# Maldon District Council High Level ICT Strategy 2021-26

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## Introduction

The 2018 Maldon District Council (MDC) embarked on a Transformation Programme. A significant part of this relied on the improvement of the ICT infrastructure to support the required changes and cost savings the Council needed to achieve.

Some of the key improvements are listed below:

- The installation and completion of the new infrastructure project, including the replacements of the antiquated firewalls, switches, and networks on site
- Upgraded the internet line to site from 50MBPS over 100MBPS to 1GBPS over 1GBPS with a redundant line in place.
- Upgraded and improved the Wi-Fi coverage on site, including a link to Govroam through our partnership with Thurrock Council.
- Replaced all the desktops on site with laptops and completed the phase three roll out to staff.
- All computers are now image built onsite – which means the process of setting up new devices for staff takes around 10 minutes rather than 3 hours of resource and build time.
- The new Mitel softphone solution is near completion, which replaces the old Alcatel phone system.
- There are new efficiencies within the ICT teams and the way staff use technology and software to complete their work. The team has reduced from 14 ICT staff within Specialist ICT alone to five ICT staff over Specialist and 4 within the Caseworker ICT team, this shows a staff saving for the council whilst still achieving the same working level.
- We have installed upgrades to all our software on site. Civicare, Uniform, TLC, Xpress, Sage and Office 365 are all on the latest builds as of October 2020 and are now hosted on our virtual infrastructure.
- We have released a new website with a new design and layout, integrating with firmstep and as a final step to the transformation project the council upgraded its front office to back office communication helping the public communicate with the correct department using digital communication.
- The release of Microsoft Teams to all staff, facilitated by one-to-one and small group training sessions has enabled better internal communication and collaborative working between departments.

Following the above successes within ICT, this document will now seek to outline the following five year period 2021 to 2026 and the steps needed to realise the councils Corporate Plan of Performance and Efficiency by leading in the community through the use of technology and continuing to achieve our excellent services with value for money. This document will include upgrade paths and costs to achieve a flexible workforce able to deliver collaboratively on its objectives to the public and its stakeholders. It will also provide digital solutions to service delivery for faster, easier and more flexible access for residents with value for money.

## Where are we now

The use of technology is at the centre of MDC's service delivery assisting staff and the public. This can be seen in the day to day running within the council and its District. This will be outlined in each of the areas below. At a high-level overview MDC is benefiting from the new IT infrastructure, which was fully replaced and upgraded to the latest technology in July 2019.

The council has seen more rapid implementation times when making network changes, for example the work completed for the Always On VPN. There is also greater cyber security in terms of access prevention, due to the new firewalls and segregated layer 3 network as well as training and set up of the internal network for officers. Microsoft Teams has also allowed for better communication both on and off site which has been invaluable during the Covid-19 pandemic and has allowed for data and document sharing as well as facilitating the virtual committee meetings efficiently and securely. Finally, the move from desktops to laptops has seen the entire council move to the use of mobile devices, this allows for a more flexible work approach and has facilitated the councils aims of agile working and was key in enabling the Council to move quickly to remote working when the pandemic hit.

Following the successes of the transformation project It is now imperative that we maintain our lead on technology by continual improvement and upgrades. As a council we should have a commitment to making sure our offices hardware (such as laptops) stay up to date, as the older a laptop gets the slower, they will become. Best practice would mean that no device should be more than three years old. A renewal program is being prepared based on this document.

Whilst we have worked to improve the officer's IT equipment over the last 3 years and are now looking to continue that improvement, the data centre urgently requires upgrading. There are 10 hosts in total, all of which are now four or more years old and urgently need replacing as there are risks with hardware failing. This can be seen in the below predicted hard drive failure rate.

We have seen one hard drive fail in 2019 and three in 2020, following this curve we will potentially have up to six additional hard drive failures in 2021. Whilst we do have backups in place, we will hit critical system issues by 2022 unless we start a replacement program for the datacentre.
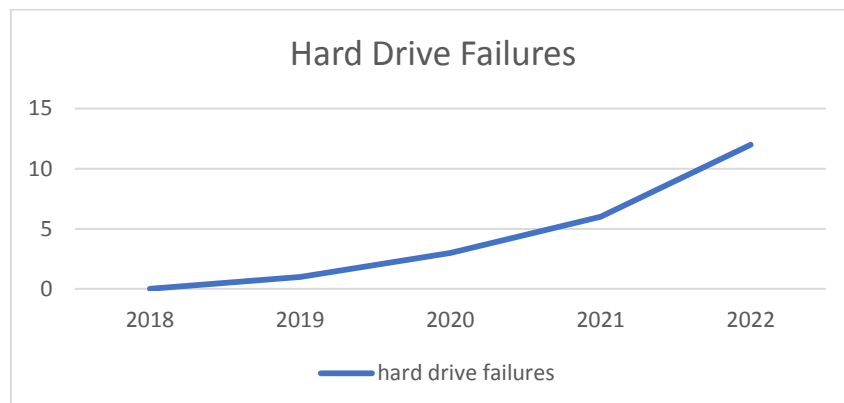


As hosts start to fail, the council will start to see slower data access alongside more space and resource restrictions.

Outside of hardware, the council would also benefit greatly from a reduction in the amount of software, which is being used across all departments. In order to amalgamate the current software to use fewer software programs, and improve efficiencies, research needs to start now to source a

package capable of running all of MDC's deliverables yet is sustainable with the current on-site resources. One such example would be Dynamics 365.

Whilst we are leading in the field of hardware, our software still requires some work to show the overall efficiencies required by the council.

## Current Council Systems

Below is a more detailed view of the current council systems. This has been broken down into Infrastructure (the internal hardware and systems of the council such and the network and datacentre), Hardware (such as Officer laptops and screens, used daily by staff to work), Software (applications use by offices to run the council) and then ICT business as usual (BAU) and project works which are currently actively being worked on.

### Infrastructure

#### Hosts

MDC have 10, fit for purpose but nearing end of life Hosts. Each host runs several servers which in turn power the software for the council. Whilst these are being maintained they should be replaced as soon as possible. The current hosts are Generation 8 despite Generation 11 now being available, it is standard practice to upgrade hosts every three to four years based on age and performance.

#### Switches

MDC Switches are less than 12-month old Aruba HPE switches. In total there are eight, 48 port switches used to run the network at the MDC offices, these are all in warranty and should run for a minimum of another three years before a replacement is needed.

#### Firewalls

The firewalls are Palo Alto firewalls, this is one of the best brands in the world for firewall systems and are also brand new and in warranty. We have two firewalls split over a virtual pair for redundancy; these firewalls can be kept in place for up to six years without the need for replacement.

#### Access points

Again, based of Aruba HPE, the access points were installed in July 2019. There are 56 access points on site, all in warranty. We can expect these to last up to six years.

#### Internet

Following the recommendation of the 2018 ICT strategy the council now has a 1GBPS line into the building, this is a dedicated fibre line with resilience. The council is utilising around 750MBPS on average giving a lot of room for additional system usage.

#### Disaster Recovery and Testing

Not included in the 2018 ICT strategy, MDC have a testing environment which can be used within the current datacentre however this is not fit for purpose and is low on resource, with the upgrade of the hosts suggested above it would be advised that the old host system would be used to build a purpose built testing and DR system in the park offices. This would give us the option of an instant back up to the parks offices in the event of a system failure at MDC offices.

#### Backup system

At this moment the backup system is based on 5 tape drives which have to be switched manually each day by a member of the ICT team. Going forward, it is proposed that the tape drives are removed, and we utilise the full capacity of our Veeam backup solution for offsite backups. This

would allow for faster restoration and safer data storage going forward. It would also remove the need for an officer to travel to site each day.

*Projects:*

- Upgrade the HPE fibre switches
- Upgrade the data centre hosts
- Set up the disaster recovery and testing in parks
- Move the entire data centre off site
- The data centre needs to be cleaned up – removing redundant equipment
- The backup tapes need to be removed completely
- Veeam Upgrade and setup for remote Backup solution
- The last 4 physical servers need to be virtualised
- Monitoring and logging needs to be sorted out for all the above
- Upgrade network to better support home working

## Hardware

### Laptops

Due to the transformation program, council laptops for officers and members are now under a year old and in full warranty, the laptops are set to standard office specification containing 8GB RAM and a modern gen7 or 8 CPU. The laptops themselves are Dell branded and of a robust design. The council have three sizes of laptops, the default being a 15inch model but there are 13inch and 14inch models available as well.

### Tablets

Council Tablets are avalable for officers and members and are now coming up to three years in age. The council have two brands of tablet, iPad and Samsung Galaxy Tab A. These are on a three year renewal cycle based on warranty.

### Docks

Due to the thunderbolt port on the council laptops a dock can be used to connect two monitors and expand the laptop with two additional UBS ports and a sound card. The docks were setup at each desk during the transformation to enable hot desking. Any officer could use their laptop at any desk by simply plugging in a single cable.

### Screens

The council has one monitor available per officer in addition to their laptop screen giving all staff two screens to work form. For users who are considered advanced ICT users (also know as power users – i.e. the entire ICT Team) there is the option of a second monitor at their desk allowing for three monitors in total. The monitors are 22inch across and work on DVI and HDMI for active digital connections to either the laptops or docks. The monitors also have adjustable risers allowing officers to set the monitor to a preferred high for better posture.

### Keyboard and mice

Keyboards and mice are bought on a per need basis. MDC currently uses a mix of HP and Dell keyboards and mice. The council keeps around 20 sets in storage and some of the current sets are nearly due for renewal.

### Phones

The council has now moved to a softphone solution based of Micollab which is installed on the officers Laptop and runs on the built-in mic and speaker system of the laptop. Each officer is also provided with a headset which can be used if needed with the laptop.

In order to maintain the stock of IT kit the following projects are being completed along with a 5-year cycle IT renewal programme

### Projects:

- Laptop Refresh program of renewal on a three-year cycle.
- Tablet refresh program of renewal on a three-year cycle.
- Members hardware Refresh program.
- Softphone upgrade to MS Team's integration to Mitel.
- Headset stock increase.
- Keyboard and Mouse stock check.

## Software

### Office 365 (Inc PowerBI, Forms, Teams, Word and Outlook)

Used as our primary software in all day to day tasks the council is now fully integrated with office 365 and its business applications. Officers continue to use Word, PowerPoint, Excel and Outlook for all their day to day activities, however users have now started to work with additional software such as Forms and PowerBI helping them to improve and optimise their work and outputs. ICT have also started to work with Power Automation and Power Apps to build custom dynamic content for the council, again helping to achieve efficiencies. ICT continue to lead this through training, self-learning and testing of these new systems prior to staff taking them on board. This helps to enable a dynamic work force.

### Civica

Civica was recently upgraded to the latest available version with the server Civica was stored on, upgraded at the same time, to Server 2012. This is the latest server version available. Civica is used to administer tax collection and public facing amenities, the software is a central point for viewing and updating this information.

### Uniform

Uniform has been used by MDC to digitise its paper-based documentation for all public front office activities, this is a file management software used within the council.

### TLC

Land Charges data, results and info required are stored. Anyone in the TLC group can check the status (search in progress, awaiting acceptance etc.). Notes if responses have been sent, if they're over their expected time.

### ArcGIS

Used to run our mapping and planning departments, ArcGIS integrates with our website to allow the planning portal to show mapping data.

### Xpress

Is used to run the Districts electoral register, whilst the software is old it has a tried and tested track record in running the electoral requirements.

### Sage

Used for the internal accounts for MDC, Sage stores and runs the accounts for MDC.

*Firmstep*

Firmstep is a front to back office ticketing tool, used by MDC to link our front office contact with the public to our back-office officers for triage and completion. An example of this is the FOI system which integrates with the MDC website and sends completed FOI's to the appropriate department.

This is still under development with forms going live each month.

*Freshservice*

Is used for ticketing and triage of support requests across the council. All members, staff and officers can raise a ticket which is sent to the correct department to be dealt with, this has provided for greatly increased time efficiencies in resolving issues around the council.

The work requirements to maintain and improve the above software are listed below:

*Projects:*
- Twice a year upgrade programme for each piece of software.
- Amalgamate the software by removing redundant software.
- Program of introducing new software which will improve council efficiencies such as power apps and MS Forms.
- Dynamics 365 test and project kick off.

## Covid 19

With the Covid 19 pandemic effecting business globally, and Government guidance for employers to ensure staff worked from home where possible, MDC had to work flexibly with officers to quickly move from working within the office buildings to remote off site working. For the majority of staff this was achieved within a few days and for all staff who are desk based within 10 days.

This was due to the time and effort of the ICT teams, the pro-active work of managers and staff and the investment that had been made to the infrastructure of the council. This put us ahead of many other Council's in the country. Focus is now on improving remote working. The Always ON VPN setup by ICT requires continue maintenance and monitoring and has now become key to the systems and functionality of the council and its staff.

The planned projects around the Always ON VPN are to move from the current split tunnelling setup into a more secure. faster forced tunnelling structure however due to the pandemic and the limitation of out of hours work progression is slow this is where projects such as the infrastructure DR and testing solution would come into play.

The Pandemic has also brought further requirements around the future of how business and the council will function to provide flexible options for working. For this we have devised the below project list in conjunction with the Always ON VPN to deliver improvements.

## Future Remote working

Due to the new way of working ICT are producing a list of projects to help towards this new flexible working solution, this includes supporting officers with home internet connections or through the use of 4G dongles for the officer laptops.

Further development is then needed to give greater control of the now off-site hardware such as laptops through the implementation of MS Intune and an update which was needed to the council's hardware warranty as devices where originally designed not to leave the offices.

ICT are also now increasing stock for onsite hardware so that staff can work from the offices when needed, from specified desks.

Projects to maintain and improve flexible working for future service delivery are below.

*Projects*
- Stability of Always ON VPN
- 4G connection from laptops
- DR and Testing host setup
- Development of MS InTune

## 2021 and 2022

ICT have three key roles:

### Key roles
1. Continued support of current systems and staff
2. Project preparation for future changes to the system
3. The ICT department has an annual recurring budget of £534,300.00 for the projects and future projects proposed in this document, meaning that all current project works listed here are fully funded.

As a priority 4 main projects are to be completed for current systems in 2020 and 2021 as below.

### Projects
- New softphone system
- SharePoint
- Host Datacentre upgrade

### In Parallel
ICT will provide ongoing training and support to staff and Members to utilise the new hardware and software available and continue to provide the following.

- Continual software upgrades and improvements
- Hardware renewal program
- Laptop Refresh program of renewal
- Monitoring and logging
- Upgrade network to better support home working

## 2022-2026

Over the following four years there should be a clearer path to the future ways of working for MDC. The addition of Dynamics as a central point for all software and separately to this the migration of our datacentre into an offsite shared location will assist in enabling greater flexible working and cost savings

The planned project work will be:

### Projects

- Set up the disaster recovery and testing in parks
- Move the entire data centre off site
- The backup tapes to be removed completely
- Veeam Upgrade and setup for remote Backup solution
- The last 4 physical servers need to be virtualised
- Softphone upgrade to MS Team's integration to Mitel.
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- Twice a year upgrade programme for each piece of software.
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- Program of introducing new software which will improve council efficiencies such as power apps and MS Forms.
- Dynamics 365 test and project kick off.
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- Development of MS InTune