

Schedule 15 – IM&T Requirements

1. Introduction

The Northern Beaches Hospital Project is a major opportunity to embrace digital technology and innovation with the aim of supporting new ways of working, improved performance and better health outcomes. The incorporation of technology and innovative treatment methodologies, care provision and patient services in line with the States vision, mission and values is encouraged in the design of the Facility.

The Operator will develop and implement its end-to-end IM&T solution/s to support quality clinical care throughout the Operational Phase.

The Operator must demonstrate that its IM&T systems:

- (i) are compliant with the State’s data model for health and are able to submit relevant data sets to the State’s data warehouses in accordance with the prescribed interface specifications;
- (ii) support data linkage with other state and national databases including any operational links to the community services, Medicare Locals, GPs etc. within the NSLHD;
- (iii) support the business requirements of all the departments and ancillary services provided from the Facility and enables the Operator to deliver the Services in accordance with the Project Deed;
- (iv) ensures interoperability and transparency between the Operator and State key Clinical, Clinical Support and Non-Clinical Support systems including medical record data transfer;
- (v) are managed and compliant with accepted State, national and international IM&T standards, principles and requirements;
- (vi) are flexible and expandable;
- (vii) enable replacing and upgrading, identifying and implementing new IM&T throughout the term;
- (viii) are maintained and updated throughout the Term to ensure that Good Operating Practice is always achieved; and
- (ix) are constructed as to enable the State to efficiently and effectively manage the requirements of the Project Deed including contract management, performance monitoring and reporting.

The Operator will provide all IM&T systems and support services at the Facility. The State will not mandate the IM&T systems to be used by the Operator, except that the IM&T environment at the Facility must provide a transparent solution that integrates with existing and future State systems and applications as prescribed.

The glossary in Appendix A to this Schedule is intended to assist with the interpretation of this Schedule.

2. Functional Requirements

- (a) Without limiting the generality of an 'end-to-end' IM&T System, the Operator is required to include, but not be limited to, the following infrastructure to enable interoperability and transparency with the States key existing applications:
- (i) a patient administration system;
 - (ii) an emergency department information system (including real time performance monitoring);
 - (iii) a clinical information system. Components of a clinical information system may include but not be limited to:
 - (A) a clinical documentation information system;
 - (B) a medical/health record management system (all media formats);
 - (C) an operating theatre information system;
 - (D) an outpatient information system;
 - (E) a medication management system;
 - (F) a discharge referral information system; and
 - (G) a community health information system; and
 - (iv) any other information and communication technologies which are necessary for, or reasonably required, to enable the Operator to deliver the Services and comply with its other obligations under the Project Documents.
- (b) The Operator will ensure that the IM&T Systems comply with all Laws, including but not limited to any requirements of any Authority relevant to:
- (i) Electronic and Paper Health Records;
 - (ii) Personally Controlled Electronic Health Records;
 - (iii) Health Identifiers;
 - (iv) Electronic Discharge Summaries;
 - (v) Corporate/State Records;
 - (vi) Secure Message Delivery;
 - (vii) National Authentication Service for Health; and
 - (viii) National E-Health Security and Access Framework.
- (c) Except as otherwise prescribed, the Operator is not required to comply with the State's reference guides, blueprints or classification specifications. However, the Operator must reasonably consider these specifications, as a means to achieving similar functionality and performance for the IM&T System as delivered at other State facilities, and to optimise interoperability and transparency with IM&T systems operating at other State facilities as outlined in section 2(a) now and for the term of this agreement.
- (d) The Operator will design, develop, install, configure and acceptance test (**DDICAT**) and operate, administer and maintain (**OAM**) its IM&T infrastructure to enable connectivity and mobility of IM&T systems using current technologies across the entire Facility. This will include all passive infrastructure related connections to the State to allow integration and transparency with the State's IM&T systems as outlined in section 2(a).

- (e) The Operator should consider alignment with the State's relevant adoption of internet protocol layer and use principles as the preferred network framework when it designs and constructs the IM&T System.
- (f) The Operator will DDICAT and OAM IM&T Systems that are capable of, and always deliver, safe, secure, efficient, accurate, timely and consistent exchange of required information with the State's IM&T Systems, using formats and protocols specified by the State from time to time, especially as relevant to:
 - (i) Patient information;
 - (ii) State data reporting requirements; and
 - (iii) automated workflows for the systems outlines in section 2(a).
- (g) The Operator will DDICAT and OAM an agreed platform with the State for interoperability and transparency amongst various workflows, business processes and IM&T systems operating at the Facility consistent with standards for messaging protocols, patient identifiers, patient records and include alignment to state, national and international standards for messaging and interoperability, particularly those relevant to health services i.e. Health Language (HL7) and Digital Imaging and Communications in Medicine (**DICOM**).
- (h) The Operator will federate with the state-wide approach to enable interoperability for Unified Communications, Conferencing and TeleHealth IM&T systems.
- (i) The Operator will, during the Development Phase, install and, throughout the Operating Phase, maintain the infrastructure required by State agencies to enable those parties to use their critical radio networks across the Site. These State agencies include:
 - (i) NSW Police;
 - (ii) NSW Ambulance Service; and
 - (iii) NSW Fire Brigade.
- (j) The Operator will develop in the Development Phase and maintain throughout the Operating Phase, non-production instances of Facility Interfaced and Interoperable IM&T Systems including development and testing instances which accurately reflect production instances, and which can be used to test planned upgrades and data exchanges between IM&T Systems and the States IM&T systems as outlined in 2(a).
- (k) The Operator will DDICAT and OAM a Federated Identity and Access Management platform that:
 - (i) allows personnel, authorised by the State (in its sole and absolute discretion) to securely view clinical records held by the Operator; and
 - (ii) allows the access required within the IM&T Requirements, without requiring users operating at the facility to have a user credential on the State's platform.
- (l) Whilst the Operator is not required to utilise the State's clinical and non-clinical applications as part of the IM&T Systems, if the Operator elects to utilise the same clinical and non-clinical applications used by the State, it must procure them from the relevant provider as the State will not be the service provider to the Operator.

3. Performance Requirements

- (a) The Operator will automate all reporting pertaining to performance of Clinical Services, Clinical Support Services and Non-Clinical Support Services at the Facility. Reports will be provided in accordance with the Project Deed (including the Performance Schedule and Reporting Schedule).
- (b) During the Operations Phase, the Operator will routinely report on the performance of the platform for interoperability and transparency provided by the Operator.
- (c) The Operator will detail in the IM&T Plan the delivery, maintenance and security of all components of the IM&T System. The IM&T Plan will include but not be limited to:
 - (i) Information Security;
 - (ii) Information Privacy;
 - (iii) Data Governance;
 - (iv) IM&T System Business Continuity;
 - (v) IM&T System Disaster Recovery;
 - (vi) IM&T System Maintenance;
 - (vii) IM&T System / Asset Lifecycle;
 - (viii) Technology Adoption and Innovation; and
 - (ix) Research data sharing.
- (d) The Operator will ensure that at all times throughout the Term that the medical/health record management system is suitably robust and reliable and that they achieve the following performance thresholds:
 - (i) 100% of all Inpatient encounters with a length of stay greater than one (1) day have a completed discharge summary; and
 - (ii) 100% of medical/health records are available at the point of care at the time of need for patient care when a Patient is transferred by the Operator to another State facility.

APPENDIX A – GLOSSARY

Term	Meaning
Data Governance	means the plan of that name as described in section 3(b) of these IM&T Requirements to be developed by the Operator and regularly updated throughout the Term which describes the governance model for all clinical and non-clinical data created, recorded, stored or accessed as part of the IM&T Systems.
DDICAT	means, in respect of the Design and Construction Phase under the Design and Construction Agreement, the Operator's obligation to design, develop, install, configure and acceptance test the relevant matter.
DICOM	means Digital Imaging and Communications in Medicine, being the world standard for handling, storing, printing and transmitting medical imaging data and enables integration of scanners, servers, printers, workstations and network hardware.
Electronic Discharge Summary	means a computerised legal version of the collection of information about events during care by a provider or organisation that complies (Int) 2007. For the avoidance of doubt, the provider or organisation is the Operator.
Electronic Health Record	means a longitudinal electronic record of summary healthcare information generated by one or more encounters, in any care delivery setting.
Electronic Medical Record	means a computerised legal version of much of the data found in a paper medical record, which aggregates data from disparate computer systems and scanned documents, including clinical, demographic and administrative data.
Facility Interfaced and Interoperable IM&T Systems	means the set of IM&T Systems which interface or otherwise interoperate with any of the State's IM&T Systems.
Federated Identity and Access Management or FIAM	means policies, practices and protocols to manage the identity and trust into IM&T users and devices across organisations, in this case across the Operator and the Department.
Healthcare Identifier Service	means the national service which enables healthcare operators to associate health information about a healthcare individual accurately, securely and consistently within a healthcare context. This association includes use within electronic communications such as discharge summaries, prescriptions and referrals.
HL7	means Health Language 7.
IM&T	means information management and technology.
IM&T Plan	means the plans, as described in section 3(b) of these IM & T Requirements, to be developed by the Operator and regularly updated throughout the Term which set out the architecture, design, implementation and OAM processes and procedures to allow the Operator to meet these IM&T Requirements.

Term	Meaning
IM&T Services	means any IM&T functional capability accessible via: <ol style="list-style-type: none"> 1. the IM&T Systems; or 2. Personal IM&T Equipment being used at the Public Patient Health Campus.
IM&T Systems	means the hardware, software and platforms owned by, and under the operation and management of, the Operator as further described in these IM&T Requirements.
Information Lifecycle Management Plan	means the plan to be developed by the Operator and regularly updated throughout the Term which describes, in detail, the lifecycle of information within the IM&T Systems, and the management of that information during and between each stage of the lifecycle of that information.
Information Security Management Plan	means the plan to developed by the Operator and regularly updated throughout the Term which demonstrates and details processes to protect and manage the security of information stored on the IM&T Systems.
Interoperability	means the exchange of information between the Operator and the State using formats and protocols specified by the State, as updated from time to time by the State.
National Authentication Service For Health	the nationwide, secure authentication service for healthcare organisations and personnel to exchange e-health information, being finalised by NEHTA as at the Date of this Agreement.
National E-Health Security and Access Framework	means the document titled “National E-Health Security and Access Framework” (V1.0, 2009) published and amended from time to time by NEHTA.
NEHTA	the National E-Health Transition Authority Limited (ABN 18 114 638 336).
OAM	means, in respect of the Operational Phase under this Agreement, the Operator’s obligation to operate, administer and maintain the relevant matter.
Passive Infrastructure	any rooms, infrastructure and equipment required for the OAM of the IM&T Systems, but which does not necessarily itself interface with the IM&T Systems, including: <ol style="list-style-type: none"> 1. Communications Rooms and all non- IM&T infrastructure and equipment housed within and/or directly supporting the operation of these rooms; 2. power infrastructure (including power supply and in-rack power distribution); 3. cooling infrastructure; and 4. server and communications racks.

Term	Meaning
Patient Identifier	means the primary unique identifier for Patients issued, owned and maintained by the Department.
Personally Controlled Electronic Health Records	means a type of Electronic Health Record that is initiated and personally controlled by an individual.
Public Patient Electronic Health Record	the Electronic Health Record pertaining to encounters delivered by the Operator to Public Patients attending the Health Campus.
Public Patient Electronic Medical Record	the Electronic Medical Record pertaining to encounters delivered by the Operator to Public Patients attending the Health Campus.
Secure Message Delivery	means the application of NEHTA messaging specifications and the use of NEHTA infrastructure services to transfer unspecified, opaque content between healthcare operators.
States Facility Classification Specification	means the States document titled “ISMS Information Classification Handling and Labelling Guidelines” as updated from time to time.
State’s Frameworks, Guides and Standards	means the collection of documents available from the State describing the State’s IM&T Enterprise Architecture for facilities as updated from time to time.
States IM&T Systems	means any IM&T systems which are owned by and/or under the OAM of the State, but specifically excludes the IM&T Systems and any Medical IM&T Systems.
States Patient Administration Systems	means the State’s patient administration systems as advised by the State from time to time.
Systems Maintenance Schedule	means a schedule developed by the Operator describing the planned maintenance, upgrades and scheduled service outages for all the IM&T Systems, in accordance with which the Operator must perform planned maintenance, upgrades and scheduled service outages, including any engineering works relevant to the IM&T Systems.
Technology Adoption Plan	means the plan to be developed by the Operator which outlines the estimated targets for the integration into the IM&T Systems of any technological developments anticipated over the subsequent rolling 3 years, and which aligns with the IM&T Service Plan.
TeleHealth	means the delivery of clinical services to Patients at a distance using IM&T to provide real time (synchronous) and store and forward (asynchronous) assessment and ongoing management of Patients. Clinical services provided via this methodology include: <ol style="list-style-type: none"> 1. specialist referral services; 2. Patient consultations and second opinion advice; 3. remote Patient monitoring; 4. Patient education; 5. health professional education, support and communications; and 6. administrative tasks related to the provision of health delivery.

Term	Meaning
Unified Communications	means the use of a single, integrated platform, based on internet protocol, to deliver a consistent user experience of real-time and non-real-time communications functionality.