

## NIGP 2012 Innovations Award Winner

**Agency Name** Multnomah County, Oregon

**Innovation Title** In-house Development of Computer based Learning Systems

**Innovation Summary** Multnomah County developed the capability and is delivering computer-based training in-house at a low cost. We researched and implemented off-the-shelf computer-based course development software and a freeware Learning Management System and were able to achieve a 69% savings over contracting the work out. The computer-based training allowed us the flexibility to deliver needed business training to a target audience of 120 Contract Administrators to fit their individual schedules.

**Name** Brian Smith

**Email** brian.r.smith@multco.us

**Title** Purchasing Manager

**Phone** (503) 988-5111 x24173

**Agency Address** 501 SE Hawthorne Blvd, Suite 400  
Portland, Oregon 97214

**Full Description** Multnomah County provides a wide array of services, from bridges and roads to human services. Our annual contract spend value exceeds \$300 million. We cover those needs for goods and service with approximately 120 people involved in either developing or administering these contracts in the departments and divisions plus a staff of 18 in Central Purchasing.

In surveying people in the procurement and contract development roles we found that of the 120 people many had limited exposure to the business aspects of procurement and contracting process. Given the relatively low understanding of contract business basics, we knew we had to bring the majority of the people to a common level of understanding to implement our new centralized procurement and contracting system. We had three primary objectives: 1) initially train people who were high volume users. In order to reach as many of the 120 people as possible we needed to have training that could be delivered in both traditional classroom as well as flexible computer-based learning. 2) Provide a training source

that low volume users could access as needed and others could use as a reference. 3) Train new people as the need arose.

We initially surveyed what other organizations were doing, and sent a representative to attend a 4-day training session provided by an outside firm at a municipal agency that was involved in undergoing large procurement process changes. We requested a budgetary quote for a semi-custom classroom/e-learning program from the outside firm.

When we received the quote for developing and training, we realized the option was unaffordable. In addition, the computer-based training would not be available as a reference base and to train new people we would have to pay license fees after the initial training period.

We also knew that without bringing all our users to a basic level of business procurement and contracts knowledge, we were unlikely to be successful in implementing new processes and a centralized ERP system.

After reviewing our options we decided to develop our own course material, both for traditional classroom as well as computer-based learning and reference.

Internally we have experience in developing and delivering classroom-based training, but as a County we had no experience in the computer-based course development process. We also had no system that could track the registration, manage hourly modules in what we believed to be a 24 to 36 hour course, record completion, and track employees' training. We found we also needed to implement and use a computer-based learning management system. The latter software is referred to as a Learning Management System (LMS).

To achieve all of our objectives we needed to 1) Develop a program that outlined the basic procurement and contract business requirements; 2) research and implement a LMS that could be used County wide at a low initial and on-going maintenance cost; 3) research and implement computer-based course development software that was simple enough for a non-specialist to use and yet provide a professional level output with low initial and on-going maintenance cost.

Working collaboratively with our Central Human Resources Training Department and other functional Departments we found similar emerging needs. Our LMS and computer-based

course development software solutions had to meet the needs of the County as we now understood it and be scalable as well as robust enough to meet expanding needs.

To start the course development, we created a five person team to outline the course and add content from other courses where we could and develop drafts of materials where none existed. Each team member had expertise in procurement and contracts, but some had experience in developing other material and delivering this to the users. Once the material reached a completed draft stage, we started offering the material to select individuals in all Departments to critique and finish the product. After several rounds of review, we developed a class that could be team-taught in seven hours time. We started the development in January of 2011 and delivered our first course six months later in June of 2011. All individuals working on this aspect of the project did so as a secondary responsibility. To date we have offered the classroom training four times to 62 attendees.

In parallel we worked on identifying and implementing the LMS and computer-based course development software.

The computer-based course development software was relatively easy to identify; we found Human Resources had people who had worked with computer-based course development area prior to joining the County. Their experience matched what our research was finding and we choose Adobe's Captivate product. We found this product to have a solid base of people who knew the product, was easy to learn, and outside expertise was easy to obtain if needed. We decided to bring in-house a limited duration position, with hopes that they could develop training for other County needs that were identified. The individual was committed full time to course development and training Central Purchasing staff on how to use the product. The individual spent approximately three months on these tasks. As part of that time she also developed standard templates and designs for the County to use and a considerable amount of time developing procedures and training for audio recording.

The end product was a 191 frame presentation with review questions after each of six sections as well as an end-of-course review. Based on incorrect answers the LMS automatically refers students back to the appropriate section that they missed, and keeps a summary of sections missed in the aggregate. Although the computer-based course was available in late June of 2011, we delayed its implementation until

September so that we could coordinate with the roll-out of the County LMS system at the same time.

The LMS was selected by a team of potential users with the Training Manager from Central Human Resources chairing the team and participation by IT. The selection was also done in parallel to both the classroom training and computer-based course development software implementation. They choose Moodle, a free open source web application, as our new LMS. With the LMS identified, IT began the implementation.

In feedback sessions from both the classroom and on-line training we have identified that user's uniquely favored one method or the other. Our initial thought was to offer the training all computer-based; we found some users would not have taken the course delivered in that manner. Conversely, we found that some users would have been very reluctant to attend a formal all-day class. The likelihood of achieving any acceptable number by offering only one method would have left us with less than desirable results. By offering both methods, we have over 70 completions with an additional 20 participants identified as starting the computer-based training, a remarkable 75% of targeted participants.

The computer-based training offers many advantages. First the class is designed so that it can be taken in small modules. The course can be stopped at any point and then re-entered where the last completed module was done. We give the student 60 days to complete the course, which provides great flexibility. The course can be taken a week per module or all at once or any combination. This alleviated the largest argument we heard from the Program Managers - there was no time to take a formal class, even if it was broken down into 4 hour blocks. Second, the computer-based course is built using side bar indexes. If you need to reference a particular subject, you simply click on the appropriate tab and the course starts there. Third, the course is delivered in relatively small Flash modules to the user's computer. This means there is no central access needed as each module is residing on the user's computer, including take-home lap-tops. We are able to send content to highly restricted and separate data networks used by our DA and Sheriff's Departments without creating a long term computer link. The individual can keep the modules they want locally for quick reference.

Our measurements of success are in three parts: 1) We needed to achieve at least 50 % participation from the target audience; 2) We needed to obtain at least a 70% success rate on the

material; and 3) We wanted to have an average feedback score of four or above (on a scale of five). The first objective may seem low; we have 120 target users, however approximately 50% of these are once-every-two-to-three, single contract users. Training someone who would not use the information potentially in the next three years was not a productive approach or likely to be successful if we required immediate training for all. In the second measurement, we decided we would not score either version of the course, however we do collect data anonymously for quality purposes to determine which parts of the material people are having difficulty with.

In all of our key metrics, we have surpassed our goals. 1) Our six month completion rate was 58% (70 of 120) and our start rate reflect an additional 17% potential (75% completion or 90 of 120 if all who start complete the course). 2) Our average score is better than 80%. 3) Our satisfaction score is averaging 4.5

**- Contributes to  
the Public  
Procurement  
Practice or  
Profession**

Prior to Purchasing taking on the role as a trainer, our surveys found that most people who plan or develop contracts in their operational roles learned how to do contracts by shadowing a more experienced person, often for a year or more. There are at least two problems with this approach: 1) the processes become decentralized - a Department procures needed services by using one approach, another Department does something slightly different, over time the variations grow farther apart. For a centralized Purchasing function as well as overall County control, it is difficult to see what is happening and a lot of training is done retroactively based on procurement problems. 2) As we face continued budget reductions, the individuals with the knowledge base grow closer to retirement and the loss of verbal history becomes more real. Additionally, we no longer have the luxury of people who are not focused 100% on their tasks. People today have little or no time to train; the ability to bring someone on before they are needed is rarely achieved and often it is after the incumbent has left. Documented training, whether in a class or via computer, provides a consistent product across the organization and continuity to the training

The ability to provide this training electronically enables it to reach people who may not have been obtainable via traditional means. It breaks through the barrier of "I don't have time to attend a class!" by providing near-self-management of when and how much of the material you take at a session while still

tracking progress and completion of the material. Procurement manages and distributes the data and updates as rules, laws, and experiences change. All of this is done with very minimal non-dedicated people. The ability to access updated material by using a side-bar reference tool [graphic attached] has made the material more accessible and answers some questions without the user having to call Purchasing.

**-Increases Procurement's Value to the Organization**

Our feedback critiques, both written and verbal, showed the training was well received and appreciated. Experienced people commented that they wished they had something like this when they started; newer people commented this was the first real training they received on the subject and were appreciative.

The training and resulting easy-to-use computer reference material also provides an opportunity for our users to change their perspective of Purchasing from an obstacle to someone who wants to help and they better understand the "why" of what we do as well as how their actions affect the County.

**- Demonstrates Procurement collaboration with Stakeholders to create innovative solutions**

Purchasing worked with the Central Human Resources Training Department as well as other Departments such as Health to come up with collaborative solutions to the LMS, computer-based course development software as well as standard templates and audio development. Purchasing developed the latter two organization-wide processes using resources paid for by Procurement. Procurement is recognized for its leadership role in computer-based training in the County

Using the same templates, processes and software first introduced in our course other Departments are developing their own computer-based courses.

**-Redefines the manner in which public procurement operates**

As the demand for faster execution of contracts with fewer resources to process those contracts grows, we've recognized that the role of Purchasing is changing. To be able to execute as fast as we can we need to push the process understanding as far as possible up the procurement chain. Previously Contract Administrators whose function may have relied heavily on their expertise in social work depended upon others to consider the business side of the contracts. We no longer have the people or time to afford that luxury - we have to have some consistent knowledge of contract business

systems at the start in the initial scope development and continue that understanding through the contract development and administration cycle.

The first step in moving this process upstream is imparting the knowledge of why, how, when, and where the contract life-cycle meets their functional need. To do that, Purchasing has to adapt to be a central training resource in addition to its more traditional roles.

Additionally, the workforce is changing. We have people at times working remotely and often working while in motion. The traditional classroom training is the right option for some; for others they need to be able to take it on the road and fit bits into the available time in their increasingly busy schedule.

The development of computer-based training combined with traditional classroom training has given us the ability to both develop training as well as delivering it in non-traditional methods, all at a relatively low cost, provides a path for other organizations to move forward.



### Upcoming Events

There are no upcoming events

[Go to calendar...](#)  
[New Event...](#)

Typical Multnomah County employees have fast-paced work lives: varied, flexible schedules, increased mobility, and a constant demand for up-to-date information on a vast array of professional topics.

In a rapidly changing and uncertain environment, Multnomah County supports a culture of continuous learning and thoughtful adaptation.

Multco Learns—your classroom in the cloud—provides one central place to access the information and learning you need. Anytime, anywhere. Learning doesn't just happen in the classroom anymore!

Whether you want to check out materials before you register for a class, learn on your own outside the formal classroom, or find materials that were handed out in a class you liked, Multco Learns has something for every learner preference!

This site is under construction. Multnomah County trainers from all departments are continuously adding new classes.

[Take a Site Tour.](#) [Learn Basic Navigation.](#)

### Course categories

- [Countywide Classes](#)
- [Department-specific Classes](#)
- [Leadership](#)

This is the top level menu page in our LMS - [multco learns](#). Our course is in [Countywide Classes](#)

Search courses:





"multco learns" is our in-house name for Moodle's Learning Management System (LMS)

This is the County standard template we developed as part of the course development

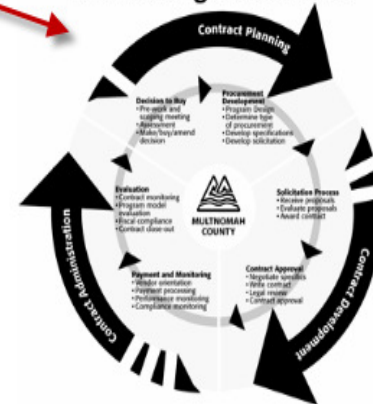


Table of Contents

# Basic Contracting Business Basics

This is the cover slide to our Business Basics course

## Contracting Framework



Contract System Redesign Project  
Developed by:  
Purchasing Training Team

- E-learning Instructions
- Instructions -notes
- News forum

This is the index for the course. From here you can learn how to use E-learning >>>

1 Time to complete this module only is:

- Basic Contracts Introduction
- Purchasing resources link
- Multnomah County Procurement & Contracts Procedural Manual
- Basic Contracts Introduction Notes

>>> Access supporting documents like the County Procurement Manual >>>

2  Basic Contracts Business Basics Module #1

- Basic Contracts Business Basics Module #2
- Basic Contracts Business Basics Module #3
- Basic Contracts Business Basics Module #4
- Basic Contracts Business Basics module notes

>>> or skip to any module. This index would also show progress if you had previously started.

3  Basic Contracts Planning Module #1

- Basic Contracts Planning Module #2
- Basic Contracts Planning notes

4  Basic Contracts Procurement Module #1

- Basic Contracts Procurement Module #2
- Basic Contracts Procurement Module #3
- Basic Contract Procurement Notes

5  Basic Contracts Contract Development Module #1

- Basic Contracts Contract Development Module #2
- Basic Contracts Contract Development Notes

6  Basic Contracts - Contract Administration Module #1

- Basic Contracts- Contract Administration Module #2
- Basic Contracts- Contract administration Notes

7  Basic Contracts- Certificate of completion

- Basic Contracts Course Summary
- Basic Contracts Summary Notes page

After you complete the course and final review you can request a certificate of completion. At this point the class automatically goes into your training record

Course Overview

★ Slide Title	Status
Basic Contracting in Multnom...	✓
Welcome to Contracts Training	✓
Module 1: Business Basics	✓
Business Basics	✓
Introducing Risk	
Business Risk Management	
Purchasing and Contracting R...	
Procurement and Contracting ...	
Program Manager / Decision M...	
Program Representative Role	
Program Representative Role (...)	
Program Representative Role (...)	
Program Representative Role (...)	
Program Representative Role (...)	
Procurement Representative R...	
Procurement Representative R...	
Contract Representative / Spec...	
Contract Representative / Spec...	

Find: 01:24 / 09:18 Minutes Clear

# Introducing Risk



Table of Contents

uncertainty that surrounds outcomes

that has on potential

Clicking on pop\_up Table of Content displays all sections in the course. You can jump to that section by selecting the any of the tags

