

Borders NHS Board

Meeting Date: 27 June 2019

Approved by:	June Smyth, Director of Strategic Change & Performance
Author:	Jackie Stephen, Head of IM&T
ROAD TO DIGITAL UPDATE & 19/20 PLAN	
Purpose of Report:	
To present the Road to Digital Progress update and 2019/20 plan to the Board for ratification.	
Recommendations:	
<p>The Borders NHS Board is asked to:-</p> <p>Ratify the recommendation from the Strategy & Performance Committee that the NHS Board approves the plan and requests the Director of Finance and Director of Strategic Change to work with Scottish Government to secure the funding to deliver the plan – The Strategy & Performance Committee agreed that the content, timing and costs of the plan reflected the priority order and was appropriate to meet the outstanding risks and challenges faced by NHS Borders as well as delivering additional functionality to improve service delivery and to approve its implementation.</p> <p>Ratify the recommendation from the Strategy & Performance Committee that the NHS Board delegates authority to commit expenditure against the plan to the Director of Finance or Chief Executive where Standing Financial Instructions require Board level approval. Otherwise normal SFIs would apply. Any significant deviation from the plan will be referred back to the Board.</p> <p>Acknowledge that if additional Capital funding and adequate revenue funding was not secured as outlined in the financial plan, the delivery plan would be re-phased. If the plan was significantly re-phased it would be brought back to the Board for consideration and approval.</p>	
Approval Pathways:	
The update and plan was presented to the Road to Digital Programme Board on 25 th April 2019 and the Strategy & Performance Committee on 2 May 2019.	
Executive Summary:	
A Roadmap – ‘Road to Digital’ was presented to the Board in May 2017. The Roadmap was approved to progress on to detailed planning and securing funding to support delivery of the plans.	

A programme team and programme board was established. The programme team have developed detailed plans and designs which were approved by the Board via update papers at Strategy & Performance Committee.

We have been very successful in securing capital funds to support the programme in both 2017/18 and 2018/19 – expenditure against the Roadmap has been reported separately through financial and capital updates to the Board.

We have made good progress in reducing our very high risk areas across the infrastructure and some good progress within the applications stream. Most progress has been within the overall infrastructure or BGH/ acute settings.

A detailed plan for delivery during 2019/10 has been developed. It continues to focus on reducing high and very high risk areas and will shift more into the applications area and some additionally within the infrastructure – primarily in Community settings. This shift will see a bigger change for end users in their day to day activities.

Learning from the first 18 months, we are adopting a front loaded approach, with a significant initial focus on discovery, revalidation of requirements and detailed application and solution testing.

Completing very detailed planning and testing work in advance of delivery significantly increases the chances of a successful, low impact delivery. To help implement and deliver this we will plan to have strong engagement with all stakeholders.

A programme of this scale needs a number of specialised skills sets and these have been mapped for each project and the level of resources mapped to the volume of work and tasks within the plan.

Planning indicates that the team will need to increase in size across most skill sets due to the additional activity, mapping, testing and user engagement required in this phase of the programme

Delivery of the plan relies on sufficient funding to purchase components of the IT infrastructure and applications as well as services and resources to configure, build implement and train end users.

The plan assumes that £1,000,000 will be available from CIG in addition to local capital of £300,000 rolling programme funding, that we have access to DEL and eHealth non-recurring funding at the same level as previous years and that £100,000 recurring is available from NHS Borders financial plan.

If we cannot secure all the funding required to deliver the plan, we will need to consider further prioritisation and may need to reduce the number of schemes to match funding and resources.

The attached paper describes the schemes within the plan, timescales for delivery and likely costs. As we work through each scheme and identify more robustly the solutions, activity and funding sources, the plan will be adjusted. Any significant changes to this will be referred back to the Board.

Impact of item/issues on:

Strategic Context	<p>This plan is consistent with the national Digital strategy and our obligations under Scottish Government security and European legislation for Network Information systems.</p> <p>It is consistent with NHS borders strategic direction for electronic patient records.</p>
Patient Safety/Clinical Impact	<p>Improved resilience and reduced risk of disruption to clinical services in the event of failure. Opportunities to improve working practices with faster compute, more secure compute and introduction of new functionality to support day to day working.</p>
Staffing/Workforce	<p>Staff will be impacted through the implementation process and the opportunity to work differently as a result of the projects within the plan. Some projects may have an impact on the workforce levels within some services. These will be presented within individual business cases and will be managed as part of that project in lien with any organisational polices.</p>
Finance/Resources	<p>Funding has been agreed for the delivery of the project. Additional Recurring funding of £275,290 is required and will be a cost pressure on the financial plan from 2019/20 part year and 2020/21 full year.</p>
Risk Implications	<p>If we are unable to secure sufficient funding this will impact delivery of the plan.</p> <p>There may be some issues arise through discovery and testing that impact the timescale if they are not resolved quickly.</p> <p>If the plan slips this means we will continue to carry high and very high risk identified in the risk register longer than planned.</p> <p>There will be different risk with each scheme and this will be monitored closely.</p>
Equality and Diversity	<p>Aligned with Equality & Diversity policy</p>
Consultation	<p>IM&T technical teams, clinical and managerial services specific to their projects</p>
Glossary	<p>CIG – Capital Investment Group DEL – BGH – Borders General Hospital</p>

The Road to Digital

Progress Update 2017 - 2019

&

2019/20 Implementation Plan

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Document History

Version	Date	Update Origin	Written by
0.1	22.04.2019	Added updated appendix, 19/20 Plan on a Page and risk images – Dotty Corner	Jackie Stephen, Head of IM&T
0.2	23.04.2019	Jackie Stephen	
0.3	23.04.2019	Update BGH & Community risk level graphics, replace updated appendix – Dotty Corner	Dotty Corner
0.4	23.04.2019	Added risk levels and amended Appendix tables. Added text to finance section.	Jackie Stephen, Head of IM&T.
0.5	24.04.2019	Updated Appendix	Laura Maltman
Sharepoint	24.04.2019	Updated resource table	Dotty Corner
0.6	25.04.2019	Text revised various sections Plan revised to add missing lines Finance table revised Recommendation wording revised. Text in finance section revised	Jackie Stephen
0.7	25.04.2019	Update Plan on a Page, Update Finance table, format Appendix	Dotty Corner
1.0	25.04.2019	Text updates to finance section, cover page added – Final version ready to distribute to S&PC & Programme Board	Jackie Stephen

Introduction

A Roadmap – 'Road to Digital' was presented to the Board in May 2017. The Road map was approved to progress on to detailed planning and securing funding to support delivery of the plans.

A programme team and programme board was established. The programme team have developed detailed plans and designs which were approved by the Board via update papers at Strategy & Performance Committee.

We have been very successful in securing capital funds to support the programme in both 2017/18 and 2018/19 – expenditure against the Roadmap has been reported separately through financial and capital updates to the Board. This report focuses on an update of progress against risk status, delivery of schemes and benefits in the Roadmap. It will also set out the delivery plan for 2019/20.

Progress update 2017-2019

The programme really started to plan and deliver from October 2017 after securing capital funds from Scottish Government and appointment of a Programme team. The primary focus of this phase of the programme has been to mitigate risk within the IT infrastructure and to significantly improve our IT and cyber security position following the global cyber-attack in May 2017.

As the detailed discovery and planning process was undertaken for each scheme, the designs changed to deliver additional benefits. The Board have been kept updated to any significant design changes affecting costs or timescales.

We have made good progress in reducing our very high risk areas within the infrastructure and some good progress within the applications stream. The focus in 2019/20 moves more into the applications area and some additionally within the infrastructure – primarily in Community settings. This shift will see a bigger change for end users in their day to day activities.

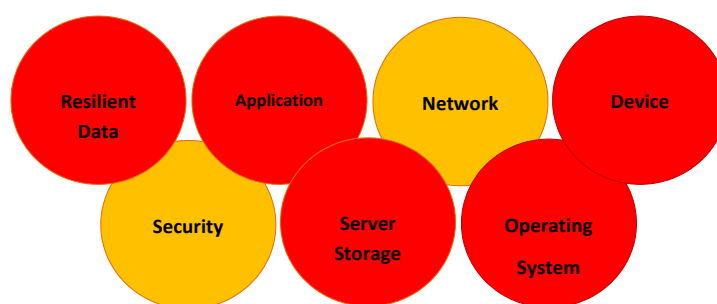
The individual schemes within the Roadmap are in Appendix 1. A status update and analysis of benefits delivery is given for each scheme. Highlights include;

- A new Community Patient Management system across all community settings
- Upgraded Dental system
- A new maternity system
- A new fully resilient applications cluster

- A resilient active active VDI infrastructure
- Upgraded network switches within BGH
- Upgrade Wi-Fi within BGH
- Desktop refresh within Community & General Practice
- Increased bandwidth for remote access to key systems
- A new print infrastructure with follow me printing within BGH

Overall Risk Baseline

The diagram below shows the high level Risk Assessment snapshot presented in the Roadmap as at May 2017 prior to the programme starting.



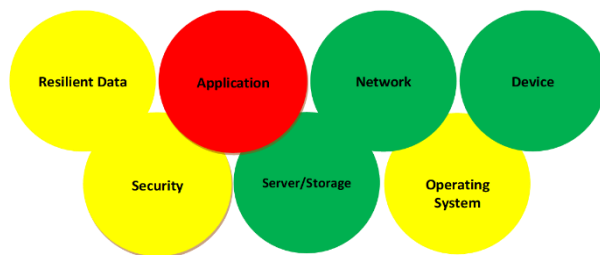
We have undertaken continuous review of these risk levels as the context changes over time. We have had to consider the following as we have developed detailed delivery plans;

- The impact of the global cyber-attack
- Cyber Security and Public sector Action Plan requirements
- New European Directives for Networked Information Systems
- Time – aging of additional equipment, particularly in Primary Care
- Time – additional software obsolescence, Windows operating systems and the impact on hardware available to purchase
- National agreements for Windows and Office 365

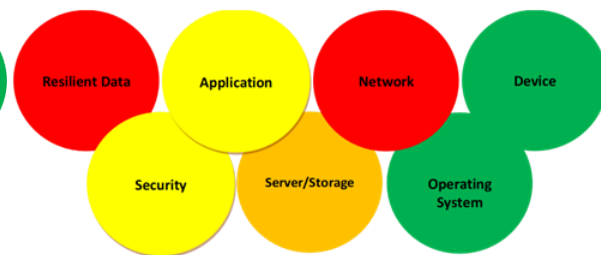
Some of these have impacted our choices, designs and pace of delivery. However we have been able to make a positive impact on our overall risk baseline. We have broken our risk assessment down further to take account of the different needs and baseline for the Acute / BGH setting and the wider Community / GP Practice settings, especially taking account of the above context and passage of time.

The revised breakdown position at May 2019 is shown below. This shows a significant improvement within BGH / Acute but with work still to do, and the current risks in Community which are the focus of much of the 2019/20 plan.

BGH Technology Risk Levels, May 2019



Community Technology Risk Levels, May 2019



While we have installed all the equipment and systems we planned for resilient data within BGH & Corporate functions, we have not yet managed to secure a second resilient facility location, which is still planned during this year. It is the reason that resilient data has not moved to green risk status.

1.1. Progress against Outcomes

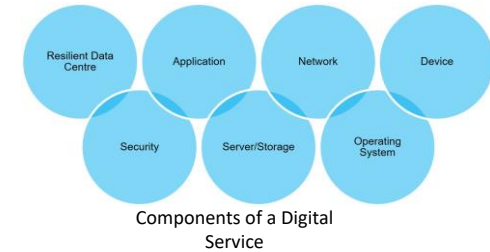
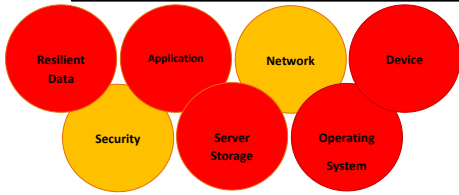
The diagram below from the original roadmap was intended to demonstrate how risk will diminish over the life of the plan. It has been updated to show which outcomes have been delivered at this point.

The changes to detailed design of the solutions allowed earlier delivery of some outcomes. Conversely, in some cases detailed planning, uncovered additional work and complexity which has slowed some aspects of the plan. Overall we are still making good progress towards the desired risk levels and the target outcomes.

Outcomes which have been delivered are shown in BOLD text.

Investment v Risk Profile 2017 - 2020

Current Risk Assessment



Apr 17
Phase 0

Outcomes - 2018

- Better able to recover from failures in top 10 applications
- Improved assurance for resilience, disaster recovery & service continuity for key applications (excluding Trakcare & Labs)
- Highest risk server replaced so less likelihood of failure – significantly reduced risk
- Improved performance and user experience for all users in day to day use
- Improved performance for users in remote sites for externally hosted applications
- Community based teams have an electronic patient record and can redesign ways of working to start to include mobile
- Most applications are on a supportable version
- Dental Teams have an improved reliable application with enhanced functionality
- Clinicians can start to dictate directly into applications – efficiencies for secretarial teams
- BECS team can access records when on the road
- Maternity has electronic records for new mums
- Community teams have a caseload view to manage across localities
- Reliable reporting infrastructure and improved reporting capability

Apr 18
Phase 1

Outcomes - 2019

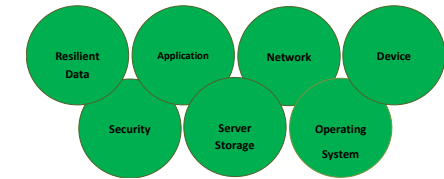
- Combined patient records in Trak across Borders & Lothian
- Reduced need for paper casenotes as records are scanned
- User have access to email & collaboration tools in the cloud
- Offers ability to collaborate with local authority partners
- Users have a patient view across care settings including Social care
- Non BGH based staff have Wi-Fi access to NHSB systems
- Child Health records – improved functionality & performance
- Better demographics data from national CHI
- Improved efficiency in IT teams
- Improved protection and monitoring of security threats
- Further assurance around resilience of more applications
- Local network hardware refreshed & supportable
- General Practice Docman system upgraded
- Video consultation with patients are the norm for suitable specialities

Apr 19
Phase 2

Outcomes - 2020

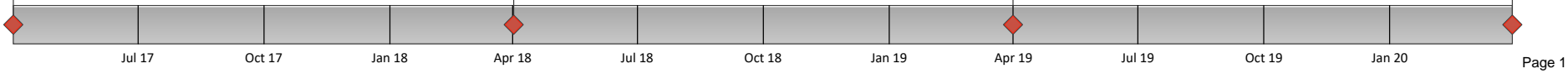
- General Practice improved ability to share and integrate with Community
- GPs can order diagnostic requests and reconcile results
- Improved support for mobility & mobile apps
- Starting to use electronic prescribing in Borders General Hospital
- Old end of life Labs Information System being replaced
- Less reliance on paper as we build on previous investment to extend information available in Electronic Health Record
- Strong foundation to build on for newer Digital technologies

Mar 20
Phase 3



Residual Areas of Concern

- Trakcare – End of Life hardware & software – Very High risk for safe patient care in the event of failure
- eMail & MS Office – End of life software – no longer supported - very disruptive in the event of failure & difficult to recover – incompatibility issues
- Disaster Recovery & resilience – still some applications not well enough protected / recoverable in desired timescales in the event of failure
- Network – Old hardware – end of life – disruptive in the event of failure
- Security – lack of robust audit & proactive monitoring to manage threats



The 2019/20 Plan

This section describes the delivery plan for 2019/20. The primary focus remains risk mitigation as a priority.

1.2. Content of the Plan

Schemes in the plan have been prioritised based on continuing risk with very high risks that are outstanding being given the highest priority.

However, the plan also starts to focus on delivering added value to end users by extending the infrastructure to support more mobility across sites and implementing new applications to support efficiency and access to information electronically.

A description of all schemes, their benefits and risk status is contained at Appendix 1 along with progress of schemes delivered so far.

The main schemes within the plan this year are;

Infrastructure Stream

- Complete VDI to remaining end users in BGH
- Complete remaining Windows 2003 server upgrade & associated application upgrades
- Internet firewalls replacements
- Upgrade network in Community locations
- Off-site backup solution for GP Practices
- Install corporate Wi-Fi in all Community locations – (new functionality)
- Install public Wi-Fi to Community inpatient locations – (new functionality)
- Upgrade end point desktop operating system to Windows 10
- Migrate email to Exchange online
- Migrate Office to Office online

Applications Stream

- Upgrade Voice recognition system
- Upgrade national PACS to V12
- Upgrade Theatre system
- Upgrade Trakcare to T2018
- Upgrade Radiology Information System
- Procure & implement GP Order Comms – (new functionality)
- Procure & implement eCasenote system – (new functionality)
- Procure & implement mobile EMIS in the Community – (new functionality)

1.3. Delivery timeline

The next page shows a timeline for the next 12/18 months showing the order of schemes taking account of priority and deliverability. It is important to note that this plan is predicated on the availability of both funding and sufficient resources being secured.

Workstream	Start	End	April 2019				May 2019				June 2019				July 2019				August 2019				September 2019				October 2019				November 2019				December 2019				January 2020				February 2020				March 2020			
			W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4								
RTD																																																		
Programme Management	01/04/2019	24/05/2019	[Bar]																																															
Phase 1 Mop Up (Wintel)	01/04/2019	02/08/2019	[Bar]																																															
Phase 1 Mop Up (Network)	22/04/2019	10/05/2019	[Bar]																																															
Cyber Essentials Technical Work	13/05/2019	24/05/2019	[Bar]																																															
EUC EndPoint	03/06/2019	16/08/2019	[Bar]																																															
GP & Community Infrastructure Refresh	01/04/2019	27/09/2019	[Bar]																																															
Resilient Facility, Build and Decant	01/04/2019	31/10/2019	[Bar]																																															
Windows 10 Upgrade	01/04/2019	31/05/2020	[Bar]																																															
Office 365	01/04/2019	31/05/2020	[Bar]																																															
TRAK Upgrade	01/04/2019	29/05/2020	[Bar]																																															
G2 Upgrade	01/04/2019	28/06/2019	[Bar]																																															
GP Order Comms	01/08/2019	29/11/2019	[Bar]																																															
eCasenote	01/06/2019	29/05/2020	[Bar]																																															
Theatre System Upgrade	01/04/2019	30/04/2019	[Bar]																																															
P&D																																																		
Patient Monies (Expec Replacement)	01/04/2019	24/05/2019	[Bar]																																															
Ensemble Upgrade	02/09/2019	01/11/2019	[Bar]																																															
Federated Trak	1/4/19 (started 9/1/18)	23/05/2019	[Bar]																																															
PACS v12	01/05/2019	24/09/2019	[Bar]																																															
Sci Store Upgrade	01/04/2019	24/05/2019	[Bar]																																															
EMIS Mobile	24/06/2019	11/10/2019	[Bar]																																															
Transport Workbench	1/4/19 (started 9/1/18)	24/05/2019	[Bar]																																															
Windows 10 Application remediation work for in-house apps	01/08/2019	06/01/2020	[Bar]																																															
RIS Portal	06/01/2020	03/04/2020	[Bar]																																															
Cyber																																																		
NIS Plan	1/4/19 (started 4/3/18)	24/05/2019	[Bar]																																															
Cyber Essentials	31/05/2019	28/06/2019	[Bar]																																															
Cyber Essentials Plus	01/07/2019	27/12/2019	[Bar]																																															
IM&T Operations																																																		
Windows Server 2008 Upgrade?	3/6/19	31/03/2019	[Bar]																																															

Financial Plan

Delivery of the plan relies on sufficient funding to purchase components of the IT infrastructure and applications as well as services and resources to configure, build implement and train end users.

In previous years we have secured Capital from the Capital Investment Group (CIG) and this will be required in 2019/20 again. We assume within the plan that £1,000,000 will be available from CIG to support the plan in addition to local capital of £300,000 rolling programme funding. The 2019/20 capital plan approved by the Board at the April Board meeting identified the £300,000 for the rolling programme the balance of funding has not yet been confirmed

While still significant, there is less purchase of equipment this year as we move to configuration of systems and applications that directly affect our staff user base. Therefore the bulk of expenditure within the plan is for services and resources. A fuller description of the team resources assumed within the plan is contained in section 5. This will be funded using DEL and eHealth strategy allocations for non-recurring implementation costs. Work is ongoing to confirm the availability of resources.

Some additional recurring costs are anticipated as shown in the plan. There is £100,000 in the financial plan this year to support Road to Digital and to date this has accommodated the increased recurring costs which have been identified, but as can be seen from the table there is likely to be a recurring gap, most significantly with the proposed solution to upgrade Trakcare, which is the subject of a separate business case.

Further work will be required on a scheme by scheme basis to develop individual business cases and to minimise any recurring impact by securing savings from services to offset the costs.

The table on the next page shows the planning assumptions and indication of expenditure and funding available so far.

As we work through each scheme and identify more robustly the funding sources, the plan will be adjusted. Any significant changes to this will be referred back to the Board. If we cannot secure all the funding required to deliver the plan, we will need to consider further prioritisation and may need to reduce the number of schemes to match funding and resources.



ROAD TO DIGITAL

IM&T Roadmap Investment Plan		DEL Revenue Costs -	NHSB One Off Revenue Costs	Recurring Revenue Costs
Capital Budget Item	Capital FY19/20	DEL Revenue Cost FY 19/20	Revenue Cost FY 19/20	Recurring Cost FY 19/20
Infrastructure & End User Desktop	£ 405,000.00	£ 380,780.00	£ 228,944.00	£ 20,700.00
Applications - Current	£ 807,622.00	£ 305,324.00	£ 121,500.00	£ 347,133.60
Delivery Resources	£ -	£ 811,378.50	£ 531,153.00	£ -
Full Programme Total	£ 1,212,622.00	£ 1,497,482.50	£ 881,597.00	£ 367,833.60

FUNDING AVAILABLE Capital		DEL Revenue Costs	Projected One Off Revenue	Recurring Revenue Costs
Capital - Rolling Programme	£ 300,000.00			
Capital - Local Capital Plan				
eHealth Strategic allocation	£ 1,000,000.00		£ 550,000.00	£ -
Primary Care allocation			£ 42,000.00	
201718 E Health carry forward to future years				
201819 E Health carry forward to future years			£ 450,000.00	
201920 E Health carry forward to future years				
DEL Funding		£ 1,300,000.00		
eHealth Programme support				
NHS Borders Financial Plan				£ 100,000.00
Full Programme Total	£ 1,300,000.00	£ 1,300,000.00	£ 1,042,000.00	£ 100,000.00

Expenditure v Funding		DEL Revenue Costs	Projected One Off Revenue	Recurring Revenue Costs
Expenditure	£ 1,212,622.00	£ 1,497,482.50	£ 881,597.00	£ 367,833.60
Funding	£ 1,300,000.00	£ 1,300,000.00	£ 1,042,000.00	£ 100,000.00
Full Programme Total	£ 87,378.00	-£ 197,482.50	£ 160,403.00	-£ 267,833.60

Delivering the Plan

1.4. Approach to Delivery

This is a very ambitious programme with a number of major projects e.g Trakcare, eCasenote, Windows 10 & Office 365, GP Order Comms, EMIS Mobile and some small / medium sized projects across both Infrastructure and Applications streams.

The scale of the programme means that every part of the service and almost every member of staff will be impacted.

As we implement things like Windows 10 and Office 365, it will be important that all our current systems and working process continue to function as expected to minimise any disruption to the end users and clinical services.

We will need to tightly manage the plan, resources and the finance to make sure we deliver all requirements, on-time and within budget.

Learning from the first 18 months, we are adopting a front loaded approach, with a significant initial focus on discovery, revalidation of requirements and detailed application and solution testing.

Completing very detailed planning and testing work in advance of delivery significantly increases the chances of a successful, low impact delivery. To help implement and deliver this we will plan to have strong engagement with all stakeholders.

It is clear that the plan will only be successful, not only if the technical solutions are successfully implemented but also fully adopted by the service. So the upfront effort on user engagement, understanding working processes and operational priorities will allow delivery to be tailored and reduce service impact caused by change. The service impact reduction can only be realised as a result of comprehensive testing. This will increase the likelihood of delivery being achieved on a "right first time" basis for the majority of the NHS Borders staff population.

1.5. Delivery resources

Detailed resource planning and some resource levelling have taken place across the programme to maximise utilisation of all resources.

A programme of this scale needs a number of specialised skills sets and these have been mapped for each project and the level of resources mapped to the volume of work and tasks within the plan.

Proposed Programme delivery resource and team composition is as follows:

Overall management of the programme will be with the Road to Digital Programme Manager.

There is a core programme team already established for the previous phases that is managing all projects and who have access to infrastructure and applications specialists in core teams who will assist in the technical delivery. This team will continue to work to implement against the plan.

The detailed resource planning has identified that the current resource pool does not have the capacity to deliver everything in the plan within the timescales. The team will need to increase in size across most skill sets due to the additional activity, mapping, testing and user engagement required in this phase of the programme.

The table below shows the composition and mix of the team across the two workstreams. The cost of the full team is within the financial plan as presented in section 4.

Total required resources identified within the plan		
Job Role	Infrastructure	Applications
Programme Manager	1.0	
Project Managers	4.4	4.85
Project Officers		5.3
Project Support Officers	1.0	
IT Facilitators	2.0	2.7
Network Engineers	2.0	
Senior Technical Engineers	4.0	
Filed Support Engineers	1.0	
Developers		Core team + 1.0
Applications specialist		Internal core team
Testing Lead & Test Analyst	2.0	
Training & OD Lead		1
Total Team	17.4	14.85 + 6 core staff

Additional posts will be filled through NHS Borders normal recruitment process as far as possible and only where all other routes have been exhausted and skills are in short supply, will short term agency staff be considered due to the higher costs of those.

1.6. Monitoring & Governance

The Programme Board is chaired by the Director of Finance and meets monthly to receive reports, and consider any risks or issues. The membership includes general managers and senior clinicians to ensure that the programme is delivering benefit and takes account of the needs of services in its plans.

This gives the programme good visibility within the organisation and ensures that senior stakeholders are able to challenge and contribute to the success of the programme.

Conclusion

We have significantly improved the IT infrastructure and application systems within NHS Borders over the 18 months of the Road to Digital Programme. Many of the highest risk areas identified in 2017 have now been resolved though some critical areas remain. These high risk components form part of the plan for delivery during 2019/20.

The plan will move from underlying infrastructure to focus on systems that will see more visible improvements to end users day to day work and can facilitate redesign and efficiency of service delivery.

Lessons learned during the first 18 months have been applied to development of this year's plan to increase the likelihood of smooth successful delivery.

Recommendations

In order to deliver the plan, we recommend that the Strategy & Performance Committee;


- **Recommend that the NHS Board Approves the Plan and requests Director of Finance and Director of Strategic Change work with Scottish Government to secure the funding to deliver the plan** – The Strategy & Performance Committee is asked to agree that the content, timing and costs of the plan reflects the priority order and is appropriate to meet the outstanding risks and challenges faced by NHS Borders as well as delivering additional functionality to improve service delivery and to approve its implementation.

-
- **Recommend that the NHS Board delegates authority to commit expenditure against the plan to the Director of Finance or Chief Executive where Standing Financial Instructions require Board level approval. Otherwise normal SFIs will apply. Any significant deviation from the plan will be referred back to the Board.**
 - **Acknowledge that if additional Capital funding and adequate revenue funding is not secured as outlined in the financial plan, the delivery plan will be re-phased** – The Strategy & Performance Committee are asked to note that if insufficient funding is available the plan will be re-phased. They should note that this will impact on delivery and therefore the risk profile and benefits that can be delivered over the duration of the roadmap. If the plan is significantly re-phased it will be brought back to the Board for consideration and approval.

Appendix

1.7. Scheme descriptions, including benefits, risk profile & progress

The following table provides further detail around the specific schemes. Each Scheme is described in terms of what will be done, why and what it will deliver in terms of risk mitigation and benefits. It also attempts to give some context in terms of its additional contribution to NHS Borders overall aims.

Components	Description	Rationale	Benefits			Status Update	
			Benefit Delivery	2017 Risk Level	2019 Risk Level		
 <p>Infrastructure Current</p>	<p>Improve Resilience - Server cluster</p> <p>Upgrade server cluster to provide additional storage space and replace End of Life switch controllers.</p>	<p>BGH currently has only one data centre with a single server cluster holding around 300 applications on virtual servers, hosting the majority of its business critical IT Infrastructure.</p> <p>Some components of that cluster are now end of life and pose significant risk to service continuity. Mitigating risk of failure is immediately</p>	<p>Mitigate risk of failure and therefore significant disruption to clinical services.</p>	Full	Very High	Low	<p>Complete</p> <p>New cluster fully functioning within Data Centre</p>
			<p>Creates capacity to store more information electronically.</p>	Full	Very High	Low	
			<p>Creates capacity to deliver new servers faster for upgrades or new clinical applications.</p>	Full	Very High	Low	
			<p>** Additional benefits – Significantly improved performance – 50% faster compute capability</p>	Full	Very High	Low	

Components	Description	Rationale	Benefits	Benefit Delivery	2017 Risk Level	2019 Risk Level	Status Update
		necessary. Increased requirement for storage within current application footprint as well as create capacity for further applications / upgraded applications on roadmap.					
	<p>Improve Resilience - Data Centre Network Links</p> <p>Redesign Network terminations into main data centre to separate points of entry and create separate resilient pathways.</p>	<p>There is a single point of failure where current external network links both terminate in the same network switch within the main data centre. Loss of this will result in loss of services.</p>	<p>In the event of switch or link failure, externally hosted systems will still be accessible through a secondary network link.</p> <p>Supports further moves to externally hosted services reducing the need to support systems locally.</p>	<p>Full</p> <p>Full</p>	<p>High</p> <p>High</p>	<p>Low</p> <p>Low</p>	<p>Complete</p> <p>New terminations in place</p>
	<p>Improve Resilience - Fast recovery & Disaster</p>	<p>Current resilience secures data</p>	<p>Ability to recover applications faster reducing disruption to</p>				<p>Mostly Complete</p> <p>Fast recovery with</p>

Components	Description	Rationale	Benefits	Benefit Delivery	2017 Risk Level	2019 Risk Level	Status Update
	<p>Recovery</p> <p>Explore best option for resilience & backup in main data centre to allow faster recovery in the event of significant multiple applications failure e.g loss of cluster and for complete loss of data centre</p> <p>Consider extent of secondary instances and where these should be – external to NHSB</p>	<p>predominantly through backups – this would mean prolonged recovery times and significant disruption to NHS Borders ability to care for patients effectively if there were any significant failures which where concurrent / multiple applications required to be restored. E.g. loss of cluster or main data centres</p>	<p>service</p> <p>** Additional benefit</p> <p>Fully resilient solution for virtual desktop with mirrored clusters means no disruption for desktop</p>	<p>Full</p> <p>Full</p>	<p>High</p>	<p>Medium</p>	<p>snapshot technology in place – recovery times and data re-entry now within hours – Systems classified into Tiers for most critical with shortest recovery times and snapshots.</p> <p>Secondary mirror server clusters are in operation within the main data centre giving added resilience but require second facility.</p> <p>Second resilient Facility still to be delivered in 19/20 – option appraisal for location underway.</p>
	<p>Improve Resilience - Backup Hardware</p> <p>Upgrade key components of the existing backup infrastructure</p>	<p>Our backup infrastructure uses deduplication technology to reduce the amount of disk storage required and to speed up back-up and restore times. The existing hardware is now end of life and no</p>	<p>Mitigate the risk of backup failure allowing the full restoration of the most up to date data</p> <p>Allow more backup jobs to run simultaneously and finish within the backup window</p>	<p>Full</p> <p>Full</p>	<p>High</p>	<p>Low</p>	<p>Complete</p> <p>Fast backup technology in place = backups take hours and fully complete rather than days.</p>

Components	Description	Rationale	Benefits	Benefit Delivery	2017 Risk Level	2019 Risk Level	Status Update
		longer capable of performing as required					
	<p>End User computing - Desktop Transformation</p> <p>Upgrade desktop operating system to latest compatible version e.g. MS Windows 7/10</p>	<p>Windows XP operating system is end of life and is unable to support the latest web browsers now required by many clinical web sites or some newer clinical applications.</p> <p>The estate is holding back using modern technology to deliver care.</p>	<p>New applications supported so can move to latest versions of clinical systems.</p> <p>Improved performance and faster logins for users</p> <p>Able to access modern web sites of clinical interest.</p>	<p>Partial</p> <p>Partial</p>	High	Medium	Windows XP fully replaced in community & partially complete in acute. Full completion 21st may 2019
	<p>End User Computing – Performance & security</p> <p>Configure and implement Appsense profiling tools</p> <p>Upgrade & extend number of applications using Single Sign on Password management</p>	<p>Users' login times are too long.</p> <p>Difficult and time consuming to switch between different devices and access software needed by the user.</p>	<p>Improves performance for users by only assigning the services and software they need to their personal profile.</p> <p>Faster logins and flexibility to get same services on any device.</p> <p>Improves security & control of end user session for IT teams – easier to manage so IT</p>	<p>Full</p> <p>Partial</p> <p>Full</p>	High	Low	Ainti Appsense fully installed, configured and in use

Components	Description	Rationale	Benefits	Benefit Delivery	2017 Risk Level	2019 Risk Level	Status Update
			<p>management can be more effective.</p> <p>Makes desktop replacement faster to deploy.</p>	Full			
	<p>Corporate systems – email & collaboration</p> <p>Upgrade and migrate to Office 365</p>	<p>Email system is end of life and unsupported.</p> <p>Microsoft Office is end of life and unsupported.</p> <p>Sharepoint system is end of life and unsupported</p> <p>Internal Video Conferencing system is end of life and unsupported.</p> <p>These must be replaced to mitigate risk of disruption should they fail.</p> <p>Does not support integrated working with partners and other NHS</p>	<p>Mitigates risk of extreme disruption to the whole organisations normal business.</p> <p>Replaces significant capital expenditure on individual product upgrades and further upgrade cycles.</p> <p>Allows full collaboration within and across NHS Boards and potentially with other partners to support integrated care.</p> <p>Could replace internal Intranet.</p> <p>Offers Skype for business as collaboration tool.</p> <p>Reduces need to for local on-site storage & backup of documents.</p> <p>Reduces local support burden on IT teams</p>	Pending	Very High	Very High	<p>Office 365 planning under way. Earlier piece of work to migrate server 365 may/June 2019</p> <p>Roll out due by 31/3/2020</p>


Components	Description	Rationale	Benefits	Benefit Delivery	2017 Risk Level	2019 Risk Level	Status Update
		boards.	500 PC & 100 laptops to be replaces				
	Windows 10 Upgrade *** New Addition ***	Windows 7 is end of life 14 th January 2020. As part of a national programme we will be rolling Windows 10 out.	Secure and stable platform which ensures that the end user operating system is up to date and compliant	Pending	High	Low	High level plan for Windows 10 in place. Deployment to commence following successful discovery and test phase.
	Wireless Infrastructure – Borders General Hospital Upgrade/replace current wireless infrastructure in BGH campus Configure for reciprocal Wi-Fi access for NHS Lothian and Scottish Borders council (excluding Huntlyburn cabins)	Current solution is unsupported and not fit for purpose with some black spots where signal is poor.	Improved wireless coverage and performance for staff using mobile technology in BGH allowing more work at the bedside. Provide access for visiting NHS staff and Local Authority staff to their own native services. Could support local staff and the public access to internet services. Potential to support use of personal devices for work.	Partial Partial Full Pending	High	Medium	New Wi-Fi in all but one location in BGH. Will be completed by June 2019.
	Network –Wide Area – NHSB sites Review, design and implement network	New GP IT versions will be externally hosted and require more network	Users can make use of newer applications and increased functionality	Partial	High	High	All links being accessed as part of work for Office 365 and TrakCare


Components	Description	Rationale	Benefits	Benefit Delivery	2017 Risk Level	2019 Risk Level	Status Update
	architecture for improved connectivity between NHSB sites	bandwidth. Community sites may need more bandwidth for EMIS web application If Trak hosted externally e.g. in Lothian increased bandwidth will be required.					Upgrade
	Network – Local Area Upgrade network switches and cabling	The network infrastructure on many sites is now old and unsupported leading to increased risk of failure and service disruption and poor performance speeds for users.	Improved performance speeds for users. Reduced risk of loss of services and disruption to clinical care	Partial Partial	High	Medium	Network fully replaced at BGH campus. Work started to replace all GP and community sites to be completed by end of Sep 2019.
	Network – Remote Site Legacy Cabling Replace old cabling at a number of General Practises and Community hospitals	Old cabling at some sites restricts performance and requires unsupported equipment to operate that would not be	Increased performance and reliability and allow the use of supported equipment	Full	High	Low	Completed at all four sites

Components	Description	Rationale	Benefits	Benefit Delivery	2017 Risk Level	2019 Risk Level	Status Update
		able to be replaced					
	<p>Network – Core Switch Replacement</p> <p>Replace central core switches</p>	<p>Current core switches are approaching end of life. These switches are the cornerstone for the network within NHS Borders</p>	<p>Continued performance and reliability on a supported platform.</p> <p>Redesign of network will allow for greater levels of resilience.</p>	Full	High	Low	New Network switch delivered and in place
	<p>Network & Security - Internet facing</p> <p>Upgrade Forefront security management product to latest version</p> <p>Increase bandwidth for remote access to NHS Borders applications & services</p>	<p>Current product is end of life and unsupported so risk that newer threats are not recognised and blocked / managed</p> <p>Current bandwidth prohibits any increase in number of users and applications that can be accessed remotely.</p>	<p>Improved control of access to services and confidence in protection of information assets</p> <p>Facilitates access for those working externally in community or local authority</p>	<p>Pending</p> <p>Partial</p>	High	High	New appliances ordered and to be install may 2019

Components	Description	Rationale	Benefits	Benefit Delivery	2017 Risk Level	2019 Risk Level	Status Update
	<p>Security – SWAN Facing Firewalls</p> <p>Replace firewall pair that sits between NHS Borders network and SWAN</p>	<p>Current firewalls have entered extended support</p>	<p>Implement a supported platform that will continue to protect NHS Borders infrastructure from external cyber-threats</p>	Full	High	Low	Complete
	<p>Security – Audit, Monitoring & Management</p> <p>Purchase & Implement security management systems</p>	<p>New cyber security threats are emerging and we are required by national standards and guidance to have effective measures in place to protect our information assets.</p> <p>Current tools are not sophisticated enough to manage newer threats.</p>	<p>Improved confidence in protection of information assets.</p> <p>Less likelihood we will be subject to cyber events and disruption of services as a result.</p>	Partial	High	Medium	Advance malware protection (MP) Partial install in BGH with roll out in NHSB 16 th Aug 2019.
	<p>Security – Mobile Devices</p> <p>Upgrade mobile device encryption</p>	<p>Current encryption is old, expensive and has a high support burden</p>	<p>Easier to manage device encryption for IT teams.</p> <p>Delivers cost savings through less expensive technology</p>	Partial	Medium	Low	<p>All mobile devices using new encryption – 75% of community devices.</p> <p>25% to be moved to new</p>

Components	Description	Rationale	Benefits	Benefit Delivery	2017 Risk Level	2019 Risk Level	Status Update
							encryption by end of June 2019.
	<p>Security- Cloud Protection</p> <p>Increase bandwidth for remote access to NHS Borders applications & services</p>	<p>Different security requirements exist for data and applications accessed in the cloud.</p>	<p>Ensure that data and systems hosted in the Cloud are protected.</p> <p>Ensure that data and applications hosted in the cloud do not pass threats to NHS Borders internal infrastructure</p>	Full	High	Low	Complete
	<p>IT Infrastructure Management – Configuration Management</p> <p>Upgrade System Configuration Centre Management software & build application packages for most used software.</p>	<p>Management software is end of life and unsupported.</p> <p>Unable to manage new operating systems and new infrastructure effectively due to incompatibilities.</p>	<p>Faster deployment of applications to end users.</p> <p>More efficient process and effective use of IT staff resources.</p> <p>License and asset registers maintained and current</p> <p>Infrastructure patched to</p>	Partial	High	Medium	CSSM upgrade due to complete 31/05/2019

Components	Description	Rationale	Benefits	Benefit Delivery	2017 Risk Level	2019 Risk Level	Status Update
			<p>required security levels</p> <p>Automatic operating system upgrades.</p>				
 Infrastructure Additional / Future	<p>Wireless Infrastructure – Non BGH sites</p> <p>Install a new Wi-Fi infrastructure at all non BGH sites to include Community Hospital & Health Centres</p>	<p>There is little or no Wi-Fi at non-BGH sites.</p> <p>Staff increasingly need to work flexibly in the Community away from traditional bases requiring mobile access to services from any NHS location in order to effectively work.</p>	<p>NHS Staff and authorised partners can access NHS services from any location.</p> <p>Reduced non-productive time travelling or waiting for access to equipment.</p> <p>Staff can work differently and provide a better service.</p> <p>Facilitates joint working and integrated care.</p>	Partial	High	High	Implementation of Wi-Fi at non BGH sites underway due for completion end of Sep 2019.
	<p>Print Infrastructure</p> <p>Review printing requirement and reduce number of printers</p>	<p>NHS Borders has a very high number of printers and models compared to other boards.</p> <p>This incurs significant costs per page and there are cheaper alternatives</p>	<p>Reduced print cost per page</p> <p>Reduction in printing demand and unnecessary printing.</p>	Full	High	Low	Complete
	<p>Smartphones</p>	<p>The blackberry email server is</p>	<p>Give users mobile access to NHS services</p>				

Components	Description	Rationale	Benefits	Benefit Delivery	2017 Risk Level	2019 Risk Level	Status Update
	Migrate from Blackberry to smartphone technology	<p>now old and end of life.</p> <p>Older blackberry technology does not support the needs of users for mobile working</p>	<p>and applications where a laptop is not required.</p> <p>Some devices offer Wi-Fi calling to mitigate poor mobile signal.</p> <p>Avoid cost of upgrading blackberry infrastructure</p>	Full	High	Low	Blackberry devices removed and Smartphones issued.
	<p>Remote Access – Joint working</p> <p>Purchase additional licensing and configure remote access for integrated care</p>	There is an increasing need for NHS and local authority staff to be able to access NHS systems remotely.	Any internet connected and authorised user can access NHS applications and services to support integrated care.	Partial	Medium	Medium	Remote access to some system available full implementation by July 2019
 <p>Current application estate</p>	<p>Radiology Information System (RIS)</p> <p>Upgrade to latest version of RIS and reporting software</p>	Bring the current IT applications estate up to the later versions of cornerstone systems.	<p>Supported latest version.</p> <p>Allows regional reporting of images</p>	Full	Very High	Low	Complete
	<p>TRAK</p> <p>Local upgrade or re-provision Trakcare as part of a collaborative model with other NHS Board</p>	End of life unsupported – bring to latest version as cornerstone	<p>Delivers sustainable support model and faster pace of change / adoption.</p> <p>Supports cross border</p>	Full	Very High	Low	Project started in April and upgrade delivery scheduled near end of 2019

Components	Description	Rationale	Benefits	Benefit Delivery	2017 Risk Level	2019 Risk Level	Status Update
		system.	<p>patient flow and regional working</p> <p>Realistic expectation there will be a transitional phase from paper to electronic operating environment</p>				
	<p>Community & Mental health Information System (ePEX)</p> <p>Migrate to EMIS Web</p>	<p>End of life unsupported – bring to latest version as cornerstone system</p> <p>Key component of EHR & Information Sharing for H&SC</p>	<p>Delivers sustainable support model and faster pace of change / adoption.</p> <p>Realistic expectation there will be a transitional phase from paper to electronic operating environment.</p> <p>Creates data source worth sharing with Social care</p>	Full	Very High	Low	Complete – Reporting Exceptions nearly completed
	<p>Adastra OOH system</p> <p>Upgrade software version and implement mobility solution.</p>	<p>End of life version and enhanced functionality</p>	<p>Deliver sustainable version.</p> <p>Improved efficiency & quality for patients from mobile access</p>	Full	Medium	Low	Complete

Components	Description	Rationale	Benefits	Benefit Delivery	2017 Risk Level	2019 Risk Level	Status Update
	<p>Voice Recognition System</p> <p>Upgrade to latest version of G2 application</p>	<p>End of life version and enhanced functionality</p> <p>Allows direct dictation by clinicians into existing applications e.g. Trakcare</p>	<p>Deliver sustainable version.</p> <p>Improved efficiency across secretarial & consultant teams.</p> <p>Improved quality & completeness of Electronic patient record.</p>	Pending	Medium	Medium	<p>Planned delivery June 2019 in planning stages delivery</p> <p>Project will be delivered in 2 phases. Phase 1 upgrade hardware and software</p> <p>Phase 2 connect interface with TrakCare after TrakCare has been upgraded in January 2020</p>
	<p>Drugs & Alcohol Prescribing System</p> <p>Purchase & implement alternative product</p>	<p>Safety & efficiency Issues with current system</p>	<p>Safer prescribing</p> <p>More efficient process & administration</p>	Full	Very High	Low	Complete
	<p>Dental System</p> <p>Upgrade to latest version of R4 product</p>	<p>Software end of life and unsupported</p> <p>Hardware old and approaching end of life</p> <p>Problems with</p>	<p>Deliver sustainable version.</p> <p>Improved efficiency & quality for patients & Staff</p> <p>Improved performance and mobile working for staff</p>	Full	High	Low	Complete

Components	Description	Rationale	Benefits	Benefit Delivery	2017 Risk Level	2019 Risk Level	Status Update
		<p>performance of current system</p> <p>Functionality old and holding back service from modern care delivery</p>	<p>More complete patient record</p> <p>Modern technology supports easier upgrade to future eversion</p> <p>Allows interaction with patients for appointment text and signature capture</p>				
	<p>OOH Rostering System</p> <p>Upgrade to latest version of rostering application</p>	<p>End of life version and enhanced functionality</p>	<p>Deliver sustainable version.</p> <p>Improved efficiency</p>	Full	Medium	Low	Complete
	<p>Theatre Management System</p> <p>Upgrade to latest version of the application</p>	<p>End of life version limits progress and redesign of workflows, doesn't support information needs - includes enhanced functionality</p>	<p>Deliver sustainable version.</p> <p>Improved efficiency & quality for patients</p> <p>Allows capture of IHO information to better support patient flow & Theatre utilisation</p>	Pending	High	Low	Planned for mid-May 2019 hardware and software upgrade dependency on XP machines upgraded to Win 7


Components	Description	Rationale	Benefits	Benefit Delivery	2017 Risk Level	2019 Risk Level	Status Update
	<p>Clinical Portal</p> <p>Review the need and use of a Clinical portal and determine whether to Re-provision or deploy an alternative tactical option for access to data held in Clinical portal</p> <p>Review Need</p>	<p>The contract across SE region for Clinical Portal ends in October 2017 but the region has no plans to upgrade or continue with this product.</p> <p>We have a number of users who find this useful in their clinical setting who will need to have at least the same access to information.</p> <p>A portal is a key component of the EHR Blueprint design and will assist with Health & Social care integration</p>	<p>Supports information sharing across boards, sectors and local authority</p>	<p>Partial</p>	<p>Medium</p>	<p>Low</p>	<p>On Hold</p> <p>Benefits delivered through EMIS Web data sharing for GPs and Community teams – Wider requirement for a portal needs reviewed.</p>
	<p>Docman GP Document System</p> <p>Upgrade to latest version</p>	<p>Current version approaching end of life</p> <p>Main document system for</p>	<p>Sustainable solution and supported software.</p> <p>Improved patient record in General Practice.</p>	<p>Full</p>	<p>Medium</p>	<p>Low</p>	<p>Complete</p>

Components	Description	Rationale	Benefits	Benefit Delivery	2017 Risk Level	2019 Risk Level	Status Update
	in line with national programme	General Practice patient records and will offer new functionality and supported version					
	<p>GP IT System</p> <p>Upgrade / re-provision GP IT system when new national contract is let</p>	<p>Current national contract ends in 2017/18 and new procurement will deliver new system</p> <p>Current version will become end of life and unsupported under the contract</p> <p>Current version is inhibiting improvements in service delivery in General Practice and information sharing across teams.</p>	<p>Supported version and improved resilience for GP Practices</p> <p>Increased efficiency</p> <p>Improved functionality to support new ways of working.</p>	Pending	High	High	National project run by NSS moving forward contract has been awarded delivery 2021
	<p>SCI Store Document Store</p> <p>Upgrade to latest version</p>	<p>Hardware end of life and requires version upgrade at same time.</p> <p>Latest version</p>	<p>Supported and resilient system</p> <p>Ability to proceed with casenote scanning as a key component of EHR</p>	Pending	High	Low	Planned end of April 2019

Components	Description	Rationale	Benefits	Benefit Delivery	2017 Risk Level	2019 Risk Level	Status Update
		<p>offers additional functionality</p> <p>Key component for Casenote scanning project</p> <p>Secondary system for access to Diagnostic results in the event of Trak failure</p>	<p>Blueprint</p> <p>Improved resilience for diagnostic reporting</p>				
	<p>IT Service Desk system</p> <p>Purchase & implement new product as managed service in the cloud</p>	<p>Current version unsupported, limits progress and redesign of workflow and service delivery model for IT and customers</p>	<p>Improved call management and end user visibility and tracking of calls.</p> <p>Improved efficiency for IT teams</p> <p>Improved IT management through performance reporting.</p> <p>Better customer experience</p> <p>Available to other services for helpdesk call tracking</p> <p>Enhanced customer self-help through knowledge</p>	Full	High	Low	Complete

Components	Description	Rationale	Benefits	Benefit Delivery	2017 Risk Level	2019 Risk Level	Status Update
			portal				
	<p>Business Objects Local Reporting System</p> <p>Upgrade version, create new data warehouse and revise all reports</p>	<p>Current version well behind latest versions and often fails on overnight routines</p> <p>Failure has significant impact on ability to manage services due to lack of reporting being available.</p> <p>Unable to take advantage of newer functionality to further enhance and streamline current reports</p>	<p>Mitigate risks associated with failures.</p> <p>Improved reporting and visualisation of reports.</p>	Full	High	Low	Complete
	<p>Patient Safety Reporting Tool</p> <p>Procure and migrate to an alternative product for</p>	<p>The current Lanquip tool is not being developed any further by NHS</p>	<p>A supported and fit for purpose tool to monitor patient safety KPIs</p> <p>Reduced manual effort</p>	Pending	Medium	Medium	Picked up as part of the delivery of Excellence and Care National Assurance (KAIR). Software moved onto a supported platform

Components	Description	Rationale	Benefits	Benefit Delivery	2017 Risk Level	2019 Risk Level	Status Update
	patient safety reporting and performance	<p>Scotland and support is only on an emergency basis if required.</p> <p>A new tool is needed to support the programme and monitor new measures.</p>	and duplication.				
	<p>Labs System</p> <p>Consider options for labs system as current product reaches end of life. Contract been in place for 20+ years and very dated technology and will limit change</p> <p>Interim complete in 19/20</p>	<p>Current version is very old and no new developments or enhancements are available.</p> <p>Will eventually not support newer ways of working.</p> <p>Unable to readily report on key items to understand demand capacity and performance.</p>	Modern Labs system allows supported system that can facilitate new ways of working.	Partial	Very High	Medium	<p>Labs hardware replaced and software upgrade pending.</p> <p>Longer term procurement for a replacement is part of Regional solution discussions on going at a regional basis</p>

Components	Description	Rationale	Benefits	Benefit Delivery	2017 Risk Level	2019 Risk Level	Status Update
	<p>National Child Health System</p> <p>Implement new national application locally</p>	<p>The national Child Health System is being retired and replaced by a new system.</p>	<p>Modern supported platform gives reliable access and opportunity to work differently</p>	Pending	Medium	Medium	National project restarted at beginning of 2019 after being on hold 2021 delivered
	<p>National CHI System</p> <p>Implement new demographic connection between local applications and national CHI</p>	<p>The old national CHI is being retired and replaced by a new system. This is necessary to feed local systems with patient demographic information</p>	<p>Modern supported platform gives reliable access to demographics to keep local system current & accurate</p>	Pending	Medium	Medium	National project restarted at beginning of 2019 after being on hold 2021 delivered
	<p>SCI Diabetes System</p> <p>Undertake local work to integrate to new SCI-DC system</p>	<p>Operating system & SQL version unsupported.</p> <p>Necessary for national eLinks project</p> <p>SCI DC is being upgraded and requires work to implement locally</p>	<p>Supported platform</p> <p>Improved applications access</p>	Pending	Medium	Medium	In progress currently at planning stage with IT only
 <p>Applications –</p>	<p>Badgernet Maternity System</p>	<p>Maternity records mainly on paper and a number of</p>	<p>Patient Maternity notes will be easily and instantly accessible to all</p>	Full	Medium	Low	Complete

Components	Description	Rationale	Benefits	Benefit Delivery	2017 Risk Level	2019 Risk Level	Status Update
additional / future	Implement new application to provide maternity record	<p>small bespoke systems meaning information not available in the same place potential risk to patients</p> <p>Inefficient methods pf recording information</p> <p>Unable to report on key indicators or to use information to plan services.</p>	<p>maternity services around NHS Borders electronically</p> <p>Patients note longer need to carry their notes with them to ever appointment as they have a separate electronic link via an App</p> <p>Reporting is easy and quickly available to authorised users</p>				
	<p>Case note scanning</p> <p>Define strategy/ approach for scanning paper records into electronic format.</p>	<p>Continuing with paper is not sustainable long term and increases risk due to fragmented information sources and lack of sharing.</p> <p>Key component of Electronic Health Record Blueprint approved by</p>	<p>Will generate streamlined higher quality access to information and create efficiencies.</p> <p>Less handling of paper</p> <p>Less risk of lost / misfiled information</p> <p>Delivers significant step towards EHR Blueprint.</p>	Pending	Medium	Medium	Delivery scheduled for 2019/20

Components	Description	Rationale	Benefits	Benefit Delivery	2017 Risk Level	2019 Risk Level	Status Update
		NHS Borders.					
	<p>Systemview</p> <p>Implement whole system information tool to support flow of patients across all acute hospitals.</p>	<p>Lack of whole system visibility and excessive time spent capturing information to facilitate system flow</p>	<p>Improved visibility 'real time' of key indicators to support managing patient flow.</p> <p>Information accessible from anywhere within NHSB to managers</p> <p>Increased efficiency and reduced duplication of capturing and reporting information.</p> <p>Reduction in number of meetings for bed management / flow.</p>	<p>Partial</p> <p>Partial</p> <p>Not delivered</p> <p>Not Delivered</p>	Medium	Low	<p>Delivered – Service currently doesn't have funding to continue with System View. Support has been paid until 2019 and will not continue support due to current financial position</p> <p>This may be picked up later as value in system for opportunities in improving patient flow and releasing efficiencies</p>
	<p>Clinical Bridge</p> <p>Develop a new application view across Community based teams</p> <p>No Appetite</p>	<p>Community systems are paper or telephone based and time consuming.</p> <p>No visibility of all patients and status in one place to manage workload and</p>	<p>Teams and managers can review caseload together in one view of information.</p> <p>Less risk of adverse impact of not sharing / access to information</p> <p>Effective use of resources</p>	Not Delivered	Medium	Low	On Hold – Reconsider if required – no drive or appetite from services.

Components	Description	Rationale	Benefits	Benefit Delivery	2017 Risk Level	2019 Risk Level	Status Update
		staff resources. Difficult for community based teams to manage caseload and work collaboratively.	Improved quality of care for patients.				
	<p>Admission View</p> <p>Implement changes to Admission view product to suit local needs</p> <p>No Appetite</p>	Doctors still use manual whiteboards to manage admission tasks for patients across the whole hospital	<p>Easier for doctors to manage patents across all care settings and ensure admission tasks / diagnostics are completed</p> <p>Help faster assessment of patient son admission and streamline work flow.</p>	Not Delivered	Medium	Low	On hold – additional development by supplier at a cost – review if required with service
	<p>GP Order Comms</p> <p>Buy and implement electronic diagnostic requesting for GP Practices</p>	GPs still use paper request forms to order diagnostic tests – results are electronic but not easily reconciled to ensure all request have been processed.	<p>Improved reconciliation of results to request.</p> <p>Able to readily see what tests have been ordered – reduce duplication of requests</p>	Pending	Medium	Low	Projects delivery 2019 options paper going to be presented to board
	<p>Diabetes Monitoring</p> <p>Central monitoring system</p>	Part of a national project for	Closer monitoring of patients blood glucose levels during hospital	Pending	Medium	Low	Demo given to Stakeholders and small Business case prepared

Components	Description	Rationale	Benefits	Benefit Delivery	2017 Risk Level	2019 Risk Level	Status Update
	for Blood Glucose levels	Diabetes Plan	stays. Reduced length of stay and complications for some patients				by service to go to recovery PMO for consideration
	Labs – Blood360 Implement an electronic blood tracking system that is compliant with the specification set by the National Patient Safety Agency (NPSA).	Not fully compliant with Blood safety regulations	Fully auditable Reporting/Statistics availability Reduction in manual input therefore reducing risk of human error Real time stock management	Pending	Medium	Low	Implementation stage currently being managed by Labs Department
	HEPMA	Hospital prescribing and medicines administration is still done on paper This can lead to prescribing and administration errors.	Reduced medication errors Improved electronic patient record.	Pending	High	Low	In plan for delivery 2021

