SCOTTSDALE INSTITUTE

INSIDE EDGE

Volume 18, Number 6

IT Integration: The Pendulum Swings

EXECUTIVE SUMMARY

You can count on IT integration to be a perennial topic, an editorial evergreen that can fill any gap in the calendar. IT integration takes center stage today, however, because of the confluence of Meaningful Use, Reform and the massive shift of patients to the ambulatory sector in a quest to achieve the best care at lowest possible cost. IT integration follows clinical and operational integration, both of which stand or fall on the Big Data requirements of population health and coordinated, accountable care. Part of Big Data is the ability to use it to improve clinical and financial outcomes, of course, so IT integration becomes critical to successful business-intelligence analytics.

Being at such an inflection point means there are many ways to define the issue of IT integration. For hospitals or health systems as well as your vendors and consultants, IT integration is likely to include the basic blocking and tackling of standardized EHR platforms and common data architecture. You may also be looking beyond these foundational aspects of IT to a future vision that bespeaks of where the proverbial puck is heading.

We've got both in this report. Ironically, at least for this writer, trying to integrate the different views of IT integration just may be as difficult a task as integrating IT itself.

Start with endgame in mind

Any IT integration strategy, says Bob Reese, Partner and Managing Director of CSC's Health Delivery Solutions practice, must start with the organizational goals clearly stated. In today's drive for health care provider organizations to achieve meaningful use as well as define a role in Accountable Care, understanding the goals for achieving clinical excellence and financial vitality go hand in hand. "Health Care Provider Organizations need to provide evidence that they are providing better clinical outcomes in a safe environment. You need to keep in mind what the endgame is. And at the same time, know it's a dynamic environment. Change in healthcare is now a way of life." While addressing the immediate needs of Meaningful Use Stages 1 and 2, healthcare organizations must look beyond deployment of IT to how they are going to manage the health of a defined population.

"Government reimbursement models are changing, and are increasingly based on the ability to provide evidence of effective population health management, including the management of patients with complex chronic disease. Determining the data required to prove that you've improved clinical outcomes and treatment effectiveness is a big task and means that the IT team will have to think differently in order to provide the proper tools and to establish a clear governance model for use and access to the data," he says.

Scottsdale Institute Conferences 2012/13

Fall Forum 2012
Oct. 25-26, 2012
Hosted by Memorial Hermann Healthcare System, Houston

Spring Conference 2013
April 17-19, 2013
Camelback Inn, Scottsdale, Ariz.

Fall Forum 2013
Oct. 31-Nov. 1, 2013
Hosted by UCLA Hospital System

SCOTTSDALE INSTITUTE

Membership Services Office:
1660 Highway 100 South
Suite 306
Minneapolis, MN 55416

T. 952.545.5880
F. 952.545.6116
E. scottsdale@scottsdaleinstitute.org
W. www.scottsdaleinstitute.org

Bob Reese, Partner/ Managing Director, Health Delivery Practice, CSC

Many healthcare organizations are going to have to bear financial risk, as reimbursement mechanisms shift, and they will need the tools, capabilities and governance structures to help them succeed at it. "Simply integrating transaction systems is not enough. If all you do is integrate, without leveraging the power of the technology, then health systems will fall short of achieving the financial sustainability and clinical excellence that is possible, and required. Leadership needs to ask hard questions of how an organization can integrate clinical and business processes," says Reese.

There may be need for new capabilities in the IT team as well. Clinical expertise and understanding of clinical and operational workflows is more important than ever, and some organizations are looking to CIOs who combine clinical and business backgrounds with their technology qualifications. Balance is critical, according to Reese who notes, "If you're a layperson, you may not understand clinical workflow, but then again, not every physician is skilled at business decision-making, nor at population health management."

Stepping into an integrated future

To achieve integration of IT, health systems should start by undertaking several tactical moves:

1. **Evaluate and rationalize the system to find duplication and overlap.** Recognizing that certain clinical processes are more intense in their use of the organization's resources—those processes are candidates for a deeper understanding of what resources are consumed. This approach enables the organization to drive forward with process improvements that improve clinical outcomes in those areas where the organization will want to demonstrate leadership in the community.
2. **Examine business and clinical processes in light of the usage of technology resources available for the IT department.** What are the best technologies to support lower cost, quality care? Pursue a process of rationalizing what IT you already have on the basis of how it's used and identify which systems have the lowest cost of ownership and maintain the quality of care demanded by physicians and administration. "You have to provide technical services at a cost that won't overburden the organization," says Reese.
3. **Review how data is accessed.** How is data used to support end-users? Do you have the right tools and skill sets to access the data? Reporting out of a system is one of the most challenging issues and monolithic EHRs are often abysmal at it. "Health systems have spent all this money on EHRs and are now beginning to realize they've basically got a transaction system. They're no better off at interpreting the data," he says, and finding that the cost of using these clinical systems is more than originally thought because of the additional need for reporting and the data analytics required to support population health, including demonstrating clinical effectiveness and improved outcomes.

"Integration challenges are significant with increasing demands for legacy data to populate your EHR," says Reese. Exacerbating the problem is the fact that certain interfaces like eGate from Oracle Corp. are being sunset. For those organizations, it will represent an opportunity

to acquire the best solution utilizing the latest in advanced technology and software to address increasing demands for service.

Health systems are in the process of completing the most recent evolution of implementing transaction systems to meet immediate needs under Meaningful Use through 2015. The question for those organizations will now become how to demonstrate use of these systems to actually achieve better outcomes.

Shifting from the single EHR

"What we've seen," says Eric Leader, Director of Product Management & BI, Harris, an international communications and information technology company that became an SI Corporate Sponsor through its acquisition of Carefx last year, "is that, in the past three years primarily due to HITECH, many organizations have viewed IT integration as going down the path of the single EHR."

The pendulum has swung the other way, however.

Now, after the big expenditures and all the dissatisfaction, he says, organizations are considering alternatives to single-vendor EHRs to provide end-to-end integration. "Department chairs may want more control over expectations. They want something that meets their own needs—and their departments are where revenue is generated. Nobody recognized that viewpoint shift even a year ago," he says.

The interoperability aspects of monolithic EHRs are weak, even in Stage 1 Meaningful Use, Leader argues. Most interoperability interfaces—typically built upon a CCD interface—are not up to par for health-delivery requirements. "You can get results data from basic HL-7 feeds, but organizations need to go to the next level, which is to do that more broadly and put that information where it's best used, the most beneficial system from a patient-care perspective such as sending certain lab results to a cardiology system, for example. So, the challenge has changed somewhat. Everybody's invested a whole lot in those EHRs which may not be meeting departmental needs—and interoperability isn't being advanced," he says.

From blasting to delivery

If the first level of integration is within the hospital, the second level is across the enterprise, the third is to exchange information with different organizations, whether your own or with competitors, then the fourth level is to make that information available to cross-organizational care teams. How do you get information into the hands of a caregiver? That's a problem with traditional HIEs, which are becoming the workhorses for hospitals to extend their clinical systems and applications to the larger ambulatory arena. An HIE's limitations will begin to manifest themselves, however, in population management, especially in terms of data latency and data consolidation into data marts. HIEs lack the workflow and process information to do population management.

"HIEs may blast it out there," Leader says, but may not place it into the right patient or clinical context—a major shortcoming given that nearly eight of 10 patients forget their doctor's instructions and of those who do, half interpret them incorrectly.

Patients either aren't getting information or aren't being followed up on. They don't show up for follow-up visits and if they do they lack the correct information. "The key is getting information to someone: the care team and the patient," he says.

Another level of IT integration today in healthcare involves new views of data mining. Monolithic EHRs may offer intraoperability—sharing of data within its

own applications—but may still leave health systems unable to share data between or among systems.

Meet me in the cloud

The sheer volume of information and its latency, or delay in transmission, have become major factors driving the more rigorous demands of IT integration. The numbers tell the story: healthcare storage needs are rising a whopping 40 percent a year, according to Leader.

Eric Leader, Director, Product Mgmt. & BI, Harris

"Everything is in the cloud. Hospitals are hiring hosting companies for storage-area networks that can control the performance characteristics," he says. As a result, the cost of storage has been decreasing. For smaller systems, the storage is built into the remote-hosting arrangement. "Storage pods," in which hospital data networks are connected to hosted servers, are becoming increasingly common. "The underlying theme in infrastructure is virtualization: large virtual servers," says Leader.

The integration technology in the clinical space is of fairly old design, he says, and that creates challenges in gathering all the information required for clinical decisions. Customization is still required.

"Providers want higher granularity and quicker response so they can intervene in a patient's care. You can't extend alerts to a care team for a patient with chronic disease if you're waiting on an HIE for lab results," says Leader.

The old model was to merely move data around; the new model involves being able to take action on that data. EHRs are good at transactions but not especially good at helping apply that information for critical needs in a population-based world.

Trinity and Loyola

A year ago Novi, Mich.-based Trinity Health, a $9-billion, 49-hospital health system with presence in 10 states, acquired Loyola University Health System, an academic medical center in Chicago. For healthcare IT watchers, the move had significance because each has its own unique EHR system.

Since 2000, Trinity Health has become recognized for its disciplined, standardized IT implementation of Genesis—its Cerner-based single-EHR platform—throughout its enterprise. With the change, new systems replaced legacy technology and provided a platform for standardized clinical process support of patient safety and quality outcomes. As Trinity Health grew, affiliating with many small community hospitals, there was never a question that transitioning to Genesis would be beneficial. Loyola, though, had already invested significant dollars and time on its Epic EHR. With the merger, Trinity Health found itself working to answer a question it had not had to ask itself before: "to standardize or not to standardize?"

"For the past ten years, Trinity Health has been a leading innovator of the electronic health record, leveraging health information technology to drive efficiency and quality," says Sue Paris, VP of Client Services for Trinity Information Services (TIS). "Technology had become scalable, making it possible for us to standardize content and processes. Once we decided to create an advanced clinical system that could serve the enterprise—and best serve our patients—we had to seize the moment."

WELCOME NEW MEMBER

OSF HEALTHCARE

The Scottsdale Institute is proud to announce OSF HealthCare System, based in Peoria, Illinois as a new member.

OSF HealthCare, owned and operated by The Sisters of the Third Order of St. Francis, includes OSF Healthcare System consisting of eight hospitals and medical centers, one long-term care facility, and two colleges of nursing. Additionally, OSF Medical Group is a physician network consisting of more than 650 primary care and specialty physicians and advanced practice providers in over 90 locations throughout Illinois.

OSF HealthCare owns an extensive network of home health services, healthcare-related businesses and the OSF Healthcare Foundation, the philanthropic arm.

OSF Healthcare System consists of the following:

- OSF St. Francis Hospital & Medical Group, Escanaba, Mich. (110 beds)

continued on next page

TRINITY HEALTH

Novi, Michigan

Trinity Health's philosophy about technology has always been guided by the principles of doing what is best for the patient and, historically, simplification, convergence over time, standardization and consolidation was the chosen path.

"When looking at technology as a matter of consideration in a merger and acquisition, we don't simply assume that we'll convert our new partner to the Genesis platform," said Paris. "Instead, we ask a lot of questions about their current EHR investment and about what will provide the greater value—moving to Genesis or maximizing the existing EHR by co-mingling our data?"

Paris explains that, because Loyola had already invested and adopted a mature state-of-the art EHR, Trinity determined that integrating clinical, revenue and financial data from Loyola into the Trinity data warehouse would best serve its future strategy.

Maximum leverage

Art Krumrey, VP and CIO at Loyola, says they have begun mapping financial data to Trinity Health's data repository with revenue and clinical data to follow.

Today, 41 of Trinity's hospitals are active on the Genesis platform. Revenue cycle systems including registration, billing and AR run on the McKesson suite and the enterprise supply chain function on the Lawson suite. Trinity Health's Supply Chain department does purchasing for the entire organization, so it will extend the Lawson supply chain platform to Loyola in the next year. (Loyola also uses a version of Lawson, so that should be more straightforward.) Other centralized applications include general financials, risk management and clinical engineering.

"We want to leverage Trinity Health's scale in purchasing, procurement and medical-equipment database. All 49 hospitals, for instance, will pool their risk in maintenance costs for equipment," says Krumrey. Just a couple years ago Loyola was paying more than $4 million a year in service contracts for diagnostic-imaging modalities such as MRIs alone. "Trinity's method is to pool the risk of MRI and save tens to hundreds of thousands of dollars. It made perfect sense for our clinical engineering department to turn over inventory and management to a central corporate entity."

Portal gazing

Still, the recently merged organizations have already put a toe in the water in terms of patient-information sharing. Trinity Health has a telemedicine unit in South Bend, Ind. where a stroke patient from just across the border in Michigan can undergo an imaging procedure and have results remotely read by Chicago neurologists on a 24/7 basis. "One of our tasks is to find better ways to look at each other through tools like portals for providers and patients," says Krumrey. "The physicians at the Saint Joseph Regional Medical Center can view the specialty care a referred patient gets at Loyola through Epic's physician portal."

Trinity Health's focus on community health—rural and suburban—combined with its access to capital provided a powerful appeal to Loyola, he says. Paris says that, for Trinity Health, adding an academic medical center to its ministry enhanced its ability to focus on network integration, interoperability, clinical research and analytics and population health management. Additionally, the partnership is helping the organiza-

continued

- OSF Saint Anthony Medical Center, Rockford, Ill. (254 beds)
- OSF Saint Elizabeth Medical Center, Ottawa, Ill. (99 beds)
- OSF Saint James-John W. Albrecht Medical Center, Pontiac, Ill. (47 beds)
- OSF St. Joseph Medical Center, Bloomington, Ill. (154 beds)
- OSF Saint Francis Medical Center and Children's Hospital of Illinois, Peoria, Ill. (616 beds)
- OSF St. Mary Medical Center, Galesburg, Ill. (99 beds)
- OSF Holy Family Medical Center, Monmouth, Ill. (25 beds)
- OSF Saint Clare Home (long term care)
- Saint Francis Medical Center College of Nursing
- Saint Anthony College of Nursing

Welcome to Kevin Schoeplein, CEO; Michelle Conger, SVP, Chief Strategy Officer; Jeffry Tillery, MD, VP & CMO; Jim Mormann, CIO, and the entire OSF Healthcare System leadership team.

TELECONFERENCES

August 14
Getting it Right on Privacy and Security
- Jared Rhoads, senior researcher, CSC's Global Institute for Emerging Practices
- Owen Pate, Healthcare Risk and Compliance Executive, CSC's Global Institute for Emerging Practices

August 16
ONC Online Guide: Unintended Consequences of EHRs
- Michael I. Harrison, PhD, Sr. social scientist, Organizations & Systems Center for Delivery, Organization, and Markets, Agency for Healthcare Research and Quality
- Spencer S. Jones, PhD, associate information scientist , RAND Corporation

August 21
Meaningful Use Reporting; Maximizing Utility, Efficiency, and Engagement
- Sean Gaskie, MD, physician director, Sutter Health
- Laura Kreofsky, Impact Advisors and program director, Sutter Health's Meaningful Use Program

August 23
Business Intelligence: A Wave is Coming
- Joe Van De Graaff, research director, Business Intelligence, KLAS

September 11
Innovative Approaches to Sepsis at The University of Kansas Hospital
- Steven Simpson, MD, CSC
- Amanda Gartner, RN (KUHA), CSC
- Bryan Eckert, Healthcare Group, CSC

continued on next page

tion strengthen Catholic healthcare in Chicago.

"One of the first projects we engaged on is analyzing 10 million patient records in the data warehouse from the combined organizations," says Paris. "We'll use the analysis to determine how to reduce hospital readmissions of congestive heart failure patients."

The IT integration, of course, involves more than just data and the two IT staffs will merge as well. Paris says that Trinity Health has established a process and method to analyze the new organization, staff skills and roles, and create an IT Integration plan that moves the staff and management to the enterprise TIS organization. This will bring the TIS roster to over 1,700 FTE's. Trinity Health spends between $100 and $125 million in capital annually on IT.

For an organization that built a reputation for IT standardization on a national scale, Trinity Health has shown through the Loyola merger that it is willing to be creative in its approach to IT integration and that it will embrace flexibility in serving the strategic interests of the organization and the communities it serves.

CHI

An even more widely-dispersed Catholic health system, Catholic Health Initiatives (CHI), a $10.5-billion a-year, Englewood, Colo.-based organization with 76 hospitals and 70,000 employees in 19 states, continues on the journey of IT integration it launched three years ago. "We are so vast, our scope so large, but we all feel and look like the same organization," says Michael O'Rourke, CIO.

From 2009 to 2012, CHI has made a concerted effort to unify human resources, processes and structure under a single IT organization in 19 states and 45 markets, called MBOs, short for market-based organizations. IT staff at CHI are centrally structured but organized to support MBOs, which can include several hospitals that do not overlap other markets. Tacoma, Wash., for example, constitutes an MBO with five hospitals.

CATHOLIC HEALTH INITIATIVES®

A spirit of innovation, a legacy of care.

Michael O'Rourke, CIO, CHI

"The first step," he says, "includes rationalizing or simplifying the IT portfolio of platforms and applications. Standardization is when you agree upon a platform; rationalization is taking things out." The health system runs predominantly the Cerner EHR for its larger facilities and has rationalized down to a single version of the software; smaller hospitals all use Meditech v 6.0. Markets are homogeneous around Cerner or Meditech. CHI's Lexington, Ky., MBO, for example, is all Cerner. CHI's division in North Dakota and Minnesota uses Meditech.

As recently as 2009, CHI had no standard ambulatory solution; today it has implemented an Allscripts EHR and practice management system. "The journey has continued to standardize and rationalize," says O'Rourke. For example CHI today has 17 different dietary systems and will rationalize that number down to one or two.

Endgame

"Integration has been expedited by Meaningful Use and Reform and is proving very helpful in terms of continuity of care and population management.

We still have hundreds of apps we have to take out as we roll out the platform. We're decommissioning as we go. It will take us the next few years to achieve. The endgame—which is to standardize product and content and reduce the application portfolio—is in sight for 2014," he says.

"That's when all the new games—ACOs and population health—will begin," says O'Rourke. CHI has built a common master patient index (MPI), which will tie into an HIE the health system is launching in November. "We can create a unique identifier for a patient. The HIE will then allow us to pull together a patient's record. The last piece: To take all this disparate information and through an EPMI and HIE tie these pieces of medical information to the patient. Today a patient might go through Mercy for a hospital stay, visit a physician, a reference lab and then follow up with a specialist. How do you bring it together? Give a physician or clinician a comprehensive look?"

Highway to accountable care

It's clear that the "new games" O'Rourke refers to are changing the IT landscape under the health system's feet.

"ACOs, medical home and population management all put us into another paradigm," says O'Rourke. The EHR, HIEs, all applications and tools then become the foundation for moving into using electronic information to improve population health, such as following and managing diabetic diets. All these tools are part of the highway that allows us to do accountable care. The EHR is really just the ante to get into the game, to sit at the table. The market forces of reform are moving us to accountable care. The question is: What does that look like?"

While accountable care will involve hospitals, the ambulatory setting, reference labs and post-acute care sites among other elements, it will not be a hospital system. "Hospitals are going to be huge cost centers. We want to route patients to the lowest-cost quality care." Already, CHI (Mercy) facilities in Des Moines, Ia. are working in partnerships with other health systems in their market to determine how collaborating on an ACO can help them achieve that goal. CHI is also working with insurers to develop an embryonic ACO structure in places like Lincoln and Tacoma, Wash.

"The forces are coming together. Each market has a different cadence to it, but you're starting to see the outlines of an integrated delivery network. That's happening as IT integrates clinical systems and we continue to move clinical information forward. The schizophrenia is that not every insurer or other player is on board. You don't want to get out of fee-for-service prematurely. You have to do it in a modulated manner."

Conclusion

While IT integration in healthcare continues to be a work in progress, the industry is at an inflection point at which it has completed much of its EHR foundation work and is moving into a new phase that requires intelligently integrated systems for coordinated care and population health. This new IT integration will incorporate Big Data and the analytics engines to track populations for accountable care. To paraphrase our expert sources: We are moving from systems for transaction to systems for action. Speed is of the essence.

continued

September 12
Impacts from the Election
- Paul Keckley, PhD, executive director, Deloitte Center for Health Solutions, Deloitte Consulting LLP

September 17
SI-Cerner Users Collaborative No. 47

September 18
Bundled Payment Strategy Development: Incorporating Physician Variation Insights
- Dave Jackson, senior consulting manager, Truven Health Analytics

September 20
Leadership Lessons of Kilimanjaro
- Ed Marx, SVP and CIO, Texas Health Resources

September 24
New Clinician Orientation: How to Move EMR Training out of the Classroom
- Karen Broz, EMR Training Team coordinator, University of Missouri Health

September 25
Advancing PMO Value in Healthcare
- John A. Kocon, PMP, VP, Enterprise Program Management Office, Catholic Health Initiatives

September 27
Code Explosion: Leveraging Computer Assisted Coding
- Lorri Luciano, RHIA, manager, HIM Product Hospital Specialist, OptumInsight

Share your organization's experience, success factors and lessons learned with other SI members by hosting a teleconference presentation. Contact us at scottsdale@scottsdaleinstitute.org

BOARD OF DIRECTORS

Executive Committee

Stan Nelson, Chairman

Don Wegmiller, Vice Chairman

Gordon Sprenger, Secretary & Treasurer

Shelli Williamson, Executive Director

David Classen, MD, Associate Professor of Medicine, University of Utah, CMIO, Pascal Metrics

Board Members

David Campbell, Senior Advisor, System Strategy and Growth, Oakwood HealthCare, Inc.

Bob Clarke, President Emeritus, Memorial Health System

Stephen C. Hanson, FACHE, EVP/ Chief Operations Leader – North Zone, Texas Health Resources

Steve Heck, VP, Impact Advisors

Stan Hupfeld, Past President & CEO, Integris Health, Inc.

Lowell Kruse, Senior Fellow Healthy Communities, Heartland Health

Scott Parker, President Emeritus, Intermountain Health Care

Tom Sadvary, President & CEO, Scottsdale Healthcare

Joseph R. Swedish, FACHE, President & CEO, Trinity Health

Anthony Tersigni, CEO, Ascension Health Alliance

Kevin Wardell, President, Norton Hospital, Norton Healthcare

MEMBER ORGANIZATIONS

Adventist Health, Roseville, CA

Adventist Health System, Winter Park, FL

Advocate Health Care, Oak Brook, IL

Ascension Health, St. Louis, MO

Avera, Sioux Falls, SD

Banner Health, Phoenix, AZ

BayCare Health System, Clearwater, FL

Beaumont Health System, Royal Oak, MI

Bellin Health System, Green Bay, WI

Billings Clinic, Billings, MT

Catholic Health Initiatives, Englewood, CO

Cedars-Sinai Health System, Los Angeles, CA

Centura Health, Englewood, CO

Children's Hospitals and Clinics of Minnesota, Minneapolis, MN

CHRISTUS Health, Irving, TX

Cincinnati Children's Hospital Medical Center, Cincinnati, OH

Dignity Health, San Francisco, CA

HealthEast, St. Paul, MN

Heartland Health, St. Joseph, MO

Henry Ford Health System, Detroit, MI

INTEGRIS Health, Oklahoma City, OK

Intermountain Healthcare, Salt Lake City, UT

Lifespan, Providence, RI

Memorial Health System, Springfield, IL

Memorial Hermann Healthcare System, Houston, TX

The Methodist Hospital System, Houston, TX

Metro Health Wyoming, MI

Munson Healthcare, Traverse City, MI

New York City Health & Hospitals Corporation, New York, NY

NewYork-Presbyterian Healthcare System, New York, NY

Northwestern Memorial HealthCare, Chicago, IL

Norton Healthcare, Louisville, KY

Oakwood HealthCare, Dearborn, MI

OSF HealthCare System, Peoria, IL

Parkview Health, Ft. Wayne, IN

Partners HealthCare System, Inc., Boston, MA

Piedmont Healthcare, Atlanta, GA

Presence Health, Mokena and Elk Grove Village, IL

Scottsdale Healthcare, Scottsdale, AZ

Sharp HealthCare, San Diego, CA

Sidra Medical and Research Center, Doha, Qatar

Spectrum Health, Grand Rapids, MI

SSM Health Care, St. Louis, MO

Sutter Health, Sacramento, CA

Texas Health Resources, Arlington, TX

Tri-City Medical Center, Oceanside, CA

Trinity Health, Novi, MI

Trinity Mother Frances Health System, Tyler, TX

UCLA Hospital System, Los Angeles, CA

UK HealthCare, Lexington, KY

University Hospitals, Cleveland, OH

Virginia Commonwealth University Health System, Richmond, VA

CORPORATE SPONSORS

Deloitte. Microsoft Impact advisors hp invent Cerner OPTUMInsight HARRIS TRUVEN HEALTH ANALYTICS KORN/FERRY INTERNATIONAL CSC

STRATEGIC PARTNER

KLAS

August 2012