Colorado Springs Utilities
Demographics

- Colorado Springs Utilities is a 4 service Municipal Utilities company at the foot of Pikes Peak in Colorado between Pueblo and Denver.

- Our 1800 employees supply comprehensive Natural Gas, Electricity, Water and Wastewater Services to a community of approximately 350,000 customer/owners.
Colorado Springs Utilities Training organization structure

- Workforce Planning and Development Manager
  - Technical Craft Development Supervisor
  - Business Skills Development Supervisor
  - Workforce Planning Supervisor
  - Instructional Design Supervisor
Technical Craft Training Unit

• This Unit Facilitates 12 apprenticeship programs all Safety and Environmental Training and on-going Journey Level Training such as Commercial Driver’s License, Industrial Equipment Qualification and Craft Specific ongoing refresher training.

• One Supervisor with 8 Senior Training Professional Employees oversee the School of Technical Field Operations, The School of Technical Plant Operations and the School of Safety and Environmental
Technical Craft Training Unit (cont.)

Department of Labor Certified Apprenticeship Programs with 68 Apprentices

- Line Technician (Power Linemen) 13 Apprentices
- Gas Pipefitter 9 Apprentices
- Water Pipefitter 10 Apprentices
- Power Plant Electrician 1 Apprentice
- Substation Electrician 4 Apprentices
- Instrumentation & Control Technician 1 Apprentice
- Water Collection Specialist (Wastewater Mechanic) 9 Apprentices
- Apparatus Electrician (Transformer Repairman) 1 Apprentice
- Power Plant System Operator 13 Apprentices
- Power Plant Mechanic 6 Apprentices
- Electric Secondary Serviceman No Apprentices
- Meter Specialist (Meter Mechanic) 1 Apprentice
Technical Craft Training Unit (cont.)

Journey Level Training Programs

- 53 Safety Courses such as, SCBA, Confines Space, CPR/AED, Shoring and Trenching, Fall Protection, LOTO, etc...
- 36 Environmental Courses such as Chlorine Emergency Response, Construction De-watering, etc...
- 20+ Industrial Equipment courses such as Backhoe, Bucket Truck, Vac-Truck, Front-end Loader, Overhead Crane, Mobile Crane, Rigging, etc...
- Craft Specific Courses such as Power Pole Climbing Certification, Power Plant Clearance Procedure, Natural Gas Fire Fighting Procedures,
- General Course Mandates such as National Incident Response System (NIMS) and National Energy Regulatory Commission Security Training (NERC Security)
• Technical Craft Development assists in matriculation agreements which outline partnerships between local Community College programs and marry them to apprenticeship programs. Current programs include, Certified Welding, Basic Water System, Water Sciences and Power Engineering.

• Future opportunities are Wind and Photovoltaic (Solar) Power Operation Generation and Instrumentation & Control.
Business Skills Unit

- This Unit facilitates, procures and instructs Leadership Development, Employee Relations, Computer System Technology, General Software, Customer Service and Professional Development learning opportunities.

- One Supervisor with 6 Senior Professional Trainers oversee the School of Organizational and Professional Development and the School of Customer Relations.
Instructional Design Unit

- Instructional Design unit Analyzes, Designs, Develops, Implements, and Evaluates training for Colorado Springs Utilities and is capable of producing virtually any form of training via multiple media platforms. Additionally, they are responsible for managing corporate Learning Management and Content Systems including vendor supplied on-line content.

- Staff of one Supervisor and 6 Instructional Designers
Utility Places High Priority on Maintaining Prepared Workforce

<table>
<thead>
<tr>
<th>Category</th>
<th>Units</th>
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<tbody>
<tr>
<td>Management of Workforce Planning and Development</td>
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<tr>
<td>Technical Craft Development</td>
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<td>Workforce Planning</td>
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<td>Instructional Design</td>
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<tr>
<td>Administrative Support</td>
<td>3</td>
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<tr>
<td><strong>Total Work Unit</strong></td>
<td><strong>32</strong></td>
</tr>
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</table>
Problems we needed to solve

- Duplication and inconsistency in training provided (e.g., forklift training)
- Sometimes developed training materials that then were not used
- Needed to separate training issues from employee performance and accountability issues
- Lacked business-like process for defining training needed and the appropriate process for providing the training (e.g., in-house or vendor-provided)
Centralized Training Approach

- One-Stop Shop
- Consolidated and true training cost Budget
- Centralized Instructional Design
- Cross Functional Trainers
University of Springs Utilities (USU) Model

- Sponsorship Council (Deans of each School and the Manager of Workforce Planning and Development)
  - Technical Field Operations Advisory Board
  - Technical Plant Operations Advisory Board
  - Safety and Environmental Advisory Board
  - Customer Relations Advisory Board
  - Organizational and Professional Development Advisory Board
Advisory Board Make up

- Dean of the School nominated by Board of Directors (e.g., General Manager of Water Services Division is Dean of Field Operations School)
- Dean Selects Committee members
- 8 to 10 Departmental Representatives from mid level leadership
- 1-2 University \ Training Representatives
Example of Advisory Board Leveraging Efficiency

- Prior to the University Model implementation, Colorado Springs Utilities offered 14 different Forklift courses which covered the topic from 1 hour to 2 days in course duration yet each trainee received the same credit for completing this important course. The centralized model allowed collaboration and right-sizing the course to a comprehensive 4 hour course with hands on proficiency testing by certified instructors.
Example of Advisory Board Collaboration

During a particular Technical Field Operations Advisory Board meeting, a request for McElroy Water Pipe Fusion training came up for approval specifically for the Water Field Operations Section. It turns out the Natural Gas Department uses the exact same piece of equipment and have been training on it for years. This opportunity allowed consolidation of the training effectively cutting in half our Operation and Maintenance Budget for this training event plus allowed some sharing of techniques between crafts. Overall we saved O&M money and gained efficiency on the job.
Training Request Model

1. Customer requests training via email, phone, verbally
2. USU schedules face-to-face meeting with customer and documents request with consistent form/questions.
3. CUSTOMER LINKS REQUEST TO STRATEGIC OBJECTIVES
4. Customer obtains manager approval
5. USU Develop/Brainstorm possible solutions
6. USU offers solutions to requestor and determines subject matter expert (SME).
7. USU and requesting customer present request to Advisory Board
8. USU designs and develops training solution
9. Progress is reported to Advisory Board for accountability
10. USU measures success (was goal achieved?)
**Simple Request Example:**

**What:**
What topic are you requesting training on?

What new skill and/or knowledge would you like your workers to have upon completion of training?

**Note 1:** If this is a software tool, please list the specific functions of the software that the training should include.

**Note 2:** If this is a request to revise existing training, briefly identify the scope of the revisions.
Circle the organizational strategies, goals, or objectives below that are supported by this training request.

**Strategy A:** Add sustainable value to our community by providing our customers and citizen-owners reliable electric, gas, water, wastewater, and utility-related products and services:

- **A1:** Provide essential infrastructure and resources
- **A2:** Effectively deliver the customer cycle-of-service
- **A3:** Maintain a visible community presence

**Strategy B:** Build and strengthen our financial position

- **B1:** Manage cost and income performance to ensure fair rates
- **B2:** Price all products and services to maximize value for all customers
- **B3:** Plan for and manage business risks

**Strategy C:** Create and maintain a positive, performance-oriented organization

- **C1:** Value people
- **C2:** Continuously improve processes
- **C3:** Leverage technology investments
If training is needed the determination is made of most cost-effective way to deliver:

- Vendor Instructor-led solution
- Content designed by Vendor for internal Instruction
- Instructor Led Content designed internally
- Computer Based Training purchased off-the-shelf
- Computer Based Training Designed internally
- Performance Support Tool Designed (Check List) with picture examples of steps by step process
- Video of subject matter expert performing task is offered.
Video Capture of Knowledge of Subject Matter Experts
In 2009 USU successfully piloted use of Animated Avatars. This technique minimizes video costs by reducing reshoots, edits, and the need for expensive video equipment. Avatars of real employees may be created and employees' actual voices may be used. Employees enjoy the change of pace and are entertained by actual employee animation.
NEW Ideas to be explored in 2010!

- Use of WIKI technology
- PDA training, e.g. Blackberry, and I-phone
- Further Exploration of Avatars (virtual or animated depiction of real employees)
- Virtual Classrooms (Remote trainers with students at computer stations)
- Virtual Reality Simulators
Useful Colorado Springs Utilities Documents

- Training Request Form
- Job Task Analysis
- Front End Analysis
- Instructor Guide
- Student Guide
- Performance Gap Analysis
- Training Needs Assessment
- Course Management Plan
- Evaluation of Training Materials
- Training Material Style Guide for Development
University of Springs
Utilities Awards

2005 ASTD BEST Award

Honorable Mention Best in Class
Instructional Design Department
DISC Award
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