Architecture for the US Army Human Resources Enterprise

For

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Seth Dorris

University of Denver University College

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Faculty: Steve Else, PhD.

Director: Michael Batty

Dean: Michael J. McGuire, MLS

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Executive Summary

The Clinger-Cohen act of 1996 (CCA) required Federal Agency heads to develop an Information Technology (IT) architecture to maximize the value and manage the risk of IT investments within their agency. The Department of the Army (DA) is an agency of the Federal Government that has an established EA program per the Clinger-Cohen act of 1996. However, the DA does not recognize business units as enterprises which require their own EA to completely integrate IT into the decision-making process and maximize the value of IT investments. By recognizing Human Resources Management as an enterprise, an architecture can then be developed that will nest neatly underneath the existing EA for the Business Mission Area and enable the DA to optimize integrations, decrease IT risks, lower IT costs, and simplify the IT landscape. However, the newly identified enterprise exists with major architectural issues. These issues include high variability among key stakeholders, inefficient data model backing applications, no chief architect to lead architectural development efforts, broken links between the enterprise and IT investments, and a lack of architecture framework and artifacts to guide architectural development efforts. These issues can be remedied through standardization and identification of key stakeholders, hiring a chief architect, review and selecting an architecture framework, and requiring human resources enterprise key leaders at the Defense Business Systems Management Committee to link IT investments to the enterprise.

Introduction

The Clinger-Cohen act of 1996 (CCA) required Federal Agency heads to develop an Information Technology (IT) architecture to maximize the value and manage the risk of IT investments within their agency. The act required all Federal Agencies to staff a Chief Information Officer (CIO) responsible for overseeing and executing the requirements of the act. Furthermore, the act required IT integration with agency decision making processes such as budget, financial, and program management (Clinger-Cohen Act of 1996). The design and plan of IT integration with agency decision making processes can be referred to as an agency's enterprise architecture (EA).

The Department of the Army (DA) is an agency of the Federal Government that has an established EA program per the Clinger-Cohen act of 1996. This paper will (1) describe how human resources is managed in the Department of the Army, (2) describe human resources as an enterprise, (3) identify major architectural issues of the human resources enterprise, and (4) propose solutions for the identified major architectural issues. This will enable the DA to better achieve the Clinger-Cohen Act's desired outcome of maximizing value of IT investments.

Background

I learned a tremendous amount about the Department of the Army's (DA) EA while working as a Director of Human Resources for a logistics organization within the United States Army for over six years. This experience enabled me to recognize some of the shortcomings to the DA's EA.

Department of the Army Enterprise Architecture

The DA's EA is described in *Army Regulation (AR) 5-1 Management of Army Business*Operations. Figure 1 shows how AR 5-1 models the DA's EA.

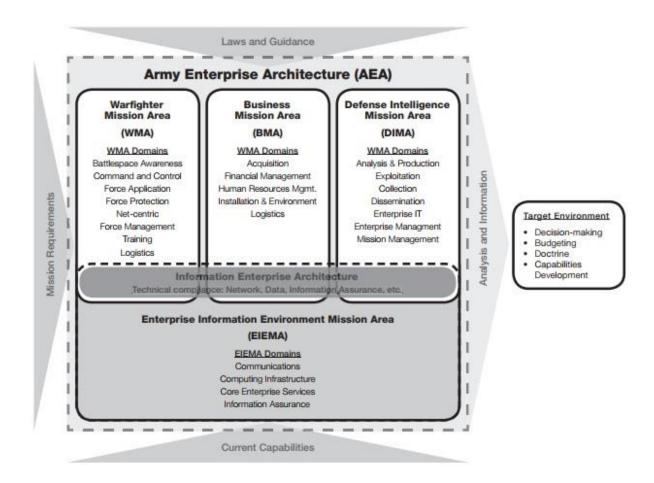


Figure 1. Department of Army Enterprise Architecture Diagram. Source: Headquarters Department of the Army 2015.

One can see from the Figure above that the DA recognizes three separate mission areas. The problem with this model is that the DA fails to recognize the need for each mission area to have their own EA that supports the DA's EA. The impact of this failure will be shown in the next section.

Defining the Enterprise

Now that one can see where exactly Human Resources Management falls within the DA's EA, it is important to understand how Human Resources is delivered to organizations within the DA.

Organizational Structure

To demonstrate this delivery model, this paper will look at an Army logistics organization which is comprised of 3-4,000 employees and several different sub organizations or business units, each of which contain their own mission. While not all Army organizations are charged with a logistics mission such as this example, the same HR delivery model is applied and standardized across all Army organizations. Figure 2 below depicts the organization chart for an Army logistics organization.

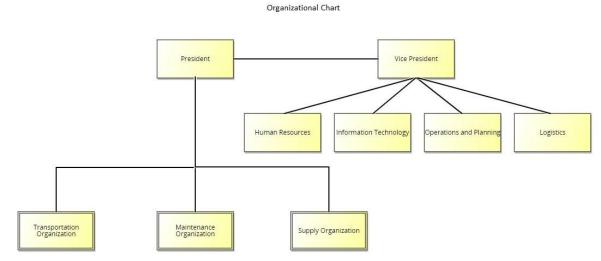


Figure 2. Army Logistics Organization's Org Chart

In this example, the Army logistics organization above is led by the organization's President.

The President is charged with fulfilling the mission of providing logistical support to the organizations within its area of responsibilities defined by order from a higher headquarters.

The President is charged with leading smaller organizations, shown in Figure 2 as

Transportation Organization, Maintenance Organization, and Supply Organization, tasked with performing functionalities that support the logistics organization's overall mission. These suborganizations can be thought of as business units. The Vice President of the logistics organization is charged with coordinating and controlling the staff departments of Human Resources, Information Technology, Operations and Planning, and Internal Logistics. These departments provide support to the organization they are assigned. The Human Resources department in Figure 2 would provide HR support to the entire logistics organization. However, each business unit organization contains their own Human Resources department for providing Human Resources within that organization. Figure 3 below depicts this through an organizational chart for the Transportation business unit.

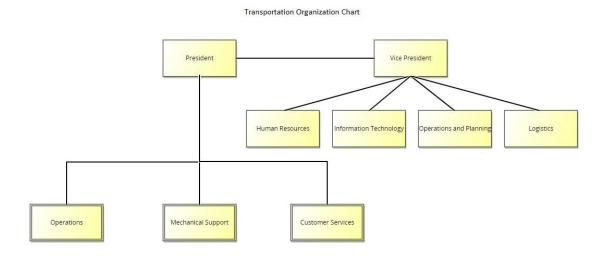


Figure 3. Transportation Business Unit Organization Chart.

In the Transportation business unit's organization chart above, one can see that the structure is very similar to its parent organization's structure. The only difference is the number of employees in the organization and suborganizations. However, both the parent organization and business units have their own departments for Human Resources delivery. The Human Resources departments of these organizations have a hierarchical relationship as well, and each Human Resources department has a parent Human Resources department to feed information and data to, all the way up until the parent Human Resources department is the Headquarters of the Department of the Army's Human Resources Department. Using the same Army logistics organization again, Figure 4 depicts this Human Resources reporting relationship.

HR Organization Structure

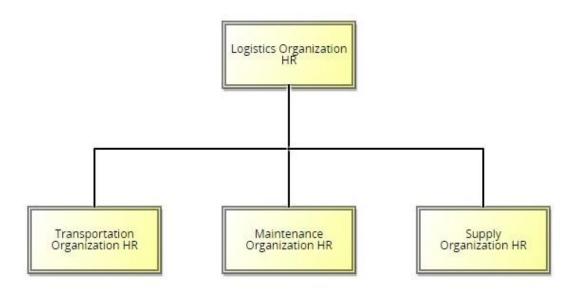


Figure 4. Army Logistics Organization Human Resources Hierarchical Relationship Diagram.

The Army's Field Manual 1-0 which details Human Resources Support within the Army, describes the overall mission of the Human Resources organization is to plan, provide, and coordinate the delivery of human resources support, services, or information to all assigned and attached personnel within the organization and subordinate organizations (Headquarters Department of the Army 2014). This excerpt clearly demonstrates that the Army's HR delivery model can be thought of as an enterprise with a basic mission or goal to provide human resources services to customers.

The DA fails to recognize human resources as a distinct enterprise which requires its own enterprise architecture that supports their own Army Enterprise Architecture. This failure inhibits the ability of the Army to create Army-wide HR solutions, rather than individual systems

and programs to support HR delivery. An enterprise architecture that supports the HR enterprise is required.

Operating Model

In the book, *Enterprise Architecture As Strategy* the authors describe several operating models with which a company or enterprise "should position itself in one... to clarify how it intends to deliver goods and services to customers" (Robertson, Ross, and Weill 2006). It is important to position the HR enterprise within one of these four quadrants to develop an EA that best suits the operating model of the enterprise. Figure 5 depicts the HR enterprise structure, which applies to every HR enterprise in the Army. In the previous section, it was shown that HR is provided the same way throughout the Army, however, the only difference is that the customers are different. This design of HR delivery most appropriately falls into the replication operating model described by Robertson, Ross, and Weill. "In a replication model the company's success is dependent on efficient, repeatable business processes rather than on shared customer relationships". (Robertson, Ross, and Weill 2006)

Architecture Vision

A proper enterprise architecture is required in order for the human resources enterprise to properly align the enterprise's business strategy and information technology. The defined enterprise exists within the Department of Defense, therefore, the enterprise architecture framework used to support the development of the architecture vision is the Department of Defense Architecture Framework (DoDAF).

Intended Use of Architecture

The purpose of the intended architecture is to provide the newly defined Department of the Army human resources enterprise an architecture for the replication operating model it is built on. This architecture will increase standardization among key stakeholders and IT investments within the replicated enterprises. Additionally, the proposed architecture will ensure that business strategy, information systems, and technology are tightly coupled in order to work together to achieve the overall human resources strategy.

Architecture Success

Figure 5 models a successful enterprise architecture vision for the DA's human resources enterprise.

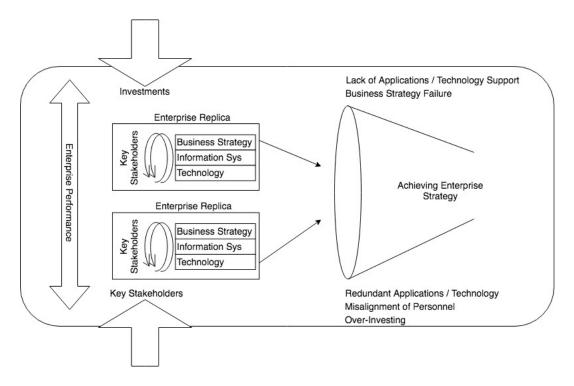


Figure 5. Human Resources Enterprise Architecture Vision

The human resources enterprise replicas or business units operate with individual business strategies that support the parent enterprise's strategy. Information systems and technology should support the business unit's business strategy through the standardization and appropriate involvement of key stakeholders. Additionally, key stakeholders and IT investments external to the business units should provide just enough influence to guide the business unit towards achieving the DA's human resources enterprise business strategy. The proposed solutions within this architecture are intended to provide that appropriate level of influence. In addition, the data model backing information systems within the enterprise will eliminate the need for redundant transactions and applications.

Architecture Risks

Figure 5 also models the risks of the proposed architecture. With too little IT Investments, DA's human resources enterprise business units risk operating with legacy systems or a lack of applications in order to achieve the business unit strategy and objectives. Too much IT investment can lead to redundant applications and technologies as well as overspending on IT investments. Additionally, external key stakeholder involvement in the business units can lead to misalignment of personnel which can lead to failing to achieve business unit strategy and ultimately causing the DA human resources enterprise to fail to achieve its strategy and objectives. The risks identified are evident in today's DA architecture-less human resources enterprise, however, these risks are mitigated through the architecture solutions recommended in this paper.

Identified Issues

The Army does not recognize HR as a distinct enterprise, therefore, there is no current EA supporting the HR enterprise. This leads to several architectural issues identified below.

- Organizational, Management, Strategy, Financial, People, Culture
 - High variability among involvement of stakeholders across the enterprise results in mismanagement of personnel.
 - o IT investments managed too centrally and not directly linked to the enterprise.
 - No chief architect to manage architecture
- Data, Information & Knowledge
 - o Inefficient data modeling results in duplicated business processes
- Information Technology, Other Technology
 - Legacy technology continuing to support MS-DOS based applications
- Business Process, Policies and Procedures, Controls/Metrics
 - Lack of standardized process / policies / controls in the enterprise lead to inefficient use of resources.
- Architecture Frameworks, Reference Models, Patterns and Implementation
 - Lack of EA artifacts and reference models impede the enterprise's ability to plan for the future

Analysis

Organizational, Management, Strategy, Finance, People, Culture

Key Stakeholder Involvement

In the background section, it was mentioned that the identified human resources enterprise operates within the replication operating model. This model relies on replicating human resources business processes at various locations throughout the world. In essence, this creates many sub-enterprises of the human resources enterprise, each with a unique organizational culture. Each enterprise involves the same key stakeholders such as the supported organization's President and Vice President, however, the degree to which key stakeholders are involved varies greatly between organizations. Additionally, some organizations may include or neglect other key stakeholders into decision making processes. For example, the Army describes one such key stakeholder in the process as "normally playing an active role in managing enlisted personnel" (Headquarters Department of the Army 2014), and while a common practice across the enterprise, it is not a very well-defined standard. Furthermore, the degree to which the management of enlisted personnel is performed is highly variant. During my time as a director of an HR enterprise within the Army, I have seen the supported organization's key stakeholders make human resources strategic decisions overriding the human resources enterprise entirely. This creates a friction between stakeholders in the human resources enterprise and the supported organization and can lead to the mismanagement of human capital and resources.

Centrally Managed IT Investments

According to *Army Regulation 5-1 Management of Army Business Operations (AR 5-1)*, IT Investments are aligned to one of the four business mission areas and undergo an annual Department of Defense certification process (Headquarters Department of the Army 2012). The Army's HR enterprise resides as a domain within the Business Mission Area, and therefore relies on the Business Mission Area to improve the IT investment portfolio. Additionally, AR 5-1 does not prescribe step-by-step procedural guidance for Army units or organizations to recommend business process re-engineering or IT investments leading to a breakdown of communication from those that need IT investments to those that make IT investments. The failure to recognize the HR domain as an enterprise results in a breakdown of timely IT investments and creates an enterprise that is slow to react and inflexible. A major example demonstrating slow and failed IT investments as it relates to the HR enterprise is with the Defense Integrated Military Human Resources System project.

The Government Accountability Office report GAO-08-927R DOD Systems

Modernization states, "As a result of several pay issues, in 1995 the Under Secretary of Defense for Acquisition and Technology established a Defense Science Board Task Force on Military

Personnel Information Management to advise the Secretary of Defense on the best strategy to support military personnel and pay functions" (Government Accountability Office 2008). The first phase design was finally accepted by DoD in 2004 and given the green-light to proceed with the development of the system (Government Accountability Office 2008). Ultimately, after 12 years of development and over \$1 billion invested, the Defense Integrated Military Human Resources System (DIMHRS) project was terminated in 2010.

The DIMHRS project demonstrates several issues with IT investments within the Department of the Army. First, the DIMHRS project was originally initiated only AFTER several pay issues were brought to the attention of the Under Secretary of Defense for Acquisition and Technology. This demonstrates a clear lack of understanding of how IT investments and proposals are managed within the Department of the Army. Second, it took nearly 10 years from the review of pay issues until the system design was accepted for development. This demonstrates a very long and inflexible system for handling IT investment proposals which runs counter to the defense environment which requires flexibility and agility in order to maintain a strategic advantage over adversaries. Lastly, poor management of the project lead to project escalation or "continued commitment in the face of negative information about prior resource allocation". According to Mark Keil, project escalation can "weaken a firm's competitive position while siphoning off resources that could be spent developing and implementing successful systems." (Keil 1995), and that is exactly what happened to the DIMHRS project.

The human resources enterprise is without a chief architect to lead the architectural development efforts. In addition, there is no current requirement to staff the enterprise with an individual that possesses the skills necessary to lead an enterprise architecture program.

Collaborative Enterprise Architecture defines several key functions of the chief architect such as making important decisions to ensure the integrity of alignment of business strategy and IT, communicating architecture requirements with key stakeholders, keeping the enterprise up to date with emerging technologies, creating the roadmap to achieving future architectures, and lastly, communicating architecture vision through the use of models to key stakeholders to

motivate change (Bente, Bombosch, and Langade 2012). Without a skilled chief architect on staff to lead the enterprise architecture program, the enterprise architecture program is at risk of complete failure due to lack of direction, vision, technical expertise, and poor alignment of IT with business strategy.

Data, Information and Knowledge

Inefficient Data Model

Without an EA supporting the HR enterprise, the Army is currently suffering from legacy platforms that perform redundant operations. Figure 6 below demonstrates the redundancy of applications in the HR enterprise through the first phase, "get an overview of the current set of applications" of the application rationalization initiative described in "Collaborative Enterprise Architecture" (Bente, Bombosch, and Langade 2012). This diagram was created based off a small sample size of the current set of applications within the HR enterprise and does not reflect the entire application landscape.

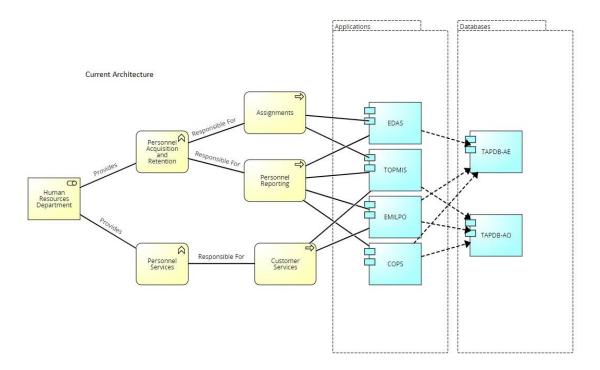


Figure 6. HR Enterprise Application Landscape.

In the far left of Figure 6, the HR enterprise is modeled showing how it provides two business functions of Personnel Acquisition and Retention and Personnel Services. Each function is associated with the business process it is responsible for. Each business process utilizes an IT application for completing that process. For example, the Customer Services business process must utilize the TOPMIS application or the EMILPO application depending on the customer being served. Both applications possess the same functionality however, they only work on specific customer segments. The customer segments are differentiated by two different pay grades. For simplicity, pay grade A would require TOPMIS for customer service transactions while pay grade B would require EMILPO for customer service transactions. The data model backing these two entities are identical but separated based on pay grade and should not require the use of separate applications for conducting customer service transactions. In

addition, the databases these applications rely on are separated based upon this inefficient data model.

Information Technology, Other Technology

Legacy Systems

Many legacy applications exist in the current portfolio of human resource information systems (HRIS) that support the DA's human resources enterprise. For example, the Enlisted Distribution and Assignment System (EDAS) is a Microsoft Disk Operating System (MS-DOS) based HRIS. Microsoft discontinued support for this operating system at the end of 2001 (Microsoft Corporation 2006), yet the Army still utilizes systems that run on this operating system. Utilizing applications built on an operating system that is no longer supported poses a security threat as security patches / updates to the operating system is discontinued. A security breach of one of the Army's HRIS could compromise millions of records, operations and identities, and cost millions of dollars in response and recovery. According to Scott Bernard in his book An Introduction to Enterprise Architecture, "legacy system disposal is important to maintaining an IT operating environment that is as effective, flexible, and cost-efficient as possible" (Bernard 2012). Maintaining legacy systems, like EDAS, is costly and requires maintaining outdated hardware. Additionally, supporting legacy systems built on antiquated programming languages can be expensive as the skills required for maintaining software built on older programming languages are difficult to find (Government Accountability Office 2016). Failure to upgrade legacy technology and systems hinders the ability of the human resources enterprise to embrace new capabilities provided by emerging technologies and systems.

Architecture Frameworks / Reference Models / Patterns and Implementation

Lack of Artifacts

All of the issues identified up to this point stem from the lack of an enterprise architecture program in the DA's human resources enterprise. Furthermore, the identified issues all support the need for an enterprise architecture program in the human resources enterprise. In the background section, the Department of the Army's enterprise architecture was explained. In this section, the business mission area falls underneath that enterprise architecture, however, there is no supporting architecture in the business mission area consequently leaving the human resources enterprise without an architecture that supports the BMA or the DA's architecture. As a result, there is no repository that contains architecture artifacts. In the article Use It or Lose It? The Role of Pressure for Use and Utility of Enterprise Architecture Artifacts, the authors identify two types of architecture artifacts, descriptive and prescriptive; descriptive artifacts pertain to the current state of the enterprise while prescriptive artifacts document and pertain to the "to-be" state of the enterprise. Descriptive artifacts aid the enterprise in planning projects and ensuring that the principles of the enterprise architecture are upheld. Prescriptive artifacts describe the desired or future architecture state of the enterprise as well as identify the steps necessary for the organization to achieve that state (Aier, Bischoff and Winter 2014). It is evident that the human resources enterprise lacks both descriptive and prescriptive enterprise architecture artifacts. Without these artifacts, the human resources enterprise runs the risk of approving projects that do not support either the current architecture model or the transition to the targeted architecture model. It is important to note that the Department of Defense does maintain a

collection of enterprise architecture artifacts such as the DoD EA Transition Strategy and the DoD EA Reference Model Taxonomy, however, these artifacts are much too high-level in their perspective, and the human resources enterprise requires its own set of artifacts to support its own architecture due to the hierarchical structure of the Department of Defense (DoDAF 2011). The importance of generating and using enterprise architecture artifacts is clear.

Lack of EA Framework

Without an enterprise architecture framework to guide the architecture development process, the human resources enterprise may run into several issues. The previously mentioned architecture issue, missing architecture artifacts, can occur due to poor guidance of the architectural development process. Enterprise architecture frameworks provide a structured and guided approach to the architectural development process. For example, step 4 of the Department of Defense Architectural Framework 2.02 is Collect, Organize, Correlate, and Store Architecture Data (DoDAF 2011).

Another issue within the human resources enterprise that results from a lack of EA framework is a weakening of communication among stakeholders. Enterprise architecture frameworks provide a systematic approach to the development of architectural information and principles and help relay the right information to the right stakeholders at the right time. This paper has already identified key stakeholder involvement variability as an organizational architectural issue, however, the lack of a guiding enterprise architecture framework certainly exacerbates this issue due to a weakening of communication among key stakeholders.

Recommended Solutions

Standardization of Key Stakeholders

The Army is a highly standardized organization. Regulations and standards are prescribed in Field Manuals and Army Regulations and enforced by the Uniform Code of Military Justice. Due to this, the proposed solution that follows does not make any recommendations in terms of governance / compliance. As mentioned in the issues analysis section of this paper, the Army's Field Manual 1-0 Human Resources Support, states that one such human resources enterprise key stakeholder "normally plays an active role in managing enlisted personnel" (Headquarters Department of the Army 2014). This line of text is vague and leads many of the replicated human resources business units to interpret this line with a high degree of variability in terms of the degree to which the key stakeholder can influence human resources decision making. The Army should update Field Manual 1-0 Human Resources Support to specifically identify key stakeholders of the human resources enterprise and their authority in the human resources decision making process. Due to the ranking structure involved in the Army, the Department of the Army should update Field Manual 1-0 Human Resources Support to specifically address the limits of human resources decision making authority for each key stakeholder in the human resources enterprise. By doing so, this will standardize key stakeholder involvement across all replicated human resources business units and minimize mismanagement of human resources.

Alternative Solution

The Army can release a Military Personnel Message (MILPER) message "designed to provide a quick, efficient means to impart new procedural guidance and information to the field

user" (Army Human Resources Command 2018). This MILPER message should contain the same guidance as the recommended solution, however, the downside to MILPER messages are that they rely on human resources enterprise key leaders to manually retrieve the messages and enforce the guidance contained within the messages rendering them a less effective communication method than updating Field Manual 1-0.

Linking IT Investments

The Department of the Army recognizes human resources as an enterprise and requires representation of the human resources enterprise at the Defense Business Systems

Management Committee (DBSMC). This committee provides oversight of defense business systems and is the certification authority associated with Defense Business Systems that support human resources management. Requiring representation of the human resources enterprise at the DBSMC links human resources enterprise key stakeholders to IT investment decisions.

Alternate Solution

The Department of Defense budgets enterprise information technology investments for the Department of the Army. The Department of the Army should provide step-by-step procedural guidance for business process re-engineering to include the process of recommending IT investments in *Army Regulation 5-1 Management of Army Business*Operations. This will provide a communications link between those that require IT investments and those that make IT investment decisions as well as speed up the certification process timeline.

Chief Architect

The Department of the Army should authorize the hiring of a Chief Architect for the human resources enterprise in order to ensure the integrity of alignment of business strategy and IT, communicate architecture requirements with key stakeholders, keep the enterprise up to date with emerging technologies, create the roadmap to achieve future architectures, and communicate architecture vision through the use of models to key stakeholders to motivate change (Bente, Bombosch and Langade 2012).

Alternate Solution

If the Department of the Army chooses not to hire Chief Architect, it is possible to assign an Active Duty Information Technology Officer (Military Occupational Specialty Code 25A) to the role as either a key development or broadening position. Department of the Army Pamphlet 600-3 (DA PAM 600-3) defines a key development position as one that is "fundamental to the officer's capabilities in their core competencies". DA PAM 600-3 defines a broadening position as one that "develops an officer's capability to see, work, learn, and contribute outside each one's own perspective or individual level of understanding for the betterment of both the individual officer and the institution" (Headquarters Department of the Army 2017).

Improved Data Model and Upgrading Systems

An EA could help improve the data model backing the applications. The model could be simplified so both customer segments can be represented by one model. This unified model approach would eliminate the need for redundancies in applications and databases, simplifying the IT landscape in the enterprise. This simplification of the IT landscape would help the HR

enterprise reduce development effort, optimize integrations, decrease IT risks, lower IT costs, and improve business confidence (Robertson, Ross and Weill 2006). Additionally, this would speed up the process of training for HR employees as they would spend less time in training environments learning all the applications utilized in the HR's IT landscape. This outcome aligns with and supports the DA's overarching Business Mission Area goal of "organizing, manning, training, equipping, and sustaining forces" (Headquarters Department of the Army 2015).

Furthermore, this improved data model is more closely aligned to the Department of Defense Architecture Framework v2.0 Guidelines for a data-centric model that is integrated, searchable, and structured to support analysis and targeted to critical decisions (DoDAF 2011), as the new data model will integrate the old pay-grade based data model into a single data model.

According to "Collaborative Enterprise Architecture", an EA program could help merge redundant applications and assist managers in making decisions for turning off legacy platforms, simplifying the IT landscape. This simplification of the IT landscape will help the HR enterprise reduce development effort, optimize integrations, decrease IT risks, lower IT costs, and improve business confidence (Bente, Bombosch and Langade 2012). Figure 7 depicts what a simplified IT landscape could look like.

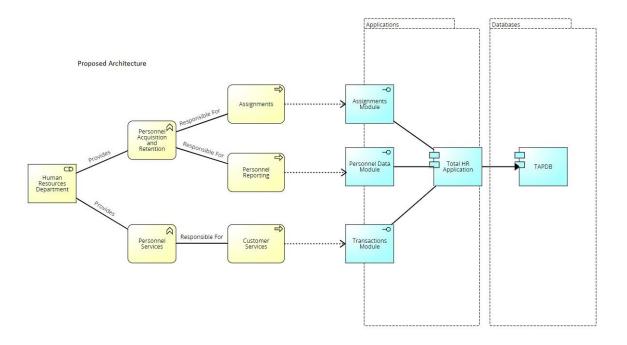


Figure 7. Proposed IT Landscape.

Finally, the IT Landscape depicted above for the HR enterprise is quite different than the current landscape depicted in Figure 6. The proposed IT landscape would eliminate all redundant applications and replace them with a new HR application that exposes HR functionality through interfaces. This landscape would help eliminate many MSDOS based legacy systems that have been cobbled together over the years to support inefficient data models which add rigidity and excessive cost (Robertson, Ross and Weill 2006). For those legacy systems that still serve a purpose, a legacy modernization plan should be developed (Gallardo, Hernantes, and Serrano 2014). In addition, HR data and information would be provided to organizational leaders faster and more accurately which would enable organizations to focus on their core functions.

Alternate Solution

There recommended solution for improving the data model is both the most efficient and causes the least amount of disruption as the improved data model would only require a merging of only pay-grade information. Therefore, the only possible alternate solution would be to keep the existing data model. If legacy modernization is too costly and disruptive and alternate solution could be wrapping the system in service-oriented architecture service that responds to HTTP requests. This can be a great way to transform inflexible legacy systems into a flexible web service (Gallardo, Hernantes, and Serrano 2014).

Enterprise Architecture Framework and Artifacts

A comprehensive assessment of all of the available enterprise architecture frameworks should be done in order to select the appropriate framework to guide enterprise architecture development process. The selected framework will guide the architecture development process which includes the generation of enterprise architecture artifacts.

Alternate Solution

If no existing framework fits the enterprise, the human resources enterprise key stakeholders and/or chief architect are responsible for creating a custom enterprise architecture framework for the enterprise to guide architecture development.

Road Map

The roadmap is broken down into the following phases:

Phase I: Now – 3 months

Phase II: 3 – 6 months

Phase III: 6 – 12 months

Phase IV: 12-18 months

Phase V: 18 – 24 months

Phase VI: 24+ months

Solution	Timeline	Milestones
Key Stakeholder Involvement	Phase I	Key stakeholder review
	Phase I	FM 1-0 Update Draft Revision
	Phase II	FM 1-0 Final Revision
Linking IT Investments	Phase I	Department of Army requires
		human resources
		representation at DBSMC
Hiring Chief Architect	Phase I	Obtain delegated examining
		authority from Office of
		Personnel Management (Office
		of Personnel Management
		2007).
		Chief Architect Job Analysis

		Identify exam trainees and
		conduct initial delegated
	Phase I	examining training
	Phase II	Finalize Chief Architect Job
		Posting
		Review applications and hire
	Phase II	architect
	Phase III	
Improved Data Model and	Phase I	Proposed new data model
Upgrading Legacy Systems	Phase I	Develop data migration plan
	Phase II	Begin data backup in
		preparation for model change
	Phase III	Implement new data model
		with old data model in
		existence.
	Phase IV	Verify data model success and
		purge old data model
	Phase IV	Identify redundant applications
		that can be eliminated after the
		data model change

		Identify legacy applications that
	Phase IV	need modernization and
	Phase V	develop plan for modernization
		Develop and finalize
	Phase VI	modernization proposals
		Begin modernization of legacy
		systems
EA Framework and Artifacts	Phase III	Review EA frameworks and
		selection

Conclusion

The Clinger-Cohen act of 1996 certainly made great strides towards utilizing IT as a pivotal role in the business decision making process. Federal agencies, specifically the Department of the Army, fail to recognize the importance of establishing enterprise architectures at critical business units such as Human Resources Management within the Business Mission Area. By recognizing Human Resources Management as an enterprise, an architecture can then be developed that will nest neatly underneath the existing EA for the Business Mission Area and enable the DA to optimize integrations, decrease IT risks, lower IT costs, and simplify the IT landscape. However, the newly identified human resources enterprise is faced with many challenges that stem from a lack of enterprise architecture. These challenges present as major architectural issues such as lack of key stakeholder standardization,

no chief architect, lack of architecture artifacts and framework, legacy systems and a poor data model that creates redundant transactions and inefficiencies. However, these challenges can be overcome through the development and implementation of an enterprise architecture. A chief architect should be hired to serve in the human resources enterprise and lead architecture development efforts for the human resources enterprise. Additionally, the Department of the Army must recognize human resources as an enterprise and require representation at the Defense Business Systems Management Committee in order to link IT investments directly to the human resources enterprise. This will allow the human resources enterprise to modernize legacy applications and increase the enterprise's ability to adapt to future requirements.

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