

5-2017

# UMASS Memorial Healthcare Information System Job Ladder

Matthew Simoncini  
*Clark University*


Vamsi Kavuru  
*Clark University*

Antariksh Nanda  
*Clark University*

Tahaseen Mahaboob Basha  
*Clark University*

Vikram Patil  
*Clark University*

Follow this and additional works at: [https://commons.clarku.edu/sps\\_masters\\_papers](https://commons.clarku.edu/sps_masters_papers)

 Part of the [Business and Corporate Communications Commons](#), [Family, Life Course, and Society Commons](#), [Health Policy Commons](#), [Human Resources Management Commons](#), [Information Security Commons](#), [Management Information Systems Commons](#), [Marketing Commons](#), [Nonprofit Administration and Management Commons](#), [Public Administration Commons](#), [Public Health Commons](#), [Social Media Commons](#), and the [Sociology of Culture Commons](#)

---

## Recommended Citation

Simoncini, Matthew; Kavuru, Vamsi; Nanda, Antariksh; Basha, Tahaseen Mahaboob; and Patil, Vikram, "UMASS Memorial Healthcare Information System Job Ladder" (2017). *School of Professional Studies*. 12.  
[https://commons.clarku.edu/sps\\_masters\\_papers/12](https://commons.clarku.edu/sps_masters_papers/12)

This Capstone is brought to you for free and open access by the Master's Papers at Clark Digital Commons. It has been accepted for inclusion in School of Professional Studies by an authorized administrator of Clark Digital Commons. For more information, please contact [mkrikonis@clarku.edu](mailto:mkrikonis@clarku.edu), [jodolan@clarku.edu](mailto:jodolan@clarku.edu).

CLARK  
UNIVERSITY



CHALLENGE CONVENTION.  
CHANGE OUR WORLD.

# School of Professional Studies

## UMASS Memorial Healthcare Information System Job Ladder

# Table of Contents

- Acknowledgment..... 3**
- Executive Summary ..... 4**
- Introduction ..... 5**
  - About UMASS .....5
  - History.....7
- Statement of Problem ..... 8**
- Client Requirement ..... 9**
- Meeting Overview ..... 10**
  - February Meeting ..... 10
  - March Meeting..... 12
  - April Meeting ..... 14
- Research Overview ..... 16**
- Research Approach ..... 18**
- Research Execution ..... 31**
  - Minimum Qualifications.....31
  - Knowledge and Experience .....32
  - Organizational Impact.....33
  - Leadership/Influence .....33
  - UMMHC Examples .....34
  - Salary Band.....34
- Final Solution ..... 35**
  - Content.....36
  - Job Documents .....37
  - Dashboard.....40
- Conclusion..... 50**
- References ..... 52**
- Appendix..... 53**

## ***Acknowledgment:***

We have taken efforts in this project. However, it would not have been possible without the kind support and help of many individuals. We would like to extend our sincere thanks to all of them.

We would first like to thank our client **Mr. David Crandall, Director of Enterprise Architecture of UMASS** who could explain us the need of Job Ladder in existing UMASS IS Structure. His requirements very clear and precise and what he expects from us. Would also like to thank him for providing us the initial Job ladder that helped us to extend in larger scale.

The completion of this assignment gives us immense pleasure. It wouldn't have been possible without **Mr. Richard Aroian, Clark University** our capstone advisor. Thank you for giving us a good guideline for assignment throughout numerous consultations. His office door was always open whenever we ran into a trouble spot or had a question about our research or writing. He consistently allowed this paper to be our own work, but steered us in the right the direction whenever he thought we needed it.

We also want to thank the **Clark University** for consent to include copyrighted pictures and its resources as a part of our paper.

Especially our team members itself, have made valuable comment suggestions on this proposal which gave us an inspiration to improve our assignment. We thank all the team members for their help directly and indirectly to complete our project. We would also like to expand our deepest gratitude to all those who have directly and indirectly guided us in writing this assignment.

## ***Executive Summary:***

The capstone project report emphasizes the importance of a job ladder and the need of an hour to implement it at UMASS Memorial health care. The scope of this project is to create a well-established job ladder at UMASS with pre-defined standards on job levels related to Information Technology department that would facilitate in hiring, developing and promoting employees at various stages.

Job ladder also termed as career ladder that is been typically oriented to Human resource department describes the evolution of job roles right from entry level positions to higher managerial levels of skills, educational qualification, work experience, responsibility matrix, and the reporting authority.

This project would illustrate on various aspect of how the capstone team would assist in developing traditional job ladder and career paths through an intensive understanding of communications, legal concerns, metrics, and global issues arising within an organization and simplify the challenges in defining multiple career paths for various hierarchies. The report demonstrates on various hierarchical structures that exist within the UMASS organization and the rising demand to reframe those structures in accordance with the constructive and well-laid job profile. This job ladder project would assist UMASS in hiring, retaining and nurturing the right talent pool within the organization. It would result in fostering and encouraging employees to succeed with a long-term career goal at UMASS.

## ***Introduction:***

The Clark Capstone Team has been approached by the customer, Dave Crandall, UMASS Memorial Healthcare (UMMHC), Director of Enterprise Architecture, to assess his current organization and create a corporate job ladder/organizational job matrix for the UMASS Memorial Healthcare IS department.

Historically, UMMHC has outsourced most of the organizations IS responsibilities to 3<sup>rd</sup> parties. The outsourcing contract was originally signed to help in UMMHC's turnaround plan and reduce IS costs. With an objective to improve healthcare quality, UMMHC recognized the strategic role of IS and decided to Insource. Within the last couple of years, the management team has reversed its course and began to hire many of the 3<sup>rd</sup> party contractors as permanent employees. Finding that the overall IS organization was too small to meet the requirements of their customers, UMMHC began hiring outside applicants for many of their internal IS open requisitions. These employees were given random job titles which were not related to each other and were very confusing leading to an unstructured IS organization.

Some of the key issues of the IS organization were

- Inconsistent Organization plan
- Unstructured Organization
- Poor Organizational culture
- Lack of advancement opportunities
- Inaccurate Job designations

To solve the above issues and to develop consistency in the IS organization, the intent of this project is to create a job ladder within UMMHC IS organization with objective standards for specific job levels that would be useful in hiring, developing and promoting employees. Job ladder defines a predictable career path from entry level individual contributor through management with well-defined requirements and qualifications that fosters employee engagement and long term career options. The job ladder is envisioned

for UMASS Healthcare IS organization.

The Job ladder would benefit the organization in terms of job titles, responsibilities, impact and leadership. The job ladder defines the sequence or levels of positions to guide employees in progressing from junior to senior positions. The job ladder refines specific job titles and description for each level, including tasks and responsibilities of the position, knowledge, education and experience requirements, salary range, skills and abilities required for each position.

## ***History:***

The IS department for UMASS Memorial Health Care leads organization-wide IS efforts from the Worcester, MA headquarters. There are IS footprints at individual units within the system such as Wing Memorial Hospital. UMASS Memorial Health Care (UMMHC) signed a contract with the First Consulting group to provide IS services to UMMHC. The outsourcing contract was originally signed to help in UMMHC's turnaround plan and reduce IS costs.

Most of the IS employees were hired as Xerox contractors who worked on networking, data systems, data center hosting, desktop, help desk, telecommunications, disaster recovery, and resource planning services. They provided 24\*7 help desk services through dedicated network monitoring and call center. The Xerox contractors were later insourced and became UMASS employees. These employees were given random job titles which were not related to each other and were very confusing, leading to an unstructured IS organization.

To solve the issues and to develop consistency in the IS organization, our effort is to create a job ladder with objective standards for specific job levels that would be useful in hiring, developing, and promoting employees. The job ladder is envisioned for UMASS Healthcare IS organization.

The job ladder defines the sequence or levels of positions to guide employees in progressing from junior to senior positions. The job ladder refines specific job titles and descriptions for each level, including tasks and responsibilities of the position, knowledge, education and experience requirements, salary range, skills, and abilities required for each position.



## ***Statement of Problem:***

With the vast network of delivery services amongst New England communities, the key challenge faced by the organization is to keep a tab in outlining the work responsibilities assigned to employees at various departments. This would not only be fruitful to the company in optimum utilization of resource but also for an employee to develop career growth within an organization. A successive progress of an employee completely relies on the development of a career path in a company, as this would result in the retention of the best talent in the company.

UMASS is lacking its own manpower in terms of internal employees within its IS department. When the hiring process was conducted for IS job roles, the hiring was freeze through Xerox Team due to which the basic requirement ascertain for hiring as per the job description that acts as a benchmark was not given utmost importance. There were also many instances wherein the designation to the employee was allotted irrelevant to the job profile handled by that employee. There is a severe absence of motivation and trust amongst the employee due to the limited scope of career growth and advancement.

Due to the lack of motivation and a sense of trust amongst the labor force, the organization is not able to achieve the desired set goals. The hiring pattern implicates insufficiency in determining comparison on the junior and senior level.

The industrial standard and protocol are not followed when on-boarding a new employee to the system. In terms of promotion, there is an absence of define framework basis which an employee should be promoted to the next level.

There is a considerate imbalance in the pay scale as there are employees who are underpaid irrespective of how much effort they put into or what designation they hold in the company and there are some who are highly paid with meager work task assigned or the job profile they are involved in.

## ***Client's Requirement:***

The customer has an organization which does not currently have consistency within its IS organizational plan and has a very little structure or organization within IS at this moment. The main objective is to develop consistency across the organization in terms of job titles, responsibilities, impact, and leadership.

The customer would like to develop a career/job ladder by position for the IS department at UMASS Memorial Healthcare. Each positional job ladder would be part of a larger organizational job matrix which depicts both job progression up within a particular ladder, but also horizontally across the organization. The requirements are as listed below:

- Create series of job ladders for IS department. Each position should have different levels such as
  - Intern
  - Analyst
  - Junior Architect
  - Senior Architect
  - Team Lead
  - Manager
  - Director
  - VP
- Job Description
- Minimum Qualification for each level.
- Knowledge and Experience of the employee for each level.
- Impact of the employee to the organization
- Leadership qualities of an employee for each level.

## ***Meeting Overview and Discussions:***

The following are the collected meeting minutes and discussions or decisions that were taken from Feb 20<sup>th</sup>, 2017 to April 27<sup>th</sup>, 2017

Location: JC111

Attendees: Matthew, Vamsi, Antariksh, Tahaseen, Vikram

### **February Meeting:**

#### **Agenda items**

- Discuss on Capstone Assignments and intent of each assignment.
- Discuss about progress on first position in job ladder i.e., Database Administrator and further research progress.
- Discuss team meeting frequency, dates, and times.
- Discuss job ladder template with Dave.
- Discuss next steps for expanding job ladder.
- Discuss need to complete National Institute of Health (NIH) training before starting interviews.

#### **Discussions**

- Team discussed around what the final deliverables would look like and who we might be presenting them to.
- Team discussed about the meeting frequency Discussion both for internal meetings, as well as, meeting with Rich.
- Team discussed deliverables and identified two which would be required, job description sheets per position and level and a spreadsheet which would serve as the overall dashboard and tracking mechanism for all underlying job description sheets.

- Discussed on need to make final updates to template, Level 4 - Database Administrator, per Dave's suggestions.
- Discussed using Excel document to capture all the criteria for the entire job ladder before creating individual position documents in Word.
- In-order to move forward with interviews, surveys, and any type of direct contact with UMMHC employees, team will need to complete NIH training and receive certificate of completion.
- There was some contention amongst team on whether we needed to complete NIH training if we funneled questions through Dave Crandall rather than direct contact with UMMHC employees. Agreed to run question through Rich.

### Action items

<b>Description of Action Item</b>	<b>Assigned To:</b>	<b>Date Required:</b>
Create a Google Drive account	Matthew	February 21
Create position template for Database	Vamsi	February 21
Updates on assignment #2	Team	February 23
Determine whether IRB approval is needed before meeting with anyone at UMMHC for interviews.	Rich	March 2
To send team responsibilities for assignment #3	Matthew	February 24
Update job ladder template with changes suggested by Dave	Team	February 28
Job ladder template to Dave for final approval	Matthew	February 28
Update job ladder master data (Excel) document with all levels for Database Administrator.	Team	March 6

## March Meeting:

### Agenda items

- Status on Database Administrator position.
- Next steps for expanding job ladder.
- National Institute of Health (NIH) training before starting interviews.
- UMMHC interviews

### Discussions

- The Database Administrator position within the job ladder is 90% complete (missing some sections, but those are being worked on). Link sent to Dave for approval and once team receive comments, we can move forward with expanding the ladder across positions.
- Team discussed about completing the NIH training which would take 45-60 minute worth of time.
- Each team member will need to sign an NDA before being eligible to work with any resources from UMMHC for interview purposes.
- In-order to get the UMMHC interview process started, we provided Dave a list of positions/people who we would want to interview. This would include a Sharepoint resource from UMMHC.
- Team had come up with a timeline/project plan for the rest of the semester along with our first “status report” for Rich.
- The job ladder was almost completed. Each section has been almost filled out and any remaining items which are required need to be completed by April 3<sup>rd</sup>. This was a major milestone for the team to complete this effort in-order to move onto the final paper and presentation.
- Once the job ladder was completed, the individual position description (Word documents) can be completed and the dashboard can be completed.

- The team reviewed the project timeline Matthew created which highlighted deliverables and milestones for the remainder of the semester/project.
- In-order to meet our project timelines, team discussed the final paper and presentation in our weekly meeting on - 4/3/2017.
- Our final presentation is scheduled for Monday, May 1<sup>st</sup> from 10:00am to 11:00am and attendance is mandatory. Team discussed to be on time and on-site for the final presentation.

### Action items

<b>Description of Action Item</b>	<b>Assigned To:</b>	<b>Date Required:</b>
Need comments from Dave on work completed for DBA position.	Dave	March 16
Complete NIH training	Team	March 20
Sending out signed NDA form	Team	March 15
Create a list of resources/people for interview process	Vamsi	March 16
Complete the remaining sections of the job ladder.	Team	April 3
Provide list of interviewees from UMMHC.	Dave	March 30
Review Capstone documentation, specifically around requirements for final presentation	Team	April 3

## April Meeting:

### Agenda items

- Status on overall job ladder completion.
- Review project timeline.
- Discuss project presentation and final paper

### Discussions

- All research has been completed and all sections of the job ladder have been updated except for the UMMHC Examples section.
- All job documents have been completed on Google Drive for each position/job family. The content of each document has been populated for only the Database Administration job family and the remaining content will be updated once all UMMHC Examples have been provided by UMMHC managers.
- Team discussed the templates for both the Final Paper and Presentation. Rich had examples of final documents which are similar to this Capstone for team to review.
- All research has been completed and all sections of the job ladder have been updated except for the UMMHC Examples section.
- Team waiting on Dave C. to provide meeting dates to meet with UMMHC managers in-order to get updates on the UMMHC Examples section.
- All job documents completed on Google Drive for each position/job family. The content of each document has been populated for only the Database Administration job family and the remaining content will be updated once all UMMHC Examples have been provided by UMMHC managers.

## Action items

<b>Description of Action Item</b>	<b>Assigned To:</b>	<b>Date Required:</b>
Provide meeting invitation for UMMHC manager interview.	Dave	April 5
Complete UMMHC Examples sections of the job ladder.	Matthew	April 10
Update job ladder dashboard	Matthew	April 10
Review Capstone documentation examples	Team	April 10
Final paper review	Team	April 17
Final presentation walkthrough with Rich	Team	April 24
Final report in a printed format	Team	April 27



## ***Research Overview:***

When we were introduced to our capstone project, we realized that a huge chunk of our resources would go into the research part of the project. The reason being Job Ladder is not a hugely popular concept except for in a very few organizations that implement it.

Even if we could find a job ladder that is being adopted by an organization, we cannot use it with UMMHC. We need to create a job ladder that is tailor made for UMMHC's IS organization.

We also realized the need to understand UMMHC, IS department's existing organizational structure, for that we had collected material from our client, which detailed their existing structure. Also, the important step here was to understand client's expectations, in terms of the end-product from the project.

By structure, we mean the framework around which the group is organized, the underpinnings which keep the coalition functioning. It's the operating manual that tells members how the organization is put together and how it works. More specifically, structure describes how members are accepted, how leadership is chosen, and how decisions are made.

This helped our team in:

- Understanding the clear guidelines for how to proceed
- How to bind the positions together
- How better we can interlink the positions

Before we started with the research we had to ensure that we are starting off in the right direction, for that we had internal meetings with the team to ensure we were all on the same page. Then we presented our understandings to the client as well as our capstone advisor.

Once we got the go ahead, we devised our plan of action to approach the research. We divided the work among the team members and assigned responsibilities to each one on the team. We had come with an agenda of timeline and responsibilities.

The aim of the research is to come with a job ladder that would suit UMMHC's IS department. This job ladder will in turn translate into a referral document for anyone in the team to understand their responsibilities and understand the competency requirements to move to next level in the job ladder.

This would also help the HR department or the department manager while posting a job opening, all that they would need to do is pick the document for the required job level for the job level.

## ***Research Approach:***

### What UMMHC has?

Before we start researching for job ladder and creating a ladder, we wanted to understand UMMHC already have in place; It is also essential to understand how their IS organization is structured. The best part is client was open to suggestions even regarding the organizational structure, if we could support the suggestions with data to prove why it is good for their organization.

We received a sample ladder from the client detailing the lines on which he is expecting to see a final document. We also studied their structure from other sources such as UMMHC website, LinkedIn, Glass Door etc.

The approach consisted out of few ideas behind the scenes, such as;

- Create a Career Roadmap
- Build Position Profiles
- Identify Core Competencies and Expected Behaviors
- Incorporate Training and Development
- Establish Accountability

A	B	C	D	E	F
<b>Level 1 - Intern</b>	<b>Minimum Qualifications</b>	<b>Knowledge and Experience</b>	<b>Organizational Impact</b>	<b>Leadership / Influence</b> Understand the IT systems and how they interact. Understand the role of the applications team. Learn about the systems and underlying technologies. Complete the tasks assigned by mentor/supervisor.	<b>UMMHC Examples</b>
<b>Level 2 - Analyst</b>	<b>Minimum Qualifications</b>	<b>Knowledge and Experience</b>	<b>Organizational Impact</b>	<b>Leadership / Influence</b> Understand how the business requirements are being translated into tasks and later into technologies. Provide Guidance to Intern when necessary. Assist the team in preparing documentation. Complete the tasks assigned by supervisor.	<b>UMMHC Examples</b>
<b>Level 3 -</b>	<b>Minimum Qualifications</b>	<b>Knowledge and Experience</b>	<b>Organizational Impact</b>	<b>Leadership / Influence</b> Understand and complete tasks as assigned by management or through systems. Routinely exercise independent judgement and discretion to achieve defined objectives. Test systems for expected functionality. Responsible for day-to-day operations of the applications used within UMMHC.	<b>UMMHC Examples</b>
<b>Level 4 -</b>	<b>Minimum Qualifications</b>	<b>Knowledge and Experience</b>	<b>Organizational Impact</b>	<b>Leadership / Influence</b> Independently identifies new projects that will drive value and improve progress towards UMMHC strategies. Works collaboratively to identify the best solutions.	<b>UMMHC Examples</b>

← ... Systems Engineer Security Engineer Network Engineer Technical Coordinator Business Relationship Manager **Application Analyst** +

Figure 1: Job Ladder template provided by client

### A bit from history

When we realized, there wasn't a defined structure and the job titles were across the place, we decided to understand what led to this. UMMHC's IS was earlier outsourced to an external organization, who managed all the UMMHC's IS resources, where UMMHC themselves had a very IS employees.

The organization has over 1,200 active medical staff and 2,200 registered nurses who are active in over 22 communities. They also offer emergency services such as Life Flight, long-term care facilities, home health and rehabilitation and behavioral health services. They also offer a variety of informational patient seminars and classes on health-related topics throughout the year.

When UMMHC decided to have their own IS team, many of the employees who were employed by the contracting company were hired by UMMHC. These recruitments took place without a due process or requirements in place, and those hired were assigned job titles on a case to case basis as the due process or structure was not in place.

## What UMMHC need?

UMHMC need a detailed job ladder for various departments within the IS organization, detailing various job positions/levels within the department. For each job position we need to fill in six important data columns:

1. Minimum Qualifications
2. Knowledge and Experience
3. Organizational Impact
4. Leadership/Influence
5. UMMHC Examples
6. Salary Band

## Job Ladders across the market!

After realizing what we have and what we need, we ventured into the wild to find out what other organizations have been doing, with regards to job ladder. We didn't find any! Yes, that's right, we didn't find any, then we realized it's just our approach that's at fault. Job ladder is a tailored fit solution for any company, why would anyone publish it online.

We also had to understand and know about the typically hierarchical arrangement of lines of authority, communications, rights and duties of the organization. Because organizational structure determines how the roles, power and responsibilities are assigned, controlled, and coordinated, and how information flows between the different levels of management.

We also had to understand the organization's objectives and strategy. In a centralized structure, the top layer of management has most of the decision-making power and has tight control over departments and divisions. In a decentralized structure, the decision-making power is distributed and the departments and divisions may have different degrees of independence.

Then we went researching for some organizations who were leaders in their own fields, we did not get any direct hits, but we were offered a sneak peek through many other forums and websites, all of them had a hierarchical and detailed structure.

This was most evident from their recruitment ads, which were very consistent even when they were advertised by various locations across U.S. ranging from east coast to west coast.

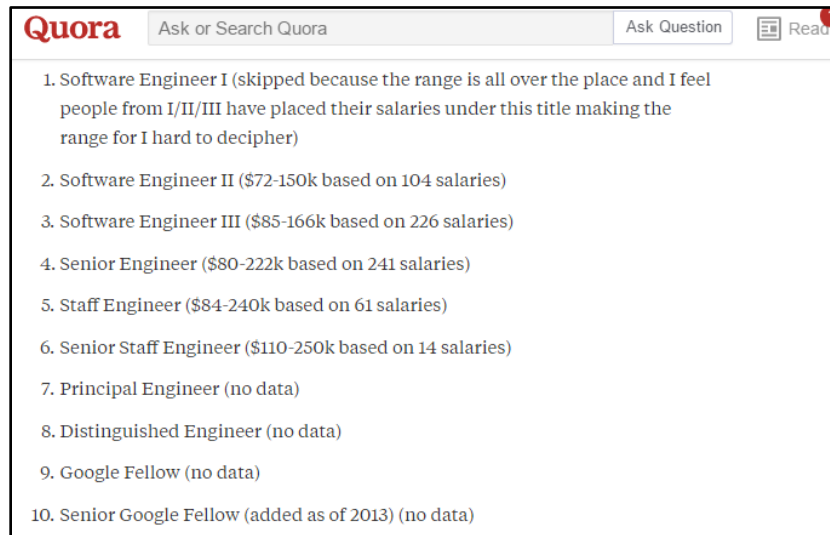


Figure 2: Job Ladder (for Software Engineer) in Google

### Job ladders in the industry

Building an accurate and comprehensive career ladder/lattice can be a challenging task for one individual. It requires knowledge of the industry and of jobs within that industry, as well as an understanding of the similarity and differences between jobs and how jobs relate to one another. To efficiently combine these diverse pieces of information into a career ladder/lattice, it is important to reach out to industry and other knowledgeable experts to gather information about the industry and jobs within the target career.

Collaboration with industry experts when creating career ladders results in more accurate representation of movement between jobs in an industry. It allows people who know about the industry to weigh in with their content expertise during the development process and encourages the validation of career ladders/lattices to ensure that:

- The appropriate jobs are present on the career ladder
- Job progression within the career is accurate
- Job description information is current

Also, there are few points we had to consider, such as;

- To understand significant background and expertise in an industry
- To understand the issues facing an industry
- To understand about education and training needed for the jobs and occupations
- To understand about jobs and occupations within an industry

Our goal was to provide an excellent resource for employees and human resource professionals which is created and guided by considering the industry experts.

Our job ladder will help UMMHC to;

- Focus workforce development efforts
- Attract individuals to them by showing potential career progression beyond entry points
- Show workers how different jobs interconnect within careers in their organization
- Inform workers about the training, education, and developmental experiences that would enable them to accomplish their career objectives

The focus was more on creating a job progression in a career as well as detailed descriptions of the jobs and the experiences that facilitate movement between jobs. Our product will contain both vertical and lateral movement between jobs and will reflect more closely the career paths of today's work environment.

After a generic search for job ladder across the length and breadth of the market, we narrowed our search to see what others within the health industry are doing. Even there, we couldn't find much success as most of the hospitals had some detailed structure with respect to physicians or nursing staff, none had anything detailed with respect to IT department in their organizations.

## Adopt or Create?

At that stage, we were staring at two possible scenarios:

1. Adopt a suitable career ladder from an IS organization and modify it.
2. Create a brand-new job ladder which would be a tailor fit for UMMHC.

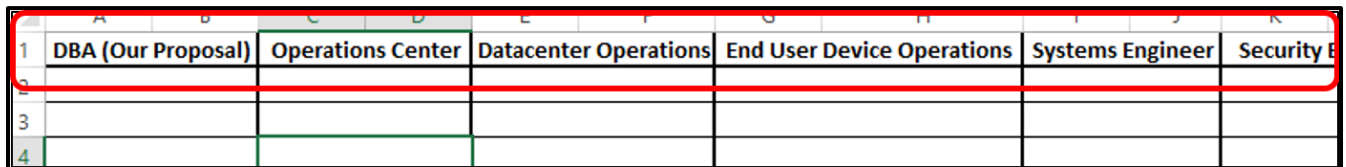
After extensive research and brain storming our team decided to pursue option 2, i.e. to go ahead with a brand-new job ladder, what helped was our client had already shared his expectation of what this job ladder must contain. We considered that's something we could work with.

## Square 1!

So, we were back to square 1, we know where to start with, but we got to start from nothing, that is some serious work to do. Were already into our second month of the project and we realized we didn't have much time to lose. We decided on our game plan.

## Horizontal First

From the excel sheet, client had provided, we extracted all the tabs of the excel and formulated into a skeleton for job ladder. Now we know what are the possible departments we could have, we again brainstormed, trimmed out couple of departments and merged a few and came with the final list of departments required.



1	DBA (Our Proposal)	Operations Center	Datacenter Operations	End User Device Operations	Systems Engineer	Security E
2						
3						
4						

Figure 3: Departments in Job ladder

## Vertical Next

We confirmed the same with client and received his consensus. That's when we got our horizontal/ row fixed from which we would have to develop the ladder vertically.



Each of us have started working on the vertical levels or positions within those departments. We decided that the IS organization got to have pyramidal structure, so each department within IS can have only one Level-8 Sr. Director at the top.

After level-4 the employees in each department would have a choice to advance either towards a management career or continue in the technical career. They could also make a career shift from technical to management career even at a later stage. People from other departments can move to a different department at the same level or higher level if they satisfy the requirements specified for that level.

One step at a time

Once we finalized all the positions within the ladder, we again sought the confirmation from client to proceed further. We froze the job positions or titles successfully.

Then we decided to create on document detailing all the fields for a position. So, we created a template for the same. Each of the team member chose one section in the document and has done some extensive research in our own areas.

UMass Healthcare IT Department Career Ladder	
<b>Title</b>	
<b>Level - Job Title</b>	
	Enter Level and Job Title here
<b>Minimum Qualifications</b>	
	Enter Qualifications here.
<b>Knowledge and Experience</b>	
	Enter Knowledge and Experience here.
	<ul style="list-style-type: none"> <li>• Point 1 goes here</li> <li>• Point 2 goes here</li> <li>• Point 3 goes here</li> <li>• Point 4 goes here</li> <li>• Point 5 goes here</li> </ul>
<b>Organizational Impact</b>	
	Enter Organizational Impact here.
<b>Leadership / Influence</b>	
	Enter Leadership/Influence here.
<b>UMMHC Examples</b>	
	Enter UMMHC Examples here.
<b>Salary Band</b>	
	Enter salary here.

Figure 4: Template

We chose Database Administration team and Level-4 DBA as a test subject. We created the document for the above-mentioned position and submitted it for client's approval. Client was quite happy with what he saw and his only suggestion was to break down some of the text into bullet points.

At this juncture, he had also advised us to think about the final output, he had also pointed us in the direction of share point and offered to help us by providing one of his engineers to work with us on the share point application. His base idea was to have application which he could go and present it to his management for approval.

## ***Research Execution:***

As per our plan, we went ahead and did the research and finalized the horizontal row, which would in turn become departments within IS. We came up with 10 departments.

1. DBA
2. Operations Center
3. Datacenter Operations
4. End User Device Operations
5. Systems Engineer
6. Security Engineer
7. Network Engineer
8. Technical Coordination
9. Business Relationship Manager
10. Application Analyst

After client was satisfied with this the departments, that we suggested, we went on to develop vertical ladder for one department, again, we decided to move on with DBA department. The idea here is to finalize one vertical ladder which would resemble or replicate across all the departments with minor changes or modifications. We then started gathering information about the structure of vertical ladder.

We came up with some basic concepts, as stated below:

- All the departments would have maximum of level-8.
- All the departments (except for Technical Coordination & Business Relationship Manager) will have both technical and management career paths.
- After level-4 employees would have a choice to move towards advanced technical or management career.
- Technical expertise will max out level-7.

- Employees will have the option to transfer between departments or change from technical career to management career even at later stages, if they satisfy requirements for the position.
- Departments of Technical Coordination & Business Relationship Manager would have a different structure from rest of the table, where:
  - Technical Coordination would have only a technical career path;
  - Business Relationship Manager would have only a management career path.

We started out research about DBA by looking at IS organizations and came up with list of positions for DBA starting from Intern and going all the way to Sr. Architect in technical path and to Sr. Director in management path.

We verified to see if our structure would be valid in Health care environment, when we were sure we could defend our suggestions, we went ahead and submitted the same for client's approval. We go ahead to go ahead and replicate it across the table.

<b>Database Engineer</b>	
Level 1 - Database Intern	
Level 2 - Database Analyst	
Level 3 - Database Administrator	
Level 4 - Database Engineer	
Level 5 - Sr. Database Engineer	Level 5 - MGMT Team Lead
Level 6 - Database Architect	Level 6 - MGMT Manager
Level 7 - Sr. Database Architect	Level 7 - MGMT Director
	Level 8 - MGMT Sr. Director

Table 1: Job titles for DBA

Though next step is relatively simple in terms of research and execution, it is still an important part of process. Each of the team member has taken 2 departments and started working on the job titles for those.

The important thing to be done here is to understand the differences between each department, cause going forward we must be able to clearly define job responsibilities for each position. So, it was important to ensure there is little or no overlap of responsibilities.

Management section across all the departments remained the same, as they have generic title and not specific ones.

Following are the finalized job titles:

<b>Operations Center</b>	
Level 1 - Operations Intern	
Level 2 - Operations Analyst	
Level 3 - Operations Administrator	
Level 4 - Operations Engineer	
Level 5 - Sr. Operations Engineer	Level 5 - MGMT Team Lead
Level 6 - Operations Architect	Level 6 - MGMT Manager
Level 7 - Sr. Operations Architect	Level 7 - MGMT Director
	Level 8 - MGMT Sr. Director

Table 2: Job titles for Operations Center

<b>Datacenter Operations</b>	
Level 1 - Datacenter Intern	
Level 2 - Datacenter Analyst	
Level 3 - Datacenter Administrator	
Level 4 - Datacenter Engineer	
Level 5 - Sr. Datacenter Engineer	Level 5 - MGMT Team Lead
Level 6 - Datacenter Architect	Level 6 - MGMT Manager
Level 7 - Sr. Datacenter Architect	Level 7 - MGMT Director
	Level 8 - MGMT Sr. Director

Table 3: Job titles for Datacenter Operations

<b>End User Device Operations</b>	
Level 1 - EUD Intern	
Level 2 - EUD Analyst	
Level 3 - EUD Administrator	
Level 4 - EUD Engineer	
Level 5 - Sr. EUD Engineer	Level 5 - MGMT Team Lead
Level 6 - EUD Architect	Level 6 - MGMT Manager
Level 7 - Sr. EUD Architect	Level 7 - MGMT Director
	Level 8 - MGMT Sr. Director

Table 4: Job titles for End User Device Operations

<b>Systems Engineer</b>	
Level 1 - Systems Intern	
Level 2 - Systems Analyst	
Level 3 - Systems Administrator	
Level 4 - Systems Engineer	
Level 5 - Sr. Systems Engineer	Level 5 - MGMT Team Lead
Level 6 - Systems Architect	Level 6 - MGMT Manager
Level 7 - Sr. Systems Architect	Level 7 - MGMT Director
	Level 8 - MGMT Sr. Director

Table 5: Job titles for Systems Engineer

<b>Security Engineer</b>	
Level 1 - Security Intern	
Level 2 - Security Analyst	
Level 3 - Security Administrator	
Level 4 - Security Engineer	
Level 5 - Sr. Security Engineer	Level 5 - MGMT Team Lead
Level 6 - Security Architect	Level 6 - MGMT Manager
Level 7 - Sr. Security Architect	Level 7 - MGMT Director
	Level 8 - MGMT Sr. Director

Table 6: Job titles for Security Engineer

<b>Network Engineer</b>	
Level 1 - Network Intern	
Level 2 - Network Analyst	
Level 3 - Network Administrator	
Level 4 - Network Engineer	
Level 5 - Sr. Network Engineer	Level 5 - MGMT Team Lead
Level 6 - Network Architect	Level 6 - MGMT Manager
Level 7 - Sr. Network Architect	Level 7 - MGMT Director
	Level 8 - MGMT Sr. Director

Table 7: Job titles for Network Engineer

<b>Technical Coordination</b>	
Level 5 - Sr. Technical Engineer	
Level 6 - Technical Architect	
Level 7 - Sr. Technical Architect	

Table 8: Job titles for Technical Coordination

<b>Business Relationship Manager</b>	
	Level 5 - MGMT Team Lead
	Level 6 - MGMT Manager
	Level 7 - MGMT Director
	Level 8 - MGMT Sr. Director

Table 9: Job titles for Business Relationship Manager

<b>Application Engineer</b>	
Level 1 - Application Intern	
Level 2 - Application Analyst	
Level 3 - Application Administrator	
Level 4 - Application Engineer	
Level 5 - Sr. Application Engineer	Level 5 - MGMT Team Lead
Level 6 - Application Architect	Level 6 - MGMT Manager
Level 7 - Sr. Application Architect	Level 7 - MGMT Director
	Level 8 - MGMT Sr. Director

Table 10: Job titles for Application Engineer

Once all the job titles were finalized, we started working on one each position' s details. For each job title, we are needed to formulate the following data:

1. Minimum Qualifications
2. Knowledge and Experience
3. Organizational Impact
4. Leadership / Influence
5. UMMHC Examples
6. Salary Band

We decided each member of the team would work on one of these sections, the strategy here is to ensure that the above details got be uniform and non-overlapping across all the positions in the ladder. Each section had been done using a different strategy.

### Minimum Qualifications:

This required mostly market research to see what is the market standard and few samples of UMMHC's job postings. We also made sure to understand the current trend within UMMHC.

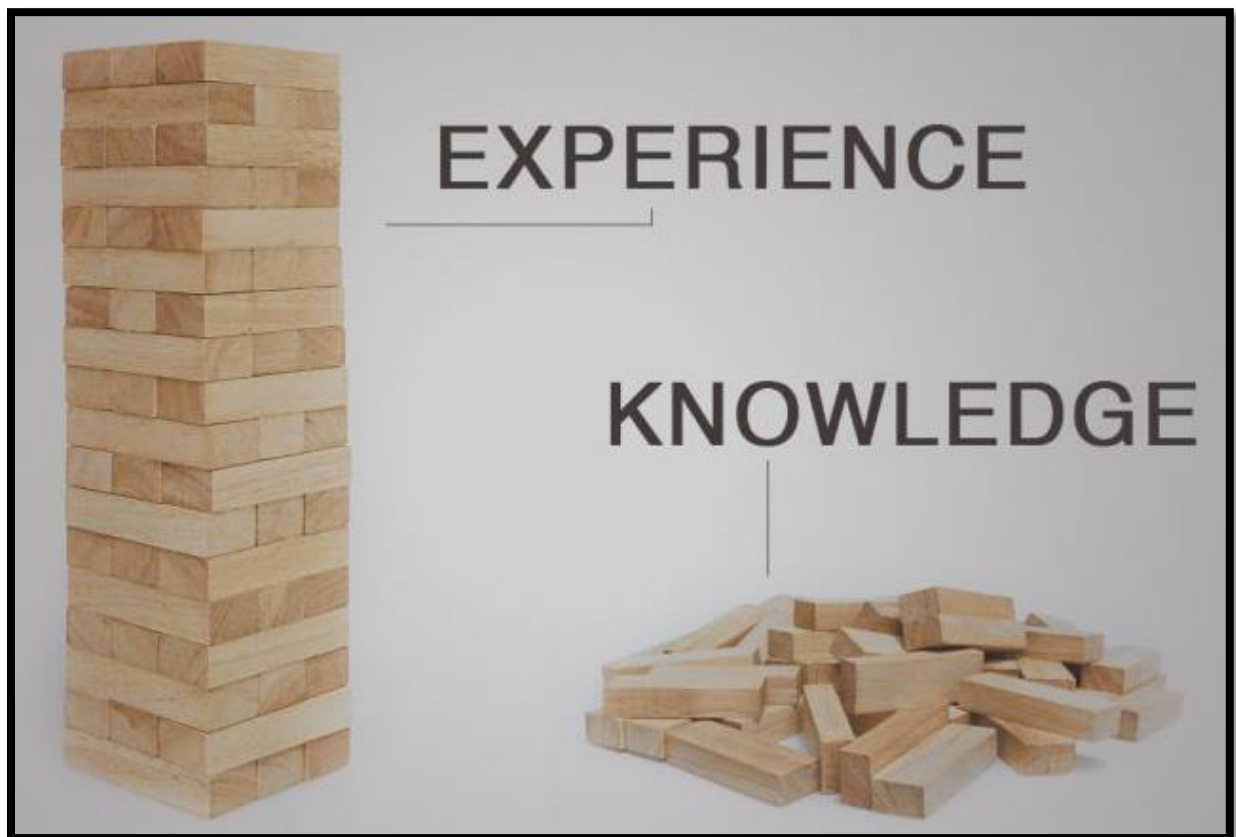
This section concentrated on Educational Qualifications, Degree Requirements, Skills required, Technical Discipline.



## Knowledge and Experience:

This has a lot to do with the UMMHC's own requirements; We had to analyze what they have been doing historically, whom they have been hiring in terms of experience. We did match it with other organizations to ensure if the expected knowledge and experience is realistic and if it is in line with market trends.

In this section, we concentrate on previous experience, skill set, expertise in the mentioned area, responsibilities. But while doing that, we ensured that we consider the message mentioned in the image below.



*Figure 5: Knowledge Vs Experience*

### Organizational Impact:

Organizational Impact is to understand what sizable role each position plays in the bigger picture. This helps each employee understand their role in organization setups, which provides them with an overview. In most organizations, employees only understand their tasks but they seldom know their part in the big picture and how they fit in. This section helps them understand that.

Whether considering the impact of technology, leadership, environment, change or whatever else, it is a sort of institutional navel gazing, that measures and analyzes effects on an organization and its response.

### Leadership / Influence:

This section highlights the how one position affects the other, while depicting the reporting hierarchy; It also formally represents, who would be responsible for ensuring work assignments, tracking project status, project delivery, project ideas.

As level increases, the responsibilities increase and individual assessment of tasks and higher productivity is expected. To consider this part, a line came across the team which said; **“You can influence without being a leader, and you can lead without influencing, but you can’t be a good leader without influencing”**.

The team did its homework and ended up having a list of requirements, which will merge both these qualities in one definition. Few of them are mentioned below;

- Leadership is usually conscious; influence is often unconscious
- Leadership is contained; influence crosses boundaries
- Leadership is public; influence is often behind the scenes
- Leadership is formulaic; influence is mysterious
- Leaders act on people; influence affects people and outcomes
- Leadership is visible; influence is out of sight
- Leadership is immediate; influence is long-term
- Leadership captivates culture; influence drives culture
- Leadership is the tip of the iceberg; influence is the mass under the surface

### UMMHC Examples:

This is something, which we had to sit down with UMMHC employees to understand what are the sample tasks each level of employee does. These serves as examples for any employee to understand what tasks they are expected to do in that position or what they are expected to do if they intend to get promoted.

This formalizes the practical expectations from each position/level in the respective departments.

### Salary Band:

This is more of a HR perspective. This is to help recruiters or management understand the market trends and to have an estimate to plan for recruiting new resources. These are mostly example figures, based on market trends at the time of research.

Note: This figures in this section may subject to change based on the industry trends.

Based on the above requirements we have populated the job ladder document for each position of DBA team. We have submitted these for client's review. After his review, we have received few suggestions for modifications, implementing which we were given the approval to populate similar documents for all the positions in the job ladder.

Client has also asked us to work on the format for final output. As mentioned earlier, he has asked us to consider using SharePoint application.

We were also considering using Microsoft excel with Macros. One of our team members has volunteered to work on Macros. He had come up with a sample file, which had documents embedded for all the job titles in DBA section. When we submitted the same to client, he was happy to move ahead with it. With that we had all the material needed for our final product.

Parallely we were working on populating the job ladder documents for all the positions, there were quite many differences from position to position and many more from department to other departments even though the jo positions were of same level.

## ***Final Solution Overview:***

In-order to create the final solution, our team broke down the job ladder requirements into three components:

1. Content
2. Job documents
3. Dashboard

This section of the final paper will discuss the final solution as it relates to the individual parts and their relationship to the final solution. Additionally, we will describe how the solution can be used by both the individual and the organization to quickly access job requirements for different use cases.

### **Part 1 – Content**

As part of the process to create the job families for the UMMHC IS organization, specific criteria were determined to be important for the business to describe what constituted a job within the vertical family and what differentiated one job from the next as you work through that particular family. This was defined as the content of the job ladder and required the majority of our research for the project. The content as we described it included the following:

- A. Level and job title – defines where in an individual job family a particular job belonged (i.e. like a rung in the ladder). The lower level, starting with one, increasing to the top of the family or ladder, level eight. Along with the Level, titles were assigned which were aligned across of job families to remain consistent.
- B. Minimum Qualifications – defines the minimum amount of education, relevant experience, and certifications which are required for this position within the job family.

- C. Knowledge and Experience – defines what practical experience and specific skills are required for this position. This differs from Minimum Qualifications in that these requirements are less related to education/certification and more to actual work experience.
  
- D. Organizational Impact – defines what impact to the organization will a person holding this position be expected to have. More junior members of the IT staff may have less impact across the team and larger IS organization, but are focused on individual impact such as meeting service level agreements (SLA) to customers. As IT staff move up the ladder the impact which they are expected to have not only increases within the team, but also across the larger organization.
  
- E. Leadership and Influence – defines the level of leadership and scope of influence required by this position. In a similar manner to how Organizational Impact grows with each higher level attained within the organization, so does the Leadership responsibility and scope of Influence.
  
- F. UMMHC Examples – this section contains specific examples of job responsibilities a person in this position would be expected to carry out within this Job Family at UMMHC. This information was provided by the UMMHC management team through conversations and surveys.
  
- G. Salary Band – this section, were it in scope, would contain salary banding or range information provided by the human resources department.

## Part 2 – Job documents

All the content which was collected through research and surveys needed to be organized in such a way that any individual position within the UMMHC IS organization could be accessed at the detailed level. The first step to providing this capability, was to take the organization structure provided by the customer and build a corresponding folder structure which would be used to contain the Content, which is shown in the below figure.

- ✓ Application Analyst
- ✓ Business Relationship Manager
- ✓ Database Administration
- ✓ Datacenter Operations
- ✓ End User Device Operations
- ✓ Network Engineer
- ✓ Operations Center
- ✓ Security Engineer
- ✓ Systems Engineer
- ✓ Technical Coordinator

*Figure 6 - Organizational Structure for job families*








- ✓ Individual Contributor
- ✓ Management

*Figure 7 - Individual Contributor and Management break out*

The above folder structure highlights that within each job family, there is an Individual Contributor and Management subfolder which is consistent with the requirement for the availability of separate career paths.





Once the folder structure was finalized, individual job documents templates were created for each position within each of the job families as shown in the following two figures.

## Individual Contributor

-  Level 1 - Database Intern
-  Level 2 - Database Analyst
-  Level 3 - Database Administrator
-  Level 4 - Database Engineer
-  Level 5 - Senior Database Engineer
-  Level 6 - Database Architect
-  Level 7 - Senior Database Architect

*Figure 8 - Individual Contributor (Database Administration)*

## Management

-  Level 5 - Database Administration - Team Lead
-  Level 6 - Database Administration - Manager
-  Level 7 - Database Administration - Director
-  Level 8 - Database Administration - Senior Director

*Figure 9 - Management (Database Administration)*

Once the templates and structure were in place, the Content was entered into the corresponding Job Documents.

UMass Healthcare  
IT Department Career Ladder

<b>Database Administration</b>
<b>Level - Job Title</b>
Level 1 – Database Administration Intern
<b>Minimum Qualifications</b>
<ul style="list-style-type: none"> <li>• High School Diploma/ <u>Bachelors</u> Degree .</li> <li>• Students must be enrolled full time at an accredited College or University.</li> <li>• Must possess strong verbal and written communications.</li> <li>• Must possess problem solving and decision making ability.</li> <li>• Knowledge of database is a plus.</li> </ul>
<b>Knowledge and Experience</b>
<ul style="list-style-type: none"> <li>• Basic analytical and communication skills.</li> <li>• Attention to detail with the ability to collect and record information from a wide variety of sources.</li> <li>• Must be reliable and able to set consistent work hours.</li> <li>• Ability to use standard office tools and software (MS-Office).</li> </ul>
<b>Organizational Impact</b>
<ul style="list-style-type: none"> <li>• The quality of the incoming data is enhanced with correct and accurate entering of data.</li> <li>• Improved evaluation of new/additional application updates and plugins.</li> </ul>
<b>Leadership / Influence</b>
<ul style="list-style-type: none"> <li>• Understand the IT systems and how they interact.</li> <li>• Understand the role of DB team.</li> <li>• Learn about the systems and underlying technologies.</li> <li>• Complete the tasks assigned by mentor/supervisor.</li> </ul>
<b>UMMHC Examples</b>
Enter UMMHC Examples here.
<b>Salary Band</b>
Enter salary here.

*Figure 10 - Completed job document - Level 1- Database Intern*



## Part 3 - Dashboard

In-order to effectively display the entire UMMHC IS organization at a glance, as well as, facilitate access to the individual detailed Job Documents, an interface was required. The team understood that the UMASS IS organization already had an investment in Microsoft software, so we looked at using products which would be available to them without incurring additional cost. After some discussion of options and taking into account team skills and time, we decided to use Microsoft Excel as the dashboard. Because of the logical organization of the UMMHC IS organization, it was fairly easy to replicate that structure into Excel using cells to contain each position within the job families.

Database Administrator		Operations Center		Datacenter Operations		End User Device Operations		Systems Engineer		Security Engineer		Network Engineer		Technical Coordinator		Business Relationship Manager		Application Engineer	
Individual Contributor	Management	Individual Contributor	Management	Individual Contributor	Management	Individual Contributor	Management	Individual Contributor	Management	Individual Contributor	Management	Individual Contributor	Management	Individual Contributor	Management	Individual Contributor	Management	Individual Contributor	Management
Database Intern		Operations Intern		Datacenter Intern		End User Device Operations Intern		Systems Intern		Security Intern		Network Intern		Technical Intern		Business Relationship Intern		Applications Intern	
Database Analyst		Operations Analyst		Datacenter Analyst		End User Device Operations Analyst		Systems Analyst		Security Analyst		Network Analyst		Technical Analyst		Business Analyst		Applications Analyst	
Database Administrator		Operations Administrator		Datacenter Administrator		End User Device Operations Administrator		Systems Administrator		Security Administrator		Network Administrator		Technical Service Coordinator		Senior Business Analyst		Applications Administrator	
Database Engineer		Operations Engineer		Datacenter Engineer		End User Device Operations Engineer		Systems Engineer		Security Engineer		Network Engineer		Technical Engineer		Associate Business Analyst		Applications Engineer	
Senior Database Engineer	Database Team Lead	Senior Operations Engineer	Operations Team Lead	Senior Datacenter Engineer	Datacenter Team Lead	Senior End User Device Operations Engineer	End User Device Operations Team Lead	Senior Systems Engineer	Systems Administration Team Lead	Senior Security Engineer	Security Team Lead	Senior Network Engineer	Network Team Lead	Senior Technical Engineer	Technical Coordination Team Lead	Principal Business Analyst	Business Relationship Team Lead	Senior Applications Engineer	Applications Team Lead
Database Architect	Database Manager	Operations Architect	Operations Manager	Datacenter Architect	Datacenter Manager	End User Device Operations Architect	End User Device Operations Manager	Systems Architect	Systems Administration Manager	Security Architect	Security Manager	Network Architect	Network Manager	Technical Architect	Technical Coordination Manager	Solutions Architect	Business Relationship Manager	Applications Architect	Applications Manager
Senior Database Architect	Director of Database Systems	Senior Operations Architect	Director of Operations	Senior Datacenter Architect	Director of Datacenter Operations	Senior End User Device Operations Architect	Director of End User Device Operations	Senior Systems Architect	Director of Systems Administration	Senior Security Architect	Director of Security Administration	Senior Network Architect	Director of Network Systems	Senior Technical Architect	Director of Technical Coordination	Senior Solutions Architect	Director of Business Relationships	Senior Applications Architect	Director of Corporate Applications
	Senior Director of Database Systems		Senior Director of Operations		Senior Director of Datacenter Operations		Senior Director of End User Device Operations		Senior Director of Systems Administration		Senior Director of Security Administration		Senior Director of Network Systems		Senior Director of Technical Coordination		Senior Director of Business Relationships		Senior Director of Corporate Applications

Figure 11 - UMMHC Job Ladder Dashboard

Database Administrator		Operations Center		Datacenter Operations		End User Device Operations	
Individual Contributor	Management	Individual Contributor	Management	Individual Contributor	Management	Individual Contributor	Management
Database Intern		Operations Intern		Datacenter Intern		End User Device Operations Intern	
Database Analyst		Operations Analyst		Datacenter Analyst		End User Device Operations Analyst	
Database Administrator		Operations Administrator		Datacenter Administrator		End User Device Operations Administrator	
Database Engineer		Operations Engineer		Datacenter Engineer		End User Device Operations Engineer	
Senior Database Engineer	Database Team Lead	Senior Operations Engineer	Operations Team Lead	Senior Datacenter Engineer	Datacenter Team Lead	Senior End User Device Operations Engineer	End User Device Operations Team Lead
Database Architect	Database Manager	Operations Architect	Operations Manager	Datacenter Architect	Datacenter Manager	End User Device Operations Architect	End User Device Operations Manager
Senior Database Architect	Director of Database Systems	Senior Operations Architect	Director of Operations	Senior Datacenter Architect	Director of Datacenter Operations	Senior End User Device Operations Architect	Director of End User Device Operations
	Senior Director of Database Systems		Senior Director of Operations		Senior Director of Datacenter Operations		Senior Director of End User Device Operations

Figure 12 - Job Families (closer view)

Once the cells were laid out in a similar manner to the folder structure created to hold the Job Documents, buttons were added with macros defined under each button to allow a simple mouse click to access the underlying Job Document. An example of the macro is shown in the next Figure.

```
(General)
Sub Button1_Click()
    Dim ie As Object
    Set ie = CreateObject("Internetexplorer.Application")
    ie.Visible = True
    ie.Navigate "https://drive.google.com/open?id=0B6XI6KLIIC9zM0pTRDVwMVBOTFE"
End Sub
```

Figure 13 - Excel Macro for Job Document Access

With the addition of the buttons and macros, a simple click on any of the buttons would open the underlying Job Document for the desired position in read only mode within a web browser window.

As mentioned earlier in this section, it was important to the team to understand what tools were already available within UMMHC for several reasons including cost, time to develop, ease of use, and skills needed to maintain the solution. The solution which was built accomplished all of our goals and then some. What is meant by “and then some”, encompasses two main areas:

- 1) The solution is portable, meaning because we used Excel and an underlying file system (in this case Google Drive), the solution can be transferred or ported over to the customers systems and be hosted on-site, and
- 2) The solution is extensible, meaning there is room for technical improvements. For example, the underlying Job Documents could be converted into database tables and then an ODBC driver could be used to access those documents from Excel or the Excel dashboard could be replaced with a Sharepoint or Web based front-end if the customer has the necessary development resources in house and wants to make the dashboard part of their corporate portal.

## Career Path

During preliminary discussions and initial requirements gathering, it was discovered that the result of this project was the desire to show that an IS professional working at UMMHC could have a career in IS and not just a job. Having an IS Job Ladder as a tool is an important step in the process of showing individuals within the organization that there is a path which they can follow which will allow them to progress in responsibility, skills attainment, and salary if they choose to do so.

## Specialization

One way in which to progress a career is to specialize in a specific skill. Whether that be databases, networks, security, or datacenter operations, obtaining experience and growing one's skillset in a specialized area will allow an individual to grow vertically within one of the UMMHC IS Job Families. This path is shown in the below figure using Database Administration as an example.

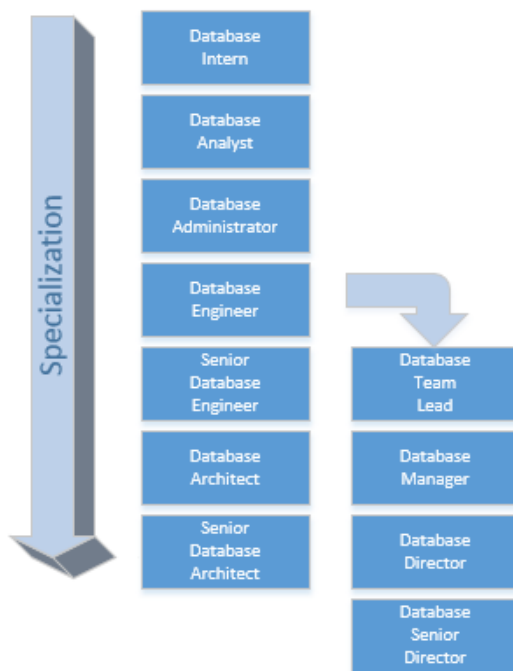


Figure 14 - Career Specialization - Database Administration

It's important to take note that once at Database Engineer (Level 4), an individual can choose to continue in an individual contributor role as a Senior Database Engineer (Level 5) or move over into a management role as a Database Team Lead (Level 5). This distinction is very important for a person wishing to make a career in a specialized area because it allows them to make a choice as to whether they continue to be viewed as successful by their own accomplishments or by those of the team which they lead. This decision to move from Individual Contributor to Management career path is available in almost all job families within the UMMHC IS organization.

### Generalization

Another way to look at developing a career is to take a more generalized approach to skill attainment. This approach is much broader in the set of skills gathered over time and allows for a lot of diversity in terms of work assigned. In terms of the UMMHC IS Job Ladder, the generalized approach allows individuals in one Job Family to move horizontally across the organization. This type of horizontal movement is shown in the next figure.

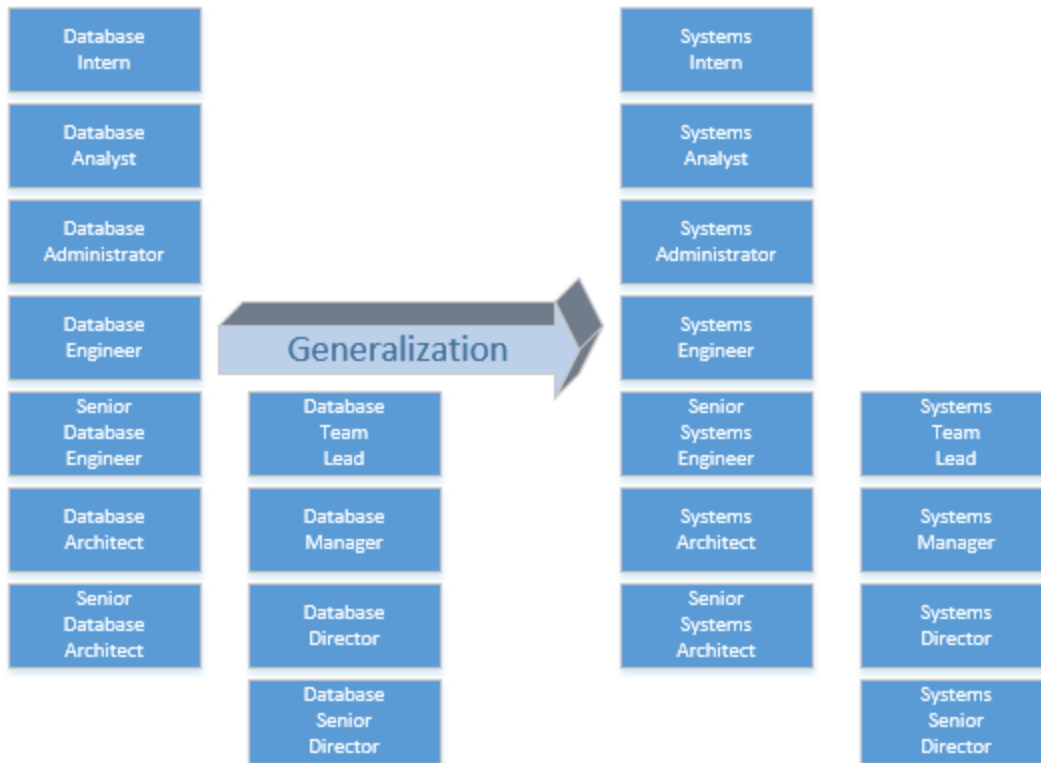


Figure 15 - Generalization

In the above figure, an individual who is in a Database Engineer position transfers over to the Systems Administration Team at the same level (Systems Engineer – Level 4). This move is for illustration purposes a “lateral move” in that while changing teams, the individual does not move up or down in level. The reason for this point to be highlighted is that in some cases an individual may wish to move from one Job Family to another, but by requirement (move down) or by desire (move up) a level when making the move between teams. This determination is often made by management based on skills required or organizational need.

For example, there is an individual on the Database Administration Team who is a Database Engineer (Level 4) and meets all of the requirements for either a Senior Database Engineer (Level 5) or a Database Team Lead (Level 5) position. On the Systems Administration Team, there is a System Administration – Team Lead (Level 5) position open and the Database Engineer meets all of those requirements as well. If

there is a need and the Database Engineer wishes to move over to another Job Family to broaden his skills, this may be an acceptable move.

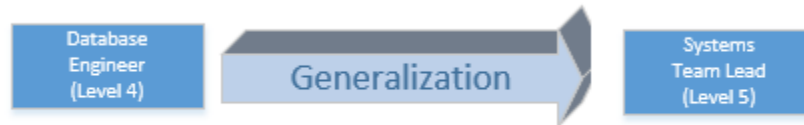


Figure 16 - Horizontal movement (up)

### Use cases

As examples of how the UMMHC IS Job ladder solution can be used, our team developed two use cases which showcase the use of the Dashboard and Job Documents.

### Management

John Smith, who is the Systems Administration Manager in the UMMHC IS Department has an opening for a Systems Administrator (Level 3) on his team. John would first like to post the open position internally to see if he could find any candidates who would be interested in the position and he believes in growing the IS organization from within rather than going through the more difficult task of screening new candidates from outside UMMHC.

John starts the process, but realizes he doesn't have any documentation on what a Systems Administrator does, what the requirements for the position should be, or what experience this person should have in that position. Aside from the effort John needs to put in personally, he may need to involve his manager to review the new position requirements, make necessary changes, and send to human resources to post the position internally.

John has quite a bit of work to do



Figure 17 - Example effort behind creating job documentation from scratch.

Let's move forward to today. John Smith has the same open position within his organization and wants to post the open position internally. John logs into the UMMHC IS Portal and finds the IS Job Ladder link. He opens the link to the Job Ladder Dashboard and finds the Systems Administration position. He opens the Job Document for that position by clicking on button labeled System Administrator, reviews the document, and sends a link to Human Resources asking them to post the position on the internal job board.

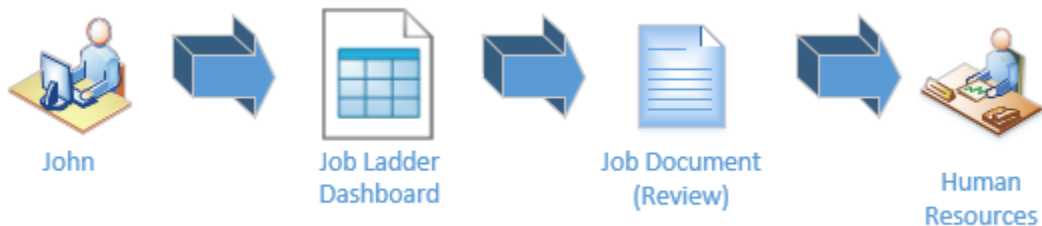


Figure 18 - Example of new process to post open position.

This use case highlights the time savings afforded to UMMHC IS management for tasks where they need information quickly to react to an opportunity in a time efficient manner and allowing them to move on to more value-added tasks.



## Individual

Marie Richmond holds the position of Senior End User Device Engineer (Level 5) and has been with UMMHC IS for 7 years. She started with the organization as an Intern while in college and has moved up through the organization specializing in End User Device Operations. She likes her job and the organization, but lately the work has become stale and she has always been interested in the backend system behind the end user devices she supports. She asks around and finds out that the Systems Administration Team manages the servers which run the services that her customers access through their devices.

Marie knows that there is an IS Job Ladder on the IS Portal so decides she'll look at what the requirements are for a position on the Systems Administration Team. She accesses the IS Job Ladder Dashboard and looks at Senior Systems Engineer (Level 5) Job Document and realizes she doesn't meet all of the skills specific to this position, but after looking at the Systems Engineer (Level 4) Job Document realizes her skills and experience come closer to that position. She decides that she'll print the two documents and talk to her manager to understand if there is a path for her to move over to the Systems Administration Team.



Figure 19 - Individual access to information.

This use case is one where an individual has access to the necessary information to understand what opportunities are available to them and what skills and experience they need to take advantage of those opportunities or at a minimum start the conversation.

## ***Conclusion:***

The customer request is a little challenging given this effort is considered a complete replacement for the existing structure which exists within the UMMHC IS organization today. That said, there is a lot of opportunity for the customer to influence what the IS organization looks like in the future, bringing more structure, better performance, and customer satisfaction to the business.

With the challenges the organization is facing to keep up the work responsibilities assigned to employees at different departments, job ladder that we created will not only benefit the company in full utilization of resource but also it helps the employees to advance their careers to higher level of responsibility and authority.

Poorly structured organizations find that critical deadlines are not met because there were not sufficient human resources in each department to accomplish all parts of a given task, or because it was not clear whose ultimate responsibility the project was. If individuals are not sure whom they report to, they may find they are given conflicting assignments by two or more managers above them.

A sound organization structure ensures that the company has the right people in the right positions. The structure may suggest weak spots or deficiencies in the company's current management team. As the company grows, the organization structure must evolve with it.

In today's diverse, global, and technologically savvy work environment, careers are no longer perceived as strictly vertical movements on a job ladder. Instead, a more appropriate example for one's career path would be a rock climbing wall.

Similarly, an effective career path process must be multi-faceted and should support each step in the talent management cycle. Our goal to create well-crafted career paths with best fit success factors, which can play an important role in driving organizational change for UMMHC and building a better yet efficient workforce capability.

## **References:**

- Competency Model:  
<https://www.careeronestop.org/competencymodel/careerpathway/CPWCIICollaborativeProc.aspx#why>
- ONET: <https://www.onetcenter.org/ladders.html>
- Lifehacker: <http://lifehacker.com/the-difference-between-knowledge-and-experience-1516486966>
- LinkedIn: <https://www.linkedin.com/pulse/20141120165807-4321527-the-individual-and-organizational-impact>
- Steve Graves: <http://www.stephenrgraves.com/articles/read/the-difference-between-influence-and-leadership/>
- Technical-career-track: <https://www.quora.com/What-are-all-the-job-levels-in-Gogles-technical-career-track>
- UMASS Mission and Values- <https://www.UMASSmemorialhealthcare.org/about-us/mission-vision-and-values>
- <http://smallbusiness.chron.com/>

**Appendix:**

1. Stakeholder Sign-off

This project charter has been signed off by the following stakeholders:

_____	_____	_____
Name	Title	Date

Project Teams Members:

_____	_____	_____
Name	Title	Date

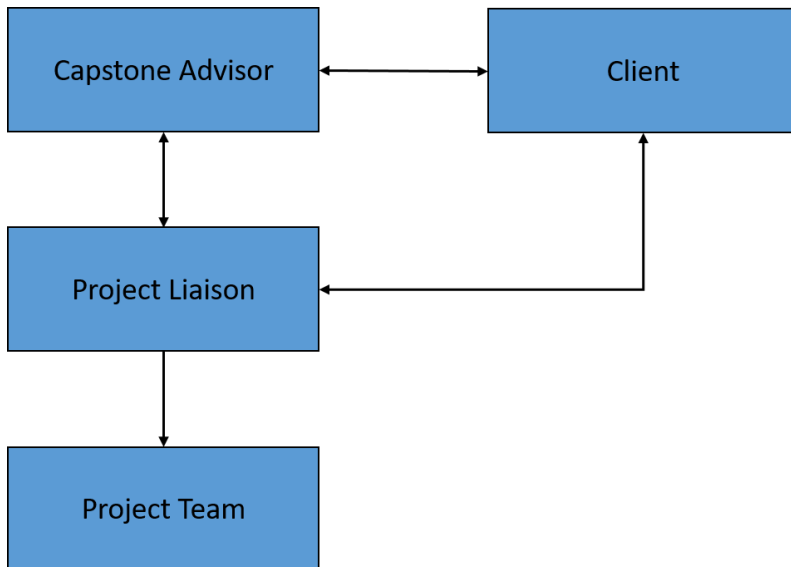
_____	_____	_____
Name	Title	Date

_____	_____	_____
Name	Title	Date

_____	_____	_____
Name	Title	Date

_____	_____	_____
Name	Title	Date

## 2. Project Structure



## 3. Status Report

NOTE: Please include along with the template a 1 to 2 page written narrative on the project status, including learning insights, project issues, goals achieved or team dynamics

WEEKLY STATUS REPORT Project <NAME>  
TEAM:

STATUS: G  
REASON (If Yellow or Red):

**STATUS REPORTING LEGEND**  
**Overall Team Status**  
Green = On Target: You will hit all 'Must Hit' Milestone workplan dates  
Yellow = Danger Range: You are not confident you will hit 'Must Hit' Milestone dates and/or complete all activities by phase end  
Red = Off Target: 'Must Hit' Milestones and phase end activity dates will not be met

**Individual Milestone Status**  
Green = On Target: You will hit the milestone date listed in the workplan. All issues can be handled internally  
Yellow = Danger Range: There is a risk the milestone will not be complete by the workplan date  
Red = Off Target: Milestone date will not be hit – the go-live date is jeopardized

Top Milestones							
Milestone # and Description	% Complete	Original Start	Original Finish	Revised Finish	Status (G,Y,R)	Predecessor ID	Predecessor Description
1 Requirements gathering	100%	1/23/2017	2/20/2017		G		
2 Job ladder and dashboard - initial development and prototype	100%	2/20/2017	3/13/2017		G		
3 Job ladder and dashboard complete	90%	3/20/2017	4/3/2017	4/17/17	Y		
4 Final paper - DRAFT	50%	4/3/2017	4/24/2017		G		

Overview