

Work with InterSystems.
Not separate systems.



NHLS Laboratory Information System

Andrew Morgan, Implementation Services Director

INTERSYSTEMS SYMPOSIUM 2009

INTERSYSTEMS

NHLS Who are they?



National Health Laboratory Service

The largest diagnostic pathology service in South Africa.

260 laboratories
serving 80% of the population

6500 staff

50,000,000 Tests per annum

Plus conduct health related research

HIV/Aids	Tuberculosis
Malaria	Malnutrition
Cancer	Occupational Health

INTERSYSTEMS

SA Health Statistics

South Africa

Total population: 48,282,000

Gross national income per capita (PPP international \$): 8,900

Life expectancy at birth m/f (years): 50/53

Healthy life expectancy at birth m/f (years, 2003): 43/45

Probability of dying under five (per 1 000 live births): 69

Probability of dying between 15 and 60 years m/f (per 1 000 population): 598/531

Total expenditure on health per capita (Intl \$, 2006): 869

Total expenditure on health as % of GDP (2006): 8.6

Australia

Total population: 20,530,000

Gross national income per capita (PPP international \$): 33,940

Life expectancy at birth m/f (years): 79/84

Healthy life expectancy at birth m/f (years, 2003): 71/74

Probability of dying under five (per 1 000 live births): 6

Probability of dying between 15 and 60 years m/f (per 1 000 population): 82/47

Total expenditure on health per capita (Intl \$, 2006): 3,122

Total expenditure on health as % of GDP (2006): 8.7



NHLS South Africa



NHLS - Aims

To unite the fragmented public health laboratory services, avoiding duplication of services resulting in wastage and cost-inefficiency and, most importantly, creating a world-class health laboratory service accessible to all South Africans in all corners of the country.

**An essential component in achieving
these aims Centralised LIS**

INTERSYSTEMS

Environmental Issues

- Staff shortages
- Isolation
- Poor infrastructure
- Unreliable power
- Unknowledgeable patients
- 16% growth last year
- 106% growth over the last 4 years

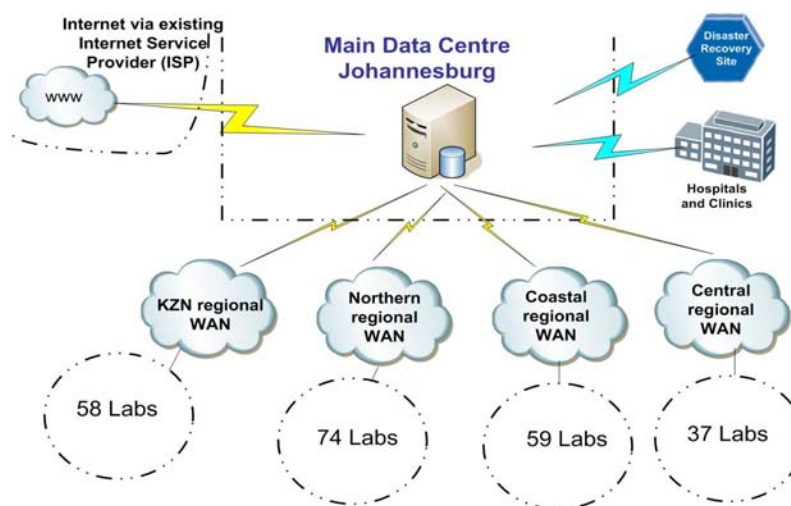
INTERSYSTEMS

National Focus

- Centralised management
- Standardisation
- Training
- Automation
- Distribution of workload
- Centres of excellence
- Equality of care
- Epidemiological information
- Surveillance

INTERSYSTEMS

NHLS – Technical Requirements



INTERSYSTEMS

Expected Users

Expected number of concurrent users

Region	TrakCare Lab	Web	Instruments
Kwa-Zulu Natal	300	200	220
Northern Region	500	400	250
Central Region	500	400	250
Coastal Region	500	400	250

Total 1800 1400 970

INTERSYSTEMS

The Solution - TrakCare Lab

- Single Source of Data
- Patient Centric
- High Availability
- Scalable
- Flexible
- Total Solution

INTERSYSTEMS

The Consortium



INTERSYSTEMS

FUJITSU COMPUTERS
SIEMENS



INTERSYSTEMS

Contracting partnership



Implementation Services
NHLS Skills Transfer
Project management
Training
Data Conversion
HIS Interfaces
Analyser Interfaces
Cache Support
TrakCare-Lab Support
Help desk



Servers
Operating System
Citrix
Infrastructure



Programme Management
BPR
Change Management

INTERSYSTEMS

Consortium Partners

INTERSYSTEMS
TrakCare Lab

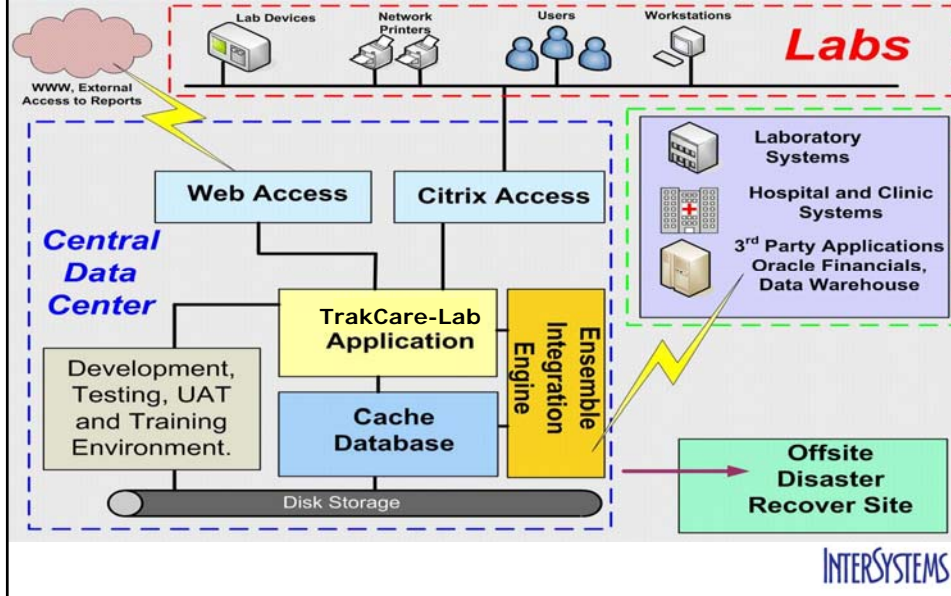
- PM support
- Local Skills Transfer
- Super User Training
- Analyser Interfaces
- HL7 Interfaces
- Technical Support
- Data migration support
- TrakCare-Lab Support
- Local Customizations

INTERSYSTEMS
ENSEMBLE CACHÉ

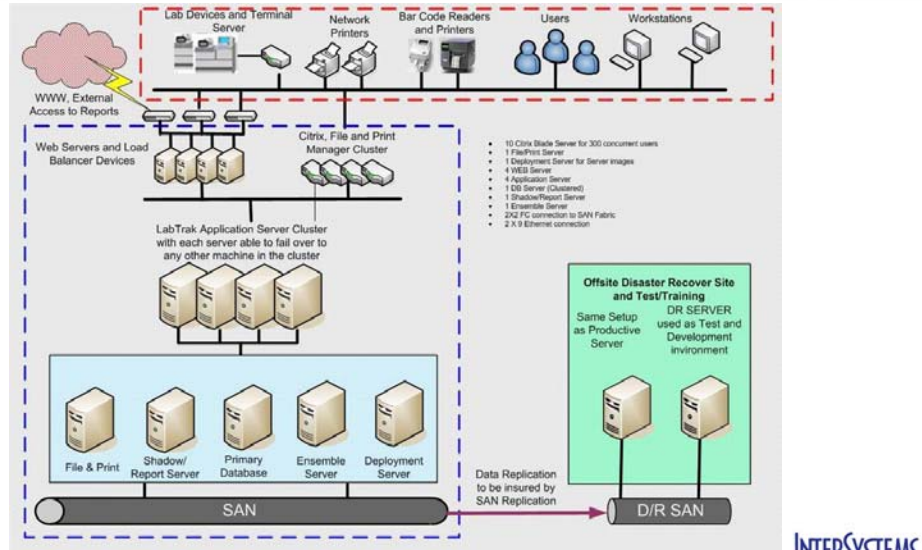
- Database
- Integration Platform
- Training
- Support

INTERSYSTEMS

Software



Hardware



Printers & Planes . . .



Project Teams

- **Configuration Team**
 - "Shape the future of the Organisation"
 - Define standards
 - "Buy-in" from academics
- **Implementation Team**
 - Assist with roll-out to labs
 - Super users / trainers
 - Will assist with end-user training
 - Trained by configuration team and system trainers

INTERSYSTEMS

Standardization

Standards

- 50 Pathologists and Senior Scientists
 - Test items
 - Test sets
 - Reference ranges
 - Report formats
 - Comments
 - Templates

INTERSYSTEMS

Software developments

- Hierarchy
- Billing
- SMS
- GPS
- Altitude

INTERSYSTEMS

Phase 1 – Kwazulu Natal

- **Phase 1 – KZN**
 - Rollout to Labs
 - Pilot Lab
 - Grey's Hospital – **Go-Live 26th August 2009**
 - Other Labs
 - Referrals into Grey's: Northdale, Edendale
 - Priority sites: RK Kahn, Prince Mshyeni
 - EThekwini Metro Labs
 - Multiple teams move into remaining labs in the Province

INTERSYSTEMS

Phase 1 - Kwazulu Natal

- **Phase 1 – KZN**
 - **Parallel Activities**
 - System Servers
 - 23 Servers based at Sandringham
 - 23 Disaster recovery servers based at Braamfontein
 - Interfaces
 - Analyser Interfaces
 - Oracle Billing Interface
 - HL7 Interfaces
 - » Addington, King Edward, IALCH
 - Data Migration
 - Addington, King Edward, IALCH

INTERSYSTEMS

Phase 2, 3 & 4

- **Phase 2**
 - After evaluation of KZN Implementation
 - Each region done as a phase
 - Approximately 12 months per region

INTERSYSTEMS

Work with InterSystems.
Not separate systems.



NHLS Laboratory Information System

Andrew Morgan, Implementation Services Director

INTERSYSTEMS SYMPOSIUM 2009

INTERSYSTEMS