

I. Project Identification

Project Title: **Connecticut's Early Childhood Information System and Quality Rating and Improvement System**

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Participating Agencies

Office of Policy and Management, State Department of Education, Department of Public Health, Department of Developmental Services, Department of Social Services, and Board of Regents

Agency Name: **State Department of Education**

Agency Business Unit: **Office of Early Childhood (proposed new agency linked to SDE for Administrative Purposes Only)**

Title:	Full Name:	Telephone:	Email Address:
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II. Project Details

A. Proposed Dates

Enter the date as shown in this example:

Proposed Start Date:

Early Childhood Information System Transactional	07/01/2013
Early Childhood Information System Data Warehouse	01/01/2015
Quality Rating Improvement System	01/01/2016

Expected Completion Date:

Early Childhood Information System Transactional	01/01/2015
Early Childhood Information System Data Warehouse	06/01/2016
Quality Rating Improvement System	06/01/2017

Duration (in months):

Early Childhood Information System Transactional	18 Months
Early Childhood Information System Data Warehouse	18 Months
Quality Rating Improvement System	12 Months

B. Project Description:

Project Name and a Short Description:

Early Childhood Information System (ECIS): Quality Rating Improvement System (QRIS)

To meet PA 11-181, two distinct information systems need to be built: an Early Childhood Information System (ECIS) and a Quality Rating and Improvement System (QRIS). The ECIS is a transactional data system used for child case management and informing policy. The QRIS is used to track early care and education program- and provider-level data, as well as to inform the public about the quality of available early care and education programs.

C. Summary

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

Connecticut currently lacks a coherent early childhood system in which one entity has clear authority over early childhood policy, budget, and data collection and management. In 2010 the legislature enacted Public Act 11-181 in recognition of Connecticut’s desperate need for a comprehensive early childhood system. As a result of PA 11-181, the Early Childhood Planning Team emerged with the charge to plan for an ECIS and a QRIS.

First, Connecticut needs a centralized mechanism for collecting and managing early childhood data. Since early childhood services are distributed across multiple state agencies, early childhood data is also housed in multiple agencies. Moreover, early childhood data is often inaccessible due to antiquated

data systems and a lack of transparency. As a result, on the rare occasion that interagency data sharing occurs, it is a challenge. Children receive multiple services, including early care and education, health, mental health, and home visiting from the state. Yet because the state has no coordinated system of identifying which children are receiving services, there is no way to assess the effectiveness of said services. Moreover, because early childhood data is not linked to the K-12 data system, the state can neither accurately conduct longitudinal analyses of early care and education programs nor monitor student progress. In short, the state cannot make informed and effective policy, hindering its ability to improve the lives of young children and their families.

Second, Connecticut needs to join the majority of states that have a QRIS. A QRIS would enable parents to assess and providers to improve the quality of center-based and home-based early care and education. Currently, the only way for parents to determine the quality of the care their children receive outside of the home is through word of mouth. Parents yearn for a more objective way to evaluate the quality of options available to them.

Early Childhood Information System (ECIS):

The Early Childhood Information System or ECIS will include two components: a Transactional System and a Data Warehouse.

The Transactional System will be a new base application for all Early Childhood case management functions. State contractors will develop a fully customized system using state-of-the-art software development tools, by either expanding or combining the current systems used by SDE and other agencies housing early childhood services. The case management functions currently performed in different agencies will be combined into one cohesive system housed in DAS BEST data center. Early childhood staff will be able to input data and edit functions. In addition, the system will include Service Oriented Architecture (SOA) or SOA principles so that data transactions can be fluid with external sources.

The Data Warehouse will include both aggregate level data for public consumption and record level analysis tool data for internal state users and other FERPA authorized users. The Data Warehouse will consume and orient data from the ECIS into analytical data cubes for fast reporting and an easy-to-use Dashboard-driven interface. The interface will display both public data and internal state secured data depending on the users' credentials and security settings. Since SDE has a similar Data Warehouse for K-12 students, SDE could possibly leverage the current Data Warehouse to meet the needs of the Office of Early Childhood.

Quality Rating and Improvement System (QRIS):

The QRIS is a system used to track early care and education program-and provider-level data, as well as to provide the public with information about the quality of available early care and education programs. It will be a separate application that takes data from Early Childhood Information System.

Purpose

There is an urgent need for an ECIS and a QRIS that leads to accessible, meaningful data analysis to facilitate policy decisions, program monitoring, population assessment, professional development needs, and program quality ratings. With these two systems, families will be able to access quality information about program choices.

Importance-describe project importance

In accordance with Public Act 11-181, the Governor appointed an Early Childhood Planning Director to drive the development of a coordinated early childhood system in Connecticut. Legislation addresses the following specific components related to a statewide QRIS driven by an extensive and comprehensive ECIS that would provide:

- **Information :**
 - Creation of a “unified set of reporting requirements” for all programs “for the purpose of collecting the data elements necessary to perform quality assessments and longitudinal analysis”
- **Quality:**
 - Creation, implementation and maintenance of a Quality Rating and Improvement System that “covers home-based, center-based and school-based early child care and learning”
 - Monitoring and evaluation of “all early childhood education and child care programs and services focusing on outcomes in satisfying the health safety developmental and educational needs of all children”
 - Maintaining “a system of accreditation facilitation to assist early childhood education and child care programs and services in achieving national standards and program improvement”
 - Development and updating of “appropriate early learning standards and assessment tools for children from birth to five years of age... that are aligned with existing learning standards as of July 1, 2013 and assessment tools for students in grades kindergarten to twelve....”
- **Access:**
 - Provision of “opportunities for choice in services including quality child care” for families
 - Provision of “information and technical assistance to persons seeking early childhood education and child care programs and services”
 - Provision of support services to “state agencies and municipalities in obtaining available federal funding for early childhood education and child care programs and services”

Outcomes-what are the expected outcomes of this project?

Upon completion of the ECIS, the Office of Early Childhood will be able to promote accountability and provide high-quality data to the following stakeholders:

- **Families and Communities (QRIS)**
 - licensing
 - program quality rating
- **Teachers**
 - lesson planning information
 - student assessments
 - review of own professional development needs
- **Local Program Administrators and Providers**
 - licensing
 - program quality
 - program quality for funding
 - program quality for program improvement

<ul style="list-style-type: none"> <input type="checkbox"/> program information for licensing and accreditation <input type="checkbox"/> work force information <input type="checkbox"/> program needs for specific services <input type="checkbox"/> professional development needs ▪ State Agency Administrators <ul style="list-style-type: none"> <input type="checkbox"/> work force information (Workforce Registry) <input type="checkbox"/> classroom assessments <input type="checkbox"/> student population data <input type="checkbox"/> program monitoring ▪ Legislatures and Policy Developers <ul style="list-style-type: none"> <input type="checkbox"/> student population assessments <input type="checkbox"/> program evaluation <input type="checkbox"/> Results Based Accountability (RBA) <input type="checkbox"/> longitudinal data analysis <input type="checkbox"/> program participation data for children birth to 8 across agency programs <input type="checkbox"/> annual Office of Early Childhood Care and Education reports <input type="checkbox"/> research studies
Approaches and Success Evaluation- Use the SDM* to answer the basic high level policy questions
<ul style="list-style-type: none"> ▪ Use the Business Requirements and Test to match actual system design functionally, and assure that the implementation of the data structures can support the Office of Early Childhood’s case management and reporting needs ▪

*System Development Methodology

D. Business Goals

List up to 5 key business goals you have for this project, when (FY) the goal is expected to be achieved and how you will measure achievement. Must have at least one. Please use action phrases beginning with a verb to state each goal. Example, “Reduce the permitting process by 50%. In the Expected Results field, please explain what data you will use to demonstrate the goal is being achieved and any current metrics.

Business Goal	Expected FY	Current Condition	Expected Result/Measure
Provide program choice and information about program quality to families by design and development of a QRIS	FY 2016	not available	Survey of parents from pilot communities will show family access and feedback showing at least 70 % satisfaction
Promote discussion of social impact bonds with access to RBA relevant data from ECIS	F201717	not available	Availability of social impact bonds to support the cost of early childhood technology needs and updates
Reduce redundancies in multiple agencies by the design and implementation of ECIS in one office	FY2018	Multiple agencies hold data related to Early Childhood	Provide requested information for program evaluation to legislatures

E. Technology Goals

From a technical perspective, following the above example, list up to 3 key technology goals you have for this project and in which Fiscal Year (FY) the goal is expected to be achieved. Please use action phrases beginning with a verb to state each goal.

Technology Goals	Current Condition	Expected Results	Fiscal Year (FY) for Goal
<ol style="list-style-type: none"> 1. Complete the Business Requirements and Design phases of SDM for the ECIS Transactional case management application 2. If Go approval on line 1 then complete the technology infrastructure build outs for the ECIS 3. If Go approval on line 1 then complete the Business Requirements and Design phases of SDM for the ECIS Data Warehouse 	Not available	Meet all deliverables associated with each SDM phase including costs benefit analysis and Go/No Go phase approval.	FY 2014
<ol style="list-style-type: none"> 4. If Go approval on line 1 then complete the Construction, Testing, Implementation and Post Implementation phases of SDM for the ECIS Transactional system 5. If Go approval on line 3 then Complete the Construction phase of SDM for the ECIS Data Warehouse system 6. If Go approval on line 1 then complete the Business Requirements and Design phases of SDM for the QRIS 7. If Go approval on line 3 then complete the technology infrastructure build outs for the ECIS Data Warehouse system 	Not available	Meet all deliverables associated with each SDM phase including costs benefit analysis and Go/No Go phase approval.	FY 2015
<ol style="list-style-type: none"> 8. If Go approval on line 5 then complete the Testing, Implementation and Post Implementation Phases of SDM for the ECIS Data Warehouse system 9. If Go approval on line 6 then complete the technology infrastructure build out for QRIS 10. If Go approval on line 6 then complete the Construction, Testing, Implementation and Post Implementation Phases of SDM for the QRIS phase of SDM for the QRIS system 	Not available	Meet all deliverables associated with each SDM phase including costs benefit analysis and Go/No Go phase approval.	FY 2016

F. Priority Alignment

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

Priority Criterion/description	Y/N	Explanation
Aligned with Governor's Key Priorities	Y	Coordination of early childhood programs and services is one the Governor's top priorities. In February 2013 the Governor announced his proposal to create the Office of Early Childhood in order to reduce redundancies and improve the quality of early childhood services in Connecticut.
Is this project aligned with business and IT goals of your agency?	Y	A crucial aspect of the Office of Early Childhood's work is the coordination of data systems into a unified, easily accessible system, which promotes accountability on multiple levels .
Does the project reduce or prevent future increases in the agency's operating budget?	Not known	The total number of data systems is assumed to be about 25 across five or six agencies making it almost impossible at this point to determine the current cost. It is probable that cost savings will result from coordinating these data bases.
Will this product result in shared capabilities?	Y	Other agencies and early childhood stakeholder groups will be able to leverage information for the purpose of promoting program quality, and decision making.
Is this project being Co-developed through participation of multiple agencies?	Y	Five agencies will collaborate to assure that a comprehensive information system is designed and developed for the Office of Early Childhood.
Has the agency demonstrated readiness to manage a project of this size and scope?	Y	SDE has demonstrated its readiness to manage and initiate such a project, since it has done similar projects, such as a teacher certification data base, student information systems, and others.
Is the agency ready to deliver the business value of this project?	Y	SDE is ready to assist and support the Office of Early Childhood in the design and development of an ECIS that will drive a QRIS.

G. Organizational Preparedness

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

State Department of Education (SDE) as well the Office of Policy and Management (OPM) is prepared to assist and support the Office of Early Childhood in the design and development of an ECIS that will drive a QRIS. They are also ready to support the OEC in student/population assessment and promote administrative and legislative decision making.

H. Project Ramp Up

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

Project ramp up will be six to nine months.

Key Ramp-up Requirements-have any already been started?

- Issue an RFI to research prospective COTS and MOTS solutions
- Build an in-house internal contractor build model and cost (for comparison to RFP proposals)
- Issue an RFP for potential external solutions
- Compare RFP proposals and costs to the in-house model and cost.
- If RFP proposal and cost is significantly better than the in-house solution, award proposal and start procurement and project
- If the in-house solution is better than the RFP proposals, interview and hire external contractors and start project

I. Organizational Skills

Do you have the experienced staff with the proper training to sustain this initiative once it's a production system? No

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

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

As of this date SDE and OPM does not have experienced staff with proper training to sustain this initiative once the production system is completed.

The following new staff (1 FTE) will be needed to maintain this system:
 One IT Analyst III for support of the ECIS

Minimal training will be needed if the newly hired IT Analysts have the matching base technology skill sets to support this system. If the IT Analyst III does not have the matching base technology skills sets then at least 2 years of in-depth application development and data warehouse technology training will be needed.

J. Financial Estimates and Explanation

Estimated Total Development Cost	Estimated Total Capital Funding Request	Estimated Annual Operating Cost	One Time Financial Benefit	Recurring Financial Benefit
ECIS Transactional Case Management System ~ \$2.5M	ECIS Transactional Case Management System ~ \$2.5M	ECIS Transactional Case Management System ~ \$110K (yr 2 +)	not applicable	not applicable
ECIS Data Warehouse System ~\$2.5M	ECIS Data Warehouse System ~\$2.5M	ECIS Data Warehouse System~\$110K (Yr 3+)		
Quality Rating Improvement System ~1M	Quality Rating Improvement System ~1M	Quality Rating Improvement System ~100K (Yr 3+)		
\$6M	\$ 6M	\$320K	0	0

Assumptions

Please list key assumptions you are using to estimate project development and implementation costs.

- All cost estimates are derived through historical costs for similar development systems;
 - Operational System –SDE CT Educator Certification System;
 - Date Warehouse- SDE CT Education and Reporting System
 - QRIS system –SDE CT Education and Reporting System
- Moving 5 separate agency functions and 25 associated databases to a centralized department within SDE
- Provide both aggregated public and internal record level data reporting

III. Expanded Business Case

A. Project Impact

Beyond the top business goals identified in Section II, please provide descriptions for those topics as they apply to your project. What impacts will this project have, if any, in the targeted areas below? What would be the impact of not doing this project? How will the project demonstrate how benefits are achieved?

1. Impact (Vision)	Description of Project Impact
Will this project provide efficient and easily accessible services for all constituents?	This project will allow the Office of Early Childhood to provide information related to early childhood program quality, to monitor programs, promote funding eligibility and to make meaningful policy decisions.
Will the project provide open and transparent government with the citizens of this state?	This project will give families and communities access to early childhood program quality information as well identify program needs. Both will result in program improvement.

Will the project establish efficient and modern business processes?	With estimated 25 data bases across five or six agencies, a unified and comprehensive EC Information System will lead to efficiencies and modern business practices.
Will this project increase accuracy and timeliness of data for policy making, service delivery and results evaluation?	A comprehensive, unified ECIS will drive a QRIS which in turn provides policy makers and legislators with meaningful and reliable data that promotes decision making as well as program evaluation and communication with families and communities.
2. Impact of NOT Doing This Project	
The current status of EC data systems has resulted in much inefficiency. Moreover, it lacks a QRIS for the State of Connecticut compared to over 25 states nationwide that have such a QRIS.	
3. How Will You Demonstrate Achievement of Benefits:	
Achievement of benefits will be demonstrated through family surveys related to access to information and QRIS, and a reliable number of responses regarding requests for data by various early childhood stakeholders.	

B. Statutory/Regulatory Mandates

1. Cite and Describe Federal and State Mandates That This Project is Intended to Address
Public Act 11-181, enacted July 2011, charged the Early Childhood Planning Director to drive the development of a <i>coordinated system for early care, education and development in the State of Connecticut</i> . The design and development of a Quality Rating Improvement System, driven by a comprehensive ECIS is critical to such coordination.
2. What is Impact of Non-compliance
Lack of accountability and the current status of inefficiencies on multiple levels that negatively impact a coordinated early childhood system in Connecticut.

C. Primary Beneficiaries

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

The State of Connecticut and its citizens will be the primary beneficiaries of this project, particularly our youngest children, their families, their teachers, program providers, policy makers, and legislators.
