## Clemson University Libraries 2020 Planning Document

**Executive Summary** 

Clemson University Libraries continues to be the heart of the University, however we believe that our role is best represented by the *scientific* image of the heart: by pumping the blood, transporting oxygen to the limbs and brain ....keeping the organism alive.

- To our students, we are a place for learning, study, research, and socializing.
- To our faculty, we are more often the invisible resource that provides information for research and courses taught. Quite often, this delivery is to the desktop.
- To the entire Clemson community, we are also consultants and information providers.

We believe that we do this job well, based on feedback from those we serve. At the same time, we recognize that the world of information and higher education is changing rapidly. We cannot afford to remain an excellent 1990's Library. Transformation must take place to maintain excellence and relevance in the role we expect to play in 2020. We expect that the greatest changes will be in the business models affecting the acquisition of information and relevant methods to access that information. In this knowledge based economy, intellectual property and its use heavily influence the Library. Libraries of 2020 must be active contributors rather than passive repositories, and by embracing this transformation, we will remain a strong presence in the University's efforts to change the world through research and education. For more information, see the Library Overview: <a href="http://www.clemson.edu/library/lib\_overview/missvissg.html">http://www.clemson.edu/library/lib\_overview/missvissg.html</a>

#### National Trends:

Collections: While decisions library materials purchased are driven by the curriculum and research priorities of the University, the methods used to meet the informational needs of students and faculty are changing. The scales are now tipping in favor of access versus ownership, in patron-driven acquisitions, increased just-in-time purchases, and centralized digital preservation initiatives.

The role of the academic library as publisher of information is a significant trend. The library serves as facilitator for and repository of the University's research data, technical reports, published articles, and funded research information.

Benchmarking: The traditional counting of library volumes held is being abandoned as a measure for peer comparisons and benchmarking, with total library expenditures becoming the more common delimiter. In addition, reporting is now including state-wide and regional library cooperatives that augment local library resources as a benchmarking measure.

Services: Trends indicate a declining research service desk use by students and faculty in particular. The response has yielded a transformation by embedding librarians in the academic departments for research support.

At Clemson University, library use trends indicate the following:

- Increased use of space. The 2010-2011 gatecount will exceed 1.2 million as all time high
- Increased use of electronic resources
- Decrease in number of reference questions at research desk
- Increased followers of library in social media
- Increased instruction emphasizing critical evaluation of information
- Increased purchase of electronic holdings
- Increased creation and management of digital assets
- Decrease in circulation of paper titles/print books
- Increased collaboration with campus information technology (CCIT)

In response to the following trends, Clemson University Libraries will continue to strategically address the University's needs for research and curriculum support through new initiatives and transformation. The Strategic Plan Summary following indicates our path as we continually transform operations to meet the changing needs of the University and Higher Education.

#### **Strategic Plan Summary**

1: Respond to changes in Clemson University curriculum and research priorities in content provided and in method of delivery. This is accomplished by evaluation and adoption of new models for access and by concentration on methods of information delivery for students and faculty who are not on the main campus.

2: Actively seek opportunities for cooperation and collaboration to maintain resources and services, to expand resources and services, to gain efficiencies in use of resources and services. Internal partners include faculty, CCIT, and the Office of Research. External partners included state and regional academic libraries, cooperative affiliates such as the Carolina Consortium, federal grant funding agencies, and foundations.

3: Maximize facility use to enhance the learning environment for students and faculty, both on campus and offsite. Actions require critical evaluation of collections for retention, relocation, or cooperative storage of physical or electronic resources. Seek partnerships for offsite collaborative learning spaces to meet the information needs of Clemson students and faculty at a distance.

4: Information content. Continue to look for avenues to provide appropriate content to support Clemson University through effective acquisition, management, access and delivery of both commercially produced and University generated content.

5: Human Resources. Continually transform positions through re-tooling existing personnel and by filling vacant positions to support increasing information technology demands of the 21<sup>st</sup> Century Library.

What do you want to be in five years?

In terms of what the Library wants to be in 2015, we made a conscious decision in 2010 that we want to transform into a 21<sup>st</sup> Century Library, which means we assume a leadership stance in the delivery and access (via existing and new technologies) of information. In 2010, we believe we are an excellent 1990s Library, but that excellence will not be sustainable in the 21<sup>st</sup> Century without a vision. We recognize that if we don't do this for Clemson University, some other unit will. (see: <a href="http://www.imls.gov/about/21stCSkills.shtm">http://www.imls.gov/about/21stCSkills.shtm</a>).

In 2015, we will have an established Digital Initiatives Unit with new grants underway and a functional Institutional Repository. As the Library, we provide access and support to more resources electronically and students and faculty are better able to access resources (thus increasing usage from where we were in 2010).

The traditional subscription model has been seriously altered and the associated funding model irrelevant. Based on that, we have adjusted our method of allocation and purchase of resources accordingly. We are responding to the changing access/ownership model and increasingly acquiring alternative types of information in various media (audio, digital video).

The Cooper Library print collection has decreased in size, and the Library has a solid remote storage facility that accommodates print collections and digitization services. The total amount of campus space for libraries has remained constant, with no on campus expansion on the horizon. Cooper Library space has experienced comings and goings of partners: the Academic Success Center will have left and CCIT services are now well established in the building. With these changes, staff areas are reconfigured. Despite the increased percentage of Library resources available electronically, the Library as a space for study, collaboration, and use of technology has increased. The 2010 Learning Commons has become more sophisticated, with new learning technologies and high end productivity computer software readily available. The Library website will have a single (Google-like) search box for all the resources it purchases, including physical collections, electronic collections, Institutional Repository resources, and open access information. Research services are an integral part of the commons, as well as other student – focused services. Instructional support for the use of video and audio editing has increased from CCIT, with the librarians learning how to assist as well. Rather than just relying on Library web pages with textual information via a PC, students and faculty will be using mobile devices for Library instruction that includes video segments and tie into point-of-use instruction for our extensive collections. This will include increased mobile applications, the use of QR codes, and technologies not available in 2010 with increased 24/7 tutorials purposefully placed at point of need locations. The Library will continue to play an active role in the extended orientation for all students via the Clemson Connect Program, which will keep students aware of the services that the Library offers. Library instruction will accessible on demand from the web page via interactive forms and more outreach programs like Graduate Student Boot Camp will be provided for students, faculty, and staff.

The Libraries continue to work with established partners as well as new partners in the areas of collection development, storage, and access. With digital humanities blossoming on campus, the Library and special collections are exposing more collections via the web. As leaders in data management on campus and the natural keepers of the body of knowledge produced by our Clemson faculty, Library faculty are working with researchers across campus data to meet grant data management requirements as well as access and preservation of data. Clemson Library faculty will also use and expose collaborative digital preservation repositories such as Hathi Trust to expand open access resources for students and faculty to use in their research.

On campus, the de facto 'departmental library collections' are being evaluated and stronger ties to Clemson University Libraries are being established. A stronger system deliver print resources and research support to off campus locations in Greenville (UCG, ICAR, and Bowater) is evolving, and more formal relationships for use of Library resources are being crafted.

Government Document collections are physically smaller, and the print collections are directly tied to the curriculum. Clemson Library is a Center of Excellence for National Park Service resources in the Federal Depository Library Program. More electronic government information is accessible through the Library's catalog.

In Special Collections, a big increase in acquisition has been and continues to be electronic records. More of the personnel are well versed in access of born digital information, the associated software, the access of this information and the mechanics of digital preservation.

In 2015, the Library is investigating the migration of our Integrated Library System to another platform, which will most likely be open source. The Library is actively acquiring the personnel to manage the move to open source software. Throughout the Library, the staff are transitioning to more technologically demanding positions. New hires have the expertise and others are being retrained to meet the changing skills required in Library positions.

There are fewer units in the Library as space changes have made cross training and collaboration easier to accomplish.

Funding from the University is flat, and the Library is actively pursuing alternative funding from foundations, federal and state grants, as well as private dollars through individual donors. External grants have a direct relationship to the strengths of the University, and the corresponding collections of the Library.

If peer reviewers came to review your programs, which programs would they likely identify as candidates for increased funding, continued funding, closure, downsizing, merger or reorganization?

Library programs and services are very different from academic programs. Clemson University Libraries provides the most basic of services for its students and faculty, which are foundational support for the University's curriculum and research. Simply put, our programs and services are then influenced by the priorities of the College's faculty and students we support.

In the fall of 2009, Library Consultant Raynna Bowlby was engaged to examine the organizational structure and organizational systems for aligning the Clemson University Libraries' staff with strategic goals and for achieving effective accountability. This would be the closest equivalent to a peer review for the Library. The Consultant's report indicated deficiencies in the following areas, where either new or redirected funding was needed.

- Assessment and Planning. Greater analysis of resources and planning to realize efficiencies and opportunities. (action being taken: search for Associate Dean with the responsibility for coordinating. Divest to invest strategy for funding being used.)
- Sponsored Research. Strengthen support provided for development, specializing in support
  needed to obtain and manage grants and contracts; assist with meeting requirements of grant
  applications (electronic filing and forms, etc.) and grant financial administration
  (action being taken: search for Associate Dean with the responsibility for coordinating research
  efforts using divest to invest strategy. First major grant proposal successful October 2010 for
  over \$750,000 from Institute for Museum and Library Services)
- Copyright/Scholarly Communication/Institutional Repository. Develop the Libraries' understanding of legislation, policies, and procedures, assist campus and Libraries' faculty and staff with permissions and compliance, heighten campus awareness of scholarly communication issues and new options, encourage University faculty and researchers to contribute to an Institutional Repository. (action being taken: initial stages beginning with reallocation of personnel and external funding. Additional revenue streams needed and continued divest to invest strategy)
- Digital Initiatives. Since this is a relatively new functional area for academic libraries, it is typically under-staffed; however, to make an impact in this strategic area libraries generally need staff with special expertise (programming, metadata) as well as sufficient numbers of staff to physically handle, digitize and describe large numbers of materials (both new and divested funds required in addition (action being taken: reallocation of personnel and external funding are being pursued. First major grant proposal was successful in October 2010 with over \$750,000 from the Institute for Museum and Library Services.)

By reallocating existing funds and hiring an Associate Dean, the Library will be positioned to attain external funding through grants or by freeing the Dean to cultivate prospects for increased donor support.

It is important to note that the consultant's report addressed *organizational* needs, and was not designed to evaluate Library collections and their adequacy for the University's curriculum and research. In 2010, the Library conducted a serials review to identify titles for possible cancellation. The strategy again being to reduce duplication and eliminate seldom used titles. Without an analysis, it was clear than the Library would be unable to add new titles or migrate to new information business being employed in research libraries across the country.

Analysis of Academic Library Survey data from the National Center for Educational Statistics (NCES) provides comparators with three peers chosen based on similar structure and academic mission. North Carolina State University, Iowa State University and Virginia Polytechnic Institute have centralized libraries rather than multiple departmental libraries.

Since much of the data does not take into account the nuances in state-wide support (such as PASCAL for South Carolina) and direct Library support, it is difficult to make meaningful comparisons. However, using total Library expenditures per FTE student in 2008, the information revealed the following:

#### Library Expenditure per FTE student

Virginia Tech University	\$482.73*
Clemson University	\$711.82
Iowa State University	\$802.29
North Carolina State University	\$900.73

\*Virginia Tech omitted the following areas from its report: staff salaries, all salaries fringe benefits, and the other operating expenses.

#### Level of activity per FTE student in an average week, 2008

	Clemson	lowa	NCSU	VT
Gate count	2.43	1.89	1.45	.71
Circulation	14	11	23	12
Reference	.048	.027	.027	.001
questions				

2008 NCES data suggests that our funding is comparable, while our facility use is greater than our peers.

In addition, LibQUAL+ data from years 2001, 2003, 2004, and 2006 indicates increasing satisfaction with Library services and resources. (see <a href="http://www.clemson.edu/library/lib">http://www.clemson.edu/library/lib</a> overview/plans.html )

In summary, the bulk of our Library operations would be maintained to include: Circulation, Acquisitions, Cataloging, Special Collections, Reference, Resource Sharing, Gunnin Library, and Records Management.

The Library consultant's report did not recommend programs for closure, but did recommend merger of smaller units as opportunities through attrition and systems workflow provided opportunities. The consolidation was not recommended as a cost savings measure but rather a reduction in the number of direct reports to the dean while maintaining a flat organizational structure.

How would your answer change if you knew that your funding from the university would decrease by 20%?

The priorities of the Library would not change, but the ways and means in which we meet those priorities might well change. For instance, hiring an Associate Dean with responsibility for overseeing grants would certainly help us meet some gaps in the funding structure.

However, a 20% funding decrease for the Library could not be easily replaced by new funds and would therefore require reductions in Library resources, which constitute over 40% of the Library's current budget and are subject to significant inflation even in the worst of economic times. (While the Library's material expenditures for books, journals, and databases have increased from \$3.6 million in 2006 to \$5.6 million in 2009, statewide database funding provided through PASCAL has dramatically decreased from \$2,000,000 in 2008 funding to less than \$175,000.) In addition to continued review of purchases and cancellations based on curriculum changes and use, the Library would accelerate its adoption of 'just in time' materials purchases, moving away from both traditional collection development and traditional interlibrary loan to a more collaboratively; participating in consortia to purchase more print and digital collections as well as a heavier reliance on electronic books, and individual document retrieval. While the aforementioned strategies are not bad, students and faculty may see increased turnaround times for obtaining resources.

As of July 1, 2010, 22 positions (or 20% of our total positions and over \$600,000 in salaries) are empty. Half of these positions would be filled over the next three years to address the need for increased Library technology support and the retooling of our staff to meet the future. In previous years, the Library kept the positions budgeted and used the salary lapse to purchase books as the serials inflation diminished Library purchasing power.

Other means of coping with the loss involve restructuring our current practices. To mitigate the loss of E&G revenue, the purchase of a remote storage facility rather than our current lease arrangement would ultimately eliminate the need for \$130,000 annually in rent. The leased site holds over 110,000 volumes. Statistics indicate decreased use of the Library's document delivery service, and the service requires revamping to meet the changed demands for resources.

In summary, the answer does not change, but the activity does diminish access for resources and limit the ability to respond to our changing environment. The transition to alternative information access models would be greater without yielding increased access to more resources supporting the curriculum and research.

# In addition to focusing on programs in your department, how might you also adjust costs by considering the following?

	anges In discipline curriculum ee "The Elepha <i>nt</i> in the Room: Curricular Glut" by Michael Bugeja in the <i>Chronicle of Higher</i>	
•	lucation, 3/28/2010	
-W	hat are the critical or most important ("core") course offerings in your curriculum?	
	/hat are your department's least important offerings and what would be the impact minating these courses?	of
	ow could you teach your course offerings differently in order to reduce instructional nile maintaining quality?	costs
- A Wł	s you construct your answer, consider national trends and best practices in your discipnat do you need to do or "add" to make sure that your graduates will be competitive i uld you make this happen by eliminating lower priority coursework or programs?	

Since the Library is the support mechanism to the curriculum and to research, it is important that the Library be informed about curriculum changes to adjust information resources accordingly. By thoroughly and consistently reviewing Library holdings in light of the curriculum, and by maintaining close relationships with the academic departments and students, the Library is able to respond to changes.

Trends in higher education, learning, technology, information access, and technology transfer have an important impact on academic libraries. National academic library trends have been a focus of our study and discussion from April to July of 2010. In a review of the literature, several studies and documents were the fodder of our discussion.

Institute of Museums and Library Services. <u>Museums, Libraries, and 21<sup>st</sup> Century Skills</u>. 2009. <u>http://www.imls.gov/pdf/21stCenturySkills.pdf</u>

Association of College and Research Libraries. <u>Futures Thinking for Academic Librarians: Higher</u> <u>Education in 2025</u>. June 2010. http://www.ala.org/ala/mgrps/divs/acrl/issues/value/futures.cfm

ACRL Research and Review Committee. 2010 Top Ten Trends in Academic Libraries: a Review of the Literature. <u>CR&L News</u>. June 2010.

Educause. The Future of Learning Environments. <u>http://www.youtube.com/watch?v=NtPVGn04sDk</u>

How *should* libraries and museums evolve as institutions of learning in the 21st Century? In light of 21st Century demands, libraries and museums should build on current strengths and embrace new approaches such as the ones described in the following chart:

20TH CENTURY MUSEUM/LIBRARY	21ST CENTURY MUSEUM/LIBRARY	
Primarily content-driven	Combination of audience- and content-driven	
Mostly tangible objects (art, books)	Combination of tangible and digital objects	
One-way information (institution presents information to audiences)	Multi-directional (co-created experiences involving institution, audiences, and others)	
Focus on presentation and display	Focus on audience engagement and experiences	
Emphasis on enhancing knowledge	Emphasis on enhancing knowledge and 21st century skills	
Acts independently	Acts in highly collaborative partnerships	
Located in community (operates independently)	Embedded in community (aligned with and acts as a leader on community needs/issues)	
Learning outcomes assumed, implied (content knowledge and skills like critical thinking tend to be byproducts of programming)	Learning outcomes purposeful (content knowledge and 21st century skills like critical thinking are visible, intentional outcomes of audience experiences)	
Institution leads content development (content tightly edited and controlled)	Content co-created among diverse partners and audiences; accessible in multiple ways	

From: The 21st Century Museum/Library Shift (see http://www.imls.gov/pdf/21stCenturySkills.pdf)

In the summer of 2010, a group of Library faculty and staff used the IMLS Self Assessment Tool, asking ourselves questions that addressed the areas mentioned above. The results of the Self Assessment labeled Clemson University Libraries as a *Library in Transition*.



While the Library is making strides in the area of facilities and infrastructure, there is much to do in retooling staff for the transition to 21<sup>st</sup> Century skills. The Library's new partnerships with campus IT serve as an important foundation for future efforts. Clearly, the Library will continue to build upon partnerships with content providers (Clemson faculty) to provide access to scholarly information. Collaboration with internal and external technology providers will facilitate scholarly communication, a vital role for 2020 academic libraries. Changes in general education and the undergraduate experience -What do you want your students to know and be able to do from their general education experience? What FIVE competencies would you want to assess? -How would you combine the education of undergraduate students with the economic development opportunities and engage students in out-ofclassroom experiences? -Could student engagement activities become a part of your departmental or general education curriculum? How could this help to offset other instructional costs?

Clemson University Libraries plays a major role in the University's Clemson Connect (also known as LIB 100) extended orientation program that is required for all entering Freshmen. Our part consists of a face-to-face workshop for each student. The Library workshop outcomes are:

**Outcome 1** (Library Resources): Student will be able to access Library resources and services in order to find resources for college level research.

**Outcome 2** (Going Beyond Google): Student will be able to use Library resources in order to supplement the information that they find on the web.

**Outcome 3** (Critical Analysis of Materials): Student will be able to assess articles based on learned criteria in order to determine which resources will provide more scholarly information

Each outcome will be assessed with questions in a post-test provided at the conclusion of the workshop. Answers to these questions will be graded on a rubric to determine the effectiveness of the instruction provided by demonstrating students' ability to meet the outcomes on a basic, developing, or proficient level.

In the area of student engagement, Cooper Library serves as a busy hub of activity. Some activities would be expected of a Library but others are special and promote out-of-classroom engagement. The additional of a Learning Commons in Cooper Library provides an excellent opportunity to collaborate with other departments to bring a variety of services and experiences to students. Engagement activities currently offered could be incorporated into the curriculum offered by academic departments throughout the University.

#### **Engagement Activities\***

Mid-week Music\* Cookie Break \* Banned Book Reading Book Sale\* New Freshman Orientation\* Week of Welcome Table\* Exhibits in Cooper Library and Strom Thurmond Institute\* Angel Tree\* Site for International Awareness Festival activities (Sand Mandala construction, Photo Contest) CAPS/Cooper Stress buster\* Service Learning/IE Student Projects/Students for Environmental Awareness campus historical events Clemson Life Program Literary Festival (site for CU authors display, etc.) Solid Green Docutalks Series Senior Portrait site/TAPS Summer Reading book-signings\* Asian Pacific American Heritage Month Display Poetry Club meeting Eportfolio classes SAE Display (race car, dune buggy) Donation Boxes for charities and organizations\* Banner site for organization notices Outdoor activities (FCA semester dance, Relay for Life, Race to the Rock)\* Bridge Space Reservations \* H1N1 and Flu Vaccine Clinics Teaching American History\*

\*indicates regular/annual engagement activities.

A 2009 student engagement survey asked the question, "Where do you hang out on campus?" While the number one answer was dining halls (and there are several), the number two answer was Cooper Library. With a visitor count over 1.1 million annually, the Library is an important place for students to meet, collaborate, study, and learn has increased.

Changes in graduate education and research -How could you capitalize on Clemson's many economic development initiatives to further enhance graduate experiences? -How could you reduce MA/MS program costs and reallocate funding to your college's high-priority PhD programs while still addressing critical teaching and research needs? [not applicable] -How could F&A returns to your department/college be put to better use? -What changes need to be made in policies and procedures to increase scholarly productivity, federal/external funding, public/private partnerships, and technology transfer?

The University Libraries could provide fee based information services to business and industry. Georgia Tech has an established service that could be modeled for cost recovery when implementing such a program.

National Institutes of Health (NIH) Federal regulations require the University to submit reports from federally funded research into Pubmed. Responsibility for seeing that this occurs has been the effort of the Library with the assistance of the Office of Sponsored Research. This requirement sets a precedent for other federally funded research and serves as a cornerstone for the University's establishment of an Institutional Repository. The development of an Institutional Repository is a high priority of the Library.

The Library supports department programs and research by providing instructional support, subject librarians for research consultation, information resources made available online and in print, interlibrary loan, and support tools like Refworks. For graduate students, Library research boot camp has been held. Through Academic Program Review faculty assess the sufficiency of library resources for programs and research.

In a similar vein, Gunnin Architecture Library plays a vital role in the education of art and architecture students and faculty. A component of accreditation reviews, the Gunnin resources are evaluated regularly.

### Changes in workload -What changes could be made in workload expectations to improve the efficiency and effectiveness of your department? -How would you need to adjust teaching, research, and service expectations and performance criteria to more effectively: deliver undergraduate and graduate curricula, increase external funding, fulfill our land grant mission? -How would these adjustments be reflected in your tenure and promotion guidelines?

As of July 2010, the Library is operating with a 20% reduction in staff. Effectiveness in the Library is a matter of retooling and growing existing staff to meet the changing nature of libraries and the 21<sup>st</sup> century as well as hiring new faculty and staff with new skills when possible. This requires more technical expertise, a willingness to embed Library support throughout the University Community rather than expect people to come to us. It also requires libraries to provide multiple points of access to resources and services in a multitude of formats.

Alternative Library service delivery for distance education at the off-campus Research and Education Centers (RECs) needs to be accomplished by increased technology. The Library plans to establish polycom capabilities in the next year to reach Clemson students anywhere. Through alternative electronic delivery of information, the Library continues to provide support for the University's PSA mission.

None of the aforementioned needs or plans have an impact on tenure and promotion for the libraries.

Changes in operations -Are there specific university or state policies and procedures that cause your department to be less efficient and effective? -What are some specific ideas and opportunities for your department/college to generate income in order to offset state funding cuts?

The University's Office of Sponsored Programs hinders the efficient implementation of funded projects and imposes hurdles upon the preparation of proposals. It lacks an appreciation for efforts to get small grants which are more common for libraries/humanities proposals. These grants frequently do not fund indirect costs and require cost sharing.

Libraries find themselves in the difficult position of being less attractive to potential donors, and do not have their own alumni base as do the Colleges. Libraries are viewed as part of the basic institutional cost of doing business, for many donors. It is often as difficult to find someone willing to donate funds to the Library's basic resources as it would be to find a donor to give money for new plumbing in a facility. Basic funding needs for Library resources are great, requiring large endowments to augment E&G funds of \$5.6 million and growing annually by 10%. In addition, external funds as grants for basic resources are virtually non-existent since the needs are common to most academic libraries.

> Changes in hiring and enrollment strategies -Attrition often provides opportunities to shift resources. Considering your plans for program, curriculum, and workload changes, how will you refocus personnel resources over the next five years? How will this augment Clemson's emphasis areas? -Considering your plans, and in order to improve quality, what would be the appropriate level of student enrollment for your department over the next five years?

The focus on future hiring will be to grow digital initiatives and the University's Institutional Repository rather than filling 20<sup>th</sup> Century (traditional) positions. As positions are vacated, analyses will be conducted to determine the most appropriate position to fill based on priorities in the areas aforementioned. These positions will require more technical expertise. Current positions will continue to be transformed as described in the 21<sup>st</sup> Century Library report cited earlier.

In addition, the Library will be responding to the changing needs of students and faculty in their curricular and research needs.

Are there functions and services in your area that could be **outsourced** to allow you to focus more resources on supporting university priorities?

The Library has outsourced the processing of collections, some digital scanning, and some of its IT needs through CCIT. By so doing, the use of personnel has been maximized and duties changed to accommodate the demands of increased technical expertise.