Disruption or Transformation?
Managing Care Workflow with Lorenzo

Towards a Consumer Experience of Healthcare
Lorenzo: A Continuing Focus on Development
Welcome

Electronic medical records (EMRs) are at the heart of healthcare digitisation and represent a key component of the eHealth Optimisation strand of CSC’s Agile Health strategy. We focus on helping healthcare providers maximise the clinical relevance and financial value of their eHealth investments.

CSC is one of the leading global EMR providers. In this edition of CSC Forward magazine, you can learn how our Lorenzo product is setting the standard for EMRs in the English National Health Service. You can also read about how our Enterprise Management solution helped Ain Al Khaleej Hospital achieve Healthcare Information and Management Systems Society (HIMSS) Analytics Electronic Medical Record Adoption Model (EMRAM) Stage 6 certification, and how South/South West Hospital Group in Ireland consolidated an i.PM patient-administration system across nine hospitals.

Of course, EMRs alone are not enough to drive the transformation to new models of healthcare. A cultural shift, underpinned by digitisation, is also required. In “Towards a Consumer Experience of Healthcare” (page 10), Chief Technology Officer Femi Ladega gives an expert view of what’s required to create a connected healthcare ecosystem. Also in this issue, Professor Ben Bridgewater provides an analysis of what digital disruption really means for healthcare services.

We hope you find something in CSC Forward that catches your interest. And we would love to hear from you.

PHIL HEMMINGS
Director — Product Marketing
CSC Healthcare and Life Sciences

About Lorenzo

Lorenzo is one of the most widely adopted electronic medical record (EMR) systems in the English National Health Service (NHS), with 21 trusts now having chosen the system. NHS England data shows that these trusts comprise more than 100 separate hospitals and account for approximately 9% of English hospital beds. Lorenzo maintains EMRs for more than 16 million patients and supports 108,000 registered users.

As a next-generation system, Lorenzo transforms healthcare delivery by providing an integrated, real-time patient record wherever and whenever needed. Designed to be fully interoperable and to be delivered as a service, Lorenzo offers a complete range of EMR functionality.

LATEST NEWS: Ipswich Hospital NHS Trust goes live with Lorenzo Theatre Management

Ipswich Hospital NHS Trust, a 600-bed hospital in the East of England, has become the first organisation to go live with the Lorenzo Theatre Management module. Ipswich has deployed Theatre Management initially in their obstetrics and gynaecology department.

Lorenzo Theatre Management supports staff working in hospital operating theatre suites and covers the complete perioperative pathway from initial consultation to recovery room. The module allows surgeons and other theatre staff to create clinical records in real time, through a touch-screen user interface.
Disruption or TRANSFORMATION?

by Professor Ben Bridgewater

We all know the term “digital disruption”. It describes a shift, driven by new and emerging technologies, that transforms the way customers and citizens interact with products and services. There’s no doubt it can have negative consequences for organisations that don’t adapt. Take the experience of Kodak, which went from being the global leader in the photography business to becoming a bit part player by failing to grasp the potential of digital imaging. However, digital disruption also provides a platform for new models and new entrants, with Uber and Airbnb being great examples. Crucially, digital disruption offers profound benefits for consumers.

A recent survey of executive-level leaders indicates that significant disruption is expected in many industries in the near future. Media, telecommunications and financial services are at the top of the list, but 47% of healthcare executives believe that there will be significant digital disruption in their field over the next year.1

In CSC’s experience as a global IT consulting and services provider, as well as a major supplier of healthcare technology, we’ve worked with many major organisations as they digitally optimise their business. We’ve seen key global digital disruption trends, and they all have a profound impact on the way healthcare services operate.

**Digital first and best**

For many people, technology is increasingly part of everyday life. This raises our expectations for digital products, and applies to us both as customers and employees. People will no longer accept poor connectivity and usability at work when they’re used to fast and intuitive products at home.

**Technology as a utility**

As customers and employees use more digital solutions, the underlying infrastructure needs to adapt and respond rapidly to continuing changes in demand. Organisations that have had their systems dictated by the hardware available to run them will rapidly move to solutions defined by the business processes that need improving. Instead of owning complicated in-house technology infrastructure, organisations will address specific requirements as “a service”, buying only the computing power and capacity they need at that point in time.

These new digital solutions will bring with them increased connectivity and mobility, meeting people’s expectations of accessing information wherever and whenever they need it. This means data governance and cybersecurity become ever more important.

**Data-driven insights**

Inevitably, all organisations will collect large amounts of data as a consequence of operating digitally. The most effective ones will look to derive insights from this digital data, bringing together information from many different organisations and sectors as required to support their needs. Rather than reflecting the state of an organisation, data will start to drive its development. Effective use of technology will lead the development of the business, not just serve as a supporting service.

**Bring your own device**

Finally, as organisations look to leverage digitisation so they can be as productive and cost-effective as possible, they will also look to exploit their employees’ digital footprint by letting employees use their personal devices. This, of course, will require tight security, careful auditing and hybrid cloud approaches.

**The impact on healthcare**

Healthcare organisations are increasing their digital maturity, often working towards goals that include the quality of infrastructure, the availability and deployment of digital solutions, and the readiness of staff to adopt them. This is essentially an internally focused approach.

However, the global challenges in healthcare are ageing populations, increasing costs of delivery and escalating expectations. Addressing these challenges not only requires care to move away from expensive hospitals where possible, but also needs to create a step change in productivity across health and social care in general. It means increased evaluation and standardisation of care to drive best practices and implementing new payment models to ensure maximum value. I would also argue that it requires patient empowerment— with people increasingly taking responsibility for their own health and well-being.

Greater patient empowerment and increased provider efficiency both need healthcare systems to provide better digital care experiences. These should incorporate both patients’ and employees’ existing devices; they should be built on flexible, service-based infrastructures; and they should be as easy and attractive to use as the best consumer products.

Integrating data from across various health and care sectors is essential. This data will not be genuinely useful until insights are generated by analytical technique and then acted upon. Of course, the security of the healthcare information is particularly critical, and the consequences of infrastructure shortcomings on service delivery can be devastating for patients and extremely costly for healthcare providers.

**Leading from the front**

A growing number of clinicians are finding important roles as chief clinical information officers. These professionals act as the “glue” between technology capability and subject matter expertise. This group has been identified as essential for organisational effectiveness in the recent NHS review by Robert Wachter.2 We believe that the most successful organisations will have a number of these individuals, and that their voice will be increasingly important in defining organisational strategy, tactics and structure.

Healthcare needs to look outwards to other industries. The experience of care for all of us can only be improved by bringing the best of digital approaches to customer relationship management (to increase patient empowerment), supply chain management (to drive operational efficiency) and to product life cycle management (to re-engineer more effective care pathways). 3

**BEN BRIDGEWATER** is director of healthcare strategy at CSC.

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MINISTRY OF HEALTH BRUNEI CREATES A
ONE-PATIENT/ONE-RECORD

In Brunei, a small country on the northern coast of Borneo, a cutting-edge healthcare information system is delivering big and universal health benefits. With support from CSC, the Ministry of Health Brunei (MOHB) has achieved a first-of-its-kind milestone in healthcare: the implementation of an agile health-information management system containing the health records of every citizen in an entire country.

Thanks to Brunei’s plentiful reserves of oil and natural gas, its citizens enjoy a high standard of living, and that includes healthcare and medical services provided by the federal government. Building on that foundation, MOHB—which oversees Brunei’s four government hospitals and 60 health centres and clinics—sought to implement a comprehensive healthcare information system. It wanted a system that would span all of the country’s health facilities and, operating under a “one patient/one record” philosophy, make every health record easily accessible to physicians and other healthcare professionals anywhere, anytime.

Easy access to patient records

MOHB officials knew that building such an advanced healthcare information system would require help from a partner that offered a deep knowledge of the healthcare industry, an established software solution and a wide range of skills. “We realised that our goal would be no small feat,” says Dr. Ahmad Yazid, an intensive-care physician and medical superintendent of the Raja Isteri Pengiran Anak Saleha (RIPAS) Hospital—Brunei’s largest, with more than 600 beds. “So we needed a partner with technical knowledge and dedication.”

That partner was CSC, which MOHB brought on board to provide IT support and technical expertise. CSC engineers designed the system, dubbed Bru-HIMS (short for Brunei Health Information and Management System), to run on CSC’s Enterprise Management software and to integrate with nearly a dozen pre-existing MOHB systems, including the roughing appointments, outpatient management and clinical care. After less than 2 years of work, Bru-HIMS went live.

To improve its chances for a successful implementation, MOHB introduced Bru-HIMS on a district-by-district basis. This carefully planned system roll-out included user training, readiness roadshows and symposiums. CSC provided training for every medical professional, and all Bruneians were encouraged to register for the system, leading to high levels of adoption. Bru-HIMS was even given its own public Web portal: moh.gov.bn/HealthPages/Bru-HIMS.aspx.

Helping both patients and physicians

Today, Bru-HIMS’s real-time data integration and replication capabilities make it possible for all Bruneians—as well as their healthcare providers—to easily gain access to a single, consistent record of their healthcare information. To register for the system, Bruneians can use a mobile app that runs on smartphones; to date, 90% of the population has registered.

Patients appreciate knowing that wherever they go, their healthcare records can be retrieved quickly and easily. When they visit a clinic or hospital, they need bring only an ID card to access their single medical record, which includes lists of prescribed medications, the results of past X-rays and other tests, and reports from previous visits. Patient safety is protected, too, as an audit trail with a unique patient number is available for any investigation report.

For physicians, Bru-HIMS helps to eliminate misplaced or missing notes, solve the problem of illegible handwriting, minimise duplicate tests, improve the management of medication stock, and—by allowing access to a single patient record anywhere, anytime—generally improve both diagnosis and care. “The system”, Dr. Yazid says, “enables the clinics and hospitals to operate more efficiently and effectively to meet our patients’ expectations.” In addition, Bru-HIMS offers enhanced mobility solutions that empower clinicians to support their patients from outside hospitals or while travelling. A planned feature will let Brunei’s “flying doctors”—physicians who serve the roughly 10% of the population living in areas so remote that they can be accessed only by helicopter—provide telemedicine over the Internet.

Industry experience, global reach

As a global leader in advanced eHealth solutions, CSC is proving a good match for MOHB. “We’ve worked well together from the beginning,” Dr. Yazid says. “CSC has listened to our needs as a client, delivered the software, trained the users and improved the programme based on user feedback.” CSC’s Enterprise Management system underpins the Bru-HIMS solution, providing full integration of enterprise health records and hospital information systems. The solution drives the complete automation of all hospital workflows across patient management, clinical documentation, referrals, and areas such as pharmacy, laboratory and radiology.

Moreover, Bru-HIMS transactions are fully synchronised across multiple databases and system nodes using real-time workflows across multiple care settings. Integration with a drug database provides clinical decision support while also ensuring patient safety. Patients benefit from easier access to resources, while care delivery is safer because error rates have been reduced through electronic prescribing.

Client: Ministry of Health Brunei

Challenge:

• Optimise a national, state-provided healthcare ecosystem
• Improve service delivery efficiency and overall patient experience
• Enhance business intelligence and mobility capabilities

Solution:

• Roll out the Brunei Health Information and Management System (Bru-HIMS), built on CSC’s Enterprise Management system
• Link and integrate systems for Brunei’s four hospitals and 60 health centres and clinics
• Leverage CSC’s knowledge, expertise and skill set to support implementation

Results:

• “One patient/one record” access for all registered citizens and their healthcare providers
• Ability for clinicians to support patients anytime, anywhere
• Better use of medical data; improved patient care and safety
An electronic medical record (EMR) solution goes beyond just storing patient information to provide a platform for managing hospital-wide care workflow. The solution allows hospitals to reinforce best practices by standardising patient journeys and to minimise unnecessary variations in treatment protocols.

A key element of CSC’s eHealth Optimisation approach is to support healthcare providers in maximising the clinical and financial benefits of their eHealth investments. The company works closely with clinicians to understand and optimise processes and includes features in its solutions that enable hospitals to use efficient and effective care workflow. Two examples are Lorenzo Activities and Content for specific clinical conditions.

Lorenzo Activities
Lorenzo Activities helps identify, manage and record the activities that need to be delivered as part of a personalised programme of care.

Starting with a standardised activity catalogue, clinicians and other care providers can create a care work-list. This work-list is specific to an individual patient and takes into account the patient’s particular needs and preferences. As Lorenzo is a fully integrated EMR system with a single record for each patient, the activities included in the work-list link directly to other parts of the solution.

The work-list then provides a living view of the patient’s care journey. Hospital staff can see the complete set of activities for each patient, the activities included in the work-list link directly to other parts of the solution.

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These icons can also be included in Lorenzo’s Emergency Care white-board or inpatients overview, allowing them to become a highly visible common mechanism for driving care workflow. In addition, Lorenzo Clinical Indicators can be used to provide a “traffic light” indicator that shows whether specific quality indicators, such as for venous thromboembolism (VTE) prophylaxis, have been recorded.

Content for specific clinical conditions
Another workflow technique available in Lorenzo is the provision of content for specific clinical conditions, which uses Lorenzo’s native Clinical Data Capture (CDC) forms functionality to map particular best-practice care protocols.

A series of forms leads hospital staff through a standardised, best-practice process. Along the way, clinicians and other care providers are prompted to record crucial data and to take appropriate next steps. The forms also provide clinical decision support by making appropriate local, national and international guidance visible at the point of care.

This content offers a number of benefits. A clinical narrative is automatically created for each patient, and coherent clinical data is recorded in a form that reflects both the hospital’s preferred practice and the requirement for external reporting. The structured data collected in the CDC forms also allows clinical key performance indicators, which are known to drive clinical quality, to be easily generated.

So far, content has been created for cardiological surgery and urology. These reflect the practices of a number of expert clinicians and have been collated under the supervision of a number of local hospitals.

The structured data collected in the CDC forms allows clinical key performance indicators, which are known to drive clinical quality, to be easily generated.

By standardising and codifying best practices into their workflow with tools like these, healthcare providers are able to streamline operational activity and, most importantly, improve patient outcomes.

LEADING THE NATIONAL PATIENT REGISTER PROGRAMME IN DENMARK
Sundheddatastyrelsen, the Danish Health Data Authority, has chosen CSC to lead the next stage of development for its National Patient Register (LPR) programme. LPR is a national electronic patient record containing patients’ medical details and information about their contacts with the Danish healthcare system. It represents a single source of truth about Danish citizens’ health and wellness patterns, and the information in LPR is used for managing payments between healthcare providers and for evaluating healthcare initiatives.

CSC took over responsibility for developing and delivering LPR in September 2016, and will work with the Danish Health Data Authority on LPR3, the third generation of the system. LPR3 will include enhanced details of each episode of care, allowing for improved insights into the use of resources and healthcare costs.

LPR3 will provide a national patient registry that improves collaboration and coordination, explains Philippe Blanco, CSC’s general manager for healthcare in the Nordics.

“Building on our global experience providing patient record systems and population health programmes, we are taking an approach that ensures an accurate picture of episodes of care across departments, hospitals, general practitioners and regions,” he says, Danish Health Data Authority CEO Lisbeth Nielsen says, “The database has to become future-proof. CSC presented the best bid and the strongest vision, and we have selected [it] as our partner.”

LORENZO LAUNCHES IN AUSTRALIA AND NEW ZEALAND
Lorenzo is now available in Australia and New Zealand, enabling integration with the National Health Identifier service for sharing discharge summaries and connecting to the My Health Record system.

“As Australia’s population ages and the rates of chronic illness increase, patient journeys are becoming increasingly complex,” says Darryl Goodall, CSC’s general manager for healthcare in Australia and New Zealand. “With Lorenzo’s smart forms, hospitals can deliver complex care more effectively, plan ahead and manage resources more easily.”

Lorenzo also offers healthcare providers in Australia and New Zealand an open approach to data and interoperability, and innovative functionality for managing care.

“Lorenzo supports local clinical workflows and keeps doctors and nurses close to patients,” Goodall says. “The platform automates how patient observations are captured via mobile devices and enables integration with third-party apps to increase efficiency amongst clinicians.”
CSC Patient Administration System

DELIVERS MAJOR BENEFITS IN IRELAND

Improved care — and beyond: patients, hospital group reap benefits of single, integrated system

With help from CSC, the South/South West Hospital Group (SSWHG) is Ireland’s first hospital group to implement a single Patient Administration System (PAS) across all of its acute care hospitals. Now, a single patient reference number linking all administrative and clinical activity relevant to that patient lets the nine hospitals in the group share information more easily, providing many benefits to patients and healthcare administrators.

In Ireland, the Health Service Executive (HSE) is responsible for providing health and social services to all citizens, using public funds. Hospitals in Ireland are organised into seven hospital groups, and the SSWHG serves a population of approximately 1.2 million. A primary goal of the group was to improve patient access by provisioning integrated care pathways.

Easier access to patient information

A core application in healthcare organisations, a PAS is used as a master patient index to support activities such as appointments, billing, reporting and patient activities management. CSC's range of patient management solutions, including i.PM, enables organisations to manage their patient, clinical, business and functional processes, making it easier to access patient information at the point of care.

SSWHG needed to meet a challenge set forth in Ireland that hospitals within a group should deliver better, safer care by carrying out particular functions and specialises on a group-wide level. “This was a challenging project which required significant input from a range of people — locally, regionally and nationally,” says Mike O’Regan, information services manager, Cork University Hospital. “The efforts of people on the ground were enormous, with significant support from their colleagues regionally and huge input from staff in areas such as data migration and the provision of the technical infrastructure.”

Meeting migration challenges

The migration involved bringing down the regional system for nearly 2 full days, over a weekend, and manually entering patient data so the UHK data could be loaded into the integrated system. Another challenge: There had not been much coordination between hospitals — they continued to work in silos.

Once data had been back-loaded and patient charts re-labelled with new numbers to support patient tracking, the system went live. It has run smoothly ever since. Now, with CSC’s PAS solution, the SSWHG has begun tracking, reporting and delivering care on a truly group-wide basis.

“The achievement of the single PAS system is a long-held ambition, and it is fantastic to see it come to fruition,” says O’Regan. “It will now serve to anchor so many more clinical and administrative systems and practices and will allow true integration of patient data across multiple sites. This can only be good for the patients we serve.”

CSC provided technical assistance with the data migration, working closely with the SSWHG team in areas such as system configuration and database management. With the completion of the project, SSWHG is now Ireland’s first hospital group to have a single group-wide PAS with a common patient master index.

For patients, the group-wide PAS provides numerous benefits. Now, regardless of the hospital at which a patient registers their details, the demographic and administrative information is shared across all hospitals in the group. Also, each patient now has one unique identity and a single medical record number across the hospital group. This means that appointments can be booked at one hospital for clinics in another area, and waiting lists and episode histories can be shared across hospitals, leading to reduced wait times.

The PAS provides fully integrated business functionality to the hospital and includes programs for patient registration, admissions, transfers, discharges, clinic management, and patient document tracking and billing. The powerful PAS platform provides a foundation for a future move to CSCs Lorenzo, a next-generation EMR solution.

Learn more at csc.com/healthcare.

Client: South/South West Hospital Group

Challenge:

- Consolidate: Integrate Patient Administration System (PAS) across nine hospitals
- Enable group-wide sharing of certain information (eg, appointments and waiting lists)
- Facilitate delivery of better, safer patient care

Solution:

- Transform business by consolidating and reorganising acute care delivery across hospital group
- Support patient flow using CSC’s i.PM solution
- Manage and update legacy data to enable integration of i.PM solution across all nine hospitals

Results:

- Improved care by successfully implementing single PAS across entire hospital group
- For patients: Ability to book appointments at any facility in the group from a single location
- For administrators: Improved patient tracking, enhanced billing and better coordination amongst hospitals
- Established firm foundation for future move to Lorenzo, CSC’s next-gen electronic medical record system
Towards a Consumer Experience of Healthcare

WHY THE NEXT STAGE OF HEALTHCARE STARTS WITH AN IT ECOSYSTEM

by Femi Ladega

In nearly all aspects of our lives, we have embraced digitisation. In the workplace, at home and in school, more and more of what we do is governed by digital data and digital workflows. And, by 2020, 70% of the global population will carry a smart mobile device, according to a report by network provider Ericsson.

In healthcare, digital technology is ever-present. In the general physician’s consulting room, at the hospital and beyond, providers now use computers, tablets and specialised medical devices to complete and document their work. In the United States, nearly 87% of physicians have adopted some kind of electronic health record, reports the Office of the National Coordinator for Health Information Technology.

So, why, for many patients, is the practical experience of healthcare anchored in approaches and processes that don’t make sense in this digital world?

Shifting from payments to outputs

There are many reasons for the gap, but at the basic level, it comes down to incentives created by healthcare payment structures. Until recently, providers have operated as autonomous organisations funded to perform specific tasks. There’s been little need for — or obvious benefit to — transforming business models for the digital age. The focus, instead, has been on technology for process improvement.

That’s changing, as developed economies shift towards a payment-for-value approach and the adoption of coordinated care. The drivers of this shift are well known. The unsustainable growth in healthcare costs puts the spotlight on efficiency. The requirement to treat more patients with chronic conditions directs the focus away from acute, episodic care to long-term patient engagement.

The effect is profound. Collaboration and coordination are no longer just nice to have; they’re essential to success.

Embracing an ecosystem solution

Currently, there is considerable tension in the system blocking this success. Most technology solutions in use operate as independent islands of information and workflow. The focus is on individual solutions owned by the organisation, not on the broader healthcare ecosystem.

These disparate solutions impede continuity of care and slow the flow of data. To be effective, organisations need a healthcare ecosystem that allows for the friction-free movement of patient data. Information must be available wherever and whenever needed to inform and improve health and wellness decisions.

To achieve this, the IT focus must shift from individual software solutions towards a fully connected ecosystem. Healthcare organisations shouldn’t look for “the one” system that addresses all their needs; they should invest in a hybrid approach that allows them to bring together individual systems in a coherent and secure whole.

The aim here is to reach across all relevant systems and deliver contextually relevant information to “information consumers” — healthcare workers and patients. In this way, Healthcare 3.0 goes well beyond the exchange of data or messages to providing a unified platform. That is, it provides the underpinning to enable sophisticated, patient-centred workflows, operating across the broad ecosystem.

Going mobile

Another characteristic of Healthcare 3.0 is that it is inherently mobile. No longer will organisations wait for a supplier to provide a mobile “front end” to their software product, or for a third party to provide a “portal”. Instead, digital “mash-ups” will allow new functionality to be quickly and easily layered on top of existing systems.

This means that the presentation layer for core healthcare systems needs to be disconnected from the application layer. With this approach, new interfaces can be quickly and easily layered on top of a core system, and specialised workflows can be built on core data.

Patients, clinicians and healthcare managers across the ecosystem will also want to integrate their preferred digital healthcare apps with this data fabric. That may mean uploading personal health data, integrating healthcare scheduling with personal calendars or subscribing to wellness coaching or health lifestyle apps — all possible with the layered, hybrid approach.

Open health connect

Connected healthcare requires three fundamentals:

• Open data: Data must be available and synchronised across the ecosystem, with appropriate data security and governance.
• Open interoperability: The system must support recognised interoperability standards and provide an API gateway.
• Managed security: Security must start with individual providers, then expand across the ecosystem and the broader digital world.

All of this has a very clear pay-off for healthcare providers: it allows them to deliver better outcomes in more efficient ways, something both policymakers and payers (public and private) now demand. But perhaps more importantly, it starts to change the relationship between patients and providers, bringing the digitisation we all take for granted in other parts of our lives to the healthcare space.

With a secure, interoperable IT ecosystem, healthcare organisations can ensure that providers and patients have the right information, delivered at the right time and place — and in a way that fully supports the consumer experience of the digital age.

FEMI LADEGA is global chief technology officer for healthcare and life sciences at CSC.
FORWARD: A CSC MAGAZINE FOR HEALTHCARE

A CONTINUING FOCUS ON DEVELOPMENT

by Rob Cullingworth

Eight years ago, University Hospitals of Morecambe Bay became the first English National Health Service (NHS) acute hospital trust to go live with CSC’s Lorenzo next-generation electronic medical records (EMR) system. In 2016, the trust renewed its contract for Lorenzo after evaluating a range of other products. Over those 8 years, a huge amount has been accomplished — both by the NHS trusts that have chosen Lorenzo and by CSC. Twenty-one trusts have chosen the system, making it one of the most widely used EMR systems in the United Kingdom. CSC has introduced Lorenzo in Ireland, Australia and the Nordic region. Most important, the range of functionality available to Lorenzo users has increased significantly, and we have a roadmap of improvements and enhancements stretching into the future.

Delivering on the roadmap

Lorenzo 2.9 was a major upgrade when it debuted in October 2016, featuring nearly 1,000 improvements and new features across all areas of the product. We work closely with our users through our dedicated Product Engagement Groups and the National Lorenzo User Group to ensure that our efforts are focused on the most valuable areas.

Continuous improvement

Over the next 12 months, we have a plan for continuous improvement, with several releases scheduled for 2017. These improvements address key requirements identified both by our users and by our Lorenzo product management team.

Users can also expect to see significant new clinical capability, with rules-based decision support and care protocol solutions coming in the next year, in addition to extended capabilities in our electronic Prescribing and Medication Management (ePMM), Theatres and Activity Work-list solutions to support wide-scale roll-out and clinical adoption. This year we will also deliver the Lorenzo Dashboards and Reporting solution, providing access to data across the EMR system in real-time to support clinical and business analytics.

In addition to improving the core integrated EMR functionality and clinical breadth at the heart of Lorenzo, we are also pursuing a very clear strategic direction focused on three key areas: interoperability, usability and mobility.

Interoperability

Elsewhere in this edition of CSC Forward, Global Healthcare CTO Femi Ladega explains why the next stage for healthcare is a “consumer-oriented” experience — and that stage is rooted in interoperable IT systems.

With Lorenzo, we are working on two areas that will make it a class leader in interoperability — open APIs and open data.

Open APIs, based on the Fast Healthcare Interoperability Resources (FHIR) standard and available through an API gateway, will provide a platform for innovation, allowing us, as well as third parties, to build exciting new capabilities on top of Lorenzo’s rich core functionality.

Open data means that the underlying patient data recorded in Lorenzo can be made available, with appropriate security and governance, to provide insights and inform development of ever more effective care pathways. The provision of a digital health platform to support continuity of care, with Lorenzo at its heart, is key to our strategic direction.

Usability

We recognise that one of the biggest impediments to maximising the benefit of any EMR system is usability. With Lorenzo, we are reducing the overhead of using the system and enhancing clinical relevance (see “Managing Care Workflow with Lorenzo” on page 6). This year we will improve usability across seven core themes: performance, numbers of clicks, workflow, navigation, ease of use, standardisation, and look and feel.

New and Enhanced Functionality in Lorenzo 2.9:

- Management views of the bed/ward state across a trust
- Bed-request management in emergency care to transfer patients to a regular ward
- An enhanced medical discharge process for mental health patients, including support for trial leave
- Support for two NHS Information Standards Notices — Female Genital Mutilation (FGM) and Child Protection Information-Sharing (CPIS) recording and reporting
- Stillbirth registration
- Redeployment of request catalogue items to reduce dependency on clinical data capture
- Emergency Department retrospective updates/unpick
- New Activities functionality (an additional-charge option) to support managing and recording clinical activities for patients in the emergency department, including a work-list of activities to be done
- Porter support
- Emergency Theatre Dashboard
- Clinical indicators functionality extended to outpatients to support the monitoring of complex clinics
- Opportunities for organisations to create and manage their own Desktop Integration* through a licensed solution

* An additional-charge option

Mobility

When Lorenzo was first deployed in 2008, mobility was beginning to show interesting potential. Today it’s an essential component of any healthcare IT strategy.

By providing open APIs with Lorenzo, we’re providing a platform for mobility, and we have prototype mobile apps in development. This year we will bring to market our first patient engagement tools — the ability to capture observations at the point of care — and offline capabilities for midwives and community workers. Perhaps even more exciting, we’re also looking forward to partners building innovations on top of the system. We’ve always intended Lorenzo to be at the heart of a broad and open healthcare ecosystem, and our strategic alignment with today’s technology is enabling that.

I’m excited by Lorenzo’s direction. The core is in place, and we can look forward now to where the future takes us.

ROB CULLINGWORTH is head of product management for Lorenzo.
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About CSC
CSC (NYSE: CSC) leads clients on their digital transformation journeys. The company provides innovative next-generation technology services and solutions that leverage deep industry expertise, global scale, technology independence and an extensive partner community. CSC serves leading commercial and international public sector organisations throughout the world. CSC is a Fortune 500 company and ranked among the best corporate citizens. For more information, visit the company’s website at www.csc.com.

Learn more and sign up for our newsletter at csc.com/healthcare.