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CYMRU  
**NHS**  
WALES

Cydweithrediad  
Iechyd GIG Cymru  
NHS Wales Health  
Collaborative

# Laboratory Information Network Cymru (LINC)

## Wales national LIMS Lessons Learnt

**Judith Bates**

**Programme Director**

**Regional Key**

- North Wales
- South Wales
- West Wales

**Ysbyty Gwynedd**

Andrology, Blood Sciences, Immunology, Microbiology (PHW), Mortuary Services, Toxicology

**Wrexham Maelor Hospital**

Andrology, Blood Sciences, Microbiology (PHW), Mortuary Services,

**Ysbyty Glan Clwyd**

Andrology, Blood Sciences, Cytology, Cellular Pathology, Microbiology (PHW), Mortuary Services,

**Ysbyty Ystrad Fawr**

Blood Sciences, Body Store, Andrology

**Bronglais General Hospital**

Blood Sciences, Microbiology (PHW),

**Glangwili General Hospital**

Blood Sciences, Andrology, Cellular Pathology, Microbiology (PHW), Mortuary Body Store

**Royal Glamorgan Hospital**

Clinical Haematology, Cytology, Cellular Pathology, Microbiology, Mortuary, Post Mortem Service, Andrology, Bereavement services, Infection prevention & control, Blood sciences

**Prince Charles Hospital**

Clinical Haematology, Immunology, Mortuary, Post Mortem Service, Infection prevention & control, Blood sciences

**Nevill Hall Hospital**

Andrology, Blood sciences, Mortuary, Post Mortem Service,

**Withybush Hospital**

Andrology, Blood Sciences, Body Store, Microbiology, Post Mortem Service

**Prince Philip Hospital**

Blood Sciences, Immunology, Mortuary Body Store, Non-Gynae, Cytology

**Llandough Hospital**

Andrology, Blood Sciences, Toxicology,

**Cervical Screening Wales**

**Morriston Hospital**

Andrology, Body Store, Core Lab ABMU Laboratory Medicine, Cellular Pathology, Post Mortem Service, Immunology

**Royal Gwent Hospital**

Blood Sciences, Cytology, Andrology, Cellular Pathology, Immunology, Microbiology, Mortuary, Post Mortem Service

**Singleton Hospital**

Andrology, Body Store, Cytology, Essential service Lab Laboratory Medicine, Cellular Pathology, Microbiology (PHW),

**Neath Port Talbot Hospital**

Body Store, Sample reception, Andrology, Wales Fertility Institute facilities

**Princess of Wales Hospital**

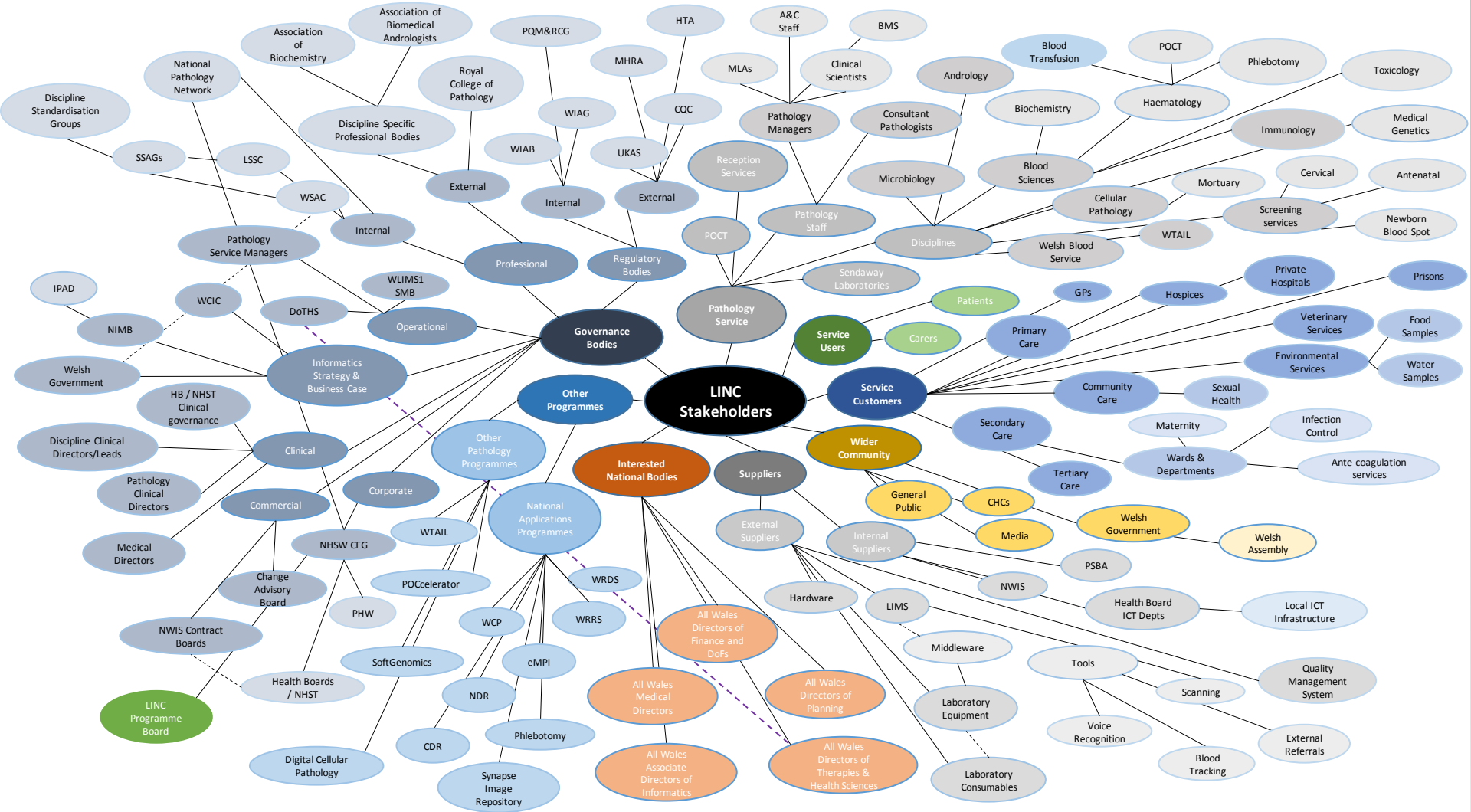
Andrology, Body Store, Essential service Lab Laboratory Medicine, Post Mortem, Toxicology

**Welsh Blood Service**

**University Hospital of Wales**

Blood Sciences (including specialist Biochemistry Services), Cytopathology, Microbiology (PHW), Cellular Pathology (including neuropathology, paediatric and foetal), Immunology, Laboratory Genetics, Mortuary Service (Adult -Consent, Coronial, Forensic Paediatric - Consent, Coronial, Forensic), Andrology, Wales Fertility Institute facilities, Andrology, All Wales New born blood spot screening, Antenatal Serum Downs screening

# LINC Stakeholders



# Current LIMS

- InterSystems
  - TCL 2011 contract started 2010 and ends June 2020
  - Upgrade to TCL 2016 being implemented
  - Contract extended to 2025 to provide business continuity
  - Steiner providing solution for WTAIL
  - Some Mortuaries remain paper based
- DXC TelePath
  - Blood Transfusion for 4 health boards
  - Hardware upgraded and standard application
  - Cellular Pathology for Cardiff and Vale
- Clinisys Masterlab
  - Blood Transfusion for two health boards
- SCC Soft Genetics
- Siemens POCcelerator

# What has worked well

- A national laboratory platform centrally hosted and managed
- National LIMS for Blood Sciences, Microbiology and most Cellular Pathology
- TCL2011 processing >30 million tests per annum
- Microbiology standardised across Wales
- High level of test standardisation for Blood Sciences
- Link to national Master Patient Index has substantially improved the quality of demographic data
- All patient records in the LIMS and results in Welsh Clinical Portal
- National boards for service management and change control to ISO standards
- Histology and Cytology legacy data solution



# What has not worked so well

- Pressure to go live before ready
  - Health boards not ready to deploy, so lots of local variation
  - E.g. 800 rules for a blood film
- Poor business intelligence
  - So not widely used but much service effort to improve DeepSee
- Significant downtime for various reasons
  - Impacted implementation of Blood Transfusion
- Electronic test requesting
  - Improving but a way to go and pressure to use in-house tools
  - Especially in primary care
- Contract management
  - Not transparent to the Pathology service
  - Not strong enough to hold supplier to account

# Feedback from the Pathology service

We raise a call on ServicePoint and it is closed with no feedback even if the issue is not resolved

It was like being given a book with blank pages

InterSystems said modules were in development during procurement but they weren't completed in time

InterSystems see NWIS as their customer and not the Pathology service

We have to give a ham sandwich a name, address and date of birth!

Changes in one discipline impact another discipline causing operational issues

Who owns the LIMS?

There isn't a perfect LIMS out there that does everything we need



# What is LINC learning from WLIMS1?

- Stakeholder engagement
- Standardisation with warranted variation
- Stronger governance
- Better communications and training
- National team of subject matter experts
- National quality management service
- Enhanced requirements
- No go live until developed and tested for Wales
- Strengthened technical support



# LINC Objectives

1. Deliver benefits that improve patient care, safety & outcomes
2. Engage the Pathology and wider NHS to ensure commitment
3. Procure new LIMS service to replace three current LIMS
4. Ensure long term ownership and management of the service
5. Deliver a seamless end-to-end electronic Pathology solution
6. Standardise Pathology services, with warranted variation
7. Establish a national quality management service and system
8. Develop information and business intelligence services
9. Develop a different approach to integration services
10. Learn the lessons from WLIMS1

# New LIMS Service

- Single national standardised system for all disciplines
- Supplier hosted service, meeting service levels
- Supplier to complete initial configuration
- Enable service development and redesign
- Includes LIMS, document scanning, voice command & digital dictation, blood tracking & NPEX
- Future proofed and value for money
- Integration with national technical platform, national pathology solutions, analysers and middleware through Open Standards and Open Connectivity
- Developed and tested once for Wales
- Contract for 10 years plus an extra 4 years



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# Stakeholder Engagement



**2018/9**

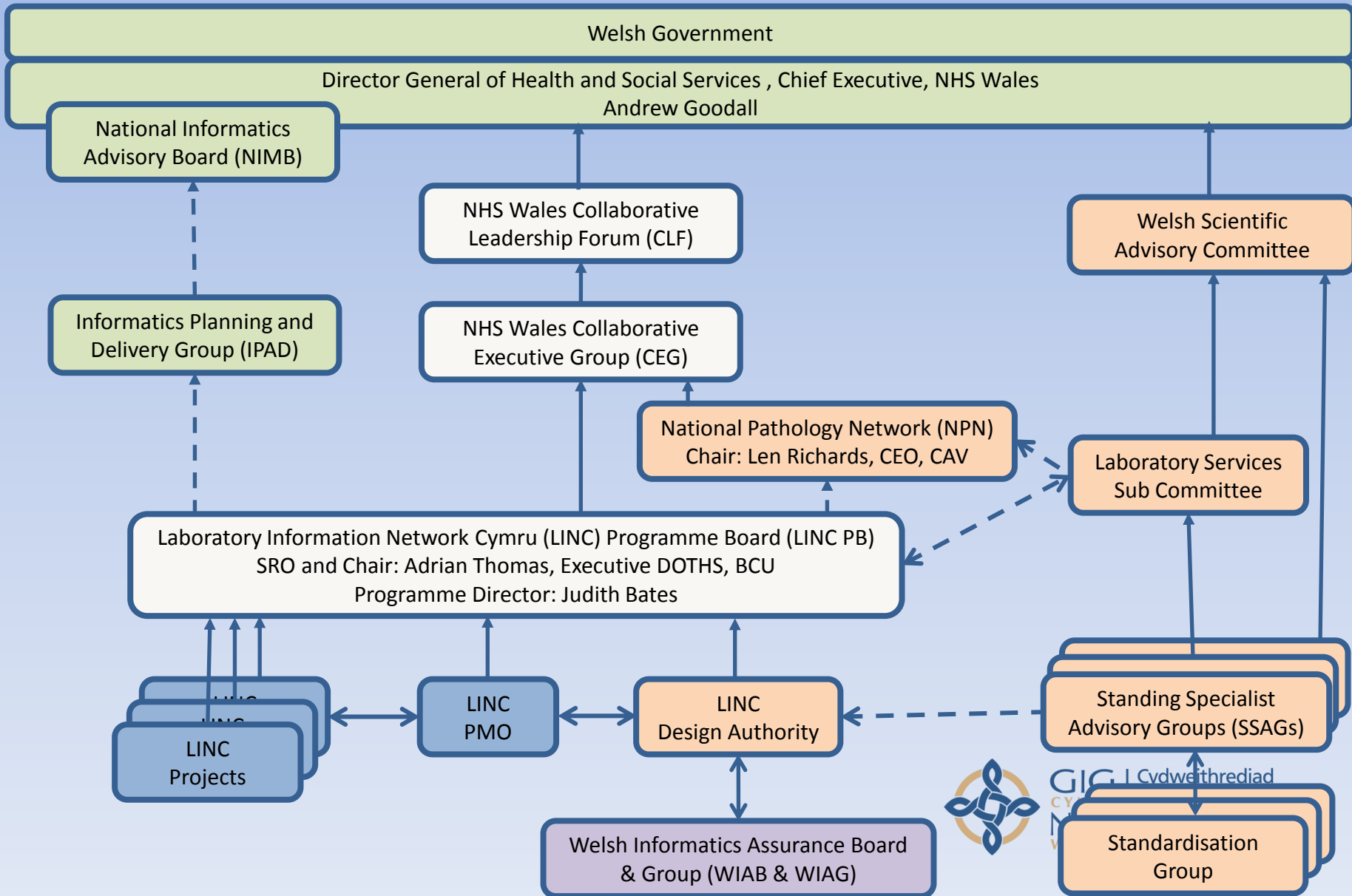
4 conferences  
11 newsletters

54 workshops  
~1,000 participants

***From Pathology:***

700+ participants  
400+ individuals

# LINC Programme Structure




# LINC Timeframe

Tranche 0	Tranche 1	Tranche 2	Tranche 3	Tranche 4
Pre-procurement	Procurement	Development	Deployment	Close
Apr18-Oct19	Nov19-Mar21	Apr21-Sep22	Oct22-Jun24	Jul24-Sep24
<p>Outline business case</p> <p>Contract documentation</p> <p>Standardisation approach</p> <p>Quality management</p>	<p>Procurement Benefits specification</p> <p>Standardisation design</p> <p>Business change</p> <p>Full business case</p>	<p>Hosting LIMS Service</p> <ul style="list-style-type: none"> <li>- development</li> <li>- Testing</li> <li>- UAT</li> <li>- Validation</li> </ul> <p>Once for Wales</p>	<p>CAV (6 mths)</p> <p>HB2 (3 mths)</p> <p>HB3 (3 mths)</p> <p>HB4 (3 mths)</p> <p>HB5 (3 mths)</p> <p>HB6 (3 mths)</p>	<p>Handover to operations</p> <p>Programme closure</p>



Agreeing standardisation  
Enabling change

A photograph of a person standing on a large, light-colored rock formation. The person is wearing a light-colored shirt and blue pants, and is reaching up with their right arm towards a massive, dark, overhanging rock face. The background shows a clear blue sky with some clouds and a dark, forested hillside in the distance.

# **LINC Outline Business Case**

**Approved by all health boards & trusts**

**Welsh Government has approved**

**Ministerial approval due by December**

