

**STATE OF CALIFORNIA  
DEPARTMENT OF CORRECTIONS  
AND REHABILITATION**

FEASIBILITY STUDY REPORT

**Career Technical Education-  
Media Evolution  
(CTE-ME)**



Project Number: 5225-162

SUBMITTED:  
December 4, 2015

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## **1 EXECUTIVE PROJECT APPROVAL TRANSMITTAL**

### **1.1 IT ACCESSIBILITY CERTIFICATION**

Please see attached Executive Project Approval Transmittal document.



## Feasibility Study Report Executive Approval Transmittal

### State Entity Name

California Department of Corrections and Rehabilitation

### Project Title (maximum of 75 characters)

Career Technical Education

### Department of Technology Project Number

5225-162

### Project Acronym

CTE

### State Entity Priority

### Agency Priority

I am submitting the attached Feasibility Study Report (FSR) in support of our request for the California Department of Technology's approval to undertake this project.

I certify this FSR was prepared in accordance with State Administrative Manual Sections 4920-4930.1 and the proposed project is consistent with our information technology strategy as expressed in our current Agency Information Management Strategy.

I have reviewed and agree with the information in the attached FSR.

I certify the acquisition of the applicable information technology (IT) product(s) or service(s) required by my Agency/state entity that are subject to Government Code 11135 applying Section 508 of the Rehabilitation Act of 1973 as amended meets the requirements or qualifies for one or more exceptions (see following pages).

### APPROVAL SIGNATURES

Agency Information Security Officer		Date Signed
		7-9-15
Printed name:	Scott MacDonald	
Enterprise Architect		Date Signed
		7/9/15
Printed name:	Edward Wiebe	
Associate Director, Budget Management Branch		Date Signed
		7.14.15
Printed name:	Leisa A. Maestretti	
Director, Enterprise Information Services		Date Signed
		7/13/2015
Printed name:	Russell J. Nichols	
Undersecretary, Administration & Offender Services (A) Designee for Agency Secretary		Date Signed
		7/15/15
Printed name:	Diana Toche	

**Feasibility Study Report  
Executive Approval Transmittal**

**IT Accessibility Certification**

**Yes or No**

<b>Yes</b>	<b>The Proposed Project Meets Government Code 11135 / Section 508 Requirements and no exceptions apply.</b>
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**Exceptions Not Requiring Alternative Means of Access**

<b>Yes or No</b>	<b>Accessibility Exception Justification</b>
No	The <b>Proposed</b> IT project meets the definition of a national security system.
No	The <b>Proposed</b> IT project will be located in spaces frequented only by service personnel for maintenance, repair, or occasional monitoring of equipment (i.e., "Back Office Exception.")
No	The <b>Proposed</b> IT acquisition is acquired by a contractor incidental to a contract.

**Exceptions Requiring Alternative Means of Access for Persons with Disabilities**

<b>Yes or No</b>	<b>Accessibility Exception Justification</b>
No	Meeting the accessibility requirements would constitute an "undue burden" (i.e., a significant difficulty or expense considering all Agency/state entity resources). Explain:  Describe the alternative means of access that will be provided that will allow individuals with disabilities to obtain the information or access the technology.
No	No commercial solution is available to meet the requirements for the IT project that provides for accessibility. Explain:  Describe the alternative means of access that will be provided that will allow individuals with disabilities to obtain the information or access the technology.

**Feasibility Study Report  
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**IT Accessibility Certification  
(continued)**

**Exceptions Requiring Alternative Means of Access for Persons with Disabilities**

<b>Yes or No</b>	<b>Accessibility Exception Justification</b>
No	<p>No solution is available to meet the requirements for the IT project that does not require a fundamental alteration in the nature of the product or its components. Explain:</p> <p>Describe the alternative means of access that will be provided that will allow individuals with disabilities to obtain the information or access the technology.</p>

## 2 INFORMATION TECHNOLOGY: PROJECT SUMMARY PACKAGE

### 2.1 EXECUTIVE SUMMARY

<b>1</b>	<b>Submittal Date</b>	<b>July 20, 2015</b>
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		<b>FSR</b>	<b>PSP Only</b>	<b>Other:</b>
<b>2</b>	<b>Type of Document</b>	<b>X</b>		
	<b>Project Number</b>	<b>5225-162</b>		

			<b>Estimated Project Dates</b>	
<b>3</b>	<b>Project Title</b>	<b>Career Technical Education – Media Evolution</b>	<b>Start</b>	<b>End</b>
	<b>Project Acronym</b>	<b>CTE-ME</b>	<b>July 1, 2016</b>	<b>June 30, 2018</b>

<b>4</b>	<b>Submitting Agency/State Entity</b>	<b>California Department of Corrections and Rehabilitation (CDCR)</b>
<b>5</b>	<b>Reporting Agency</b>	<b>CDCR</b>

<b>6</b>	<b>Project Objectives</b>
	<p>Rehabilitation starts when offenders arrive in prison. CDCR’s Division of Rehabilitative Programs (DRP) is charged with the rehabilitation mission through a variety of programs that facilitate a transition from incarceration to community life with a greater probability of successful integration with society. This proposal supports the directives of the Three-Judge Panel (3JP) Court Order CASE 3:01-CV01351-TEH and Assembly Bill (AB) 494 and AB 1019. AB 494 amended Section 2053.1 of the California Penal Code and requires implementation of literacy programs in every state prison that are designed to ensure inmates are able to achieve specific literacy goals upon parole. AB 1019 amended Section 2053.4 of the California Penal Code and directs the Superintendent of Correctional Education to set goals for inmate literacy and testing and career technical education programs for inmates. Section 2053.5 of the California Penal Code was added to AB 1019 to state that a career technical education program must consider including the following factors: the workforce needs of high-demand sectors of the state and regional economies; whether there is an active job market for the skills; whether the program increases the number of inmates who obtain a marketable industry or apprenticeship board-recognized certification, credential, or degree; whether there are formal or informal networks in the field that support finding employment; and whether the program will lead to employment in occupations with a livable wage. Milestone Credits mean the achievement of a distinct objective of a rehabilitative program as established by CDCR in the Milestone Completion Credit Schedule (see 3043(c)(6)). If an inmate is eligible for program credits pursuant to PC section 2933.05, reaching a milestone allows for awarding of such credits.</p>

The goal of the Career Technical Education – Media Evolution (CTE-ME) project is to ensure that each of California’s approximately 135,000 inmates has access to Career Technical Education (CTE) opportunities and certifications supporting their eligibility for Milestone Credits and attainment of real-world skills and employment in those fields once paroled.

7	<b>Proposed Solution</b>
	<p>One of the programs used within the Department’s Office of Correctional Education (OCE) programs is called the Career Technical Education (CTE). CTE is a program that prepares the CTE student with the required skills and industry recognized certifications to obtain full employment upon release, in an effort to ultimately reduce their recidivism.</p> <p>Courses and training media today are in the form of CD, DVD, paper products and desktop installed software formats. There is no online access to CTE vendor material except through the use of the 283 Teacher workstations in each of the CTE Classrooms. Vendor providers are progressively moving towards online training and certification and moving away from paper based and local desktop software formats. The purpose of this FSR is to seek approval of a new network solution that will migrate existing CTE programs to a digital network based technical education and online certification media platform. This solution will allow for student learning and certifications that will meet today’s employment requirements and court/legislative mandates, as well as attainment of Milestone Credits.</p>

8	Major Milestones	Est Complete Date
	FSR Submittal	12/4/2015
	Project Start Date	07/01/2016
	Project Initiation Phase Complete	07/31/2016
	Project Planning Phase Complete	8/31/2016
	Requirements Phase Complete	10/31/2016
	Design Phase Complete	11/30/2016
	Initial Provider Test Phase Complete	12/31/2016
	TMS Data Center Implementation Phase Complete	01/31/2017
	Procurement Phase Complete	02/28/2017
	Training Development Phase Complete	2/28/2017
	Proof of Concept Phase Complete	04/30/2017
	Second Site and Validation Phase Complete	05/31/2017
	Basic Compliance Site Infrastructure Build Out Phase Project Rollout Complete	5/31/2018
	Full Compliance Site Infrastructure Build Out Phase Complete	5/31/2018
	Project Acceptance and Closeout	06/30/2018
	PIER	06/30/2019
	<b>Key Deliverables</b>	
	Associated project management documentation for initiation and planning phase complete	08/31/2016
	Business and Requirements documentation complete	10/31/2016
	Design Documentation complete	11/30/2016
	Initial Testing complete	12/31/2016
	TMS Data Center components implemented	1/31/2017
	Hardware, software, infrastructure equipment received	02/28/2017
	Training Developed	2/28/2017
	Proof of Concept complete	04/30/2017
	Second site and validation successful	05/31/2017
	Hardware, software, infrastructure implemented for Basic Compliance Phase	05/31/2018
	Hardware, software, infrastructure implemented for Full Compliance Phase.	05/31/2018
	Project closeout	06/30/2018
	PIER Report	06/30/2019

## 2.2 SECTION B: PROJECT CONTACTS

<b>Project #</b>	<b>5225-162</b>
<b>Doc. Type</b>	<b>FSR</b>

<b>Executive Contacts</b>								
	<b>First Name</b>	<b>Last Name</b>	<b>Area Code</b>	<b>Phone #</b>	<b>Ext.</b>	<b>Area Code</b>	<b>Fax #</b>	<b>E-mail</b>
<b>Agency Secretary</b>	Jeffrey A.	Beard	916	323-6001				Jeff.Beard@cdcr.ca.gov
<b>Undersecretary of Operations</b>	Scott	Kernan	916	323-6001				Scott.Kernan@cdcr.ca.gov
<b>State Entity Director (A)</b>	Brantley	Choate	916	322-6063				Brantley.Choate@cdcr.ca.gov
<b>Budget Officer</b>	Leisa	Maestretti	916	322-8216				Leisa.Maestretti@cdcr.ca.gov
<b>Information Security Officer (A)</b>	Allen	Pugnier	916	798-1810				Allen.Pugnier@cdcr.ca.gov
<b>Enterprise Architect</b>	Ray Judith	Roa Christensen	916	358-1981 358-2243				Ray.Roa@cdcr.ca.gov Judith.Christensen@cdcr.ca.gov
<b>Director Enterprise Information Systems</b>	Russell	Nichols	916	358-2312				Russ.Nichols@cdcr.ca.gov
<b>Project Sponsor (A)</b>	Brantley	Choate	916	322-6063				Brantley.Choate@cdcr.ca.gov

<b>Direct Contacts</b>								
	<b>First Name</b>	<b>Last Name</b>	<b>Area Code</b>	<b>Phone #</b>	<b>Ext.</b>	<b>Area Code</b>	<b>Fax #</b>	<b>E-mail</b>
<b>Doc. prepared by</b>	Bob	Johnson	530	530-409-4157				Robert.johnson3@cdcr.ca.gov
<b>Primary Contact</b>	Colleen	Kashiwagi	916	358-1751				Colleen.Kashiwagi@cdcr.ca.gov
<b>Contract Manager</b>	Tina	Bayles	916	322-8026				Tina.Bayles@cdcr.ca.gov
<b>Project Manager</b>		TBD						

**2.3 SECTION C: PROJECT RELEVANCE TO AGENCY/STATE ENTITY PLANS**

1.	What is the date of your current Technology Recovery Plan (TRP)?	Date	April 15, 2014
2.	What is the date of your current Agency Information Management Strategy (AIMS)?	Date	2015-2020
3.	For the proposed project, provide the page reference in your current AIMS and/or strategic business plan.	Doc.	CDCR IT Strategic Plan 2015-2020
		Page #	4

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		Yes	No
4.	Is the project reportable to control agencies?	X	
	<b>If YES, CHECK all that apply:</b>		
X	a) The project involves a budget action.		
	b) A new system development or acquisition that is specifically required by legislative mandate or is subject to special legislative review as specified in budget control language or other legislation.		
X	c) The estimated total development and acquisition cost exceeds the Department of Technology's established Agency/state entity delegated cost threshold and the project does not meet the criteria of a desktop and mobile computing commodity expenditure (see SAM 4989 – 4989.3).		
	d) The project meets a condition previously imposed by the Department of Technology.		

**2.4 SECTION D: BUDGET INFORMATION**

<b>Project #</b>	<b>5225-162</b>
<b>Doc. Type</b>	<b>FSR</b>

<b>Budget Augmentation Required?</b>	<b>No</b>	
	<b>Yes</b>	<b>x</b>
<b>If YES, indicate fiscal year(s) and associated amount:</b>		
	<b>FY</b>	<b>2016-2017</b>
	<b>FY</b>	<b>2017-2018</b>
	<b>FY</b>	<b>2018-2019</b>
	<b>\$ 4,085,890</b>	<b>\$ 10,611,712</b>
		<b>\$ 4,160,091</b>

**PROJECT COSTS**

<b>1.</b>	<b>Fiscal Year</b>	<b>2016-2017</b>	<b>2017-2018</b>	<b>2018-2019</b>	<b>TOTAL</b>
<b>2.</b>	<b>One-Time Cost</b>	<b>\$4,673,749</b>	<b>\$10,728,489</b>	<b>\$ 0</b>	<b>\$15,402,238</b>
<b>3.</b>	<b>Continuing Costs</b>	<b>\$ 0</b>	<b>\$462,551</b>	<b>\$4,160,091</b>	<b>\$4,622,642</b>
<b>4.</b>	<b>TOTAL PROJECT BUDGET</b>	<b>\$4,673,749</b>	<b>\$11,191,040</b>	<b>\$4,160,091</b>	<b>\$20,024,880</b>

**PROJECT FINANCIAL BENEFITS**

<b>5.</b>	<b>Cost Savings/Avoidances</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>6.</b>	<b>Revenue Increase</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

## 2.5 SECTION E: VENDOR PROJECT BUDGET

<b>Project #</b>	<b>5225-162</b>
<b>Doc. Type</b>	<b>FSR</b>

<b>Vendor Cost for FSR Development (if applicable)</b>	<b>\$</b>
<b>Vendor Name</b>	

### VENDOR PROJECT BUDGET

1.	Fiscal Year	2016-2017	2017-2018	TOTAL
2.	Primary Vendor Budget			\$
3.	Independent Oversight Budget	\$112,560	\$112,560	\$225,120
4.	IV&V Budget			\$
5.	Other Budget-Project Manager	\$250,000	\$250,000	\$500,000
6.	Other Budget-Solution Architect	\$140,872.50	\$140,872.50	\$281,745
7.	<b>TOTAL VENDOR BUDGET</b>	<b>\$503,432.50</b>	<b>\$503,432.50</b>	<b>\$1,066,865</b>

## 2.6 SECTION F: RISK ASSESSMENT INFORMATION

Project #	5225-162
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### RISK ASSESSMENT

	Yes	No
Has a Risk Management Plan been developed for this project?	X	

General Comment(s)
A Risk Management Worksheet was completed for the project. Risks and Issues are documented as identified.

### **3 BUSINESS ANALYSIS**

This proposal supports the directives from the 3JP Court Order CASE 3:01-CV01351-TEH and from Chapter 784, Statutes of 2014, AB 494 and the California Penal Code 20531.1, 2053.4 and 2053.5, and Chapter 789, Statutes of 2013, AB 1019. Legislation revised both directives from AB 494 and AB 1019.

AB 494 amended Section 2053.1 to ensure that upon parole inmates are able to achieve specific literacy goals. Penal Code Section 2053.1 (b) states, “In complying with the requirements of this section, the department shall give strong considerations to computer-assisted training and other innovations that have proven to be effective in reducing illiteracy amongst disadvantaged adults.”

AB 1019 amended Section 2053.4 of the California Penal Code directing literacy, academic and related programs of offenders to meet specific goals set by the Superintendent of Correctional Education in fields being trained and the availability of employment in those fields.

AB 1019 added Penal Code 2053.5 addresses CTE that requires CTE to align with workforce needs, job market demand, marketable and industry or apprenticeship requirements, including recognized certification, credential, or degree.

Refer to Appendix A: Stage 1 Business Analysis for a more detailed description of the Business Analysis.

For purposes of the FSR, the current method is referred to CTE program. The proposed solution is referred to CTE-ME.

## **4 BASELINE ANALYSIS**

As part of the CDCR’s overall recidivism reduction strategy, the DRP is implementing durable solutions that directly support the 3JP mandate, meet state offender literacy and employment laws (AB 494 and AB 1019), and expand rehabilitative resources for offenders in an effort to reduce prison overcrowding and prepare offenders for successful reintegration into society. One outcome of the mandate and subsequent legislative bills is to maximize the opportunities for offenders to earn Milestone Credits. In addition, education has proven to be one of the most effective means to reduce recidivism.<sup>1</sup>

The purpose of this analysis is to:

- Determine if the current method meets the mandates as directed by the 3JP and resultant legislative bills,
- Determine if CDCR is able to maximize the opportunities for offenders to attain the milestone credits and marketable certifications as related to CTE,
- Identify the gaps that exist preventing the offenders the opportunities to earn those educational Milestone Credits, and
- Identify opportunities for increasing the breadth of certifications available by career technical program in order to further help reduce recidivism.

The CDCR through the DRP OCE, CTE is responsible for providing incarcerated students with the opportunity to acquire employment-ready skills aligned to career pathways that provide a livable wage in the California economy.

Program Strategic Goals are to prepare the CTE student with the required skills to obtain full employment upon release, and to reduce their recidivism.

Program Service Objectives are to provide industry recognized certifications to all 19 program areas and the enrolled student population leading to:

- Employment on release
- Subsequent continuing education in their chosen career path
- Continued job retention within their community

### **4.1 CURRENT METHOD**

Inmates sentenced to a California state prison are sent to a Reception Center. Upon arrival, Correctional Counselors evaluate numerous factors for placement in an institution including education, mental health, etc. CCs administer the Correctional Offender Management Profiling for Alternative Sanctions (COMPAS) criminogenic needs assessment to evaluate level of need in the areas of substance abuse, criminal thinking, anger management, and employment. The Test

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<sup>1</sup> RAND Corporation study “Evaluating the Effectiveness of Correctional Education” 2013

of Adult Basic Education (TABE) is also administered during this time to evaluate the academic level of each offender. Both the TABE and Employment scores are used as indicators of need for a CTE program. It is recommended the TABE score for each inmate scheduled to participate in a CTE program achieve at least a ninth grade reading level or have demonstrated a strong desire to succeed. Once approved by the Classification Committee, the inmate is placed on applicable waiting lists until notified there is a slot available for them. Offenders with moderate to high risk to recidivate with a moderate to high need in employment are prioritized for placement in CTE programs first. Once a program becomes available and the inmate is placed in the program, the instructor monitors the inmate's progress using a competency check-off list to verify the inmate's ability, progress and coverage of the curriculum. After the instructor signs off on the competency check-off list, the inmate is eligible to take the certification exam.

CTE provides 19 CTE programs, taught as 283 courses (or programs) in 36 CDCR locations within 35 institutions to 8,450 students. CTE currently uses a combination of file and written material, and audio and video media, from physical CDs and DVDs to provide instruction across these programs. There is no inmate-student online access in place for inmate use in the CTE Shops or classroom areas. Inmates receive Classroom training from instructors, and take CTE certification tests using written and hands-on proof of learning methods in the CTE Shops. There is online access only by the 283 Teacher workstations statewide. Currently only staff are allowed access to the network and the Internet. Within the 283 CTE shops, there are 3,418 non-networked computer workstations, where students practice and demonstrate their learning, and produce the physical products needed as proof of learning and skill for some of the certification tests; however, inmates cannot take online exams for certification purposes. A secure environment is not currently available for inmate online access to the Internet.

Commercial vendors are progressively moving their information content to digital-network media (e.g., Internet, organizational intranet, local area network) and are discontinuing the physical and paper-based media, and standalone computer software loading, including the critical certification testing and issuance process. These changes are impacting and will continue to adversely affect the current method in which CTE programs are presently administered. The impact on CTE is that the industry standard certifications are not being made available, negating compliance with the 3JP, the US Federal Grant (US Carl Perkins Act) and State Laws (AB 1019 – PC 2053.4 and 2053.5) and ABs 494 and 1019. This will also deny students the opportunity to earn these categories of Milestone Credits.

#### The objectives of the current system

The objectives of the current system are to teach an inmate a vocation from 19 different State sponsored programs and to have them take a certification exam at the end of the coursework to certify their proficiency. The current method is CD/DVD/paper-based process which is becoming obsolete, due to commercial vendors moving training and certification testing to exclusively online. The current system will no longer be available to students without access to the Internet.

#### Current systems' ability to meet workload requirements

There are currently 19 program areas with 283 courses. Each program offers coursework and a

certification testing at the end of the course. The certification tests currently use written and hands-on proof of learning methods in the CTE classrooms. Three certification exams are now only offered exclusively online: Automotive Service Excellence (ASE) - Auto Body and Auto Mechanics, and Inter-Industry Conference on Auto Collision Repair (ICAR). Two more certification exams Office Service and Related Technologies (OSRT) and Computer Literacy (includes computing fundamentals and Microsoft certification) will only be available online starting July 1, 2015. Five out of nineteen, or twenty-six percent (26%) of the programs cannot meet the completion requirements for inmates to take the certification exams. Twelve more programs are starting to migrate text books, teacher resources and instructional videos to an online or digital format while three programs are migrating to digital only. The current method is becoming obsolete, due to commercial vendors moving training and certification testing to exclusively online. The current system will no longer be available to students without access to the Internet.

#### Level of user and technical staff satisfaction

For certification programs still using the paper-based method, the inmate receives a paper exam and/or coursework printed out by the testing coordinator, who proctors the examination. Once completed, the inmate hands the exam and/or coursework to the testing coordinators who processes and mails the exams to the provider site administrator for manual grading and processing. Obtaining results of the exam and whether the inmate qualifies for certification can currently take more than 3 months. There is a greater chance of error in grading the exam manually as well as ensuring the integrity of the exam – the risk of a student to steal the exam and/or memorize the contents. Because the coursework is printed out the instructor has no way of gauging the student's progress or ability to analyze the student's competency. The instructor is unable to determine if the student needs more help on a certain subject, needs more assistance on certain problems, or is being held back from continuing on to subsequent subjects. Also, the instructor has no way of tracking the inmate if they are released or transferred to another prison so the inmate may receive their certification. Rather than increasing the opportunity of students receiving their certifications this actually reduces the number of certified students, or delays their receipt of certification. Suffice to say, teachers are dissatisfied with the current paper based method and favor the opportunity of utilizing more technologically friendly systems to teach/train their students.

#### Data input, related manual procedures, processing and output characteristics

Data input is centered on a combination of files and written material, and audio and video media, from physical CDs and DVDs. The inmates receive classroom instruction from the instructors, and take exams using written and hands-on proof of learning methods. The testing coordinators will proctor and collect the exams, then mail the exams to the provider site administrator. The provider site administrator grades the exams and mails them back to the instructors who will then upload the exam information via an unencrypted flash-drive on their online access computers to the respective certification program. For programs that cannot be uploaded, the instructor will print out the exam, have the student take the exam, and manually grade the exam on site. The instructor will then prepare and complete an exam outcome form, signs the form certifying the student participation in the exam, and sends the paperwork to headquarters for processing. Once

at headquarters, an analyst reviews the paperwork, logs on to the respective certification site and enters the data via an excel spreadsheet. The certification site processes the form and issues the certification. This process can take well over three (3) months for completion and issuance of certification which could impact the inmate/student's Milestone Credits and potentially impact an earlier release because of this delay. Currently there is no way to track how many inmates were paroled before receiving their certifications or the missed opportunities of them receiving their certificates once the prison has received the certification paperwork.

#### Data characteristics

There is currently no secure electronic system in place to allow inmates to access the career technical provider's coursework or certification exams.

#### System provisions for security, privacy and confidentiality

A dedicated standalone computer for testing is monitored by the instructor. Once the test is completed the results are uploaded by the instructor on the instructor's Internet access computer (via a non-encrypted flash-drive) to the respective programs' site. Each provider requires their own unique login and the instructor logs in on behalf of the student to update their records.

#### Equipment requirements of the current system

The instructor's Internet accessible computer is locked in a secure room. Standalone non-Internet computers are available for student use but not for online tests. Tests are printed out, manually proctored and manually graded by the instructor.

#### Software characteristics

The manual processes in place for inmates to take the certification exam requires CDCR to download the test generators from the certification provider's site and store the test generator on a SharePoint site. The inmate's computer has a certain CDCR image to match the particular provider's exam (based on the current test generators on CDCR's SharePoint site). The instructor copies the test generator onto a non-encrypted flash drive and loads the test generator on the inmate/student's computer to take the exam. The certification provider is constantly upgrading the test generator; therefore, CDCR does not always have the latest version loaded on the SharePoint site. If the current provider's test does not match the test generator on the computer, this creates a conflict on the computer and the inmate will be taking an outdated or incorrect exam.

#### Internal and external interfaces

There are no internal or external interfaces.

#### Personnel requirements

There are 283 instructors for the CTE classrooms. There are also two test coordinators (instructors) for most sites (a few sites only have one testing coordinator) for a total of 70 testing coordinators. For software support there are existing IT staff to support the labor of creating images for the computers statewide to allow provider certification software to function in the

CDCR security parameters and to handle service calls for all of the statewide education and CTE computers for the existing number of devices.

#### System documentation

Each system has documentation for the image of the particular provider's software. Preparing and providing images is very labor intensive. A different image is needed for every generation of computer. There are currently seven (7) generations of computers (processor changes) statewide which results in seven different images to maintain.

#### Failures of the current system

The certification tests currently use written and hands-on proof of learning methods in the CTE classrooms. Three certification exams are now only offered exclusively online (ASE – Auto Body, ASE – Auto Mechanics, and ICAR). Two more certification exams (OSRT and Computer Literacy) will only be available online starting July 1, 2015. Five out of nineteen, or twenty-six percent (26%) of the programs cannot meet the completion requirements for inmates to take the certification exams and are therefore not in compliance with the court mandate and state legislative bills. Conflicts result between provider specific software upgrades and upgrades maintained on the CDCR SharePoint sites (from the provider sites) as the SharePoint upgrades are not always up to date to match the provider specific software or test generator upgrades. IT staff has to maintain seven different images for the 3,418 computers out in the field to correct these conflicts, resulting in lost time for the inmate to either complete coursework or exams for certifications and potentially impacting their opportunity to earn Milestone Credits.

## **4.2 TECHNICAL ENVIRONMENT**

#### Expected operational life

The expected operational life of institution computers is usually 5 years subject to CDCR's refresh cycle. Under the proposed solution, this process will remain unchanged. Infrastructure lifecycle will remain continuous with no End of Life (EOL) except for the normal maintenance and operations. If the proposed solution is approved, the current physical CTE media now being used for CTE Training and Certification Testing will be phased-out and replaced with Internet media on the CTE vendor sites. The CTE vendor sites will contain the most current training and test materials, as opposed to the current situation.

#### Interaction with other systems

The current CTE platform is standalone and therefore has no automated interactions with other systems. Any interactions between this standalone environment and other systems are manual and require human intervention. Instructors will order CDs or DVDs with the applicable career technical and educational information. These CDs and DVDs represent a point in time of when the data was created, which could be up to five (5) years old.

The new CTE-ME Classroom computers will have controlled and monitored Internet access to course-specific CTE material from the Vendor-course through the CDCR network. The CTE-

ME solution will also leverage the firewall environment of the Internet Protocol Television Integration (IPTVI) solution.

#### State-level information processing policies

AB 1019 and Penal Code 2053.4 and 2053.5 require the CTE training and certification to align with workplace employment trends. Additionally, the following State-level information processing policies apply currently and will continue to apply under the adoption of the proposed solution:

- **The Future of California Corrections – CDCR Blueprint 2012.** CDCR follows the blueprint mapping as outlined in the CDCR Blueprint.
- **CDCR IT Strategic Plan 2015 – 2020.** CDCR follows the five (5) year strategic plan incorporated by the California Dept. of Corrections and Rehabilitation – Enterprise Information Services.
- **State Administrative Manual (SAM).** CDCR follows all SAM policies and guidelines in the development of new information systems, specifically SAM sections 4800, 5200 and 5300.
- **Statewide Information Management Manual (SIMM).** CDCR follows all SIMM policies and guidelines in the development of new information systems, specifically SIMM Sections 10 through 80 and Sections 110 through 200, Sections 5300 through 5360-B.
- **Information Technology Oversight.** CDCR follows state policy regarding the establishment of an information technology project and the state oversight responsibilities within any proposed solution.
- **Department Operations Manual (DOM)** – The Department Operations Manual is the single authoritative statewide operations manual for the department.
- **California Code of Regulations - Crime Prevention and Corrections for the State of California – Title 15** is the legal statute for CDCR operations.

#### Financial constraints

When the CTE-ME program is in operation, it will require the purchase of 3,418 Personal Computers (PCs) workstations, which will be installed on the inmate network. Each workstation will have controlled inmate access to the Internet for CTE classrooms to remain in operation as the vendor media migrates to Internet-only forms. Financial constraints in the form of a rejected proposed budget augmentation request would impact the CDCR's ability to meet the 3JP mandate and Assembly Bills AB 494 and 1019's literacy goals as well as impede the inmate's ability to attain Milestone Credits and IT's ability to support the CTE-ME solution.

#### Legal and public policy constraints

Legal and public policy constraints that have implications for the proposed alternative include:

- CDCR Department Operations Manual (DOM).
- California Code of Regulations – Title 15 and Title 22

- State of California offender legislative mandates
- Federal legislative offender mandates
- Information Practices Act
- California Public Confidentiality
- Freedom of Information Act
- Records Act
- Code of Federal Regulations (CFR) – Title 21, and
- Excerpts from the Public Resources Code.

#### Agency/State entity policies and procedures

The current system follows CDCR policies and procedures, including the Information Security Policy, the current CDCR IT Strategic Plan 2015 – 2020, and the DOM.

#### Anticipated changes in equipment, software, or operating environment

Anticipated changes in equipment, software or operating environment include installation of 3,418 PC workstations within the CTE classrooms, to the CDCR network. This will require additional network hardware, software, services and staffing for inmate network access, inmate access control, and monitoring and reporting of inmate use.

#### Availability of personnel resources for development and operation

A project manager and solution architect will be contracted to procure, deploy and closeout the CTE-ME project. Oversight and monitoring will be performed by the California Department of Technology. There are three (3) dedicated IT resources providing software imaging support for the education division computers. The non-networked CTE Shop workstations used by the inmates are supported when possible by the institution's IT staff who will handle the deployment support of software images for those computers. Additional staff will be required to deploy, administer, monitor and support the workstation deployment. A proposed budget augmentation will be requested for additional project and operational resources relating to ISO auditing and monitoring, infrastructure network and monitoring, administration and support.

### **4.2.1 Existing Infrastructure**

#### Desktop workstations

The existing workstations are Microsoft-based and less than two years old except for OSRT computers, which were purchased in 2011 and are approaching their refresh cycle. The 283 Teacher workstations located across the state have Internet connections in the CTE classrooms. CTE shop workstations are currently not networked. Educational materials are bulk-loaded by the instructor using physical media.

#### LAN Servers

Not applicable.

Network Protocols

Not applicable for the current system.

Application Development Software

Not applicable

Personal Productivity Software

Microsoft Office Suite (except for Access and Outlook), as per enterprise architectural standards is the standard productivity software used by the inmates.

Operating System Software

Operating system software will consist of software applicable to the Vendor Career Technical Education site. Microsoft Windows 7 or current standard is the CDCR operating system software. Workstations currently not on Windows 7 are on a refresh cycle to upgrade to the current version.

Database Management Software

Not applicable.

Application Development Methodology

Not applicable.

Infrastructure Development Methodology

The project will follow a waterfall methodology modified for an infrastructure project.

Project Management Methodology

See Section 6.0, Project Management Methodology.

## **5 PROPOSED SOLUTION**

In an effort to sustain the prison population reduction and Milestone Credit achievement, the Career Technical Education – Media Evolution (CTE-ME) proposed solution provides controlled Internet access to career technical provider sites to allow offenders access to the latest career technical educational information and provide certification exams in areas no longer available via hard-copy written textbooks and exams. This also enables offenders to use computers to access online CTE training and certification-testing resources.

The current CTE program is accessible to 8,450 inmates participating in 19 different CTE Program Areas, provided through 283 ongoing courses. Some of these pre-approved technical training courses and their certification tests currently require use of online computer access, and this is increasingly becoming the only means of accessing this training and testing material. Any inmate request for participation in an online distance education course will be evaluated on a case-by-case basis for inclusion in the program.

The CTE Basic Compliance phase remediates the certifications that are currently out of compliance such as National Institute for Automotive Service Excellence certification and Internet and Computing Code Certification. This will include the purchase and deployment of a few computers in those selected career technical classrooms statewide as well as the implementation of wireless services for these computers to access the provider career technical sites for coursework, career technical documentation and certification exams. Additionally, career technical shops within the institutions with certifications which are out of compliance will have network drops installed to the related career technical equipment to allow direct access to the provider career technical site for shop equipment upgrades, maintenance and troubleshooting by the provider career technical site.

The CTE Full Compliance phase will provide wireless connectivity for all remaining CTE classrooms and wired connectivity for all remaining CTE shops for the full complement of certifications. These certifications include construction certifications such as for Sheet Metal. This includes the additional purchase of workstations and equipment to fully configure career technical classrooms and shops to an optimal level of access to expanded curriculum, study resources, test preparatory sites and other related content. .

Prior to deploying the 3,418 purchased workstations to enable inmates to access the Internet-based CTE-ME media in the CTE Classrooms, the core infrastructure that will be used to manage and secure this “CTE inmate network” is required. The Agency Information Security Office (ISO) has identified the following minimum requirements:

- Core Switch – To isolate CTE-ME inmate network traffic from CDCR staff network traffic
- Power over Ethernet (POE) Switch – To specifically power the Access Points for a Wireless solution. These Wireless points would have monitoring devices to detect a rogue Wireless presence.

- Core Firewall (institution) – To allow only authorized traffic over the CTE-ME inmate network. The Internet Protocol Television Integration project is installing a firewall at each institution for IPTVI services. These firewalls can be leveraged by the CTE project to avoid purchase of additional units. This will only entail access through a port in the firewall for CTE traffic. There will be no impact to IPTVI services.
- Tenant Managed Services (TMS) Data Center Firewall - To allow only authorized traffic over the CTE-ME inmate network.
- TMS Data Center Proxy Server - To ensure that access to the public Internet is restricted to sites that have been pre-approved by the Division of Adult Institutions (DAI) and OCE for inmate access.
- Internet Proxy Filter – To ensure that access to the public Internet is restricted to sites that have been pre-approved by DAI and OCE for inmate access.
- Intrusion Detection System (IDS)/Intrusion Prevention System (IPS) – To monitor and prevent malicious activity and packets from originating from and terminating to the CTE-ME inmate network.
- Security Event Manager – to automate the correlation of security log events from the proxy, IPS, firewall, and other appliances to identify potential threats on the CTE-ME inmate network.
- Microsoft Active Directory licensing – To manage the user authentication, security policies, and overall presence on the CTE-ME inmate network.
- Virtual Machine (VM)/VM Server(s) – To host the required components of the CTE-ME inmate network such as Active Directory, CTE-ME resources, etc.
- Tunneling VPN – to segregate the inmate network from CDCR traffic.

Each CTE classroom or inmate education location must have the following hardware to facilitate access to the managed CTE-ME inmate network:

- Site Switch – To connect multiple workstations to a single Wireless Access Point (WAP) in the CTE-ME inmate network.
- Site Firewall – To allow only authorized traffic over the CTE-ME inmate network (leveraging the existing IPTVI firewall at each site).
- Wiring – Physical cables and connectors for each Access Point connect to the Power over Ethernet (POE) switch.
- Access Point (AP) – For controlled Wireless connectivity.
- Protective cover for the AP to prevent inmate damage.
- Network Capable Computer Workstations – Interface for connection to the CTE inmate network that meets the minimum requirements such as memory, Central Processing Unit (CPU) and Network Interface Card (NIC) or Wireless Access Card (WAC).

## **5.1 SOLUTION DESCRIPTION**

Virtual Servers will be deployed to host the applications and services that will be required for the CTE-ME inmate network. A virtual environment does not require additional hardware and therefore reduces the physical space requirement and overall cost. Virtual servers and hosts will be used to accommodate the requirements of CTE-ME inmate network project, except where proprietary appliances or hardware is required such as firewall or security hardware. Applications

incompatible with virtual environments have not been identified as being required with the deployment, but future considerations will be taken into account when researching potential programs to deploy using the CTE-ME inmate network. Additionally, the creation of Virtual Local Area Networks (VLANs) will be deployed to assist in segregating the inmate network.

The costs associated with the use of the existing equipment (e.g., Internet Proxy Filter, core switches, routers, computers, etc.) are limited to configuration of the devices to ensure the CTE-ME inmate network can be properly accommodated. New equipment (Data Center proxy servers, Data Center firewalls, Controllers, POE switches) would be purchased to ensure that the inmate network is securely segregated from the CDCR staff network traffic. Since the CTE-ME inmate network would be a segregated network (via tunneling VPN), this ‘tunneling’ would link directly from the institutional firewall to the Data Center firewall. Maintenance and operational costs will be factored into the project, and any outages of the CTE-ME network that are caused by multi-use devices would not affect the CDCR staff network as the inmate network is segregated from the CDCR network.

This digital-network based solution will allow CDCR to:

- a. Reach the target of 90% of CDCR subscribed digital-network media CTE courses that are only available online. As more certification sites are configured and brought online, there will a greater volume of availability of career technical materials and certification exams for inmates to attain their Milestone Credits.
- b. Have the flexibility to include additional digital technical educational materials and certification testing content as it comes available. This will meet the target of inmate certifications, both in increase in count (3,300 inmates achieving certifications 24 months before their release) and increase in percentage (40% of inmate who complete the course obtain certifications after participation in the career technical programs).
- c. Reduce the amount of time to wait for certification results.
- d. Alleviate discrepancies with testing engine versions on the CDCR SharePoint site. Online access will allow the workstation to download the latest version of the exam testing engine so the inmate will have the correct test to take, thereby greatly reducing the possibility of the inmate taking a wrong or outdated exam.
- e. Increase the receipt of certification results for offenders. With online certification submission and receipt, inmates will know quickly if they have passed an exam. The instructor could print out a copy of the exam results for the inmate; therefore, CDCR will no longer need to facilitate delivery of certification results for inmates who transfer.

Additionally, this digital-network based solution will align CDCR to the business functional requirements which include:

- a. Increasing access to a broader selection of online technical education and certification media (audio, text, videos, graphics, software tools, references, etc.)
- b. Improving the certification testing and turnaround time for receipt of certification
- c. Increasing the number of certification exams that can be taken
- d. Allowing all program related workshop devices (i.e., smog equipment, etc.) to connect to the controlled inmate online network
- e. Availability for coursework and certification exams during normal career technical classroom hours
- f. A secure network solution
- g. A scalable solution
- h. Service Level Thresholds
- i. A secure physical solution
- j. Mock scenarios to demonstrate real life applicability to reinforce career technical curriculum.

The following traceability matrix aligns the Business Objectives (Section 5.2) with the Functional Business Requirements (Section 9):

Business Objectives (Section 5.2)	Business Functional Requirements (BFRs – Section 9)
5.a - Reach the target of 90% of CDCR subscribed digital-network media CTE courses	Aligns with BFR 9.a, 9.c, 9.d, 9.e, 9.f and 9.j
5.b - Have the flexibility to include additional digital technical educational materials and certification testing content as it comes available	Aligns with BFR 9.a, 9.c, 9.d, 9.e, 9.f, 9.g, 9.i and 9.j
5.c - Reduce the amount of time to wait for certification results	Aligns with BFR 9.b
5.d - Alleviate discrepancies between testing engine versions on the CDCR SharePoint site	Aligns with BFR 9.h
5.e – Increase the receipt of certification results for inmates	Aligns with BFR 9.b

The CTE project is an infrastructure project that will leverage current and new technology to change the way CDCR provides career technical services. The project scope will encompass CDCR’s Career Technical Education program certifications and curriculum available online.

In scope will include:

- Replacing manual career technical certification coursework and exam processes

- Providing a wireless infrastructure for flexible and expandable career technical classroom environments
- Providing online access to career technical educational and certification exams
- Expanding the number of certification programs and exams to the inmate when they become available
- Reducing the amount of time for inmates to receive certification exam results and certificates

Out of scope includes:

- Replacing Academic, Voluntary Education Programs (VEP), and Voluntary Education Programs/College programs.

## 1. Hardware

**Hardware for Network:** Switches and firewalls will be purchased to ensure the proper security and isolation of the proposed CTE-ME inmate network. These devices will be placed in the core environment and Data Center and managed by the EIS Infrastructure staff. The core switch will be a mid-performance switch to accommodate all of the CTE-ME inmate network traffic. The POE switch will power the Access Points implemented at the different CTE classroom sites.

**Hardware for Security:** Appliances will be required for the CTE-ME inmate network to monitor and prevent breaches of the network. An Intrusion Detection System (IDS)/Intrusion Prevention System (IPS) will be procured to actively monitor and control the traffic that will traverse the network. Once configured, the IDS/IPS will actively monitor and control inmate transmissions over the network, prevent inmates from accessing restricted network resources, and monitor the network for other abnormalities such as malware signatures that may originate from the CTE-ME inmate network. A Data Center proxy server will be required for access to selected vendor Internet sites as well as a TMS firewall for security purposes. Associated software and maintenance costs will also be required and funding sources will be identified. In addition to controlling the Internet traffic, the proxy will be able to maintain detailed logs of inmate web browsing activity as well as prevent inadvertent access to malicious websites. The logs can be queried to produce supervisor and management reports.

**Hardware for Site:** To connect CTE-ME classroom inmate computer workstations, the site must have a network POE switch that is scaled to accommodate the appropriate number of endpoints. Each CTE-ME classroom inmate workstation will have a direct wireless connection via a WAC to the Wireless Access Point which will be connected back to the POE switch. Classroom locations at the institutions will have various electrical and data wiring needs to enhance wiring, conduit, and receptacles, to secure the classroom associated hardware. Each CTE-ME shop inmate workstation will have a direct wired connection via a NIC.

HARDWARE	FY 2016/17	FY 2017-18	FY 2018-19
Classrooms			
Generic AD Capable PCs (3,418 @ \$1,200 EA)	\$355,200	\$3,746,400	
Data Center Proxy Server (2@\$200,000 EA)	\$400,000		
HP ProCurve Gigabit SC-LC Mini GBICs (370 @ \$350 EA)	\$63,000	\$66,500	
Data Center Firewall (2 @ \$60,000 EA)	\$120,000		
HP 2920-24G-POE Switch (110 @ \$1,500 EA)	\$90,000	\$75,000	
HP 2920-48G-POE Switch (75 @ \$2,500 EA)	\$75,000	\$112,500	
Aironet 11AC Controller Aps (299 @ \$950 EA)	\$104,500	\$179,550	
CISCO 5508 Series Wireless Controller (35 @ 7,000 EA)	\$245,000		
Cisco Prime Infrastructure Management Console	\$22,700		
Institution Shop Locations			
HP 2920 24G Switch (286 @\$1,200 EA)	\$117,600	\$225,600	
HP ProCurve Gigabit SC-LC Mini GBICs (562 @ \$350 EA)	\$65,100	\$131,600	
ADA compliant equipment - 27" monitor, keyboard, mouse	\$93,720	\$161,028	

(299 @ \$852/set)			
Sales Tax @ 8.5%	\$148,905	\$399,345	
Proxy Server SmartNet Support (4@\$60,000 EA)		\$120,000	\$120,000
Firewall Support (4 @ \$12,000 EA)		\$24,000	\$24,000
CISCO Controller SmartNet Support (70 @ 4,500 EA)		\$157,500	\$157,000
SmartNet 11AC Wireless Access Point Support (409 @\$51 EA)		\$5,610	\$15,249
Sales Tax @ 8.5%		\$26,104	\$26,924
<b>TOTAL HARDWARE COSTS</b>	<b>\$1,900,725</b>	<b>\$5,430,737</b>	<b>\$343,673</b>

## 2. Software

**Software for Site:** Each workstation must have Microsoft Software (includes operating system and other base requirements for network licensing)

**Microsoft Client Access licenses:** Workstation licenses to comply with current software licensing agreements.

**Anti-virus software:** To clean and protect workstations from identified malware.

SOFTWARE	FY 2016/17	FY 2017-18	FY 2018-19
OS Upgrades for AD capability (3,418 @ \$85 EA)	\$25,160	\$265,370	
MS Office Suite STD w/o Access (3,418 @ \$90 EA)	\$26,640	\$280,980	
MS Exchange ENT CAL (3,418 @ \$133 EA)	\$39,368	\$415,226	
McAfee License + 1 Year Support (3,418 @ \$16 EA)	\$4,597	\$48,485	
Ekahau Site Survey Premium Pack	\$5,629		
Wireless Access Point Licenses 100 lic (3 @ \$19,822)	\$39,644	\$19,822	
Jaws ADA compliant software – 5 lic (60 @ \$2,936 EA)	\$64,592	\$111,568	
Solarwinds Polling Engine Software	\$20,000		
Software Sales Tax @ 8.5%	\$11,039	\$11,168	
Microsoft OS Software Assurance (3,418 @ \$85 EA)		\$25,160	\$290,530
MS Office Suite STD Software Assurance (3,418 @ \$90 EA)		\$26,640	\$307,620
MS Exchange ENT CAL Software Assurance (3,418 @ 133 EA)		\$39,368	\$454,594
McAfee License + 1 Year Support (3,418 @ \$11 EA)		\$3,123	\$36,060
Ekahau Site Survey Premium Pack Support		\$809	\$809
Adder License Annual Support – 100 licenses (2 @ \$1,950 EA)		\$3,900	\$5,850
Jaws Software support (2 year) (entered into FY2018-2019 so in on-going budget.) (57 @ \$852/set – 2 year support)		\$18,744	\$51,120
SolarWinds Polling Engine Software maintenance		\$4,000	\$4,000
Software Sales Tax @ 8.5%		\$2,334	\$5,251
<b>TOTAL Software Costs</b>	<b>\$236,669</b>	<b>\$1,276,697</b>	<b>\$1,155,834</b>

**3. Technical Platform**

The platform indicated with this project is thin-client/server TCP/IP based networking to leverage Internet/cloud based computing alternatives for CTE programs

**4. Development Approach**

The existing CDCR Security Information Event Manager (SIEM) system will be additionally configured to correlate events from the CTE-ME inmate network to monitor for potential security events. The use of the existing CDCR SIEM increases the complexity of the network design; however, it realizes substantial cost savings to the project.

There will be improved security and auditing: Inmates who currently access a workstation or computer must be assigned to the computer prior to accessing the resources. The current manual tracking process creates a burdensome task when attempting to identify and hold inmates accountable for inappropriate computer activities. Active Directory services, Internet proxy and network log management will be able to track and manage inmate activity, which will keep an audit trail to be used during the course of an investigation and assist in prosecution for criminal violations.

Select and estimate percentage of each

- COTS \_\_\_%      MOTS \_\_\_%    Custom Development \_\_\_%    Others None  
(Equipment and infrastructure purchase only)

**5. Integration Issues**

Existing CDCR infrastructure will be utilized. No integration issues are foreseen at this time.

**6. Procurement Approach**

The CDCR Contracts unit will conduct a Request for Offer (RFO) or Request for Quote (RFQ) for the hardware and software. Separate POs will be issued for any server software and desktops, using the standard DGS procurement vehicles.

a. Proposed Prime Vendor Procurement Vehicle(s)

- IFB   RFI   CMAS   MSA   IFB   RFO   RFP   Others   None

b. Proposed Prime Vendor Contract Type

Fixed Price  Time and materials  Percentage of Benefit  Other

- c. Market research: Research was performed as to the feasibility of physically cabling all workstations and a Wireless Access Point solution.
  
- d. When personal services are sought, include a justification pursuant to Government Code Section 19130. A specialized background is required for this infrastructure project.
  
- e. Identify efforts to achieve certified Small Business (SB) and certified Disabled Veteran Business Enterprise (DVBE) goals. The procurement will follow standard SB and DVBE outreach.
  
- f. Indicate the contract(s) term, including maintenance years.  
July 1, 2016 – June 30, 2018.
  
- g. Indicate types of IT goods/services, procurement vehicle/quantity, and contract dollar values. For instance, there are a number of acquisition components embedded in an IT project, e.g., FSR, in some instances an SPR, Independent Validation and Verification, and Independent Project Oversight, procurement services, as well as Design, Development and Implementation (D, D, and I). Agencies/state entities may use a matrix to display this information, such as the following example:

See Table 1, Contract Table, next page.

Table 1 - CONTRACT TABLE

<i>CONTRACT TABLE</i>										
<b>Contract Number</b>	<b>Type of Contract</b>	<b>Has the contract been awarded (Yes/No)</b>	<b>If so, what is the date of the award? If not, what is the planned award?</b>	<b>Start Date of Contract</b>	<b>End Date of Contract</b>	<b>Total Value of Contract</b>	<b>Will this be an Interagency Acquisition? (Yes/No)</b>	<b>Will this contract be performance based (Yes/No)</b>	<b>Will this be competitively awarded? (Yes/No)</b>	<b>What, if any, alternative financing option(s) are being Used? i.e., Loan, grant, or other</b>
	<i>IPO (Project Oversight)</i>	No		<i>July 1, 2016</i>	<i>June 30, 2018</i>	<i>\$225,000</i>	Yes	No	No	N/A
	<i>Other (Project Manager)</i>	No		<i>July 1, 2016</i>	<i>June30, 2018</i>	<i>\$500,000</i>	No	No	Yes	N/A
	<i>Other (Solution Architect)</i>	No		<i>July 1, 2016</i>	<i>June30, 2018</i>	<i>\$281,745</i>	No	No	Yes	N/A

## **7. Technical Interfaces**

There are no technical interfaces.

## **8. Accessibility**

All accessibility policy and procedures currently required of CDCR will be incorporated as identified in ADA accessibility compliance.

## **9. Testing Plan**

The project plan for the proposed solution will include an implementation test plan. The testing will include unit testing, system testing, and user testing in the lab, as well as unit testing, system testing and user testing on-site. Testing will include the following:

- Identifying all provider certification sites,
- Identifying the number of certifications available per provider site,
- Configuring the provider sites for access,
- Testing the provider certification sites for access.
- Ensuring the network connectivity to the provider certification site is secure.

The objective of the testing process is to validate that the infrastructure (workstations, network environment) performs as expected and adequately meets the state's business functional requirements. The various levels of testing and their purposes are as follows:

- Accessibility testing confirms that all workstations can access provider's sites without issue. This will also confirm site accessibility when providers upgrade or change certain aspects of their site. This testing will be performed by the project team with assistance of IT staff.
- Security testing confirms that the equipment, network, system security systems allow only access to the prescribed provider sites (a "whitelisted" site). This will also include test for security safeguards (firewall, port access), mock testing, end to end testing and other security-related testing. This testing will be performed by the project team in conjunction with IT staff and ISO oversight.

## **10. Resource Requirements**

Proposed budget augmentations request Enterprise Information Services (EIS) Infrastructure staff to focus on the deployment and maintenance of the CTE-ME assets and services. Deployment, configuration, and set-up of the core infrastructure will be a collaborative effort between the Infrastructure Services staff, Agency Information Security Office (AISO) staff, Facilities staff, Custody staff, Customer Service and Field Operations (CSFO) staff, administration and contracted staff. Redirected DRP OCE Supervisors and Staff, Principals, and Vocational Instructors will provide the program expertise necessary for the project. Refer to Table 2. Roles and Responsibilities for additional information.

**Table 2: Roles and Responsibilities**

Role	Responsibilities	Redirection or Proposed Budget Augmentation	One-time or Continuing	Positions Fiscal Year 2016-2017	Positions Fiscal Year 2017-2018	Positions Fiscal Year 2018-2019
Executive Sponsor	<p>Key business decision-maker of the project.</p> <p>Approves the final scope of the project.</p> <p>Resolves project scope issues.</p> <p>Serves as a final decision maker regarding escalated issue resolution and risk mitigation strategies.</p> <p>Provides additional resources (funding, staffing) when justified.</p> <p>Ensures project priority is remains static.</p> <p>Directs the project managers.</p>	Redirection	One-time	3% Superintendent Correctional Education	3% Superintendent Correctional Education	
CTE User Project Manager	<p>Negotiates for resources with the various DRP resource managers.</p> <p>Coordinates project work efforts with CDCR business and technical staff.</p> <p>Provides schedule leadership</p> <p>Contributes to executive/managerial project reporting.</p> <p>Briefs the project sponsors on the status of the Project.</p> <p>Participates in change management process.</p> <p>Participates in risk and issue management process.</p> <p>Reviews and evaluates all vendor deliverables.</p> <p>Coordinates customers to participate in User Acceptance Testing activities.</p> <p>Coordinates Training activities.</p> <p>Oversees program and system development, procurement and quality</p> <p>Oversees change management process.</p> <p>Ensures new business workflow, policies and procedures are defined and documented to support the inmate network.</p>	Redirection	One-time	58% Staff Services Manager II (Managerial)	58% Staff Services Manager II (Managerial)	
CTE Technical	<p>Communicates project status to internal and external stakeholders.</p>	Redirection	One-time	Consultant	Consultant	

Role	Responsibilities	Redirection or Proposed Budget Augmentation	One-time or Continuing	Positions Fiscal Year 2016-2017	Positions Fiscal Year 2017-2018	Positions Fiscal Year 2018-2019
Project Manager	<p>Prepares and updates the Project Management Plan</p> <p>Tracks project schedule, scope, and budget.</p> <p>Prepares initial Statements of Work (SOW) for consulting services related to the CTE Project.</p> <p>Reviews project schedule and deliverables.</p> <p>Negotiates for resources from the various resource managers.</p> <p>Coordinates project work efforts.</p> <p>Implements risk and issue management plans and process.</p> <p>Prepares project status reports.</p> <p>Participates in change management process.</p> <p>Provides procurement support.</p> <p>Reviews and evaluates all vendor deliverables.</p> <p>Briefs the project sponsors on the status of the Project.</p> <p>Tracks contract compliance.</p> <p>Updates the FSR and BCP, as needed.</p>					
DRP Subject Matter Expert Supervisors	<p>Assists in the identification of business needs, definition of business processes and business rules.</p> <p>Participates in Design, working sessions, and the redesign of processes.</p> <p>Develops training plans/materials and trains.</p> <p>Participates in user acceptance testing.</p> <p>Develops policies and procedures..</p> <p>Participates in process development, and outreach.</p>	Re-direction	One-time	2 Supervisors of Vocational Instruction (25% each) 2 AGPAs (50% each)	2 Supervisors of Vocational Instruction (25% each) 2 AGPAs (50% each)	
DRP Subject	Coordinates site-related preparation and deployments.	Re-direction	One-time	30% Facility Captain –	30% Facility Captain –	

Role	Responsibilities	Redirection or Proposed Budget Augmentation	One-time or Continuing	Positions Fiscal Year 2016-2017	Positions Fiscal Year 2017-2018	Positions Fiscal Year 2018-2019
Matter Experts	Develops policies and procedures. Participates in process development and outreach with customers.			Correctional Institution	Correctional Institution	
Principals, Proctors, and Vocational Instructors	Provide site specific information to the project. Coordinate on-site related activities and events. Train inmates on use of online certification testing.	Redirection	One-time	Basic Compliance - Principals 70% PY Vocational Instructors 1.30% PY	Basic Compliance Vocational Instructors 60% PY  Full Compliance – Principals 70% PY Vocational Instructors 60% PY	
Plant Operations	Verify room locations and power availability on as built	Redirection	One-time	Basic Compliance – Plant Operations staff 70% PY	Full Compliance – Plant Operations staff 70% PY	
EIS Technical Staff	Information Security Auditor – <ul style="list-style-type: none"> <li>test the effectiveness of the inmate computer and network security components.</li> <li>provide detailed reports on the findings to the Information Security Officer and recommendations on best practices to improving the security levels of the system in place.</li> <li>certify that sufficient security safeguards are in place to protect CDCR’s network assets and data integrity while allowing the organization goals to be attained through efficient use of IT resources.</li> </ul>	Proposed Budget Augmentation	One-time and Continuing	1 Systems Software Specialist I	1 Systems Software Specialist I	1 Systems Software Specialist I





Role	Responsibilities	Redirection or Proposed Budget Augmentation	One-time or Continuing	Positions Fiscal Year 2016-2017	Positions Fiscal Year 2017-2018	Positions Fiscal Year 2018-2019
	<p>server architecture (Servers, Services, Storage, and Virtualization activities).</p> <ul style="list-style-type: none"> <li>Ongoing, maintain and solve the most difficult problems related to servers, network services and network policies.</li> </ul> <p>Infrastructure Wireless and AP monitoring staff –</p> <ul style="list-style-type: none"> <li>Develop the overall wireless network architectural design and re-engineer the infrastructure for the CTE project.</li> <li>Support ongoing maintenance of wireless controllers, POE switches, and WAPS.</li> </ul> <p>EIS Contract and Procurement Support –</p> <ul style="list-style-type: none"> <li>Acquires Information Technology (IT) goods and services for CTE including: coordinating, analyzing, and planning the solicitation approach for the acquisition of IT goods and services;</li> <li>Assists with and/or developing the scope of work for IT consulting and service Agreements;</li> <li>Develops all IT solicitation documentation (e.g., Request for Quote, Request for Proposal, Request for Offer) necessary for the acquisition of IT goods and services;</li> <li>Executes all IT contracts and procurements necessary to support the development and</li> </ul>			<p>1 Systems Software Specialist II</p>	<p>1 Systems Software Specialist II</p> <p>Full Compliance - 1 Senior Information Systems Analyst</p>	<p>Specialist II</p> <p>1 Systems Software Specialist II</p> <p>Full Compliance - 1 Senior Information Systems Analyst</p>

Role	Responsibilities	Redirection or Proposed Budget Augmentation	One-time or Continuing	Positions Fiscal Year 2016-2017	Positions Fiscal Year 2017-2018	Positions Fiscal Year 2018-2019
	<p>implementation of CTE for 200-250 Procurements and 3 – 4 Agreements and/or Renewals per year.</p> <p>EIS project support –</p> <ul style="list-style-type: none"> <li>Assists with all hiring and recruitment activities for the CTE project.</li> <li>Interfaces with EIS managers, supervisors, and various headquarters programs, including Office of Personnel Services and Budget Management Branch to develop, establish, maintain, and track all positions.</li> <li>Assists applicants through the recruitment process by reviewing minimum qualifications, gathering required hiring documents, and assists with on boarding of new employees.</li> <li>Responsible for various special projects including, but not limited to, position reconciliation, Government Code 12439 (Section 41), recruitment and retention development and administration reviews</li> </ul>				<p>Full Compliance - 1 Associate Government Program Analyst/Staff Services Analyst</p>	<p>Full Compliance -1 Associate Government Program Analyst/ Staff Services Analyst</p>
Facilities Management Division Staff	<p>Provides leadership on pathways, wiring, and power requirements for each facility. Coordinates the changes to the physical plant. Updates plant records. Participates in Change Management activities.</p>	Redirection	One-time	<p>2% Associate Construction Analyst</p> <p>7% Senior Estimator of Building Construction</p>	<p>2% Associate Construction Analyst</p> <p>7% Senior Estimator of Building Construction</p>	
Project Manage-	Provides guidance on CDCR's Project Management Methodology. Report risks	Re-	One-	5% Systems Software	5% Systems Software	

Role	Responsibilities	Redirection or Proposed Budget Augmentation	One-time or Continuing	Positions Fiscal Year 2016-2017	Positions Fiscal Year 2017-2018	Positions Fiscal Year 2018-2019
ment Office	<p>and issues to Agency Information Officer (AIO or designee.)</p> <p>Attend Executive Steering Committee meetings.</p> <p>Acquire and manage IPO Services</p> <p>Serves as liaison with CalTech.</p>	direction	time	Specialist III	Specialist III	
Enterprise Architecture Unit	<p>Acquire Solution Architect Consultant Services</p> <p>Manages Solution Architect contract and review and approve deliverables for payment.</p> <p>Manages contract change orders.</p>	Re-direction	One-time	5% Systems Software Specialist III	5% Systems Software Specialist III	
Independent Project Oversight	<p>Monitors the progress of the project to ensure project objectives are met.</p> <p>Provides information on project issues, risks, and status to the Project Manager, and steering committee.</p> <p>Monitor management of project schedule, scope, cost, quality, human resources, communication, risk, procurement and integration</p> <p>Provide Independent Project Oversight Reports to CalTech based on project criticality</p> <p>Participate in Executive Steering Committee meetings, as requested.</p>	Proposed Budget Augmentation	One-time	California Department of Technology - InterAgency Agreement	California Department of Technology - InterAgency Agreement	
Solution Architect	<p>Ensure compliance with requirements for project activities during processes</p> <p>Ensure adherence to standards, practices and conventions during processes</p> <p>Make recommendations for changes as needed</p> <p>Provide solution architect services</p> <p>Assess technical deliverables, processes, and products</p> <p>Monitor project activities for requirements, design, build, documentation, configuration management, testing, training and implementation</p>	Proposed Budget Augmentation	One-time	Consultant	Consultant	

Role	Responsibilities	Redirection or Proposed Budget Augmentation	One-time or Continuing	Positions Fiscal Year 2016-2017	Positions Fiscal Year 2017-2018	Positions Fiscal Year 2018-2019
	<p>Assess adherence to technical best practices</p> <p>Report and make recommendations on technical risks and issues</p> <p>Attend and report at Executive Steering Committee meetings, as requested.</p>					
Network Connectivity Installation Consultants	<p>Conducts site surveys.</p> <p>Develops design and engineering specifications.</p> <p>Installs cable drops, wireless access point drops, and WAPs.</p>	Proposed Budget Augmentation	One-time	Consultants	Consultants	
Totals				<p>5.3 PY redirected</p> <p>7 PY proposed budget augmentation FY2016-2017</p> <p>Consultants</p>	<p>5.2 PY redirected</p> <p>21 PY proposed budget augmentation (7 PY from proposed budget augmentation FY2016-2017, 14 PY for future request)</p> <p>Consultants</p>	<p>21 PY continued from proposed budget augmentations</p>

The following areas would incur additional costs (i.e., travel, associated costs):

- Facilities staff working the site As-Built diagrams, cabling requirements, fiber specifications, appropriate site review and signoff (i.e., Facilities, Fire Marshall, Inspector, etc.) will require site visits and travel costs.
- Network infrastructure staff performing implementation, configuration and testing of the network switches and other networking appliances placed at the institutions.
- Placement, configuration and testing of Data Center proxy servers and firewalls.
- Preparation, creation and deployment of images for institutional workstations.
- Configuration, implementation and testing of inmate workstations, both new and existing.

Once in production, support and maintenance visits will also be required. An analysis regarding the number of staff needed to provide that support is included in the workload study associated with the proposed budget augmentation.

Workstations must be individually configured for compliance with current Information Security policies prior to being accessed by an inmate. This includes, but is not limited to assigning a unique network identifier for each workstation and configuring/ensuring privileged system resources are properly secured. Support for the current and newly purchased workstations is included in the proposed augmentation request.

## **11. Training Plan**

The Project Team will develop a training plan, training materials, and provide training to institution instructors and test coordinators. This may include the following elements:

- **Train-the-Trainer** - Training designed for an internal system expert to support department-wide training needs and provide access to the provider certification site and remedial site support.
- **Follow-up Support** - Training provided after installation to address questions, features, issues, and concerns of institutional instructors, testing coordinators, and trainers. The project team will design this training to address the needs of both remedial and more sophisticated users. The training will cover business processes, workflow, data input, maintenance, search and retrieval, and certification exam requirements.
- **IT Field Support Staff** – Training on troubleshooting problems with desktop and/or access issues.
- **System Administrator** - Training or transfer of knowledge on system maintenance, updates, access, security, configuration, and modification.
- **Network Administrator** – Training or transfer of knowledge on network, wireless and Access Point maintenance, updates, access, security, configuration and modification.
- **ISO Auditing and Monitoring** – Training or transfer of knowledge of security

auditing and monitoring software and processes.

**12. On-going Maintenance**

A proposed budget augmentation will be requested for resources to support this project. Enterprise CDCR network support and maintenance parameters will be applied for this project and associated enterprise components. Maintenance on the hardware and software will include the standard warranty period afforded the State of California for workstations, switches, and other hardware related items and one or two-year maintenance support as well as the Software Assurance for Microsoft software products and regular software license support for products not covered under Software Assurance (please refer to Section 1 – Hardware and Section 2 – Software for costing per Fiscal Year).

**13. Information Security**

To secure the CTE-ME inmate network from the CDCR staff network, an independent Active Directory structure will be built to properly manage the user accounts and inmate security privileges. A tunneling VPN will further segregate the CTE-ME inmate network.

**14. Confidentiality**

Personally identifiable information will be protected using the State of California's and CDCR's Policy and Procedures.

**15. Impact on End Users**

Users currently enrolled in these paper based courses would need training on PC and / or Internet browser navigation. Existing PC based courseware students will require a brief overview of the differences between the PC software based training and Internet based training.

**16. Impact on Existing Systems**

At the time of this writing, new workstations will be purchased.

**17. Consistency with Overall Strategies**

The solution will be developed consistent with the state procurement, development and management processes as defined in SAM, SIMM and the Department Operations Manual (DOM) as well as DRP strategic initiatives. The solution is consistent with the CDCR IT Strategic Plan 2015 – 2020 page 4.

**18. Impact on Current Infrastructure**

Since CTE-ME inmate classrooms may not be constructed with the necessary wiring or Wireless infrastructure, the site may have the wiring and/or Wireless infrastructure built. The CTE-ME inmate network wiring extensions at the institutions will be installed by the local Plant Operations Unit (or contractor) from the POE switch to the classroom. Access Points will be positioned in the classroom and connected to the cable. Wireless access will be provided for the workstations via WAC that will be connected to the CTE-ME

inmate network. In addition, electrical wiring may be required to meet the power requirements of the workstations and networking hardware. Network accounts, security, access monitoring and control and proxy server capabilities will be increased through the addition of approximately 3,418 networked workstations and 8,450 student user accounts annually. Local staff will be relied upon to provide first level support of the networking equipment and workstations.

In addition, the implementation of the CTE-ME inmate network in the CTE classrooms at all of the institutions will cause an increase in bandwidth usage within the institution, between the institution and the wide area network shared with CCHCS, and at the central data center. The resource usage required by the system will have to be assessed and additional resources purchased if necessary.

**19. Impact on Data Center**

Impact to the State of CA data center would be limited to the additional network and Internet traffic generated via the CTE-ME networks across the institutions.

**20. System Hosting/Data Center Consolidations**

\_\_\_ OTech Managed Services

\_\_\_ OTech Federated Data Center

\_\_\_ Agency/state entity

\_\_\_ Outsourced/Other

X N/A. No additional hosting by CDCR or data center consolidations is expected with the CTE-ME project.

**21. Backup and Operational Recovery**

The CTE-ME solution will leverage the backup and operational recovery strategy of the TMS Basic and CDCR EIS's policies and procedures related to backup and operational strategy.

**22. Public Access**

No public access needs are identified for the CTE project.

**5.2 RATIONALE FOR SELECTION**

Loss of rehabilitative education pathways for offenders reduces the probability of the offender's successful reintegration into society and increases the probability of that offender's recidivism. The current CTE program needs to move to a digital-network-based technical education and certification system to include Wireless and hard wired, updated workstations, data center and network infrastructure, and security policies that will allow student learning and certification that meets today's employment requirements. Moving to this digital-network based solution will allow CDCR to:

- a. Reach the target of 90% of CDCR subscribed digital-network media CTE courses. As more certification sites are configured and brought online, there will a greater volume of availability of career technical materials and certification exams for inmates to attain their Milestone Credits.
- b. Have the flexibility to include additional digital technical educational materials and certification testing content as it comes available. This will meet the target of inmate certifications, both in increase in count (3,300 inmates achieving certifications 24 months before their release) and increase in percentage (100% of inmate obtaining certifications after participation in the career technical programs).
- c. Reduce the amount of time to wait for certification results. If certification exams are performed online the test results are immediate. This will:
  - o Greatly reduce the process time of provider site administrators to manually grade the certification exams.
  - o The reduction of time needed to manually grade exams will free up testing coordinator's time to proctor more exams per day, also increasing the opportunity of inmates receiving their certifications, and result in both an increase in count (3,300 inmates achieving certifications 24 months before their release) and increase in percentage (100% of inmate certifications who participate in the career technical programs – 2016 estimates – 8,400 inmates).
- d. Alleviate discrepancies between testing engine versions on the CDCR SharePoint. Once this project is complete, the computer that logs onto the provider certification site will automatically receive the correct provider specific software update as needed and be directed to the most current certification path.
- e. Increase the receipt of certification results for offenders. With online certification submission and receipt, inmates will know quickly if they have passed an exam. The instructor will print out a copy of the exam results for the inmate; therefore, CDCR will no longer need to facilitate delivery of certification results for inmates who transfer.

Additionally, moving to this digital-network based solution will align CDCR to the business functional requirements which include:

- a. Increasing access to a broader selection of online career technical education and certification media (audio, text, videos, graphics, software tools, references, etc.)
- b. Improving the certification testing and turnaround time for receipt of certification
- c. Increasing the number of certification exams that can be proctored
- d. Allowing all program related workshop devices (i.e., smog equipment, etc.) to connect to the controlled inmate online network
- e. Availability for coursework and certification exams during normal career technical classroom hours
- f. A secure network solution
- g. A scalable solution
- h. Service Level Thresholds
- i. A secure physical solution

- j. Mock scenarios to demonstrate real life applicability to reinforce career technical curriculum

If the FSR is not approved:

- More CTE programs will move to online based testing reducing the number of programs for inmates to receive their certifications and future employment opportunities.
- Less number of CTE programs will be available impacting the inmate’s ability to achieve Milestone Credits.
- CDCR will further fall out of compliance with the 3JP and Assembly Bills 494 and 1019.

### **5.3 OTHER ALTERNATIVES CONSIDERED**

Alternatives for the CTE solution included:

1. To subscribe to digital-network media CTE courses, connecting all workstations in the CTE classroom to cables that will run back to the Intermediate Distribution Frame (IDF) switch, providing online CTE access.

#### **5.3.1 Alternative 1**

##### Description

The Alternative 1 solution would require running cables from the building IDF to the classroom and connecting each computer up to the cables.

##### Costs

The costs of running cable to each of the 3,418 computers would be extraordinarily high. Average cost of running a cable to a computer is \$2,000.

- 3,418 cables X \$2,000 = \$6,836,000

##### Benefits and Advantages

- Reach the target of 90% of CDCR subscribed digital-network media CTE courses. As more certification sites are configured and brought online, there will a greater volume of availability of career technical materials and certification exams for inmates to attain their Milestone Credits.
- The flexibility of CDCR to add additional technical educational materials and certification testing as they become available. This will meet the target of inmate certifications both in increase in count (3,300 inmates achieving certifications 24 months before their release) and increase in percentage (40% of inmate certifications who participate in the career technical programs).
- Reduce the amount of time to wait for certification results.
- CDCR alleviating discrepancies between testing engine version on the CDCR

SharePoint site. The computer that logs onto the provider certification site will automatically receive the correct provider specific software update.

- Increase receipt of certification results for offenders

Disadvantages

The disadvantages to Alternative 1 include:

- High cost of physically cabling all computers in a classroom.

## **6 PROJECT MANAGEMENT PLAN**

CDCR has adopted a project management methodology and Project Life Cycle (PLC) model that embrace project management principles described by the Project Management Institute (PMI) and the California Project Management Methodology (CA-PMM). The CDCR PLC processes provide a consistent approach to perform activities and tasks required for planning, initiating, executing, controlling, and managing IT projects. PMI clearly define the major activities of a project to ensure the product or service delivered satisfies the customer's business needs. In addition, they provide a systematic approach and standard methodology for performing the major activities of a project.

CDCR endorses and applies project management best practices. EIS uses the most effective project management practices and tools to maximize communication and coordination between all project team members. Its project management practices and tools allow EIS to prioritize and allocate resources efficiently across projects. While EIS takes full accountability and responsibility for the completion of projects on time and on budget, project management responsibility is shared between EIS and its customers.

CDCR has adopted a project approach that relies on shared project management responsibility between program and technical areas. This synergistic project management approach deemphasizes the technical issues in order to establish a logical relationship between technical requirements and CDCR business imperatives. The Technical Project Manager (TPM) and the Business Project Manager (BPM) cooperate to achieve overall project effectiveness and alignment with business processes.

CDCR uses a disciplined approach to project tracking and reporting supported by recognized project management tools. Automated project management tools support project planning, tracking and reporting, and also support project managers IT by enabling project management techniques, such as checklists and review check points to keep the focus on quality and achieving project objectives.

A key component of the Project Management Methodology is the hiring of a project manager. The project scope, schedule, and requirements will be clearly defined in the project plan, and the contractor will be required to provide the necessary skills and staff resources to accomplish the project goals.

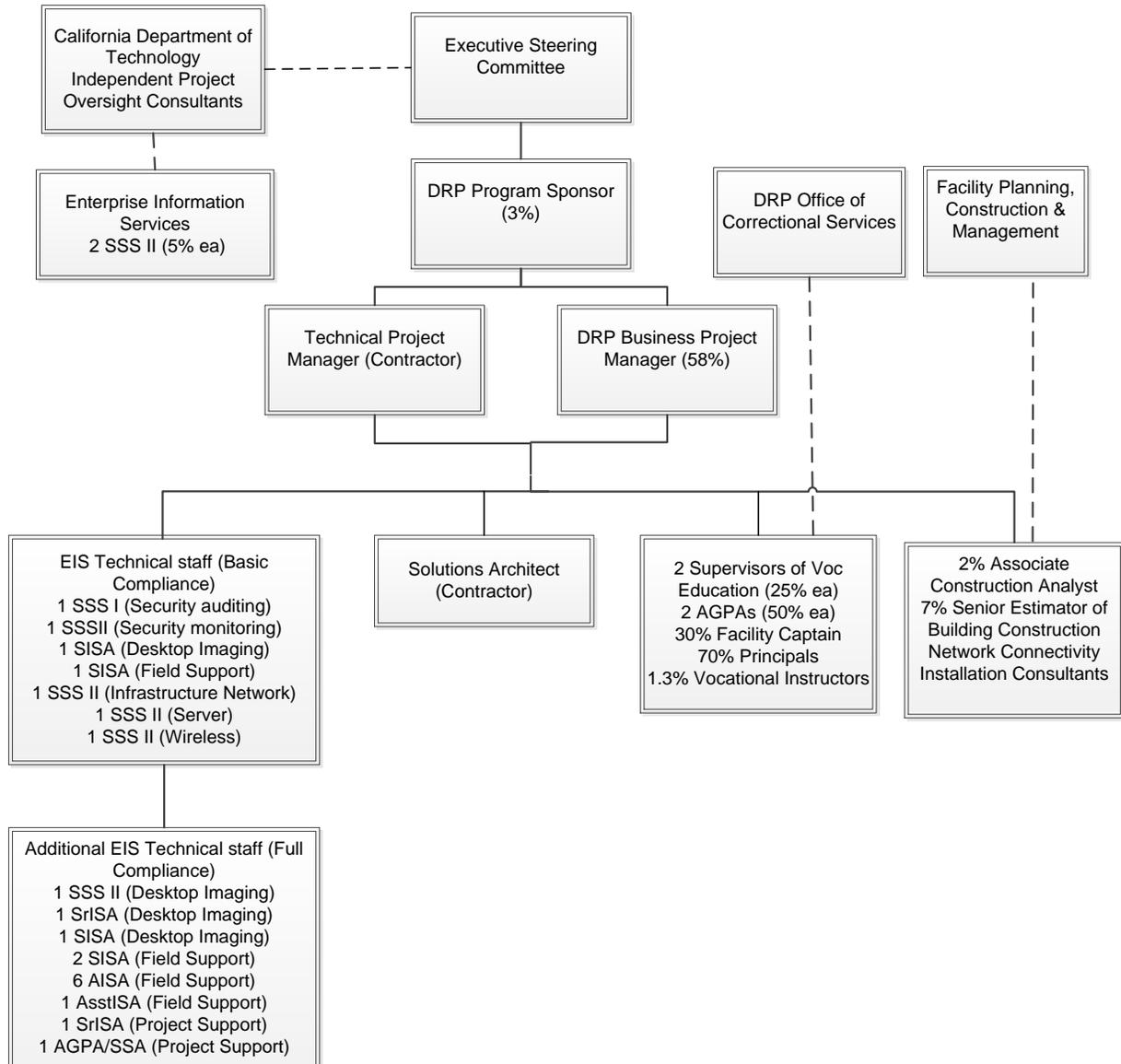
Project plans will be developed in accordance with the Department of Technology California Project Management Methodology (CA-PMM). At a minimum, the following will be developed:

- Project Charter
- Project Management Plan
- Scope Management Plan
- Configuration/Change Control Management Plan
- Human Resources Management Plan

- Communications Management Plan
- Risk and Issue Management Plan
- Cost Management Plan
- Quality Management Plan
- Schedule Management Plan
- Contract Management Plan
- Testing Plan
- Training Plan
- Organizational Change Management Plan
- Transition to Maintenance and Operations Plan

## 6.1 PROJECT ORGANIZATION

### CTE Project Organization



## 6.2 PROJECT PLAN

### 6.2.1 Project Phasing

<b>Project Phase</b>	<b>Phase Deliverables</b>
Initiation	Charter, resource onboarding
Planning	Project documentation
Requirements	As-Is documentation, Site Survey documentation
Design	To-Be documentation, Gap analysis, Design documentation
Lab Test	Procurement, provider site links/software/testing documentation
TMS Data Center	Proxy server build, firewall build
Main Procurement	Hardware/equipment/software/maintenance/support
Training Development	Training plan, materials, and schedule
Proof of Concept (POC)	One institutional site location
Second Site and Validation	One institutional site location, validation of revised processes from POC
Basic Compliance Phase Statewide Build-out, Implementation and Rollout	All institutional locations (33 sites, several computing devices per critical CTE certification classroom/shop)
Full Compliance Phase Statewide Build-out, Implementation and Rollout	All institutional locations (33 sites, all remaining CTE programs, all remaining computing devices in CTE classrooms/shops)
Project Closure	Project artifacts, project library

## 6.2.2 Project Schedule

Major Milestones	Est Start Date	Est Complete Date
FSR Submittal	07/20/2015	12/4/2015
Contract Award	05/01/2016	07/01/2016
Project Start Date	07/01/2016	07/01/2016
Project Initiation Phase	07/01/2016	07/31/2016
<ul style="list-style-type: none"> <li>Resource identification and onboarding</li> </ul>		
<ul style="list-style-type: none"> <li>Project Charter complete</li> </ul>		
Project Planning Phase	08/01/2016	08/31/2016
<ul style="list-style-type: none"> <li>Project planning documentation</li> </ul>		
Requirements Phase	09/01/2016	10/31/2016
<ul style="list-style-type: none"> <li>Discovery analysis</li> </ul>		
<ul style="list-style-type: none"> <li>As-Is analysis</li> </ul>		
<ul style="list-style-type: none"> <li>Site surveys</li> </ul>		
Design Documentation Phase	10/01/2016	11/30/2016
<ul style="list-style-type: none"> <li>To-Be analysis</li> </ul>		
<ul style="list-style-type: none"> <li>Gap analysis</li> </ul>		
<ul style="list-style-type: none"> <li>Design documentation</li> </ul>		
Initial Provider Test Phase	11/01/2016	12/31/2016
<ul style="list-style-type: none"> <li>Procurement of lab test equipment</li> </ul>		
<ul style="list-style-type: none"> <li>Lab test provider sites</li> </ul>		
<ul style="list-style-type: none"> <li>Lab test documentation</li> </ul>		
TMS Data Center Implementation Phase	12/01/2016	01/31/2017
<ul style="list-style-type: none"> <li>Tiger team contacted</li> </ul>		
<ul style="list-style-type: none"> <li>TMS proxy server build</li> </ul>		
<ul style="list-style-type: none"> <li>TMS firewall build</li> </ul>		
Procurement Process Phase	12/01/2016	02/28/2017
<ul style="list-style-type: none"> <li>Hardware/equipment/maintenance purchase</li> </ul>		
<ul style="list-style-type: none"> <li>Software/license/support purchase</li> </ul>		
<ul style="list-style-type: none"> <li>Hardware/equipment/software receipt</li> </ul>		
<ul style="list-style-type: none"> <li>Institution delivery of hardware/equipment/software</li> </ul>		
Training Development Phase	02/01/2017	2/28/2017
<ul style="list-style-type: none"> <li>Develop training plan, materials, and schedule.</li> </ul>		
Proof of Concept Phase	03/01/2017	04/30/2017
<ul style="list-style-type: none"> <li>POC site build-out</li> </ul>		
<ul style="list-style-type: none"> <li>POC site implementation and rollout</li> </ul>		
<ul style="list-style-type: none"> <li>POC test of security safeguards</li> </ul>		
<ul style="list-style-type: none"> <li></li> </ul>		
<ul style="list-style-type: none"> <li>Test training process and documentation</li> </ul>		
<ul style="list-style-type: none"> <li>POC site evaluation</li> </ul>		
<ul style="list-style-type: none"> <li>POC site lessons learned</li> </ul>		
Second Site and Validation of Processes from POC Phase	05/01/2017	05/31/2017
<ul style="list-style-type: none"> <li>Site Build-out</li> </ul>		
<ul style="list-style-type: none"> <li>Site implementation and rollout</li> </ul>		
<ul style="list-style-type: none"> <li>Site test of security safeguards</li> </ul>		
<ul style="list-style-type: none"> <li>Train second site staff</li> </ul>		
<ul style="list-style-type: none"> <li>Site evaluation and transition</li> </ul>		

Basic Compliance Site Infrastructure Build Out Phase (rolling wave approach – 33 sites, several computing devices per critical CTE certification classroom/shop )	<b>06/01/2017</b>	<b>05/31/2018</b>
<ul style="list-style-type: none"> <li>• Site infrastructure build-out (network equipment)</li> </ul>		
<ul style="list-style-type: none"> <li>• Site Implementation and Rollout Phase (PC’s, connectivity verification, Security configuration, Security verification, train staff, site evaluation and transition) (rolling wave approach – 33 sites)</li> </ul>		
<ul style="list-style-type: none"> <li>• Site implementation and rollout</li> </ul>		
<ul style="list-style-type: none"> <li>• Site transition</li> </ul>		
Full Compliance Site Infrastructure Build Out Phase (rolling wave approach – 33 sites, all CTE programs, all computing devices in CTE classrooms/shops)	<b>07/01/2017</b>	<b>05/31/2018</b>
<ul style="list-style-type: none"> <li>• Site infrastructure build-out (network equipment)</li> </ul>		
<ul style="list-style-type: none"> <li>• Site Implementation and Rollout Phase (PC’s, connectivity verification, Security configuration, Security verification, train staff, site evaluation and transition) (rolling wave approach – 33 sites)</li> </ul>		
<ul style="list-style-type: none"> <li>• Site implementation and rollout</li> </ul>		
<ul style="list-style-type: none"> <li>• Site transition</li> </ul>		
Project Acceptance and Closeout	<b>06/01/2018</b>	<b>06/30/2018</b>
<b>PIER</b>	<b>07/01/2018</b>	<b>06/30/2019</b>

### **6.3 AUTHORIZATION REQUIRED**

This project requires approval from the following:

- CDCR Agency Information Security Officer
- CDCR Enterprise Architect
- CDCR Chief Budget Officer
- CDCR Enterprise Information Services Director
- Undersecretary, Administration & Offender Services designee for CDCR Agency Secretary

The FSR also requires approval from the Department of Technology as part of the standard FSR review process.

## **7 RISK MANAGEMENT PLAN**

### **7.1 Risk Management Approach**

The CTE Project will follow the Risk Management Procedures established by the CDCR's Project Management Office PMM and SIMM. The plan will document the processes and procedures used to identify the entire structure of the project and its deliverables, providing a comprehensive framework for assessing each aspect of the project for potential risk.

#### **7.1.1 Risk Register**

High-level project risks are identified in the Risk Register. A copy of the high-level risks is included in Section 7.2.

#### **7.1.2 Risk Assessment**

The high-level risk assessment is an initial broad view of the risk associated with the project. The risk assessment process includes a review and determination of whether the identified risks are acceptable. Risk assessment is not a one-time event; CTE will assess the risks identified monthly or more frequently if required throughout the project.

#### **7.1.3 Risk Identification**

During the initiation phase of the project, high-level risk information is gathered in an initial meeting of the Business and Technical Project Managers and the CTE Project Team members. Each CTE Project Team member will identify and provide a list of potential risk items. As the project progresses, the team will identify and assess additional risks which will result in a complete list of potential risks of the project. The characteristics of each identified risk are captured and entered into the Risk Register.

#### **7.1.4 Risk Analysis and Quantification**

After identifying the potential risks, the project team and/or project manager reviews each risk to classify and prioritize the risk, and seeks to assess the probability of occurrence and impact to the project. This risk analysis and qualification process will lead to the creation of the Risk Register. The team will manage and accept those risks deemed most likely to have a negative impact to the project.

#### **7.1.5 Risk Prioritization**

The prioritization of a risk is based upon the potential impact of the risk on the project and the probability of occurrence, which computes the risk exposure. The team and/or project manager will assess the risk mitigation timeframe and apply some expert judgment to determine the overall prioritization order for the risks. The probability on the likelihood of the risk occurring (1-9=Low Risk, 10-15=Medium Risk, 16-25=High Risk) while the risk impact is based on either the effect to cost, schedule and/or performance as well as the probability to determine the rating

1-5.

### **7.1.6 Risk Response**

The project team has identified the risk mitigation response to each of the risks listed in the project Risk Register. The response can consist of one of the following responses:

- Mitigate – Used to reduce the probability and/or impact of an adverse risk event to an acceptable threshold. Taking early action to reduce the probability and/or impact is often more effective than trying to repair damage if the risk occurs.
- Avoid – Involves changing the project plan to eliminate the threat posed by the adverse risk.
- Transfer – Requires shifting the negative impact of a threat along with ownership of the response to a third party. Transferring the risk simply gives another party responsibility for its management.
- Acceptance – Risk acceptance involves simply accepting the risk event and its consequences. Project team and/or project manager will monitor the risk and deal with the event if it occurs.

For each response that is accepted, a mitigation plan has been developed and is summarized in the Risk Register for that risk.

### **7.1.7 Risk Tracking and Control**

The objective of risk tracking and control is to ensure that all steps of the Risk Management Procedures are being followed, and as a result, risks are being mitigated and mitigation plans are followed as necessary. Risk tracking and control involves the oversight and tracking of risk mitigation action plan execution, avoidance plan execution, reassessment of risks, reporting of risk status and recording risk information changes in the project Risk Register.

#### **Risk Tracking**

The Project Manager is responsible for the high-level oversight of the execution of mitigation strategies for all risks identified in the project Risk Register. The Project Manager is also responsible for updating the Project Sponsor and Steering Committee via identified and accepted communication mediums and obtaining their approval as needed.

#### **Risk Control**

The Project Manager will reassess the risk information in the project Risk Register to determine if any changes are needed. The risk probability or impact could change based upon project events or other information. Reassessment of risk information will be performed on a monthly basis, but it may be performed more frequently if needed. Risk status is included as part of the project status meetings. Risk status reporting will focus on the highest ranked risks. Information presented will include the status of risk mitigation plans, changes in risk prioritization for known risks, and any new risks identified.

## 7.2 Risk Register

The Risk Register (part of the CA-PMM Toolkit) describes the risks associated with the project, the probability of the risk occurring, the impact if the risk occurs, the time action must begin, the risk level identified, and the preventative or contingency measures that CTE can use to address the risk.

Statement of Probability or Impact (Levels 1-5)	Risk Management Action Must Begin...	Risk Level (probability X impact X action must begin)	Description
1=Low; 5=High	Within six months	Low 1-9	Unlikely or highly unlikely
1=Low; 5=High	Six months to a year from now	Medium 10-15	Better than even chance
1=Low; 5=High	Over a year from now	High 16-25	Highly likely or almost certain

### Potential Risks (via the Risk Register)

The following potential risks were identified.

- Funding for the project may not be approved.
- Key resources with the appropriate skill set not available when project begins.
- Physical and IT security parameters not able to be met.
- Conflicts with other ongoing projects may impact project schedule or resources.
- Readiness of instructors to transition to web based instruction may take longer than expected.
- Statewide vendor procurement contract for desktops will expire June 10, 2016.
- Implementation pace for in-prison infrastructure not keeping up with CTE industry transition to online curriculum and exams.

# Risk Register

Project Name: Career Technical Education (CTE) Project

Project #: 5225-162

Revision Date: August 30, 215

\* 1-9 = Low Risk Level, 10-15 = Medium Risk Level, 16-25 = High Risk Level

#	Risk	Probability (1 - 5)	Potential Impact (1 - 5)	Risk Management Action must begin...	Risk Level* (1 - 25)	Cause	Consequences	Avoidance Plan	Mitigation Plan
1	Funding for the project may not be approved.	3	5	Six months to a year from now	<b>9.9</b>	Low priority within the State Budget or a downturn in the State economy.	Project Objectives may not be met	Identify critical objectives to be completed first and ensure no project delays	Keep communications open and actively involve all project stakeholders
2	Key resources with the appropriate skill set not available when project starts.	3	4	Six months to a year from now	<b>7.92</b>	Lack of sufficient resources to handle all mission critical work assignments	Project may be delayed	Build a strong schedule and attain agreement for use of future resources	Train backup staff to fill the key positions or obtain funding for consultant augmentation.
3	Physical and IT security parameters not able to be met	2	4	Over a year from now	<b>2.64</b>	Unique layout of each institution may create unanticipated barriers	IT equipment, infrastructure and software security protocol cannot be standardized statewide	Involve all relevant stakeholders early in the project during requirements definition and identify critical physical and IT security needs	Develop a working group of applicable stakeholders to evaluate and conduct an analysis of each occurrence
4	Conflicts with other ongoing projects may impact project schedule or resources	3	3	Over a year from now	<b>2.97</b>	Unanticipated new critical mandates	Project may be delayed or staff resources not available due to conflicts in project schedules	Build a strong communication plan and establish priorities within the organization	Prioritize project deliverables so as not to conflict with other projects

# Risk Register

5	Readiness of instructors to transition to web based instruction may take longer than expected.	1	3	Over a year from now	<b>0.99</b>	Industry transition rate to online curriculum and exams exceeds available training time	Inmates may be delayed in taking certification exams until training is accomplished	Monitoring the industry transition rate for planning purposes	Keep communications open and actively involve all instructors and trainers
6	Statewide vendor procurement contract for desktops will expire June 10, 2016	5	3	Six months to a year from now	<b>9.9</b>	Statewide mandatory contract for desktops expires June 10, 2016.	Prices for desktops may increase with the new contract affecting project budget.	Monitor DGS contract negotiations for a new statewide mandatory contract.	DGS will be negotiating a new statewide mandatory contract.
7	Implementation pace for in-prison infrastructure not keeping up with CTE industry transition to online curriculum and exams	2	4	Within the next six months	<b>8</b>	Certification providers moving to new technology	Reduction of certifications issued to inmates	Monitor and collaborate with certification providers for alternate delivery of curriculum and exams until project is implemented	Collaborate with certification providers for alternate delivery of curriculum and exams until project is implemented
8					<b>0</b>				
9					<b>0</b>				
10					<b>0</b>				
11					<b>0</b>				
14					<b>0</b>				
15					<b>0</b>				
16					<b>0</b>				
17					<b>0</b>				
18					<b>0</b>				
19					<b>0</b>				
20					<b>0</b>				

## **8 ECONOMIC ANALYSIS WORKSHEETS**

Please see attached Economic Analysis Worksheets.

**EXISTING SYSTEM COST WORKSHEET**

Department: California Department of Corrections and Rehabilitation  
 Project: Career and Technical Education - Media Evolution (CTE-ME)

	FY 2016-2017		FY 2017-2018		FY 2018-2019		TOTALS	
	PYs	Amounts	PYs	Amounts	PYs	Amounts	PYs	Amounts
<b>Information Technology (IT) Costs:</b>								
<i>Continuing:</i>								
Staff (Salaries & Benefits)	0.0	\$ -	0.0	\$ -	0.0	\$ -	0.0	\$ -
Hardware Lease/Maintenance		\$ -		\$ -		\$ -		\$ -
Software Maintenance/Licenses		\$ -		\$ -		\$ -		\$ -
Contract Services		\$ -		\$ -		\$ -		\$ -
Data Center Services		\$ -		\$ -		\$ -		\$ -
Agency Facilities		\$ -		\$ -		\$ -		\$ -
Other		\$ -		\$ -		\$ -		\$ -
<b>Total IT Costs</b>	<b>0.0</b>	<b>\$ -</b>	<b>0.0</b>	<b>\$ -</b>	<b>0.0</b>	<b>\$ -</b>	<b>0.0</b>	<b>\$ -</b>
<b>Program Costs:</b>								
<i>Continuing:</i>								
Staff	354.1	\$ 30,216,587	354.1	\$ 30,216,587	354.1	\$ 30,216,587	1062.4	\$ 90,649,760
Other		\$ -		\$ -		\$ -		\$ -
<b>Total Program Costs</b>	<b>354.1</b>	<b>\$ 30,216,587</b>	<b>354.1</b>	<b>\$ 30,216,587</b>	<b>354.1</b>	<b>\$ 30,216,587</b>	<b>1062.4</b>	<b>\$ 90,649,760</b>
<b>Total Existing System Costs</b>	<b>354.1</b>	<b>\$ 30,216,587</b>	<b>354.1</b>	<b>\$ 30,216,587</b>	<b>354.1</b>	<b>\$ 30,216,587</b>	<b>1062.4</b>	<b>\$ 90,649,760</b>

\*See detail sheets for breakdown

**PROPOSED SYSTEM COST WORKSHEET**

Department: California Department of Corrections and Rehabilitation  
 Project: Career and Technical Education - Media Evolution (CTE-ME)

	FY 2016-2017		FY 2017-2018		FY 2018-2019		TOTALS	
	PYs	Amounts	PYs	Amounts	PYs	Amounts	PYs	Amounts
<b>Information Technology (IT) Costs:</b>								
<i>One-time:</i>								
Staff (Salaries & Benefits)	12.3	\$ 1,375,026	26.2	\$ 2,808,222	0.0	\$ -	38.5	\$ 4,183,247
Hardware Purchase		\$ 1,900,725		\$ 5,097,523		\$ -		\$ 6,998,248
Software Purchase/License		\$ 236,669		\$ 1,152,619		\$ -		\$ 1,389,288
Telecommunications		\$ 416,000		\$ 754,000		\$ -		\$ 1,170,000
Contract Services								
<i>Solution Architect</i>		\$ 140,873		\$ 140,873		\$ -		\$ 281,745
<i>Project Management</i>		\$ 250,000		\$ 250,000		\$ -		\$ 500,000
<i>Project Oversight</i>		\$ 112,560		\$ 112,560		\$ -		\$ 225,120
<i>IV&amp;V Services</i>		\$ -		\$ -		\$ -		\$ -
<i>Other Contract Services</i>		\$ -		\$ -		\$ -		\$ -
TOTAL Contract Services		\$ 503,433		\$ 503,433		\$ -		\$ 1,006,865
Data Center Services		\$ -		\$ -		\$ -		\$ -
Agency Facilities		\$ -		\$ -		\$ -		\$ -
Other		\$ 241,897		\$ 412,693		\$ -		\$ 654,590
<b>Total One-time IT Costs</b>	<b>12.3</b>	<b>\$ 4,673,749</b>	<b>26.2</b>	<b>\$ 10,728,489</b>	<b>0.0</b>	<b>\$ -</b>	<b>38.5</b>	<b>\$ 15,402,238</b>
<i>Continuing:</i>								
Staff	0.0	\$ -	0.0	\$ -	21.0	\$ 2,228,893	21.0	\$ 2,228,893
Hardware Lease/Maintenance		\$ -		\$ 333,214		\$ 343,673		\$ 676,887
Software Maintenance/Licenses		\$ -		\$ 124,078		\$ 1,155,834		\$ 1,279,912
Telecommunications		\$ -		\$ -		\$ -		\$ -
Contract Services		\$ -		\$ -		\$ -		\$ -
Data Center Services		\$ -		\$ -		\$ -		\$ -
Agency Facilities		\$ -		\$ -		\$ -		\$ -
Other		\$ -		\$ 5,259		\$ 431,691		\$ 436,950
<b>Total Continuing IT Costs</b>	<b>0.0</b>	<b>\$ -</b>	<b>0.0</b>	<b>\$ 462,551</b>	<b>21.0</b>	<b>\$ 4,160,091</b>	<b>21.0</b>	<b>\$ 4,622,642</b>
<b>TOTAL PROJECT COSTS</b>	<b>12.3</b>	<b>\$ 4,673,749</b>	<b>26.2</b>	<b>\$ 11,191,040</b>	<b>21.0</b>	<b>\$ 4,160,091</b>	<b>59.5</b>	<b>\$ 20,024,880</b>
<b>Continuing Existing Costs:</b>								
<i>Information Technology Costs:</i>								
Staff	0.0	\$ -	0.0	\$ -	0.0	\$ -	0.0	\$ -
Other		\$ -		\$ -		\$ -		\$ -
<b>Total Existing IT Costs</b>	<b>0.0</b>	<b>\$ -</b>	<b>0.0</b>	<b>\$ -</b>	<b>0.0</b>	<b>\$ -</b>	<b>0.0</b>	<b>\$ -</b>
<i>Program Costs:</i>								
Staff	354.1	\$ 30,216,587	354.1	\$ 30,216,587	354.1	\$ 30,216,587	1062.4	\$ 90,649,760
Other		\$ -		\$ -		\$ -		\$ -
<b>Total Program Costs</b>	<b>354.1</b>	<b>\$ 30,216,587</b>	<b>354.1</b>	<b>\$ 30,216,587</b>	<b>354.1</b>	<b>\$ 30,216,587</b>	<b>1062.4</b>	<b>\$ 90,649,760</b>
<b>TOTAL CONTINUING EXISTING COSTS</b>	<b>354.1</b>	<b>\$ 30,216,587</b>	<b>354.1</b>	<b>\$ 30,216,587</b>	<b>354.1</b>	<b>\$ 30,216,587</b>	<b>1062.4</b>	<b>\$ 90,649,760</b>
<b>TOTAL ALTERNATIVE PROJECT COSTS</b>	<b>366.4</b>	<b>\$ 34,890,335</b>	<b>380.3</b>	<b>\$ 41,407,627</b>	<b>375.1</b>	<b>\$ 34,376,678</b>	<b>1121.9</b>	<b>\$ 110,674,640</b>
Increased Revenues		\$ -		\$ -		\$ -		\$ -

\*See detail sheets for breakdown

**ALTERNATIVE 1 COST WORKSHEET**

Department: California Department of Corrections and Rehabilitation  
 Project: Career and Technical Education - Media Evolution (CTE-ME)

	FY	2016-2017	FY	2017-2018	FY	2018-2019	TOTALS	
	PYs	Amounts	PYs	Amounts	PYs	Amounts	PYs	Amounts
<b>Information Technology (IT) Costs:</b>								
<i>One-time:</i>								
Staff (Salaries & Benefits)	12.3	\$ 1,375,026	26.2	\$ 2,808,222		\$ -	38.5	\$ 4,183,247
Hardware Purchase		\$ 3,659,587		\$ -		\$ -		\$ 3,659,587
Software Purchase/License		\$ 594,602		\$ -		\$ -		\$ 594,602
Telecommunications		\$ 7,336,000		\$ -		\$ -		\$ 7,336,000
Contract Services								
<i>Software Customization</i>		\$ -		\$ -		\$ -		\$ -
<i>Project Management</i>		\$ 250,000		\$ 250,000		\$ -		\$ 500,000
<i>Project Oversight</i>		\$ 112,560		\$ 112,560		\$ -		\$ 225,120
<i>IV&amp;V Services</i>		\$ -		\$ -		\$ -		\$ -
<i>Other Contract Services (Solution Architect)</i>		\$ 140,873		\$ 140,873		\$ -		\$ 281,746
TOTAL Contract Services		\$ 503,433		\$ 503,433		\$ -		\$ 1,006,866
Data Center Services		\$ -		\$ -		\$ -		\$ -
Agency Facilities		\$ -		\$ -		\$ -		\$ -
Other		\$ 241,116		\$ -		\$ -		\$ 241,116
<b>Total One-time IT Costs</b>	<b>12.3</b>	<b>\$ 13,709,764</b>	<b>26.2</b>	<b>\$ 3,311,655</b>	<b>0.0</b>	<b>\$ -</b>	<b>38.5</b>	<b>\$ 17,021,418</b>
<i>Continuing:</i>								
Staff	0.0	\$ -	0.0	\$ -	21.0	\$ 2,228,893	21.0	\$ 2,228,893
Hardware Lease/Maintenance		\$ -		\$ 1,073,000		\$ 1,073,000		\$ 2,146,000
Software Maintenance/Licenses		\$ -		\$ 1,123,189		\$ 1,123,189		\$ 2,246,378
Telecommunications		\$ -		\$ -		\$ -		\$ -
Contract Services		\$ -		\$ -		\$ -		\$ -
Data Center Services		\$ -		\$ -		\$ -		\$ -
Agency Facilities		\$ -		\$ -		\$ -		\$ -
Other		\$ -		\$ -		\$ -		\$ -
<b>Total Continuing IT Costs</b>	<b>0.0</b>	<b>\$ -</b>	<b>0.0</b>	<b>\$ 2,196,189</b>	<b>21.0</b>	<b>\$ 4,425,082</b>	<b>21.0</b>	<b>\$ 6,621,271</b>
<b>TOTAL PROJECT COSTS</b>	<b>12.3</b>	<b>\$ 13,709,764</b>	<b>26.2</b>	<b>\$ 5,507,844</b>	<b>21.0</b>	<b>\$ 4,425,082</b>	<b>59.5</b>	<b>\$ 23,642,689</b>
<b>Continuing Existing Costs:</b>								
<i>Information Technology Costs:</i>								
Staff	0.0	\$ -	0.0	\$ -	0.0	\$ -	0.0	\$ -
Other		\$ -		\$ -		\$ -		\$ -
<b>Total Existing IT Costs</b>	<b>0.0</b>	<b>\$ -</b>	<b>0.0</b>	<b>\$ -</b>	<b>0.0</b>	<b>\$ -</b>	<b>0.0</b>	<b>\$ -</b>
<i>Program Costs:</i>								
Staff	354.1	\$ 30,465,580	354.1	\$ 30,465,580	354.1	\$ 30,465,580	1062.3	\$ 91,396,740
Other		\$ -		\$ -		\$ -		\$ -
<b>Total Program Costs</b>	<b>354.1</b>	<b>\$ 30,465,580</b>	<b>354.1</b>	<b>\$ 30,465,580</b>	<b>354.1</b>	<b>\$ 30,465,580</b>	<b>1062.3</b>	<b>\$ 91,396,740</b>
<b>TOTAL CONTINUING EXISTING COSTS</b>	<b>354.1</b>	<b>\$ 30,465,580</b>	<b>354.1</b>	<b>\$ 30,465,580</b>	<b>354.1</b>	<b>\$ 30,465,580</b>	<b>1062.3</b>	<b>\$ 91,396,740</b>
<b>TOTAL ALTERNATIVE PROJECT COSTS</b>	<b>366.4</b>	<b>\$ 44,175,344</b>	<b>380.3</b>	<b>\$ 35,973,424</b>	<b>375.1</b>	<b>\$ 34,890,662</b>	<b>1121.8</b>	<b>\$ 115,039,429</b>
Increased Revenues		\$ -		\$ -		\$ -		\$ -

\*See detail sheets for breakdown

**ECONOMIC ANALYSIS SUMMARY**

Department: California Department of Corrections and Rehabilitation  
 Project: Career and Technical Education - Media Evolution (CTE-ME)

	FY <b>2016-2017</b>		FY <b>2017-2018</b>		FY <b>2018-2019</b>		<b>TOTALS</b>	
	PYs	Amounts	PYs	Amounts	PYs	Amounts	PYs	Amounts
<b>Baseline:</b>								
Total IT Costs	0.0	\$ -	0.0	\$ -	0.0	\$ -	0.0	\$ -
Total Program Costs	354.1	\$ 30,216,587	354.1	\$ 30,216,587	354.1	\$ 30,216,587	1062.4	\$ 90,649,760
Total Existing System Cost	354.1	\$ 30,216,587	354.1	\$ 30,216,587	354.1	\$ 30,216,587	1062.4	\$ 90,649,760

<b>Proposed Solution:</b>								
<b>Total Existing System Cost</b>	<b>354.1</b>	<b>\$ 30,216,587</b>	<b>354.1</b>	<b>\$ 30,216,587</b>	<b>354.1</b>	<b>\$ 30,216,587</b>	<b>1062.4</b>	<b>\$ 90,649,760</b>
Total Proposed Project Cost	12.3	\$ 4,673,749	26.2	\$ 11,191,040	21.0	\$ 4,160,091	59.5	\$ 20,024,880
Total Continuing Existing Cost	354.1	\$ 30,216,587	354.1	\$ 30,216,587	354.1	\$ 30,216,587	1062.4	\$ 90,649,760
Total Proposed Cost	366.4	\$ 34,890,335	380.3	\$ 41,407,627	375.1	\$ 34,376,678	1121.9	\$ 110,674,640
Cost Savings or Avoidance	-12.3	\$ (4,673,749)	-26.2	\$ (11,191,040)	-21.0	\$ (4,160,091)	-59.5	\$ (20,024,880)
Increased Revenue		\$ -		\$ -		\$ -		\$ -
Net Cost or Benefit	-12.3	\$ (4,673,749)	-26.2	\$ (11,191,040)	-21.0	\$ (4,160,091)	-59.5	\$ (20,024,880)
Cumulative Net (Cost) or Benefit	-12.3	\$ (4,673,749)	-38.5	\$ (15,864,789)	-59.5	\$ (20,024,880)		

<b>Alternative 1:</b>								
<b>Total Existing System Cost</b>	<b>354.1</b>	<b>\$ 30,216,587</b>	<b>354.1</b>	<b>\$ 30,216,587</b>	<b>354.1</b>	<b>\$ 30,216,587</b>	<b>1062.4</b>	<b>\$ 90,649,760</b>
Total Alt. 1 Project Cost	12.3	\$ 13,709,764	26.2	\$ 5,507,844	21.0	\$ 4,425,082	59.5	\$ 23,642,689
Total Alt. 1 Continuing Existing	354.1	\$ 30,465,580	354.1	\$ 30,465,580	354.1	\$ 30,465,580	1062.3	\$ 91,396,740
Total Alternative 1 Cost	366.4	\$ 44,175,344	380.3	\$ 35,973,424	375.1	\$ 34,890,662	1121.8	\$ 115,039,429
Cost Savings or Avoidance	-12.3	\$ (13,958,757)	-26.2	\$ (5,756,837)	-21.0	\$ (4,674,075)	-59.4	\$ (24,389,669)
Increased Revenue		\$ -		\$ -		\$ -		\$ -
Net Cost or Benefit	-12.3	\$ (13,958,757)	-26.2	\$ (5,756,837)	-21.0	\$ (4,674,075)	-59.4	\$ (24,389,669)
Cumulative Net (Cost) or Benefit	-12.3	\$ (13,958,757)	-38.5	\$ (19,715,594)	-59.4	\$ (24,389,669)		

**PROJECT FUNDING PLAN**

Department: California Department of Corrections and Rehabilitation  
 Project: Career and Technical Education - Media Evolution (CTE-ME)

	FY 2016-2017		FY 2017-2018		FY 2018-2019		TOTALS	
	PYs	Amounts	PYs	Amounts	PYs	Amounts	PYs	Amounts
<b>TOTAL PROJECT COSTS</b>	12.3	\$ 4,673,749	26.2	\$ 11,191,040	21.0	\$ 4,160,091	59.5	\$ 20,024,880
<b>REDIRECTED RESOURCES</b>								
Staff	5.3	\$ 587,859	5.2	\$ 579,329	0.0	\$ -	10.5	\$ 1,167,187
Redirected Funds								
Existing System		\$ -		\$ -		\$ -		\$ -
Other fund sources		\$ -		\$ -		\$ -		\$ -
<b>Total Redirections</b>	5.3	\$ 587,859	5.2	\$ 579,329	0.0	\$ -	10.5	\$ 1,167,187
<b>ADDITIONAL FUNDING</b>								
One-Time Project Costs	7.0	\$ 4,085,890	21.0	\$ 10,149,161	0.0	\$ -	28.0	\$ 14,235,051
Continuing Project Costs	0.0	\$ -	0.0	\$ 462,551	21.0	\$ 4,160,091	21.0	\$ 4,622,642
<b>TOTAL NEW FUNDING</b>	7.0	\$ 4,085,890	21.0	\$ 10,611,712	21.0	\$ 4,160,091	49.0	\$ 18,857,693
<b>Total Project Funding</b>	12.3	\$ 4,673,749	26.2	\$ 11,191,040	21.0	\$ 4,160,091	59.5	\$ 20,024,880
Difference: Funding - Costs	0.0	\$ -	0.0	\$ -	0.0	\$ -	0.0	\$ -

<b>TOTAL ESTIMATED SAVINGS</b>	0.0	\$ -	0.0	\$ -	0.0	\$ -	0.0	\$ -
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FUNDING SOURCE*								
General Fund	100%	\$ 4,673,749	100%	\$ 11,191,040	100%	\$ 4,160,091	100%	\$ 20,024,880
Federal Fund	0%	\$ -	0%	\$ -	0%	\$ -	0%	\$ -
Special Fund	0%	\$ -	0%	\$ -	0%	\$ -	0%	\$ -
Reimbursement	0%	\$ -	0%	\$ -	0%	\$ -	0%	\$ -
<b>TOTAL FUNDING</b>	100%	\$ 4,673,749	100%	\$ 11,191,040	100%	\$ 4,160,091	100%	\$ 20,024,880

\*Type: If applicable, for each funding source, beginning on row 31, describe what type of funding is included, such as local assistance or grant funding, the date the funding is to become available, and the duration of the funding.

**ADJUSTMENTS, SAVINGS AND REVENUES WORKSHEET**

Department: California Department of Corrections and Rehabilitation  
 Project: Career and Technical Education - Media Evolution (CTE-ME)

<b>Annual Project Adjustments</b>	FY <b>2016-2017</b>		FY <b>2017-2018</b>		FY <b>2018-2019</b>		<b>TOTALS</b>	
	PYs	Amounts	PYs	Amounts	PYs	Amounts	PYs	Amounts
<b>One-time Costs</b>								
Previous Year's Baseline	0.0	\$ -	7.0	\$ 4,085,890	21.0	\$ 10,149,161		
Annual Augmentation	7.0	\$ 4,085,890	14.0	\$ 6,063,271	-21.0	\$ (10,149,161)		
<b>Total One-Time Budget Actions</b>	<b>7.0</b>	<b>\$ 4,085,890</b>	<b>21.0</b>	<b>\$ 10,149,161</b>	<b>0.0</b>	<b>\$ -</b>	<b>28.0</b>	<b>\$ 14,235,051</b>
<b>Continuing Costs</b>								
Previous Year's Baseline	0.0	\$ -	0.0	\$ -	0.0	\$ 462,551		
Annual Augmentation	0.0	\$ -	0.0	\$ 462,551	21.0	\$ 3,697,540		
<b>Total Continuing Budget Actions</b>	<b>0.0</b>	<b>\$ -</b>	<b>0.0</b>	<b>\$ 462,551</b>	<b>21.0</b>	<b>\$ 4,160,091</b>	<b>21.0</b>	<b>\$ 4,622,642</b>
<b>Total Annual Project Budget Augmentation</b>	<b>7.0</b>	<b>\$ 4,085,890</b>	<b>14.0</b>	<b>\$ 6,525,822</b>	<b>0.0</b>	<b>\$ (6,451,620)</b>		

**Total Additional Project Funds Needed**

<b>49.0 \$ 18,857,693</b>
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**Annual Savings/Revenue Adjustments**

Cost Savings	0.0	\$ -	0.0	\$ -	0.0	\$ -		
Increased Program Revenues	0.0	\$ -	0.0	\$ -	0.0	\$ -		

**Baseline Cost Details**

*IT Costs*

STAFF	SALARY	FY 2016-2017		FY 2017-2018		FY 2018-2019	
		PY	Amount	PY	Amount	PY	Amount
	\$ -	0.0	\$ -	0.0	\$ -	0.0	\$ -
	\$ -	0.0	\$ -	0.0	\$ -	0.0	\$ -
	\$ -	0.0	\$ -	0.0	\$ -	0.0	\$ -
	\$ -	0.0	\$ -	0.0	\$ -	0.0	\$ -
	\$ -	0.0	\$ -	0.0	\$ -	0.0	\$ -
<b>TOTAL</b>		<b>0.0</b>	<b>\$ -</b>	<b>0.0</b>	<b>\$ -</b>	<b>0.0</b>	<b>\$ -</b>

HARDWARE	UNIT COST	FY 2016-2017		FY 2017-2018		FY 2018-2019	
		#	Amount	#	Amount	#	Amount
	\$ -	0	\$ -	0	\$ -	0	\$ -
	\$ -	0	\$ -	0	\$ -	0	\$ -
	\$ -	0	\$ -	0	\$ -	0	\$ -
<b>TOTAL</b>			<b>\$ -</b>		<b>\$ -</b>		<b>\$ -</b>

SOFTWARE	UNIT COST	FY 2016-2017		FY 2017-2018		FY 2018-2019	
		#	Amount	#	Amount	#	Amount
	\$ -	0	\$ -	0	\$ -	0	\$ -
	\$ -	0	\$ -	0	\$ -	0	\$ -
<b>TOTAL</b>			<b>\$ -</b>		<b>\$ -</b>		<b>\$ -</b>

CONTRACT SERVICES	UNIT COST	FY 2016-2017		FY 2017-2018		FY 2018-2019	
		#	Amount	#	Amount	#	Amount
	\$ -	0	\$ -	0	\$ -	0	\$ -
	\$ -	0	\$ -	0	\$ -	0	\$ -
<b>TOTAL</b>			<b>\$ -</b>		<b>\$ -</b>		<b>\$ -</b>

DATA CENTER SERVICES	UNIT COST	FY 2016-2017		FY 2017-2018		FY 2018-2019	
		#	Amount	#	Amount	#	Amount
	\$ -	0	\$ -	0	\$ -	0	\$ -
	\$ -	0	\$ -	0	\$ -	0	\$ -
<b>TOTAL</b>			<b>\$ -</b>		<b>\$ -</b>		<b>\$ -</b>

**Baseline Cost Details**

<b>AGENCY FACILITIES</b>	<b>UNIT COST</b>	<b>FY 2016-2017</b>		<b>FY 2017-2018</b>		<b>FY 2018-2019</b>	
		<b>#</b>	<b>Amount</b>	<b>#</b>	<b>Amount</b>	<b>#</b>	<b>Amount</b>
	\$ -	0	\$ -	0	\$ -	0	\$ -
	\$ -	0	\$ -	0	\$ -	0	\$ -
<b>TOTAL</b>			<b>\$ -</b>		<b>\$ -</b>		<b>\$ -</b>

<b>OTHER</b>	<b>UNIT COST</b>	<b>FY 2016-2017</b>		<b>FY 2017-2018</b>		<b>FY 2018-2019</b>	
		<b>#</b>	<b>Amount</b>	<b>#</b>	<b>Amount</b>	<b>#</b>	<b>Amount</b>
	\$ -	0	\$ -	0	\$ -	0	\$ -
	\$ -	0	\$ -	0	\$ -	0	\$ -
<b>TOTAL</b>			<b>\$ -</b>		<b>\$ -</b>		<b>\$ -</b>

**Program Costs**

<b>STAFF</b>	<b>SALARY</b>	<b>FY 2016-2017</b>		<b>FY 2017-2018</b>		<b>FY 2018-2019</b>	
		<b>PY</b>	<b>Amount</b>	<b>PY</b>	<b>Amount</b>	<b>PY</b>	<b>Amount</b>
<b>Institutions Statewide</b>							
Vocational Instructor	\$ 85,301	283.0	\$ 24,140,183	283.0	\$ 24,140,183	283.0	\$ 24,140,183
Vocational Instructor (testing coordina	\$ 85,301	70.0	\$ 5,971,070	70.0	\$ 5,971,070	70.0	\$ 5,971,070
<b>DRP Headquarters</b>							
Associate Government Program Analy	\$ 93,630	1.1	\$ 105,334	1.1	\$ 105,334	1.1	\$ 105,334
	\$ -	0.0	\$ -	0.0	\$ -	0.0	\$ -
	\$ -	0.0	\$ -	0.0	\$ -	0.0	\$ -
<b>TOTAL</b>		<b>354.1</b>	<b>\$ 30,216,587</b>	<b>354.1</b>	<b>\$ 30,216,587</b>	<b>354.1</b>	<b>\$ 30,216,587</b>

<b>OTHER</b>	<b>UNIT COST</b>	<b>FY 2016-2017</b>		<b>FY 2017-2018</b>		<b>FY 2018-2019</b>	
		<b>#</b>	<b>Amount</b>	<b>#</b>	<b>Amount</b>	<b>#</b>	<b>Amount</b>
	\$ -	0	\$ -	0	\$ -	0	\$ -
	\$ -	0	\$ -	0	\$ -	0	\$ -
<b>TOTAL</b>			<b>\$ -</b>		<b>\$ -</b>		<b>\$ -</b>

NOTE: One time staff and Other salaries reflect the 2% raise in 2014/2015 and the 2.5% raise in 2015/2016

## Proposed Details - One Time Costs

One-time:

STAFF	SALARY	FY 2016-2017		FY 2017-2018		FY 2018-2019	
		PY	Amount	PY	Amount	PY	Amount
<b>DRP</b>							
Superintendent, Correctional Education	\$ 202,793	0.03	\$ 6,084	0.03	\$ 6,084		
Staff Service Manager II (Managerial)	\$ 119,156	0.58	\$ 69,110	0.58	\$ 69,110		
Supervisor of Vocational Instruction	\$ 128,177	0.5	\$ 64,089	0.5	\$ 64,089		
Facility Captain, Correctional Institution	\$ 168,815	0.3	\$ 50,645	0.3	\$ 50,645		
Associate Governmental Program Analyst	\$ 94,889	1	\$ 94,889	1	\$ 94,889		
Supervisor of Correctional Education	\$ 139,657	0.7	\$ 97,760	0.7	\$ 97,760		
Vocational Instructors	\$ 85,301	1.3	\$ 110,891	1.2	\$ 102,361		
<b>EIS RRSU</b>							
Systems Software Specialist II	\$ 116,354	0.0	\$ -	1.0	\$ 116,354		
Senior Information Systems Analyst	\$ 116,642	0.0	\$ -	1.0	\$ 116,642	0.0	\$ -
Staff Information Systems Analyst	\$ 107,085	1.0	\$ 107,085	2.0	\$ 214,170	0.0	\$ -
			\$ -		\$ -		
<b>EIS Institution Field Support</b>							
Staff Information Systems Analyst	\$ 107,085	1.0	\$ 107,085	3.0	\$ 321,255	0.0	\$ -
Associate Information Systems Analyst	\$ 98,768	0.0	\$ -	6.0	\$ 592,608	0.0	\$ -
Assistant Information Systems Analyst	\$ 84,595	0.0	\$ -	1.0	\$ 84,595	0.0	\$ -
			\$ -		\$ -		
<b>EIS Infrastructure</b>							
Systems Software Specialist II (Infrastructure Network)	\$ 116,354	1.0	\$ 116,354	1.0	\$ 116,354	0.0	\$ -
Systems Software Specialist II (Wireless, AP Monitoring)	\$ 116,354	1.0	\$ 116,354	1.0	\$ 116,354	0.0	\$ -
Systems Software Specialist II (Server)	\$ 116,354	1.0	\$ 116,354	1.0	\$ 116,354	0.0	\$ -
			\$ -		\$ -		
<b>ISO</b>							
Systems Software Specialist I (Auditing)	\$ 107,581	1.0	\$ 107,581	1.0	\$ 107,581	0.0	\$ -
Systems Software Specialist II (Security Monitoring)	\$ 116,354	1.0	\$ 116,354	1.0	\$ 116,354	0.0	\$ -
			\$ -		\$ -		
<b>EIS Project Support</b>							
Senior Information Systems Analyst	\$ 116,642	0.0	\$ -	1.0	\$ 116,642	0.0	\$ -
Associate Government Program Analyst/Staff Services Analyst	\$ 93,630	0.0	\$ -	1.0	\$ 93,630	0.0	\$ -
Systems Software Specialist III (PMO)	\$ 126,840	0.05	\$ 6,342	0.05	\$ 6,342		
Systems Software Specialist III (EA)	\$ 126,840	0.05	\$ 6,342	0.05	\$ 6,342		
<b>FPCM</b>							
Associate Construction Analyst	\$ 147,301	0.02	\$ 2,946	0.02	\$ 2,946		
Senior Estimator of Building Construction	\$ 111,500	0.07	\$ 7,805	0.07	\$ 7,805		
Chief of Plant Operations II Correctional Facility	\$ 101,366	0.70	\$ 70,956	0.70	\$ 70,956		
<b>TOTAL</b>		<b>12.3</b>	<b>\$ 1,375,026</b>	<b>26.2</b>	<b>\$ 2,808,222</b>	<b>0.0</b>	<b>\$ -</b>

HARDWARE	UNIT COST	FY 2016-2017		FY 2017-2018		FY 2018-2019	
		#	TOTAL	#	TOTAL	#	TOTAL
<b>Classrooms</b>							

### Proposed Details - One Time Costs

Generic AD-Capable PCs	\$ 1,200	296	\$ 355,200	0	\$ -	0	\$ -
Generic AD-Capable PCs	\$ 1,200	0	\$ -	3122	\$ 3,746,400		
Data Center Proxy Server	\$ 200,000	2	\$ 400,000	0	\$ -	0	\$ -
HP ProCurve Gigabit SC-LC Mini-GBIC	\$ 350	180	\$ 63,000	190	\$ 66,500	0	\$ -
Data Center Firewall	\$ 60,000	2	\$ 120,000	0	\$ -	0	\$ -
HP 2920-24G-POE Switch	\$ 1,500	60	\$ 90,000	50	\$ 75,000		
HP 2920-48G-POE Switch	\$ 2,500	30	\$ 75,000	45	\$ 112,500	0	\$ -
Aironet 11AC Controller APs (for classrooms)	\$ 950	110	\$ 104,500	189	\$ 179,550	0	\$ -
CISCO 5508 Series Wireless Controller w/ 12 AP licenses	\$ 7,000	35	\$ 245,000	0	\$ -	0	\$ -
Cicso Prime Infrastructure Management Console	\$ 22,700	1	\$ 22,700	0	\$ -	0	\$ -
		0	\$ -	0	\$ -	0	\$ -
<b>Shop Locations</b>							
HP 2920 24G Switch	\$ 1,200	98	\$ 117,600	188	\$ 225,600	0	\$ -
HP ProCurve Gigabit SC-LC Mini-GBIC (assuming 10 reused)	\$ 350	186	\$ 65,100	376	\$ 131,600	0	\$ -
ADA compliant equipment (27" monitor, keyboard, mouse)	\$ 852	110	\$ 93,720	189	\$ 161,028	0	\$ -
Sales Tax @ 8.5%	\$ 148,905	1	\$ 148,905	0	\$ 399,345	0	\$ -
<b>TOTAL</b>			<b>\$ 1,900,725</b>		<b>\$ 5,097,523</b>		<b>\$ -</b>

SOFTWARE	UNIT COST	FY 2016-2017		FY 2017-2018		FY 2018-2019	
		#	TOTAL	#	TOTAL	#	TOTAL
OS Upgrades for AD Capability (no sales tax)	\$ 85	296	\$ 25,160	3122	\$ 265,370	0	\$ -
MS Office Suite Std w/o Access (no sales tax)	\$ 90	296	\$ 26,640	3122	\$ 280,980	0	\$ -
MS Exchange ENT CAL (no sales tax)	\$ 133	296	\$ 39,368	3122	\$ 415,226	0	\$ -
McAfee License + 1 year support (no sales tax)	\$ 16	296	\$ 4,597	3122	\$ 48,485	0	\$ -
Ekahau Site Survey Premium Pack	\$ 5,629	1	\$ 5,629	0	\$ -	0	\$ -
Wireless Access Point Licenses (100)	\$ 19,822	2	\$ 39,644	1	\$ 19,822	0	\$ -
Jaws ADA compliant software (5 license)	\$ 2,936	22	\$ 64,592	38	\$ 111,568	0	\$ -
Solarwinds Polling Engine Software	\$ 20,000	1	\$ 20,000	0	\$ -	0	\$ -
Software Sales Tax @ 8.5%	\$ 11,039	1	\$ 11,039	1	\$ 11,168	0	\$ -
<b>TOTAL</b>			<b>\$ 236,669</b>		<b>\$ 1,152,619</b>		<b>\$ -</b>

TELECOMMUNICATIONS	UNIT COST	FY 2016-2017		FY 2017-2018		FY 2018-2019	
		#	TOTAL	#	TOTAL	#	TOTAL
<b>Wireless</b>							
IP Wireless Access Point Drops (cabling, switches, installation)	\$ 2,000	110	\$ 220,000	189	\$ 378,000	0	\$ -
<b>Shop Locations</b>							
IP Network Drops (cabling, switches)	\$ 2,000	98	\$ 196,000	188	\$ 376,000	0	\$ -

## Proposed Details - One Time Costs

<b>TOTAL</b>		\$ 416,000	\$ 754,000	\$ -
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CONTRACT SERVICES	UNIT COST	FY 2016-2017		FY 2017-2018		FY 2018-2019	
		#	TOTAL	#	TOTAL	#	TOTAL
Solution Architect	\$ 281,745	1	\$ 140,873	1	\$ 140,873	-	\$ -
Project Manager	\$ 250,000	1	\$ 250,000	1	\$ 250,000	-	\$ -
Project Oversight	\$ 9,380	12	\$ 112,560	12	\$ 112,560	-	\$ -
	\$ -	0	\$ -	0	\$ -	-	\$ -
	\$ -	0	\$ -	0	\$ -	-	\$ -
<b>TOTAL</b>			<b>\$ 503,433</b>		<b>\$ 503,433</b>		<b>\$ -</b>

DATA CENTER SERVICES	UNIT COST	FY 2016-2017		FY 2017-2018		FY 2018-2019	
		#	TOTAL	#	TOTAL	#	TOTAL
	\$ -	0	\$ -	-	\$ -	-	\$ -
	\$ -	0	\$ -	-	\$ -	-	\$ -
<b>TOTAL</b>			<b>\$ -</b>		<b>\$ -</b>		<b>\$ -</b>

AGENCY FACILITIES	UNIT COST	FY 2016-2017		FY 2017-2018		FY 2018-2019	
		#	TOTAL	#	TOTAL	#	TOTAL
Power setup**	\$ -	0	\$ -	-	\$ -	-	\$ -
	\$ -	0	\$ -	-	\$ -	-	\$ -
<b>TOTAL</b>			<b>\$ -</b>		<b>\$ -</b>		<b>\$ -</b>

OTHER	UNIT COST	FY 2016-2017		FY 2017-2018		FY 2018-2019	
		#	TOTAL	#	TOTAL	#	TOTAL
Training Wireless AP/Controller monitoring	\$ 20,000	1	\$ 20,000	0	\$ -	-	\$ -
Training Ekahau Site Survey Software	\$ 2,294	3	\$ 6,882	0	\$ -	-	\$ -
Other Sales tax 8.5%	\$ 2,285	1	\$ 2,285	-	\$ -	-	\$ -
DGS fee 1.15%		1	\$ 35,489	1	\$ 86,337	-	\$ -
Travel for switch installations	\$ 25,000	1	\$ 25,000	1	\$ 25,000	-	\$ -
<b>OE&amp;E New PY</b>							

## Proposed Details - One Time Costs

<b>EIS RRSU</b>							
Systems Software Specialist II	\$ 21,559	0.0	\$ -	1	\$ 21,559		
Senior Information Systems Analyst	\$ 22,223	0.0	\$ -	1	\$ 22,223	\$ -	
Staff Information Systems Analyst	\$ 22,223	1.0	\$ 22,223	1	\$ 22,223	\$ -	
<b>EIS Institution Field Support</b>							
Staff Information Systems Analyst	\$ 22,223	1.0	\$ 22,223	2	\$ 44,446	\$ -	
Associate Information Systems Analyst	\$ 22,223	0.0	\$ -	6	\$ 133,338	\$ -	
Assistant Information Systems Analyst	\$ 22,223	0.0	\$ -	1	\$ 22,223	\$ -	
<b>EIS Infrastructure</b>							
Systems Software Specialist II (Infrastructure Network)	\$ 21,559	1.0	\$ 21,559	0	\$ -	\$ -	
Systems Software Specialist II (Wireless, AP Monitoring)	\$ 21,559	1.0	\$ 21,559	0	\$ -	\$ -	
Systems Software Specialist II (Server)	\$ 21,559	1.0	\$ 21,559	0	\$ -	\$ -	
<b>ISO</b>							
Systems Software Specialist I (Auditing)	\$ 21,559	1.0	\$ 21,559	0	\$ -	\$ -	
Systems Software Specialist II (Security Monitoring)	\$ 21,559	1.0	\$ 21,559	0	\$ -	\$ -	
<b>EIS Project Support</b>							
Senior Information Systems Analyst	\$ 22,223	0.0	\$ -	1	\$ 22,223	\$ -	
Associate Government Program Analyst/Staff Services Analyst	\$ 13,121	0.0	\$ -	1	\$ 13,121	\$ -	
<b>TOTAL</b>			<b>\$ 241,897</b>		<b>\$ 412,693</b>	<b>\$ -</b>	

NOTE: One time staff and Other salaries reflect the 2% raise in 2014/2015 and the 2.5% raise in 2015/2016

\*\*Power setup is identified as a risk due to the fact power could not be quantified at the institution at this time. The setting up of workstations in an existing classroom could result in running more power to that room.

## Proposed Details - Continuing Costs

Continuing:

STAFF	SALARY	FY 2016-2017		FY 2017-2018		FY 2018-2019	
		PY	Amount	PY	Amount	PY	Amount
<b>EIS RRSU</b>			\$ -		\$ -		
Systems Software Specialist II	\$ 116,354	0.0	\$ -	0.0	\$ -	1.0	\$ 116,354
Senior Information Systems Analyst	\$ 116,642	0.0	\$ -	0.0	\$ -	1.0	\$ 116,642
Staff Information Systems Analyst	\$ 107,085	0.0	\$ -	0.0	\$ -	2.0	\$ 214,170
<b>EIS Institution Field Support</b>							\$ -
Staff Information Systems Analyst	\$ 107,085	0.0	\$ -	0.0	\$ -	3.0	\$ 321,255
Associate Information Systems Analyst	\$ 98,768	0.0	\$ -	0.0	\$ -	6.0	\$ 592,608
Assistant Information Systems Analyst	\$ 84,595	0.0	\$ -	0.0	\$ -	1.0	\$ 84,595
<b>EIS Infrastructure</b>							\$ -
Systems Software Specialist II (Infrastructure Network)	\$ 116,354	0.0	\$ -	0.0	\$ -	1.0	\$ 116,354
Systems Software Specialist II (Wireless, AP Monitoring)	\$ 116,354	0.0	\$ -	0.0	\$ -	1.0	\$ 116,354
Systems Software Specialist II (Server)	\$ 116,354	0.0	\$ -	0.0	\$ -	1.0	\$ 116,354
<b>ISO</b>							\$ -
Systems Software Specialist I (Auditing)	\$ 107,581	0.0	\$ -	0.0	\$ -	1.0	\$ 107,581
Systems Software Specialist II (Security Monitoring)	\$ 116,354	0.0	\$ -	0.0	\$ -	1.0	\$ 116,354
<b>EIS Project Support</b>							\$ -
Senior Information Systems Analyst	\$ 116,642	0.0	\$ -	0.0	\$ -	1.0	\$ 116,642
Associate Government Program Analyst/Staff Services Analyst	\$ 93,630	0.0	\$ -	0.0	\$ -	1.0	\$ 93,630
							\$ -
	\$ -	0.0	\$ -	0.0	\$ -	0.0	\$ -
<b>TOTAL</b>		<b>0.0</b>	<b>\$ -</b>	<b>0.0</b>	<b>\$ -</b>	<b>21.0</b>	<b>\$ 2,228,893</b>

HARDWARE	UNIT COST	FY 2016-2017		FY 2017-2018		FY 2018-2019	
		#	TOTAL	#	TOTAL	#	TOTAL
	\$ -	0	\$ -	0	\$ -	0	\$ -
Proxy Server SmartNet support	\$ 60,000	0	\$ -	2	\$ 120,000	2	\$ 120,000
Firewall support	\$ 12,000	0	\$ -	2	\$ 24,000	2	\$ 24,000
Cisco Controller SmartNet support	\$ 4,500	0	\$ -	35	\$ 157,500	35	\$ 157,500
Smartnet 11AC Wireless Access Point support	\$ 51	0	\$ -	110	\$ 5,610	299	\$ 15,249
Hardware Sales Tax @ 8.5%	\$ 26,104	0	\$ -	1	\$ 26,104	1	\$ 26,924
<b>TOTAL</b>		<b>0.0</b>	<b>\$ -</b>	<b>\$ 333,214</b>		<b>\$ 343,673</b>	

SOFTWARE	UNIT COST	FY 2016-2017		FY 2017-2018		FY 2018-2019	
		#	TOTAL	#	TOTAL	#	TOTAL

### Proposed Details - Continuing Costs

Microsoft OS Software Assurance	\$ 85	0	\$ -	296	\$ 25,160	3,418	\$ 290,530
MS Office Suite Std Software Assurance	\$ 90	0	\$ -	296	\$ 26,640	3,418	\$ 307,620
MS Exchange ENT CAL Software Assurance	\$ 133	0	\$ -	296	\$ 39,368	3,418	\$ 454,594
McAfee License + 1 year support	\$ 11	0	\$ -	296	\$ 3,123	3,418	\$ 36,060
Ekahau Site Survey Premium Pack Support	\$ 809			1	\$ 809	1	\$ 809
Adder License annual support (100 licenses)	\$ 1,950	0	\$ -	2	\$ 3,900	3	\$ 5,850
Jaws Software support (2 year) (entered into FY2018-2019 so in on-going budget.)	\$ 852	0	\$ -	22	\$ 18,744	60	\$ 51,120
SolarWinds Polling Engine Software maintenance	\$ 4,000	0	\$ -	1	\$ 4,000	1	\$ 4,000
Software Sales Tax @ 8.5%	\$ 2,334	0	\$ -	1	\$ 2,334	1	\$ 5,251
<b>TOTAL</b>			<b>\$ -</b>		<b>\$ 124,078</b>		<b>\$ 1,155,834</b>

<b>TELECOMMUNICATIONS</b>	<b>UNIT COST</b>	<b>FY 2016-2017</b>	<b>FY 2017-2018</b>	<b>FY 2018-2019</b>
		<b># TOTAL</b>	<b># TOTAL</b>	<b># TOTAL</b>
	\$ -	0 \$ -	0 \$ -	0 \$ -
	\$ -	0 \$ -	0 \$ -	0 \$ -
<b>TOTAL</b>		<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>

<b>CONTRACT SERVICES</b>	<b>UNIT COST</b>	<b>FY 2016-2017</b>	<b>FY 2017-2018</b>	<b>FY 2018-2019</b>
		<b># TOTAL</b>	<b># TOTAL</b>	<b># TOTAL</b>
	\$ -	\$ -	\$ -	\$ -
	\$ -	\$ -	\$ -	\$ -
<b>TOTAL</b>		<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>

<b>DATA CENTER SERVICES</b>	<b>UNIT COST</b>	<b>FY 2016-2017</b>	<b>FY 2017-2018</b>	<b>FY 2018-2019</b>
		<b># TOTAL</b>	<b># TOTAL</b>	<b># TOTAL</b>
	\$ -	\$ -	\$ -	\$ -
	\$ -	\$ -	\$ -	\$ -
<b>TOTAL</b>		<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>

<b>AGENCY FACILITIES</b>	<b>UNIT COST</b>	<b>FY 2016-2017</b>	<b>FY 2017-2018</b>	<b>FY 2018-2019</b>
		<b># TOTAL</b>	<b># TOTAL</b>	<b># TOTAL</b>

**Proposed Details - Continuing Costs**

	\$ -	\$ -	\$ -	\$ -
	\$ -	\$ -	\$ -	\$ -
<b>TOTAL</b>		<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>

OTHER	UNIT COST	FY	2016-2017	FY	2017-2018	FY	2018-2019
		#	TOTAL	#	TOTAL	#	TOTAL
DGS fee 1.15%	\$0			1	\$ 5,259	1	\$ 17,244
<b>Continuing OE&amp;E New PY</b>	\$ -		\$ -		\$ -		\$ -
<b>EIS RRSU</b>							
Systems Software Specialist II	\$ 20,169	0.0	\$ -	0.0	\$ -	1.0	\$ 20,169
Senior Information Systems Analyst	\$ 20,169	0.0	\$ -	0.0	\$ -	1.0	\$ 20,169
Staff Information Systems Analyst	\$ 20,169	0.0	\$ -	0.0	\$ -	2.0	\$ 40,338
<b>EIS Institution Field Support</b>		0.0		0.0			
Staff Information Systems Analyst	\$ 20,169	0.0	\$ -	0.0	\$ -	3.0	\$ 60,507
Associate Information Systems Analyst	\$ 20,169	0.0	\$ -	0.0	\$ -	6.0	\$ 121,014
Assistant Information Systems Analyst	\$ 20,169	0.0	\$ -	0.0	\$ -	1.0	\$ 20,169
<b>EIS Infrastructure</b>		0.0		0.0			
Systems Software Specialist II (Infrastructure Network)	\$ 20,169	0.0	\$ -	0.0	\$ -	1.0	\$ 20,169
Systems Software Specialist II (Wireless, AP Monitoring)	\$ 20,169	0.0	\$ -	0.0	\$ -	1.0	\$ 20,169
Systems Software Specialist II (Server)	\$ 20,169	0.0	\$ -	0.0	\$ -	1.0	\$ 20,169
<b>ISO</b>		0.0		0.0			
Systems Software Specialist I (Auditing)	\$ 20,169	0.0	\$ -	0.0	\$ -	1.0	\$ 20,169
Systems Software Specialist II (Security Monitoring)	\$ 20,169	0.0	\$ -	0.0	\$ -	1.0	\$ 20,169
<b>EIS Project Support</b>				0.0			
Senior Information Systems Analyst	\$ 20,169	0.0	\$ -	0.0	\$ -	1.0	\$ 20,169
Associate Government Program Analyst/Staff Services Analyst	\$ 11,067	0.0	\$ -	0.0	\$ -	1.0	\$ 11,067
<b>TOTAL</b>			<b>\$ -</b>		<b>\$ 5,259</b>		<b>\$ 431,691</b>

NOTE: Continuing staff and Other salaries reflect the 2% raise in 2014/2015 and the 2.5% raise in 2015/2016

**Proposed Details - Continuing Existing Costs**

**IT Costs**

STAFF	SALARY	FY 2016-2017		FY 2017-2018		FY 2018-2019	
		PY	Amount	PY	Amount	PY	Amount
	\$ -	0.0	\$ -	0.0	\$ -	0.0	\$ -
	\$ -	0.0	\$ -	0.0	\$ -	0.0	\$ -
	\$ -	0.0	\$ -	0.0	\$ -	0.0	\$ -
	\$ -	0.0	\$ -	0.0	\$ -	0.0	\$ -
	\$ -	0.0	\$ -	0.0	\$ -	0.0	\$ -
	\$ -	0.0	\$ -	0.0	\$ -	0.0	\$ -
	\$ -	0.0	\$ -	0.0	\$ -	0.0	\$ -
	\$ -	0.0	\$ -	0.0	\$ -	0.0	\$ -
	\$ -	0.0	\$ -	0.0	\$ -	0.0	\$ -
<b>TOTAL</b>		<b>0.0</b>	<b>\$ -</b>	<b>0.0</b>	<b>\$ -</b>	<b>0.0</b>	<b>\$ -</b>

HARDWARE	UNIT COST	FY 2016-2017		FY 2017-2018		FY 2018-2019	
		#	Amount	#	Amount	#	Amount
	\$ -	0	\$ -	0	\$ -	0	\$ -
	\$ -	0	\$ -	0	\$ -	0	\$ -
	\$ -	0	\$ -	0	\$ -	0	\$ -
	\$ -	0	\$ -	0	\$ -	0	\$ -
	\$ -	0	\$ -	0	\$ -	0	\$ -
	\$ -	0	\$ -	0	\$ -	0	\$ -
	\$ -	0	\$ -	0	\$ -	0	\$ -
	\$ -	0	\$ -	0	\$ -	0	\$ -
<b>TOTAL</b>			<b>\$ -</b>		<b>\$ -</b>		<b>\$ -</b>

SOFTWARE	UNIT COST	FY 2016-2017		FY 2017-2018		FY 2018-2019	
		#	Amount	#	Amount	#	Amount
	\$ -	0	\$ -	0	\$ -	0	\$ -
	\$ -	0	\$ -	0	\$ -	0	\$ -
	\$ -	0	\$ -	0	\$ -	0	\$ -
<b>TOTAL</b>			<b>\$ -</b>		<b>\$ -</b>		<b>\$ -</b>

CONTRACT SERVICES	UNIT COST	FY 2016-2017		FY 2017-2018		FY 2018-2019	
		#	Amount	#	Amount	#	Amount
	\$ -	0	\$ -	0	\$ -	0	\$ -
	\$ -	0	\$ -	0	\$ -	0	\$ -

**Proposed Details - Continuing Existing Costs**

<b>TOTAL</b>		\$	-	\$	-	\$	-
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DATA CENTER SERVICES	UNIT COST	FY	2016-2017	FY	2017-2018	FY	2018-2019
		#	Amount	#	Amount	#	Amount
	\$ -	0	\$ -	0	\$ -	0	\$ -
	\$ -	0	\$ -	0	\$ -	0	\$ -
<b>TOTAL</b>			\$ -		\$ -		\$ -

AGENCY FACILITIES	UNIT COST	FY	2016-2017	FY	2017-2018	FY	2018-2019
		#	Amount	#	Amount	#	Amount
	\$ -	0	\$ -	0	\$ -	0	\$ -
	\$ -	0	\$ -	0	\$ -	0	\$ -
<b>TOTAL</b>			\$ -		\$ -		\$ -

OTHER	UNIT COST	FY	2016-2017	FY	2017-2018	FY	2018-2019
		#	Amount	#	Amount	#	Amount
	\$ -	0	\$ -	0	\$ -	0	\$ -
	\$ -	0	\$ -	0	\$ -	0	\$ -
<b>TOTAL</b>			\$ -		\$ -		\$ -

**Program Costs**

STAFF	SALARY	FY	2016-2017	FY	2017-2018	FY	2018-2019
		PY	Amount	PY	Amount	PY	Amount
<i>Current Process</i>							
<b>Institutions Statewide</b>							
Vocational Instructor	\$ 85,301	283.0	\$ 24,140,183	141.5	\$ 12,070,092	0.0	\$ -
Vocational Instructor (testing coordina	\$ 85,301	70.0	\$ 5,971,070	35.0	\$ 2,985,535	0.0	\$ -
<b>DRP Headquarters</b>							
Associate Government Program Analy	\$ 93,630	1.1	\$ 105,334	0.6	\$ 52,667	0.0	\$ -
	\$ -	0.0	\$ -	0.0	\$ -	0.0	\$ -
<i>New Process</i>							
<b>Institutions Statewide</b>							
Vocational Instructor	\$ 85,301	0.0	\$ -	141.5	\$ 12,070,092	283.0	\$ 24,140,183
Vocational Instructor (testing coordina	\$ 85,301	0.0	\$ -	35.0	\$ 2,985,535	70.0	\$ 5,971,070
<b>DRP Headquarters</b>							
Associate Government Program Analy	\$ 93,630	0.0	\$ -	0.6	\$ 52,667	1.1	\$ 105,334

**Proposed Details - Continuing Existing Costs**

<b>TOTAL</b>		354.1	\$ 30,216,587	354.1	\$ 30,216,587	354.1	\$ 30,216,587
<b>OTHER</b>	<b>UNIT COST</b>	<b>FY</b>	<b>2016-2017</b>	<b>FY</b>	<b>2017-2018</b>	<b>FY</b>	<b>2018-2019</b>
		#	Amount	#	Amount	#	Amount
	\$ -		\$ -		\$ -		\$ -
	\$ -		\$ -		\$ -		\$ -
<b>TOTAL</b>			<b>\$ -</b>		<b>\$ -</b>		<b>\$ -</b>

## 9 BUSINESS FUNCTIONAL REQUIREMENTS

In order to meet the business objectives, the proposed solution must meet the following functional requirements described below:

- a. **The solution must increase access to a broader selection of online technical education and certification media (audio, text, videos, graphics, software tools, references, etc.).** The Internet-capable network needs to provide a broader access to education, certifications and references online for the inmate.
- b. **The solution must improve the certification testing and turnaround time for receipt of certification.** The Internet-capable network needs to provide instantaneous testing results. Inmates who take the certification exams online will know immediately if they pass or fail. The current process can take up to three months.
- c. **The solution must increase the number of certification exams that can be taken.** The Internet-capable network to provide availability of exams during normal career technical classroom hours. Testing coordinators (instructors) can spend more time giving online certification exams and spend less time handling the paperwork needed to proctor, process and mail the paper-based exams to the provider site administrator. More exams equates to more inmates achieving their technical certifications.
- d. **The solution must allow all program related workshop devices (i.e., smog equipment, etc.) to connect to the controlled inmate online network**
- e. **The solution must be available for coursework and certification exams.** The Internet-capable network needs to be available during normal career technical classroom hours.
- f. **The solution must be network secure.** The Internet-capable network needs to have proper security standards in place in alignment with CDCR security policies and procedures in order to prevent unauthorized access of Internet sites by inmates.
- g. **The solution must be scalable.** The Internet-capable network must be scalable to accommodate additional technology.
- h. **The solution must have identified Service Level Agreements.** The Internet-capable solution must have a support structure identifying the escalation process, acceptable downtime, and help desk support.
- i. **The solution must be physically secure.** The Internet-capable solution must provide a secure physical environment for network equipment, wireless access points (WAPs), cabling and related infrastructure environment. Support inmate access to testing sites from the institution.
- j. **The solution must be able to provide mock scenarios to demonstrate real life applicability to reinforce career technical curriculum.**

## **APPENDIX A – STAGE 1 BUSINESS ANALYSIS**

Please see attached S1BA document.



# Stage 1 Business Analysis

## General Information

Agency or State Entity Name:

Corrections and Rehabilitation, Department of

Organization Code:

5225

Name of Proposal:

Career Technical Education (CTE) Media Evolution

Proposed Start Date:

July, 2016

Department of Technology Project Number:

5225-162

## Submittal Information

Submission Date:

11/7/2014

Contact First Name:

Patricia A.

Contact Last Name:

Rogers

Contact email:

PARogers4@cdcr.ca.gov

Contact Phone:

(916) 956-4686

## Business Sponsor and Key Stakeholders

### Executive Sponsors

Title	First Name	Last Name	Business Program Area
Director	Millicent	Tidwell	Division of Rehabilitative Programs

### Business Owners

Title	First Name	Last Name	Business Program Area
Superintendent (HQ)	Brantley	Choate	Office of Correctional Education

### Key Stakeholders

Title	First Name	Last Name	Business Program Area/Group	External
Associate Superintendent	Janet	Blaylock	Office of Correctional Education/Career Technical Education (CTE)	<input type="checkbox"/>
Director	Russell	Nichols	Enterprise Information Services	<input type="checkbox"/>
Data Processing Manager IV	Scott	MacDonald	Enterprise Information Services	<input type="checkbox"/>
Deputy Director	Devin	Holmes	Enterprise Information Services	<input type="checkbox"/>
Data Processing Manager IV	Elbert	Lawrence	Enterprise Information Services	<input type="checkbox"/>
Multiple	Multiple	Multiple	CTE Training and Certification Vendors	<input checked="" type="checkbox"/>

# Business Analysis

## 1.1 Business Drivers

- Financial Benefit:**  Increased Revenues  
 Cost Savings  
 Cost Avoidance
- Mandate(s):**  State  
 Federal
- Improvement:**  Better services to citizens  
 Efficiencies to program operations  
 Technology refresh

## 1.2 Statutes or Legislation

- Statutes or Legislation:**  New statutes or potential legislation  Not Applicable  
 Changes to existing legislation

**Bill Number:** Chapter 784, Statutes of 2014 (AB 494)

**Legal Code:** California Penal Code 2053.1, 2053.4 and 2053.5

**Additional Information:** Chapter 789, Statutes of 2013 (AB 1019)

Legislation revises both aforementioned Penal Code Sections to address the California Corrections Blueprint.

This proposal supports the directives from Assembly Bills (AB) 494 and AB 1019.

AB 494 amended Section 2053.1 to ensure that upon parole inmates are able to achieve specific literacy goals. Penal Code Section 2053.1 (b) states, "In complying with the requirements of this section, the department shall give strong consideration to computer-assisted training and other innovations that have proven to be effective in reducing illiteracy amongst disadvantaged adults".

AB 1019 amended Section 2053.4 of the California Penal Code directing literacy, academic and related programs for offenders to meet specific goals set by the Superintendent of Correctional Education in fields being trained and the availability of employment in those fields.

AB 1019 added Penal Code 2053.5 addresses Career Technical Education (CTE) that requires CTE to align with workforce needs, job market demand, marketable and industry or apprenticeship requirements, including recognized certification, credential, or degree.

## 1.3 Program Background and Context

- Provide a succinct description of the business program(s) impacted by the problem/opportunity. The description must include the programs' function, strategic goals, and service objectives.

**Answer:**

The California Department of Corrections and Rehabilitation (CDCR) through the Division Rehabilitative Programs (DRP), Office of Correctional Education (OCE), Career Technical Education (CTE) and the Training and Certification Testing (TCT) is responsible for providing incarcerated students with the opportunity to acquire employment-ready

skills aligned to career pathways that provide a livable wage in the California economy.

Program Strategic Goals are to prepare the CTE student with the required skills to obtain full employment upon release, and to reduce their recidivism.

Program Service Objectives are to provide industry recognized certifications to all 19 program areas and the enrolled student population (FY2014-15 = 8,450) leading to:

- Full employment on release
- Subsequent continuing education in their chosen career path
- Continued retention in their community
- *For each internal stakeholder, provide their business description and how they interact with your program.*

**Answer:**

- Office of Correctional Education/Career Technical Education (CTE): CTE programs are the most popular training programs offered by DRP. With each completed course and certification, CTE helps students achieve CTE Milestone Credits and enter career pathways that sustain their employment. CTE course instructors (or teachers) currently use a variety of instructional methods to provide training to CTE students to include PowerPoint presentations, CD and DVD software and references, and hard copy text. However, the CTE industry trend for instructional materials and student certifications has been moving to digital-network-based (e.g., Internet, intranet) content. CDCR represents only a small portion of the CTE market, so is not likely to influence the CTE industry to consider or address prison-specific CTE requirements. Thus, the CTE material used by CDCR will increasingly be available only through this digital-network media. This means that offender participation in training and certification are in jeopardy of declining in the near future if adaptation into this trending media solution is not provided.
- Enterprise Information Services: EIS will need to provide the workstations and controlled Internet by which the CTE inmate students will access the evolving CTE media. Enterprise Information Services (EIS) is responsible for the development and support of all enterprise-wide information technology solutions.

- *For each external stakeholder, provide their business description and how they interact with your program.*

**Answer:**

CTE Training and Certification Vendors: Over 19 commercial vendors who provide the CDCR CTE Training and Certification material are moving their information content onto digital-network media (e.g., Internet, organizational intranet, local area network). Some of these vendors are no longer producing the physical media that has previously been used by CDCR to provide this rehabilitative service to offenders. More vendors have committed themselves to follow this digital-networked-media trend. If CDCR cannot use the online media provided by the vendors, those vendors will lose a measurable amount of business

## 1.4 Business Problem or Opportunity Summary

*Provide a narrative summary of the problems and/or opportunities by addressing the following:*

- *What are the problems and/or opportunities that this proposal will address?*

**Answer:**

CTE needs to move from training media in CD, DVD, paper product, and desktop-installed-software formats, to digital-network-based technical education and certification media (audio, text, tables, simulations, videos, graphics, drawings, software tools, references, etc.) to include updated CTE classroom and shop workstations, infrastructure, and security policies that will allow student learning and certification that meets today's employment requirements. These workstations must be also appropriately and securely networked to administer and maintain vendor provided web-based courses and testing software.

- *How were the problems and/or opportunities identified (e.g. logs/reports, deficiencies, backorders,*

*assessment of penalties, excessive overtime costs, statutes or legislation, etc...)?*

**Answer:**

Some CTE TCT became inaccessible to offenders because the vendors migrated to only providing the training and certification material in a digital-network format (e.g., offline via cache/proxy server, online over the Internet), to which CDCR has not yet provided access.

- *What created the problems and/or opportunities?*

**Answer:**

To fulfill their internal strategies, CTE vendors have increasingly migrated their products' technology base to a digital-network media types, currently inaccessible to CDCR institutions and offenders.

- *What is the magnitude of the problems and/or opportunities?*

**Answer:**

CTE currently provides 19 CTE program areas, taught as 283 CTE courses (or programs) in 36 CDCR institutions, to over 8,450 students. The 283 CTE classrooms are where the CTE instructors, each with a networked computer workstation, provide or supervise training and testing with written, form-based, audio, and video material. The CTE 283 shops, with 3,418 non-networked computer workstations, are where the students practice and demonstrate their learning, and produce the physical products needed as proof of learning and skill for some of the certification tests. For each CTE program area, course and vendor product migrated to being only accessible as digital-network media, the State will lose a rehabilitation pathway for multiple offenders seeking that education at multiple state correctional facilities. Now, 3,418 new classroom computer and shop workstations, with monitored and controlled CTE vendor Internet site access, are needed by CDCR to continue to provide CTE training and certification testing as the vendor media evolves.

- *How do each of the business drivers selected in Section 1.1 relate to the problems and/or opportunities?*

**Answer:**

California Senate Bill 1019 with amendment to Penal Code 2053.4 and addition of Penal Code 2053.5 requires CDCR to provide the pathways for offenders to gain industry certifications aligned to workplace employment. This is also specified in the CDCR Governor's blueprint.

The Three Judge Panel (3JP) and the US Federal Carl Perkins Act drive CA and thus CDCR to provide CTE capabilities to offenders where the CTE is aligned to the labor market needs.

The CTE "Open Entry, Open Exit" is a facilitated, more effective, and more efficient education process, and utilizes the singular teacher resource in each CTE program more efficiently.

CDCR must replace logistically-burdened physical media with more adaptable, supportable, and expandable digital-networked media capability to continue partnering with vendors.

- *Why is this proposal important to consider at this time?*

**Answer:**

Without the newly requested 3,418 classrooms and shop controlled-network workstations for offender CTE training and certification, there is a risk of losing the rehabilitative education pathways for offenders. This reduces the probability of the offender's successful reintegration into society and increases the probability of that offender's recidivism. CTE needs to move to a digital-network-based technical education and certification system to include updated workstations, infrastructure, and security policies that will allow student learning and certification that meets today's employment requirements. These workstations must be also appropriately and securely networked to administer and maintain vendor provided web-based courses and testing software. An estimate of the classroom and shop workstation count is shown in the table below, with a typical CTE Course Facility layout shown in the diagram below.

Program Areas	Classroom Workstation Requirements	Shop Computer Workstation Requirements (Only Internal Access to Shop)

			<b>Equipment, with Loading by Instructor) (2 shops per course)</b>
1	<b>Auto Body</b>	5	6
2	<b>Auto Mechanics</b>	5	2
3	<b>Building Maintenance (Construction Tech)</b>	5	2
4	<b>Carpentry</b>	5	2
5	<b>Computer Literacy (New October 12/13)</b>	32	0
6	<b>Cosmetology/Manicuring</b>	5	2
7	<b>Drywall</b>	5	2
8	<b>Electronics (Network Cabling)</b>	5	2
9	<b>Electrical</b>	5	2
10	<b>HVAC</b>	5	2
11	<b>Industrial Painting</b>	5	2
12	<b>Machine Shop</b>	10	8
13	<b>Masonry</b>	5	2
14	<b>Roofing</b>	5	2
15	<b>Office Services and Related Tech (OSRT)</b>	32	0
16	<b>Plumbing</b>	5	2
17	<b>Sheet Metal</b>	5	4
18	<b>Small Engine Repair</b>	5	2
19	<b>Welding</b>	5	4

CTE FY14 Budget: 283 Vocational Programs across 19 Program Areas.

- 8,450 estimated students X \$1,500 average student cost for training materials, training media, and certification fees.
- Approximately \$13 million per year (including \$4.7 million in certification costs) for CTE courses.
- Does not include teacher costs
- 283 classrooms with 283 teacher workstations now operational, each under two years old, each with Internet access.
- 3,418 student workstations are now operational in the CTE shops, each under two years old, none with networking capability, many with connections to shop-specific equipment.  
3,418 student workstations and IT course shop workstations are needed in the 283 classrooms, to enable controlled and monitored student access to Internet-only CTE training and certification testing material.

Of the 19 program areas, the CTE classrooms will need computers having controlled access to pre-defined CTE vendor sites on the Internet. Most of the CTE shops will need one or more computers with the ability to accept the transfer of CTE material from the instructor's computer and thus provide software control of shop machines, and to access shop software applications and references corresponding to the type of work in each CTE program area.

Within the CTE classrooms, the following type of CTE media must be available from the CTE vendors:

- Text book and instructional resource sites (student and teacher vendor resource center portals).
- Equipment manufacture instruction portals (e.g., CNC Mill MFG, Auto Mechanics Alignment MFG – Hunter).
- Industry data software resources (e.g., ALLDATA, and Audatex) that are industry standard software packages used for shop management, estimates, work orders and etc.
- Industry Association such as AWS, ASE
- For these courses the vendor-provided help must be turned off to prevent inmate communication. All inmate request for help will be directed to the instructor who will inquire with the vendor.

- Change CDCR policy to allow for cursory/intermittent supervision (rather than full time, continuous supervision) of CTE students who are using approved controlled-access computers, software, and Internet/intranet resources located in CTE course’s shop and classroom areas.

All 19 program areas must have the capability for the instructor to monitor and control the instructor-approved information transfer from classroom computers to shop computers and equipment or other offender computer workstation. This will currently be needed in the following programs.

- Machine shop, welding, sheet metal (CNC auto CAD) programs from classroom to equipment.

Recommend developing all CTE course locations to have this classroom to shop information transfer capability to meet anticipated future CTE vendor program offerings in the evolving media types of the CTE industry.

Note: A pilot program, e.g., to reinstate the inactive Auto Body and Auto Mechanic CTE Training and Certification Program areas, will provide sufficient proof of this CTE media evolution concept, followed by scheduled regional roll outs across the remaining 17 CTE program areas as they finalize their migration to Internet-only media.

- *How do the statutes or mandates identified in Section 1.2 impact your program?*

**Answer:**

The senate bill and penal code changes mentioned above drive CDCR to provide quantifiable performance in CTE for offenders aligned to workspace requirements.

The changes in these industry practices will make the essential legal and performance achievements in the CTE programs impossible to reach, unless DRP becomes more digitally capable in the prison environments.

- *Describe the impact of not executing this proposal for each of the impacted business areas. Include any potential financial penalties.*

**Answer:**

The impact on CTE is that the industry standard certifications will not be available or offered, negating compliance with the Federal Grant (US Carl Perkins Act) and State laws (PC 2053.4 and 2053.5), in addition, CTE training vendors CTE certification testing vendors will lose CDCR as their customer.

As a part of Enterprise Information Services (EIS), the Information Security Office is responsible for protecting the California Department of Corrections Rehabilitation's information technology assets and data from unauthorized access, modification, destruction, or disclosure, and ensuring the physical security of these resources. The ISO ensures the Agency's compliance with information security policies and procedures for maintaining confidentiality, availability, and integrity (Info Sec CIA Triad) of all CDCR information assets, including this proposal.

**1.5 Business Problems or Opportunities and Objectives Table**

ID	Problems and Opportunities
1.0	<p><i>For each problem identified in section 1.4, individually list the business drivers identified in Section 1.1 followed by the problem or opportunity that aligns to this driver and describe how the problem/opportunity impacts the business program(s).</i></p> <p><b>Answer:</b></p> <p>State and Federal Mandates, Efficiencies to Program Operations, Better Services to Citizens, and Technology Refresh: Technical education and certification material is trending towards digital online forms (e.g., web-based) rather than physical media (e.g., CD, DVD, paper). This trend drives CTE, within the context of the larger DRP and then OCE, to evolve its CTE and instructional methods to continue to address reduction of prison population as a result of recidivism. These new methods can then sustain the current population of technical education students, while providing new capabilities and capacities to scale to a potentially larger</p>

student population, and thus to reduced inclination to recidivate.

**ID Objective**

1.1 *Description the specific result the program aims to achieve which can correct or address the defined business problem. Ensure the description is: Specific, Measurable, Achievable, Realistic and Time Bound (SMART).*

**Answer:**

Upgrade 90% of CTE training and certification testing to digital-network-based media technology by June 30, 2018.

Metric	Baseline	Target	Measurement Method
Percentage of certification courses evolved to only digital-network media, for which CDCR provides access	Current digital-network course training and certification testing is (0) % accessible to CDCR offender students	90% of CDCR-subscribed digital-network media CTE courses	Quarterly count of CDCR CTE courses that are only available as digital-network media

**ID Objective**

1.2 Increase number of online certified inmates by 40% by December 2018.

Metric	Baseline	Target	Measurement Method
Count of online certified inmates within 24 months before being released	0 inmate online certifications	3,300 inmate online certifications	SOMS reporting of certifications

**ID Objective**

1.3 There will be a 10% Incremental increase of online inmate certifications each quarter after 6 months of implementation.

Metric	Baseline	Target	Measurement Method
Percentage of inmate online certifications	40% inmate online certifications	100% inmate online certifications	SOMS reporting of certifications

**ID Problems and Opportunities**

2.0 Efficiencies to program operations: There are Certification programs that are still using the paper based method for certification testing. The paper based method involves provider site administrators manually grading and processing the exams which causes processing delays in completing and issuance of certifications. The manual processing can take more than 3 months impacting inmates earning Milestone Credits and potentially an earlier release.

Per CalTech request on 8/7/2015, this business problem has been added to align with FSR Section 4.0, Current Method.

**ID Objective**

2.1 Reduce the amount of time to wait for certification results within 1 business day by December 2018.

Metric	Baseline	Target	Measurement Method

25% of CDCR CTE program certifications administered online where available	3 months	within 1 business day	Certification results received
----------------------------------------------------------------------------	----------	-----------------------	--------------------------------

**ID Objective**

2.2 Increase receipt of certification results for offenders by December 2018.

Metric	Baseline	Target	Measurement Method
Increase inmate certification receipt rate	approximately 65%	100%	Certification results received

### 1.6 Strategic Business Alignment

Strategic Business Goals	Alignment
<p>Identify the business goals from the Agency/Department Strategic Plan and/or Blueprint associated with this proposal.</p> <p>Answer: CDCR IT Strategic Plan - Goal 2: Ensure Availability of IT Infrastructure and Systems</p>	<p>Describe how this proposal helps to achieve each goal.</p> <p>Answer: The infrastructure and platforms needed to accomplish the DRP/OCE/CTE education and certification mission need to be evolved to prevent their mission degradation and eventual failure, thus having a significantly negative impact on offender success in CTE certification, employment after release, and potential recidivism due to unsuccessful adjustments to freedom.</p>
<p>CDCR IT Strategic Plan - Goal 1: Manage IT as an Enterprise Asset to Improve the Delivery of Service to Customers</p>	<p>With those offenders seeking CTE certifications as both DRP and EIS customers, adapting the CDCR IT Assets to this new educational and certification media will fully support this goal.</p>
<p>CDCR Strategic Plan - Goal 2: Model correctional leadership</p>	<p>To be recognized as a leader in correctional and rehabilitative leadership, CDCR must provide CTE education and certification capabilities to help enable highly successful rehabilitation of offenders.</p>
<p>CDCR Strategic Plan - Goal 3: Employ best practices in correctional custody, care, and rehabilitation</p>	<p>Adapting to instructional and certification technology evolution demonstrates best practice in rehabilitation.</p>



## Gate 1 Business Analysis Criteria Scorecard

### ITPOC Administrative Evaluation

#### Submittal Completeness

- General Information
- Business Sponsor and Key Stakeholders
- 1.1 Business Drivers
- 1.3 Program Background and Context
- 1.4 Business Problem or Opportunity Summary
- 1.5 Business Problem or Opportunity and Objectives Table

1.2 Statutes or Legislation

1.6 Strategic Business Alignment

**Comments**

Chapter 784, Statutes of 2014 (AB 494)

## ITPOC Content Evaluation

### 1.3 Program Background & Context

### Assessment

Have all business programs impacted by this proposal been identified?

- Meets Requirements  
 Deficiencies

Has an overview of each impacted business program area been provided?

- Meets Requirements  
 Deficiencies

### 1.4 Business Problem or Opportunity Summary

### Assessment

How well has the business need, issue or problem that this proposal will address been defined?

- Meets Requirements  
 Deficiencies

How well has the importance of this project been described, including why the proposal is being considered at this time?

- Meets Requirements  
 Deficiencies

Have the effects and/or impact of the statutes or mandates been identified? (if applicable)

- Meets Requirements  
 Deficiencies

Has the business impact of not executing the proposal been described?

- Meets Requirements  
 Deficiencies

Have information security and/or privacy considerations been described, such as confidentiality, integrity and availability?

- Meets Requirements  
 Deficiencies

### 1.5 Business Problem or Opportunity and Objectives Table

### Assessment

Have the individual problems and opportunities that are expected to be met by this proposal been identified?

- Meets Requirements  
 Deficiencies

Have expected short-term and long-term objectives been identified? Is there one objective for each business problem or opportunity? Are they specific, measurable and realistic?

- Meets Requirements  
 Deficiencies

Have measurements for each objective been identified? Will the measurements adequately provide the data necessary to determine if the objectives have been met?

- Meets Requirements
- Deficiencies

### 1.6 Strategic Business Alignment

### Assessment

Has an adequate description of how the proposal will help to achieve the strategic goals been provided?

- Meets Requirements
- Deficiencies

## Critical Partner Evaluation

### Enterprise Architecture

Yes

Can the Business Problem or Opportunity and Objectives be validated against the Business Strategy for alignment?

No comments

Is the proposal in accordance with the organization's target (future state) enterprise architecture and enterprise roadmap (if these artifacts are available)?

Are there any reference architectures, reusable assets, and/or shared business services in existing state-wide standards and guidance that can be included in Stage 2 Alternatives Analysis?

### IT Project Oversight and Consulting Division

Yes

Does the organization have capacity to take on more projects during the proposed time period of project initiation?

No. CDCR has 2 major projects going on currently SOMS and EHRS. In addition they have presented 11 S1BAs this year, some of which starts around the same timeframe as this one. More details will be needed on resources from CDCR in S2AA of the life cycle.

Does the organization and project management infrastructure have (or appear to have) experience with similar projects and a demonstrated capability of delivering the project successfully?

Does the proposal provide any opportunity for leveraging other existing initiatives or services in state?

What, if any, issues and/or risks do you see that would affect the Stage 2 Alternative Analysis?

Identify which of the following goals of the California IT Strategic Plan align with this proposal. Select all that

apply:

- Accessible and Mobile Government
- Information is an Asset
- Leadership and Collaboration Yield Results
- Capable Information Technology Workforce
- Efficient, Consolidated, and Reliable Infrastructure and Services

### California Information Security Office

Yes

Are there any privacy or confidentiality laws or regulations which will require a Privacy Impact Assessment?

No comments

Have any information security and or privacy program requirements (SAM Section 5100, and SAM Chapter 5300) not been addressed, or require significant program remediation?

### Customer Delivery Division

Yes

Is there any opportunity to leverage Data Center Services?

No comments

### Office of Geospatial Information Systems

Yes

Is there any opportunity to leverage Geospatial Information Systems?

No comments

Is there an opportunity to leverage existing GIS infrastructure and services?

## Gate 1 Exit Criteria

Criteria

Comment

Enterprise Architecture has reviewed

No comments or concerns

IT Project Oversight and Consulting Division has reviewed and approved

California Information Security Office has reviewed

No comments or concerns

Customer Delivery Division has reviewed

No comments or concerns

Office of Geospatial Information Systems has

reviewed

No comments or concerns

Business Analysis deliverable is acceptable



Approval of the proposal(based on what is known at this stage) is highly probable



## California Department of Technology Decision

### Assessment

- Approved       Not Approved  
 Approved with conditions       Withdrawn

### Explanation

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