Report To:	Inverclyde Integration Joint Board	Date: 10 September 2019
Report By:	Louise Long Corporate Director (Chief Officer) Inverclyde Health & Social Care Partnership (HSCP)	Report No: IJB/51/2019/AS
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Subject:	**TECHNOLOGY ENABLED CARE (TEC)**	

1.0 PURPOSE

1.1 This report provides an update on the development of Technology Enabled Care (TEC) within Inverclyde and the positive outcomes for people who use the service.

2.0 SUMMARY

2.1 Technology enabled care supports people to have greater choice, control and confidence in their care and wellbeing. Technology can deliver better outcomes for those using our health, housing, care and support services and assist them to remain more independent and safer at home for longer. TEC provision supports a reablement approach, hospital discharge and reduction in bed days as well as avoiding unscheduled care.

2.2 There are approximately 2,200 service users within Inverclyde with a community alarm service. Of this number, over 400 also have enhanced telecare packages. These packages consist of a wide variety of environmental sensors and personal sensors such as fall detectors, and bed exit monitors. Of those utilising enhanced technology, 60% are over 75 years old. (see appendix 1 for the breakdown of those with enhanced telecare).

2.3 The service has seen a 5% net increase in service users year on year, with 803 referrals received during 2018. Within Inverclyde a team of one WTE manager, one WTE co-ordinator and 16.45 WTE officers provide a 24 hour response service and regular visits overnight following discharge from hospital. The service has responsibility for the installation and maintenance of equipment, 6 monthly service user reviews and management of information. (Team structure appendix 5).

2.4 The use of technology is aligned to Scotland's National Health and Wellbeing Outcomes and plays an important role in ensuring that:-

- People are able to look after and improve their own health and wellbeing and live in good health for longer;

- People, including those with disabilities or long term conditions or who are frail are able to live, as far as reasonable practical, independently and at home or in a homely setting in their community.

2.5 Digital technology is also a focus of the Inverclyde Health and Social Care Strategic Plan 2019-2024, and as part of our vision and values is underpinned by the "Big Actions" These include:-

- The use of technology to support and manage long term conditions,
- Benefits and opportunities that technology can offer through the use of digital platforms
- Improved access to physical and digital information
- Development of a Digital Strategy by 2021

2.6 The Inverclyde TEC Service has made significant inroads in embedding technology locally and in meeting the requirements for Scottish Executive funding through the Technology Enabled Care Programme.

Since 2007, TEC initiatives have generated £900,000 non-recurring Government funding which has enabled stakeholder engagement, promotion/awareness sessions, training and implementation of TEC in line with the Government's strategy to achieve an integrated approach to meeting national and local outcomes. The service has established a great deal of experience in managing and developing TEC and has learned much working with other partnerships.

2.7 The current Scottish Executive priority is to fund future tests of change. The aim of any proposed test "must align with the overarching TEC programme aim which is to support more citizens to make greater use of technology to manage their own health and wellbeing at home and in the community. A test of change should seek to demonstrate measurable improvement in outcomes directly to individuals or indirectly through improved service delivery processes". It is assumed by the Scottish Executive that the infrastructure required should now be in place within partnerships.

2.8 Benchmarking shows the benefits of expansion of TEC services and investment made in other partnerships. East Renfrewshire HSCP has made a significant commitment to TEC and currently has approximately 2,741 service users with community alarms and enhanced telecare packages. Advancements in Home and Mobile Health Monitoring (HMHM) have also been realised with 702 people benefiting from this service. East Renfrewshire's TEC Structure (see appendix 4) supports the HSCP's commitment to resourcing and developing the service ensuring its long term sustainability.

2.9 Within Inverclyde recent investment from complex care funding has been utilised to develop the service to meet future challenges in supporting people with more complex needs to live safely within the community. This will ensure the sustainability of the future service and enable the HSCP to continue joint work within the Scottish Executive strategy.

2.10 Future challenge will be the transfer from analogue to digital. OFCOM, the regulator for communication services, has advised that all analogue telephone services in the UK will be switched off and replaced by digital connections by 2025. This transition will have significant financial implications for the Council and has been highlighted in a report to the Head of Service, Community Care and Health dated 6th September 2018. (see appendix 6).

3.0 RECOMMENDATIONS

The Integration Joint Board is asked:

3.1 To note the achievements within Tec and support our continued role in the national digital transformation which will link with the local Digital Strategy as outlined in the

Inverclyde Health and Social Care Strategic Plan 2019-2024.

3.2   To note the future financial pressure and potential costs as a result of the changeover from analogue to digital by telecommunication providers. It is anticipated that these costs could be in the region of £500k with ongoing connectivity costs, after the first 2 years, of potentially £80k annually.

3.3   To agree a future report will be presented to the IJB when feedback from national work streams conclude.

Louise Long
Corporate Director (Chief Officer)
Inverclyde HSCP

4.0 BACKGROUND

4.1 Technology Enabled Care (TEC) can be defined as the use of telecare, telehealth, video conferencing and mobile health and wellbeing to improve outcomes for individuals through the application of technology as an integral part of cost-effective care and support.

4.2 **What is Telecare and Telehealth**

Telecare – is the provision of care services at a distance using a range of analogue, digital and mobile technologies. These range from simple personal alarms, devices and sensors in the home, through to more complex technologies such as those which monitor daily activity patterns, home care activity, enable 'safer walking' in the community for people with cognitive impairments/physical frailties, detect falls and epilepsy seizures, facilitate medication prompting, and provide enhanced environmental safety.

Telehealth – is the provision of health services at a distance using a range of digital and mobile technologies. This includes the capture and relay of physiological measurements from the home/community for clinical review and early intervention, often in support of self-management: and "teleconsultations" where technology such as email, telephone, telemetry, video conferencing, digital imaging, web and digital television are used to support consultations between professional to professional, clinicians and patients, or between groups of clinicians.

4.3 **National Technology Enabled Care Programme**

The Technology Enabled Care Programme 2014-2018 and associated funding have been a major focus of the Scottish Government's drive to support the integration of telecare and telehealth across Scotland. The use of TEC locally has allowed Inverclyde HSCP to contribute to the 2020 vision outlined by the Scottish Government:

"By 2020 everyone is able to live longer healthier lives at home, or in a homely setting……..".

The National TEC Programme has focused on five areas of work:-

- Extending the use of home health monitoring
- Expanding use of video conferencing across all health and social care sectors
- Building on the emerging national digital platforms to enable direct access to advice and assistance
- Expanding the take up of telecare with a focus on prevention, points of transitions in care, and dementia
- Exploring the scope and benefits of switching from analogue to digital

Since 2007, TEC initiatives within Inverclyde have generated £900,000 non-recurring Government funding which has enabled stakeholder engagement; promotional/awareness sessions; training and implementation of TEC in line with the Government's strategy to achieve an integrated approach to meeting national and local outcomes.

In line with the National Telehealth and Telecare Delivery Plan for Scotland, the Scottish Executive announced funding in 2014 to support the adoption and delivery at scale, of technology enabled care including expansion and embedding of telehealth and telecare.

It was the Government's expectation that partnerships would use the funding for developments and transitional costs with continued revenue being from mainstream budgets to ensure sustainability beyond the life of the TEC Programme. It was also the case that partnerships would provide a degree of match funding for some of the

identified work areas.

4.4 **Technology Enabled Care in Inverclyde**

4.4.1 It can be evidenced that technology enabled care can support people to have greater choice, control and confidence in their care and wellbeing. Technology can deliver better outcomes for those using our health, housing, care and support services and allow them to remain independent and safer at home for longer. TEC provision supports a reablement approach, hospital discharge and reduction in bed days as well as avoiding unscheduled care.

4.4.2 It is well documented there is an increasing older population which is higher in Inverclyde compared to the rest of Scotland. In comparison with the Scottish average, Inverclyde also has a greater TEC provision for those over 65 years.

The service has seen a net rise of 5% in demand for services year on year. The service received 803 referrals in 2018.

There are approximately 2,200 service users within Inverclyde with a community alarm service. Of this number, over 440 also have additional telecare packages. These packages, in the main, consist of environmental sensors and personal sensors such as fall detectors, bed exit monitors and so on. Of those utilising enhanced technology, 60% are over 75 years old. (See Appendix 1 for the breakdown of those with enhanced telecare)

Within Inverclyde a team of one manager, one co-ordinator and 16.45 WTE responders provide a 24 hour response service and regular visits overnight following discharge. The service has responsibility for the installation and maintenance of equipment, 6 monthly service user reviews and management of information. (Team structure appendix 5).

4.4.3 Over the last few years the service has increased collaborative working with other agencies. The service has worked tirelessly to bring awareness of TEC and its benefits to service users, carers, professionals and other stakeholders. Partnership working has included Your Voice; Carers Centre; Alzheimer Scotland as well as awareness sessions provided to - acute setting; community AHPs; HSCP mental health as well as assessment and care management teams.

4.4.4 There is ongoing work to raise awareness and provide training sessions and equipment within local care homes. Over the last two years there have been approximately 110 pieces of equipment loaned to care homes in order to keep residents safe. The majority of equipment is in support of falls reduction. The frailty of older people in care homes means that they are three times more likely to fall than older people living in their own homes and there are ten times more hip fractures in care homes than other environments. It is known that approximately 40% of hospital admissions from care homes follow a fall.

4.4.5 The service has introduced the use of GSM units (Global System for Mobile Communication) where service users have no land line but are assessed as being at risk. They are used to facilitate urgent hospital discharges and those moving to temporary accommodation. They have also been used to support housing in emergency situations where there is a risk of domestic abuse.

4.4.6 As part of Inverclyde HSCP Falls Pathway, TEC plays a vital role in supporting and sustaining service users at home. Community Alarm responders assist around 1500 service users annually after sustaining a fall, of which only 10% (150) are taken to hospital. This is significantly lower than those attended to by the Scottish Ambulance Service (SAS) who conveyed (556) 76% of the 735 falls calls they attended in 2017 across Inverclyde. In line with guidance contained in "The Prevention and Management of Falls in the Community – A framework for action" responders complete a level one assessment form to facilitate appropriate follow up action and prevention.

4.4.7   TEC staff complete joint visits with Fire and Rescue Services where a fire risk has been identified. As well as installation of smoke and/or heat detector sensors, fire prevention colleagues complete a home safety check to ensure all fire risks are considered. There have been over 140 such joint visits carried out over the last 2 years.

4.5   **Home and Mobile Health Monitoring (HMHM)**

TEC supports 30 people with Chronic Obstructive Pulmonary Disease (COPD) using Docobo remote health hubs. This allows patients with the long term condition to send their physiological readings through the hub to a website which is triaged daily by community nursing. This process provides early intervention and 'just in case medication' should this be required, thus avoiding exacerbations and potential hospital admissions. The service is in line with the Scottish Government's drive to encourage greater self-management of chronic conditions and has been a strong focus of the TEC Programme. Data taken from the Docobo system has evidenced a reduction in hospital admissions and a cost saving.

4.6   Developments

In 2017, building on the work of the TEC Programme, the Scottish Executive announced their intention to fund tests of change. The aim of any proposed test "must align with the overarching TEC programme aim which is to support more citizens to make greater use of technology to manage their own health and wellbeing at home and in the community. A test of change should seek to demonstrate measurable improvement in outcomes directly to individuals or indirectly through improved service delivery processes". It is assumed by the Scottish Executive that any infrastructure required should now be in place within partnerships. Inverclyde Test of Change Report 2017 (see appendix 3).

In 2015, Government funding was used to recruit a Project Lead to drive forward the TEC Programme and a Marketing/Training post which was seen as pivotal in promoting TEC. This has enabled us to significantly progress the TEC agenda and increase its use. However, the funding for these posts has now come to an end.

4.6.1   Care Lifestyle Monitoring

"I Care" (Intelligent Care) is an assessment and monitoring tool. The technology monitors an individual's activity at home which is recorded and can be viewed by authorised users in the form of a graph and report. Following the roll-out of awareness training the system has been used on over 80 occasions in the community. The technology aids the HSCP's Home 1st approach, early supported hospital discharge and provides a robust assessment as well as rich information to inform future care planning arrangements. Case study 2 shows how Mrs A is now able to remain in her own home rather than move to a care home.

4.6.2   Global System for Mobile Communication (GPS)

GPS technology is being used as part of a safer walking initiative offering individuals greater choice, independence and control. In conjunction with colleagues in Mental Health and Alzheimer Scotland, initially 22 individuals participated in a test of change initiative increasing to 32 service users in 2018. It is planned to upscale this initiative by a further 30 users bringing the total to 62 in 2019.

This technology will also be beneficial to people with a learning disability. Work is underway to introduce the technology as part of an independent travel pilot with learning disability services.

4.6.3   Hypertension

Home health and mobile monitoring can be a cheaper and more cost-effective way of monitoring long term conditions. The use of Florence (mobile App) with 90 people over 3 x 30 day cycles is currently being tested.

The test of change involves patients monitoring their blood pressure from home and relaying their results via their mobile phone to their GP practice. It is anticipated that the outcomes of this test will reduce the number of primary care appointments, address the issue of those suffering from 'white coat syndrome', free up health professionals by improving self-monitoring and improve patient experience.

4.6.4 Diabetes

Florence (mobile App) is also being used to improve self-care in Type 1 Diabetes and increase the number of patients self-administering insulin thus reducing the number of home visits required by the community nursing team. It is anticipated that the outcomes will evidence improved patient confidence in self-monitoring as well as raise the numbers utilising on line resources such as "My Diabetes My Way" to support self-management. Case studies (appendix 2) show how Miss A, a 23 year old, now feels more in control of her condition and Mr C comments " I feel alive again, its great".

4.7 **Transition to Digital**

Preparing for technology changes, such as the analogue to digital telephony switch has been a key focus for the TEC programme.

By 2025 all analogue telephone services in the UK will be switched off and replaced by digital connections. This will have a significant impact for local authorities who provide TEC as part of their service delivery model.

The transition will have resource implications for the HSCP as all alarms will be required to be replaced individually as well as any linked sensors. A briefing has been submitted to the CMT regarding financial implications. (see appendix 6)

Work is underway with regard to planning for the switchover by telephone providers and an advisory group has been established to support local authorities and other organisations through the transition to ensure there is minimal disruption for vulnerable service users.

4.8 **Benchmarking**

Inverclyde has completed a benchmarking exercise with East Renfrewshire HSCP in relation to their Technology Enabled Care Team. As can be seen in the attached structure chart (see appendix 4), East Renfrewshire has committed long term to embedding and sustaining TEC services and supports 24% more service users with a community alarm and enhanced telecare equipment than Inverclyde.

In addition, there have been 702 service users who have benefited from home and mobile health monitoring (HMHM) using FLO to monitor hypertension. Based on a calculation of each patient having between 4-6 appointments with practitioners to diagnose and titrate medication as well as an annual review, they have reported a saving of over 1800 face to face clinical appointments with GPs/practice nurse and pharmacy.

As with most authorities in Scotland, Inverclyde charges for community alarm at £11.25 per month. Following the implementation of the charge in July 2018 there was a 20% reduction in the uptake of alarms and this may impact on the continued demand for the service.

4.9 **Proposal**

To support and develop the TEC Service, it is vital that Inverclyde HSCP continues to

invest in the infrastructure of the service in order to meet the following outcomes:

- Provide the necessary infrastructure to support and maintain TEC delivery as well as new developments
- Be in a state of readiness to take up opportunities for new funding in conjunction with partners and deliver on milestones and agrees outcomes
- Coordinate expansion and upscaling of technology locally
- Include Technology Enabled Care in the Digital Strategy as part of the Strategic Plan
- Continue to meet the ongoing reporting and evaluation work required to meet Tests of Change conditions
- Upscale and expand the use of Home and Mobile Health Monitoring to support long term conditions and self-management and implement innovative use of technology as part of the Strategic Plan
- Manage securely, the transition of analogue to digital for Inverclyde service users
- Implement and promote digital access.

5.0 IMPLICATIONS

FINANCE

5.1 Money will be put aside in an Earmarked Reserve from any Health and Community Care underspends over the next couple of years to cover the anticipated one off costs associated with the move to digital. The expectation is that the recurrent costs will be covered by a review of charging.

Cost Centre	Budget Heading	Budget Years	Proposed Spend this Report £000	Virement From	Other Comments

Annually Recurring Costs / (Savings)

Cost Centre	Budget Heading	With Effect from	Annual Net Impact £000	Virement From	Other Comments

LEGAL

5.2 There are no legal implications arising from this report.

HUMAN RESOURCES

5.3 There are no human resources implications arising from this report.

EQUALITIES

5.4 Has an Equality Impact Assessment been carried out?

YES

X	NO – This report does not introduce a new policy, function or strategy or recommend a change to an existing policy, function or strategy. Therefore, no Equality Impact Assessment is required.

How does this report address our Equality Outcomes?

Equalities Outcome	Implications
People, including individuals from the above protected characteristic groups, can access HSCP services.	TEC is inclusive of people with protected characteristics
Discrimination faced by people covered by the protected characteristics across HSCP services is reduced if not eliminated.	TEC reduces risk in the community for vulnerable groups
People with protected characteristics feel safe within their communities.	TEC equipment can reduce risks and can ensure a greater feeling of safety in the community.
People with protected characteristics feel included in the planning and developing of services.	TEC is promoted in many different locations, including Your Voice, acute setting, Carers Centre, and other events
HSCP staff understand the needs of people with different protected characteristic and promote diversity in the work that they do.	This is included in mandatory training for staff
Opportunities to support Learning Disability service users experiencing gender based violence are maximised.	TEC reduces risk in the community for vulnerable groups
Positive attitudes towards the resettled refugee community in Inverclyde are promoted.	TEC is open to the Refugee community.

CLINICAL OR CARE GOVERNANCE IMPLICATIONS

5.5 There are no clinical or care governance implications arising from this report.

NATIONAL WELLBEING OUTCOMES

5.6 How does this report support delivery of the National Wellbeing Outcomes?

National Wellbeing Outcome	Implications
People are able to look after and improve their own health and wellbeing and live in good health for longer.	Services support greater self-management of chronic conditions through remote home health monitoring. Services also support the use of technology to enhance independence and wellbeing through safer walking initiatives.
People, including those with disabilities or long term conditions or who are frail are able to live, as far as reasonably practicable, independently and at home or in a homely setting in their community	Services support people to live independently, for longer at home using a variety of technologies that can summon assistance in an emergency, monitor activity and provide reassurance for carers.

People who use health and social care services have positive experiences of those services, and have their dignity respected.	Services are delivered in line with National Care Standards and comply with Scottish Social Services Council and Care Inspectorate requirements.
Health and social care services are centred on helping to maintain or improve the quality of life of people who use those services.	Services support people to have a greater choice and control in their care and wellbeing.
Health and social care services contribute to reducing health inequalities.	Where inequalities arise, services are provided to those with assessed needs and are given early intervention and support
People who provide unpaid care are supported to look after their own health and wellbeing, including reducing any negative impact of their caring role on their own health and wellbeing.	Unpaid carers are supported and are involved in care planning taking into account their role. Carers are signposted to other support organisations.
People using health and social care services are safe from harm.	Services are delivered in line with National Care Standards and comply with Scottish Social Services Council and Care Inspectorate requirements.
People who work in health and social care services feel engaged with the work they do and are supported to continuously improve the information, support, care and treatment they provide.	Staff are recruited and supported develop their skills and knowledge through continuous professional development, supervision, training, team development sessions, briefings.
Resources are used effectively in the provision of health and social care services.	Resources are used appropriately and as an integral part of quality cost effective care and support.

6.0 DIRECTIONS

	Direction to:	
Direction Required to Council, Health Board or Both	1. No Direction Required	
	2. Inverclyde Council	X
	3. NHS Greater Glasgow & Clyde (GG&C)	
	4. Inverclyde Council and NHS GG&C	

7.0 CONSULTATION

7.1 The report has been prepared by the Chief Officer of Inverclyde Health and Social Care Partnership (HSCP) after due consideration with relevant senior officers in the HSCP.

8.0 BACKGROUND PAPERS

8.1 Breakdown of service users receiving enhanced TEC – Appendix 1
I Care and FLO Case Studies – Appendix 2
Technology Enabled Care Test of Change Report 2017 – Appendix 3
East Renfrewshire Technology Enabled Care Team -- Appendix 4

Inverclyde HSCP Technology Enabled Care Team   -- Appendix 5
Report to CMT on the implication of Analogue to digital   -- Appendix 6

Service User with 1 equipment	
Equipment	Qty Service Users
Fall Only	147
Smoke	64
Heat	4
Gas	3
Bed Exit	1
Window / Door	18
Epilepsy	3
Total Service Users	**240**

Service Users with 2 equipment	
Equipment	Qty Service Users
Fall & Smoke	22
Fall & Gas	2
Fall & Bed	2
Fall & Carer Alert	4
Fall & Door/Window	9
Fall & Epilepsy	4
Fall & Big Button	1
Smoke & Heat	27
Smoke & Gas	4
Smoke & Carer Aler	2
Smoke & Door/Window	6
Smoke & Chair	1
Heat & Bed	1
Heat & Door/Window	1
Bed & Carer	16
Carer & Door/Window	11
Carer & Epilepsy	7
Carer & Big Button	1
Total Service Users	**121**

Service Users with 3 equipment	
Equipment	Qty Service Users
Fall, Smoke & Heat	12
Fall, Smoke & Gas	3
Fall, Smoke & Bed	1
Fall, Smoke & Door/Window	1
Fall, Smoke & Epilepsy	2
Fall, Carer Alert, & Chair	1
Fall, Carer Alert, & Door Window	4
Fall, Carer Alert, &Epilepsy	1
Fall, Heat & Bed	1
Fall, Gas & Door /Window	1
Fall, Bed & Carer Alert	4
Smoke, Heat & Gas	10
Smoke, Heat & Door/Window	2
Smoke, Heat & flood	1
Smoke, Heat & CO2	1
Smoke, Bed & Carer Alert	1
Smoke, Gas & CO2	1
Bed , Carer Alert & Door/Window	3
Carer Alert, Door/Window & Epliepsy	1
Total Service Users	**51**

Service Users with 4 equipment	
Fall, Smoke , Heat & Gas	1
Fall, Smoke , Heat & Bed	1
Fall, Smoke , Heat & Carer Alert	1
Fall, Smoke , Heat & Door/Window	2
Smoke, Heat, Carer alert & Door/Window	1
Fall, Gas , Bed and Carer Alert	1
Fall, Chair, Bed & PIR	1
Fall, Bed, Carer Alert & Door/Window	2
Total Service Users	**10**

Service Users with 5 equipment	
Fall, Smoke, Heat, Gas &Flood	1
Fall, Smoke, Heat, Gas & Door/Window	1
Total Service Users	**2**

Total Number of Service Users	
	424

Case Study 1- Diabetes Using "FLO"

Miss A is a 23 year old who has Type 1 Diabetes and, until recently, did not record her blood sugar readings nor administer her daily insulin as prescribed. This proved difficult at reviews with her diabetic nurse who was unable to check her glucose readings and adjust her insulin accordingly.

Miss A was approached about using "Florence" (FLO), a phone app which sends prompts via a text message to patients reminding them to take their readings. This information is then text back to FLO and a further message sent to the patient to administer their insulin or retake their glucose levels.

Miss A agreed to use FLO from 25th June 2019 and commented " I need to take responsibility for my own health and manage my diabetes better"

Since she started, Miss A sends her glucose readings through FLO at least once per day and they are improving. The diabetic nurse can see a clear record of previous readings which can be discussed at her review.   Miss A said that "with FLO I feel more in control of my diabetes than I ever have". "I was even able to set the time of the texts to remind me to suit me. I now just answer it and give myself my insulin and move on with my day". "I feel more in control and feel people are allowing me to be a grown up".

 Miss A has since commenced a course at college 4 days per week.

Case Study 2 – "I Care" Hospital Discharge

The I Care Lifestyle Monitoring System was an invaluable piece of equipment for social work practice in February 2019. Mrs B is an older lady who was in hospital whose family had requested a transfer to long term care due to the risks around her mobility. These concerns were particularly associated with during the night periods as the family thought that their mother was up all night as she had, on occasion, called them during the night.

Following an assessment it was thought that Mrs B's needs could be met within the community as she had capacity and was keen to return to her own home. It was recognised monitoring her movements in her home using I Care, particularly during the night, would facilitate a better picture of any activity or pattern of behaviour and hopefully go some way to alleviate the family's anxieties.

With Mrs B's permission following a 2 week period of monitoring it was established that there were no overnight needs and for the most part Mrs B remained in her bedroom overnight. This reassured family that their mother was resting and that there was no risk to her wellbeing but more importantly, meant that Mrs B was able to stay independent at home as she wished.

Case Study 3 – Diabetes using "FLO"

Mr C is a 58 year old who was diagnosed with Type 2 Diabetes in 2005. He has a learning disability and lives independently within a sheltered housing complex. Mr C was previously supported by community nursing to administer his insulin twice daily. His diet was also variable leading to high blood sugar readings and he suffered a significant weight loss due to poor glycaemic control.

Mr C agreed to use "Florence" (FLO), and following a number of weeks increased support with understanding and using the system, and learning to self administer his insulin, he became more confident to do this independently.

When Mr C became independent with FLO in March, he commented "I did have initial doubts and made a few mistakes but I now find it easy to use and can follow FLO's instructions in a few minutes". "Before FLO, I was stuck at home for 5 years waiting on nurses visiting twice a day"

Mr C is now fully independent in administering his own insulin and sending his readings through FLO.   He no longer receives visits from community nursing and states that "my health has definitely improved and my energy levels too".

Not feeling tied to his home waiting on visits, Mr C has now started a voluntary position at the Inverclyde Royal Hospital making up home from hospital boxes and also attends the HUB at a local church where he can chat to others. Mr C said "I feel alive again, it's great"

TECHNOLOGY ENABLED CARE TESTS OF CHANGE REPORT 2017

Digital Health and Care

Inverclyde Test of Change Award £6,000

The Aim

Scope/Deliverables: We aim to increase independence, choice and control to 20 service users, using a low cost (GPS) technology "One Touch", whilst also ensuring piece of mind and reassurance for carers. This will take place in conjunction with our local Alzheimer Scotland colleagues.

One of our prime aims is to support safer walking within our community for service users that have been diagnosed with a cognitive impairment.

The Activity
A GPS Pilot questionnaire was issued to the 20 users and the following results were observed.
6 users (33%) completed the survey

Of the completed surveys received:

- All users used the One Touch device during the 6 week period

- All users used the One Touch device to get familiar with it

- 50% of users activated the device between 5 – 10 times during the 6 week period

- All users felt more confident and safer while walking

- The majority of users would describe the device as reliable & fit for purpose

- No other services were used by the users during the 6 week period

- 3 people experienced a problem with the device, 'Battery drained', 'SOS alert failed to connect to responder' and 'Other'

- Most users found the device very easy or extremely easy to use

- 83% of users found using the device did not encourage them to walk more

- 83% of users felt the device improved their quality of life

- All users noted that the device gave the carer / family member reduced stress levels and additionally gave more independence to the user

- All users expressed that they were not frightened or enter a panic state whilst using the device

- 66% of users felt the Tele-care / TEC Technical teams knowledge of the One Touch device was mostly very good with a further 33% recommending excellent

- All users expressed that it extremely likely that they would recommend the One Touch Service to friends / family

Additionally two service users took part in a case study and were referred for assessment to determine whether they would be eligible for the GPS pilot program. Both users had been engaged within the pilot program from April/May 2017. Service user A (81 years old) lives independently on her own and had recently been diagnosed with Dementia. Service user B (87 years old) lives within a private care home and has recently been diagnosed with Alzheimer's. Both users were recommended for the pilot and geo fencing was set up for each of them to ensure both users were still able to enjoy their independence outdoors whilst benefitting from the security that the Geo fence would ensure their location would be tracked.
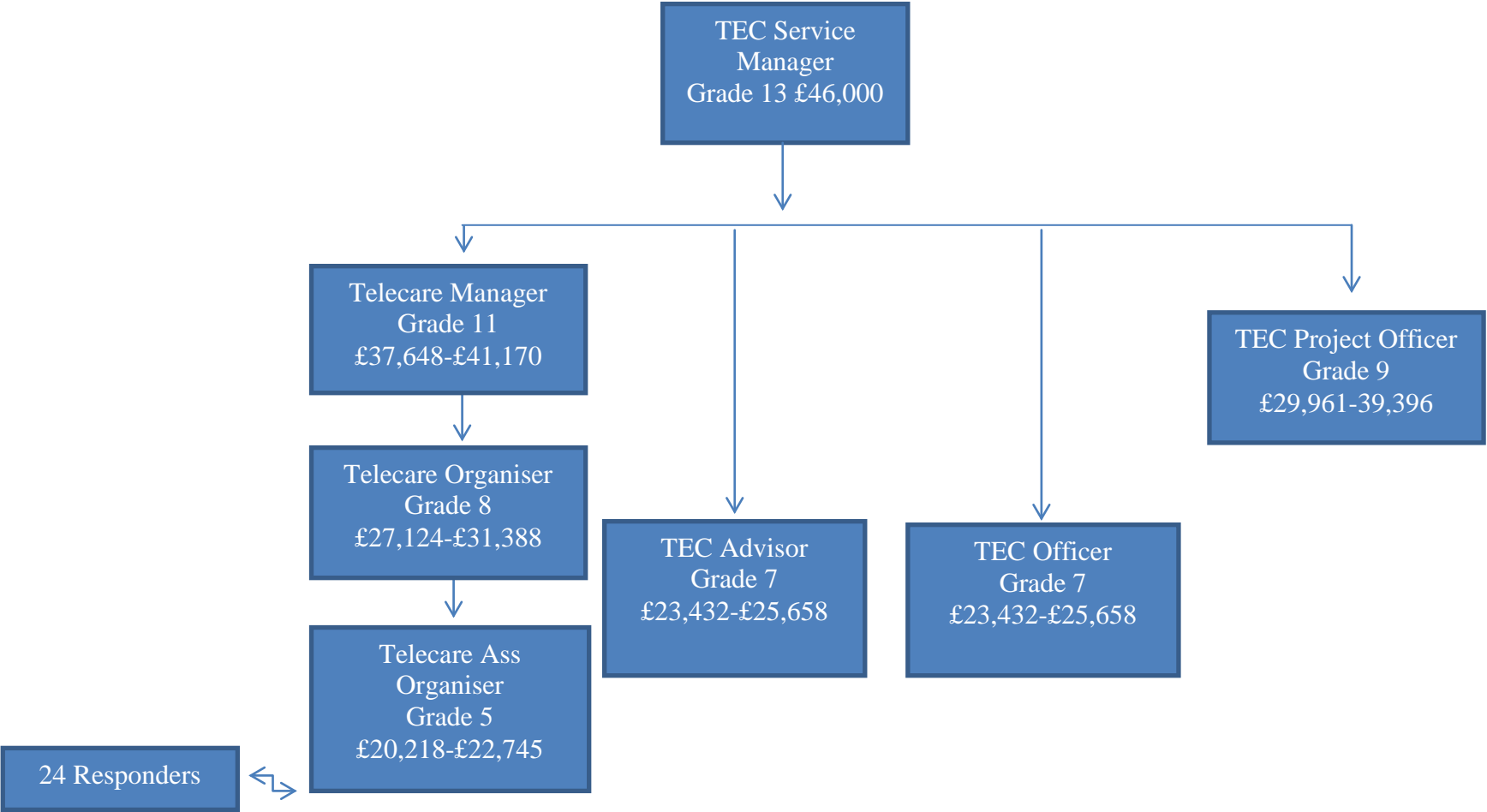
The Conclusion

Service User A

Our initial survey results have provided evidence that service user A has used the device to become familiar with how it works. Further to this she has used the device twice as she became confused and could not remember how to use the telephone; she knew if she pressed the SOS button it would contact her daughter. She has found the device to be reliable useful and fit for purpose. Although she hasn't increased the time spend walking, she has felt a lot more confident while walking. Service user A found the device extremely easy to use and believes that it has had a positive impact for her. The impact has also had an extremely positive affect for service user A's daughter as it has reduced stress levels knowing that she can check her mother's location each night before going to bed. Due to the positive impact – reduction in stress levels and confidence it has given to both service user and family member, they would highly recommend the GPS pilot program to friends or family members.

Service User B

Our initial survey results have provided evidence that service user B has used the device to become familiar with how it works. It has allowed him to increase the time spent out with the care home on his own. He feels a lot more comfortable knowing that he can contact the care home management team quickly if he becomes disoriented or anxious while out walking. He has attended a dental and eye appointment on his own and also went for a coffee since having the GPS device. He has found the device very easy to use. He did stress that the audio volume when having a conversation with the care home management team through the GPS device was rather loud. The impact has also had an extremely positive affect for service user B's care management team as it has reduced stress levels and allowed them to increase his level of independence, due to the fact that they can locate him and check on his GPS position while he is out walking. Service user B's son has also had a positive impact as his father is still having a level of independence and he is less concerned with him walking out side of the care home grounds as his father can quickly contact the staff if he has any issues. Due to the positive impact – reduction in stress levels and confidence it has given to both service user and care home management team, they would highly recommend the GPS pilot program to friends or family members
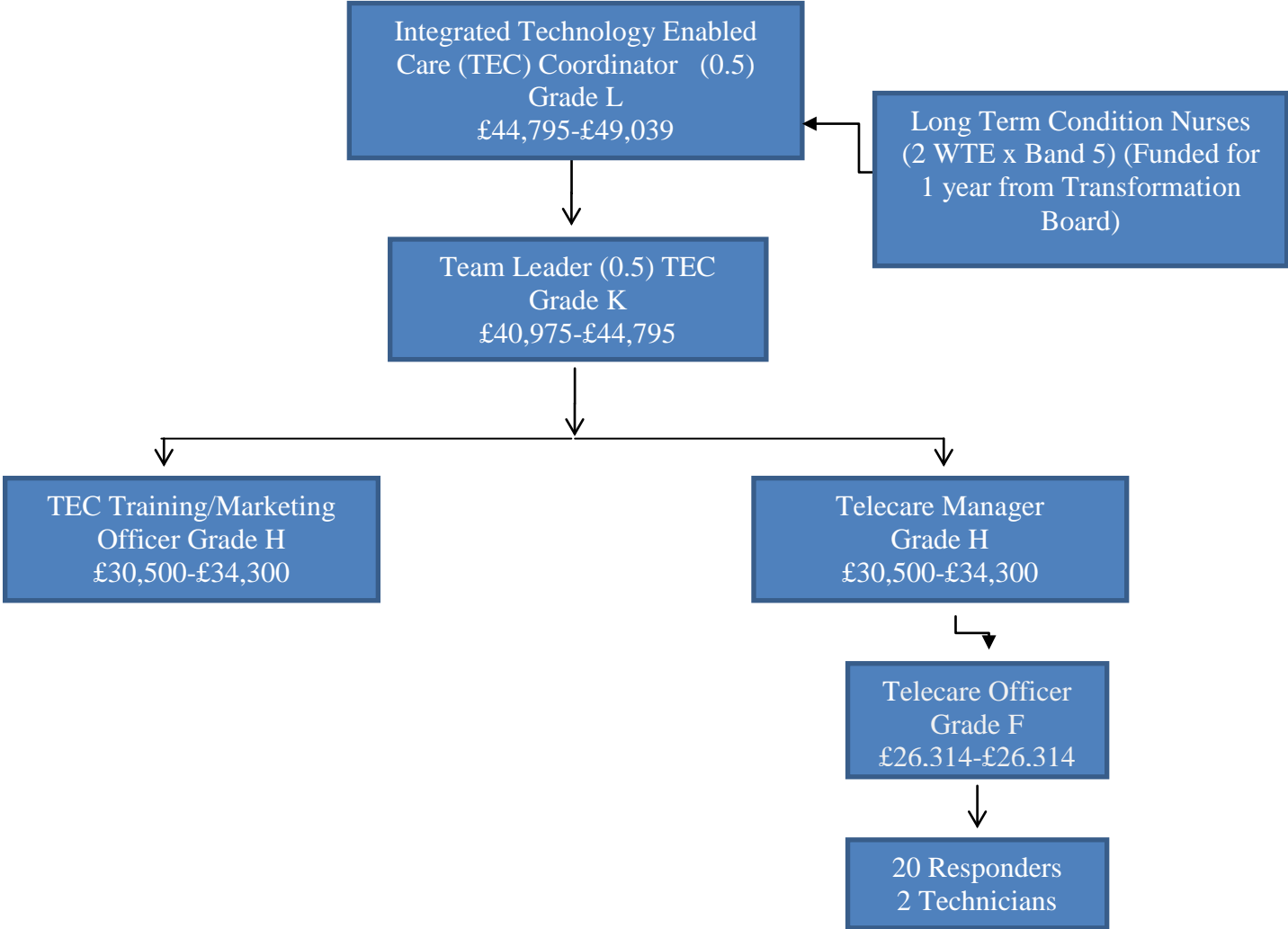
East Renfrewshire HSCP

Technology Enabled Care Team – Interim Structure

TEC Service
Manager
Grade 13 £46,000

Telecare Manager
Grade 11
£37,648-£41,170

TEC Project Officer
Grade 9
£29,961-39,396

Telecare Organiser
Grade 8
£27,124-£31,388

TEC Advisor
Grade 7
£23,432-£25,658

TEC Officer
Grade 7
£23,432-£25,658

Telecare Ass
Organiser
Grade 5
£20,218-£22,745

24 Responders

Inverclyde HSCP
Technology Enabled Care Team

Integrated Technology Enabled Care (TEC) Coordinator (0.5)
Grade L
£44,795-£49,039

Long Term Condition Nurses (2 WTE x Band 5) (Funded for 1 year from Transformation Board)

Team Leader (0.5) TEC
Grade K
£40,975-£44,795

TEC Training/Marketing Officer Grade H
£30,500-£34,300

Telecare Manager
Grade H
£30,500-£34,300

Telecare Officer
Grade F
£26.314-£26.314

20 Responders
2 Technicians

To	Allen Stevenson, Head of Community Care and Health
Author	Gill Burns, Team Leader, Out of Hours Services
Subject	Telecare – Switch from Analogue to Digital
Date	6th September 2018

1.0 Introduction

1.1 OFCOM has advised that all analogue telephone services in the UK will be switched off and replaced by digital connections by 2025.

1.2 Current telecare equipment including alarm units and all sensors will need to be upgraded to digital technology. Vulnerable residents within Inverclyde rely on this technology in order to summon assistance when required. When equipment is activated a call is routed through the telephone line to a call handling centre. This results in a variety of responses including those required from emergency services; mobile responder team; family and so on.

1.3 If equipment is not upgraded to digital, then people will be unable to use the service and lose the technology that keeps them safe, reduces risk of harm, and keeps them living independently at home for longer.

1.4 Telecare has been a core component of the HSCP's service delivery model for older people and those with disabilites and mental health issues for over 12 years. The funding awarded by the Scottish Government since 2006 has allowed the service to upscale its use locally and move into other areas of development such as lifestyle monitoring, GPS technology and Telehealth services.

1.5 Digitial Telecare services will offer many benefits to service users and organisations who provide or procure services. Some of these include:-

- Better conectivity
- When connectivity is lost this it picked up and notified to the control centre immediately
- Remote programming of sensors etc
- Lost equipment can be located
- Activations from safety detectors such as falls pendants can be notified to carers via mobile, and many more.

2.0 Recommendations

2.1 The Head of Service is asked to note the following:-

- The HSCP's requirement to upgrade all analogue technology to digital by 2025
- Preparations already underway nationally and locally
- Anticipated financial presure that will be placed on HSCP and Council
- Indicative costings for replacement equipment
- Agreement to update senior management on new developments and costing models
- Associated risks identified

3.0 Transition to Digital

3.1 By 2025, all analogue telephone services in the UK will be switched off and replaced by digital connections. Many telecommunication companies have not yet given any indication of their timeline for migration such as SKY and Talk Talk, while others, such as Virgin media have committed to switch off by 2021. Although timescales have slipped already, the implications of this is that we are likely to need to commence our transition within the next 3/5 years with regard to new installs and replacement units for service users who are contracted to Virgin.

3.2 Within Inverclyde there has been a rise year on year of 6% in new referrals to the service (which includes withdrawals) and, until July 2018, there were over 2,700 using the service. This has changed recently due to the implementation of a community alarm charge of £2.50 per week which has to date resulted in the return of approximately 500 alarm units and addidtional peripheral kit.

3.3 Current analogue based telecare services connect through the service user's telephone line. While service users pay £2.50 weekly for the physical equipment and support responder service, they also pay for the cost of a local call every time they activate their equipment through their telephone contracts.

3.4 The call handling service is sub contracted to Bield (BR24). They require to upgrade software to allow them to accept calls from digital alarm units. This is a small piece of work which they have indicated will take around 6 weeks and require input from Jontek Engineers. (Jontek being the call handling system they operate).

3.5 Bield (BR24) has also confirmed that their call handling platform will be able to accommmodate dual calls from both analogue and digital alarms during the transition and roll out period, and therefore this poses no issues with regard to our planned timeline for rollout.

3.6 New digital equipment will not be able to connect through service users' telephone services, instead there will be a roaming sim card embedded in the new alarm unit. The change will have an additional financial impact for the HSCP as there will a a recurring call/data charges for any sim card connection similar to a mobile phone contract.

4.0 National Picture

4.1 A national Advisory Group has been established including membership from The Scottish Government's Digital Office ; Telecare Association (TSA); Scottish Centre for Telecare and Telehealth (SCTT); NHS24; and Scotland Excel. The group's remit is to support organisations through this transition and provide a set of guiding principles to help organisations to shape solutions and overcome challenges. Guidance has not yet been published.

4.2 Some of the key considerations being looked at by the Advisory Group include:- connectivity, resilience and service levels, service costs and tarrifs, cyber security, privacy and data protection, interoperability and standards, device management, product maturity and migration.

4.3 A number of pilots have been established in Perth and Kinross , East Lothian and Edinburgh, however, their plans to test new digital units through digital lines into Alarm Receiving Centres (ARCs) have all been delayed for a variety reasons but are about to go live in the next few weeks.

4.4 Scotland Excel is also working closely with the Advisory Group to establish a buy off framework by August 2019.

5.0 Financial Implications

5.1 The transition from analogue to digital will have financial implications for the Council. New equipment will require to be procured as well as the cost of connectivity in the form of sim cards.

5.2 Inverclyde HSCP purchase equipment from Scotland Excel and currently use suppliers Tynetec, CHUBB and Tunstall.

5.3 Tynetec (Legrand) have now produced a digital alarm unit which is on the market for testing as mentioned above. They have now indicated that they will start to mass produce this alarm unit towards the end of 2018 and will thereafter be available for purchase. Other suppliers of new digital units include Doro and Possum. New digital units will be fully compliant with the receiving platform at our call handling centre Bield (BR24).

5.4 All peripheral sensors linked to existing alarm units will also need to be replaced which will contribute to the financial impact. Tynetec have some sensors available and on the market and has confirmed that these will be costed at the current price of analogue sensors.

5.5 In addition, within Inverclyde there are 30 remote home healthhubs within the community monitoring the condition COPD. There is currently onging work with Teleheatlh locally to look at more innovative and cost effective ways of providing this service, the health hubs will be replaced as part of the teleheath programme which will ensure compatability.

5.6 The service has arranged for a meeting with Tynetec to allow us to see and test the new digital unit. They have also offered to undertake an audit of our telecare equipment portfolio (at no charge). Based on indicative costs which they have provided us with, the undernoted table provides senior management with approximate costs for the replacement of telecare equipment.

Table 1: New digitial units will come with a 2 year SIM budle which includes all calls and data transfers at an estimated cost of £200 per service user. Potentially this could be subject to change once the units are on the market with a reduction in costs.

Description	Current Numbers	IP Replacement Costs
Dispersed Digital Unit (includes Pendant)	2153	£430,600.00
Bed Exit Sensor	47	£8,041.23
Chair Exit Sensor	5	£796.60
CO2 Monitor	3	£248.85
Door Exit Sensor	84	£2939.16
Epilepsy Monitor	21	£7,678.65
Falls Detector	209	£14,811.83
Flood Sensor	2	£68.72
Gas Sensor	34	£3,171.18
Heat Sensor	87	£5,157.36
PIR	1	£48.00
Smoke Detector	227	£9,890.39
Sensor Controller	24	£2,716.00
Altec response	38	£5,464.00
Total projected capital costs to change existing equipment to digital		**£491,631.97**

5.7 While no providers have confirmed sim card rental costs after the first 2 years, following Discussions, it is a resonable assumption that this could be between £36 - £40 per annum which would mean a recurring annual cost of between £77,508 and £86,120 for the 2153 current service users.

5.8 It is assumed that the above replacement programme to new digital equipment will be rolled out over a period of years from 2021 to 2025. However, this will be dependent on when each telecommunication provider decides to switch over.

5.9 It should be noted that there may be potential to rent equipment, however, Scotland Excel is investigating if this could be an option as a Lot in the Technology Enabled Care contract which will not be concluded until 2019.

5.10 As previously mentioned, the service has seen an increase in referals of 6% year on year (including withdrawals). Service net growth is around 130 additional service users annually however this could reduce with the implementaion of the charge.

5.11 inverclyde HSCP service users who receive a service within their own home have seen a charge of £2.50 implemented from 1st July this year. Increasing this charge to cover some of the above mentioned costs goes against the Scottish Government's desire to deliver and upscale these services free of charge.

5.12 As part of the replacement to digital technology, account will need to be taken of the training requirement for staff who will need to reach a level competency to enable installation and

programming to be carried out effectively. Depending on the roll out programme this will have a resource and financial impact on the service.

6.0   Next Steps

6.1   Planning for this change is difficult as there are still many unknowns within the industry and timelines are still to be confirmed by each telecommunication provider.

6.2   Inverclyde Technology Enabled Care Service is keeping up to date with developments and progress with regard to the switch from Analogue to Digital and will continue to attend events and webinars as well as continue close contact with colleagues from neighbouring authorities.

6.3   Inverclyde Technology Enabled Care Service will continue to have regular discussions with its call handling provider Bield (BR24) in ensuring that they are digital ready and compliant with requirements.

6.4   Advance planning to include mapping telephony providers in the Inverclyde area to service users.

6.5   Consider potential roll out approaches and capacity.

6.6   Consult with service users at the earliest opportunity advising details of our plans to change over.

6.7   Update senior management of any new changes and developments as well as financial projections.

6.8   Agree to uptake the offer by Tyetec to cary out an audit of Inverclyde's Telecare equipment portfolio.

7.0   Risks

Risk	Recommended Mitigating Actions
Inverclyde HSCP has no control over when each telecommunication provider will decide to switch analogue connections. If there is a delay in the availability of new equipment, there is a risk of service disruption to vulnerable service users as their current equipment will no longer work.	• Monitor work and developments coming out from the Advisory Group with regard to ongoing position • Continue to engage in events including webinars on the update and progress of the changeover • Continue to engage and provide updates on developments nationally and locally • Prioritise the rollout by targeting those telephony providers who have confirmed their timeline for changeover.
No national funding has been made available or allocated to support this transition as yet which	• Highlight the financial pressure. • Work with Scotland Excel to establish a call off framework to ensure best value

will mean a financial pressure on the HSCP budgets. It should be noted that it is the Scottish Government's desire that these services should not be charged for.	• Development of a phased replacement programme