

# NBSS and PACS: Update on Developments and challenges

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# NBSS Background(1)

- n One standard national breast screening information system (NBSS) locally run servers
- n Application runs on a Cache Database – around 1200 concurrent users
- n Windows front end
- n Ad hoc Reporting through Crystal Reports

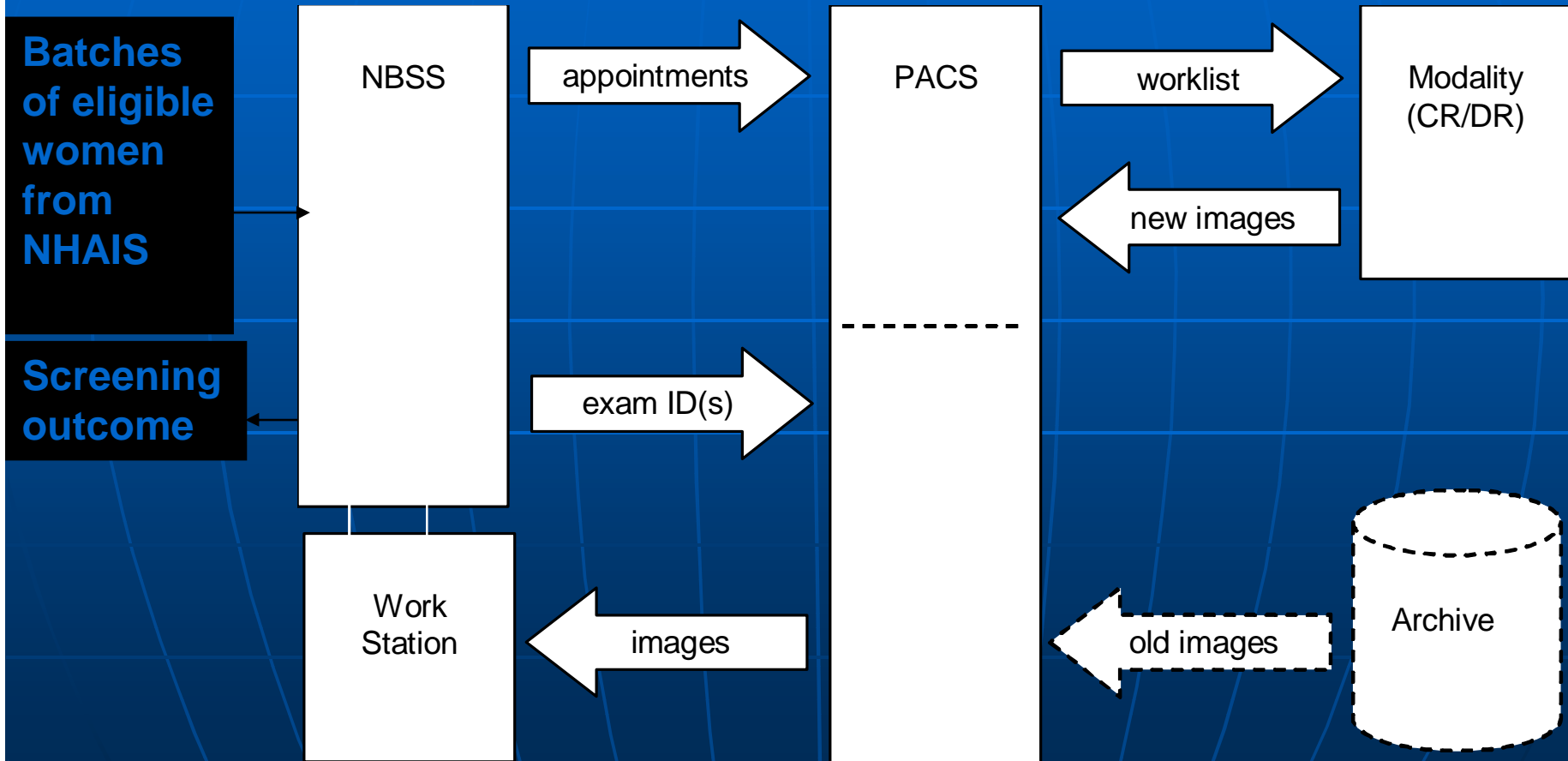
# NBSS Background(2)

- n Used in 95 centres (England, Wales, Northern Ireland and Isle of Man)
- n Central contract for support and development with Financial Objects Bespoke Services (now Temenos)
- n 2 new releases per year
- n Links with NHIAS via Medifact

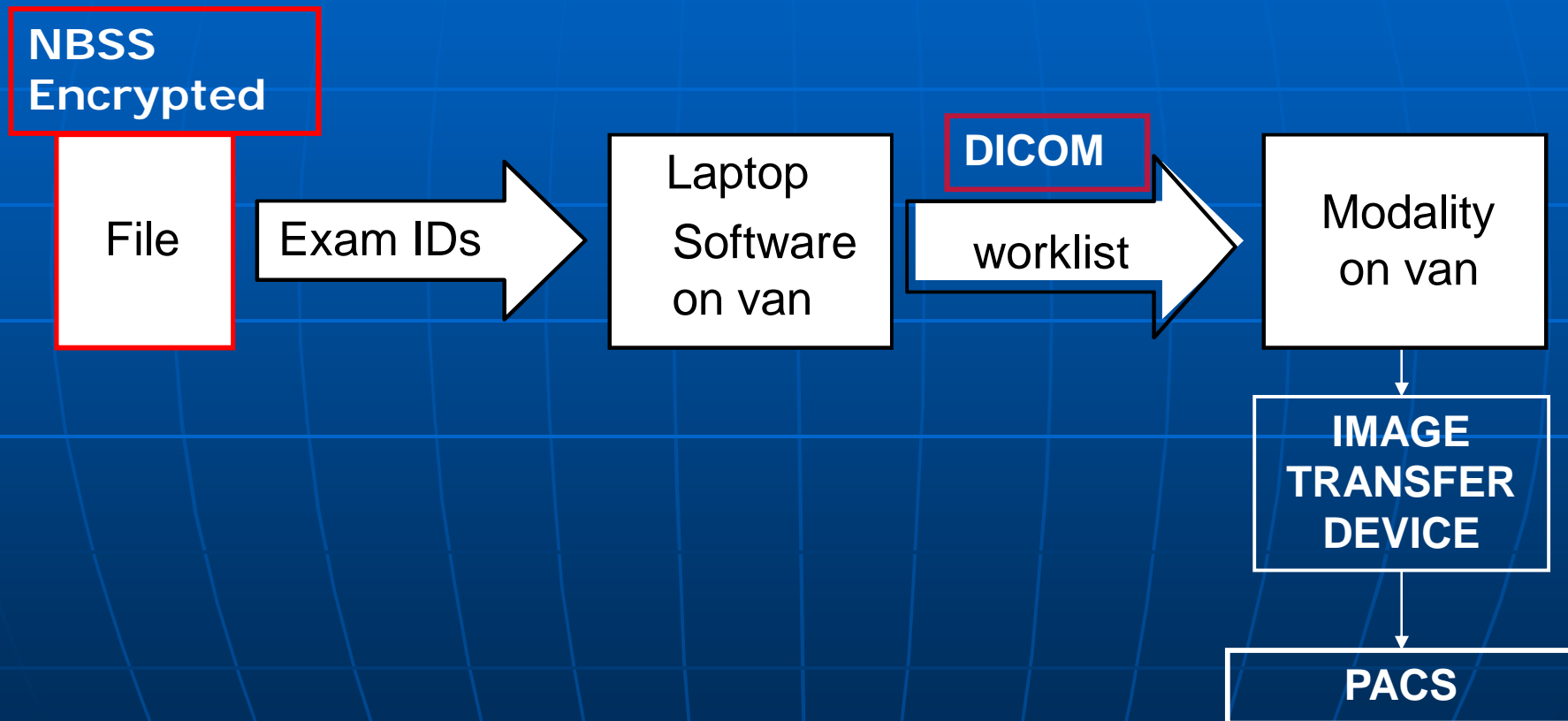
# Current Developments

- n **Link screening up with existing PACS infra structure**
  - Aim to pilot with main PACS vendors
  - Working with CfH (LSP and PACS issues)
  
- n **PACS interface – screening (Stage 1)**
  - HL7 messages to PACS broker
  - Accession number for each examination
  - Encrypted messages for mobile work
  - Workstation synchronisation-NBSS/PACS workstation
  
- n **PACS interface - Assessments (Stage 2)**
  - to be handled the same as symptomatic cases (in the short term)
  - Developments to NBSS planned for 2009-2010

# PACS Interfaces - Static



# PACS Interface - mobile



# Example screen – reader identification

**SIRE Film Reader Identification for MU001 Tuesday 8 April 2008**

Print Screen Help Contents

Results Entry Method: Automatic When Unanimous, 2 readers

Your Film Reader ID: AJE  DR A.J. EVANS

Multi-Viewer:

**WORKSTATION WARNING**

If you use the workstation to switch to a different patient you do so at your own risk. The patient will NOT be shown in NBSS and you might enter results against the wrong patient. It is recommended that you only use NBSS to switch between patients.

If you have not logged on to the workstation, please log on now.

alert



# Example screen-reading

SIRE Film Results for MU001 Tuesday 8 April 2008

Print Screen Film Reader Result What's This? Help Contents History

SX Number KKE041234 BLOOMFIELD, RENEE Synchronise Viewer

Result	Reader	Right	Left	Action
1				
2				
Overall				

Result Reader Right Left Action

1 AJE [dropdown] [dropdown] [dropdown]

Back Ignore Save Save & Unload Save As Normal/Normal Quit

New features

# Progress of NBSS Pilots

- ∅ Input from PACS suppliers on specifications
- ∅ Testing so far on standalone systems not yet on live LSP PACS
- ∅ Limited to those sites with digital mammography equipment
  - ∅ Nationally 2 digital mobiles being used for screening
  - ∅ 11 centres have digital

Type	number
DR	1
DR	15
DR	1
DR	4
DR	6
DR	1
DR	1
CR	1
CR	5
	35

## Ø Agfa PACS – Doncaster

- Ø Tests of HL7 link to Agfa test PACS February – May 2008
- Ø Retests completed in August/September 2008
- Ø Live testing from October 2008
  - Ø Test clinics planned for November 2008
- Ø CCN to Accenture for linking with LSP PACS at Leeds

## Ø Sectra PACS

- Ø Technical testing at Coventry and Warwick Breast Screening Programme – Walsgrave Hospital
- Ø London LSP site to be agreed

## Ø GE PACS

### Ø Derby

- Ø Tests of HL7 link to GE test PACS in Feb 2008
- Ø Trust recently moved to NHS number being used as identifier
- Ø Upgraded PACS – now same version as LSP
- Ø Live testing from November 2008

### Ø Brighton

- Ø testing HL7 messages with mini PACS
- Ø GE - IDI workstation synchronisation with NBSS
- Ø Live testing being planned for early November

### Ø LSP sites to be confirmed

# Pilot Outcomes

## Test out all interfaces and workflows

- NBSS
- PACS
- Modality
- Reporting

## Post pilot report from each service

## Clarify pre implementation work for wider roll out e.g.

- Network upgrades
- NHS number
- Storage

## Estimate costs of implementation

- High Resolution Mammography Reporting Workstations
- ? Developments to PACS or just changes to configuration
- Cost of site visits etc

## Develop an implementation package and make available for services

- LSP catalogue item
- NBSS released to each site

# Challenges(1)

## n Client identifier

- Pulling most recent digital mammograms
- Sharing images
- Screening services work across multiple Trusts

## n Storage of images

- Increase in storage
- Local costs
- Impact of storing NHSBSP screening images on LSP data stores

## n Networks

- ?Impact of breast images on PACS performance
- ? Network upgrades

# Challenges(2)

- n **Costs of additional PACS high quality workstations/multi-modality workstations**
- n **LSP change process**
- n **Spine Compliance**
  - Single sign on agreed as a development to NBSS for next year
- n **Non LSP PACS**
  - ? Additional development work

Thank you!