

Key Decision Required:	Yes	In the Forward Plan:	Yes
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CABINET

16 FEBRUARY 2018

REPORT OF PORTFOLIO HOLDER FOR FINANCE AND CORPORATE RESOURCES

A.9 **DIGITAL TRANSFORMATION**

(Report prepared by John Higgins and Mark Westall)

PART 1 – KEY INFORMATION

PURPOSE OF THE REPORT

To seek Cabinet's support and approval to three proposed Digital Transformation investment strands to provide opportunities to increase efficiency, reduce our operating costs and potentially generate income.

EXECUTIVE SUMMARY

The Council's IT systems play a fundamental enabling role in its day to day service provision and access to information. The projects and investment set out in this report in particular form a key building block in several of the Council's key strategies and plans to transform and modernise the way we work, deliver our services and interact with our residents.

More specifically

- ✓ The investment proposed demonstrates a strong rate of return and the savings generated will contribute significantly to the newly adopted long term **Financial Strategy**;
- ✓ The proposed integration of information held on the Council's major databases into a single view for staff and the opportunity to develop a Tending Portal will deliver a step change in the delivery of the **Customer Service Strategy**;
- ✓ Significant improvements to the web site and the development of an "Events App" will be a major step forward in improving access to information digitally – helping to deliver **Channel Shift**;
- ✓ The integration of back office systems and the move to host systems and store data remotely in "the cloud" will deliver increased flexibility and the ability to deliver services better using digital means and to support face to face delivery of services by staff – all in accordance with the **IT Strategy**.

From a financial perspective, we are constantly looking for investment strategies and opportunities to work as efficiently as possible, in part to drive down our operating costs but also to provide better services to our community for less money.

In September 2013 Cabinet agreed the 3½ year £1.5 million Strategic IT Investment Programme funded through a capital one off investment of £995,000 with additional contributions from 2013/16 IT budgets. Cabinet approval included a £75,474 investment saving target, based upon the investment.

Cabinet subsequently agreed the proposal to bring the Council’s IT support back ‘in house’ from 1st April 2016, generating an ongoing operational saving of £200,000 per year. This was undertaken on a hybrid-based arrangement. The Council’s IT team provide ‘in house’ support where we are resourced to do so, with the need for some specialist resource procurement externally. Major changes to our IT infrastructure and systems such as those proposed in this report require specialist resource support so the majority of investment is for services – specialist IT skills rather than new hardware and software.

For the past six months officers have been working alongside Amido and Intergence consultants to understand Tendring District Council’s state of *digital maturity* – how each department currently uses IT to deliver statutory and non-statutory services to residents. The recommendations resulting from this work comprise three strands of IT and specialist resource investment proposals, as follows;

1. Investment in ‘front office’ IT products and specialist consultant resources to integrate these systems with our existing ‘back office’ databases and systems requiring £519,200 one off investment with £71,500 ongoing costs per year and returning an overall ongoing saving of £35,266 per year. (6.8% ROI). The project will enable ‘step change’ improvements in our customer service delivery, and officers working in a mobile fashion out in our communities.
2. Investment to migrate our IT systems data storage from Council-owned/ maintained hardware that will soon require investment or replacement to that of rented Microsoft Azure platform resources – ‘The Public Cloud’. This project requires a one off investment of £226,000 and has ongoing estimated costs of £149,000 which represents a small overall cost increase of £8,337 per year. However, this project represents a shift from periodic and increasingly large capital investment and ownership of IT hardware, to that of monthly ‘pay as you go’ hardware rental costs. There are additional operational benefits in terms of flexibility and business continuity/ resilience.
3. Investment to develop a Council Smartphone ‘Tourism and Events App’ to promote tourism events and to enhance Air Show crowd funding income. This project requires a one off investment of £120,000 with additional income streams indicatively estimated at £113,119 per year in year 3 of the project. The project also represents a new communications media for the council to utilise.

The digital transformation programme is primarily about using technology to improve performance and efficiency (doing more for less), provide our residents and customers with a digital self-service ‘*single portal access to services*’ council-wide and introducing new Mobile Phone App communications media channel - from a financial perspective the programme costs can be summarised as follows;

Digital Transformation Programme Strand	One Off Investment Costs (£)	Ongoing Annual Costs (£)	Estimated Savings/ Income (£)
Investment In ‘Front Office’ Technology Integrated With ‘Back Office’ Databases	519,200	71,500	106,766
Migration To The Microsoft Azure Platform – ‘The Public Cloud’	226,000	149,000	140,663
Development of a Smartphone Tendring ‘Tourism Events App’	120,000	0	113,119
Totals	865,200	220,500	360,548

In today's digital society our residents' and customers' capabilities, expectations and desire to engage with the Council digitally increases year on year. However, whilst the digital gap between the 'haves' and the 'have nots' is constantly reducing, we recognise that it is there, and will continue to maintain service inclusivity through other channels e.g. face to face service. This inclusivity will be further enhanced through mobile staff working digitally whilst face to face with people all over the district..

From an investment/ return perspective, each of the three proposals comprises a mix of capital investment with some ongoing costs and with return on investment opportunities based upon; self-service take-up and/ or reduction in corresponding staff support costs, a reduction in year on year revenue support costs, the potential to generate additional income streams.

From a transparency perspective, it should be noted that officers have taken the consultants' calculated returns on investments, savings and new income stream opportunities and reduced them considerably, whilst still proposing modest savings and returns. This has been done, in part to reflect a range of service productivity improvements and cost reduction exercises already ongoing and partly to ensure that decisions are made based upon conservative estimates in the hope that these are exceeded rather than under achieved. The proposed staff savings will be achieved and taken where opportunities arise through natural staff turnover.

The proposed Digital Transformation programme of major customer service improvements and supporting IT infrastructure requires an investment total of £865,200 across the three separate programme strands over a two year timeframe. The full financial costs of each of the three elements together with their different investment return models are outlined in detail in *Appendix A* to this report.

The proposed two year programme of investment in customer service improvements supported through new IT investment represents a considerable investment on the Council's behalf. There are clearly programme delivery risks which are outlined with appropriate risk mitigation/ management measures in *Appendix B* to this report.

The programme will require robust monitoring and reporting arrangements with risks and issues requiring active management throughout. With this in mind, key officers will meet with the consultants to monitor issues/ risks and performance weekly. Additionally, we will establish a monthly Programme Board, chaired by the Corporate Director (Corporate Services), and including the Portfolio Holder for Resources and Corporate Services together with key officers to monitor deliverables, timescales, costs and savings.

It is proposed that the procurement will be undertaken through the UK government GCloud-9 framework agreement route which accords with the Council's Procurement Procedure Rules.

The three investment strands are summarised as follows:

1. Investment In 'Front Office' Technology Integrated With 'Back Office' Databases

The primary proposal in this report recommends that the Council invests in a computer system which is designed for local government. A project using specialist IT consultancy services to integrate this software with our other key systems will then result in a single 'view' of a customer for officers, providing the following benefits:

- ✓ A single and consistent view of a customer record

- ✓ Workflow Management – the ability to identify and view all interactions / services with a customer from one location provides a more effective information source to improve our relationship and service with our customers
- ✓ Improves data accuracy through reducing / removing the potential for errors and/or discrepancies that exist between records in different systems e.g. F Smith, Fred Smith, Frederick Smith.
- ✓ Improved officer mobile working capabilities within the community by making the information available in one place
- ✓ The ability to offer residents and customers new digital self-service accounts with a corresponding increase in self-service channel shift = reduction in more costly interactions (e.g. telephone and face to face)
- ✓ Greater staff efficiencies through increased automation will provide savings opportunities.

This front-office product suite project and specialist consultant resourcing to achieve integration to our back-office databases will take 18 months to fully complete and represents one-off investment costs of £519,200 with £71,500 re-occurring costs per annum being off-set through projected savings.

In addition to a 'step change' improvement to customer service provision it is projected that this project strand will generate a return on investment (ROI) of 6.8% or £35,266 ongoing savings per year from 2020 as set out in appendix A (section 1).

The project will deliver staff savings partly through automation of manually intensive processes with additional staff savings being accrued through residents and customers increasingly adopting self-service digital methods when dealing with the Council. Non-staff digital savings will be achieved through reduced operating costs in terms of printing, postage and scanning costs etc.

2. Migration To The Microsoft Azure Platform – 'The Public Cloud'

The second proposal recommends an ethos shift in IT system procurement from that of Council owned/ maintained – our *Private Cloud* - to that of rented Microsoft Azure platform resources – *The Public Cloud*. This concept of IT service provision is in no way unique, we already use the Azure platform for some services and all local authorities Essex-wide are at varying stages of migration to the Azure Platform.

Previously, in 2013 we concluded that the *Public Cloud* market was too volatile/ immature to migrate to. However, with Microsoft investing nearly £15 billion in its Azure platform and a further £1 billion investment in cyber security the 2017 *Public Cloud* market looks very different from that of 2013.

Cabinet should note that this migration to the Microsoft Azure platform will shift our IT costs from that of periodic, significant capital investment to ongoing Azure platform monthly rental costs. This change will introduce the ability to increase/ decrease our usage incrementally and only pay for what we use.

Our Council data storage architecture is already 3 ½ years old and with a 'life expectancy' of 5-7 years combined with a predicted 2 year migration timeline we should look to start a migration strategy within the next 6 months. This proposal identifies saving opportunities based upon; reduced annual capital hardware infrastructure investment, reduced power utility costs and IT support savings.

The financial analysis in *appendix A* (section 2) considers the ongoing revenue and capital hardware re-investment savings costs over a five year period and concludes that an

ongoing strategy of hardware ownership will create an unbudgeted cost pressure of £110,780 in 2019 when our data storage SANs require replacing. Taking into account the Council's growth in data storage over the period a cloud migration strategy will incur a modest increase in costs of £8,337 per annum, but the calculations exclude the future cost pressures of not moving to the *Public Cloud* resulting from Microsoft's strategy of increasing non-cloud licensing costs year on year.

3. Development of a Smartphone Tending 'Tourism Events Ap'

The third and final Digital Transformation investment proposal is to procure specialist consultancy resources to work with our leisure and tourism staff to develop a Smartphone 'Tourism Events App' to promote Tending tourism generally and to market specific tourism and leisure events throughout the year generating advertising/ sponsorship income stream opportunities. This opportunity is clearly highlighted through the Council's annual Air Show with a focus on increasing crowd funding income opportunities.

The Air Show additional revenue table in (appendix A section 3) identifies the £120,000 App investment could achieve a return on investment within three to four years based solely on new Air Show income. These income streams could be increased through using the App technology on other major tourism and leisure events throughout the year, including theatre productions.

There is a risk that the smartphone App potential new income streams are over-estimated. It is therefore recommended that this proposal be considered partly based upon its potential to generate additional income and partly upon the App being a new technology opportunity trial that has proven to be highly effective in other market sectors, notably with the younger generation.

Given the recognised financial risks associated with this App investment proposal, a further feasibility study will take place during the first six weeks of the front- office product project work at no extra cost. This will determine if it is practical to move forward with the App project or to cancel this strand of the programme without incurring charges.

RECOMMENDATION(S)

That Cabinet approves;

(a) Each of the Digital Transformation programme investment proposals outlined, specifically;

- i. A 'front office' product suite and specialist consultant resourcing to achieve integration to 'back office' databases over an eighteen month period with one-off investment costs of £519,200 with £71,500 re-occurring costs per annum.**
- ii. An IT migration strategy and specialist consultant resourcing to host the majority of the Council's IT systems on the Microsoft Azure '*Public Cloud*' platform over a two year period with one-off investment costs of £226,000 and with Microsoft re-occurring monthly costs thereafter, as set out in the report.**
- iii. Development of a Tending Tourism and Events smartphone App over a six month period through specialist consultancy resources and with one-off investment costs of £120,000.**

(b) That authority be delegated to the Chief Executive in consultation with the Portfolio Holders for Finance and Corporate Resources and Leisure and Tourism to agree continuation within existing budgets or termination of the App development after a further feasibility study.

(c) That Digital Transformation Investment works totalling £865,200 be funded in part from £440,000 funds already set aside for existing/ related capital IT improvement budgets with the remaining funding by a transfer of £414,000 from the 2017/18 New Homes Bonus and £11,200 from the Building for the Future Reserve.

(d) That subject to 'a to c' above, officers are requested to finalise the associated procurement activities in accordance with the Council's Procurement Procedure rules.

(e) That authority be delegated to the Corporate Director (Corporate Services) to make the necessary on-going budget adjustments to reflect the financial impact of the investment proposed, as set out in Appendix A.

PART 2 – IMPLICATIONS OF THE DECISION

DELIVERING PRIORITIES

The Digital Transformation investment proposals are primarily focused on delivering our stated Corporate Plan priority of "Delivery of high quality, affordable services" and specifically address;

- ✓ Transforming the way we work.
- ✓ Our financial strategy and a balanced budget.
- ✓ IT improvement programme.
- ✓ Engagement with the community
- ✓ Workforce planning.
- ✓ Maximising tourist opportunities through events.
- ✓ Improving customer access to services.

The self-service 'customer portal' service improvements will further support the vulnerable and rural communities to engage with the Council, either directly through digital channels or via digitally enabled mediated access.

Throughout its inception and the adoption of the Council's Customer Service Strategy it was always envisaged that the Council's corporate IT team would play a key development and delivery role. This Digital Transformation investment represents an additional key supporting element in enabling the practical delivery of the customer service strategy.

FINANCE, OTHER RESOURCES AND RISK

Finance and other resources

The Digital Transformation programme represents an £865,200 major IT investment over two years to deliver 'step change' in our customer service provision. Programme costs, budgetary proposals and forecast savings are broken down on a per-project basis in *Appendix A* to this report.

Should Cabinet decide to fund all, or a number of the three strands comprising the digital transformation programme, funds will be allocated from the existing IT investment capital

budgets totalling £440,000 as follows;

- £350,000 budget previously set aside for a 'My Tending' customer portal/ Customer Relationship Management (CRM) which this programme delivers.
- £60,000 Revenues and Benefits capital budget set aside for a replacement Northgate Unix server which due to the 'Cloud Strategy' will not be purchased.
- £30,000 of the £42,000 Revenues and Benefits capital budget set aside for replacement scanning stations. Scanning hardware costs have reduced significantly during the past 12 months and a £12,000 budget is now sufficient.

Subject to Cabinet's recommendations the remaining £425,200 additional funding will be allocated by a transfer of £414,000 from the 2017/18 New Homes Bonus and £11,200 from the Building for the Future Reserve.

Following the proposed use of the 2017/18 New Homes Bonus, there would be no further funding available from this budget. The remaining funding in the Building for the Future Reserve would be £55,360 after allowing for the proposed use of £11,200.

Other Risks

The programme risks are presented in *Appendix B*: programme risk management and mitigation in the same format as our corporate risk register.

LEGAL

This proposed investment is in accordance with the Council's Budget and Policy framework.

The procurement route will be through the UK government digital marketplace GCloud-9 framework which is fully compliant with the Official Journal of the European Union (OJEU) procurement regulations and can be used in accordance with the Council's Procurement Procedure Rules.

Specialist IT consultants Amido and Intergence are named in the report as they have undertaken the digital transformation assessment work and know the council well. However, the specification of our requirements are being analysed using the comparative information available within the Gcloud-9 framework and a detailed value for money assessment will be completed separately in accordance as per our Council's Procurement Procedure Rules. A final decision on the award of contract will be a Portfolio Holder decision.

OTHER IMPLICATIONS

Consideration has been given to the implications of the proposed decision in respect of the following; Crime and Disorder/ Equality and Diversity/ Health Inequalities/ Area or Ward affected/ Consultation/ Public Engagement.

The customer self-service element of this IT investment proposal is reliant upon the digital capabilities of our residents and customers. Whilst this capability continues to increase predominantly through Smartphone ownership the Council must continue to enable resident service inclusivity through other channels e.g. face to face service, telephony and through outreach working with other partners. In addition to the proposals set out in this report there are plans to give residents access to Council services via kiosks in key

locations throughout the District.

The proposal increases opportunities to mobilise our workforce in our community. This will benefit public engagement and additionally enhance our capacity to serve residents with transport, mobility, isolation, health or vulnerability issues through mediated access and face to face meetings.

An Equality Impact Assessment (EIA) has been completed and no adverse impacts were identified.

A Privacy Impact Assessment (PIA) has been completed to assess the information governance and data protection risks associated with the proposals set out in this report. The risks are within those deemed acceptable to the Council and governance arrangements are robust.

PART 3 – SUPPORTING INFORMATION

BACKGROUND

Within the workplace, the Council's IT services, database systems and supporting architecture play a fundamental enabling role in the Council's day to day service provision and access to information.

The Council's ongoing investment in IT is a cornerstone of our transformation agenda and our drive to work more efficiently and flexibly with officers increasingly working out in the community and at locations across the district.

From a financial perspective, we are constantly looking for investment strategies and opportunities to work as efficiently as possible, in part to drive down our operating costs but also to provide better services for less money i.e. value for money for our community.

With ever reducing central government funding there is increasing pressure to marshal and focus our limited resources to target key Council priorities and outcomes that best serve our residents. This is becoming increasingly difficult for managers without the benefit of real business intelligence, statistical knowledge and trend-based service analysis.

Likewise, in today's digital society our residents' and customers' capabilities, expectations and desire to engage with the Council digitally increases year on year. From an inclusivity perspective - Deloitte 2017 research identifies that 88% of UK adults will have a Smartphone by mid-2018 and among younger age groups (18-45 year olds) smartphone adoption has been over 90 per cent for several years.

This growth in Smartphone usage provides enhanced digital service opportunities through the creation of a new Council App(s) and an as-yet untapped opportunity to generate additional income streams advertising, promoting our tourism and key events and marketing.

Clearly, whilst the digital gap between the 'haves' and the 'have nots' is constantly reducing, this gap must continue to be recognised with the inclusion of all residents maintained through a mix of channels e.g. face to face service, telephony and through outreach working with other partners. Increased opportunities to mobilise our workforce in the community is further enhancing our capacity to serve residents with transport, mobility, isolation or vulnerability issues.

The Council's customer service structure was historically based around old service-based silo working and this is reflected in the structure of the Council's corporate IT systems that still work in isolation to one another. There is also a customer service skills 'split', in part due to professional/ process knowledge, but also based around working knowledge of our different corporate database systems – the IDOX 'property-centric' system and the 'person-centric' Northgate Revenues and Benefits and Northgate Housing system(s). Investment and adoption of a 'front-office' single system integrated to each of our corporate databases will provide a platform for;

- ✓ More generic service-based IT investment and development as opposed to 'silo' database-centric development.
- ✓ Further opportunities to standardise customer service Council-wide – 'One Council'.
- ✓ Through a customer 'single view' enhanced opportunities to better serve residents 'holistically' and with resourcing based upon a single Council-wide view of resident needs, service usage and available business intelligence.
- ✓ Improved data accuracy through opportunities to match data records between databases.
- ✓ Service marketing opportunities/ income generation opportunities subject to residents opting-in to receive information, for example theatre ticket or leisure promotions.

Additionally, many of our processes remain resource intensive with limited automation and with pseudo-self service arrangements i.e. a resident website self-service request and payment often generates an email that has to undergo manual intervention to create a job activity. There is limited or no opportunity for residents to monitor the progress of their Council service requests through self-service channels. Historically, this lack of automation is due to our database suppliers being unwilling to invest in system integration and their slow realisation of the sector's needs for more mobile/ agile staff working – hence the market gap filled by Firmstep and others.

Cabinet will recall that when it agreed the proposal to bring the Council's IT support back 'in house' from 1st April 2016 with an ongoing operational saving of £200,000 per year, it did so on the basis that we would operate a hybrid arrangement whereby we would resource some IT support 'in house' with the need for some specialist resource procurement externally. The programme of works outlined and its procurement is a practical example of our IT support arrangements in practice, albeit on a large, joined-up programme scale.

In 2016 Cabinet formally adopted both the Customer Service Delivery Strategy and the Channel Shift Strategy. The digital transformation proposals in this report will provide a digital 'toolkit' to practically deliver these strategies.

On 6th February 2017 a digital transformation workshop took place attended by; the Portfolio Holder for Resources and Corporate Services, Management Team and Heads of Service presenting both the corporate directorate and operations directorate, with consultants Amido and Intergence.

Following a value for money assessment, Amido and Intergence were commissioned through the UK government GCloud framework procurement route to undertake an 'as is' *digital maturity* assessment of Tendring District Council with a key outcome being a clear

programme of IT investment based upon robust Return on Investment (ROI) with cognisance to the Council's budget deficit position.

Subsequently, over the past six months officers across the Council have been working alongside Amido and Intergence consultants to understand Tendring District Council's state of *digital maturity*.

The Council's *digital maturity* is best explained as an 'as is' assessment of how we currently use IT to deliver our statutory and non-statutory services, both internally by officers and externally by our residents and customers. The investigative work has included; analysing our goals and aspirations and our policies and strategies, reviewing internal/ external pressures and issues, understanding our financial position, analysis of our customers' service experience and aspirations, service process modelling of high volume manually intensive statutory processes (based upon these having the highest Return On Investment [ROI]), challenging our use of corporate IT systems, reviewing our IT investment and budgeting.

Amido and Intergence's '*digital maturity*' findings were reported back to Management Team and Heads of Service on 16th October. The resultant Council's *Digital Transformation* investment programme proposals and calculated ROI savings are outlined below.

To be successful it is essential that staff resources are committed from both IT and across relevant services to work alongside the consultants - a partnership commitment, as opposed to it being something "done to the Council by consultants". To do otherwise will invariably end in failure, or at best, limited success. Whilst every effort will be made by officers to minimise any negative effects on Council service/ response times throughout the programme this is a risk that should be noted.

The Digital Transformation programme proposals are as follows:

1. Investment In 'Front Office' Technology Integrated With 'Back Office' Databases

The primary proposal in this report recommends that the Council invests in a computer system which is designed for local government. A project to integrate this software with our other key systems will then result in a 'single view' of a customer for officers, providing the following benefits:

- ✓ A single and consistent view of a customer record.
- ✓ Customer Record Management(CRM) capabilities – details of why a customer has contacted the Council.
- ✓ Workflow Management – the ability to identify and view all interactions / services with a customer from one location provides a more effective information source to improve our relationship and service with our customers.
- ✓ Reduces/ removes the potential for errors and/ or discrepancies from existing records in different systems e.g. F Smith, Fred Smith, Frederick Smith.
- ✓ Improved officer mobile working capabilities within the community by making the information available in one place.
- ✓ The ability to offer residents and customers a new digital self-service account with a corresponding increase in self-service channel shift = reduction in more costly interactions (e.g. telephone and face to face).
- ✓ Greater staff efficiencies through increased automation will provide savings opportunities.

Scenario One: Tendring resident, Mr. Jones is on Clacton seafront with his family watching the Air Show. Between flights he uses his smartphone to access his new Council online account to confirm his Council Tax payment balance and that his direct debit has been paid following changes to his personal bank account. Whilst online he sees a Theatre promotion for the Summer Show so buys tickets for tonight's performance there and then. His family is having a great day out at the Air Show, as he has limited cash and knows that his children will want ice creams etc. he downloads the new App and makes a £20 online donation

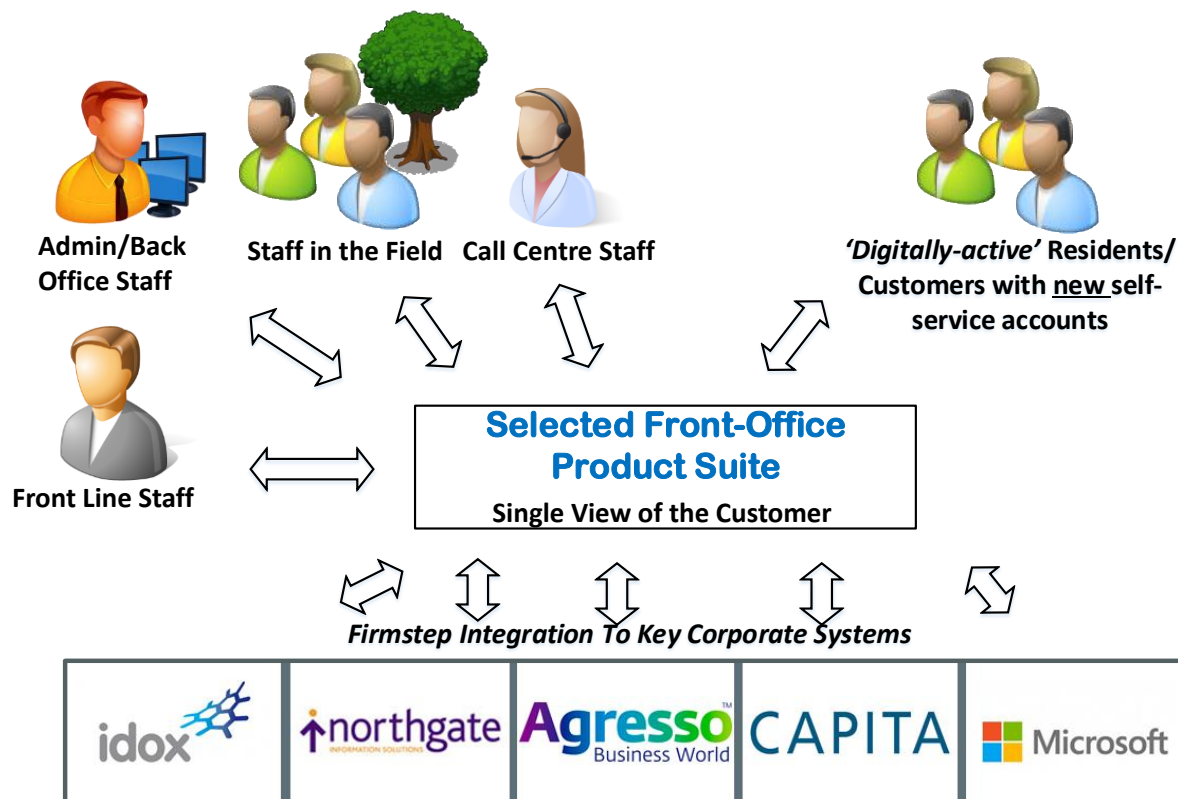
Scenario Two: Local Property Developer, Ms. Davis wants to check the status of her current planning application. She does so online and notes a Council website promotion for self-service accounts. She registers her business and has instant access to her NNDR account balance. As a business account holder she sees a further promotion for a forthcoming business seminar at the Town Hall so registers to attend and also signs up to the Council's business E-magazine.

The selected front-office product will be fully integrated with key Council 'back end' databases, namely;

- ✓ **IDOX** - property-based database used by planning, building control, licensing, public health and environmental services and asset management.
- ✓ **Northgate** - comprising Council tax revenues, housing benefit, NNDR, Council housing repairs and tenancy related activities.
- ✓ **Agresso** – corporate financial system.
- ✓ **Capita** e-payment system.
- ✓ **Microsoft** - used by all IT enabled officers e.g. Outlook calendar for scheduling appointments.

The 'single view of the customer' will enable a more knowledge-based approach to providing resident services for staff, be they; customer facing, mobile and office-based processing staff – balanced against information governance, security and job profile needs.

The single resident view technology used by officers will be used to create the resident self-service account - the My Tendring Customer Portal - where residents can opt to subscribe to new self-service account opportunities (channel-shift) for those who wish to manage their Council relationship in this manner. It should be noted that this new functionality will sit alongside more traditional face to face and telephony based customer service channels to maintain access to services for all demographics.



The front-office product integration work will include integration with and re-design of our Council website to make it even simpler for residents and customers to self-serve. Again, further enhancing opportunities for residents to 'channel-shift' to digital self-service as their preferred methodology for dealing with the Council.

The product workflow functionality combined with e-forms will facilitate greater processing efficiency/ management with increased automation. The product suite integration to our IDOX and Northgate databases will enable officers (reception/ office and mobile working) to recall and input information in once with feeds to fields in each database as appropriate. Working in this manner will improve staff efficiency and ultimately generate saving opportunities.

As a further benefit, integration between the front-office product and our corporate databases with staff accessing data via the front-office product suite will ultimately make the Council 'back office' product agnostic. This means that in the future we could move from one system provider to a competitor to drive down operating costs with minimal upheaval for front-office product using staff.

In addition to software and licensing it is proposed that we procure specialist IT resources to; deliver the application integration to IDOX and Northgate databases and supporting infrastructure, to provide programme management resources, to lead on the automation/ efficiency improvements identified, and to provide configuration documentation, training and support.

It should be noted that calculated ROI savings are based upon improved use of electronic workflow systems in just a small number of high volume, manually intensive statutory processes undertaken by Revenues and Benefits, Planning, Housing and Environmental Services. Additionally, ROI saving predictions are based upon modest growth in 'self-service' (channel-shift) from other more costly channels - for example a shift from face to face service requests to digital self-service requests.

Council staff trained in the use of front-office product will have the skillset to work on further process flow automation and generate additional ROI savings but consideration should be given to the fact that there may be the need for additional specialist support to stimulate automation in other Council areas.

For example, the selected front-office system will be capable of being integrated with the leisure management information system - Gladstone. This additional system integration does not form a part of this Digital Transformation proposal. It could be undertaken as a future phase but would incur additional costs and resourcing.

2. Migration To The Microsoft Azure Platform – ‘The Public Cloud’

Cabinet will recall that a key deliverable of the now complete three year 2014-2017 £1.5 million IT Strategic Investment programme was the purchase of two data Storage Area Networks (SANs) and the removal of some one hundred and eighty separate physical servers to store our data ‘virtually’ on these SANs. This virtualisation programme created our ‘*Private Cloud*’ data storage infrastructure.

This second proposal recommends an ethos shift in IT system architecture from that of predominantly Council purchased/ maintained hardware (our *Private Cloud*), to that of rented Microsoft Azure platform resources – ‘*The Public Cloud*’. It is proposed that we purchase specialist resources to assist us with migrating most of our IT services across to run on the Microsoft Azure platform.

In 2013/2014 during the IT Strategic Investment programme research phase, we investigated the option of ‘virtualising’ our physical servers and moving directly to the *Public Cloud* instead of purchasing Council-owned SANs and creating our current *Private Cloud* architecture. At that time we concluded that the *Public Cloud* market was too volatile/ immature and there were doubts as to cloud security and the outsourced placing of our most sensitive data.

With the fast pace of technology change, and with Microsoft investing nearly £15 billion in its Azure platform including creating a number of UK-based data warehouses and with a further £1 billion investment in cyber security the 2017 *Public Cloud* market looks very different from that of 2013.

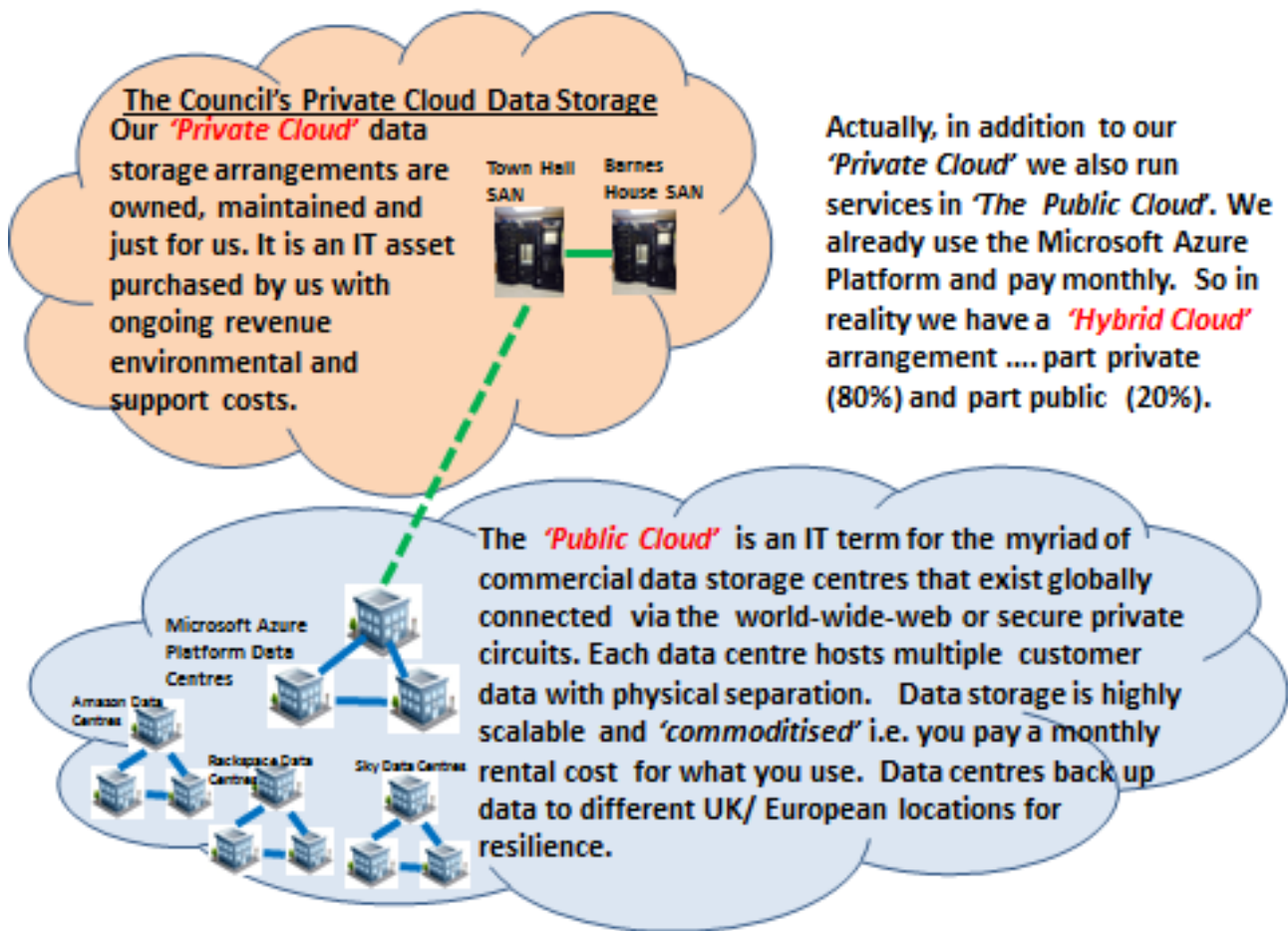
From a security perspective, the Microsoft Azure platform achieves compliance with the standards required by the National Cyber Security Centre (NCSC) and Microsoft have been awarded the data storage contract for the Ministry Of Defence (MOD) and with Police and NHS increasingly adopting a migration strategy to the Azure platform.

Given the fast pace of IT industry change, and with software applications requiring ever increasing processing power, and given in-built product obsolescence, our *Private Cloud* data storage SANs will require significant re-investment, or more realistically, complete replacement within the next two year timeframe. In reality their performance will steadily degrade over the next two years as the software applications processing power needs start to outstrip the SANs performance capabilities.

It is notable that all of the members of the Essex Online Partnership (EOLP) are all at different stages in migrating their IT architecture to the Microsoft Azure Platform. We should also note lessons learnt from Brentwood Council following their office transformation need to move to the *Public Cloud*, as follows;

- a) Local authorities have some legacy systems that simply won't work in a *Public Cloud* environment so they must either remain on physical hardware supported by localised resource or be replaced/ turned-off.
- b) Local authorities deliver complex, multi-faceted services as opposed to a private sector company with perhaps just 50 product lines. In practice, this means that a large scale IT supporting infrastructure cloud migration will take around 2 years to complete.

Our *Private Cloud* IT architecture, comprising our 'mirrored' SANs represents a 2014 capital hardware investment cost of £152,714, is already over 3 ½ years old and originally had an operating 'life expectancy' of 5-7 years. They are now realistically estimated to last 5-6 years. With cognisance to a two year timescale experience for Azure platform migration we should be looking at a migration strategy to commence as soon as possible.



Actually, in addition to our *Private Cloud* we also run services in *The Public Cloud*. We already use the Microsoft Azure Platform and pay monthly. So in reality we have a *Hybrid Cloud* arrangement part private (80%) and part public (20%).

In truth, the Council already has a *Hybrid Cloud* solution with around 80% of our IT services running on our *Private Cloud* SANs but with 20% of services already on the Microsoft Azure platform *Public Cloud*. This proposal represents a shift in ethos that will effectively reverse our current position ultimately placing around 80-90% of IT services on the Azure *Public Cloud* with some 10-20% remaining on greatly reduced Council-owned hardware.

Our hardware virtualisation strategy has placed the Council in a strong position to now benefit from the maturing *Public Cloud* market. However, when we commenced the Strategic IT Investment Programme in 2014 the Council had just 9 Terabytes of data stored. Since 2013 this has steadily grown year on year and we currently store over 30 Terabytes (TBs) of data, despite introducing de-duplication systems that mean that we only store all data once. To aid understanding, 30 TBs of digital data storage equates to

over 1 ½ million trees made into paper and printed on. Additionally, the programmes and systems that we use represent a further 45 TBs of programme data storage. Our ever increasing need to securely store data will continue, relentlessly.

Our SANs were purchased with the expansion capability to cope with this data storage growth subject to future additional investment. We currently have around 25% growth capacity remaining. Their mirrored configuration has benefited the Council with more robust backup/ disaster recovery arrangements than ever before. However, given their close proximity (Town Hall and Barnes House) a significant emergency could destroy or incapacitate both SANs. With this in mind we additionally back-up our data to physical data storage tapes that are stored in a fire-proof safe for disaster recovery situations.

Our tape-based data archiving/ disaster recovery arrangements are becoming increasingly resource intensive and are now taking so long to run that they are beginning to conflict and slow our office hours IT processing. We need to do something differently i.e. another reason for migrating our data storage to the *Public Cloud* where we can utilise Microsoft's data archiving/ disaster recovery services through mirroring our configuration across two different data centres (for example London and Dublin). This service is costed into our migration proposal.

Alternatively, we will need to invest further capital hardware sums to replace our existing two Data Protection Manager (DPM) systems that run the tape data storage. Each of the two existing DPM machines cost £22,231 to purchase and it is estimated that over time as our data backup needs increase we will need up to two additional DPM systems bringing the total capital costs to an estimated £106,709. Again, each system will only have a realistic lifespan of five years. Our migration strategy proposal will negate these additional future cost pressures.

Cabinet should note that this migration proposal to the Microsoft Azure platform will shift our IT costs from that of annual and periodic significant capital hardware investment budgeting to ongoing Azure hardware revenue monthly rental costs which is a new concept for the Council and will require careful management to resist uncontrolled cost increase.

The proposal identifies savings based upon; reduced annual capital hardware infrastructure investment, reduced power utility costs, ongoing service costs (for example the computer suite air conditioning contract support costs) and IT support staff savings. Financial details are outlined in *appendix A* (section 2) to this report.

Running our IT services on the Azure platform gives the Council new flexibility to temporarily increase our IT processing capabilities. For example; to meet increased demands upon our website during the Airshow, website demands during parking permit renewals, or to increase system capacity/ processing speed for our Electoral Services system during an election. The Council isn't really comparable with a major marketing organisation with massive business 'peaks' during a global campaign, nonetheless, this flexibility may become useful – again bearing in mind that we will pay for what we use.

3. Development of a Smartphone Tending 'Tourism Events App'

The third and final strand of the Digital Transformation proposal is to procure specialist resources to work with our leisure and tourism staff to develop a Smartphone 'Tourism Events App' for Apple and Android Smartphones.

The aim of the smartphone App will promote Tending tourism generally but also market

specific Council-led tourism and leisure events throughout the year with new advertising/ sponsorship income stream opportunities. This opportunity is clearly highlighted through the Council's annual Air Show with a focus on increasing crowd funding income opportunities i.e. attendees could donate via the App and their smartphone instead of (or as well as) donating via collection buckets. The wider resident and visitor population of Tendring could also chose to donate remotely using the App - perhaps from the comfort of their garden sun lounger, or from a beach in Holland on Sea.

Based upon their research and marketing/ advertising knowledge across other more mature economic sectors, the consultants have forecast new income generation streams as outlined in the financial section of this report. It should be noted that this is a new technology area for the Council and therefore the accuracy of forecasting financial return on investment is difficult. However, it cannot be disputed that App development represents a high growth technology area with strong financial returns in other sectors.

The Air Show additional revenue table (appendix A section 3) identifies that the £120,000 App investment could achieve a return on investment in between three to four years based solely on Air Show income. These income streams should be improved through using the App technology on other major tourism and leisure events throughout the year, including theatre productions.

With the potential risk associated with over-estimating the smartphone App return on investment it is recommended that this proposal be considered based partly upon its potential to generate additional income, and partly upon the App being a technology trial that has proven to be highly effective in other market sectors, notably with the younger generation. In addition to the potential to generate new income streams, the technology may be re-usable in other areas of Council activity, for example, within our Career Track Apprenticeship service to promote employment and training opportunities.

Given the recognised financial risks associated with this App investment proposal, a further feasibility study will take place by specialist consultants during the first six weeks of the front office product project work at no extra cost. This will determine if it is practical to move forward with the App project or to cancel this strand of the programme without incurring charges.

It is worth noting that in the future App technology could also be used in other areas with a focus on reaching younger demographics that habitually chose this media channel in preference to other more traditional channels.

BACKGROUND PAPERS FOR THE DECISION

Tendring District Council Corporate Plan 2016-2020
Tendring District Council Customer Service Delivery Strategy.
Tendring District Council Channel Shift Strategy.

APPENDICES

Appendix A: Financial considerations, budgetary provision and forecast savings
Appendix B: Programme risk management and mitigation