



QUALITY SET-UP IN AN EMR PROJECT

Shivika Chugh

MBA-HM 19 (0216)

Guided by : Dr. Arindam Das
(Associate Dean Research)

DISCLAIMER

All the information regarding the Dell organization during this study is confidential and/or privileged information and will not be disclosed/used for any purpose other than this study.

It is hereby notified that any use, dissemination, copying, or storage of this study/findings/ information is strictly prohibited under any circumstances. It may not be reproduced in whole, or in part, nor may any of the information contained therein be disclosed without the prior consent of the organization.

The contents of this report have not been independently verified and they do not purport to be comprehensive/accurate, or to contain all the information pertaining the subject.

The organization takes no responsibility or liability in relation to the accuracy or completeness of this study or any other written or oral information made available in connection with the study.

AGENDA

- Introduction
- Rationale
- Research question
- Objectives
- Methodology
- Quality Management System In the organization
- Quality set-up in EMR projects (Documents, plans and matrices)
- Survey findings
- Comparison of quality set-up in different EMR projects
- Conclusion
- Recommendations

INTRODUCTION

- IT services are a necessary support for most business processes, therefore the quality of IT support services is of high importance.
- IT support services are a key factor for minimizing failures and sustaining the business performance. Thus, to ensure quality of services, operations must be systematically planned and aligned to the organization's requirements¹.
- A Quality Management System (QMS) in an IT support services project is a collection of business processes focused on consistently meeting customer requirements and enhancing their satisfaction creating value to the donor as well as the beneficiaries which justifies the definition of quality which is “Conformance to requirements or fitness for use”².

1. *Technology Diffusion: The Adoption of Electronic Medical Records in US Hospitals,*” *Management Science* (56:8)

2. *Joseph M. Juran , Quality Control Handbook (1951)*

RATIONALE

Understanding the Quality Management System in an EMR project and assessing the knowledge of project teams regarding the quality processes will allow for the development of targeted measures to demonstrate the advantages of following quality protocols in an EMR project and setting up of quality processes in the projects which lack the same.

RESEARCH QUESTION

What is the Quality set-up in an EMR project and what is the knowledge regarding the quality processes amongst the project team members ?

OBJECTIVES

1. To Understand the Quality Management Processes in a service support project.
2. To Assess the knowledge about Quality Management System in an EMR project among different team members.
3. To compare the quality set-up of different EMR project teams

METHODOLOGY

- **Study design:** Descriptive cross- sectional study design.
- **Study Area:** Healthcare applications support services project teams
- **Study Duration:** Three months (February 2016-April2016)
- **Study Population:** The respondents for the study would be different project team members in Bangalore
- **Sample Size-** 57 (Excluding team members working in night shifts , responses received were 64, out of which 57 complete responses were received)
- **Source of Data and data collection tool :** Primary data collected through a semi-structured questionnaire.
- **Data Collection Technique:** The data collection combined a qualitative analysis of event logs data for a certain period, with a quantitative approach conducting interviews Face to Face interview as well through e-mail.
- **Data Analysis and Presentation :** Survey analysis is done using Microsoft excel and results are presented in the form of Pie-diagrams, bar and column graphs.

UNDERSTANDING DELL'S QUALITY MANAGEMENT PROCESSES

Guidance was taken from the **Services Quality & Standards Advisor** and **Senior advisor** using an Open ended questionnaire attached along.

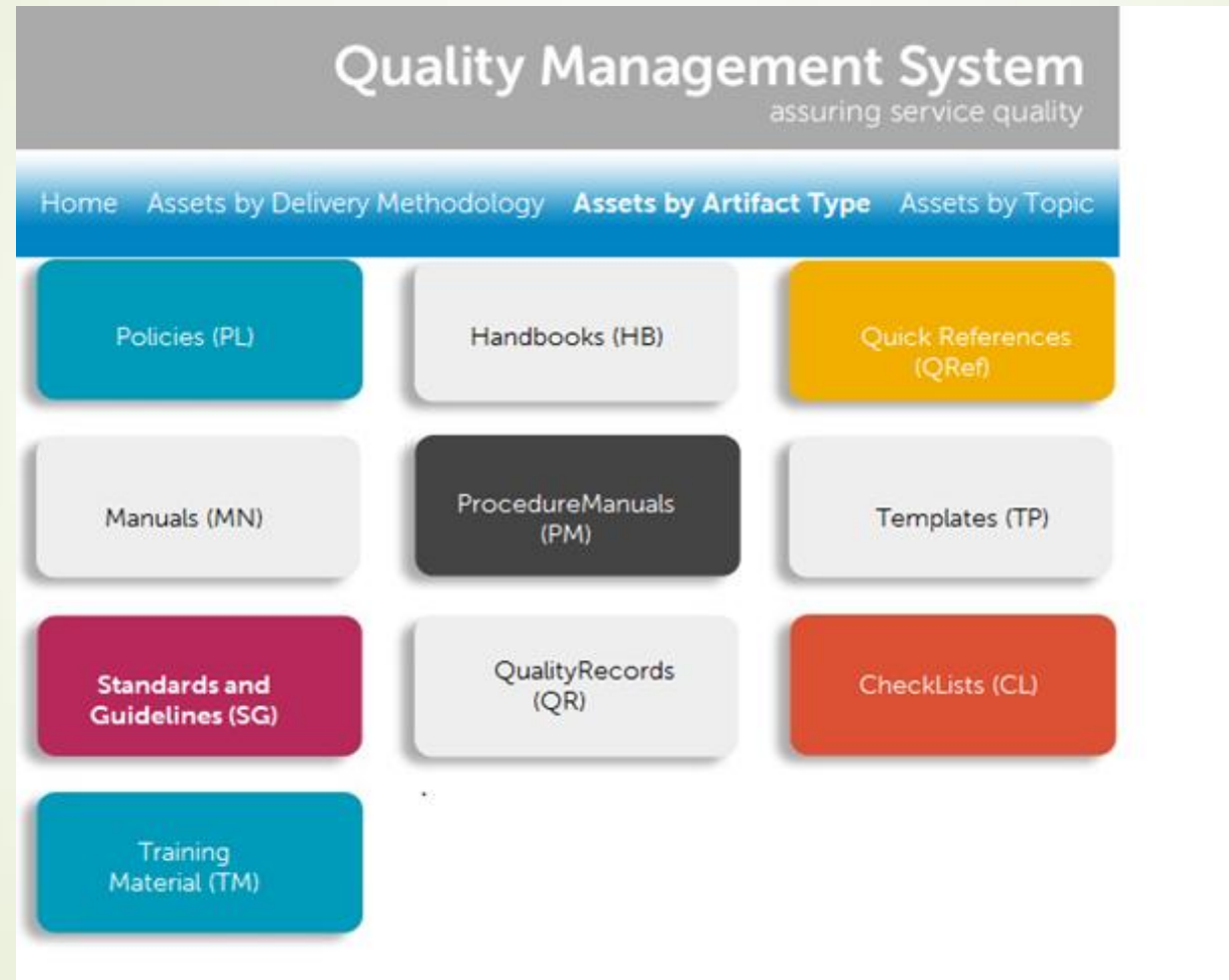


Microsoft Word
Document

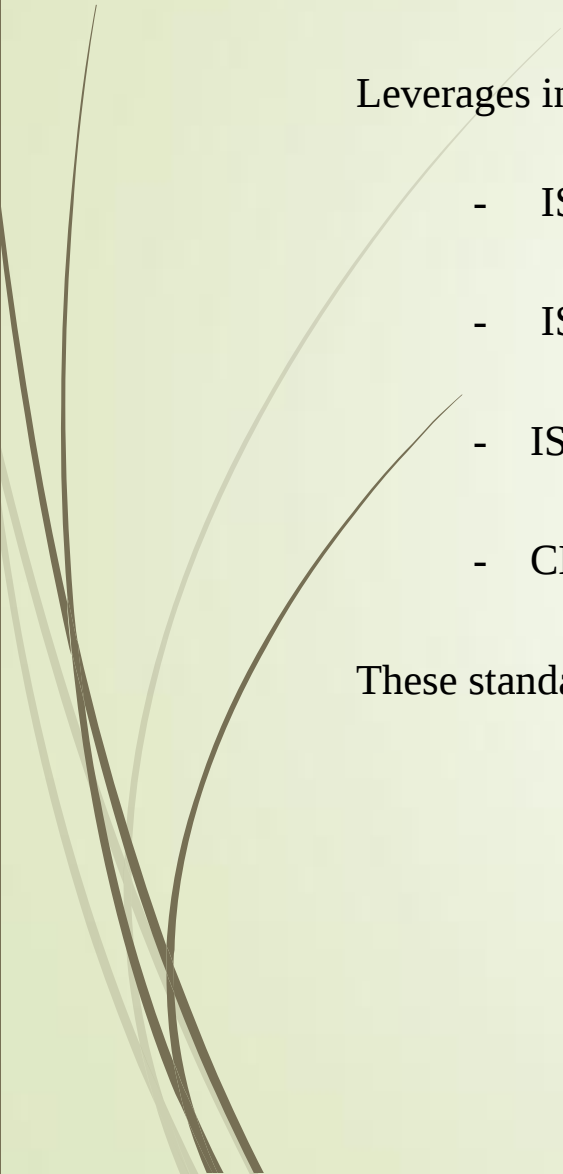
After understanding the processes and expectations of the Quality team with different projects, a survey was designed to assess the knowledge regarding these processes amongst different team members.

QUALITY MANAGEMENT SYSTEM

The Services – Applications approach to project delivery is supported by robust process framework (QMS) that includes:



Source : Dell QMS portal

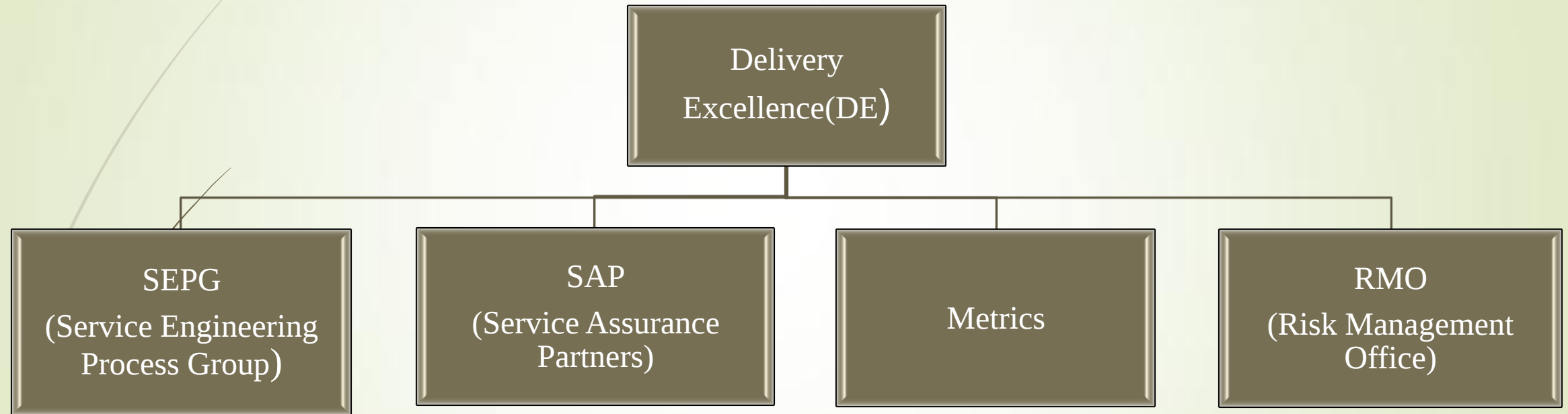


Leverages industry best practice from ISO suite of Standards

- ISO 9001 - Quality
- ISO 20000 – Services
- ISO27001 –Security
- CMMI - Development.

These standards lay the foundations of our delivery methodologies for various service offerings.

QUALITY MANAGEMENT TEAM



The quality set-up for an EMR project consists of maintaining A set of documents, plans and matrices such as :

PROJECT CHARTER

The Project Charter serves several purposes:

- Clearly states the situation or opportunity that the project addresses
- Defines the scope of the project and their deliverables
- Defines high-level expectations
- Establishes a Project Charter Statement
- Serves as sponsor's authorization to proceed to Initiation phase
- Suggests an initial approach to solve the problem

SERVICE MANAGEMENT PLAN (SMP)

- Service Management plan is created to document how a Service delivery manager plans to deliver the services in an optimal manner to achieve the service management objectives as stated in the contract.
- This document consists of a number of important aspects like stating service management objectives, strategy to achieve the objectives, execution plan, service monitoring and reporting etc.
- Roles and responsibilities of those involved in this engagement have been clearly defined in the document.

SERVICE DELIVERY DOCUMENT (SDD)

- This document is a subset of Service Management Plan (SMP).
- The objective of this document is to record the actual implementation of service delivery as planned in Service Management Plan

SERVICE IMPROVEMENT PLAN (SIP)

- To share knowledge about ongoing activities related to the Project and discussion on any issues faced by the team members
- There are certain triggers that lead to the identification of the service improvement opportunity. Some of the examples are :
 - SLA performance
 - Project Performance
 - Customer Complaint
 - Contractual Requirement
 - Review with Customer
 - Process Audit

CONFIGURATION MANAGEMENT PLAN (CMP)

The document clearly defines the roles and responsibilities for all the individuals responsible to perform configuration management activities. The configuration management activities will also cover the following:

- Build and release management for project/product components
- Environment management/ system configuration changes
- Naming conventions
- Versioning

CONFIGURATION MANAGEMENT DATABASE(CMDB)

The Configuration Management Database would contain the information about all the Configuration Items in the department/Group. This CMDB can be used by the departments to capture useful information about the Configuration Items (CIs), the references and history that are not already covered in the configuration tool.

DISASTER MANAGEMENT PLAN

Lists all the Critical SLA's/milestones and ensures service continuity so that there is no breach of SLA's or deviations in case of disastrous situations.

ESCALATION MATRIX

If the item owner cannot resolve the risk or issue, or validate the assumption and out-of-scope item, the Project/Operations manager escalates the item to the next level.

RAID MATRIX

- Risks
- Assumptions
- Issues
- Dependencies

COMPLIMENTS AND COMPLAINT RECORD (CCR)

To capture the compliments received and to capture the client complaints

COMMUNICATION MATRIX

The communications you need to engage in with your project/program stakeholders. It includes

- Trigger Event
- Audience
- Channel/ Approvers
- Vehicle

KNOWLEDGE MANAGEMENT PLAN

- Track Knowledge Sessions (K-Hours) conducted for sharing experiential learnings across all relevant expertise areas like domain & technology
- Document experiential learnings (On-the-Job learnings)
- Induction Plan for associates.
- Ready snapshot of the project through project case study
- Other Collaborative Initiatives (Newsletters, Debates, Quiz etc.)
- KM related metrics
- Track the list of potential components that may be reused in the project. It also tracks the effort and value saved for the components that are reused.(Reusability)

SURVEY FINDINGS

The questionnaire that has been used for the survey has been embedded along.



Quality Set-up
questionnaire

QMS SESSIONS ATTENDED

n=57

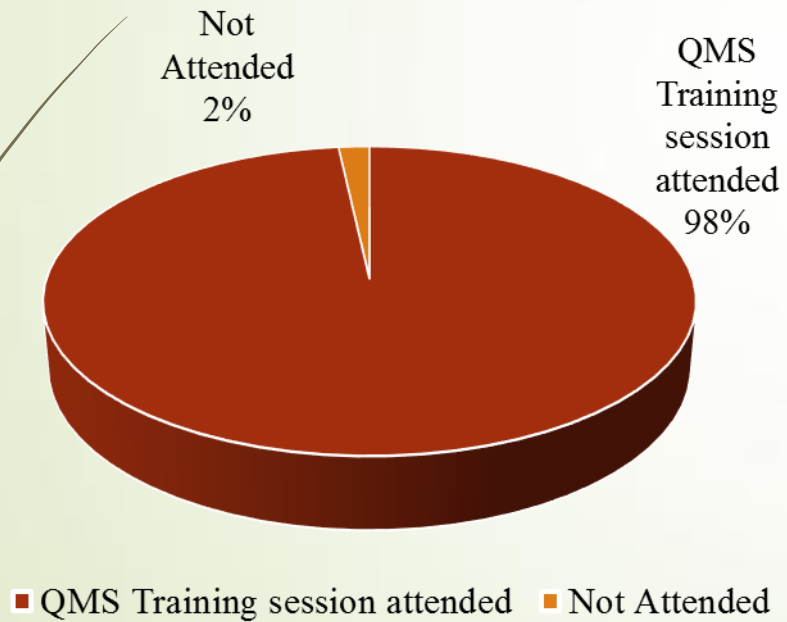


Figure 1

AWARENESS ABOUT ALL QMS PROCESSES

n=57

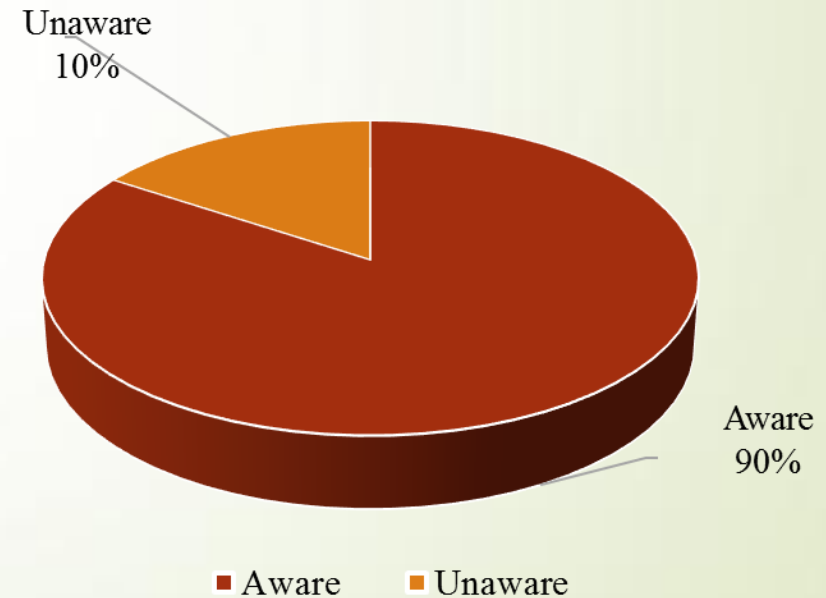


Figure 2

AWARENESS ABOUT THE ORGANIZATION STANDARDS

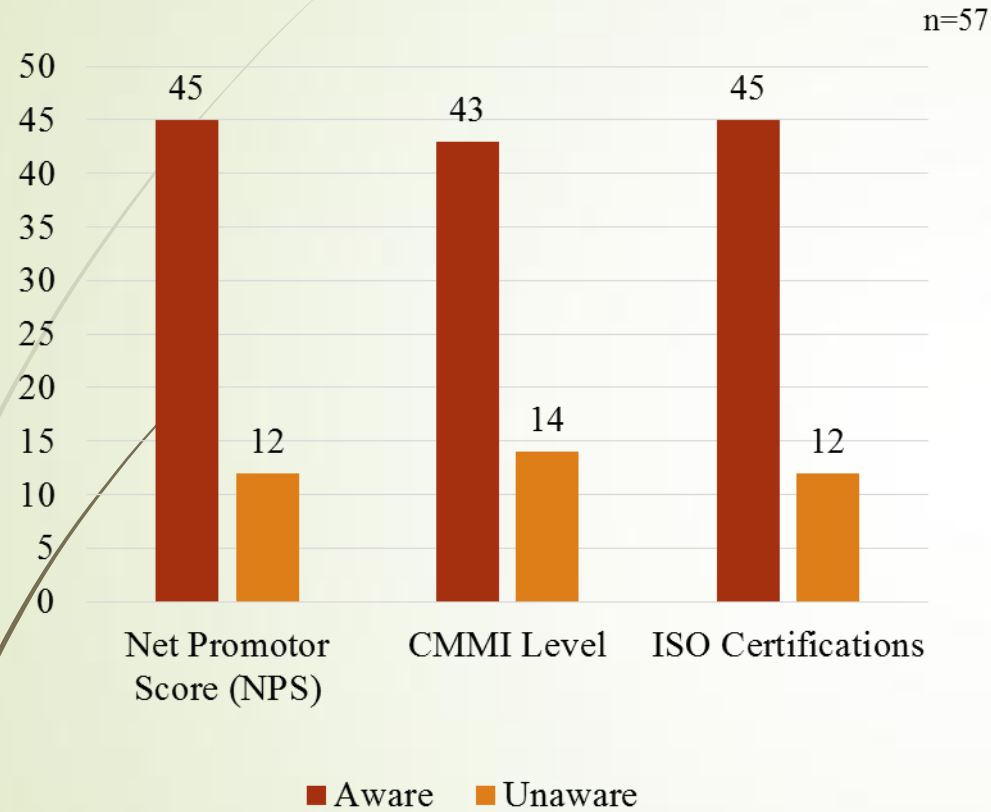


Figure 3

ADMINISTRATIVE TOOLS

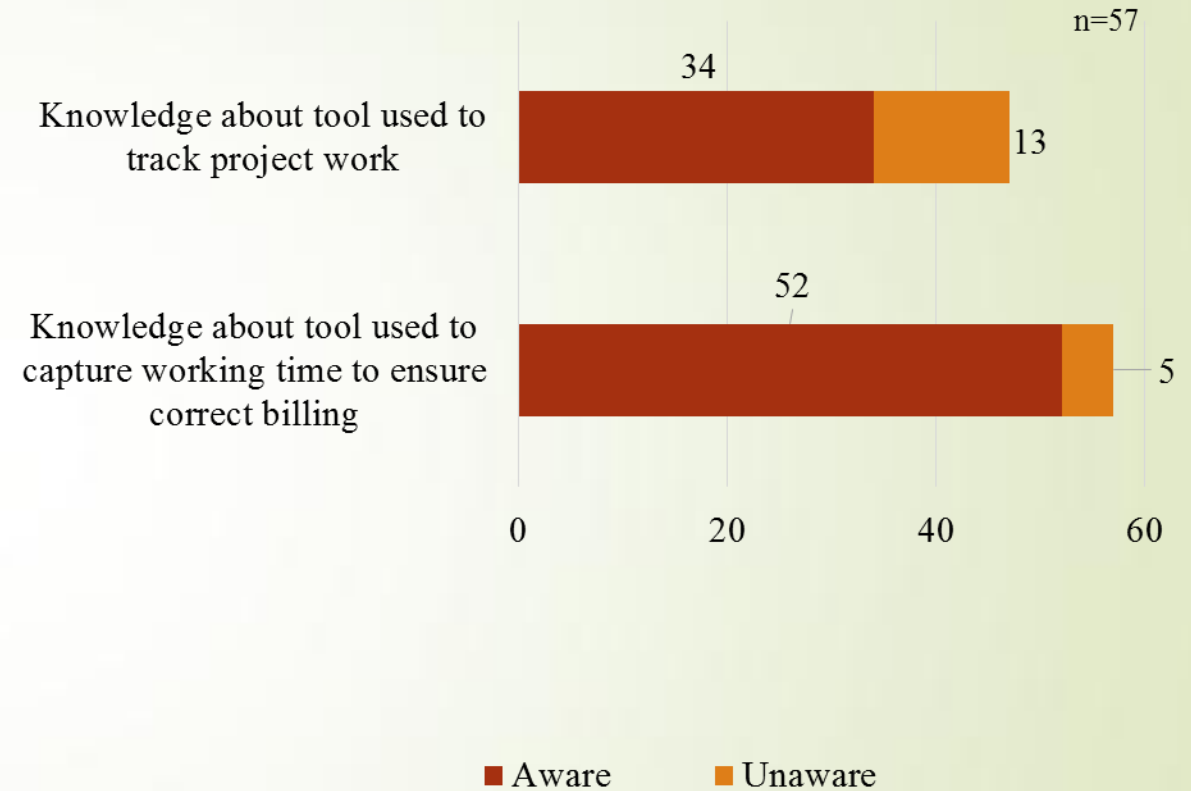


Figure 4

**ALL THE ISSUES THEY CAN FACE
WHICH CAN POSE A RISK TO
PROJECT DELIVERY**

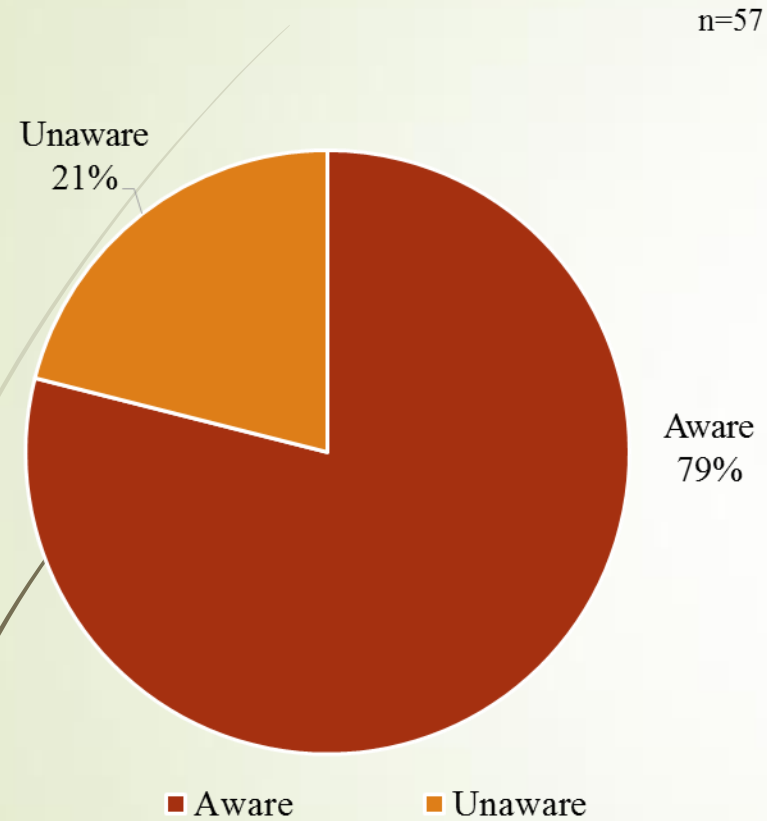


Figure 5

**RELATION BETWEEN AWARENESS
REGARDING WHAT SHOULD BE DONE IN
CASE OF A SLA BREACH AND EXPERIENCE**

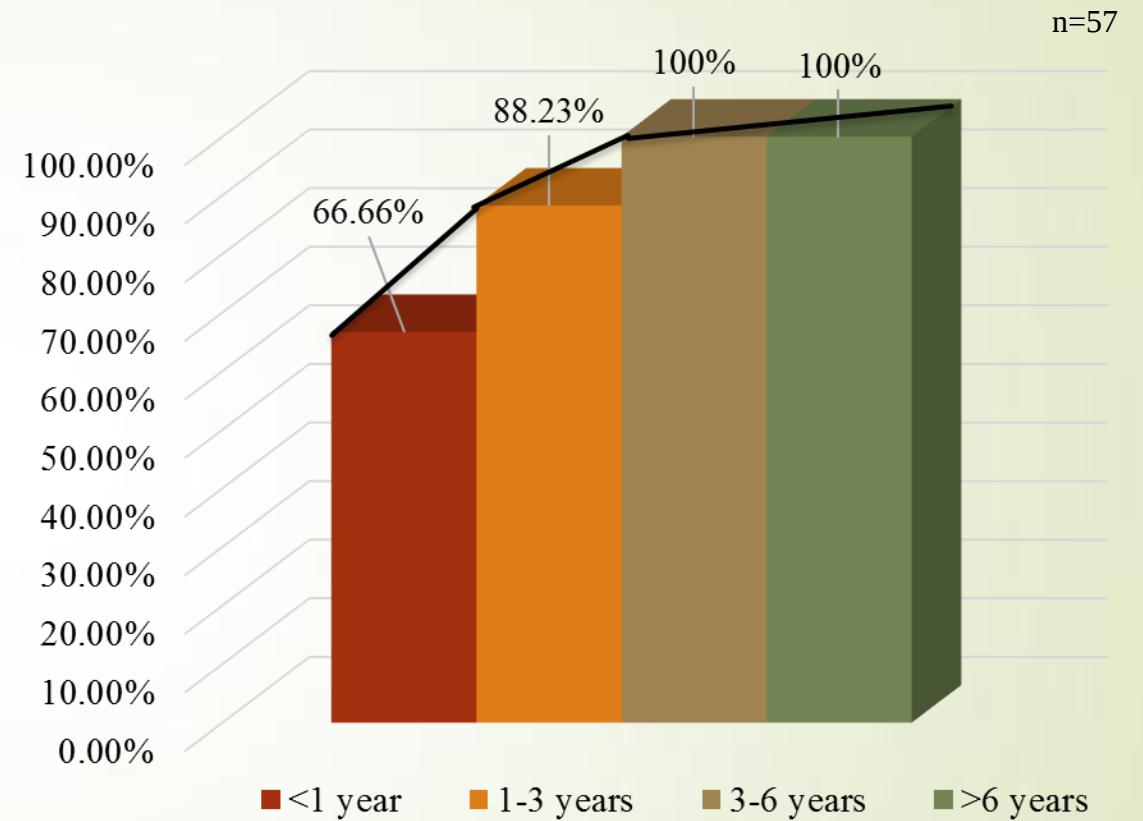


Figure 6

RELATION BETWEEN KNOWLEDGE ABOUT RESPONSE AND RESOLUTION TIMES AND EXPERIENCE

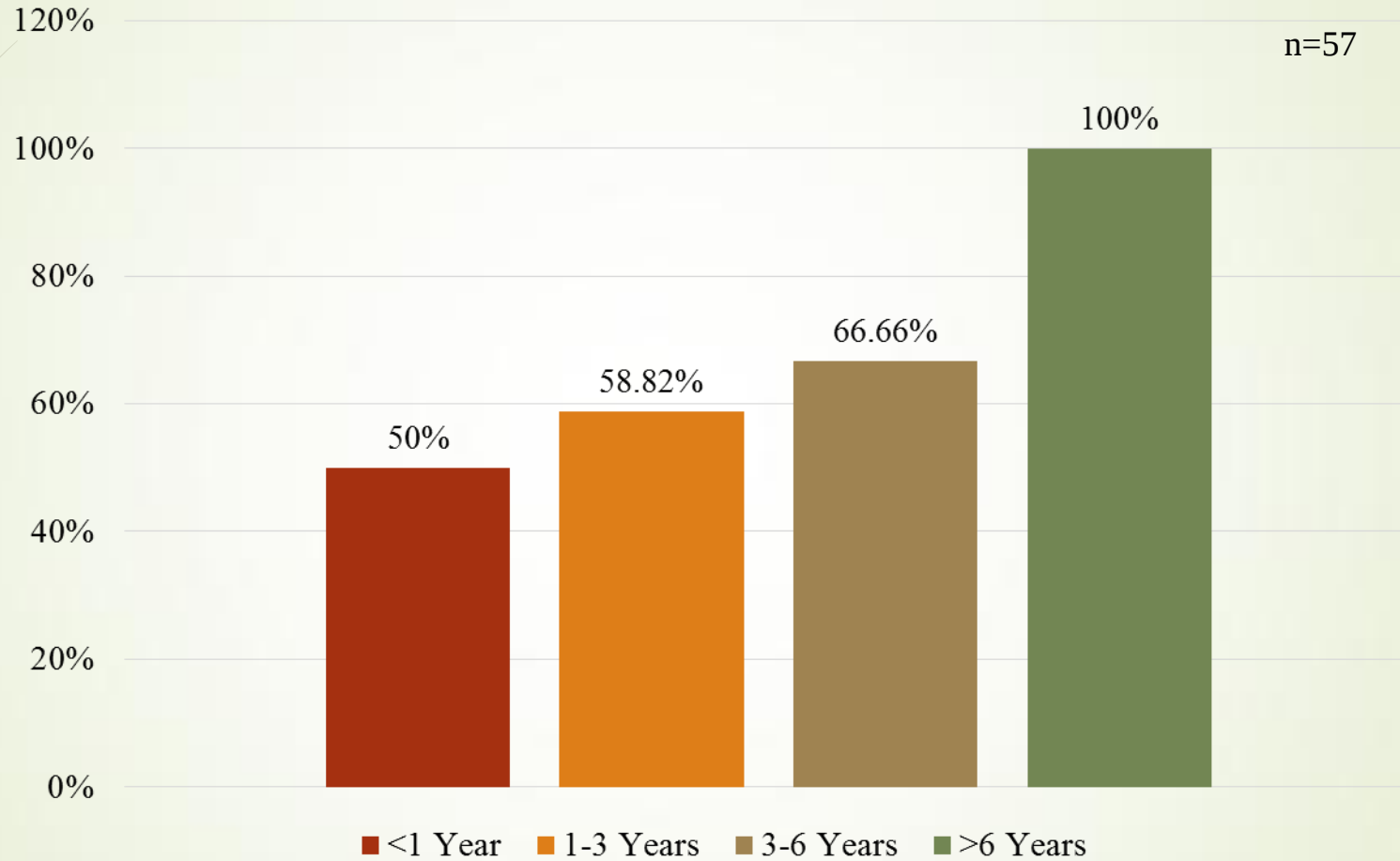


Figure 7

**RELATION BETWEEN EXPERIENCE AND AWARENESS REGARDING
WHERE THE CRITICAL RESOURCES AND NAMING CONVENTIONS
ARE DEFINED**

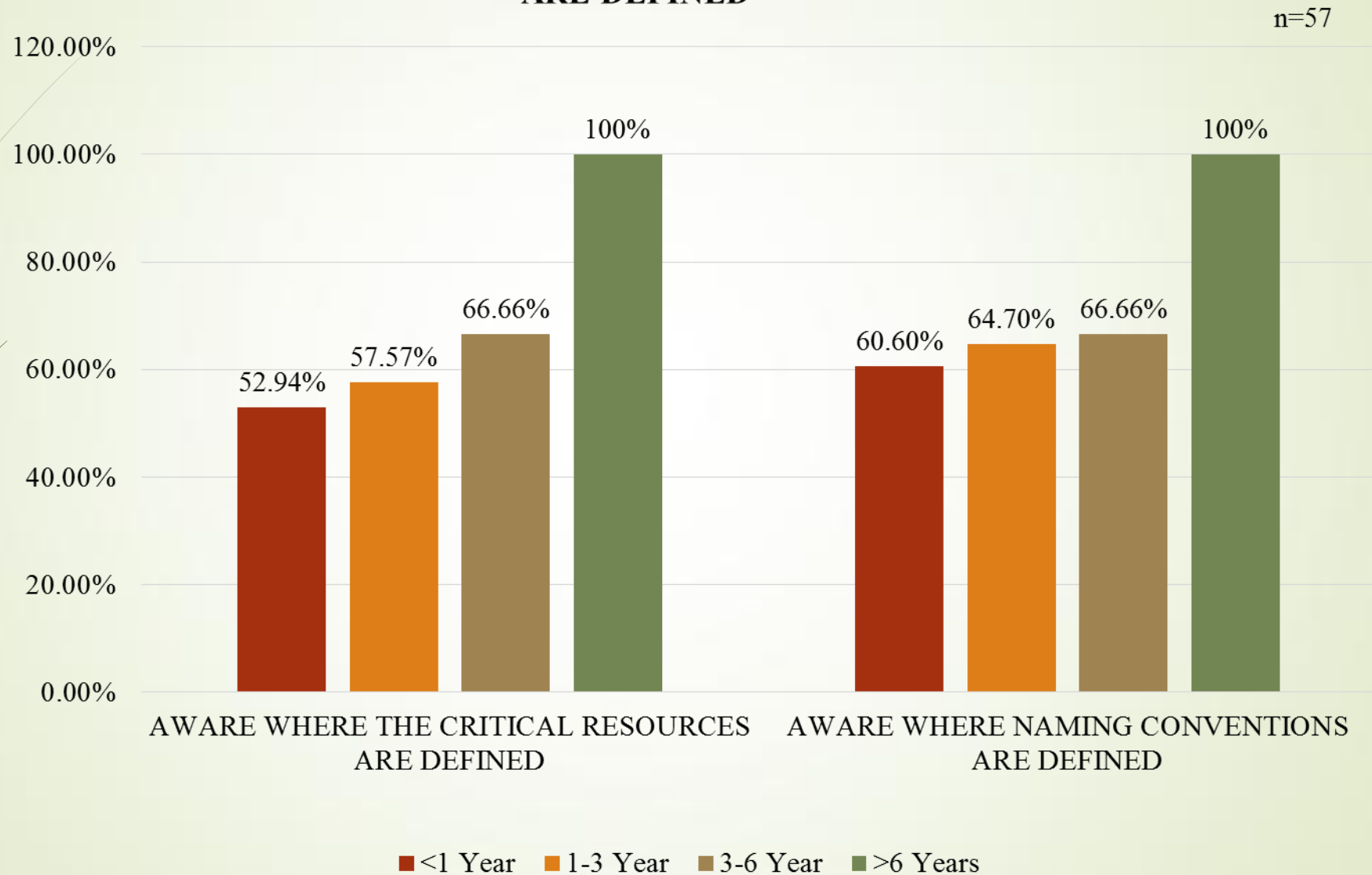


Figure 8



DIFFERENT EMR PROJECTS AND THEIR QUALITY SET-UP

	PROJECT 1	PROJECT 2	PROJECT 3	PROJECT 4	PROJECT 5
DOCUMENTS					
PROJECT CHARTER	✓	✓	✗	✓	✗
SERVICE MANAGEMENT PLAN(SMP)	✓	✓	✗	✓	✗
CONFIGURATION MANAGEMENT PLAN(CMP)	✓	✓	✗	✓	✗
DISASTER MANAGEMENT PLAN(DMP)	✓	✓	✗	✓	✗
RAID MATRIX	✓	✓	✗	✓	✗
ESCALATION MATRIX	✓	✓	✗	✓	✗
SERVICE DELIVERY DOCUMENT	✓	✓	✗	✓	✗
SERVICE IMPROVEMENT PLAN(SIP)	✓	✓	✗	✓	✗
COMMUNICATION WORKBOOK	✓	✓	✗	✓	✗
CONFIGURATION MANAGEMENT DATABASE(CMDB)	✓	✓	✗	✓	✗
COMPLIMENTS AND COMPLAINT RECORD	✓	✓	✗	✓	✗

LIMITATIONS

- Sample size : Less responses from the project team members because of variation in shifts
- Non-availability of the Quality Management Team because of their hectic schedule
- Time constraints : Collection, compilation and analysis of data requires lot of time
- Some questions were slightly prone to subjectivity.

CONCLUSION

- Few people in the team are unaware at some levels because certain things are handled only by the top management in the project i.e. people with more than 3 years of experience
- Having a quality set-up does not ensure complete awareness about all the quality processes amongst the team members.
- The Projects under consideration are performing and delivering well. This is mainly due to experienced and skilled resources. Hence, it can be concluded that the projects are people driven and not process driven.

RECOMMENDATIONS

- Regular knowledge transfer sessions should be arranged across the teams with special focus on hands on trainings.
- Since number of junior resources is more they should be involved in the various quality processes under the guidance of a mentor which will give a more hands-on experience on these processes and will be far more beneficial.
- In addition to being aware of different documents, the importance and benefit of maintaining them should also be known to each team member and should be taken care of in the induction plan.
- There should be a timeline maintained for following and maintaining all the quality processes.



THANK YOU