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INTERNAL OUTSOURCING:
LEVERAGE RESOURCES AND MAINTAIN CONTROL

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ABSTRACT

Wise technology decisions are continually needed to support rapidly changing campus environments. Learn how seven diverse Florida Community Colleges combine fiscal and human resources, producing campuses with more advanced, better-managed technology.

Specialized design teams combine end user architects with technical experts to propel the colleges forward to support eApplications.
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FLORIDA COMMUNITY COLLEGE SOFTWARE CONSORTIUM
I. INTRODUCTION

A. ISSUES

All institutions of higher education must face and solve problems associated with the increased need for ever-changing technology. This is an ongoing issue, which began to accelerate several decades ago. Examples that must be addressed are: hardware and software selection, the hiring and training of staff, and the finances needed for all of the above. Those decisions have lead institutions to question and/or evaluate the following directions: developing in-house applications, purchasing application software and outsourcing to an application service provider (ASP). Each direction has its positive and negative aspects.

- Develop In-house Applications

Definitely as a positive, this direction provides control of content, timelines, and priorities. The In-House development is tailored to what the institution needs and wants.

Depending on the existing resources of the institution, the need for I/T management and technical staff, hardware, software development and training for technical staff could be considered a negative aspect.

- Purchase Application Software

It is positive to purchase software, not requiring the institution to have the I/T management and technical staff to design, develop and maintain software.

The limitations of this approach include the use a system developed to some “out of the box” specifications. The institution must accept these specifications, pay for changes or have an I/T staff trained to make changes. One of the greatest limitations is less control over modifications and enhancements. These requests must be prioritized with other institutions’ requests so there is definitely less control over content and development time.

- Outsource to an ASP

The plus of this option is the institution does not need an I/T Department, if the ASP supports hardware, system and application software. Whether the ASP helps in the purchase of software or develops software for the institution, the discussion above, relating to control of timelines and priorities, applies.

The main issues of this option are communication. If all I/T functions are outsourced, one or more staff at the institution must be knowledgeable, responsible and work directly with the ASP to assure they are following the direction desired by the institution.
The 1990’s presented a variety of critical challenges to all institutions of higher education, including the twenty-eight Florida Community Colleges. Approximately six years ago in 1994, seven Florida Community Colleges were individually facing similar situations. Legislated mandates from both the State and Federal governments arrived with increasing frequency. At the same time, funding from both sources to implement these mandates shrank or was non-existent. The demographics of the student population were changing dramatically. A decrease in the number of traditional students was offset by an increase in non-traditional students.

As a result, most Community Colleges have been forced to find even more cost-effective ways of doing business. In this rapidly changing and increasingly complex environment, we have come to rely on automated systems to support management decision-making and to provide improved student services.

In fact, not only were new systems required, but a new way of developing and maintaining systems was required for the colleges to meet state mandates, prepare for Y2K and meet the basic growth in services they predicted would be needed. Several factors made this so:

- Software systems were in place, stable, and functional, but were nearing the end of their life cycles. They were written in languages using design features that were out-of-date and required complex maintenance processes.
- Most of the applications did not fully meet mandated requirements.
- The time and cost to individually develop new systems was excessive.

Each of the seven colleges wanted new systems which would meet State, Federal and College requirements, but also systems written with tools that could be easily managed, changed and enhanced in the future. At first purchasing software sounded appealing, but existing packages that met all the Florida mandates and college requirements for students, finance and payroll/personnel could not be found. Each of the seven colleges already had competent staff and owned hardware; therefore, their top management did not seriously consider outsourcing the entire I/T function to an ASP.

What choices were left if individual development was too slow and costly for the “long term”, applicable packages for most systems did not exist, and outsourcing management and development to an ASP seemed too dramatic an approach at the time? The 1994 Florida Legislature stimulated the thought process by appropriating seed money for the development of integrated student, personnel, and financial databases, with emphasis and rewards for sharing development activities. An idea formed in the minds of several of the colleges’ top administrators. If the colleges worked together and pooled resources, they could develop new software together.
C. CONSORTIUM FORMATION

With the appealing concepts of outsourcing, being able to control the design, development tools and priorities and then being encouraged to share by the Florida Legislature, the Presidents and top administrators of the seven Community Colleges decided to form the Florida Community College Software Consortium (FCCSC) and to work collaboratively to initially develop four mission critical applications: finance, student, personnel/payroll and facilities. The top administrators liked the idea of outsourcing to themselves. That is, they liked internal outsourcing, to share resources but maintain control.

II. CONSORTIUM APPROACH

A. LOGISTICS

The participating community colleges are Broward CC, with 24,720 students; Florida CC at Jacksonville, with 19,645 students; Indian River CC, with 12,589 students; Miami-Dade CC, with 47,152 students; Oskaloosa-Walton CC, with 6,730 students; Palm Beach CC, with 16,962 students; and Tallahassee CC, with 10,736 students (October 1999 Headcount). Together, the full-time equivalent (FTE) of these seven community colleges represents about 47% of the FTE of the students of the 28 Florida community colleges. The logistics of the Consortium are difficult as the distance between the colleges varies, i.e. Oskaloosa-Walton CC to Miami-Dade CC is about 609 miles while Miami-Dade to Broward CC is about 22 miles. The fact that colleges, so very different in size and located geographically far apart, voluntarily choose to work together on such a large project is in and of itself significant.

Currently the Consortium has an office for its staff, training and meetings, which is located in Ft. Lauderdale. Development of application software occurs on hardware provided by Miami-Dade Community College. Each of the member colleges transfers (ports) software releases to its own college environments for production.

B. MISSION

The mission of the FCCSC is to develop, implement, maintain and enhance world-class software and other automated processes for the Florida Community College environment. The FCCSC provides leadership working with community college staff in the definition and prioritization of the business processes to be automated. It also coordinates the efforts of all consortium members in the development of new software enhancements and processes.

C. GOALS

The FCCSC develops, enhances and maintains a repository of high quality, good performing, and well-documented applications. FCCSC will continue a leadership role in supporting the evaluation, development and/or selection of applications needed by the colleges.
The repository offers to its members the best possible solution as they:

- Provide an alternative for satisfying application requirements in addition to buying or building individually.
- Increase productivity and efficiency in the development and maintenance of applications.
- Offer the latest "best practice" applications with more useful features.
- Reduce the cost in the development and maintenance of integrated applications.
- Enhance users' understanding of application functions and methods used by others.
- Provide a communication facility for matching needs and solutions.
- Provide a solution written in an advanced technology tool set.

D. OBJECTIVES AND STRATEGIC INTENT/PLAN

The success of FCCSC lies in its ability to maintain and expand its repository of applications that are "best practice" and are easily transferred to member colleges.

All Consortium decisions will take into consideration actions to support the following directions:

- To provide Web/IVR interfaces (Graphical User Interfaces (GUI) will be provided by Web interfaces) where the mainframe server program will use common message formats for application service requests, independent of where the request originated.
- To support an executive information system for institutional decision making and friendly end user reporting.
- To seek enterprise licensing for application and utility software used by the Consortium colleges.
- To maintain common platform and architecture for quality control.
- To assure software design will take into consideration both personnel and hardware resources.
- To define the hours of operation and support needed by the Colleges.
- To define the testing process needed for successful ongoing development and maintenance.

E. ADVANTAGES

The distinctive advantages that FCCSC brings to its members are:

- Experience. Applications that are accepted into the repository will be considered the "best practice" by function standards as well as "best technology standards."
- Sophistication. Applications will be integrated and of a high quality using cutting edge technology.
- Efficiency. The philosophy of FCCSC is that joint sharing will enable increased productivity in the delivery of proven applications.
- Regularly, through the committees, the members' needs and solutions will be assessed to determine repository candidates and priorities.

F. ORGANIZATION
The College Presidents

- Have ultimate authority for strategy, tactics and direction.
- Designate an Executive Committee Member to represent each College.

The Executive Committee

- Has overall authority as designated by the Presidents.
- Sets long-term priorities and directions.
- Has final approval for:
  - Allocation of funds.
  - Progress of overall project.
  - Resource allocation.
  - Changes to the project plan.
  - Contracts and Agreements.
- Identifies Technical Committee and User Group Members.
- Hires and Supervises the Consortium Executive Director.

The Technical Committee

- Reports to the Executive Committee.
- Has month-to-month authority.
- Responsible for technical oversight.
- Assures adequate resources on the projects.
- Are site managers of project resources.
- Supervises the Systems Environment Group.

The User Committees

- Are comprised of one primary member per system per college.
- Are the architects responsible for defining the business functions.
- Work with technical experts to design, test and prioritize enhancements.
- Are empowered by their colleges to obtain “best practice” solutions.
- Arrive at consensus with the “one vote per college” rule.
- Have meetings called and facilitated by the FCCSC Group Managers.

Systems Environment Group (SEG)

- Are technical college members, database managers and system programmers.
- Are responsible for:
  - System performance.
  - Data management.
  - Environment management.
Executive Director

- Reports progress and status to Executive and Technical Committees.
- Defines and adjusts project plan.
- Maintains project budget.
- Manages the projects.
- Hires and supervises Consortium staff including: group managers, programmers, systems programmer, quality assurance and database administrators
- Supervised by the Executive Committee.

FCCSC Help Desk

- Staffed by Consortium employee(s).
- Records all requests.
- Answers simple questions and refers all others to Consortium group managers.
- Is assisted by college help desk staffs, which are responsible for first line support.

Group Managers (GMS)

- Are Consortium staff.
- Are technical leaders specializing in at least one of the major systems.
- Coordinates all activity that affects the baseline software of the FCCSC.
- Manage the maintenance function for their systems or areas.
- Functional GMs manage applications and operational GMs manage the maintenance environment.

III. OUTCOMES

A. SUCCESSES

Between February 1995 and September 1999 the FCCSC designed, developed and implemented at the seven colleges the following integrated on-line real-time administrative systems.

- PERSONNEL including applicant tracking, demographics, job assignments, benefits, position accounting, payroll, time accounting and FTE accounting.
- FINANCE including general ledger, budget, accounts payable, credit and collections, and purchasing.
- STUDENT AFFAIRS including admissions, registration, records, curriculum, fees and tuition, and degree audit.
- FACILITIES including inventory and scheduling.
Also during its first five years of existence the FCCSC has designed, developed and implemented at all or most of the colleges additional systems, including the following:

- WEB including registration, course availability, grade checking, address changes, degree audit and financial aid tracking and status. Under development are fee payments and admissions.
- IVR (interactive voice technology) including registration, grade checking and fee payments.
- FINANCIAL AID – the Financial Aid Directors of the Consortium selected a financial aid system to purchase, which is written in the same language and supports the Federal, State and private grants, scholarships and loans needed by the colleges. The Consortium wrote the interfaces from this financial aid system to the finance and student systems.
- FACTS -- The State of Florida has a major initiative to support students called Florida Academic Counseling and Tracking for Students (FACTS). This is a statewide web-enabled system that allows all students and all potential students to review the programs of Florida’s higher educational institutions, to access their place in a program, and eventually, to be admitted, receive financing, plan for and register for programs and courses. This system, via the web, provides real-time interaction among institutions and with any student or potential student. The FCCSC colleges worked together and with the FACTS organization to design, develop and implement the interfaces from the Consortium software to the FACTS system.

B. AREAS OF IMPROVEMENT

Always the number one area of improvement is in communication. With an organization this large, diverse and logistically separated, there is never enough communication. In May 2000, the Consortium held its first annual Users Conference. This was a time when all user teams met together to share in their successes and work together to establish the next year’s goals. Recognizing successes is very important. It always seems much easier to notice problems and let successes occur quietly. The users and technical staff left this meeting with a better understanding of other groups and how all teams are important to the Consortium success.

It is also very important for top management to continue to make the time to be involved with user meetings. This most often occurs during major implementations, but it needs to occur on a continuing basis too.

In summary, it is truly amazing that all seven such diverse colleges continue to agree that we have chosen the correct direction and want to continue to work together. The willingness of the Executive and Technical committees to agree on issues and pull in the same direction is phenomenal.
C. FUTURE

What is the future for the Consortium and its member colleges? We certainly plan to continue to work together and share knowledge and efforts in the area of application software design and development. We do plan to continue to leverage our purchases and maintenance through enterprise license agreements. Currently, we are undertaking a study to see if there is a more cost effective way to develop and maintain our software. For example, would it be more cost effective for the Consortium to be a full-service ASP for the member colleges?

The FCCSC has sold the software to two universities/colleges out of the State of Florida and currently provides maintenance support for one. It is the intent of the Consortium to continue to make these types of decisions when they are in the best interest of the Consortium and the other university/college.

D. CONCLUSION

The FCCSC has already been very successful in the systems we have designed, developed and implemented. We will continue to be successful because along with the enthusiasm of the colleges and the need and desire for our products, this Consortium has three criteria required for success. They are:

- The Consortium must be organized and managed so success occurs. It is rewarded along the way because with ever-changing technology; the end is seldom reached. The annual users conference is an important means of giving this praise.
- The Consortium must have support and direct involvement of the users. Our users are the ARCHITECT.
- The Consortium must have top management support. Look at the commitment of the college resources, both personnel staff and financial to provide this support.

Our dynamics and momentum are strong! Every member college believes in our success!