

ICT STRATEGIC PLAN

Learning Academies Trust

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Approved by: Board of Directors
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CHANGES

Policy date	Summary of change	Author	Version
05/12/2016	Draft plan has been created.	Luke Pollard, IT Manager	0.1
09/05/2017	Strategic plan has been published.	Luke Pollard, IT Manager	1.0
15/01/2021	Rewritten to accommodate operational/strategic changes.	Luke Pollard, IT Manager	2.0

1. STRATEGIC DIRECTION

Overview

The introduction of this strategic plan formalises the existing work undertaken in our organisation, and the strategic direction that the Trust is pursuing to modernise the infrastructure and services required to deliver a successful IT facility for our schools and wider community. Over the course of several years, this plan has undergone numerous draft revisions in-line with the current environment, challenges, and target audience. This latest version has been completely rewritten to reduce any excessive detail and to provide a concise overview of the overarching strategy.

Having now built a comprehensive understanding of our schools existing environment and challenges, the focus on modernising our IT facilities is crucial to ensure the continued operation and development of our schools. Over the past few years, we have inherited several aging or non-functioning computing facilities and have spent a significant amount of time to correct and implement basic/fundamental facilities that were simply not present or functioning.

From this point, the Trust invested in various technologies that enabled us to start building a centralised facility that is efficient, effective to manage, and delivers the resources required for our schools to operate. To date we have made significant progress by implementing numerous technical enhancements, and most importantly migrating all current schools into a single Trust-wide Microsoft 365 tenancy. This progress has already proven to be invaluable for our users as this has enabled tools that have improved communication, collaboration, and delivery of education across the entire Trust. Additionally, it has already eased a significant number of operational pressures.

Whilst to date we have made substantial progress in centralising several of our facilities, we must remain aware that we are comprised of a number of individual schools, each with their own identity and requirements. Our strategy is designed to provide a model that is fit for all and can adapt to those individual requirements when necessary. It must also be understood that as a single business there are some areas of our current model where we must implement a centralised and standardised approach that can leverage economies of scale and provide operational efficiencies.

So where do we go next? Well, the current facilities are only the beginning of our journey towards ICT excellence. To date, much of our work has been reactive to ensure every school in our Trust has the baseline facilities to operate. As we continue to mature our services within the Trust, our IT will be guided using the principals established in the ITIL framework. We are moving forward with a clear direction and strategy, whilst ensuring we provide continuous service improvements throughout this entire process. Ultimately, we want to operate proactively to provide an effective solution and service with a focus on efficiency, affordability, reliability, continuity, and scalability.

In the following document you will find an overview of our strategy to modernise our IT facilities, services, and operation, to provide a solution for the challenges and demands present in our modern world. Everything presented in this document aligns to the beliefs and values set out at the inception of our Trust, and ultimately aims to build upon those beliefs to further develop and improve the overall success for our staff, pupils, and community.

Delivery

The key to the successful delivery of this strategy is clear management, procedures, and transparency across our entire Trust as we plan, develop, and implement changes. Historically, the Trust has implemented several projects outside of any change management process due to limited resources and critical underlying issues that needed to be urgently addressed. As mentioned previously, the principal behind this plan is to move away from that reactive model and start to implement a proactive model that ensures key stakeholders are thoroughly involved in the design, development, implementation, and improvement of any new or existing service/facility across the Trust.

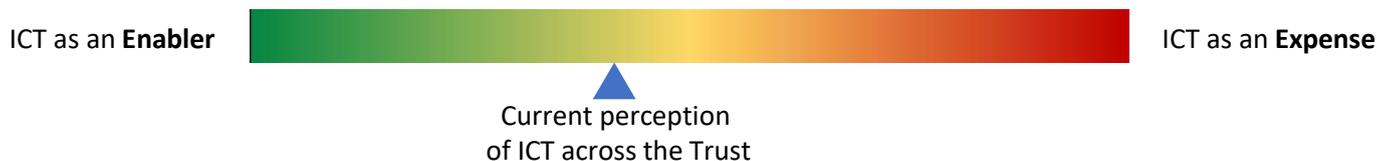
Over the past few years, we have been working with our leadership teams to facilitate an open discussion and understand the current position of IT within our schools, and what steps we need to take to move forward. Whilst there are challenges ahead, by holding these transparent conversations we can work together to design and implement changes that will provide value and improve the overall functions of our schools and Trust. Following



from these group conversations, we then met individually with each headteacher to understand the individual ideas, challenges, and request from each school and have since used this information to formulate this strategic plan.

Most importantly, what has been highlighted throughout each meeting is a clear understanding of the current state of technology within each school, what is required to operate a school effectively, and a requirement to invest. The planning day with all headteachers was crucial in highlighting the scale of an effective ICT operation, and some of the ever-changing advancements within the industry. Throughout a number of conversations there appears to be a gradual shift of mindset and understanding that ICT should be seen as an enabler for the school and not just an expense; Something that that has recently been highlighted in the Kreston academies benchmark report.

From my opinion, I believe the following graph provides an accurate representation of the current perception of ICT across our Trust. Most of our leadership teams understand and embrace the need for technology and are welcoming to the changes required. I still believe there is a slight hesitance in viewing it as an enabler until the new technologies are thoroughly embedded into the classroom and making a visible impact for our pupils. Once the infrastructure is in place, we need to ensure we place focus on training our staff to utilise technology effectively within the classroom.



Our model

Under the local authority model each school was operating independently and as a result we had inherited eight systems that were mostly outdated and inadequate. Having since reviewed the facilities in each school, we are implementing a centralised approach that will support a range of modern technologies, with the option to adapt to individual challenges and scale when additional capacity is required. For the most part, our schools are using the same systems for their software, services, and devices, with some niche projects implemented in a few areas.

As a Trust there are clear operational and financial advantage in merging the infrastructure and managing the service centrally. It reduces the overall burden on schools to manage independent infrastructures and ensures the future of their infrastructure is efficient, compliant, safe, reliable, and sustainable. Our in-house experts have a holistic view of the Trust and can focus on the specific operational needs to progress our facilities and provide value to our schools. Unlike some external providers, we are not driven by profit. Our centralised service is here to improve the operation and compliance of our schools and focuses on providing value by optimising business processes, reducing costs to invest back into our schools, and providing an innovative and leading facility to deliver education across the Trust.

Implementation

After reviewing the existing infrastructure, planning for modern facilities and services, and agreeing the requirement to invest and upgrade with key stakeholders, we are moving closer to ratifying the overall implementation of a new model and era of IT. Upon completion of the quality assessment and gaining approval from the Board, we will begin to invest in the relevant resources required to transform and improve our schools, thus delivering a significant set of resources that will greatly benefit the education and working environment of our pupils, staff, and community.

To enable our team to efficiently deliver the required facilities and services, there will be decisions authorised at a Trust level and some that are authorised directly with the school. As we look to improve our change management process, many of the decisions will be reviewed, assessed, and agreed with the relevant experts, guidance, and input from key stakeholders. Decisions that are made at a Trust level will always be in the best interest of our schools, and where any major project and investment is involved, the Board of Directors will seek external quality assessment to ensure the advice given from our internal teams are appropriately reviewed and approved by other industry experts.

As we look to the latest version of the ITIL framework, one of the guiding principles is to 'start where you are' and build upon the existing work that has already been completed, whilst recognising when a replacement is needed. At the time of writing this document (February 2021) we are in an excellent position. We have already made significant progress in developing a centralised solution and removing some of the legacy systems, and now with the additional

investment in technology we will continue to improve our services and implement the new facilities required to move forward. As you will discover over the remaining sections of this document, we have a clear focus on providing value in our work, making sure that everything is proper and implemented to a high standard.

Timeline

As an indication of our current priorities, the timeline below indicates when we aim to implement each stage of the technical improvements:

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- 2021 Q2
 - Internet connectivity (first 4 of 8)
 - Smoothwall filtering - installation
 - Network switches - installation
 - Synology backup - installation
 - Add capacity to IT team (Network Manager / IT Operations Manager)
 - 2021 Q3
 - Exclaimer - installation
 - Patch ports/fibre - installation
 - Wireless APs - installation
 - Telephone system - installation
 - 2021 Q4
 - Intune setup and testing
 - Clean up existing AD environment
 - Preparing / training for data migration
 - Initiate data transfer to Sharepoint
 - 2022 Q1
 - Complete data transfer to Sharepoint
 - Plan, prepare, document the Azure Servers
 - 2022 Q2
 - Build Azure servers and connectivity
 - Internet connectivity (remaining 4 of 8)
 - 2022 Q3
 - Migrate all devices to Intune
 - 2022 Q4
 - Troubleshooting, review, clean up.
 - Decommission old servers.

These projects are currently focused on overhauling the infrastructure and supporting services. After 2022 Q4, we will focus on advanced training for staff to thoroughly embed the new technologies into the classroom. The timeline for our next phase will be released once we have reviewed the knowledge/skills across the Trust and produced a targeted training plan to address any gaps.

2. INFRASTRUCTURE AND SERVICES

Overview

To implement our ICT strategy and provide an effective solution, there is a clear necessity to modernise the existing infrastructure to support the current and future demands of technology. As it stands, most of our infrastructure is provisioned on premises using equipment and strategies that have quickly become outdated and is now considered legacy. As a Trust, we must recognise the value of IaaS, PaaS, and SaaS (Infrastructure, Platform, Software as a Service) solutions that will replace our legacy infrastructure and provide major efficiencies and improvements across our entire ICT estate.

Whilst it is inevitable that costs will increase due to a previous lack of investment, by utilising several of these IaaS and PaaS services we are able to implement a modern facility at a fraction of the cost compared to an on-premises solution. These new solutions offload several physical resources and management tasks to an effective managed service, allowing for the Trust ICT team to focus valuable time towards serving the needs of our schools.

With a mixture of local and cloud-based resources, detailed in this section you will find a number of strategic concepts and decisions that support the implementation of a modern infrastructure and allows for a number of automations and operational improvements to provide an efficient and effective facility for our users.

Choosing the Microsoft 365 environment

When working in the education sector, the choice of cloud platform is usually Microsoft 365 or Google Workspace due to the educational tools integrated within the platform. Now the challenge for any leadership team is whether to adopt the Google or Microsoft route. What platform is better for our schools? Whilst this is a controversial subject across the industry, here at Learning Academies Trust we have adopted the Microsoft route for a variety of reasons.

The key to making this decision is looking holistically at the entire platform and the additional tools it provides in addition to the classroom tools used for education. As important as the teaching tools are, if users are unable to seamlessly onboard with the platform because the existing infrastructure does not adapt well, then the user's experience is hampered and can become an obstacle when trying to onboard to a new environment and process.

From the perspective of systems administration, the Microsoft 365 platform wins without question. For a small to medium business, I would argue Google is much simpler to setup. However, when operating at an enterprise scale with multiple sites and systems, Microsoft gives us granular control over the entire infrastructure dependent on how we choose to deploy, configure, protect, and utilise our environment. With several thousand user accounts, having everything in one place is far more efficient to manage and maintain.

When it comes to integration, Microsoft 365 provides several tools that offer flexibility and compatibility with most online platforms. Having the ability to synchronise, provision, and single-sign-on to most services drastically reduces the time and resource required to manage them, and provides a much cleaner, user friendly experience. Through API automation and integration, we can improve the accessibility and reliability of services for our users and reduce any risks of introducing errors into the system through manual data-entry.

Microsoft 365 also gives us an incredibly powerful set of tools to ensure our data is secure and compliant. From built in email encryption, data loss prevention policies, sensitive data monitoring, auditing, retention, and archiving. As we continue to develop and improve our organisational processes, the tools available in the Microsoft compliance suite will enable us to protect our users and ensure our company stays compliant within the relevant GDPR laws.

Now from a user's perspective I can understand that when you first look at Microsoft 365, it can be overwhelming with the sheer quantity of tools available. There are so many amazing tools that will support with our education and operations, but often users do not know what they are, what they do, or where to find them. As part of our ongoing efforts to simplify access to our facilities, we developed an intranet portal that seamlessly integrates with Microsoft 365 and guides users to the plethora of resources available (both in Microsoft 365 and across the web). Having spent the time to ensure the user experience is simple and seamless, the rollout across the Trust has been a huge success.

The final element of the Microsoft 365 suite that completes the package is the Microsoft Teams collaboration and classroom tools. One of the Trust's core belief is schools work best when they work together, and even before the global pandemic occurred, we were working towards implementing a platform that enables our staff to share resources, ideas, and best practice with other school across the Trust. Teams became our platform of choice, as it will integrate directly with our file sharing system, video and messaging systems, and other collaborative tools.

In addition to collaboration, the pandemic has accelerated our implementation of the assignments and online learning features within Teams. Our teachers have already spent thousands of hours providing live lessons and have assigned hundreds of assignments to our pupils. It is a superb tool to support teachers at home and in the classroom. We are anticipating that schools will utilise the online platform further once the pandemic is over. Teams is not just about remote learning as it provides an online learning platform that improves the interaction and communication between staff and student. The tools can be utilised throughout the normal school day for individual or group work and will provide a whole new way for learning and interacting in the classroom.

Choosing our cloud infrastructure

When looking for an appropriate solution to operate the whole of our infrastructure, there were several avenues to investigate to ensure we picked the correct tool. As part of this process, it was imperative that we keep up to date with this rapidly changing industry, as one of the driving factors behind our choice is due to the global migration toward cloud and mobile driven technologies. Whilst there was good evidence to approach this with a tried-and-tested environment such as a Windows domain with traditional thick clients, or hypervised Citrix / RDS farms using a thin client model, we chose to move toward the emerging MDM/MAM model to enable cross-platform compatibility with our current devices and any other devices and operating systems we may see in the future.

Is this still the right choice? In our expert opinion, yes. When we first looked at a hybrid environment with MDM (Mobile Device Management) and MAM (Mobile Application Management), the tools necessary to operate an entire infrastructure were not readily available. Instead, they were actively being developed by leading software vendors and companies such as Microsoft. Move on five years and we now have all the fundamental tools available for us to provide basic resources such as authentication, file storage, device management, software deployment, security services, communications, printing, and more. Unlike the other solutions, an MDM/MAM cloud driven environment can manage various operating systems including Windows, iOS, MacOS, Android and ChromeOS. This is crucial as we continue to build a solution that can support all of the individual technologies within each school.

Furthermore, to support the choice of MDM/MAM; if you look at the latest industry changes in the CPU market and try to draw between the lines, it appears that a new processor architecture will be favoured in the future. Some key device manufacturers are starting to build their own silicon chips using non x86/x64 architectures, and whilst mass adoption is still a considerable time away, having a system capable of managing these devices in the future is crucial. We are already seeing the implementation of Windows 10 X and new devices running on ARM processors. With this new technology and movement towards msix and progressive web apps, this would appear to be the direction that vendors are moving us towards in the future, especially in the low-end education device market.

Local infrastructure

To enable us to manage our current infrastructure effectively and prepare for any new technologies, we are first focusing our efforts on upgrading the core infrastructure and connectivity that form the backbone of our network. We have already seen evidence of one of our schools unable to operate effectively by jumping ahead with modern technologies without first taking into consideration the connectivity requirements. As we start to implement these changes, we will first install a solid foundation for which the rest of the facilities will be built upon. In the sections below we detail the technology being implemented to enable the successful delivery of our modern infrastructure.

Internet connectivity

Each school will be fitted with a 1Gbps leased line and a 100Mbps backup line. Where possible these will be installed by two different telecom suppliers to provide redundancy for our schools. The gigabit connection will ensure there is enough capacity to enable all users to operate quickly and effectively when accessing cloud hosted resources.

We have previously evaluated the necessity of installing a full gigabit line for our smaller schools, however when comparing the current data usage and seeing the difference in cost between the 100Mb and 1000Mb connection, we know that most of the cost is the fibre itself and the difference in cost for the additional capacity is negligible.

Smoothwall filtering and monitoring

Having previously completed a tender exercise, we have chosen Smoothwall as our supplier. Each site will have a physical appliance to provide advanced filtering, monitoring, and UTM services. The solution also provides a cloud service that will enable us to filter and monitor devices off site, something we have previously been unable to do.

The service will also provide a significant improvement to safeguarding, with tools that proactively identify and alert our safeguarding leads to any serious incidents or trends that require intervention in order to protect our students.

Enterprise switching

We are replacing all consumer/low-end network switches with high-quality enterprise switches. Whilst there is an initial investment, these switches provide a significantly higher throughput and several critical features required to effectively operate and secure the network.

Enterprise wireless

We are replacing the wireless systems at each site with enterprise access points using the new Wifi 6 standard. Most of our sites have numerous dead zones or the access points are unable to provide consistent capacity for an entire classroom to access resources simultaneously.

Each site will receive a professional heat map survey which will determine where the new access points are to be installed, ensuring appropriate coverage and throughput for a minimum of 32 devices in each room. With the use of online learning tools in the classroom, we are anticipating a significant increase in wireless bandwidth utilisation.

IaaS (Infrastructure as a Service)

Our cloud infrastructure expands across multiple services and consist of solutions from a variety of vendors. Some of them are provided to educational establishments for free, while others are a paid for service. Most of our tools will be provided within Microsoft 365, Google Workspace, or Azure.

We are migrating our physical environment to Azure, which will reduce the overall operating costs associated with on-premises hardware. By working together as a Trust, we will reduce the subscription costs by consolidating the quantity of servers and services that are required. Azure provides us with a great deal of flexibility as we only pay for the resources we use, and we can expand those resources to scale up as and when the organisation grows.

There are additional tools only available within the cloud that enable us to manage the assortment of devices across our network. Google Workspace is synchronised with our Azure tenancy to provide management of Google accounts and ChromeOS devices, whilst other tools such as Apple School Manager are synchronised to provide management of federated Apple accounts and iOS/macOS devices.

Our cloud infrastructure will consist of the following:

Infrastructure Servers

The following servers will deliver core functionality that enables authentication, filtering, printing, remote support, access control and more. They will be hosted within Azure and will be capable of serving all schools within the Trust.

- Domain Controller, Azure AD Connect, NPS, DNS
- Certificate Authority, NDES, SCEP
- Print Server, Universal Print, PaperCut MF
- SQL Database Server
- PRTG Monitoring
- SimpleHelp Remote Support
- Paxton Door Access
- S2S VPN Gateway (Azure to site connectivity)

Due to the associated costs and the current size of our Trust, some services will not function in HA (high availability) at this time. We have carefully considered the risks and will accept a minimum downtime in case of a server failure. However, where possible items such as Domain Controllers will function across availability zones to ensure critical services will not be impacted. If we were to expand and onboard additional schools in the future, then we would re-

evaluate those costs and consider the impact in a larger environment. However, any service being implemented now will be configured to allow us to migrate them into a HA failover cluster in the future.

Data storage

All data will be migrated from local storage media into Sharepoint and Onedrive. With the data hosted online this removes the requirement for remote access through VPN/RDP connections, and enables us to implement several facilities which improves accessibility, data protection, recoverability, and auditing.

Web Hosting & Public DNS Servers

Our web servers and DNS hosting are currently provided by Krystal Hosting Ltd. This is a trusted UK company which provides a highly reliable and affordable solution for hosting our websites and serving our public DNS.

Device Management (Windows, MacOS, iOS, Android)

Our chosen device management platform is Intune, as this is native to the Microsoft 365 systems that are optimised to manage Windows environments. Intune is also capable of managing iOS, MacOS and Android environments too, with several tools optimised for federated SSO integration with other Microsoft resources.

We already have most of our iOS devices across the Trust transferred to Intune and this is working well. We recently setup the Autopilot environment for Windows 10 at Mount Wise, and we can already see this feature making a significant impact to optimise the deployment and management of our software and devices. Our goal is to move all devices from our legacy domain environment into the Intune MDM/MAM.

Device Management (ChromeOS)

With some schools using chromebooks, Google give no choice except to manage their devices through Google Workspace. Our current Azure tenancy is SSO integrated to manage all Google accounts and ChromeOS devices.

Security

All security software and processes will operate through the Microsoft Defender and ATP services available within Microsoft 365. These facilities directly integrate across the whole platform to manage threats from every user and device. (See more in the security section later in this document).

Hardware: rolling programme

What is prominent in the industry today is the speed at which technology is being developed, released, and then becoming outdated. Due to the ever-increasing demands of modern technology and the continuous fight against cyber security threats, the hardware required to operate the latest operating systems and software updates often require additional resources to remain compatible. In several instances across the Trust, we have devices that do not meet the minimum supported specification (OS version, TPM chip, processor) and will need a replacement.

Having reviewed the current IT estate, we have a vast range of hardware in use with limited conformity across the age and specification of devices. The majority of computers have been replaced over the past five years, however many of the earlier replacement devices are starting to deteriorate due to their age and lack of rolling programme. There are also a number of infrastructure devices that are incompatible with new security updates, leaving several vulnerabilities across the network and devices that are not stable when performing configuration changes.

Looking at this legacy model, schools would historically purchase new equipment and keep it running until it either ceases to function or breaks beyond economical repair. As a Trust we cannot continue to operate in this way as this often leads to significant downtime, unplanned expenditure, and continues to pose a security risk to all our users. This IT strategy will move our schools away from this one-off capital expenditure mindset and will implement a full rolling programme that ensures all equipment is refreshed on a regular schedule.

By implementing this rolling programme and increasing the investment in IT, we understand that there will be an impact to the school budgets. Our modelling shows an initial peak in the first two years across every school whilst the core infrastructure is upgraded, followed by a lower stable budget thanks to the consistent ringfencing of funds for regular hardware replacement. Throughout this entire process we have made every endeavour to reduce any unnecessary expenditure and provide value for money through long term investment and bulk purchasing power.

Hardware: functionality

When planning and building our infrastructure, one of the key elements we have focused on is the interoperability of all software and hardware used across the network. There is a range of different computing technologies currently in use as they each offer their own advantage within the classroom, however they do not all work seamlessly with each other due to the current infrastructure unable to support all our different operating systems. Moving our data and infrastructure to the cloud provides a huge advantage in enabling these technologies to work seamlessly together.

In providing a system that supports the use of different technologies, we give teachers the opportunity to innovate and provide new ways of engaging pupils in their education. We know there are a plethora of classroom focused tools available on other devices, such as the iPad, and allowing teachers to seamlessly access resources from any device will make a key difference in the adoption and use of technology to improve education.

Regarding the students, we have already seen the benefits of using cloud-based technologies throughout this pandemic by enabling a facility that can be accessed through a number of different devices. As we continue to migrate the rest of our infrastructure online and streamline the access to our learning resources, we hope to see these technologies further developed and embedded in schools and at home.

Account management

With the size of our organisation, having an effective account management procedure in place is essential to keeping the organisation operational. As we continue to move forward, many of the processes have already been or will be automated to ensure our users have a quick, consistent, and secure provisioning process that provides appropriate access to our computing infrastructure.

Our previous decision to migrate the MIS system to Arbor has been instrumental to these automations as we have direct API access to our data. When the school administrators make any additions or modifications to the pupil data, our fully autonomous scripts will provision and deprovision the relevant resources for each pupil. This highly efficient process enables our pupils to have immediate access to their resources and ensures they are correctly linked to their class; A process that is complex, but critical to ensuring their online learning platform is working effectively.

For staff accounts, we are in the process of developing a partially automated solution that will be initiated by the HR department through the IT service desk. This will ensure accounts are created with the appropriate permissions and all new staff are taken through a step-by-step provisioning and induction process. This provides a professional and inviting start for any new member of staff joining the Trust, whilst ensuring the appropriate departments are informed and valuable assets are assigned/audited across the organisation.

Account integration

To ensure our systems are easy to access, our infrastructure has been setup to automatically provision Microsoft, Google, Apple, and Adobe accounts for every user. Each service has SSO (single sign on) capabilities enabled which allows for seamless authentication across all devices and online services. By enabling these features, we have greatly reduced the security risk associated with managing multiple accounts as the provisioning, deprovisioning, and access rights for each account are managed from one platform and propagated throughout the other services.

For our users this means signing into a device with one username and password will provide access to all resources without having to retype a number of different account details to gain access. In addition, many new websites have integrated a Microsoft SSO feature, meaning that you can login with a single click instead of signing up and having to remembering another password. Whilst this may not seem a significant issue, having an infrastructure capable of reducing the number of logins required will drastically reduce the amount of time it takes younger pupils to login and access their work, thus freeing up 10-15 minutes of each lesson for valuable learning instead.

3. ORGANISATION STRUCTURE AND OPERATIONS

Overview

The following section details the strategic decisions that have been made since the inception of the Trust and some of the planned changes to optimise the current ICT service, operation, and governance structures. Our primary goal is to ensure that we have an effective structure in place with appropriate capacity, expertise, and governance.

If we first look back to before the Trust was formed, we had a model whereby two schools were supported by their local secondary school, two schools were sharing a full-time technician, and the remaining four schools had support from external contractors. Whilst this model had kept the school functioning in the past, it became clear that was no long-term strategy for modernising IT due to a support model that had challenges in terms of the relevant skills and expertise required to drive them forward.

At this point early in the growth of our Trust, we made a strategic decision to amalgamate our technical team and cease all external contracts. Over the course of a few years, we have been able to introduce a centralised service that has significantly improved our service efficiency and enabled a standardised approach to manage capacity, prioritisation, project planning, and the overall strategic direction. Our schools now have a single point of contact (SPOC) to our service desk, thus enabling our small team to handle a significant quantity of requests efficiently.

Even with the current success of our service, as part of our efforts to continuously improve we have now identified key areas that need to be addressed to resolve several outstanding operating risks. Throughout the remainder of this section, you will find a number of changes we propose to make in order to reduce risks and continue with improving the efficiency and effectiveness of our IT services.

Structure

With the current size of our organisation, we have been operating as a team of four to support the whole Trust. Initially employing a Network Manager and one Technician, followed by a second Technician who amalgamated from two schools into the central IT team, followed by another IT Technician who recently completed an apprenticeship with us. We also receive some additional part-time capacity provided by a member of staff at Salisbury Road. Whilst the team has always stepped up to the challenge of supporting eight schools, it has been identified that there are significant capacity issues that have caused several delays in incident response time and general daily operations.

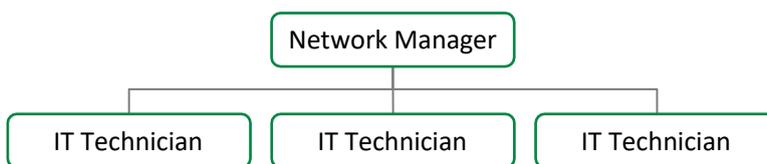
We have had a significant amount of work to undertake by inheriting eight independent systems in a mixture of conditions, all with either very basic or no documentation available. Several schools did not have an appropriate infrastructure in place, causing us to spend an excessive number of months getting all schools into a stable condition to ensure they can continue to function. Due to the nature and complexity of the work, most of this reconfiguration was completed by the Network Manager as our current IT Technicians do not have the required skills and experience to rebuild an entire infrastructure. However, our technicians were instrumental in completing the groundwork.

To assist with the capacity issues, we discussed the implementation of a deputy IT Manager to support with some of the advanced technical issues and projects across the Trust and to provide redundancy when the Network Manager is unavailable. However, in the current budget this model would not have been viable unless another school were to join the Trust and provide additional funding. Instead, we were to continue with the current model of support whilst providing funding for our technicians to undertake professional training to upskill our existing team.

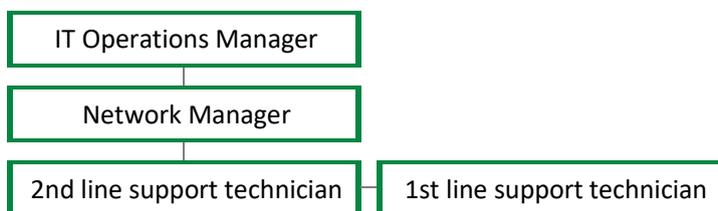
Due to some recent and tragic circumstances, we have lost an IT Technician from our team which as a result has made available some additional funds. With the loss of our colleague this leaves us with an increased shortage in capacity, however rather than hiring another 1st/2nd line IT Technician to the service desk, we believe it would be beneficial to implement an additional management role to add an experienced candidate who will add capacity to the service desk, management, and project works. In addition to the new management role, we are also proposing a change in title for our existing technicians in order to streamline the current operation and assign responsibilities appropriate to the skills and experience required within each role.

These proposed structural changes are demonstrated in the diagram below:

Current structure:



New proposed structure:



With this new model the current Network Manager’s title will be change to IT Operations Manager and a new Network Manager position will become available to fulfil the ‘deputy’ role discussed above. Our two IT Technicians will then be split into a 1st Line Support Technician and 2nd Line Support Technician. The change of titles will reflect a number of responsibilities to be delegated to each position, all of which are outline in the table below. This change in structure should provide a clear process of escalation and enable our team to focus on the tasks specifically allocated within each role.

IT Operations Manager	<ul style="list-style-type: none"> - Supplier and contract management - Financial strategy and budgeting - Service continuity management - Security and compliance management - Risk management - Project management - Policy management (including SLAs, guides, handbooks, etc) - Resolution of service desk escalation - Line management for IT team
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Network Manager	<ul style="list-style-type: none"> - Monitoring and reporting of infrastructure health - Incident and request management - Change management - Resolution of service desk escalation - Service asset and configuration management - Knowledge management - Proactive maintenance and upgrades
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2nd Line Support Technician	<ul style="list-style-type: none"> - Monitoring of infrastructure health - Resolution of service desk escalation - Proactive maintenance and upgrades - On-site visits for service desk - Knowledge management (building self-help articles) - Recording and actioning incidents when 1st line unavailable
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- 1st Line Support Technician**
- Monitoring of infrastructure health
 - Recording, actioning, and escalating incidents to the appropriate teams
 - Providing basic support, including signposting issues with self-help options
 - Knowledge management (building self-help articles)
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As it stands the size of our team is comparatively small and this capacity is something we continue to monitor. If the allocated roles above become too challenging to manage effectively, then we will look at increasing our capacity. We have already made a number of operational efficiencies through the use of automation and as we continue to implement modern technologies the overall workload on the service desk continues to reduce, with most systems working as expected. The challenge at this time is balancing our current workload with the understanding that management of our IT estate will become highly optimised in the future, thus reducing the need for long-term capacity. We do not want to over-allocate resources now when we know our requirements will likely reduce once everything has been migrated to our modern infrastructure.

The benefit of this new model is the ability to adapt to new challenges in the future. The new Network Manager will make a significant impact for our service desk incident management and provide additional technical experience to help support and grow our existing technicians. This new model also provides avenues for the growth of our current team, something which we can adopt and utilise as required when the capacity requirements change in the future.

Roles

As the Trust continues to grow and improve their services, we need to modify our current support model and focus on implementing a number of key roles designed to keep the organisation safe, compliant, and operational. With the proposed changes to the IT structure, having additional management capacity is a significant step to allocating the resources required to fulfil these crucial roles for our business.

The allocation of roles shown in the table above provide an initial set of tasks for each member of the team. There are a number of specialised roles listed that we know are time-consuming activities and we will continue to review our capacity and ability to perform these roles, ensuring that crucial tasks are not being missed. If the Trust were to grow in size, we will of course look to increase capacity and offload some of these roles to ensure individuals within our team can handle their allocated tasks for a larger quantity of schools. As it stands with the current number of schools, many of these roles will need to be fulfilled with the existing resources available to us.

Summarised below is the requirements of each role and the impact for our Trust.

Security and compliance management

The role of security and compliance is absolutely crucial in protecting our Trust and ensuring we adhere to the appropriate privacy and security regulations within our industry. With access to highly sensitive information and providing facilities for children, we must ensure all systems and processes in use are safe, secure, and compliant.

Risk management

The risk manager is responsible for capturing and controlling all risks associated with ICT, ensuring the Trust-wide risk register is kept up to date using a probability/impact assessment. This register is regularly reviewed by the board and must detail the actions taken to mitigate risks or the decisions for acceptance of risks.

Project management

With a significant number of upcoming projects, it is essential to have a project manager capable of communicating with suppliers and key stakeholders to ensure each project successfully delivers on time with the intended outcome.

Change management

The change manager is responsible for the planning, development, and monitoring of change management plans and activities including communications, training staff, key stakeholder management, change impact assessment, and change reinforcement. With the vast number of upcoming changes, this role will be essential in managing the

transition for schools and ensuring minimal impact and disruption across the Trust. As we look to improve our infrastructure and services, this position will play a vital role in keeping the organisation informed and operational.

Service continuity management

This role places responsibility for ensuring all key services have a continuity plan and that a detailed procedure for the recovery of any impacted service is thoroughly documented and tested. There are already a number of services across the Trust that already have a solution for continuity in place, however these will all need to be documented, tested, and reviewed.

Incident and request management

This role is to oversee the service desk and ensure all incidents and requests are appropriately logged, prioritised, and actioned. They will work closely with the support team to resolve outstanding issues and to design methods and procedures that aim to reduce the overall number of problems and incidents entering the service desk.

Supplier and contract management

The role of supplier engagement and contract management will prove vital to the Trust as we move towards a model that encourages a stronger relationship and growth with our suppliers. In our centralised model we are able to build upon supplier relations that provide value to our schools by focusing on our business needs, streamlining the supply and purchasing of goods, and providing economic value through bulk purchasing and customer incentives. This role will focus on building those relationships, negotiating contracts and service level agreements, and ensuring services, contracts, and purchases all meet the expected level of quality and value for our Trust.

Service asset and configuration management

The manager for this role is required to keep an accurate record of the assets and configuration within our current IT estate, detailing any assets that may impact other devices or services. They will keep track of all assets to identify and log any change requirements. Most assets are already recorded within our configuration management database, however there are a number of historic inaccuracies that need to be addressed along with the documentation of any relationships between assets. This role is crucial to developing an accurate database so that we can maintain our IT estate effectively.

Knowledge management

The role of knowledge management is shared across our entire technical team to allow the capture of knowledge that will enable efficient management of our infrastructure and services. The role of the Knowledge Manager is to govern the additions and modifications to our information and ensure that our team is documenting all changes, recording root analysis and resolutions, and contributing to the development of self-help guidance for our users.

Service desk

To standardise our procedures, we implemented a centralised service desk to provide a single point of contact for staff to raise technical issues and queries from across the Trust. It has significantly improved the communication from our staff and has enabled us to keep an accurate log of all incidents and requests to ensure they are actioned efficiently. In addition to the increased communication and tracking of tickets, this tool has enabled us to monitor the current workload and prioritise issues raised across all schools.

With that said our current service desk software was developed internally several years ago and only provides a basic set of tools to record the information required to respond to incidents and requests. Whilst this software has sufficed until now, to improve our operational practice we need to replace the software with a professional ITSM (IT Service Management) tool. This should include a self-service facility for our users and provide our technicians with advanced utilities that will enable the management of projects, incidents, problems, change requests, knowledge, and more through a series of integrated ITIL processes.

Having reviewed a number of options available on the market, we are currently looking at the *Freshservice* product which is a modern ITSM focused service desk developed by the *Freshworks* team. There are a number of key features that we aim to utilise in order to deliver a significant improvement to our technical operations and reporting.

With our service desk already in place, the focus moves to improving the customer experience and decreasing the response and resolution time of our service. Our team works incredibly hard to provide an outstanding service for our users and take great pride in their work. However, with the increase in demand for our services there has been a significant number of tickets that have fallen far below an acceptable resolution time. Our goal is to ensure users feel confident in raising a query and receiving a response or resolution within a reasonable time frame, or to have the knowledge and appropriate access to resolve an issue themselves through our self-help offerings.

In order to reach our goal and provide a rapid and positive experience for our users, there are a number of steps we will take as detailed below:

Customer portal

The new ITSM software provides a modern customer facing portal with seamless access through SSO and enables our users to access self-help options, to create new incidents or request, and to track their existing tickets.

In providing users with access to their ticket history we hope to build Trust in our service by evidencing the quick response and resolution of their queries. Allowing users access to create new request and respond to existing requests should also encourage their engagement with our team in order to resolve issues quickly and efficiently.

We are also building a database of self-help articles to empower our users and encourage them to resolve their issues using the guidance available. This results in a faster resolution for their issues and in doing so saves valuable time and resources from our support team.

Service catalogue

As part of the self-help options, users will also have access to a number of predefined catalogue items in order to automate and streamline a number of processes. For example, a user should be able to request a piece of software or order a new ID card, mouse, laptop charger, etc. direct from IT without the bureaucracy involved in placing an order or accessing a service. Another use case is for requesting a routine process or tasks. For example, the HR team may complete a request form for a new employee, and this will automatically trigger a series of automated or manual tasks such as creating a new account, printing a new ID card, and purchasing the appropriate licenses.

By providing a service catalogue within the customer portal we give users a simplified procedure that enables the automation of a number of standard requests and approval processes. This provides an efficient and seamless process for the support team and ensures our users requests are actioned quickly.

SLA tracking

When dealing with tickets, our technicians will normally respond as soon as they can, however in some instances a ticket may get missed or a user does not respond to the initial reply and the technician has not followed up on the request. With the new ITSM software, there are a number of tools available to automatically alert, highlight, and follow up on our tickets to ensure they are dealt with promptly within the times set in the service level agreement.

With the ability to easily view and track these statistics, our incident and request manager will be responsible for reviewing any outstanding request and allocating resources within our team to chase up and resolve these issues.

Satisfaction surveys

To ensure that users are happy with the response they are receiving, the software will send a satisfaction survey at the end of each ticket. This will allow users to rate our service and inform us if they are unhappy with the support they have received. This information will also allow our technicians to respond to the user if they are not satisfied and allow the monitoring of KPI statistics to identify trends and address any concerns or outstanding issues.

Management reporting

With the additional reporting facilities available to us, we have a significant amount of additional data that will be used to review the current progress and status of operations across the whole Trust. Analysing this data will enable us to improve our existing service and further develop efficiencies within our operation to ensure our users are receiving a valuable service. This data will also be used to report back to key stakeholders within the Trust.

4. SECURITY AND RISK MANAGEMENT

Overview

With Learning Academies Trust operating as an independent company, we have a significant responsibility to protect our users, assets, and finances across the whole Trust and will be held liable if we fail to do so. This section details a number of security, compliance, and risk mitigations to be implemented throughout our Trust.

Security

Whilst the remaining sections of this document highlight the benefits of investing in IT, the most significant reason for investment is security. Our modern world is reliant upon technology and as we continue to embed and utilise new technologies, criminals will use this as an opportunity to gain money, damage reputations, or cause significant harm to individuals. Cyber-attacks are a serious and increasing threat that is continuously changing and we need to protect ourselves before it causes a damaging impact to our organisation.

To highlight the significance of a cyber attack and the damage it can do, here are some recent articles about targeted attacks to the education sector:

- **15 schools disabled through ransomware – 03/03/2021**
Nova Education Trust have their entire IT systems disabled through ransomware, with users unable to access to communications, online learning platforms, and any of their work. Pupils and parent have also been advised not to access any external third-party services such as Class Dojo, Tapestry, Microsoft Teams, etc.
- **Trust has £400,000 stolen through fraud – 08/02/2021**
£400,000 has been stolen through fraudulent transactions as attackers breached a system to impersonate genuine suppliers and request a change of bank details for invoices to be paid. It still being investigated by the police and no arrests have been made so far.

As a Trust, we have already had successful attacks to our system and thankfully due to some of the safeguards in place already we have mitigated the serious attacks thus far. However, a large proportion of our systems are using legacy technologies or do not have the appropriate systems and processes in place to enforce all required security settings and updates. Whilst I am confident in the existing systems and procedures to protect against a number of common attacks, I believe there is still a significant risk to our schools due to a number of vulnerabilities that could easily be exploited through a sophisticated attack.

So how do we protect ourselves?

The first thing to understand is we will never be completely protected and there will always be a risk as attackers continue to develop sophisticated attacks and breach zero-day vulnerabilities. The key to protecting our organisation is prevention, by making it difficult for someone to breach our systems in the first instance and limiting their ability to traverse the rest of the infrastructure should they manage to gain access to our network.

Without going into great detail, by investing and modernising our infrastructure we are able to implement some of the following changes in order to protect our Trust:

- Regular purchasing of hardware ensures the systems are compatible with the latest security and firmware updates, ensuring all vulnerabilities are patched to reduce the possible attack vectors. Modern equipment uses new chipsets to support the use of leading security and encryption technologies to protect user data.
- Enterprise level network equipment enables the application of advanced security settings and segregation of networks to isolate access across devices where appropriate. Once paired with the Aruba Central facility, this equipment will provide reporting and insight to our networks allowing technicians to identify unauthorised access and anomalies, and to mitigate any risks.
- Migrating all devices to Intune MDM will enable the enforcement of policies and controls that ensure the device is updated regularly and compliant with the appropriate security recommendations. With additional

tools and reporting available we will have visibility to track, enforce, control, and wipe the device from anywhere, as long as it is connected to the internet.

- All users, including pupils, will have their own account. In the event the account is breached that user will be disabled to stop the attack from progressing. RBAC (Role Based Access Control) will be enforced to ensure accounts only have privileges to the facilities they require access to, and this applies to all standard, service, and administrative accounts. Should an attacker gain access to the account credentials, RBAC will limit the privileges of the breached account, thus reducing the number of systems an attacker can impact.
- Through the use of SSO (Single Sign On) and MFA (Multi Factor Authentication) technologies, our long-term goal is to remove or reduce the use of passwords and instead use an appropriate FIDO2 security key.

With modern technologies making it difficult for attackers, our biggest cause of breaches is users entering their credentials into a phishing email, and therefore leaking their username and password directly to the attacker. MFA has been proven to stop 99.9% of credential breaches and we are working towards the implementation of MFA for the entire infrastructure where it is supported.

- The biggest and most significant investment is the licensing of Microsoft A5 for our users. With our entire infrastructure being hosted through Microsoft services, the A5 licensing model provides access to some of the worlds most advanced security technologies that are entirely integrated with the Microsoft 365 systems.

The A5 licensing, albeit more expensive than OVS licensing structure, provides access to ATP (Advanced Threat Protection) tools that will be utilised across our local and cloud infrastructure. ATP is operated by Microsoft and identifies threats from billions of sensors all over the world every day and enables proactive and reactive termination to any attack on the network. They recently demonstrated the significant amount of power behind this facility by managing to shut down a global scale attack on a SolarWinds vulnerability (a global software that provides management to a significant amount of infrastructure).

ATP alone has a number of key uses for our infrastructure as detailed below:

- **Safe attachments, Safe links, anti-phishing, anti-malware** are tools available to protect our email and other communications system from vulnerabilities. These ATP services are crucial as emails are often one of the first methods used to provide an attacker with entry to our network.
- **ATP for SharePoint, OneDrive, and Teams.** With a number of unknown devices uploading resources (e.g. remote learning) without knowing if they are clean from malware and viruses, ATP will actively scan data and clean any malicious files uploaded into our cloud storage services.
- **ATP endpoint protection** provides standard antivirus, antimalware, and behaviour monitoring tools to protect endpoints with support for multiple operating systems. It provides live analysis through a central security console and gathers intelligence that will track an anomaly or attack through the entire network. This tool will respond to an incident anywhere in the organisation within seconds.
- **ATP for Azure** provides a monitor service that sits on our critical network servers and analyses traffic for any malicious activities such as pass-the-hash, golden Kerberos ticket, and more. It feeds back sensor data to analyse and trigger an appropriate response once an attack is initiated.

The crucial element to ATP is the ability for every element of the service to work seamlessly together to provide alerts, analyse threats, and automatically remediate issues across the network. There is a significant reduction in the resources required to manually monitor the network security, as the central console will deal with most incidents automatically and notify technicians when human intervention is required. These notifications can even include tasks for the technician such as updating a piece of third-party software which has a known vulnerability, something that would easily get missed without this automated security service.

- Whilst Microsoft provide a redundant facility, they (and many other cloud providers) make it very clear that we are responsible for the backup of our data. At present, we have no facility for an item level backup and restoration of any data stored within Microsoft 365 data. OneDrive and Sharepoint have a previous versions, recycle bin, and admin recycle bin feature that enables a number of steps to protect against data deletion, however this does not protect against permanent deletion through accidental or malicious use. Exchange (our email system) also has a recover deleted items feature, but again items within each mailbox are not protected from permanent deletion.

We're implementing an off-site Synology storage unit which has the software and capacity to backup our entire Trust-wide Microsoft 365 tenancy, including Emails, personal files, shared files, and Teams data.

- Finally, and most importantly, we will provide mandatory security training for all of our users. Whilst we can implement a range of technologies to protect our organisations, an attacker knows the weakest point of any organisation is the users themselves and will often use social engineering or phishing attacks to gain access.

Once the infrastructure and service upgrades have been implemented, we will mitigate a significant amount of risk across the entire Trust. With additional capacity being added to our technical team, it will be the role of the security and compliance manager to monitor security risks across the organisation and ensure the relevant controls are in place to protect our users and the business. Through the use of artificial intelligence technologies within ATP, the automated security reports will provide a significant insight into the protection and health of our organisation.

Compliance

In reviewing the current infrastructure from our schools, we have identified a number of areas whereby our schools have not implemented a number of technologies and practices required by different legislations within our sector. It is essential that we modify our practice in line with current guidance to ensure our Trust is compliant and operating within the bounds of the law. It is the role of our security and compliance manager to identify, recommend, and implement changes that ensure our Trust is operating within the relevant legislations. All compliance risks will be added to the risk register and reported directly to the CEO and Directors.

Risk Management

A core component to ensure the safe and successful operation of an organisation is effective management of risk. During our review of the current IT estates and services, we have identified a significant number of risks that have been added to our Trust risk register and need to be addressed. After presenting the risk register to the Board, our Directors have understood the significance of the risks that are present and have enabled a series of structural and financial changes that will enable our team to urgently address and mitigate these risks.

The elements documented within this strategic plan are part of the major overhaul required to address a number of outstanding issues. Details of these risks are outside of the scope of this plan and can be found in the live register, external to this document. It is of the highest priority for the ICT risk manager to monitor, implement controls, and review the operational risks that are currently present, ensuring any new risks are also identified and addressed.

Business Continuity

Our organisation must have a business continuity plan that documents all procedures that are in place to manage any significant event that will negatively impact the ability for the business to operate. With ICT being a fundamental component to the operation of our schools, it is essential we implement and document any use of technology or procedure that provides continuity and minimises any impact to our organisation. As part of this documentation, we should also have a disaster recovery procedure that details the entire process of recovering our infrastructure and services from any major incident such as fire, flooding, theft, cyber-attack, natural disaster, pandemic, etc.

At the time of writing this document, our business continuity plan is under development along with the disaster recovery plan. Currently we have a very poor level of recoverability due to insufficient resources to provide an appropriate level of backup and redundancy. If a school were to have an incident now, there would be significant downtime required to rebuild a functioning network, with a high risk of data loss should the backup solution fail.

In planning our new infrastructure and implementing many of the technologies within this document, we are building a facility that can withstand a significant disruption, or in the event of a disaster, minimise the downtime required to recover the school back to a fully operational state. Moving to the cloud offers significant benefits to the availability and recoverability of our services through the use of highly efficient, highly redundant services. By overhauling our infrastructure, we aim to provide a facility that mitigates all associated risks and can be up and running in a matter of hours/days instead of weeks.

To minimise the size of this strategic plan, the full detail of our continuity will be available in the business continuity document once it is complete. This will be a detailed document managed by the IT continuity manager and regularly reviewed and tested in order to protect the availability of the Trust computing facilities.

5. BUSINESS IMPACT

Overview

Through the implementation of this strategic plan, we are making significant improvements to the computing environment across the entire Trust that will positively impact our students, staff, and wider community. By providing consistent access to a modern, feature-rich facility, we are providing both staff and students with the opportunity to utilise technology throughout school to provide an engaging and focused educational experience.

Whilst this current strategic plan is targeting the operational requirements of ICT, the long-term aim is to focus on embedding technology into the classroom and working with teachers to implement new tools that can improve the engagement and outcomes of pupils. There are significant benefits to the use of technology in education and this is something to explore further with curriculum leads and staff who want to champion these tools across the Trust. The Microsoft Educator Centre has a catalogue of free training and lesson plans, demonstrating new ways of teaching and engaging pupils in the classroom and showcasing a few examples of how technology can make a difference.

As of now, there is a clear requirement to overhaul the existing infrastructure and services to provide a facility that is consistent and effortless for our staff. Working in the education sector provides unique challenges and modernising our IT estate will start to simplify and reduce the workload for our colleagues. There is nothing more frustrating than technology becoming a hindrance to our work and adding additional stress when it should be assisting users. As we have seen evidenced in the past, if the technology can be trusted to work consistently, then staff will adopt the use technology to assist and improve their day-to-day tasks.

We currently have an estimated two-year technical project ahead in order to migrate our schools onto this modern facility. At the point whereby our infrastructure is stable and operating effectively, we will identify and engage with a number of key staff across the Trust to further develop our strategic direction and explore methods of embedding technology within the classroom, and how we can train our staff to use technology effectively.

Management

Our goal is to provide a managed service that enables schools to focus on education instead of operation. Through a series of structural changes and financial investment, schools will benefit from an organisation wide infrastructure that provides a facility that is consistently operational, secure, and compliant without the overhead and challenges of managing an effective IT strategy.

For the first few years, in line with changes seen across the IT industry, there is a significant investment being made to modernise the existing facilities to ensure they continue to operate effectively as we migrate our resources into the Cloud. Within this investment, we will ring-fence funds as part of a rolling programme that covers the entire IT estate and protects against aging or failing equipment. Once the rolling programme has caught up, over time our operational costs will decrease into a consistent and predictable budget instead of the current volatile purchasing of equipment once it has failed.

We will conduct annual reviews with each school to ensure that the current resources are appropriate to their requirements. We also welcome schools to contact us at any time with any change requests. As part of this review,

we will identify the quantity of resources available, the intended purpose, the options available, the upfront costs, and rolling programme long-term affordability. Once everyone is agreement of the requirements, we will merge all purchasing requests across the Trust in order to manage the procurement, implementation, and rotation of our resources going forward.

For schools, this should simplify the management of the entire IT service. By modernising, maintaining, and rotating the infrastructure we drastically reduce any operational risks, and the only requirement from the school is to decide upon the teaching resources required to provide education. All other management duties will be handled by the Trust IT team, thus freeing up valuable management time for Headteachers and associated leadership teams.

Business USP

The core function of our organisation is to provide a rich and stimulating curriculum that strives for the highest academic standards, improves the life chances of the children in our care, and develop our children into well rounded citizens. Throughout the entirety of this plan, we have detailed a significant improvement to the tools and resources available in our classroom that will enable our staff and students to experience an outstanding and world class environment in which to teach and learn.

As a result of modernising our facilities, we believe there will be a number of inadvertent benefits available from a business perspective that will positively impact our schools:

1. With our schools able to showcase a cutting-edge computing facility, it provides a significant advertisement for any prospective parent or carer looking for the right school for their child. It demonstrates and exemplary use of technology and emphasises a forward-thinking school that can provide their child with a plethora of new opportunities. Whilst it is not the sole reason a parent may choose a particular school, it should go a long way to encourage parents about the positive and modern environment their child will be learning in.
2. Our modern facilities could make a positive impact in recruitment and retention of staff across the Trust. Whilst it may sound trivial, having a working computing environment can go a long way to reduce stress in the workplace. There are a significant number of employers who do not invest in technology and provide their employees with either basic or inadequate resources to fulfil their job. When you consider our employees are working continuously on a computer, having an infrastructure that works consistently, is secure, enables innovation, and builds the user's trust is a significant step to keeping them happy and wanting to work for us. The last thing our organisation needs is an employee who is frustrated and unfulfilled as the technology they are working with is limiting and does not support their innovation.
3. From a business opportunity perspective, the implementation of a cutting-edge facility and service provides a unique selling point for other schools looking to join our MAT. Having a facility that is efficient, scalable, and provides unique opportunities to collaborate with the other schools in our Trust will demonstrate value when it comes to choosing the right MAT to support their needs. The more schools that join our facilities, the more efficient and cost effective our operation becomes, ensuring even higher value in our service.

The points listed above are not an exhaustive list, however, they highlight a few of the additional business benefits of investing in a long-term IT strategy to support the growth and development of our schools.