

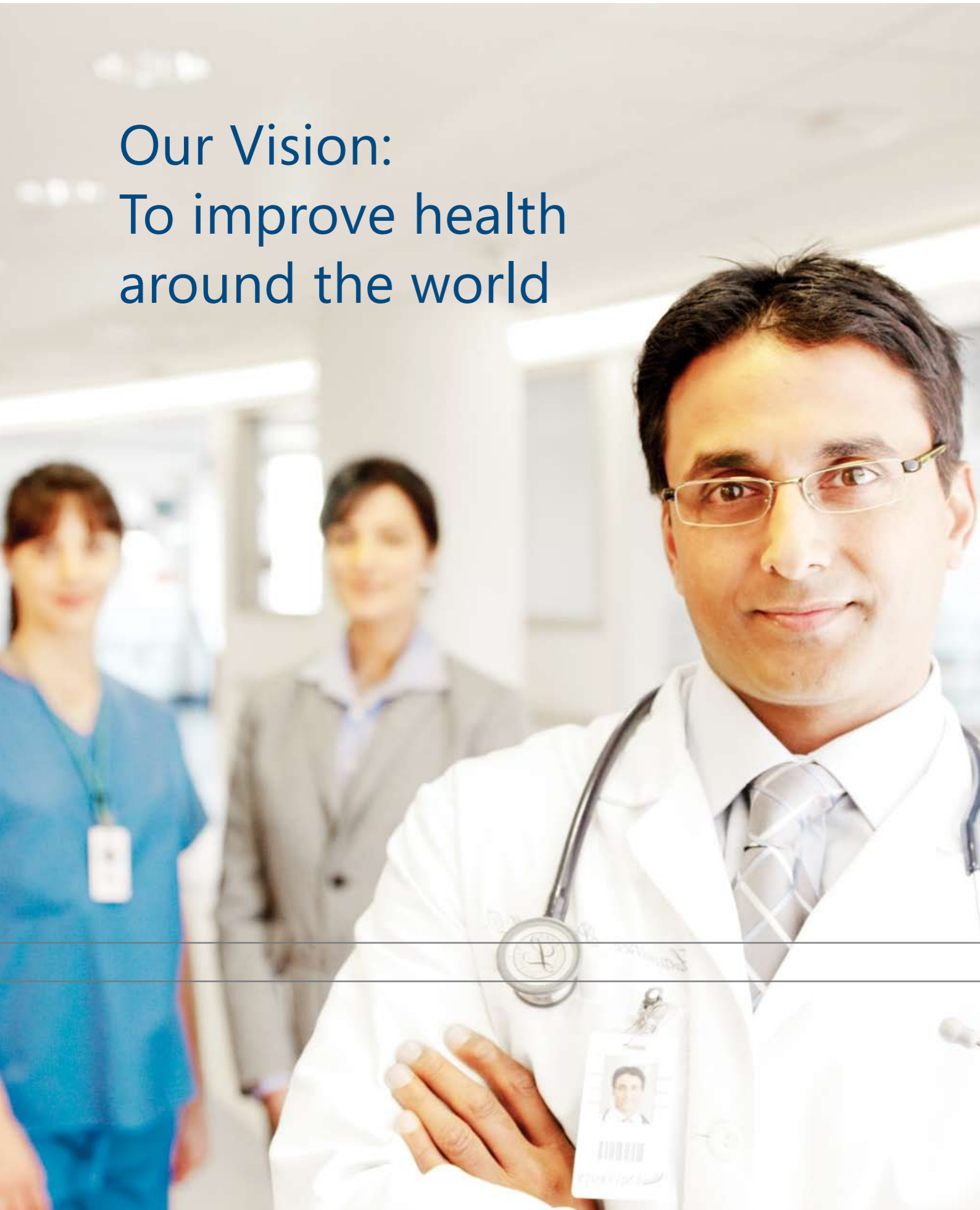
# Microsoft Amalga Hospital Information System (HIS)



➤ Manage all hospital functions  
with one integrated solution



## Our Vision: To improve health around the world



For more than a decade, Microsoft has invested significant time and resources into understanding the needs of healthcare organizations. We are developing solutions that encompass both the provider and the consumer to help you achieve your goals from enhancing patient care to improving the financial health of your organization. We believe the issues that Microsoft is best positioned to address focus on healthcare information management—getting the right data to the right people in the right way at the right time. That's why we're working to speed and advance the capture, manipulation, aggregation, and presentation of healthcare data by offering a family of integrated IT systems for the healthcare enterprise.

## The Microsoft Amalga family of Enterprise Health Systems

The Microsoft® Amalga™ family of Enterprise Health Systems offers a comprehensive range of solutions to meet the needs of your health enterprise.

### Microsoft Amalga

Microsoft Amalga, formerly Azyxxi, is the *Unified Intelligence System* that allows hospital enterprises to unlock the power of all their data sitting in clinical, financial, and administrative silos. Without replacing current systems, it offers leading-edge institutions an innovative way to capture, consolidate, store, access, and quickly present data in meaningful ways.

### Microsoft Amalga Hospital Information System (HIS)

Microsoft Amalga Hospital Information System (HIS), formerly Hospital 2000, is a state-of-the-art, fully integrated hospital information system for developing and emerging markets. The system is built around a unified Electronic Medical Record (EMR) that includes complete patient and bed management, laboratory, pharmacy, Radiology Information System and Picture Archiving and Communication System (RIS/PACS), pathology, financial accounting, materials management, and human resource systems.

### Microsoft Amalga RIS/PACS

Microsoft Amalga RIS/PACS is available as a stand-alone system or as an integrated component of Microsoft Amalga HIS. The fully integrated architecture of Amalga RIS/PACS means that radiologists can use a single software application to manipulate study images and access the entire patient medical record. In addition, the workstation interface is optimized for radiologist workflow, including support for predefined templates, an intuitive report editor, and voice-recognition and dictation capabilities. In addition, multi-resource appointment scheduling, image distribution, and patient billing are also included. Due to the critical nature of RIS/PACS reliability, this system supports high availability options such as duplication of the image archive for disaster recovery.



# Microsoft Amalga Hospital Information System (HIS)

## The Complete, Integrated Hospital Information System



Hospitals and health systems around the world share the same goal: to deliver the highest quality of care, efficiently and effectively. Healthcare organizations in emerging and developing countries have additional challenges, including how to manage highly multicultural environments, potentially explosive growth, and smaller budgets for information technology.

Microsoft Amalga HIS delivers a complete hospital information system that is flexible, affordable, and intuitive. Developed collaboratively with physicians, pharmacists, nurses, ancillary staff, and IT professionals, the solution was designed from the ground up to meet the needs of healthcare professionals, while minimizing the cost and resources required to run global healthcare organizations.

### Complete and Integrated

With Amalga HIS, you get a *complete* hospital information system that manages your healthcare organization from end to end, automating and improving effectiveness for clinical, financial, and back-office operations. Because Amalga HIS was designed from the onset as a single, integrated solution, all of the systems work together without costly interfaces or custom coding.

This scalable healthcare solution:

- Manages all hospital functions with one affordable solution.
- Improves operational efficiency with an intuitive user interface and consistent, reliable data delivery.
- Improves care quality and the patient experience by providing clinicians with a single, customizable view of patient data across all encounters, resulting in more informed decision making and faster throughput.
- Supports paperless, integrated, seamless workflows to help increase data integrity, reduce transcription errors and duplication of data entry, and optimize patient and report turnaround.

### Flexible

With Amalga HIS, clinicians and staff can view data in the way that is most meaningful to them. Lab and test results, for instance, can be dynamically viewed in any of the application's multiple supported language options. This dynamic translation is available on all generated output, including clinical notes, lab results, and pharmacy labels. Adding data is equally simple, and the system provides customizable, forms-based templates for clinical notes.

Multicultural patients create unique patient care considerations that go beyond language differences. Does your patient require a same-sex care provider or have dietary restrictions that are religion-based? Amalga HIS has the agility to handle all of the challenges of a multicultural environment.

Microsoft Amalga HIS features a comprehensive range of integrated functionality, making it straightforward to configure solutions that optimize business workflows. In addition, multiple business scenarios in all modules help users to address local business rules, cultural requirements, and individual end-user requirements.

### Affordable

Designed to meet the varied needs of all hospital departments while providing a low cost of ownership, Amalga HIS is built on a single architecture and code base. Amalga HIS runs on commodity hardware using an architecture that is simple to manage, powerful, and reliable.

### Intuitive

The easy-to-use and familiar Microsoft Windows® interface of Amalga HIS reduces the user learning curve and minimizes training costs. In fact, most users can start using the system with one hour of training. Because controls and functions are common throughout the entire system, Amalga HIS users who are reassigned to other departments need little or no application retraining.

## THE MICROSOFT AMALGA HIS SYSTEM

### PATIENT MANAGEMENT

Registration  
Admissions, Discharge, Transfer  
Appointment  
Medical Records  
Clinic  
Ward  
Image Management

### ANCILLARY SERVICES

EMR (25 Specialities)  
Pharmacy  
Laboratory  
Radiology  
PACS  
Pathology  
Operating Theatre

### SHARED MODULES

HL7 Messaging  
DICOM Protocol  
Scan Manager  
Print Forms

### SYSTEM ADMINISTRATION

Security  
Maintenance  
OLAP

### MATERIALS MANAGEMENT

Inventory  
Purchasing

### FINANCIAL MANAGEMENT

Patient Accounting  
Accounts Payable  
Accounts Receivable  
General Ledger

### HR MANAGEMENT

Payroll  
Rostering  
Time & Attendance  
Training



## Microsoft Amalga RIS/PACS

Microsoft Amalga RIS/PACS is an integrated Radiology Information System (RIS) and Picture Archiving and Communication System (PACS) available as a stand-alone imaging system or a seamlessly integrated component of Microsoft Amalga HIS.

### Clear Winners: Doctors, Administrators, and Patients

The radiologist workstation is designed to optimize radiologist workflow and is customized to match radiologist preferences. Amalga RIS/PACS not only provides access to standard image manipulation tools for reading studies, but also delivers quick access to the entire patient Electronic Medical Record (EMR) from the reporting workstation.

All historical studies are stored online for ready access, rather than in a "long-term" archive, improving the patient care delivery process and radiologist efficiency. The system also integrates advanced 3D and 4D imaging functionality and includes the ability to incorporate third-party image processing add-ins to assist with analysis.

The integration of Microsoft Amalga RIS/PACS provides a powerful, truly seamless system that can quickly deliver high-quality data to any department. By giving staff immediate access to the data they need, hospitals can increase patient turnaround time and enhance the patient experience.

### Amalga RIS/PACS offers

- **Automatic order management** that integrates information from EMR and RIS
- **Automatic scanning and attachment** of hard copies to study orders
- **Image manipulation tools**, including 3D cursor location
- **Built-in film digitizer** that delivers automatic acquisition of scanned images from non-DICOM modalities or external sources
- **Report Status Linkage** that provides comprehensive patient demographic and allergy information
- **Integrated database** that ensures patient medical information is accessible directly from the PACS
- **Management reports** for full audit tracking, with time stamps for key RIS/PACS functions
- **Real-time indicator** that flags critical-result reports with "Requires Attention"
- **Template-driven options**, including reporting and voice recognition
- **Intuitive Report Editor** that accepts written or dictated reporting
- **Customizable preference tabs** for radiologist worklist studies
- **Instant Study assignment** to radiologist at time of ordering
- **Warning system** that notifies radiologists if a study that they are reporting is also being reported by another radiologist, and that sends an alert if a study in the RIS is open in the PACS
- **Online Historical studies**, making historical studies available for quick retrieval, regardless of study age
- **Unlimited Study revisions** that save any or all key images, window-level settings, and image annotations with revision descriptions
- **CD creation** for PACS studies, reports, and EMR; options include DICOM and JPEG images, reports, and all or selected portions of a patient's EMR

### Microsoft Amalga RIS/PACS system comprises of:

- |                                                                                                                                                                                                                                                                             |                                                                                                                                                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>RIS</b></p> <ul style="list-style-type: none"> <li>• Appointment bookings</li> <li>• Study-acquisition workflow</li> <li>• Document management</li> <li>• Report creation from templates</li> </ul> <p><b>Wide-area PACS</b></p> <p><b>Diagnostic workstation</b></p> | <p><b>Dictation</b></p> <p><b>Voice recognition</b></p> <p><b>Transcription</b></p> <p><b>Report and image distribution</b></p> <p><b>Teleradiology</b></p> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|



## Microsoft Amalga RIS/PACS Case Study

### Changi General Hospital



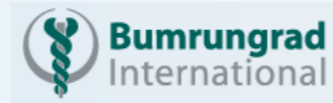
Changi General Hospital (CGH) opened in December 1996 to serve the needs of Singapore's rapidly growing eastern region, and is the designated regional general hospital for the 750,000 Singaporeans that populate its surrounding communities.

CGH has 26 wards, 790 beds, 22 specialist clinics, and 103 consultation rooms, and handles than 40,000 inpatient admissions and 327,000 outpatient visits per year. In addition, the hospital's radiology department performs more than 210,000 studies annually.

Implementation of Amalga RIS/PACS included 10 dual-monitor Diagnostic Workstations that are distributed throughout the central reporting area and reporting substations, as well as nine Clinical Review Stations. An unlimited site license for Microsoft Amalga RIS/PACS makes it possible for the hospital to distribute radiology studies and images of all types to any Internet Explorer-enabled PC on the hospital intranet.

## Microsoft Amalga HIS Case Study

### Bumrungrad International Hospital



Bumrungrad International Hospital, a 554-bed facility, was the first hospital in Asia to meet the requirements of the U.S.-based Joint Commission on International Accreditation. The hospital sees 2,500 to 4,000 outpatients a day, and more than 1,200,000 patients a year, including 400,000 foreign patients. In addition, the hospital does 262,000 radiology studies per year.

With Microsoft Amalga HIS, Bumrungrad has achieved outstanding results. Time to retrieve medical records has been reduced from 25 minutes to mere seconds; patient waiting time has been reduced by 39 percent; outpatient pharmacy dispensing time has been reduced by 50 percent; accounts receivable days have been reduced from 15 days to 10 days; and forms stocked have been reduced from 395,616 average pieces to zero. What's more, 10,000 square feet of medical records storage space has been transformed into a revenue-producing pediatric center.



#### Microsoft Amalga HIS: The Right Data at the Right Time

Finally, a highly scalable, intuitive healthcare solution that manages all hospital functions in one affordable, integrated system. Customizable to each user's needs, Microsoft Amalga improves operational efficiency across the organization, helping to lower overall costs and improving provider collaboration and the patient experience.

Learn about how Microsoft Amalga HIS  
can benefit your organization:  
Visit [www.microsoft.com/amalga22](http://www.microsoft.com/amalga22) or  
call 8xx-xxx-xxxx.