I. Project Identification

Project Title: Department of Correction Health Portal - DOC HP

Agency Name	**Agency Business Unit**
Department of Correction	DOCM1

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II. Project Description

A. Project Dates

Proposed Start Date (MM/DD/YYYY)	**Expected Completion Date** (MM/DD/YYYY)	**Project Duration** (in months)
July 1, 2013	June 30, 2017	48

B. **Project Description -** This information will be used for listings and report to the Governor and General Assembly on capital funded projects.

The Department of Correction (DOC) is proposing to create a Department of Correction Health Portal (DOC-HP) which will provide an electronic health record to facilitate the care of the nearly 17,000 inmate patients within the agency's facilities also to serve as a mechanism to link the agency's healthcare system to the various state agencies, outside community agencies, and external hospitals and clinics involved in the healthcare of DOC's patients. This may include providing, organizing, and/or paying for care to DOC patients both when they are housed within DOC facilities, and when they are not. DOC's healthcare system handles approximately 25,000 intakes and discharges per year. DOC's healthcare system includes but is not limited to general medical care, dental care and mental health and substance abuse/addiction care.

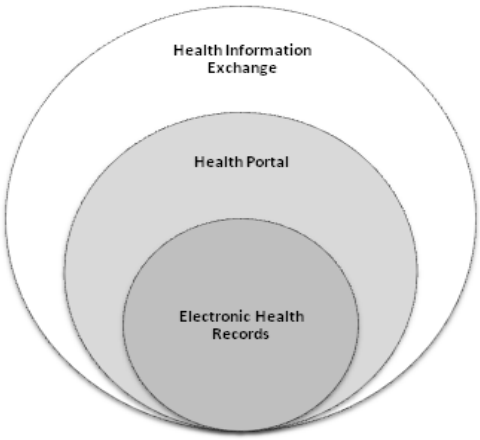
The project is divided into three main components, all of which are closely linked in order to ensure effective and efficient interconnectivity of the systems. The first component involves the purchase and installation of an electronic health record system, within the medical units in 16 facilities across the state, which encompasses all of the areas of care supported by the DOC healthcare system. The second task is to link that health record into the health documentation systems in the relevant state agencies, community services agencies and the community health center clinics in the state that serve DOC's patients when they are released and to create linkages between the DOC healthcare system and outside hospitals and other care providers who see the agency's patients, as well as outside community service organizations that provide other benefit assistance such as housing, case management, etc. The third component is to link our system to the state's Health Information Exchange.

It is anticipated that this project will pay for itself within the first three to five years of operation - if not sooner - due to improved operational efficiencies, better management of inmate healthcare and continuity of care, better inmate outcomes (lower rates of recidivism and lower healthcare costs to the state) and avoided legal costs.

It is anticipated that the electronic health records component of the project will be fully implemented by the end of fiscal year 2015 and all of the other components of the project fully implemented by the end of fiscal year 2018. The savings that will occur from this project will begin accruing in earnest by the end of fiscal year 2015 (following the complete implementation of the electronic health records component).

C. Summary.

Summary - Describe the high level summary of this project in plain English without technical jargon



This three phase project will establish in DOC and our healthcare contractor University of Connecticut Health Center, Correctional Managed Health Care (UCHC/CMHC) an electronic health records system and ultimately a healthcare portal linking such records to the various state agencies, outside community agencies, and external hospitals and clinics involved in the healthcare of DOC's patients. This project will also feed into the state's Health Information Exchange. The project provides for both improvements in the ways that the agency cares for its inmate patients within its facilities as well as providing us the opportunity to ensure that the healthcare gains made by DOC patients while under agency care are not lost when inmate patients are released to the community. It does this by implementing state of the art electronic health record technology within DOC's facilities to enable the approximately 600 healthcare providers who work for DOC's vendor, UCHC/CMHC, to utilize digital medical record technologies to generate and manage all of the medical, behavioral health, and addiction medicine data relevant to the care of DOC's patients. In addition to day-to-day care for the agency's patients, electronic records such as this facilitate the development of quality control systems, patient management and staff development capabilities, through real-time access to reporting and analytic capabilities as well as make possible expanded use of innovative medical technologies such as telehealth/telemedicine. This in itself would be a great step forward for DOC since there is no electronic medical record capability within its facilities at this time.

However, the goals of this project extend beyond the agency's borders into the other state agencies, community providers and others to whom DOC hands off its patients when they are released. This system, as it is designed, will enable all DOC's partners in care to share relevant medical and other information in order to ensure that once released, inmate patients have the opportunity to integrate effectively back into their home communities and stay in them – more than 97% of inmates are returned to the community. It is anticipated that this project will pay for itself within the first three to five years of operation - if not sooner - due to improved operational efficiencies, better management of inmate healthcare and continuity of care, better inmate outcomes (lower rates of recidivism and lower healthcare costs to the state) and avoided legal costs.

It is anticipated that the electronic health records component of the project will be fully implemented by the end of fiscal year 2015 and all of the other components of the project fully implemented by the end of fiscal year 2018. The savings that will occur from this project will begin accruing in earnest by the end of fiscal year 2015 (following the complete implementation of the electronic health records component).

Purpose – Describe the purpose of the project

Many states use electronic health records systems in a correctional environment. These include Rhode Island, New Jersey, Arizona, Michigan, Texas, Tennessee and Iowa, as well as the Federal Bureau of Prisons. In addition to improved patient care and the ability to measure productivity and outcomes, they have all identified substantial direct and indirect cost savings as a result of the implementation. These states primarily have purchased software packages which provide the framework for healthcare providers to schedule appointments, record encounters, integrate test results and provide easy access to patient information in a secure environment.

The overarching purpose of the project is to enable the DOC and its vendors and community partners to provide to its inmate patients affordable and efficient state of the art community standard healthcare utilizing up-to-date tools and technologies including electronic health records. Within this larger purpose, the Department of Correction conceives of this project as a tool to better integrate and coordinate care for its inmate patients with community providers both when inmate patients are in DOC facilities (utilization management provided by the Department of Social Services' Administrative Service Organization, for example) and after their release into the community (community health centers, community hospitals, etc.). This will not only improve the quality of health care for DOC's inmate patients, but will also improve the standard of public health in Connecticut's communities. The combination of an electronic health record in conjunction with linkages to the key community care providers and other community services providers will lead to better quality of care, reduced costs, and better outcomes for DOC's inmate patient population.

As part of our desire to have in place an electronic system (the DOC Health Portal) that will enhance our efforts to maintain the continuity of care of our inmates as they transition back into Connecticut's communities upon release from our care and custody and in support of the state's efforts to implement systems needed in support of health care reform and managing costs and improving outcomes related to the state's health and human service programs, our intent is to procure a Certified EHR Technology system that has been Health Information Technology (HIT) Certified as required by the Health Information Technology for Economic and Clinical Health (HITECH) Act so that we can achieve the Meaningful Use (MU) objectives and measures established by the Centers for Medicare and Medicaid Services (CMS).

The affordable care act has placed a great deal of focus on nationwide utilization of electronic records in the care of patient s in America. This electronic health record will help facilitate DOC's ability to take advantage of the medical system changes that are planned through the Affordable Care Act.

The lack of a modern EHR system significantly impacts the ability of clinicians to easily share patient information, particularly when they are transferred between facilities and to community providers.

DOC invests heavily in the healthcare of inmates. The agency's current paper driven system adds to the difficulties inherent to preserving the continuity of care that needs to be in place when inmates discharge from DOC facilities into the community. When the continuity of care is broken, the healthcare investments made to an inmate's health are greatly eroded (if not voided entirely) which leads to increased healthcare cost (to the state) in the community, and potentially an increase in recidivism. The difficulties coordinating Medical, Mental Health and Addictions information internally and coordinating aftercare with community providers, due to the poor communication of medical information caused by the current paper driven system, results in the loss of clinical gains made, at great expense, during an inmate's period of incarceration and ultimately increased medical costs to the state for these individuals in the community.

The ability to provide more data on the drivers of the costs associated with inmate medical care should promote more transparency in the understanding of costs and outcomes.

Health Information Technology certification ensures that the EHR technology providers choose to adopt offers the necessary capabilities, functionalities, and security to help them achieve MU. Our intent is to procure a Certified EHR Technology system that has been Health Information Technology (HIT) Certified as required by the Health Information Technology for Economic and Clinical Health (HITECH) Act

We have reviewed/are in the process of reviewing the EHR systems currently used by the UCONN Health Center (NextGen) and DMHAS (FEi) and have concerns regarding their ability to support the needs of a correctional healthcare system and environment. We have begun working with Minakshi Tikoo, Connecticut's Health Information Technology (HIT) Coordinator for the Health Information Exchange (HIE), with regard to the identification of an appropriate HIT certified system. Based on the RFP conducted a few years ago regarding an EHR system for our correctional healthcare operations and discussions with Ms. Tikoo, we are confident that the amount we are requesting through the IT Capital Investment fund will be sufficient to acquire an appropriate system for DOC, regardless of whether we go with NextGen, FEi or another to be determined vendor.

We understand and whole heartedly agree with the state's desire and need to limit the number of potentially duplicative IT platforms within the state system and will make every effort to utilize existing state systems and contracts, however given the unique nature and requirements of a correctional healthcare system and environment we believe that the state and DOC will be best suited by the procurement and implementation of a system that specifically meets our requirements.

Importance – Describe why this project is important

DOC is constitutionally responsible to provide medically necessary health care to the Connecticut inmate population housed in 16 different facilities across the state including both jails and prisons. In order to provide this care, health records must be maintained. Much of the high cost of health care has been attributed to inefficient information systems as identified in the national health care reform effort. In the correctional environment this is even more relevant. Inmates are often in facilities for long stays and have extensive medical records that are kept in file rooms and warehouses. Inmates are also often transferred between facilities and/or released and re-incarcerated. Extensive time may be spent tracking charts and creating duplicate charts while the original charts are unavailable. Requests for information on medical care often require a great deal of labor in finding, researching and extracting charts. Handwriting in charts is often difficult to read, creating problems in communication and in subsequent efforts when trying to determine exactly what the encounter entailed. Correctional Managed Health Care employs at least two medical records staff per facility to handle filing and retrieving charts and preparing information for requests for medical records. An electronic system will allow for: 1) the timely availability of information to improve patient care; 2) improved efficiency through the ability to measure productivity; 3) reduction in medical errors and subsequent litigation through improved communication; 4) enhanced continuity of care as critical information will appropriately follow the patient across boundaries; and 5) reduce costs for filing information, transporting charts and storage. An electronic system will allow the DOC and UCHC/CMHC, as well as the various state agencies, outside community agencies, and external hospitals and clinics who are involved in healthcare for DOC's patients, to manage costs and improve patient outcomes, supporting the goals of overall national health care reform.

Currently healthcare and healthcare cost data and information is locked in paper records or in disparate (and in many cases antiquated) databases. Meaningful analysis of this data and information is currently extremely difficult, labor intensive and inefficient. A modern EHR system will provide opportunities to employ data analytics to improve healthcare outcomes and maintain or lower healthcare costs.

DOC is responsible for the health care for the approximately 17,000 inmates who reside in its facilities at any given time as well as for the care of certain parolees who reside in halfway houses. Those 17,000 patients are

distributed between 16 separate facilities across the state. DOC houses many very ill patients. As of December 2012, there were almost 500 inmates classified as either Medical 4 or Medical 5, the DOC classification categories signaling the sickest inmates. (Medical 5 patients are either admitted to an acute care hospital or in one of DOC's facility infirmaries; Medical 4 level patients have severe chronic disease such as end stage liver disease and require high level care, but not inpatient). Approximately 10% of DOC inmates have serious mental illness and, approximately 40% - 50% of the agency's female patients are on mental health medications at any given time.

In addition, DOC's healthcare system is characterized by frequent inter-facility inmate transfer and a great deal of movement from the community into and out of the jail system. There is no electronic medical data capacity in the agency's facilities at this time. The medical, mental health, and addictions information for these inmate patients is documented in paper charts and must follow the individual patients from facility to facility and from medical center back and forth to facility via the hard copy physical chart. The logistics involved in moving these patients back and forth is complex, not to mention the need to transport confidential medical information with them as they travel. Not only do records frequently not reach the arriving facility when the inmate does, but this leads to loss of records as well. An electronic health record will eliminate the need to physically transport confidential medical data.

Electronic health records have also been shown to improve the quality of healthcare and to facilitate the timely care of patients. The affordable care act has placed a great deal of focus on nationwide utilization of electronic records in the care of patient s in America. This electronic health record will help facilitate DOC's ability to take advantage of the medical system changes that are planned through the Affordable Care Act. These include the development of the medical home model, for example. In addition, as DOC's inmate patient healthcare system moves toward integration with the statewide Medicaid utilization management system, electronic medical record data will be critical to integrate with the Administrative Services Organization under contract to DSS who manages healthcare utilization statewide.

The importance of this project extends far beyond DOC's facilities. Several studies have shown that as inmate patients enter DOC's systems, many times their clinical status improves while under the agency's care, but then rapidly deteriorates once they are released. This is a result of a number of variables that characterize the current healthcare system, not the least of which is the difficulty in securing immediate patient referrals to the community healthcare system and providing medical, behavioral health, and addiction information to care providers in the community. By linking with other state agencies (Department of Social Services, Department of Mental Health and Addiction Services, Department of Development Services and Department of Public Health, etc.) and outside medical providers (community health centers, local mental health authorities, hospitals, etc.) the referral process will be much improved and the care of higher quality and much more efficiently provided enabling DOC's inmate patients to maintain the gains in clinical and health status that they have achieved while in DOC's facilities, and, as a result, reducing their risk of recidivism and cost to the state's healthcare system as a whole.

The goals of this project extend beyond the agency's borders into the other state agencies, community providers and others to whom DOC hands off its patients when they are released. This system, as it is designed, will enable all DOC's partners in care to share relevant medical and other information in order to ensure that once released, inmate patients have the opportunity to integrate effectively back into their home communities and stay in them – more than 97% of inmates are returned to the community.

Because this system will be integrated with community healthcare providers (Department of Social Services, Department of Mental Health and Addiction Services, Department of Development Services, Department of Children and Families and Department of Public Health, etc. community health clinics, for example), use of the electronic health record will provide new opportunities for the provision of timely, accurate, and appropriate

care in alignment with community standards. It will also provide for continuity of care upon release, improve the agency's ability to measure chronic disease outcomes for its population, identify trends in healthcare needs in order to identify and allocate resources and needs; measure utilization to predict costs and produce accurate accounting to tax payers of DOC's expenditures on healthcare.

This system will also be Health Information Technology (HIT) Certified as required by the Health Information Technology for Economic and Clinical Health (HITECH) Act so that we can achieve the Meaningful Use (MU) objectives and measures established by the Centers for Medicare and Medicaid Services. This system will be designed to participate in the Health Information Exchange system so that health information can be shared among doctors, hospitals, and other health care providers.

It is anticipated that this project will pay for itself within the first three to five years of operation - if not sooner - due to improved operational efficiencies, better management of inmate healthcare and continuity of care, better inmate outcomes (lower rates of recidivism and lower healthcare costs to the state) and avoided legal costs.

Outcomes – What are the expected outcomes of this project

Access to electronic healthcare records information opens up a profound opportunity to improve healthcare, operational and financial outcomes. The ability to provide better oversight of clinical care reduces the chance of any patient care issues as a result of inadequate transfer of information thereby reducing potential liability. There would be a reduction in the number of duplicate tests ordered. DOC and UCHC/CMHC would have the ability to develop meaningful performance measures, significantly increasing accountability. DOC and UCHC/CMHC could easily track the volume and type of patient encounters in clinics in terms of how many patients have been seen, where were they seen, what was done, and by what provider. This will enable DOC and UCHC/CMHC to be more efficient in allocation and scheduling of staff, monitoring medication side effects, providing clinical supervision and assessing training needs. The direct entry of medication orders would reduce the number of pharmacists needed to enter orders and reduce medication errors. The need for medical records staff would be significantly reduced and storage space would be freed up in the facilities. Overall staff time spent on clerical tasks associated with paper charts will reduce everyone's time spent on activities unrelated to direct care delivery.

The expected outcomes of the project include the following:

- Reduced cost in the provision of healthcare for DOC's 17,000 inmate patients. This will be achieved by:
    - Limiting duplicative and redundant procedures
    - Improved and rapid access to inmate patient medical records (no longer must one hunt for a chart, but only sit down at a terminal or pick up a handheld);
    - Simplify patient movement by not requiring paper medical charts to accompany custody transport
    - Reduced storage costs for medical charts
    - Better and more effective referral process to outside care providers, care organizers and managers, and others who assist inmate patients in the community such as housing and benefits agencies
    - Ability to utilize DSS statewide Administrative Services Organization to manage utilization of healthcare both within and outside of DOC's facilities
    - Expanded use of innovative medical technologies such as telehealth/telemedicine
- Increased quality of care for DOC's inmate patients while in DOC facilities and after transition to the community
    - Better access to medical, behavioral health, and addiction-related clinical information for health care providers in the facilities
    - Less time lost searching for charts, more time spend taking care of patients

- Access to real time information for community health providers means more efficient care and higher quality care for inmate patients once they transition into the community
- Access to medical information in real time means appointments can be scheduled much sooner for patients to see community health providers
- Ability to monitor quality of care, healthcare demand, staffing capacity, on a real time basis within the facility-based healthcare system thus allowing for timely and effective process-based management of the system

It is anticipated that this project will pay for itself within the first three to five years of operation - if not sooner - due to improved operational efficiencies, better management of inmate healthcare and continuity of care, better inmate outcomes (lower rates of recidivism and lower healthcare costs to the state) and avoided legal costs.

Approach and Success Evaluation – Provide details of how the success of the project will be evaluated

There are both hard and soft measures that DOC and UCHC/CMHC will utilize to measure the success of the project. First, part of the success of the project will be measured by how well DOC establishes timelines and goals to develop and implement the project. Success would be measured by how closely DOC and UCHC/CMHC are able to meet established timelines and goals. Second, once up and running, there are many "hard" metrics that DOC and UCHC/CMHC would utilize to measure the success of the project including outcomes of patient care, cost and efficiency of patient care, numbers and cost of litigation, for example. There are also soft metrics such as patient satisfaction, and provider satisfaction, for example, that are relevant to the success of a project such as this, and also closely related to the quality of care provided within a medical system.

D. Business Goals. List up to 10 key business goals you have for this project, when (FY) the goal is expected to be achieved, and how you will measure achievement, Must have at least one. Please use action phrases beginning with a verb to state each goal. Example: "Reduce the Permitting process by 50%". In the Expected Result column, please explain what data you will use to demonstrate the goal is being achieved and any current metrics.

Business Goal (Action Phase)	Target FY for Goal	Current Condition	Expected Result
Reduce long term costs of inmate patient healthcare across state agencies by integration of chronic care services and continuity of care with community providers.	FY 15	DOC is responsible for providing medically necessary, community standard, and cost effective health care to its inmate patient population. Inmates comprise the only segment of the nation's population with a "right" to healthcare. Healthcare costs have been rising as have the medical needs of the inmate population. The increase in age and illness among DOC's population requires ever-increasing	Because this system will be integrated with community healthcare providers (Department of Social Services, Department of Mental Health and Addiction Services, Department of Development Services, Department of Children and Families and Department of Public Health, etc. community health clinics, for example), use of the electronic health record will provide new opportunities for the provision of timely, accurate, and appropriate care in

		need for care. More than 9 out of ten inmates (97%) ultimately return to the community. The incarcerated population is predominantly composed of minorities who have higher risks for identified chronic diseases and less access to healthcare.	alignment with community standards. It will also provide for continuity of care upon release, improve the agency's ability to measure chronic disease outcomes for its population, identify trends in healthcare needs in order to identify and allocate resources and needs; measure utilization to predict costs and produce accurate accounting to tax payers of DOC's expenditures on healthcare.
Improve and restore health to the chronically ill (substance abuse, mental health, chronic disease) who are returning to the community in order to improve quality of life, reduce disability, increase employability and other levels of social interaction, and reduce recidivism.	FY 16	The lack of an electronic system for recording incidence and prevalence of disease as well as outcomes of disease management severely limits the agency's ability to understand the current state of its population, their treatment needs, the effects of treatment, and other outcomes necessary for managing such a large medical system. This not only complicates the care for patients who move frequently within DOC's system, but also interferes with the agency's ability to connect with its patients' external providers when they come to the agency and when they are discharged.	Providing quality healthcare to inmates within DOC's facilities and then ensuring that these same inmates have access to healthcare in the community after they are released is an important deterrent to recidivism. The Mission of the DOC includes "…with opportunities that support restitution, rehabilitation, and successful Community re-integration." The CDOC recognizes that these goals cannot be achieved without active engagement in healthcare. An increase in the integration of the medical and behavioral health and addictions information of inmate patients whenever possible among 16 facilities and among providers in the community will ensure continuity of appropriate care for inmate patients upon release. There will also be much improved system-wide medical care planning as DOC will be able to identify disease incidence and prevalence and manage its system based at

			least in part upon that knowledge. In addition, data regarding the health, wellness, and illness in DOC's population will enable the agency to make strong arguments regarding the value of supporting research projects, demonstration grants, and similar initiatives to enable its programs to progress even more aggressively.
Lean and Green - Eliminate the need for and increased use of paper. To provide care that is accurate, consistent, timely and in alignment with community standards. To utilize precious human and physical resources carefully. To eliminate the need to transport and package inmate records.	FY 14	The CDOC paper record creates excessive waste of paper, misuse of human resources, space and housing needs for records and the cost of storage and future destruction. Records are created for all new inmates and temporary ones are created for those returning (approximately 25,000 per year). All records are packaged and transported around the state by couriers or with the custody staff during all internal moves on a daily basis.	By eliminating paper medical records, the Department of Correction will achieve the following: o Eliminate the need to create new paper records on new inmates (approximately 25,000 intakes, new commits = new records old commit = temporary records) o Eliminate transportation and packaging of existing Paper Records between facilities and upon discharge as inmates move around the system = 57,600 per year o Eliminate health summaries completed by nurses for all inter-facility inmate transfers = approximately 30,000

			o Eliminate person hours for the production of record copies on paper o Reduction in copy machine leases, paper and ink o Reduce person hours for the creation of record copies by making electronic copies.

E. Technology Goals. From a technical perspective, following the above example, list up to 10 key technology goals you have for this project and in which Fiscal Year (FY) the goal is expected to be achieved. Please use action phrases beginning with a verb to state each goal. Example: "Improve transaction response time by 10%".

Technology Goal	Target FY for Goal
Reduce paper tracking of medication administration through use of an electronic platform for 9 million annual doses of medication and increase the efficiency and effectiveness of clinical resources by deploying a fully integrated application suite of interdependent functional modules for each clinical discipline (Medical, Mental Health, Dental, Addictions, and Pharmacy) and operational processes (Medical Records, appointment scheduling, for example). **Current Condition.** Currently, many of the functions of nursing and medical prescribers are undertaken in a manual fashion. Medication administration, for example, is a completely manual process requiring nursing staff to document in large books administration of medication to inmate patients while the patients are receiving their medications. In addition, anytime an inmate patient is seen for care, documentation is required to describe the visit and to provide the plan of care. Under the current system, each chart is manually retrieved from a large chart storage area, brought to the prescriber, the information regarding the medical visit is entered, orders are written, the orders are then taken off by the nursing staff, the medication orders are then faxed via paper fax to the pharmacy, and the other orders are manually taken off (transcribed) and the order is carried out as required. Finally, the chart is manually filed back in the large chart storage area. Much of this work in DOC's facilities is currently completed by highly trained and highly paid medical professionals. Electronic health information is currently delivered across several in-house developed .NET applications in addition to vendor supported Laboratory/Radiology and Pharmacy packages. The collection of databases presents a technical challenge in terms of supporting the multitude of interfaces between systems. While these complicated, and at times unreliable, integration/interface processes are used to share some data elements, they do not provide interfaces to all necessary systems and processes. Current practice of faxing and scanning critical health information (medication orders	FY 14 – FY 17 This goal will be achieved in phases with initial results occurring in FY 2 of the project and the balance of results being achieved in FY 3 - 5 of the project

for example) is not always consistent or reliable and does not provide for the ability to mine data in an efficient and effective manner

Expected Result.
The use of an electronic system would reduce the time required to document medication administration by at least 50%. In addition, an electronic system would reduce medication associated medical errors both involving administration and documentation as well as markedly speed and improve the process of ordering medications for each facility from the centralized pharmacy. Measurement metrics would include errors pre- and post- implementation of the electronic system as well as time to delivery of medications from pharmacy to facility. In addition, nursing time would be reduced in the medication administration area and this would enable personnel re-assignment to other areas currently needing additional staff. Other metrics revealing improvement would include: eliminate monthly production of paper filing of all paper MARs = x350 hrs per month; improved medication compliance and prescription practices (calculated by # of switches of medication by prescribers); and reduced person hours of hand collected data for quality assurance.

A standardized user environment that consolidates all data elements into a comprehensive system providing staff a centralized data repository for a complete picture of an inmate's health care information. This environment would eliminate the existing disparate interfaces, provide a structured environment for data interchanges, and eliminate the existing labor intensive fax, scanning, and filing processes.

One expected result is the elimination of many of these manual tasks and the reduction in time required to complete others. For example, there would be substantial reduction in the time required by registered nursing staff to create, pass, check and document medication three times or more daily (currently managed by staff on a full time shift with some facilities employing up to three nurses per shift to complete this task). One metric to evaluate the impact of this change would be to measure the increase in availability of the nursing staff time to take on other duties or other staffing measures such as the number of per diem hours used for pharmacy duties. Another metric would be the measurement of medication administration errors.

Another expected result of the electronic health record would be to eliminate time spent on retrieval of charts for documentation of encounters. Under the current system, individual charts travel up to 600,000 times annually from a storage room to clinician and then back again. With the electronic system, this would be eliminated. (Inmate paper chart requires documentation for each encounter. Minimally there at 600,000 occurrences annually where a chart must travel internally from a storage room to a clinician and back again.)

It is also expected that a modern EHR system will improve the accuracy of individual medical records as it would eliminate the need for late entries in charts given that a paper chart cannot be in two places simultaneously. The electronic chart could be utilized by multiple users at the same time, thus eliminating the problem of delayed or forgotten charting. Currently a clinician must wait until the chart is returned from another clinician. The ability to have clinicians from different medical specialties such as mental health and medicine recording information in the chart of a single patient simultaneously will increase the efficiency of those providers.

Speed Benefit Application and Approval **Current Condition.** A significant percentage of the inmate patient population qualifies for both federal and state benefits such as those offered through the social security system (SSI and SSDI) and state benefits such as Medicaid, SNAP, etc. Under the current system, all applications for these benefits that require medical information are completed by marshalling together hard copy versions of medical records from a variety of different providers. The applications are complex and, in some cases such as the SSI and SSDI applications, require a significant amount of prescriber time to complete. As a result, in most cases, inmate patients who qualify for these benefits are not able to access them when they leave DOC facilities. This is problematic since SSI and SSDI, for example, are critical to securing housing as well as other necessities including food for many disabled inmates. **Expected Result.** The electronic medical record and integration with community providers would be expected to lead to increased federal reimbursement and access to state benefits due to increased ability to collect electronic data for functional reports and on line applications for inmates SSI / SSDI upon release.	FY 17 This goal will be achieved in FY 5 of the project
Ability to understand population trends and health and disease trends on a population-wide basis **Current Condition.** The current system does not allow for access to data to allow trend analysis or detailed understanding of the health and illness of the inmate population generally. Since all the data regarding DOC's patient population is hidden in manually created paper medical records, there is no opportunity to develop queries or run reports on the population. The limited amount of quality data that DOC currently has comes from manual chart review and analysis. It is currently impossible, for example, to list by diagnostic code the numbers of inmate patients with specific diagnoses. **Expected Result.** Electronic health records would enable management to readily assess inmate healthcare trends to increase staff efficiency and forecast utilization in high need areas. This would also give us a more exacting ability to analyze and report on treatment costs per patient, or cost per procedure or medical incident or event. The medical field utilizes established coding for procedures and diagnoses and by using these codes DOC's system could have a much more accurate and sophisticated understanding of statewide trends in patients' needs among DOC's population in order to better address health disparities.	FY 15 – FY 17 This goal will be achieved in FY 3 - 5 of the project
Improved process management and reduced IT maintenance requirements. **Current Condition.** The current system has extremely limited ability to support process analysis or process improvement. Time studies can be completed manually, for example, but because there are so many differences in the way the medical department processes function	FY 15 – FY 17 This goal will be achieved in FY 3 - 5 of the project

from facility to facility, one study at one facility has little or no value on a system wide basis. Similarly, there are limited ways to evaluate effectiveness and efficiencies in monitoring the operation of the medical care in the facilities. For example, the medical departments do not have system-wide electronic scheduling systems. This lack of ability to manage the process of patient flow and care provision leads to long waiting lists, inmate patient dissatisfaction and complaint, and provider frustration and decreased morale. Statewide, desktop computers are used to deliver existing applications. Maintenance on such computers (over 500 existing PCs) across the state (21 various locations) requires frequent travel to remote sites. Upgrades, application pushes, and other software installations all require on-site attention. A five year purchasing cycle has been established to keep equipment up to date. **Expected Result.** One component of an electronic health record would be an electronic scheduling system which would markedly reduce waiting time for inmates and, as a result, contribute to an increase in patient satisfaction. This would improve inmate compliance and reduce complaints. In addition, reduced waiting time would increase the time available for inmates to spend at work or programs. Inmates waiting for medical appointments now might be pulled from their work schedules, for example, for hours to wait for the medical prescriber. Better management of medical processes would result in increased productivity of clinical staff and custody personnel. There would be increased reliability of statistics on patient care. In general, this would lead to increased Inmate contact time and improved patient outcomes. On the management end, it would increase efficiency in clinical oversight for supervisors and enable them to better manage downtime. With the deployment of a web based system DOC and UCHC/CMHC will be able to navigate towards a thin client architecture, thus providing for a cost-effective means of delivery and support. Various less costly and less robust digital appliances can be used for application access. Support, maintenance, system, and application upgrades can be managed and delivered from a centralized location. Expansion into other technologies such as digital image transmissions will also be possible.	
Linkages with community healthcare providers and provide appropriate care settings for extremely ill inmate patients and maintain the continuity of care. **Current Condition.** At present, DOC's medical care system has no electronic interaction with community medical providers or providers of other services in the community upon which its inmate patients depend at discharge. This leads to significant problems in areas such as continuity of care, medical diagnoses and previous medical history. When providers are not able to secure the patient's medical history, there is delay in medical care and the outcomes are suboptimal. This happens both in the DOC facilities when inmate patients enter and in community health provider offices and clinics when inmate patients are discharged. Without significant resource and capital investments the in-house developed systems used by UCHC/CMHC do not support the existence of Chronic Care Documents (CCDs)	FY 14 – FY 17 This goal will be achieved in phases with initial results occurring in FY 2 of the project and the balance of results being achieved in FY 3 - 5 of the project.

which are an integral part of health care exchanges. The functional practicality of expanding existing systems to incorporate this type of functionality is complex from a resource, training, and timeline perspective. Additionally, there are currently a small number of inmate patients within DOC's 17,000 population who are very ill, infirm, and debilitated and no longer represent a threat to the public health and safety. These inmates are typically high utilizers of healthcare. For example, this group tends to have frequent admissions for hospital inpatient care, permanent residence in one of the system's higher level of care infirmaries, and regular outpatient visits for invasive procedures. There are existing provisions in the law allowing for early release for inmate patient's who qualify based upon their level and seriousness of illness. However, DOC's current medical care system does not enable the agency to, in a systematic way identify those individuals who are extremely ill. Hence, DOC is unable to mount a formal and effective program that can work to facilitate early release for those individuals who qualify. **Expected Result.** With technology that is integrated with systems such as the DSS and DMHAS databases, the medical utilization history on each patient would be instantly available upon entry. This would result in improved continuity of care within facilities (inter and intra agency and with external providers) upon release as well as improved communication with providers upon entry. This would also reduce excessive and redundant testing and diagnostic procedures. The proposed system will allow for the establishment of a certified Electronic Health Record and provide the ability to transmit data (including CCDs) in HL7, or other commonly accepted exchange formats. This includes valuable clinical information resulting from services provided at outside hospitals and other state agencies. This bi-directional electronic communication is becoming the standard for health information systems involving patient care. These transmissions will ultimately integrate and interface with other state agencies and providers participating in the Health Exchange. Additionally, with a comprehensive electronic health record system, the very ill, infirm, and debilitated individuals that no longer represent a threat to the public health and safety would be identified upon entry to DOC's facilities and their condition could be rapidly and effectively monitored over time. This would enable DOC health officials to identify the point at which the individual reached qualification for early release and move forward to attain that release. The long term result would be that extremely ill inmate patients and those with impending terminal diagnoses would be released prior to the last months of their lives. This would result in a reduction in time and dollars spent on care inside the facility. Additionally a system that links to community healthcare providers will enable an appropriate continuity of care for these individuals upon release. Creating the ability to electronically exchange Health Information with hospitals, private community providers, and other state agencies will allow for more comprehensive healthcare and ensure that continuity of care is maintained.	

F. Priority Alignment. The criteria in this table, in concert with other factors, will be used to determine project priorities in the capital funding approval process. Briefly describe how the proposed projects will align with each criterion.

Priority Criterion	Y/N	Explanation
Is this project aligned with the Governor's Key Priorities?	Yes	This project meets several of the Governor's key priorities for IT systems including the following: 1) implementation of efficient, modern business practices that result in clear and identifiable cost savings and service delivery improvements for state agencies; 2) reduce the costs to the state regarding its implementation, use and management of technology systems through shared services, applications and hardware across agency boundaries and by other means; 3) implement systems needed in support of health care reform and managing costs and improving outcomes related to the state's health and human service programs; and 4) ensure the appropriate confidentiality, integrity, and availability of the State's valuable electronic or digital data information resources in order to provide an environment in which the state's user community can safely conduct state business. This project will reduce the time and cost associated with maintaining paper files and inefficient processes to provide medication delivery and overall healthcare. It will also likely reduce the cost of legal settlements. Ultimately it will result in improved patient outcomes and limit the rates of increase if not reduce the cost of the provision of healthcare services to DOC's inmate population.
Is this project aligned with business and IT goals of your agency?	Yes	The CT DOC has worked to identify and implement an electronic health record in partnership with its vendor, Correctional Managed Health Care, for several years. Efforts to accomplish this have not come to fruition in the past; however, the strong commitment to an EHR remains at the top levels of management in this agency.
Does this project reduce or prevent future increases to the agency's operating budget?	Yes	It will reduce both healthcare costs and custody costs for the Department of Correction in a variety of ways that are discussed in the earlier sections of this document.
Will this project result in shared capabilities?	Yes	The integration of medical care information across multiple state agencies and community health clinics and other community providers will synergistically impact each of the partnering organizations. The ability to electronically share healthcare information between DOC, UCHC/CMHC and other outside community providers will enhance healthcare outcomes and reduce costs.
Is this project being Co-developed through participation of multiple agencies?	Yes	Not only is CT DOC partnering with its healthcare vendor, Correctional Managed Health Care to create this DOC Health Portal/Electronic Health Record system, but also several state agencies (for example, Department of Social Services, Department of Mental Health and Addiction Services, Department of Development Services and Department of Public Health) as well as community based providers will be a part of the partnership.

Has the agency demonstrated readiness to manage project of this size and scope?	Yes	Resources to assist in the management of this project exist at DOC and at UCHC/CMHC as implementation of health care systems at the Health Center for JDH and outpatient clinics including the patient safety system and an electronic health record system for outpatient clinics have already taken place. Additionally, the new Offender Management Information System currently under development at CT DOC represents a project greater in scope than this project. Certainly, the agency could not manage this without several added positions including a durational project manager with IT implementation experience as well as support personnel. However, CT DOC would envision that a good deal of support to implement this project would be forthcoming from Correctional Managed Health Care as both agencies will stand to gain much from the project.
Is the agency ready to deliver the business value proposed?	Yes	The agency has recognized the value of an electronic health record for years, as well as the importance of providing information on inmate patients to community providers and others who have responsibilities for their well-being. The operational substrate of the health component of this agency is generations behind the times. This is recognized by those in management at DOC and there is a great deal of excitement about the possibility of moving this component of DOC's operation forward. Over the past four years the spending on Inmate Medical Services has been below the appropriated dollars through changes in business practice resulting in increased efficiency and through the careful use of 340b pricing available on pharmaceuticals. If able to implement an Electronic Health Record system DOC and UCHC/CMHC will have the means to further evaluate performance data and allocate resources efficiently as they have done with the limited data available to date. DOC will re-engineer its current business practices to take full advantage of the automation, improved throughput and increased data access, accuracy and timeliness, made available through the new system, to re-engineer current processes to eliminate waste, increase productivity, enhance safety and security, enhance communication and improve inmate outcomes. It is anticipated that this project will pay for itself within the first three to five years of operation - if not sooner - due to improved operational efficiencies, better management of inmate healthcare and continuity of care, better inmate outcomes (lower rates of recidivism and lower healthcare costs to the state) and avoided legal costs. It is anticipated that the electronic health records component of the project will be fully implemented by the end of fiscal year

		2015 and all of the other components of the project fully implemented by the end of fiscal year 2018. The savings that will occur from this project will begin accruing in earnest by the end of fiscal year 2015 (following the complete implementation of the electronic health records component).

G. Organizational Preparedness. Is your agency prepared to undertake this project? Is senior management committed, willing to participate, and willing to allocate the necessary time, energy and staffing resources? How will the project be managed and/or governed and who will make the key project decisions?

- Is your agency prepared to undertake this project?

  The agency would need approximately 6 months to ramp up to manage this project. A durational project manager would need to be added as well as several personnel to manage the implementation of the project. Additionally the agency will need to procure the services of a business analyst (either through a selected system vendor or separately) to assist in the analysis and documentation of business processes that will be impacted by the new system. DOC would also work very closely with the IT staff and subject matter expert personnel who are employed by DOC's vendor, UCHC/CMHC. UCHC/CMHC staff will work directly with the implementation team at DOC and will provide much of the support for the implementation of the EHR system. This system will be owned by DOC but be housed on the UCHC/CMHC network/environment.

- Is senior management committed, willing to participate and willing to allocate the necessary time, energy and staffing resources?

  Yes. Senior leadership from DOC, including the Commissioner and Deputy Commissioners, has endorsed this project and recognize the importance and value of electronic health records. Dr. Robert Trestman (UCHC/CMHC) and Dr. Kathleen Maurer (DOC) would be regularly involved with implementation and allocation of resources. As noted above, senior management is deeply aware of the limitations inherent in the existing outdated medical record keeping methods utilized in the agency's facilities. Members of the senior management team have supported several unsuccessful efforts to purchase and implement an electronic record in the past. These have been unsuccessful largely because of the unavailability of funding. Should DOC be able to access funding through the Information Technology Investment Fund, there should be no impediments standing in the way of implementation.

- How will the project be managed and/or governed and who will make key project decisions?

  The management team at the Department of Correction would be primarily responsible for the high level governing of the project. DOC and UCHC/CMHC will establish a steering committee to work through any issues regarding day to day management of the project and the eventual operation of the new system. Dr. Maurer and Dr Trestman will be the executive sponsors of the project and will head the steering committee. The steering committee will be composed of key technology and clinical staff who will be responsible for making key project decisions. A full time project manager will be assigned to oversee all aspects of daily decision making and bring key project decisions to the steering committee.

H. Project Ramp Up. If capital funds are awarded for this project, how long will it take to ramp up? What are the key ramp-up requirements and have any off these already been started? For example, has a project manager been identified? Has an RFI been issued? Is a major procurement required such as an RFP?

- If capital funds are awarded for this project, how long will it take to ramp up?

  DOC anticipates that it will take approximately 6 months to ramp up the staff and organization to undertake the project. DOC will depend heavily on its vendor, Correctional Managed Health Care, to support this undertaking and envisions that building a joint focused work force that is dedicated to this effort may take a slight amount of additional time. The expectation is to use an existing vendor either through a DHMAS contract or through a sole source with the UCHC/CMHC vendor which should greatly reduce ramp up time.

- What are the key ramp-up requirements and have any of these already been started?
  i.e. Has a project manager been identified? Has an RFI been issued? Is a major procurement required such as an RFP?

  The project will be jointly directed out of DOC's Health Services Group and IT Division and UCHC/CMHC. A durational project manager will be hired to carry out the brunt of organizing the project. DOC will work very closely with UCHC/CMHC throughout the project. DOC has been assured that UCHC/CMHC is strongly in support of this initiative and will work with DOC to successfully implement the electronic health records and the DOC Health Portal. It is anticipated that a major procurement would be required as the project involves the purchase and implementation of an electronic health record. A model RFP currently exists as a result of previous efforts to attain an electronic health record system. It is anticipated that DOC will be able to draw a significant amount of information from that document. The existence of that RFP will substantially reduce the amount of time required to develop and publish a new RFP.

I. Organizational Skills. Do you have the experienced staff with the proper training to sustain this initiative once it's a production system? Do you anticipate having to hire additional staff to sustain this? What training efforts are expected to be needed to maintain this system?

- Do you have the experienced staff with the proper training to sustain this initiative once it's a production system?

  UCHC/CMHC has current staff that have implemented and maintained individual health care modules that contain portions of what would be the functionality of a full electronic health records system. These staff can be transitioned to support and maintain a full electronic health record system. There would be additional demands upon DOC's IT staff as well as upon DOC's Health Services staff. At the present time, DOC does not have the available staff to manage this new and ongoing system. However, DOC would anticipate a joint agreement between the agency and UCHC/CMHC that would allow for shared operational responsibility, thus limit the burden somewhat for DOC.

- Do you anticipate having to hire additional staff to sustain this?

  Yes, DOC would need to add at least one to two IT staff members permanently and 1 FTE for the Health Services Department.

- What training efforts are expected to be needed to maintain this system?

  Based on information from other correctional systems that have implemented an electronic health records system it is expected that several days of training would be needed for any newly hired nurses or other clinical staff. Initially, the bulk of the training burden would fall on UCHC/CMHC at least initially since their approximately 600 patient care employees would need to be trained on utilizing the system. There are fewer than 5 personnel at DOC who would also need to be trained. As Phase II and III were developed, there would be training required for other state agencies and community health services and other providers. Preferably, all of this would be implemented through a "train the trainer" methodology. As new staff was hired, they would need to be trained in the existing system. In addition, as system updates were installed, there would be ongoing needs for training to update the existing staff in the upgrades.

J. Financial Estimates. From IT Capital Investment Fund Financial Spreadsheet

Estimated Total Development Cost	Estimated total Capital Funding Request	Estimated Annual Operating Cost	One Time Financial Benefit	Recurring Annual Financial Benefit
$9,750,000	$8,050,000	$500,000		$3,210,000

Explanation of Estimates

Total Estimated Development Cost: $9,750,000

Key Assumptions:
Internal Project Management and Integration Costs include the cost of a Project Manager and Integration assistance.

Vendor costs reflect costs from proposals received in March 2010, adjusted to reflect portal component - include software license fees, implementation cost, customization, hardware, travel expense

Maintenance fees are based on average vendor software maintenance fees

Hardware/equipment costs include network and local hardware including digital radiology equipment - at DOC and UCHC/CMHC – needed to complete the project.

Assumes DOC IT staff costs for IT support and maintenance and informatics staff in DOC Healthcare following implementation - "Out Years". It is assumed that all or part of this cost will be offset through efficiency savings gained in other areas

Total Estimated Capital Funding: $8,050,000

Key Assumptions:
Internal Project Management and Integration Costs include the cost of a Project Manager and Integration assistance.

Vendor costs reflect costs from proposals received in March 2010, adjusted to reflect portal component - include software license fees, implementation cost, customization, hardware, travel expense

Maintenance fees are based on average vendor software maintenance fees.

Hardware/equipment costs include network and local hardware including digital radiology equipment - at DOC and UCHC/CMHC – needed to complete the project.

Total Estimated Annual Operating Cost: $500,000

Key Assumptions:
Assumes $600,000 per year for years 1 and 2 of the transition in project management and integration assistance costs. Assumes $300,000 per year for years 3 and 4 of the transition in project management and integration assistance costs. Assumes $200,000 for project management and integration assistance costs for year 5 of the transition and assumes steady state costs of $200,000 per year - DOC IT staff costs for IT support and maintenance and informatics staff in DOC Healthcare. It is assumed that all or part of this cost will be offset through efficiency savings gained in other areas. All other operating costs are to be borne by UCHC/CMHC. Maintenance fees are based on average vendor software maintenance fees.

Recurring Annual Financial Benefit: $3,210,000

Key Assumptions:
$1,350,000 Medical Records Personnel (Salary & Fringe) Savings assumes a reduction of 18 medical records staff over two years 6 in Year 1 of implementation; the remainder in Year 2. Timing of staff reductions could be impacted by no layoff provisions unless other state opportunities are identified. Fringe is estimated at 50% of salaries. $25,000 Printed Forms/Tabs Savings assumes that printed tabs and forms for current paper charts are eliminated. $250,000 Medication Savings assumes, $100,000 Reduction in Duplicate Procedures Savings and $420,000 Reduction in Pharmacists Savings (Salary & Fringe) Savings assumes that there is a reduction in medication waste due to incorrect and duplicate orders and .6% of total pharmaceutical costs. $65,000 Reduction in X-Ray processing assumes a reduction in duplicate orders for labs/radiology and reduced processing costs.

Hard data is not available due to confidentiality issues, however it is estimated that this new system could allow DOC to avoid legal costs associated with medical related legal actions in excess of $1,000,000 annually.

Not quantified are the savings that will accrue from not having to physically transport paper records or the physical storage and maintenance costs. Also not quantified are the savings that will accrue from having higher cost staff (nurses in particular) spend less time maintaining and handling paper records and more time providing patient care.

III. Expanded Business Case

A. Project Impact. Beyond the top business goals identified in Section II, 1) What impacts will this project have, if any, in the targeted areas below 2) What would be the impact of not doing this project 3) How will the project demonstrate benefits are achieved.

(1) Impact Area (Vision)	Description of Project Impact
Will this project provide efficient and easily accessible services for all constituents?	The lack of a modern EHR system significantly impacts the ability of clinicians to easily share patient information, particularly when they are transferred between facilities and to community providers. Not implementing this project will perpetuate the labor intensive paper system currently in place. As a result, duplicate tests will continue to be ordered, medication waste due to incorrect and duplicate orders will continue and resources will be wasted looking for paper charts, filing charts, transporting

	records and storing, maintaining, retrieving and disposing of records. Further perpetuating the current system significantly limits (if not prohibits) other opportunities for efficiency gains and cost savings from the implementation of modern medical care practices and technology, such as the use of telehealth/telemedicine – which has the potential to significantly lower healthcare costs and improve patient outcomes. Additionally, it is important to note that the DOC invests heavily in the healthcare of inmates. The current system adds to the difficulties in preserving the continuity of care that needs to be in place when inmates discharge from DOC facilities into the community. When the continuity of care is broken, the healthcare investments made to an inmate's health are greatly eroded (if not voided entirely) which leads to increased healthcare cost (to the state) in the community, and potentially an increase in recidivism. The difficulties coordinating Medical, Mental Health and Addictions information internally and coordinating aftercare with community providers, due to the poor communication of medical information caused by the current paper driven system, results in the loss of clinical gains made, at great expense, during an inmate's period of incarceration and ultimately increased medical costs to the state for these individuals in the community.
Will this project promote open and transparent government with the citizens of the state?	The ability to provide more data on the drivers of the costs associated with inmate medical care should promote more transparency in the understanding of costs and outcomes. Through this system all aspects of inmate healthcare - general medical care, dental care and mental health and substance abuse/addiction care - will be tracked and coordinated. Currently these healthcare dimensions are tracked independently in various paper driven systems. An EHR system that captures and tracks healthcare data across all of the different healthcare dimensions will enable better coordination of care and treatment, reduce or eliminate redundancy of services, provide for more focused treatment and ultimately better patient outcomes and lower care and treatment costs.
Will this project establish efficient and modern business processes?	Yes, this project will help to define efficient and modern business processes as they relate to integration of community health, benefits and related service providers within a correctional health system. The system also will provide an impetus to restructure the processes of providing care within the correctional facilities themselves. For example, linking of the new kiosk system with this electronic health record will completely change how

	patients who request to be seen are provided with care. It is anticipated that this project will pay for itself within the first three to five years of operation - if not sooner - due to improved operational efficiencies, better management of inmate healthcare and continuity of care, better inmate outcomes (lower rates of recidivism and lower healthcare costs to the state) and avoided legal costs.
Will this project increase accuracy and timeliness of data for policy making, service delivery and results evaluation?	With the current system, there is no access to electronic data regarding the quality of health care, the diagnoses of DOC's inmate patient cohort, or the outcomes of treatment. DOC is virtually unable to understand the output of its healthcare system at other than an individual patient level except by manual chart review. In the 21st century, this is not an appropriate business model. This project will lead to the elimination of inefficiencies and ineffectiveness associated with bifurcated care. Through this system all aspects of inmate healthcare - general medical care, dental care and mental health and substance abuse/addiction care - will be tracked and coordinated. Currently these healthcare dimensions are tracked independently in various paper driven systems. An EHR system that captures and tracks healthcare data across all of the different healthcare dimensions will enable better coordination of care and treatment, reduce or eliminate redundancy of services, provide for more focused treatment and ultimately better patient outcomes and lower care and treatment costs.

2) What is the expected impact of NOT doing this project?
Not doing this project will result in business as usual, except that "business as usual" may well lead to poorer outcomes for DOC's inmate patients over time. DOC's patient population is not only aging as is the population generally, but the degree of severity of their illnesses is increasing. At the same time, the medical care models are becoming much more sophisticated. DOC is held to the community standard of care. This makes the access to accurate and immediate medical information that much more important. Without information access of this type, it is very possible that the quality of DOC's inmate patient care outcomes may decline over time. With regard to patient data and records management, the current business model is very labor intensive. Not moving forward with a modern EHR system will perpetuate this inefficient and expensive data management model.

(3) How will you demonstrate achievement of benefits?

Achievement of benefits will be demonstrated by identifying a series of metrics that measure both global improvements in efficiency, inmate patient outcomes, and community integration as well as individual metrics designed to measure process improvements and efficiency in the day-to-day operation of the system. DOC will identify systems impacted by the new EHR system, establish specific metrics and set up data collection systems and schedules. DOC will examine labor impacts (DOC healthcare staff, UCHC/CMHC staff, DOC IT staff, DOC custody staff, DOC programs and treatment staff and other impacted staff), IT costs, and healthcare materials costs. DOC will also examine patient outcomes over time to measure the impact of the new system on healthcare outcomes.

B. Statutory/Regulatory Mandates. 1) Cite and describe federal and state mandates that this project in intended to address. 2) What would be the impact of non-compliance?

(1) Statutory / Regulatory Mandates:

The Department of Correction is required by case law interpretation of the 8th Amendment to provide healthcare to its inmate population. DOC currently complies with its responsibilities by providing medical care to the inmate population. However, for a variety of reasons some of which involve access to medical information, DOC is frequently named in lawsuits involving the provision of its healthcare. Having access to medical, behavioral health and addictions records digitally in DOC's facilities would go a long way toward reducing the costs of litigation regarding healthcare.

DOC currently has 10 Judicial Mandates. These mandates (consent decrees/court ordered treatment) require that DOC provide medical/health care in a manner designated by the court. The court has (a) consultant(s) review inmate patient charts to ensure compliance with the court orders. DOC is required to routinely provide the court patient information. The current Judicial Mandates are as follows:

- Valerie West v. John Manson (re York Correctional Institution mental health services)
- Valerie West v. John Manson (re: Niantic Correctional Institution conditions of confinement including medical care)
- David Doe v. Larry Meachum, (AIDS education and Pre and Post HIV Test Counseling)
- David Doe v. Larry Meachum (Health Care for HIV+ Inmates and Confidentiality of HIV-Related information)
- Edward Roe v. Larry Meachum (Bridgeport Correctional Center Mental Health Services)
- Nevin Mawhinney v. John Manson, Civil No. B78-251Jeremiah
- O'Sullivan v. John Manson Civil No. B78-24
- Gary Andrews v. John Manson, Civil No. 81-20
- Donald Lareau v. John Manson, 78-145
- Jesus Campos v. John Manson, 78-199

Additionally DOC medical records are critical to the state's defense in the numerous lawsuits filed annually against the department and UCHC/CMHC. The quality and accuracy of the data contained in inmate medical records as well as the timeliness of providing such information have a direct bearing on the outcome of these suits. The DOC provides multiple copies to multiple attorneys in the Public Safety Division of the Office of the Attorney General. These cases span long periods of time and constant updates to the attorneys are necessary to provide proper representation. A modern EHR system will improve the quality and accuracy of DOC medical records and data as well as increase the timeliness of providing such information to the Attorney General's Office. Ultimately a modern EHR system will lead to lower defense costs and potentially better and less costly legal outcomes.

(2) Impact of non-compliance:

These mandates are addressed at this time, however, with the DOC-HP, the agency would be able to provide healthcare that more effectively meets the needs of DOC's inmate population which will allow for easier attainment of the mandated requirements as well as reduce the number and cost of litigation in its system.

C. Primary Beneficiaries. Who will benefit from this project (citizens businesses, municipalities, other state agencies, staff in your agency, other stakeholders) and in what way?

Beneficiaries of this project will be many and widespread across the state. These include the following:

- Individuals
    - Inmate patients who receive better care both inside the agency's facilities and in the communities to which they return
    - Care providers in DOC facilities who are able to access up-to-date and accurate healthcare information on inmate patients immediately
- Agencies
- Community healthcare providers who will have immediate access to medical information on inmate patients whom they see and care for
- The Department of Correction, UCHC/CMHC, the Department of Mental Health and Addiction Services, the Department of Social Services, and Department of Developmental Services will benefit from immediate access to complete and accurate medical information services that will be much more efficiently provided by a modern EHR system and enable all to provide better care.
- State Taxpayers and Others
- The DOC Healthcare portal will reduce healthcare costs in the agency's inmate population, thus reducing the cost to the taxpayer.
- There will be many fewer legal actions taken against the state because the healthcare quality will be improved and legal challenges that do occur will be better defended as a result of higher quality and more accurate data management and record keeping as well as from more timely access to such information.
- State taxpayers will benefit from the cost savings that accrue from a modern EHR system because of the provision of more efficient healthcare within DOC's facilities and more broadly in the communities to which DOC's inmate patients return because of better care and lowered risk of recidivism