and documentation, and showing the relationships between them.
Definitive software library (DSL)	The library in which the definitive authorised versions of all software CIs are stored and protected. It is a physical library or storage repository where master copies of software versions are placed. This one logical storage area may in reality consist of one or more physical software libraries or filestores. They should be separate from development and test filestore areas. The DSL may also include a physical store (fire- proof safe, for example) to hold master copies of bought-in software. Only authorised software, strictly controlled by Change Management and Release Management, should be accepted into the DSL. The DSL exists not directly because of the needs of the Configuration Management process, but as a common base for the Release Management and Configuration Management processes.
Device	Any computer or component that attaches to a network.
Error trap	A signal informing a program that an event has occurred. When a program receives an interrupt signal, it takes a specified action (which can be to ignore the signal). Interrupt signals can cause a program to suspend itself temporarily to service the interrupt.
Ethernet	A LAN (local area network) architecture developed in 1976 by Xerox Corporation in co-operation with DEC and Intel. Ethernet uses a bus or star topology and supports data transfer rates of 10 Mbps. The Ethernet specification served as the basis for the IEEE 802.3 standard, which specifies the physical and lower software layers. Ethernet is one of the most widely implemented LAN standards.
FDDI (Fibre Distributed Data Interface)	A set of ANSI protocols for sending digital data over fibre optic cable. FDDI networks are token-passing networks, and support data rates of up to 100 Mbps (100 million bits) per second. FDDI networks are typically used as backbones for wide area networks.
Financial Management	To ensure that the ICT and technical resources are implemented and managed in a cost-effective way.

Firewall	A system designed to prevent unauthorised access to or from a private network. Firewalls can be implemented in both hardware and software, or a combination of both. Firewalls are frequently used to prevent unauthorised internet users from accessing private networks connected to the internet, especially intranets. All messages entering or leaving the intranet pass through the firewall, which examines each message and blocks those that do not meet the specified security criteria.
Gateway	A node on a network that serves as an entrance to another network. In schools, the gateway is the computer that routes the traffic from a workstation to the outside network that is serving web pages. In homes, the gateway is the ISP that connects the user to the internet.
Gigabit	When used to describe data transfer rates, it refers to 10 to the 9th power (1,000,000,000) bits. Gigabit is abbreviated Gb, as opposed to gigabyte, which is abbreviated GB.
HTTP (hypertext transfer protocol)	The underlying protocol used by the World Wide Web. HTTP defines how messages are formatted and transmitted, and what actions web servers and browsers should take in response to various commands. For example, when you enter a URL in your browser, this actually sends an HTTP command to the web server directing it to fetch and transmit the requested web page.
Hub	A connection point for devices in a network. Hubs are commonly used to connect segments of a LAN (local area network). A hub contains multiple ports. When a packet arrives at one port, it is copied to the other ports so that all segments of the LAN can see all packets.
іст	The convergence of information technology, telecommunications and data networking technologies into a single technology.
Incident	Any event which is not part of the standard operation of a service and which causes, or may cause, an interruption to, or a reduction in, the quality of that service.
Incident Management	To detect, diagnose and resolve ICT incidents as quickly as possible and minimise their adverse impact on normal operation.
ITIL	The OGC IT Infrastructure Library – a set of guides on the management and provision of operational IT services.
LAN	A computer network that spans a relatively small area. Most local area networks (LANs) are confined to a single building or group of buildings.
LocalTalk	The cabling scheme supported by the AppleTalk network protocol for Macintosh computers. Most local area networks that use AppleTalk, such as TOPS, also conform to the LocalTalk cable system. Such networks are sometimes called LocalTalk networks.
Logical topology	The logical topology is the way that the signals act on the network media, or the way that the data passes through the network from one device to the next without regard to the physical interconnection of the devices.
MAC (media access control) address	Each device on a network can be identified by its MAC address, a hardware address that uniquely identifies each node of a network. In IEEE 802 networks, the data link control (DLC) layer of the OSI reference model is divided into two sub-layers: the logical link control (LLC) layer and the MAC layer. The MAC layer interfaces directly with the network media. Consequently, each different type of network media requires a different MAC layer.

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Management information base (MIB)	A management information base (MIB) is a database of objects that can be monitored by a network management system. Both SNMP and RMON use standardised MIB formats that allow any SNMP and RMON tools to monitor any device defined by a MIB.
Network	A group of two or more computer systems linked together. The two types of computer networks of interest to schools are LANs (local area networks) and WANs (wide area networks).
Network interface card (NIC)	A network interface card (NIC) is an expansion board inserted or built into a computer so that the computer can be connected to a network. Most NICs are designed for a particular type of network, protocol, although some can serve multiple networks.
Network traffic	The load on a communications device or system.
Node	A processing location. A node can be a workstation or some other device, such as a printer. Every node has a unique network address, sometimes called a data link control (DLC) address or media access control (MAC) address.
OSI reference model	The OSI (open system interconnection) model defines a networking framework for implementing protocols in seven layers. Control is passed from one layer to the next, starting at the application layer in one station, and proceeding to the bottom layer, over the channel to the next station, and back up the hierarchy.
Packet	A piece of a message transmitted over a packet-switching network. One of the key features of a packet is that it contains the destination address in addition to the data.
Packet switching	Refers to protocols in which messages are divided into packets before they are sent. Each packet is then transmitted individually and can even follow different routes to its destination. Once all the packets forming a message arrive at the destination, they are recompiled into the original message.
Peer-to-peer network	A type of network in which each workstation has equivalent capabilities and responsibilities. This differs from client/server architectures, in which some computers are dedicated to serving the others.
Physical topology	The physical layout of devices on a network. Every LAN (local area network) has a topology – the way the devices on a network are arranged and how they communicate with each other.
Port	In TCP/IP and UDP networks, an endpoint to a logical connection. The port number identifies what type of port it is. For example, port 80 is used for HTTP traffic.
Problem	The underlying cause of an incident or incidents.
Problem Management	The detection of the underlying causes of incidents and their resolution and prevention.
Protocol	An agreed format for transmitting data between two devices.
Protocol stack	A set of network protocol layers that work together. The OSI reference model that defines seven protocol layers is often called a stack, as is the set of TCP/IP protocols that define communication over the internet.

Proxy server	A server that sits between a client application, such as a web browser, and a real server. It intercepts all requests to the real server to see if it can fulfil the requests itself. If not, it forwards the request to the real server.
Release Management	To plan, test and manage the successful implementation of software and hardware. To define release policy and to ensure that master copies of all software are secured centrally.
Remote monitoring (RMON)	Remote monitoring (RMON) is a network management protocol that allows network information to be gathered at a single workstation. For RMON to work, network devices such as hubs and switches must be designed to support it.
Request for change	Form or screen used to record details of a request for a change to any CI within an infrastructure, or to procedures and items associated with the infrastructure.
Router	A device that forwards data packets along networks. A router is connected to at least two networks, commonly two LANs (local area networks) or WANs (wide area networks) or a LAN and its ISP's network. Routers are located at gateways, the places where two or more networks connect.
Segment	A section of a network that is bounded by bridges, routers or switches. Dividing an Ethernet into multiple segments is one of the most common ways of increasing available bandwidth on the LAN.
Server	A workstation or device on a network that manages network resources. For example, a file server is a computer and storage device dedicated to storing files. Any user on the network can store files on the server. A print server is a computer that manages one or more printers, and a network server is a computer that manages network traffic. A database server is a computer system that processes database queries.
Service Continuity Management	To minimise the impact on ICT service of an environmental disaster and put in place and communicate a plan for recovery.
Service Desk	The single point of contact within the school for all users of ICT and the services provided by Technical Support.
Service level agreement	Written agreement between a service provider and the customer(s) that documents agreed service levels for a service.
Service Level Management	The process of defining, agreeing and documenting required service levels and ensuring that these levels are met.
Simple network management protocol (SNMP)	A set of protocols for managing complex networks. SNMP works by sending messages, called protocol data units (PDUs), to different parts of a network. SNMP- compliant devices, called agents, store data about themselves in management information bases (MIBs) and return this data to the SNMP requesters.
Star topology	A LAN (local area network) that uses a star topology in which all nodes are connected to a central computer. The main advantages of a star network are that one malfunctioning node does not affect the rest of the network and that it is easy to add and remove nodes.
Switch	A device that filters and forwards packets between segments of a LAN (local area network). Switches operate at the data link layer (layer 2) and sometimes the network layer (layer 3) of the OSI reference model and therefore support any packet protocol.

TCP/IP (Transmission Control Protocol/Internet Protocol)	The suite of communications protocols used to connect hosts on the internet. TCP/IP uses several protocols, the two main ones being TCP and IP.
Token ring	A type of computer network in which all the computers are arranged (schematically) in a circle. A token, which is a special bit pattern, travels around the circle. To send a message, a computer catches the token, attaches a message to it, and then lets it continue to travel around the network.
Тороlоду	The shape of a LAN (local area network) or other communications system. Topologies are either physical or logical.
User datagram protocol (UDP)	A connectionless protocol that, like TCP, runs on top of IP networks. Unlike TCP/IP, UDP/IP provides very few error recovery services, offering instead a direct way to send and receive datagrams over an IP network. It is used primarily for broadcasting messages over a network.
WAN	A computer network that spans a relatively large geographical area. Typically, a wide area network (WAN) consists of two or more LANs (local area networks). Computers connected to a wide area network are often connected through public networks, such as the telephone system. They can also be connected through leased lines or satellites. The largest WAN in existence is the internet.
Workstation	Any computer connected to a LAN (local area network).