	Secondary Uses Service			
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Secondary Uses Service Strategic Direction

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Glossary of Terms:

List any new terms created in this document. Mail the NPO Quality Manager to have these included in the master glossary above [1].

Term	Acronym	Definition

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1. Purpose

1.1. Introduction

The first release of the Secondary Uses Service (SUS) component of the NHS Care Records Service (NCRS) is due to go live in mid 2005. Detailed discussions are already underway with the NCRS National Application Service Provider (NASP) BT to agree the requirements for the next two releases due in 2006.

It therefore seems an appropriate time for the SUS Project Board to re-assess the purpose, scope and way forward for the Secondary Uses Service. This document aims to provide a strategic vision of what SUS is trying to achieve, and some of the steps to be taken along the way.

1.2. Background

The primary purpose of the NHS Care Records Service (NCRS) has always been to support the operational care of patients. However, it was realised that, as a by-product of collecting information for operational patient care, there was a major opportunity for supporting the secondary analysis and reporting of information for a variety of purposes. The NCRS contracts therefore include general requirements for secondary uses together with specific requirements in Phase 2 Release 1 for the replacement of the NHS Wide Clearing Service, and support for a number of clinical datasets.

At present, there is a multitude of secondary uses services provided at local, regional and national level, often fed from different sources. The architecture of the NHS Care Records Service (NHSCRS) provides the opportunity to rationalise data abstraction, data flows, data management and analysis and reporting.

2. Vision

The vision for the Secondary Uses Service is to capture, process and enable access and reporting on all data relating to NHS-commissioned activity. The intention is that the capture of data should be automatic from operational systems, and should enable the generation of summary reports (eg central returns) thus reducing the burden of data collection for the NHS, and enabling a full range of reporting at local and national levels..

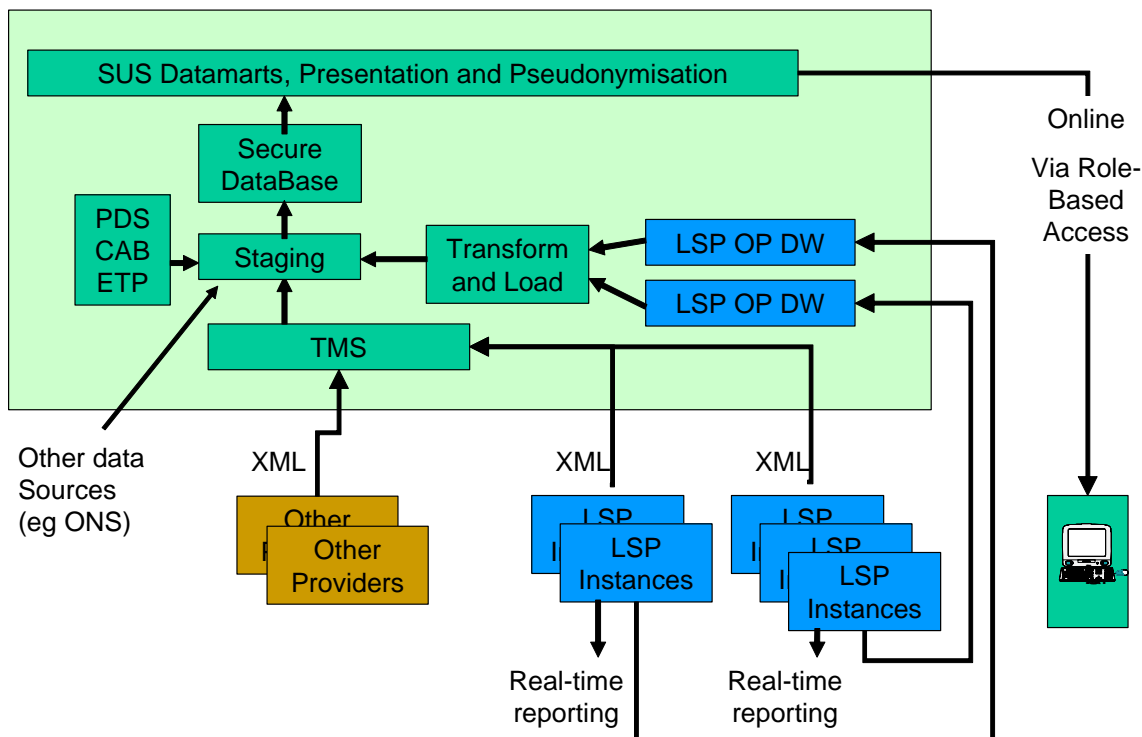
The potential uses for an epidemiological database covering the whole of England are huge, with an impact on public health, research and development and ultimately on the quality of care provided.

It is important to understand that this is much broader than a replacement for the NHS-Wide Clearing Service. The initial content will be largely person-specific, building on existing flows such as commissioning datasets and clinical audit data flows and the supporting demographic data. In time, these data will be provided automatically as a by-product of the NHS Care Records Service and other NHS Connecting for Health programmes (such as Choose and Book and the Electronic Transmission of Prescriptions). These data will cover all care settings (so primary and community care as well as acute). The intention is to collect data for all NHS-commissioned activity, including those services provided for the NHS by the independent sector. This will be focussed on coded text-based data, and not images.

In addition to this, the scope of SUS includes the addition of other person-specific data (e.g. questionnaires) to complement other activity data. The scope also includes a range of non-person-specific data such as finance, workforce and estates. There could also be data from other organisations (eg the Office of National Statistics).

The concepts are illustrated in the diagram below, illustrating how data may be captured from Local Service Provider (LSP) solutions into an operational data warehouse (OP DW) and then into the Secure Database for subsequent reporting.

Expected Dataflows for the Secondary Uses Service



There is a wide range of potential users, both at local level (Trusts, Primary Care Trusts, Strategic Health Authorities), regionally (clinical networks, public health observatories) and nationally (the Department of Health, regulators, other Arms-Length Bodies). The information from SUS will be valuable for patients and the public, for research and teaching, for other Government departments (at Local and National level).

One of the features of SUS is the ability to link different data sources together (e.g. primary and acute data). A robust basis for this – in particular an agreed data schema – is critical. From this, flexible reporting can allow different data “views” to be constructed depending on user requirements, and different tools can be used to report on this information.

The range of users, and the breadth of information available highlights the vitally important step of safeguarding the confidentiality of personal data, and hence the information governance framework for SUS will be of critical importance.

Taking these aims together, a number of important principles are proposed for SUS:

- there would be one national approach to the Secondary Uses Service;
- user access would be managed through the security and confidentiality facilities embedded within NHS CRS;
- information provided through the Secondary Uses Service will be pseudonymised;
- data would, where possible, be collected or derived from clinical systems as a by-product of direct care;
- SUS would include the tools and services for an effective and secure working environment for analysis and reporting.

3. Benefits

In order to plan for the delivery of SUS, it is important to have a clear understanding of the intended benefits to be achieved. The primary benefits are shown in the table below.

<ol style="list-style-type: none"> 1. Consistency of data collection and analysis across the country 2. Comprehensive coverage of data collection, in particular aiming to capture all NHS-commissioned care 3. Cohesion of information collection enabling, for instance, linkage of patient data across primary, community and acute settings 4. Timeliness of data which, in time, would be collated directly from local sources 5. A secure environment which enabled patient confidentiality to be maintained 6. Increased ability for sharing (particularly of aggregated data) for comparative purposes 7. Common approach to derivation of data
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3.1. Business Needs

There are many potential uses for SUS:

- Access and Choice, in support of capacity and demand planning, commissioning, linked to the implementation of Payment by Results;
- Standards and Performance Monitoring, looking at National Service Frameworks, clinical indicators, and information to support the work of the Healthcare Commission;
- Public Health information, including screening, surveillance and epidemiology. In particular this would support the Public Health Information Strategy, announced in the Choosing Health White Paper (2005);
- Research and Development, including longitudinal studies and the monitoring of outcomes and effectiveness supporting a range of development activities; and
- Improving Productivity, in areas such as the GMS contract, the new consultant contract, Agenda for Change and benchmarking.

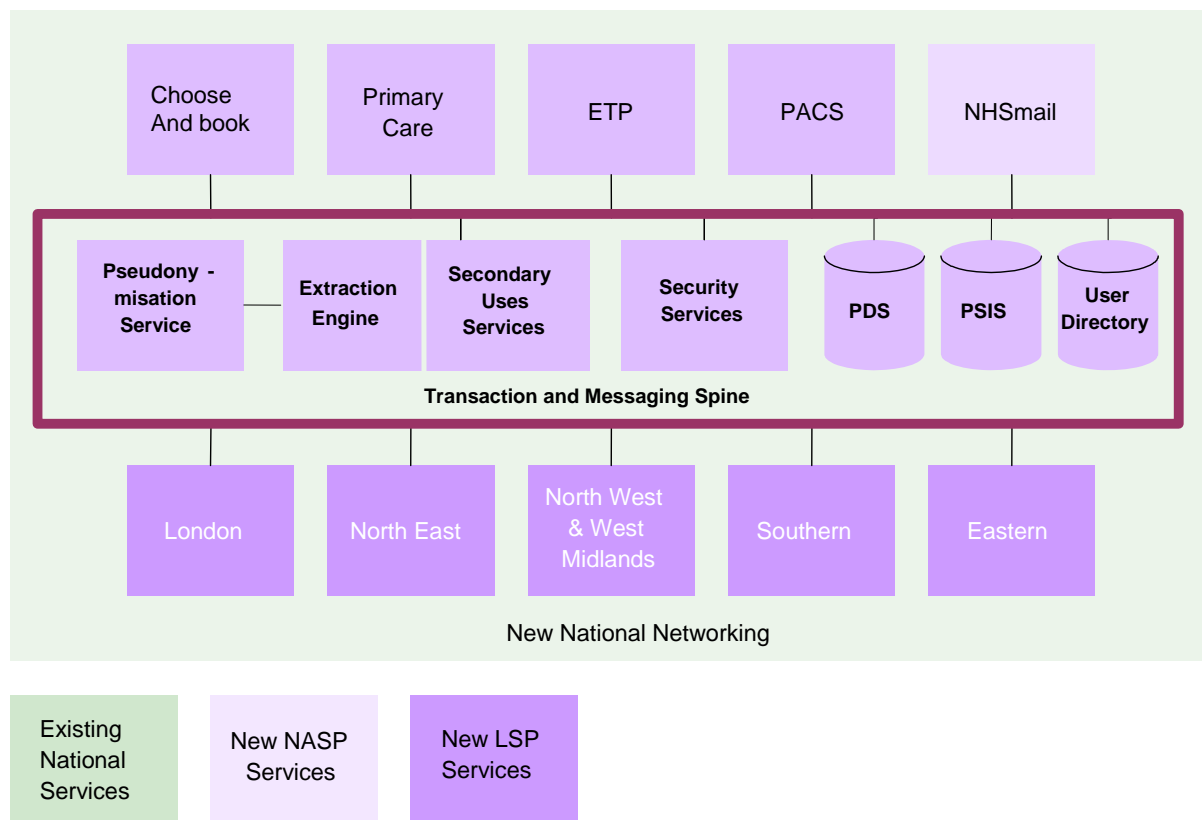
The table below illustrates some of the ways in which SUS will contribute to these areas even in the first few releases:

	Release 1	Release 2	Release 3
Access and Choice	Payment by Results	I/P, O/P and A&E data	Choose and Book
Perf Monitoring		I/P, O/P and A&E data	Cancer Wait Times Diabetes dataset Central returns generation
Public Health		I/P, O/P and A&E data	Cohort management
R&D		I/P, O/P and A&E data	Demographic data
Productivity		Copy of QMAS data	

4. NHS Care Records Architecture

This section provides an overview of the Secondary Uses Service and its relationship with the other components of the National Programme. Figure 1 below illustrates the main components being delivered by the National Application Service Providers and the Local Service Providers.

Figure 1: National Programme Components



The National part of the NHS Care Record Service includes the following core modules:

- the Transaction and Messaging Spine, through which all messages will pass;
- the Information Governance arrangements, covering security and confidentiality requirements;
- the secondary uses service will only be available to authorised users through the standard Role-Based Access facilities. Each user will be recorded in the User Directory. It will be possible for non-NHS users to be registered, but they will need to be “sponsored”, and will be granted access only to those functions appropriate to their role;
- the Personal Demographics Service, holding demographic details for all patients;
- the Personal Spine Information Service, holding the operational view of each patient’s record;
- the Secondary Uses Service, from which pseudonymised extracts will be provided for analysis and reporting.

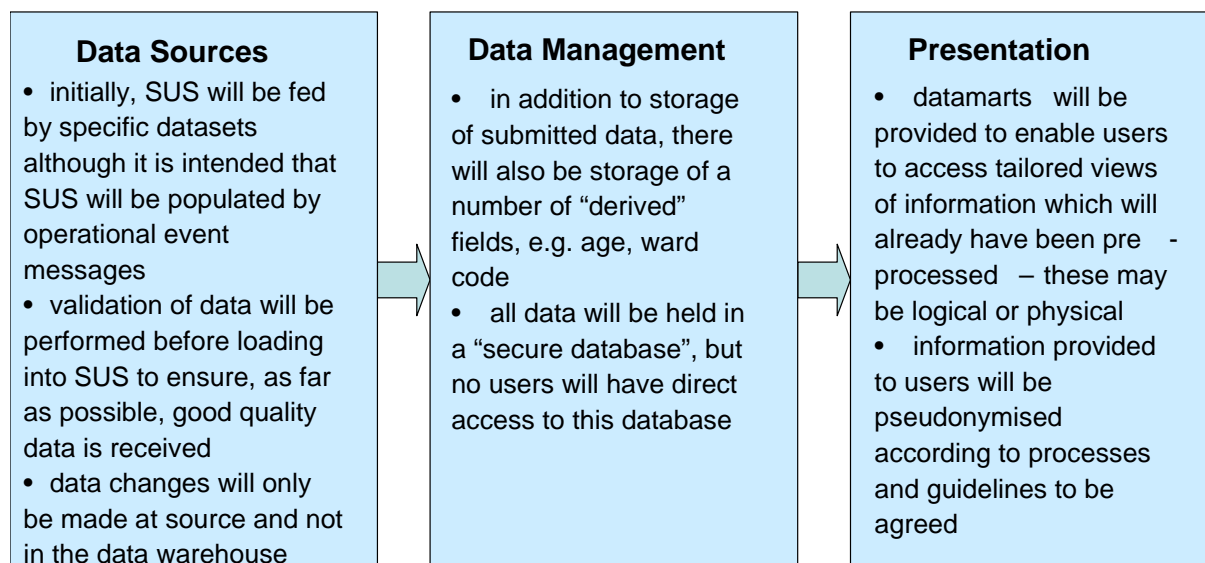
5. Design

It has been important to consider the requirements for SUS both at a national level (through the NASP) and at a local level (through the LSPs) and, in addition, to consider the short, medium and long-term requirements.

The design principles for SUS are illustrated in the diagram below:

Design Principles for SUS

- the design needs to be flexible and scalable, hence ensuring that design work now (e.g. for the first version of SUS) will provide a robust foundation for the future
- one of the aims of the National Programme is to reduce duplication. The intention is therefore to aim for one, national, approach to data warehousing



- a full audit trail and history will be retained
- versioning will support the differentiation of provisional and final data, with information about the levels of certainty of the data

The underlying database will be developed using Oracle database products. There are options for the use of alternative analysis and presentation toolsets. Similarly, there will be planned upgrades of Oracle versions as SUS progresses.

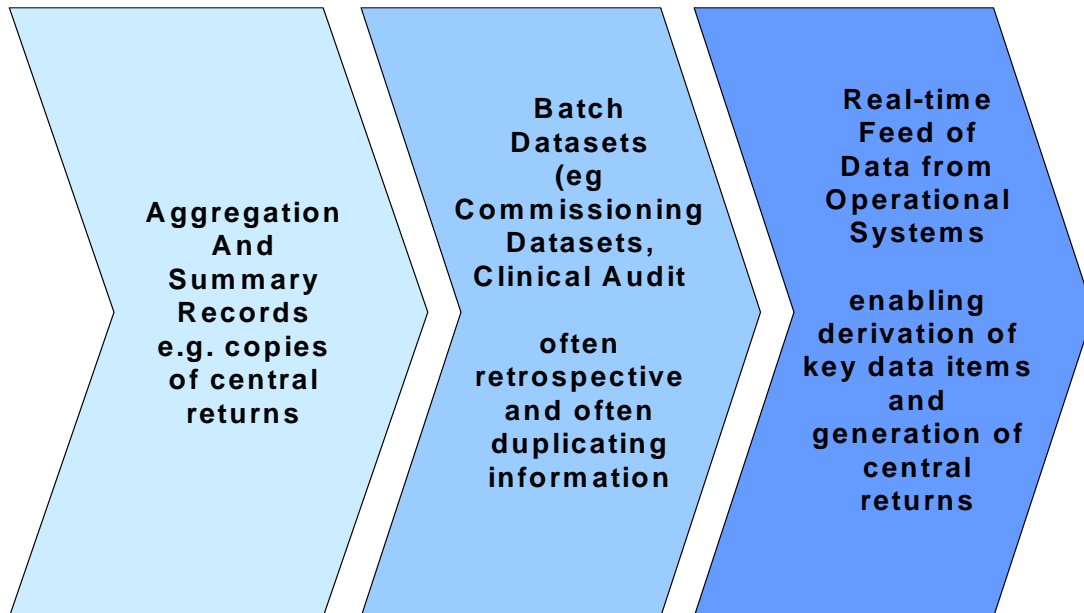
6. Phasing

The planning phase has provided an opportunity to consider priorities for phasing. The potential scope for SUS is huge, but it will be necessary to identify a series of achievable steps to lead towards this. The factors that have been taken into account include:

- policy and business needs of the NHS at national and local level;
- the need to support on-going NHS business requirements;
- the contractual requirements for the NASP and for LSPs;
- the ability to ensure continuity of service, particularly where current arrangements will cease;
- the need to demonstrate that the NHS is using patient-identifiable data only where it can be fully justified or consented;
- the availability of data from the NHS Care Record Service;
- the ability to provide “quick wins” which would be of obvious benefits to users.

The plans for the allocation of responsibilities and the phasing, are therefore designed to address these tensions. The current release profile is shown in Appendix A. This illustrates the plans through until 2007. Further developments will need to be commissioned formally.

One of the main issues with the phasing is to balance the short-term deliverables with the long-term vision, and to ensure that a series of incremental steps can be taken building towards the goal. The figure below illustrates the steps that may need to be taken.



By way of example, the plans for demographic data are as follows:

- in 2006-A, the intention is to have a simple monthly copy of the Personal Demographics Service (PDS) data to enable basic counting (e.g. of numerators and denominators)
- in 2006-B, there will be a daily copy of the Personal Demographics Service, including history, plus cohort management facilities enabling groups of patients to be selected, marked and tracked;
- in 2007-A, these cohort management facilities will enable replacement of patient tracking facilities currently provided through the NHS Central Register and the NHS Strategic Tracing Service, and will also enable linkage with ONS mortality data;
- in 2007-B, the facilities currently provided by the NHAIS (Exeter) system will be incorporated;
- the longer-term vision then sees the patient demographic data within SUS being used as the master for all demographic analysis, obviating the need for specific datasets to include demographic information other than NHS Number as identifier.

The important thing with this area, as with others, has been to ensure that early design decisions are taken with a view to future development and requirements.

Similar issues apply also to the non-functional aspects. The first release will be based around Oracle 9, but in 2006-B this will be upgraded to Oracle 10, which will then allow user-defined datamarts. As new facilities are provided through Oracle and other tools, these will be built into the overall SUS offering.

Appendix A – Current Profile of SUS Releases

	Mid 2005	Late 2005	Spring 2006	Autumn 2006	Spring 2007	Autumn 2007
Payment by Results	First release offering initial extracts	Support for migration to XML	Requirements for 2006-2007		Requirements for 2007-2008, including HRG v4	
	Data quality reports		Replacement of NWCS			
Demographics			Monthly copy of demographic data	Daily copy of demographic data	Ability to track groups of records (eg research datasets)	
				Cohort management		
Clinical Audit				Cancer Waiting Times	Other cancer datasets	Other CHD datasets
				Diabetes	Pilot for coronary heart disease dataset	Renal dataset
Transactions				Extract of data from Choose and Book	Prescriptions transactions	Other patient event transactions
Other			Extract of data from QMAS		Extract of other Primary Care data	
Central Returns				Generation of population-based central return (ADS)	Storage of central returns, and pilot generation of other central returns	
Information Governance	Role-based access	Pseudonymisation	Facilities for RBAC and Pseudo implemented ...	across each release		