

Information Communication Technology Strategy

Version 2.0

01/03/2021

Council Vision

'To secure a prosperous future for the people of Harborough District.'

Our Priorities

The Corporate Delivery Plan is structured around our 3 priorities:

- **The Place:** A safe, enterprising and vibrant place.
- **The People:** A healthy, inclusive and empowered community.
- **Your Council:** Creative, proactive and efficient.



Vision for ICT

To provide a stable, effective, responsive, and cost-effective platform which enables the business to sustain effective service delivery regardless of location in a changing environment.



Online service provision.



Agile and adaptable to support business change.



Engagement of the business and inclusion on the change journey.

Purpose and Wider Perspective



Gaining and maintaining a full understanding of business drivers and service needs by working in close partnership with all service areas, suppliers and partners.



Enabling the Council to deliver efficient, effective and evolving services through provision of effective ICT.



Achieving value for money through delivery of continuous improvement in all Council services.



Tailoring digital technology and ICT to support excellent customer services in line with safety, security and sound policies / procedures.



Recognising that the IT Service should proactively support the Council's responsibilities regarding the environment and climate change.

Key Foundations

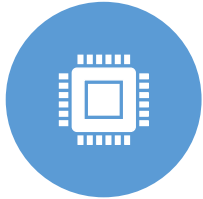
Firm Foundations

- Secure, resilient and simple infrastructure.
- Adoption of an agile / lightweight best practice approach and processes.
- An ICT Service designed to enable the business needs in a modern cloud environment.
- Up to date and relevant application portfolio designed for operation in a cloud environment.
- A strategic approach designed to allow flexibility and adaptability in the future.

Transformation

- A service designed around the customer, staff and partner needs.
- Adoption of a continuous improvement process working alongside the customer, staff, partners and solution providers to continually improve business solutions.
- Adoption of a model that improves support and enablement of cloud provision for both infrastructure and applications.
- Application of industry experience, innovation and the ability to adapt and respond quickly.
- A focus on service delivery not housekeeping to enable sustained improvement.

Key Outcomes



Strategic and tangible improvements to ICT services and operations for all staff and customers.



Robust, resilient and less complex solutions with reduced outages.



More productive and effective delivery of IT services.



Informed decision making through improved information and data management.



Greater value for money and reduced overall cost of ICT in alignment with Budget Challenge 2025 (BC25).



More effective engagement with strategic partners, through joint working and proactive strategic ICT leadership.



Maintaining and enhancing digital capability through sustained investment, innovation and staff training / development.



Establish a transformed fit for purpose ICT service and solutions.

Local Government Trends



Improved cybersecurity approach and a change in mindset to respond to the channel shift of cloud first, modern and secure desktop (Zero Trust).



Adoption of a multi-channel approach to community engagement including things such as virtual assistants, AI-driven chatbots and mixed reality (MR).



Drive toward more self sufficient and cost effective delivery models and opportunities as a result of the removal of Revenue Support Grants (RSGs) in 2020.



Support of the 17 Sustainable Development Goals (SDGs) outlined by the UN to address the issue of climate change and sustainability and the UK's climate change policy.



A change in mindset leading to effective support of contract management and any outsourced services.

Horizons



Long Term (Vision): Future **principles**.

Medium Term (Interim): **Aligning** current position with future principles.

Short Term (12 months): In delivery, **current projects** and programmes.

Baseline: where are we **now**.

Service Areas



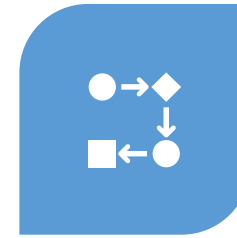
USERS



DEVICES



APPLICATIONS



PROCESSES

Business Areas Engaged



Hot Spots and Pain Points



Usability issues with Microsoft Teams and the Citrix client.



Interrupted connectivity when working remotely via Citrix.



Training on new / old systems, e.g. MS Teams, SharePoint, Office 365, Excel, Word, Uniform, etc.



Low resource on the IT help desk leading to slow issue resolution.



Non standardised devices for users.



No Service Level Agreement's between the ICT function and service areas.

Business Perception of ICT

The ICT Service is:

- Hard working, works well together as a team and is personable.
- Able to keep on top of things day to day.
- Keen to embrace technology and agile working practices.
- Reactionary in its approach to issue resolution and doesn't appear to be strategic in how issues are resolved (i.e. are similar issues reviewed to find underlying cause to resolve the wider issue?).
- Stretched / under resourced so when issues occur they have a major impact.
- In its current state not sustainable.

The strategic direction of ICT is not clear to the wider Council:

- What is the planned approach for ICT across the Council?
- Where are we on our journey?
- What has happened to date?
- Are we maximising our opportunities?
- Was our response to Covid-19 a success? How do we compare to other Councils?

ICT is key to the Councils future.

Service Area Drivers

Seamless user
experience regardless
of location

Enablement of
collaborative working

- ICT works effectively remotely, i.e. it is accessible, reliable and performant regardless of a users location.
 - Users can receive effective support when / where required.
 - Users can answer calls from different mediums through one solution and irrespective of location (Unified Communications).
 - Users can seamlessly access all types of data effectively irrespective of format or file size (e.g. spatial data, documents, databases, etc).
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- Seamless, secure and responsive access to any 3rd party / partner provisioned service or application.
 - The ability to share data in compliance with GDPR effectively across the organisation and its partners.

Systems Skills and Knowledge



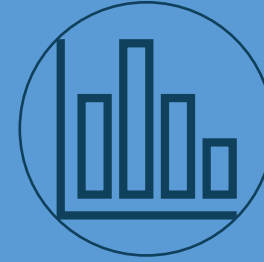
System admin skills are not centralised



System knowledge has been lost (eFinancials)



GIS is not managed centrally



Focus is required to enable best use of Business Analyst skills



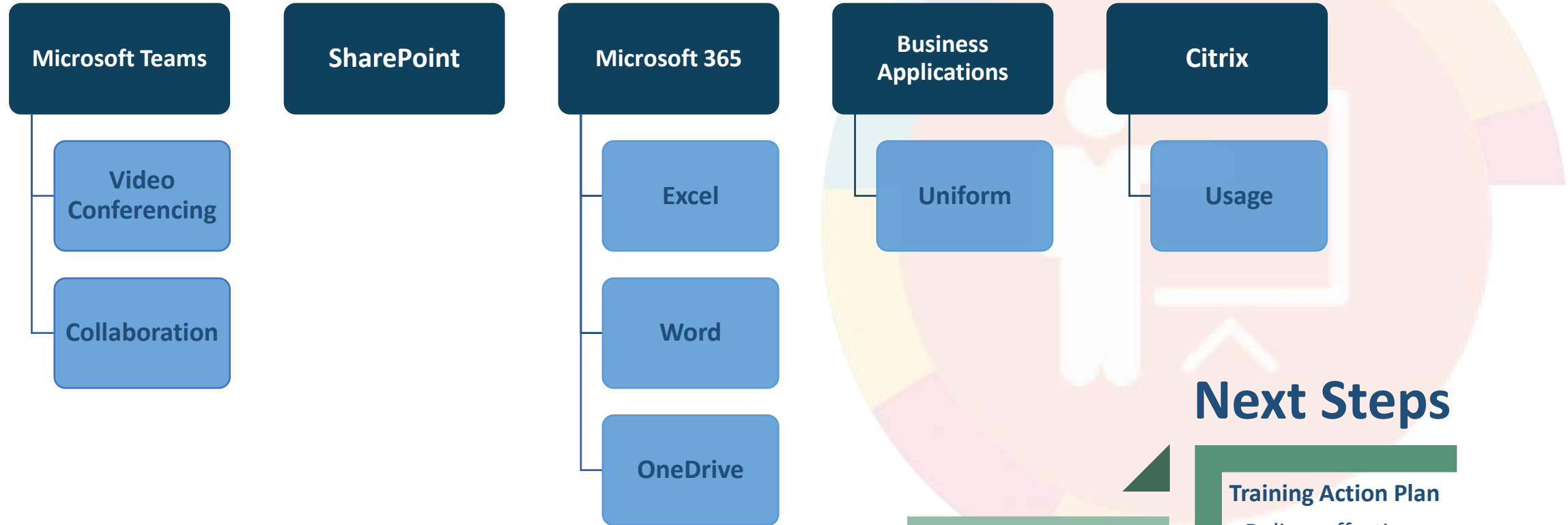
A consistent level of support is not available across all business areas

Digital Team

- Effective management of specialist resource.
- Provision of consistent support which is paramount to enable effective service delivery.
- Knowledge share and cross skilling to mitigate the impact of holiday, absence and turnover.
- Act as a bridge between traditional ICT and service delivery.
- Ability to drive change throughout the organisation with a consistent approach.

Training

Outlined below are those areas which require training support based upon the staff survey results:



Whilst training is not part of ICT’s responsibility to deliver it is critical to a successful business and consequently delivery.





Harborough Innovation Centre

- Currently managed and serviced through internal ICT provision.
- There are challenges to managing ICT within an office provision that are very different to those understood / expected within a normal Council ICT Service.
- A review is being undertaken as to how ICT provision within the HIC should be managed moving forwards.
- ICT provision within the HIC should still be considered internally, however, it may require a dedicated resource and need to be commercially viable.
- Guiding principles already established should continue to be adhered to were appropriate.

Executive Summary



CLOUD
TECHNOLOGY



MOBILE
TECHNOLOGY



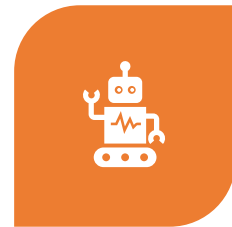
5G NETWORKS



INTERNET OF
THINGS



ARTIFICIAL
INTELLIGENCE



AUTOMATION



ZERO TRUST
NETWORK

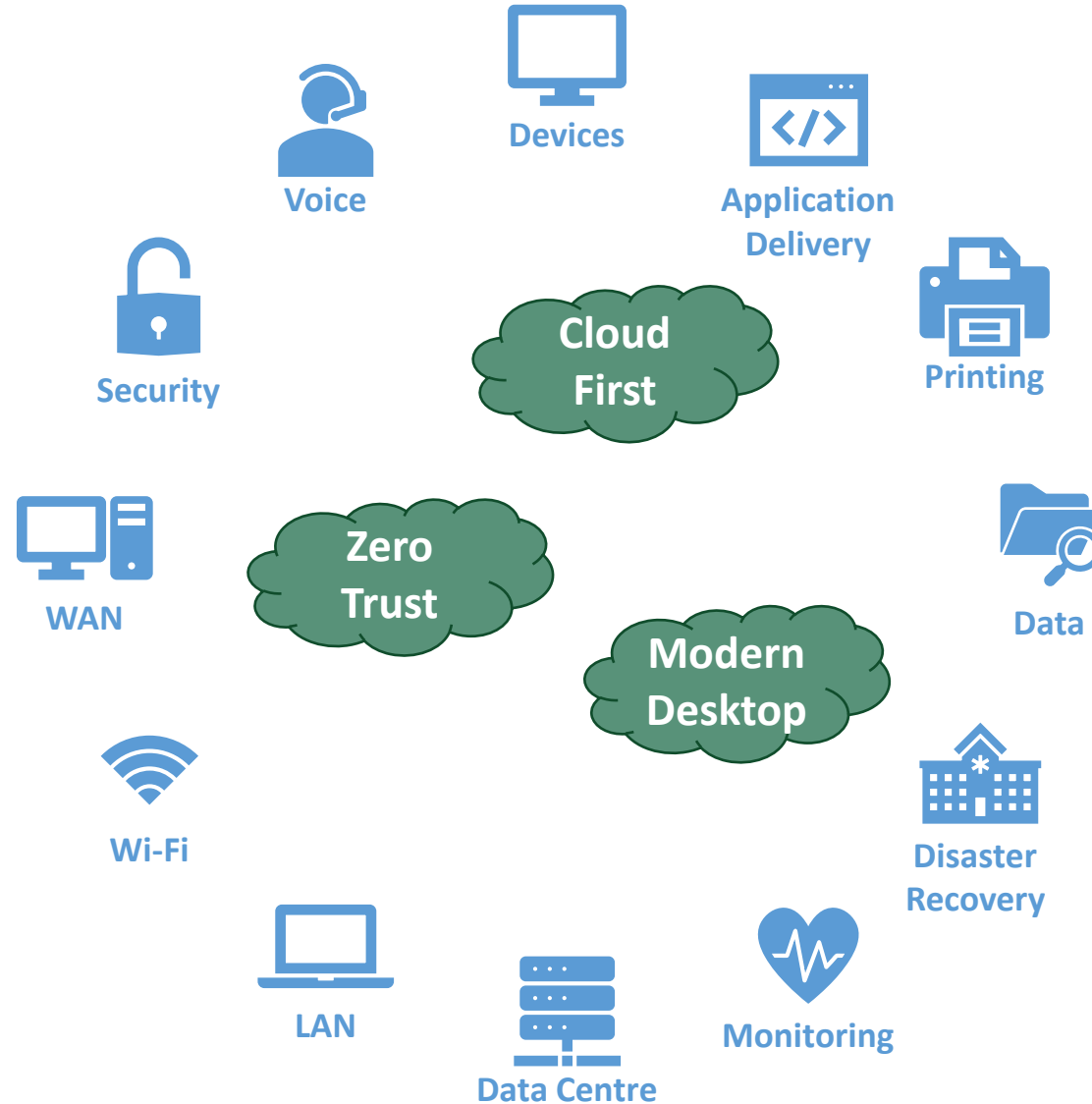
Guiding Principles

Modern Desktop

- Enables users to:
 - Work wherever they need to
 - Remain in a secure, protected environment.
- Deployed and managed in a simple manner to minimize overhead.
- Always current utilising the latest productivity tools.

Cloud First

- A set of business practices that aim to utilise cloud services as much as possible.
- Cloud computing solutions are considered before any others.



Zero Trust

- A security concept that requires all users (even those inside the organisation's network) to be:
 - Authenticated
 - Authorised
 - Continuously validating security configuration and posture.

Leveraging Existing Technology

- Existing solutions which remain fit for purpose will:
 - Continue to be utilised
 - Reviewed in line with business requirements
 - Only be replaced in accordance with the strategy at the point of natural refresh.

Executive Summary

Leveraging Existing Technology

- Making use of existing technology and “sweating assets” is important whilst they remain technically relevant and can be replaced in accordance with the technical roadmap / programme plan.
- Application based constraints mean some existing assets must be retained until they can be replaced.

Applications Review / Replacement

- Both Idox Uniform and eFinancials are old, technically constraining applications which need to be reviewed as “fit for purpose” for the business and alignment with the ICT strategy.
- Application delivery will move to a complete cloud of Software as a Service (SaaS) based model.

Data Management

- Processes, procedures and policies need to be updated / created in support of best practice data management.
- Shared drive data needs to be reviewed, sanitised and restricted to enable the vision of cloud based storage through MS Teams / SharePoint.
- Service Areas will need to take responsibility for the data cleansing work to enable a successful outcome.

Enterprise Architecture Change

- On premise ICT infrastructure / architecture can be simplified and reduced in accordance with Modern Desktop and Cloud First.
- The role of the ICT is still critical and new skills and management approach is required in order to support a cloud and partnership based model.

Executive Summary

Device Management

- User device types need to be standardised to enable simpler support, ease of use and robust device (end point) management.
- Within today's remote working environment and the increase of licensing cost for thin clients a laptop based estate should be provisioned.

Unified Communications

- This is critical to modern, flexible and agile service delivery particularly in a remote working environment.
- The current approach of utilising MS Teams is the recommended way forward, however, complexities around the ICT estate such as Citrix need to be resolved to allow this solution to operate in an effective manner.

Remote Working

- Simplification of the ICT estate in terms of constraining applications and their need to deploy through Citrix will enable a simpler, robust, efficient user experience and reduce costs (i.e. create a consistent platform for the whole organisation).
- Transformation of the ICT service in support of a cloud based / SaaS model will provide more effective support for staff irrespective of geographic location.

Transformation Required

- The ICT service has progressed along the first part of its journey to move most services into a cloud based model, now the service must be transformed in order for it to provide effective support for the Council.
- Creation of a "Digital Team" with systems admin and business analysis skills will link ICT and the Service Areas together enabling more efficient / effective working and better utilisation of solutions and partnerships .

Executive Summary

Decentralised Budget

- Service Area's currently hold budget for use on ICT equipment, solutions and services. As a result ICT is not always engaged early enough in the procurement process leading to a lack of consistent approach and alignment with the strategic approach.
- A review of the ICT budget approach and consideration of a model which provides a level of control on spending outside of the strategic approach should be undertaken.

Budget Challenge 25

- The ICT Service will act as a vital enabler for BC25 by supporting the improvement, rationalisation and simplification of all Service Area solutions.

Future of ICT

- The Council are on track to move towards a cloud based and SaaS delivery model and now need to complete this transition and transform the ICT Service in support of this agenda.
- Once transformed the Council will be an exemplar within the local region of best practice and effective ICT delivery.
- The transformed ICT provision could potentially look to offer services to other Councils in an effective, robust and highly accessible manner.

Enterprise Architecture



Server and
Storage
Infrastructure



Network,
Telephony
and
Associated
Infrastructure



End User
Computing
and Office
Environment



ICT Security



Infrastructure
Roadmap

Enterprise Architecture

Constraints

Partners such as Charnwood and Hinkley & Bosworth service provision is not enabled for public internet access.

The MPLS project is still in progress so the current contractual position is not clear for a move away from this methodology.

Vision

Move from an MPLS based network to a simple and easier to maintain approach which makes use of Modern Desktop and Zero Trust methodologies utilising public internet for access to application services.

Recommendations

- Complete MPLS project to remove expensive point to point connections enabling a reduction in line costs.
- Work with partners to develop public internet enabled service provision utilising Zero Trust principals.
- Enabling technologies such as Azure Active Directory Application Proxy or Windows Virtual Desktop should be leveraged.



WAN

Current Wi-Fi provision is suitable for the business need.

Maintain good quality Wi-Fi utilising latest standards and 5 year refresh cycle enabling agile working, bring your own device and technology shifts.

- Continue with frequent reviews of Wi-Fi quality, service provision, technology shifts, etc to enable an agile workforce.



Wi-Fi

Current network infrastructure is old and in need of upgrade / improvement.

Provision of a robust, resilient and responsive network to enable a Cloud First / Modern Desktop approach.

- Complete work to upgrade switch infrastructure and fibre provision to all cabinets.
- Adoption of best practice for switch management and VLAN provisioning.
- Provide and quality assure internet provision into the office space to enable Cloud First / Modern Desktop / Zero Trust approach within the office space.



LAN

Enterprise Architecture



Constraints

Idox Uniform is a heavyweight traditional application currently delivered on premise. This requires the Council to maintain a more significant on site infrastructure presence than it can make effective use of. Whilst Idox can provide a managed service in our experience this often has a poor end user experience particularly around GIS.

Vision

Move towards cloud hosted data centre solutions with a minimal on premise presence maintained.

Recommendations

- Maintain the existing setup for remaining contract duration (i.e. 2 years + option to extend).
- Once constraining factors such as Uniform application delivery are resolved a transition to a full cloud hosted data centre provision such as Azure should be undertaken.



Application delivery through Citrix will be complex and costly to run in a cloud based recovery service.

Continue management of disaster recovery through cloud based recovery services.

- Continue with the current Azure Site Recovery (ASR) approach maintaining best practice.
- Undertake a failover test with Uniform and its associated database.
- Windows Virtual Desktop to replace Citrix as the vehicle for application delivery will reduce complexity and cost.



Challenge of amalgamating logs and reports into a cohesive view to enable comprehensive understanding of threats and inform countermeasure decision making.

Aggregation of all monitoring information into a single view to provide comprehensive and digestible information in a single reportable location.

- Implement network monitoring tool such as PRTG (basic monitoring option is free).
- Implement a Security Information and Event Management (SIEM) solution.
- Microsoft's Sentinel SIEM solution which will sit within the Azure environment will aggregate everything into a single view.

Enterprise Architecture



Constraints

The current approach is a mix of local infrastructure and cloud hosted provision. It is not an efficient approach as it provides security across a mixed economy.

Vision

Adopt a Zero Trust strategy inline with a Cloud First and Modern Desktop approach for application delivery and endpoint management.

Recommendations

- Continue to utilise existing Azure services
- Continue to utilise Microsoft Defender for Endpoint (sweat assets) which is a good fit with Modern Desktop / M365 strategy.
- Implement new cloud based web security / proxy solution such as Zscaler to provide future flexibility / security options.
- External Software as a Service (SaaS) services should federate with Azure Active Directory where possible.



There is a significant volume of legacy data that is poorly structured / controlled.
Complex file linking such as within Excel documents or Access databases are an issue.
Data managed outside systems is available through Citrix. This often provides a poor end user experience and can confuse users who try to use other applications through Citrix such as MS Teams which is not performant through Citrix.
There are no records management processes or policies established.

Seamless, secure and efficient access to data independent of user location which is supported by underlying policy and procedure to control use of data within an agile and remote environment.

- Legacy data on One Drive and file shares needs to be tidied up and ingested into systems where possible (e.g. PST files into Exchange Online, Access databases incorporated in sustainable solutions, etc)
- Initial move to provision of access to file share data through an “always on” VPN solution which will be invisible to the end user (Zscaler provide a solution to enable)
- Longer term once the data is tidied it can be moved into a MS Teams / SharePoint environment effectively.

Note: See Data Management Section

Enterprise Architecture



Application Delivery

Constraints

The Idox – Uniform system is currently delivered through Citrix. It is not viable to deliver this solution effectively as a published application. Vendor hosted service options tend to have poor user experience. It is currently approaching its 5 year renewal with an option to extend by up to 2 years.

The One Advanced – eFinancials system is currently delivered through Citrix.

Services delivered through partnerships (e.g. Revenues and Benefits, Building Control, etc) utilising Citrix and thick client delivery will take time to be delivered through other methodologies as this will require the partner and other organisations to also shift approach, supplier, solution, etc.

The agreement to move to North West Leicestershire’s iTrent instance is technically constrained. iTrent can only connect to 1 Azure tenancy. The Council will need to setup specific business to business (B2B) connectivity which is not in alignment with the strategic vision.

Vision

Move towards full application delivery through lightweight delivery mechanisms in alignment with a Cloud First and Modern Desktop approach.

Recommendations

- On premise thick client solutions such as Uniform and eFinancials will be reviewed by the business with SaaS in mind.
- Renewal of licensing and support for technically constraining solutions should be carefully managed with short extensions (i.e. 12 months) taken up where viable more modern solutions exist to replace them in the future.
- In the short term where possible applications should be delivered as “applications” using Citrix not as full desktop applications.
- Once issues with legacy applications delivery are resolved a move towards the following lightweight delivery mechanisms should be made:
 - Software as a Service (SaaS)
 - Microsoft Remote Desktop Services
 - Azure Active Directory Proxy for web based applications.
- Proceed with plans to deliver a Contact Centre as a Service (CCaaS) solution.

Enterprise Architecture



Devices

Constraints

Currently there is a mix of devices in circulation without an adopted strategic approach. This is partly due to the fast rollout of devices for the Covid-19 response.

Thin client devices need to be upgraded from OS10 to OS11, however, there is an additional licensing cost kicking in from December 2021 for these thin client devices.

Vision

Adoption of a small set of standardised devices based on the business and user needs.

Recommendations

- Undertake a review of business area / role needs to understand their device requirements.
- Carry out a risk analysis to determine if the thin client devices need upgrading from OS10 to OS11 or whether the risk of continued OS10 usage is acceptable.
- Thin client devices should be replaced by December 2021 as a new license cost will be incurred at this point for all devices remaining in use.
- Where appropriate users should use laptops rather than thin clients to enable adoption of a Modern Desktop approach.
- Adopt a standardised list of devices and rollout plan / approach.



Printing

Print solution requires replacement and a new Konica solution has been procured but work has not commenced 12 months on (PO provided).

Policies and procedures do not support / relate to a remote working environment.

Adoption of an effective, efficient and minimal contact print solution within the office environment. This will be supported by appropriate policies and procedures to cover working within the office or from remote locations.

- Assign a project manager and drive the solution delivery forward with Konica.
- Data Protection Officer, ICT and Business Areas to review policies and procedures around remote working and establish new current / maintained guidance.

Enterprise Architecture



Constraints

Existing issues with Microsoft Teams deployment largely caused by confusion of whether to use MS Teams inside or outside Citrix (i.e. local desktop application) has created a negative user experience.

Vision

Provision of a single unified communications solution that is clear, effective and resilient.

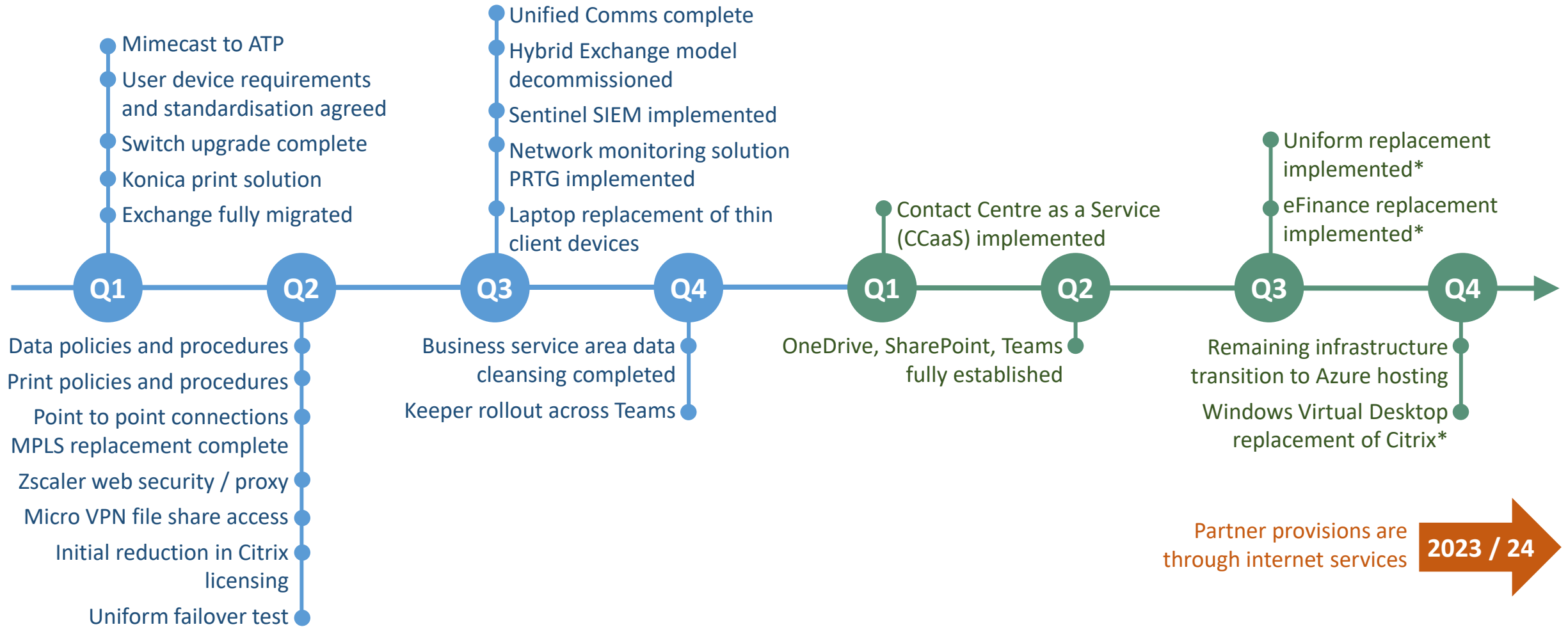
Recommendations

- Continue with implementation of Microsoft Teams as a unified communications system.
- Complete work to implement Microsoft Teams Direct routing with Gamma.
- Undertake requirements work with the business users to determine functionality gaps within the Teams voice offering.
- Short term gaps within Teams voice offering may need to be filled by strategic short term 3rd party applications.
- Medium term it is expected that feature gaps will be closed.

Technology Roadmap

2021 / 2022

2022 / 2023



*Uniform & eFinance may not be easily replaced. As such the goal of replacing Citrix with Windows Virtual Desktop may not be possible in the short term. The medium term option would be to only deploy Citrix to users who must use an application reliant Citrix therefore reducing the licensing costs.

Roadmap and Future Flexibility

The roadmap needs to be flexible to enable it to take into account the following key principles

Business
driven change

Partner driven
change

Technology
driven change

Solution
driven change

Organisational
calendar
(e.g. elections,
snow days,
schools, etc)

Continuous
horizons
scanning

Continue evolution and development of technology to meet the challenges of COVID19

Data and information Management



Users



Devices



Support



Security



Technology



Enabling

Data and Information Management

Data and Information Management

- At present there are no policies around management and control of data.
- Whilst data management and governance requires ICT support it should be lead by the business.
- A review of all business data will be carried out by the business with support from ICT to determine the type and usage of data. Once complete relevant policies and procedures will be documented, approved and adopted.

Data Protection Act / GDPR

- Current documentation is out of date / missing and does not support an agile remote working approach.
- In todays climate it is imperative that processes and procedures are documented and adopted by staff to avoid unwanted litigation.
- A review of existing processes and procedures will be carried out with a comprehensive set of documentation created in alignment with the Data Protection Act, GDPR and taking into account the shift to remote / agile working.

Service Delivery



Users



Devices



Support



Security



Technology



Enabling

Service Desk



People

- Staff are helpful, friendly, keen to learn and able to resolve issues.
- Based upon call levels and resolutions time the Service Desk is under resourced particularly during periods of sickness, training for apprentices and annual leave.
- As the Service Desk is manned by apprentice level staff there are knowledge gaps and guidance / development of the apprentices can be a challenge.

Digital Service Transformation

- A Review of the Service Desk should be undertaken with a view to employ a Team Leader* to act as a initial point of escalation and provide guidance / knowledge.



Solution


- A new solution has recently been implemented - Atlassian's Jira solution.
- The Jira solution is linked to the ICT knowledge base held within Atlassian's Confluence solution.
- This approach fits with the current strategy of utilising web based solutions and cloud hosting.
- The current solution is simple, effective and lightweight.

Digital Service Transformation

- This solution should be reviewed to confirm it is suitable longer term particularly when taking into account mediums such as email and phone.

* Currently being fulfilled by a secondment

Service Operation Drivers for Change

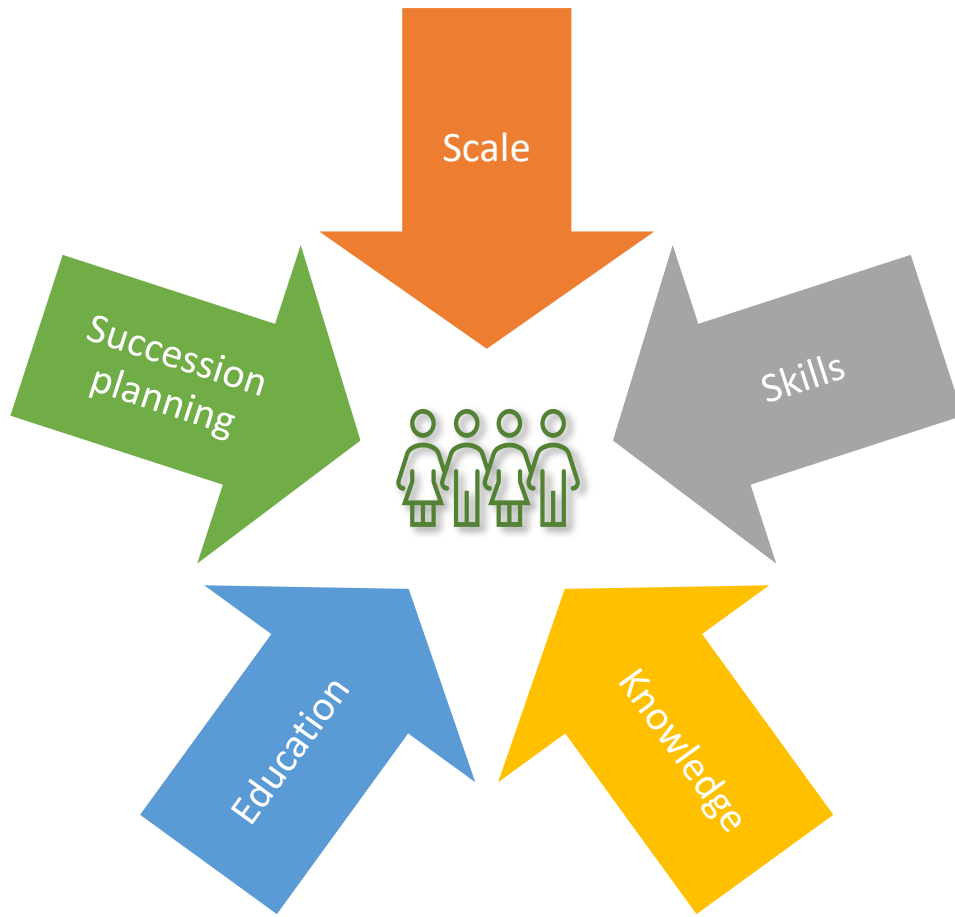
-  The move to cloud solutions for applications and infrastructure requires a different approach.
-  A need for effective partner and solution based contract management.
-  The service needs to act as an enabler of business solutions and change.
-  Support of business led decision making to enable effective service operation.
-  The requirement for support is now location agnostic.
-  With the pace of change in the last 12 months continuous improvement is paramount to the provision of an effective ICT service.
-  Delivery of the strategy requires new governance to be established to enable ICT oversight of all solutions and as such a level of approval for all IT spending is required.

Service Operation



- The ITIL 4 update for a digital world approaches service operation from a customer experience, values streams and digital transformation perspective embracing methodologies such as:
 - Lean
 - Agile
 - DevOps.
- IT service provision has changed significantly in recent years with two main stages being undertaken:
 - A move of IT infrastructure and applications into the cloud to obtain cost reduction, decreased ICT asset ownership and a reduction in complexity of ICT
 - Embarking on a digital transformation journey to evolve the ICT Service.
- The Council has almost completed stage 1 with the notable locally hosted solution exceptions being:
 - Idox – Uniform
 - One Advanced – eFinancials.
- Adopting an ITIL 4 approach is in support of a Cloud First, Modern Desktop and Zero Trust methodology.
- As with all frameworks it is important to make use of those elements that are of use and relevant as one size does not fit all.

ICT Service Transformation



- Digital Transformation is critical in order for ICT to effectively support the business in a continuously changing environment.
- A digital transformation programme utilising the relevant parts of the ITIL 4 framework should be progressed. This will redefine how the ICT functions will be:
 - Designed
 - Developed
 - Transitioned
 - Operated
 - Provisioned
 - Enabled to improve ICT and business related services.
- An ICT options appraisal will be undertaken including a review of current service costs, savings and recommendations.

ICT Transformation



Users



Devices



Support



Security

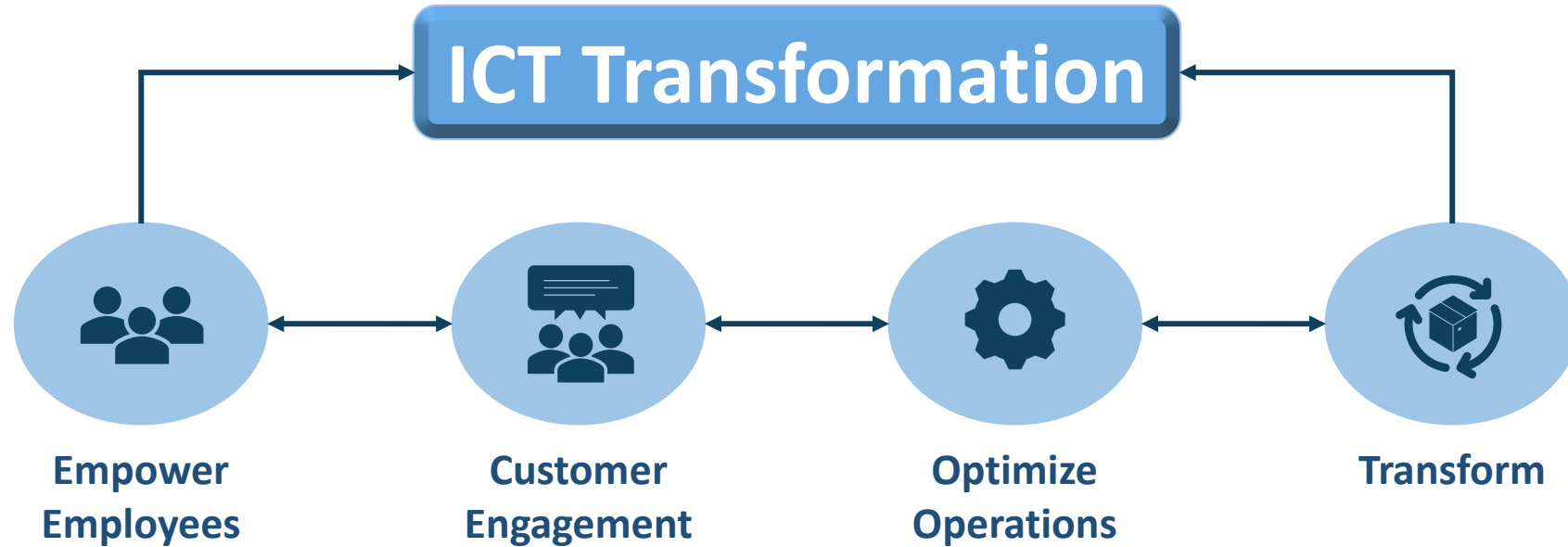


Technology



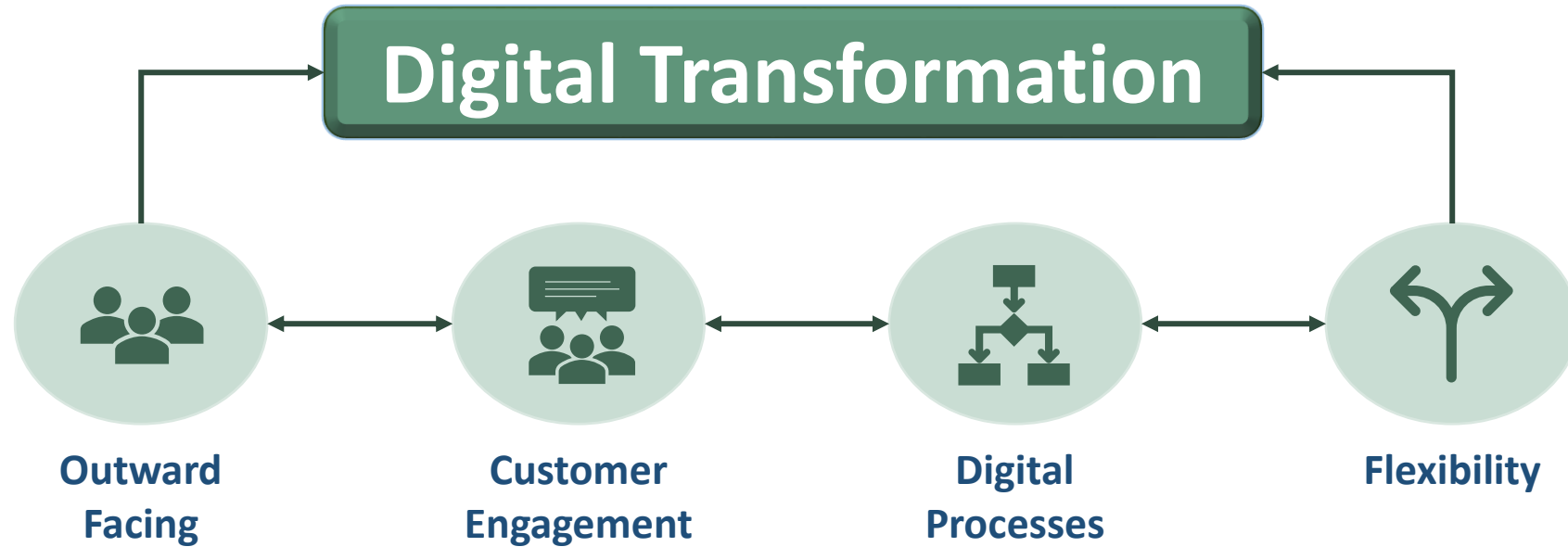
Enabling

What is ICT Transformation



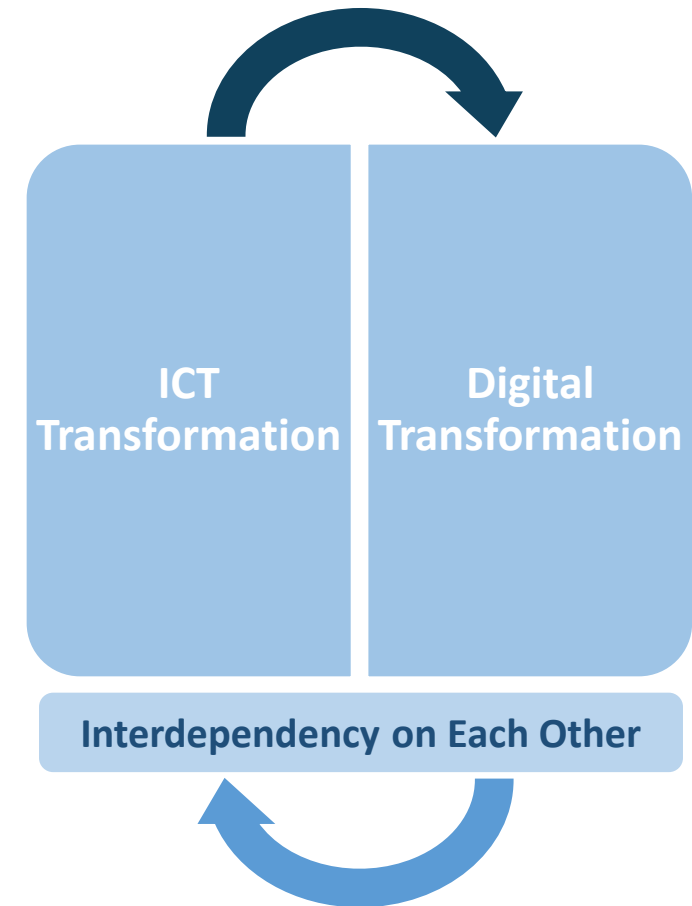
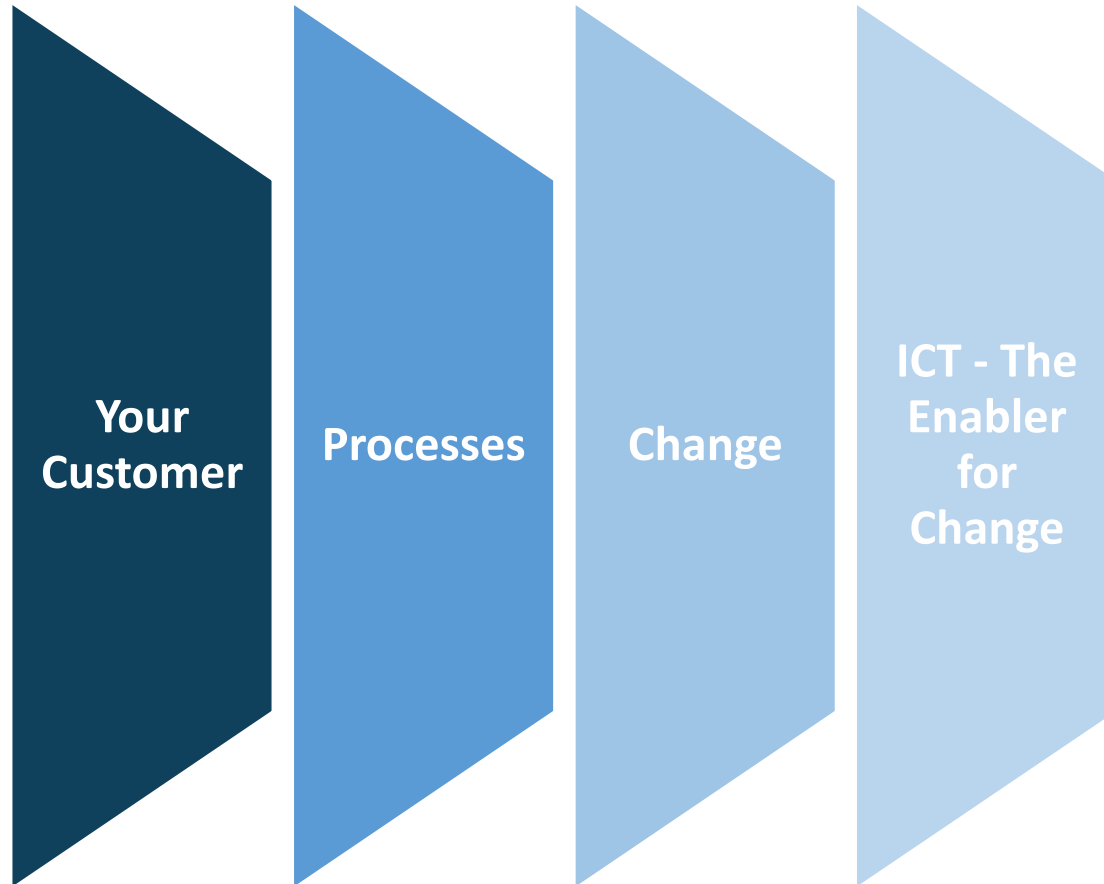
- Be proactive not reactive.
- Be flexible – respond quickly to change and make informed decisions.
- Align with the business to effectively meet customer needs.
- Continue to reduce cost envelope and improve ICT service delivery.

What is Digital Transformation



- Customer is at the heart of your decisions.
- Fundamental changes within your organisation.
- Ongoing process of dealing better with change over time.
- Flexibility – respond quickly to change and make informed decisions.
- Understanding the business need to effectively meet customer needs.

ICT vs Digital Transformation



Change Programme Alignment



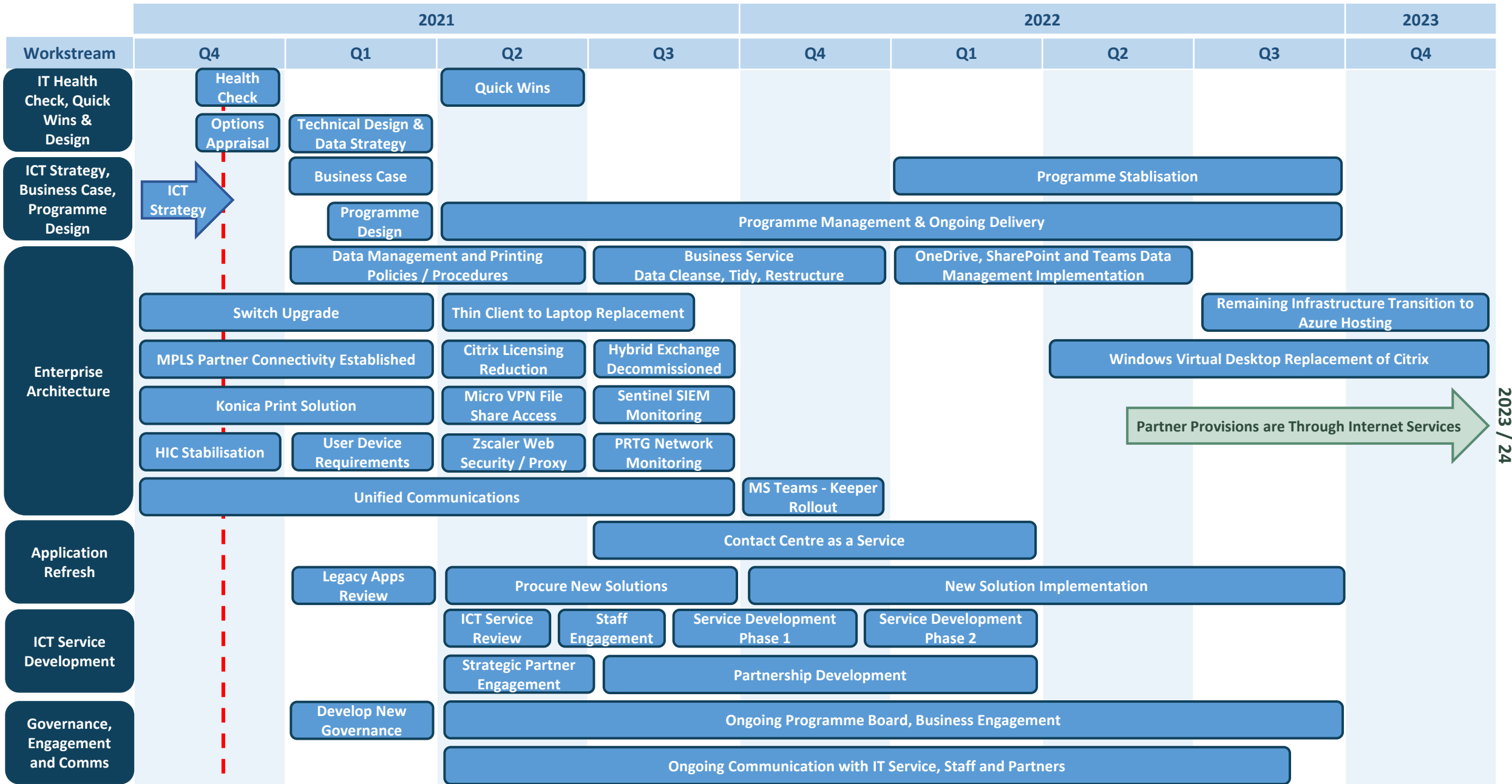
Change Programme

- Continuous improvement.
- Set objectives for cost reductions.
- Reduce footprint of day to day support.
- Reduce ongoing systems and service costs.

ICT Strategy

- ICT insight, future of ICT.
- Set objectives for cost reductions.
- New ways of working.
- Service provision.
- Reduce impact on staff time and efficiency.

ICT Transformation Overview Plan



Benefits of Change



Savings through replacement of legacy solutions that constrain technology options.



Efficient, effective and agile ICT Service capable of supporting the Councils vision.



Robust, resilient and secure ICT landscape.



ICT will be an enabler of business transformation supporting modern, flexible and agile solutions.



Working in close partnership with the business to enable service change, efficiencies and improvements.



Increased motivation, morale and engagement within the ICT Service.



Establishment of Harborough District Council ICT Service as an exemplar of excellence in the local region.

ICT Strategy Stakeholder Engagement





Next Steps

- ICT options review leading to Business Case for change.
- ICT Transformation Programme design.
- Feedback to staff and external partners on the ICT Strategy.
- ICT health check – root cause analysis.
- Engage with ICT service to deliver quick wins from the ICT Health Check.