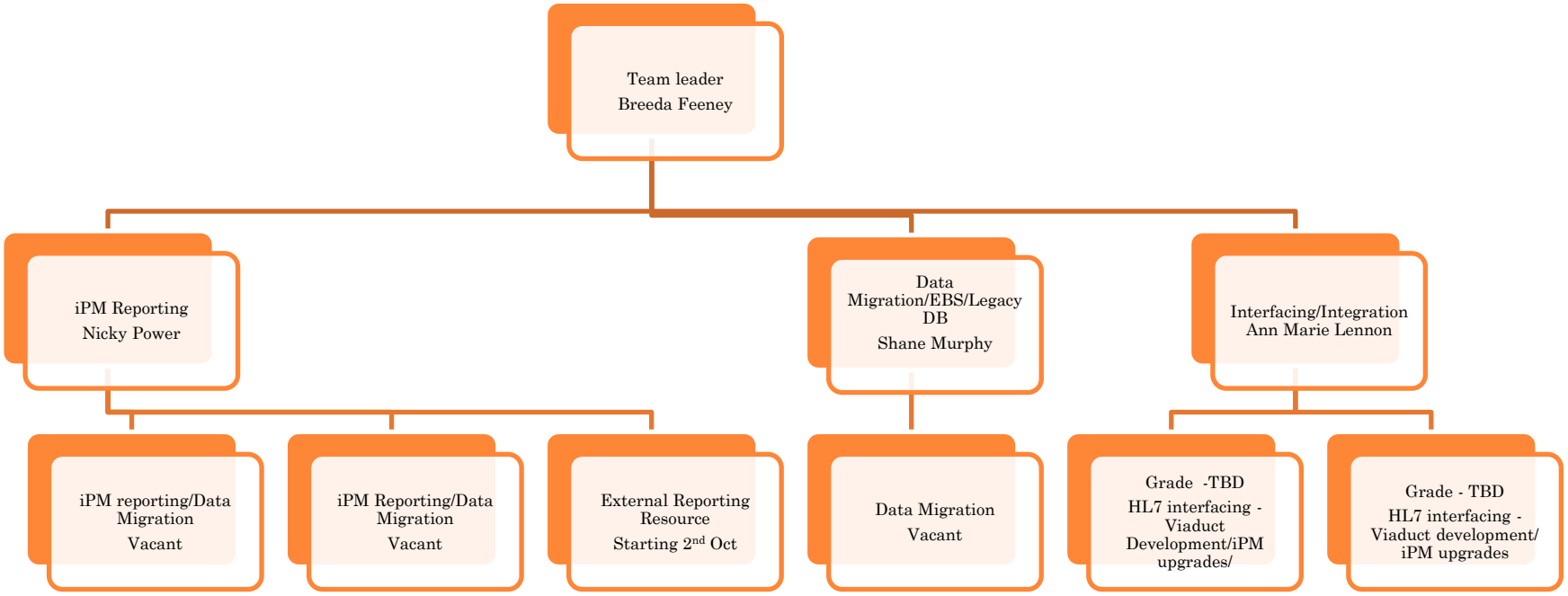
iPM Technical Team

A2I meeting

28th Sept 17

iPM Technical Team



iPM Technical Team -What do we do?

- Technical aspects of iPM
  - hardware provision, maintenance of estate, etc.
- Coordination of Integration to/from iPM (delivered by DXC)
- iPM reporting
  - Trying to fill gap left by new OoCIO structure in 2015
  - No resources in some areas (DML, DNE, SGH, LGH)
  - Two staff moved on since Dec 16 – no replacement
  - Need to put reporting on a national footing
- Work with new sites going onto iPM – Data Migration/Data Integration
  - Work with National iPM Team (when there is one!) and site around mapping of local to iPM values
  - Part of Project Team for iPM rollout
  - Assist site with identifying duplicate patients – 19 point matching criteria
  - Provide a patient matching database when a site moves onto an existing instance of iPM
    - Help reduce duplication of records migrated onto iPM
  - Data Migrations to iPM
    - Work with sites to determine what/how much to move (generally all as old system to be shutdown)
    - Script old data to iPM load file formats, factoring in data conversion, etc.
    - Very successful process – approx. 20 migrations completed. Mainly IMS PAS to iPM, also iPM to iPM,
    - high quality, low error rate, massive savings to the HSE over the years
  - Work with DXC in relation to migration - pass them the files to load
    - Test loads and 2 dry runs before go-live
  - Work with site and DXC as regards integration
    - Move to HL7 where possible
- DBA work was part of the remit but the staff delivering that are now located in Service Mgt.
- Email Branding System
  - Single source of unique email addresses/userid's
- Legacy database work - maintenance and support of systems in former board area

iPM Technical Team – what are we?

- No longer a "Technical Team".
  - Providing integration delivery/support mainly
  - Minimum of DBA skills since staff reassignment
- Staffing issues - four staff reassigned from team in 2015, not replaced
- Agreed new structure/staffing with Michael Redmond earlier this year to address deficits reporting and data migration wise.
  - 1 new G7 and 2 G6's agreed. G7 now in place.
  - Need to get G6's recruited asap.
- Will need additional resources if/when Saolta, National Children's Hospital and Beaumont migrations collide.
- 1 external reporting resource made available to the team in Aug 2016. Since left. To be replaced from 2nd Oct.
- Would like to develop Integration site of things more;
  - Deliver In-House – more cost effective and more efficient
  - Was always the long term plan.
  - Need additional resources for this.
- Creation of a data migration team – not just iPM

iPM Technical Team — The iPM bit

- iPM Estate covers iPM, iCM and ORMIS
- 11 separate instances of iPM across the country
  - Covers HSE and Voluntary Hospitals
  - Only one HSE instance fully aligned to Hospital Groups – UHL
  - South next closest but has Wexford and Kilkenny who are in the Ireland East group
  - Many different versions of iPM
    - V3.1, V3.2, V3.3, V4.
    - Testing underway for V5
    - V6 due to ship next year
  - In the region of 300 servers across iPM estate - growing all the time
    - 18 SQL 2005/ SQL 2012 DB's (test and prod) incl 2 servers for replication
    - 28 iIE and Viaduct (test and prod) – integration
    - 28 Application Servers (test and prod)
    - 14 remote access/utilities/Data Migration servers
    - 3 Document templates/report output locations (test and prod)
    - 180 citrix application servers approx.(test and prod)
    - 15 iCM servers
    - 2 ORMIS servers
    - Some local servers across HSE
    - 20TB of data across all servers
- iCM
  - Letterkenny and Cork – substantial integration to iCM – lab/RIS/Endoraad, etc.
- ORMIS – Theatre Mgt System
    - Rotunda and Temple St.

iPM Technical Team - Integration

- **Integration from iPM**
  - Standard outbound feed from iPM
    - Uses NAT Values (should be standard across sites)
    - Covers PMI, ED, IP, OP, Referrals, Wait lists, Ward Attenders, Theatre, Reference files (GP/Cons), Patient Billing
    - PMI (A28, A31, A37, A40)
    - ADT (A01, A02, A03, A05, A11, A12, A13, A21, A22, A38, A52, A53)
    - Reference files – GP/Cons – M02/M05
    - DFT (Claimsure) - DFT^P03
    - Developing SIU messages presently – requested for G2 Speech in Cork but also required for other sites/systems
      - Will be part of Standard feed
  - Deal with requests across all iPM sites
  - Prioritise and schedule interface work with DXC
    - Bulk order process in place to cater for all sites SI work
  - Open worklist of approx. 30 items – juggling according to priority of business requirements
  - iIE from each iPM
    - Central iIE
    - local iIE's in Cork, Sligo, Tullamore, DNE (uses local codes)
      - No further feeds being added to local – all deployed through central iie
      - Need to address the local iie's at some point
  - Viaduct Integration Engine in place - Covers all sites except DNE
  - Presently 3 Viaduct servers in place - Single sites & DML, South (Cork, Kerry, South East), UHL
    - Adding another prod and test Viaduct server due to loadings & to cater for upgrade of Viaduct
  - HIPE extracts
    - Patient Level Costing, hospital budgets, etc.

iPM Technical Team - Integration

- iCM integration
  - Cork and LGH iCM sites
  - Heavy integration of iCM with 3rd party systems in both sites.
  - MDM messages
  - LGH live since Tues with NIMIS
    - New interfaces between iCM/NIMIS for Orders/Results
    - Messaging via Viaduct
  - Sligo iCM (v2.2)
    - Project just starting
  - iCM data major source of info for Patient/clinical Portal
- Not all integration via HL7
  - SQL views
  - Replicated database
  - Text file extracts
  - Some in-house, some by DXC

iPM Technical Team – What's going on now?

- **V5 rollout**
  - Need to move off unsupported version of SQL (2005) (AMP project)
    - V5 runs on SQL2014
  - Requirement for MN-CMS sites who use iPM billing to have patch for billing (costs otherwise per site.)
  - Requirement from OPD Improvement Program for more info in relation to OPD/Waiting lists (Ollie Plunkett)
  - E-Referral Functionality part of V5 – passing of referral from GP into iPM.
  - Elements of IHI part of V5 – display of IHI on front end, non editable.
  - Will involve replacement of practically all of the iPM hardware estate.
    - Use as an opportunity to move to Windows 2012 servers and increase/improve hardware spec.
    - An initial request of 50 servers sent to Server Mgt and being built
  - No real buy in from Business up to now for V5
  - Push on for OPD info from OPD improvement program
  - Vincent Jordan, now pushing V5 rollout
    - Preliminary rollout plan drawn up to June of next year – covers 6 sites
    - UHL to be pilot site
  - Meeting next week with sites to discuss V5 rollout
- V6 also due to ship Q2 of 2018
  - What do we do? Upgrade all to V5 and then go back and do V6 or half and half?
  - Hardware replacement necessary either way as V5 will not run on SQL2016
  - Need business buy-in/decision making
  - V6 will have real-time integration to IHI using FHIR interface so will need a pilot site

iPM Technical Team – What's going on now?

- **Rollout of MN-CMS**
  - Major changes to interfaces
    - Development of inbound feeds to iPM. New inbound feeds from MN-CMS to iPM of baby reg's and adm's, mum and baby transfers and discharges.
    - Tech go-live Rotunda – 18th Nov
    - Tech go-live NMH – Dec
    - Phase 2 sites – UHL, Coombe, Portlaoise, Cavan (get V5 into these before MN-CMS)
    - PMI migrations (HSE sites only) via HL7
    - Push of future OPD appts for Obs/Gynae/Neo-Natal clinics via HL7
- **Introduction of the IHI to iPM**
  - Seeding exercise against iPM South under taken earlier this year. Low match rate – 35% approx.
  - Add IHI to exiting versions of iPM – define a new ID type and NAT Value so as to record and store on iPM and have it available to be passed to 3rd party systems via the interface. 3rd parties can choose to use or ignore.
  - Generate the extract files from each iPM and pass to IHI Team for seeding
  - DXC load seeded IHI details onto iPM
  - Rea-ltime integration with IHI (V6 of iPM)
- **Rollout of MEDLIS**
  - 4 iPM sites in Phase 1 - Tullamore, Portlaoise, Mullingar and Cavan
  - "Only" an outbound feed from iPM requested originally
  - MEDLIS now require extracts of PMI from sites to be migrated for data verification purposes.
  - We do not want two feeds from an iPM to MEDLIS/MN-CMS as duplicating effort and data the same.
- **Rollout of Temple St iPM to Crumlin**
  - Foundation of National Children's Hospital single PAS
  - To cater for set up of satellite centres in Connolly and Tallaght
  - To also include a migration from Tallaght iPM of Paediatric data
  - Engagement started last year – still no agreed or finalised plan
  - Looking to have something in place by Sept 2018

iPM Technical Team — What's going on now?

- **Rollout of iPM to Saolta group**
  - New instance of iPM - TBD
  - Will have to be V5 at least
  - Will involve a migration of both Clinicom PAS's and iPM's – Sligo and Letterkenny
  - Need experience of knowledge of those that undertook previous migrations if to be undertaken In-House. More efficient, cost effective and time-saving.
- **Rollout of iPM to Beaumont**
  - New request. Initial talks to take place.
  - Where will it go? Own instance or onto DNE? TBD
- On-going requests to deploy new interfaces to the likes of Endoraad, ICU, INOR, etc.
- **MOCIS Project**
  - Initial meeting/discussions re interfacing requirements.
  - Standard outbound feed only – early days
- **iCM Sligo project**
  - New interfaces from iPM to iCM
  - New interfaces from iCM to/from NIMIS (orders/results)
  - Need to revisit and move some feeds from local iie to Central/Standard iie as part of project
- **Move of clinical documents from local w2k3 servers in Tullamore to data centre**
  - Being managed by Angela Halvey – helping with that process, procuring servers, additional space, shares. Etc.

iPM Technical Team —What's going on now?

- **iPM Reporting**
  - Major deficit in this area due to staff losses/reassignment over the past couple of years.
  - No reporting staff available to DNE, DML for past 2 years. Since Nov of 2016 Sligo and LGH added to that list.
    - Backlog of report requests in those areas
  - Nicky Power appointed recently
  - External resource brought in last year, left in Aug
  - Replacement external resource starting on 2nd Oct.
  - Need to put standardised, centralised reporting in place, e.g. OSPIP, other standard reports required for all sites.
  - Need to move onto "dashboard" type reporting
  - Review existing reporting set up across sites – replace older methods of report deployment. Reporting should be more efficient and not cause db blocking.
- **Upgrade to Viaduct (integration engine)**
  - Need to upgrade to later version of Viaduct
    - DXC task but need to consider hardware refresh/upgrade and use as opportunity to upgrade backend hardware.
    - Spilt out existing Viaduct runtimes across more servers.
    - Almost zero tolerance of downtime on MN-CMS interfaces – dependence on real-time feed to iPM to get baby MRN.
    - Need to put alerting in place on inbound iPM MN-CMS feeds.
- **Move of iie to non w2k3 server in South**
  - Move of central iie server
  - Move of local iie server
- **Replace remaining non data centre iPM servers**
  - Some in the DNE.

iPM Technical Team – What's going on now, Non iPM bits

- **Email Branding System**
  - Email Branding System (EBS) should be source of unique email addresses and user/application id's.
  - Used by non HSE sites to generate unique user/application id's for likes of iPM/NIMIS, Blood-Track, etc.
  - Determines all routing for external email – updates HSE gateway twice a day
  - Too many admin's (254), too many duplicates – no governance
  - 52 separate Health Agencies (8 Tusla, 22 HSE, 22 Vol)
  - Created 19,000 accounts last Dec as part of "Digital Identity" project.
    - Accounts for the most part never used.
    - Issues now as some of those people being moved back to existing domains
  - Migration to Healthirl domain
    - Move of existing domains to Healthirl
    - EBS not being used properly(or at all) to verify account details
    - Finding some accounts created on healthirl are not correct – wrong email and/or userid assigned. 20%+ incorrect from a cohort of 150)
    - Not taking account of rules around naming conventions used on EBS (20 char limit on userid's), rules created previously to cater for transfers, etc.
    - Working with Project Team to try and address the issues before large scale migrations roll out
  - Migration to Healthirl to be "sped up".
    - Advising HSE Project Team, Microsoft, etc. of need to have correct process in place to ensure correct email/userid's used and migrated or chaos will ensue
  - What's to happen with EBS? Will there be a replacement or is it to continue to be the source of unique email/userid details?
  - Who will be in charge of single National Domain? Who devises/enforces the policy?
    - Meeting with project and Helpdesk leader to be arranged. Training needed.
    - Offenders mainly IT staff

iPM Technical Team – issues of concern

- **Where does iPM fit in?**
  - Core system for patient info and details
  - Source of all waiting list, OPD, ED, acute hospital info – under reporting of and under selling of data it contains
  - Not a lot of consistent or standard usage – clinical doc's, Theatres, etc.
  - Not recognised as a "business" system – still an "IT" issue
  - Not properly managed or resourced at business level
  - Needs major investment of resources/time to introduce standards, governance
  - Most sites not using Clinical documents – source of info for GP's, etc.
  - Still have South sites on old Keogh Billing system
- **Status (or lack thereof) of national iPM Team**
  - Alan Price not replaced
  - Only 2 analysts on Nat Team – more needed to cater with workload and areas such as iCM, Billing, ORMIS and rollouts to new sites.
  - V5 rollout – effort involved, National Team, iPM Tech Team and local resources
  - Upcoming migrations
    - Without resources both within the National iPM Team and Technical Team we cannot do
- **Setting up iPM instances to better mirror hospital groups**
    - Costly both financial and time-wise
    - Are groups defined enough?
    - Should we be looking at a single National iPM?
    - Where is Lorenzo?
    - Long term continuance of iPM - Due to be sun-set in next few years
- **GDPR**
  - What does that mean for iPM?
  - Talks of having to record all "read" details. Massive impact on storage needed.
- **Reassignment of DBA skills from iPM Technical Team to Service Mgt.**
  - Major issue. Staff were moved with no plan as regards ongoing support.
  - No progress on "plan" to have DXC taken on a wider support role incl. DBA work. Still waiting on a quotation
  - HSE DBA staff no longer able to provide level of support as before.
  - Causing problems in terms of day to day support and rollout of V5, rollout of iPM.
- **Legacy Database Work**
  - Shane has a lot of legacy South databases he looks after. Ultimately some will be replaced with national system rollouts such as SAP HR/Payroll. Until then there is a major dependency on to maintain/support those systems.
  - Outdated/unsupported OS/software in use.
- **Ability of DXC to keep pace with HSE requirements**
  - Recent redundancies in DXC – 2 resources lost from SI team (from a pool of 8)
  - Knowledge of HSE set up confined to a few staff – patient billing