
DEPARTMENT OF EDUCATION

SCHEDULE IV-B
FOR
FLORIDA PREK-20 DIGITAL
REPOSITORY
FOR
FISCAL YEAR 2007-2008



State of Florida

The Florida Legislature

Governor's Office of Policy and Budget

February 23, 2007

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I. Schedule IV-B Cover Sheet

Schedule IV-B Cover Sheet and Agency Project Approval	
Agency: Department of Education	Schedule IV-B Submission Date:
Project Name: Florida PreK20 Digital Repository	Is this project included in the Agency's LRPP? _X_ Yes __ No
FY 2007-2008 LBR Issue Code: 36277CO	FY 2007-2008 LBR Issue Title: Project Education Media Technology Services – Agency Enterprise Information Technology – Digital Repository
Agency Contact for Schedule IV-B (Name, Phone #, and E-mail address): Susan Henderson, 850-922-3274, shenderson@distancelearn.org	
AGENCY APPROVAL SIGNATURES	
I am submitting the attached Schedule IV-B in support of our legislative budget request. I have reviewed the estimated costs and benefits documented in the Schedule IV-B and believe the proposed solution can be delivered within the estimated time for the estimated costs to achieve the described benefits. I agree with the information in the attached Schedule IV-B.	
Agency Head: Printed Name: John L. Winn	Date:
Agency Chief Information Officer: Printed Name: Ron Lauver	Date:
Budget Officer: Printed Name: Dewey Phillips	Date:
Planning Officer: Printed Name: J. David Armstrong, Jr.	Date:
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II. Schedule IV-B Business Case

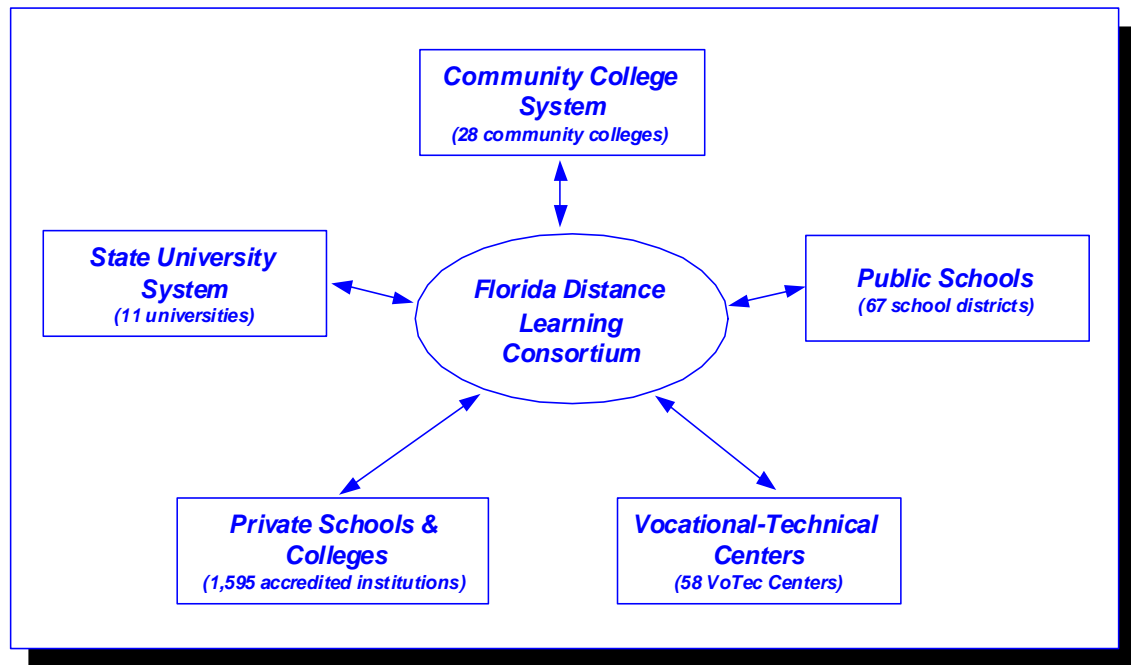
A. Background and Strategic Needs Assessment

Purpose: To clearly articulate the business-related need(s) for the proposed project.

1. Agency Program(s)/Service(s) Environment

Agency

The Florida Distance Learning Consortium (FDLC) is a statewide organization comprised of the former Florida Community College Distance Learning Consortium and the Florida Virtual Campus. Membership is currently open to representation from all of Florida's K-20 public and private educational entities. The FDLC facilitates cross-institutional communication and successfully spearheads statewide initiatives in distance and/or technology delivered learning that will improve student learning and access to education, while recognizing the autonomy of Florida's educational institutions.



Quarterly meetings with FDLC members provide a forum for discussing and developing solutions to statewide policy barriers, exchanging information regarding successful projects, keeping members informed about emerging trends, technology, and tools, and information on distance learning. Consortium members share their experiences and identify initiatives that the state-level Consortium staff should undertake for statewide leadership purposes. In addition, members review commercial products and determine which should be licensed by FDLC staff to obtain significant cost savings for the institutions. Examples of such initiatives include the

Consortium's statewide licensing agreements for software tools, the digital repository

project, determining data collection fields for technology delivered education, and its statewide catalog of all postsecondary distance learning courses.

The Consortium's 2004-2007 strategic plan includes six initiatives as the focus of its activities. The highest rated strategic priority is the **Florida K20 Digital Repository of Instructional Content, The Orange Grove**.

Description of Services

The Repository is an enterprise level repository system capable of serving the entire Florida educational system that consists of approximately 230,000 educators. In its current implementation, FDLC funding supports licensing the software for use by 500 educators. The repository software enables Florida to acquire, contribute, store, manage, and electronically share high-quality learning resources in one location. It also enables federated searches with other repositories. Educators can contribute to the repository, simply re-use resources during technology-supported learning or traditional classroom instruction or modify existing content to meet classroom needs. The repository has the capability to manage and store content for any sector in Florida, including Workforce Education and state agencies.

Because the learning resources are carefully indexed and described according to international standards and customized for Florida, educators may search by a variety of defined fields such as: keyword, concept, age appropriateness, Sunshine State Standards (PreK-12), course number (postsecondary), FCAT competency, or user-defined fields. The key stakeholders of the Orange Grove initiative are Florida's 200,000+ education professionals who will use the learning resources to support instruction in order to improve learning for all students.

What will you find in the Repository?

There are two main types of resources currently defined in the repository with the flexibility to add more. These resource types are:

- **Asset:** These are very small, reusable pieces of learning content, such as single video or audio files, a single text document (e.g. lesson plan), image, Web page, or test/assessment item. Assets can be stored separately, or as part of a larger collection of items.
- **Learning Resources:** These resources are complete or partial lessons. They have at least two of the following components:
 - instructional objective,
 - content or information presentation
 - learning practice with feedback
 - assessment
- Each **learning resource** includes **multiple assets** such as pictures, audio, graphs or illustrations. Learning resources can be thought of as building blocks for creating modules and complete courses, and are similar to "learning objects." By definition, a learning object is a self-contained, reusable, small chunk of learning

content that accomplishes a specific learning objective.” (IEEE Learning Technology Standards Committee). Learning objects have been likened to Legos™, the toy building blocks, in that they can be combined with other learning objects/resources in limitless ways and re-used for many different purposes.

These resource types encompass a diversity of resources that can be included in Florida’s digital repository and can be used in a variety of instructional applications. For example, a quality, reusable learning resource on algebraic equations can be shared with an unlimited number of educators to enable students to understand a specific concept. This same resource could be used, for example, in a middle or high school Algebra class, a community college nursing course, an evening GED class, and even in an entry-level business course. Learning resources can also present and explain difficult concepts using visual, auditory, or tactical/kinesthetic teaching strategies to assist learners with different learning preferences. The Orange Grove is currently operational with a small, but growing population of resources that have been reviewed based on up to ten quality measures, and can be accessed at: <http://florida.theorangegrove.org> .

Repository Structure

To ensure success, the project has been built on systematic and system-wide planning for the five components shown in the pyramid below.



Technical International e-Learning Standards.

The United States Department of Defense (DoD) recognized the need in 1997 for technical standards to establish the requirements for the development of e-learning tools and content that is interoperable, reusable, trackable, and portable. At the time, the Internet was new and content was not reusable (think betamax and VHS). From 1997 until today, the DoD has identified specifications and worked with international technical standards groups to create the necessary standards that ensure content is shareable and reusable for all learning sectors: primary,

secondary, postsecondary, workforce and technical education. This has become a global movement with countries and groups worldwide supporting the adoption and use of the SCORM 2004 (Shareable Content Object Reference Model). Many learning management systems, repositories, and associated software tools such as Dreamweaver, an industry leader, have become SCORM 2004 conformant. First released in 2000, the SCORM specifications continue to evolve and expand as technology develops; the most current version of the standards is SCORM 2004. The DoD requires, and the world of education now demands, adherence to these standards. Test suites are currently available at www.academiccolab.org to test and report for conformance to SCORM 2004.

International technical standards are the cornerstone of a successful repository whether purchasing software, tools, or content or acquiring, developing, or delivering content to standardize curriculum development, save course development costs, improve learner outcomes, and save costs in delivering education. **The Repository software selected by the Consortium, Equella, has an active participation in the e-Learning Standards activities.**

2a. Policies. Workshops were conducted by the Florida Distance Learning Consortium (FDLC) in Tallahassee, University of South Florida, Indian River Community College, and Daytona Beach Community College during 2004 and 2005 to work with representative Repository contacts to define the Repository pilot focus, Repository infrastructure and create content. Bryan Eldridge, CEO of Cannon Learning Systems, (Athens, Georgia) and a recognized thought leader in repositories, facilitated three workshops focusing on quality standards, workflow processes, and the content development process.

Another workshop was held in December, 2004 with math faculty where it was determined that there was significant interest to focus development and content acquisition on two courses: MAT 1033 Intermediate Algebra, and MAC 1105 College Algebra. The most difficult concepts were identified for each of those courses and learning resources addressing seven of these concepts were developed in a collaborative effort that involved community college faculty and staff, FDLC, and a contracted developer. The resulting lessons were piloted during spring 2006 and continue to be used by Mathematics faculty members. Current development efforts are focused on adding an audio track to each MAT 1033 resource to assist poor readers and persons with disabilities.

2b. Quality Review Standards. Quality is critical. For each defined resource type in the repository, there is a virtual quality review process that requires from one to five steps and the abilities of professionals such as:

- Faculty with subject area expertise to ensure content is accurate
- Instructional designers to ensure that the content aligns with the resource's objectives and that it contains appropriate events of instruction.
- Technical reviewers to ensure that the content is SCORM conformant and displays correctly in a learning management system. With funding support,

content can be modified to meet ADA requirements.

- Librarians to metatag (carefully describe the resource) the content based on the SCORM specifications for meta-tagging.

3. Partnerships. The project director and project manager recognize and appreciate the value of partnerships to build the necessary levels of support and expertise for a successful repository. Multiple partnerships have been established, ranging across such entities as the Florida Virtual School, the College Center for Library Automation, individual community colleges and universities, the Southern Regional Education Board (SREB) and the Academic ADL co-Lab in Madison, Wisconsin. At every opportunity, the repository has been positioned to utilize and build upon the talents and strengths of its partners within Florida's borders and beyond.

- The Florida Distance Learning Consortium is co-located with the **College Center for Library Automation (CCLA)** in Innovation Park, Tallahassee, Florida. Without having to hire and maintain technical IT staff, the repository project is outsourced to CCLA, an internal stakeholder, which is committed to the project success. The Orange Grove repository project benefits greatly from the expertise of the CCLA network manager and staff to design, support, and deliver a robust and redundant system and network that is scalable for all of education in Florida and supported 24 x 7.
- The **Florida Virtual School, University of West Florida, Brevard Community College, Broward Community College, Daytona Beach Community College and St. Petersburg College** are active participants in the repository project. They are currently developing a small but growing number of digital, SCORM 2004 conformant learning resources to be published in the Repository and reviewed for quality and metatagged.
- The **Southern Regional Education Board (SREB)** is initiating a small pilot for eight states, including Florida, to share digital learning resources and templates. For example, Texas has offered to share digital tools that they spent \$25,000 developing. Maryland is sharing the learning resources created for an Algebra I course. Florida is providing access to repository software for the multiple states.

The SREB convened task forces from 2003-2005 to author and prepare the following publications which are essential to the establishment of policies and procedures for repositories:

- [Principles of Effective Learning Objects](#)
- [Technical Guidelines for Digital Content](#)
- Users' Guide to Learning Object Metadata (LOM)

More information about this SREB initiative is available at <http://www.sreb.org/programs/EdTech/SCORE/index.asp>

- The value of the partnership with the [Academic Advanced Distributed](#)

[Learning \(ADL\) Co-Lab](#) cannot be underestimated. The talented programmers at the Co-Lab consults with the repository staff on implementation questions and offers training to use the SCORM specifications. Thirteen individuals from Florida participated in SCORM training in July, 2005. Ms. Susie Henderson, the Associate Executive Director and Project Director for the Repository Project, was one of a select group to participate in the Global Learning Object Repository Summit in Madison, Wisconsin with international leaders in this area. The Co-Lab has also contributed open source software to create and author courses using SCORM conformant content.

The Co-Lab also hosted the MiCTA and The American Telecommunications Alliance (ATA) Request for Proposal review committee in early November, 2005. This committee evaluated RFP responses for repository software and learning management systems of the ATA Alliance and was sponsored by the SREB. MiCTA is a national entity composed of members from K12 and higher education, healthcare, libraries, government, and other non-profits. Originally organized as the Michigan Collegiate Telecommunications Association in 1982 to identify and resolve common telecommunication issues for higher education, this organization focuses on obtaining quality service and products at outstanding prices for its membership in the areas of voice, data and video. The ATA Alliance is also a national collaborative designed to expand the MiCTA program to include technology offerings, collaborate on program development, and unify procurement processes to leverage additional discounts.

- And, finally, the [Florida Distance Learning Consortium](#) (FDLC) has provided initial project support from existing server resources and a funding source for:
 - Repository Project Manager salary
 - server hardware
 - monthly server support costs
 - repository software license
 - travel and office expenses

In addition, the FDLC has provided in-kind staff support of the FDLC Associate Executive Director who serves as the Project Director for the Repository Project. Consortium members across Florida's community colleges and universities have also provided in-kind support through donation of facilities hosting, instructional design, faculty time and effort, and development expertise.

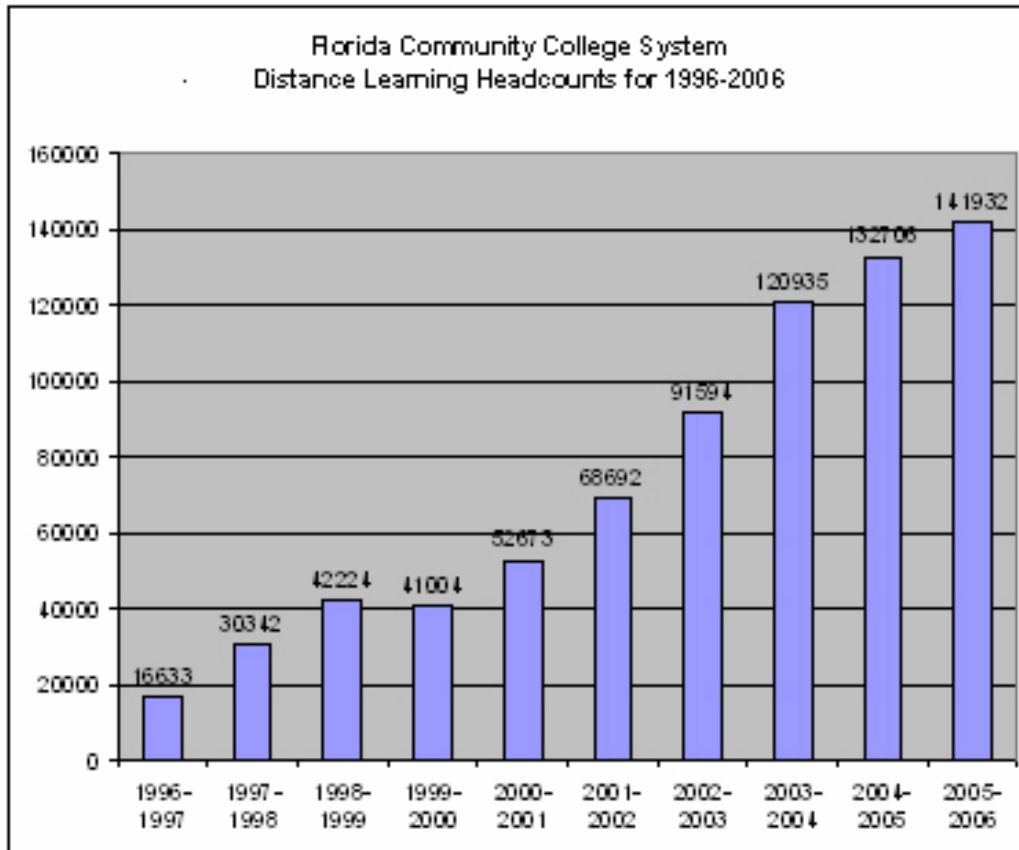
Statement of Need

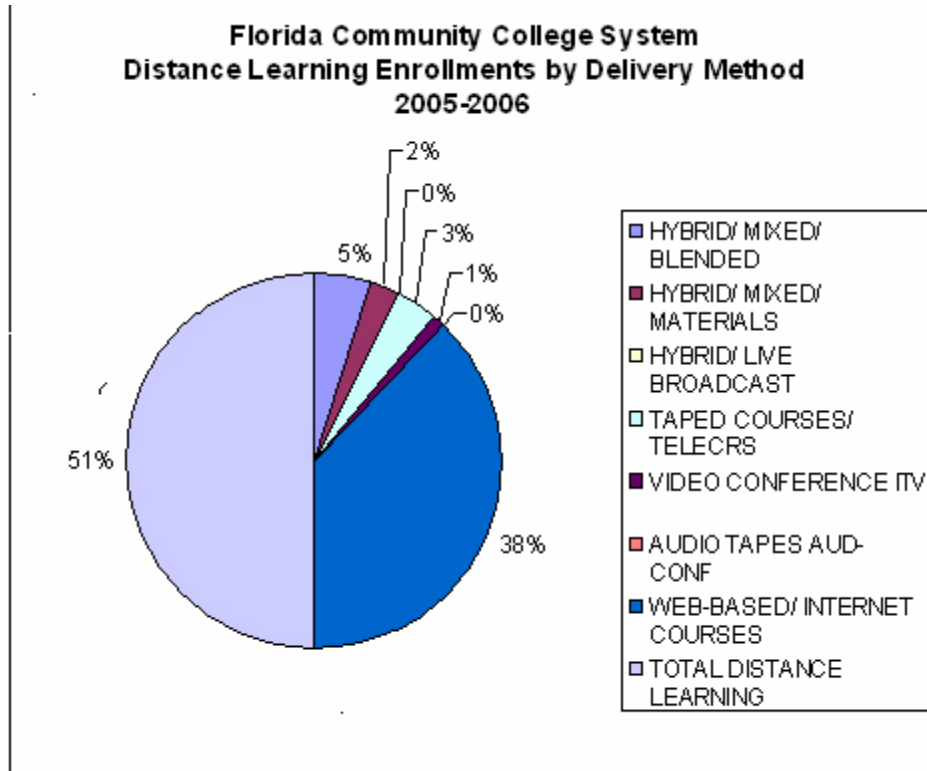
Is there a need for a digital online repository in Florida? Absolutely. Let's briefly review Internet history to gain some perspective on why a digital repository is now critical.

e-Mail. In 1994, only 3% of community college courses utilized e-mail as an instructional resource (Green, 1999, p.4). By 1998 that number had increased to 26%. And in 2003, the number of all college courses using e-mail had increased to over 69.5%.

Today, e-mail is only one online tool that students and faculty use to communicate. They also use Instant Messenger, web conferencing, free voice over IP (e.g.,SKYPE), and text messaging. This is the digital generation!

Online Courses. In Florida, the first Internet delivered course was developed and delivered in 1994 at St. Petersburg College. Only eleven years later, thousands of Internet delivered courses have been developed in Florida and are being offered to students each semester from K-20. These courses are the first to reach enrollment caps. The Consortium has estimated (based on trends in Florida, nationally, and internationally) that distance learning headcounts in online courses will continue to increase by 8-12% each year for the foreseeable future.





Enrollment has also sharply increased in K-12 online courses across the country. A November 2006 report from the North American Council for Online Learning (NACOL) found that 38 states now are engaged in policy-making to regulate online education, or in state-led online learning programs, or both. This same report states that enrollment at the Florida Virtual School, rose by more than 50 percent compared with the last school year.

The Internet, Digital Resources and Education. The majority of the 3 million U.S. online students are using Internet-based digital resources. Many courses are now entirely electronic, most frequently relying on the Internet for the transmission of the materials.

With the increased popularity of online posting of supplementary course material and addition of online activities for face-to-face courses, many of the differences between classroom and online courses are disappearing.

The quality of these electronic course materials varies and so does the ease with which they can be shared with other instructors for re-use. Although many educators and commercial educational software companies are creating content in an electronic form to illustrate and teach in new ways, too often the content is buried on an individual's computer or in proprietary course management systems, inaccessible and not searchable by others.

Florida's teachers and faculty are encouraged to integrate the use of technology, the Internet and its resources into their classroom experience in every setting. The state has invested millions in providing the infrastructure, bandwidth and the hardware to support the use of the Internet in teaching and learning.

What is missing in Florida? It is State of Florida financial support to:

1. License the learning repository software for use by every Florida educator.
2. Create awareness of the repository project throughout the educational community through face to face workshops and online tutorials and web conferences
3. **Train faculty and developers how to contribute and effectively use the repository content**
4. **Maintain communication with individual faculty and create faculty subject communities**
5. Invite faculty, institutions and the Department of Education to contribute existing content to the repository
6. **Review, store and catalog/describe the state's resources to ensure discoverability and reusability at a granular level**
7. Provide access to online content and tools that have been reviewed for quality, carefully described using pre-defined and standardized fields (metadata), linked to Sunshine State Standards, common course numbers and objectives plus tracked for its effectiveness in helping students achieve success.
 - i. *Florida must be able to offer online resources to challenge our academically gifted and meet the needs of our academically challenged students. With the same precision as the Global Positioning System, we must be able to target the learning needs of every student and offer the appropriate learning resources.*

It is expected to provide student learning gains by providing remediation for students' weak areas and challenging content for areas of student interest. A repository is an investment in the education of today's students and tomorrow's emerging digital world.

What will happen if Florida does not fund this request?

Today, the State of Florida has a leadership role in digital repositories both regionally and nationally due to the development work on policies and conceptual work and the emphasis on technical standards. This foundational work led to the 2006 award of a prestigious United States Department of Education, Fund for the Improvement of Secondary Education (FIPSE) grant to create a "blueprint" for the development of a statewide repository. Other states, such as California, North Carolina, Kentucky and Georgia, now have funded digital repository projects. Without funding, it will be impossible to operationalize the blueprint for Florida educators.

If no funding is received for the Florida PreK20 Digital Repository:

- Individual Florida institutions will continue to develop content and house it in their institutional databases or on individual faculty member computers with no option to share it statewide.
- Content most likely will be developed without the adherence to state standards for quality and international standards for interoperability.
 - Appropriate metadata will not be assigned to resources.

- Learning resources may or may not be designed for accessibility.
- There will be redundant development of the same concepts and no opportunity for cost avoidance.
- For the most part, content will be developed at a minimum level of interaction and use of multimedia to avoid costs.
- Faculty members will not have access to a repository that allows them to precisely locate content that is targeted to remediate a Sunshine State standard, a missed question on the FCAT, or a difficult concept in a bottleneck course.
- The State of Florida will not be able to participate in the SREB SCO-RE project, the Shareable Content Object Registry for Education. Florida will not participate in the most important aspect of the digital revolution –**the ability to locate and share content**. As John Morgridge, CEO of Cisco Systems, stated, education over the Internet will make e-mail’s importance equivalent to a rounding error.

Linkage of Proposal to Agency Performance Measures

Department of Education Goals and Objectives. In 2003, the Legislature passed HB 915, establishing a unified K-20 accountability system. Each education delivery system is responsible for attaining the goals of high student achievement; seamless articulation and access; a skilled workforce; and quality, efficient service. Each goal and performance indicator established by the Task Force on K-20 Performance Accountability is listed below, along with an explanation of how the Orange Grove initiative links to each one.

<p><i>Goal:</i> Highest Student Achievement <i>Indicator:</i> Evidence of Student Learning Gains</p>
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Repository Linkage: By creating a repository of quality, easily-shared learning resources that are initially targeted at addressing the bottleneck courses, a greater number of students will pass those difficult courses on their first try. As the Orange Grove is expanded to other areas, such as FCAT competencies, greater student achievement gains are expected.

<p><i>Goal:</i> Maximum Articulation and Access <i>Indicator:</i> Evidence of Access and Evidence of Progression & Readiness</p>
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Repository Linkage: The learning resources will be available to all educators, from PreK-20, allowing for equal access in their application and use. Since the Orange Grove will contain learning resources designed for all learning styles, the project will enable all types of learners to progress.

Goal: A Skilled Workforce
Indicator: Evidence of Employment and Earnings

Repository Linkage: Vocational and Technical Centers can use the Orange Grove repository and search for learning resources that may be most suitable for their students. Curriculum can be more easily shared among the more than 50 Vocational/Technical Centers statewide. In a similar manner, learning resources acquired for teacher professional development can be acquired once, and subsequently shared by school districts as well as institutions of higher education.

Goal: Quality, Efficient Services
Indicator: Evidence of Return on Investment

Repository Linkage: To the extent learning resources successfully target bottleneck concepts and FCAT skills, the state can save significant costs through reduced failure/withdrawal rates. For postsecondary courses, the State of Florida avoids an estimated \$370 in state funding for each student that does not have to repeat a three credit hour course.

Also, the Orange Grove will contain high-quality, SCORM-conformant learning resources that can be re-used in limitless ways by all educators, saving them the time they might otherwise have spent developing similar learning resources. Duplication of effort in developing learning resources and curriculum would be lessened.

Finally, a central repository will significantly reduce the expenses associated with each institution developing its own learning resource repository. The state-sponsored Orange Grove will provide a central resource that all institutions can access, regardless of their size. The system software also permits The Orange Grove to “federate” or search standards-based repositories on a state, regional, and national scale, allowing users to search a variety of collections from one central location.

2. Business Objectives

Repository –Wide Objectives

These business objectives pertain to the sectors Higher Education (universities and community colleges) and PreK-12.

- Annually (each July), for those students in each target educational sector who use repository learning resources, a measurable improvement in student performance of at least 10% will be demonstrated.
- For the first year of the project (beginning with date of implementation for each sector as specified in project plan), the amount of repository learning resources available for use by that sector will increase by 50% and 10% annually for the remaining four years of the project.

- Annually for each sector (beginning with date of implementation for each sector as specified in project plan), the use of learning resources will increase by 10% (as measured by usage statistics)
- Annually for each sector, the number of educators who search for Repository resources before they initiate development efforts will increase by at least 5% (based on responses to data collection efforts).
- Annually for each sector, an evaluation rating will be received from at least 70 % of repository users responding to data collection efforts, indicating that the repository is “easy to use” to search, locate, and implement learning resources, whether these objects are used online or on-site. Subcategories that are planned for evaluation include ease of use for searches by key words, concept, age appropriateness, Sunshine State Standards (PreK-12), course number (postsecondary), and FCAT competency.
- If full funding is received and sustained by the State of Florida, in five years from date of initial funding, the learning object repository will be used in all sector areas by the majority of Florida’s educators.
- Within five years of receipt of legislative funding, state-level library groups will be responsible for maintaining technical aspects of the repository; content maintenance will be continued by state-level academicians.

Additional Business Objectives by Sector

- *Higher Education:* For those students who access learning resources that support at least 75% of their course objectives, a reduction of at least 10% in the number of these students retaking targeted “bottleneck courses.”

B. Baseline Analysis

Purpose: *To establish a basis for understanding the business processes, stakeholder groups, and current technologies that will be affected by the project and the level of business transformation that will be required for the project to be successful.*

1. Current Business Process Requirements

If educators want to use learning resources in their curricula, they can develop their own or obtain resources that are already developed and suitable for their particular purposes. Currently, based on a Consortium survey, at least six Florida postsecondary educational institutions have instructors who develop learning resources and/or have licensed learning resources from proprietary software vendors. These learning resources may be stored in repositories at each institution, but more often are stored on individual computers or department servers that limit their

availability to other faculty. There is a wide range of quality in these learning resources and many are not interoperable across different platforms.

Depending on the complexity, the cost to develop a digital learning resource can range from a few hundred dollars to hundreds of thousands of dollars if the resource requires expert content knowledge or sophisticated graphics. Some learning resources are available at no cost; some require a license fee or royalty payment.

Currently, if an instructor decides to use an existing learning resource, they must first search for it (via Internet, colleagues, educational networks, proprietary vendors, etc.), determine whether it is suitable for his or her use (applicability, usability, quality) and then arrange for its use (no cost vs. licensing). For example, a recent Google search for fractions returned 13.7 million hits and a search regarding the Declaration of Independence returned 15.5 million hits. It is indeed a daunting task to review and select an appropriate resource.

Florida's post-secondary institutions are asking for leadership from the Florida Distance Learning Consortium to provide a digital repository with storage space and policies to share and utilize the significant and growing investment made throughout Florida in digital resources. The Florida Virtual School is aware of the benefits and need for digital content and is piloting courses developed as learning objects. The K12 school districts have a limited awareness of repositories and benefits and have indicated the need for a turnkey solution at the desktop of every teacher.

- a. Inputs
Most data are anecdotal at this point.

PreK12

The **Florida Virtual School** is changing its course development model to focus on the development of learning objects, smaller chunks of content and valuable digital tools, e.g., a digital calculator.

In general, **school districts** license proprietary software (e.g., Plato and Riverdeep) that requires a separate system to offer content. It is difficult to track and monitor student performance in multiple systems.

Community Colleges

Brevard Community College has re-designed a business course as a collection of learning objects and has changed its development process to focus on learning objects. They have engaged consultants to improve their development process.

Broward Community College is creating their nursing curriculum as learning objects and assets (e.g., pictures, gifs, jpegs, graphs) and storing them in the repository hosted by the Florida Distance Learning Consortium.

Daytona Beach Community College has been instrumental in the development of math content for the state repository project through voluntary donation of math

faculty time and by hosting a development workshop. They also are sharing resources developed by their faculty through the repository.

An **Edison Community College** faculty member has offered all of his online lectures for algebra, calculus and physics to be stored in the repository. He wants to make them available to the state of Florida academic community.

Indian River Community College has participated in the repository planning and is exploring the development of digital content.

St. Petersburg College received a FIPSE (Federal Improvement of Postsecondary Education) grant to create approximately 100-200 learning resources each year for three years and is storing them locally in a database on the web. SPC is sharing these learning resources with the Repository project.

Universities

Several years ago, The **University of West Florida** received a federal grant to develop K12 digital science resources which are primarily stored locally on their servers. The institution is developing PDA and desktop delivered learning objects and content for Navy contracts. They are sharing some of these resources through the Repository.

Individual postsecondary institutions are currently creating and using their own digital resources. In general, K12 school districts license content. Copyright issues are handled by each institution as are metadata related to each resource. Institutions are beginning to publish digital content to the Florida PreK20 Digital Repository to be reviewed for quality and made publicly available, but a lack of repository funding has slowed the review process.

Florida Gulf Coast University is hosting a regional faculty workshop in March, 2007 to develop awareness and commitment to use digital content through the repository.

K-20 Content Acquisition by FDLC

The acquisition or development of content is moving forward slowly as the project lacks financial resources to hire staff to review and upload content, to contract for subject matter experts to vet content, or to license content. Some content development has been accomplished, largely due to the in-kind donations of Consortium institutions' faculty and staff members. Similarly, faculty have examined resources developed outside of Florida which have been made available in the Repository as they are reviewed and certified as accurate and compliant.

For the math pilot and in order to move forward quickly, the Project Director attempted to arrange rights for Florida to use in perpetuity the extensive online math and English content from Academic Systems (now Plato). Unfortunately, it was determined that the content had been developed using a proprietary software and that the costs to re-develop the source files into interoperable and reusable

content would be approximately equal to the cost of developing completely new resources. The Repository Steering Committee determined that the total cost of ownership should always be considered when evaluating digital content, rather than only considering the purchase price or cost of acquisition.

Fund for the Improvement of Postsecondary Education (FIPSE)

The FDLC has recently been awarded a federal grant to develop a national model for digital repositories. Susie Henderson, FDLC Associate Director and Director of the Repository Project, is leading the FIPSE project. The project began in October 2006 and extends through September 2009. This grant will produce a blueprint to guide other states or institutions in establishing, developing, and maintaining a repository that enables faculty to store, discover, manage, and use the rapidly growing body of digital content.

Funds from the FIPSE project will enable FDLC to strategically assess the current state of the repository implementation in Florida, including policies, standards, guidelines, training strategies and topics, and funding and marketing strategies. Results of the assessment will be used to improve the current Florida initiative as well as to lay the groundwork for the FIPSE project.

b. Processing

Individual institutions and school districts may or may not have process definitions or standards for content development or acquisition standards, processes, or metadata.

c. Outputs

Each year in Florida, thousands of faculty create many learning resources, such as lessons, learning objects, digital tools, games, PowerPoint presentations, pictures, graphs, and video lessons with only limited utilization potential. In most cases, these resources will be reused by an individual instructor or, at best, a single department or school district.

d. **Business Process Interfaces**

The FDLC has licensed for statewide use the independent enterprise level repository software solution, Equella, created by The Learning Edge International (www.thelearningedge.com.au). The newest version of this software was released in November 2006 and is now implemented through the FDLC. Every institution and school district has the potential to store and control content and to create quality processes within their virtual institutional areas. Institutions may also choose to make their content publicly available to other educators in Florida.

Most institutions license a learning management system that may or may not have the capability to store and retrieve content (e.g., Blackboard, Desire2Learn, Educator or WebCT). However, keeping content locked away in an individual system does not allow for cross institutional sharing of content or the sophisticated management, searching, and tracking of resources. The Equella software allows integration with a range of learning management systems

(LMSs), enabling easy entry into the repository from the user's LMS, and facilitating content sharing outside of the LMS. The Equella software also includes a simple authoring tool to enable faculty to easily create, assemble and publish online content.

e. Business Process Participants

Participants. The potential participants are:

- every school district
- every community college
- every university
- Department of Education

Users. Potential users for the project are every educator Florida.

Stakeholders. Stakeholders include:

- State of Florida Department of Education: Commissioner, chancellors and vice-chancellors, Board of Governors; governing boards for PreK12
- Higher education initiatives: Florida university and community college students, faculty, development staff, and administrators; SREB partners; FIPSE project partners, evaluators, and advisors, national partners
- PreK12 initiatives: district and school administrators, teachers, media specialists, development staff, and students; SREB partners; national partners
- Educator professional development initiatives: Florida university, community college and school district students and faculty and their electronic resource development staff and administrators; persons seeking teaching certification; SREB partners; national partners

f. Process Mapping

Please refer to Appendix B for the Sample Process Maps. These flowcharts depict 1) the current process most educators follow for locating and implementing learning resources through electronic sources, and 2) the proposed process that would be followed by educators using the Repository.

It can be seen that efficiencies are gained in several areas in the proposed process:

- Development costs for learning resources will be reduced due to the ability to share resources
- Tremendous cost savings for licensing software and 24 X 7 technical support for the infrastructure from one location
- Server storage requirements are reduced because the learning resource is stored in one location and used multiple times in multiple locations.
- Efficiencies will be realized in time spent searching for learning resources
- Resources located are expected to be closely aligned with educators' needs because the Repository provides the capability to conduct highly refined searches for resources targeted to particular needs (e.g., key words, concepts,

age appropriateness, Sunshine State Standards (PreK-12), course numbers (postsecondary), FCAT competencies),.

- Fewer revisions are expected (e.g., editorial, metadata, key instructional components).because the Repository quality-assures learning resources,
- Updating and maintaining resources is performed once. . Any enhancements or revisions that are made to learning resources will be available to all Repository users. Repository software can automatically alert users to revisions to an existing resource, and can allow them to choose to link to the most recent version of a resource.
- Efficiencies in users' ability to use digital resources. Resources developed to Repository standards can be used in any standards-based learning management system.

2. Assumptions and Constraints

Project assumptions and constraints are presented in detail in Section VI, Project Management.

In 2006, we are not aware of any standards that would constrain the development of a digital repository. To the contrary, Department of Defense and federal agencies now require that content and software solutions are SCORM-conformant. The SREB, in concert with the state of Florida, has developed a metadata publication for education, based on international LOM (learning object metadata) standards to describe digital resources to ensure discoverability across states and sectors.

The implementation of the project will be impacted by the support provided by education leadership, the Governor and the State Legislature, the effectiveness of the project change management strategies, and available funds for licensing the Repository software platform for Florida educators, learning resource acquisition and development. Change management strategies include adequately informing and educating users about the benefits of using the Repository, and providing training on how to use the repository to employ resources for use in instruction and professional development. The project will be negatively impacted without adequate funding to license more seats to the repository (current FLDC budget supports 500 faculty seats) and adequate high quality, digital resources for educators to use.

C. Proposed Business Process Requirements

Purpose: To establish a basis for understanding the business processes requirements the proposed solution must meet and outline criteria the project will use in selecting an appropriate solution.

1. Proposed Business Process

The Changing Nature of Teaching & Learning

As in many professions, technology is causing the reengineering of teaching and learning. Distance learning is becoming an integral part mainstream education because most classes have a web presence; often, campus courses mix web

components with face to face classroom components. Students have grown up with technology as a part of their daily lives; they are the “digital natives.” Many of these students expect and prefer to have technology infused into the learning process.

A recent study by the Pew Internet & American Life Project found that nearly four-fifths of the college students in their survey agreed that Internet use has had a positive impact on their college academic experience. Today’s students have the skills and comfort level necessary to make technology-infused learning successful. These factors indicate that the future of education will need to increasingly become:

- More participatory
- Capable of providing constant assessment
- Capable of providing constant feedback
- Customizable
- Available 24/7

The use of digital content and resources in education is perfectly adapted to meet these needs, whether they are used in distance learning, a hybrid course or in a traditional classroom setting.

Academic leaders are also convinced of the quality of online education, with 57 % asserting that the learning outcomes for online education are equal to or superior to those of face-to-face instruction (Sloan Consortium Report: Sizing the Opportunity: The Quality and Extent of Online Education in the United States, 2002 and 2003). Almost a third of these leaders anticipate that online education will exhibit learning outcomes that are superior to face-to-face instruction in three years.

Scaled Implementation

Until funding is obtained, the repository will remain a small scale project. The foundational work on standards, policies, procedures and the repository server infrastructure ensure that the project will scale. The project has been carefully planned for a phased implementation as staff and resources become available for PreK12 and higher education. The repository software is SCORM conformant and currently serves users in Australia, Europe, Canada, and the U.S. With the receipt of funding to support acquisition of resources and manage implementation in the PreK12 sector, repository implementation will move forward. The FIPSE project initial assessment effort, planned for early 2007, will review and improve the effectiveness of repository strategic and communication plans.

Specific Targets of Opportunity in Florida: Bottleneck Courses

Digital learning resources are anticipated to be especially useful in Florida to address a long-standing problem, often referred to as the “bottleneck course” issue. This term describes the situation wherein many students have trouble with challenging concepts, particularly in Algebra, and must repeat a course multiple times before passing it. Multiple repeat enrollments in these courses creates a bottleneck in the postsecondary education system; it prevents the student from progressing on schedule, and it creates additional funding requirements for the state, which

underwrites the costs of the course each time a student enrolls.

The problem of bottleneck courses in the Florida education system may be solved through the application of learning resources targeted at these difficult concepts, particularly if those learning objects make use of innovative web-based capabilities and strategies, such as instructional gaming. The tables below show the failure/withdrawal rate in the community college and the state university system for some of the basic required math courses.

University figures: 2004-2005 academic year data; Community College figures: 2005-2006 academic year data

As the data in the table indicates, even a 10% improvement (decrease in the failure/withdrawal rate) represents a potential annual cost avoidance of over \$2.6 million for Florida, just for these five classes. If similar gains were made for all high failure postsecondary courses, the cost savings would be tremendous.

Other states have used learning objects in a similar manner, with very positive results. For example, the State of Massachusetts reports that it re-designed its Algebra I course through the use of learning objects for all types of learning styles and reduced its dropout rate in that course alone by 25%. Therefore, Florida could expect to attain

Bottleneck Courses (3 credit hours)	# Community College Students Withdrawn/Failed	% Community College Students Withdrawn/Failed	# University Students Withdrawn/Failed	% University Students Withdrawn/Failed	10 % Improvement/Reduction of W/F Rate (# of students that would not W/F)	Potential 1 Year Savings to State with 10% Improvement in W/F Rate
Calculus for Business & Soc. Sciences 1 MAC 2233 3 credits	2,910	29 %	2,945	31 %	291 CC 295 Univ.	\$ 92,247 CC \$ 135,110 U
Calculus 1 MAC 2311 5 credits	2,019	27 %	3,303	31 %	201 CC 330 Univ.	\$ 106,229 CC \$ 251,708 U
Trigonometry MAC 1114 3 credits	3,601	30 %	2,114	31 %	360 CC 211 Univ.	\$ 114,120 CC \$ 96,638 U
Intermediate Algebra MAT 1033 3 credits	27,561	37 %	188	21 %	2,756 CC 19 Univ.	\$ 873,652 CC \$ 8,702 U
College Algebra MAC 1105 3 credits	26,509	33 %	7,170	27 %	2,650 CC 717 Univ.	\$ 840,050 CC \$ 328,386 U
TOTAL Yearly Savings to State						\$2,846,842

even greater educational savings than those projected above.

Other specific targets of opportunity suited for the use of digital learning resources from the Orange Grove include:

- ***Teacher Professional Development.*** Florida has invested considerable effort in the development of its alternative teacher certification program. The program contains learning activities that are specifically mapped to the 12 accomplished practices that must be demonstrated by every certified teacher. Conversion of the learning materials to portable, sharable learning resources will allow for additional distribution and usage among all sectors of education.

Additionally, teacher professional development materials, such as those being created through the Governor's Reading Initiative, could also be converted to a standards-based format so that they can be more easily accessed and infused across all districts and sectors of education. Finally, the Orange Grove can be used to house and distribute instructional components to increase the number of certified PreK instructors that will be necessary to implement Florida's PreK program.

- ***High Need Content.*** Other educational sectors may want to use or expand the repository's content to address additional programs of study or additional sector needs.
- ***FCAT Core Competencies.*** Successful completion of the FCAT can be traced to the mastery of specific core competencies in reading, writing, and math. By collecting the best instructional materials and converting them to portable and easily shareable learning resources that use a range of learning strategies, effective instructional tools can be placed in the hands of more teachers and students. As such, the Orange Grove can serve as a central location to access multi-dimensional learning resources for use by all educators in the broadest sense. It is important to note that, unlike FCAT Explorer which only addresses target skills at specific grade levels, the Orange Grove will be an object-based resource tool for all K-12 grades and educators.

Long-Term Vision

The Consortium initiated this project because digital learning resources have been and will continue to be a growing and vital component of all instruction. The project's objectives are expected to extend the availability of high quality digital resources to all educational settings (traditional, distance learning, and hybrid classrooms) and that can employ strategies to engage a variety of preferred learning styles (auditory, visual, tactical/kinesthetic). The Consortium's objective is to spearhead the project in its implementation years and to assume leadership for the project management, change management, and stakeholder communication activities necessary to make it a success. Success is defined as active use of the Repository in all areas of PreK-20

education by the majority of Florida's educators.

Once the Repository is well established, perhaps in five years, it is likely that the ongoing maintenance of its technical aspects could become the responsibility of state-level library groups, while the Repository content would continue to be the responsibility of state-level academicians.

2. Business Solution Alternatives

The Consortium considered five options.

1. Option #1 – Do Nothing

This option was discarded. Publishers would continue to seek control of instructional content and educators would have limited access to materials that otherwise could be shared. There would be a significant duplication of time and effort by educators and content developers to develop the same or similar resources throughout Florida at multiple institutions. Larger institutions will continue to develop small scale repositories, while smaller institutions would not have the resources to engage in similar efforts. Issues concerning the quality of learning resources and the ability to share them would continue.

2. Option # 2 – Implement SREB Regional Approach – SCORE Registry

The SREB SCORE Project involves hosting a repository to share educational resources among the sixteen member states. When standards are completely defined for inter-repository communication, the Southern Regional Education Board (SREB) will provide a CORDRA instance that will house metadata and a unique identifying number for each digital resource to allow for the searching of multiple state repositories from one location. This option is being reviewed by FDLC. However, although SREB participation provides access to resources, the current structure does not permit targeted searching by fields that are customized according to Florida Sunshine State Standards or by Florida Statewide Course Numbers. Participation costs are \$20,000 per year per agency.

3. Option #3 – Relying on Repositories in Other States and Countries

This option was discarded for several reasons. First, a repository becomes a mission critical initiative when it supports direct instruction. Florida would want to ensure the reliability and security of the system and the support. It is cost prohibitive and unlikely that Florida, the 4th largest state, could subscribe to and only use learning resources from other state repositories. Bandwidth costs and other associated costs are not known. In addition, if it were decided to rely on hosting from other states or international entities, Florida would lose its ability to control the indexing (metadata-tagging) of the learning resources, which is necessary to meet Florida's educational standards. By developing a Florida repository, we retain the ability to search and retrieve learning resources based on the common course numbering system, Sunshine

State standards, and other criteria that are relevant to Florida educators. Other existing repositories would be unlikely to support Florida's specialized standards and course numbering system without significant costs to do so.

4. *Option # 4 – Designate a Florida Institution to House a Repository*

This option was discarded. This approach is not favored because selecting a single institution to house the central repository could create discord, negatively affect eventual use, and jeopardize project success. Similarly, other educational institutions may distrust their ability to receive equal service and quality if the repository is not maintained by a neutral, state-level organization.

5. *Option # 5 – Implement Repository at Consortium*

This option was selected. The Consortium has a state-level mission, responsibility for distance learning, and history of success. The state-level approach to developing Florida PreK20 Digital Repository, The Orange Grove, was selected over the other remaining options as the best solution for providing a sharable content learning resources repository for all Florida educators as identified in the Feasibility Study conducted in 2004. The repository is totally supported by the College Center for Library Automation's (CCLA) network staff and housed in their secure network room on FDLC servers. Maintenance of servers and software and 24 x 7 support for the system is ensured. CCLA has a superb record of up-time for over 15 years. Bandwidth utilization is monitored and adjusted as needed. Server storage is also managed and upgraded as needed. The FDLC works with the repository software company to configure and maintain the repository software to meet Florida's needs.

3. Rationale for Selection

Implementing the Orange Grove at the Consortium was selected as the best solution for the following reasons:

- *Business Compatibility.* The role of the Consortium is to provide statewide leadership for Florida's distance learning activities. The Orange Grove is compatible with this objective.
- *National Leadership.* Consortium staff is extensively involved in national distance learning efforts, including standards development for SCORM-conformance and metadata-tagging. Other states have begun to emulate Florida's Orange Grove concept because of its creative approach, unique conceptualization, standards-based foundation, and value. The Consortium's national activities will ensure Florida's efforts incorporate the most recent standards and national directions.
- *Cost Savings.* The Consortium has demonstrated its ability to attain significant cost savings for Florida's postsecondary institutions. For nearly ten years, the

Consortium has negotiated statewide contracts on behalf of its member institutions. These efforts result in over a million dollars in savings each fiscal year for the State of Florida. Likewise, the Consortium will be able to implement the Repository in the most cost-effective manner.

- *Stakeholder Investment and Endorsement.* The Consortium has strong *voluntary* participation in its activities by K-20 institutions, and its membership is growing. As demonstrated through strategic planning efforts in the Spring/Summer of 2004 and in ongoing statewide discussions, the Orange Grove project is strongly endorsed by Consortium member institutions. In fact, 97% of the Consortium members agreed or strongly agreed that implementing The Orange Grove project should be a top Consortium priority.
- *Existing Network for Change Management.* The Consortium has established a strong network of professionals through its member institutions and has strong support from the Department of Education’s executive leadership. In addition, the Consortium’s Executive Director and Associate Director participate in many statewide groups (e.g., Council of Presidents, Council for Administrative and Financial Affairs, Council of Instructional Affairs among others) which will be instrumental and essential for the change management and professional development activities required for project success.

4. Recommended Business Solution

Florida PreK20 Digital Repository Components

The PreK20 Repository (The Orange Grove) initiative will support Florida’s PreK-20 educational system by acquiring, developing, storing, and managing high-quality learning resources that can easily be located and electronically shared among all Florida education professionals. The Repository will consist of:

- *The Learning Edge International “Equella” Repository Software* – This sophisticated software product supports the following criteria in a user-friendly format:
 - an independent product that integrates into multiple learning management systems (LMS) and permits users to access content independently of any LMS.
 - supports SCORM and other international e-learning standards content and federated searching
 - allows for adding batches of users through LDAP
 - scales to several million users
 - allows customization of
 - organizational structure at the statewide and at the institutional levels
 - resource types

- roles and groups to define system access
 - metadata fields
 - workflow requirements
 - email templates and notifications
 - personalization at the user level
- provides:
 - an authoring tool to permit users to easily create and assemble learning resources using components directly from the repository or from their desktops
 - tracking of resource utilization
 - options to link to or to download resources
 - controls versioning
 - push/pull technology: supports RSS feeds to faculty users based on their defined preferences
 - technical and user support
- *Development templates.* To assist web developers in creating SCORM – conformant resources, templates have been developed that automatically include the required java programming and metadata-tag fields.
- *Target learning resources.* The Orange Grove contains learning resources that are judged by a multi-stage review team of experts to meet quality standards, metadata-tagged for ease of use, and SCORM-conformant. Depending on funding levels, The Orange Grove is expected to contain learning resources from many sources:
 - No-cost, fair-use resources developed by individual colleges, universities, other states, or regional/national organizations
 - Licensed resources from proprietary software vendors or from educational institutions
 - Resources provided by the federal government, e.g., NSF, Library of Congress
 - Materials developed by contractors to address specific needs
 - Items co-developed with other states, commercial entities, or institutions
 - Learning resources developed by educational entities through grant funding

The Orange Grove project team will determine the cost-benefit of each of the identified sources for learning resources based on quality, applicability within the State of Florida for specific skill mastery, and cost to develop (and subsequently own for perpetuity), versus recurring annual licensing costs.

Initially, many of the learning resources in the Orange Grove will address difficult-to-master concepts involved in the math bottleneck courses in the postsecondary system. As the Orange Grove expands and as funding permits,

learning resources will be added to include items required for PreK12 students, Workforce courses, and educational professionals.

- *Technology infrastructure.* The Repository utilizes existing scaleable hardware owned by the Consortium and hosted by the College Center for Library Automation to host the repository software, as well as associated networking, firewall, technical support, and other software components to ensure a robust and reliable support environment. The use of a SAN and blade server technology allows for addition and efficient allocation of servers to expand Repository capabilities as utilization increases.
- *Repository staff.* The project will require contracted staff housed at the Consortium whose sole responsibility will be the successful implementation, change management, and ongoing support of the project. The Consortium staff members are annually contracted employees (not State FTE) that are administratively housed under Tallahassee Community College (TCC).
- *Implementation assistance.* Over the anticipated five-year implementation timeframe, the Repository will require subcontracted staff that can provide unique areas of expertise. Subcontractors are planned for use in areas such as research on student gains, supplemental training, resource acquisition, technical support/programming, and marketing/awareness. Some of these subcontractors will be from private entities, while others will be retained experts from Florida's educational system.

The Consortium will provide the core items in each of the above areas. It is fully expected that this project will expand beyond the initial target areas identified in this document to include parents supporting their children's FCAT skill mastery at home, other state agencies' professional development activities, and possibly private educational institutions. These other areas will not be addressed, or considered, until after the Consortium demonstrates success with the postsecondary, PreK-12, and vocational-technical areas.

Impact on Current Business Processes

The Repository will dramatically change the way educational professionals access digital learning resources. No longer will resources be locked away in proprietary systems or at the local institutions where they were developed. Instead, they will be managed and made accessible from a single location.

Pilot Project. Repository resources' effect on student learning has been tested on a small scale during the spring semester of the FY 2005-2006 academic year through a pilot project at one community college. Using learning resources for seven of the most difficult concepts in MAT 1033, Intermediate Algebra, instructors in five classes offered the resources to their students as supplemental material. Results showed that the students who could have benefited the most from use of the resources did not access them. Future studies are planned that will require students to use the digital resources in order to assess the resources' impact on student learning.

Interviews with faculty participating in the pilot showed overwhelming support for digital resources. They suggested that more resources were needed for this course, so that students can rely on the availability of supplemental resources to help them master all the course concepts, and that students get in the habit of working with electronic lessons. The Consortium funded the pilot project by using one-time carryover funds that are no longer available.

Professor Manacheril, Edison Community College, recently wrote that students in his on-line courses perform better than his face to face courses because of their interaction with his online lectures using a whiteboard interface. The students' ability to replay those lectures as needed improves student performance. This professor has offered to make available all his recorded lessons through the statewide repository to all faculty and students in Florida.

Because the learning resources in the Repository are metadata-tagged, it is easy for educators to identify, locate, and acquire them for use in their curricula, whether the learning resources are used to form an entire course or whether they are used to supplement instruction. It is fully intended that Repository resources will be suitable for use in both online and on-site instructional settings. As materials are updated to reflect changes made based on research on student gains or new information, faculty are notified through email. At any time, they can elect to download or link to the updated version of the resource or to continue using the original resource.

The Learning Edge International "Equella" repository software makes the current process for creating and using digital resources more efficient as well as easier for faculty. Using the authoring tool included in the software, faculty members can arrange and sequence learning resources from their desktops and from the repository. When linking to a repository resource, the actual content files remain in the repository. Thus, a resource is stored once and used virtually infinitely.

Business Value Realized

PreK-20 educational professionals will be able to access a variety of learning resources, for use in the classroom or via distance learning. Student academic gains are expected as learning resources are developed, acquired, or licensed and added to the Repository for concepts that are difficult for students to master. Value propositions include:

- ***Improved customer satisfaction.*** The Repository will improve satisfaction by providing easy access by Florida's educational professionals to quality learning resources. In turn, students will benefit from a wider variety of instructional materials, resulting in improved learning.
- ***Improved quality of programs.*** To support elementary to postsecondary instruction, the Repository will contain learning resources that enable students to master difficult concepts critical to continued academic success. Applications of the Repository include postsecondary bottleneck courses, supplemental materials for advanced students, FCAT concepts, adult and vocational technical concepts, and teacher professional development (e.g., alternative teacher certification and increasing need for certified PreK instructors).
- ***Improved access/delivery of state services.*** By implementing a learning resource repository at the state-level, instructional materials can be shared among institutions. Learning resources developed by one educational entity can be indexed and shared with others.
- ***Cost avoidance.*** State of Florida entities award development grants and local institutions often contract for learning resource development. The Repository will ensure centralized statewide access to the products of this funding. This is the same issue that propelled the U.S. Department of Defense to initiate and implement SCORM specifications for all its content development and purchases.

The FL Digital Repository software also supports federated searching of other repositories, effectively expanding access to additional publicly funded resources such as the PALMM Collection at the University of Florida.

Also, through the FL Digital Repository, the State of Florida will be able to participate with the Southern Regional Education Board (SREB) in sharing content across multiple states using Florida-defined measures of quality and metadata standards. Finally, the repository will enable the State of Florida to pursue state-level purchasing agreements to obtain lower costs for licensed

digital content from textbook companies and educational software developers. Cost avoidance will also be realized by having a repository at the state-level that each PreK-20 educational institution may use, thus averting some costs that would be incurred in developing their own digital collections, repositories, or databases. The State of Florida could require that a copy of all content purchased was placed in the repository. This would expand and enhance the repository significantly.

- *Improved employee satisfaction.* State of Florida education professionals will have additional quality instructional materials available to them. These materials will be indexed to ensure items are easily located (e.g., by common course numbering, grade level, subject, and Sunshine State Standards). Education professionals will be able to access alternative instructional content to reach students with different learning styles, thereby employing a wider range of strategies to assist more students to master concepts.

III. Schedule IV-B Cost Benefit Analysis

Purpose: To calculate and declare the tangible and intangible benefits compared to the total investment of resources needed to support the proposed IT project.

A. The Cost-Benefit Analysis Forms

Purpose: To provide a comprehensive financial prospectus specifying the project's tangible benefits, funding requirements, and proposed sources of funding.

Benefits Realization Table

Benefits associated with the Repository Project are included in the **Benefits Realization Table (Appendix C)** of this document. A number of those benefits are tangible in that they can be measured to some degree; however, their financial worth to the State is not always easily quantifiable. Given the narrow definition of “tangible” benefit that is allowed in the Schedule IV-B, all the benefits listed are categorized as *intangible*.

In some cases, the financial benefit to the State is realized in future cost *avoidance*, not in cost *savings*. Other benefits include improved customer satisfaction, improved access to learning materials, and improved program quality and access to programs. These benefits are described below.

Cost Avoidance Benefits:

- Avoiding future costs associated with students needing to repeat courses. This estimate considers the most current data on withdrawals and failures for the five math classes in the postsecondary system considered to be “bottlenecks.” A very conservative estimate of \$2.8 million per year in future cost avoidance is associated with just 10% fewer students failing or withdrawing from these courses.
- Avoiding potential duplication in costs associated with each educational institution developing learning resources and building and maintaining its own repository. Although total cost avoidance amounts cannot be predicted, the potential is significant. For example, development costs for a single learning resource for use in a lesson are estimated, at a minimum, to be \$7,500. With a robust Repository, prior to undertaking development of new learning resources, administrators and educators can easily search for, acquire, and re-use or adapt existing digital learning resources.
- Costs avoided for institutions that use the Florida PreK20 Repository, rather than building an independent repository.
- Central management of digital copyrighted materials and use fees.

- Capitalizing on the existing significant state investment in infrastructure, bandwidth & hardware

Improved Customer Satisfaction:

- Positive impact on students' higher education experience by providing easy access to digital resources. (A survey conducted by Pew Internet & American Life Project found that nearly four-fifths of college students surveyed agreed that Internet use had a positive impact on their college academic experience.)
- Meet or exceed current and future expectations of students (PreK12 and higher education sectors) and educators for functionality and availability of learning resources (resources that provide ongoing assessment and feedback and that are available 24/7).

Improved access to learning materials for students and teachers:

- This is accomplished through a user-friendly and centralized storehouse of high-quality resources that adhere to state quality standards and international standards for interoperability for each sector.

Improved program quality and improved access to programs:

- Availability of an increased number of high-quality learning resources for students and for educator professional development, PreK-20, through the Florida PreK20 Digital Repository, associated regional and national partnerships, and interconnected repository initiatives.
- Educators assisted in developing and validating new models of instruction
- A statewide community of practice among faculty using learning resources will be nurtured.
- Increased educator knowledge of and expertise in creating and using digital learning resources.
- Increased educator knowledge of components of high-quality instruction as modeled by learning resources.
- Florida continues its leadership role in regional and national project on e-resources for education
- Because learning resources can be re-used in multiple ways and many are suitable for multiple educational levels and settings, the repository will increase involvement of the PreK-12 education system with the postsecondary system, supporting the development of the seamless system envisioned in Florida law.

CBA Form 1 – Tangible Changes

Although the Florida K20 Digital Repository Project has many benefits associated with it, as described above and summarized in the Benefits Realization Table (Appendix C), none of them qualify to be included in the CBA Form 1 as a tangible benefit. This is because the Florida K20 Digital Repository Project will not result in a reduction in current personnel or in current operational costs, but does offer significant future opportunities for cost avoidance. For this reason, CBA Form 1 – Tangible Changes (part of Appendix D) is left blank and its associated CBA Form 1- B is left unchanged from its default response. This has implications for the investment summary calculations in CBA Form 3 (also part of Appendix D) and the costs benefit analysis results, discussed later in this section.

CBA Form 2 – Costs

This part of Appendix D includes sections on the proposed project costs for the Florida K20 Digital Repository Project, as well as estimates of the current costs associated with the existing Repository program. Each of these sections is discussed below.

Project Costs

The proposed project costs for the Florida Digital Repository are shown in CBA Form 2-A (Appendix D). This is a two-year project, with first year costs of \$1,750,000 and second year costs of \$ 1,951,340.

CBA Form 2-A shows that two-thirds of the proposed project costs are included in the cost category “Consultant Services.” This reflects the project’s primary objective to identify, acquire, and adapt existing high-quality digital learning resources for the repository. The first priority will be to use existing resources whenever possible, although by the second year of the project, it may be necessary to develop some new learning resources for the repository. In order to accomplish discovery and quality reviews, it will be necessary to pay for the services of faculty experts throughout the state who can assist in identifying and vetting the existing learning resources for inclusion in the repository. Faculty and/or institutional development teams may also receive small contracts for enhancing resources to meet targeted courses or concepts.

The remaining one-third of the proposed project costs are comprised of costs spread among many categories in the CBA Form 2-A. There are proposed costs for associated project staff, consisting of one full-time state FTE and two half-time OPS positions. In addition, funding is included for staff augmentation costs associated with marketing and research related to the project.

Additional hardware, software, and network infrastructure costs are minimal, reflecting the fact that the project builds upon the existing repository and its related infrastructure. Technology planning includes options for expanding bandwidth and storage capacity if the number of users increases quickly. A dramatic increase in users is possible as institutions might choose to integrate the Repository with their learning management systems. This option enables all institutional instructors to seamlessly enter and search the repository for

resources, as well as to easily contribute their personal resources for sharing. Costs for training and the associated travel expenses reflect the importance of training for the success of this project.

The “Other” cost category includes facilities costs for the additional staff and the five percent administrative fee imposed by TCC. Greater detail on these project costs is included in the Project Budget section of the Project Management Planning component of this Schedule IV-B.

CBA Form 2-B (Appendix D) indicates that this project cost estimate for the Florida K20 Digital Repository is of the “Not to Exceed” type with a confidence level of +/- 5%. The estimated costs were developed by the Consortium staff based on extensive knowledge of learning resources and repositories and the experiences of others in similar endeavors. The IT cost estimates were provided by the College Center for Library Automation (CCLA) technical staff based on the Consortium’s existing IT costs and extrapolating what additional IT infrastructure and network costs the Repository would create.

This confidence level for the project costs also reflects the fact that while certain costs (hardware, software, network and personnel) are more easily estimated, the bulk of the proposed project costs for digital learning resources acquisition, (included under the “Consultant Services” category) are less easily estimated due to the wide range of possible costs associated with adaptation or enhancement of learning resources. However, the total budget amount allotted to this activity can be certain not to exceed a given amount. The project’s proposed costs could be controlled within a 5% range, since a majority of the total project costs would be expended through individual consultant contracts.

Existing Program Costs

CBA Form 2-C (Appendix D) indicates the current program costs associated with the existing Florida Digital Repository. These costs were identified by the staff of the Florida Distance Learning Consortium (FDLC), based on actual and, in some cases, estimated expenses incurred with the repository. The hardware, software and network/hosting services costs, were supplied by the technical staff of the College Center for Library Automation which provides the technical support for the FDLC as well as the existing repository.

Current program costs for the existing repository are estimated to be \$318,961. This is comprised of state general revenue funding and FIPSE grant funds.

Over half of the current expenditures are for the 1.8 State FTEs that contribute in some manner to its operation. Portions of the salaries and benefits associated with the FDLC’s Project Director, Project Manager, and the new FIPSE Project Coordinator are included in the current program costs.

Total FIPSE grant-related funding of \$38,000 is also included in the current program costs. The initial phase of this project will involve an assessment of the current repository implementation in Florida, including reviewing policies, standards, guidelines, training

strategies and topics, and funding and marketing strategies. This includes not only funds for a portion of the FIPSE Coordinator's salary and benefits, but also some funds for travel associated with Florida focus groups and some contracted services for Florida faculty advisors.

CBA Form 2-D shows that the existing program costs estimate is classified as detailed/rigorous, indicating that they were calculated based on analysis of actual costs incurred and with some precision attached. The confidence level is given as +/- 10% indicating that these estimates of existing program costs are not exact amounts, but are provided with a high level of confidence.

B. Cost Benefit Analysis Results

CBA Form 3 – Project Investment Summary

The Florida K20 Digital Repository is not a typical IT project. It is primarily a project to acquire new e-learning resources (content) that will use an existing IT infrastructure and network for the delivery of the new learning resources throughout the state. The expansion of this existing IT infrastructure and network, however, is a very small portion of the overall project costs, the majority of which are in content or resource acquisition.

Because there are no cost savings associated with the Florida Digital Repository Project (only future cost avoidance), the CBA Form 3 – Project Investment Summary concludes that there is no return on investment. The return on investment from this project is best conveyed by the intangible benefits included in the Table of Benefits (Appendix C), but these are not captured in the Cost Benefit Analysis worksheets.

It is anticipated that the existing program costs for the repository will continue at the current level throughout the project. Additional repository project funds are necessary, however, for the Repository program to expand beyond its existing size and scope of 200 users and over 300 learning resources.

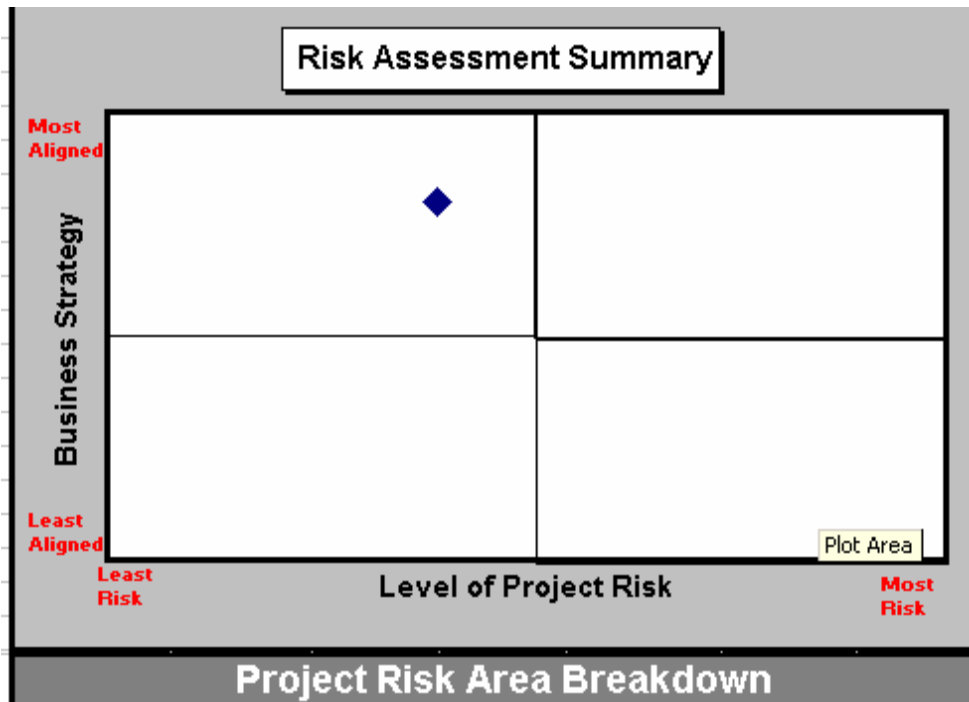
IV. Major Project Risk Assessment Component

The project has no high risk areas, and the overall risk assessment is *medium*. Preliminary plans have been made to enact mitigation strategies for managing existing risks. The risk assessment represents a reduction in the level of risk assessed for the project one year ago, and is due to the project activity that has taken place during the past year.

A. Risk Assessment Tool

Purpose: To provide an initial high-level assessment of overall risk incurred by the project to enable appropriate risk mitigation and oversight to improve the likelihood of project success.

Please refer to Appendix E for the Project Risk Assessment Tool. The high level results of the Risk Assessment tool are shown in the image below.



B. Risk Assessment Summary

Purpose: To identify the overall level of risk associated with the project and provide an assessment of the project's alignment with business objectives.

Using the Risk Assessment Tool, for the eight major project risk assessment areas, these results were obtained

- Strategic Assessment: **Medium**
- Technology Exposure Assessment: **Low**

- Change Management: **Medium**
- Communication Assessment: **Medium**
- Fiscal Assessment: **Medium**
- Project Organization Assessment: **Low**
- Project Management Assessment: **Medium**
- Project Complexity Assessment: **Medium**

This section discusses risk factors and mitigation strategies related to Change Management and Project Complexity.

Change Management

This project has several factors that contribute to the medium risk rating in the area of change management.

- The Consortium must retain three additional project staff (2.0 FTE), one of which will be a fulltime employee. This is a 25 % increase from its current staff size of eight fulltime employees (8.0 FTE).

This risk can be mitigated and controlled because the Repository project team will continue to have areas of responsibility that are separate from general Consortium responsibilities. By using institutional or private subcontractors for unique areas of expertise or for periods of increased demand, maximum flexibility and efficiency can be achieved. The staffing plan also relies on part-time staff, resulting in lower personnel costs. Current staff possesses the expertise and has planned procedures and space to manage and accommodate additional staff. Position descriptions and responsibilities have been defined. In addition, the existing Consortium and Repository Project staff members' expertise mitigate this risk through their participation in regional and national repository development efforts, and through their experience in managing larger teams that the one proposed for this project.

- The project will require educational professionals to adapt the way instruction is delivered via the use of learning resources. Early adopters are being used in the current limited implementation phase, including faculty and/or staff from Brevard Community College, Broward Community College, St. Petersburg College, and Daytona Beach Community College. These Consortium members are committed to early use and/or support of the Orange Grove repository and it is anticipated that they will become change agents. Additional collaborators and participants include members from University of West Florida, Florida Gulf Coast University, and the University of South Florida.
- Instituting change in the educational arena has historically proven challenging. The number of repositories is growing, with over 35 listed currently on the Academic ADL Co-Lab website at: <http://www.academiccolab.org/projects/repositories.html>

However, based on a spring 2005 survey, around 50 U.S. universities have operational repositories, and the majority of doctoral-granting institutions that don't have a repository are planning to create one or to participate in a consortial repository system (D-Lib Magazine, Vol. 11, No. 9). Many universities and community colleges are currently making digital learning publicly available. The Consortium will tap into many existing mechanisms for communication and training for the project, including statewide organizations and established training protocols such as in-service.

- Another risk factor for any technological solution is the management of technological changes, and the potential need to migrate digital content from one set of technologies to the next as technology evolves. By positioning a statewide repository in a centralized location, under the management of a statewide entity, these risks can be mitigated. Repository project staff will continue to communicate with similar initiatives across the southeast region and the nation, and will be able to track and evaluate alternate solutions to technical challenges as they arise. Because of the Consortium's partnership with the College Center for Library Automation (CCLA), it is able to take advantage of the expertise of CCLA technical staff in administering a large statewide system from a central location.
- A final risk factor for the repository is the ability to populate the repository with a sizeable pool of resources. This critical factor has been accounted for in that over 60% of the requested project funds are devoted to resource acquisition.

Project Complexity

The Repository project has a medium level of complexity for several reasons:

- This is one of the first PreK-20 projects that has the potential to touch all 164 institutions/school districts throughout the state, making the project inherently complex. Although the potential reach is wide, several strategies are planned to assist in extending the scope of the Repository.

One strategy is to specify a sector coordinator dedicated to each sector to ensure sufficient attention and dedication to sector needs. The project staffing plan delegates coordination for higher education to the current project manager, and assumes management of the PreK12 sector will be the responsibility a point person assigned by the Florida Department of Education's Bureau of Instruction and Innovation. Existing resources from within each sector will be solicited and used as a first priority for content acquisition.

For the higher education sector, contractor funds will be used to support several math instructors and several science instructors to serve as part-time regional coordinators to systematically search for existing content within their assigned regions. As part of the search, coordinators will review existing content to ensure it is accurate, and assist in providing the subject area information needed to

describe each resource including related Florida course numbering and state-level objectives.

For the Pre-K-12 sector, Repository staff will work with Florida Department of Education personnel to develop processes to discover and integrate existing Florida PreK12 resources/collections into the Repository. Wherever possible, discovery, review, implementation, and evaluation tasks will be performed by personnel within each sector, promoting buy-in and increasing two-way communication.

- The Consortium will be serving in the role of systems integrator, a role it has previously undertaken for statewide licensing of learning management systems, but not for a project of this size and complexity. However the technical systems already in place are equipped to manage the Repository project. The software used to manage the Repository has already been used to support larger implementations than this Florida statewide effort. The Consortium's partnership with the College Center for Library Automation (CCLA), allows access to the expertise of CCLA technical staff in administering a large statewide system from a central location.
- Project leaders have planned staffing roles and responsibilities. Plans are also in place for a comprehensive communication and marketing, training, and change management that communicate project benefits, receive stakeholders' feedback, and address stakeholders' needs. Initiating implementation within each sector as a limited pilot project will allow small early successes that should invite buy-in and provide data that can be used in marketing.
- The project requires a combination of business process adaptation, infrastructure updates, and software implementation/customization. These risks will be mitigated by ensuring effective project management, utilizing the services of an existing robust computing support center, and ensuring continual endorsement by key project stakeholders.

The Repository Director, with support from collaborating institutions, has facilitated the progress of the limited implementation without legislative funding, although progress has been slow. One advantage of this approach is that collaborating institutions are sharing acquisition, development and evaluation tasks, and thus gaining a deeper understanding of the requirements of the repository.

The Repository project is also utilizing partners, such as the Southern Regional Education Board (SREB), and advisors, such as the Academic ADL Co-Lab, which has worked with the Department of Defense on similar repository initiatives, to take advantage of repository technical expertise, lessons learned, and research.

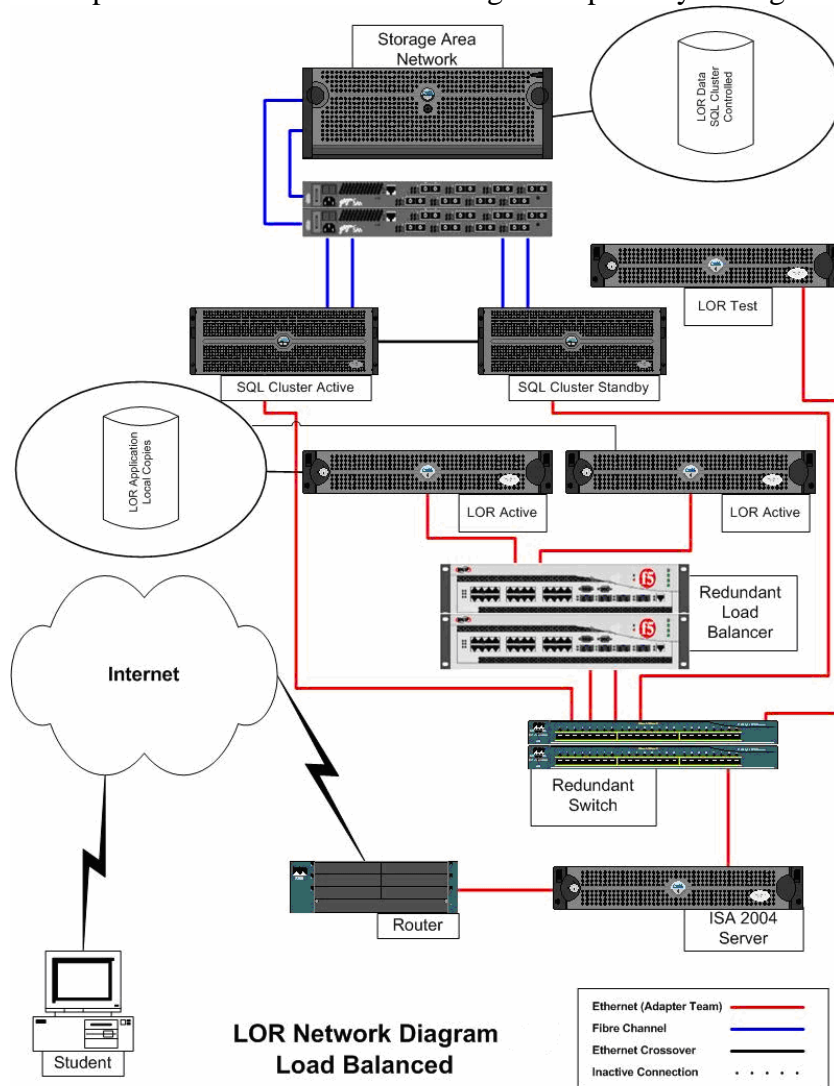
V. Technology Planning Component

C. Current Information Technology Environment

1. Current System

a. Description of current system

The Florida Distance Learning Consortium operates in concert with the College Center for Library Automation within a robust data center environment that features redundant systems with regular backup and off-site disaster recovery protocols in place. The hardware and networking environment for the current implementation of the PreK20 Digital Repository is diagrammed below.



b. Current system resource requirements and performance

Hardware environment includes:

- Dell PowerEdge servers from 2850 to 4400 series
- Dell CX500 SAN
- Brocade Fibre Channel Switches
- F5 Load Balancer for application performance management

Software environment includes:

- Windows 2000 Advanced Server
- Microsoft SQL Server 2000 Enterprise
- The Learning Edge – Learning Object Database

Protection and security is implemented using a Microsoft ISA 2004 firewall and supplemental virus protection/filtering software.

Application and user data backups are conducted using Veritas Backup Exec with MSSQL module to backup the database. Backups are performed daily (incrementally) on Sunday through Friday, with a full backup on Saturday (file system and database data).

2. Strategic Information Technology Direction

The Consortium possesses significant additional capacity within the existing technical infrastructure design for the Orange Grove Repository project because it is scalable, has proven reliable, and is well supported by the technical resources at CCLA. Additional processing hardware for the database application, while dependent upon the scale of implementation and partitioning of currently storage capacity, is expected to be required to support the Repository and the associated learning resources. However, no extensive changes to the Consortium's current Intel-based hardware, software, or network configuration are anticipated or desired.

The Consortium will continue to contract with CCLA for technical infrastructure support and maintenance of the Repository. CCLA has provided reliable, cost-effective, and quality services for the Consortium for over five years. In addition, because CCLA and the Consortium are housed in the same building, local support for servers and staff workstations is present.

3. Information Technology Standards

The software used for the Orange Grove Repository, The Learning Edge International, is a proven product that conforms to SCORM requirements. A combination of education, industry and Florida standards for metadata-tags (descriptive information for storage and retrieval) are being used to ensure that searching by educational professionals is easy, targeted, and productive.

However, the selection of the software vendor will be re-evaluated periodically as software solutions evolve. If changes are considered, decisions will consider the complete costs for any changes.

D. Proposed Solution Description

1. Business Requirements Summary

The Repository is expected to continue to provide an increasing number of educators with access to an increasingly robust repository of reusable learning resources that can be used to support instruction and improve learning retention for students, and to support professional development for educators.

The Orange Grove Repository is currently operational, with many types of learning resources existing and planned, including:

- *Learning object repository software* – existing. The Learning Edge International was chosen as the software that currently affords this project the best set of online tools to assist educators in creating and accessing high-quality, SCORM-conformant learning objects using a set of pre-defined search metadata-tagging (indices).
- *Learning object development templates* – existing. Two types of templates have been developed to assist web developers in creating high-quality, SCORM-conformant learning objects.
- *Target digital resources* – existing and planned. A modest number of resources are currently available in the Repository. The Orange Grove will contain a broad range of digital resources including learning resources that have been judged by a review team of experts as meeting quality standards (including metadata standards), and ultimately will be made ADA and SCORM-conformant.
- *Technology infrastructure* – existing and planned. The Repository is able to meet current demand with existing infrastructure, but, depending on the scale of implementation, will require scaleable hardware and bandwidth to store and provide access to Repository resources, as well as associated networking, firewall, technical support and other software components to ensure a robust and reliable support environment.
- *Repository staff* – existing and planned. The project director, project manager, and FIPSE Repository Blueprint Coordinator comprise existing project staff. The project will require additional staff housed at the Consortium to implement the project, as specified in the appendices associated with this narrative.

- *Implementation assistance* – planned. Over the anticipated two-year implementation timeframe, the Repository will require subcontracted staff that can provide unique areas of expertise to assist in resource identification, review, and any adaptations needed.

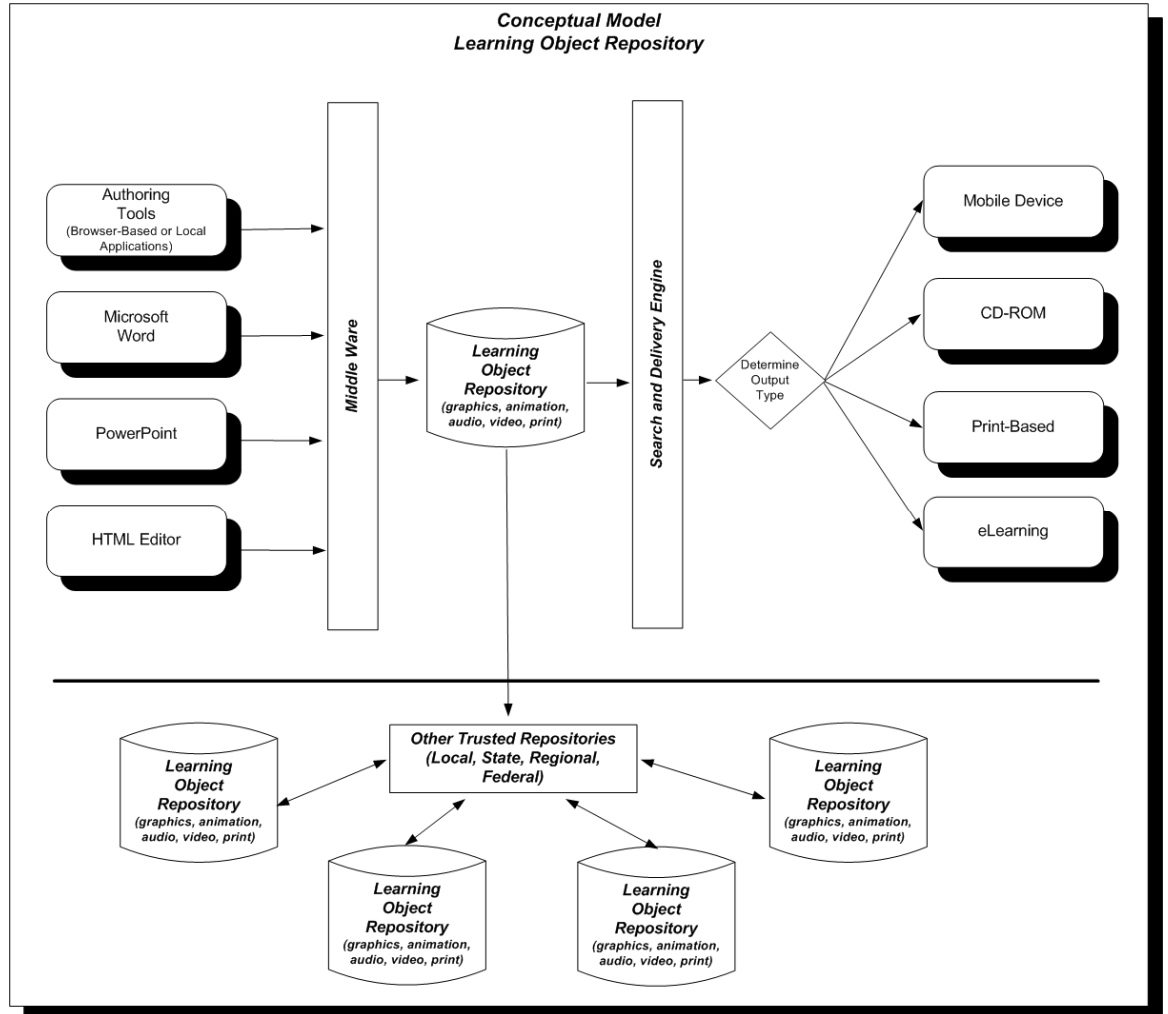
2. Technical Requirements

a. Summary description of proposed system

When selecting a vendor for the learning object repository, the following requirements were met:

- SCORM-conformant
- Compliance with IEEE metadata standards for distance learning
- Ability to search and share learning resources with other local, regional, and national repositories
- Ability to reference or copy learning resources for show or use in locally-based learning management systems
- Simple, logical and intuitive user interfaces for state-level staff and local users
- Workflow capabilities to support quality review of learning resources, customizable at the institutional level
- E-commerce for processing payments for any “purchased” learning resources (planned, but not currently operational).
- Scalable to support at least 300,000 educational professionals, and eventually scaleable to support all students and parents (estimate 4 million users)
- Support for federated searches of multiple repositories (current standard is the Library of Congress’ Z39.50)
- Ability to package curriculum materials as SCORM-conformant resources.
- Software interfaces that are ADA compliant.
- E-commerce capabilities to allow institutions to pay for copyrighted materials before use (planned, but not currently operational).
- User interface that supports several browsers.
- Technical environment that is Intel-based to leverage existing Consortium technical investments and capitalize on current technology support skills.

This list of requirements will expand and contract as the Repository implementations proceed, additional software tools are identified and reviewed, and new information is collected on users’ expectations/needs/experiences. A high-level conceptual depiction of the expected environment follows.



The proposed system represents an increase in capacity designed to address a deployment of the repository for statewide use. Two balanced application servers will be added to the Consortium’s existing storage and network services matrix to address the increased processing demands. Ample storage and redundancy in the database servers already exists to meet current needs.

b. Resource and summary level funding requirements for proposed system (if known)

The table below shows the requirements for the proposed system. These numbers are based on the service level agreement between the Consortium and CCLA.

Proposed System (Leveraging Existing Resources)			
Phase I (Project Year 1)	Quantity	Unit Cost	Total Cost
Application Servers	2	\$8,500	\$17,000
Qlogic cards for San/Server	2	\$2,500	\$5,000
FC Switch	1	\$14,000	\$14,000
Misc Server Software	2	\$2,000	\$4,000
PCs	4	\$1,500	\$6,000
PC software	4	\$500	\$2,000
Teamquest Suite	2	\$2,500	\$5,000
Dell rack and rack console, training for data protection	1	\$2,600	\$2,600
Network Analysis Fee	1	\$1,000	\$1,000
High capacity printer	1	\$2,000	\$2,000
Disaster recovery services	12	\$500	\$6,000
Subtotal			\$64,600
Phase 2 (Project Year 2 – as needed)			
SQL Cluster Software (Windows 2003 Enterprise & SQL Server 2000 Enterprise)	2	\$4,200	\$8,400
SQL Servers (clustered)	2	\$10,000	\$20,000
Network Bandwidth (extra capacity @ 1Mb/month)	12	\$100	\$1,200
Subtotal			\$29,600
Phase 3 (Project Year 2 – as needed)			
Additional Storage	1	\$25,000	\$25,000
Development environment (Servers)	1	\$10,000	\$10,000
Multimedia streaming server and software	1	20,000	\$20,000
Teamquest	2	\$2,500	\$5,000
Subtotal			\$60,000
Total Cost (all phases)			\$154,200

c. Ability of the proposed system to meet projected performance requirements for:

- network and system availability
System availability conforms to customers' service hours. A consistent maintenance period is required for systems maintenance and backups. The

hosting organization has maintained greater than a 99.9% uptime for the applications that it supports during the past 15 years.

- network and system capacity
Network and system capacity is designed to have at least a three year life to any hardware purchase. This ensures that while equipment is in production, it is maintained at a high level and typically has capacity available for non-production purposes after that initial purchase. Network capacity is monitored by the Internet provided and additional bandwidth on demand is available.
- network and system reliability
Network and systems are designed to ensure reliability for our customers. This reliability comes from putting redundancy in place from the building infrastructure, like generators and UPS's, to technical systems redundancy, such as fail-over hardware. At the time any new product is introduced, technical staff analyze at what it would take to make it an application that is available, 24x7. A multi-tiered development environment also helps to ensure this reliability with managed change control across the production and development areas. All network and systems are maintained by either a stringent maintenance contract or backup hardware is available onsite.
- network and system backup and operational recovery
Network and system backup and recovery services are provided by a contract with SunGard Availability Services. This contract provides for hardware and network replacement in the event of a disaster.
- scalability to meet long-term system and network requirements
Scalability to meet long-term system and network requirements is built into the reliability of the system. The systems are designed so that additional capacity can be easily incorporated.

E . Capacity Planning

As part of the SLA to the Consortium, the hosting organization (CCLA) reviews technical statistics that include capacity of its systems and network. This information is analyzed by technical staff on a routine basis to ensure that there is sufficient capacity to meet current needs. Additionally, during annual contract review sessions between CCLA and FDLC, and prior to the signing of the memorandum of understanding, the growth of the network and system during the past year is analyzed and compared to the capacity available, in order to project needs for the next fiscal year. This analysis of the existing network and system infrastructure is then incorporated into the annual contract.

F. Analysis of Alternatives

1. Assessment Process

CCLA staff, working with FDLC leadership, identified the requirements for a stand-alone Repository technical infrastructure. The requirements for that system are presented in the following table.

Stand-Alone Repository System			
Phase I	qty	unit cost	Total Cost
Application Servers	2	\$8,500	\$17,000
SAN	1	\$70,000	\$70,000
Qlogic cards for San/Server	2	\$2,500	\$5,000
FC Switch	1	\$14,000	\$14,000
Misc Server Software	2	\$2,000	\$4,000
PCs	6	\$1,500	\$9,000
			\$124,000
Phase 2			
SQL Cluster Software	2	\$4,200	\$8,400
SQL Servers	2	\$10,000	\$20,000
Network Bandwidth (extra 1Mb/month)	12	\$100	\$1,200
			\$29,600
Phase 3			
Big IP Application Server (Load Balancer)	2	\$25,000	\$50,000
Add'l Storage Array w/disk	1	\$25,000	\$25,000
Development environment (Servers)	2	\$10,000	\$20,000
			\$95,000
TOTAL			\$243,600

After identifying the stand-alone system requirements, CCLA staff then examined the stand-alone system for areas where existing resources could be leveraged to provide the necessary technical infrastructure for the Repository. The results of that analysis produced the table on a previous page, titled Proposed System (Leveraging Existing Resources).

2. Technology Recommendation

The proposed solution is sufficiently robust and efficient, and a lower cost alternative, as it makes use of existing capacity. Consortium hosting in partnership with CCLA represents a proven solution which maximizes previous investments in hardware, software, and network capacity already built into the Consortium learning management system environment.

VI. Project Management Planning Component

A. Project Charter

Purpose: To document the agreement between a project's customers, the project team, and key management stakeholders regarding the scope of the project and to determine when the project has been completed. It is the underlying foundation for all project related decisions.

The goal of Florida's PreK20 Repository, The Orange Grove project, is to create a repository of high-quality, standards-based learning resources accessible by Florida's PreK-20 educational professionals that will improve student learning and avoid educational costs. The Orange Grove will be available for use by Florida's nearly 230,000 educational professionals and by the students they teach.

The Repository will address the following problems in Florida:

- The inability of Florida's educators to easily share learning resources developed locally, nationally, or by instructional software/textbook companies.
- The inability to locate learning resources that precisely target a Sunshine State Standard or objective in a postsecondary common course number.
- The lack of easily accessible, high-quality digital instructional tools and resources to allow students to learn independently.
- High student failure rates and course withdrawals because difficult-to-understand concepts are not mastered in key subject areas or courses.
- Duplication of development efforts among institutions to create electronic resources that address the same or similar concepts.
- The development of electronic resources that are non-standards based and not reusable.

Project Goals

The goals of the Repository are presented below. Specific objectives, including criteria for success and timelines, have been provided in Section II, Business Case, under the topic *Background and Strategic Needs Assessment*.

- Acquire high-quality reusable learning resources based on international e-learning standards for accessibility and reusability, known as SCORM (Shareable Content Object Reference Model). Reusable learning resources are discoverable, reusable, interoperable, and portable digital resources.
- Increase productivity of educational professionals by finding or enhancing existing high-quality, accessible, and reusable learning resources for key

concepts, particularly for courses that have proven to be difficult to master (i.e., math and science). Eventually, it may be necessary to develop additional resources to target any content gaps for key concepts.

- Establish partnerships with public and private institutions, libraries, vendors, and other states to provide educational professionals with a large and comprehensive array of quality digital resources.
- Avoid costs and increase quality in the acquisition and delivery of instruction. The repository contains validated, cost effective educational resources that will reduce duplication of effort across the state and nationally in the development of learning materials, while increasing student learning.
- The goal of the Florida Distance Learning Consortium relative to the Repository is to spearhead the project in its implementation years and to assume leadership for project management, change management, and stakeholder communication activities necessary to make it a success.
- Success for the Repository is defined as active use of the learning object repository in all areas of PreK-20 education by the majority of Florida’s educators.

Funding

The Florida PreK20 Digital Repository Legislative Budget Request is expected to provide additional core staffing, continued access to learning resource repository software, learning resource acquisition/development (within the defined budget), and supplemental subcontracted expertise for the following target areas:

- Higher Education (universities and community colleges) – with emphasis on “bottleneck courses”
- PreK-12 (includes FCAT and gifted students)

This legislative budget request represents support from three different educational sectors:

- Issue #64 001 CO (John Opper): Transfers Florida Digital Repository (\$700,000)
- Issue #4003570: Digital Instructional Resources for Stem Courses (Partnership with Community Colleges) – State University System of Florida (\$750,000)
- Issue #36277CO: Project Education Media Technology Services – Agency Enterprise Information Technology – Digital Repository (\$300,000)

Secondary Applications

Secondary applications of the Repository that may be considered in future years (not included in this budget request) are:

- PreK-20 Educator professional development/training resources
- Workforce Education resources
- Access to FCAT learning resources by parents.

- Application of the Repository to professional development needs of other state agencies.

However, no additional opportunity will be included in the Repository project until:

- A business case for the new opportunity is developed.
- An invested sponsor is identified to champion the opportunity within its stakeholder group.
- A funding source is identified.

Major Business Objectives to Be Attained (Including Timelines and Standards for Acceptable Performance)

Specific objectives, including criteria for success and timelines, have been provided elsewhere in this document, in Section II, Business Case, under the topic Background and Strategic Needs Assessment.

Major Deliverables

The project is organized in cycles, with a limited implementation initiating activity within each sector. After implementation and evaluation, each sector’s activities are on an annual schedule, adjusted based on funding as determined at the beginning of each fiscal year. The projected major deliverables are presented in the following table. Please note that actual PreK12 deliverables are expected to be determined through discussion with DOE personnel assigned to carry out project responsibilities and PreK12 stakeholders.

Major Deliverables			
Phase	Deliverable 1	Deliverable 2	Deliverable 3
Research and Planning	Annual Update to the Strategic Plan for Repository (expected August 2007)	Annual Update to the Strategic Plan for Repository (expected July 2008)	Annual Update to the Strategic Plan for Repository (expected July 2009)
<i>Higher Education</i>			
Phase HE II: Expanded Implementation for Higher Education	2007-2008 Higher Education Strategic Plan (stakeholders, goals, objectives, strategies, responsibilities)	Learning Resources Implemented	2008 Evaluation Results and Recommendations for Improvement
Phases HE II: Expanded Implementation for Higher Education	2008-2009 Higher Education Strategic Plan (stakeholders, goals, objectives, strategies, responsibilities)	Learning Resources Implemented	2009 Evaluation Results and Recommendations for Improvement

<i>PreK12 Education</i>			
Phase PreK12 - I - Integration with Existing K12 Collections	Detailed PreK-12 Plan: Expected to include (stakeholders, goals, objectives, strategies, responsibilities)	Collections/ Resources Implemented	2008 Evaluation Results and Recommendations for Improvement
Phase PreK-12 - II: Expanded Implementation	Detailed PreK-12 Plan: Expected to include (stakeholders, goals, objectives, strategies, responsibilities)	Learning Resources Implemented	2009 Evaluation Results and Recommendations for Improvement

Major Milestones

The major milestones within each sector are marked by: 1) implementation phases, when the instructional resources for targeted areas are implemented by educators; and 2) evaluation phases, which conclude each sector cycle. Evaluation results are used as input to improve processes and outcomes for the next phase of implementation within that sector. Results will be integrated with the strategic plan for the entire Repository, as well as for each sector (higher education and PreK-12).

During evaluation, data is expected to be collected to determine

- Student achievement in each sector
- Satisfaction ratings by students and faculty/teachers
- Progress toward target goals for Repository and for each sector

The most significant milestones will be reached when target business objectives for the Repository and for each sector are achieved. If these should occur within the lifecycle of the project, the project leadership will determine whether new business objectives will be created or whether project resources should be redistributed to reach unmet objectives. If any resources are redistributed, attention will be given to maintaining the levels of performance and satisfaction in “completed” objective areas.

Significant Project Assumptions

The project assumes the following:

- The digital learning culture will continue to expand.
- The culture of sharing learning resources will continue to become more widely accepted as general practice.
- Authoring reusable and 508 conformant learning resources will become easier with advances in template design, software development tools, and as newer SCORM versions are implemented.
- Learning resources will increasingly become standard “building blocks” for all curriculum development at all educational levels.

- A central repository of high-quality, standardized learning resources will be useful to and valued by all educators and students.
- The learning resources in the Repository will be frequently used in face-to-face classrooms as well as in distance learning and blended/hybrid courses.
- Educational institutions and individual faculty members will make their learning resources available to others by contributing them to the Repository.
- Educators will increasingly use digital learning resources in their curriculum, especially subsequent to increased awareness and training sessions.
- The Repository staff will focus the majority of its efforts on coordinating the process of learning resource discovery and on ensuring conformance to defined Repository standards.
- The number of Repository software options will continue to increase. The software used for the Repository will continue to meet evolving industry and best practice standards, including SCORM (Shareable Content Object Reference Model)-conformance.
- The majority of educational institutions will have access to learning management system software.
- Where appropriate, learning resources in the Repository will be shared with other states, the SREB, and other educational entities.
- To the extent possible, Florida will seek public and private partnerships with others to more rapidly include the greatest amount of high-quality learning resources in the Repository.
- The Florida Department of Education's Bureau of Instruction and Innovation will provide a staff person to manage Repository activities for the PreK-12 sector. This staff person will coordinate with Repository project staff to integrate Repository related to PreK-12.
- Collections that integrate with the Repository will conform to international standards to ensure that all Repository resources remain discoverable and interoperable as systems evolve.

Significant Project Constraints

The project is constrained by the following:

- Florida's decentralized educational system emphasizing local control relies on voluntary participation to establish a single, statewide learning resources repository, as has been done in some other states.

- Full statewide implementation is dependent upon additional legislative funding.
- The Repository is a long-term project that will require recurring funding from the Florida Legislature to continue its activities.
- Funding levels will affect the amount and types of learning resources that are included in the Repository. The greater the funding provided, the greater the amount of learning resources that can be acquired for targeted skills and sectors.
- Learning resources developed by private entities (such as textbook companies or educational software providers) may be subject to licensing agreements or royalty arrangements that will require ongoing funding for their use.
- Many school districts do not have access to learning management system software. While a learning management system is not required to use learning resources from the Repository, the lack of such a system will limit a district's ability to obtain some learner management information, such as tracking learning resource use and assessing the impact on student performance. Funding to provide learning management systems for educational entities is not included as part of the Repository project budget.
- Efforts to implement innovative teaching methods, such as the use of digital learning resources, require ongoing education and support to produce a change in the educational culture.

Key Stakeholder Groups Impacted by the Project

The key stakeholders expected to be impacted by the Repository project are:

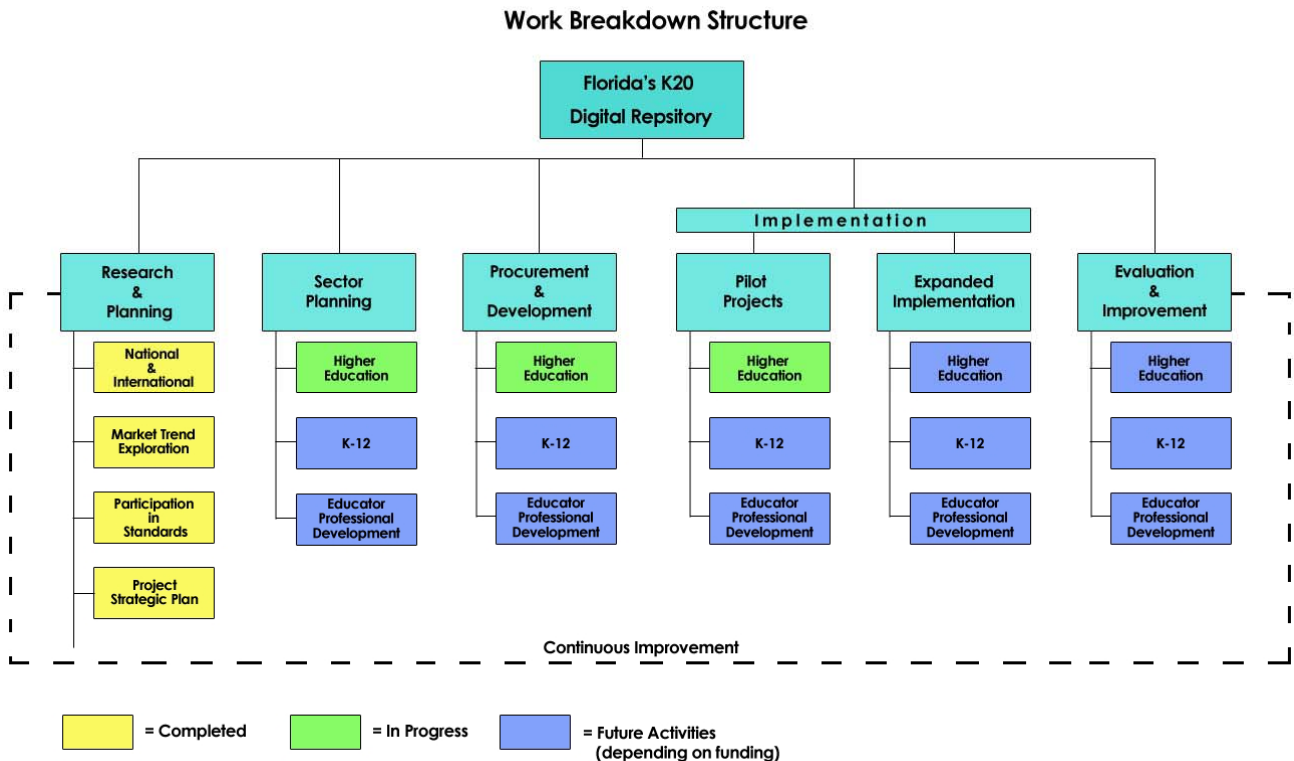
- State of Florida Department of Education: Commissioner, chancellors and vice-chancellors, Board of Governors; governing boards for PreK12
- Higher education initiatives: Florida university and community college students, faculty, development staff, and administrators; SREB and FIPSE partners; national partners
- PreK12 initiatives: district and school administrators, teachers, media specialists, development staff, and students; SREB partners; national partners

B. Work Breakdown Structure

Purpose: To define at a summary level all work that will take place within the project. It serves as a common framework for planning, scheduling, estimating, budgeting, configuring, monitoring, reporting on, directing, implementing and controlling the entire project.

The work breakdown structure provides an overview of all work that has been accomplished thus far for the PreK20 Repository, all anticipated work required to implement it statewide, and necessary activities to integrate future opportunities.

The following chart presents the workflow framework for the Repository Project. The project follows iterative cycles of 1) planning, 2) pilot project, 3) wider implementation, and 4) evaluation and improvement. The evaluation results feed back into the next cycle of planning for each sector. After a pilot project cycle has been completed for each sector, the second implementation cycle assumes a wider implementation phase, the extent of which will depend upon funding for that educational sector. Development and procurement occurs between the planning phase and the implementation phase.



C. Resource Loaded Project Schedule

Purpose: To indicate the planned timetable for all project-related work and estimate the appropriate staffing levels necessary to accomplish each task, produce each deliverable, and achieve each milestone.

The project schedule (Appendix I) presents the planned timetable for project work. Staff responsibilities are provided in the Responsibility Assignment Matrix (Appendix J).

D. Project Budget

Purpose: To ensure that a realistic project budget has been developed.

The Florida K20 Repository Project budget request for FY 2007-08 is \$1,750,000. Second-year project costs are estimated to be \$1,951,340 for a total 2-year project cost of \$3,701,340.

The project budget worksheets (Appendix L: Project and Operational Budget Tables) provide the quarterly breakdowns of the proposed Florida K20 Repository Project budget for each of the two project years. Per the instructions for this Schedule IV- B, since the cost benefit analysis was completed for this project, the project budget worksheet # 2 does not need to be included.

The project cost estimates for the Florida Digital Repository are characterized as “not to exceed” estimates within 5%. The estimated costs were developed by the Consortium staff based on extensive knowledge of learning resources and repositories and the experiences of others in similar endeavors. IT-related cost estimates were provided by College Center for Library Automation (CCLA) technical staff based on the Consortium’s existing IT costs and extrapolating what additional IT infrastructure and network costs the Repository would create.

The second year of the proposed project includes a 3% increase in costs for all categories, with a few exceptions. The exceptions are the IT-related categories of hardware and software. These costs will increase based on the scale of the project that will be affected not only by the increase in the number of users, but also by the sophistication/complexity of the content that is delivered. The increases in the software and hardware categories are to support an increased user base of up to 20,000 users.

The following section discusses the project budget items by major category.

Project Budget Items by Major Category

State Staff – Consortium staff members are annually contracted employees that are administratively housed under Tallahassee Community College (TCC). The budget

includes funding for the equivalent of 2.0 FTEs, one state FTE and one OPS FTE. These additional staff needs for the Repository project are described as follows:

- System Administrator/Web Developer (1 full-time state FTE) – This position would encompass two major roles. First, a system administrator is required to customize and manage configuration of the system and to work with the software vendor to provide occasional programming services as needed to meet evolving demands from the expanding user base. A web developer is necessary to produce and maintain the Repository website and related web-based products that will result and be disseminated through the Web.
- Metadata-Tagging Specialists (Total 1.0 FTE - OPS) – Two part-time specialists are required to index learning resources for the repository, according to Florida’s requirements. Indexing resources is a time-consuming task, but essential to success. Proper descriptions of learning resources will facilitate educators’ ability to locate needed materials.

Subcontractors

There are two types of subcontractors’ costs included in this broad category provided in the Schedule IV-B Project Budget Worksheet. The first are the costs associated with staff augmentation activities related to the project: marketing and learning outcomes research and evaluation.

- Marketing and Awareness – This includes contracted services for developing a statewide awareness and marketing campaign for branding the Orange Grove Repository and ensuring Florida’s educators become aware of its benefits. These services will also be required throughout the implementation of the Orange Grove.
- Research – This includes contracted research services to independently assess the learning gains resulting from the Repository project. The Consortium can use the research results to 1) increase the likelihood of educators integrating digital learning resources, and 2) provide the basis for grant requests to extend the capabilities of the Repository. This is a recurring budget item.

The second type of subcontractor cost included in this Worksheet category is that associated with the learning resources acquisition. These costs comprise over two-thirds of the total project costs.

- Learning Resource Acquisition: Higher Education – Most of the Repository learning resources will be discovered by individuals under contract. The project budget includes funds to purchase faculty “after-hours” time from several faculty member institutions around the state with expertise in targeted subject areas, which are expected to be Math and Science. These faculty members will serve as Regional Higher Education Faculty Coordinators, who will interface with faculty

and institutions in their region to locate existing resources and to vet them as appropriate for inclusion in the Repository. This is seen as the primary resource acquisition activity for the first year of the project.

In the second year of the project, gap analyses will be conducted to determine if there are areas where new resources must be created to address critical concepts or needs. Any development efforts would be conducted through purchasing faculty/teacher and state institutional developers' expertise. The resulting learning resources would be owned by the State of Florida and could be available for marketing outside the State. The costs for developing each learning resource can vary depending on several factors: whether existing resources can be adapted to meeting defined needs, the amount of additional development time required, and the multimedia approach chosen for development. All resources will meet the quality standards established for inclusion in the Repository.

- Learning Resource Acquisition: PreK-12 – The primary acquisition strategy for the first year of the project is to integrate existing Florida collections of resources appropriate for PreK-12. The Department of Education will resource a staff person to coordinate Repository efforts for the PreK-12 sector. Subcontracting monies may be used to fund discovery of resources or collections, modifications to collections to bring them into conformance with international standards, or to enhance existing resources or collections.

Hardware, Software and Network Support –

The costs included in these Schedule IV-B Project Budget Worksheet categories are detailed in the technology section of this document. The Consortium will continue to contract with the College Center for Library Automation (CCLA) for technical infrastructure support and maintenance of the Repository.

CCLA has provided reliable, cost-effective, and quality services for the Consortium for several years. In addition, because CCLA and the Consortium are housed in the same building, local support for both servers and staff workstations is present. Project budget items in these categories, further detailed in the technology requirements section of this document, include:

- Additional PCs, and associated software
- Additional application servers
- Project-related software licenses
- High capacity printer
- LAN and technical support
- Security web hosting
- Additional bandwidth
- Database server for product development and testing
- Database software

- Streaming software
- Additional SQL servers
- Additional firewall components, repository software vendor requirements, and other unanticipated expenses
- Disaster recovery services

Other Costs –

Several categories of other costs included in the Repository Project budget are described below.

- Training – This budget item in the proposed project budget is based on an estimated 5% of total project costs. It is for contracted assistance to provide regional training for the repository during the startup period and to supplement the efforts of the Repository Project staff. Training will be a critical success factor for this project, thus additional assistance is budgeted throughout the two-year project implementation period.

This budget item also includes costs associated with developing online training for the repository. The resulting training would allow users with moderate technical skills to learn how to use the repository without traveling to a training class.

- Travel-- The Repository Project staff will incur travel expenses as part of its ongoing coordination, training, and awareness and marketing efforts for successful implementation of the repository. The ability to meet in person with contracted individuals and teams coordinating the discovery of learning resources will be critical to the project's success. Much of the travel costs are also associated with the training efforts that will be underway throughout the state.

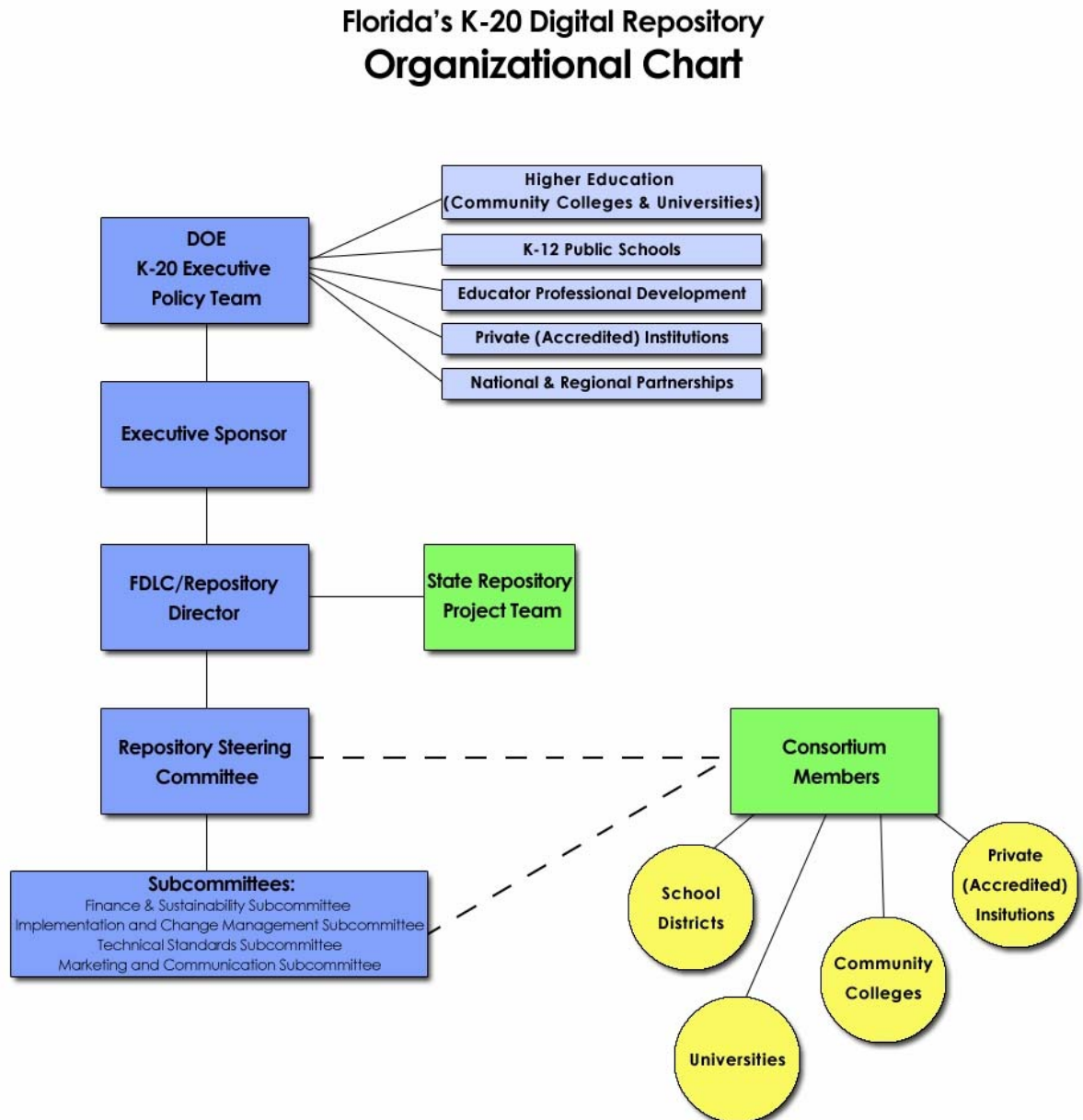
The project staff will be leveraging existing Distance Learning Consortium meeting opportunities as well as current training mechanisms to ensure project travel costs remain low. In addition, it is expected that each institution will support the training effort by sponsoring and leading local training sessions based on materials developed by the Repository Project. The proposed travel budget represents 2% of the total project costs.

- Facilities – The Consortium will need to expand its office space and obtain minimal furniture to accommodate the additional staff retained for the Repository Project. Additive facility costs will be a recurring budget item.
- Administrative Expenses – Because the Consortium is fiscally housed at TCC, up to 5% of the Repository Project budget must be allocated to the college for administrative functions such as fiscal and human resource support. This administrative fee is generally calculated based on the amount of revenue that flows through the organization and will be a negotiated cost item with TCC.

E. Project Organization

Purpose: To determine whether an appropriate project organizational and governance structure will be in place and operational in time to support the needs of the project.

The project organizational structure is depicted in the following chart.



Entities depicted in the Organizational Chart are described in the following paragraphs.

- *DOE PreK-20 Executive Policy Team* – The Florida Department of Education (DOE) Education Policy Team will provide organizational sponsorship for the PreK20 Repository. This team will provide executive sponsorship within each educational sector for project coordination purposes.
- *Executive Sponsor* – Dr. Judith Bilsky is the project’s Executive Sponsor. The Executive Sponsor will be responsible for ensuring the project continues to meet its strategic goals and for communicating with the DOE Executive Policy Team.
- *Repository Director* – The Associate Executive Director of the Florida Distance Learning Consortium will serve as the Director for the K20 Repository. The Repository Director is ultimately responsible for project success and will direct and lead all project activities. The Director is responsible for working with the project manager to assess pilot projects and to expand high-level sections of the project plan into detailed plans of action to allow specification, tracking, and measurement of project activities.
- *State Repository Project Team* - The State Repository Project Team will consist of approximately 6 state-level contracted staff as detailed in the project budget. The current team includes the director, a project manager, and the FIPSE Repository Blueprint coordinator.

Additional personnel to be recruited for the team include two meta-tagging specialists, and a system administrator/web developer. Regional coordinators for the higher education sector, who will coordinate the discovery and review of resources for inclusion in the Repository, will be identified by project staff. The coordinator(s) for the PreK-12 sector must be identified by DOE staff. These staff members, working with the project director and project manager, will be responsible for execution of project tasks, primarily the discovery and review of resources in year one of the project. Coordinators are also primarily responsible for ongoing marketing, communication, research, training, and evaluation for their assigned sectors. Additional experts for marketing, enhancement/development, technical support, and evaluation may be retained for the implementation year in each sector. The project director will also guide the efforts of these subcontracted companies/individuals.

- *Steering Committee* - The Steering Committee will consist of eight to ten members, to include project staff, sector stakeholders and partners, and Department of Education stakeholders. The Steering Committee will be responsible for policy decisions, definitions, quality standards, and intellectual property. The Steering Committee will also have oversight for three subcommittees. Members of the Steering Committee may also serve on one or more of the subcommittees. Travel for committee meetings is expected to be provided by each committee member’s representative institution.

- *Subcommittees* – Four subcommittees will be formed for the project, consisting of PreK-20 stakeholders and partners. Core membership already exists for these committees and will be augmented as the project expands.
 - The *Sustainability Subcommittee* will be responsible for issues related to:
 - Strategic planning updates
 - Structure
 - Finance
 - Sharing with other states, regions, and international entities
 - The *Implementation and Change Management Subcommittee* will be responsible for issues related to:
 - Change Management
 - Standards for quality of content, metadata, workflow
 - Resource acquisition or development
 - Education/training, evaluation, and improvement
 - Support for a community of practice
 - The *Technical Standards Subcommittee* will be responsible for issues related to:
 - Interoperability, accessibility, and technical concerns
 - Template standards and development
 - The *Marketing and Communication Subcommittee* will be responsible for issues related to:
 - Marketing
 - Communication (events and communication pathways)

Each of these subcommittees will consist of eight to ten team members, including steering committee members, project staff, stakeholders, and selected PreK-20 educational professionals throughout Florida. Travel for committee meetings is expected to be provided by the representative institution.

- *Florida Distance Learning Consortium Members* - The Consortium members are key stakeholders in the Repository, because they represent many of Florida's PreK-20 educational institutions. Consortium members will play an invaluable role in the project by communicating project objectives, activities, and successes to their individual institutions. Similarly, they will provide their institutional input and feedback (both positive and negative) to the repository project team and/or through the committee structure to ensure continuous improvement.

F. Project Quality Control

Purpose: To understand project quality requirements and ensure that effective quality control processes and procedures are in place and operational in time to support the needs of the project.

Many details of the Repository quality control plan will be developed by the Implementation and Change Management and the Technical Standards subcommittees. At a minimum, the project's quality plan will contain the following components:

- *Standard Metadata-Tags:* Metadata tags (indices) allow people to locate learning resources using key word searches that are based on international standards. Standards for metadata tagging have been developed through the project director's leadership on a work group that included the Academic ADL Co-Lab, Florida Center for Library Automation (FCLA), College Center for Library Automation (CCLA), community colleges, universities, and the Southern Regional Education Board (SREB).

In the Repository, these tags currently include Sunshine State Standards, common course numbers, age/grade level, and subject, among others. Other tags, e.g., FCAT skill, can be easily included in the system. All learning resources in the Repository will be appropriately tagged and searchable.

- *Content Accuracy and Quality* – Educational professionals must have assurance that resources in the Repository meet standards for content quality and accuracy. Before a learning resource is added to the Repository, it will be screened by content experts. Detailed processes for this review have been developed, but will be regularly reviewed by the subcommittee.
- *Template Development* – Two templates (tools that are similar to wizards) have been created as part of this project, to guide web developers to produce SCORM-conformant content. Additional templates may be discovered, or created by Repository project staff, to guide educators in using the repository authoring tool to easily develop their own learning resources without extensive technical training, while ensuring resources meet Repository standards. The Repository may be able to access additional templates through efforts currently underway at the Academic ADL Co-Lab.
- *Technical Reliability* – Learning resources must be accessible 24 hours a day, seven days a week because they will be used by students and educators for both synchronous and asynchronous learning (for classroom and distance learning, and for blended/hybrid courses). This level of access is currently available and supported by a Repository partner, The College Center for Library Automation. The Technical Standards Subcommittee will continue to monitor and update standards for accessibility and reliability as required, ensuring a stable technical environment that is accessible to all Florida educators and students.

- *Workflow Processes* - Workflow, processes, and quality/technical checklist documents have been developed to guide the creation of learning resources and for their placement in the Repository. The Repository is using and will continue to build upon three publications outlining quality standards developed by the Southern Regional Education Board workgroups, co-chaired by the Repository Project Director. These publications are:
 - [Principles of Effective Learning Objects](#)
 - [Technical Guidelines for Digital Content](#)
 - SCORE Users' Guide to Learning Object Metadata (LOM): Entering Metadata into LOM Fields

G. External Project Oversight

Purpose: To understand any unique oversight requirements or mechanisms required by this project.

Oversight for the Repository project will be provided by the DOE K-20 Executive Policy Committee (from the state perspective) and the Repository Steering Committee (from the institutional perspective). No other external oversight is expected for this project.

H. Risk Management

Purpose: To ensure that the appropriate processes are in place to identify, assess, and mitigate major project risks that could prevent the successful completion of this project

Details regarding major project risks and mitigation methods are presented in the Project Risk and Risk Mitigation Plan found in Appendix F. In addition, mitigation methods have been presented in Section IV of this document, Major Project Risk Assessment Component, under part B, Risk Assessment Summary. Ongoing updates to the Risk Management Plan are the responsibility of the Repository Project Manager.

I. Organizational Change Management

Purpose: To increase the understanding of the key requirements for managing the changes and transformation that the users and process owners will have to implement for the proposed project to be successful.

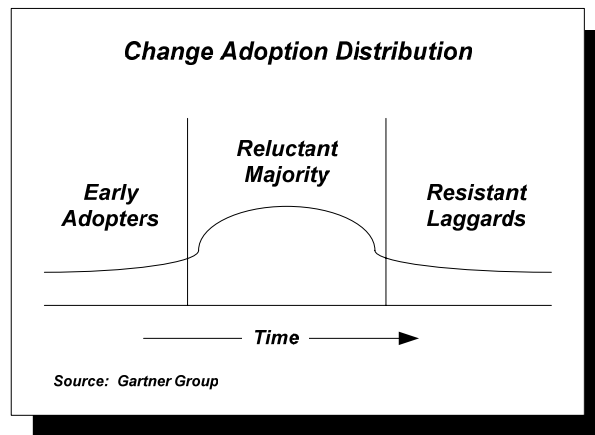
Challenges to Change

The greatest challenge for the Repository project is the need for effective change management strategies. Pressures to change the educational culture to facilitate collaboration have been underway for several years and have been advanced by the increasing popularity of distance and “blended” learning (blending synchronous and

asynchronous learning). Similarly, the high costs of development of online resources are putting pressure on educators to share resources, rather than replicate the traditional model of lesson preparation.

However, education is historically a culture that is resistant to change, and the project team, steering committee, and stakeholders anticipate some educator reluctance to try new ways of teaching through the use of digital learning resources. The adoption of digital learning resources by the majority of Florida’s educators is not guaranteed, even given a high-quality repository, efficient and effective marketing and communication, and evidence of learning gains and user satisfaction.

GartnerGroup research indicates that within a group, individual behaviors and emotional responses to change result in a bell curve of adopters. The organizational change anticipated for the Repository project is not expected to differ from this model.



According to GartnerGroup, in the beginning stages of a change initiative, a small percentage of people will eagerly participate, while the majority of individuals will be far less enthusiastic. This reluctant majority will adopt the change over time, if change management strategies for each group are developed and executed. The final group, the resistant laggards, may never adapt to the new change. Over time this group is likely to select out of the profession or organization or may retire.

Change Management Plan

The Repository project team and steering committee recognize the impact of the change adoption distribution phenomenon. Early adopters for the Repository were foreseen as steering committee members, subcommittee members, and Consortium members that already use digital learning resources. During the time that has elapsed since project planning began, this has proven to be true. Enrolling the middle group, the *reluctant majority*, is expected to require addressing several critical success factors:

- *Broad-Based Support* - The Repository project members will continue to foster two-way communication with its pre-established strong network of professionals, including member institutions, DOE’s executive leadership, and existing statewide educational groups. These entities are currently enrolling as early

adopters and are expected to be instrumental and essential for the change management activities required for success.

- *Local Champions* – Initial efforts have begun to identify a local champion (Repository contact person) at each higher education institution to facilitate project communication and to help lead local awareness efforts. With support, this effort can be expanded to more higher education institutions and to the PreK-12 area.
- *Demonstrated Success* – Educators are more likely to use the Repository if they are able to find the resources they need and if research indicates these resources improve student learning. Wide-spread publication of Repository successes is essential, and part of the communication strategy.
- *Awareness* – Educators cannot use the Repository if they do not know it exists. Branding, name recognition, and outreach efforts to communicate the Repository concept and its associated benefits must continue to occur.
- *Education/training* – Some educators are still reluctant to use technology, or get frustrated when an online resource is not intuitive. Other instructors are technology-adept and will integrate new products quickly. Training for the Repository will use both online and instructor-led training to demonstrate how easily learning resources can be used in everyday instruction. In addition, by using existing training opportunities (e.g., in-service), educators will begin to understand that the Repository provides additional instructional materials that produce effective student learning and engagement with very little effort on their part.
- *Reliability* – Consistent accessibility and reliability of the Repository has been recognized as critical to ensuring that every user’s Repository encounter is positive. The College Center for Library Automation’s reliable support for the Repository technical infrastructure for over three years is an indication of the system stability.
- *Content* – The Repository must have sufficient content for each sector before the Repository is activated for general use. The project team has planned a scaled implementation for each sector, initiated by a limited pilot phase. During the pilot phase, stakeholder and user input will be gathered and learning gains and user satisfaction will be evaluated. The results of the evaluation will be used to revise plans and priorities for the next implementation effort within that sector.
- *Quality* – Educators will expect Repository materials to be educationally sound. The rigorous quality review process for proposed learning resources has been designed to ensure that high quality standards are maintained for the life of the project.

- *Value Recognition* – Methods will be developed to recognize educational professionals who use Repository learning resources in their instruction as well as for those individuals that develop quality materials for statewide use. Those who embrace change and adopt new teaching methods should be rewarded.

The Implementation and Change Management Subcommittee is responsible for developing and implementing an appropriate change management plan that incorporates these critical success factors. Similarly, the Marketing and Communication Subcommittee is responsible for supportive communication based on both the change management and communication plans. The Technical Standards Subcommittee ensures that technical standards are current and engages in solving technical problems.

To ensure an effective change management plan is developed, the subcommittees will identify the most effective strategy required for implementing change for each target group. All the subcommittees will be guided by the efforts of the Sustainability Subcommittee. These efforts will be leveraged by state-level staff, and by subcontracted individuals experienced in change management, when needed.

J. Project Communication

Purpose: To ensure that effective communication processes are in place to disseminate information and receive feedback from users, participants, and other project stakeholders to facilitate project success.

Objectives

Every project of this magnitude is dependent upon consistent, structured communication to deliver and receive critical information. This communication plan is a beginning point and will be expanded by the Marketing and Communication Subcommittee. As the project unfolds, additional areas of communication will continually be identified and new elements of the communication plan will be developed.

The Project Communication Plan Tool specifies critical aspects of the communication plan, including target audiences and key messages, and may be found in Appendix M of this document.

The objectives of the Repository communication plan are to:

- Identify audiences for project communication by sector.
- Identify the communication/organizational structure of the project.
- Identify each audience’s communication needs.
- Plan for communication content and channels that will result in desired behaviors.
- Define roles and responsibilities for funding, preparation, and dissemination of the various project communications.

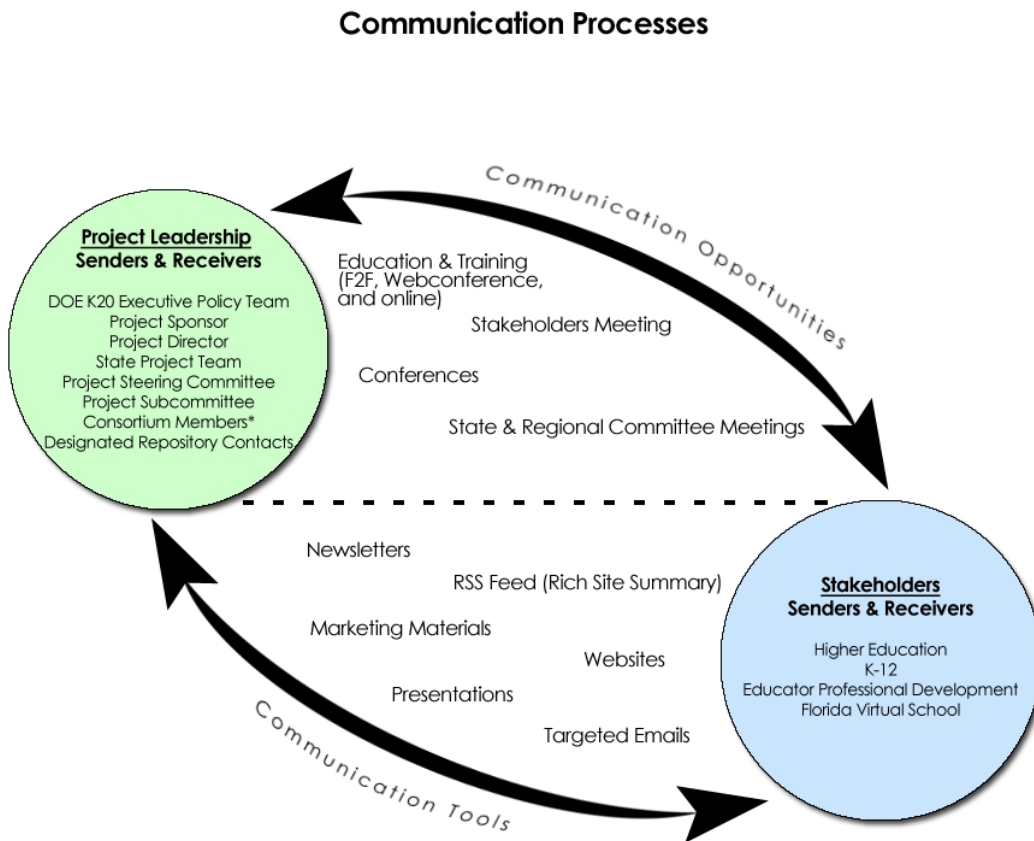
- Provide a means for feedback and improvement for project communication.

Audiences for Communication

The Repository project is a statewide initiative that will impact the Florida Department of Education, Florida’s public PreK-20 educational institutions, and educators. The ultimate benefactors of this project are Florida’s PreK-20 students as instruction becomes enhanced.

Communication Structure

The following diagram shows the communication structure for the Repository project.



* Florida Distance Learning Consortium

Primary Methods of Communication

- *Meetings.* The project director is uniquely situated to take advantage of existing meeting structures statewide, and for some regional and national opportunities. Because the project director is also the Associate Executive Director for the Florida Distance Learning Consortium, she attends quarterly Consortium meetings and manages meetings and communication among members of Repository committees and sub-committees affiliated with the Consortium. Through her participation in the Southern Regional Education Board, she interacts regularly with members from the 16 member states of the southern region. These interactions allow dissemination of Repository project information as well as the opportunity to receive input from users and stakeholders in the areas of higher education, PreK12, educator professional development, and the Florida Virtual School. These inputs relate to resources available for sharing as well as defined needs for repository users and best practices related to repository creation, management, and tool. Through informal communication with Academic ADL Co-Lab personnel, as well as attendance at working group meetings, the project director receives input on national and international advances related to repository structures, standards, management, and tools. The Executive Director of the Consortium also attends many meetings involving statewide stakeholders and uses those opportunities to engage in two-way communication with stakeholders.
- *Education and Training Opportunities.* The project staff has found past Repository workshops to be excellent opportunities to engage in two-way communication with stakeholders and users. During future training events, time will continue to be reserved for debriefing of training sessions, for the purpose of improvement, as well as to share problems and potential solutions among users and stakeholders.

To reach Florida's educators on the Repository and teach them how to apply digital learning resources in the classroom, the following two training strategies will be pursued, among others, identified by the Implementation and Change Management Subcommittee:

- *Instructional Course* – A training program will be developed and provided to Consortium members for use at their local institutions. As funds permit, subcontracted training professionals will provide regional training sessions at sponsoring institutions or at state conferences/education-related meetings. The objectives for this training program are to:
 - Increase the use of the Repository by Florida's educators, and
 - Begin change management activities to increase educator awareness of how the teaching/learning process can be altered to improve student learning.
- *Online Training Program* - An online training program will be developed for educators that will allow educators with moderate technical skills to access Repository training without human assistance.

- **Online Conferencing Tools** - The Consortium has a license for 65 concurrent seats for Elluminate, which can be used for web-based training programs. This software allows for a real-time training, demonstration, and collaboration environment through dial-up modem or high-speed LAN. It enables the delivery of live, video-capable, online learning, training, coaching, mentoring, and meetings. Participants can talk over the Internet through 2-way audio, chat online, and share whiteboards and applications
- *Conferences.* Both the Project Director and Executive Director of the Consortium regularly attend state and national conferences related to technology, education and training, and distance learning. The networking opportunities presented at these events have allowed the directors to discover new potential partners and resources, and the communication plan includes the continuation of these efforts. In addition, FIPSE project funds provide opportunities for conference travel and repository-related presentations by the FIPSE project coordinator.
- *Statewide Awareness Campaign.* The project will contract with a firm/individual for consulting and preparation of a statewide awareness campaign. This firm will work under the direction of the Repository Project Director and the Marketing and Awareness Subcommittee. The statewide awareness campaign may consist of the following activities, among others identified by the Marketing and Awareness Subcommittee.
 - Information to be provided to Consortium members for distribution at their institutions,
 - Videos and flyers identifying the benefits of the Repository that can be shown to educators,
 - Presentations and booths at statewide educator conferences, and
 - Give-away awareness materials.

As the project continues to evolve, additional materials and strategies will be identified and pursued as appropriate.

Communication Tools

- *Newsletters, targeted emails, and websites.* Currently the Consortium and project staff members are using newsletters, emails, and websites to disseminate information about the Repository. Information and problem reporting structures on Consortium and Repository websites allow input from users.
- *Presentations.* Presentations are currently made statewide and regionally by the Repository Project Director and Executive Director of the Consortium. These are used to disseminate information and to receive input from attendees. Input is used to refine communication plans and to improve future presentations

In addition, efforts are currently underway to present to key Department of Education

contacts and to solicit their suggestions for additional stakeholder events that might provide an opportunity to learn about user needs as well as to disseminate information about the Repository project.

- *Marketing materials.* A variety of marketing materials are planned to promote recognition of the Repository and to facilitate access by users. These will be specified in marketing plans as the project is funded.

K. Special Authorization Requirements

Purpose: To understand any project specific authorizations that must be received for the proposed project or solution.

Legislative approval and an associated appropriation are required to continue this project beyond the pilot phase.

VII. Appendices

The Appendices to the Schedule IV-B include:

Appendix A: Documentation Requirements for IT Projects

Appendix B: Sample Process Map

Appendix C: Benefits Realization Table

Appendix D: Cost Benefits Analysis Tool

Appendix E: IT Project Risk Assessment Tool

Appendix F: Project Risk and Mitigation Table

Appendix I: Work Plan Schedule

Appendix J: Responsibility Assignment Matrix

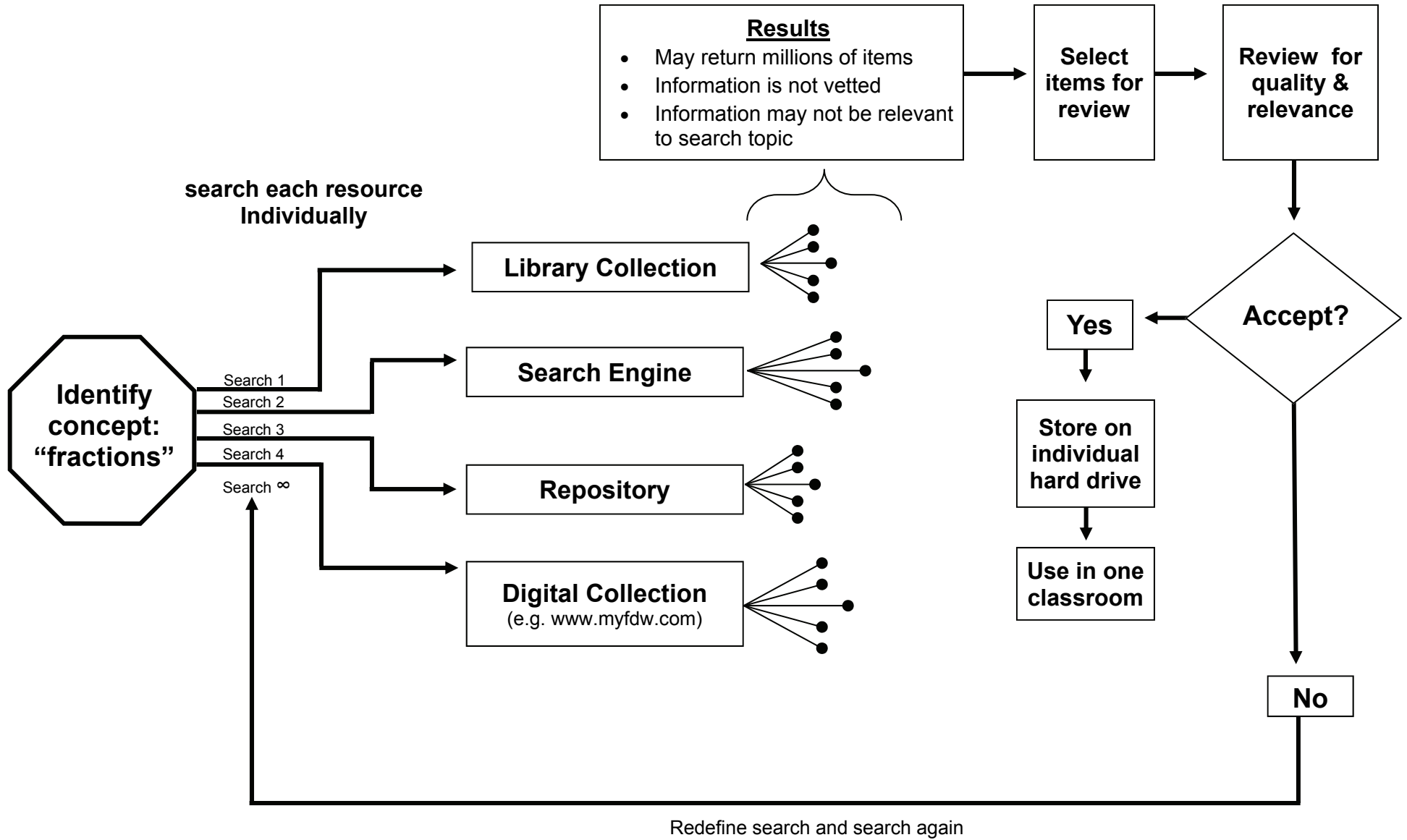
Appendix L: Project and Operational Budget Tables

Appendix M: Project Communication Plan Tool

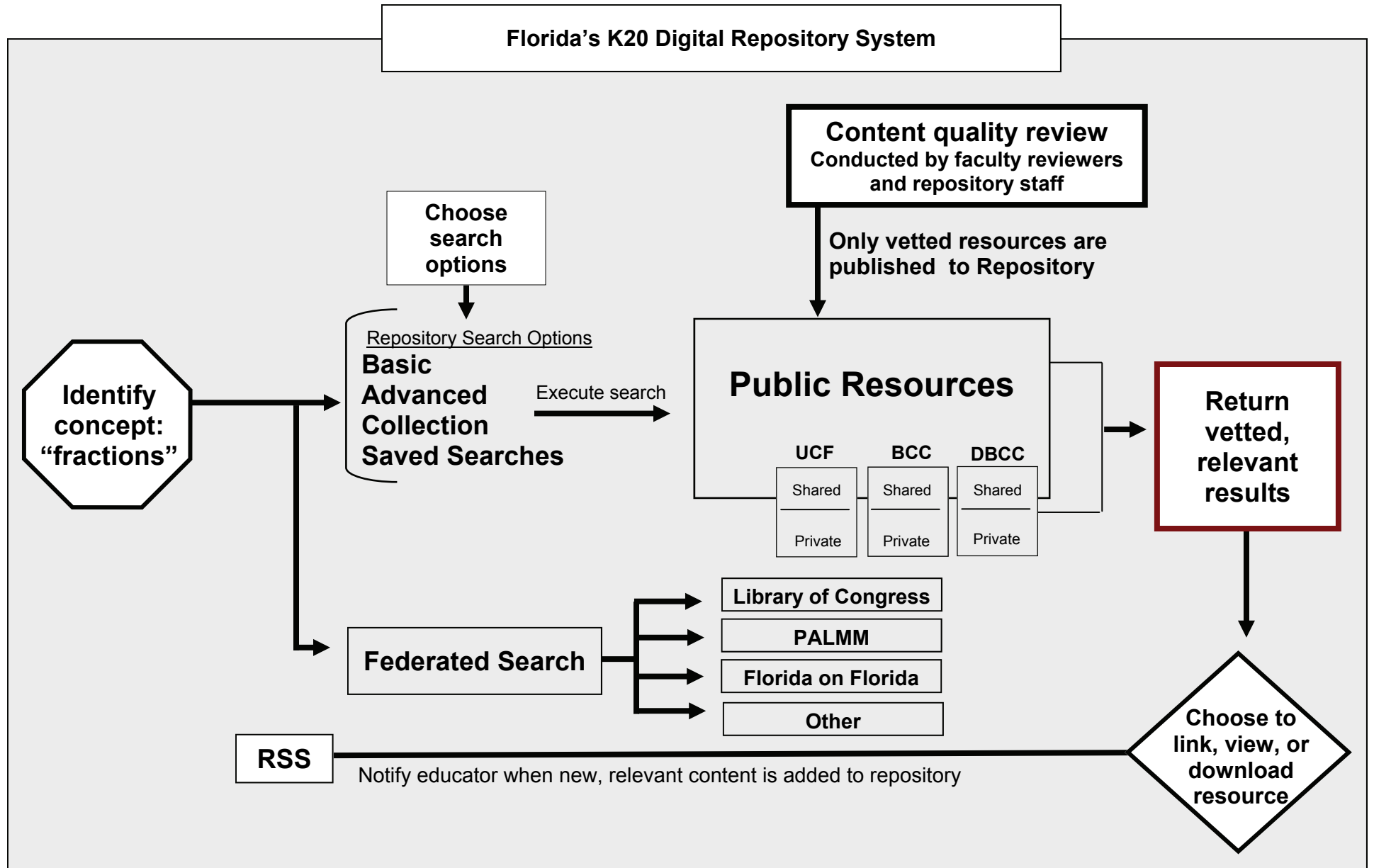
Appendix O: Letters of Support

Appendix P: Project Staff

How Educators Currently Locate Digital Content



Locating & Selecting Content with Florida's K20 Digital Repository



Appendix C: Benefits Realization Table

	Benefit Description	Tangible or Intangible	Who receives benefit?	How is benefit realized	Realization Date
1	Avoid future state costs for providing education	Intangible Cost avoidance estimated at \$ 2.8 million /yr If 10% fewer students repeat courses	Citizens	As the failure and withdrawal rates for courses decrease, there will be fewer students repeating courses.	When reduced failure or withdrawal rates occur; over time as learning objects from the Orange Grove are incorporated into more curriculum
2	Greater percentage of students passing gateway courses with a grade of “C” or above, which permits their entry into STEM (Science, Technology, Engineering, and Math) courses	Intangible	Citizens	Having more students enrolled in STEM courses contributes to the economic climate of the state	As improved student achievement occurs; over time as learning objects from the Orange Grove are incorporated into more curriculum
3	Greater involvement of the PreK-12 education system with the postsecondary system as part of the seamless system envisioned in law	Intangible	Educators; Educational Institutions; Students	Learning resources can be re-used in multiple ways and many are suitable for multiple educational levels and settings	Immediately, as the PreK-12 system is already represented in the project organization
4	Improve student learning outcomes	Intangible	Students	Learning resources are created for many types of learning styles, critical concepts, and high-need areas as defined by stakeholders	When reduced failure or drop rates for courses occur; pilot projects for the Repository will test this.
5	Reduce duplication of effort in the development of instructional content; the convergence of content for online and face-to-face delivery	Intangible Cost avoidance	Educators; Educational Institutions; Students; Citizens	More time can be spent on teaching; lower costs for instructional content development	When educators begin using the learning resources from the Orange Grove
6	“Level the playing field” regarding the development and use of high-quality learning objects in education so that access to them is improved	Intangible	Educators; Educational Institutions; Students	Equal access to these resources; leverages state investment to benefit all; those that can’t afford their own repository can still participate	As learning resources are deployed in the Orange Grove. Initially, the Higher Education sector pilot project will include objects for selected “bottleneck” math courses.

7	Cost avoidance associated with institutions deciding not to build and maintain their own learning objects repository	Intangible Cost avoidance (Minimum of \$7,500/learning object for development costs and minimum of \$180,00 to build and maintain a local repository)	Educational Institutions; Citizens	Institutions would rely on the Orange Grove to store and access learning resources, rather than spending their funds to develop their own repositories	As soon as the Orange Grove is funded, institutions may decide to defer their own repository development
8	Assist educators in developing and validating new models of instruction to improve the quality of instruction	Intangible	Educators; Educational Institutions; Students	Improved learner outcomes	Over time, as learning resources from the Orange Grove are incorporated into various curriculums
9	Develop a statewide community of practice among educators using learning objects in instruction	Intangible	Educators; Students	Increased knowledge about and expertise in using learning objects; increased usage of them	Over time, as learning objects are developed and placed in the Orange Grove and used by educators
10	Create an efficient focal point for all searches for instructional materials in Florida	Intangible	Educators	Educators have one place to find many instructional resource materials	Over time, as the learning resources are developed and placed in the Orange Grove
11	Repository can manage the use of copyrighted materials and payments for use	Intangible	Educators; Educational Institutions	Legal use of shared materials	Immediately, as copyrighted materials are added to the repository.
12	Improve employee and customer satisfaction	Intangible	Educators; Students	Educators will have easy access to alternative tools for teaching; greater number of students will be able to master concepts	Will be initially validated during the Higher Education pilot project for math courses; over time will increase as more learning resources are incorporated into the curriculums
13	Meet student expectations for quality education through the availability of electronic resources	Intangible	Students; Educational Institutions	Students have positive feelings about their learning experiences; educational institutions create goodwill	Over time, as learning resources from the Orange Grove are incorporated into various curriculums

**SState of Florida
FY 2007-08 Schedule IV-B
IT Project Cost Benefits Analysis**

Agency: Education

Project: Florida K20 Digital Repository

File version 1b

CBAForm 2 - Costs

Program(s) Title: FDLC: Florida Digital Repository

Project Sponsor: Judith Bilsky

Project Cost Elements <i>(Project Planning, Development & Implementation Only - No Operational Costs)</i>	Project Cost Table -- CBAForm 2-A					TOTAL
	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12	
State FTEs (Salaries & Benefits)	\$84,500	\$87,035		\$0	\$0	\$171,535
OPS FTEs (Salaries)	\$80,236	\$82,643	\$0	\$0	\$0	\$162,879
Staff Augmentation (Contract Cost)	\$57,276	\$58,994	\$0	\$0	\$0	\$116,270
Consultant Services	\$1,140,451	\$1,174,665	\$0	\$0	\$0	\$2,315,116
Hardware	\$46,600	\$65,000	\$0	\$0	\$0	\$111,600
Software	\$104,884	\$238,791	\$0	\$0	\$0	\$343,675
Network Infrastructure	\$7,000	\$1,200	\$0	\$0	\$0	\$8,200
Training	\$94,580	\$97,417	\$0	\$0	\$0	\$191,997
Travel	\$36,140	\$37,224	\$0	\$0	\$0	\$73,364
Other <i>Specify: Facilities & TCC 5% admin fee</i>	\$98,333	\$108,371	\$0	\$0	\$0	\$206,704
Total Project Costs (*)	\$1,750,000	\$1,951,340	\$0	\$0	\$0	\$3,701,340
Cumulative Project Costs	\$1,750,000	\$3,701,340	\$3,701,340	\$3,701,340	\$3,701,340	\$3,701,340

Total Project Costs are carried forward to CBAForm3 for investment summary calculations.

Character of Project Costs Estimate - CBAForm 2-B	
Choose Type	Confidence Level Enter % (+/-)
Detailed/Rigorous <input type="checkbox"/>	5%
Not to Exceed <input checked="" type="checkbox"/>	
Order of Magnitude <input type="checkbox"/>	
Placeholder <input type="checkbox"/>	

Agency Program Cost Elements <i>(Operations Only -- No Project Costs)</i>	Program(s) Costs for Current Operations versus Proposed Operations as a Result of the Project -- CBAForm 2-C														
	FY 2007-08			FY 2008-09			FY 2009-10			FY 2010-11			FY 2011-12		
	(a) Existing Program Costs	(b) Operational Cost Change (Benefits from CBA Form1-A)	(c) = (a) + (b) New Program Costs resulting from Proposed Project	(a) Existing Program Costs	(b) Operational Cost Change (Benefits from CBA Form1-A)	(c) = (a) + (b) New Program Costs resulting from Proposed Project	(a) Existing Program Costs	(b) Operational Cost Change (Benefits from CBA Form1-A)	(c) = (a) + (b) New Program Costs resulting from Proposed Project	(a) Existing Program Costs	(b) Operational Cost Change (Benefits from CBA Form1-A)	(c) = (a) + (b) New Program Costs resulting from Proposed Project	(a) Existing Program Costs	(b) Operational Cost Change (Benefits from CBA Form1-A)	(c) = (a) + (b) New Program Costs resulting from Proposed Project
A. Personnel -- Costs	\$156,800	\$0	\$156,800	\$156,800	\$0	\$156,800	\$156,800	\$0	\$156,800	\$156,800	\$0	\$156,800	\$156,800	\$0	\$156,800
A-1.a. State FTEs (Salaries & Benefits)	\$156,800	\$0	\$156,800	\$156,800	\$0	\$156,800	\$156,800	\$0	\$156,800	\$156,800	\$0	\$156,800	\$156,800	\$0	\$156,800
A-1.b. State FTEs (# FTEs)	1.80	0.00	1.80	1.80	0.00	1.80	1.80	0.00	1.80	1.80	0.00	1.80	1.80	0.00	1.80
A-2.a. OPS FTEs (Salaries)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
A-2.b. OPS FTEs (# FTEs)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A-3.a. Staff Augmentation (Contract Cost)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
A-3.b. Staff Augmentation (# of Contract FTEs)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B. Plant & Facility -- Costs	\$13,500	\$0	\$13,500	\$13,500	\$0	\$13,500	\$13,500	\$0	\$13,500	\$13,500	\$0	\$13,500	\$13,500	\$0	\$13,500
C. External Service Provider -- Costs	\$89,232	\$0	\$89,232	\$89,232	\$0	\$89,232	\$89,232	\$0	\$89,232	\$89,232	\$0	\$89,232	\$89,232	\$0	\$89,232
C-1. Contractor Services	\$52,707	\$0	\$52,707	\$52,707	\$0	\$52,707	\$52,707	\$0	\$52,707	\$52,707	\$0	\$52,707	\$52,707	\$0	\$52,707
C-2. Maintenance & Support Services	\$10,000	\$0	\$10,000	\$10,000	\$0	\$10,000	\$10,000	\$0	\$10,000	\$10,000	\$0	\$10,000	\$10,000	\$0	\$10,000
C-3. Network / Hosting Services	\$26,525	\$0	\$26,525	\$26,525	\$0	\$26,525	\$26,525	\$0	\$26,525	\$26,525	\$0	\$26,525	\$26,525	\$0	\$26,525
C-4. Data Communications Services	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
C-6. Other <i>Specify</i>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D. Data Processing -- Costs	\$38,202	\$0	\$38,202	\$38,202	\$0	\$38,202	\$38,202	\$0	\$38,202	\$38,202	\$0	\$38,202	\$38,202	\$0	\$38,202
D-1. Hardware	\$20,279	\$0	\$20,279	\$20,279	\$0	\$20,279	\$20,279	\$0	\$20,279	\$20,279	\$0	\$20,279	\$20,279	\$0	\$20,279
D-2. Software	\$17,923	\$0	\$17,923	\$17,923	\$0	\$17,923	\$17,923	\$0	\$17,923	\$17,923	\$0	\$17,923	\$17,923	\$0	\$17,923
D-4. Other <i>Specify</i>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
E. Others -- Costs	\$21,227	\$0	\$21,227	\$21,227	\$0	\$21,227	\$21,227	\$0	\$21,227	\$21,227	\$0	\$21,227	\$21,227	\$0	\$21,227
E-1. Training	\$10,334	\$0	\$10,334	\$10,334	\$0	\$10,334	\$10,334	\$0	\$10,334	\$10,334	\$0	\$10,334	\$10,334	\$0	\$10,334
E-2. Travel	\$10,805	\$0	\$10,805	\$10,805	\$0	\$10,805	\$10,805	\$0	\$10,805	\$10,805	\$0	\$10,805	\$10,805	\$0	\$10,805
E-4. Other <i>Specify Office supplies</i>	\$88	\$0	\$88	\$88	\$0	\$88	\$88	\$0	\$88	\$88	\$0	\$88	\$88	\$0	\$88
Subtotal of Operational Costs (Rows A through E)	\$318,961	\$0	\$318,961	\$318,961	\$0	\$318,961	\$318,961	\$0	\$318,961	\$318,961	\$0	\$318,961	\$318,961	\$0	\$318,961
F. Revenues / External Contribution / Fiscal Offsets	\$318,961	\$0	\$318,961	\$370,961	\$0	\$370,961	\$370,961	\$0	\$370,961	\$0	\$0	\$0	\$0	\$0	\$0
F-1. Revenues <i>Specify GR/ FDLC & Institutions</i>	\$280,961	\$0	\$280,961	\$280,961	\$0	\$280,961	\$280,961	\$0	\$280,961	\$0	\$0	\$0	\$0	\$0	\$0
F-2. Federal Participation <i>Specify</i>	\$0	\$0	\$0	\$52,000	\$0	\$52,000	\$52,000	\$0	\$52,000	\$0	\$0	\$0	\$0	\$0	\$0
F-3. Grants <i>Specify FIPSE</i>	\$38,000	\$0	\$38,000	\$38,000	\$0	\$38,000	\$38,000	\$0	\$38,000	\$0	\$0	\$0	\$0	\$0	\$0
Total (Sum of Rows A through E minus Row F)	\$0	\$0	\$0	(\$52,000)	\$0	(\$52,000)	(\$52,000)	\$0	(\$52,000)	\$318,961	\$0	\$318,961	\$318,961	\$0	\$318,961
Cumulative Program/Operational Costs	\$0	\$0	\$0	(\$52,000)	\$0	(\$52,000)	(\$104,000)	\$0	(\$104,000)	\$214,961	\$0	\$214,961	\$533,922	\$0	\$533,922

Character of Existing Program Costs Estimate - CBAForm 2-D	
Choose Type	Confidence Level Enter % (+/-)
Detailed/Rigorous <input checked="" type="checkbox"/>	10%
Not to Exceed <input type="checkbox"/>	
Order of Magnitude <input type="checkbox"/>	
Placeholder <input type="checkbox"/>	

Agency: Department of Education

Project: Florida's K20 Digital Repository of Learning Resources

Section 8 -- Project Complexity Area			
#	Criteria	Value Options	Answer
8.01	Is the proposed solution more complex than current agency systems?	Unknown at this time	Similar complexity
		More complex	
		Similar complexity	
		Less complex	
8.02	Will multiple agencies be impacted upon successful project completion?	More than 4	1
		2 to 4	
		1	
		None	
8.03	Are the business users or end users dispersed across multiple cities, counties, districts, or regions?	Single location	More than 3 sites
		3 sites or fewer	
		More than 3 sites	
8.04	Are the project team members dispersed across multiple cities, counties, districts, or regions?	Single location	Single location
		3 sites or fewer	
		More than 3 sites	
8.05	How many external contracting or consulting organizations will this project require?	No external organizations	1 to 3 external organizations
		1 to 3 external organizations	
		More than 3 external organizations	
8.06	What is the impact of the project on state operations?	Internal agency business process change	Internal agency business process change
		Agency wide business process change	
		Statewide or multiple agency business process change	
8.07	What is the expected project team size?	Greater than 15	5 to 8
		9 to 15	
		5 to 8	
		Less than 5	
8.08	Is the agency planning to assume the role of Systems Integrator for this project?	Yes	Yes
		No	
8.09	Has the agency successfully completed a similarly-sized project when acting as Systems Integrator?	Yes	Yes
		No	
8.10	What type of project is this?	Infrastructure upgrade	Combination of the above
		Implementation requiring software development or purchasing Off the Shelf software	
		Business Process Reengineering	
		Combination of the above	

Project Risks and Risk Mitigation					
#	Risk Description	Impact of Risk	Probability of Occurrence	Tolerance Level	Mitigation Strategy
1	Change Management: Project tasks demand a significant increase in staff size	Management becomes more complex	High Probability	Medium	<p>Plans made for project team to be managed as a separate unit of the Consortium and additional workspace has been secured.</p> <p>Experience of current staff is sufficient to meet management challenges.</p> <p>Project plan specifies recruitment of additional staff as soon as funding is received. Positions and responsibilities defined.</p> <p>PreK-12 activities will be managed by a DOE staff person familiar with that context. Responsibilities are clearly defined for this sector and regular communication between sectors is a priority</p>
2	Change Management: The project demands could exceed expectations, requiring additional staff and resources beyond those identified.	<p>Users do not receive access as rapidly as desired; insufficient storage space for resources.</p> <p>A more rapid implementation plan is desired, requiring additional funding sooner than projected.</p>	Low Probability	<p>Medium Tolerance</p> <p>(Increased demand is a sign of project success.)</p>	<p>Communicate the two-year project timeline.</p> <p>Use of institutional /private subcontractors will provide unique areas of expertise and/or additional resources for peak demand periods. Many Learning Management Systems can easily be integrated with the Repository without workload impact.</p> <p>If needed, request funding for out-years sooner than projected (provided goals are being attained and quality remains high).</p>
3	Change Management: Educators may not adopt the use of the Repository	Project does not meet its intended objective.	Medium - Low Probability	Low Tolerance (If educators do	Develop comprehensive communication, training, and change management plans that communicate project benefits, and address stakeholders' needs.

Project Risks and Risk Mitigation					
#	Risk Description	Impact of Risk	Probability of Occurrence	Tolerance Level	Mitigation Strategy
	in the instructional process.			not use the Orange Grove, the project will be considered a failure.)	<p>Evaluation plans include collection and dissemination of metrics on use and user perceptions to allow prompt intervention.</p> <p>Early adopter change agents within each sector will be recruited as partners for pilots. Pilot successes become marketing tools; pilot partners become change agents.</p> <p>The number of repositories is growing nationally; many institutions are making digital learning publicly available, increasing number of available resources.</p>
4	Change Management: If the Repository is not perceived as the best way to implement digital learning resources, local entities may undertake similar projects at an overall higher cost to the state.	The State of Florida expends unnecessary funds for duplication of effort	Medium Probability	High Tolerance (If other standards-based repositories are developed The Orange Grove can search and link to their contents)	<p>Provide business case that clearly identifies the advantage of developing the state-level repository.</p> <p>Continue to communicate with Florida institutions to track this type of initiative; attempt to arrange mutual sharing of objects among any independent repositories.</p> <p>Continue to pursue regional resource sharing through SREB partnerships.</p>

Project Risks and Risk Mitigation					
#	Risk Description	Impact of Risk	Probability of Occurrence	Tolerance Level	Mitigation Strategy
5	Project Complexity: Project will potentially affect all 164 Florida institutions/school districts.	Difficult to identify all stakeholder needs and issues	Medium Probability	Medium	<p>Project staff structure specifies a coordinator dedicated to each sector, supported by executive leaders and committees; project manager provides additional oversight.</p> <p>Sector resources will be solicited as a first priority for development, implementation, and evaluation tasks, promoting buy-in and increasing two-way communication.</p> <p>Technical support infrastructure utilizes the experience and robustness of the College Center for Library Automation (CCLA).</p>
6	Technology: While SCORM and ADA (Section 508) conformant learning objects are the goal of the Repository, the number of conformant resources currently available may be relatively low.	Conformance may require a greater investment of resources than can be supported by the project. Lack of objects could lead to lack of use.	Medium Probability	High Tolerance (Ensuring all objects in the Repository are conformant will take time.)	<p>Allow non-SCORM and ADA (Section 508) conformant learning objects in the Repository during its early years, to ensure an adequate supply of learning objects. Meta-data tags will reflect any non-conformant objects.</p> <p>Actively work with learning object providers to ensure the development of SCORM and ADA conformant objects for the future. This is under discussion with SREB members.</p> <p>Purchase tools and/or templates that facilitate conformance. Similar templates are already being developed by the ADL Co-Lab.</p>

ID	Task Name	Start	Finish
1	Phase: Research & Planning	Mon 1/3/00	Tue 6/30/09
2	Research repositories and plan structure	Mon 1/3/00	Wed 11/17/04
3	Create Repository Strategic Plan	Mon 1/3/00	Mon 1/3/00
4	Create repository vision statement & initial strategies	Tue 4/1/03	Wed 11/17/04
5	Marketing and communication plans; funding possibilities	Thu 2/12/04	Wed 11/17/04
6	Plan and solicit sponsorships and partnerships	Wed 11/5/03	Wed 11/17/04
7	Research and plan funding opportunities & efforts	Mon 5/3/04	Wed 11/17/04
8	Create initial partnership structure across various sectors	Mon 1/3/00	Tue 1/4/05
9	Higher education partners: community colleges, universities, Bd of Governors; CCL A	Wed 11/5/03	Wed 11/5/03
10	Higher education partners: Private universities	Mon 1/3/00	Mon 1/3/00
11	K-12 partners	Tue 1/4/05	Tue 1/4/05
12	Regional, national, international partners [SREB, ADL Co-Lab]	Mon 8/7/00	Mon 8/7/00
13	Create standards	Mon 8/7/00	Fri 9/30/05
14	Research and adopt/create technical e-learning standards (SCORM)	Mon 8/7/00	Fri 9/30/05
15	Research and adopt/create ADA/Section 508 Accessibility conformance requirements	Wed 9/1/04	Fri 9/30/05
16	Research and adopt/create metadata standards	Tue 2/1/05	Mon 5/16/05
17	Research and adopt/create copyright standards	Tue 2/1/05	Mon 5/16/05
18	Research and adopt/create content quality standards for content packages	Wed 9/1/04	Mon 5/16/05
19	Create technical infrastructure & processes	Thu 4/1/04	Fri 4/29/05
20	Research and adopt/create repository software options	Thu 4/1/04	Mon 11/1/04
21	Research and adopt/create workflow process for adding object to repository	Wed 1/5/05	Fri 4/29/05
22	Update Repository Strategic Plan at specified intervals	Wed 11/17/04	Tue 6/30/09
23	Create steering committee to encompass active and planned sector members	Wed 11/17/04	Wed 12/15/04
24	Schedule regular sessions to manage issues/problems	Thu 1/6/05	Tue 6/30/09
25	Incorporate new partners and initiatives if cost effective	Thu 1/6/05	Tue 6/30/09
26			
27	Phase HE I - Pilot: MAT 1033 (Int. Algebra) and MAC 1105 (College Algebra) Resources	Wed 11/17/04	Fri 6/29/07
28	Planning	Wed 11/17/04	Fri 11/18/05
29	Identify target sector and content area/courses	Wed 11/17/04	Wed 12/15/04
30	Identify most challenging concepts in selected courses	Tue 4/5/05	Fri 7/1/05
31	Determine timelines and scope	Tue 4/5/05	Thu 9/1/05
32	Select and install repository software [troubleshooting; problem-solving; customization]	Mon 12/6/04	Wed 12/15/04
33	Plan and staff repository management tasks (user accounts, categories)	Thu 6/16/05	Fri 7/1/05
34	Conduct introductory training for repository software	Wed 11/17/04	Fri 11/18/05
35	Solicit pilot partners	Fri 7/1/05	Mon 10/31/05
36	Development partners: content experts, instructional designers, developers, metadata and copyri	Fri 7/1/05	Thu 7/28/05

ID	Task Name	Start	Finish
37	Institutional partners [access to instructors and students/student performance data for evaluation]	Tue 7/26/05	Fri 9/30/05
38	Faculty partners to use learning resources in their courses	Fri 7/1/05	Mon 10/31/05
39	Develop draft evaluation plan; include data collection during and after implementation	Wed 11/17/04	Mon 4/18/05
40	Project Management	Fri 7/1/05	Fri 7/22/05
41	Develop pilot project plan (deliverables & milestones; resources; reporting requirements for fundir	Fri 7/1/05	Fri 7/22/05
42	Develop issue reporting processes (e.g., resource problems; technical problems)	Fri 7/1/05	Fri 7/22/05
43	Develop communication & problem-solving processes	Fri 7/1/05	Fri 7/22/05
44	Develop change control processes and risk management plans	Fri 7/1/05	Fri 7/22/05
45	Acquisition/Development	Mon 1/17/05	Fri 6/29/07
46	Update criteria and processes to search for learning resources	Mon 1/17/05	Tue 3/1/05
47	Locate existing content	Tue 3/1/05	Fri 6/29/07
48	Collaborate on developing new resources	Tue 3/1/05	Fri 12/16/05
49	Evaluate and recommend existing content (as resources permit) to be added to Repository	Thu 9/1/05	Fri 6/29/07
50	Implementation	Wed 11/17/04	Fri 6/29/07
51	Implement communication & change control processes and risk management plans	Wed 1/4/06	Fri 3/30/07
52	Conduct user training for repository software	Wed 11/17/04	Fri 6/29/07
53	Provide educator training on using learning resources (for all targeted areas)	Mon 10/17/05	Fri 3/30/07
54	Implement instruction using Repository resources (pilot project 1)	Wed 1/4/06	Fri 1/13/06
55	Implement and manage ongoing issue reporting & problem resolution processes	Wed 1/4/06	Fri 3/30/07
56	Conduct midterm information sharing among pilot participants to correct/adjust as required	Wed 2/1/06	Tue 2/28/06
57	Pilot Evaluation	Mon 2/7/05	Fri 9/1/06
58	Solicit/verify pilot evaluation partners and stakeholders	Tue 11/15/05	Tue 11/22/05
59	Develop detailed pilot evaluation plan including evaluation criteria, processes, and resources	Wed 11/23/05	Mon 1/16/06
60	Assess student learning performance gains, student perceptions, and faculty perceptions	Mon 2/7/05	Tue 5/30/06
61	Assess pilot project and create recommendations for improvement	Thu 6/1/06	Fri 6/30/06
62	Update current structure, processes & plans to reflect results/recommendations	Fri 6/30/06	Fri 9/1/06
63	Strategic Evaluation/ Assessment	Mon 11/6/06	Fri 6/22/07
64	Solicit/verify partners and stakeholders	Mon 11/6/06	Fri 3/16/07
65	Develop detailed plan including evaluation criteria, processes, and resources	Mon 2/12/07	Fri 2/23/07
66	Conduct evaluation	Mon 3/5/07	Fri 5/18/07
67	Assess results and create recommendations for improvement	Mon 4/2/07	Fri 6/1/07
68	Update current process and plans to reflect results	Mon 6/4/07	Fri 6/22/07
69			
70	Phase HE II - Expanded Implementation for Higher Education (state funding begins July 07)	Mon 1/15/07	Mon 7/28/08
71	Funding	Mon 4/2/07	Fri 8/31/07
74	Planning	Mon 1/15/07	Mon 6/30/08

ID	Task Name	Start	Finish
75	Verify high-level sector partners and stakeholders	Mon 4/2/07	Thu 7/12/07
76	Refine strategic plan to encompass wider implementation for this sector	Mon 1/15/07	Mon 9/17/07
77	Input from partners & stakeholders on needs/priorities; revise plans as required	Mon 7/2/07	Fri 8/31/07
78	Solicit members for any required committees	Mon 1/15/07	Fri 8/31/07
79	Integrate sector plan with Repository Strategic Plan	Mon 8/20/07	Mon 9/17/07
80	Assess marketing and communication efforts needed; plan as required	Mon 7/2/07	Mon 8/27/07
81	Adjust & implement repository technical components as needed	Mon 7/2/07	Fri 8/24/07
82	Define/adjust target courses and/or target concepts	Mon 3/5/07	Fri 8/31/07
83	Solicit input from multiple stakeholders	Mon 3/5/07	Fri 8/31/07
84	Consider cost-benefits: (e.g., instructional needs of faculty and learners)	Mon 3/5/07	Fri 8/31/07
85	Update/revise change control processes as required	Mon 9/3/07	Thu 10/4/07
86	Update/revise risk management plan as required	Mon 9/3/07	Thu 10/4/07
87	Update criteria and processes (used in pilot project) to locate learning resources as required	Mon 9/3/07	Thu 10/4/07
88	Solicit partners for this implementation	Mon 5/7/07	Mon 6/30/08
89	Acquisition partners/resources to locate, vet, and describe resources	Mon 5/7/07	Fri 2/29/08
90	Institutional partners [access to instructors and student performance data]	Mon 5/7/07	Mon 6/30/08
91	Faculty partners to evaluate use of learning resources during Spring 2008	Mon 5/7/07	Mon 6/30/08
92	Develop draft evaluation plan for this implementation	Mon 10/1/07	Fri 11/30/07
93	Solicit input on evaluation plan; adjust as needed	Mon 10/1/07	Fri 11/30/07
94	Project Management	Mon 5/7/07	Fri 6/20/08
95	Update project plans as needed	Mon 5/7/07	Fri 6/20/08
96	Adjust issue reporting processes (e.g., resource problems; technical problems)	Mon 5/7/07	Fri 6/20/08
97	Adjust problem-solving processes as required	Mon 5/7/07	Fri 6/20/08
98	Adjust project management reporting templates as required	Mon 5/7/07	Fri 6/20/08
99	Acquire Resources	Fri 6/22/07	Mon 6/30/08
100	Implement partners' search for learning resources	Fri 6/22/07	Mon 6/30/08
101	Implement processes for partner searches	Fri 6/22/07	Fri 9/28/07
102	Locate, evaluate & recommend existing content	Mon 7/9/07	Mon 6/30/08
103	Identify any resource requirements for conformance to standards	Mon 7/9/07	Mon 6/30/08
104	Add learning resources to repository	Mon 7/9/07	Mon 6/30/08
105	Implement Marketing and Communication Plans	Mon 7/9/07	Mon 6/30/08
106	Acquire marketing and communication resources/services	Wed 8/1/07	Fri 8/24/07
107	Implement change control processes and risk management plans	Mon 7/9/07	Mon 6/30/08
108	Create marketing & communication materials	Mon 9/3/07	Mon 6/30/08
109	Distribute/implement marketing and communication materials	Mon 9/17/07	Mon 6/30/08
110	Implement Learning Resources	Mon 7/9/07	Mon 6/30/08

ID	Task Name	Start	Finish
111	Provide educator training on using learning resources (for all targeted areas)	Mon 7/9/07	Mon 6/30/08
112	Implement instruction using learning resources	Mon 8/27/07	Mon 6/30/08
113	Implement and manage ongoing issue reporting & problem resolution processes	Mon 7/9/07	Mon 6/30/08
114	Conduct periodic information sharing among participants to correct/adjust as required	Mon 7/9/07	Mon 6/30/08
115	Evaluation (informal: ongoing: formal: Spring 2008)	Wed 10/31/07	Mon 6/30/08
116	Solicit/verify evaluation partners, stakeholders, and resources	Mon 11/5/07	Tue 4/8/08
117	Develop detailed evaluation plans (criteria, processes and resources)	Wed 10/31/07	Fri 12/14/07
118	Conduct informal evaluations (faculty/student perceptions)	Wed 10/31/07	Mon 5/26/08
119	Implement formal evaluation (Asses student gains; student & faculty perceptions)	Mon 3/3/08	Fri 5/30/08
120	Use evaluation results to recommend improvements	Mon 6/2/08	Mon 6/16/08
121	Update current processes and plans to accommodate evaluation results/recommendations	Tue 6/17/08	Mon 6/30/08
122	Preparation for Project Expansion	Tue 7/1/08	Mon 7/28/08
123	Determine scope of future implementation efforts	Tue 7/1/08	Mon 7/21/08
124	Adjust project plans, timelines, and cycles based on successes and recommendations	Tue 7/1/08	Mon 7/28/08
125			
126	Phase HE III - Expanded Implementation for Higher Education (2008-2009)	Mon 6/2/08	Tue 6/30/09
127	Funding	Tue 7/1/08	Mon 7/28/08
128	Review funding status and update project plan if needed	Tue 7/1/08	Mon 7/28/08
129	Planning	Tue 7/1/08	Tue 5/26/09
130	Verify high-level sector partners and stakeholders	Tue 7/1/08	Mon 8/25/08
131	Solicit members for any required committees	Tue 8/26/08	Mon 10/20/08
132	Solicit stakeholder input on project plans and processes	Tue 7/1/08	Tue 9/30/08
133	Assess marketing, risk management and communication efforts needed	Tue 7/1/08	Tue 9/30/08
134	Assess repository hardware/software needs	Tue 7/1/08	Tue 9/30/08
135	Define strategies for content acquisition	Tue 7/1/08	Tue 9/30/08
136	Refine sector strategic plans to incorporate input	Mon 7/28/08	Mon 10/6/08
137	Integrate sector plan with Repository strategic plan	Mon 9/29/08	Mon 10/6/08
138	Solicit partners for this implementation	Tue 7/1/08	Tue 5/26/09
139	Acquisition partners/resources	Tue 7/1/08	Tue 1/27/09
140	Institutional partners [access to instructors & student data for evaluation]	Tue 7/1/08	Tue 5/26/09
141	Faculty/instructor partners to use learning resources in their courses	Tue 7/1/08	Tue 5/26/09
142	Develop draft evaluation plan for this implementation	Mon 9/1/08	Mon 2/16/09
143	Project Management	Mon 9/22/08	Fri 10/17/08
144	Update project plan as needed (deliverables, milestones, resources; reporting)	Mon 9/22/08	Mon 10/6/08
145	Adjust issue reporting processes (e.g., resource problems; technical problems)	Mon 9/22/08	Fri 10/17/08
146	Adjust problem-solving processes	Mon 9/22/08	Fri 10/17/08

ID	Task Name	Start	Finish
147	Adjust project management reporting templates	Mon 9/22/08	Fri 10/17/08
148	Resource Acquisition	Tue 7/1/08	Tue 6/30/09
149	Develop/update criteria and processes to acquire learning resources	Tue 7/1/08	Mon 7/28/08
150	Resource tasks related to resource acquisition	Tue 7/1/08	Mon 9/1/08
151	Locate or create content	Fri 8/1/08	Tue 6/30/09
152	Evaluate content according to quality standards	Mon 8/11/08	Tue 6/30/09
153	Recommend resources for use in repository; select resources for implementation	Mon 8/11/08	Tue 6/30/09
154	Add learning resources to repository	Mon 8/11/08	Tue 6/30/09
155	Implementation	Fri 8/1/08	Tue 6/30/09
156	Implement change control processes and risk management plans	Fri 8/1/08	Mon 6/22/09
157	Implement marketing and communication plans	Fri 8/1/08	Mon 6/22/09
158	Provide educator training on using learning resources (for all targeted areas)	Fri 8/1/08	Tue 3/17/09
159	Implement instruction using learning resources	Mon 8/18/08	Tue 6/30/09
160	Implement and manage ongoing issue reporting & problem resolution processes	Mon 8/18/08	Tue 6/30/09
161	Conduct periodic information sharing among participants to correct/adjust as required	Mon 8/18/08	Tue 6/30/09
162	Evaluation (informal: ongoing; formal: Spring 2009)	Mon 6/2/08	Tue 6/16/09
163	Solicit/verify evaluation partners, stakeholders, and resources	Mon 6/2/08	Mon 11/10/08
164	Develop detailed evaluation plan (criteria, processes and resources)	Mon 8/18/08	Fri 8/29/08
165	Implement evaluation plan (academic gains; student & teacher perceptions)	Wed 10/1/08	Mon 6/1/09
166	Assess implementation for this phase and create recommendations for improvement	Tue 6/2/09	Tue 6/16/09
167	Update current processes and plans to accommodate evaluation results/recommendations	Tue 6/17/08	Mon 6/30/08
168	Preparation for Project Expansion	Wed 1/7/09	Tue 6/30/09
169	Determine possible scope of future implementation efforts	Wed 1/7/09	Wed 2/4/09
170	Adjust project plans, timelines, and cycles based on successes and recommendations	Wed 6/17/09	Tue 6/30/09
171			
172	Phase PreK12 - I - Integration with Existing K12 Collections (state funding begins July 07)	Mon 1/3/00	Mon 7/28/08
173	Funding	Tue 5/1/07	Fri 8/31/07
174	Review funding status and update project plan if needed	Tue 5/1/07	Fri 6/22/07
175	Review software and hardware infrastructure; adjust as needed	Tue 5/1/07	Fri 8/31/07
176	Planning	Mon 1/3/00	Mon 6/30/08
177	Verify sector partners and stakeholders	Tue 5/1/07	Thu 7/12/07
178	Identify: 1) DOE project resources and responsibilities; 2) FDLC project staff responsibilities	Tue 5/1/07	Fri 8/31/07
179	Identify scope of pilot implementation	Tue 5/1/07	Thu 5/31/07
180	Specify conformance standards required for integration	Mon 1/3/00	Mon 1/3/00
181	Refine strategic plan to encompass implementation for this sector	Tue 5/1/07	Mon 9/17/07
182	Input from partners & stakeholders on needs/priorities; revise plans as required	Tue 5/1/07	Fri 8/31/07

ID	Task Name	Start	Finish
183	Solicit members for any required committees	Tue 5/1/07	Fri 8/31/07
184	Integrate sector plan with Repository Strategic Plan	Mon 8/20/07	Mon 9/17/07
185	Assess marketing and communication efforts needed; plan as required	Tue 5/1/07	Mon 9/17/07
186	Adjust & implement repository technical components as needed	Tue 5/1/07	Mon 10/1/07
187	Define implementation scope and targeted collections	Tue 5/1/07	Fri 8/31/07
188	Solicit input from multiple stakeholders	Tue 5/1/07	Fri 8/31/07
189	Consider cost-benefits: (e.g., instructional needs of faculty and learners)	Tue 5/1/07	Fri 8/31/07
190	Update/revise change control processes as required	Mon 9/3/07	Thu 10/4/07
191	Update/revise risk management plan as required	Mon 9/3/07	Thu 10/4/07
192	Update criteria and processes to locate learning resources as required	Mon 9/3/07	Thu 10/4/07
193	Solicit partners for this implementation	Mon 5/7/07	Mon 6/30/08
194	Acquisition partners/resources to locate, vet, and describe resources/collections	Mon 5/7/07	Fri 2/29/08
195	Institutional/regional district partners [access to instructors and student performance data]	Mon 5/7/07	Mon 6/30/08
196	Teaching/instructional partners to evaluate use of learning resources	Mon 5/7/07	Mon 6/30/08
197	Develop draft evaluation plan for this implementation	Mon 10/1/07	Fri 11/30/07
198	Solicit input on plan; adjust as needed	Mon 10/1/07	Fri 11/30/07
199	Project Management	Mon 5/7/07	Thu 6/21/07
200	Update project plan as needed (deliverables, milestones, resources; reporting requirements)	Mon 5/7/07	Thu 6/21/07
201	Adjust issue reporting processes (e.g., resource problems; technical problems)	Mon 5/7/07	Thu 6/21/07
202	Adjust problem-solving processes	Mon 5/7/07	Thu 6/21/07
203	Adjust project management reporting templates	Mon 5/7/07	Thu 6/21/07
204	Integrate with Florida K12 Collections	Mon 7/9/07	Mon 6/30/08
205	Implement search for collections	Mon 7/9/07	Mon 6/30/08
206	Locate, evaluate & recommend existing resources/collections	Mon 7/9/07	Mon 6/30/08
207	Identify any tasks required for collections' conformance to standards	Mon 7/9/07	Mon 6/30/08
208	Integrate collections/resources with repository	Mon 7/9/07	Mon 6/30/08
209	Implement Marketing and Communication Plans	Mon 7/9/07	Mon 6/30/08
210	Assess marketing and communication requirement, resources, and services option	Wed 8/1/07	Fri 8/24/07
211	Implement change control processes and risk management plans	Mon 7/9/07	Mon 6/30/08
212	Create marketing & communication materials	Mon 9/3/07	Wed 10/31/07
213	Distribute/implement marketing and communication materials	Mon 9/17/07	Mon 6/30/08
214	Implement Learning Resources	Mon 7/9/07	Mon 6/30/08
215	Provide educator training on using learning resources (for all targeted areas)	Mon 7/9/07	Mon 6/30/08
216	Implement instruction using learning resources	Mon 8/27/07	Mon 6/30/08
217	Implement and manage ongoing issue reporting & problem resolution processes	Mon 7/9/07	Mon 6/30/08
218	Conduct periodic information sharing among stakeholders & participants to correct/adjust as requ	Mon 7/9/07	Mon 6/30/08

ID	Task Name	Start	Finish
219	Evaluation	Wed 10/31/07	Mon 7/14/08
220	Solicit/verify evaluation partners, stakeholders, and resources	Mon 11/5/07	Tue 4/8/08
221	Develop detailed evaluation plans (criteria, processes and resources)	Wed 10/31/07	Fri 12/14/07
222	Conduct informal evaluations (e.g., teacher/student perceptions)	Wed 10/31/07	Fri 6/13/08
223	Implement formal evaluation (Asses student gains; student & teacher perceptions)	Wed 10/31/07	Fri 6/13/08
224	Use evaluation results to recommend improvements	Mon 3/31/08	Mon 6/30/08
225	Update current processes and plans to accommodate evaluation results/recommendations	Mon 5/5/08	Mon 7/14/08
226	Preparation for Project Expansion	Thu 5/1/08	Mon 7/28/08
227	Determine scope of future implementation efforts	Thu 5/1/08	Mon 7/21/08
228	Adjust project plans, timelines, and cycles based on successes and recommendations	Tue 7/1/08	Mon 7/28/08
229			
230	Phase PreK12 - II Expanded Implementation for PreK12	Mon 6/2/08	Tue 6/30/09
231	Funding	Tue 7/1/08	Mon 7/28/08
232	Review funding status and update project plan if needed	Tue 7/1/08	Mon 7/28/08
233	Planning	Tue 7/1/08	Tue 5/26/09
234	Verify high-level sector partners and stakeholders	Tue 7/1/08	Mon 8/25/08
235	Solicit members for any required committees	Tue 7/1/08	Mon 8/25/08
236	Solicit stakeholder input on project goals, plans and processes	Tue 7/1/08	Tue 9/30/08
237	Assess marketing, risk management and communication efforts needed	Tue 7/1/08	Tue 9/30/08
238	Assess repository hardware/software needs	Tue 7/1/08	Tue 9/30/08
239	Define strategies for next phase of expansion	Tue 7/1/08	Tue 9/30/08
240	Refine sector strategic plans to incorporate input	Mon 7/28/08	Mon 10/6/08
241	Integrate sector plan with Repository Strategic Plan	Mon 9/29/08	Mon 10/6/08
242	Solicit partners for this implementation	Tue 7/1/08	Tue 5/26/09
243	Acquisition partners/resources	Tue 7/1/08	Tue 1/27/09
244	Institutional partners [access to instructors & student data for evaluation]	Tue 7/1/08	Tue 5/26/09
245	Faculty/instructor partners to use learning resources in their courses	Tue 7/1/08	Tue 5/26/09
246	Develop draft evaluation plan for this implementation	Mon 9/1/08	Mon 2/16/09
247	Project Management	Mon 9/22/08	Fri 10/17/08
248	Update project plan as needed (deliverables, milestones, resources; reporting)	Mon 9/22/08	Mon 10/6/08
249	Adjust issue reporting processes (e.g., resource problems; technical problems)	Mon 9/22/08	Fri 10/17/08
250	Adjust problem-solving processes	Mon 9/22/08	Fri 10/17/08
251	Adjust project management reporting templates	Mon 9/22/08	Fri 10/17/08
252	Resource Acquisition	Tue 7/1/08	Tue 6/30/09
253	Develop/update criteria and processes to acquire learning resources	Tue 7/1/08	Mon 7/28/08
254	Resource tasks related to resource acquisition	Tue 7/1/08	Mon 9/1/08

ID	Task Name	Start	Finish
255	Locate or create content	Fri 8/1/08	Tue 6/30/09
256	Evaluate content according to quality standards	Mon 8/11/08	Tue 6/30/09
257	Recommend resources for use in repository; select resources for implementation	Mon 8/11/08	Tue 6/30/09
258	Add learning resources to repository	Mon 8/11/08	Tue 6/30/09
259	Implementation	Fri 8/1/08	Tue 6/30/09
260	Implement change control processes and risk management plans	Fri 8/1/08	Mon 6/22/09
261	Implement marketing and communication plans	Fri 8/1/08	Tue 6/30/09
262	Provide educator training on using learning resources (for all targeted areas)	Fri 8/1/08	Tue 3/17/09
263	Implement instruction using learning resources	Mon 8/18/08	Tue 6/30/09
264	Implement and manage ongoing issue reporting & problem resolution processes	Mon 8/11/08	Tue 6/30/09
265	Conduct periodic information sharing among participants to correct/adjust as required	Mon 8/11/08	Tue 6/30/09
266	Evaluation	Mon 6/2/08	Tue 6/16/09
267	Solicit/verify evaluation partners, stakeholders, and resources	Mon 6/2/08	Mon 11/10/08
268	Develop detailed evaluation plan (criteria, processes and resources)	Mon 8/18/08	Fri 8/29/08
269	Implement evaluation plan (academic gains; student & teacher perceptions)	Wed 10/1/08	Mon 6/1/09
270	Assess implementation for this phase and create recommendations for improvement	Tue 6/2/09	Tue 6/16/09
271	Update current processes and plans to accommodate evaluation results/recommendations	Tue 6/17/08	Mon 6/30/08
272	Preparation for Project Expansion	Wed 1/7/09	Tue 6/30/09
273	Determine possible scope of future implementation efforts	Wed 1/7/09	Wed 2/4/09
274	Adjust project plans, timelines, and cycles based on successes and recommendations	Wed 6/17/09	Tue 6/30/09

Activity Description	Project Manager	Project Director	FIPSE Project Coordinator	PreK12 Coordinator	Regional Higher Ed Faculty Coordinator (contracted)	Meta-data Tagging Specialists (2)	System Administrator / Web Developer (1)	Vendors	Owner
Research and Planning									
Conduct problem-solving and planning sessions	▲ = Direct	▲ = Direct	● = Indirect	▲ = Direct (PreK-12 only)	● = Indirect	■ = Support	■ = Support	-	■ = Support
Yearly updates to Repository Strategic Plan	▲ = Direct	▲ = Direct	● = Indirect	▲ = Direct (PreK-12 only)	● = Indirect	■ = Support	■ = Support	-	● = Indirect
Phase HE I – Expanded Implementation for Higher Education(2007 – 2008)									
Plan	▲ = Direct	▲ = Direct	● = Indirect	□ = None	● = Indirect	■ = Support	■ = Support		● = Indirect
Acquire resources	▲ = Direct	▲ = Direct	□ = None	□ = None	▲ = Direct	■ = Support	■ = Support	-	● = Indirect
Implement learning resources	▲ = Direct	▲ = Direct	□ = None	□ = None	● = Indirect	● = Indirect	■ = Support	-	● = Indirect
Evaluate and recommend improvements	▲ = Direct	▲ = Direct	● = Indirect	□ = None	● = Indirect	■ = Support	■ = Support	-	● = Indirect
Prepare for expansion	▲ = Direct	▲ = Direct	● = Indirect	□ = None	● = Indirect	■ = Support	■ = Support	-	■ = Support
Phases HE – II - Expanded Implementation for Higher Education(2008 – 2009)									
Plan for phase	▲ = Direct	▲ = Direct	● = Indirect	□ = None	● = Indirect	■ = Support	■ = Support	■ = Support	■ = Support
Procure / develop resources	▲ = Direct	▲ = Direct	□ = None	□ = None	▲ = Direct	■ = Support	■ = Support	■ = Support	● = Indirect
Implement learning resources	▲ = Direct	▲ = Direct	□ = None	□ = None	● = Indirect	● = Indirect	■ = Support	■ = Support	● = Indirect
Evaluate pilot and recommend improvements	▲ = Direct	▲ = Direct	□ = None	□ = None	● = Indirect	■ = Support	■ = Support	■ = Support	■ = Support
Prepare for expansion	▲ = Direct	▲ = Direct	● = Indirect	□ = None	● = Indirect	■ = Support	■ = Support	● = Indirect	■ = Support
Phase PreK12 – I - Integration with Other PreK-12 Collections									
Plan	▲ = Direct	▲ = Direct	□ = None	▲ = Direct	□ = None	■ = Support	■ = Support	■ = Support	■ = Support
Procure / develop resources	▲ = Direct	▲ = Direct	□ = None	▲ = Direct	□ = None	■ = Support	■ = Support	■ = Support	● = Indirect
Implement learning resources	▲ = Direct	▲ = Direct	□ = None	▲ = Direct	□ = None	● = Indirect	■ = Support	■ = Support	● = Indirect

Activity Description	Project Manager	Project Director	FIPSE Project Coordinator	PreK12 Coordinator	Regional Higher Ed Faculty Coordinator (contracted)	Meta-data Tagging Specialists (2)	System Administrator / Web Developer (1)	Vendors	Owner
Evaluate and recommend improvements	▲ = Direct	■ = Support	□ = None	▲ = Direct	□ = None	■ = Support	■ = Support	■ = Support	■ = Support
Prepare for expansion	▲ = Direct	■ = Support	□ = None	▲ = Direct	□ = None	■ = Support	■ = Support	● = Indirect	■ = Support
Phase PreK12 – II - Expanded Implementation for PreK-12 (2008 – 2009)									
Plan for pilot phase	▲ = Direct	▲ = Direct	□ = None	▲ = Direct	□ = None	■ = Support	■ = Support	■ = Support	■ = Support
Procure / develop resources	▲ = Direct	▲ = Direct	□ = None	▲ = Direct	□ = None	■ = Support	■ = Support	■ = Support	● = Indirect
Implement learning resources	▲ = Direct	▲ = Direct	□ = None	▲ = Direct	□ = None	● = Indirect	■ = Support	■ = Support	● = Indirect
Evaluate pilot and recommend improvements	▲ = Direct	▲ = Direct	□ = None	▲ = Direct	□ = None	■ = Support	■ = Support	■ = Support	■ = Support
Prepare for expansion	▲ = Direct	▲ = Direct	□ = None	▲ = Direct	□ = None	■ = Support	■ = Support	● = Indirect	■ = Support
▲ = Direct Responsibility ~ Approval Authority									
■ = Support Responsibility ~ Review Authority									

Project Costs for Florida K20 Digital Repository

Produced 1/2007 Florida Distance Learning Consortium

For Education

By FDLC

F Y 2008-2009

PROJECT BUDGET WORKSHEET 1 (Captures All Major Direct & Indirect Costs associated with Development, Implementation, and Transition)												
Project Cost	Quarter	Jul-Sep Planned	Jul-Sep Actual	Oct-Dec Planned	Oct-Dec Actual	Jan-March Planned	Jan-March Actual	April-June Planned	April-June Actual	Budget to Date	Actual to Date	Variance to Date
State Staff										\$0	\$0	\$0
# FTEs 2 (1 is OPS)		\$42,420.00		\$42,420.00		\$42,420.00		\$42,420.00				
Subcontractors										\$0	\$0	\$0
# FTEs depends on # contracts		\$310,540.00		\$310,540.00		\$293,666.00		\$318,911.00				
Hardware										\$0	\$0	\$0
See detail in Tech section		\$65,000.00										
Software										\$0	\$0	\$0
See detail in Tech section		\$119,396.00		\$119,396.00								
Misc Equipment										\$0	\$0	\$0
Network infrastructure		\$1,200.00										
Other Costs										\$0	\$0	\$0
Training (develop & deliver)		\$24,354.00		\$24,354.00		\$24,354.00		\$24,354.00				
Travel		\$9,306.00		\$9,306.00		\$9,306.00		\$9,306.00				
Facilities		\$3,863.00		\$3,863.00		\$3,863.00		\$3,863.00				
TCC Admin Fee (5%)		\$23,230.00		\$23,230.00		\$23,230.00		\$23,230.00				
Total Costs		\$599,309	\$0	\$533,109	\$0	\$396,839	\$0	\$422,084	\$0	\$1,951,341	\$0	\$0
Progress Payments										\$0	\$0	\$0

Appendix M: Project Communication Plan Tool

The *Implementation and Change Management Subcommittee* will refine and expand the following key messages for each target Repository audience

Sender/ Receiver	Desired Behaviors	Messages	Channels and Timing	Responsibility	Review and Evaluation
DOE K-20 Executive Policy Team	Ongoing project endorsement	Project status	Emailed monthly updates Quarterly one-on-one meetings with each invested leader	Project Sponsor and Project Director	Identification of new objects, materials, or functions to be added to the Repository; improvements
Consortium members or their Repository Project designee (one member per higher education institution)	Local endorsement and advocacy of Repository project; interact with Regional Higher Education Faculty Coordinators	Project awareness Benefits of and improvements to the Repository Local activities and assignments	Quarterly	Implementation and Change Management Subcommittee Marketing and Awareness Subcommittee	Identification of desired process improvements at each meeting Use of Repository by educators
Regional Higher Education Faculty Coordinator	Interface with a region's institutional representatives (e.g., deans, department chairs, CIOs) and faculty in targeted subject areas to promote Repository use and to acquire existing digital content	Repository awareness Benefits of and options for using and sharing content through the Repository Support for communities of practice/practitioners	Quarterly contact with each institution within their assigned region Quarterly Contact and Status reports submitted to project manager	Project Manager and Project Director	Informal surveying of institutional and faculty in each region Number of resources added to Repository
Sector Statewide Policy Groups	Ongoing project endorsement	Benefits of and improvements to the Repository	Regularly scheduled sector group meetings	Project Sponsor Project Director	Institutional support Use Repository by educators

Sender/ Receiver	Desired Behaviors	Messages	Channels and Timing	Responsibility	Review and Evaluation
		Local activities and assignments			
Educators	Use of the Repository resources in instruction Sharing of individual digital resources through the Repository	Consortium representatives and Regional Higher Education Faculty Coordinator activities Direct and online training Awareness	As identified in strategic plan and Awareness Campaign plan	Consortium Members Implementation and Change Management Subcommittee Marketing and Awareness Subcommittee	Use of Repository by educators