

Ventura County Grand Jury 2014 - 2015



Final Report

County Project Management – A Case Study

June 4, 2015

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County Project Management – A Case Study

Note: see “**Glossary**” for definitions

Summary

The growing dependence on Information Technology (IT) systems makes these systems as important an infrastructure element as is a building, a telephone system, electricity, and water. Properly planning projects to successfully deliver an IT system involves balancing relationships among project constraints such as size (scope), quality, schedule, budget, and risks. These elements are so closely linked that changing one will always have an impact on one or more of the others.

As a result of public complaints, the 2014-2015 Ventura County Grand Jury (Grand Jury) initiated an investigation into Ventura County’s (County) methodology and practices for project management using the County’s implementation of the Cerner Electronic Health Record System (EHR) as a case study.

After extensive research and interviews, the Grand Jury found that:

- No Countywide policy, applicable to all agencies, identifies required project management standards.
- The management of projects across the County is inconsistent in its use of “best practices” even though the expertise and resources to employ these practices are available within the County.
- The EHR ranks as an enterprise-level project based on its cost and its effect on other departments and agencies. Enterprise projects require formal risk assessments prior to a project start date. The risk assessment documented and approved did not meet the level of detail expected for an enterprise-level project. By limiting risk assessment to federal incentive reimbursement and fines, the County ultimately failed to uncover what impact the system would have on Ventura County Health Care Agency’s (VCHCA) operational performance, efficiency, and profitability.
- Scheduled quarterly Information Technology Committee (ITC) status reports for the EHR project were infrequent and inadequate. Failure to require quantitative project status and Estimate at Completion (EAC) reports caused ITC, the governing group, to miss opportunities to identify problems and take corrective action throughout the EHR project.
- From October 2011 through December 2014, the Ventura County Board of Supervisors (BOS) authorized in excess of \$71,000,000 for the EHR. Additional costs, such as labor hours and other expenses not charged to the project, travel reimbursements, and losses from uncollectable patient billing ultimately will increase total costs to an amount not currently known.

Based on the findings of the Cerner case study for County project management, the Grand Jury recommends that the Board of Supervisors standardize the use of project management “best practices” and formalize the approval of any deviation from standards.

The Grand Jury recommends that the BOS assign the ITC responsibility and authority to regularly: monitor achievement of stated project goals; ensure compliance with the approved project process; enforce utilization of quantitative data to measure project progress; identify problems; and assure that prompt corrective action is taken.

Background

As a result of public complaints, the Grand Jury initiated an investigation into the County’s methodology and practices for project management using the County’s implementation of the Cerner Electronic Health Record System (EHR) as a case study. The Grand Jury sought to answer the following questions:

1. What are the Countywide policies relating to project management?
2. What are the County’s standard procedures for project management?
3. How was the EHR implemented?
4. What is the cost history of the EHR?

Methodology

The Grand Jury conducted this investigation by researching:

- The American Recovery and Reinvestment Act of 2009 (ARRA) and Health Information Technology for Economic and Clinical Health Act (HITECH) and their impact on Electronic Health Records
- The County’s timeline for the adoption and implementation of the VCHCA EHR
- County documents related to the implementation of the new VCHCA EHR
- Information related to County’s project management processes and procedures available on the Ventura County Intranet
- Information on project management best practices from the Project Management Institute’s “A Guide to the PROJECT MANAGEMENT BODY OF KNOWLEDGE (PMBOK® GUIDE) Fifth Edition” and the International Organization for Standardization (ISO) [Ref-01, Ref-02, Ref-03, Ref-04]
- Other documents related to the adoption and implementation of the EHR for the VCHCA

The Grand Jury interviewed County employees including those involved in project management and staff associated with the implementation of the EHR for the VCHCA.

Facts

- FA-01.** The Project Management Institute (PMI) is an organization that promotes the use of “best practices” for managing projects. PMI’s core purpose is “to advance the practice, science and profession of project management ...” by providing education and certification for project management professionals. PMI encourages project management using measurement-based project plans that allow quantitative measurement of progress and enable the calculation of final cost and schedule using performance-based predictions. One such methodology is “earned value.” [Ref-01, Ref-02]
- FA-02.** ISO has published an industry standard document titled “Structured Approach to Enterprise Risk Management” that can be used as a guide to effective risk management. [Ref-03, Ref-04]
- FA-03.** PMI-certified project managers from the Ventura County Information Technology Services Department (ITS) are available to provide project management for County agencies for an additional fee. ITS also provides basic PMI-oriented training, when requested, to agencies that decide to use their own personnel.
- FA-04.** The County maintains a website for Forms and Policies (F&P) on its Intranet. This website contains suggested standards, policies, and templates that comply with PMI standards. It is used for IT projects. The County Auditor-Controller’s report dated March 30, 2015, states that 74% of the IT policies on the County’s Intranet were at least 5 years old, with 4 policies over 10 years old. The audit report recommended setting regular review schedules to ensure the County IT policies are up-to-date. [Ref-05]
- FA-05.** ITS project managers use the forms posted on the F&P website as well as the Microsoft Project program to control projects greater than \$50,000. ITS adheres to the policies and standards posted on the website.
- FA-06.** The Ventura County Board of Supervisors (BOS) approved “The Enterprise Information Systems Policy,” available on the F&P that:
- Allows technology to be managed by individual County departments
 - Defines the roles of the Information Technology Committee (ITC), the County Executive Officer (CEO), and the Auditor-Controller in the implementation of significant technology-based projects
 - Mandates that IT projects for the acquisition and establishment of information systems and services conform to the approval process
- The policy does not apply to specialized or unique equipment and software used solely for medical, scientific, and laboratory analysis.
- FA-07.** The “ITS Template Recommendation Matrix,” available on the F&P website, recommends which document(s) are optional and which are required for projects based on their size (small, medium, and large) and the categories listed below:
- Software Development and Enhancements

- Vendor Application Software
- Computer Hardware, Computer/Server Operating System, and Support Software
- Data Network, Telephone, and Radio

Project size is determined as follows:

- “Small projects are usually one or two person projects, less than a month in duration and less than 500 hours or [sic] effort.”
- “Large Projects include many people for many months. A good rule of thumb is any project with more than 2000 hours of effort is large.”
- “Medium Projects are any projects in between.”

FA-08. As of May 2015, no Countywide policy mandates the use of PMI-based project management methodology and/or the use of the available forms and templates posted on the F&P website. In fact, the *County Administrative Handbook*, chapter 5, paragraph 3 of Information Technology Policies, Standards & Guidelines specifically states, “The individual departments are responsible for choosing technological alternatives as a way of doing business, presenting the proposals necessary to acquire the proper approvals and funding for such projects, and for the management of the project once it has been undertaken.” This allows an agency to manage its IT projects without the constraint of ITS forms, policies, procedures, and methodologies.

FA-09. In 1995, the BOS created the Information Technology Committee (ITC) to review and approve (1) the County’s IT strategy, (2) proposed changes and additions of operational policies, and (3) standards and guidelines prior to their establishment and enforcement by the CEO. The ITC approves and monitors progress on selected County IT projects over \$50,000. Committee members include two members from the Board of Supervisors, the CEO, the Ventura County Sheriff, the Ventura County Fire Protection District Chief, the Auditor-Controller, and the directors from Human Services Agency, VCHCA, and ITS. [Ref-06] (Att-01)

FA-10. All County information technology projects must receive approval by the ITC for projects and purchases greater than \$50,000. The process for funding requires the project sponsor to complete the Automation Project Assessment Questionnaire (APAQ). This document outlines the project description, scope, objectives, risk assessment, outcome, and measurements for success. The APAQ can be found on the F&P website.

FA-11. The County’s Intranet website provides links to the ITC quarterly meeting agendas and minutes from 2006 to 2015. Of the 44 meeting dates listed, 34% of the links to the meeting minutes were inoperable as of April 2015. The Grand Jury was unable to confirm that these meetings occurred.

FA-12. The October 3, 2011 APAQ for the Cerner EHR project presented to the ITC identified three goals, one measurement for success, and a minimal risk assessment.

- Goal 1: To replace VCHCA’s clinical record system with a single system which complies with the HITECH provision of ARRA
- Goal 2: To automate and integrate the patient accounting and supply chain management with the new clinical record system
- Goal 3: To automate and integrate billing and claim management for leveraging information across the enterprise
- Measurement: The single measure of this project’s success would be achieving its first attestation in accordance with federal requirements under the “Stage 1 Meaningful Use” (MU) criteria by September 1, 2013.
- Risk assessment: Risk would be limited to the loss of federal reimbursement allocations and the issuance of fines if the project was not started by January 1, 2012, and completed by September 1, 2013.

FA-13. As indicated in its agenda, status reports on open projects need not be provided at ITC meetings unless requested by the ITC. Of those reports given, a quantitative assessment is not required. The reports reviewed for EHR were qualitative and thus could not be monitored with any metrics. They also failed to provide status for goals stated in the APAQ.

FA-14. Project status reports for Cerner presented to the ITC on October 18, 2012, January 9, 2013, April 11, 2013, and October 9, 2013, were primarily qualitative; i.e. no quantitative progress was provided which would support a performance-based prediction of total project costs at the completion date and a performance-based prediction of the completion date. All reports stated that there was a shortage of County labor and thus milestones would not be met.

FA-15. The Grand Jury requested all project files that demonstrate how the Cerner project was conducted, including activities that cover the pre-Cerner-installation plan, the Cerner integration efforts, and the planned post-“Go-Live” maintenance tasks. The Grand Jury only received and reviewed the following project plans created by Cerner:

- Project file number one (submitted to the Grand Jury on January 21, 2015, as a Microsoft Project plan file), spanned the period from October 24, 2011 to September 30, 2013, and represented Phase 1 of the EHR System project implementation.
- Project file number two (submitted to the Grand Jury on January 21, 2015, as a Microsoft Project file), spanned the period from August 26, 2013, to March 18, 2014, and represented Phase 2 of the EHR System project implementation.
- Project file number three (submitted to the Grand Jury on January 21, 2015) spanned project period from “9/11/14 to 2/13/2014” [sic] and represented the project tasks to be completed, achieving “Federal Core Measures.”

- Project file number four (submitted to the Grand Jury on January 21, 2015) spans the period from March 1, 2014, to December 27, 2019, and includes Cerner implementation of the Cerner Remote Hosting option and maintenance.

The plans reviewed did not have the PMI-required data for County labor needed to perform specific tasks. Resources such as equipment and labor for the project milestones were missing. The Grand Jury did not receive a County PMI-compliant plan for the Cerner project that was referenced in the BOS response to a 2013-2014 Ventura County Grand Jury report: "HCA did use a formal structured policy management plan for the Cerner System Implementation. The plan presented was the project plan required of Cerner in their contract with the County. This plan followed an Event Driven Project Management methodology." The project plans presented to the Grand Jury were developed by Cerner and covered only Cerner tasks. [Ref-01, Ref-07, Ref-08]

- FA-16.** According to the BOS response to the 2013-2014 Grand Jury Report, Cerner uses a management method it calls "Event Driven Project Management Methodology." This methodology cannot be found in the standard ISO or PMI management literature. It is used by Cerner as its own production planning tool because Cerner's work is driven by the customer's response (known as an "event") to its requirements. Cerner has no authority over the customer's workforce. Therefore, Cerner cannot predict when the customer will respond to its requests or how complete the response will be. The VCHCA, by contrast, was being driven by a very firm scheduled due date, the "Go-Live" date of July 1, 2013. Issues arise when event-driven methodologies are used on schedule-driven projects. A Federal Aviation Administration case study concludes that scope creep/project expansion and budget overruns are a consequence of this mismatch. (Ref-01, Ref-07, Ref-08, Ref-09, Ref-10, Ref-11, Ref-12)
- FA-17.** As of May 1, 2015, the total cost of the EHR system had not been publicly disclosed. The Grand Jury requested audit data from the Ventura County Auditor-Controller in order to evaluate implementation performance. At the time of the request, no audit had been completed. However, the Grand Jury received the following information:
- County employee project time was not always charged to the project.
 - Equipment purchased had not been inventoried or not charged to the project.
 - Payments to vendors could not always be tracked to the project.
 - The true cost of EHR could not be ascertained.
- FA-18.** Audits are routinely conducted where cash is used in daily transactions or where there might be a propensity for theft. Audits may also be initiated at the request of agencies, submittal of a public complaint, or, if requested, at the completion of a project.

FA-19. The EHR funding process began with a VCHCA letter to the BOS dated October 4, 2011, that recommended the purchase of an EHR system with the vendor Cerner for \$32,466,000. The recommended project had an 18-month duration with a set of activities as follows:

- Month 1. Contract Execution
- Month 2. Hire Implementation Team
- Month 3. Project Kickoff
- Month 4-5 Training, Design
- Month 5-12 Build, Validate
- Month 13 Integration Test 1, Integration Test 2, Go-Live
- Month 14-18 Post Live System Check, Begin Production Maintenance Activities

[Ref-14, Ref-15]

FA-20. The BOS gave approval of and authorization for EHR expenses to be increased from the initial \$32,466,000 on October 4, 2011, to over \$71,000,000 as of May 7, 2015. [Ref-13, Ref-14]

The history of BOS authorizations is as follows:

- April 10, 2012 for \$5,110,980 Cerner charges for services [Ref-15]
- July 24, 2012 for \$5,748,500 for staffing services, computerized physician order entry software and 5% contingency; \$4,450,000 to NovaCoast Corp. for staffing support during EHR (July 24, 2012 to June 30, 2013); \$125,000 to Zynx Corporation for physician order set creation services (July 24, 2012 to June 30, 2013) [Ref-16, Ref-17]
- May 21, 2013 for \$6,337,196 for medical equipment, end user equipment, licenses and software necessary to integrate patient care into EHR [Ref-18]
- June 24, 2014 for \$19,160,788 Cerner Remote Hosting [Ref-19]
- September 23, 2014 for \$514,560 not to exceed \$599,880 for annual hosting of the Health Portal, portal reporting database, and Helping Hands Level 1 support [Ref-20]
- November 4, 2014 for \$99,900 with the ability to expand to \$570,000; second amendment to contract with Barnard Howard LLC [Ref-21]
- December 2, 2014 for \$379,000 for first amendment to contract with Luminous Technology Group (January 3, 2014 to June 30, 2015) [Ref-22]

FA-21. The Cerner contract estimated Cerner’s travel expenses at \$346,000. As of December 31, 2014, the County had reimbursed Cerner Corporation over \$834,000 for travel expenses. [Ref-13]

- FA-22.** As of the July 1, 2013 “Go-Live” date, over 100,000 County employee hours had been used for Phase 1 of the EHR implementation.
- FA-23.** The *Ventura County Star*, citing the EHR as a contributing factor, reported an \$8,550,000 loss at the Ventura County Medical Center (VCMC) in fiscal year 2014. [Ref-23]
- FA-24.** Problems stemming from the implementation of the EHR system affected the VCHCA’s ability to bill correctly, resulting in an operational loss. These problems created a large volume of uncollectable patient billing (estimated at \$40,000,000) that, even after being corrected, still left a substantial portion unrecoverable.
- FA-25.** Both before and after selection, County employees visited other hospitals that were either in the process of implementing a Cerner EHR “Solution” or had already completed their implementations. Their research revealed that other institutions employed more people with the necessary skill sets (e.g., informatics) to support their EHR system than the VCHCA had allocated during its Cerner EHR implementation. The VCHCA’s current level of EHR support remains below that of comparable institutions.

Findings

- FI-01.** The Grand Jury found that project management across the County is inconsistent in its use of ISO/PMI best practices even though the expertise and resources to employ those practices are available through ITS. The EHR project governance, as defined by PMI, should have begun with a qualified project manager and a County project plan as early as 2009, when the search for a qualified vendor began. It did not. (FA-01, FA-02, FA-04, FA-05, FA-06, FA-07, FA-08, FA-13, FA-14, FA-15)
- FI-02.** The Grand Jury found that the County maintained a website with PMI-compliant forms, policies, and procedures during the EHR project. Not all project managers were aware of the website’s existence and those who knew were not required to use any of the recommended procedures or documents. As of May 2015 no Countywide policy, applicable to all agencies, identifies required project management standards. Merely posting recommended templates and documents on a website is not a clearly stated policy. (FA-04, FA-05, FA-06, FA-07, FA-08)
- FI-03.** The EHR is an enterprise-level project based on its cost and its effect on other departments and agencies. Such effects include the integration with the County data network and the interface with the Auditor-Controller’s office. Enterprise projects require formal risk assessments prior to a project start date. The risk assessment documented and approved on the APAQ did not meet the level of detail expected for an enterprise-level project. By limiting risk assessment to federal incentive reimbursement and fines, the County ultimately failed to address the impact the system could have on patient safety; the daily workflow of doctors, nurses, lab technicians, pharmacists, billing, and registration; and the effect on VCHCA’s efficiency and profitability. (FA-01, FA-02, FA-12, FA-13, FA-14)

- FI-04.** Scheduled quarterly ITC status reports for the EHR project were infrequent and inadequate, allowing the project to expand in both scope/size and cost. Failure to have quantitative project status and Estimate at Completion (EAC) reports caused ITC, the governing group, to miss opportunities to identify problems and take corrective action throughout the EHR project. (FA-09, FA-10, FA-11, FA-13, FA-14, FA-23, FA-24)
- FI-05.** Information contained in the EHR project and plan documentation provided to the Grand Jury was incomplete and inaccurate and did not reflect effective project management. These documents did not accurately allocate or report the amount of time needed or spent on projects by County employees. They did not track the progress and cost of the individual tasks assigned to County resources. (FA-13, FA-14, FA-15)
- FI-06.** The Grand Jury found that County labor required for the EHR project, as documented in the APAQ, was severely underestimated and ultimately proved more costly than originally proposed. The Grand Jury could not accurately verify the labor hours and cost due to the tracking methodology employed during the project. (FA-13, FA-14, FA-15, FA-17, FA-19, FA-22, FA-23)
- FI-07.** VCHCA knew from its research and the ITC knew from its status reports that there was a shortage of County personnel assigned to the project, but both failed to take the necessary and timely corrective action. (FA-14, FA-25)
- FI-08.** VCHCA failed to develop a project plan to reflect the hours and resources necessary to integrate with the Cerner production schedule. (FA-01, FA-15, FA-16)
- FI-09.** The ITC allowed the adoption of an APAQ that gave priority to meeting a "Meaningful Use" date. Setting this priority distracted from establishing a PMI-compliant project plan. VCHCA adopted the vendor's "Event Driven Methodology," which covered Cerner's production but did not integrate into any County plan. (FA-12)
- FI-10.** The ITC had no way to quantitatively measure successful completion of the APAQ goals. The project cannot be called complete until all outstanding substantive issues related to satisfaction of the APAQ goals are resolved and accurate project performance data is produced. (FA-12, FA-20, FA-23, FA-24)
- FI-11.** From October 2011 through December 2014, the BOS authorized in excess of \$71,000,000 for the EHR. County labor hours and other expenses not charged to the project, reimbursement for Cerner travel expenses, and losses from uncollectable billing ultimately will increase total costs to an amount not currently known. (FA-17, FA-20, FA-21, FA-23, FA-24)

Recommendations

- R-01.** The Grand Jury recommends that the Board of Supervisors standardize the use of project management “best practices” (e.g., PMI and ISO) and formalize the approval of any deviation from the standards requested by the project. (FI-01, FI-02, FI-08, FI-10)
- R-02.** The Grand Jury recommends that the Board of Supervisors direct all agencies to use PMI-certified project managers on medium- and large-sized projects and/or provide training and oversight by PMI-certified project managers on projects using personnel who lack that certification. (FI-01, FI-03, FI-05)
- R-03.** The Grand Jury recommends that the Board of Supervisors direct that all agencies routinely include the cost of the project manager and/or support for PMI project management services in the budgeted cost for medium- and large-size projects. (FI-01, FI-05, FI-08, FI-10)
- R-04.** The Grand Jury recommends that the Board of Supervisors direct all agencies to use labor and capital codes for specific task line items in medium- and large-size projects and that the projects be independently audited. (FI-03, FI-04, FI-05, FI-06, FI-08, FI-10, FI-11)
- R-05.** The Grand Jury recommends that the Board of Supervisors assign to the ITC the responsibility and authority to regularly: monitor achievement of stated project goals; ensure compliance with the approved project process; enforce utilization of quantitative data to measure project progress; identify problems; and assure that prompt corrective action is taken. (FI-03, FI-04, FI-07, FI-08, FI-09)
- R-06.** The Grand Jury recommends that the Board of Supervisors direct the ITC to conduct post-mortem project reviews to determine “lessons learned” and publish the results in support of continuous process improvement. (FI-06, FI-07, FI-08, FI-11)

Responses

Responses required from:

Board of Supervisors, Ventura County (FI-01, FI-02, FI-03, FI-04, FI-05, FI-06, FI-07, FI-08, FI-09, FI-10, FI-11) (R-01, R-02, R-03, R-04, R-05, R-06)

Auditor-Controller, Ventura County (FI-01, FI-03, FI-04, FI-05, FI-06, FI-08, FI-10, FI-11) (R-03, R-04)

Responses requested from:

County Executive Officer, Ventura County (FI-01, FI-02, FI-03, FI-04, F-05, FI-06, FI-07, FI-08, FI-09, FI-10, FI-11) (R-01, R-02, R-03, R-04, R-05, R-06)

Chief Information Officer, Ventura County (FI-01, FI-02, FI-03, FI-04, FI-05, FI-06, FI-07, FI-08, FI-09, FI-10, FI-11) (R-01, R-02, R-03, R-04, R-05, R-06)

Commendations

The Grand Jury commends the many VCHCA employees who, through dedication and hard work, were able to meet federal requirements while overcoming inadequate project planning.

References

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- Ref-02.** PMI.org website, “Project Management Institute STRATEGIC PLAN,” November 30, 2012, http://www.pmi.org/about-us/~media/pdf/governance/strategic_plan.ashx (accessed April 14, 2015).
- Ref-03.** “A structured approach to Enterprise Risk Management (ERM) and the requirements ISO 31000,” https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=3&cad=rja&uact=8&ved=0CDYQFjAC&url=https%3A%2F%2Fwww.theirm.org%2Fmedia%2F886062%2FISO3100_doc.pdf&ei=DHUtVbG1B47xoATmjYGIDA&usq=AFQjCNGr8qJJGakYk3_1im8Df1bS3R7VLA&sig2=v6NuQP3n1kWY0i87b-qJYw (accessed April 14, 2015).
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- Ref-05.** County of Ventura Auditor-Controller, “Audit Reports - FY 2014-2015,” Audit of the Information Technology Services Department’s Role in Information Technology Governance, March 30, 2015, <http://vcportal.ventura.org/auditor/docs/audit-reports/FY2014-2015/2015-03-30%20Audit%20of%20ITSD%27s%20Role%20in%20Information%20Technology%20Governance.pdf> (accessed May 11, 2015).
- Ref-06.** County of Ventura Supervisor Peter Foy Membership page, “Memberships on Boards, Commissions, & Committees (2013),” <http://www.ventura.org/peter-foy/memberships> (accessed April 14, 2015). Supervisor Steve Bennett Memberships webpage, “2015 MEMBERSHIP ON BOARDS, COMMISSIONS, & COMMITTEES,” <http://www.ventura.org/steve-bennett/memberships> (accessed May 13, 2015).
- Ref-07.** Ventura County Grand Jury 2013-2014, “Healthcare Records Processes and Procedures May 29, 2014,”

- http://vcportal.ventura.org/GDJ/docs/reports/2013-14/Healthcare_Records-05.29.14.pdf (accessed March 4, 2015).
- Ref-08.** County of Ventura Board of Supervisors, "Responses to Findings (FI) and Recommendations (R), Healthcare Records Processes and Procedures Report No. 01 May 29, 2014,"
http://vcportal.ventura.org/GDJ/docs/reports/2013-14/Healthcare_Records-Response-BOS_CEO.pdf (accessed 2/27/2015).
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http://en.wikipedia.org/wiki/Project_management (accessed March 4, 2015).
- Ref-10.** Frederick, John; Lee, Valerie. Federal Aviation Administration, "T&E for Event Driven Programs, Presented to: 2012 ITEA International Symposium,"
http://www.itea.org/~iteaorg/images/pdf/Events/2012_Proceedings/2012_Annual_Symposium/track_1_%20fredericklee_thefutureoftestandevaluationforeventdrivenprograms.pdf (accessed March 3, 2015).
- Ref-11.** Husband, Mark. "Schedule or Event Driven? How Do I Know?" *Defense AT&L Magazine*, March – April 2014 Issue, Defense Acquisition University Publications,
<http://www.dau.mil/publications/DefenseATL/DATLFiles/Mar-Apr2014/Husband.pdf> (accessed March 3, 2015).
- Ref-12.** Nissan, Ray. Technology Executives Club website, "Event-Driven Job Scheduling. So, What's the Occasion?"
<http://www.technologyexecutivesclub.com/Articles/management/artEventDriven.php> (accessed March 2, 2015).
- Ref-13.** County of Ventura, Board of Supervisors Meeting October 4, 2011, Agenda Item 31, "Approval of, and Authorization for, the Purchasing Agent to Sign a Contract With Cerner Corporation to Provide an Electronic Health Record System, Effective October 4, 2011 Through September 30, 2016..., Supporting Materials, *Approval of, and Authorization for the Purchasing - Board Letter.pdf*,"
<http://bosagenda.Countyofventura.org/sirepub/agdocs.aspx?doctype=agenda&itemid=42875> (accessed May 20, 2015).
- Ref-14.** Wilson, Kathleen. "County to spend \$32 million on electronic health records system," *Ventura County Star*, October 6, 2011,
<http://www.vcstar.com/news/county-to-spend-32-million-on-electronic-health> (accessed March 3, 2015).
- Ref-15.** County of Ventura, Board of Supervisors Meeting April 10, 2012, Agenda Item 13, Authorization for the Auditor-Controller to Process the Necessary Budgetary Transactions to Revise the Operational Plan of Ventura County Medical Center by Revising Appropriations and Revenue in Order to Pay Cerner Corporation for the Electronic Health Record System Approved by Your Board on October 4, 2011, Supporting Materials, "Authorization for the Auditor-Controller to Process - Board

Letter.pdf,"

<http://bosagenda.countyofventura.org/sirepub/agdocs.aspx?doctype=agenda&itemid=46263> (accessed on May 20, 2015).

- Ref-16.** County of Ventura, Board of Supervisors Meeting July 24, 2012, Agenda Item 38, Approval of, and Authorization for, the Health Care Agency (HCA) to Expend a Total of \$5,748,500 for the Implementation of the Electronic Health Record (EHR) Project, Which Will Include Staffing, Services, Computerized Physician Order Entry Software..., Supporting Materials, *"Approval of, and Authorization for, the Health Car - Board Letter.pdf,"*
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- Ref-17.** Biasotti, Tony. "Ventura County supervisors approve more money for electronic health records," *Ventura County Star*, July 24, 2012, <http://www.vcstar.com/news/ventura-county-supervisors-approve-more-money> (accessed May 7, 2015).
- Ref-18.** County of Ventura, Board of Supervisors Meeting May 21, 2013, Agenda Item 30, "Approval of, and Authorization for, the Health Care Agency (HCA) to Expend Up to \$5,200,000 for Medical Equipment, End User Equipment, Licenses and Software Necessary to Integrate Patient Care Into the Electronic Health Record (EHR); Ratification of, Approval of, and Authorization for, the HCA Purchase of \$1,137,196 End User Equipment Related to the EHR Implementation (Cerner); and Approval of, and Authorization for, the Auditor-Controller to Process the Necessary Accounting Transactions to Establish Appropriations. Supporting Materials,"
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Attachments

Att-01. ITC Charter, Make-up, and Mission

Glossary

<u>TERM</u>	<u>DEFINITION</u>
APAQ	Automation Project Assessment Questionnaire; a document required before requesting Board of Supervisor funding of an IT project
ARRA	American Recovery and Reinvestment Act of 2009; includes funding for HITECH and Meaningful Use
Attestation	The act of certifying a formal document which states that something is true, correct, or real; in an EHR context, it is affirmation that the installed system meets federal Meaningful Use requirements
BOS	Board of Supervisors, Ventura County
CEO	County Executive Officer
Cerner Remote Hosting	The option of having the necessary servers for the EHR system equipment located and maintained at an offsite Cerner facility
County	County of Ventura
EAC	Estimate at Completion; the expected total cost of a scheduled activity or project when the defined scope of work will be completed
EHR	Electronic Health Record
Earned value	Shows how much of the budget and time should be spent with regard to the amount of work to be done
Enterprise	A large project undertaken or to be undertaken, especially one that is important or difficult or that requires boldness or energy
Event driven	A production planning tool where work is determined by the customer’s response
F&P	Forms and Policy; a Ventura County intranet website
Go-Live	Start date for operational use of the VCHCA EHR (July 1, 2013)
Grand Jury	2014-2015 Ventura County Grand Jury

<u>TERM</u>	<u>DEFINITION</u>
HITECH	The Health Information Technology for Economic and Clinical Health Act, enacted as part of the American Recovery and Reinvestment Act of 2009
Informatics	The science of computer information systems; in the context of this report, a multidisciplinary field that uses health information technology to improve health care
Intranet	An organization’s internal network, not available to the general public
ISO	International Organization for Standardization
ITC	Information Technology Committee
ITS	Ventura County Information Technology Services Division
Microsoft Project	A project management software program that is designed to assist a project manager in developing a plan, assigning resources to tasks, tracking progress, managing the budget, and analyzing workloads
Milestone	An identifiable stage in any project
MU	Meaningful Use; minimum federal government standards for using electronic health records to meet the criteria for federal reimbursement
PMBOK	Project Management Body of Knowledge; a reference guide to accepted polices, standards, and procedures for project management from PMI
PMI	Project Management Institute; an organization for the promotion, standardization, and improvement of project management professionals
Post-mortem project review	A comprehensive review held for process/management improvements after a project has either stopped or been completed
Project resources	Elements needed to complete a project, e.g., people, hardware, raw materials
Scope	A project’s defined objectives

TERM

DEFINITION

Solution

A function-specific Cerner software application used by hospital and clinic staff to view and update patient records, and to interface equipment into the EHR system

Success

Project success is measured by product completeness, quality, timeliness, budget compliance, and degree of customer satisfaction.

VCHCA

Ventura County Health Care Agency

VCMC

Ventura County Medical Center

WBS

Work Breakdown Structure; a project broken down to a system of manageable tasks that can be arranged to show dependencies and resources

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Attachment 01

ITC Charter, Make-up, and Mission

ITC Charter, Make-up, and Mission

The ITC was created by action of the Board of Supervisors on November 21, 1995. The ITC charter, as approved by the Board of Supervisors, is as follows:

Review and presentation of long-range technology plans as prepared by the IT Services Department and approved by the County Executive Office.

Review and presentation of the County's Information Technology Strategy as prepared by the IT Services Department and concurred in the County Executive Office.

Review of proposed changes and additions to on-going operational policies, standards and guidelines as recommended by the IT Services Department and prior to issuance and enforcement on the part of the County Executive Office.

The ITC is comprised of ten County executives: two members of the Board of Supervisors, the County Executive Officer, the Auditor-Controller, the Sheriff, the Fire Protection District Chief, the Human Services Agency Director, the Resource Management Agency Director, the Health Care Agency Director, and the IT Services Department Director.

Chairperson - Peter Foy

Vice Chairperson - Mike Pettit

County Counsel - Ronda McKaig

Members:

- Steve Bennett
- Michael Powers
- Geoff Dean
- Jeffery Burgh
- Mark Lorenzen
- Chris Stephens
- Barry Zimmerman
- Barry Fisher

Members Proxy:

- Brian Miller
- Rodney Lanthier
- Steve Offerman
- Cindy Cantle
- Matt Carroll
- Bill Ayub
- Joanne McDonald
- Vaughan Miller
- Rod Megli
- Jennifer Padre
- Melissa Livingston
- Terry Theobald
- Garrett Anestos
- Joan Araujo