**SANDWELL AND WEST BIRMINGHAM HOSPITALS NHS TRUST**

**Report to the Trust Board 3rd January 2019**

**Unity Go-live Criteria and Countdown**

## 1 Introduction

1.1 This paper outlines an update on IT and Business readiness for Unity Full Dress Rehearsal (FDR) to take place in February and the countdown milestones to go live.

1.2 The Digital Major Projects Authority paper is attached as an appendix to inform the Trust Board of detailed milestones against 9 readiness elements of IT & Technical Considerations, Devices, Product Readiness, Testing, Training, Operational Readiness, FDR & Cutover, Communication & Engagement and Post Go Live Planning.

1.3 This paper focuses on optimisation of the product through our people, as well as the technical and training countdown which have the largest components of delivery to be completed in order to agree a go live date.

## 2 Optimisation

2.1 The initial aim is to achieve 80% optimisation of the Unity system. The programme team are working on the following definition of:
- Every user using Unity
- Every user using Unity in 80% of the process it is designed to support
- Every user using Unity in 80% process it is designed to support to its 80% capability

2.2 The Trust is working with Cerner on a key indicator deck to represent the above definition from initial go live up to 3 months post go live; this work will be completed in January. The measures will include the following indicators for each user which will be role based and team based:

- Total Unique Users
- Login Average Response Times
- Patient activity at go live- e.g. ED Visits – numbers of patients going through ED
- Documents used – e.g. Charts Open – Clinical assessment documents and general documentation, Care Compass opened – nurses' main input screen
- Electronic medication  - e.g. Total Meds Administered, all Pharmacy Orders, total Multum Alerts Fired – e.g. warning that what you are about to prescribe a drug that may interact adversely with patient's other medications and total Multum Alerts overridden – override of the above
- Dynamic Documents Signed – a document that required electronic "signature" in order to move to the next step in the process
- All Orders – measure medications, tests, isolation orders, x-rays
- All Lab Orders

Results acknowledgement, sepsis management and our safety plan will also be incorporated in the KPIs.

2.3 Early Adoption will be managed through operational teams and line managers. Cerner provide a 'Lights On Module' that provides intelligence benchmarked against peers of the user performance and optimisation of the product against over 200 measures. Lights On is a self-serve module. We will create dashboards to push out to the organisation through the Directorates to manage local optimisation. These will be visible before the end of February.

2.4 Cerner promotes the use of Physician Adoption Coaches, who can work with our staff on developing improvement approaches. They re-join the Trust at week 6 post go live and will provide focussed intervention with staff and or teams that are less optimal. Through in-situ coaching and supervision they will enhance the user optimisation.

2.5 A work stream chaired by the COO with operational and clinical membership will be set up in the first week of January to oversee the optimisation for go live and the first year, to include the dashboard and governance oversight.

2.6 It will be important in advance of go-live to be explicit with our workforce on expectations. For some time now the message has been clear internally that all employees roles are digital. We need to frame that into clarity about what level of Unity use is expected of people, how they can be supported but also what the consequence arrangements will be for future PDR and employment arrangements if someone is unable to adapt to the new requirements. We will aim to issue with payslips in March 2019 an unambiguous set of expectations so that everyone is advised formally before deployment begins.

**3 Technical countdown**

3.1 We do have an agreed to-do list on what remains of technical countdown. This has withstood scrutiny at the executive group, digital MPA and the digital committee. Prior advice was that all of the issues could be concluded by the end of January. This advice has proved misplaced and revised detailed deployment plans are being created to be delivered in Gantt chart for by January 12th.

3.2 The most significant aspects of technical countdown and readiness still to be completed include:

- Wifi roll out to be completed and tested by end of January

- Citrix and screwdriver upgrades to include a Windows 7 solution remains unresolved that this stage and a risk to device roll out.

- Installation of the fail over line is scheduled post completion of the Logicalis infrastructure work which is on track.

- Network stability is dependent on a N3 solution. The provider and timeliness of this solution is not yet fully understood.

- Device survey reconciliation will be concluded in January to inform assurance of device roll out plan. The current device roll out is currently behind schedule by 2 weeks and resources will be increased to support this.

- The printer 'health check' in December is partially complete. The lived experience reported by clinical teams is still inadequate and a trajectory to fix this is necessary in January. The scale of work needs to be fully understood and resourced.

## 4    People and training

4.1    This workstream has been insufficiently precise to date. It now composes three phases of parallel work. There is more thinking to do on the quantity of take up needed to define success for the latter two:

- Completion of basic training
- More enhanced training that incorporates SOP changes as well as IT
- Individual opportunities to test and play with the product in a safe domain

4.2    Our programme aim is to train all staff in basic role training by the end of January. 1995 staff still require training at the time of writing. There are 2 risks to this goal; i) inadequate training capacity for some roles in theatres, midwifery, in patient nursing and ED / Imaging medical staff and ii) the booking trajectory is inadequate with 90 % of capacity in the first full week of January still un-booked.

It is recommended through the Digital Committee in December the sessions are force booked against rosters. Alternative leadership will be put in place by January 4th to complete this work successfully.

4.3    Before go live, staff will receive 'enhanced' training. This is about how people use Unity in their own environment and as part of a team providing patient care. The proposal for enhanced training is to be developed rapidly by the end of January. It will use simulation both filmed and actual simulation to inform enhanced learning for care supported by the new unity technology in outpatients, wards, theatres, critical care and community settings.

4.4    A complementary environment to support learning is the play domain. This is underutilised and will need promotion and monitoring of usage. This will start during January.

## 5    Go live criteria

5.1    The Board considered some criteria for go live, to which was added an expectation of 70 days IT stability. The criteria are replicated below and reflect good practice from Cerner and from other go live. The concern expressed within the Digital Committee is that there is an emphasis on plans. In view of this I would wish to propose to the next D-MPA some measures of 'success' on each criteria which test both breadth and depth. This reflects the issues raised by Richard Samuda at the DMPA about "hot spot" parts of the Trust.

In view of the comments under sections 2-4 I would further to amend the criteria to set thresholds for enhanced training and perhaps play domain use, again targeted at department coverage.

5.2    The prior approved go live criteria were:

    i.    Have all deliverables and approvals required for the current stage been stored on the Portal in the correct locations? Have all weekly reports been uploaded to the Portal?

    ii.    Have all exit criteria been met for Full Dress Rehearsal activities including final timings?

    iii.    Have Digital Champions been trained, orientated in support procedures and aware of their engagement activities?

    iv.    Has 80% of end user training been completed on schedule as per training plan?

    v.    Has 95% of critical end users been trained ready for cutover? (critical users = users that will be on duty over the 48h after the cutover)

    vi.    Have the Benefit Baselines been collected for all benefits in the Benefits Workbook?

    vii.    Is the Cerner Go Live/ELS team resourced and documented?

    viii.    Is the Trust Go Live/ELS team resourced and documented?

    ix.    Has the conversion/cutover plan, downtime strategy and all risks, issues and lessons learned been reviewed and agreed?

    x.    Has the Trust Back Office Teams been fully established and are ready for go-live?

    xi.    Are there any outstanding issues on the programme or corporate risks / issues log that may prevent Go Live and are how are they being addressed?

    xii.    Has the Trust approved the Clinical Safety Case/Report (CRM) and signed the Clinical Authority To Deploy (CATD) document?

    xiii.    Has Cerner completed the RFO - Ready For Operation - testing (e.g. performance, stability, penetration testing, environment lock-down) been carried out?

    xiv.    Have all Risks and Issues been reviewed and those with a classification of high (score equal or greater than 15) have a mitigation that has been agreed and signed off by all parties?

    xv.    Has the impact on the Trust (ED, inpatient, outpatient) been determined and catered for within the Trust's operational plans?

    xvi.    Are all DCWs up to date and been handed over to the Trust to maintain?

    xvii.    Are all business continuity plans approved, published on Connect and known to staff?

    xviii.    Is there a detailed communications and engagement plan in place for cutover that details what is happening when and how to access support?

    xix.    Have Floorwalkers been sourced, training, rostered and have a published engagement plan.

5.3    As a subset of the above, we agreed some conversion criteria:

- Have all deliverables and approvals required for the Project been stored on the Portal in the correct locations? Have all weekly reports been uploaded to the Portal?
- Has a Lessons Learned session been scheduled?
- Has the the Work-Off Plan been presented to the Trust and agreed?
- Has the Cerner hand-over to Live Service meeting taken place and agreement reached on the hand-over date agreed (i.e. the end of ELS)
- Have the Quick reference Guides (QRGs) and videos been published?
- Have all DCWs been handed over to the Trust Back Office for ongoing maintenance

**6. Recommendation**

The Trust Board is asked to:
   a) **DELEGATE** to the next Digital MPA meeting agreeing revised Go Live criteria
   b) **NOTE** the commercial agreement with Cerner for 2019 go-live
   c) **RECOGNISE** and consider the work to be done prior to any go-live decision or go-live

**SANDWELL AND WEST BIRMINGHAM HOSPITALS NHS TRUST**


**Report to the Digital MPA: 14th December 2018**
**Unity Implementation Progress Report**


**Introduction**

1.1     This paper outlines an update on IT and Business readiness for Unity Full Dress Rehearsal (FDR) that will take place on 4th February 2019 (technical) and 11th February 2019 (operational). A successful FDR will support a Go Live date on 23rd March 2019.

**2.      Readiness – Key deliverables and Milestones**

2.1     A schematic of the key deliverables timeline can be found at Appendix 1.

2.2     There are 9 readiness elements – IT & Technical Considerations, Devices, Product Readiness, Testing, Training, Operational Readiness, FDR & Cutover, Communication & Engagement and Post Go Live Planning.  Each readiness element is described below in terms of major milestones to completion and, by a colour key, the completeness of the plans supporting milestone delivery. Green indicates where credible plans exist although these may not yet be fully documented. Red indicates where there is not a credible plan in place or where an enabling decision that remains outstanding.  The "G", "A" and "R" notations on the graphics below indicate the RAG at last reporting period (left side notation) and current reporting period (right side notation)

**3. Technical infrastructure and Back Office**



Technical Infrastructure and Back-Office Plan
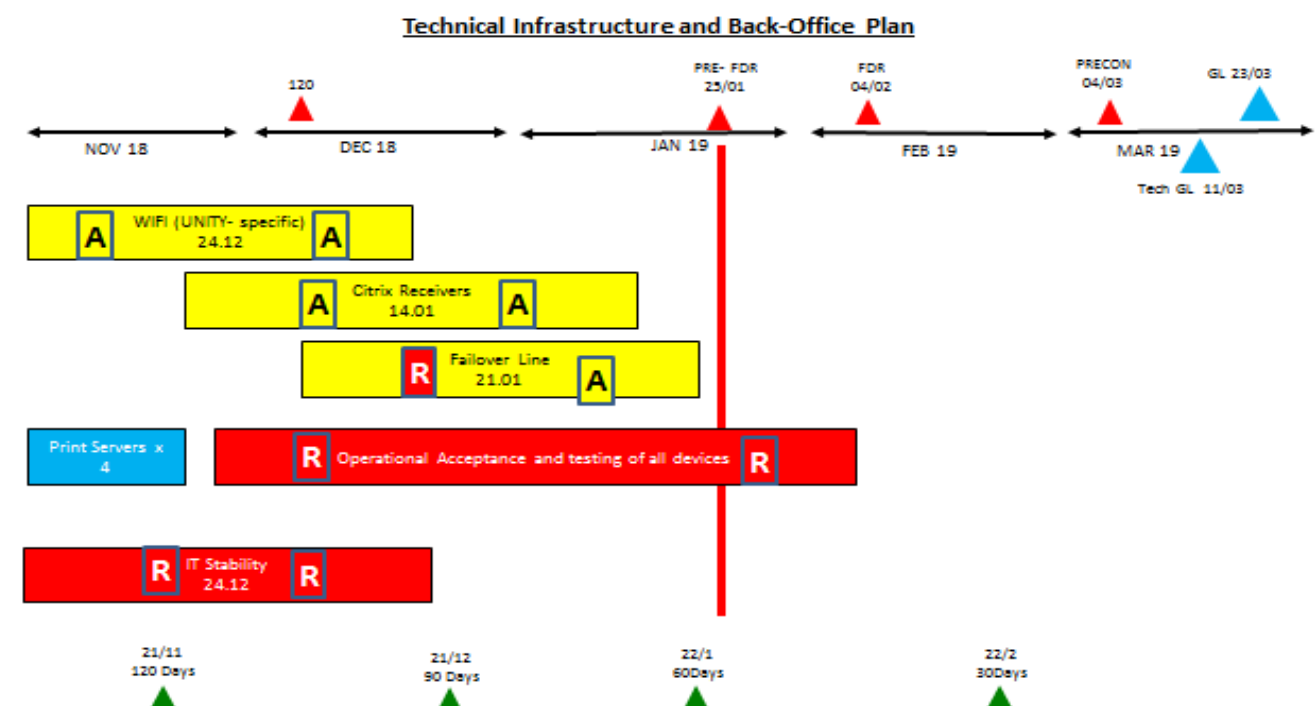
## 3.1 Remediation actions

- Wifi – This plan item will be in Green status by mid-January.  Further investigation is planned at Leasowes, Rowley Regis and Ling being investigated.
- Citrix Receivers – mitigation outstanding at tiem of writing and to be confirmed by the Chief Informatics Officer
- Failover line – The item will be Green by the end of the calendar year. Waiting installation date.
- Device Testing – Resource requirement is being re-scoped.  Will have clarity on when this item will be Green in the next reporting period.
- IT Stability – An operational definition is being drafted of IT stability will be clarified via the relevant Executive leadership to Major Projects Authority at the next meeting.
- Back Office – Cerner will provide an application managed service.  There is a proposal to grow our Support Team to 7 people in order to provide the right level of service.  This  item will be Green by 21st December.
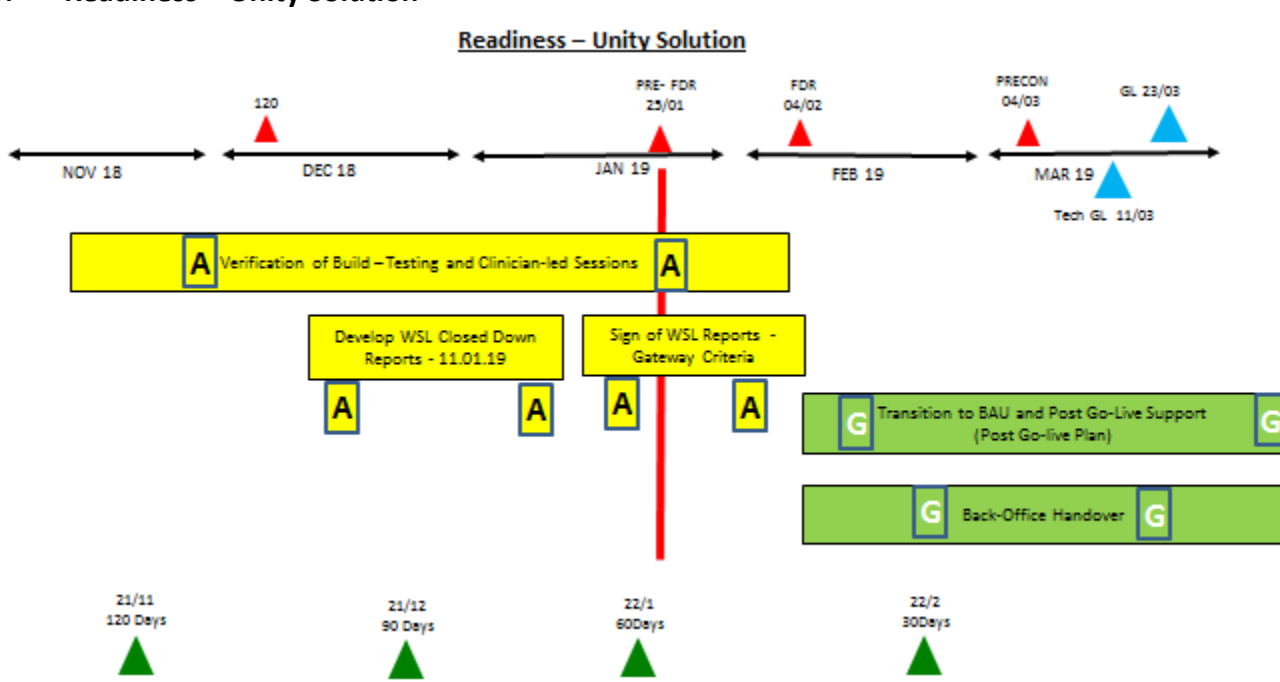
## 4.   Devices



Devices Plan
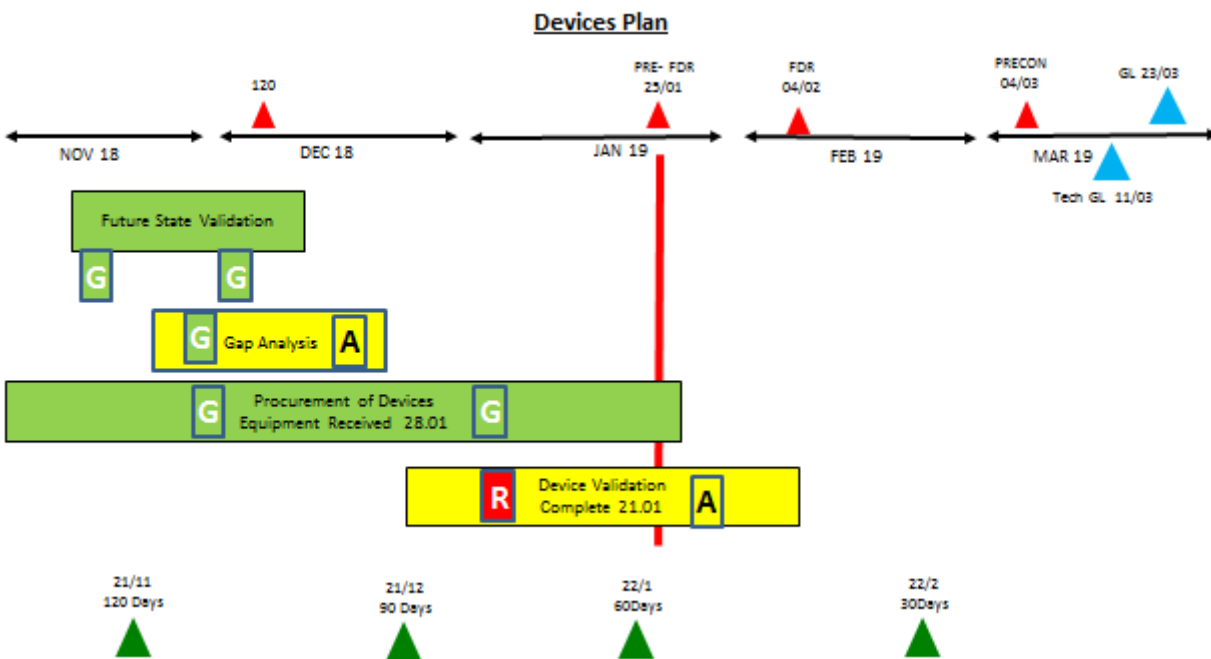
## 4.1   Remediation actions

- Gap Analysis – There is some uncertainty that additional device considerations related to the safe care of "the isolated patient" will be concluded before the deadline.  Contingencies are being developed to ensure FDR device requirements are met first.  Potential risk to the overall device plan in relation to "the isolated patient" is being assessed.

- Gap Analysis – Device gap analysis at BMEC has not been completed. Contingency plan is in place to recover this and return to plan on 13th December. The plan item is expected to be Green by the end of the calendar year.
- Gap Analysis – Work is being done to a very granular level and a strong "check and challenge" process is in place to ensure safety standards are met and budget consideration are being made. There are a number of surplus device categories and care will be taken to recycle equipment from surplus to deficit areas.
- Device Validation - A good plan is emerging for device deployment, labelling and in-situ testing. Additional resources can be deployed from within the Project Team, if required. This plan item is expected to be Green by the end of the calendar year.
- There is a need to conclude the device gap in the next fortnight to prevent this item becoming red. The executive unity group wil review in a weeks' time the detailed gap analysis.

## 5. Readiness – Unity Solution



### 5.1 Remediation actions

- All amber elements – Three areas previously identified as behind schedule (BMEC, ePMA and Theatres) are progressing well. There is concern about Biomedical Device Integration (BMDI). This will be explored further in a later section of this report. (See Section 5 – BMDI Update). Decisions on resourcing are required and, when concluded satisfactorily, the work required can be concluded by mid-January.

## 6.    Testing

**Testing Plan**
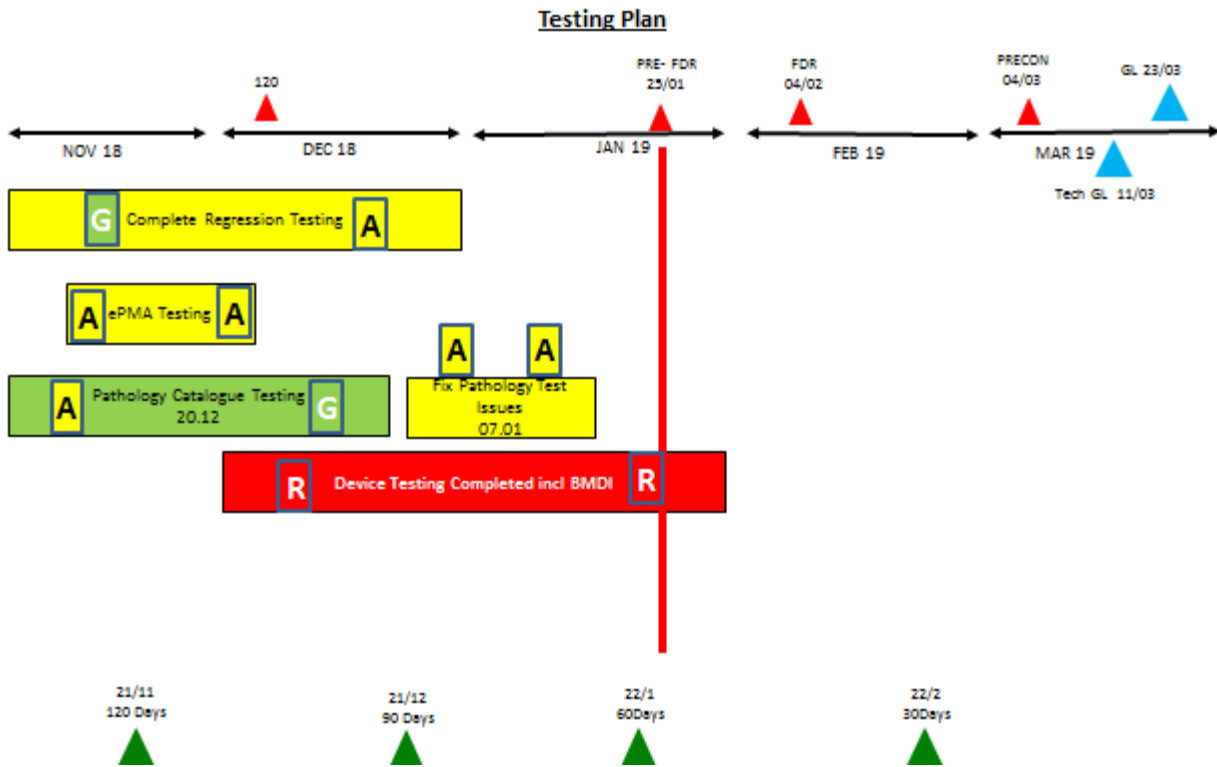


### 6.1    Remediation actions

- Complete Regression Testing – testing has lagged behind schedule in the last two weeks. Training Team resources were drafted in to assist with testing and this hampered progress as testing execution was not as speedy as the plan dictated.  Specific named Trainers will now be assigned to the task and Workstream Leads will be deployed to specific areas of testing, maintaining the integrity of the test approach.  Business testers may be drafted in to assist if the schedule does not recover quickly. The plan item is expected to be Green by 31st December.
- Pathology Test Issues – Some testing issues are with Cerner.  We will have clarity as to when this item will be Green by 21st December.
- Devices – Work continues to understand the enabling work and test load for BMDI

## 7. Training
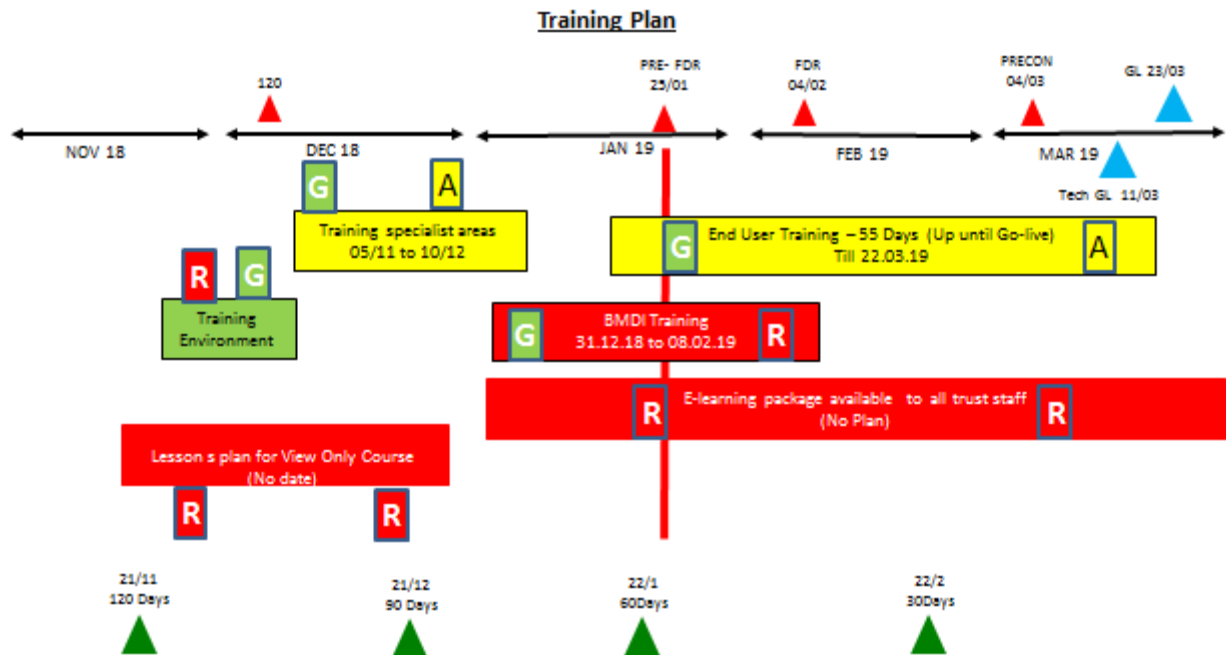


**Training Plan**

### 7.1 Remediation actions

- The Digital Committee on 21st December will review a detailed worked back plan for training to support a February Dress Rehearsal at scale. The following will be part fo that worked back plan:
    - Complete training for the 2175 staff who are outstanding basic training by end of January.
    - E-learning procurement based on Calderdale's e-learning module adapted for the Trust requires a work back delivery plan including procurement.
    - Enhanced training and localised learning plan to be evidenced by detailed activity schedule.

## 8. Operational Readiness

**Operational Readiness**
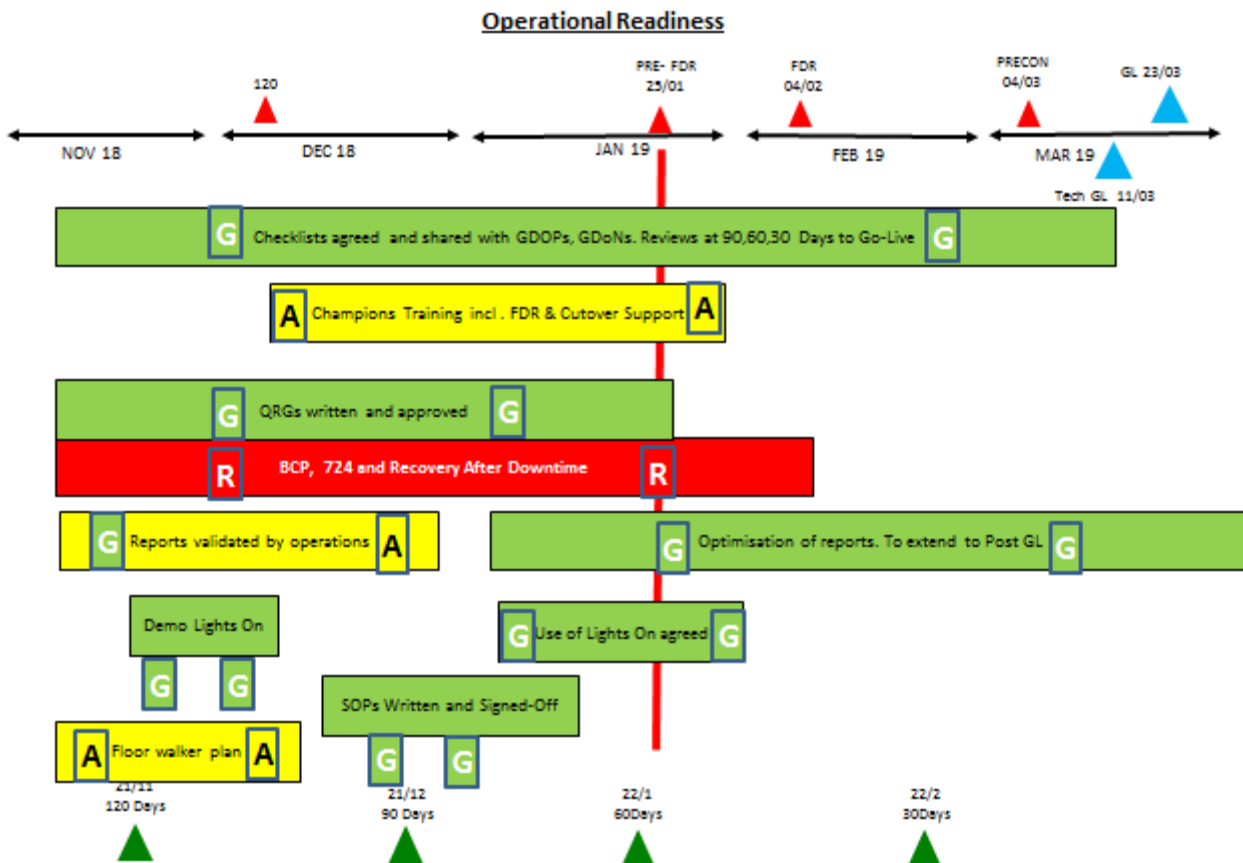
## 8.1 Remediation actions

- Business Continuity Planning (BCP), 724 and Recovery after Downtime – two project resources with experience of Cerner and of creating BCP and recovery plans at other Trusts have been assigned to support the Plan Owner to deliver. BCPs and Recovery Plans have been sourced from other Trusts and will act as a guide and inspiration to completing the work. It is expected this section will transition to Amber, if not green, in December.

- Reports Validated by Operations – All reports will be put through an "operations validation" to ensure not just report accuracy, but also fitness for purpose from an operational perspective. The plan for this is being created. The work will not be complete by the end of the year, but will be complete two weeks prior to FDR. It is envisaged that this elements will be Green by 31st December.

- Floor Walker Plan – A final decision on the floor walker plan will be taken at the next Executive Steering Group Meeting and this element will be turned Green.

- The lights on intelligence module will inform how we manage go live and a user optimisation plan. This outline plan will be discussed at Digital Committee in December and the January MPA.

## 9. FDR and Cutover



**FDR and Cutover Plan**
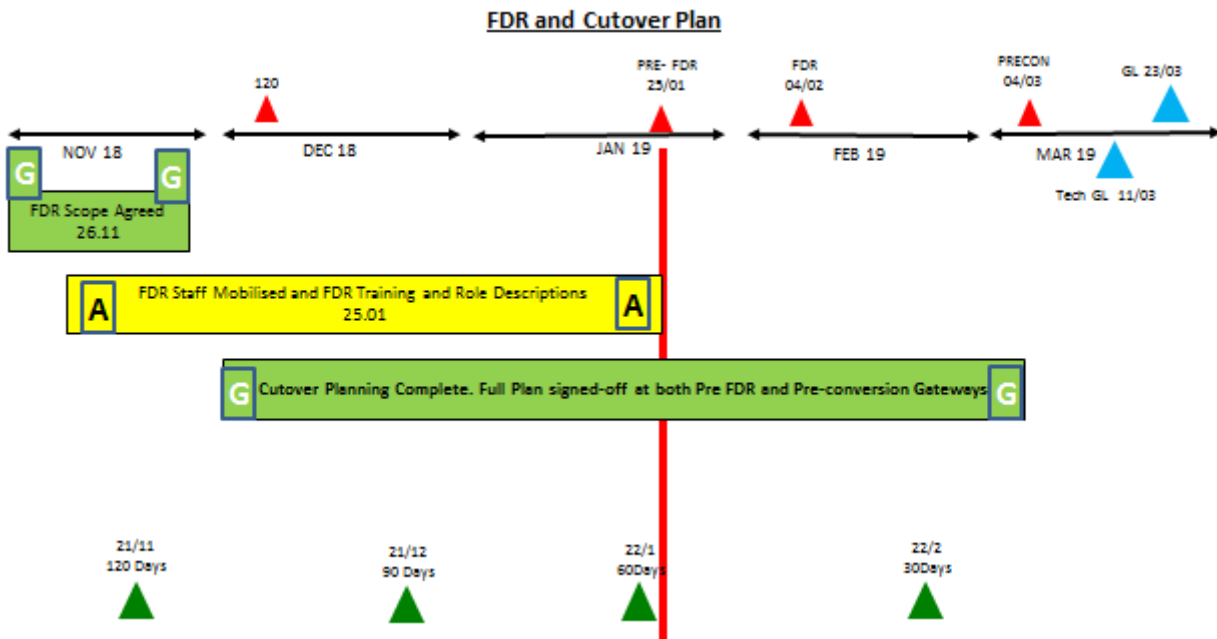
### 9.1 Remediation actions

- FDR Staff Mobilisation – Deadline for names of colleagues participating in FDR was 7th December. Of 138 resources required, 72 named resources have been assigned roles in the allotted timeframe. All clinical Groups have outstanding slots to fill. It is anticipated the remaining resources for FDR will be in place by 14th December and this element can be changed to Green.

## 10. Communications and Engagement



**Communications and Stakeholder Engagement Plan**
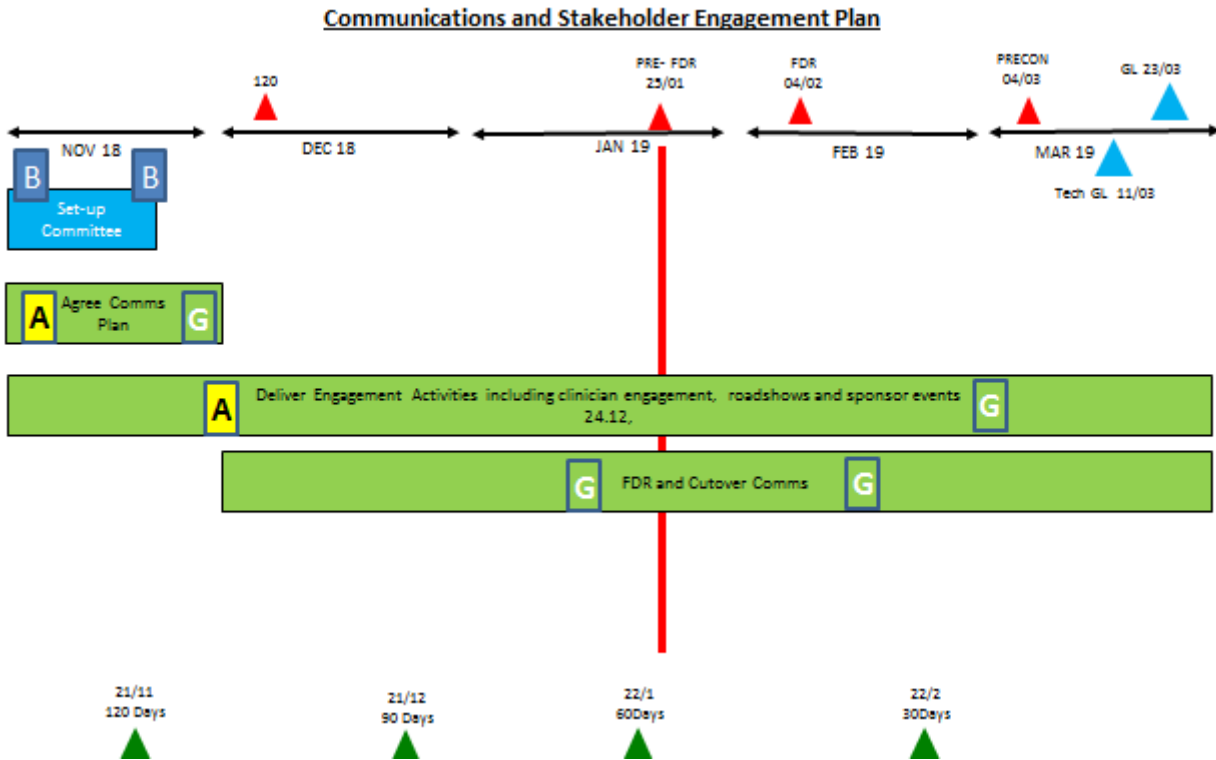
10.1 The release of the FDR date to the organisation has enabled all statuses in the Communications and Engagement plan to be Green.

## 11. Risks and Issues

**Risks**

11.1 There are currently 2 very high risks and 1 high risk to the programme. There are 39 open risks. Following a review of Risks & Issues, a process to categorise all R&I's to a theme. This brings more clarity and some simplification to identification of like

| EPR PROJECT | VERY HIGH | HIGH | MEDIUM | LOW |
|---|---|---|---|---|
| Open | 2 | 1 | 21 | 15 |
| Closed | 8 | 37 | 141 | 59 |
| **Total** | **10** | **38** | **162** | **74** |

11.2 The table below details the open very high and high risks.

| RISK ID | RISKS | TARGET MITIGATION DATE | TRUST SCORE | RESIDUAL SCORE |
|---|---|---|---|---|
| 490 | End user devices not available - Plan for resolution is being followed with a planned completion before FDR | 25/01/19 | 20 | 8 |
| 488 | Programme Cost – Proposed costs have been presented to accountants prior to approval | 23/11/18 | 20 | 9 |
| 405 | Business Continuity Plans (BCP) – Work has commenced on the BCP strategy. This will include the 724 solution allowing for read only access at both local and Trust level at specified devices. | 25/01/19 | 15 | 6 |

**Issues**

11.2   There are currently 4 very high and 2 high issues to the programme and a total of 20 open issues.

| EPR PROJECT | VERY HIGH | HIGH | MEDIUM | LOW |
|---|---|---|---|---|
| Open | 4 | 2 | 8 | 6 |
| Closed | 15 | 25 | 86 | 24 |
| **Total** | **19** | **27** | **94** | **30** |

11.3   The table below details the open very high and high issues.

| ISSUE ID | ISSUES | TARGET MITIGATION DATE | TRUST SCORE | RESIDUAL SCORE |
|---|---|---|---|---|
| 111 | SWBH Network Infrastructure will not be robust enough to support Unity – Upgrades have been made to the infrastructure and further upgrades planned to add robustness to the Unity solution | 25/01/19 | 25 | 5 |
| 493 | Bar code scanners are not useable with Unity – Suppliers have been invited to supply replacements. Planned review to take place in November | 26/11/18 | 25 | 4 |
| 450 | Failures in referencing result codes between Unity and Telepath - Codes have been updated in Telepath and are now being tested | 21/12/18 | 20 | 6 |

| ISSUE ID | ISSUES | TARGET MITIGATION DATE | TRUST SCORE | RESIDUAL SCORE |
|---|---|---|---|---|
| 381 | Lack of clearly defined process for ECG capture – Work has commenced to agree and test the process for ECG capture | 30/11/18 | 15 | 6 |
| 480 | Power interruptions at City Hospital (The new CIO will be informed of the risk to Unity if power interruptions are not minimised) | 23/11/18 | 15 | 3 |

**Hazards**

11.4  There are 55 clinical hazards.  Work is underway to complete an evidence repository for all hazard mitigations.  This work will be concluded by 31st December.

11.5  The table below gives the summary information of the open and closed hazards.

| Hazard rating | Open | Closed | Grand Total |
|---|---|---|---|
| Unacceptable (15-25) | 10 | 2 | 12 |
| Undesirable (8-12) | 18 | 8 | 26 |
| Tolerable (4-6) | 24 | 8 | 32 |
| Acceptable (1-3) | 3 | 0 | 3 |
| **Grand Total** | **55** | **18** | **73** |

11.6  It is anticipated that all unacceptable hazards will be mitigated prior to the clinical safety case being approved.

**12.   BMDI – update**

12.1  A Unity Go-Live without BMDI would require each individual patient observation to be input into Unity.  It would take up to 18 minutes per patient, at every observation period, to physically enter the data into Unity.  BMDI facilitates and automatic update of the patient record.

12.2  BMDI relies of "parameter mapping".  For example, a patient's heart rate is a parameter.  Of the hundreds of heart rate parameters available, the correct one has to be selected and then mapped in Unity.  Approximately 130 parameters must be mapped from a list of thousands of parameters.  Some parameters do not exist and must be created by Cerner.

12.3 Parameter mapping is severely behind schedule die to a lack of dedicated resources. The ideal candidates to do the parameter mapping work are intensivists, neonatologists and medical engineering colleagues. It will require three days of training by Cerner, per person, to equip colleagues to do the work. Once trained, it is estimated that three additional resources would take one month to map the parameters. Resource availability and any associated backfill requirements will be investigated as a matter of priority.

## 13. Update on revised governance and programme management arrangements

13.1 Terms of Reference for the Unity Programme Board are being reviewed with the CEO. Reporting templates for Sub Groups and work area leaders are devised pending sign off and are in current use for exception reporting. The first meeting of the Executive Steering Group will take place next week.

## 14. Project Planning and Tracking

14.1 Many sub groups and streams of work did not have discernible plans. This is being rectified and project plans for all product workstreams, sub groups, task & finish groups, risks & issues and training work streams are in train. A Project Wall is being constructed with week-by-week plans for all areas of work. Weekly "red line and back-spike" meetings are in the process of being diarised. RAID Logs (risk, issues, interdependencies and assumptions) will be used to track road blocks and support quick problem solving and rapid escalation of issues.

14.2 These plans and RAIDs will form the basis of exception reporting to Programme Board

## 15. Recommendations

15.1 The Committee is asked to:

a) Consider the plan and milestones to enable a Full Dress Rehearsal on 4th February (technical) and 11th February (operational)

b) Note the program risks, issues and hazards

**Katie Gray**
**Deputy Chief Operating Officer for Improvement**
**November 2018**