



Advanced Distributed Learning Task 6 Acquisition for New Distributed Learning Report

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List of Abbreviations and Acronyms

A&S	Acquisition and Sustainment
ADL	Advanced Distributed Learning Initiative
ATC	Authority to Connect
ATO	Authority to Operate
BAA	Broad Agency Announcement
CMF	Consortium Management Framework
DFAR	Defense Federal Acquisition Regulation
DISA	Defense Information Systems Agency
DL	Distributed Learning
DoD	Department of Defense
FAR	Federal Acquisition Regulation
FedRAMP	Federal Risk and Authorization Management Program
FFRDC	Federally Funded Research and Development Center
GSA	General Service Administration
IA	Information Assurance
IP	Intellectual Property
IT	Information Technology
LRS	Learning Resource System
NDAA	National Defense Authorization Act
NIST	National Institute of Standards and Technology
OSD	Office of the Secretary of Defense
OT	Other Transaction
OTA	Other Transaction Authority
PWS	Performance Work Statement
R&D	Research and Development
RFP	Request for Proposal
RMF	Risk Management Framework
S&T	Science and Technology
SaaS	Software as a Service

Executive Summary

The momentum from efforts of the DoD business acquisition reform initiatives¹ are highlighting the demand for the adoption of new acquisition pathways to acquire distributed learning resources that provide learning solutions that offer the level of interoperability and accessibility that the DoD desires. Innovations in distributed learning modernization stem from the desire to have the ability to distribute learning tools widely and quickly access them from anywhere, and to develop readily and easily shareable learning advancements. The Advanced Distributed Advanced Distributed Learning (ADL) Initiative asked the Potomac Institute for Policy Studies (PIPS) to conduct research to assist ADL in identifying potential pathways to address the challenges of distributed learning (DL) acquisition in order to better achieve the full vision defined in new DL guidance found in DoD Instruction 1322.26 ("Distributed Learning").² As part of this task, the Potomac Institute for Policy Studies interviewed government stakeholders from Services (Army, Navy, Marine Corps, Air Force) and Organizations (Joint organizations/Joint Knowledge Online) to explore distributed learning modernization best practices in acquisition.

The revised DoD Instruction 1322.26 enables DoD stakeholders further exploration of the application and development of new distributed learning systems and software services. Through stakeholder discussions of the challenges and best practices for acquisition of DL capabilities, and the development of tools to aid in the acquisition of distributed learning technologies and services, the following themes were identified:

- **More flexible acquisition pathways and resources for DL systems, services, and infrastructure.**
- **Considerations when requesting distributed learning products and services.**
- **Difficulties of a being a limited consumer of DL capabilities.**

This report documents our research on successful acquisition related processes associated to distributed learning modernization and acquisition templates/tools related to standards and enablers. It identifies and provides common language, practices, and procedures that enable successful acquisition of DL technology for the DoD. This research provided insight into the investigation, validation, and documentation of distributed learning acquisitions approaches, and provides resources on how to approach acquisition for the following areas:

- (1) Stakeholders desire to have more options for contract vehicles and alternate approaches to acquire distributed learning technologies and services.
- (2) Understanding, reconciliation, and acquisition of distributed learning capabilities as they apply to the developer, contracting personnel, and information technology (IT) managers.

Methods for increasing avenues to acquire distributed learning capabilities, and resources for acquiring distributed learning products and services that take into account intellectual property rights, cybersecurity requirements, and government acquisition services are addressed in this report.

¹ 2018 national Defense Strategy. (n.d.). Retrieved March 7, 2018, from <https://dod.defense.gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf>

² DoD Instructional 1322.26. (2017, October 5). Retrieved from http://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/132226_dodi_2017.pdf?ver=2017-10-05-073235-400/home_new

Introduction

The Potomac Institute for Policy Studies (PIPS), in support of the Advanced Distributed Learning (ADL) Initiative, interviewed distributed learning stakeholders to explore acquisition needs and acquisition models in order to identify resources to address challenges with acquiring new distributed learning (DL) capabilities. The areas of focus included distributed learning acquisition tools that are related to standards and enablers, and address the desire to increase options for acquiring distributed learning systems, applications, and software. Attention was given to identifying resources that would open the aperture for obtaining new distributed learning vendors, acquiring cybersecurity compliant systems, and government acquisition methods that would enable the flexibility and specificity needed for distributed learning modernization efforts.

The work presented herein represents data from the Services, and related distributed learning subject matter experts from the defense community. The report is intended to provide tools to aid in the acquisition of distributed learning technologies and services. These themes resulted from stakeholder discussion of both challenges and best practices for acquisition DL capabilities.

- **More flexible acquisition pathways and resources for DL systems, services, and infrastructure:** Provide resources with related recommendations on avenues to engage distributed learning vendors and promote a better understanding of the DL needs and requirements of government entities, and stimulate collaboration of government sponsors and private industry.
- **Considerations when requesting distributed learning products and services:** Present considerations for requesting distributed learning technologies and services, and help address the need for further understanding and reconciliation of distributed learning services as they apply to various applied users.
- **Difficulties of a being a limited consumer of DL capabilities.** Outline potential best practices for obtaining distributed learning technologies, products, and services.

Through distributed learning stakeholder discussion highlights and a case study, this report introduces checklists, language, and recommendations for acquiring new DL capabilities in the areas of DL product delivery mechanism, data rights for DL, DL service definitions, and cybersecurity. Additionally, this report includes the discussion surrounding Service DL needs and the difficulties of a limited consumer of DL capabilities, and recommended solution approaches to enable successful distributed learning acquisition. Materials used to facilitate interview discussions, and interview data analysis are included in the appendices. These include: Appendix I: Task 6 Procedures and Structured Approach, Appendix II: Coding and Analysis, and Appendix III: Stakeholder Interview Data.

Background and Significance

Several experts have proposed that greatest returns on investment for DoD modernization will stem from replacement of old hardware and network modernization.³ Current distributed learning organizations

³DoD cybersecurity and modernization efforts most likely to move forward with new federal budget: Research. (2018, March 22). Retrieved April 10, 2018, from <https://www.cisomag.com/DoD-cybersecurity-modernization-efforts-likely-move-forward-new-federal-budget-research/>

struggle to quickly acquire new products and services, while a number of private industry companies are reluctant to pursue DoD contracts. Companies' reluctance can be attributed to multiple factors, including the (1) complexity of DoD acquisition process, (2) government specific contract terms and conditions, and (3) intellectual property rights concerns.⁴ To assist in addressing these challenges and concerns, this research aims to begin providing acquisition terminology, checklists, and related resources that the DL DoD stakeholder community can utilize for RFPs, Contracts, BAAs, and PWSs for the acquisition of DL technologies and software.

Currently, the DoD is acting to address business acquisition process reform⁵ in order to increase mission effectiveness, establish more efficient financial practices, reduce regulatory impediments, and deliver cost effective capabilities faster⁶. The DoD is pursuing enabling procurement methods designed to reduce both time and cost in the DoD acquisition and procurement structure. These methods are intended to improve the optimization and modernization of systems and services.⁷ The acquisition of distributed learning systems, applications, and software presents its own set of unique challenges, however. DL modernization acquisition efforts stakeholders have to account for coexistence of both legacy and new technologies⁸, acquisition requirements that are tied to operational requirements⁹, and cybersecurity mandates that decrease the speed of procurement efforts¹⁰. With evolving distributed learning technologies, distributed learning stakeholders require acquisition pathways that are flexible (and inclusive), and further acquisition resources for distributed learning developers, purchase administrators, and information technology managers.

A reoccurring theme from the analysis and interviews of members of the DL community is that there is a varying degree of their involvement in the acquisition process. A spectrum of responses from offices indicated that some DL system managers are well versed and involved in acquisition processes, while other organizations indicated that the responsibility for DL acquisition is performed by an acquisition command that may be less familiar with the nuances of DL needs as technologies and methods change. There is potential to address new distributed learning capability acquisition engagement processes through the DoD business acquisition reform by instituting alternative, streamlined DL acquisition pathways and procurement methods. Related distributed learning acquisition resources are outlined and discussed in the following sections of this report according to categorized theme: (1) More flexible acquisition pathways and resources for DL systems, services, and infrastructure, (2) Considerations when requesting distributed learning products and services, and (3) Difficulties of a being a limited consumer of DL capabilities.

⁴ U.S. Government Accountability Office. (2017, July). Military Acquisitions: DoD is Taking Steps to Address Challenges Faced by Certain Companies. (Publication No. GAO-17-644). Retrieved from: <https://www.gao.gov/assets/690/686012.pdf>

⁵ Brust, A. (2018, May 25). DoD's acquisition and sustainment chief shares path forward for new office. Retrieved July 16, 2018, from <https://federalnewsradio.com/defense-main/2018/05/dods-acquisition-and-sustainment-chief-shares-path-forward-for-new-office/>

⁶ Mehta, A. (2017, December 8). Here's how Ellen Lord will reduce acquisition time by 50 percent. Retrieved July 18, 2018, from <https://www.defensenews.com/pentagon/2017/12/08/heres-how-ellen-lord-will-reduce-acquisition-time-by-50-percent/>

⁷ Ibid.

⁸ Watt, C. (2018, May 16). The perfect storm: DoD's unique modernization opportunity. Retrieved from <https://federalnewsradio.com/federal-insights/2018/05/the-perfect-storm-dods-unique-modernization-opportunity/>; The 2018 DoD Digital Engineering Strategy. (2018, June). Retrieved from: <https://www.acq.osd.mil/se/docs/2018-DES.pdf>

⁹ Service Acquisition Mall - ARRT Requirements Definition. (n.d.). Retrieved April 22, 2018, from http://sam.dau.mil/Content.aspx?currentContentID=arrt_requirements_definition

¹⁰ (Defense Science Board. (2009, March). Department of Defense Policies and Procedures for the Acquisition of Information Technology. Retrieved from: <https://www.acq.osd.mil/dsb/reports/2000s/ADA498375.pdf>

Stakeholder Discussion and Related Resources

More flexible acquisition pathways and resources for DL systems, services, and infrastructure:

Stakeholder distributed learning acquisition concerns surrounding modernization stem from the desire to update systems with changing requirements, continuous application updates and maintenance, introduction of new capabilities, and implementation of innovative new S&T capabilities. Contracting structures that lend themselves to flexible acquisition approaches are needed to fully address evolving training and education system needs, updates to standard compliant educational content; simultaneous scalable learning environments and transition goals of DL efforts.

Throughout this study, interviewees responded with varying answers on their available acquisition vehicles and pathways. Often times there is spilt as to what method a university, office, or command will use in order to procure a DL product, service, or continued support for own systems. The disparity is frequently due to the rigidity of the contracting practices of that particular institution. Additionally, stakeholders had varying levels of input, responsibility, and authority within organizational acquisition processes. In essence, different organizations have different ways of approaching the acquisition of DL systems, services, and infrastructure.

The descriptions in the following section include possible considerations for how to open the aperture for obtaining new distributed learning systems, services, and infrastructure. The following sections discuss alternative, flexible acquisition pathways, and insights for engagement with industry and academic partners.

Use of Other Transactions (OTs), Other Transaction Authority (OTA) Consortium Management Firm (CMF)

Connecting private sector distributed learning research that can address the unique needs of military distributed learning technologies through OTs is a strong avenue for encouraging innovation. Stakeholders cited use of OTAs as a means to connect with private sector distributed learning research and development expertise. OTs are legally binding non-standard contracts/grants/cooperative agreements¹¹ used to engage industry and academic partners¹²; OTAs are OT agreements utilized for prototyping¹³. Below is a resource that provides (1) a collection of explanatory guides on what the current DoD policy is regarding OT's, (2) guides, examples of successful projects that have utilized this alternative process, (3) as well as links to training opportunities to assist in the education of the acquisition workforce on OT's. Resources for their authority, scope, and application may be found at:

- Website - <https://www.acq.osd.mil/dpap/cpic/cp/10USC2371bOTs.html>

Additionally, Chapter 2 of the resource below provide considerations, and guidelines for acquisition planning:

- Website - <https://www.darpa.mil/attachments/OTGuidePrototypeProjects.pdf>

¹¹ Other Transaction Authority for Prototype Projects 10 U.S.C. 2371b [Suggest Change]. (2017, October 27). Retrieved from <https://www.dau.mil/acquimedia/Pages/ArticleDetails.aspx?aid=dd749bb2-2ed0-49ca-868e-83f02962ee3e>

¹² FY1994 National Defense Authorization Act. (1994). Retrieved March 15, 2018, from <https://www.congress.gov/103/bills/hr2401/BILLS-103hr2401enr.pdf>; Other Transaction Authority (OTA) Overview. (n.d.). Retrieved February 20, 2018, from https://www.transform.af.mil/Portals/18/documents/OSA/OTA_Brief_Ver_6Apr2016.pdf

¹³ Authority Of The Department Of Defense To Carry Out Certain Prototype Projects. (2016, January 3). Retrieved February 24, 2018, from <https://www.gpo.gov/fdsys/pkg/USCODE-2015-title10/pdf/USCODE-2015-title10-subtitleA-partIV-chap139-sec2371b.pdf>

A consortium approach to an OTA could provide for additional flexibility in distributed learning modernization efforts¹⁴. OTA Consortium Management approaches¹⁵ involve using a consortium management firm (CMF) to engage the performer community. In practice, the government sponsor does a blanket contract¹⁶ with the CMF, and the CMF uses an OTA for performer interaction. The approach places the onus of the administrative and contracting details on the CMF, while freeing the Program Manager time to focus on technical and specification research details. In some cases, vendors whose members compete for OTAs are selected to run a CMF.¹⁷ This is an important consideration for DL due to the management of the vendors being vetted and cultivated by the CMF which allows the DoD participant to select the ideal vendor to support their efforts. The process can be faster, flexible, and tailored to meet the requirements of the government sponsor.

Processes for government agencies utilizing an OTA Consortium Management approach typical includes the following:

- Specific technical research requirements are provided to the CMF by the government sponsor. Using the required research topics as a basis, the CMF develops the request¹⁸ for white papers or proposals in the form of Broad Agency Announcement (BAA), Request for Proposals (RFP), or Special Project Announcement, etc.
- Submitted white papers and proposals are organized by the CMF, and then they are provided to the government for review. The government selects the desired project and the commercial award contract is generated by CMF.

Overall, working with a CMF is similar to working with traditional contracting agents; however, the OTA Consortium Management approach has been shown to significantly reduce the award cycle time.¹⁹ Government agencies may choose to use traditional contracting approaches for certain parts of the research (basic and applied) as a means to address government intellectual property and cost concerns, and OTAs for the technology development and prototyping. An OTA may be leveraged as a more tailorable approach to address the specific technology development and prototyping needs of individual DL stakeholder programs.

DL considerations for using OTA Consortium Management strategy include the following:

¹⁴ Greeff, T. (2018, March 23). How the US can put its OTA procurement process to best use. Retrieved from <https://www.federaltimes.com/acquisition/2018/03/23/how-the-us-can-put-its-ota-procurement-process-to-best-use/>

¹⁵ Van Metre, C. (2015, October 27). Use of Defense Consortia for Rapid Technology Development. Retrieved February 20, 2018, from <https://ndiastorage.blob.core.usgovcloudapi.net/ndia/2015/PSTS/vanmetre.pdf>

¹⁶ United States Army Contracting Command - New Jersey, Maneuver Ammunition Systems Center Acc-Nj-Ma / Bldg 10 Picatinny Arsenal, Nj 07806-5000 And Consortium Management Group, Inc. On Behalf Of Consortium For Command, Control, And Communications In Cyberspace (C5). (2017, April 20). Retrieved From <https://cmgcorp.org/Wp-Content/Uploads/2017/02/C5-Ota-W15qkn-17-9-5555.PDF>; Megargel, J. (2017, November 28). Countering Weapons of Mass Destruction (CWMD) Other Transaction Agreement (OTA). Retrieved March 15, 2018, from https://www.cbdstconference.com/docs/default-source/2017/tues_1630_jpeo-cwmd-ota-presentations.pdf?sfvrsn=2

¹⁷ Reynolds, T. & Dalcourt Angle, V. (2018, February). Acquisition Disruption: Innovative Concepts in Government Contracting. *Morrison & Foerster, Government Contracts Insights*. Retrieved from <http://govcon.mofo.com/compliance/acquisition-disruption-innovative-concepts-in-government-contracting/>

¹⁸ (Guidebook for the Acquisition of Services. (n.d.). Retrieved March 19, 2018, from https://www.acq.osd.mil/dpap/ccap/cc/corhb/files/miscellaneous_training/guidebook_for_acquisition_of_services_24march2012.pdf

¹⁹ GAO Assessment Guide. (2012, May). Retrieved from <https://www.gao.gov/assets/600/591240.pdf>

The goal of the contracting and management aspects of OTA Consortium Management strategies is to have a flexible and ultimately a transformational effect on DL technology. Strategies should depict both the plans and requirements for the technical solicitation, as well as the approach for cost sharing, partnerships, and risk assessment. Distributed learning stakeholders cited the need to further illuminate the current state of art in the DL environment as related to their specific DL capability needs and to encourage further vendor understanding of the government needs as related to DL. These factors can be inserted into the frameworks for cost sharing and strategic partnerships of OTA Consortium Management strategies. In particular, some components for injecting specific DL considerations for using OTA Consortium Management strategies include the following:

- **Frameworks for cost sharing** should be determined for each stage of the DL technology development process. Plans for cost sharing can help alleviate some of the government-funding burden and incentivize vendors to identify, notify, and address (resolve) program issues early on because their internal resources are invested in program success. For example, the Government Accountability Office (GAO) conducted a study of the best practices for conducting scheduling and successful approaches to ensuring a project meets the stated objectives. Their best practices cover concepts such as capturing, sequencing, and assigning of activities. They also provide guidance on critical pathways and leveraging of integrated management systems. These are all relevant when projects involve cost sharing due to the variability in assignment of resources (e.g., labor, facilities) and tracking of expenditures of those resources. With these tools, a sponsor can better align tasks and resources to vendors as well as enable them to be prepared for those critical activities that are vital to the success of the DL project. Below is the link to the best practices when conducting scheduling assessments:
 - Website - <https://www.gao.gov/assets/600/591240.pdf>
- **Strategic partnership roles and responsibilities** should be outlined to capture the specific distributed learning innovation area the vendor will address²⁰ and provide justification for how their work is unique and sustainable to the military distributed learning capability needs, correlated to the DL product developmental milestone. The below resource lays out the key components of what an agreement should encompass. It is a guide to setting the understandings between the consortium and government sponsor, including the defining of key terms. The language contained in the guide is generic and may be substituted for more specific agreement needs as defined by stakeholder sponsor organizations. Topic areas included in this resource are:
 - Administration (Scope of the Agreement, Terms, Management of the Project, Subcontracting, and Agreement Administration)
 - Funding (Obligation and Payment and Disputes)
 - Overall rights (Patent Rights, Data Rights, Foreign Access to Technology, and Title to and Disposition of Property)
 - Execution and Special Clauses

The example of a consortium agreement can be found on the Health and Human Services site at the following website:

- Website - <https://www.phe.gov/about/amcg/otar/Documents/otar-consortium.pdf>

Considerations When Requesting Distributed Learning Products and Services:

Throughout the investigation of the acquisition challenges and best practices of the DL community, there were recurring accounts of the inconsistent manner by which organizations were conducting test and evaluation efforts for new products, applications and services provided to the different branches of the military and activities of the DoD. Often times, there were reports of a lack of collaboration between the developers, acquisition professionals, IT/cybersecurity professionals, and ultimately the end users or instructors that would be utilizing distributed learning tools. This variance in understanding and lack of collaboration at the initial stages of a product acquisition can cause negative second and third order effects to a product farther along in the acquisition process, and as a result both incur delays in time and increase costs. Below is a case study with distributed learning capability acquisition challenges, followed by related potential resources to avoid similar difficulties.

Consider the following distributed learning case study:

A government organization developed a mobile training information collection system to record the results of training outside of classroom settings. The system was applied on a then-current electronic notebook (compatible with Android devices) and allowed instructors and leaders to collect training data in the field. The intent was to allow the data from the electronic notebook to be downloaded to a training management system. The electronic notebook was compatible with the then-standard training management system, which operated on the organization's wired intranet backbone.

The mobile training information collection system successful met all operational functionality needs; however, once the development was complete, the mobile system had to go through the organization's standard cybersecurity compliance protocols. At the time, those protocols prohibited any WiFi system from being connected to a computer that was operating on the organization's intranet. This meant that even with wire cables physically connecting the mobile system electronic notebooks to desktop computers, the security protocol prohibited doing so.

The organization's training agency wanted to transition the mobile training management system to be a component of their existing training management system, and continued to seek cybersecurity compliance certification. The problem continued – there was, at the time, no IA protocol would allow a WiFi capable device to connect to the Warfighter Enterprise Network. By the time the problem was solved, about two (2) years had passed, and at that point the organization lost interest in this mobile system because its software was then out of date/incompatible with their latest operating system.

Related DL acquisition considerations and resources:

- If Services want to assess the value of developing or new DL systems, exploratory distributed learning product pilot events can be used for assessments. The incorporation of an early utility assessment, including cybersecurity considerations, into a distributed learning acquisition strategy can assist in the evaluation of a new or additional distributed learning system design

needs to simultaneously address learning delivery and other considerations such as cybersecurity requirements. Structuring the assessment to evaluate a DL system on the front end helps to identify, early in the process, both the learning delivery effectiveness and the feasibility of the DL product's successful transition. This will also allow the DoD sponsor to assess the DL system and provide them an understanding of the concept's capability and if this is in line with their requirements. This can be accomplished through a series of test beds, modeling and simulation, or assessments. These may be areas where organizations such as ADL may help; for example, centralized test bed environments supervised by ADL for DoD clients.

Federally Funded Research and Development Centers (FFRDC)²¹ are resources that can assist in the construct and evaluation of an assessment. That said, because of assessment level of effort and investment, Services need to be sufficiently interested in a potential new capability to effectively establish a test for assessment purposes, not just an exploratory pilot. Including distributed learning tailored assessments as part of prototyping can improve the prospects of a successful acquisition. Also, due to the nature and construct of agreements between a sponsor and an FFRDC²², consensus between the two parties needs to be reached in order to ensure the viability of the work being requested and agreed upon. FFRDC's provide a government approved entity that have established areas of focus that they specialize in and may offer an unbiased assessment of the nature of the work being requested and can assist in the determination of the final outputs. FFRDC's may be considered flexible, responsive, knowledgeable resources to address short and long-term research and development analyses,

- The requirements for receiving an Authority to Operate/Authority to Connect (ATO/ATC) can be difficult to navigate. Additionally, the timeframe can also be long to meet the detailed requirements for gaining an ATO/ATC (typically it takes up to six months for this process). Digital service officers, such as 18F²³ of the General Service Administration (GSA), have identified best practices for digital acquisition, to help agencies make information technology purchases that provide better return on investment. Digital service offerors, through their leverage of private industry project management best practices, can help in bridging the divide between different offices and technical performers, which can help in the multiple transitions and provide enablers that can improve the acquisition timeline. The value of entities such as 18F is in their ability to be language translators between training and education developer stakeholders and cybersecurity stakeholders. 18F provides a number of informative checklists, templates, and tutorials on topics related to various government requirements around digital processes such as Authority to Connect and how to reduce the time spent on these efforts.
 - [Website](https://digitalaccelerator.18f.gov/#how) - <https://digitalaccelerator.18f.gov/#how>
- Another aspect of providing the tools necessary for improving acquisition of cyber compliant distributed learning systems is through further communication and understanding of the application of information technology security measures and controls. Resources, such as the

²¹ Federally Funded Research and Development Centers (FFRDC) [Suggest Change]. (n.d.). Retrieved from <https://www.dau.mil/acquipedia/Pages/ArticleDetails.aspx?aid=5e3079b8-44f2-43df-a0e7-9f379e8c48ed>; <https://www.nsf.gov/statistics/ffrdclist/>

²² Defense Acquisition University. (2011, March). Fully Funded Research and Development Centers (FFRDC). Retrieved from <https://www.dau.mil/acquipedia/Pages/ArticleDetails.aspx?aid=5e3079b8-44f2-43df-a0e7-9f379e8c48ed#anchorInfo>

²³ Organizations, such as 18F, provide full service project support to the government. 18F is an activity in the GSA that provides a technical project management support. They provide technical and project support personnel that can work alongside acquisition efforts throughout the life of the process. How we work. (n.d.). Retrieved August 8, 2018, from <https://18f.gsa.gov/how-we-work>

below example of the Department of Commerce’s manual for navigating the United States government’s Cybersecurity Framework and the National Institute of Standards and Technology (NIST) Special Publication (SP) 800-53, can assist organizations in facilitating communication of cybersecurity compliance information to various stakeholders. Addressing the cybersecurity requirements early in an acquisition effort can reduce the timeframe of implementation that can dramatically impact the if left for later in the effort. The following is a link to the baseline security control and assessment guide that provides usage scenarios for tailoring security controls:

- Website - <https://nvlpubs.nist.gov/nistpubs/ir/2016/NIST.IR.8130.pdf>

Considerations for Defining DL Services as they apply to the developer, contracting personnel, and IT managers:

Intellectual Property:

A number of offices that were interviewed had blanket clauses or statements that either assumed all the intellectual (IP) rights and licenses to data rights or outright disallowed anything that was proprietary on their network. While the government IP interests²⁴ were adequately stated, misalignment and miscommunication between stakeholders and vendors expectations of intellectual property rights were reported. When considering modernization efforts regarding DL systems and services, and opening the aperture for obtaining new distributed learning vendors, it is important for all parties to have the appropriate understanding of data licenses and material that is needed. Government property, while including, Government-furnished property and contractor-acquired property, does not include IP and software.²⁵

The 2018 National Defense Authorization Act (NDAA) includes several changes on how the DoD pursues the acquisition of software that will impact distributed learning acquisition regarding IP negotiations²⁶. In partial summary, the 2018 NDAA requires the DoD to consider acquiring all software and related material:

- that reproduces, builds or recompiles the software from original source code,
- needed to establish mandatory software testing,
- and is needed to deliver software system file on appropriate hardware platforms.

Individual Services and organizations have related guides²⁷ [and guidelines²⁸] for data rights.

There are three types of licenses regarding IP that help inform the way a proposal can be constructed. The three types are: unlimited rights, government purpose rights, and limited or restricted rights. Each

²⁴ Data Rights. (n.d.). Retrieved August 22, 2018, from <https://disa.mil/About/Legal-and-Regulatory/DataRights-IP/DataRights>

²⁵ Contractor Property Management System Procedures Review [Suggest Change]. (2018, April 16). Retrieved from <https://www.dau.mil/acquimedia/Pages/ArticleDetails.aspx?aid=8a968050-d81b-465f-b1c2-7f02197c106f#anchorDef>

²⁶ Bartolanzo, A., & Szeliga, K. (2018, January 30). Contractors Beware: The 2018 NDAA Ushers In New Changes Affecting IP Rights. Retrieved from <https://www.governmentcontractslawblog.com/2018/01/articles/department-of-defense/ndaa-ip-rights/>

²⁷ For example: United States Army. (2015, August). Army Data & Data Rights (D&DR) Guide. Retrieved from https://www.acq.osd.mil/dpap/cpic/cp/docs/Army_Data_and_Data_Rights_Guide_1st_Edition_4_Aug_2015.pdf

²⁸ Technical Data and Computer Software Rights Handbook 8th Edition 05-23-2018. (n.d.). Retrieved from <https://www.dau.mil/guidebooks/Shared Documents HTML/Technical Data and Computer Software Rights Handbook 8th Edition.aspx#toc4>

has their own criteria on how they are funded and who has overall control of the rights, these are partially summarized as related to distributed learning in the table below^{29,30}.

Data Rights	
Unlimited Rights	<ul style="list-style-type: none"> • DoD/Services have total rights to all DL SW/services/technology • Third party access can be granted by Government officials • Developed exclusively for DoD/Services funds under exclusive DoD/Service contract • Built specifically for DoD systems use • Product delivery is to the DoD/Service with the documentation and ability to modify
Limited Rights	<ul style="list-style-type: none"> • DoD/Services have partial control over DL SW/services/technology • Technical data may be reproduced DoD/Services; however, cannot be disclosed outside the DoD/Services • Not for commercial manufacture • Are exceptions DFAR 252.227-7013(a)(14)³¹ • Typically, not developed under a DoD/Service contract • DL content built by vendor and does not require additional modification • Funded by vendor
Restricted Rights	<ul style="list-style-type: none"> • DoD/Services have limited control over DL SW/services/Technology • Can be transferred to other DoD/USG systems • Can make copies with ability to modify • Funded and developed by vendor • DL systems integration required

Important considerations for distributed learning IT developers and managers include that agency rules governing IP ownership, including use and markings, may vary, and are dependent on how Services anticipate using the data. From the contracting perspective, conditions concerning IP and specific contracts terms can be negotiated and are typically the responsibility of the contracting representative.³²

Cloud Services:

The Federal Risk and Authorization Management Program (FedRAMP) is the government established mechanism to facilitate a standardized approach to cybersecurity evaluation and continuous monitoring for cloud services.³³ Cloud services have unique offerings that can be beneficial to an organization's distributed learning use and operation. These differences can help in determining the service level required and anticipated in the purchase of such services. The preferred method of cloud usage is determined by the compatibility of the DL software/hardware/service and the type of cloud services an organization desires. While stakeholders recognized understanding and implications of the FedRAMP

²⁹ McCarthy, J., Hermann, K., & Baker, J. (n.d.). The unique world of governmental intellectual property: who has rights to what? Retrieved from <https://www.crowell.com/files/20171026-The-Unique-World-of-Governmental-Intellectual-Property-Who-Has-Rights-to-What.pdf>

³⁰ Rights in Computer Software under Federal Government Contracts. (2012, February 03). Retrieved from http://www.btlg.us/News_and_Press/articles/FARcomputersoftware.html

³¹ DFARS 252.227 thru 252.231. (n.d.). Retrieved from http://farsite.hill.af.mil/reghtml/regs/far2afmcfars/fardfars/dfars/dfars252_227.htm#P295_15658

³² Intellectual Property in Government Contracts | Weitz Morgan, PLLC. (n.d.). Retrieved from <https://www.weitzmorgan.com/2017/01/20/intellectual-property/>

³³ FedRAMP. Federal Agencies. Retrieved from <https://www.fedramp.gov/federal-agencies/>

process by themselves and vendors, they did report vendor reluctance, attributed to cost, to undergo FedRAMP certification.

Overall distributed learning stakeholders desire further understanding of the considerations for framing the discussion of cloud services, including defining the cloud services as related to their specific organizational needs and desires.³⁴ At the higher level, cloud services may be depicted by three categories: (1) Commercial³⁵ – Amazon, IBM, Microsoft, etc., (2) MilCloud³⁶ – the DoD’s enterprise cloud service for secure purposes, and (3) Cloud.gov³⁷– cloud based service that offers test bed environments in a FedRAMP compliant setting. Each have their own distributed learning related offerings; overall service characteristics are partially summarized in the table below.

Cloud Services	
Commercial Cloud	<ul style="list-style-type: none"> • Understand cost of inbound and outbound data costs • Costs associated with processing requirements, storage, security, training, access, and exiting the cloud service • Typically, security patches happen more often • Identify if service is FedRAMP compliant, will make purchase of service easier • Service can be flexible • Understand the operating requirements and if DL software is compatible
MilCloud	<ul style="list-style-type: none"> • Designed to serve DoD secure information and systems • Managed by DISA • Offers application support and database services • FedRAMP compliant • Can support data storage up to 100TB • Maintains connectivity and access to DoD Information Network
Cloud.gov	<ul style="list-style-type: none"> • Product as a service format • FedRAMP compliant • Provides a structure that allows for development of DL products before full deployment • Offers sandbox and virtual test beds • Established as a Cloud Foundry open source product, compatible with multiple commercial cloud offerings

From the DL interviewee stakeholder perspective two areas of cloud service interest were highlighted: (1) distributed learning content migration, and (2) information technology as a Service. When considering cloud content migration, distributed learning stakeholders also have the additional concern of accommodating Electronic Learning (E-learning) standards and specifications. While some stakeholders have already considered cloud content conversion incorporating specifications such as xAPI, many need and requested further introduction to both the benefits of using xAPI conformant systems, and how xAPI can further organizational learning and developmental needs.

³⁴ Task 5(b) Cybersecurity Barriers to Distributed Learning Modernization Analysis Report

³⁵ How to Buy | Amazon Web Services. (n.d.). Retrieved July 16, 2018, from <https://aws.amazon.com/how-to-buy/>

³⁶ MilCloud. (n.d.). Retrieved June 8, 2018, from <https://www.disa.mil/Computing/Cloud-Services/MilCloud>

³⁷ Cloud.gov. Retrieved June 11, 2018, from <https://cloud.gov/overview/technology/iaas/>

- Many distributed learning stakeholder interviewees reported that they were the authors of their own content; however, they had concerns about the processes and related information technology policies for distributed learning cloud content migration. Towards this discussion, the Defense Information Systems Agency (DISA) has a brief on the contracting officer's perspective for acquiring cloud services, which may be found amongst other related resources at the link below. Additionally, in terms of distributed learning acquisition of cloud services, the DoD Enterprise Software Initiative (ESI) is project resource for Software as a service (SaaS), information technology services. They have several buyer's checklist for the purchase of software (i.e., Commercial off-the-Shelf software and enterprise software licensing guide) that may be found below. This resources provides (1) a series of checklists for activities, such as, purchasing software or COTS services and (2) walk throughs of the considerations when it comes to the process of negotiating and purchasing products. They focus on, not only, a way to structure the approach to acquisition of software but also the questions to ask in order to ensure that compliance is met when it comes to acquisition as well as cybersecurity adherence. Website - <http://www.esi.mil/Resources.aspx>

Difficulties of a Limited Consumer of DL Capabilities

A reoccurring theme from offices that were interviewed was a need for additional assistance during the project planning and acquisition processes. Often, the educators and performers who use the DL systems and services have little or no involvement in acquisition process inputs. Distributed learning stakeholders vary in their access to acquisition vehicles and pathways, and have different levels of ability to influence organizational acquisition processes. That said, they are resourceful in being able to capture DL applications, systems, and services required to meet their needs. Below are practices captured from our stakeholder discussions of the challenges and best practices for acquisition DL capabilities, and the development of tools to aid in the acquisition of distributed learning technologies and services in the areas of flexible acquisition practices, vendor accountability, and cybersecurity concerns.

- **The more the merrier** (flexible acquisition practices): Stakeholders have opened the aperture of acquisition to find contracting vehicles with the level of support needed to meet their distributed learning needs. To meet their needs, some stakeholders have worked within their organization to expand access beyond small business contracting limits. Some stakeholders have encouraged contracting methods that increases the involvement of small businesses.
- **Keep it focused for accountability** (vendor accountability): Stakeholders have base contracts that contains core information on their distributed learning standards. Those using an Indefinite delivery/indefinite quantity (IDIQ), elaborate on the specific standards in the delivery orders (DOs) and use that as a base of management for accountability. Organizations can monitor from a broad SOW, and then bring focus to a given project through the refined DOs.
- **Separation of content and technology** (vendor accountability): For overall organizational contracting process ease and ability to introduce specific contracting language needs, some stakeholders have found it helpful to have separate contracts for content and technology. This is a way to address specific specification requests based on potential technology requirements.

- **Come as you are** (flexible acquisition practices): Distributed learning stakeholders, reported limited resources for surveying the most innovative solutions to meet their specific distributed learning needs. Some have required it from vendors. Additionally, DL stakeholders cited the integration of commercial developers as a means for DL modernization into their DL research and development ecosystem can be achieved through OTAs.
- **Test it first** (cybersecurity concerns) : Front end DL cybersecurity evaluations are important for the successful acquisition of new capabilities. Some stakeholders require vendors to check their products in test beds that mirror government cybersecurity and content environments, before they commit to purchase.

Conclusions

The Under Secretary of Defense for Acquisition and Sustainment (A&S) has made the DoD business reform initiatives a priority to provide a more efficient system for defense acquisition. There are opportunities to align DL procurement and acquisition with these efforts. Members of the DL community provided insight into needs associated with their DL acquisition efforts and what could improve their ability to purchase the products they are looking for. They helped craft an understanding that produced the following set of enabler areas for acquisition of distributed learning technologies and services:

- **More flexible acquisition pathways and resources for DL systems, services, and infrastructure.** Distributed learning stakeholders have varying contractual resources for the acquisition of distributed learning products and services. That said, stakeholders were interested in identifying alternative, creative, and tailorable ways to open the aperture of flexible acquisition. As a whole, stakeholders desire to have additional opportunities to capture needed capabilities and ways to learn more about the latest developments in DL systems and services. In practice, some distributed learning stakeholders mentioned use of Other Transaction Authorities (OTAs), and seeking alternatives to and use of small business use, as way the open the aperture of acquisition pathways for obtaining DL systems, services, and infrastructure.
- **Considerations when requesting distributed learning products and services.** Distributed learning system, applications, content, services have specific cybersecurity compliance and functionality considerations before integration into the DoD networks. The ability to address urgent needs and requirements, and testing before executing a traditional acquisition pathway through resources such as centralized distributed learning test beds, perhaps provided by ADL, were stated areas of DL communities interest. Complementarily, further resources for the discussion of the general implications of cloud services, and xAPI use, implementation, and integration were stated areas of interest. Providing joint distributed learning acquisition and project management professionals to assist in DL product and service procurement could be a potentially advantageous partnership area for ADL to pursue.
- **Difficulties of a being a limited consumer of DL capabilities.** Distributed learning stakeholders struggle with infrastructure resources to assist in acquisition processes for distributed learning products and services. A comprehensive, standardized manual for distributed learning operational terms and definitions associated can codify the DL communities understanding of DL

technologies and services would also be an area of continued investment. Another worthwhile approach is to pursue ways that bring in insights from all levels of the acquisition chain, from instructor, to developer, to contract professional, to department head, into procuring the most appropriate DL technology or service would be of value.

Further platforms for information sharing, like those already provided by ADL³⁸, can provide members of the DL community the access and awareness of a standardized practices for testing, prototyping, purchasing, and utilization of appropriate DL software, hardware, or services. Providing education and training units opportunities where there is an ability to pull in distributed learning professionals to aid in the process of project development and acquisition is an area of interest.

³⁸ <https://adlnet.gov/ifest-2018>

Appendix I: Task 6 Procedures and Structured Approach

Method and Design

For the types of issues we expect to encounter with both tasks, it is not possible to fully anticipate the breadth or depth of issues that we will encounter. It is imperative, however, to have a structured approach and apply it consistently to the extent necessary to dive as deeply as necessary to get at *root causes*. For this method, we define *root causes* as those for which *actionable, implementable recommendations* can be made. This process of heuristic analysis, then, may require multiple analytic cycles to “peel the onion” of complex issues from what is often stated as the issue in reality being the effect, not the cause. Thus, participants are likely to define an issue in terms of its effect (the “what”) rather than its cause (the how and why). Even for those who attempt to identify causes, those things they are calling causes are in fact the effects of deeper causes. Because we cannot identify, a priori, what the issues are going to be, we cannot lay out how many levels down we will need to dig to identify the root causes that result in higher-level effects.

Overall Approach

Potomac Institute for Policy Studies (PIPS) will draw from our interviews with the key subject matter experts the most prominent obstacles that many/all the Services are trying to overcome. PIPS will then analyze to explore core causes and address specific recommendations ADL may employ (policy update, technology demonstrator, changes to procedures etc.) to address the problems. Questions are developed to (a) identify the particular problems within different Services (Army, Navy, Marine Corps, Air Force) and Organizations (Joint organizations/Joint Knowledge Online) are facing and (b) their approaches to addressing them.

The study will be based upon participant responses to predetermined semi-structured open-ended questions. The experimental materials include an interview script.

Population of subjects to be studied

PIPS has identified the updated DoDI 1322.26 stakeholders, DL Cybersecurity Technology Stakeholders, and Service POCs for the ADL Initiative, Defense ADL Advisory Committee (DADLAC). These groups will be recruited to participate in this study and will be asked to identify additional related DoD distributed learning stakeholders for interviews. All participants will be 18 years or older.

Inclusion/exclusion criteria

PIPS Research Associates, in conjunction with ADL, will compile a list of qualified subject-matter-experts (SMEs) with experience in DL modernization, implementation, and integration issues.

Safeguards

Privacy and confidentiality: All interviews will be not for attribution. Audio recordings are prohibited during these meetings. Written notes will be coded and stored with numeric experimental identifiers. The master list of the coded and stored numeric experimental identifiers will be kept under lock and key with access restricted to the study lead.

Risk/Benefit - Data Safety and Monitoring Plan

The study poses minimal or transitory risk. For example, responding to questionnaires or feeling embarrassment about an organization's ability to acquire DL systems. There are indirect benefits for participation in the study. For example, a sense of pride in contributing to the knowledgebase, and potential for future improvements on cybersecurity/acquisition processes. Interactions includes the following interactions between investigator and SME: face-to-face and phone interaction with questionnaires and laptop computer.

The study will be reviewed and governed by PIPS investigators, including the Principal Investigator, Kathy Goodson, Subject-Matter-Expert, Thomas O'Leary, Subject-Matter-Expert, Laura Worcester, Subject-Matter-Expert, Dwight Lyons, Research Associate, Adam Steele and Research Associate, Sabrina Worcester. Collected information and data will be delivered to ADL at the end of the contract period. Back up collected information and data will be destroyed by PIPS at the end of the contract period. Adverse events are not anticipated. The PIPS investigators are responsible for review of cumulative adverse events which will be documented and reported accordance to the policies and procedures of the Human Research Protection Program (HRPP).

Recruitment

Identified SMEs for the Cybersecurity Barriers to Distributed Learning Modernization and Acquisition for New Distributed Learning will be contacted by PIPS to discuss the study parameters and set up potential interview dates. This includes members of the PIPS cybersecurity, acquisition, and policy SME network. Participants may choose not to participate at any time. We anticipate that SMEs contacted first may not have all the information needed to conduct the multiple cycles needed to get from top-level effects to underlying root causes. Thus, we expect that initial interviews will identify additional types of personnel that need to be contacted to pull the threads from effect all the way through to root cause(s).

Potential initial SMEs to include:

Acquisition and Requirements POCs

- Chief Information Officers (CIOs)
- Authorizing Officials (AOs)
- DISA Infrastructure Engineering (IE) POCs

DL Cybersecurity Technology Stakeholders

- DL technical designers
- JKO technologists (hardware/software developers)

DL Service POCs

- DADLAC
- Military Education POCs

Demographics

1. Active, Reserve, Civilian
2. Position/Organization
3. Title/Rank
4. Experience with DL systems
5. Experience with DL modernization efforts/Experience with DOD acquisition process

Tasks 6 Procedures to be followed

Task 6 Semi-Structured Interviews

Interviews will take place via telecom or in person with individual stakeholders. There will be a general series of initial semi-structured open-ended questions. Based on stakeholder responses, follow on questions may be asked to further the discussion. PIPS will request stakeholders allow 30-45 minutes but no longer than 60 minutes.

1. Stakeholders will meet with 1 facilitator and 1-2 rapporteurs.
2. Stakeholders will be asked to respond to interview questions in order to further project discussion.
3. Upon completion of the interview, researchers will request follow-up dates and times with the stakeholders via phone or email if additional information is required.

Task 6 Research Apparatus

The research apparatus will consist of the following sections.

1. Semi-structured open-ended questions, for the purpose of identifying current needs for acquiring DL new tools.
2. Statements related to the perception of priority areas for acquisition of new distributed learning resources, utilizing a Likert scale analysis ranking system.

Statements from the semi-structured open-ended questions will identify current distributed learning community acquisition needs and stakeholders will be asked to rank these in order of impact. Acquisition categories will be broadly classified around the individual themes identified. Stakeholders will be asked to rank their perceptions of the impact of identified areas and their ability to acquire distributed learning products with the following scale: 0 - no impact, 1 - minor impact, 2 - moderate impact, or 3 - major impact.

Data Analysis

1. Responses to the open-ended questions will be summarized qualitatively and quantitatively examined for themes, specific data, and other information.
2. Responses to the Likert scale analysis ranking system will be further analyzed in order of impact or need.

Task 6 Semi Structured Interview Questions

Final goal: Task 6 - Acquiring specific language, terminology, and/or statements from the DL community that provide detailed information that is beneficial to acquiring of useful DL capabilities.

Intro Script Task 6:

- The Potomac Institute for Policy Studies (an independent, 501(c)(3), not-for-profit public policy research institute in Arlington, VA) is supporting the Advanced Distributed Learning Initiative (ADL) in a task to explore distributed learning (DL) modernization best practices.
- As part of our task, we are interviewing government stakeholders to researching possible ways for making DL acquisition more “turn-key” for DoD DL leaders.
- These interviews will directly inform our research on identifying potential pathways to address the challenges of DL acquisition.
- Non-attribution Statement: All correspondence collected during interviews, surveys, or through other forms of information generation will be safeguarded by the research team. Without the express permission of the interviewee, nothing he or she says will be attributed to that speaker directly or indirectly and/or released to anyone who was not affiliated or involved with the information exchange. The research protocol will not involve names as identifiers and attribute data to an interviewee through a coded system. All research material is for the expressed purposes of the research team and members of ADL.
- The now revised DoD Instruction 1322.26 ("Distributed Learning") enables DOD stakeholder further exploration of the application and development of distributed learning systems and software services.
- Acquisition of distributed learning software, standards, and technologies that allow for sharing of learner data [such as: *Total Learning Architecture (TLA) enabled technologies*, xAPI-enabled technologies, open-architecture technologies, open-source systems, open (licensed) content, browser plug ins and cybersecurity complacent systems] is the focus of this research.
- The goal of this research is to capture relevant acquisition terminology, checklists, processes, and successful examples of learning systems modernization will improve the DL community’s ability to effectively select new technologies.

Task 6 Interviews Overview

1. Describe your organization’s most recent DL acquisition efforts. What were the results?
 - a. What are the greatest challenges your organization is experiencing with DL acquisition?

- b. Were there particular areas in which acquisition language in contracts was particularly helpful or problematic?
 - c. Has your organization run into any showstoppers?
2. Within your organization's current DL acquisition processes, are there specific issues that are causing the most difficult delays/cost incurrences?
3. What type of acquisition language/checklists/templates/examples would improve your organization's DL acquisition processes?
 - What is the impact of the described resource on your organization's ability to modernize distributed learning [utilizing the following scale: 0 - no impact, 1 - minor impact, 2 - moderate impact, or 3 - major impact]?
4. Describe your organization's use of distributed learning specifications and standards.
5. Describe your organization's current DL acquisition practices as related to:
 - a. xAPI enabled technologies (*e.g., enable interoperable experience, performance tracking capabilities, learning analytics, data integration with multiple applications or systems*)
 - b. Open source systems (*e.g., code, software, licenses*)
 - c. Open architecture technologies (*e.g., network platform interfaces, IP restrictions, primary systems and subsystems*)
 - d. Open license content (*e.g., software plug-ins, web browser development, source code and data*)
 - e. Proprietary content (*e.g., ownership of code, data/IP rights, content restrictions, data ownership*)
 - f. Cloud based systems (*e.g., Software as a Service, Platform as a Service, Infrastructure as a Service*)
6. What are some areas related to the issue(s) just discussed where you think the ADL Initiative can help your organization?
 - What solutions/assets/procedures/techniques/tactics would help the most?

Appendix II: Analysis and Coding

Pre-set and emergent codes that were assigned to the raw data that was collected during the stakeholder interviews.

Task 6 Acquisition for New Distributed Learning Identification Pre-Sets:

- Acquisition language
- Successful modernization efforts
- Types of acquisition
- Challenges
- Enablers

Analysis Code:

- Category: Acquisition Types: Methods of purchasing activities
 - Subcategory 1: Practice: What is to be procured
 - Acquisition of new: Obtaining different SW/HW/Service
 - Update: Bringing older systems into compliance with new standards
 - Transition of Legacy system: Movement of current system to current system
 - Subcategory 2: Service Sought: Type of assistance provided
 - Man: Procurement of personnel for operation, maintenance, improvement of system
 - Train: Educational services
 - Equipment: Providing hardware or software
 - Subcategory 3: System Sought
 - Hardware: Physical system
 - Software: Programs and other operating information
 - xAPI enabled technologies: Programs operating xAPI architecture
- Category: Enablers
 - Checklist: Systematic listing of objectives
 - Template: Drafted, reproducible contract document
 - Terminology: Consistent standard terms and definitions
 - Other: Not aligned with other enablers
- Category: Challenge
 - Cost: Price of procurement
 - Time: Length of time for acquisition and procurement processes
 - Security: Cybersecurity requirements
 - Policy: Guidance on how to conduct DL acquisition
 - Organizational: Internal processes of an organization

Analysis and Coding Table³⁹:

Question	Responses	Analyst 1 Identifiers		Analyst 2 Identifiers	Comments
		Code	Frequency	Code	
1. Describe your organization's most recent DL acquisition effort. Where there particular areas in which acquisition language in contracts was particularly helpful or problematic?	379 - We do leverage acquisition tools such as OTAs to secure prototypes and do R&D rapidly to get traditional contractors and tech. Our challenge is to find the most promising and capable tech developed for commercial uses and adapt that to the military (Types of acquisition)	Acquisition types - Practice (Acquisition of New)	022	Acq types/	Integrating commercial developers into the research and development ecosystem using OTAs. (Leveraging OTAs in order to quickly gain access to prototypes for transition into the service. High funding ceiling incentivizes vendors to engage with training and education commands.)
	361 - We own all of our data. We do all the surveying, we have institutional research and accreditation does that. (Successful modernization efforts)	Enabler (Other)		Enablers/Other	Example of decision making and planning done in-house (curriculum assessment, updating/modifying etc.)
	022 - we didn't have a good contract vehicle to get content contracted. We started looking at vehicles that easier access. Ironically I found out that we did have one but it wasn't geared the way we needed it to be geared or had the right language in it. We assumed that, modified it, stole other contract vehicle language and released it out and was very successful. Within 18 mo of a 3 yr POP we already were on track to exceed the contractual funding levels. We got involved again started a new one, we actually went from one contract that had analysis, design development, and high end PC simulations into 3 separate contracts strategically outsourced for 700 M funding ceiling with onramp and offramps for the vendor (Acquisition language)	Practice (Acquisition of New) Enabler (Template)	379	Enablers/Template	Finding contract vehicle that allows for ease of modification and funding.

³⁹ ³⁹ The Rows reflects extracted stakeholder feedback (coded with numeric experimental identifiers) from the outlined questions. The chart Columns include the analysis Code and the Frequency, which is a reference to another stakeholder which may have stated or eluded to similar information.

	<p>373 - we're a consumer of the capability rather than purchaser of the capability. (-When we are hosted on the XXX anything they need to do from a hw standpoint or upgrade to the virtual machines are outside of our purview, we are a consumer in that regard) (Challenges)</p>	<p>Challenge (Available Service)</p>	<p>380, 026</p>	<p>Service Sought/Equip</p>	<p>Operational requirements. (Limited consumer)</p>
	<p>380 - all of our stuff is GOTS, we manage and control it and we can tailor to operational needs that are unique. There is no COTS system that I can pluck off the shelf and use because if I could I would. Because of the uniqueness of the IT battlespace and the reqs that come down from operations comma I have to build it. (The first thing we do is look at what it does, what does the authentication layer look like in the system? All of our stuff we need to get the student/admin in based on that role I was talking about earlier. What is the authentication, how is the content segmented, what database/s does the it support? We use oracle right now but are thinking of moving to SEQUEL with a layer in between that does the interpretation. All of those factors are first before I can consider using something. It Integrates and the admin's can get to it and behind the scenes it will fit in the engine compartment.) (Challenges)</p>	<p>Challenge (Available Service)</p>	<p>373, 362</p>	<p>Acq types/System Sought/ SW</p>	<p>Operational requirements. Capabilities are developed and owned by government/military entity specifically tailored for their needs (scalability/efficiency). (time and resources)</p>
	<p>361 - I looked at several options that I identified that our best option was to pursue an existing? An IDIQ contract that have a number of primary, we gave to them, 4 of them were interested, we interviewed them, in it I include the word? they came back and asked what the word meant and I said if you don't know it, your probably not qualified to do the work. The one that won understood the concept and used XXX for the coursework. (Enablers) (Types of acquisition)</p>	<p>Practice (Transition of legacy system)</p>		<p>Enablers/Terminology</p>	<p>Used in place IDIQ for all updates needed.</p>

	362 - Around acq, the biggest problem is the process itself and the fact that ppl are executing acq which still does not include own data rights but when we do our SIS it takes 18 mo. to buy a suboptimal program. (Challenges)	Practice (Acquisition of New) Challenge (Cost)	368	Challenge/Time	Procurement not oriented to capture demands of current learning ecosystem. (organizational shift)
	368 - being very specific about when someone builds a component for XXX for the govt that the govt owns rights for that. This is something new for Adobe and their legal folks are having an issue with it. So, from a procurement standpoint, I guess it would be more integration services or professional services having an understanding that when the govt pays for a component to be built the govt owns the intellectual property rights and can be shared across DoD. (Challenges)	Challenge (Policy)	362, 025	Enablers/Terminology	Baseline vendor awareness to the government right expectation is the major concern.
2. Do you have any examples of some acquisition gotchas that could have been prevented?	379 - With XXX we have access to an application scripting interface (ASI) to review/scan source code but we don't own the rights to it. We don't have full API access we have ASI. It limits what we can do, we can't compete to a third party or add updates and mods to the sw. I have an idea in mind and a good proof of concept that was done in a XXX on how to get us out of vendor lock with XXX. (Challenges/Enablers)	Practice (TRANSITION of legacy system)	361, 362	Challenge/Policy	Vendor lock prevents adoption of DL best practice in current environment/ecosystem.
	103-They don't have experience in putting systems outside of their own facility so they don't know who to contact, who the POC is at DIA, who pays for the system. A lot of that stuff I've had to figure out through friends, through DARPA to help them get this situated. Now they've got a handle on it, now we are waiting on funding and the line. DIA only does that a certain time of the year when they are accepting funds, fiscal years. It's been a whole lot of systems issues with the client getting this done. (Challenges)	Acquisition Type-Equip	26	Acq types/Practice/New	Lack of process for implementation of alternate sites.
	022 - One of the drivers to split them out was it deepened the base of the contractors that we could get and allowed the contracting agency (XXX) to open that up to small businesses to help with their small business quota's and allowed the other 2 to proceed the normal route without SBAs being involved. They	Practice (Acquisition of New)	(379)	Challenge/Policy	Opened the aperture of acquisition to find contracting vehicles with the level of support needed to meet their distributed learning needs.

	were still there but there was another way to get into it. (Enablers)				
	362 - Even if we have the image of buying on amazon marketplace we don't have the business reality of being able to execute that. If going to GSA Advantage was as easy as going to amazon marketplace we would be able to go accomplish so much more as educator's n the DoD. (Challenges)	Practice (Acquisition of New) Acquisition types (System Sought)	380	Challenge/Policy	Current DL acquisition marketplace not streamlined to meet educator needs.
	025 - Clearly stated in the base contract and each DO that anything delivered to the govt belongs to the govt. We do not allow for proprietary branding. (Acquisition language)	Enablers (Terminology)	368, 022	Enablers/Terminology	Procurement not oriented to capture demands of current learning ecosystem.
3. Similarly, do you have any examples where you (your organization) or someone else (another organization) were clever/smart and prevented an acquisition gotcha?	379 - Where I'd like to see it in the future is our contract solicitations specify "we want to see all the great stuff you can do with your cutting edge tech but first and foremost we want to demonstrate to us that you can import this test scenario's and we will observe how it runs in your environment for all the elements of fidelity that we put in, be it atmospheric lighting, physics models, how does that run in your environment? And then when you've passed that interoperability and can import and export in our data format then we would like to see all of your proprietary IP for which we will pay the premium" (Acquisition language/Enablers)	Enablers (Template)	022, 346	Acq types/Practice/Update	OTA implications. (Recommendations toward centralized test bed resources/environments.)
	022 - The base contract has our standards in there and elaborated in the DOs underneath the IDIQ and then we make sure we manage them as close as we can. It's not always successful but I think it is more successful now than in the past. (Acquisition language)	Enablers (Checklist)	025	Enabler/Checklist	Resource (tracking throughout DL product life cycle). (Organization monitors from a broad SOW through the refined DO in order to bring focus to a given project.)

	332 - This one was pretty simple, we didn't have anything like this before so we just stated that we needed to be able to capture audio/video and sync in the cloud. (Acquisition language)	Acquisition types - Practice (Acquisition of New)		Acq types/Practice/New	Specific specification request based on potential technology requirements.
	361 - As I remember I had some boiler plate language. We don't get penalized for plagiarism in the DoD, reinventing the wheel is something that's frowned upon.	Practice (Acquisition of New)	362	Enablers/Terminology	Internal processes favor pre-approved language. Efficiency driven language to speed process and increase successful bid process.
	025 - One thing that has been helpful is the Life Cycle Mgmt. book. If you want to understand how the content was developed you can look in this book and say this is how it was done. (Enablers)	Enablers (Checklist)	022	Enabler/Checklist	Resource (tracking throughout DL product life cycle). (Integrated project management tool)
4. Has your organization run into any DL acquisition showstoppers?	379? -Our showstopper is the lack of requirement later than 1999 [...]. (Challenges)	Challenge (Organization - Internal)	380	Challenge/Org	Operational requirements.
	022 - So things like xAPI, augmented reality, virtual reality, those are mentioned in the base. When it comes to the DO we become more specific about what we are looking with that. Right now, xAPI, the XXX is struggling with PII because we aren't sure exactly sure what we want to do with it. The data capabilities of that. (Acquisition language/Challenges)	Challenge (Organization - Internal)	346	Challenge/Org	Procurement not oriented to capture demands of current learning ecosystem. (Need identified - demonstration) Gap in understanding of xAPI capability offering. Figuring out deliverable as the process progresses.
	346 - It's important to repeat for the business to be efficient we are absolutely dependent on ADL creating a performance test suite and other development stage tools to make the process more efficient in terms of cost and accuracy. (Enablers)	Enabler (Other)	379	Enablers/Other	Need (request of ADL) -Centralized test bed environment supervised by ADL for DoD clients.

	368 - I mentioned blackboard. It was the end on 2016, our licenses were expiring. Our contracting officer said that the contract took so long for him to get to he would give us a 1 yr. ext. but he would not allow us to contract with Blackboard because they were not Fed Ramp accredited and this was a showstopper. (Challenges)	Challenge (Policy)	362	Challenge/Policy	Baseline vendor awareness/response to the government expectation is the major concern. (Smaller scale contracting is reluctant to go through expensive, time consuming FedRamp process for niche DL clients.)
	373 - We have challenges, we are a .mil org and some of the folks who we deal with are on an .edu. enterprise, there are challenges but those things won't resolve themselves through an acq strategy. It would be more appropriate from our operational perspective is if the DL acq should occur as a result of a req. Where does that operational req come from? Is the req vetted based on all the factors, including battlespace? Or is it a high level idea, a solution looking for a problem and that becomes my problem. That is the bigger issue rather than acq. (Challenges)	Challenge (Organization - Internal)	380	Challenge/Org	Operational requirements.
	026 - The restrictiveness we talked about earlier with educational technologies being considered to information tech when it comes to safeguarding vs ease of access consideration. This is the biggest issue we are up against. (Challenges)	Challenge (Policy) Challenge (Security)	332	Challenge/Security	Educational technology policy enveloped by information technology policy. Disconnect in understanding of what DL means to different offices involved with acq. Also, end-users (educators) not involved in the initial stages of DL acq.
	361 - The biggest problem has been FedRamp. I know that Blackboard has been jumping around. The XXX has gone to Moodle, OS to try and get around that. Now, Blackboard is partially FedRamp certified. We are constantly waiting to see if someone shuts down our LMS. They seem to have responded to the challenge and have gotten around that. (Challenges)	Challenge (Policy)	362,380, 368	Challenge/Policy	Baseline vendor awareness/response to the government expectation is the major concern. (Challenge-services that do not meet govt standards, lack of vendor desire to undergo FedRamp process for small batch client)

	332 - We ran into problems with that design. We brought Student Information System and the academic affairs team was running it, when IT ran a scan they had 130 violations. We have swung the pin and IT is leading the charge. With student information, it needed to be secure. My dept. is the liaison between the 2. It has to meet all the IT reqs. (Challenges)	Challenge (Security)	026, 022	Challenge/Security	Educational technology policy enveloped by information technology policy.
	346 - contracting perspective for DL content , there is a desire in the DL comm to use cloud services. They want to escape the confines of the LMS. They want flexibility and instructional design ability of movement through the content and only report back what is necessary to report. Amazon web services is the preferred. (Challenges)	Acquisition types - Practice (Acquisition of New)	379	Challenge/Org	Procurement not oriented to capture demands of current learning ecosystem. Desire to leverage cloud services to improve their offering to faculty and students, but unsure about what cloud means, offers, and processes.
If you had a magic wand, and could wave it and solve one problem, what would that problem be?	379 -If we focus on what is the output of training, I want skilled marines/soldiers/sailor/airmen, ready to execute a mission. How would we measure the readiness of an individual marine? (Challenges)	Acquisition types - Service Sought (Train)		Acq types/Service Sought/Train	Beginning with the endstate in mind. Utilizing DL to improve readiness rates for the services.
	346 - We provide a contract vehicle with our requiring activity that we use when developing training and education and very often that innovation is in conflict with the STIG. The authoring tool captivate there are many capabilities within the authoring tool that are turned off based on the STIG. Where content is published out in the authoring tool we find that many of the capabilities will not play. (Acquisition language)	Challenge (Organization - Internal)	026	Challenge/Policy	Involving relevant entities in acq. process (end-users, acq. dept., contract officers, IT security) in order to ensure effective and efficient acq. strategies are developed.

	368 - I mentioned blackboard, FedRamp accredited. It was the end on 2016, our licenses were expiring. Our contracting officer said that the contract took so long for him to get to he would give us a 1 yr. ext. but he would not allow us to contract with Blackboard because they were not FedRamp accredited and this was a showstopper. (Challenges)	Challenge (Organization - Internal) Challenge (Time)	362, 380	Challenge Organizational	Baseline vendor awareness/response to the government expectation is the major concern. (Challenge-services that do not meet govt standards)
	346 - We've had limited steps in trying to adopt xAPI and specifications from what it is now but the nature of the standards business is when you push something from a spec to a standard, whether its ppl making a delivery system or tool it sets back any investment that you place in a new technology or as a standards before you have the performance test suite it increases the risk of failure and development and implementation and tends to turn off the leadership from making further investment because you have a failure. It also becomes more expensive without the test suite and the lower graded labor we use tools for testing to find out if something is ready for testing instead we have to put a more highly paid system developer, expert. They now have to perform all the steps that would have been performed by the suite and it's prone to error and we don't have the ppl to do it. (Challenges/Enablers)	Acquisition types - Service sought (MAN)	368, 022, 346	Acq types/Service Sought/Man	Need (request of ADL) -Centralized test bed environment supervised by ADL for DoD clients. Integrated project team structure.
What is the impact of the showstoppers on your organization's ability to modernize distributed learning [utilizing the following scale: 0 - no impact, 1 - minor impact, 2 - moderate impact, or 3 - major impact]?	026 - [Moderate/Major] struggling to keep pace with expectations of our students providing them with technologies that they are used to seeing in their everyday lives and access that they are used to seeing. State of the art technology that gives us the ability to meet them where they are and meet their expectation and sometimes exceed them. Sometimes our systems and policies keep our hands and feet shackled when it comes to providing a high value educational environment. (Challenge/Type of Acquisition)	Acquisition types - Practice (Acquisition of New) Acquisition types - Practice (UPDATE)	346	Acq types/Practice/New	Austere fiscal environment implications. (Education vs. training.-Do they require the same level of IT and cyber security vetting?)

	026 - From our perspective it has been a rough road but the command above us has a game plan. Quite frankly many of these things that I've highlighted, they are going about it from a totally different manner. (Challenges/Successful modernization efforts)	Enabler (Other)	373	Enablers/Other	The educational training command is building a learning ecosystem. (Strategy)
Recommendations	022 - Our processes are in place to make sure it runs on our network before delivery. We have a test track system where the contractors can test it out before it even gets into our system then we have a govt content accepting environment that it gets put in that mirrors the current production system and the content sponsor checks it in there. (Successful modernization efforts)	Enabler (Other)	332, 346	Enablers/Template	Resource (tracking throughout DL product life cycle). (Successful modernization efforts.) Front end cybersecurity implications.
	026 - The #1 thing we advocate and the DoD has come on board is move away from lowest price to a best value approach. The #2 thing we've run into on contracting across the areas we work in is the desire to move as much work as possible to a small business. Often times the acq agency really doesn't understand what the operational reqs are and will assume because its information tech that anyone can do it and they will try to drive you to small business that have limited capabilities for complex acquisition.(Acquisition language/Successful modernization efforts)	Acquisition types - Practice (Acquisition of New) Challenge (Policy); Challenge (Cost)	373	Challenge/Cost	Procurement not oriented to capture demands of current learning ecosystem. Educational technology policy enveloped by information technology policy. Austere fiscal environment implications. Integrated project team structure.
	332 - USA Learning scares us because we've had such a bad experience. Moodle being an OS system and we can't touch anything with it, it's locked down and everything is a contract mod and quite a bit of \$. Even for simple things like rearranging record. (Challenges/Enablers)	Acquisition Type - Practice (UPDATE); Challenge (Cost)	346	Enablers/Other	Purchasing (acq) concern- research should be performed to verify and validate that the appropriate tools are compatible. This goes back to listing specific requirements in contract/DO. (Communicating the offering USA Learning can and will provide (awareness campaign).)

	<p>368 - That's one of the big things that the IC is going to come out of the modernization effort. Ppl are going to be driven to implement xAPI, most services have looked or are looking at it but no kidding we will be implementing it. (Challenges)</p>	<p>Acquisition types - Practice (Acquisition of New); Acquisition types - Systems sought (xAPI enabled technologies)</p>	<p>346, 022</p>	<p>Practice/Acquisition of New Service Sought/xAPI enabled technologies</p>	<p>Resourced needed – xAPI. Education and awareness of xAPI capability offerings.</p>
	<p>026 - We don't have a forward-looking support org that looks at what's out there to help achieve the mission. We have to identify reqs in some form of a PWS. We don't have that capability that you just described. We have ppl that are very busy insuring the legacy systems are running and overwhelmed with sustaining the systems. We have not built an institutional arm that is focused on looking at state-of-the art tech and to me it should operate backwards than it normally operates. We on the operational side of the educational mission should have those experts come to us and say hey have you seen this capability/tool it will change how your delivering your DL. This isn't the way IT support is generally structured so that hasn't been transferred to educational tech support. (Challenge)</p>	<p>Acquisition types - Practice (Acquisition of New)</p>	<p>380</p>	<p>Service Sought/Equip</p>	<p>Providing a tech scouting and awareness office that inform educators as well as taking their requirements and searching vendors or go systems for a solution.</p>

Appendix III: Interview Data

Task 6 Interview Overview

379

7. Describe your organization's most recent DL acquisition effort. Were there particular areas in which acquisition language in contracts was particularly helpful or problematic?

My responsibility for the last 4 years in this job the XXXX terms nonstandard training systems, which are on the groundside. XXXX handles aviation-training systems. I have a liaison that works next door with XXXX division.

What we do here are things training systems that are not tied to specific weapons systems platforms. We do some of the through an MOA because it's more cost effective. We do: XXXX and the XXXX DL online. It's our only defense business system everything else is platform IT app or training sys.

We have the widest variety of the type of sys managed here at XXXX of anywhere in XXXX because we have the most senior Facility engineer, you can't do a range project w/out integrating the training sys with the facilities and the real property. We have IT SW intensive systems, mechanical system such as our underwater egress trainers. Our requirements sponsor is the, XXXX communication command.

The top level of acquisition challenges, somewhat self-serving, I'll make the observation that acquisition is often faulted with being slow and unresponsive but we are limited because we can't deliver a capability that is beyond what has been validated as a requirement for training. Between the threshold and training capability we have room to work but once we've achieved the objective capability, it's hard to justify R&D dollars to push the boundaries farther to get more than we presently have. One of my frustrations within the XXXX our training systems requirements are old to ancient. During my 4 yrs. in this job not a single new training system or existing requirements XXXX has been updated with new XXXX that require it to go to the XXXX for a decision memorandum to say yes this is a new or expanded capability. I've been dealing with old requirements and trying to get as close to the objective as possible and to get funding. There is a willingness to fund but it's ironically easier to get funding for a training system than a requirement for a training sys. The way the XXXX is supposed to work, as the XXXX we are not supposed to write our own requirements because it undermines the separation of requirements from acquisition and the budgeting and planning execution.

Rather than nontraditional I would say non-standard. A standard training system is a system that supports a platform such as type model series aircraft has a type model series simulator that supports them. Ours are more general skills generally not tied to the weapon or the vehicle specifically because it is more economical and effective to have one driver simulator to train all of the ground tactical platform we do one system with multiple configurations in that area

We do leverage acquisition tools such as OTA's to secure prototypes and do R&D rapidly to get traditional contractors and tech. We speak frequently to DIUX about nontraditional sources of tech and companies that may be relevant to us particularly virtual reality and mixed reality.

The DoD was never going to be on the cutting edge of XXXX because the \$ is coming from XXXX industry. Our challenge is to find the most promising and capable tech developed for commercial uses and adapt that to the military and then we put our classified content in there and higher fidelity in the VW.

In terms of user interfaces and the XXXX it comes from the XXXX industry. We haven't broken new ground in that area. Where we have done things that are new and pushed the envelope is in the area of putting XXXX into XXXX. Instead of having XXXX the XXXX. We have fielded prototypes and in FY19 we will be awarding to do the first procurement of this type of training. This is a great example where technology gives us a real huge cost avoidance.

Everyone has a different number, from what I've heard, for an F18 fully burden rate per flight hour is 26K for fuel, maintenance, everything that goes into keeping it in the air. Every hour you are training you don't have the platform in combat. We would much rather train in simulator if we can get the same level of skill as train live just to conserve our resources.

The XXXX is a great tool because it is used to train the XXXX as opposed to XXXX. When your training for XXXX is mostly a training aid. They are getting some training and coordination with the XXXX but it's mostly expensive training evolution for XXXX.

We have a MOA with XXXX that to be cert/maintain cert as a XXXX you have to do 12 terminal controls annually to remain cert. You never send 1 out at the same there are always 2, if it's an F18 that's 26K*2, 12 passes per controller your talking several sections of XXXX if you have a class at the school or one of the XXXX going through their recert. In a XXXX where you can take this with a XXXX over the XXXX via XXXX you can exercise all of the moving parts of that to a high degree of fidelity and get tremendous opportunity to do repetition and sets of practice at pennies on the hundred-dollar bill to what it would cost to train live. That's how we should employ XXXX in my estimation. We should use this so that you are operating a high level before going live.

On DL I think we are good in that area. We own the courseware but XXXX DL is one of the old requirement docs, it predates the XXXX. Everything is based on the old SCORM standard and not ape but we own it all. Not viewed with enthusiasm at senior levels. They know we can do better but we haven't gotten off the starting blocks to update.

In XXXX training we license a tool from XXXX called XXXX, the XXXX also licenses it and it's by arm forces around the world. They started off as a derivative from a XXXX from a company based XXXX. They discovered they thought they were a XXXX but they were actually XXXX about to be born. They had to XXXX out of an XXXX and XXXX so that we could do software assurance scanning and source code review to make sure what we were using was secure sw. We have an enterprise license with XXXX and can increase the # of users without increasing the cost. Everyone else pays a per seat license for that. In XXXX we have access to an application-scripting interface (ASI) to review/scan source code but we don't own the rights to it. We don't have full API access we have ASI. It limits what we can do; we can't compete to a third party or add updates and mods to the software.

I have an idea in mind and a good proof of concept that was done in a XXXX on how to get us out of XXXX. It's not that I don't like XXXX but I would like to go to full and open competition. One of my beliefs-the governments equity is in the data not the sw. We don't write the software we license it or pay people to develop on our behalf. What we need is the portability of the data to take it from one simulator environment into another because their will always be a better one somewhere down the road. We need to be able to take our courseware, our terrain, databases, scenarios and run it in whatever the best simulation environment it at that time for the particular mission. One thing we could do In XXXX that's probably easier done in DL apps is make an open scenario definition language for XXXX. There is a CISO interoperability standard organization standard for the military scenario definition

language (MSDL) that's used for XXXX where you're looking at a XXXX but it's a challenging problem to have an open XXXX. You have described physical geometry, colors, material, things you don't do in high fidelity in a high constructive simulator.

We have a very good proof of concept done by XXXX, and XXXX soon to be XXXX. Their thesis project was to see if they could take a scenario that was written in XXXX and translate that into an xml. Language scenario definition. It's basically a mapping of all of the scenario's that loads in XXXX and find them in an open govt standard language. The test was can we re-import this xml scenario through a parser and have it run with the same fidelity as XXXX and they did that successfully. They published a paper at XXXX that XXXX from the thesis. The thesis is available from XXXX.

The next step but hasn't been picked up by anyone is to take this prototype xml language and say now I want to have a different company XXXX, and be able to export from and import to different XXXX and compare them. If we can do that proof of concept I think we have something that's worth nominating to CISO as the draft standard. Where I'd like to see it in the future is our contract solicitations specify "we want to see all the great stuff you can do with your cutting-edge tech but first and foremost we want to demonstrate to us that you can import XXXX, how does that run in your environment? And then when you've passed that interoperability and can import and export in our data format then we would like to see all of your proprietary IP for which we will pay the premium".

1. Do you have any examples of some acquisition gotchas that could have been prevented?
2. Similarly, do you have any examples where you (your organization) or someone else (another organization) were clever/smart and prevented an acquisition gotchas?
3. Has your organization run into any DL acquisition showstoppers? If you had a magic wand, and could wave it and solve one problem, what would that problem be?

What is the impact of the showstoppers on your organization's ability to modernize distributed learning [utilizing the following scale: 0 - no impact, 1 - minor impact, 2 - moderate impact, or 3 - major impact]?

Our showstopper is the lack of requirement later than 1999 which XXXX. I'd like to paint a picture of how the future should be: we talk about training in the name of all our organizations, XXXX both of those are activities. You can spend all your time doing those but the output we are looking for is XXXX. If we focus on what is the output of training I want XXXX, ready to XXXX. How would we measure XXXX? I would start with going with the EDIPI number on the back of the common access card. The one anonymized number, it doesn't constitute identifying info (PII), it's 10 digits and aside from defense manpower data center in XXXX that matches your EDIPI to everything else to protect your privacy. It is a very portable number that doesn't hurt you or the DoD if someone knows it.

If you scan your CAC card or put that # in any training event and record where, when, and performance be a XXXX or XXXX, you can start to upload into the cloud all the training that's taking place and a performance evil and know something about the skill level.

We focus on XXXX because it's what worries us the most is being ready for the enemy. Before we get XXXX we have to get all the XXXX and XXXX. This has to do with XXXX, I don't know XXXX. I do know in FY13-15 the XXXX. That's everything from XXXX 1M was XXXX and for a significant # of mishap we have missing data XXXX.

We won't eliminate that totally but if we did a better job XXXX we would be able to overtake a significant # of XXXX. I'll throw out the conjecture that they were to human error and less than .01% was mechanical. Most mishaps were just XXXX and XXXX. We only had 3300 in losses in those stats XXXX. Most mishaps take place XXXX.

At a retirement ceremony of a XXXX the read off the XXXX and it will include XXXX XXXX. They know that because they record it, you never get to take a joy ride unless it is recorded in your logbook. The XXXX values on the job training/performance. XXXX never XXXX.

On the other hand, if you go to the retirement ceremony of a XXXX, you'll never hear XXXX. It's not recorded. We still use XXXX. If a XXXX goes to XXXX to XXXX they have XXXX. (XXXX) Nobody trusts XXXX. Do you know where XXXX? Probably not if it doesn't have XXXX location app. which we rarely do XXXX. In contrast for 20 a month I have a web based service to monitor my kids, you put it on the XXXX and this 20 a month will give you XXXX.

If we had this type of data collector XXXX so that XXXX all the data is loaded to the cloud and analyzed then we would know the real-time readiness of individuals XXXX. I would know as a XXXX who was XXXX were. I would incentivize XXXX. We don't have the ability and the data is not analyzed. We don't have a strategy to do that. there is a XXXX to put XXXX. Hopeful this will become a funded capability. The question is will the XXXX will consider this need so that we know the quality of our drivers.

Task 6 Interview Overview

025 (337)

Started 10yrs ago because we didn't have a good contract vehicle to get content contracted. We started looking at vehicles that easier access. Ironically, I found out that we did have one but it wasn't geared the way we needed it to be geared or had the right language in it. We assumed that, modified it, stole other contract vehicle language and released it out and were very successful. Within 18 mo. of a 3 yr. period-of-performance we already were on track to exceed the contractual funding levels. We got involved again started a new one, we actually went from one contract that had analysis, design development, and high-end PC simulations into 3 separate contracts strategically outsourced for 700 M funding ceiling with onramp and off-ramps for the vendor.

Both of those things are listed in the base contract.

1. Describe your organization's most recent DL acquisition effort. Were there particular areas in which acquisition language in contracts was particularly helpful or problematic?

One of the drivers to split them out was it deepened the base of the contractors that we could get and allowed the contracting agency (XXXX) to open that up to small businesses to help with their small business quota's and allowed the other 2 to proceed the normal route without SBAs being involved. They were still there but there was another way to get into it.

Intrusive Mgmt. We have our standards and they are clearly stated in the base contract. The base contract has out standards there and elaborated in the DO's underneath the IDIQ and then we make sure we manage them as close as we can. It's not always successful but I think it is more successful now than in the past.

We use our XXXX and the DoDi 29612.

One thing that has been helpful is the Life Cycle Mgmt. book. If you want to understand how the content was developed you can look in this book and say this is how it was done.

No. All of our content goes on a single network. We haven't done that. My uptake, whoever was running that stuff did not understand the different environments that it would live in. Our processes are in place to make sure it runs on our network before delivery. We have a test track system where the contractors can test it out before it even gets into our system then we have a govt content accepting environment that it gets put in that mirrors the current production system and the content sponsor checks it in there.

In the base contract and DO's.

1. Similarly, do you have any examples where you (your organization) or someone else (another organization) were clever/smart and prevented an acquisition gotchas?
2. Has your organization run into any DL acquisition showstoppers? If you had a magic wand, and could wave it and solve one problem, what would that problem be?

IT Infrastructure

What is the impact of the showstoppers on your organization's ability to modernize distributed learning [utilizing the following scale: 0 - no impact, 1 - minor impact, 2 - moderate impact, or 3 - major impact]?.
Significant impact

Define cloud?

My point is when you say move to the cloud, if you are talking to a development person it means one thing and if you talk to a contracts person it means something different. When we say move to the DoD cloud, it means different things to different people and there isn't a clear definition. I know some content developers who think the cloud is a mysterious thing floating above the earth because they aren't IT savvy. Pass that is where IT policy gets in the way between a level 2 piece of content that is releasable to the public to a level 4 which is not releasable but needs to have protection. In the XXXX instance it happens to be the CAC card other instances maybe not. So, IT policy that allows you access to that content is a little hazy. Left up to the services when you say DoD cloud the Army, Navy, AF, MC rules are different.

Yes, I say that for 2 reasons because the policy has to be consistent and enforceable across to make sure. As XXXX we work in different environments. I have people sitting in classrooms to XXXX. I have a wide variety of stuff. I realize other services have something similar, just different scenarios for that. So, when you say access to the cloud sometimes XXXX will not have the same level of access just because of the operational environment.

Yes. The other part is different people govern the rules. Information Assurance governs the IT part of it. When it comes release ability of information, that's covered by the XXXX, at least in the XXXX. I'll have a XXXX say what if content is publicly releasable or not. Not necessarily the SME and the IA saying whether or not. You get 2 orders to the helm to do something, which causes confusion.

We are working on this as we speak. At this point our information assurance policy has to be behind PKI level CAC because that's the policy. We have very little content if any that is not behind a CAC enforcement. Sailors taking content at home on their laptop have to have a CAC reader attached to their equipment to do that.

Not entirely because you don't use your license plate number to access your bank account. I think their needs to be more of a risk mgmt. posture to this because it's a risk avoidance kind of thing. There are also discussions that I've heard from DoD about the CAC number becoming PII. Before by itself it wasn't PII.

Our base contract mentions all the emerging technologies that we can think of when we are writing the base contract. They are all mentioned in one way or another, which was competed through FLC to the prime that are on the IDIQ as it, stands right now. So, things like xAPI, augmented reality, virtual reality, those are mentioned in the base. When it comes to the DO we become more specific about what we are looking with that. Right now, xAPI, the XXXX is struggling with PPI because we aren't sure exactly sure what we want to do with it. The data capabilities of that.

Generally, we don't tell the prime vendors how to suck the egg. When they come in with their proposals and they mention something like that, we have used Moodle/SAKAI, we will vet that to see whom the appropriate agency is to see if it is something that could be done. We do use RFIs to get their ideas on how we could do that.

Clearly stated in the base contract and each DO that anything delivered to the govt belongs to the govt. We do not allow for proprietary branding. It has to be branded for the XXXX.

We are connected with Industry, primes on the previous contract that are bringing us the new toys. Market Research, individual research, and discussions with other agencies.

We reference them back to the base contract where they agree with not doing that and if they have a problem with it we send them to the CO who signed it.

They all need to speak the same language, IT and cyber are not necessarily the same language, Acquisition speaks an entirely different language and the other part you're missing is the comptrollers. The financial people. None of them speak the same language or understand the challenges that each has to deal with to get content. For instance, contracting agencies that we deal with, there period for accepting new work generally shuts down in the May timeframe. On the comptroller's side, they aren't looking at money that might be leftover to fund additional projects until July when we get into the 4th quarter of the fiscal yr. We're trying to get things funded that may not be able to get funded because they don't have funding, but the funding appears in the 4th quarter but the contract window has closed out to put it on contract. It takes so long to put something on contract.

All comes together. The comptrollers make sure the end of the fiscal yr. obligates all the money. The contracting officers are making sure the contracts are completed by the end of the fiscal yr. Contracting takes time, in our case it takes anywhere from 45-60 days to get awarded from when the PWS hits the contracting office. They give themselves enough time to do this. They quit accepting new contracts in May. Sometimes comptrollers don't have available money until July.

Then you bring the IT and cyber guys in, cyber automatically say no right off the bat. The IT people are worried about their IT systems (notifications). Neither one of those orgs ever think a real motivated to

go onto the edge of the cutting edge. People see their kids sit at home taking a course after High School or College and think university students can do this why can't I well your cyber posture and your IT infrastructure does not allow that.

Are you talking to cyber people?

What cyber people are you really talking to? Not names, organizationally. Are you talking to someone inside the cyber program for the XXXX?

If you're talking to a CIO level you're missing the boat on talking to someone who lives in the trenches. In my case I work with contractors, with the govt, comptrollers so I get the hands dirty. If you talked to my executive director you'd have a different discussion. If you talk to the CIO you'll get the corporate thing, you need to talk to someone who does it every day.

Task 6 Interview Overview

026

We provide non-resident officer professional education to the entire officer XXXX. We have 4 programs-XXXX

From an enrollment standpoint, we have over 25,000 enrolled in the programs, Active course engagement we run 11-12,000 student # on any given day.

We launched the online master's degree in 07, launched online seminars in 2012 and we launched a XXXX in 2016 and a new XXXX in 2017.

Our methodologies are very different from other services, we try to maximize student flexibility, our student body XXXX are busy and are generally not given time to do professional education. We are competing with their off-duty time and other events. We try to maximize the flexibility to our students.

We have a very student-centered approach to doing this. Students can be admitted into any of those programs and enrolled in courses any day of the week (365) because we have facilitated seminars that complete any one of those programs they can graduate any month of the yr. We have students literally starting our programs every day and once a month we graduate students from one of those programs. We offer every online seminar course every month. We do not predetermine what courses are available on any given month or term like a normal university than limit the student availability based on a universities timing. We offer all courses, every month, we allow the students to register for what they need and they dynamically build the # of seminars by course to meet student demand 2 wks. before the start of the course. What allows us to do that is on the systems side- a highly integrated student mgmt. system and LMS that allows us to build those seminars and on the instructor side we have a language instructor contract where we don't commit to any instructors any more than 2-3 wks. out from the start of the term and we only commit to them for that course. We 184 instructors on that contract and currently running 175-200 seminars a month. We will graduate out of those programs anywhere from 3500-4000 a yr.

It's radically different and inside the methodology we actually have for everything but the master degree, the master's degree is a traditional program. 8 wk. fully facilitated terms where students are

engaging with their peers and faculty members just like at a university. the other 3 programs are a combination of self-paced courseware where student can go through that courseware and whatever pace meets their needs and there are pts. In the program when they complete 1-2 of the courses they will sign up for a facilitated seminar that integrates the knowledge. We have to have a system that students can sign up for the self-paced courseware any day of the week and they have 4 mo. to complete those and then after the system verifies that they've met the requirements it opens up the registration. We then build the seminar to meet their needs.

To us it's not just about the LMS it's about the integration of the LMS and student mgmt. system. Currently are LMS at XXXX is Blackboard. The university is making a transition to Canvas. Originally, 2 ½ yrs. ago they contracted to replace the legacy student mgmt. system, which are all homegrown locally coded from multiple mission because XXXX has a very diverse mission set. We're just one element of it. They contracted to buy a COTS product that would integrate a student mgmt. system and LMS and meet all the requirements of probably what was a dozen student mgmt. systems that existed. That contact did not execute well, we didn't get an integrated system. The learning mgmt. side was Canvas so they decided to split off the student mgmt. and the LMS and they are now going through an effort to integrate Canvas with our legacy student mgmt. system and they're going to go out on a new effort using the OPM USA Learning contract. This is the contract vehicle that IT reform is looking at leveraging across DoD. It's a language vehicle that has a suite of LMS, there now contracting the student mgmt. sys through that and they're going to come in and analyze and do a business process analysis to basically start that effort over.

For the LMS portion we're only transitioning from Blackboard to Canvas. Canvas that they bought is not the internally hosted that most universities have but they bought the OS Canvas to put in a Fed Ramp approved cloud environment and they have an integrator enhancing the capabilities of Canvas and working the integration with the student mgmt. system. From the cyber standpoint, the fact that we were driven to everything being Fed ramp constrains the options you have available to you to solve these IT/ET challenges. Everything is treated as high risk, everything has to be Fed Ramped. We are in the education business where most people you're talking to are in the training business. Some training clearly gets to be very operational in nature and probably needs stringent security requirements. From an education standpoint, there's very little we do that should drive any security requirements. #1 thing- this blanket approach since we view everything in operational terms and were going to apply security requirements inherently constrains the options available, lengthens the timeline to get capabilities on and costs more money.

We run the education mission. We don't own the system, we don't have the decision authority on the system. We get what the IT community gives us. We influence that but we aren't the decision makers, we are giving you the perspective of the operator and the challenges

Yes-the traditional DoD method of acquisition is the user gives a set of requirements to the acquiring agency, they acquire and give it back and it all works. The problem in this business, things are moving so quickly and their so dynamic that I don't think it's wise to use a methodology that #1 you can't perfectly identify the requirements for any given system upfront and number 2 that you don't have a more adaptive spiral development methodology where you have folks demonstrating capability and then determining what capability will suite that. I think the OPM contract should be able to provide the capability.

The other thing I wanted to point out from a DoD Standpoint-The people that generally run these systems are IT professionals and raised on the IT side of the house. Our experience is educational tech is different and yet rarely do we have educational technologists involved in the identification and procurement of these systems. I think we tend to view whatever we need for tech as information tech. and we don't have the expertise to delineate the educational tech of that side of the business. Some of the contacts that we've been driven to use were IT contracts that didn't have educational tech expertise in their contractor's suite but there good at IT. No one who new LMS or student mgmt. systems but because of policy we were forced to use to contract because it was supposed to provide all IT and the assumption is education tech is a subset of IT as opposed to something different that has different capabilities.

Task 6 Interview

1. Describe your organization's most recent DL acquisition effort. Were there particular areas in which acquisition language in contracts was particularly helpful or problematic?
2. Do you have any examples of some acquisition gotchas that could have been prevented?
3. Similarly, do you have any examples where you (your organization) or someone else (another organization) were clever/smart and prevented an acquisition gotchas?
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The restrictiveness we talked about earlier with educational technologies being considered to information tech when it comes to safeguarding vs. ease of access consideration. This is the biggest issue we are up against.

5. What is the impact of the showstoppers on your organization's ability to modernize distributed learning [utilizing the following scale: 0 - no impact, 1 - minor impact, 2 - moderate impact, or 3 - major impact]?

Moderate/Major that's what we talked about before us struggling to keep pace with expectations of our students providing them with technologies that they are used to seeing in their everyday lives and access that they are used to seeing. State of the art technology that gives us the ability to meet them where they are and meet their expectation and sometimes exceed them. Sometimes our systems and policies keep our hands and feet shackled when it comes to providing a high value educational environment.

Can you tell me your acquisition practices as it relates to:

xAPI technologies

OS technologies

As I highlighted earlier we are the users of the systems we don't acquire them. One of the most creative contract that we actually executed was the contract that provides the instructors for our programs. That methodological approach could have application to the system side. A couple of things on the

acquisition side that complicate this or at least from our experience have shown and have created additional challenges. The emphasis on lowest price technically acceptable contracting methodology. That should not be used on anything that has any significant complexity or ambiguity system solution that define largely of what we are in the business of doing and yet this seems to be the contract methodology of most contracting officers. What happens in execution it becomes lowest price technically acceptable is really generally applied what you have is a drive for low cost means you have a drive for solutions that are less robust and when you actually try to execute based on that cost it's not going to get the job done. The #1 thing we advocate and the DoD has come on board is move away from lowest price to a best value approach.

The #2 thing we've run into on contracting across the areas we work in is the desire to move as much work as possible to a small business. Often times the acquisition agency really doesn't understand what the operational requirements are and will assume because its information tech that anyone can do it and they will try to drive you to small business that have limited capabilities for complex acquisition. The drive for lowest price tech acceptable, the assumption that you can define tech requirements down to the tenth degree before you start the process and you have no way to adapt those as tech changes. Often tech changes in the timeframe your contract is executed. So that methodology is not a good approach. The people that are fielding the system/testing the system, these need to be filled with people that understand the user side of educational technology. These add additional risks on your ability to have a system at the end that is accessible, flexible etc.

We don't have a forward-looking support org that looks at what's out there to help achieve the mission. We have to identify requirements in some form of a PWS. We don't have that capability that you just described. We have people that are very busy insuring the legacy systems are running and overwhelmed with sustaining the systems. We have not built an institutional arm that is focused on looking at state-of-the-art tech and to me it should operate backwards than it normally operates. We on the operational side of the educational mission should have those experts come to us and say hey have you seen this capability/tool it will change how your delivering your DL. This isn't the way IT support is generally structured so that hasn't been transferred to educational tech support.

We have an org at the university that owns the system so they would be the ones who execute any upgrades that happen to the LMS. I think where we've been with blackboard in the past is different than where we will be with Canvas and now there's an integrating contractor that's involved with us. I do not know what the future sustainment looks like for the implementation because it isn't operational yet. I would hope in this learning ecosystem that our educational training command is building that they have envisioned an innovation element of that ecosystem where you can try new things and test them out before you buy in to them. I think that's a great capability. One of the things that you've been hearing from the end-user on some of the challenges that happen over time, the command as a whole has a vision for a cloud based learning ecosystem services based with the ability to explore and innovate, I think they have a game plan to get us there, we just aren't there yet.

From our perspective, it has been a rough road but the command above us has a game plan. Quite frankly many of these things that I've highlighted, they are going about it from a totally different manner.

We have to protect the information. To protect that you don't have to clamp down everything.

I think the problem is there isn't a lot of nuance in this discussion, we have to clamp down everything because there is a chance that PII will be vulnerable. The majority of what we do does not require PII when they are engaging in their courseware. It's really getting into the program and being able to get

credits for the program. If you manage it on the student mgmt. system side, you can free up a lot of the LMS security requirements again. It requires people to think about all the elements and what is actually driving security and how can we design that out of elements that will allow us to open up.

Task 6 Interview Overview

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The reality is we haven't acquired much for a number of years, SAKAI has been our LMS for over 10yrs. We engaged a company within the SAKAI community that does customization for us so outside of that our work in the imperial community the only quasi learning tech tool that we've acquired was for lecture capture which we did last yr. I'm not sure that we are a wealth of experience for you because we haven't done much. We are working on procuring an external portfolio tool that will replace what SAKAI is no longer going to support.

It may be a definition issue, XXXX point is spot on about our DL capabilities, we buy a lot of other tech tools here at the institution and you go through the typical pains of the govt acquisition cycle.

We have some advantage over some DoD orgs from an IT standpoint we operate 2 networks (.mil and .eddo) we make some exceptions on our .edu commercial network. We have some capabilities along the DL lines that comes through acquisition over the yrs. that I don't think we would have been able to do if we were 100% NIPR. Those difficulties still exist but we somewhat sidestep them based on our being on edu, self-contained when someone asks if we are protecting the DoD gig we can say we don't touch the DoD NIPR. An example on the DL side as far as acquisitions and challenges. If you look at one of the RMF rules controls cyber security and the cloud SRG policies that are out there is while the language is in there that say's there going to make a risk assessment based on the type of data they have on a level that needs protection in practice when you're going through acquisition it does not necessary play out. What I mean by that is a cloud provider that does not have a Fed Ramp, does not have their cert that they need. What ends up happening is the answer is no. you can't get to it. We are 1 of 1 XXXX within the DoD. I'm not competing against DoD and the info I need to store in those systems is public. The blood-clotting cascade you can find in any textbook, I don't need to protect the data in the same way yet we're still hampered by the DoD acquisition rules. If you go back to that vendor who was selling that DL or educational content and tell them they need to step through FedRAMP now at the tune of over \$1M and \$100K annually to maintain it and they look at the size of the customer and there are going to walk away.

That has been a challenge, some of that you see in the ADL gaps report where they talk about deficient contract language for procuring compliant learning tech, in the report their talking about a standard out there but there are 3-4 acquisition things in the report we would echo and support.

When we wanted to replace our student information system according to the DoD institution rules because we were going to spend more than \$500K we had to go through the defense business transformation process and that encumbered us with 450 pgs. worth of approvals. We initially had to get approved the problem statement that said yes, an acquisition was the right solution to solve our problem and then we had to submit additional paperwork that demonstrated that an SIS acquisition specifically the one we were going after was the right one. All total it was \$200k+15 mo. before we could get to an award to the vendor.

A product we were able to procure under that threshold probably mapped the product we would have liked to have ended up with taking twice as much paperwork to get through the next threshold so we are stuck making a suboptimal choice between budget and paperwork.

We needed to be under \$1M, when you went over the paperwork, timeline doubled and so it wasn't something we could do with an accreditation finding looming that needed to be fixed and so under a Million for student information system for an org our size left us with choosing from the bottom 1/3 of the industry.

We understand the DoD rules and acquisition piece and why they are there but we aren't competing in the DoD environment. Our competition so to speak is XXXX and when they can go out and procure, there are some areas where best of breed/best practice for some of these programs whether your evaluating outcomes or actually looking at content to deliver we can't get to because of the restrictions.

Typically, they happen at the same time. We'll have a list of 11 vendors and we narrow down based on capabilities and what the mission needs are but one of the criteria is always if it's a fast solution do they have everything that's required in the cloud SRG are they Fed Ramp, that's one of the evaluation criteria for all 11. This is weighted pretty heavily so we may have the top 3 get eliminated because they aren't certified, they don't have the Fed ramp, their best of breed but they also don't offer an on premises solution meaning you buy cloud or what they offer or you just don't use it and they end up getting thrown out or we go to our AO and say well now we will need to access the risk of these using them outside of DoD, Fed Ramp and/or acquisition guidelines, DFAR is that risk acceptable. On the academic and education side, I'm not saying their needs to be a separate regulation but their needs to be some exception based on content that you are teaching. The content we are delivering is OS. You may look XXXX and say you have foreign nationals you've got scenarios' that are sensitive and classified...ok. Maybe that educational platform needs to be a different level. DoD IA is a 4th of state, there doing k12 education. Math and English, do I really need that protected at the classified level?

10yrs ago everything at the university was on NIPRnet. The faculty/students were complaining. Our .edu presence at that time sat in the library/student lounge areas but wasn't used outside of those locations. We looked and realized we needed to be the exact opposite. Everything we are doing is academia, students can't open a video that the instructor puts in their teaching content. A 3-min video would take 20 min because of bandwidth restrictions/buffering. We used the same justification to say we are secure we can provide a better service and manage risk better. We switched everything to edu and we have a very small .mil footprint. They are completely separate but everything we do is on .edu. other orgs are having the same problem, the XXXX in XXXX who educate all the XXXX (XXXX etc.) have asked us to provide their edu services for them. The outcome-we went to a 3rd party vendor and had them access it and came back to say we think it would make sense for XXXX to provide edu and academic services to XXXX to solve these problems.

Some examples that I will tell you we've had. Doing medical research, we have research projects that have been endorsed in tropical medicine. This was a collaborative effort with the Chinese. There is no way your collaborating on .mil that collaboration came to a halt based on network restrictions.

We have faculty members who are trying to get out to professional organizations that are specifically tied to their job functions here and we'll find that the IP address that the org is on is part of a class C that is blocked by DoD. The IP itself isn't bad but the class C group of IPs because there is a bad actor in that group. Trying to get the IP unblocked could take weeks/months.

Those types of issues we've run into repeatedly. We've got XXXX exams that have to take place. A lot of times the National exam providers have very specific ideas on what they will allow at the desktop. Being on edu allows us to control that.

The one additional and ongoing is trying to collaborate with the XXXX for high profile XXXX research, 9 figure funded program. It's working right now because we are on edu to move back to NIPR. IT restricts our ability to access these public websites and we've been working with DISA for 9 months trying to get them to unblock 2 unsafe websites. It's not a priority. When you think about the larger DISA/DOD mission, that makes sense but in terms of furthering the research/education there is a significant disconnect there. There needs to be a type coupling between the authorizing official and the mission owner. Some of the conversations taking place are concerning they seem to have forgotten that we are not an IT org first but we are supporting warfighters with IT or educational tech depending on your preview. We are a XXXX, we are a system that is meant to facilitate and extend abilities and when we disconnect the mission owner from the authorization process that we will always fail.

Another example: Collaboration suites. We've been on one for 9 yrs. It has saved us a significant amount of dollars and if we took what we currently have and moved it to the DoD environment we'd pay double. I would have 13% of the capacity I have right now and none of the collaboration tools and that was a tool we needed for academic mission and that's why we've been on it for 9 yrs. on edu. Within the 4th estate state they are entertaining moving to that now. Implementation even when they get down that path will be 2-3 yrs. down the road. That's 10-15 yrs. too late when you talk about academic environment and being able to compete with programs that are attracting students around the US and they've had it longer than we have. It does come back to acquisitions we went through a number of gyrations trying to get that on a contract We actually had help from PEO EIS because they were doing a pilot and we piggybacked. We originally had our own contract, went to PEO EIS and then back to our own. Those are the some of the challenges. Academic cannot be 10-15 yrs. behind in academic tech acquisition.

There is specific contract language for any IT systems, generic boilerplate that is put in. We have added some additional tools on top of that collaboration suite for example to meet DoD requirements that would not have traditionally been there.

The collaboration suite off the shelf has a lot of capabilities for mobilized mgmt. tracking mobile apps and managing the data stored in drive but we found when we looked at that against DoD requirements are it may be 75% of them and the big ones but the remaining 25% we needed to buy a tool to lay on top of it. We bought a mobile device mgmt. tool and supplemented what came off the shelf for the collaboration suite. We bought a cloud security firewall and document-monitoring tool that sat on top of drive and monitored ssn etc.

It's a new fish bowl every time around. Our team will contact DISAs battle captain at FT Meade to say here is our issue what do we need to do in order to resolve? They end up sending a different form from before, we fill it out, and it either gets lost or we'll need to resubmit with modifications or get someone's approval. We'll be required to cite regulatory authority and for the particular case of getting the website unblocked is a website that support secure digital certificate and that website is supposed to be trusted based on DISA provided systems that we are supposed to build our mobile computers off of. They give us a template of what it should look like, we build from that. Unfortunately, there is a disconnect between their right and left hand. When we cite these things, people get confused,

paperwork gets lost and we have to start all over again we reinitiate a few weeks later. This has been going on for 9 mo.

OS-The university moved to an OS LMS 10 yrs. ago based on license cost, capabilities, hosting. We found great success. We are working with the OS communication SAKAI and extending and trying to tune the capability the best that we can. In parallel we've been working with Open LRS (learning record store) that was meant to be the first hyper scale capable and OS projects implementing xAPI specs. That project is called Open LRW (Learning records warehouse) that encompasses the cattle erg? format. We are not using this today, it was one of the gaps that we found in the overall specs capabilities of either the recording and discoverability aspect of this. With xApi it's easy to create learner records. Billy did this and jimmy did that but deciding the instructor and identifying which instructor should be able to see what information they should see and how they view. It is unaddressed and unmapped territory. We are re-engaging in the hope we will be able to build something usable for ours and other communities based on strong advocate of the govt is going to pay for something and it will be OS but we do not have that in deployment today. We actually had running prototypes of this about 3 yrs. ago, given other priorities, I don't need to procure something that's xApi compliant I go out to the Imperial community and work with them to say this is something that needs to be brought in to SAKAI and if necessary we fund independently a vendor to do that work. I'm probably going to Ft Bragg to see where ADL is. There are additional things that need to be done to the spec in order for us to use it.

It's really about identifying what in the SAKAI is context. What context did Billy or jimmy answer a question with a particular answer ID and how do we identify the context and who is meant to consume info from them. Should this faculty member be able to see all of the info regardless of its context? It is a mapping problem, which gets complicated quickly. I'm not sure an xAPI profile would directly facilitate that or solve the problem. In particular because we have to be sensitive as an accredited higher education to the requirements for TALBER? sources of info as well.

100% responsive web based. We should have told you about our programs. There's a XXXX here, those students are really only here for 18 mo. the remainder of the time they are at XXXX facilities around the world. The reach back ability is essential. Graduate XXXX program, PhD's they have some of those reach back requirements as well. There's a XXXX based out of XXXX, their programs are also all around the US at various XXXX. We've also got a graduated education office. College of XXXX that are really working with XXXX those students go through a list of programs, they'd walk out the door and have nothing to show for it. Now they are mapping them to get credits and a transcript and if they transfer in general education they can get their assoc. or bachelor's degree. We also have researchers that are also around the world at various times. Everything we do we look at web first. Work is a thing you do not a place you go.

Our curriculum is 90% blended.

Task 6 Interview

1. Describe your organization's most recent DL acquisition effort. Were there particular areas in which acquisition language in contracts was particularly helpful or problematic?
2. Do you have any examples of some acquisition *gotchas* that could have been prevented?
3. Similarly, do you have any examples where you (your organization) or someone else (another organization) were clever/smart and prevented an acquisition *gotchas*?
4. Has your organization run into any DL acquisition showstoppers? If you had a magic wand, and could wave it and solve one problem, what would that problem be?

What is the impact of the showstoppers on your organization's ability to modernize distributed learning [utilizing the following scale: 0 - no impact, 1 - minor impact, 2 - moderate impact, or 3 - major impact]?

There's seems to be a one size fits all. Our SIS was a good example, one of the reasons we ended up with the SIS we have its was in use by the XXXX and so even in the 4th estate in a lot of these discussion, there is a preconceived assumption that one size will fit all and I'm not sure that's the case. Not being able to move quickly through the acquisition process and actually select a tool/solution that meets your needs and is the tool that everyone uses and your forced to use and it meets 60% of your need and obviously goes along with that the process itself is cumbersome itself. If I'm XXXX I'm looking at my budget and telling someone to go buy this. Within then DoD acquisition process is fraught with hurdles and will take months to actually get something done.

The process is the biggest issue. There are a lot of problems FedRAMP, network control and coupling of the mission and authority ownership. Around acquisition, the biggest problem is the process itself and the fact that people are executing acquisition, which still does not include own data rights, but when we do our SIS it takes 18 months to buy a suboptimal program. We are cutting ourselves off at both ends of the spectrum without much accomplishment.

The have a XXXX that started, she's from XXXX. Her entire background is not DoD. I get an email saying hey I'm going to go out and buy a digital diploma service. A. I don't know anything about it B. There's no requirement C. If it's cloud It's going to be a no go. We spend a lot of time educating about all the DoD rules that will create maximum amounts of paperwork for them to do their job. It's a huge time suck that universities that we compete with don't have to do.

The XXXX is coming with the right mindset. I would argue that we are de-educating her because we are making her smart on DoD rules but it will make her less effective. The reality is, what would be beneficial is if there was a DoD repository where she could go and say this is the tool I'm looking for. What already exists on contracts and/or available and she could see if the tool met her needs. If not she could go out and procure what she needs.

Are you familiar with GSA advantage? This is listing of products that are available on a government GWAC that is meant to facilitate the procurement IT products/services. The reality is you can browse the website and you can go buy huge wads of products. The problem is despite having an amazon marketplace look and feel to the website, when you actually go to buy something off this website, you

still need to as a mobile institution days/weeks of paperwork to demonstrate how you did your market research, how you decided that you were going to buy this product specifically, did you get a sole source justification if your buying brand name on description of functionality of what you need. Even if we have the image of buying on amazon marketplace we don't have the business reality of being able to execute that. If going to GSA Advantage was as easy as going to amazon marketplace we would be able to go accomplish so much more as educators' n the DoD.

The frustration the staff and faculty feel is compounded by the complexity of actually doing the pack, they don't understand why it takes so long. Most of them come from an environment where they can purchase things quickly. All the depts. In terms of people's motivation and their ability to want to do this type of work to innovate and purchase new things, we're just hitting them over the head to hard and they don't understand.

Everything we've talked about today applies to the research mission. Where we are sometime given up to 9 figures annually for congressionally directed medical research programs and we run across the same issue across the board on IT.

Keeping staff and faculty who may have come from an environment where they can press a button to buy something and they come here and if their mission is supposed to be tied to something. It may not be worth the jump. There are a lot of things to consider in terms of faculty, happiness in the workforce.

Task 6 Interview Overview

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Task 6 Interview

Describe your organization's most recent DL acquisition effort. Were there particular areas in which acquisition language in contracts was particularly helpful or problematic? Some orgs have baseline things in their baseline contracts.

On the standards and specs side I can send you a doc. What we can do is send you a document that we provide people. That says what you have to conform to.

Under the contract XXXX we primarily develop asynchronous learning, we are trying to venture toward more of the innovative side. We do have proponents ready to do that, many are actually developing AR/DR currently and they do that in-house that is developing a classroom of the future just for what will be synchronous.

It's important to repeat for the business to be efficient we are absolutely dependent on ADL creating a performance test suite and other development stage tools to make the process more efficient in terms of cost and accuracy. For example SCORM is the only one that has the performance test suite. Unless you have the performance test suite where you can use lower graded govt labor to perform the checks that need to be performed they won't be cost efficient and they may not be reliable. As we eluded earlier in the call the efforts where we tried to be innovative and we got knocked down by HBSS, we went out and started using DL and some of those efforts did not succeed because the machine was exposed to the NIPR and ended up shutting it down. We've had limited steps in trying to adopt xAPI and specifications from what it is now but the nature of the standards business is when you push something from a spec to a standard, whether its people making a delivery system or tool it sets back any

investment that you place in a new technology or as a standards before you have the performance test suite it increases the risk of failure and development and implementation and tends to turn off the leadership from making further investment because you have a failure. It also becomes more expensive without the test suite and the lower graded labor we use tools for testing to find out if something is ready for testing instead we have to put a more highly paid system developer, expert. They now have to perform all the steps that would have been performed by the suite and it's prone to error and we don't have the people to do it.

One of our schools has a lot of proprietary content that they receive that they deliver on XXXX computers in classrooms. I can't speak to any modification, but I do know that they have a robust technical team and if any mods are needed for that proprietary content they do that there. We do not buy contract purchase any propriety content or use of any proprietary tools.

This would be a XXXX. Our systems are not OS we do have one school that uses a Moodle platform but they've since brought it down.

1. Do you have any examples of some acquisition *gotchas* that could have been prevented?
2. Similarly, do you have any examples where you (your organization) or someone else (another organization) were clever/smart and prevented an acquisition *gotchas*?
3. Has your organization run into any DL acquisition showstoppers? If you had a magic wand, and could wave it and solve one problem, what would that problem be?

What is the impact of the showstoppers on your organization's ability to modernize distributed learning [utilizing the following scale: 0 - no impact, 1 - minor impact, 2 - moderate impact, or 3 - major impact]?

I'm good with follow up questions. Please follow up with

The contract XXXX has. If you are looking for a contract to use as a template for the OSD effort. My strong recommendation is that you start with ours and XXXX it. Our contract has all the pieces in it.

Task 6 Research Plan Question Overview

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XXXX XXXX XXXX. We did not have a DL program. I worked on my doctorate in the early 90's, writing papers on distance education and I used the staff college as an example for DL. I gave it to my boss who gave it to the commandant and I became the head when there wasn't a program and for a # of yrs. while we built our facility. Once the facility was built we got direction from congress to create a program for the reserve component. That was only after the Joint Staff came down a # of times and I told them they were looking at the wrong thing. We started working on defining what it was, then congress gave us direction and funding, in the interim we had a distance learning facility that had 2 people.

Task 6 Interview

1. Describe your organization's most recent DL acquisition effort. Were there particular areas in which acquisition language in contracts was particularly helpful or problematic?

361-All of my DL acquisition efforts are 16yrs old, I've been more focused on satellite the last 10 yrs. We got funding from congress, I looked at several options that I identified that our best option was to pursue an existing? An IDIQ contract that have a number of primary, we gave to them, 4 of them were interested, we interviewed them, in it I include the word? (adult learning level), they came back and asked what the word meant and I said if you don't know it, your probably not qualified to do the work. The one that won understood the concept and used XXXX for the coursework. We developed that over a number of months, we had a hurricane come through that knocked out the power as we were getting ready to field the first class (32 wk.). Still ongoing, it went from Advanced JPME to the Joint and combined war fighting school hybrid. It has the same curriculum as our resident program, which is the same as the satellite curriculum that I manage, we now have 3 modalities.

If we could talk about acquisition concerns. Let me give you an example. Some stakeholders shared that as a challenge when they were getting ready to look at using different learning technologies when their analyst wanted to look at the data, they didn't own the rights to the learner data. Is this something that you are concerned with?

361-No, we own all of our data. We do all the surveying, we have institutional research and accreditation does that that.

Do you they give you all the base information, base contract language?

361-I doesn't recall. As I remember I had some boilerplate language. We don't get penalized for plagiarism in the DoD, reinventing the wheel is something that's frowned upon.

In terms on your IDIQ, we have had people mention that within their IDIQ that have to make sure they are monitoring DO's, they have to do this closely to hold the vendor accountable for making sure they give them exactly what they have requested. Can you speak to that?

361-I don't recall. It's been 15 yrs. I do remember getting monthly reports to make sure we were in compliance.

Maybe we can ask about other acquisition processes to see if you have some thoughts about them, maybe not direct experience. One of things we've talked to people about is xApi tech or xApi specs, is this something that you utilize.

361- I was involved with SCORM as the lead for the Learning committee, are you familiar with the DLCC. I spent a lot of time trying to get everyone to get on board with the idea of SCORM. We all have lessons, you have the theory on lesson of war that Sun Tzu hasn't said anything new in the last couple hundreds of years. If someone develops a good lesson we should be able to leverage that across the DLCC. I had some success but a lot of pushback, ultimately, I started talking about shareable content using the word SCORM. I moved on and tried to accomplish through another means. I saw value in it, we did a project on how to identify updates because I flaw I solved in SCORM was no one will want to rely on someone else to maintain their content. You either host up a flag telling everyone that you have content or querying about whether the concept they have is most up to date. We created a capability that did that, SCORM died and it went away. Did nothing with xAPI.

361-Like Sakai and Moodle?

361-We don't, we are a part of the XXXX XXXX XXXX and is using Blackboard. We use what they tell us.

Do you have a service agreement with them in terms of making updates?

361-I have no idea, we have 1 guy on staff that is good at blackboard.

361-not that I'm aware of

361-I'm not aware of what we are doing. Our dear friends at North campus believe that shutting down everything is the best solution to cyber. I don't know if you've heard of XXXXXX, I served with him on a committee looking at DPME? In 2010, his analogy was if, there is a threat to the port of New York, the solution if we shut down the port you can't use it anymore but there is no more threat, which is what they are doing with cyber.

You've brought up a point about risk mitigation vs. risk avoidance. you seem like you're on the side of risk mitigation.

361-Yes. we are hamstrung

2. Do you have any examples of some acquisition *gotchas* that could have been prevented?
3. Similarly, do you have any examples where you (your organization) or someone else (another organization) were clever/smart and prevented an acquisition *gotchas*?
4. Has your organization run into any DL acquisition showstoppers? If you had a magic wand, and could wave it and solve one problem, what would that problem be?
5. What is the impact of the showstoppers on your organization's ability to modernize distributed learning [utilizing the following scale: 0 - no impact, 1 - minor impact, 2 - moderate impact, or 3 - major impact]? 361- The biggest problem has been FedRAMP. I know that Blackboard has been jumping around. The Marine Corps university have gone to Moodle, OS to try and get around that. Now, Blackboard is partially FedRAMP certified. We are constantly waiting to see if someone shuts down our LMS. They seem to have responded to the challenge and have gotten around that.

Would you happen to know if your org leans toward picking the best resource and then going through FedRAMP or choosing vendor that is already FedRAMP approved?

361-No, this is done up North by the folks at Ft. McNaire

Task 6 Interview Overview

368

Task 6 Interview

1. Describe your organization's most recent DL acquisition effort. Were there particular areas in which acquisition language in contracts was particularly helpful or problematic?

368-The last major procurement was licenses for the Adobe Experience Manager and has not been a problem as far as acquisition language. What we are finding now, ADM is very configurable, and as we work through it and the XXX works through it in certain instances XXXX are working through it being very specific about when someone builds a component for ADM for the govt that the govt owns rights for that. This is something new for Adobe and their legal folks are having an issue with it. So, from a procurement standpoint, I guess it would be more integration services or professional services having an understanding that when the govt pays for a component to be built the govt owns the intellectual property rights and can be shared across DoD.

368-Yes, the system has been active for 20 yrs., we think we have a good baseline it's just making others people aware that the baseline is what the govt means.

368-Yes, I'd have to dig them up

2. Has your organization run into any DL acquisition showstoppers?

What is the impact of the showstoppers on your organization's ability to modernize distributed learning [utilizing the following scale: 0 - no impact, 1 - minor impact, 2 - moderate impact, or 3 - major impact]?

368-I mentioned blackboard, FedRAMP accredit. It was the end on 2016, our licenses were expiring. Our contracting officer said that the contract took so long for him to get to he would give us a 1 yr. ext. but he would not allow us to contract with Blackboard because they were not Fed Ramp accredited and this was a showstopper.

3. If you had a magic wand, and could wave it and solve one problem, what would that problem be?

368-Streamline the contracting process, for us it could take way too long and if I had to wave the magic wand bigger I would say Contracting officers that understand DL requirements, a lot look at it as another IT system.

If you could solve that problem what impact do you think that could have on modernization?

368-Moderate, it would allow us to get tools/apps faster but we would run into the issue of trying to contract professional services.

If I could ask you more about the FedRAMP process, do you go for the resource that you need or go for a vendor who is already approved? Is there a preference?

368-Not right now, until Blackboard popped up, we spread them out. Blackboard was separate from the system that we own so that was an unusual situation. Because we have our own security experts and our secure enclave and security already in place we have not looked at FedRAMP applications. We look at what we need first. If it sits outside our security posture we then look at FedRAMP.

We've talked to people about the DL acquisition practices as related to unique areas. What is your perspective on xApi?

368-we are starting to. That's one of the big things that the IC is going to come out of the modernization effort. People are going to be driven to implement xApi, most services have looked or are looking at it but no kidding we will be implementing it.

What type or resources are you looking at for that. Do you have research support as part of your team? How would you employ what you needed?

368-We just started with xApi so it's hard to answer

Do you employ OS systems.

368-Yes, Adobe experience manager, even though it is an Adobe product is built on open standards. Java, all those things could be used to build components so it's not a proprietary thing. We are integrating Moodle, which is an OS LMS into ADM.

In terms of what you need in the future. Is this a long-time contract? What happens when you have a shift?

368-if we find something that is a better breed than what we have than we can use OPM to negotiate a better price. We've always tried to look at LMS as modular system, we've never bought something monolithic, and we've always had components that work together to provide a system of systems.

Task 6 Interview Overview

332

Task 6 Interview

1. Describe your organization's most recent DL acquisition effort. Were there particular areas in which acquisition language in contracts was particularly helpful or problematic? They've had blackboard for many years now. Electric capture was brought on line a couple of yrs. ago. This is easier than an LMS. We had this for a yr. until the funding went away.

332-This one was pretty simple, we didn't have anything like this before so we just stated that we needed to be able to capture audio/video and sync in the cloud.

A problem that we have is having too much data in the RFP.

332-education was the priority and IT was lower. We ran into problems with that design. We brought Student Information System and the academic affairs team was running it, when IT ran a scan they had 130 violations. We have swung the pin and IT is leading the charge. With student information, it needed to be secure. My dept. is the liaison between the 2. It has to meet all the IT requirements.

332-FedRamp first. We've found that, it's very expensive and a lot of vendors don't want to go through the process.

2. Do you have any examples of some acquisition *gotchas* that could have been prevented?
3. Similarly, do you have any examples where you (your organization) or someone else (another organization) were clever/smart and prevented an acquisition *gotchas*?
4. Has your organization run into any DL acquisition showstoppers? If you had a magic wand, and could wave it and solve one problem, what would that problem be?

332-Security. We went through 9 mo. and it never saw the light of day because of security.

What is the impact of the showstoppers on your organization's ability to modernize distributed learning [utilizing the following scale: 0 - no impact, 1 - minor impact, 2 - moderate impact, or 3 - major impact]? FG-Major.

In terms of your use of Blackboard, a yr. from now you've changed your needs. How do you go back to address these with blackboard? What resources do you have?

332-There's not much in the service agreements, we would probably work with our sales mgr. this is mainly how we get things now. The majority is their hosting facility, once they go to amazon they will be using the sales mgr.

332-No, I wish they would but not really.

332-No but we did a yr. or 2 ago go into USA Learning and used Moodle. It is an OS Moodle system but we can't get anything into the system. The idea of hooking the LMS they did not allow through the contract. We can't use any of the OS data.

332-We develop it all in house, there are case studies/readings that we use.

332-I don't think so.

It hasn't been the best yr. for us, if you saw what we were working with right now its bare bones.

332-The students never see the other system. The system we have is a student system that they can't use. We'd like to pull some data out and do some interesting things with it but we don't have the funds to do that.

Task 6 Interview Overview

212

Can you give me some background with work you may have done in cybersecurity, policy issues or implementation of systems on a cyber secure framework.

103-I don't deal with much cybersecurity.

But you do deal with security related issues as far as our facility is concerned or things that you need to do to provide a secure environment.

103- The security I administer is the DoD cyber awareness training which comes in your security refreshers. The do's and don'ts. Don't share stuff on social media. And purchasing secure systems through cleared DoD approved sources for our SCIF.

Even going back work prior. Do you have any experience with security system, info security?

103- I've worked things along those lines at XXX. Basically the same thing. Basic security maintaining passwords or secure types of situations. I don't know how much I can expand on stuff I did there. Basic security awareness.

When you say security maintaining passwords for classified systems, was there a frequency.

The system would automatically make the changes every 90 days, responsibility, patchwork mgmt. using emails, what not to put on emails, social engineering, phishing, cyber security contacts.

103-

This is when physical security would get involved and then they would clear the system depending on what happened. For phishing emails that we have here, I run that through DSS and the FBI, there are protocols depending on the situation

103-Get the email, copy it, send it to the FBI POC, he scans/checks it and see's if there's a threat (foreign or domestic). If this a person of interest that they are interested in. If it's not, he tells me to tell the receiver to destroy it.

Task 6 Interview

With doing physical security, with the systems we manage on the floor and the security we provide on the XX floor. Are there any policy issues that we run into when we want to upgrade our ability to generate/store information in a SCIF.

103-We're not producing anything classified and we don't have classified systems in our SCIF.

I guess if you wanted to put in JWICS, what acquisition process would you use?

103-We are in the process of doing that, that system has to go through DIA for approval and you need sponsorship to do that. One of our clients is sponsoring but just getting the sponsorship and getting backing from another agency. This is the only way this will happen. There are problems with getting sponsorships.

103-The process is to go through DIA for sponsorship , which we have, our client has to come up with the funding and also has to justify the need on a DD254 form to DIA. In order to get this done you have to have money and sponsorship.

103-They could put it on the contract but a lot of agencies don't want to split the cost of that. DISA lines that have to put in which are lines that need to be put in outside which costs a lo of money, so a lot of customers do not want to pay for that for another facility. Our client is in California and we are located in VA. The client needs to find someone in this area (locally) to run lines into the SCIF at a cost \$30-40,000 to do. Then we have to get approval to have a system here. Then we have to purchase the system, buy a certain amount of user agreements and then add the JWICS in here.

103-It will be theirs. We will be using if for that specific project.

103-I will need to hire an Information Security professional that has a clearance to maintain the system, backups, logs, nothing is done without the DoD/classified guidelines of running the system.

103-Yes, it will be used by our group and employees working on projects.

Who will have access?

103-Only people working on the project/cleared can use the system

103-It should take no more than 8 mo-1 yr. but this process has taken 4 years because of the limitations of the client, meaning they've never done it before.

It's taken 4 years?

103-Yes, because of funding, getting someone to put a line here, sponsorship. There were a lot of issues. If I was at XXXX we could have had this done in 8 mo. Or sooner.

If you're a govt agency it probably would be done faster. Was this high priority

103-It is, but the client is lost in the process.

103-They don't have experience in putting systems outside of their own facility so they don't know who to contact, who the POC is at DIA, who pays for the system. A lot of that stuff I've had to figure out through friends, through DARPA to help them get this situated. Now they've got a handle on it, now we are waiting on funding and the line. DIA only does that a certain time of the year when they are accepting funds, fiscal years. It's been a whole lot of systems issues with the client getting this done.

103-By October

It's helpful to have a process implementing, upgrading and funding a new system that taking a lot longer than it should have. What are the problems and implications for something that should take 8 mo. but took 4 years. Where is the disconnect.

103-It's the communication and knowledge. You have to have the knowledge as a govt agency to know how to do the process to get the process moving. I've gone through several people with our client. That is a process that they are not familiar with that I have to look up and guide them in the right direction.

103-Process issue, 100%

It's because someone doesn't know how to go through the process not the process that's written.

103-Correct, they don't know the process. Someone like XXX, they put systems all over the country and they do this every day and like I said above, they have staff that specialize in computer security aspect of this. They will get the JWIC, SIPRNET, they do this every single day as their job.

Basically they don't have a process for doing this

103-They never have to do this, the person probably came into the govt agency, like I did with XXXX and everything was set up and in place. For me to get the SCIF certified it took me 2-3 yrs. to do this. I needed sponsorship but I was used to coming to a place and having everything done. I had to do this from scratch.

It's a learning curve.

103-and also the person that was supposed to be supporting us didn't know what they were doing. They don't know the process so it takes longer when you have to research how to do these things. This is how it is with some of the agencies. They don't know because they've never had to do it and had no guidance.

Task 6 Interview Overview

373 & 380

Task 6 Interview

1. Describe your organization's most recent DL acquisition effort. Were there particular areas in which acquisition language in contracts was particularly helpful or problematic?

373-That's kind of a loaded question on the way we use architecture. The 1st challenge is other than some R&D funds used to integrate into our system stuff that's already proven for instance XXX worked on a project called XXX for awhile and we come to the end at the transition point and we only have a limited number of resources to put against R&D. Someone else administers those contracts. All we are looking for at that point is how the operator is going to use it so a lot of or acquisition side is predetermined either from a silver standpoint that XXXX can get into a little deeper but we're a consumer of the capability rather than purchaser of the capability.

380-I mentioned before we have a software development team, all of our stuff is GOTS, we manage and control it and we can tailor to operational needs that are unique. There is no COTS system that I can pluck off the shelf and use because if I could I would. Because of the uniqueness of the IT battle space and the requirements that come down from operations command I have to built it. Using SAKAI is the closest to off the shelf but we still had to customize it a bit. At the same token, why did you use SAKAI? Why didn't you use Blackboard? A. I could customize the software B. XXXXX wasn't making money in the basement. We look for cost savings wherever we can. That's a factor, xAPI was the closest thing to a DL innovation that we've utilized recently. XXX was a methodology so I'm not going to look at it from a technical perspective I look at xApi, that's something we can do locally so we integrated the concept of an LRS into our pre-existing report builder because we were already doing it.

When we are hosted on the J10 anything they need to do from a hardware standpoint or upgrade to the virtual machines are outside of our preview, we are a consumer in that regard.

The first thing have to look at is what does the authentication layer look like in the system? All of our stuff we need to get the student/admin in based on that role I was talking about earlier. What is the authentication, how is the content segmented, what database/s does the it support? We use oracle right now but are thinking of moving to SEQUEL with a layer in between that does the interpretation. All of those factors are first before I can consider using something. It Integrates and the admin's can get to it and behind the scenes it will fit in the engine compartment.

2. Do you have any examples of some acquisition *gotchas* that could have been prevented?

3. Similarly, do you have any examples where you (your organization) or someone else (another organization) were clever/smart and prevented an acquisition *gotchas*?

4. Has your organization run into any DL acquisition showstoppers? If you had a magic wand, and could wave it and solve one problem, what would that problem be? What is the impact of the showstoppers on your organization's ability to modernize distributed learning [utilizing the following scale: 0 - no impact, 1 - minor impact, 2 - moderate impact, or 3 - major impact]?

We have challenges, we are a .mil org and some of the folks who we deal with are on an .edu. enterprise, there are challenges but those things won't resolve themselves through an acquisition strategy. It would be more appropriate from our operational perspective is if the DL acquisition should occur as a result of a req. Where does that operational requirements come from? Is the requirements vetted based on all the factors, including battle space? Or is it a high-level idea, a solution looking for a problem and that becomes my problem. That is the bigger issue rather than acquisition.

We use SAKAI when we had to deploy a blackboard like capability. That came from the XXXX, the XXXX was using XXXXX Post Grads SAKAI and XXXX XXXX XXXX for cyber security reasons pulled up the drawbridge so they were left without it. Then they asked if I could look at it, at the same time XXX wanted to about having an online synchronous classroom similar to Blackboard but we don't have the funding and we won't lease it out to Blackboard.com because of the cyber thing. We took a look at it and actively are a part of it now. We have to customize a few things but obviously you don't want to do a lot of something that's OS or COTs. We have done that before and would do that if it made sense.

When you are customizing with them are their service contracts involved?

We don't have to deal with contracts from a vendor perspective on software for the XXX apps obviously XXX engineering if they have oracle that specific OS requirements they have to deal with that but I don't. because almost all of our software with the exception of SAKAI is produced internally that's something that we control. There are no contracts requirements other, the govt development team is the predominant developer with contractors and support they are a part of a larger XX contract that also includes courseware development. One big team. I don't have to procure anything for an app.