

Putting Information Technology **at** the Heart of Healthcare



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Transforming Healthcare Today

Healthcare organisations around the world are investing heavily in new IT systems to support the delivery of patient care. Why? In the past, IT systems for primary care were developed separately from secondary care systems, while hospital departments often had their own local systems that did not interact with other each. This piecemeal approach led to islands of computing that have become barriers to efficient management of care.

An integrated and interoperable solution, at both the infrastructure and application level, is the path of choice for today's healthcare organizations. This integrated approach offers a single source of data on patients, staff, and all activities involved in delivering care in any setting – from the operating theatre to the home.

Oracle's integrated infrastructure and suite of business applications provide all the special features that the healthcare industry requires:

- Adherence to healthcare-specific standards, such as HL7
- Adherence to open industry standards, such as XML
- Use of standard terminologies such as SNOMED-CT, ICD, CCAM, CID, Read
- Protection of patient confidentiality
- Integration of administrative and clinical data
- Workflow management to support automating business processes and clinical protocols.
- Compliance with HIPAA and CNIL PHI Policies

This open, integrated approach gives Oracle customers the means to grow their systems, deploy and integrate new systems, and grant access to the clinicians, managers and patients who need it.

"Oracle technology enabled us to create an integrated information system that will improve the efficiency of our organisation and the quality of the services we offer users"

Gianpiero Guerrieri,
Information & Communication Technology Manager,
San Giovanni and Addolorata Hospitals

Rome's San Giovanni Hospital integrates and web-enables patient records and medical files

Azienda Ospedaliera San Giovanni e Addolorata used Oracle Database and Oracle Internet File System to create a single, integrated repository for patient records and medical files for the five hospitals it manages in Rome. Oracle's scalable, high-performance database has replaced the hospital's legacy information systems. Authorised users can access documents in seconds from any Web browser using Oracle Internet File System's fast, accurate search capabilities. Patients can use password-controlled access to obtain the results of certain medical tests via the internet without needing to visit the hospital. Medical records can also be viewed online. Integrating patient data between all disciplines streamlines clinical and medical processes, and improves patient care. Two hundred access points have been set up in pharmacies and other public areas in Rome to allow people to make medical appointments and pay fees online. Inside the hospitals, access points in wards allow medical staff to request drugs and book X-rays, laboratory tests and time in operating theatres. Azienda Ospedaliera San Giovanni e Addolorata plans to implement a data warehouse in 2005 and authorise medical transactions using digital signatures.



- Makes information available to patients and clinicians in real time
- Shares knowledge across all disciplines improves patient care
- Led to faster scheduling of appointments and better use of resources
- Streamlined system improves efficiency and cuts costs

City of Cremona’s Hospitals rationalise processes and improve efficiency

"Oracle E-Business Suite gives us an integrated system and optimal view of the many activities performed in our hospitals."

Michele Arisi, Information Systems Manager,
Azienda Ospedaliera 'Istituto Ospitalieri' of Cremona

Cremona's two hospitals have rationalised accounting procedures and made considerable resource savings by standardising and streamlining core processes using Oracle Financials from Oracle E-Business Suite. Following their merger into a single institution known as Azienda Ospedaliera in the late 1990s and changes in Italian healthcare legislation, the hospitals' proprietary legacy systems could no longer support the administration requirements of an advanced, modern facility. In addition, financial management applications needed to be Euro-compliant before the currency was introduced in 2002. Oracle Partner GCS, an expert consultancy in healthcare, implemented the financial management module of Oracle E-Business Suite at Azienda Ospedaliera. Automation enables payments and orders to be handled with 30% fewer staff, allowing more resources to be spent on value-added activities.

The quality of patient care has improved as well. Hospital staff can now share information across every facility, which has generated efficiency benefits. Azienda Ospedaliera is evaluating other modules of Oracle E-Business Suite and is also considering migrating its Oracle applications to a Linux operating system in order to benefit from lower support costs, without sacrificing availability and reliability.

Azienda Ospedaliera 'Istituto Ospitalieri' of Cremona

- Standardised and streamlined financial management
- Handles orders and payments with 30% fewer resources
- Improved collaboration and information sharing
- Contributes to better patient care

Welsh Health Supplies conducts UK's first e-auction for medical products

Welsh Health Supplies (WHS) expects to save an estimated £600,000 over three years by using an Oracle-based e-auction platform to source many of the goods and services it purchases on behalf of the National Health Service (NHS) in Wales. In July 2003 WHS commissioned the services of Oracle Partner UKProcure to manage an online auction of blood collection bottles. Built on Oracle technology, UKProcure's exchange platform streamlines the buying process through electronic tenders, RFQs, and auctions. Tendering and quoting online delivers considerable savings to both buyers and sellers by reducing paperwork and administration. The ability to negotiate in real time with suppliers drives down the cost of the goods and services purchased. UKProcure managed the entire process for WHS and trained its buyers and prospective suppliers on how to purchase and negotiate online. Bidders and buyers took part in the auction simply by logging on to the exchange and logging off after the auction had ended and the contract had been awarded. WHS plans to use auctions to purchase many standard items that are ordered in bulk for NHS Trusts in Wales.



- Saved 10% in purchasing prices
- Reduced administration costs and shortened procurement cycle
- Received full training and support from Oracle partner
- Expect £600,000 savings over three years



"By running our e-auction on an Oracle Exchange platform, managed by Oracle Partner UKProcure, we received a price 10% below our expectations."

Mark Roscrow, Director, Welsh Health Supplies



"Oracle's solid, proven technology has helped us automate business processes and increase productivity and profitability."

Ugo Luini, General Director,
Vacupan Italia

Centralising and consolidating IT cuts Vacupan's outgoings by 15%

Migrating its clinical and administrative data into a single Oracle Database managed centrally at its Rome office has greatly improved data accuracy and cost control at Vacupan, a provider of dental health care services in Italy. Users at Vacupan's other offices in Rome access data and applications via the internet using Oracle Portal. Implementing a single, Web-enabled data repository and set of applications lets all staff share up-to-date clinical and diagnostic information about patients in real time. When clients contact Vacupan's call centre, a dentist's availability can be checked immediately online before an appointment is confirmed. Many manual, paper-based processes have been automated, which has cut administration costs and freed staff up for value-added activities, such as customer relationship management.

Consolidating and centralizing IT systems tightened financial control and improved accuracy of cost allocation. Vacupan can now attribute costs to each business area and manage its warehouse inventory better. The company cut invoicing time from 30 to five days and significantly improved invoice accuracy.

Vacupan plans to extend online access to its information systems to its trading partners to generate efficiencies across the supply chain.



- Cut outgoings by 15%
- Reduce invoicing time from 30 days to five
- Readily shares seamless data between employees

French Cancer Research Centre improves response times, cuts operating costs

"Oracle Real Application Clusters gives us the high availability we need to keep patient records up to date, an activity that is core to our operation."

Michele Le Ster, Responsable de service Informatique, Centre Rene Gauducheau

Standardising and upgrading its IT systems on Oracle Real Application Clusters (RAC) has given clinicians at Centre René Gauducheau (CRG) reliable, round-the-clock access to up-to-date patient records. The Centre's MedSoft application holds all patient data and clinical records and is core to its cancer research and prevention activities. In 2003 CRG needed to update its aging infrastructure and text-based applications with a Web-enabled system that could deliver 99.999% availability. Guaranteeing high performance was top priority for CRG's new infrastructure and software. Downtime would severely restrict the activities of doctors, nurses, and administrative staff who needed fast, secure access to patients' medical records and test results.

CRG chose Oracle9i RAC running on an HP platform to ensure rapid failover and continuous service in the event of unplanned outages. Oracle9i RAC delivers unlimited scalability and 24/7 availability by running any packaged or custom application on a cluster of servers. The agency carried out a test implementation to demonstrate the high availability of the system, including several simulated database failures. In each case, the system automatically transferred processing to another database node without users being aware of the failure.

Following the success of the trial, patient data was transferred to the Oracle RAC-based system, together with appointments records. The Centre's staff can access and enter information on to patient records 24 hours a day, 7 days a week. New data is made available almost instantaneously to users and patient response times have improved. Peaks in user demand are handled without performance degradation. The clustered architecture has allowed CRG to cut its operating costs substantially and reduce administration.



- Makes 24/7 patient and clinical data available 24/7
- Delivers seamless failover in the event of database failure
- Lowers operating costs and speeds response times
- Handles peaks in demand with out impairing performance

Central Finland Health Care Region improves agility and speeds up decision making

Managers at Central Finland Health Care Region have rapid access to corporate data across all disciplines and can analyse and report on it at the desktop, thanks to Oracle Data Warehouse, Oracle Financial Analyzer and Oracle Sales Analyzer. The solution replaced the silos of information that prevented decision-makers from having a real-time view of performance across the organisation. Managers now have seamless access to all data via an easy-to-use interface. Up-to-date information from more than 20 different operational systems can now be extracted and interrogated for budgeting and decision-making whenever required by users, without intervention by IT staff. Data can be displayed in many different formats and analysts can run what-if scenarios to enable proactive decision-making. Management reports are distributed electronically, making new information available to executives in seconds instead of days. Administration costs have been reduced and the Region can respond more rapidly to changes in patients' requirements. Central Finland Health Care Region plans to use Oracle technology to continually expand the functionality of its business intelligence solution.



- Provide desktop access to all corporate data
- Integrated analysis and reporting tools
- Lower administrative overheads
- Led to faster decision-making

Copenhagen's hospitals integrate procurement with financial management

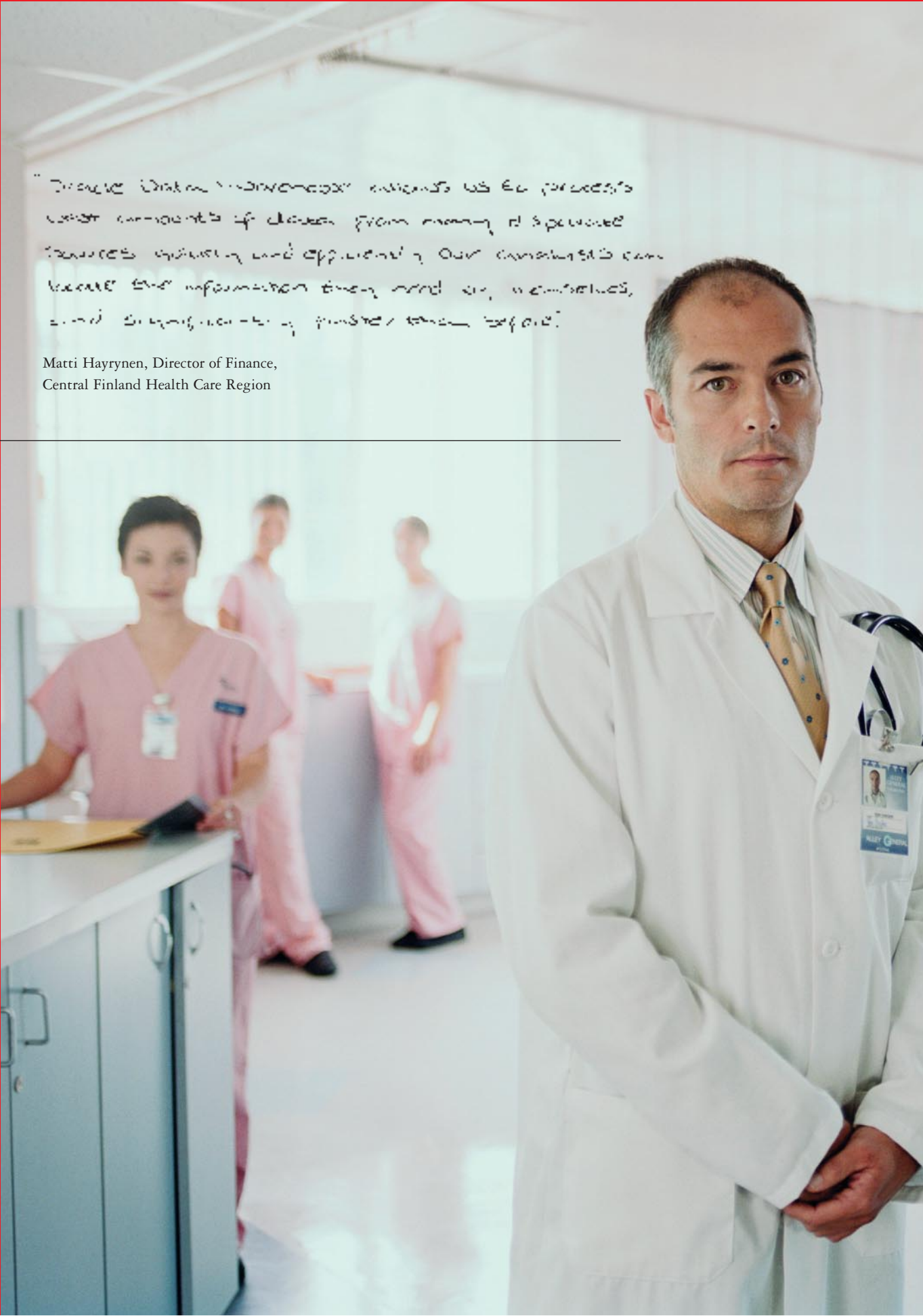
"Oracle gives our 4,500 users easy access to our new procurement system via a Web-based interface."

Jette Sylow Rasmussen, IT Planner, Copenhagen County



- Permits three hospitals to share single purchasing and logistics solution
- Integrated purchasing and financial management
- Improved budgeting and fore casting
- Scalability extends number of users served

This helps Copenhagen County's future budgeting and forecasting. As the hospital system grows, the scalable Oracle technology will allow NILS to accommodate additional users and applications.

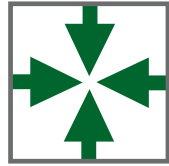


Leading Italian Oncology Centre shares information across 51 operating units and tracks cost of clinical trials

"Information sharing has significantly increased efficiency across all disciplines and gives us a global vision of the many activities we undertake".

Dario Belluzzi, Head of Economic and Financial Services,
Istituto Nazionale per lo Studio e la Cura dei Tumori

Oracle Financials enabled managers and clinicians at Italy's Istituto Nazionale per lo Studio e la Cura dei Tumori to share information transparently and keep track of the costs of the 150 clinical studies it conducts each year. With the arrival of the Euro, the institute needed a financial management system that was Euro-compliant. At the same time, it decided to implement new processes that would give managers a single, real-time view of the cost of each of its activities. Oracle Financials has improved financial reporting across the institute. During 2002 it published its annual results four months earlier than in previous years. Funding research projects and clinical trials has been streamlined by Oracle Financials as well, and managers can now allocate costs to each individual activity. Knowing the exact cost of each project or clinical trial assists in budgeting and forecasting. The institute plans to use Oracle Financials in other departments such as healthcare provision and equipment maintenance to improve efficiencies in those areas.



- Permits seamless exchange of information
- Improved efficiency
- Give officials tighter control of spend and budgeting
- Scalability to extend to other departments

University College London Hospital NHS Trust cuts financial and purchasing costs

University College London Hospital NHS Trust (UCLH) improved operational efficiency and ensured timely, fact-based management decision-making by replacing its legacy ERP systems with Oracle Financials and Oracle Purchasing. Having a single, integrated system allowed the Trust to streamline administrative and financial operations, use its resources more effectively, and move toward its goal of becoming a paperless environment. Tighter financial and purchasing control ensures that the Trust can budget accurately and account for its spending. Advanced reporting functionality gives managers the ability to drill down into data and compare quarter-on-quarter figures. Up-to-date reports can be generated online in seconds and viewed by all executives simultaneously at the desktop. This eliminates the need to print and distribute paper copies and ensures that all managers are working from the same information. The procure-to-pay process has been standardised and automated, ensuring that all orders are raised in the approved manner and according to the Trust's guidelines. Standardizing on Oracle also allowed the Trust to implement the robust financial controls that allow it to adhere to government statutory requirements for public sector financial management.

University College London Hospitals 

- Enable faster, more accurate decision-making
- Improved reporting capabilities
- Standardized purchasing procedures
- Supports compliance with government regulations through robust financial controls

"Oracle's integrated, single-line iteming solution gives us the best value for money by greatly reducing the need for third-party support providers".

Jason Kirk, Financial Controller, University College London Hospitals NHS Trust

Discover how Oracle can help your organisation run more efficiently while delivering better patient access and choice

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