



State of Washington

2016 NASCIO Award Nomination

Project Title	iCAT
Nomination Category	Emerging and Innovative Technologies
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Agency	Central Washington University
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Project Initiation	December 2012
Project Completion	April 2015

I. EXECUTIVE SUMMARY

The Great Recession placed all state agencies and services under tremendous financial pressure. Central Washington University (CWU) responded to the crisis by reducing staff and cutting services. But the university also responded with innovation. Old paper systems and departmentalized data collection were inadequate, inaccurate, and unresponsive. Change required learning more about the university than ever before to inform difficult decisions.

In 2012, the CWU Board of Trustees approved an aggressive overhaul of information and data systems—most of which resided on paper, as it had since the university’s founding in 1891. The initiative was called “improving Central’s Applications and Technology” (iCAT). The scope was ambitious: **to implement or upgrade these 12 major systems in fewer than three years.**

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|-------------------------------|---------------------------------|
| 1. Faculty 180 | 7. MyCWU Portal |
| 2. E-Travel | 8. HR Systems |
| 3. E-Purchase Requisitions | 9. Finance Systems |
| 4. E-Personnel Actions | 10. E-Time and Attendance |
| 5. Digital Security Re-Design | 11. Chart of Accounts |
| 6. Data Warehouse | 12. Planning and Budget Systems |

The teams delivered the project under budget and on time, and, in the process, retired dozens of servers, saved tens of thousands of staff hours, and eliminated more than 41,000 signatures. iCAT reduced the purchasing cycle by 80 percent and eliminated more than 100,000 pieces of paper annually. The new systems help the university direct money, assign space, and deploy people where needed most.

iCAT also made the university a state leader in the use of technology to support LEAN management practices called for in [Executive Order 13-04](#), which created “Results Washington.” iCAT supports Gov. Inslee’s innovative and data-driven enterprise performance management initiative, enhancing the stewardship of scarce resources and improving the speed and accuracy with which CWU serves Washington citizens. iCAT supports the goals of the [Washington State Chief Information Officer](#) to personalize and optimize government. And the project supports the core elements of [CWU’s strategic plan](#), especially resource development and stewardship.

Originally envisioned to reduce paper and create more precise and consistent data, iCAT accomplished that and more. The project launched a culture of best practices and continuous improvement, radically transformed change management, and dramatically altered technology and information infrastructure, including the way the university plans for, uses, and evaluates these tools. The project created a remarkable new level of transparency and information access for employees, clients, and the community.

II. CONCEPT

In 2012, the university launched an [independent best-practices assessment](#) of its technology systems and concluded that many years of inaction and inattention had resulted in decentralized applications and disconnected business processes. Standards for technology governance, replacement, utilization, and assessment had not been articulated. Digital applications for business processes existed as ad-hoc solutions and rarely as enterprise priorities, integrated with and complementary to other systems. Projects and upgrades were implemented one at a time, both a time-consuming and costly approach. The university was in constant upgrade mode, barely able to support day-to-day operations; staff time focused on reactive tasks (troubleshooting, remediation) rather than innovation.

Based on these findings, the CWU Board of Trustees made a bold decision: invest in a giant step forward in efficiency and modernization by completing 12 digital business information projects in less than three years. With the assistance of consulting partner Sierra-Cedar, the university constructed project teams, each with an executive sponsor, project managers, and cross-functional experts with membership from all pertinent departments. Each project included user input and testing. Sierra-Cedar helped implement new systems and provided best-practice [Project Management Body of Knowledge](#) (PMBOK) methodology in order to meet aggressive timelines.

The iCAT project launched in December of 2012 and concluded 28 months later in April 2015. Upgrades lab costs, licensing fees, change orders, and consulting services accounted for the bulk of the \$4.2 million budget. The project eliminated an estimated 23,000 hours of administrative tasks through workflow improvement and automation. These hours are now shifted to higher-value work improving services to our students, faculty, and staff. ROI estimates using these hours forecast a break-even period of fewer than six years. Additional cost savings associated with ease of use (simplified navigation and sign-on) were a significant factor in the iCAT project outcomes as they affect the efficiency and job satisfaction of all users.

Regular project assessment considered whether each initiative was on schedule—at green-, yellow-, or red-light status. When a project earned a “yellow light,” suggesting it was falling behind schedule or off track, the team met to analyze what was causing the delay and to identify strategies and resources needed to regain appropriate status in the work plan.

The project required no state oversight, however, CWU adopted [Information Technology Infrastructure Library](#) (ITIL) framework and adhered to Washington state best practices by forming a mature governance framework, which included change advisory boards and security audits. We also introduced change-management processes to help users adapt to the rapid system change and technology deployment. We engaged them through training, testing, and feedback—and celebrations upon completion of key projects. We recognized the staff with primary responsibility for the project work before the Board of Trustees and in division-wide meetings.

The iCAT project was the first campus-wide initiative to include a **strategic communication program**. Information Services and Public Affairs staff brainstormed a project brand—name, look and feel—that carried throughout all communications. These included a [website](#) containing all project plans, project methodology, calendars, etc. In addition to media materials, web, and print content, Public Affairs created a variety of collateral promotional materials: e.g. coffee drink sleeves for all campus dining facilities, banners, sun-screen tubes (during the summer), water bottles, etc., all branded with the iCAT messaging and imagery. Events were part of the communication and change management program, including individual recognition; lunches for business units, project teams, and focus groups; and large project celebrations, such as a barbecue where hundreds of staff celebrated the completion of the MyCWU portal.

III. SIGNIFICANCE

iCAT is innovative in its scope, speed, and success. No other Washington university has attempted to digitize and standardize processes to this degree. The scope of the project affected every university employee, student, and client. Connecting and integrating systems so fully is unique in state government and in particular, higher education. An unintended benefit of iCAT has been to create greater collaboration among employees across departments, and to establish a new, enterprise way of thinking. The successful implementation of iCAT has created an agile and transparent culture that serves as a model to other higher education organizations.

Each successive system implementation or upgrade delivered significant value:

Faculty Workload and Activity Project (“Faculty 180”). Faculty submits workload and plans online, which are then reviewed and approved online by academic administrators. Allows for the electronic submission of professional records upon which faculty are evaluated for tenure, reappointment, promotion, and post-tenure review. Typically this labor-intensive process involves collecting tens or hundreds of physical copies of work artifacts and placing them into two or three binders—sometimes even boxes. Each set of records has to be copied so that it can move through the five levels of review: Department Personnel Committee, Chair, College Personnel Committee, Dean, and the Provost. This project eliminates much of the paper process and provides for one electronic record that can be viewed simultaneously from anywhere. *Jan. 2013 - March 2013*

E-Travel within PeopleSoft’s Financial System enables employees to request travel vouchers and fill out expense reports themselves online. Electronic approvals eliminate paper and hardcopy signatures. Reimbursements are paid via direct deposit. *Oct.-April 2013*

E-Purchase Requisitions in PeopleSoft’s Financial System automates procurement. Requests are routed via workflow; approvals are electronic, eliminating paper and hardcopy signatures. Purchases are completed in CWU’s system of record, and are audited and reportable. *April-June 2013*

E-Personnel Actions within PeopleSoft allows employees to review all aspects of their benefits package. Administrators manage hiring, terminations, position changes, and

training online, eliminating paper and hardcopy signatures. All transactions are completed in the university's system of record, and are audited and reportable. *April-June 2013*

Digital Security Re-Design and Internal Auditing Framework implemented role-based security and introduced an internal auditing framework to add transparency and accountability to system access and security. Automation, increased efficiency in on-boarding and off-boarding of employees, reduction in roles for simplicity and future security management. *March-August 2013*

Data Warehouse created a central repository for all official and ad hoc reports. It provides quick access to reliable data and is non-transactional. Dashboards show data in modern reports with drillable analytics. *March-August 2013*

MyCWU portal provides a single conduit to employee operations, student learning, faculty engagement, and business processes. *Jan. 2013-Jan. 2014*

HR Upgrade to v9.2 of PeopleSoft's Human Capital Management keeps CWU in compliance with state and federal mandates, while creating efficiencies and improving performance. The HR system is fully integrated with PeopleSoft's financials, the student applications system, and MyCWU portal. *June 2013-Jan. 2014*

Finance Upgrade to the v9.2 of PeopleSoft's Financials makes CWU compliant with state and federal mandates, while creating efficiencies and improving performance. Fully integrates with PeopleSoft's human resource and student applications system through integration broker. *June 2013-Jan. 2014*

E-Time and Attendance automated all employee time and absence reporting through a self-service applet in the MyCWU portal, enhancing accuracy and efficiency by eliminating paper and manual data entry. *Feb. 2013-Feb. 2014*

Chart of Accounts Re-Design and Planning and Budgeting System forecasts and supports budgeting for state funding using detailed, account-level information. *Sept. 2014-April 2015*

IV. IMPACT

Before the implementation of iCAT, CWU lacked a consistent way to collect and analyze data. The university lacked the information necessary to budget time, people, and resources intelligently. Information management occurred on a department-by-department basis, reinforcing silos and creating disparate "realities" across the agency.

The immediate and ongoing impacts of iCAT have been to create a culture that encourages respect, creativity, and innovative problem solving for all state employees and students. Teams now are focused on continuous improvement and the elimination of wasteful processes. Reporting is aligned with state standards. Backlogs and data entry have been eliminated or dramatically reduced. iCAT provided a clear and simple project management model that reduces lead time and has improved the quality of applications and the consistency of reviews or audits. The university can now more effectively and transparently allocate staff to "mission-critical" work, resulting in improved morale.

As of April 2016, quantitative measures of the impact of iCAT include the following:

Faculty Workload and Activity Project (Faculty 180):

- Reduced evaluations cycle time from weeks to days
- 239 faculty members evaluated online
- More than 1,195 evaluations conducted in the system
- Eliminated thousands of pages of paper reports and other artifacts

E-Travel

- Eliminated 62,000 hand-written signatures
- Saved 24,000 pieces of paper
- Reduced processing time from several weeks to a few days

E-Purchase Requisitions:

- Eliminated 34,000 hand-written signatures
- Saved 8,600 pieces of paper
- Reduced processing time from days to hours

E-Personnel Actions:

- Eliminated more than 40,000 hand-written signatures
- Saved 20,252 pieces of paper
- Reduced processing time from weeks to days
- Saved 6,600 person-hours of staff time

Digital Security Re-Design and Internal Auditing Framework:

- Reduced security roles from 3,000 to 800
- Reduced security administration of Enterprise Resource Planning (ERP) by 60 percent

Data Warehouse:

- Reduced the time required to develop regulatory reporting (IPEDS, PCHEES, CDS, etc.) by more than 80 percent
- Increased employee and community information access from 10 to 100 inquiries per month

E- Time and Attendance:

- Eliminated 134 time-keepers (1,000 hours / pay cycle)
- Reduced payroll processing time by 14 hours per pay period
- Saved more than 100,000 pieces of paper
- Eliminated 38,000 hand-written signatures

Chart of Accounts Re-Design and Planning and Budgeting System:

- Streamlined planning via workflow and task lists

- Standard and ad-hoc reporting

iCAT supports these two primary [goals of the Washington State Chief Information Officer](#):

Personalize Government – iCAT enabled the university to respond faster and with higher quality to information requests from policymakers, contractors, the public, and students. It placed critical business information at the fingertips of students and employees.

Optimize Government - iCAT set a new standard for the review of information technology before it's purchased. Users bring business plans before a diverse group of staff and faculty to explain the use and compatibility of proposed purchases. The process avoids redundant expenditures and ensures integration across technology platforms.

iCAT reduced unnecessary spending on old paper systems—from filing and mailing/scanning to signature gathering—so that staff can focus on higher priorities. Digitizing old paper processes dramatically enhanced information security and consistency. Also, iCAT had the unanticipated effect of breaking down silos, bringing diverse stakeholders together around shared values, needs, and skills.

iCAT also supports Governor Jay Inslee's *Results Washington* program, especially [Goal 5: Efficient, effective & accountable government](#)

- **Customer satisfaction and employee engagement** – iCAT replaced an archaic “intranet” with a modern information portal with secure log-in. It allows students to check tuition balances and look at their class schedules; employees can report time and ask for leave; managers can approve invoices and various requests with the click of a mouse. The speed and ease of these systems, in turn, speeds agency response and services. iCAT has enhanced workplace culture by creating a new change-support process, including employee recognition, and by engaging faculty, staff, administrators, and students across traditional cultural boundaries. Thanks to iCAT, teams have replaced silos.
- **Resource stewardship** – By reducing unnecessary purchasing, reducing paper processing, and eliminating associated overhead, iCAT has improved cost efficiency and employee satisfaction.
- **Transparency and accountability** – Thanks to the iCAT data warehouse project, CWU has standardized data definitions, collection, and analysis. The result is faster, more precise responses to information needs at all levels of government. CWU is now developing dashboards that will make commonly requested data easily-accessible to the public.