

# **University of Colorado**

**VISION** | *Integrated*  
**2010** | *Infrastructure*

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## **TABLE OF CONTENTS**

Vision 2010	3
Charge for Integrated Infrastructure Initiative	3
Process Used by Integrated Infrastructure Initiative	3
Concepts for Consideration Summary Chart	5
Concepts for Consideration Further Detailed Discussions	7
Next Steps	11
Appendix – Supporting Committees Membership	12

# UNIVERSITY OF COLORADO

## Vision 2010

### Integrated Infrastructure

#### **Vision 2010**

Vision 2010 is a bold, system-wide agenda intended to map the future of the University of Colorado (CU) for the next decade. Vision 2010 consists of five action areas:

- A University Without Walls
- A Culture of Excellence
- Increasing Resources and Using Them Wisely
- Diversity
- An Integrated Infrastructure

#### **Charge for Integrated Infrastructure Initiative**

The University of Colorado strives to be among the finest universities in the world. To achieve this goal, the University must define and develop an appropriately integrated infrastructure that is both effective and efficient in delivering administrative processes to support its missions. To this end, we must continually re-examine existing structures and processes to find better ways of conducting University business.

#### **Process Used by Integrated Infrastructure Initiative**

Several university-wide administrative committees existed prior to the initiation of Vision 2010 initiative. Given that these groups were knowledgeable about many of the issues and clearly understood the importance of the Vision 2010 initiative, it was decided that redirecting some of their focus towards Integrated Infrastructure would be an effective and efficient means of developing strong Integrated Infrastructure concepts in an efficient manner. The concepts, which were developed by the various groups, were then discussed across each of the other groups for refinement and support. Following that process, the concepts were then shared with the broader community for review and comment.

The key leadership group used as a part of this process was the System Administrative Support Steering Committee (SASSC). The charge of SASSC is:

- To develop consensus about annual strategic goals and operational direction and priorities of system-wide administrative support systems and associated service units.
- To get periodic updates on the strategic and operational direction of systems and associated service units.
- To be involved in major initiatives from system owners and associated service units.
- To explore the appropriate timing of any major initiatives.

The following is an additional list of groups, which were utilized in the development and refinement of the Integrated Infrastructure concepts:

- Vice Chancellors of Administration Group
- Human Resource Operations Advisory Group
- Student Information System Governance Group
- Campus/System Information Technology Directors

Membership lists of the groups listed above are located in the Appendix of this report.

As a part of the process, “Town Meetings” were held on each of the campuses. Each of the Town Meetings comprised the following activities:

1. President Hoffman addressed the entire group at each campus and explained what Vision 2010 entailed. Subsequently, the respective Chancellor also demonstrated how the campus was striving towards Vision 2010.
2. After the keynote presentation by President Hoffman and the Chancellor, breakout sessions were conducted at all campuses except for Colorado Springs, where a larger group discussion was conducted.
3. The members of each breakout group were given a list of the existing initiatives. Verbal explanations were included for each concept considered.
4. Input was then solicited from each member within the breakout sessions about both the ideas already generated and new concepts, which should be considered.
5. Ideas were then presented to the whole group. Any idea agreed upon by the group as having merit was incorporated into this final document.

Finally, many other important multi-campus groups were integral to the development of the final document, including:

- Faculty Assemblies and Councils
- Staff Councils
- Faculty Budget Committee
- Campus Vision 2010 Committees
- Other University-wide Vision 2010 Committees

As an outcome of these processes several concepts have been identified for consideration. Additionally, preliminary estimates of appropriate timeframes have been established. The following chart provides brief descriptions of the concepts. Following the chart is a more complete description of the concepts. Finally, following the more comprehensive narrative of the concepts being considered is a description of the anticipated next steps relative to the Vision 2010 – Integrated Infrastructure initiative.

## Concepts for Consideration Summary Chart With Preliminary Estimate of Timeframes

Concepts	Short-term (CY 2003)	Mid-term (CY 2004-2006)	Long-term (CY 2006-2010)
<b>Course Related Goals</b>			
<ul style="list-style-type: none"> <li>Evaluate the implementation of University-wide electronic learning software, related tools and guidelines</li> </ul>	X	X	X
<ul style="list-style-type: none"> <li>Implement University-wide degree-audit capabilities within the Student Information System to improve advising, automated graduation checkout, and cross-campus enrollments</li> </ul>	X	X	X
<b>Directory Related Goals</b>			
<ul style="list-style-type: none"> <li>Complete the implementation of a University-wide electronic directory</li> </ul>	X	X	
<ul style="list-style-type: none"> <li>Develop an easy-to-use, University-wide e-mail directory for faculty and staff on all campuses</li> </ul>	X	X	
<ul style="list-style-type: none"> <li>Reduce the number of distinct logon/passwords for faculty and staff accessing various University systems</li> </ul>		X	X
<ul style="list-style-type: none"> <li>Reduce the printing of directories and catalogs thus saving printing and mailing costs</li> </ul>		X	X
<b>Support for Research Related Goals</b>			
<ul style="list-style-type: none"> <li>Evaluate alternatives to the current administrative research systems supporting University grant processing (both pre- and post-award perspectives)</li> </ul>		X	
<ul style="list-style-type: none"> <li>Enhance the University's capabilities to make identification of our human capital and expertise more efficient and effective</li> </ul>		X	
<ul style="list-style-type: none"> <li>Define and develop a University-wide graduate-faculty status system</li> </ul>			X
<ul style="list-style-type: none"> <li>Deploy Next Generation Networking to advance research faculty networking needs</li> </ul>	X	X	X
<ul style="list-style-type: none"> <li>Investigate, acquire and deploy software tools to enhance collaboration for research teams working in different locations</li> </ul>		X	X

<b>Concepts</b>	<b>Short-term (CY 2003)</b>	<b>Mid-term (CY 2004-2006)</b>	<b>Long-term (CY 2006-2010)</b>
<b>Other Administrative Related Goals</b>			
<ul style="list-style-type: none"> <li>Implement a comprehensive document management system that provides full lifecycle services for selective administrative processes</li> </ul>	X	X	X
<ul style="list-style-type: none"> <li>Implement a University-wide database that tracks information on foreign students and scholars for the purpose of reporting to federal agencies</li> </ul>	X		
<ul style="list-style-type: none"> <li>Define a University-wide web-page template identifying integrated online service delivery via the worldwide web focusing on administrative support systems (portal concepts)</li> </ul>		X	

## **Concepts for Consideration Further Detailed Discussions**

### **Course Related Goals**

- The University of Colorado should evaluate the implementation of University-wide electronic learning software, related tools and guidelines.
  - To date, the University and each of its campuses have utilized several different course management systems such as Web CT, E-College, Blackboard, etc. Additionally, as the Electronic Learning Systems (ELS) market continues to mature certain “open source” offerings, such as OKI, are continuing to be ever more attractive solutions. The System Office should coordinate and facilitate an evaluation of these alternatives to meet the vision and goals for the University’s electronic learning initiative. Our long-term objective should be a single ELS used by all campuses that enhances teaching and learning in a cost effective and efficient manner.
  - As part of the evaluation and planning activity, the evaluation teams should identify other key tools and products that will provide a robust and comprehensive system for developing and delivering web-based courses and course materials. These include products or systems for assessment, testing, program review and improvement. The teams should make recommendations as to whether these products can and should be standardized.
  - As usage of the ELS increases, it becomes a more critical piece of the University’s infrastructure, requiring very high degrees of reliability, availability, and security. As part of the evaluation efforts, reviewers should consider whether and when the University should move towards a single implementation of the ELS for all campuses.
  - The ELS needs to have close integration with the University’s Student Information System.
- CU should implement University-wide use of the degree-audit capabilities within the Student Information System (SIS) to improve advising, automated graduation checkout, and cross-campus enrollments.
  - The University should complete the implementation of degree audit for all its colleges, schools, and programs. This will greatly assist advisors and students who are making decisions about the student’s career at the University. The degree audit system will eliminate much of the tedious, manual effort currently required of academic advisors.

- Related to this activity, the University should complete articulation agreements among the campuses for core requirements. Eventually, articulation agreements for all undergraduate programs should be considered. Complete and well-maintained articulation agreements, along with the implementation of degree audit, will greatly help advising of transfer students. Further, articulation agreements along with full degree-audit system will help students cross-enroll for courses among the campuses. Courses taken, regardless of campus location will be integrated into the degree audit and educational plans for students.

### **Directory Related Goals**

- The University of Colorado should complete implementation of a University-wide electronic directory making it easy to locate people, manage system security (authentication and authorization), and provide a key service for facilitating the integration of other systems across the University.
  - Adapt the University of Colorado at Boulder (UCB) model for directory services for the system and other campuses, building on both the technical and policy-related work already done at UCB.
  - As an outcome of the University-wide directory, develop and deploy a single easy-to-use, university-wide e-mail directory for faculty and staff.
- The number of distinct logon/passwords for faculty and staff accessing the various University systems should be reduced moving toward a common, single sign-on for all web-based systems. Implementing this will require a robust, complete University-wide directory.
- The University should reduce its printing of directories and catalogs in order to save printing and mailing costs as access, to the above-mentioned directory will greatly reduce the need for printed copies. Additionally, it is envisioned that being able to easily and quickly get information to faculty and staff electronically will further reduce the need for other printed materials which, in turn, reduces even more printing and mailing costs.

## **Support for Research Related Goals**

- The University of Colorado should evaluate alternatives to its current systems supporting University grant and contract processing. Currently, the University has one central system for post-award grant processes with various shadow systems providing additional support. For pre-award processes the University has several systems, some centralized at a campus level and others maintained at the college or school level. Most of the systems appear to be somewhat outdated. The University should move towards a consolidated system for both pre-award processing and post-award processing. In addition to being able to provide a university-wide view, it is envisioned that such a system will reduce the effort required in developing and tracking proposals and in managing the post-award accounting, tracking, and reporting processes.
- CU should enhance the University's capabilities to make identification of its human capital and expertise more efficient and effective. An easily accessible electronic directory of University employees that partners with other systems such as the University's HR system, containing demographic and employee history data, will significantly enhance CU's grant writing/awarding ability. The combined systems will form a registry that will enable the rapid pairing of subject matter experts with relevant grant/work opportunities.
- The University should develop a University-wide graduate-faculty-status system. The first programmatic focus for an HR registry should be a system to aid with tracking graduate faculty expertise among the campuses. Such a registry could be used for research proposal writing, selecting members of dissertation committees, providing expertise to Colorado citizens and businesses, and for many other applications. It is anticipated that the registry will include resumes, lists of qualifications, and lists of interests. Faculty at all CU campuses will greatly benefit from the ability to update and store professional activity and other information for partnering with colleges and other campuses.
- The University needs to deploy Next Generation Networking to support research work. Next Generation Networking is a type of technology that provides very high-speed networking at reasonable costs. Acquiring this type of infrastructure greatly facilitates research and collaboration with research teams around the country as well as among and across the CU campuses. Deployment is feasible within the next 12 to 18 months to connect University of Colorado campuses to one another. Long-term, it is envisioned that this network will connect to a national infrastructure, which is being developed by research universities and other major research centers, such as National Center for Atmospheric Research (NCAR).
- The University of Colorado should investigate, acquire and deploy software tools to enhance collaboration for research teams working at different locations. The technology for supporting collaborative work is rapidly maturing and becoming

more useful in more ways. This initiative will focus on ways to enhance collaborative research across-campus and with researchers at other public- and private-sector entities. The initiative will include the following: audio and video conferencing systems, information organization and retrieval (sometimes called knowledge management), messaging services including email and real-time interaction, and tools that support groups in their creative and project management endeavors.

### **Other Administrative Related Goals**

- The University should implement a comprehensive document management system that provides full lifecycle services for selective administrative processes. While the University has made progress on reducing paperwork and forms, paperwork and the associated work processes continues to be a major impediment towards efficient administrative processes. This initiative has a several components:
  - Explore ways to consolidate document processing and imaging among the student service offices of the campuses. The Financial Aid offices will serve as a pilot for this initiative. Rather than re-invent the wheel and have each campus develop its own scanning system, it makes sense for all campuses to use the system in place on the Boulder campus. Over the last 10 years, the Financial Aid office on the Boulder campus has developed a comprehensive and sophisticated system for managing paperwork and processes in its office. The system includes scanning, fax in-take, workflow management, and sophisticated automatic interfaces with the University's Student Information System (SIS). The Boulder campus Financial Aid office will act as a back-office service center for the other campuses in processing in-coming documents from students and parents related to financial aid.
  - Work with the Denver campus (UCD) to implement a system for other student service areas in collaboration with the Colorado Springs (UCCS) and the Health Science Center (UCHSC). The Denver campus has made a new document management and workflow system a priority for the campus, especially in the student services area. The other two campuses (UCCS and UCHSC) have expressed interest in participating. The implementation will include scanning, fax in-take, workflow management, and integration with SIS. UCD might be able to provide certain back-office services for the other campuses, similar to the pilot for financial aid. The System Office will provide support and help coordinate these efforts.
- The University must implement a University-wide database system that tracks information on foreign students and scholars for reporting to federal agencies. Federal law requires the creation of a system that complies with the new INS reporting requirements for foreign students and visiting scholars. This system will support all International Education offices at all of the campuses, using a

single, common system. The project is currently in progress with an anticipated go-live date in early 2003.

- The University of Colorado should define a University-wide web-page template identifying common links and navigation tools and focusing on administrative services.
  - In the student services area, this initiative will build on the existing self-service web functions by enhancing existing services and adding new ones. In addition, the Boulder campus has made a new, web-based student portal a priority project for the campus. The project will provide a much richer and more integrated set of on-line services and information for students. The other campuses have expressed interest in this initiative. The System Office will explore ways to coordinate and share information about the project with the other campuses.
  - For employees, the University will implement new self-service functions for common HR administrative tasks. Using the student portal project on the Boulder campus as a basis, the benefits and system for providing comparable services for employees must be evaluated.

## **Next Steps**

The excitement generated by the Vision 2010 initiative has been significant. The following is envisioned to be the appropriate “Next Steps” in moving the identified Integrated Infrastructure initiatives forward:

1. Continue to meet and discuss the identified issues and proposed solutions with the University community to garner further acceptance to the concepts;
2. Create detailed action plans;
3. Update preliminary estimated timeframes based on the discovery of new information;
4. Validate action plans and timeframes supported by affected constituencies;
5. Secure funding, if appropriate given other resource constraints; and
6. Commitment to functionality and delivery timeframes.

## **Appendix – Supporting Committees Membership**

### **System Administrative Support Steering Committee (SASSC)**

Philip DiStefano, Provost and Executive Vice Chancellor for Academic Affairs (UCB)  
Ric Porreca, Senior Vice Chancellor & Chief Financial Officer (UCB)  
Paul Tabolt, Vice Chancellor for Administration (UCB)  
Randy Kouba, Interim Vice Chancellor for Administration and Finance (UCCS)  
G. Thomas Bellamy, Interim Vice Chancellor for Academic Affairs (UCCS)  
Jim Henderson, Vice Chancellor for Student Success (UCCS)  
Dana Gibson, Vice Chancellor for Administration and Finance (UCD)  
Midge Cozzens, Vice Chancellor for Academic and Student Affairs (UCD)  
Danny Martinez, Assistant Vice Chancellor Enrollment and Student Affairs (UCD)  
Marguerite Childs, Associate Vice Chancellor for Academic Affairs (UCHSC)  
Teresa Berryman, Vice Chancellor for Administration and Finance (UCHSC)  
Jim Topping, Interim Vice President for Budget and Finance (System)  
Mike Martin, Associate Vice President for Technology and Learning Innovations (System)  
Jack Burns, Vice President for Academic Affairs (System)  
Rodney Muth, Faculty Council Representative (UCD)  
Steve McNally, Associate Vice President for System Operations (System)

### **Vice Chancellors of Budget, Finance and Administration**

Ric Porreca, Senior Vice Chancellor & Chief Financial Officer (UCB)  
Paul Tabolt, Vice Chancellor for Administration (UCB)  
Randy Kouba, Interim Vice Chancellor for Administration and Finance (UCCS)  
Dana Gibson, Vice Chancellor for Administration and Finance (UCD)  
Teresa Berryman, Vice Chancellor for Administration and Finance (UCHSC)  
Jim Topping, Interim Vice President for Budget and Finance (System)

### **Faculty Budget Committee**

Richard Blade (Chair, UCCS)  
Diana Cook (UCCS Staff Council)  
Larry Cunningham (UCD)  
Michael Donnelly (Student Council)  
Larry Drees (UCB Staff Council)  
Kathy Fraughnaugh (UCD)  
Adelina Gomez (UCCS)  
Nancy Hester (UCHSC)  
Don Klingner (UCCS)  
Marilyn Manco-Johnson (UCHSC)

David Monarchi (UCB)  
Dennis Murray (UCD)  
Laurie Shroyer (UCHSC)  
Stein Sture (UCB)

### Human Resource Operations Advisory Group

Gwen Eberhard, Student Employment (UCB)  
Zan Johns, Director, Personnel (UCB)  
Karla Wrapp, Faculty Affairs (UCB)  
Vickie Hilty, Director, Personnel (UCCS)  
Mark Hoffman, Student Employment (UCCS)  
Chris Smith, Faculty Affairs (UCD)  
Vacant, Director, Personnel (UCD)  
Betsy Rodriguez, Director, Personnel (UCHSC)  
Cheryl Welch, Faculty Affairs, School of Medicine (UCHSC)  
Mark Stanker, Director, Payroll & Benefit Services (System)  
Paul Perales, Human Resources (System)  
Steve Honda, end user (UCD)  
Leslee Carpenter, end user (UCB)  
Kaye Orten, Change Management Service (System)  
Steve McNally, System Operations (System)

### SIS Governance Committee

Kris McCandless, Bursar (UCB)  
Barbara Schneider, Executive Director, Enrollment Services (UCB)  
Steve Chambers, IR (UCCS)  
Lee Ingalls Noble, Financial Aid (UCCS)  
Steve Ekerholm, Director of Enrollment Management (UCCS)  
Rod Anderson, Assistant Vice Chancellor (UCD)  
Ellie Miller, Financial Aid (UCD)  
Denise Sokol, IR (UCD)  
Jim Freas, Bursar (UCHSC)  
Jane Nakata, Financial Aid (UCHSC)  
Lynn Mason, CSA Student Admissions & Records (UCHSC)  
Terry Vaughn, UMS (System)  
Dave Makowski, UMS (System)  
Michel Dahlin, Academic Affairs (System)  
Mike Martin, Academic Affairs (System)  
Mollie McGill, Academic Affairs (System)  
Kaye Orten, Change Management Services (System)  
Steve McNally, System Operations (System)

## Campus/System Information Technology Directors

Dennis Maloney (UCB)  
Jerry Wilson (UCCS)  
Frank Edlin (UCD)  
Bill Freud (UCHSC)  
Dave Makowski (System)