المملكة العربية السعودية

وزارة الصحة

مكتب تحقيق الرؤية

دعوة عامة لتأهيل المقاولين لمشروع نظام أرشفة الصور الطبية وتكامل البيانات التقارير و المواعيد مع تبادلها لعدد من التجمعات الصحية – الموجة الأولى بوزارة الصحة

التاريخ: ٢٧ /٢٠١٨/٥ م

دعوة تأهيل مقاولين – عقد نظام أرشفة الصور الطبية وتكامل البيانات مع تبادلها وكتابة التقارير عن بعد لعدد من التجمعات الصحية-الموجه الاولى بوزارة الصحة

يدعوكم برنامج الصحة الالكترونية إلى المشاركة في برنامج تأهيل المقاولين المسبق تمهيداً لدعوتكم لتقديم عروضكم لتزويد المركز بخدمات نظام أرشفة الصور الطبية وتكامل البيانات مع تبادلها وكتابة التقارير عن بعد لعدد من التجمعات الصحية بوزارة الصحة، ضمن أهداف ومبادرات برنامج التحول الوطني وفي إطار المنافسة العامة.

في حال رغبتكم في المشاركة في برنامج تأهيل المقاولين والمشاركة في المناقصة التي سيتم طرحها لاحقا، المرجو اتباع الخطوات اللاحق ذكرها (المتطلبات) في الملحق الثالث من هذه الدعوة.

المرجو قراءة هذا الإعلان وملحقاته بحرص والتأكد من فهمه جيداً مع مراعاة التقيُد بتاريخ التسليم النهائي.

إن القصور وعدم استيفاء وتسليم جميع المتطلبات في موعد التسليم النهائي او قبله يعد سببا في عدم التأهل.

يحق برنامج الصحة الالكترونية قبول أو رفض أي تسليم وفقا لما تراه مناسباً.

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الملحقات المرفقة:

الملحق الاول: لمحة عامة.

الملحق الثاني: نبذه عن الخدمة المطلوبة

الملحق الثالث: المتطلبات

الملحق الاول

لمحة عامة

نبذة عن رؤية المملكة العربية السعودية ٢٠٣٠

لقد حبا الله المملكة العربية السعودية مقومات جغرافية وحضارية واجتماعية وديموغرافية واقتصادية عديدة، تمكنها من تبوء مكانة رفيعة بين الدول القيادية على مستوى العالم.

ورؤية أي دولة لمستقبلها تنطلق من مكامن القوة فيها، وذلك ما انتهجته المملكة عند بناء رؤية ٢٠٣٠ م.

فمكانة المملكة في العالم الإسلامي ستمكنها من أداء دورها الريادي كعمق وسند للأمة العربية والاسلامية، كما ستكون قوتها الاستثمارية المفتاح والمحرك لتنويع اقتصادها وتحقيق استدامته فيما سيمكنها موقعها الاستراتيجي من أن تكون محورا لربط القارات الثلاث.

تعتمد الرؤية على ثلاث محاور رئيسية وهي: اقتصاد حيوي، اقتصاد مزدهر ووطن طموح وهذه المحاور تتكامل وتنسق مع بعضها في سبيل تحقيق اهدافنا وتعظيم الاستفادة من مرتكزات هذه الرؤية.

وقد أطلق ولي العهد صاحب السمو الملكي الأمير محمد بن سلمان بن عبد العزيز اثنا عشر برنامجاً لتحقيق رؤية المملكة العربية السعودية.

١. برنامج التحول الوطني
٢. برنامج خدمة ضيوف الرحمن
٣. برنامج صندوق الاستثمارات العامة
٤. برنامج تطوير الصناعة الوطنية والخدمات اللوجستية
٥. برنامج تطوير القطاع المالي
٦. برنامج تحسين نمط الحياة
٧. برنامج ريادة الشركات الوطنية
٨. برنامج الشراكات الاستراتيجية
٩. برنامج الإسكان
١٠. برنامج التخصيص
١١. برنامج تعزيز الشخصية الوطنية

١٢. برنامج تحقيق التوازن المالي

نبذة عن برنامج التحول الوطني

أُطلِق برنامج التحوّل الوطني للمساهمة في تحقيق رؤية المملكة العربية السعودية ٢٠٣٠ وإدراك التحديات التي تواجه الجهات الحكومية القائمة على القطاعات الاقتصادية والتنموية في سبيل تحقيقها. وحَدَّدَت الجهات المشاركة في البرنامج أهدافًا استراتيجية لتحقيق أهداف رؤية المملكة العربية السعودية ٢٠٣٠ ومجابهة هذه التحديّات إلى العام ٢٠٢٠ بناءً على مستهدفات مُحددَّة، ومن ثم تحديد المبادرات اللازمة لتحقيق هذه الأهداف بشكل سنوي، وبناء خطط تفصيلية لها، تعتمد على مؤشرات مرحلية لقياس الأداء ومتابعته وانطلق البرنامج في عامه الأول على مستوى ٢٤ جهة حكومية على أن يتم مراجعة الجهات المشاركة في الأعوام المقبلة.

ويهدف البرنامج إلى تطوير العمل الحكومي وتأسيس البنية التحتية اللازمة لتحقيق رؤية المملكة العربية السعودية ٢٠٣٠، واستيعاب طموحاتها ومتطلباتها، وتعتبر مبادرات البرنامج للعام ٢٠١٦ م هي الموجة الأولى لتحقيق ذلك، وسيتمّ مراجعتها وتقييمها والنظر في كفايتها وأدائها دورياً، والنظر في اعتماد مبادرات إضافية يتم دراستها وتطويرها وفق آلية عمل البرنامج.

والتزاماً بتوجه الرؤية لدعم المرونة في العمل الحكومي، ساهم برنامج التحوُّل الوطني في رفع وتيرة التنسيق والعمل المشترك عبر تحديد بعض الأهداف المشتركة للجهات العامّة بناءً على الأولويات الوطنية، والدفع نحو التخطيط المشترك، ونقل الخبرات بين الجهات العامّة، وإشراك القطاعين الخاص وغير الربحي في عملية تحديد التحديات وابتكار الحلول وأساليب التمويل والتنفيذ، والمساهمة في المتابعة وتقييم الأداء.

نبذة عن الصحة الالكترونية و التحول الرقمي

يهدف برنامج التحول الوطني في القطاع الصحي لخلق قيمة مضافة في الصحة من خلال تحسين النتائج الصحية، والحصول على الخدمات الصحية وطريقة تقديم الرعاية الصحية للمرضى وتوفير رعاية صحية متكاملة ترتقي لأرفع المعايير الدولية.

وتعتبر الصحة الالكترونية عامل تمكين حيوي للتحول الشامل بما في ذلك التأمين الصحي والتحول المؤسسي والشراكة بين القطاع العام والخاص والذي يهدف الى تحسين كفاءة وفعالية قطاع الرعاية الصحية من خلال تكنولوجيا المعلومات والتحول الرقمي.

والاهداف الاساسية للصحة الالكترونية والتحول الرقمي على النحو التالي:

- انشاء ملف صحي الكتروني موحد يمكن الوصول اليه في أي وقت للمصرح لهم مع رفع نسبة السكان الذين لديهم سجل طبي رقمي موحد من صفر إلى ٧٠٪ بحلول ٢٠٢٠.
- تمكين إدارة المواعيد من خلال تطبيق الجوال بكل يسر وسهوله.
- تقديم استشارات ورعاية طبية ممتدة الى المنزل عن طريق الطب الاتصالي وبرامج الرعاية المنزلية.
- تحسين كفاءة العاملين في قطاع الرعاية الصحية (الأطباء، الممرضين وغيرهم) من خلال الحصول على بيانات مرضاهم (على سبيل المثال لا الحصر: صور الاشعة – التقارير – نتائج المختبر- الخ) بالإضافة الى أدوات تشخيص متطورة وخدمات دعم القرار.
- ربط جميع الصيدليات التجارية بنظام صرف الأدوية الالكتروني.

وقد تم تقسيم المبادرة الى ١٧ برنامجاً و ٥١ مشروع، ٦ منها تابعة للمجلس الصحي السعودي، ووضع خطة تنفيذية لتنفيذ المشاريع على مراحل مع مراعاة الاولويات واعتمادية المشاريع على بعضها البعض للوصول الى الهدف المطلوب في أن يكون هناك ملف صحي الكتروني موحد لـ ٧٠% من السكان.

الملحق الثاني

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١. عنوان العقد

نظام أرشفة الصور الطبية وتكامل البيانات مع تبادلها وكتابة التقارير عن بعد لعدد من التجمعات الصحية – الموجه الأولى بوزارة الصحة

٢. التاريخ المستهدف لبداية العقد

تاريخ بداية العمل يكون في فترة أسبوعين من استلام التعميد

٣. مدة العقد

تبدأ فترة التشغيل من تاريخ بداية أول فحص لكل مستشفى على حدة يتم عمله على النظام محققا جميع الوظائف الفنية والاكلينيكية الواردة بهذه الكراسة بدون أي نقصان لمدة خمس سنوات يشملها الضمان والدعم الفني وتشغيل جميع البرامج لتشمل طيلة فترة العقد وما يترتب عليها من تدريب وتحديث وتطوير كل من (Hardware/Software/licenses/labor) دون أية تكلفة إضافية على الوزارة.

على ألا تتجاوز فترة التجهيز للتشغيل من توريد وتركيب وتطوير وتطبيق النظام مدة (٢٤) أربعة وعشرون شهراً ميلادياً من تاريخ التعميد كحد أقصى للمستشفيات المذكورة بهذه التجمعات الصحية- الموجة الأولى.

يبدأ التزام المقاول بالمستشفيات التي بها عقود باكس بعد انتهاء هذه العقود مباشرة. وتعتبر الاولوية للمستشفيات التي بها عقود باكس منتهية. وللمقاول الحق بتمديد عقود المقاولين الحاليين بالباطن أو استبدالها مع الالتزام في الحالتين بكل متطلبات هذه الكراسة وآلية العمل بها والفوترة كذلك.

٤. موقع العمل

قائمة المستشفيات المذكورة بالكراسة للتجمعات الصحية – الموجه الأولى

٥. وصف عام للخدمة المطلوبة

ترغب وزارة الصحة ممثلة بمكتب تحقيق الرؤية في تأهيل شركات ارشفة الصور الطبية وتكامل البيانات مع كتابة التقارير عن بعد والمتخصصة في تقديم هذه النوعية من الخدمات حتى يتسنى لمتقدمي التأهيل المشاركة لاحقاً في منافسة نظام أرشفة الصور الطبية وتبادلها لكتابة التقارير عن بعد في التجمعات الصحية المتعددة (Clusters) كما هو موضح بقائمة المستشفيات المستهدفة بالكراسة مع نظام تكامل البيانات (VNA).

وتتطلع وزارة الصحة إلى تطبيق نظام الأرشفة المركزية الإلكترونية ذو مستوى عال وعالمي، بحيث يكون نظاما مركزياً موحداً لجميع انواع الصور الطبية (Medical Multi Media Archive) ويخدم جميع قطاعات وزارة الصحة بالتجمع الصحي الواحد (Cluster) بالمنطقة أو بين التجمعات الصحية (Clusters) أو بين المناطق بحيث يبدا المشروع بصور الأشعة الخاصة بقسم الـ (Radiology)، ويهدف هذا المشروع أيضا إلى تنظيم وإدارة الوثائق بشكل إلكتروني، وتحويل بياناتها وفهرستها في أنظمة حاسوبية مخصصة لذلك، بحيث يسهل البحث عنها واسترجاعها بيسر وسهولة بداخل المنطقة أو مع المناطق الاخرى.

وستوضح هذه الكراسة نطاق العمل والأهداف، وبذلك تدعو الوزارة كافة الجهات القادرة على تنفيذ هذا المشروع للتقدم بعرض فني يوضح المقدرة الذاتية والفنية والتقنية لتنفيذ هذا المشروع.

وتسعى وزارة الصحة إلى تطبيق نظام الأرشفة المركزية الإلكترونية للصور الطبية، وذلك من أجل تحقيق الأهداف التالية:

- الأرشفة المركزية للصور الطبية (Central PACS).
- إدارة انظمة الاشعة المركزية (Central RIS).

- نظام كتابة التقارير عن بعد داخل التجمع الصحي او التجمعات الصحية (Cluster or Clusters) بالمنطقة (Tele-Radiology).
- إنشاء مخزن لتكامل البيانات للتجمع الصحي او التجمعات الصحية (Cluster or Clusters) بالمنطقة (VNA).
- نظام أرشفة الصور وإدارة الموجات الصوتية للحوامل (OBY/GYN) بمستشفيات الولادة والاطفال.
- نظام مسح سرطان الثدي للكشف المبكر في بعض مستشفيات التكتلات الصحية مع قراءة النتائج بالطريقة العمياء.
- ربط مستشفيات المشاعر المقدسة بمكة المكرمة وإتاحة الفرصة لجميع المستشفيات بالتجمعات الصحية لإبداء الرأي والمشورة أو كتابة التقارير عن بعد.
- الرجوع الى هذه الصور الطبية في أي وقت ومن أي مكان (جميع انواع الصور الطبية على سبيل المثال الاشعة، القلب، الباثولوجي، الاسنان، العيون، الخ).
- الرجوع الى تقارير هذه الصور الطبية في أي وقت ومن أي مكان.
- كتابة التقارير للصور الطبية عن بعد (الطب الاتصالى للأشعة) سواء للمنشآت بداخل التجمع الصحي او التجمعات الصحية او المنطقة او خارجها.
- تبادل الصور الطبية بين المنشآت الطبية بالمملكة سواء داخل التجمع الصحي او التجمعات الصحية او المنطقة او خارجها.
- تبادل التقارير الطبية بين المنشآت بالمملكة سواء داخل التجمع الصحي او التجمعات الصحية او المنطقة او خارجها.

- التوسع المستقبلي لتخزين أنواع اخرى من البيانات والصور الطبية والقدرة على الرجوع اليها في أي وقت ومن أي مكان.
- تأسيس أدله تقنية لموردي أنظمة الأرشفة الرقمية للعمل على مواءمة انظمتهم وربطها بنظام الأرشفة المركزي، والتكامل في تقديم الخدمات المشتركة.
- إرساء معايير تبادل الصور الطبية وتأسيس البنية التحتية لمنظومة تبادل البيانات الخاصة بأنظمة الأشعة الرقمية وربطها بقناة التكامل للصحة الإلكترونية.
- الربط مع الملف الصحي الإلكتروني الموحد (SeHe) من خلال الويب لاستخدامها في جميع نقاط تقديم الخدمة الصحية.
- يبدا التزام المقاول بالمستشفيات التي بها عقود باكس بعد انتهاء هذه العقود مباشرة. وتعتبر الاولوية للمستشفيات التي بها عقود باكس منتهية. وللمقاول الحق بتمديد عقود المقاولين الحاليين بالباطن او استبدالها مع الالتزام في الحالتين بكل متطلبات هذه الكراسة و آلية العمل بها والفوترة كذلك.

سيكون المورد المعتمد مسؤولاً عن أداء جميع الأنشطة اللازمة لتركيب وتشغيل وتطوير وتحديث وصيانة نظام أرشفة الصور الطبية المركزية لتحقيق اهداف المشروع من جميع الجوانب، حيث يلتزم المورد بالتوريد والتركيب والترقية شاملة (Hardware/Software/LICENSES/LABOUR) لجميع الأنظمة الموجودة (نظام الأرشفة وملحقاته) وربطها بنظام المعلومات الصحي الحالي او المستقبلي للحصول على نظام يعمل بشكل متكامل بحيث يستوفي أهداف وزارة الصحة وخطة الصحة الالكترونية على نحو يتميز بالكفاءة والفعالية من حيث التكاليف والوظائف ووفقاً لما هو موضح في هذه الكراسة.

وتعتزم وزارة الصحة شراء خدمة أرشفة الصور الطبية من المورد حيث يقوم المورد بتأمين جميع الخدمات المذكورة بهذه الكراسة على شكل خدمة يتم محاسبته ودفع قيمتها على كل فحص يتم وصوله إلى

جميع الأنظمة المطلوبة محققا جميع الوظائف بدون أي نقصان. ويكون الدفع مقبولا للفحص شهريا بعد اعتمادها من المستشفى او الموقع المستفيد. ويلتزم المقاول بجميع ما ورد بهذه الكراسة من مواصفات للأنظمة، للتطبيقات، للخادمات، للرخص، للمحطات على الاقل ويطورها إذا لزم ذلك خلال فترة العقد على الا يزيد ذلك في سعر الفحص المعروض طيلة فترة العقد. ثم تنتقل ملكية هذه الاجهزة والمعدات للوزارة بشكل كامل بعد نهاية العقد مع جميع البيانات دون الحاجة الى نقلها سواء صور او تقارير او قاعدة بيانات. وللوزارة الحق في تجديد العقد مرة اخرى من عدمه حسب مصلحة الوزارة.

٦. وصف تفصيلي للخدمة المطلوبة

تعتزم وزارة الصحة بشراء خدمة ارشفة الصور الطبية من المورد حيث يقوم المورد بتامين جميع الخدمات المذكورة بهذه الكراسة على شكل خدمة يتم محاسبته ودفع قيمتها على كل فحص يتم وصوله الى جميع الأنظمة المطلوبة محققا جميع الوظائف بدون أي نقصان. ويكون الدفع مقبولا للفحص شهريا بعد اعتمادها من المستشفى او الموقع المستفيد. ويلتزم المقاول بجميع ما ورد بهذه الكراسة من مواصفات للأنظمة، للتطبيقات، للخادمات، للرخص، للمحطات على الاقل ويطورها إذا لزم ذلك خلال فترة العقد على الا يزيد ذلك في سعر الفحص المعروض طيلة فترة العقد. ثم تنتقل ملكية هذه الاجهزة والمعدات للوزارة بشكل كامل بعد نهاية العقد مع جميع البيانات دون الحاجة الى نقلها سواء صور او تقارير او قاعدة بيانات. وللوزارة الحق في تجديد العقد مرة اخرى من عدمه حسب مصلحة الوزارة.

ويشمل مجال مشروع انشاء الأرشفة المركزية للصور الطبية لتنفيذ المهام التالية:

- إنشاء أرشفة مركزية للصور الطبية داخل التجمع الصحي أو التجمعات الصحية (Central PACS).
- إنشاء نظام إدارة الأشعة مركزي داخل التجمع الصحي أو التجمعات الصحية (Central RIS).
- انشاء كتابة التقارير عن بعد (الطب الاتصالى للأشعة) داخل التجمع الصحي أو التجمعات الصحية (داخل المنطقة أو بين المناطق) Tele-Radiology.
- إنشاء مخزن لتكامل البيانات داخل التجمع الصحي او التجمعات الصحية (VNA).
- نظام ارشفة الصور وادارة الموجات الصوتية للحوامل (OBY/GYN) بمستشفيات الولادة والاطفال.
- نظام مسح سرطان الثدي للكشف المبكر في بعض مستشفيات التكتلات الصحية مع قراءة النتائج بالطريقة العمياء.
- ربط مستشفيات المشاعر المقدسة بمكة المكرمة وإتاحة الفرصة لجميع المستشفيات بالتجمعات الصحية لإبداء الرأي والمشورة او كتابة التقارير عن بعد.
- ربط أنظمة الأرشفة الموجودة بالمستشفيات بالأرشفة المركزية
- تامين العمل ومساره بدون انقطاع في حال تعطل الربط بين المستشفى ومركز البيانات الرئيسي.
- اختبار الأنظمة اعلاه.
- تدريب العاملين على استخدام الأنظمة.
- للربط و التكامل مع الأنظمة المختلفة في المستشفيات مثل نظام الـ HIS و الـ SeHe, PACS ، حيث يقع على عاتق المقاول المنفذ للمشروع بتحمل كافة التبعات المالية و الفنية و الإدارية اللازمة لذلك.
- تقديم الصيانة (الضمان) خلال فترة العقد.

- تقديم نظام تحليل البيانات وحلول ذكاء الاعمال (Business Intelligence & Static module with reporting tool) سواء على مستوى التجمع الصحي او التجمعات الصحية مع ربطها بشكل مركزي وتدريب موظفي وزارة الصحة على استخدامها واستخراج التقارير اللازمة لذلك.
- تقديم جميع الخدمات الاستشارية والفنية اللازمة خلال فترة المشروع (مرحلة التنفيذ + مرحلة الصيانة والضمان).

ويحق للوزارة طلب أي خدمة او بعض الخدمات كما في جدول تكلفة الخدمات بنفس القيمة أو أقل. (زيادة عدد الفحوص او تقليلها، زيادة عدد المعدات او تقليلها) بحيث لا تتجاوز الـ ١٠ % من إجمالي الكمية المنصوصة بالكراسة. كما يحق للوزارة تجزئة المنافسة وتعميد كل تجمع صحي على حدة.

أيضا يحق للوزارة تخفيض الكميات وتقليص نطاق العمل. (تقليل عدد المستشفيات أو الفحوص او المعدات) بحيث لا تتجاوز الـ ٢٠ % من إجمالي الكمية المنصوصة بالكراسة.

والجداول التالية تعطى فكرة مبسطة عن نوعية جداول الكميات التي سيتم اخذها بعين الاعتبار في الحل الفني والمالي مستقبلا:

حيث توضح الجداول ادناه كل تجمع صحي على حدة وما به من نوع المنشأة (المستشفى)، حجم العمل من عدد الفحوصات، هل يوجد بها نظام أرشفة أم لا، والمتوقع للموقع اما ان يكون مركزي او به نظام محلى (حسب حجمه)، الكميات المطلوبة من المعدات داخل المنشأة (مع الاخذ ايضا بعين الاعتبار حجم العمل)، عدد العاملين من اطباء وفنيين من عدد الفحوصات داخل التكتلات المشمولة بهذه الكراسة على النحو التالي:

Hospital	E١ Beds	No.	HIS only	HIS & PACs		PACS	
E١	>٦٠٠	١		١	١ - MedicaPlus	١	١ - Agfa
	٢٠٠-٦٠٠	٥	٢	٢	١ - Intersystems ٢ - MedicaPlus ١- Oasis	٢	١ - GE ١ - Phillips
	<٢٠٠	١٤	٢		١ - CentralizedHIS ١ - MedicaPLus		
	Totals	٢٠	٢٠٪	١٥٪		١٥٪	

No.	Required Extra software concurrent licenses on Cluster E١ Level Description	Qty (Concurrent Licenses)
١	٣D Post-processing (includes MRI/CT/US/Mamo/NM modalities)	٢٠
٢	Orthopedic	٢٠
٣	Concurrent Voice Recognition Licenses with un-limited profiles and or limited user names by seat un-	١٠٩

No.	Cluster #	Name of Hospital	Total Volume of Studies performed per year with ١٠٪ growth	Modality types per site	Recommendation to Hospital	Total No. of Studies per ٥ years Performed/ site	Total No. of Diagnostic Workstations per ٥ years/ site	Total No. of RIS Pcs	Total No. of Clinical View Workstations per ٥ years/ site	Total No. of CD Burner with ٢٠٠٠ CDs/site per ٥ years/ site	F-Total No. of Film Digitizer per ٥ years / site
		E١ Cluster - Small Hospitals has no RIS/PACS:									
١	E١	Prince Sultan Hospital in Orairah -(٥٠ beds) - (has no PACS/RIS)	٧,٩٠٠	Xray,US,CT	Connection To central solution directly	٣٩,٥٠٠	١ x ٦MP wide with second RIS Monitor	٧ (٥ aside modalities and ٢ at reception and working area	١٣ x single ٢ MP	١	١
٢	E١	Al Qatif Central Hospital -(٣٣٥ beds) - (has no PACS/RIS)	٩٦,٠٠٠	Xray,CT,MRI, US,Fluoroscopy, Anglo,C-Arm Fluoroscopy, mamo	Have local PACS/RIS with Medium size of storage/server on site with connection to central solution directly	٤٨٠,٠٠٠	٤ (٦MP wide with second RIS Monitor)	٢١ (١٨ aside modalities and ٣ at reception and working area	٣٠ (single ٢ MP)	١	١
٣	E١	Al Khafji General Hospital-(١٠٠ beds) - (has no PACS/RIS)	٢١,٥٠٠	Xray,US,CT,Hologic Mamo	Connection To central solution directly	١٠٧,٥٠٠	٢ (٦MP wide with second RIS Monitor)	٧ (٥ aside modalities and ٢ at reception and working area	٢٠ (single ٢ MP)	١	١
٤	E١	Al Dhahran General Hospital-(٦٠ beds) - (has no PACS/RIS)	١,٠٠٠	Xray	Connection To central solution directly	٥,٠٠٠	٠	٢ (١ aside modalities and ١ at reception and working area	٢ (single ٢ MP)	٠	٠
٥	E١	Al Nairia General Hospital-(٦٠ beds) - (has no PACS/RIS)	١٩,٧٠٠	Xray,CT,US, Flurosocopy, Dental	Connection To central solution directly	٩٨,٥٠٠	٢ (٦MP wide with second RIS Monitor)	٩ (٧ aside modalities and ٢ at reception and working area	١٩ (single ٢ MP)	١	١

٦	E١	Al Qariah Al-Olya Hospital-(٥٠ beds) - (has no PACS/RIS)	٦,٦٨٠	Xray,CT,US	Connection To central solution directly	٣٣,٤٠٠	١ (٦MP wide with second RIS Monitor)	٥ (٣ aside modalities and ٢ at reception and working area	١٢ (single ٢ MP)	١	١
٧	E١	Ras Tannoorah Hospital-(٥٠ beds) - (has no PACS/RIS)	١٧,٩٠٠	Xray,CT,US	Connection To central solution directly	٨٩,٥٠٠	١ (٦MP wide with second RIS Monitor)	٦ (٤ aside modalities and ٢ at reception and working area	٢٠ (single ٢ MP)	١	١
٨	E١	Ank General Hospital-(٥٠ beds) - (has no PACS/RIS)	١٧,٢٠٠	Xray,US,	Connection To central solution directly	٨٦,٠٠٠	٢ (٦MP wide with second RIS Monitor)	٥ (٤ aside modalities and ١ at reception and working area	١٠ (single ٢ MP)	١	١
٩	E١	Prince Sultan Hospital in Mleejah-(٥٠ beds) - (has no PACS/RIS)	١٠,٠٠٠	Xray,US,	Connection To central solution directly	٥٠,٠٠٠	١ (٦MP wide with second RIS Monitor)	٤ (٣ aside modalities and ١ at reception and working area	١٩ (single ٢ MP)	١	١
١٠	E١	Safwa General Hospital -(٥٠ beds) - (has no PACS/RIS)	١٢,٠٠٠	Xray,US,	Connection To central solution directly	٦٠,٠٠٠	١ (٦MP wide with second RIS Monitor)	٤ (٣ aside modalities and ١ at reception and working area	١٥ (single ٢ MP)	١	١
١١	E١	Al Rafeea General Hospital-(٥٠ beds) - (has no PACS/RIS)	٥,٨٠٠	Xray,US,	Connection To central solution directly	٢٩,٠٠٠	١ (٦MP wide with second RIS Monitor)	٣ (٢ aside modalities and ١ at reception and working area	٢٥ (single ٢ MP)	١	١
١٢	E١	Bqeeq General Hospital-(٥٠ beds) - (has no PACS/RIS)	١٧,٠٠٠	Xray,CT,US, Floroscopy	Connection To central solution directly	٨٥,٠٠٠	١ (٦MP wide with second RIS Monitor)	٩ (٦ aside modalities and ٢ at reception and working area	٩ (single ٢ MP)	١	١
١٣	E١	Al-Jubail General Hospital-(٢٠٠ beds) - (has no PACS/RIS)	١٥,٠٠٠	CT.MRI.US.X-ray, mamo, FLUOROSCOPY	Connection To central solution directly	٧٥,٠٠٠	٢ x ٦MP + ١ x ٥ MP New	١٥ (١٠ aside modalities and ٥ at reception and working area	١٠ x ٢MP	١	١
١٤	E١	Bathaa General Hospital- Al Hassa- (٥٠ beds) - (has no PACS/RIS)	١,٠٠٠	Xray	Connection To central solution directly	٥,٠٠٠	٠	٢ (١ aside modalities and ١ at reception and working area	٢ (single ٢ MP)	٠	٠
١٥	E١	Salwa General Hospital-(٥٠ beds) - (has no PACS/RIS)	٥,٥٠٠	Xray US	Connection To central solution directly	٢٧,٥٠٠	١ (٦MP wide with second RIS Monitor)	٣ (٢ aside modalities and ١ at reception and working area	١٥ (single ٢ MP)	١	١
١٦	E١	Amal Mental Health Complex-(٥٠٠ beds)	٩٩٠	Xray,CT,US	Connection To central solution directly	٥,٠٠٠	١ (٦MP wide with second RIS Monitor)	٧ (٥ aside modalities and ٢ at reception	١ (single ٢ MP)	١	١

		Dammam - (has no PACS/RIS)						and working area			
١٧	E١	Dhahran Eye Specialist Hospital-(٨٠ beds) - (has no PACS/RIS)	٢,٤٣٥	Xray,CT	Connection To central solution directly	١٢,١٧٥	١ (٦MP wide with second RIS Monitor)	٣ (٢aside modalities and ١ at reception and working area	٣ (single ٢ MP)	١	١
		E١ Cluster ,existing PACS/RIS									
١٨	E١	King Fahad Specialist Hospital in Dammam- (٦٣٠ beds)- Agfa- PACS/RIS	٤٠,٠٠٠	CT, MRI, Mammography, Fluoroscopy, Ultrasound, Interventional Radiology ,Nuclear Medicine, X-RAY.	Have local PACS/RIS with Medium size of storage/server on site with connection to central solution directly	٢٠٠,٠٠٠	٤٠ existed	٦٠ existed	٠	٢	١
١٩	E١	Dammam Medical Complex (٤٢٣ beds)- Philips- PACS/RIS	١٤٠,٠٠٠	Xray, US, CT, MRI, Mamo, BMD, Fluoroscopy	Have local PACS/RIS with Medium size of storage/server on site with connection to central solution directly	٧٠٠,٠٠٠	١ X ٥ MP, ٤ X ٣ MP (B/W), ٤ X ٣ MP (Color), ٤ X ٢ MP (B/W), ٤ X ٢MP (Color) existed with second or third RIS Monitor existed + New ٥ X ٦MP and ١ x ٥ MP new with second or third RIS Monitor	٣٠ existed	١٠٦ existed ٢MP	١	١
٢٠	E١	Maternity and Children Hospital in Dammam (٤٠٠ beds)- GE- PACS/RIS	٥٣,٧٩٣	MRI/CT/ FLUOROSCOPY / DIGITAL X-RAY / BMD / MAMMOGRAPHY / US / INTERVENTIONAL	Connection To central solution directly	٢٦٨,٩٦٥	٥ x ٦MP, ٦ x ٢MP, ٢ x ٣MP, ٢ x ٥MP, existed + ١ x ٥MP, ٣ x ٦MP (New)	٥٥ existed	٢٠ x ٢MP existed	١	١
		Total No. of Exams cross Cluster E١	**٤٩١,٤٠٨**			**٢,٤٥٧,٠٤٠**					

E١ Cluster Breast Cancer Screening Data

#	Hospital Name	PACS Yes/No	Total Number of scanned exam per Year	Total Number of scanned exam per ٥ Years	Total Number of breast cancer screening PC & scanner per ٥ Years	Total Number of DICOM Worklist Gateway per ٥ Years
١	Al Qatif Central Hospital - (٣٣٥ beds)	No	١٢٥٠	٦٢٥٠	١	١
٢	Al Khafji General Hospital-(١٠٠ beds)	No	١٢٥٠	٦٢٥٠	١	١
٣	King Fahad Specialist Hospital in Dammam(٦٣٠ beds)	Yes Agfa	١٢٥٠	٦٢٥٠	١	١
٤	Dammam Medical Complex (٤٢٣ beds)	Yes Philips	١٢٥٠	٦٢٥٠	١	١
٥	Maternity and Children Hospital in Dammam (٤٠٠ beds)	Yes GE	١٢٥٠	٦٢٥٠	١	١
٦	Al-Jubail General Hospital-(٢٠٠ beds)	No	١٢٥٠	٦٢٥٠	١	١
		Total	**٧,٥٠٠**	**٣٧,٥٠٠**	This number will grow ١٠٪ per year	

Hospital	E٢ Beds	No.	HIS only	HIS & PACs	HIS Vendor	PACS Vendor	
E٢	>٦٠٠						
	٢٠٠-٦٠٠	٤	١	٣	٢ - MiniHIS ١ - Oasis ١ CentralizedHIS	٣	٣ - Phillips
	<٢٠٠	٦	٢		٢ - MiniHIS	١	١ - GE
	Totals	١٠	**٣٠%**	**٣٠%**		**٤٠%**	

No.	Required Extra software concurrent licenses on Cluster E٢ Level Description	Qty (Concurrent Licenses)
١	٣D Post-processing (includes MRI/CT/US/Mamo/NM modalities)	١٥
٢	Orthopedic	١٠
٣	Concurrent Voice Recognition Licenses with un-limited profiles and or un-limited user names by seat	٦٧

No.	Cluster #	Name of Hospital	Total Volume of Studies performed per year with ١٠٪ growth	Modality types per site	Recommendation to Hospital	Total No. of Studies per ٥ years Performed/ site	Total No. of Diagnostic Workstations per ٥ years/ site	Total No. of RIS Pcs	Total No. of Clinical View Workstations per ٥ years/ site	Total No. of CD Burner with ٢٠٠٠ CDs/site per ٥ years/ site	F-Total No. of Film Digitizer per ٥ years / site
		E٢ Cluster, small , medium to large hospitals									
١	E٢	Al-Jafr General Hospital -(٣٠ beds) - (has no PACS/RIS)	٢١,٢٥٠	Xray,CT,US, Floroscopy	Connection To central solution directly	١٠٦,٢٥٠	١ x ٦MP wide with second RIS Monitor	٧ (٥ aside modalities and ٢ at reception and working area	٧ x single ٢ MP	١	١
٢	E٢	Al-Oyoun City General Hospital -(٣٠ beds) - (has no PACS/RIS)	١٨,٩٠٠	Xray,CT,US	Connection To central solution directly	٩٤,٥٠٠	١ x ٦MP wide with second RIS Monitor	٦ (٤ aside modalities and ٢ at reception and working area	٧ x single ٢ MP	١	١
٣	E٢	Maternity & Children Hospital -(٤٥٠ beds) Al Hassa- (has no PACS/RIS)	١٥١,٨٠٠	Xray,CT,MRI, Mamo,US, Floroscopy, Bone Density,	Connection To central solution directly	٧٥٩,٠٠٠	٢ x ٦MP wide with second RIS Monitor	٤٨ (٤٦ aside modalities and ٢ at reception and working area	١٤ x single ٢ MP	١	١
٤	E٢	Mental Health Hospital -(١٠٠ beds) – Al Hassa - (has no PACS/RIS)	٣,٢٠٠	Xray,US	Connection To central solution directly	١٦,٠٠٠	١ x ٦MP wide with second RIS Monitor	٣ (٢ aside modalities and ١ at reception and working area	٤ x single ٢ MP	١	١

٥	E٢	Al-Jabr ENT and Eye Hospital -(١٠٠ beds) Al Hassa - (has no PACS/RIS)	١٤,٥٠٠	Xray,CT	Connection To central solution directly	٧٢,٥٠٠	١ x ٦MP wide with second RIS Monitor	٤(٢ aside modalities and ٢ at reception and working area	١٥ x single ٢ MP	١	١
٦	E٢	Alfaliq Rehabilitation Hospital -(٨٠ beds)- Al Hassa - (has no PACS/RIS)	٢,٥٠٠	Xray	Connection To central solution directly	١٢,٥٠٠	١ x ٦MP wide with second RIS Monitor	٢ (١ aside modalities and ١ at reception and working area	٢ x single ٢ MP	١	١
		E٢ area ,existing PACS/RIS									
٧	E٢	King Fahad Central Hospital In Hafouf- (٥٠٠ beds)- Philips- PACS/RIS	٢١١,٧٦٧	CT. MRI, X-Ray, US, BMD, Mamo, Fluro, Angio,	Have local PACS/RIS with Medium size of storage/server on site with connection to central solution directly	١,٠٥٨,٨٣٥	٨ x ٢MP, ٨ x ٣MP, ١ x ٥ MP existed with second or third RIS Monitor + New as follows: ٨ x ٢MP, ٥ x ٣MP, ٤ x ٥ MP, ٢ x ٦MP with second or third RIS Monitor	٢٣ existed + ١٠ New	١١٣ x single ٢MP existed	٢CD Burner existed + ٢ CD Burner new	١
٨	E٢	Prince Saud Bin Jalloway Hospital (٢٥٠ beds)- In Hafouf - Philips- PACS/RIS	٥٧,٤٠٧	CT. MRI, X-Ray,US, BMD, Mamo, Fluro, Angio,	Have local PACS/RIS with Medium size of storage/server on site with connection to central solution directly	٢٨٧,٠٣٥	٣ x ٣MP, ١ x ٥ MP , ٣ x ٦MP existed with second or third RIS Monitor + ٣ x ٣ MP , ٣ x ٦MP with second or third RIS Monitor	١٤ Old + ٦ New	٢٥ x single ٢ MP existed + ١٠ New	١ existed	١ existed
٩	E٢	King Faisal General Hospital - (٢٥٠ beds)- In Hafouf - Philips- PACS/RIS	٩,٩٩٦	CT,MRI,X-Ray, US,	Have local PACS/RIS with Medium size of storage/server on site with connection to central solution directly	٤٩,٩٨٠	٣ x ٣MP , ٣ x ٦MP existed with second or third RIS Monitor	١٤ existed + ٦ New	٢٥ x single ٢ MP + ١٠ New single ٢MP	١ existed	١ existed
		Total No. of Exams cross Cluster E٢	**٤٩١,٣٢٠**			**٢,٤٥٦,٦٠٠**					

E٢ Breast Cancer Screening Data

#	Hospital Name	PACS Yes/No	Total Number of scanned exam per Year	Total Number of scanned exam per ٥ Years	Total Number of breast cancer screening PC & scanner per ٥ Years	Total Number of DICOM Worklist Gateway per ٥ Years
١	Maternity & Children Hospital -(٤٥٠ beds) - ALHassa	No	١٢٥٠	٦٢٥٠	١	١
٢	King Fahad Central Hospital In Hafouf- (٥٠٠ beds)	Yes Philips	١٢٥٠	٦٢٥٠	١	١
٣	Prince Saud Bin Jalloway Hospital (٢٥٠ beds)- In Hafouf	Yes Philips	١٢٥٠	٦٢٥٠	١	١
		Total	**٣,٧٥٠**	**١٨,٧٥٠**	This number will grow ١٠٪ per year	

Hospital	E٣ Beds	No.	HIS only	HIS & PACs	HIS Vendor	PACS Vendor	
E٣	>٦٠٠						
	٢٠٠-٦٠٠	٤	٢	٢	١ - Oasis ٣ - CentralizedHIS	٢	٢ - Carestream
	<٢٠٠	٣	٣		٣ - CentralizedHIS	٠	
	Totals	٧	٧١%	٢٨%		٢٩%	

No.	Required Extra software concurrent licenses on Cluster E٢ Level Description	Qty (Concurrent Licenses)
١	٣D Post-processing (includes MRI/CT/US/Mamo/NM modalities)	١٠
٢	Orthopedic	٧
٣	Concurrent Voice Recognition Licenses with un-limited profiles and or un-limited user names by seat	٢١

No.	Cluster #	Name of Hospital	Total Volume of Studies performed per year with ١٠٪ growth	Modality types per site	Recommendation to Hospital	Total No. of Studies per ٥ years Performed/ site	Total No. of Diagnostic Workstations per ٥ years/ site	Total No. of RIS Pcs	Total No. of Clinical View Workstations per ٥ years/ site	Total No. of CD Burner with ٢٠٠٠ CDs/site per ٥ years/ site	F-Total No. of Film Digitizer per ٥ years / site
		E٣ Cluster, small , medium to large hospitals									
١	E٣	King Khaled Hospital in Hafer Al-Baten-(٣٠٠ beds) - (has no PACS/RIS)	١٠٠,٩٠٠	Xray,CT,MRI, US,BMD, Fluoroscopy , mamo	Have local PACS/RIS with Medium size of storage/server on site with connection to central solution directly	٥٠٤,٥٠٠	٤ (٦MP wide with second RIS Monitor) , ١ X ٥MP with third RIS Monitor	٢١(١٧ aside modalities and ٤ at reception and working area	٥٠ (single ٢ MP)	١	١
٢	E٣	Al-Saairah General Hospital- Haf Al Baten - (٥٠ beds) - (has no PACS/RIS)	٣,٠٠٠	Xray, US	Connection To central solution directly	١٥,٠٠٠	٠	٧ (٤ aside modalities and ٣ at reception and working area	٧ (single ٢ MP)	٠	٠
٣	E٣	Al-Qaysoma General Hospital-(٥٠ beds) - (has no PACS/RIS)	٥,٠٠٠	x-ray	Connection To central solution directly	٢٥,٠٠٠	٠	٠	٠	٠	٠
٤	E٣	Mental Health Hospital-(٥٠ beds) - Hafer Al Baten (has no PACS/RIS)	٥٠٠	Xray	Connection To central solution directly	٢,٥٠٠	٠	٢ (١ aside modalities and ١ at reception and working	٠	٠	٠

								area			
٥	E٣	Recovery Hospital-(٥٠ beds) Hafer Al Baten - (has no PACS/RIS)	٥٠٠	Xray	Connection To central solution directly	٢,٥٠٠	٠	٢ (١ aside modalities and ١ at reception and working area	٠	٠	٠
		E٣ area ,existing PACS/RIS									
٦	E٣	Hafer Al Batin Central Hospital- (٢٠٠ beds)- Carestream- PACS/RIS	٥٠,٠٠٠	CT.MRI.US.X-ray, mamo	Connection To central solution directly	٢٥٠,٠٠٠	١ x ٢MP, ٣ x ٣MP, ١ x ٥ MP existed	٥٣ existed	٢٥ x ٢MP existed	١	١
٧	E٣	Maternity and Children Hospital- Hafer Al Batin- (٣٠٠ beds)- Carestream- PACS/RIS	١٥,٠٠٠	CT,MRI,US,X-ray, mamo	Connection To central solution directly	٧٥,٠٠٠	٢ x ٢MP, ٢ x ٣MP, ١ x ٥MP existed + ١ x ٦ MP	٤٠ existed	٢٠ x ٢MP existed	١	١
		Total No. of Exams cross Cluster E٢	١٧٤,٩٠٠			٨٧٤,٥٠٠					

E٣ Breast Cancer Screening Data						
#	**Hospital Name**	**PACS Yes/No**	**Total Number of scanned exam per Year**	**Total Number of scanned exam per ٥ Years**	**Total Number of breast cancer screening PC & scanner per ٥ Years**	**Total Number of DICOM Worklist Gateway per ٥ Years**
١	King Khaled Hospital in Hafer AlBaten-(٣٠٠ beds)	No	١٢٥٠	٦٢٥٠	١	١
٢	Hafer Al Batin Central Hospital(٢٠٠ beds)	Yes Carestream	١٢٥٠	٦٢٥٠	١	١
٣	Maternity and Children HospitalHafer Al Batin- (٣٠٠ beds)	Yes Carestream	١٢٥٠	٦٢٥٠	١	١
		Total	**٣,٧٥٠**	**١٨,٧٥٠**	This number will grow ١٠٪ per year	

Hospital	C١ Beds	No.	HIS only	HIS & PACs	HIS Vendor	PACS Vendor	
C١	>٦٠٠	١		١	١ - MedSys	١	١ - Carestream
	٢٠٠-٦٠٠	٧		٤	٢ - Oasis ١ - Careware ١ - MedicaPlus	٥	٢ - Carestream ٢ - Phillips ١ - FujiFilm
	<٢٠٠	١٠	٢		٢ - MiniHIS	١	١ Carestream
	Totals	١٨	١١٪	٢٨٪		٣٩٪	

No.	Required Extra software concurrent licenses on Cluster C١ Level Description	Qty (Concurrent Licenses)
١	٣D Post-processing (includes MRI/CT/US/Mamo/NM modalities)	٣٠
٢	Orthopedic	٢٥
٣	Concurrent Voice Recognition Licenses with un-limited profiles and or un-limited user names by seat	٨٥

No.	Cluster #	Name of Hospital	Total Volume of Studies performed per year with ١٠٪ growth	Modality types per site	Recommendation to Hospital	Total No. of Studies per ٥ years Performed/ site	Total No. of Diagnostic Workstations per ٥ years/ site	Total No. of RIS Pcs	Total No. of Clinical View Workstations per ٥ years/ site	Total No. of CD Burner with ٢٠٠٠ CDs/site per ٥ years/ site	F-Total No. of Film Digitizer per ٥ years / site
		C١ Cluster - Small Hospitals has no RIS/PACS:									
١	C١	Aflaj Hospitals- Al Aflaj- (١٢٠ beds) - (has no PACS/RIS)	٣٦,٠٠٠	x-ray, US, CT, MRI, mamo, Fluoroscopy	Connection To central solution directly	١٨٠,٠٠٠	٢ x ٦MP wide with second RIS Monitor	١٧ (١٤ aside modalities and ٣ at reception and working area	٢٠ (single ٢ MP)	١	١
٢	C١	Wadi Adwaser Hospital- Wadi Adwaser- (١٢٠ beds) - has no PACS/RIS)	٢٠,٠٠٠	x-ray, US, CT, MRI, Mamo	Connection To central solution directly	١٠٠,٠٠٠	١ x ٦MP wide with second RIS Monitor	١٠ (٧ aside modalities and ٣ at reception and working area	٢٨ (single ٢ MP)	١	١
٣	C١	Hotat Tamem Hospital- Hotat- (١٠٠ beds) - has no PACS/RIS)	٢٨,٠٠٠	x-ray, US, CT, Fluoroscopy	Connection To central solution directly	١٤٠,٠٠٠	١ x ٦MP wide with second RIS Monitor	٧ (٥ aside modalities and ٢ at reception and working area	٢٥ (single ٢ MP)	١	١
٤	C١	Sulayil Hospital- Sulayil- (١٠٠ beds) - has no PACS/RIS)	٢٣,٠٠٠	x-ray, US, CT, Fluoroscopy	Connection To central solution directly	١١٥,٠٠٠	١ x ٦MP wide with second RIS Monitor	٧ (٥ aside modalities and ٢ at reception and working area	٥ (single ٢ MP)	١	١

٥	C١	Alrean Hospital- Alrean- (٥٠ beds) - has no PACS/RIS)	٦,٥٠٠	x-ray	Connection To central solution directly	٣٢,٥٠٠	٠	٥ (٢ aside modalities and ٣ at reception and working area	٥ (single ٢ MP)	١	١
٦	C١	Prince Salman Bin Mohammed General Hospital Dalam- Dalam – (٥٠ beds) - has no PACS/RIS)	٦,٥٠٠	x-ray, US	Connection To central solution directly	٣٢,٥٠٠	١ x ٦MP wide with second RIS Monitor	٦ (٣ aside modalities and ٣ at reception and working area	١٠ (single ٢ MP)	١	١
٧	C١	Khasra Hospital- Khasra- (٥٠ beds) - has no PACS/RIS)	٥,٠٠٠	x-ray	Connection To central solution directly	٢٥,٠٠٠	٠	٥ (٢ aside modalities and ٣ at reception and working area	١٥ (single ٢ MP)	١	١
٨	C١	Rewaydat Alard Hospital- Rewaydat Alard- (٥٠ beds) - has no PACS/RIS)	٩,٥٠٠	x-ray, US, CT	Connection To central solution directly	٤٧,٥٠٠	١ x ٦MP wide with second or third RIS Monitor	٥ (٣ aside modalities and ٢ at reception and working area	٩ (single ٢ MP)	٠	٠
٩	C١	Alhareq Hospital- Alhareq- (٥٠ beds) - has no PACS/RIS)	٩,٥٠٠	x-ray, US, CT	Connection To central solution directly	٤٧,٥٠٠	١ x ٦MP wide with second or third RIS Monitor	٨ (٥ aside modalities and ٣ at reception and working area	١٠ (single ٢ MP)	١	١
١٠	C١	Al Naqaha Hospital- Riyadh- (٥٠ beds) - has no PACS/RIS)	٥,٠٠٠	x-ray, US, CT	Connection To central solution directly	٢٥,٠٠٠	١ x ٦MP wide with second or third RIS Monitor	٦ (٤ aside modalities and ٢ at reception and working area	١٠ (single ٢ MP)	١	١
		C١ Cluster - Medium to large Hospitals									
١١	C١	Goeyah Hospital- Goeyah- (٢٠٠ beds) - (has no PACS/RIS)	٥٥,٠٠٠	x-ray, US, CT, MRI, mamo, Fluoroscopy , BMD	Have local PACS/RIS with Medium size of storage/server on site with connection to central solution directly	٢٧٥,٠٠٠	١ x ٦MP wide with second RIS Monitor + ١ dual ٥MP with second or third RIS Monitor	١١ (٨ aside modalities and ٣ at reception and working area	٣٠ (single ٢ MP)	١	١
		C١ Cluster - existing PACS/RIS									
١٢	C١	King Saud Medical City- Riyadh- (١٢٠٠ beds)- Carestream PACS/RIS	٢٢٨,٠٠٠	X-Ray ,CT, MRI, US, mamo, BMD, Fluoroscopy, etc.	Upgrade or replace with connection to central solution directly	١,١٤٠,٠٠٠	١٥ x ٦MP , ١٠ x ٨MP existed with second or third RIS Monitor	٦٠		١	١
١٣	C١	King Salman Abdulaziz Hospital- Riyadh- (٢٥٦ beds)- Philips PACS/RIS	١٢١,٠٠٠	X-Ray ,CT, MRI, US, mamo, BMD, Fluoroscopy, etc.	Upgrade or replace with connection to central solution directly	٦٠٥,٠٠٠	١ X ٥ MP, ٣ X ٣ MP (B/W), ١ X ٣ MP (Color), ٢ X ٢ MP (B/W), ١ X ٢MP (Color) existed with second or third RIS	٧٠ existed	٣٠ x ٢MP existed	١ existed	١ existed

							Monitor + ٣ X ٦MP new with second or third RIS Monitor				
١٤	C١	Al Iman General Hospital- Riyadh- (٢٠٧ beds)- Fujifilm PACS/RIS	٧٥,٠٠٠	X-Ray ,CT, MRI, US, mamo, BMD, Fluoroscopy, etc.	Upgrade or replace with connection to central solution directly	٣٧٥,٠٠٠	٣ X ٨MP, ٢ X ٦MP, ١ X ٥ MP, existed with second or third RIS Monitor + ٤ X ٦MP at new tower with second or third RIS Monitor	٣٤ X RIS existed, + ٢٥ at new tower	٤٩ x ٢MP + ٢١ at new tower	٠	٠
١٥	C١	Al Imam Abdul Rahman Al Faisal Hospital- Riyadh- (٢٠٠ beds)- Philips PACS/RIS	٧٥,٠٠٠	X-Ray ,CT, MRI, US, mamo, BMD, Fluoroscopy, etc.	Upgrade or replace with connection to central solution directly	٣٧٥,٠٠٠	١ x ٥MP, ١ x ٦ MP, ٣ x ٣MP existed	٨ X RIS existed,	٣٣ x ٢MP existed	١	١
١٦	C١	Muzahmia Hospital- Muzahmia- (٥٠ beds) – Carestream PACS/RIS	١٩,٠٠٠	x-ray, US, CT	Connection To central solution directly	٩٥,٠٠٠	١ x ٢MP, ١ x ٣MP, existed with second or third RIS Monitor	٤٨ existed	١١ x ٢ MP existed	١ existed	١ existed
١٧	C١	Children and Delivery Hospital- Al Kharj- (٢٠٠ beds)- Carestream PACS/RIS	٨,٠٠٠	x-ray, US, CT	Connection To central solution directly	٤٠,٠٠٠	٥ x ٤MP, ٢ x ٦MP, ٢ x ٨MP existed with second or third RIS Monitor	٢٢ existed	٣٠ x ٢MP existed	١ existed	١ existed
١٨	C١	King Khalid Hospital – Al Kharj- (٣٥٠ beds) - Carestream PACS/RIS	٣٥,٠٠٠	X-Ray ,CT, MRI, US, mamo, BMD, Fluoroscopy, etc.	Upgrade or replace with connection to central solution directly	١٧٥,٠٠٠	٥ x ٤MP, ٤ x ٦MP, ١ x ٨MP existed with second or third RIS Monitor	٣٠ existed	٤٠ x ٢MP existed	١ existed	١ existed
		Total No. of Exams cross Cluster C١	٧٦٥,٠٠٠			٣,٨٢٥,٠٠٠					

C١ Cluster Breast Cancer Screening Data

#	Hospital Name	PACS Yes/No	Total Number of scanned exam per Year	Total Number of scanned exam per ٥ Years	Total Number of breast cancer screening PC & scanner per ٥ Years	Total Number of DICOM Worklist Gateway per ٥ Years
١	Aflaj HospitalsAl Aflaj- (١٢٠ beds)	No	١٢٥٠	٦٢٥٠	١	١
٢	Wadi Adwaser Hospital- Wadi Adwaser- (١٢٠ beds)	No	١٢٥٠	٦٢٥٠	١	١
٣	Goeyah Hospital Goeyah- (٢٠٠ beds)	No	١٢٥٠	٦٢٥٠	١	١
٤	King Saud Medical City Riyadh- (١٢٠٠ beds)	Yes Carestream	١٢٥٠	٦٢٥٠	١	١
٥	King Salman Abdulaziz HospitalRiyadh- (٢٥٦ beds)	Yes Philips	١٢٥٠	٦٢٥٠	١	١
٦	Al Iman General Hospital Riyadh- (٢٠٧ beds)	Yes FujiFilm	١٢٥٠	٦٢٥٠	١	١
٧	Al Imam Abdul Rahman Al Faisal Hospital Riyadh- (٢٠٠ beds)	Yes Philips	١٢٥٠	٦٢٥٠	١	١
٨	King Khalid Hospital – Al Kharj- (٣٥٠ beds)	Yes Carestream	١٢٥٠	٦٢٥٠	١	١
		Total	١٠,٠٠٠	٥٠,٠٠٠	This number will grow ١٠٪ per year	

Hospital	C٢ Beds	No.	HIS only	HIS & PACs	HIS Vendor	PACS Vendor	
C٢	>٦٠٠	١		١	١ - Cortex	١	١ - GE
	٢٠٠-٦٠٠	٣	١	٢	١ - Oasis ١ - Local ١ - Cerner	٢	١- Carestream ١- GE
	<٢٠٠	٨	٢		٢ - MiniHIS	١	١- Carestream
	Totals	١٢	٢٥٪	٢٥٪		٣٣٪	

No.	Required Extra software concurrent licenses on Cluster C٢ Level Description	Qty (Concurrent Licenses)
١	٣D Post-processing (includes MRI/CT/US/Mamo/NM modalities)	٢٥
٢	Orthopedic	١٥
٣	Concurrent Voice Recognition Licenses with un-limited profiles and or un-limited user names by seat	٩٧

No.	Cluster #	Name of Hospital	Total Volume of Studies performed per year with ١٠٪ growth	Modality types per site	Recommendation to Hospital	Total No. of Studies per ٥ years Performed/ site	Total No. of Diagnostic Workstations per ٥ years/ site	Total No. of RIS Pcs	Total No. of Clinical View Workstations per ٥ years/ site	Total No. of CD Burner with ٢٠٠٠ CDs/site per ٥ years/ site	F-Total No. of Film Digitizer per ٥ years / site
		C٢ Cluster – small to medium hospitals (has no RIS/PACS)									
١	C٢	King Khalid Hospital Magmah-(٢٠٤ beds) - (has no PACS/RIS)	٣١,٠٠٠	X-Ray, US,CT, MRI, Mamo	Connection To central solution directly	١٥٥,٠٠٠	١ x ٥ MP + ١ x ٦ MP	١٥ (٩ aside modalities + ٦ at reception/working area)	٢٠ x ٢ MP	١	١
٢	C٢	Zulfi Hospital-(١٧٠ beds) - (has no PACS/RIS)	٢٠,٠٠٠	X-Ray, US,CT, MRI, Fluoroscopy	Connection To central solution directly	١٠٠,٠٠٠	١ x ٦ MP	١٠ (٥ aside modalities + ٥ at reception/working area)	٢٠ x ٢ MP	١	١
٣	C٢	Hotat Sedir Hospital-(٨٥ beds) - (has no PACS/RIS)	١٠,٥٠٠	X-Ray, US,CT	Connection To central solution directly	٥٢,٥٠٠	١ x ٦MP	١٢ (٩ aside modalities + ٣ at reception/working area)	١٦ x ٢MP	١	١
٤	C٢	Algat Hospital-(٥٠ beds) - (has no PACS/RIS)	١١,٠٠٠	X-Ray, US,CT	Connection To central solution directly	٥٥,٠٠٠	١ x ٦MP	١٠ (٥ aside modalities + ٥ at reception/working area)	١٢ x ٢MP	١	١
٥	C٢	Tamer Hospital-(٥٠ beds) - (has no PACS/RIS)	٢٢,٠٠٠	X-Ray, US,CT	Connection To central solution directly	١١٠,٠٠٠	٠	١٠ (٦ aside modalities + ٤ at reception/working area)	١١ x ٢MP	١	١

٦	C٢	Ramah Hospital-(٥٠ beds) - (has no PACS/RIS)	١٢,٢٠٠	X-Ray, US,CT	Connection To central solution directly	٦١,٠٠٠	١ x ٦MP	١٢ (٩ aside modalities + ٣ at reception/working area)	١١ x ٢MP	١	١
٧	C٢	King Saud Chest Diseases Hospital-(١٣٠ beds) - (has no PACS/RIS)	٤٠,٠٠٠	X-Ray, US,CT,	Connection To central solution directly	٢٠٠,٠٠٠	١ x ٦MP	١٢ (٨ aside modalities + ٤ at reception/working area)	١١ x ٢MP	١	١
		C٢ Cluster ,existing PACS/RIS									
٨	C٢	King Fahad Medical City -Riyadh-(١.٢K beds)-GE PACS/RIS	١٨٠,٠٠٠	x-ray, CT, MRI, Mamo, US, BMD, Nuclear medicine, Fluoroscopy	Have local PACS/RIS with Medium size of storage/server on site with connection to central solution directly	٩٠٠,٠٠٠	٣٠ x ٦ MP , ٩ x ٣ MP, ٨ x ٢ MP, ٤ x ٥ MP existed + ٥ x ٦ MP + ١ x ٥MP New	٧٥ existed	٠	١	١
٩	C٢	Prince Mohammed bin Abdul Aziz Hospital-Riyadh- (٥٠٠ beds)-GE PACS/RIS	٨٠,٠٠٠	x-ray, CT, MRI, Mamo, US, BMD, Nuclear medicine, Fluoroscopy	Have local PACS/RIS with Medium size of storage/server on site with connection to central solution directly	٤٠٠,٠٠٠	٢ x ٢MP, ١ x ٣MP, ٩ x ٣MP (Color), ١ x ٢MP (Black & white), ٣ x ٢MP (Color) , ٣ x ٥ MP existed	٢٠ existed	٧٠ x ٢MP existed	١	١
١٠	C٢	Arta Wiah Hospital - Riyadh-(٥٠ beds)- Carestream PACS/RIS	٦,٠٠٠	x-ray, CT, US	Have local PACS/RIS with Medium size of storage/server on site with connection to central solution directly	٣٠,٠٠٠	١ x ٢MP, ١ x ٣MP existed	٤٨ existed	١١ x ٢MP existed	١	١
١١	C٢	Al Yamamah Hospital-Riyadh-(٤١١ beds)- Carestream PACS/RIS	٣٢,٧٩٠	x-ray, CT, MRI, Mamo, US	Have local PACS/RIS with Medium size of storage/server on site with connection to central solution directly	١٦٣,٩٥٠	٧ x ٢MP, ٣ x ٣MP, ١ x ٥MP	٩٥	١٤ x ٢MP existed	١	١
		Total No. of Exams cross Cluster C٢	٤٤٥,٤٩٠			٢,٢٢٧,٤٥٠					

C٢ Breast Cancer Screening Data

#	Hospital Name	PACS Yes/No	Total Number of scanned exam per Year	Total Number of scanned exam per ٥ Years	Total Number of breast cancer screening PC & scanner per ٥ Years	Total Number of DICOM Worklist Gateway per ٥ Years
١	King Khalid Hospital Magmah(٢٠٤ beds)	No	١٢٥٠	٦٢٥٠	١	١
٢	King Fahad Medical City - Riyadh(١.٢K beds)	Yes GE	١٢٥٠	٦٢٥٠	١	١
٣	Prince Mohammed bin AbdulAziz Hospital Riyadh- (٥٠٠ beds)	Yes GE	١٢٥٠	٦٢٥٠	١	١
٤	Al Yamamah Hospital Riyadh-(٤١١ beds)	Yes Carestream	١٢٥٠	٦٢٥٠	١	١
		Total	**٥,٠٠٠**	**٢٥,٠٠٠**	This number will grow ١٠٪ per year	

Hospital	S١ Beds	No.	HIS only	HIS & PACs	HIS Vendor	PACS Vendor	
S١	>٦٠٠						
	٢٠٠-٦٠٠	٣		٢	١ - MiniHIS ١- Icare	٣	٢ - Carestream ١ - GE
	<٢٠٠	١٨	١	٢	٢ - MiniHIS	١٦	١٦- Carestream
	Totals	٢١	٥%	١٩%		٩٠%	

No.	Required Extra software concurrent licenses on Cluster S١ Level Description	Qty (Concurrent Licenses)
١	٣D Post-processing (includes MRI/CT/US/Mamo/NM modalities)	٣٠
٢	Orthopedic	٢١
٣	Concurrent Voice Recognition Licenses with un-limited profiles and or un-limited user names by seat	٥٠

No.	Cluster #	Name of Hospital	Total Volume of Studies performed per year with ١٠٪ growth	Modality types per site	Recommendation to Hospital	Total No. of Studies per ٥ years Performed/ site	Total No. of Diagnostic Workstations per ٥ years/ site	Total No. of RIS Pcs	Total No. of Clinical View Workstations per ٥ years/ site	Total No. of CD Burner with ٢٠٠٠ CDs/site per ٥ years/ site	F-Total No. of Film Digitizer per ٥ years / site
		S١ Cluster - Small to medium Hospitals has no RIS/PACS:									
١	S١	Alkharja General Hospital – Baha - (٥٠ beds) - (has no PACS/RIS)	١٠٠٠	X-ray	Connection To central solution directly	٥,٠٠٠	٠	٠	٠	٠	٠
٢	S١	Mental Health Hospital in Bisha- Asir - (١٠٠ beds) - (has no PACS/RIS)	١١,٠٠٠	X-ray	Connection To central solution directly	٥٥,٠٠٠	١ x ٦ MP	٥ (٢ aside modalities + ٣ at working area	٥ x ٢MP	١	١
		S١ Cluster - existing PACS/RIS									
٣	S١	Asir Central Hospital- (٤٥٠ beds)- CareStream PACS/RIS	١٦٠,٠٠٠	CT, MRI ,X-ray, US, mamo, BMD,	Upgrade or replace with connection to central solution directly	٨٠٠,٠٠٠	٨ x ٣MP , ٨ x ٦ MP existed + ١ x ٥ MP New	٢٦ existed	٣٠ x ٢MP existed	١	١

٤	S١	Khamis Mushayt General Hospital - (١٥٠ beds)- CareStream PACS/RIS	٥٧,٠٠٠	CT, MRI ,X-ray, US,	Upgrade or replace with connection to central solution directly	٢٨٥,٠٠٠	١ x ٢ MP, ٣ x ٣ MP existed + ١ x ٦MP	٦٨ existed	٧ X ٢MP existed	١	١
٥	S١	Sarat Ubaida General Hospital - (١٢٠ beds)- CareStream PACS/RIS	٢٠,٠٠٠	X-ray, US,	Connection To central solution directly	١٠٠,٠٠٠	١ x ٢ MP existed	٦٥ existed	٤ X ٢MP existed	١	١
٦	S١	Dhahran Al-Janoab General Hospital - (١٠٠ beds)- CareStream PACS/RIS	١٨,٠٠٠	X-ray, US,	Connection To central solution directly	٩٠,٠٠٠	١ x ٢ MP existed	٦٧ existed	٤ X ٢MP existed	١	١
٧	S١	Rejal Almaa General Hospital - (١٠٠ beds)- CareStream PACS/RIS	١٤,٠٠٠	X-ray, US,	Connection To central solution directly	٧٠,٠٠٠	١ x ٢ MP existed	٤٢ existed	٤ X ٢MP existed	١	١
٨	S١	Uhod Rafidah General Hospital - (٥٠ beds)- CareStream PACS/RIS	٢٤,٠٠٠	X-ray, US,	Connection To central solution directly	١٢٠,٠٠٠	١ x ٢ MP existed	٣٥ existed	٤ X ٢MP existed	١	١
٩	S١	Al-Farshah Hospital - (٥٠ beds)- CareStream PACS/RIS	٥,٥٠٠	X-ray, US,	Connection To central solution directly	٢٧,٥٠٠	١ x ٢ MP existed	٣٢ existed	٤ X ٢MP existed	١	١
١٠	S١	Al-Harjah Hospital - (٥٠ beds)- CareStream PACS/RIS	٧,٠٠٠	X-ray, US,	Connection To central solution directly	٣٥,٠٠٠	١ x ٢ MP existed	٣٥ existed	٤ X ٢MP existed	١	١
١١	S١	Khamis Mushayt Maternity Hospital - (٢٠٠ beds)- GE PACS/RIS	٣٥,٠٠٠	X-ray, US, CT, MRI, Mamo	Connection To central solution directly	١٧٥,٠٠٠	١ X DWS with ٢ MP NIO ١ x DWS ٣ MP NIO color ١X DWS with ٦ MP ١ x DWS ٣ MP NIO gray scale ١ x DWS ٥ MP NIO existed	٢٢ existed	١٠ x ١٠ MP	١	١
١٢	S١	Maternity & Children's Hospital in Abha - (٢٠٠ beds)- CareStream PACS/RIS	٢٣,٠٠٠	X-ray, US, CT	Connection To central solution directly	١١٥,٠٠٠	١ x ٢ MP existed	٦٤ existed	٤ X ٢MP existed	١	١

١٣	S١	Bilhamar General Hospital(٥٠ beds)- CareStream- PACS/RIS	١٢,٠٠٠	X-Ray, US, CT	Connection To central solution directly	٦٠,٠٠٠	١ x ٢MP existed	٦٩ existed	٤ x ٢MP existed	٠	٠
١٤	S١	Al-Madhah Hospital(٥٠ beds)- CareStream- PACS/RIS	٥,٠٠٠	X-Ray, US	Connection To central solution directly	٢٥,٠٠٠	١ x ٢MP existed	٣٥ existed	٤ x ٢MP existed	٠	٠
١٥	S١	Tannumah Hospital(٥٠ beds)- CareStream- PACS/RIS	٩,٥٠٠	X-Ray, US	Connection To central solution directly	٤٧,٥٠٠	١ x ٢MP, ١ x ٣ MP existed	٤٨ existed	١١ x ٢MP existed	٠	٠
١٦	S١	Mahayel General Hospital- (١٧٠ beds)- Carestream PACS/RIS	٦٠,٠٠٠	X-Ray, US, CT, MRI, Fluoroscopy,	Upgrade or replace with connection to central solution directly	٣٠٠,٠٠٠	١ x ٢MP, ١ x ٣MP existed + ١ x ٦ MP New	٤٠ existed	٨ x ٢MP existed	١	١
١٧	S١	Al-Namas General Hospital- (١٠٠ beds)- CareStream PACS/RIS	٢٠,٠٠٠	X-Ray, US, CT,	Connection To central solution directly	١٠٠,٠٠٠	١ x ٢MP existed	٦٩existed	٤ x ٢MP existed	١	١
١٨	S١	Bllsamar General Hospital(١٠٠ beds)- CareStream- PACS/RIS	١٢,٠٠٠	X-Ray, US, CT	Connection To central solution directly	٦٠,٠٠٠	١ x ٢MP existed	٦٩ existed	٤ x ٢MP existed	٠	٠
١٩	S١	Al-Majardah General Hospital- (١٠٠ beds)- CareStream PACS/RIS	٣٠,٠٠٠	X-Ray, US, CT,	Connection To central solution directly	١٥٠,٠٠٠	١ x ٢MP existed	٦٦existed	٤ x ٢MP existed	١	١
٢٠	S١	Al-Qahmah General Hospital - (٥٠ beds) - Carestream PACS/RIS)	٣,٠٠٠	X-Ray, US	Connection To central solution directly	١٥,٠٠٠	١x ٢MP existed	٣٥ existed	٤ x ٢MP existed	١	١
٢١	S١	Al-Berk General Hospital (٥٠ beds)- CareStream- PACS/RIS	٦,٠٠٠	X-Ray, US, CT	Connection To central solution directly	٣٠,٠٠٠	١ x ٢MP existed	٣٥ existed	٤ x ٢MP existed	٠	٠
		Total No. of Exams cross Cluster S١	**٥٣٣,٠٠٠**			**٢,٦٦٥,٠٠٠**					

S١ Breast Cancer Screening Data						
#	Hospital Name	PACS Yes/No	Total Number of scanned exam per Year	Total Number of scanned exam per ٥ Years	Total Number of breast cancer screening PC & scanner per ٥ Years	Total Number of DICOM Worklist Gateway per ٥ Years
١	Asir Central Hospital- (٤٥٠ beds)	Yes Carestream	١٢٥٠	٦٢٥٠	١	١
٢	Khamis Mushayt Maternity Hospital - (٢٠٠ beds)	Yes GE	١٢٥٠	٦٢٥٠	١	١
		Total	**٢,٥٠٠**	**١٢,٥٠٠**	This number will grow ١٠٪ per year	

Hospital	S٢ Beds	No.	HIS only	HIS & PACs	HIS Vendor	PACS Vendor	
S٢	>٦٠٠						
	٢٠٠-٦٠٠	٣		٢	١ – Centralized HIS ١ - MedicaPlus	٢	٢ - Philips
	<٢٠٠	١٨	٤	٢	٥ - MiniHIS ١ - Oasis	٣	٣ - Carestream
	Totals	٢١	١٩٪	١٩٪		٢٤٪	

No.	Required Extra software concurrent licenses on Cluster S٢ Level Description	Qty (Concurrent Licenses)
١	٣D Post-processing (includes MRI/CT/US/Mamo/NM modalities)	١٠
٢	Orthopedic	١٠
٣	Concurrent Voice Recognition Licenses with un-limited profiles and or un-limited user names by seat	٣٥

No.	Cluster #	Name of Hospital	Total Volume of Studies performed per year with ١٠٪ growth	Modality types per site	Recommendation to Hospital	Total No. of Studies per ٥ years Performed/ site	Total No. of Diagnostic Workstations per ٥ years/ site	Total No. of RIS Pcs	Total No. of Clinical View Workstations per ٥ years/ site	Total No. of CD Burner with ٢٠٠٠ CDs/site per ٥ years/ site	F-Total No. of Film Digitizer per ٥ years / site
		S٢ Cluster - Small to medium Hospitals has no RIS/PACS:									
١	S٢	Sametah General Hospital- (١٥٠ beds) - (has no PACS/RIS)	٥٤,٠٠٠	CT, MRI, X-Ray, US, Fluoroscopy	Connection To central solution directly	٢٧٠,٠٠٠	٠	٢٠ (١٤ aside modalities + ٦ at working area) New	٢٠ x ٢MP New	١	١
٢	S٢	Sabya General Hospital- (١٥٠ beds) - (has no PACS/RIS)	٥٥,٠٠٠	CT, MRI, X-Ray, Mamo, US, Fluoroscopy	Connection To central solution directly	٢٧٥,٠٠٠	١ x ٦MP + ١ x ٥MP New	١٥ (٩ aside modalities + ٦ at working area) New	٢٤ x ٢MP New	١	١
٣	S٢	Abu Arish General Hospital- (١٣٠ beds) - (has no PACS/RIS)	٦٣,٠٠٠	CT, MRI, X-Ray, US,	Connection To central solution directly	٣١٥,٠٠٠	٠	١٥ (٩ aside modalities + ٦ at working area) New	٢٠ x ٢MP New	١	١
٤	S٢	Forasan General Hospital- (٧٠ beds) - (has no PACS/RIS)	٩,٠٠٠	CT, X-Ray, US,	Connection To central solution directly	٤٥,٠٠٠	١ x ٦MP New	١٠ (٥ aside modalities + ٥ at working area) New	١٥ x ٢MP New	١	١
٥	S٢	Fifa General Hospital- (٦٥ beds) - (has no PACS/RIS)	٨,٠٠٠	CT, X-Ray, US,	Connection To central solution directly	٤٠,٠٠٠	٠	١٠ (٥ aside modalities + ٥ at working	١٣ x ٢MP New	٠	٠

								area) New			
٦	S٢	Al-Ardhah General Hospital- (٦٠ beds) - (has no PACS/RIS)	١٦,٥٠٠	X-Ray, US,	Connection To central solution directly	٨٢,٥٠٠	١ x ٦MP New	٥ (٣ aside modalities + ٢ at working area) New	١٢ x ٢MP New	١	١
٧	S٢	Ahed Masarha General Hospital- (٥٠ beds) - (has no PACS/RIS)	٢٧,٠٠٠	X-Ray, US, CT	Connection To central solution directly	١٣٥,٠٠٠	١ x ٦MP New	١٠ (٥ aside modalities + ٥ at working area) New	٨ x ٢MP New	١	١
٨	S٢	Al-Darb General Hospital- (٥٠ beds) - (has no PACS/RIS)	١٥,٥٠٠	X-Ray, US, CT	Connection To central solution directly	٧٧,٥٠٠	١ x ٦MP New	١٠ (٦ aside modalities + ٤ at working area) New	١٢ x ٢MP New	١	١
٩	S٢	Al-Reath Hospital- (٥٠ beds) - (has no PACS/RIS)	١٨,٠٠٠	X-Ray	Connection To central solution directly	٩٠,٠٠٠	٠	٥ (٢ aside modalities + ٣ at working area) New	١٢ x ٢MP New	١	١
١٠	S٢	Al-Tiwal General Hospital- (٥٠ beds) - (has no PACS/RIS)	١٨,٠٠٠	X-Ray, US	Connection To central solution directly	٩٠,٠٠٠	١ x ٦MP New	٧ (٥ aside modalities + ٢ at working area)	١٢ x ٢MP New	١	١
١١	S٢	Al-Mosim General Hospital- (٥٠ beds) - (has no PACS/RIS)	٢٧,٠٠٠	X-Ray, US	Connection To central solution directly	١٣٥,٠٠٠	٠	٥ (٣ aside modalities + ٢ at working area)	١٠ x ٢MP New	١	١
١٢	S٢	Bani Malek General Hospital- (٥٠ beds) - (has no PACS/RIS)	٣٩,٥٠٠	X-Ray, US, CT	Connection To central solution directly	١٩٧,٥٠٠	١ x ٦MP New	١٢ (٦ aside modalities + ٦ at working area)	١٢ x ٢MP New	١	١
١٣	S٢	Dhamad General Hospital- (٥٠ beds) - (has no PACS/RIS)	٣٩,٣٠٠	X-Ray, US,	Connection To central solution directly	١٩٦,٥٠٠	٠	١٢ (٦ aside modalities + ٦ at working area)	١٠ x ٢MP New	١	١
١٤	S٢	Al-Khobah Hospital- (٥٠ beds) - (has no PACS/RIS)	٨,٠٠٠	CT, X-Ray, US,	Connection To central solution directly	٤٠,٠٠٠	٠	١٠ (٥ aside modalities + ٥ at working area) New	١٣ x ٢MP New	٠	٠
١٥	S٢	Mental Health Hospital in Jazan- (٢٠٠ beds) - (has no PACS/RIS)	١,٠٠٠	X-Ray	Connection To central solution directly	٥,٠٠٠	٠	٢ (١ aside modalities + ١ at working area)	٣ x ٢MP New	٠	٠
١٦	S٢	Chest Hospital- (٥٠ beds) - (has no PACS/RIS)	١٣,٠٠٠	X-Ray	Connection To central solution directly	٦٥,٠٠٠	٠	٥ (٢aside modalities + ١ at working area)	٣ x ٢MP New	٠	٠
		S٢ Cluster - existing PACS/RIS									

١٧	S٢	King Fahd Central Hospital in Jazan- (٤٥٠ beds)- Philips PACS/RIS	٧٥,٠٠٠	CT, MRI, X-Ray, US, Fluoroscopy	Upgrade or replace with connection to central solution directly	٣٧٥,٠٠٠	١ X ٥ MP, ٣ X ٣ MP (B/W), ١ X ٣ MP (Color), ١ X ٢ MP (B/W), ١ X ٢MP (Color) existed with second or third RIS Monitor + ٣ X ٦MP new with second or third RIS Monitor, ١ x ٥MP third RIS Monitor	٣٠	٣٠ x ٢MP existed	١	١
١٨	S٢	Prince Mohammed bin Nasser Hospital- (١٥٠ beds)- Philips PACS/RIS	٤٥,٠٠٠	CT, MRI, X-Ray, US, Fluoroscopy	Connection To central solution directly	٢٢٥,٠٠٠	١ x ٥ MP, ١ x ٦ MP, ٣ x ٣ MP existed	٨	٤١ x ٢MP	١	١
١٩	S٢	Jazan General Hospital - (١٥٠ beds)- Carestream PACS/RIS	٢٣,٠٠٠	CT, X-Ray, US, Mamo, Fluoroscopy	Connection To central solution directly	١١٥,٠٠٠	١ x ٢MP, ٣ x ٣MP, ١ x ٥MP existed with second or third RIS Monitor + ١ ٦MP New	٥٣ existed	٢٥ x ٢MP existed	١	١
٢٠	S٢	Besh General Hospital - (١٠٠ beds)- CareStream PACS/RIS	٢٦,٠٠٠	CT, X-Ray, US,	Connection To central solution directly	١٣٠,٠٠٠	١ x ٢MP, ١ x ٣MP existed with second or third RIS Monitor	٤٦ existed	٦٠ x ٢MP existed	١	١
٢١	S٢	Al-Aydaby hospital - (٥٠ beds)- CareStream PACS/RIS	٦,٠٠٠	X-Ray, US,	Connection To central solution directly	٣٠,٠٠٠	١ x ٢MP, ١ x ٣MP existed with second or third RIS Monitor	٤٨ existed	١١ x ٢MP existed		
		Total No. of Exams cross Cluster S٢	**٥٨٦,٩٠٠**			**٢,٩٣٤,٥٠٠**					

S٢ Breast Cancer Screening Data

#	Hospital Name	PACS Yes/No	Total Number of scanned exam per Year	Total Number of scanned exam per ٥ Years	Total Number of breast cancer screening PC & scanner per ٥ Years	Total Number of DICOM Worklist Gateway per ٥ Years
١	Sabya General Hospital- (١٥٠ beds)	No	١٢٥٠	٦٢٥٠	١	١
٢	Jazan General Hospital - (١٥٠ beds)	Yes Carestream	١٢٥٠	٦٢٥٠	١	١
		Total	**٢,٥٠٠**	**١٢,٥٠٠**	This number will grow ١٠٪ per year	

Hospital	W١ Beds	No.	HIS only	HIS & PACs	HIS Vendor	PACS Vendor	
W١	>٦٠٠						
	٢٠٠-٦٠٠	٧		٦	٣ - MedicaPlus ٢ - Careware ١ - AST	٦	٤ - GE ١ - Philips ١ - Agfa
	<٢٠٠	١٣					
	Totals	٢٠	٠٪	٣٠٪		٣٠٪	

No.	Required Extra software concurrent licenses on Cluster W١ Level Description	Qty (Concurrent Licenses)
١	٣D Post-processing (includes MRI/CT/US/Mamo/NM modalities)	٣٥
٢	Orthopedic	٢٠
٣	Concurrent Voice Recognition Licenses with un-limited profiles and or un-limited user names by seat	١٠٠

No.	Cluster #	Name of Hospital	Total Volume of Studies performed per year with ١٠٪ growth	Modality types per site	Recommendation to Hospital	Total No. of Studies per ٥ years Performed/ site	Total No. of Diagnostic Workstations per ٥ years/ site	Total No. of RIS Pcs	Total No. of Clinical View Workstations per ٥ years/ site	Total No. of CD Burner with ٢٠٠٠ CDs/site per ٥ years/ site	F-Total No. of Film Digitizer per ٥ years / site
١	W١	Khulais Hospit-(٦٥ beds) - (has no PACS/RIS)	٢٣,٨٩٦	X-ray + CT + US	Connection To central solution directly	١١٩,٤٨٠	٠	١٠	١٥x ٢MP	١	١
٢	W١	Al-Kamel General Hospital-(٥٠ beds) - (has no PACS/RIS)	٨٤,١٥٩	X-ray	Have local PACS/RIS with Medium size of storage/server on site with connection to central solution directly	٤٢٠,٧٩٥	١x ٦MP	٦	١٢x ٢MP	١	١
٣	W١	Ajyad Emergency Hospital-(٥٠ beds) - (has no PACS/RIS)	٩,٤٠١	X-ray + CT + US	Connection To central solution directly	٤٧,٠٠٥	١x ٦MP	٩	٤x ٢MP	١	١
٤	W١	Ibn Sina Recovery Hospital-(١٥٠ beds) - (has no PACS/RIS)	١١,٦٤٦	X-ray + US	Connection To central solution directly	٥٨,٢٣٠	١x ٦MP	١٠	١٠x ٢MP	١	١
٥	W١	Haram Emergency Hospital-(٥٠ beds) - (has no PACS/RIS)	٥,٠٠٠	X-ray + US	Connection To central solution directly	٢٥,٠٠٠	١x ٦MP	٦	٤x ٢MP	١	١
٦	W١	AlShumaisi Hospital-(٥٠ beds) - (has no PACS/RIS)	١,٧٠٠	X-ray	Connection To central solution directly	٨,٥٠٠	٠	٢	١٥ x ٢ MP	٠	٠
٧	W١	Mina AlWadi Hospital (has no PACS/RIS)	٢,٠٠٠	X_ray,C_Arm, US,CT	Connection To central solution directly	١٠,٠٠٠	٠	٤	٢ x ٢ MP	٠	٠
٨	W١	Arafat General Hospital (has no PACS/RIS)	٢,٠٠٠	X_ray,US	Connection To central solution directly	١٠,٠٠٠	٠	٣	١ x ٢ MP	٠	٠

٩	W١	East Arafat Hospital (has no PACS/RIS)	٢,٠٠٠	X_ray,US,CT	Connection To central solution directly	١٠,٠٠٠	٠	٤	٢ x ٢ MP	٠	٠
١٠	W١	Mina Emergency Hospital(has no PACS/RIS)	٢,٠٠٠	X_ray,US,CT, C-Arm, Flurscopy	Connection To central solution directly	١٠,٠٠٠	٠	٥	٢ x ٢ MP	٠	٠
١١	W١	Mina AlJisr Hospital(has no PACS/RIS)	٢,٠٠٠	X_ray,US	Connection To central solution directly	١٠,٠٠٠	٠	٣	١ x ٢ MP	٠	٠
١٢	W١	Jabal Haram Hospital(has no PACS/RIS)	٢,٠٠٠	X_ray,US	Connection To central solution directly	١٠,٠٠٠	٠	٣	١ x ٢ MP	٠	٠
١٣	W١	Mina Shara Jadid Hospital(has no PACS/RIS)	٢,٠٠٠	X_ray,US	Connection To central solution directly	١٠,٠٠٠	٠	٣	١ x ٢ MP	٠	٠
١٤	W١	Noumera Hospital(has no PACS/RIS)	٢,٠٠٠	X_ray,US	Connection To central solution directly	١٠,٠٠٠	٠	٣	١ x ٢ MP	٠	٠
		W١ Cluster ,existing PACS/RIS									
١٥	W١	King Abdullah Medical City (Specialist)- (٥٠٠ beds)- Agfa- PACS/RIS	٩٧,٢٥٠	X-Ray ,CT, MRI, US, mamo, BMD, Fluoroscopy, etc.	Have local PACS/RIS with Medium size of storage/server on site with connection to central solution directly	٤٨٦,٢٥٠	٢٢ x ٣MP, ٦ x ٥ MP, existed + ٣ x ٦MP	٣٥ existed	٥٠ New ٢MP	١	١
١٦	W١	King Faisal Hospital (٣٠٠ beds)- GE- PACS/RIS	٩٣,٠٠٠	X-Ray ,CT, MRI, US, mamo, BMD, Fluoroscopy, etc.	Have local PACS/RIS with Medium size of storage/server on site with connection to central solution directly	٤٦٥,٠٠٠	١ X DWS with two ٥ MP monitor ٢ X DWS with ١٠ MP monitor ١١ X DWS with two ٦ MP monitor Existed	٦٠ existed	١٠ X RWS with ٤ MP Monitor ١٠X RWS with ٢ MP Monitor ١٠X RWS with ١ MP Monitor existed	١	١
١٧	W١	King Abdulaziz Hospital - (٣٠٠ beds)- GE- PACS/RIS	١١٥,٠٠٠	X-Ray ,CT, MRI, US, mamo, BMD, Fluoroscopy, etc.	Have local PACS/RIS with Medium size of storage/server on site with connection to central solution directly	٥٧٥,٠٠٠	١ X DWS with two ٥ MP monitor ٢ X DWS with ١٠ MP monitor ١١ X DWS with two ٦ MP monitor Existed	٦٠ existed	١٠ X RWS with ٤ MP Monitor ١٠X RWS with ٢ MP Monitor ١٠X RWS with ١ MP Monitor existed	١	١
١٨	W١	Hera General Hospital (٢٧٩ beds)- philips- PACS/RIS	٨٥,٠٠٠	X-Ray ,CT, MRI, US, mamo, BMD, Fluoroscopy, etc.	Have local PACS/RIS with Medium size of storage/server on site with connection to central solution directly	٤٢٥,٠٠٠	١ x ٥MP, ٣ x ٣MP (Black & white), ١ x ٣MP (Color), ١ x ٢MP (Black & white), ١ x ٢MP (Color), + New ٣ x ٦MP (Multi-modalities)	٣٠ existed + ١٠ New	٣٠ x ٢MP existed	١	١
١٩	W١	Al-Noor Specialist Hospital- (٥٠٠ beds)- GE- PACS/RIS	٢٠٨,٠٠٠	X-Ray ,CT, MRI, US, mamo, BMD, Fluoroscopy, etc.	Have local PACS/RIS with Medium size of storage/server on site with connection to central solution directly	١,٠٤٠,٠٠٠	٢ X DWS with ٢MP ٦ X DWS with ٣ MP ١ X SWS ١٠ MP existed + ٤ x ٦ MP	٨٠ x existed	١٠ x ١ MP existed + ٢٠ x ٢MP New	١	١
٢٠	W١	Maternity & Children's Hospital- Makkah- (٥٠٠	٩٠,٠٠٠	X-Ray ,CT, MRI, US, mamo, BMD,	Have local PACS/RIS with Medium size of storage/server on site with connection to	٤٥٠,٠٠٠	١ X DWS with two ٥ MP monitor	٦٩	١٠ X RWS with ٤ MP Monitor	١	١

		beds)- GE-PACS/RIS		Fluoroscopy, etc.	central solution directly		٢ X DWS with ١٠ MP monitor ١١ X DWS with two ٦ MP monitor existed		١٠X RWS with ٢ MP Monitor ١٠X RWS with ١ MP Monitor existed		
		Total No. of Exams cross Cluster W١	٨٤٠,٠٥٢			٤,٢٠٠,٢٦٠					

W١ Breast Cancer Screening Data

#	Hospital Name	PACS Yes/No	Total Number of scanned examed per Year	Total Number of scanned examed per ٥ Years	Total Number of breast cancer screening PC & scanner per ٥ Years	Total Number of DICOM Worklist Gateway per ٥ Years
١	Hera General Hospital (٢٧٩ beds)	Yes Philips	١٢٥٠	٦٢٥٠	١	١
٢	King Abdullah Medical City (Specialist)- (٥٠٠ beds)	Yes Agfa	١٢٥٠	٦٢٥٠	١	١
٣	King Faisal Hospital (٣٠٠ beds)	Yes GE	١٢٥٠	٦٢٥٠	١	١
٤	King Abdulaziz Hospital - (٣٠٠ beds)	Yes GE	١٢٥٠	٦٢٥٠	١	١
٥	Al-Noor Specialist Hospital- (٥٠٠ beds)	Yes GE	١٢٥٠	٦٢٥٠	١	١
٦	Maternity & Children's Hospital Makkah- (٥٠٠ beds)-	Yes GE	١٢٥٠	٦٢٥٠	١	١
		Total	٧,٥٠٠	٣٧,٥٠٠	This number will grow ١٠٪ per year	

Hospital	W٢ Beds	No.	HIS only	HIS & PACs	HIS Vendor	PACS Vendor	
W٢	>٦٠٠	١		١	١ - Oasis	١	١ - Sectra
	٢٠٠-٦٠٠	٣	١	٢	١ - Intersystems ٢ - Oasis	٢	٢ - GE
	<٢٠٠	٤	٤		٢ - MiniHIS ١ - ACS ١ - CentralizedHIS		
	Totals	٨	٦٣٪	٣٨٪		٣٨٪	

No.	Required Extra software concurrent licenses on Cluster W٢ Level Description	Qty (Concurrent Licenses)
١	٣D Post-processing (includes MRI/CT/US/Mamo/NM modalities)	١٥
٢	Orthopedic	١٠
٣	Concurrent Voice Recognition Licenses with un-limited profiles and or un-limited user names by seat	٧٥

No.	Cluster #	Name of Hospital	Total Volume of Studies performed per year with ١٠٪ growth	Modality types per site	Recommendation to Hospital	Total No. of Studies per ٥ years Performed/ site	Total No. of Diagnostic Workstations per ٥ years/ site	Total No. of RIS Pcs	Total No. of Clinical View Workstations per ٥ years/ site	Total No. of CD Burner with ٢٠٠٠ CDs/site per ٥ years/ site	F-Total No. of Film Digitizer per ٥ years / site
		W٢ Cluster - Small to medium Hospitals has no RIS/PACS:									
١	W٢	Rabigh General Hospital-(١٢٠ beds) - (has no PACS/RIS)	١٤,٦٢٩	X-ray, CT, US , Floro, BMD	Connection To central solution directly	٧٣,١٤٥	٣x ٦MP	١١	١١x ٢MP	١	١
٢	W٢	Al-Amal Hospital-(٢١٠ beds) - (has no PACS/RIS)	١٠,٠٠٠	X-ray	Connection To central solution directly	٥٠,٠٠٠	٠	٣	٤x ٢MP	١	١
٣	W٢	Mental Health Hospital-(١٢٥ beds) - (has no PACS/RIS)	٨٤٢	X-ray	Connection To central solution directly	٤,٢١٠	٠	٢	٥x ٢MP	١	١
٤	W٢	Children and Maternity Hospital in Aziziyah-(١٠٠ beds) - (has no PACS/RIS)	١٠,٢٧٨	X-ray, CT, US, Mamo, Floro,	Connection To central solution directly	٥١,٣٩٠	٢x ٦MP, ١x ٥MP	١٣	١٠x ٢MP	١	١
٥	W٢	Jeddah Eye Hospital-(٨٥ beds) - (has no PACS/RIS)	٢,٨٠٢	X-ray,	Connection To central solution directly	١٤,٠١٠	٠	٣x	٤x ٢MP	١	١
		W٢ Cluster ,existing PACS/RIS									
٦	W٢	King Fahad Hospital -(٧١١ beds)- Sectra-PACS/RIS	٢١٥,١٤٢	X-ray, US, Mamo, CT, MRI	Have local PACS/RIS with Medium size of storage/server on site with connection to central solution directly	١,٠٧٥,٧١٠	١١x ٣MP, ٧x ٦MP, ٧x ٨MP, ٢x ١٠MP existed New, ٦x ٦MP	٥٦ existed	٨x ٢MP existed	١	١

٧	W٢	King Abdullah Medical Complex (٥٠٠ beds) Jeddah - - GE-PACS/RIS	٧٣,٩٨٣	X-ray, CT, MR, US, NM, Angio,	Have local PACS/RIS with Medium size of storage/server on site with connection to central solution directly	٣٦٩,٩١٥	١٦x ٣MP ١x ٥MP existed, New ٥x ٦MP	٢١	New: ٢٥	١	١
٨	W٢	Children and Maternity Hospital in Msaeidiah- (٢٥٤ beds)- GE-PACS/RIS	١٧,٤٤٦	X-ray, MRI, MAMO, US, BMD, Floro	Connection To central solution directly	٨٧,٢٣٠	١x ٥MP ٤x ٣MP ١x ٦MP ١x ٢MP existed , NEW: ٢x ٥MP, ٤x ٦MP	٣٠ New: ١٠	New: ١٥	١	١
		Total No. of Exams cross Cluster W٢	٣٤٥,١٢٢			١,٧٢٥,٦١٠					

W٢ Breast Cancer Screening Data						
#	Hospital Name	PACS Yes/No	Total Number of scanned exam per Year	Total Number of scanned exam per ٥ Years	Total Number of breast cancer screening PC & scanner per ٥ Years	Total Number of DICOM Worklist Gateway per ٥ Years
١	Children and Maternity Hospital in Aziziyah-(١٠٠ beds)	No	١٢٥٠	٦٢٥٠	١	١
٢	King Fahad Hospital -(٧١١ beds)	Yes Sectra	١٢٥٠	٦٢٥٠	١	١
٣	Children and Maternity Hospital in Msaeidiah- (٢٥٤ beds)	Yes GE	١٢٥٠	٦٢٥٠	١	١
		Total	٣,٧٥٠	١٨,٧٥٠	This number will grow ١٠٪ per year	

Hospital	W٥ Beds	No.	HIS only	HIS & PACs		PACS	
W٥	>٦٠٠	١	١	٠	١- Oasis		
	٢٠٠-٦٠٠	٢	٠	٢	١ – icare ١- Oasis	٢	١ - GE ١ - Agfa
	<٢٠٠	١١	٢	٠	٢- Oasis		
	Totals	١٤	٢٢٪	١٤٪		١٤٪	

No.	Required Extra software concurrent licenses on Cluster W٥ Level Description	Qty (Concurrent Licenses)
١	٣D Post-processing (includes MRI/CT/US/Mamo/NM modalities)	١٥
٢	Orthopedic	١٥
٣	Concurrent Voice Recognition Licenses with un-limited profiles and or limited user names by seat un-	٦٥

No.	Cluster #	Name of Hospital	Total Volume of Studies performed per year	Modality types per site	Recommendation to Hospital	Total No. of Studies per ٥ years Performed/	Total No. of Diagnostic Workstations per ٥ years/	Total No. of RIS Pcs	Total No. of Clinical View Workstations per ٥ years/	Total No. of CD Burner with ٢٠٠٠ CDs/site	F-Total No. of Film Digitizer per ٥

			with ١٠٪ growth			site	site		site	per ٥ years/ site	years / site
		W٥ Cluster - Small Hospitals has no RIS/PACS:									
١	W٥	Kherma General Hospital in Ta'if -(٥٠ beds) - (has no PACS/RIS)	١٣,٨٦٦	Xray,US,CT	Connection To central solution directly	٦٩,٣٣٠	١ x ٦MP wide with second RIS Monitor	١٠ (٨ aside modalities and ٢ at reception and working area	١٥ x single ٢ MP	١	١
٢	W٥	Ranyah General Hospital-(٥٠ beds) - (has no PACS/RIS)	١٩,٧٥٢	Xray,US,CT	Connection To central solution directly	٩٨,٧٦٠	٢ (٦MP wide with second RIS Monitor)	٩ (٧ aside modalities and ٢ at reception and working area	١٥ (single ٢ MP)	١	١
٣	W٥	Dholm General Hospital-(٥٠ beds) - (has no PACS/RIS)	٩,٢٥٥	Xray,US	Connection To central solution directly	٤٦,٢٧٥	١ (٦MP wide with second RIS Monitor)	٦ (٤ aside modalities and ٢ at reception and working area	١٩ (single ٢ MP)	١	١
٤	W٥	Maysan BalHareth General Hospital -(٥٠ beds) - (has no PACS/RIS)	١٠,٠٠٠	Xray,US	Connection To central solution directly	٥٠,٠٠٠	١ (٦MP wide with second RIS Monitor)	٤ (٣ aside modalities and ١ at reception and working area	١٥ (single ٢ MP)	١	١
٥	W٥	Torbah General Hospital-(٥٠ beds) - (has no PACS/RIS)	٣٦,٧٢٠	Xray,CT,US,	Connection To central solution directly	١٨٣,٦٠٠	١ (٦MP wide with second RIS Monitor)	١٠ (٨ aside modalities and ٢ at reception and working area	١٥ (single ٢ MP)	١	١
٦	W٥	Al-Qurei Bani Malek General Hospital-(٥٠ beds) - (has no PACS/RIS)	١٣,٨٣٦	Xray ,US	Connection To central solution directly	٦٩,١٨٠	١ (٦MP wide with second RIS Monitor)	٦ (٤ aside modalities and ٢ at reception and working area	١٧ (single ٢ MP)	١	١
٧	W٥	Sehen Bani Saad General Hospital-(٥٠ beds) - (has no PACS/RIS)	٥,٤٣٠	Xray,US	Connection To central solution directly	٢٧,١٥٠	١ (٦MP wide with second RIS Monitor)	٤ (٢ aside modalities and ٢ at reception and working area	١٧ (single ٢ MP)	١	١
٨	W٥	Al-Moyah Hospital-(٥٠ beds) - (has no PACS/RIS)	٨,٠٧٣	Xray,US,CT	Connection To central solution directly	٤٠,٣٦٥	١ (٦MP wide with second RIS Monitor)	٥ (٤ aside modalities and ١ at reception and working area	١٨ (single ٢ MP)	١	١
٩	W٥	Qia Hospital in Ta'if-(٥٠ beds) - (has no PACS/RIS)	١٧,١٣٧	Xray,US,CT	Connection To central solution directly	٨٥,٦٨٥	١ (٦MP wide with second RIS Monitor)	٧ (٥ aside modalities and ٢ at reception and working area	٨ (single ٢ MP)	١	١
١٠	W٥	Almehani General Hospital Taif -(٥٠ beds) -	١٠٠٠	Xray,US	Connection To central solution directly	٥,٠٠٠	١ (٦MP wide with second RIS Monitor)	٥ (٣ aside modalities and ٢ at reception	١٧ (single ٢ MP)	١	١

		(has no PACS/RIS)						and working area			
١١	W٥	Mental Health Hospital-(٦٧٠ beds) - (has no PACS/RIS)	١٥٠٠	Xray,US	Connection To central solution directly	٧,٥٠٠	١ (٦MP wide with second RIS Monitor	٤ (٣ aside modalities and ١ at reception and working area	٥ x ٢MP	١	١
١٢	W٥	Children's Hospital in Taif- (١٢٠ beds) - (has no PACS/RIS)	١٧,٨٢٥	Xray,CT,US	Connection To central solution directly	٨٩,١٢٥	١ (٦MP wide with second RIS Monitor)	٩ (٧aside modalities and ٢ at reception and working area	٢٥ (single ٢ MP)	١	١
		W٥ Cluster ,existing PACS/RIS									
١٣	W٥	King Faisal Hospital- (٥٠٠ beds)- GE- PACS/RIS	١٣٢,٩٤٧	Xray, US, CT, MRI, Mamo, BoneDensty, Fluoroscopy,Angio	Have local PACS/RIS with Medium size of storage/server on site with connection to central solutiondirectly	٦٦٤,٧٣٥	٦ X ٥ MP, ٢٥ X ٢ MP, ١ X ٣ MP existed with second or third RIS Monitor existed + New ٣ X ٦ MP new with second or third RIS Monitor	٢٨ existed+ ١٠ NEW	٢٥ Existed + ٢٠ Need	١	١
١٤	W٥	King Abdulaziz Specialist Hospital (٥٠٠beds)- Agfa- PACS/RIS	١١٠,٧٣٦	Xray, US, CT, MRI, Mamo, BoneDensty, Fluoroscopy,Angio	Have local PACS/RIS with Medium size of storage/server on site with connection to central solution directly	٥٥٣,٦٨٠	٦ X ٣ MP, ٢ x ٥MP existed with second or third RIS Monitor existed + New ٥ X ٦MP new with second or third RIS Monitor	١٥ existed existed+ ١٠ NEW	٤٠X٢ MP	١	١
		Total No. of Exams cross Cluster W٥	**٣٩٨,٠٧٧**			**١,٩٩٠,٣٨٥**					

W٥ Cluster Breast Cancer Screening Data

#	Hospital Name	PACS Yes/No	Total Number of scanned exam per Year	Total Number of scanned exam per ٥ Years	Total Number of breast cancer screening PC & scanner per ٥ Years	Total Number of DICOM Worklist Gateway per ٥ Years
١	King Faisal Hospital - (٥٠٠ beds)	Yes GE	١٢٥٠	٦٢٥٠	١	١
٢	King Abdulaziz Specialist Hospital (٥٠٠ beds)	Yes Agfa	١٢٥٠	٦٢٥٠	١	١
		Total	**٢٥٠٠**	**١٢,٥٠٠**	This number will grow ١٠٪ per year	

ايضا يقوم المقاول بتوفير الحلول المتكاملة على النحو التالي:

- يجب على مقدم العرض أن يضمن بأن الأنظمة والنظم الفرعية والروابط والمعدات يمكن الاعتماد عليها بما فيه الكفاية إما ذاتياً أو من خلال توفير النسخ الاحتياطية.
- يجب أن يكون النظام جاهزاً للعمل ومتوفراً للمستخدمين على مدار الساعة وطوال أيام السنة (٣٦٥\٧\٢٤).
- يجب ألا يكون عمل وأداء النظام لأي شهر في السنة أقل من ٩٩.٩٩%.
- يجب تزويد النظام بميزة الاسترداد الذاتي وإعادة التشغيل لضمان أقل زمن توقف ليحقق نسبة الـ ٩٩.٩٩ %.
- يجب ألا يتسبب الخلل في البرمجيات في النظام الفرعي بخلل كلي في النظام.
- يجب أن يكون تصميم النظام بطريقة لا يتسبب فيها أي عطل في وقف تشغيل النظام.
- يجب توسعة قدرة الخوادم الحالية لتغطي احتياج المستشفى او المركز المناط تركيب النظام به لمدة (٥) خمسة سنوات.
- ضمان استمرارية العمل في المواقع في حال تعطل الربط مع النظام المركزي او ما يسمى (Business Continuity).

وبناء على المعلومات اعلاه وما تم ذكره بالكراسة للمواصفات المطلوبة من المقاول، الجدول التالي سيمكن المقاول من تقديم سعر الفحص الواحد شاملا جميع التطبيقات والمعدات لكل تجمع صحي على حده كما هو موضح بالجداول ادناه:

	Service Name *	Total Number of exams per 5 years		
Cluster # E1				
1	A- Radiology Study (could be X-Ray, CT, MRI, CR, C-Arm, US, Bone Density, Fluoroscopy, Angiography, mammogram, PETCT, etc.) including front end HW like workstations, business continuity servers, etc. and back end software ,applications and necessary licenses , as per Qty mentioned in total consumption. This includes systems/Licenses/Labor/Upgrade/Update/Service and Support to meet the Required SLA.	2,457,040		
2	B- Hosting Location (Space /Rack /Power/Operation/Support/ Back-end Hardware/Operating systems/local bandwidth at center to cover the required SLA, etc.) in a certified Tier3 level hosted in Saudi. All technical requirements in this RFQ to be part of delivery of such service.			
	Service Name *	PACS Vendor		

3	C- Data Migration of existing RIS/PACS	Siemens		
		GE Healthcare		
		Carestream		
		Philips		
		Agfa		
		Sectra		
		Fujifilm		

	Service Name *	Total Number of exams per 5 years	Unit Price Per exam SR	Total Price SR
Cluster # E2				
1	A- Radiology Study (could be X-Ray, CT, MRI, CR, C-Arm, US, Bone Density, Fluoroscopy, Angiography, mammogram, PETCT, etc.) including front end HW like workstations, business continuity servers, etc. and back end software ,applications and necessary licenses , as per Qty mentioned in total consumption. This includes systems/Licenses/Labor/Upgrade/Update/Service and Support to meet the Required SLA.	2,456,600		
2	B- Hosting Location (Space /Rack /Power/Operation/Support/ Back-end Hardware/Operating systems/local bandwidth at center to cover the required SLA, etc.) in a certified Tier3 level hosted in Saudi. All technical requirements in this RFQ to be part of delivery of such service.			

	Service Name *	**PACS Vendor**		
3	**C- Data Migration of existing RIS/PACS**	**Siemens**		
		GE Healthcare		
		Carestream		
		Philips		
		Agfa		
		Sectra		

		Fujifilm		

	Service Name *	**Total Number of exams per 5 years**		
Cluster # E3				
1	**A- Radiology Study (could be X-Ray, CT, MRI, CR, C-Arm, US, Bone Density, Fluoroscopy, Angiography, mammogram, PETCT, etc.) including front end HW like workstations, business continuity servers, etc. and back end software ,applications and necessary licenses , as per Qty mentioned in total consumption. This includes systems/Licenses/Labor/Upgrade/Update/Service and Support to meet the Required SLA.**	**874,500**		

2	**B- Hosting Location (Space /Rack /Power/Operation/Support/ Back-end Hardware/Operating systems/local bandwidth at center to cover the required SLA, etc.) in a certified Tier3 level hosted in Saudi. All technical requirements in this RFQ to be part of delivery of such service.**			
	Service Name *	**PACS Vendor**		
3	**C- Data Migration of existing RIS/PACS**	**Siemens**		
		GE Healthcare		
		Carestream		
		Philips		

		Agfa		
		Sectra		
		Fujifilm		

	Service Name *	**Total Number of exams per 5 years**		
Cluster # C1				

1	**A- Radiology Study (could be X-Ray, CT, MRI, CR, C-Arm, US, Bone Density, Fluoroscopy, Angiography, mammogram, PETCT, etc.) including front end HW like workstations, business continuity servers, etc. and back end software ,applications and necessary licenses , as per Qty mentioned in total consumption. This includes systems/Licenses/Labor/Upgrade/Update/Service and Support to meet the Required SLA.**	**3,825,000**		
2	**B- Hosting Location (Space /Rack /Power/Operation/Support/ Back-end Hardware/Operating systems/local bandwidth at center to cover the required SLA, etc.) in a certified Tier3 level hosted in Saudi. All technical requirements in this RFQ to be part of delivery of such service.**			
	Service Name *	**PACS Vendor**		
3	**C- Data Migration of existing RIS/PACS**	**Siemens**		
		GE Healthcare		

		Carestream		
		Philips		
		Agfa		
		Sectra		
		Fujifilm		

	Service Name *	**Total Number of exams per 5 years**		

	Cluster # C2			
1	**A- Radiology Study (could be X-Ray, CT, MRI, CR, C-Arm, US, Bone Density, Fluoroscopy, Angiography, mammogram, PETCT, etc.) including front end HW like workstations, business continuity servers, etc. and back end software ,applications and necessary licenses , as per Qty mentioned in total consumption. This includes systems/Licenses/Labor/Upgrade/Update/Service and Support to meet the Required SLA.**	**2,227,450**		
2	**B- Hosting Location (Space /Rack /Power/Operation/Support/ Back-end Hardware/Operating systems/local bandwidth at center to cover the required SLA, etc.) in a certified Tier3 level hosted in Saudi. All technical requirements in this RFQ to be part of delivery of such service.**			
	Service Name *	**PACS Vendor**		
3	**C- Data Migration of existing RIS/PACS**	**Siemens**		

		GE Healthcare		
		Carestream		
		Philips		
		Agfa		
		Sectra		
		Fujifilm		

	Service Name *	**Total Number of exams per 5 years**		
Cluster # S1				

1	**A- Radiology Study (could be X-Ray, CT, MRI, CR, C-Arm, US, Bone Density, Fluoroscopy, Angiography, mammogram, PETCT, etc.) including front end HW like workstations, business continuity servers, etc. and back end software ,applications and necessary licenses , as per Qty mentioned in total consumption. This includes systems/Licenses/Labor/Upgrade/Update/Service and Support to meet the Required SLA.**	**2,665,000**		
2	**B- Hosting Location (Space /Rack /Power/Operation/Support/ Back-end Hardware/Operating systems/local bandwidth at center to cover the required SLA, etc.) in a certified Tier3 level hosted in Saudi. All technical requirements in this RFQ to be part of delivery of such service.**			
	Service Name *	**PACS Vendor**		
3	**C- Data Migration of existing RIS/PACS**	**Siemens**		
		GE Healthcare		
		Carestream		

		Philips		
		Agfa		
		Sectra		
		Fujifilm		

	Service Name *	**Total Number of exams per 5 years**		
Cluster #S2				

1	A- Radiology Study (could be X-Ray, CT, MRI, CR, C-Arm, US, Bone Density, Fluoroscopy, Angiography, mammogram, PETCT, etc.) including front end HW like workstations, business continuity servers, etc. and back end software ,applications and necessary licenses , as per Qty mentioned in total consumption. This includes systems/Licenses/Labor/Upgrade/Update/Service and Support to meet the Required SLA.	2,934,500		
2	B- Hosting Location (Space /Rack /Power/Operation/Support/ Back-end Hardware/Operating systems/local bandwidth at center to cover the required SLA, etc.) in a certified Tier3 level hosted in Saudi. All technical requirements in this RFQ to be part of delivery of such service.			
	Service Name *	PACS Vendor		
3	C- Data Migration of existing RIS/PACS	Siemens		
		GE Healthcare		
		Carestream		

		Philips		
		Agfa		
		Sectra		
		Fujifilm		

	Service Name *	**Total Number of exams per 5 years**		
Cluster # W1				
1	**A- Radiology Study (could be X-Ray, CT, MRI, CR, C-Arm, US, Bone Density, Fluoroscopy, Angiography, mammogram, PETCT, etc.) including front end HW like workstations, business continuity servers, etc. and back end software ,applications and necessary licenses , as per Qty mentioned in total consumption. This includes**	**4,200,260**		

	systems/Licenses/Labor/Upgrade/Update/Service and Support to meet the Required SLA.			
2	**B- Hosting Location (Space /Rack /Power/Operation/Support/ Back-end Hardware/Operating systems/local bandwidth at center to cover the required SLA, etc.) in a certified Tier3 level hosted in Saudi. All technical requirements in this RFQ to be part of delivery of such service.**			
	Service Name *	**PACS Vendor**		
3	**C- Data Migration of existing RIS/PACS**	**Siemens**		
		GE Healthcare		
		Carestream		
		Philips		

		Agfa		
		Sectra		
		Fujifilm		

	Service Name *	**Total Number of exams per 5 years**		
Cluster # W2				

1	A- Radiology Study (could be X-Ray, CT, MRI, CR, C-Arm, US, Bone Density, Fluoroscopy, Angiography, mammogram, PETCT, etc.) including front end HW like workstations, business continuity servers, etc. and back end software ,applications and necessary licenses , as per Qty mentioned in total consumption. This includes systems/Licenses/Labor/Upgrade/Update/Service and Support to meet the Required SLA.	1,725,610		
2	B- Hosting Location (Space /Rack /Power/Operation/Support/ Back-end Hardware/Operating systems/local bandwidth at center to cover the required SLA, etc.) in a certified Tier3 level hosted in Saudi. All technical requirements in this RFQ to be part of delivery of such service.			

	Service Name *	PACS Vendor	Unit Price Per Cluster data migration SR	Total Price SR
3	C- Data Migration of existing RIS/PACS	Siemens		
		GE Healthcare		
		Carestream		

		Philips		
		Agfa		
		Sectra		
		Fujifilm		

	Service Name *	**Total Number of exams per 5 years**	**Unit Price Per exam SR**	**Total Price SR**
Cluster # W5				
1	**A- Radiology Study (could be X-Ray, CT, MRI, CR, C-Arm, US, Bone Density, Fluoroscopy, Angiography, mammogram, PETCT, etc.) including front end HW like workstations, business continuity servers, etc. and back end software ,applications and necessary licenses , as per Qty mentioned in total consumption. This includes**	**1,990,385**		

	systems/Licenses/Labor/Upgrade/Update/Service and Support to meet the Required SLA.			
2	B- Hosting Location (Space /Rack /Power/Operation/Support/ Back-end Hardware/Operating systems/local bandwidth at center to cover the required SLA, etc.) in a certified Tier3 level hosted in Saudi. All technical requirements in this RFQ to be part of delivery of such service.			
	Service Name *	PACS Vendor		
3	C- Data Migration of existing RIS/PACS	Siemens		
		GE Healthcare		
		Carestream		

		Philips		
		Agfa		
		Sectra		
		Fujifilm		

Proposals shall include pricing for unlimited or concurrent licenses for all applicable solution components. Licensing models and conditions shall be described in detail for all components such as but not limited to[1] as per above mentioned table:

- Repository and Central PACS services.
- PROXY services on local sites as well as on regional / zone level.
- XDS Registry and services (including ATNA repository).
- TRS shared Central RIS services.
- VNA and viewer.
- Sites components and services (i.e. diagnostic workstations, clinical view stations, etc. as per consumption table).

- Proposals shall include all applicable integration costs for all the sites in scope (software, hardware, professional services, etc.) as per above-mentioned table.
- Proposals shall include storage requirements for ٥ years, including requirements for redundancy and fault tolerance as per above-mentioned table.
- Proposals shall include any applicable hardware and software for shared centralized solution components as well as for end users (i.e. servers, storage, diagnostic quality workstations, other end user hardware and software) as per above mentioned table.

[1] Refer to the Conceptual Reference Architecture in the Appendices.

المواصفات الفنية للمشروع:

١.١ PROJECT OBJECTIVES

The key objectives of this project are to acquire and deploy the solutions described herein as part of the national e-Health infrastructure, in order to achieve sharing of diagnostic imaging information for all patients across the Kingdom regardless of location, and to put in place a flexible National Tele-radiology infrastructure to ensure the availability of radiology services to any site regardless of its location and size in a timely and cost effective manner.

Diagnostic Imaging Repository Solution (DIRS) and CENTRAL PACS

The concept of a Diagnostic Imaging Domain Repository Solution (DIRS) aims to provide authorized healthcare providers with access to a secure and comprehensive repository of all images, reports and other relevant multi-media content for all patients, in other words, a longitudinal view of the patient record which contains all relevant DI information regardless of its origin or the location from which it is being accessed. And the central PACS aims to process and manage those images (including ٣D) associated with separate Central RIS and Tele-Radiology Services. DIRS and Central PACS could be in one solution or two separate solutions. The solution will be deployed in multi inter-connected regional repositories at regional data centers sharing a national XDS registry component which called Cluster/Clusters.

This solution will enable the MOH achieve the following objectives:

- To provide simplified and secure access to a longitudinal patient record for diagnostic imaging information (all relevant prior images, reports, voice dictation, etc.) to all potential consumers (PACS/RIS, EMR, HIS, Viewers);
- To leverage the DIRS infrastructure for other types of related contents such as images from Pathology, Cardiology, Dental, and cytology or other clinical domains.
- To leverage economies of scale and reduce costs thought a consolidated long-term archive infrastructure and enhance the pay per service.
- To leverage hospitals without HIS to engage with DIRS/TRS to utilize PACS/RIS for daily work electronically.
- To enable access to the patient electronic record to enable timely patient care while maintaining privacy and security standards.
- To establish common interoperability requirements and interface standards (ex: DICOM, HL٧ and IHE) allowing flexible procurement choices at the local PACS/RIS level while ensuring interoperability across sites and regions.
- To establish standardized naming conventions, tools and procedures for data normalization, in order to allow data consumers to easily query the DIRS when

searching for relevant prior studies, originally archived by disparate PACS/RIS operational systems and or cross the multi-Clusters.

- To put in place the required support processes, infrastructure and expertise to assist local sites (Hospitals, radiology centers and other relevant health care facilities) in their integration to the DIRS solution.
- To support the consolidated archival an sharing of images acquired at local sites via any of the following modality types: Mammography , Invasive radiology, Dental radiology, Computed tomography (CT), CT angiography, Fluoroscopy, Angiography, MR, Nuclear medicine, PETCT, Ultrasound, ECHO, X-ray, BMD. And support ٣D post-processing.
- To support the consolidated archival and sharing of diagnostic imaging reports.
- To support cross diagnostic image reporting based on specialty or any other factors.
- To support future expansion for the archival and sharing of: Discharge reports; Medical photography images; Histopathology images and reports; Cardiology images and reports; Ophthalmology images and reports; Oncology images and reports.
- To enable information consumers to query and retrieve information via standardized interfaces, and to offer web-based multi-media viewing capabilities (images, reports, voice and video).

Central RIS AND Tele-radiology solution

The concept of Central RIS aims to manage the radiology department workflow (registration , ordering in absence of HIS, scheduling, manage the DICOM worklist and reporting) cross Cluster hospitals while a Tele-radiology Solution (TRS) aims to put in place a shared RIS/PACS platform with specialized capabilities to enable remote reporting by radiologists/specialists independent of the location where images are acquired, and, to enable the optimal allocation of available resources to address reporting workloads across locations.

This solution will particularly address the needs of small remote public hospitals, which have the capability to acquire images locally but lack on-site reading and diagnostic resources. However, larger health centers will also benefit by being able to share resources and information with other locations across the Kingdom. The solution will be deployed in each interconnected instances at regional data center and or Cluster/Clusters data center.

This solution will enable the MOH achieve the following objectives:

- To enable flexible and cost effective delivery of DI reporting services across over cluster hospitals (plus/minus ١٠٪) small and remote sites (٥٠ beds to ١٠٠ beds and could be PHC) across the Kingdom, which can acquire images locally but lack on-site reporting staff. Remote locations lacking on-site radiologist/specialist will be served from resources from larger centers.
- To enable larger centers to medium existing PACS/RIS to tap into radiologist working at small/remote sites that have part-time availability to report for other locations, hence,

allowing optimal resource allocation across sites and faster and more cost effective service delivery.

- To enable medium centers to tap into radiologist working to help in workload balance for regular high volume of un-reported images such as plane x-ray.
- Through the integration with the DIRS, to enable remotely reporting radiologists to do comparative analysis of new images against any relevant priors done anywhere else in the Kingdom.
- To enable remote viewing/sharing of reported or reporting-in-progress studies, among radiologists/specialists at multiple locations which need to collaborate to finalize a diagnostic.
- To enable the flexible management of orders and work lists to optimize the utilization of available resources (modalities, technologists, radiologists, specialist, transcriptionist) across locations.
- To enable any public radiology center in the Kingdom to flexibly augment its capacity to address peak workload situations, by quickly and efficiently allowing remotely located contracted resources (may be foreign-based resources) to report on studies on its behalf.

VNA and viewer

The concept of Vendor Neutral Archive Solution (VNA) is seamless point-of-care data capture and storage for all DICOM and NON-DICOM data in its original format cross-region hospitals.

The VNA solution allows MOH cross the Cluster/Clusters to gain independence from the vendor neutral archive solution that integrates with any PACS, RIS, HIS, EHR and EMR.

The VNA can store and provide imaging data from, and to any, endpoint in the healthcare enterprise. And provide universal viewer regardless the source of data.

This solution will enable the MOH achieve the following objectives but not limited to:

- Support storing multiple local patient ID’s for a single patient in its database.
- Interface with an enterprise master patient index (eMPI) solution.
- Accommodate both DICOM & Non-DICOM data.
- Support DICOM WADO.
- Support DICOM and non DICOM routing
- Allow for granular control of data, security logs and its retention.
- Support all IHE profiles (PIX/PDQ, XDS, IOCM, Jpeg٢٠٠, KIN, ,GSPSetc.).
- Store DICOM images from multiple PACS.
- Store DICOM images from multiple sites.
- Support multiple patient ID / MRN schemes handled.
- Providing the changed studies back to the originating site / system.
- Support Image Storage be delivered as a cloud-based service.

- Provide an Enterprise viewer cross the region including zero footprint.
- Provide an interoperable image sharing solution (DICOM and non-DICOM).
- Support pre- and post-fetching.
- Provide an automated policy based deletion process.
- Support load balancing between regional VNA and National VNA..
- Support handle de-centralized electronic object acquisition.
- Support search capabilities (non-Admin).
- Support XDS.
- Seamless Integration cross multi Clusters from different vendors or providers.

١.٢ PROJECT SCOPE OF WORK

The phases described below are based on the reference conceptual architecture, uses cases and requirements described on the Informational Appendices in this document.

In summary, Bidders are expected to deploy the multi/several solutions in scope at designated data center(s), inter-connect both solutions ensuring stability, reliability and performance, and progressively deploy the new capabilities across the sites and users in scope. Both solutions will be deployed in multi inter-connected instances at regional data centers/cluster data center (or could be one data center, or ٢, etc.). The hosting itself is out of scope in the project rather than it is all in scope and BOQ with volume size is not real but estimated as mention in the RFQ and or will be in the future RFP with more specific details.

Sites and users in scope for each phase are described in the Sites and users in Scope section further in this document.

Phase ١a

SCOPE:

- Deployment and configuration of the Central RIS and Tele-radiology Solution (TRS) with workflow engine at regional data center(s)/ Cluster data center in zone #١ for example.
- Integration and deployment for sites and users in phase ١[٢].

This deliverable shall include the following elements:

- Planning and design for end-to-end deployment of the solution.
- Detailed workflow design and clinical usage scenarios which will drive system configuration (with HIS & without HIS).
- Change management, communications and training: planning and design.
- Installation and configuration of the primary instance of the centralized RIS and Tele-Radiology Solution (TRS) at a designated data center)/ Cluster data center in zone #١ for example.

[٢] See section ٢.٤ for uses and sites in scope

- Installation and configuration of redundant instances for fault tolerance and high availability at designated data center(s). Comprehensive testing of service disruption scenarios.
- Integration of Central RIS and TRS to modalities and ADT systems at remote sites (with HIS & without HIS).
- Deployment, configuration and testing of order capture and image transfer capabilities from remote sites.
- Deployment, configuration and testing of work list management and workflow components.
- Deployment, configuration and testing of viewing and reporting components.
- Comprehensive testing of clinical an administrative use cases.
- Comprehensive change management, communication, and training at each participating site for clinical, administrative and support staff.
- Operational support and ongoing maintenance for integrated sites and deployed solution capabilities.

Phase ١b

SCOPE:

- Deployment, configuration and the DI Repository Solution (DIRS) and Central PACS at regional data center(s))/ Cluster data center in zone #١ for example.
- Pilot implementation: bi-directional integration of DIRS and Central PACS to existing RIS/PACS from multiple vendors; Or replacement
- Clinical and technological demonstration of the solution's ability to meet the RFQ objectives and requirements.

This deliverable shall include the following elements:

- Planning and design for end-to-end deployment of the Central RIS and TRS and a pilot bi-directional integration to a multi-vendor cohort of RIS/PACS.
- Detailed workflow design and clinical usage scenarios which will drive system configuration (with HIS & without HIS).
- Change management, communications and training planning and design.
- Installation and configuration of the primary instance of the Repository Solution at a designated data center(s).
- Clinical and technological demonstration of bi-directional integration (archive/retrieval) to a cohort of multi-vendor RIS/PACS, in zone #١ for example or same vendor.

- Comprehensive change management, communication, and training at each participating site for clinical, administrative and support staff.
- Comprehensive testing of clinical an administrative use cases.
- Installation and configuration of redundant instances for fault tolerance and high availability at designated data center(s). Comprehensive testing of service disruption scenarios.
- Operational support and ongoing maintenance for integrated sites and deployed solution capabilities.

Phase ١C

- Deployment, configuration and the Vendor Neutral Archive (VNA) at regional data center(s))/ Cluster data center in zone #١ for example.
- Pilot implementation: bi-directional integration of VNA to existing RIS/PACS, DIRS , Central PACS, Central RIS and TRS from multiple vendors or same vendor.
- Clinical and technological demonstration of the solution's ability to meet the RFQ objectives and requirements.

This deliverable shall include the following elements:

- Planning and design for end-to-end deployment of the DISR, , Central PACS, Central RIS , TRS and a pilot bi-directional integration to a multi-vendor cohort of RIS/PACS.
- Detailed workflow design and clinical usage scenarios which will drive system configuration (with HIS & without HIS).
- Change management, communications and training planning and design.
- Installation and configuration of the primary instance of the Repository Solution at a designated data center(s).
- Clinical and technological demonstration of bi-directional integration (archive/retrieval) to a cohort of multi-vendor RIS/PACS, in zone #١ for example or same vendor.
- Comprehensive change management, communication, and training at each participating site for clinical, administrative and support staff.
- Comprehensive testing of clinical an administrative use cases.
- Installation and configuration of redundant instances for fault tolerance and high availability at designated data center(s). Comprehensive testing of service disruption scenarios.
- Operational support and ongoing maintenance for integrated sites and deployed solution capabilities.

Phase ٢

SCOPE:

- Integration of the Central RIS and Tele-radiology Solution (TRS) to the DI Repository Solution (DIRS) and Central PACS at regional data center(s))/ Cluster data center in zone #١ for example;
- Integration of DIRS and Central PACS to existing RIS/PACS in scope in phase ٢.
- Deployment of new TRS capabilities to phases ١[٣] users.
- Integration and deployment of TRS capabilities to remote sites and users in phase ٢.
- Integration and deployment of all with regional/Cluster/Clusters VNA & viewer.

This deliverable shall include the following elements:

- Planning and design for end-to-end integration of Central RIS and TRS to DIRS and Central PACS for archival and retrieval of information, including normalization of appropriate terminologies.
- Detailed workflow design and clinical usage scenarios which will drive system configuration.
- Change management, communications and training planning and design.
- Integration, configuration and testing of the primary instance of the centralized RIS and Tele-Radiology Solution (TRS) connected to the DIRS and Central PACS, for archival and retrieval of information with regional VNA & viewer.
- Configuration and testing of terminology management services of DIRS to enable standardized terminology for all studies originating from TRS.
- Comprehensive testing of clinical an administrative use cases. Archival and retrieval of information, including normalization of appropriate terminologies with regional/Cluster/Clusters VNA & viewer.
- Integration, configuration and testing of the redundant instances connected to the DIRS. Comprehensive testing of service disruption scenarios.
- Comprehensive change management, communication, and training at each participating site for clinical, administrative and support staff.
- Operational support and ongoing maintenance for integrated sites and deployed solution capabilities with regional/Cluster/Clusters VNA & viewer.

[٣] TRS integration to DIRS is new to phase ١ users of TRS

Phase ٣ (moving to another zones/cluster/clusters and go on)

SCOPE:

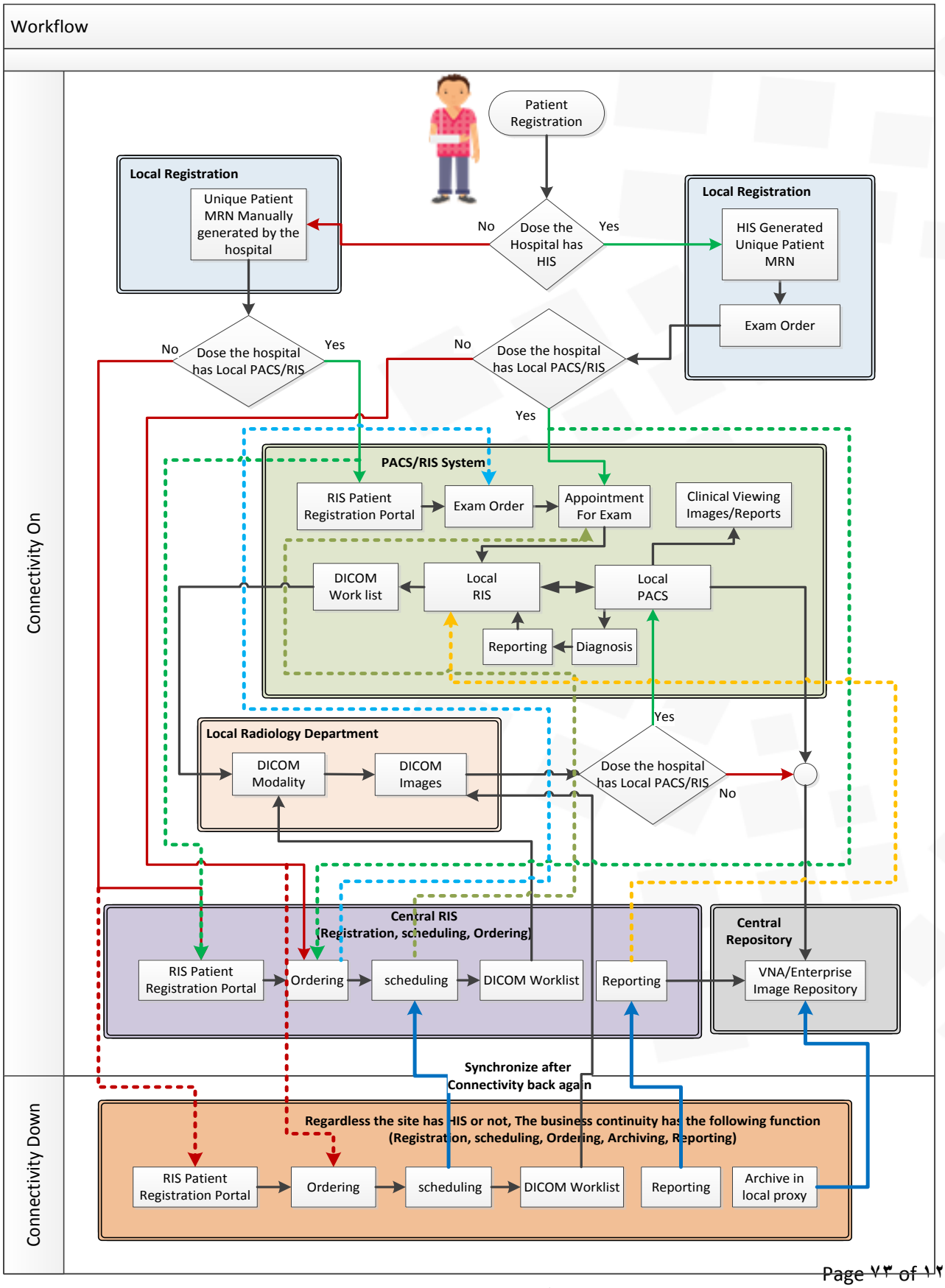
- Central RIS ,TRS , DIRS and Central PACS infrastructure replication to data center(s) in zone/cluster #٢ or ٣ or ٤ or ٥;
- Regional/Cluster/Clusters VNA infrastructure replication to National VNA.
- Integration of DIRS and Central PACS to existing RIS/PACS in scope in phase ٣ or replace them in Phase ٢.
- Integration and deployment of Central RIS and TRS capabilities to remote sites and users in phase ٣.

This deliverable shall include the following elements:

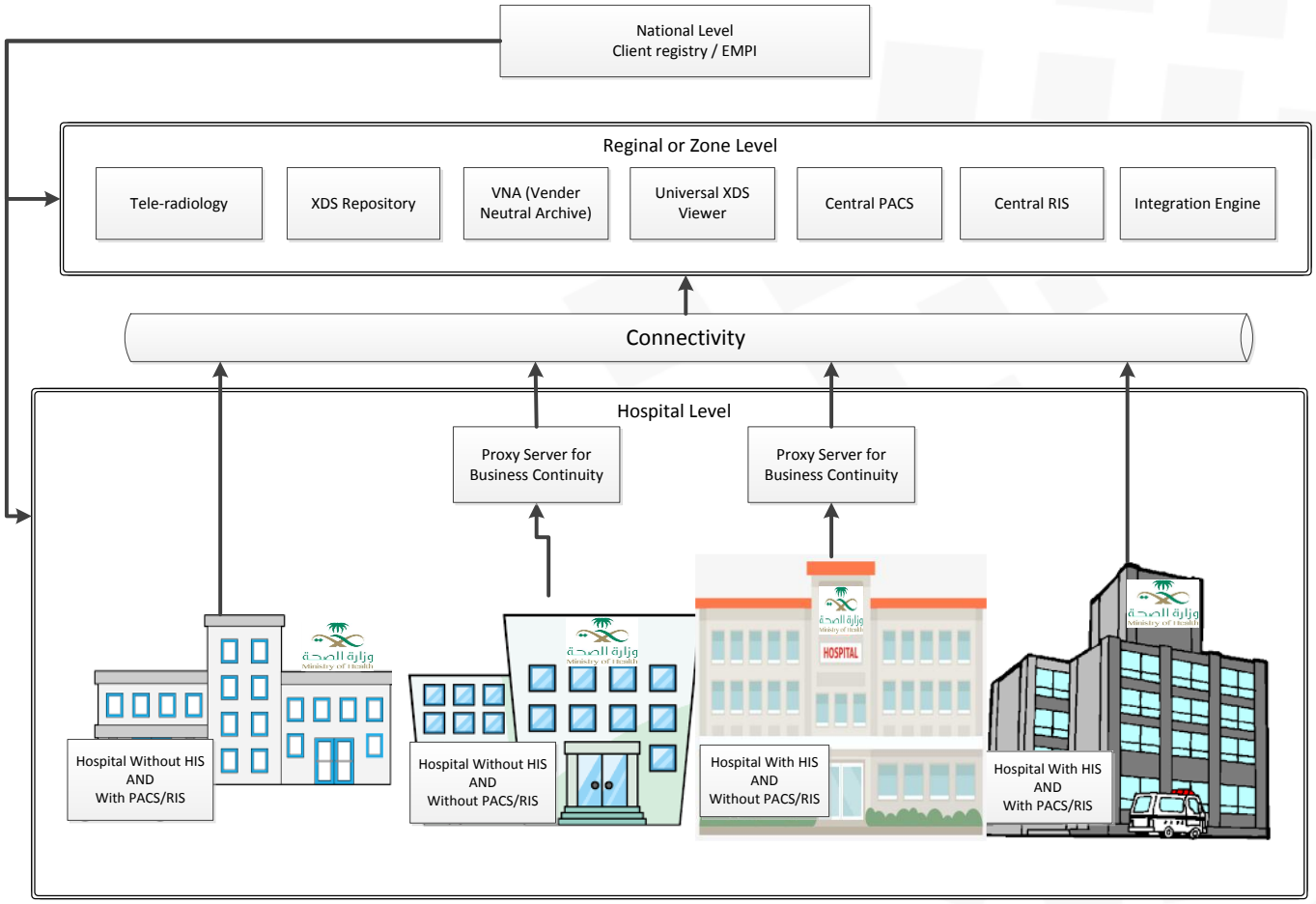
- Planning and design for end-to-end solution replication and deployment of solution across participating sites and users.
- Detailed workflow design and clinical usage scenarios which will drive system configuration.
- Change management, communications and training planning and design.
- Installation and configuration of the any additional instances of the Central RIS and Tele-Radiology Solution (TRS) at a designated data center(s).
- Installation and configuration of additional redundant instances for fault tolerance and high availability at designated data center(s), if required. Comprehensive testing of service disruption scenarios.
- Integration of Central RIS and TRS to modalities and ADT systems at participating remote sites (with & without HIS).
- Deployment, configuration and testing of order capture and image transfer capabilities from remote sites.
- Deployment, configuration and testing of work list management and workflow components.
- Deployment, configuration and testing of viewing and reporting components
- Comprehensive testing of clinical an administrative use cases, including DIRS and Central PACS integration with VNA.
- Comprehensive change management, communication, and training at each participating site for clinical, administrative and support staff.
- Operational support and ongoing maintenance for integrated sites and deployed solution capabilities.

The following layout will Illustrate the main workflow that is available at MOH hospitals (regardless the size or location) where vendor to take in consideration during implementation those scenarios in their technical proposal:

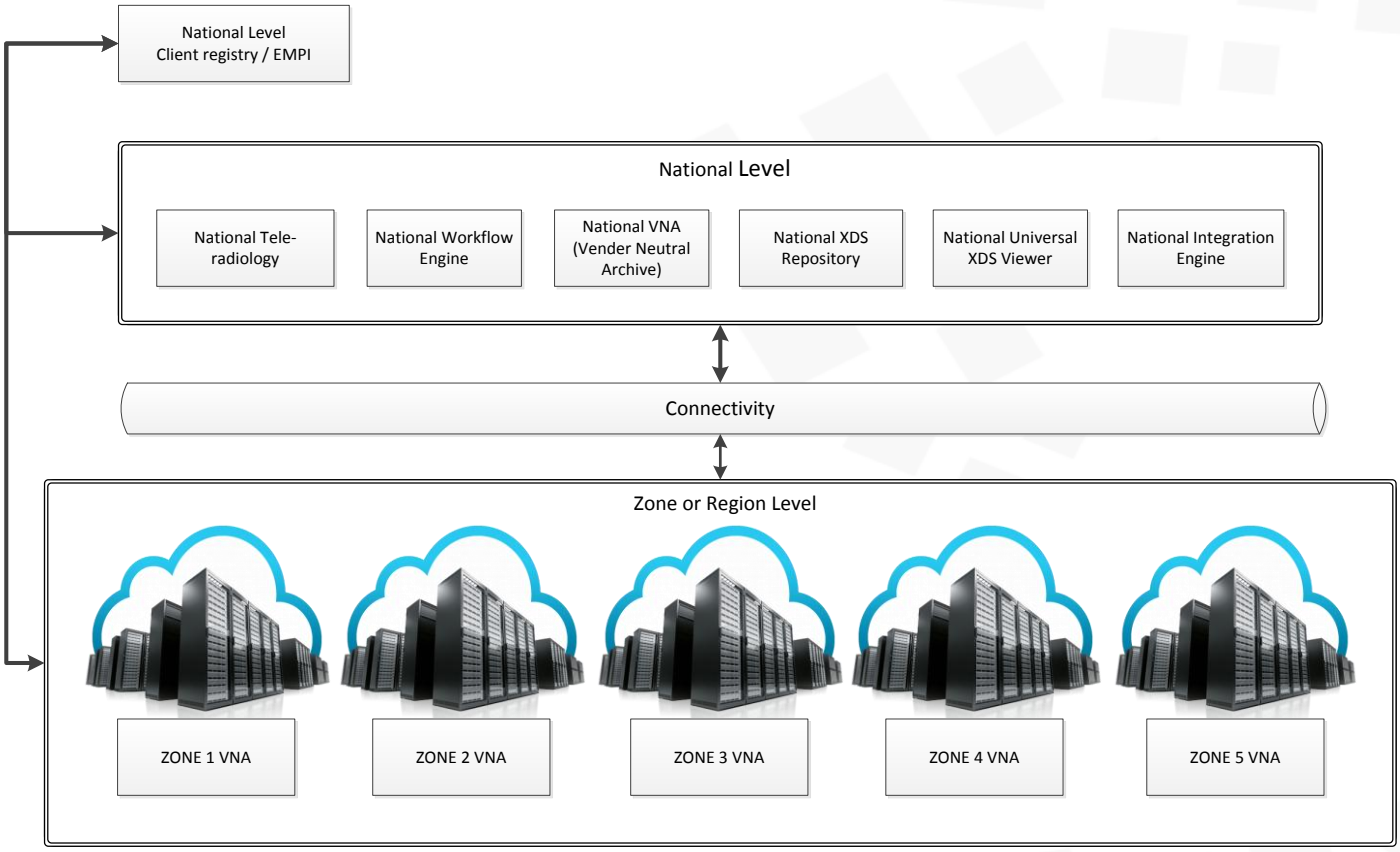
- Patient arrives Hospital (could have HIS or not).
- If HIS is exist, the admission will be made on HIS, then radiology exam order on HIS too, but schedule on RIS.
- If there is no HIS, the admission and order will be made on Central RIS.
- And so on, the below layout is showing all possible scenarios with HIS/without HIS and or with existing RIS/PACS or there is no local RIS/PACS. Also will explain the business continuity scenarios too. Last but not least it will show the relation with DIRS/Central PACS, Central RIS, TRS and VNA.


Workflow
Connectivity On
Connectivity Down
Patient Registration
Local Registration
Unique Patient MRN Manually generated by the hospital
Dose the Hospital has HIS
No
Yes
Local Registration
HIS Generated Unique Patient MRN
Exam Order
Dose the hospital has Local PACS/RIS
No
Yes
Dose the hospital has Local PACS/RIS
No
Yes
PACS/RIS System
RIS Patient Registration Portal
Exam Order
Appointment For Exam
Clinical Viewing Images/Reports
DICOM Work list
Local RIS
Local PACS
Reporting
Diagnosis
Local Radiology Department
DICOM Modality
DICOM Images
Dose the hospital has Local PACS/RIS
Yes
No
Central RIS (Registration, scheduling, Ordering)
RIS Patient Registration Portal
Ordering
scheduling
DICOM Worklist
Reporting
Central Repository
VNA/Enterprise Image Repository
Synchronize after Connectivity back again
Regardless the site has HIS or not, The business continuity has the following function (Registration, scheduling, Ordering, Archiving, Reporting)
RIS Patient Registration Portal
Ordering
scheduling
DICOM Worklist
Reporting
Archive in local proxy

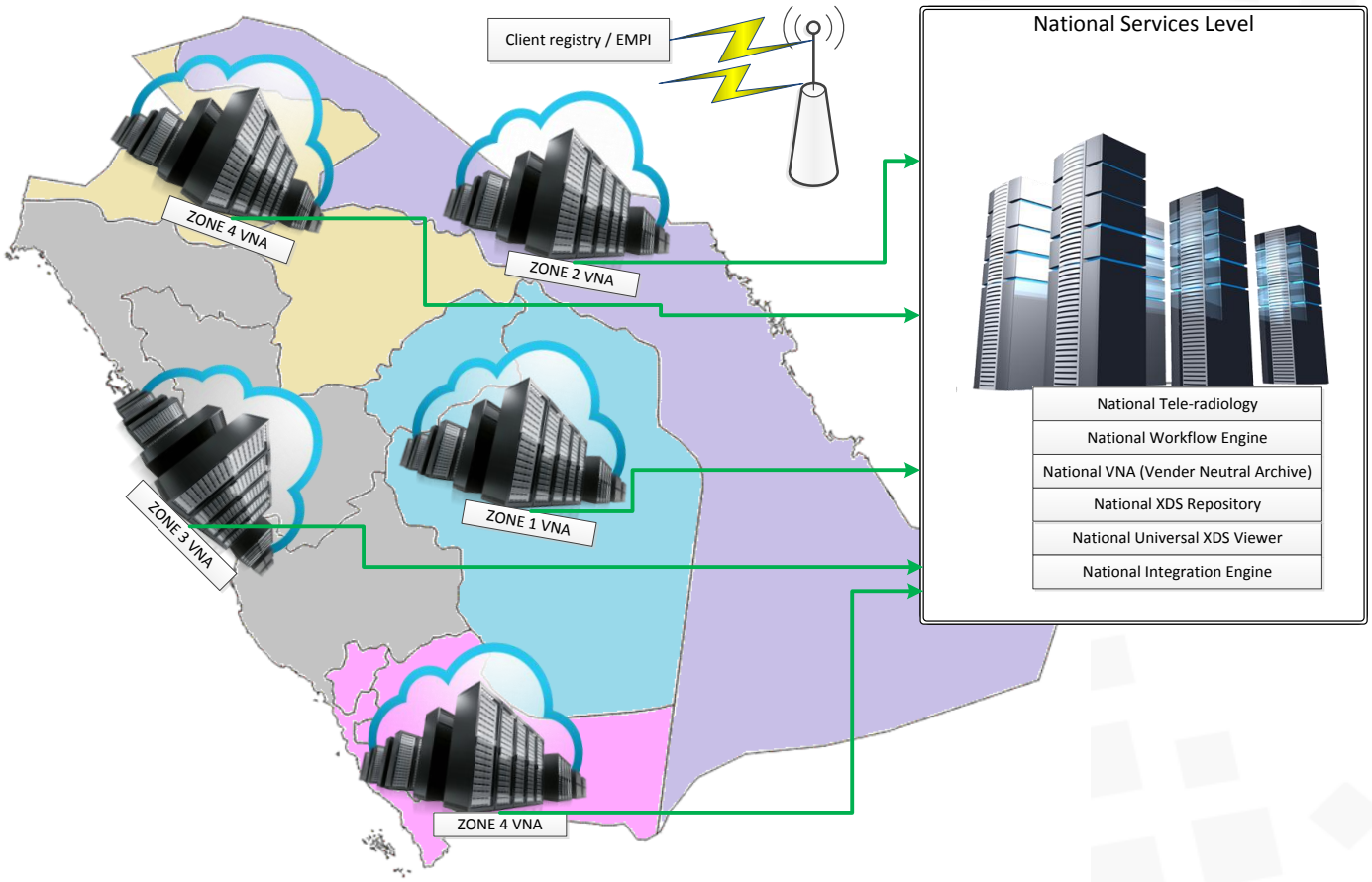
The following layout will Illustrate the main design that is targeted to be available at MOH regional level or zone/Cluster/Clusters level



The following layout will Illustrate the main design that is targeted to be available at MOH between Regions or Zones or Cluster/Clusters



The following layout will Illustrate overall between zones based on geographical distribution cross the ٥ zones or regions



١.٣ SITES AND USERS IN SCOPE

The information bellow is intended solely to assist Bidders in the preparation of proposals. To the best of MOH knowledge, the information provided is accurate in ٩٠٪ manner.

Sites in scope

A- Central RIS and TRS

In the context of the Central RIS and TRS Images will be acquired at remote sites. Orders will be recorded for reporting via the TRS and images acquired locally will be transmitted to the shared Central PACS component of the TRS for reporting by remotely located radiologists (refer to Informational Appendices for use cases and requirements). There will be existing hospital with local RIS/PACS connected to the TRS within same cluster.

The above mentioned table summarizes the number of remote sites and modalities (Which has no local PACS/RIS) as example to be integrated to the Central RIS, TRS, Central PACS and DIRS by cluster/clusters for this project.

For radiology centers with RIS/PACS, orders and images may be transmitted to the TRS for reporting by remotely located radiologists (refer to Informational Appendices for use cases and requirements). Also centers with RIS/PACS will be able to use the central platform to report for remote sites without specialist or even radiologist.

The above mentioned table summarizes the number of existing RIS/PACS sites to be integrated to the TRS by cluster/clusters for this project.

B- Central PACS and DIRS

In the context of the Central PACS and DIRS platform which is XDS based, all images and reports acquired and reported via RIS/PACS at local sites or via the Central RIS and TRS to must be transmitted for archival to the Central PACS and DIRS (refer to Informational Appendices for integration scenarios and requirements). Central RIS and TRS and RIS/PACS at local sites must be bi-directionally integrated to the Central PACS and DIRS for archival of images and reports as well as query and retrieval of relevant prior studies.

The total number of all sites and modalities to be integrated to the Central PACS, DIRS, Central RIS and TRS as above mentioned table including the local existing PACS/RIS.

C- VNA and viewer

In the context of the Central PACS , DIRS, Central RIS and TRS platform which is XDS based, all images and reports to be communicated to VNA.

Users in scope

Each zone/region/cluster/clusters will have independent Vendor Neutral Archive Solution (VNA) (Vendor will have right and freedom to deploy that taking in consideration the SLA with MOH uptime) which is seamless point-of-care data capture and storage for all DICOM and NON-DICOM data in its original format cross region hospitals.

The VNA solution allows MOH cross the zone/ region/cluster/clusters to gain independence from the vendor neutral archive solution that integrates with any PACS, RIS, HIS, EHR and EMR.

The VNA can store and provide imaging data from, and to any, endpoint in the healthcare enterprise. And provide universal viewer regardless the source of data.

This solution will enable the MOH achieve the following objectives but not limited to:

- Support storing multiple local patient ID's for a single patient in its database.
- Interface with an enterprise master patient index (eMPI) solution.
- Accommodate both DICOM & Non-DICOM data.
- Support DICOM WADO.
- Support DICOM and non DICOM routing
- allow for granular control of data, security logs and its retention.
- support all IHE profiles (PIX/PDQ, XDS, IOCM, Jpeg٢٠٠, KIN, ,GSPSetc.).
- Store DICOM images from multiple PACS.
- Store DICOM images from multiple sites.
- Support multiple patient ID / MRN schemes handled.
- Providing the changed studies back to the originating site / system.
- Support Image Storage be delivered as a cloud-based service.
- Provide an Enterprise viewer cross the region including zero footprint.
- Provide an interoperable image sharing solution (DICOM and non-DICOM).
- Support pre- and post-fetching.
- Provide an automated policy based deletion process.
- Support load balancing between regional VNA and National VNA..
- Support handle de-centralized electronic object acquisition.
- Support search capabilities (non-Admin).

- Support XDS.
- Seamless Integration cross multi Clusters from different vendors or providers.

Given the nature of the DI Repository Solution, clinical users will not interact directly with the DIRS as they will access data in the DIRS via existing clinical applications or end-user components of the TRS, such a web-based viewer. In the future as EMR and HIS solutions are upgraded, they will also provide clinical end users with access to data stored in the DIRS via VNA and its viewer.

The table below summarizes the number of users and type of user in scope for the DIRS/TRS and VNA with its viewer. Bidders may expand on the types of users outlined below based on their experience or the capabilities of their solution, and must reflect this information in their submissions.

Example of one Cluster

User type	Number of users
DI Technologist	١٥٠
Clerical staff (Order entry, etc.)	٨٠
Reporting Radiologist/specialist	١٠٠
Consulting clinicians	٤٠٠
PACS/RIS administrators (sites transmitting orders/images to TRS)	١٢٨
MOH IT support	٦٤

(System admin, help desk, etc.)	

١.٤ OUT OF SCOPE

The following elements are outside the scope of this project:

- Connectivity, Network infrastructure and data center infrastructure. These will be under the responsibility of other inter-related projects. Vendors are to specify their network and data center infrastructure requirements as part of their responses. However, Vendors have asked in the RFQ and RFP later to propose Hosting location fees as mentioned in the pricing table.

IMPORTANT: Proposals must specify in detail all network and data center infrastructure requirements of the proposed solutions (power, space, connectivity, bandwidth, etc.). These will be used by the MOH to ensure adequate infrastructure is available for implementation. However, the vendors must provide all necessary HW/SW to run proposed solutions.

٢ DELIVERY APPROACH & METHODOLOGY

The Bidder should describe in detail the approach to managing & delivering this project and clearly defines project management deliverables. The proposed approach must provide insight into the Bidder's capability to manage the project, respond to day-to-day problems, manage scope, issues, risks, change, etc., provide status, coordinate, staff, supervise and manage project resources. In addition, the Bidder must also describe process controls to be put in place to ensure the work required throughout this project is performed. The Bidder is also requested to identify the metrics to be used to measure progress and measure success.

The Bidder should provide comprehensive project management support and project reporting mechanisms throughout the project duration and adhere to the established eHealth PMO Handbook & processes.

By describing the delivery approach, the Bidder must demonstrate their understanding of the project, especially in terms of its scope, challenges and issues. The Bidder must define their project management approach and a realistic project schedule. The plan must be based on the supplier's experience with similar deployments and the need to harmonize the deployment

activities with the ongoing deployment projects for other suppliers already underway. The Bidder must describe the organization and assignment of human resources, including the client's resource needs.

The response[٤] should specifically address how the Bidder will perform the services outlined in this RFQ by describing in detail the following:

٢.١ SOLUTION DELIVERY

- An overview of the proposed project management process and methodology including:
  - Phases, descriptions and resultant deliverables
  - Project oversight activities and frequency of meetings, communication activities between the project manager and the customer's project team.
- A program management and governance plan describing the Bidder's approach to cross project communication and control for this initiative, including a description of the proposed governance structure.
- A scope management process and plan describing the Bidder's approach to scope management for the project.
- A risk analysis and management process and plan describing the Bidder's approach to risk management for the project.
- A quality assurance plan describing the Bidder's approach to quality assurance and quality control for the project, including a description of the proposed organization responsible for the project's quality.
- An overview of the proposed solution architecture and delivery strategy describing how it aligns or expands the conceptual architecture and phasing of scope described in this document. Bidder are encouraged to provide as much detail as possible, including specific recommendations to minimize risk, maximize clinical adoption and ensure the achievement of the stated goals of this project.
- An initial Work Breakdown Structure and high-level plan showing major activities, level of effort, dependencies, deliverables and milestones for each of the project phases described in the delivery strategy overview.
- A description of how the project will progress from phase to phase; identifying exit criteria for each phase, key decision points and milestones. A description of any assumptions used in creating the plan.
- A sample of deliverables from a previous similar implementation, describing: size and skill of implementation teams, time required to implement, sample plan, training approach.
- The proposed project team organization, as well as the roles and responsibilities of all of the providers and MOH required staff in the project. The Bidder should provide Curriculum Vitae for all of their proposed project team members. Staff must be identified to fill all key management positions.

[٤] In Sections ٣ to ٦ of Package Number (٢) of their proposals, see section ٤.٢ in this document.

- Résumés for the proposed Key Resources in the following roles, including a description of each role and the level of commitment to the project. The résumés should identify experience and expertise that qualifies the individuals in the roles:
  - Project Manager
  - Solution Architect
  - Installation Engineer
  - Integration Engineer
  - Applications Engineer
  - Applications Consultant
- A description of proposed Saudi-based partners or other local resources which will be leveraged to make this implementation successful. Include information on executive presence and local resource availability.
- A description of proposed procedures for handling and addressing issues and problems that arise during the project, and a clear escalation procedure for issues or problems not resolved to the customer's satisfaction.

٢.٢ ORGANIZATIONAL CHANGE MANAGEMENT, TRAINING AND SUPPORT

- An overview of the proposed change management approach and services to address organizational readiness, communication and promotion, user training and coordination.
- A description of the proposed training program(s) for clinical end users and technical support users.
- A list of proposed training courses, including:
  - Course objectives and outline
  - Course content
  - Cost per participant (vendor location vs. MOH site)
  - Max. group size
  - Length
  - Prerequisites
- A description of the training environment requirements for on-site training at an MOH facility: space, AV or computer equipment, connectivity, etc.

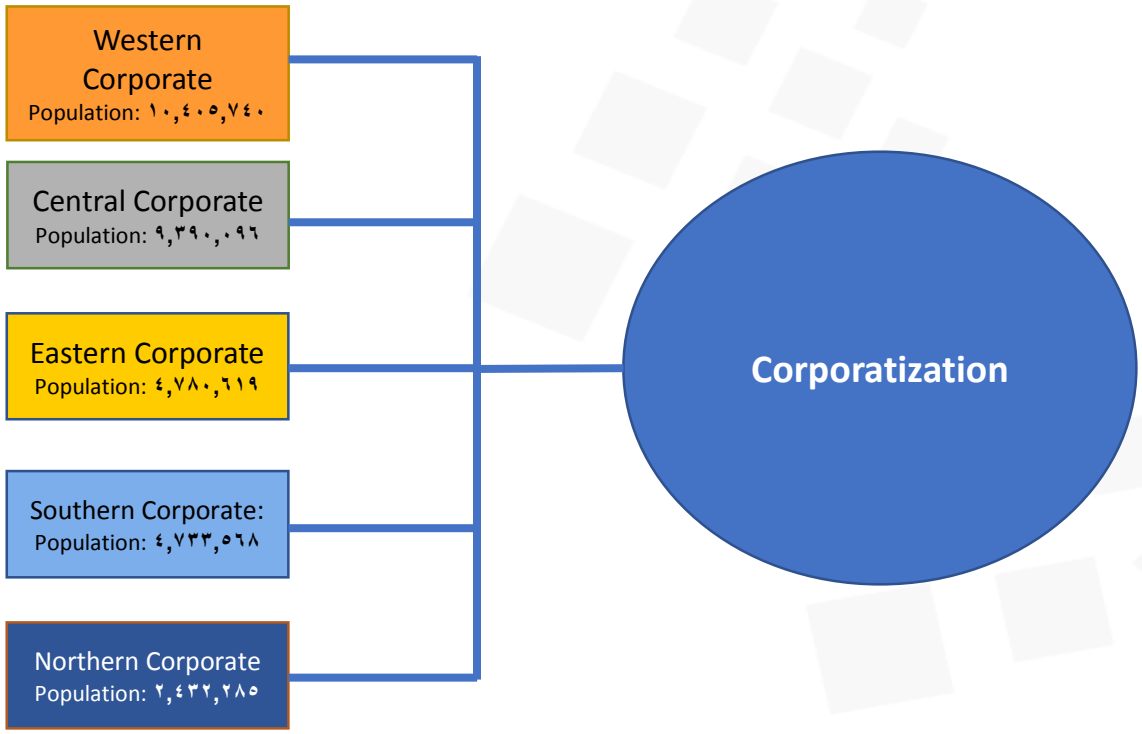
A description of the support structure, support services in scope, and detailed information on how support will be delivered across the entire MOH organization during the implementation and ongoing operation of the solution.

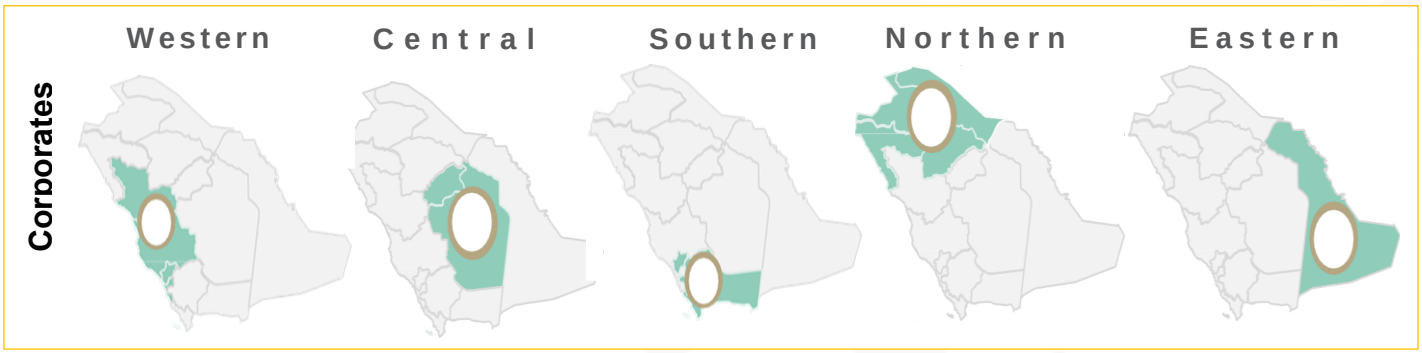
Appendix A: Glossary of RFQ

These Definitions are provided solely for the purpose of clarification of this RFQ and are not to be construed as legal definitions.

Cluster: means Group of healthcare institutes which are Balanced service offering (i.e., primary / secondary / tertiary) within Contiguous Geographical Boundaries. And it has balanced capacity as well as catchment population size. Cluster and or Clusters will be linked to MOH Corporate Structure.

Zone/Region: means Geographical area which has one or more than one cluster. This is linked to MOH Corporate Structure.





ATNA: Audit Trail and Node Authentication

Authorized Signatory: means any person who is duly authorized by the Bidder by virtue of (a) a valid commercial register naming him as a manager(s) of the business entity/company; (b) a valid authorization letter signed by the duly authorized representative of the business entity\company and attested by the applicable Chamber of Commerce; (c) a valid power of attorney made by the duly authorized representative of the business entity/company and attested by the notary public, and in the case of a power attorney issued in a jurisdiction other than the Kingdom, it should be duly attested by the relevant Saudi consular mission in the country of the business entity/company; or (d) a valid board of directors' resolution, in case of companies, duly issued by the board.

Bidder: Any legal entity (public company, private company or joint venture) who submits a proposal for this RFQ.

Business Days: Any day, Saturday through Wednesday, excluding Islamic holidays.

Contract: The contract resulted from this RFQ.

Contract Officer/Issuing Office: MOH representative who is the primary liaison between MOH and the selected Bidder, and will coordinate overall management and administration of the contract for the MOH.

DI: Diagnostic Imaging

DICOM: Digital Imaging and Communications in Medicine

DIRS: Diagnostic Imaging Repository Solution

EHR: Electronic Health Record

IHE: Integrating the Healthcare Enterprise (www.ihe.net)

MOH: Ministry of Health

Financial Data: Any information, either direct or indirect, that discloses the Bidder's proposed charges for services and deliverables. Financial data consists of, but is not limited to, costs, fees, rates, bonuses, discounts, rebates, or the identification of free services, labor or materials.

Health Level Seven (HL٧) : HL٧ is an international set of open standards for communication that allows health information systems developed independently to automatically "talk" with one another .

PACS: Medical imaging technology which provides economical storage of, and convenient access to, images from multiple modalities (source machine types). Electronic images and reports are transmitted digitally via PACS; this eliminates the need to manually file, retrieve, or transport film jackets.

PGO: Program Governance office

PMO: Project Management Office

Prime contractor\Bidder: A Bidder whose proposal for this RFQ includes the use of a subcontractor(s) to satisfy some, but not all, of the requirements of the RFQ.

SAR: Saudi Riyals

Subcontractor: Any legal entity that performs services for the Prime Contractor (Bidder) as required for the Prime Contractor's fulfillment of its obligations under a negotiated agreement with MOH for the provision of the services contemplated in the RFQ, by virtue of an agreement with the Prime Contractor.

TRS: Tele-radiology solution

XDS: Cross Enterprise Document Sharing.

XDS Actor: Actors are information systems or components of information systems that produce, manage, or act on categories of information required by operational activities in the enterprise. XDS defines five actors. Document Source Actor, Document Repository Actor, Document Registry Actor, Document Consumer Actor and Patient Identity Source Actor.

XDS Document: The concept of a document in XDS is not limited to textual information. As XDS is document content neutral, any type of clinical information without regard to content and representation is supported. This makes the XDS IHE integration profile equally able to handle documents containing simple text, formatted text (e.g., HL٧ CDA Release ١), images (e.g.,

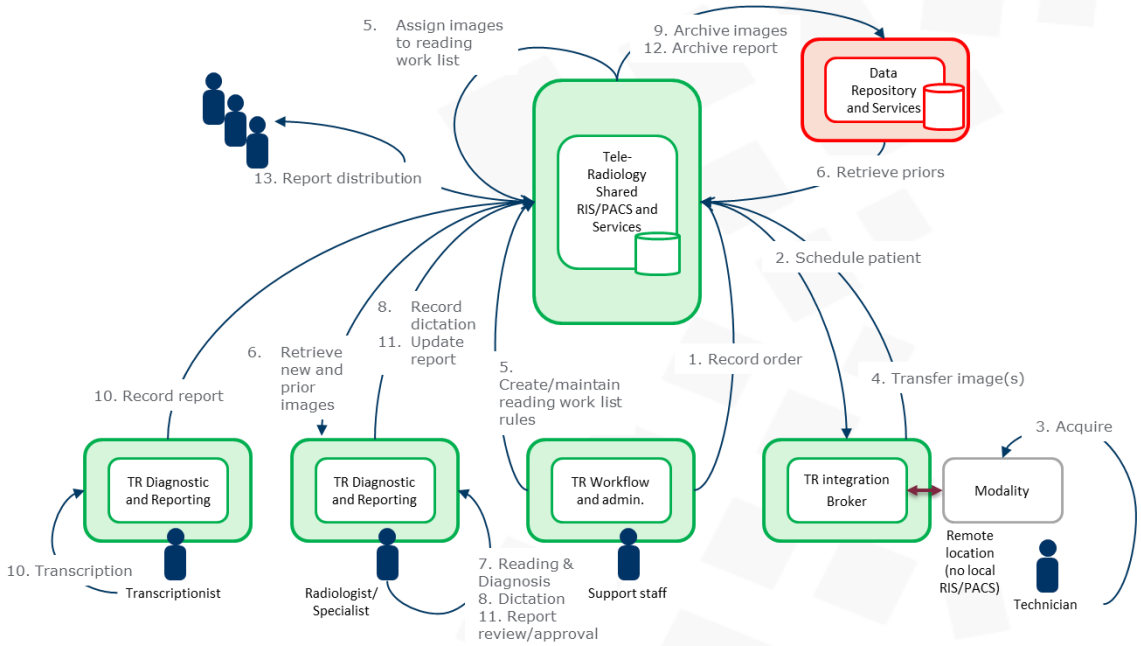
DICOM) or structured and vocabulary coded clinical information (e.g., CDA Release ٢, CCR, CEN ENV ١٣٦٠٦, DICOM SR).

XDS-I: Cross Enterprise Document Sharing for Imaging.

XDS Profile: Profiles are detailed specifications for communication among systems to address key clinical use cases, all based on established standards. Each profile defines the actors, transactions and information content required to address the clinical use case.

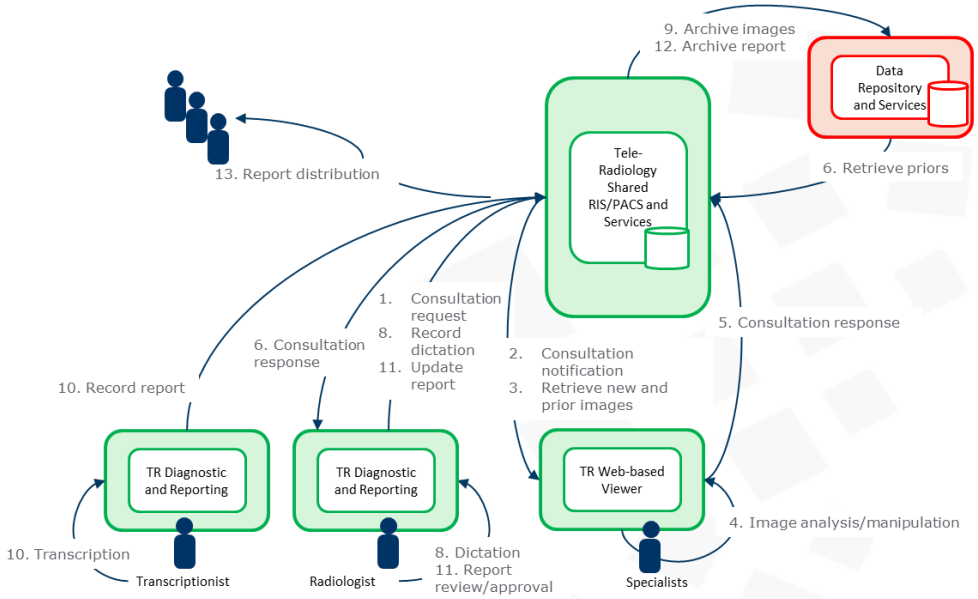
Tele-radiology Solution Use Cases

I. PRIMARY READING AND REPORTING BY RADIOLOGIST AT ANY LOCATION (WORK LIST BASED).



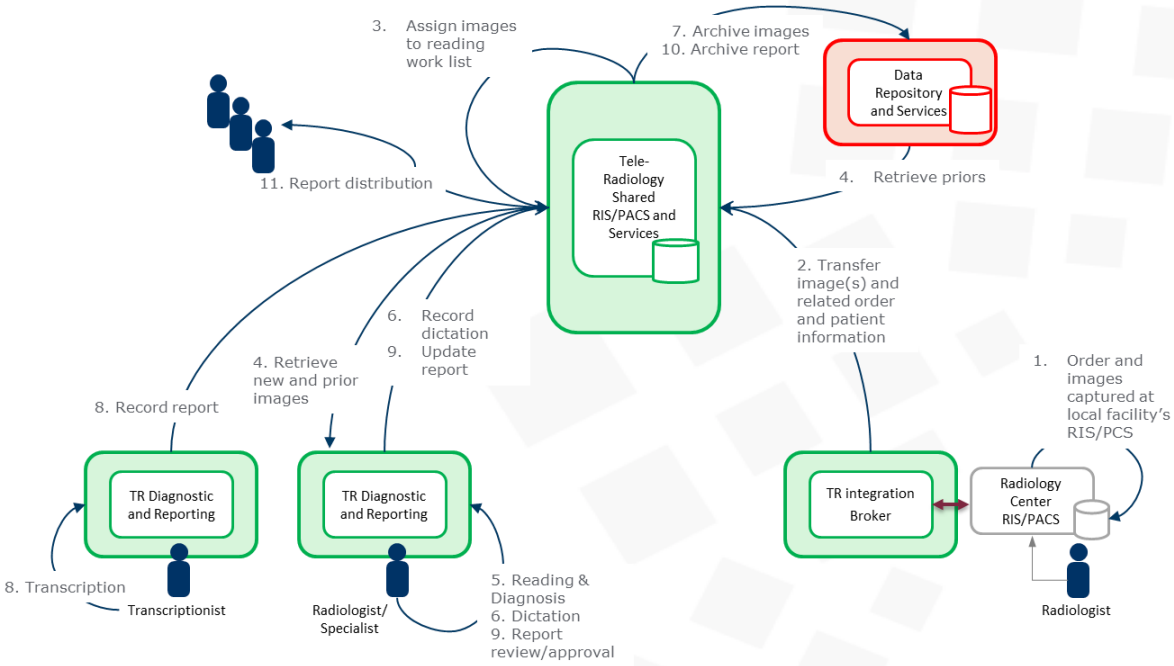
1. Order is recorded and stored in TRS shared RIS
2. Acquisition is scheduled at local site
3. Images are acquired at local site by a technologist.
4. Images are transferred from the remote modality and stored in TRS shared PACS
5. Images are automatically assigned for reporting to a Radiologist from a pool of available resources
6. Radiologist retrieves new and prior images for analysis. Relevant priors are automatically pre-fetched by TRS from regional DIRS(s). Radiologist uses Diagnostic Viewer of TRS or an existing DICOM workstation connected to the TRS.
7. Radiologist analyses, measures, annotates and manipulates images as needed.
8. Verbal report dictated into TRS.
9. Reported images are automatically archived from TRS to DIRS.
10. Dictation is transcribed into written report via Reporting component of TRS.
11. Radiologist reviews/edits and approves report via Reporting component of TRS.
12. Report is automatically archived from TRS to DIRS.
13. Report is distributed to appropriate clinicians and referring physician via TRS.

II. REMOTE CONSULT WITH SPECIALIST TO FINALIZE DIAGNOSIS AND REPORTING (AD HOC ACCESS TO IMAGES FROM DIFFERENT SITES)



1. To finalize a diagnosis, the Radiologist initiates a consultation with a specialist at another location via the workflow component of the TRS.
2. Specialist at other location receives consultation notification via TRS.
3. Specialist retrieves new and prior images for analysis. Relevant priors are automatically pre-fetched by TRS from regional DIRS(s). Specialist uses Viewer component of TRS or an existing DICOM workstation connected to the TRS.
4. Specialist analyses and manipulates images as needed.
5. Specialist records observations sends response to radiologist via TRS.
6. Radiologist receives Specialist response via TRS.
7. Steps 1 to 5 may be repeated with multiple participants if needed.
8. Verbal report dictated into TRS.
9. Reported images are automatically archived from TRS to DIRS.
10. Dictation is transcribed into written report via Reporting component of TRS.
11. Radiologist reviews/edits and approves report via Reporting component of TRS.
12. Report is automatically archived from TRS to DIRS.
13. Report is distributed to appropriate clinicians and referring physician via TRS.

III. TRANSFER OF ORDERS AND IMAGES FROM EXISTING PACS/RIS TO TRS FOR PRIMARY READING AND REPORTING BY RADIOLOGIST AT ANY LOCATION (WORK LIST BASED).



1. Images are acquired at local facility. Order information and images are stored in local RIS/PACS. Site wishes to offload workload for certain studies to available pool of remote radiologists.
2. Orders and images are transferred to TRS for reading by available pool of remote radiologists.
3. Images are automatically assigned for reporting to a Radiologist from a pool of available resources
4. Radiologist retrieves new and prior images for analysis. Relevant priors are automatically pre-fetched by TRS from regional DIRS(s). Radiologist uses Diagnostic Viewer component of TRS or an existing DICOM workstation connected to the TRS.
5. Radiologist analyses, measures, annotates and manipulates images as needed.
6. Verbal report is dictated into TRS.
7. Reported images are automatically archived from TRS to DIRS.
8. Dictation is transcribed into written report via Reporting component of TRS.
9. Radiologist reviews/edits and approves report via Reporting component of TRS.
10. Report is automatically archived from TRS to DIRS. Images and report are now available for consultation by staff at originating site and any other authorized user.
11. Report is distributed to appropriate clinicians in originating site and referring physician via TRS.

Appendix E: Tele-radiology Solution Functional and Technical Requirements

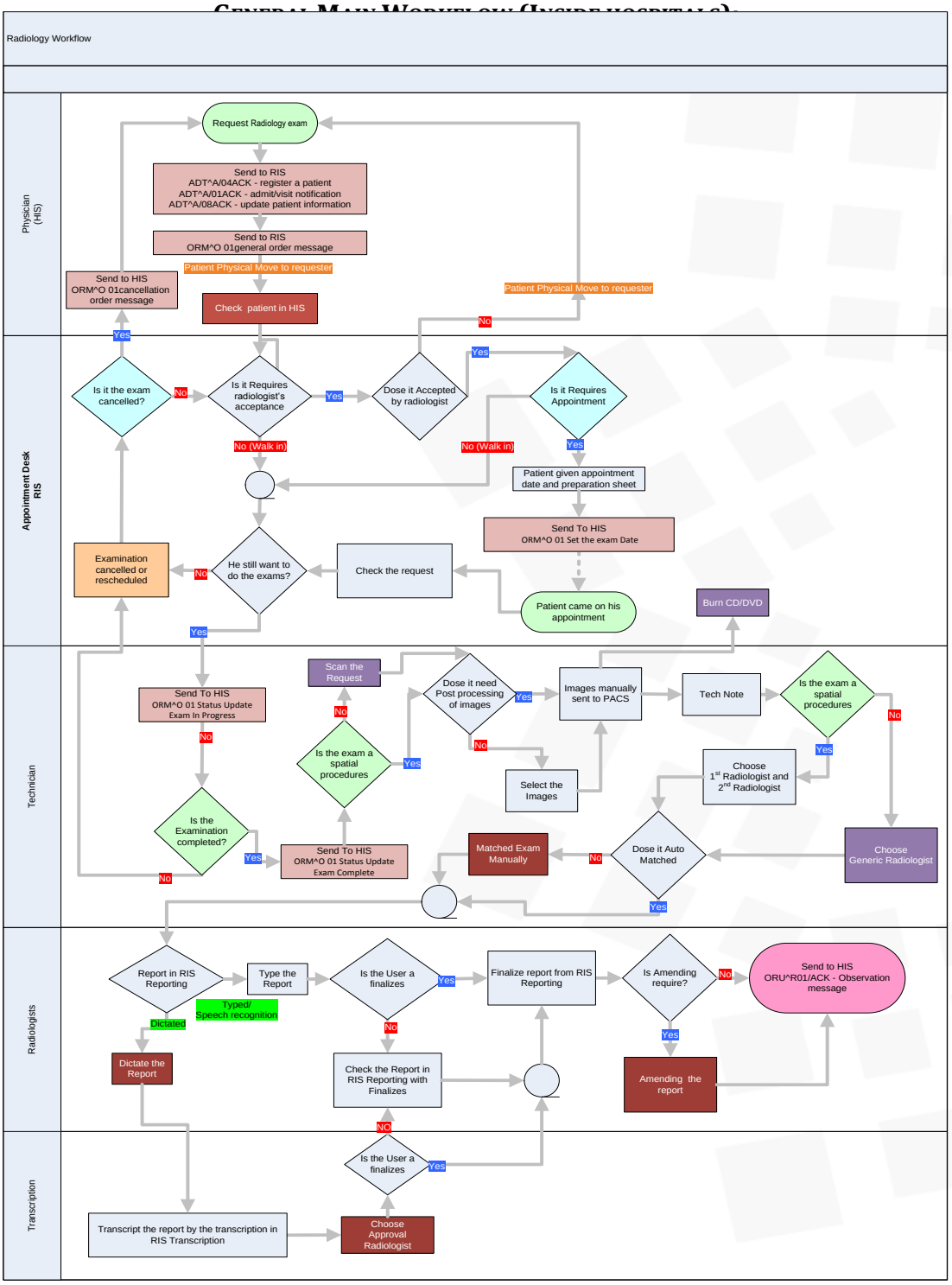
Bidders must explicitly reference the following list of requirements in their responses to the ***Scope of Work and Bidder Understanding of Requirements*** section of their proposals[٥]. Requirements are uniquely numbered. Bidders must describe how their proposal meets each requirement, and must also provide written responses to the questions under the "supporting evidence" column. Bidders are encouraged to consult the ***Conceptual Reference Architecture*** described in this RFQ.

The vendor must answer all points below and Reference page number in the proposal.

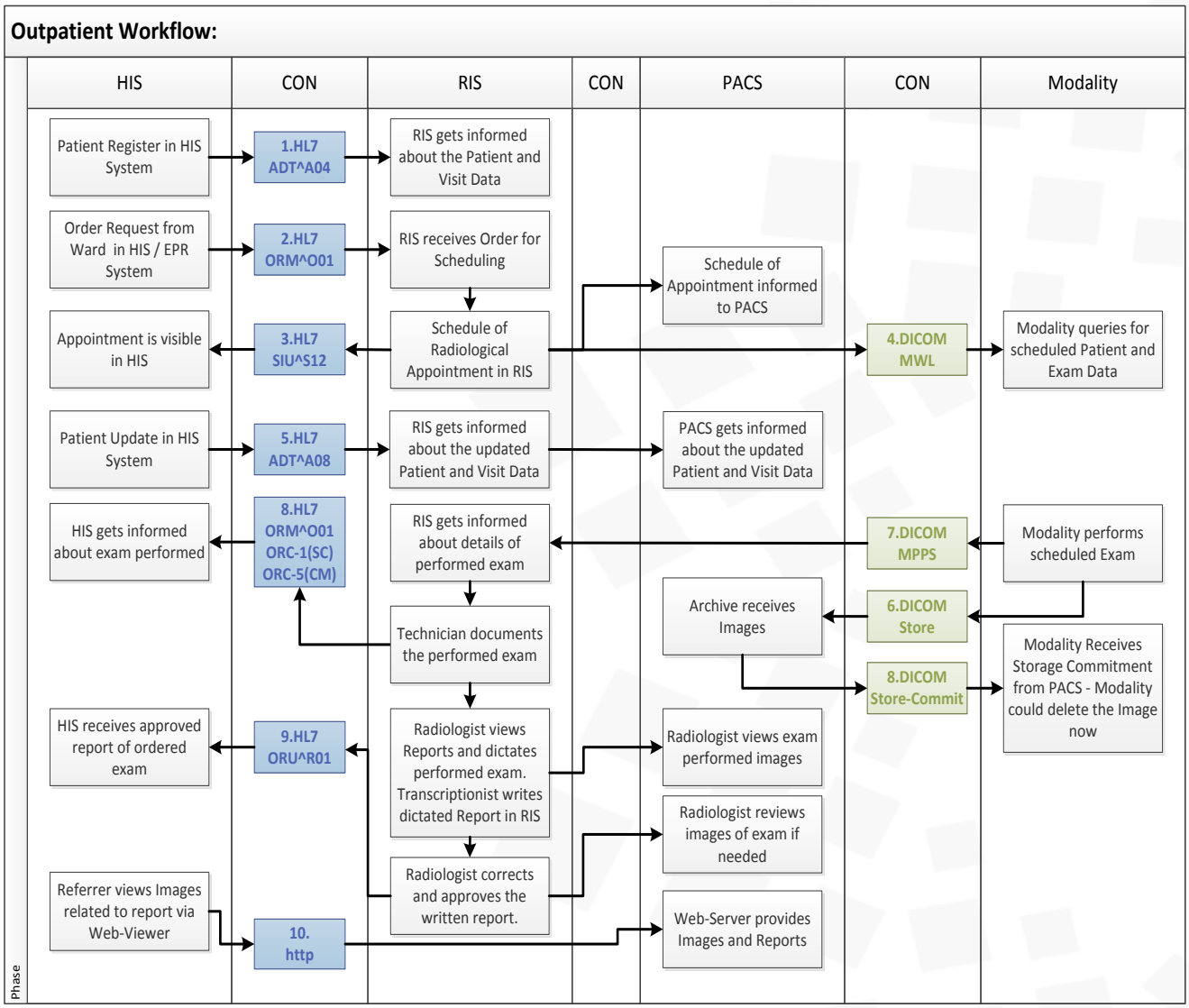
Appendix M: INTERFACE WORKFLOW

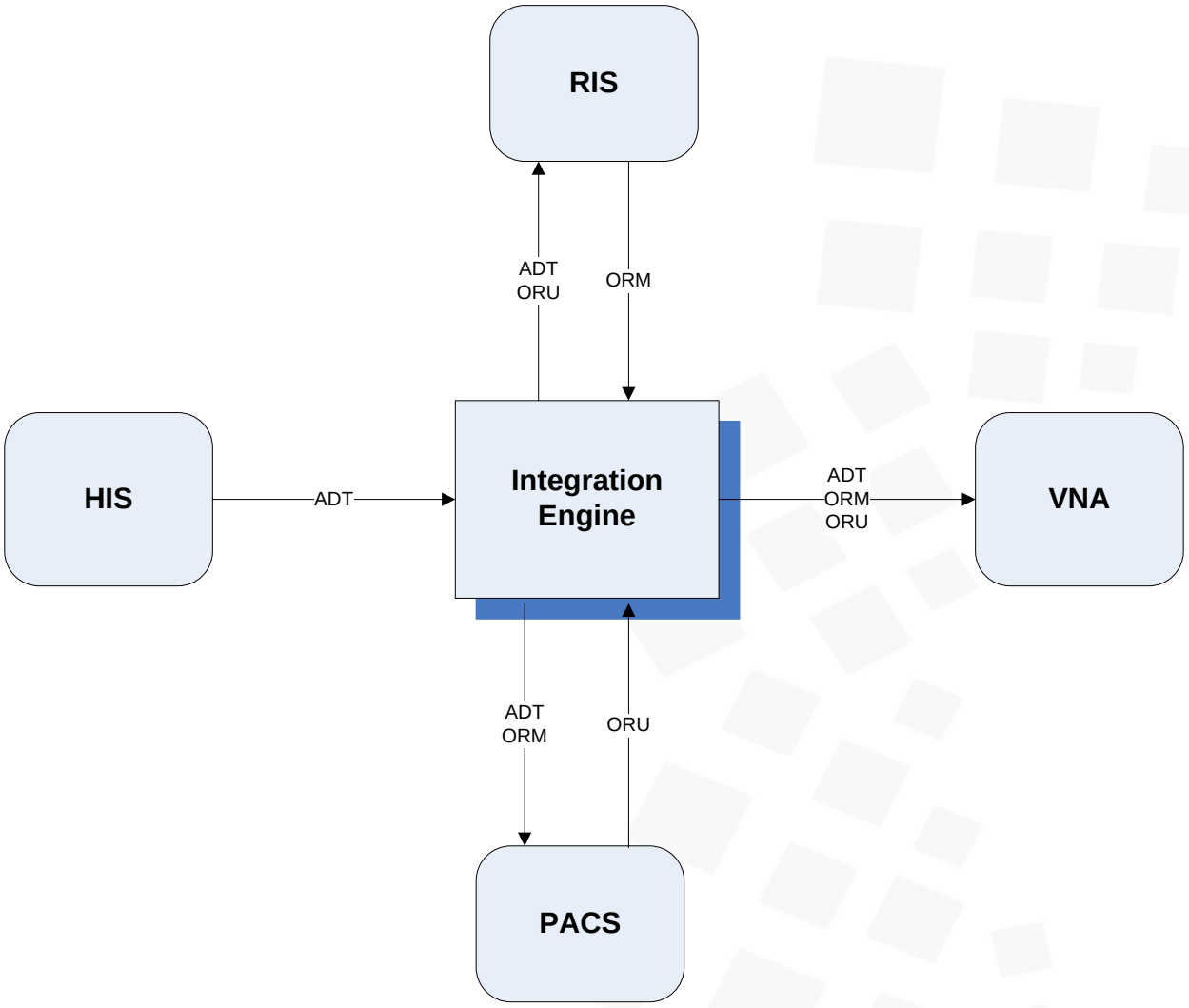
[٥] In Section ٢ of Package Number (٢) of their proposals, see section ٤.٢ in this document.

General Main Workflow (Inside Hospitals):



OUTPATIENT WORKFLOW (INSIDE HOSPITALS):





Typical message types that are expected to be supported but not limited to are shown in the table below.

criteria
integration engine
integration engine type (tight integration technology/open architecture)
DICOM

HL7
IHE
XML
file format
mentoring and alerting
centralized dashboard
GUI interface integration tool
Data Access Flexibility
Testing feature
archieve messages
web services
various connection protocol
data integrator module
minimum layer protocol
Translation performance / message edit
Functional Requirements
R7
R8
R9
R10
R11
R12
R13
R14
R15

R16
R17
R39
R40
R83
R95
R96
R100
R101
R102
R108
R114
R115
R117
message supporting
ADT-A01
ADT-A02
ADT-A03
ADT-A04
ADT-A05
ADT-A06
ADT-A07
ADT-A08
ADT-A11
ADT-A12

ADT-A13
ADT-A18
ADT-A23
ADT-A28
ADT-A31
ADT-A34
ADT-A40
ORM-O01
ORU-R01

Also Vendor shall to comply with the following HL٧:

Ministry of Health PACS Program HL٧ Interface Specification (RIS/PACS-Radiology)

Document Revision History

Revision	Edit Date	Author	Requestor	References
١.٠	١٠/١١/٢٠١٣			Health Level Seven International
٢.٠	٠٥/٠٢/٢٠١٤			Health Level Seven International
٢.١	١٦/٠٤/٢٠١٤			Health Level Seven International
٢.١.١	١٤/٠٧/٢٠١٤			Health Level Seven International
٢.٢	١٢/١١/٢٠١٤			Health Level Seven International
٢.٣	١١/٠٣/٢٠١٥			Health Level Seven International
٢.٤	٢٣/٠٤/٢٠١٥			Health Level Seven International
٢.٥	١٥/٠٥/٢٠١٥			Health Level Seven International

Introduction

This document defines the specifications for the ADT/Orders/Results interface between HIS and RIS.

ADT and Order Entry take place in the HIS.

Order Entry (during a HIS downtime), and Result Processing take place in the RIS. The following interface messages are generated:

- ADT messages HIS to RIS (ADT) for IP, OP, ER visit types
- At accessioning, HIS to RIS (ORM),
- After result verification RIS to HIS (ORU / OBR Seq ٢٥ = “F”)

This document will cover a subset of the HL٧ messages, namely the one relevant to exchange messages related to the specific areas:

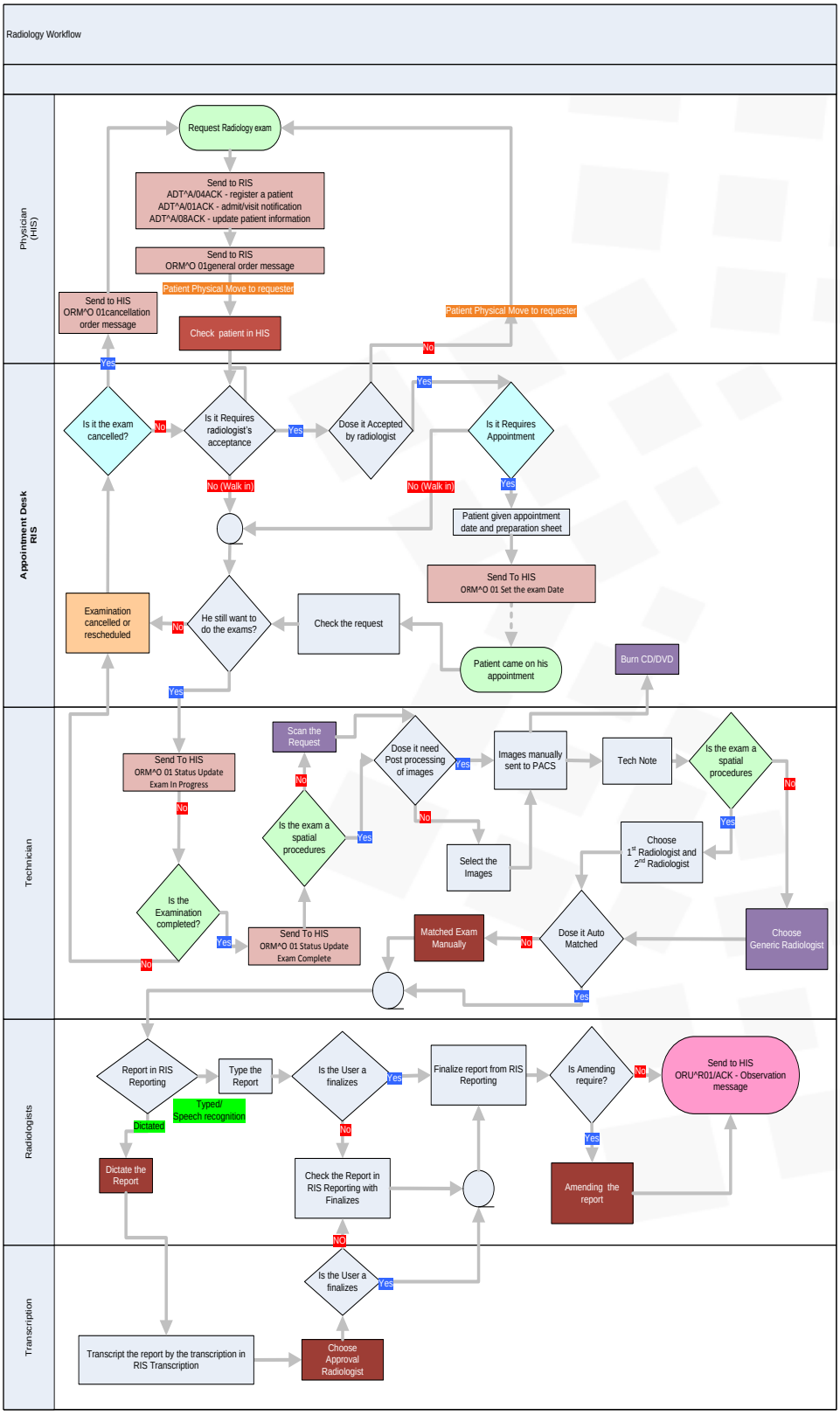
- Patient Demographic Management
- Order Management
- Result

All optional segments needed by the hospital can be added as additional segments and it will not reflect on this stander and it will be for that hospital only.

Please refer to the Health Level Seven documentation for details on the standard.

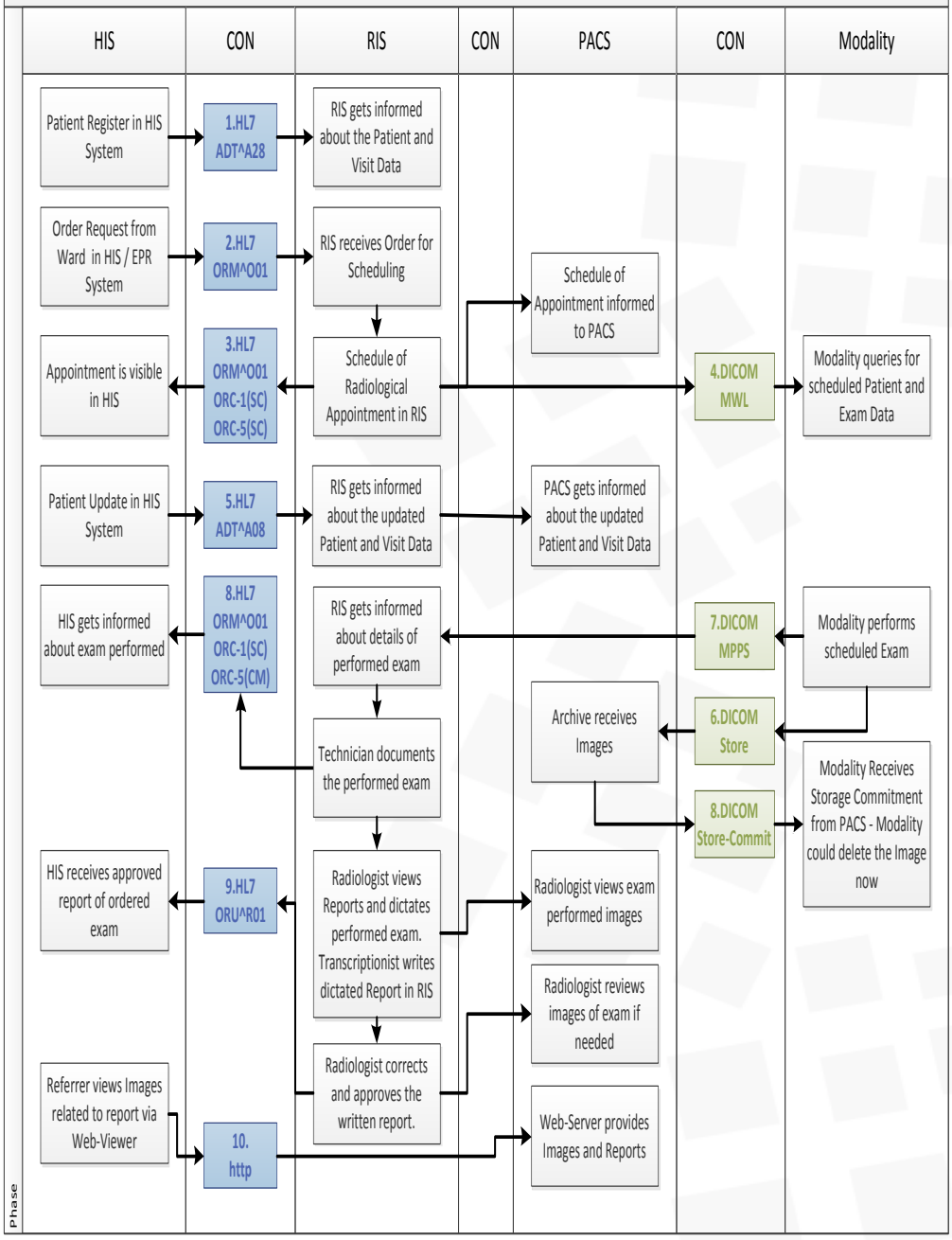
Workflow Integration scenarios:

General Main Workflow:



Outpatient Workflow:

Outpatient Workflow:



Ministry of Health PACS Program HL٧ Interface Specification (OBY/GYN PACS)

Document Revision History

Revision	Edit Date	Author	Requestor	References
٢.٠	٢٥/١١/٢٠١٤			Health Level Seven International

Introduction

This document defines the specifications for the ADT/Orders/Results interface between HIS and OBGYN Information Systems.

ADT and Order Entry take place in the HIS.

Order Entry (during a HIS downtime), and Result Processing take place in the OBGYN INFORMATION SYSTEMS. The following interface messages are generated:

- ADT messages HIS to OBGYN INFORMATION SYSTEMS (ADT) for IP, OP, ER visit types
- At accessioning, HIS to OBGYN INFORMATION SYSTEMS (ORM),
- After result verification OBGYN INFORMATION SYSTEMS to HIS (ORU / OBR Seq ٢٥ = “F”)

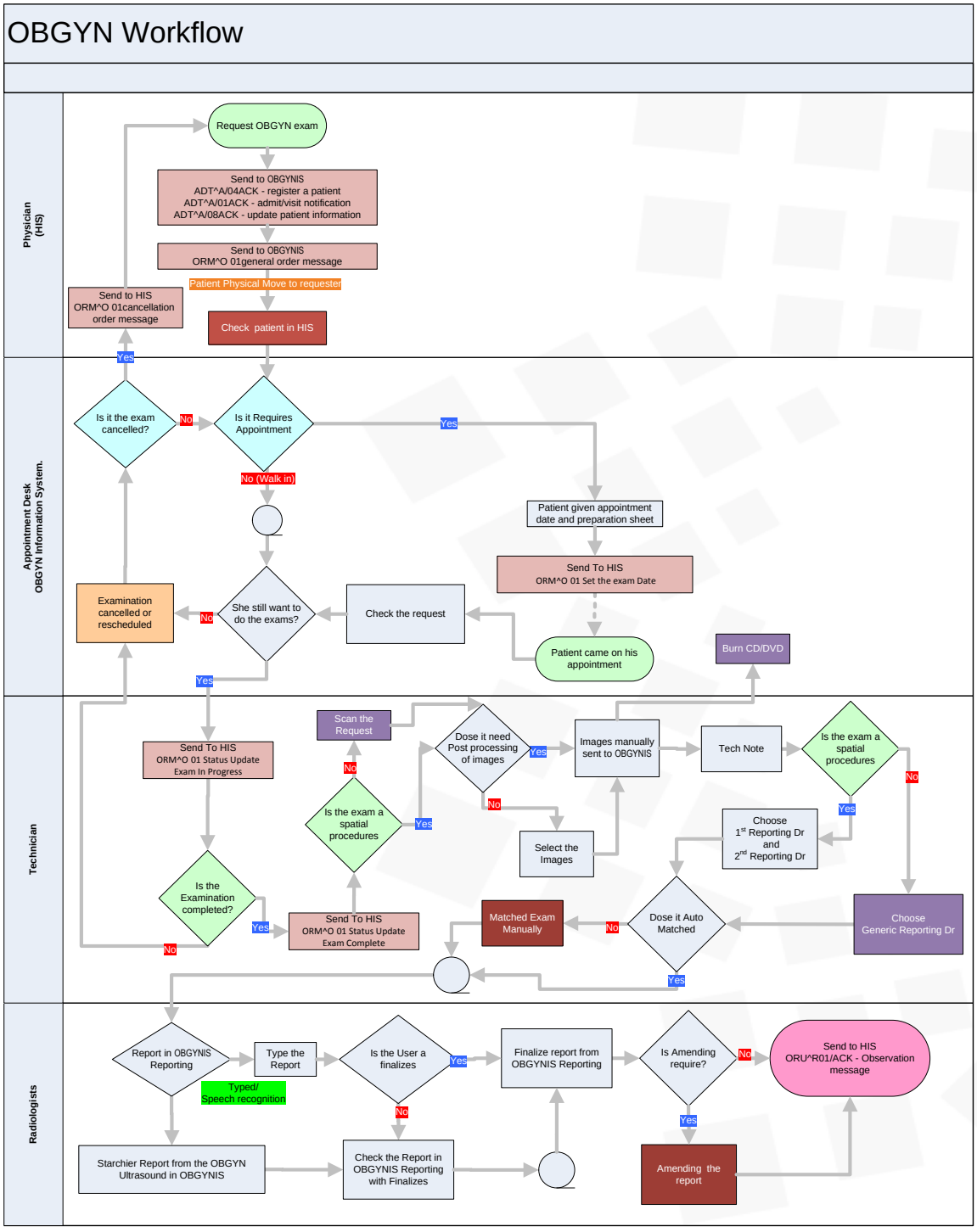
This document will cover a subset of the HL٧ messages, namely the one relevant to exchange messages related to the specific areas:

- Patient Demographic Management
- Order Management
- Result

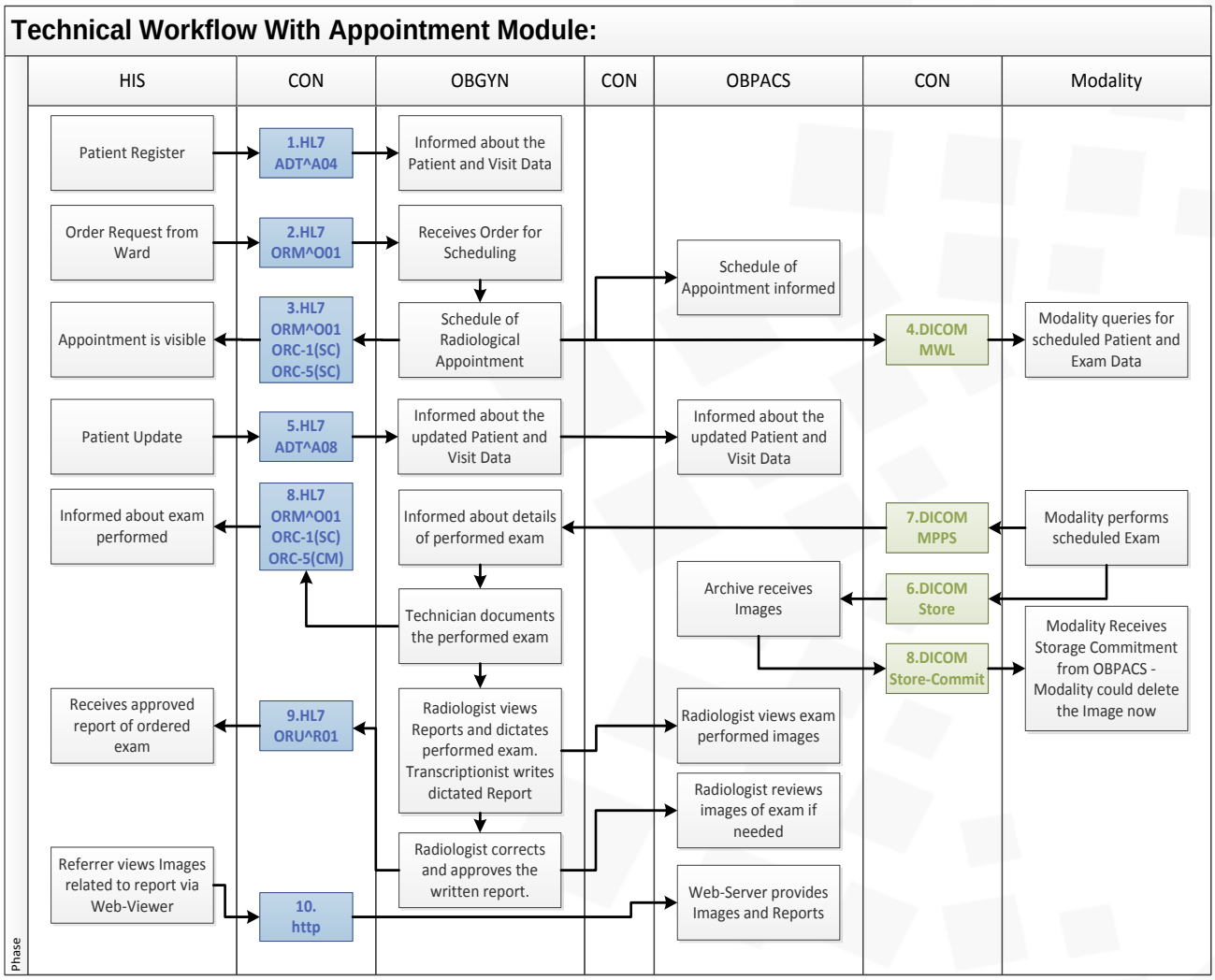
Please refer to the Health Level Seven documentation for details on the standard.

General Workflow With Appointment Module:

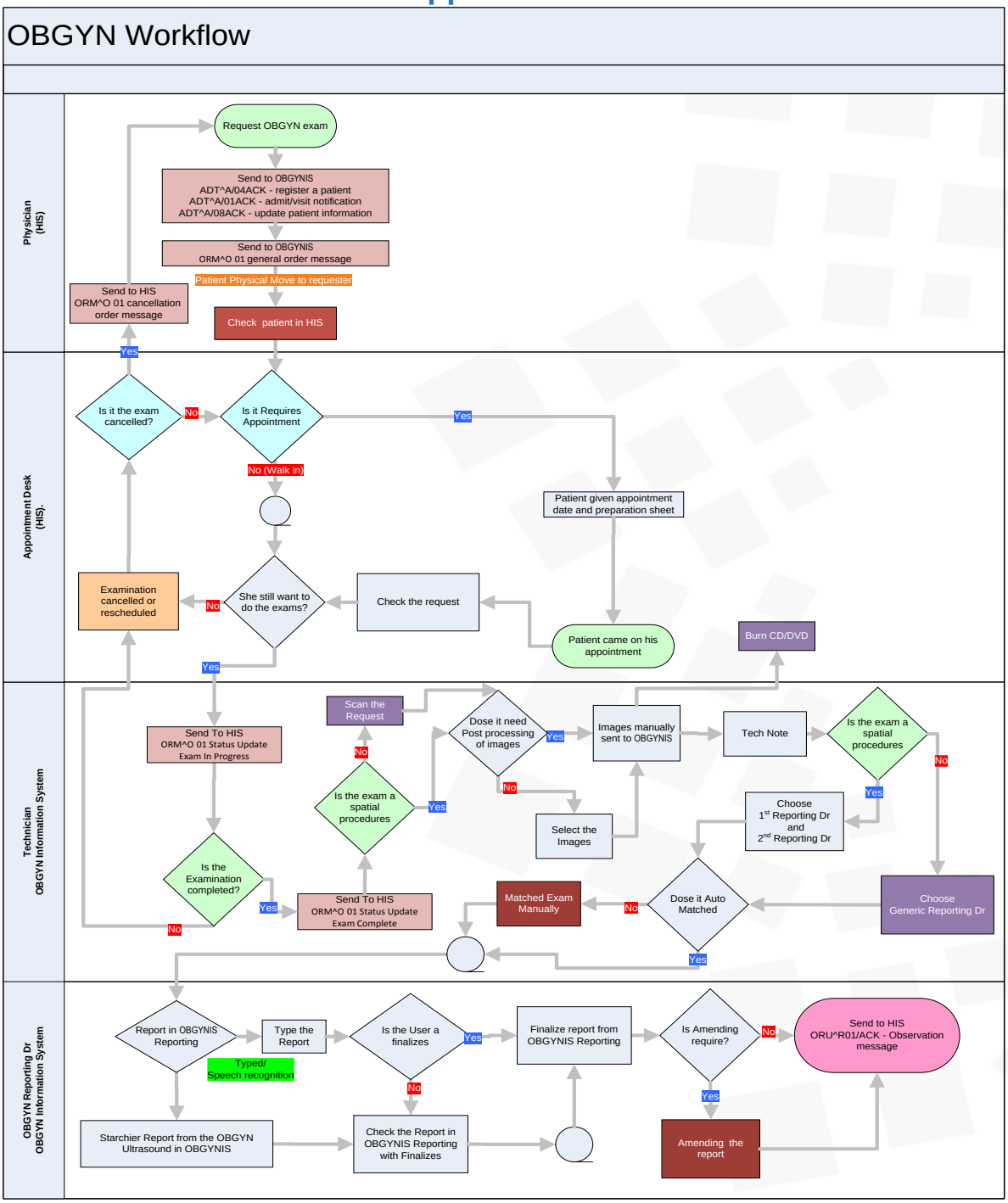
OBGYN Workflow



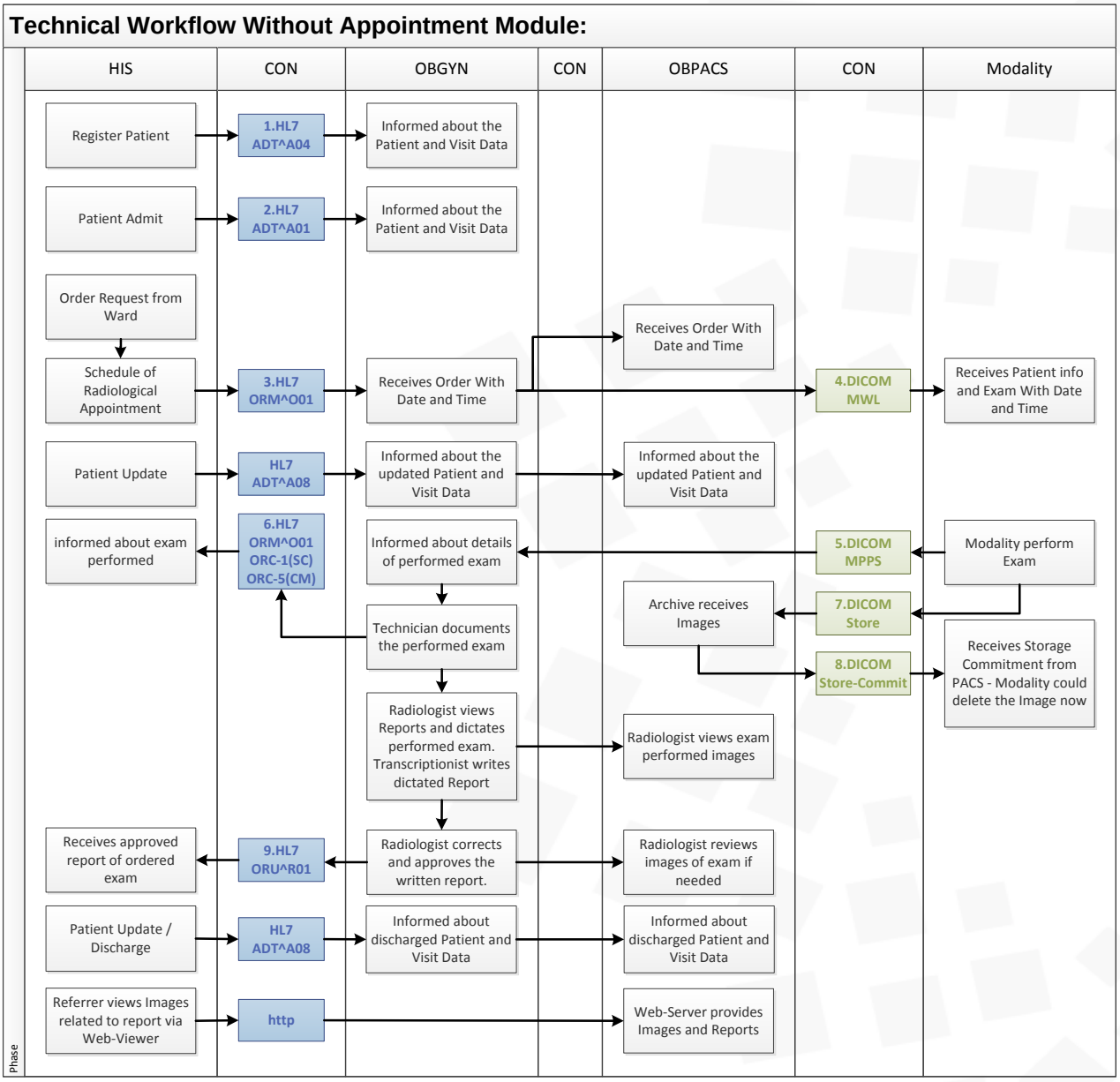
Technical Workflow:



General Workflow Without Appointment Module:



Technical Workflow:



الملحق الثالث

المتطلبات

المستندات المطلوبة

١. المستندات القانونية

١.١ شهادة السجل التجاري سارية المفعول

١.٢ شهادة الزكاة والدخل سارية المفعول

١.٣ شهادة من المؤسسة العامة للتأمينات الاجتماعية سارية المفعول

١.٤ شهادة الاشتراك في الغرفة التجارية سارية المفعول

١.٥ رخصة الاستثمار إذا كان المتنافس مرخصاً وفقاً لنظام الاستثمار الأجنبي سارية المفعول

١.٦ شهادة تحقيق النسبة النظامية لتوطين الكوادر السعودية سارية المفعول (شهادة السعودة/ نطاقات)

١.٧ القوائم المالية المصدقة لميزانية المنشأة في الثلاث سنوات الأخيرة

يتم إرفاق كافة المستندات المطلوبة بختم المقاول وترقيمها كما ذكر في الملحق الثالث تعليمات التسليم.

٢ المستندات الفنية والخبرات السابقة

٢.١ يجب على المقاول تقديم الاجابة على هذه الكراسة على النحو التالى:

- موجز للحلول التي تقدم بها مرفقه بالرسومات والخرائط اللازمة لذلك باللغة الانجليزية عدد نسختين (ورقية والكترونية).
- الاجابة على جميع المواصفات والاسئلة التي وردت بالكراسة بالشكل الذي طلب بهذه الكراسة في فقرة (Informational Appendices) باللغة الانجليزية عدد نسختين (ورقية والكترونية).
- تدعيم الاجابات والحلول بالمستندات المطلوبة من كتالوجات او نشرات او ملاحق والاشارة بشكل واضح للرجوع اليها باللغة الانجليزية عدد نسختين (ورقية والكترونية).
- تقديم التوصيات من خلال خبرات سابقه قام بها المقاول لمثل هذه النوعية من المشاريع وذكر اماكنها مع العناوين وارقام الهواتف للرجوع اليها إذا لزم الامر باللغة الانجليزية عدد نسختين (ورقية والكترونية).
- خطة التطوير او ما يسمى بالـ (Products Road-map) خلال الخمسة سنوات القادمة مدعمة بوثائق رسمية.
- تصنيف الشركة و منتجاتها لآخر خمسة سنوات في KLAS على مستوى جميع المنتجات المعروضة

(PACS/RIS/VNA/Tele-radiology/٣D post processing) مدعما بوثائق رسمية.

٢.٢ ذكر معلومات عن المقاول حسب النموذج المرفق

٢.٣ Company Profile على أن يحتوي على:

٢.٣.١ الهيكل التنظيمي

٢.٣.٢ عدد الموظفين

٢.٣.٣ عدد فروع ومكاتب المقاول

٢.٣.٤ الموردين المعتمدين ، الخ .. يتم تحديد كل المعلومات المهمة حسب نوع العقد)

٢.٤ ذكر مالا يقل عن ثلاث مشاريع مشابهه لنوع العقد المذكور خلال الخمس سنوات السابقة حسب النموذج المرفق

٢.٥ ذكر المشاريع الحالية والتي سيتم تنفيذها في نفس فترة عمل المشروع حسب النموذج المرفق

٢.٦ ذكر خبرات الجهاز الفني و الإداري التابع للمقاول حسب النموذج المرفق

٢.٧ ذكر التزامات المقاول المالية خلال مدة تنفيذ العقد

٢.٨ ذكر مصادر تمويل المقاول

٢.٩ إرفاق مالا يقل عن ثلاث شهادات حسن أداء

النماذج المرفقة

ملحوظة : ترفق المستندات الثبوتية لهذه المشاريع

نموذج الخبرات - الكادر الإداري				
٣-٢ وضح خبرات الكادر الإداري التابع للمقاول حسب الجدول التالي :				
الرقم	الاسم	الوظيفة	التخصص / مجال الخبرة	مدة الخبرة

ملحوظة : يمكن طلب السيرة الذاتية عند الحاجة

نموذج معلومات عن المقاول

١.١المقاول			
اسم المقاول (شركة / مؤسسة)		رأس مال المقاول	
رقم السجل التجاري		تاريخه	
اسم الشخص المسئول :		المنصب	
١.٢ العنوان :			
المدينة		الشارع	
ص.ب		الرمز البريدي	
هاتف :		فاكس	
البريد الإلكتروني :		الموقع الالكتروني	
سنة التأسيس:			

١.٣ ملكية الشركة		
الملاك / الشركاء	الجنسية	نسبة الملكية

١.٤ معلومات ممثل الشركة

الإسم			
المسمى الوظيفي			
الهاتف	الثابت		المتنقل
البريد الإلكتروني			

نموذج الخبرات - الكادر الفني

٣-٢ وضح خبرات الكادر الفني التابع للمقاول حسب الجدول التالي :

الرقم	الاسم	الوظيفة	التخصص / مجال الخبرة	مدة الخبرة

ملحوظة : يمكن طلب السيرة الذاتية عند الحاجة

نموذج موارد الشركة

نموذج الخبرات - المشاريع السابقة

١-١ توضيح تفاصيل طبيعة الأنشطةالتي يقدمهاالمقاول.

١-٢ اذكر تفاصيل مالا يقل عن ثلاثة مشاريع منفذة من قبل المقاول خلال الخمس سنوات الأخيرة حسب الجدول التالي :

الرقم	الوصف	المشروع الأول
١	اسم المشروع	
٢	موقع المشروع	
٣	مكونات المشروع	
٤	الجهة المالكة للمشروع	
٥	قيمة العقد	
٦	مدة العقد	

المعدات المملوكة أو المستأجرة للمقاول:

اسم المعدة	سنة الصنع	حالتها التشغيلية	رقم شهادة الترخيص	تاريخ الانتهاء

٧	تاريخ البداية	
٨	تاريخ الانتهاء	
٩	اسم المسؤول عن المشروع	
١٠	أرقام للتواصل مع المسؤول عن المشروع	
١١	بريد إلكتروني المسؤول عن المشروع	

الرقم	الوصف	المشروع الثاني
١	اسم المشروع	
٢	موقع المشروع	
٣	مكونات المشروع	
٤	الجهة المالكة للمشروع	
٥	قيمة العقد	
٦	مدة العقد	
٧	تاريخ البداية	
٨	تاريخ الانتهاء	
٩	اسم المسؤول عن المشروع	
١٠	أرقام للتواصل مع المسؤول عن المشروع	
١١	بريد إلكتروني المسؤول عن المشروع	

الرقم	الوصف	المشروع الثالث
١	اسم المشروع	
٢	موقع المشروع	
٣	مكونات المشروع	
٤	الجهة المالكة للمشروع	
٥	قيمة العقد	
٦	مدة العقد	
٧	تاريخ البداية	
٨	تاريخ الإنتهاء	
٩	إسم المسؤول عن المشروع	
١٠	أرقام للتواصل مع المسؤول عن المشروع	
١١	بريد إلكتروني المسؤول عن المشروع	

نموذج الخبرات - المشاريع الحالية

١-١ توضيح تفاصيل طبيعة الأنشطة التي يقدمها المقاول.

١-٢ اذكر تفاصيل مالا يقل عن ثلاث مشاريع قائمة حالياً حسب الجدول التالي :		
الرقم	الوصف	المشروع الأول
١	اسم المشروع	
٢	موقع المشروع	
٣	مكونات المشروع	
٤	الجهة المالكة للمشروع	
٥	قيمة العقد	
٦	مدة العقد	
٧	تاريخ البداية	
٨	تاريخ الانتهاء	
٩	اسم المسؤول عن المشروع	

١٠	أرقام للتواصل مع المسؤول عن المشروع	
١١	بريد إلكتروني المسؤول عن المشروع	

الرقم	الوصف	المشروع الثاني
١	اسم المشروع	
٢	موقع المشروع	
٣	مكونات المشروع	
٤	الجهة المالكة للمشروع	
٥	قيمة العقد	
٦	مدة العقد	
٧	تاريخ البداية	
٨	تاريخ الانتهاء	
٩	اسم المسؤول عن المشروع	
١٠	أرقام للتواصل مع المسؤول عن المشروع	
١١	بريد إلكتروني المسؤول عن المشروع	

معايير التقييم التي ستعتمدها اللجنة في تقييم ملفات التأهيل			
مسلسل	المعيار	وصف المعيار	
١	المستندات القانونية	ستقوم اللجنة باستعراض الشهادات والوثائق المقدمة من الشركات طالبة التأهيل الموضحة في فقرة المستندات المطلوبة في كراسة التأهيل	
٢	الكادر الإداري	ستقوم اللجنة باستعراض هيكل الشركة الإداري وتقييمه من حيث أسس تقسيم العمليات ووجود إدارات مختصة بالتحكم بالجودة.	
٣	الكادر الفني	ستقوم اللجنة باستعراض السير الذاتية وخبرات ومؤهلات الكوادر البشرية التي ستعمل في المشروع وتقيمها من حيث مستوى مؤهلات الفريق ومدى ارتباط خبرات الفريق الفني بنطاق عمل المشروع. وهل سبق لهذا الكادر بعمل و تنفيذ مثل هذه النوعية من المشاريع (مع ذكر مكانها وسنة التنفيذ). كذلك خبرة المنشأة في توطين هذه الكوادر و نسبة السعودة أو الخطة المستقبلية لذلك.	
٤	الخبرة الفنية	أ - ستقوم اللجنة باستعراض ثلاثة مشاريع على الأقل مشابهة لنطاق عمل المشروع خلال الخمس سنوات السابقة يقدمها طالب التأهيل مع ما يثبت قيامه بتنفيذها بنجاح (إرفاق شهادات حسن أداء) بالإضافة إلى قيمة هذه المشاريع. ب - كذلك ستقوم اللجنة باستعراض المعايير ووحدة تكامل البيانات ومنصة كتابة التقارير ومدى مطابقتها وكفاءتها لما ورد بالكراسة.	

		ج – ستقوم اللجنة باستعراض مشاركة الشركة واختبارها لمنتجاتها في الهيئة العالمية للفحص (كونيتاثون - connectathon) ومطابقتها لتلك المعايير مع تطبيقها على ارض الواقع في ثلاثة مشاريع على الاقل. بالإضافة الى موقعها في تقييم كلاس العالمى (KLAS). د – اذا تطلب الامر ، ستقوم اللجنة بزيارة احد هذه المواقع لاستكمال تقييم العرض الفني على ارض الواقع ، وقد يتغير التقييم بسبب الزيارة و المخرجات الفنية المترتبة عنه.	
٥	القوائم المالية والتزامات المقاول خلال مدة تنفيذ العقد	ستقوم اللجنة باستعراض القوائم المالية لثلاث السنوات الأخيرة لطالب التأهيل وحجم التزاماته خلال مدة تنفيذ العقد، وستقوم اللجنة الفنية بتقييم قدرة طالب التأهيل على الوفاء بالتزاماته خلال مدة تنفيذ المشروع من خلال عكس قدرته المالية على حجم التزاماته خلال مدة تنفيذ العقد.	

تعليمات التسليم

الرجاء قراءة التعليمات واتباعها،الإخلال بأي من التعليمات التالية يعد سبباً كافية لعدم التأهل:

١. يتم تسليم المتطلبات في موعد أقصاه يوم الأحد ١ /٧/ ٢٠١٨ الساعة ٤ مساء.

٢. في حال التأخر عن موعد التسليم لن يتم النظر في المرفقات ويعد الاستشاري غير مؤهل.

٣. يجب إرسال جميع المستندات المطلوبة مناولة إلى إدارة العقود والمشتريات بمكتب تحقيق الرؤية بالعنوان التالي: الرياض – طريق الملك فهد

برج البحرين – الدور الثالث

٤. يجب تعبئة جميع المرفقات بشكل الكتروني وباللغة العربية.

٥. إرفاق صور المستندات الثبوتية مختومة بختم الاستشاري لإثبات دقة المعلومات.

٦. يعتبر القصور في تقديم البيانات المطلوبة أوعدم إرفاق المستندات الثبوتية أوعدم ملء كامل البيانات المطلوبة سببا في عدم التأهل.

٧. في حالة عدم تعبئة النماذج بالمعلومات الصحيحة يؤدي ذلك إلى عدم التأهل.

٨. في حال وجود أي استفسارات يتم إرسالها إلى البريد الإلكتروني التالي:

procurement-vro@moh.gov.sa

في موعد أقصاه (يوم الأحد ٢٤ /٦/ ٢٠١٨ الساعة ٤ مساء) على أن يتم الرد عليكم في خلال ثلاثة أيام عمل.

٩. سيتم الإعلان عن النتائج في موقع الجهة الرسمي www.moh.gov.sa وعبر حسابات التواصل الاجتماعي(@VRO_MOH_PROC).

١٠. سيتم إخطار الشركات الغير مؤهلة بأسباب استبعادهم في مدة أقصاها أسبوع من تاريخ الإعلان عن النتائج أو يمكن للشركات الغير مؤهله الإستفسار عن أسباب عدم تأهلهم بالتواصل مع ممثل الجهة من خلال البريد الإلكتروني السابق ذكره.