And we're next going to transition over to our _____ the following presentation, which comes from Liz and Jeremy. Now what you want me to do, new emerging roles for cataloging and metadata librarians. So I will pass it over to Liz. Unfortunately Jeremy couldn't make it, I believe, but Liz will be more than ready to tell you all about it. So take it away, Liz.

>> Liz Woolcott: Hi. Thanks, Santi. I appreciate that. Can you hear me okay?

>> Santi Thompson: Yeah. You sound great.

>> Liz Woolcott: Thanks. So I want to thank you guys for this opportunity. I'm really sorry that Jeremy couldn't be here today, so I hope you'll bear with me as I work through his section of the presentation, too. We were really excited for this opportunity to talk with the larger profession about the changing roles for cataloging and metadata creators. We'll use a term throughout this presentation of librarians or staff or employees when we talk about cataloging metadata creations. We recognize that at each institution, that means something slightly different, but in general, we're just trying to talk about the profession in general, and that when we mean something more specific, we'll be sure and use those more specific terms.

So this comes as no surprise that the current state of cataloging is in flux, with not just rules and frameworks changing but also the expectations for catalog and metadata creators changing rapidly both outside of the cataloging. So how do all of these changes translate on the ground? What do the expected skill sets of the future look like and how should we plan for these kind of changes?

So this presentation will focus on two resources. One is a survey that Jeremy and I conducted last year to take a snapshot of the cataloging and metadata landscape. And the other is a workable mapping process that institutions can use to analyze their own workloads to determine the needs of their own unique organizations.

In 2016, Jeremy and I put together a survey that analyzed the cataloging and technical surfaces structures in academic libraries. We devoted a portion of the survey to investigate the work that is done by cataloging and metadata staff. We developed this Web site that you see here to start tracking the outcomes of all the data we've processed from the survey. You can feel free to check it out and check back as often as you like as we're constantly updating it. The URL is there at the bottom of the slide, and it's cataloging unit.wordpress.org. As we analyze the data from the survey, we post it here. There's a tremendous amount of data that we took from the survey, so it's taken quite a bit of time to work our way through, but we're nearing the end, thank heavens. We wanted to use this Web site as not only an information portal for sharing the survey data, but also as a discussion portal to start a larger conversation about the future of cataloging units. We are incorporating blog posts from individual catalogers about their units and tasks that they perform and invite any of you if you have any desire to contact us about writing, about your cataloging experience. The one thing we found out from the

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survey is that every organization has a slightly different approach to organizing their work and we would like to highlight the variety of structures and approaches to deal with the changing demands.

And to help summarize all of the 75_plus posts that we have to the Web site, each one of which outlines the research data that we analyzed, we wrote this post for you to review to get an overview of the project so far. You can visit the main Web site link shown on the last slide to get to this link. This link is also located on the ALCTS Exchange Web site forum for this discussion. So my apologies for not putting in the Google link. That would have made it easier from these slides.

Okay. So to start into the meat of this presentation, I'd like to ask the participants in Exchange today to tell us a little bit about your institution. So you should see two polls come up. And I just ask that you would feel free to go ahead and insert, tell us a little bit about your institution, and I'm ____ hopefully this will work, but I'd like to leave these polls up for a couple of slides, and then we'll come back to compare the data against what we found in the survey.

Okay. So to begin our research project, we put together a rather long survey and sent it out to a number of list serves. The survey was open for two months, and received a very favorable response with 696 responses gathered, 54% of which were completed. Respondents came from 28 countries, but 87.5% were from the U.S. Over 65% serve in faculty or professional level positions in our cataloging units and for the purpose of this survey, we classified everyone with a position that required an MLS or MLI, although we've acknowledged that in some institutions the term professional is used to indicate different types of responsibilities. We also used and define the term paraprofessional as an employee who was salaried whose position did not require an MLS when they were hired and an hourly as someone who worked on an hourly pay basis and was not required to hold an MLS degree. Though the majority of people who filled out the survey were professional level cataloging or metadata creators. And because this survey was geared towards academic libraries, the data is primarily representative of trends happening in those institutions, however, we will follow up with this brief _____ observe with strategies for mapping out work and skills that can be used at any library. Respondents of the survey primarily came from doctoral institutions. They represented 68% of responses. Masters institutions were the second largest at a distant 19% followed by bachelor's at 6.5%, associates at almost 4 and special focus institutions at 2. Now, looks like from our survey today that most people here are also from academic. We have about 78%. Yeah. So hopefully the survey data will be reflective of you. And then this next slide shows us our staffing levels. Most of our respondents replied that they had over ten people in their cataloging unit, and it looks like most of our participants today, most have between zero and 3. So it's a very big difference. But then our next highest response is 11 or more.

Okay. Thanks, Mike. Can you flip back to the main screen. Thank you. Okay. So we're going to run one more poll, do the same kind of thing. What we'd like to know is what kind of tasks are done at your institution? Feel free to fill this in. And we'll go through a couple of slides here as we talk about the type of tasks that were done. And then at the end, we'll see how it all compares.

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So here's a fun word cloud of all the options for the ties to tasks done by cataloging and metadata creators. You'll see that catalog, book and record still represent some of the core tasks that are done. But along with those are words like metadata and eResource, transformation, database, load, acquisition, training and et cetera. This kind of demonstrates how definitions of catalogers are beginning to expand quite a bit. So this reflects just the write_in option on the survey. The options you're given to select here actually reflect exactly what was given in the survey and we realized afterwards that we left out a lot of key tasks that catalogers do, and I'll kind of discuss that more towards the end. So this graph right here is complex and it has quite a bit of data in it. In the survey, respondents were asked to identify where a specific cataloging or metadata task took place, whether it was inside or outside of their cataloging units or not done at all. This provides a very interesting breakdown. The blue represents tasks that happened inside of the cataloging unit and the red represents the tasks that happened outside of the unit. The yellow represents the percentage of respondents that reported that tasks are not occurring in their institutions.

Please note that some of the institutions reported that tasks were completed both inside and outside of their cataloging units, so totals here will exceed a hundred percent. And it's also good to know that respondents were not required to report or answer this question at all so not all tasks will have a minimum of a hundred percent.

I'll go through a few of these while we're looking at them on the screen, but I will specifically pull out and talk about a few of them. Particularly the ones that deal with electronic and digital resources in subsequent slides, to dig into the meat of who and where these tasks are being completed.

So as you can see, original cataloging and copycat logging happened at almost all institutions and 97% of the time these two tasks still mostly happen within the cataloging unit. This remains a strong trend despite discussions about cataloging being unnecessary, because it is outsourced or denotes the importance of cataloging at almost every institution. Similarly, cataloging policy happens at almost all institutions.

Serial cataloging running along a similar line. However, it has a slightly higher likelihood of happening outside of the cataloging unit. 97% reported outside of the unit and 15% reported it happening outside of the unit. Again, some reported it happening both inside and outside. Authority creation, which is the creation of authorize terms such as names or subject headings that follow a very strict protocol does not happen at all institutions. 41% reported their institution did not participate in authority creation, but when they did, they were unsurprisingly almost exclusively happening in cataloging units. The maintenance of authority files is more likely to happen at institutions. 87% reported this to be the case, and it is almost done mostly in the cataloging unit. This cataloging remain strong parts of the cataloging and metadata for library. But I can expand on them just a bit more.

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So let's take a quick look at the average size of a cataloging unit. On average, units are composed of about four and a half professionals. Yeah, four and a half __ I'm sorry, four and a half professionals, five and a half paraprofessionals and two and a half hourly employees. I don't have a poll for this but I'd be interested in hearing how this average does or doesn't reflect your own institutions and why.

Interestingly, even though paraprofessional staff are more frequent in number in a traditional cataloging unit, professional catalogers more frequently listed as working on each of the tasks listed with the exception of copy cataloging, but even there it was close. Though professional catalogers are expanding quite a bit in what they're doing.

Previously, Jeremy and I presented an in depth analysis of where work was taking place, whether inside or outside of the cataloging unit and what staffing levels so I won't go into that here, but listed on the top of your screen is a link to that presentation if you would like to explore it first. This link takes you to the blog that we mentioned at the beginning of the presentation, and all of the research blogs will be listed in that blog. So I'd like to return to the nontraditional cataloging tasks that are emerging. We debated slightly in our discussion to introduce the location and staffing level aspect of the overall landscape. With those in mind, we'll start looking at the ILS maintenance. Almost every respondent reported that their institution conducted maintenance for the ILS, which stands for the integrated library system and refers to the software package that runs the cat lower and other library functions such as circulation and acquisitions, but it is almost frequently found to happen both inside and outside the cataloging unit. Please note that the graphic topics feed 100 percent but some respondents indicated that work was done both inside and outside the unit.

The breakdown for the percent angles is listed under location on the slide. This is in part due to the vagueness of the term maintenance that we used. It can be interpreted as regular data entry and clean_up or high level database support. In recent years, the increasing number of integrated library systems has demonstrated that this is a hybrid position that vacillates between cataloging, E_resources, acquisitions and assistance administration units. It is most likely done by professional level employees. Electronic resources are E resources, record maintenance typically refers to work done to reference the electronic databases. E resource record maintenance is most commonly in the cataloging or metadata unit. Few institutions said that they didn't do E_resource record maintenance, so it's highly visible, and it is usually done by professional level staff. The survey also covered aspects of digital resources and looked at metadata standards such as Dublin, core, metadata. So I'll go through them here. I'll start out with a brief description of what they are. Dublin core and Mets mods are __ they describe the structural organization of digital material. Premise is a preservation metadata standard used to record important aspects about digital files themselves that help to monitor the integrity of the files. EAD or an encodable archival description marks up or encodes the finding aids that archives and special collection units use to provide descriptions of the their collections.

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So now let's take a look at where these tasks are happening. Dublin core was the most prominent than Mets mods, but both were more likely to happen in a cataloging unit than outside of one, indicating that cataloging units were supplying labor to growing digital libraries. EAD was the one task of all the tasks provided that happened more frequently outside of the cataloging unit than inside of it. Even so, 20% of respondents indicated that their cataloging units were likely to participate in EAD creation. Metadata for data sets was more likely to happen inside the cataloging unit rather than outside, but over a third of respondents indicated that they didn't do this task. Interestingly, premise was the least likely task to be done by any institution. But when it was completed, cataloging units were more likely to work on the task than other library units. When we look at who was doing each of these tasks, we see that Dublin core metadata is most often done by more professional catalogers and metadata creators or not done at you will a. Paraprofessional staff complete at 23% of institutions, and hourly employees work on a 15%. Mods is less likely to be done with 51% of respondents indicating that it was not created at their institution but when it was it was usually done by professional level employees. Premise, as mentioned before, was not done very often, but when it was, it was most likely to be done by a professional. Data sets metadata had a showing similar to Dublin core, interestingly enough, with around 47% of respondents saying that it was done by professional level staff and EAD was the most likely to be done by the professional level staff as well or not done by the institution. So these are the areas showing an interesting trend of development. New and emerging tasks are first developed by professional level library employees who often participate in the regional, national, international and professional discussions that shape these standards. They develop procedures and internal guidelines that outline an institution's adoption of and local practices for standards. Many of these tasks have standards that are just emerging or are in rapid development. As these standards continue to develop and evolve in the near future, institutions may need to funnel more personnel in time than have been traditionally allotted to them and since personnel and time are both things that libraries have in abundance, we should easily be able to focus on these. Can't really even joke about that. I'm guessing by most of you guys' collective _____ that you have neither personnel nor time to do these kind of things.

So how do we make our time expand to incorporate these new strategies? And these new tasks. So as they're being moved around the library, being completed both inside or outside a traditional unit, how can we tell where staffing is needed or expected to grow? So for this I'd like to suggest using visualization and work flow mapping to show how work can be streamlined and refocused. While many of the trends just describe pertain mostly to academic libraries, the technique I'm about to describe can be used for any kind of institution or work.

Most of the mapping techniques I will show you here were used at my own institution. Utah State University. We worked on mapping work loads within my own unit, cataloging and metadata services, as well as mapping the work and work flows done in the larger technical services unit. Work flows have the ability to demonstrate visually the complexity of the work done, the flow of the work through

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multiple units or people, and many other things. They can help us identify redundancies, simplified processes and ultimately be decision making tools to help free up staff time. But they can only demonstrate this if they are easy for us to understand. So to begin with, I'll just outline what a work flow is. It's a sequence of processes, steps or decisions a work must pass through, starting with the initiation of the work and ending with the completion of the work. I rather like urban dictionary's definition which defines work flow as a manager's term for a process they don't understand. While humorous and ironic, this really gets to the point. Work flow should be used to demonstrate how work is accomplished. You can see a simple work flow diagram on the right hand side of your screen. Some of the basic elements of a work flow include the start or end of a work flow. Usually indicated by the orange shapes you see here, which are rectangles. Processes, usually represented as a rectangle. Each process includes a step that is taken. Decisions, represented by the diamond. This shows where a decision point happens. Arrows coming off of this shape show diverging paths that can be taken. Documentation, shown by the square with the squiggle bottom, can indicate a place where further documentation is noted and pre_defined processes, which is the square inside of a rectangle denotes where a process that is defined elsewhere might be inserted into a work flow. Here is one example of a high level process work flow. And this one shows more than one. This shows multiple work flows, one in each column, running from the top to the bottom. Represents a single work flow for special collections mark cataloging. The first column shows high value cataloging, the second, new acquisitions, the third, retro projects, the fourth, backlogs and yes, these ended up being two very different types of work flows. The next is archival collection and then two types of art book processes. Instead of going into the intricacy of rare book and archival cataloging, this diagram highlights which parts are completed inside and outside of the unit. The inside of the unit is the shaded yellow area, as well as what staffing level was needed to complete the task. In the diagram, green represents a professional level cataloger, requiring an MLS degree. Purple is our copy catalogers or paraprofessional level staff and blue is our student workers. This format for showing high level work flows is useful for external stakeholders as it shows what level of staffing is needed to complete each task and where the task occurs but does not go into any serious kind of detail.

Here is an example of a work flow sheet that shows just one work flow instead of multiple work flows such as what was shown on the last slide. Each column represents a unit, or a department rather than a different work flow. It's still encompasses the same structure with a start and ending points, the process steps and decision points. Like the last work flow, the sample is color coded by staffing level to show how many or what types of staffing are needed to complete a work flow. This format of work flow is useful for external stakeholders such as administration, as it clearly outlines the number of departments or units involved and the level of staffing used to _____ in getting a single work flow completed. It's also useful to internal stakeholders such as the staff who performed the processes because it does give them more step by step process of how work is accomplished. This is particularly useful for work that involves multiple departments or units. As much of their work may be unknown

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to one another. Even though they are all essentially working on the same task. Mid level work flows can help demonstrate where streamlining can occur.

The third example created by our very own Melanie Shaw here at USU shows a cataloging work flow that is meant to help guide internal uniwork. It is very detailed. It uses the documentation symbol to point out to external resources such as the concert cataloging manual for further resources. It is color coded by the system that is needed to perform the specific task. This kind of work flow benefits a highly knowledgeable internal stakeholder who's familiar with the cataloging process, but would be less Ben official to external stakeholders. So conducting a work flow analysis at your institution can help you leverage the visualization of mapping to make decisions, but it's important to begin this process. First of all, you'll need to include all of the relevant parties. If you're conducting an overall work flow analysis, you can start by brain storming all the different kinds of work that is accomplished. When involving multiple units, don't be surprised if participants all envision something different during the brain storming process. For instance, when our cataloging unit met with the larger technical services division, we noticed that the single work flow that we called batch loading looked very different for other members. It actually encompasses multiple processes. We process the files very similarly, but for our colleagues, the files were routed through different person expel and technical services, depending on the vendor, the account payment, et cetera. So be prepared to re envision the work that you do. Give every work flow a specific name to help solidify what is meant by the work. Figure out what you need from the work flow. Do you need to know how many staff are involved in the single process or the type of staff? Do you need step by step instructions or just the overall flow and do you need to show how to work both between units or will that over complicate the visual. And then we fine what you mean by the beginning and end point and develop the decisions in between.

Review the work flow to make sure you've included all of the elements you need and use an outside portion to point out areas that oar too detailed or not detailed enough will be very helpful. Last but not least, upload them continuously and find a visible place to post them. This serves as a daily reminder of the work it takes to get collections, material into the hands of our users.

Last considerations. Remember the overall purpose of your work flow mapping and stick to it. Create a team atmosphere for those who are developing the work flows. Try to be inclusive where possible. You may need to sell this idea of doing this process as there will likely be a lot of resistance. People who are overworked to begin with may not have time to set aside for this kind of process. Be sure to consent trait on the basics and don't get hung up on the details. Keep in mind the difference between a fill procedure and a simple visualization. And remember, visual presentations need to look pleasing to be effective. There are a number of tools you can use to create a work flow. When first brain storming, it's useful to help a white bored 0 post_its. You can use PowerPoints to create work flows. The ones I used to demonstrate on the previous slides were lucid charts.

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So what would you gain from this kind of exercise? More than anything, it helps to visualize how work flows through a unit or a division and it helps you answer questions like how are staff working together. Could they be working together more efficiently. Is there a physical layout conducive to the work flow. How does the structure of our lives help or hinder. It helps you look for areas of growth. What has taken off in the last year or two. What seems to require more and more staff or less and less staff. It can also help identified areas where you need to train more staff. As new and increasingly staff are identified, this will be helpful to handle the expectations for the libraries of the future.

One last time, I'd like to borrow the collective wisdom of our community and ask to tell me what tasks you feel are the most important going forward. I suspect this one will be particularly interesting. So while I wrap up this presentation with the data on the results of the future skills and survey, I'd invite you to provide your feedback on what you consider to be the most important skills that the staff needs. And these options reflect what was presented in the survey, and when I sent out a fun twitter poll yesterday, I got so many additional suggestions that I thought were really good, so these by no means reflect everything that we expect. So we'll just keep up this poll as I flip to the next slide.

So this just is a fun word cloud that shows some of the write_in options that were presented from the survey. Some of this metadata, repository, they are all prominent. And as you can see, the survey showed that fifth frame, RDA and RDF and link data were the most commonly reported as the new skill sets that are needed. Looking at your responses, it looks like incur, Bib Frame and the data set management you also rate higher. Linked data is ranked high by ____ 76%, and RDA by 57%. So now I suspect we're going to figure out how we will fit this into our new training, into our new workload so I hope I've given you some ideas of how you can go about assessing that.

So thank you for your time today. Jeremy and I would love to answer any questions you may have either right now or via the change forum or you can feel free to contact us directly.

>> Santi Thompson: Thank you so much, Liz, for that presentation. And we have a few minutes, two minutes to be exact, for a quick question or two. So again, if you have a question, feel free to put it in the general chat question box.

So there is a general question about the quick survey results being available from the presentation being available later. And yes, they are part of the reporting.

Have you had trouble promoting changes in work flows or staffing to management?

>> Liz Woolcott: That's a really good question.

>> Santi Thompson: By the way, you have a minute, Liz.

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>> Liz Woolcott: Yeah. Thank you. I appreciate that. We haven't had much chance or problem with promoting it to management. They've actually been really behind the work flow analysis in trying to figure out ways that we can do things differently. So it hasn't been a problem for us.

>> Santi Thompson: So as we close this session, I want to thank you, Liz and Jeremy, and send our regards, for an excellent presentation. As you all know, we will take any questions that haven't been responded to and transfer those over to the discussion forum for Liz and Jeremy to respond to a little later. And up next, we have a break. So I'm going to pass this over to another working group member, Robin, who will launch us into our break. Thanks so much. And Robin may be having some technical issues so I will lead us into the break so I just want to thank all of our speakers, and coming up after the break, we'll have Harrison and Charlotte joining us for centering the margins of the scholarly record, librarians social justice and scholarly communication and we'll also have Kathy presenting a project incorporating the four_fold path. Remember the conversation and discussion today. In the Exchange online forum and we'll return at 3:45 p.m. eastern daylight time. Thanks so much.

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