

Project Management 101 for Immunization Information Systems

Why should you care?
Why is it important?

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Topics

- H1N1 Case Study
- Review Software Development Life Cycle
- Project Management Process Groups
- Project Management Knowledge Areas
- Project Management Processes

Terms and Acronyms

- PMI – Project Management Institute
- PMBOK – Project Management Body of Knowledge
- SDLC – Software Development Life Cycle
- FDD – Functional Design Document
- UAT – User Acceptance Testing

H1N1 Story

As IIS Manager this is what you discovered in Spring 2009...

- A state IIS will be required to capture a new vaccine, H1N1, and routinely report on age groups to the CDC possibly via export functionality.
- Mass Vaccination Scenarios to be implemented. Can the IIS manage this?

And all of this must be done by September!

Software Development Life Cycle

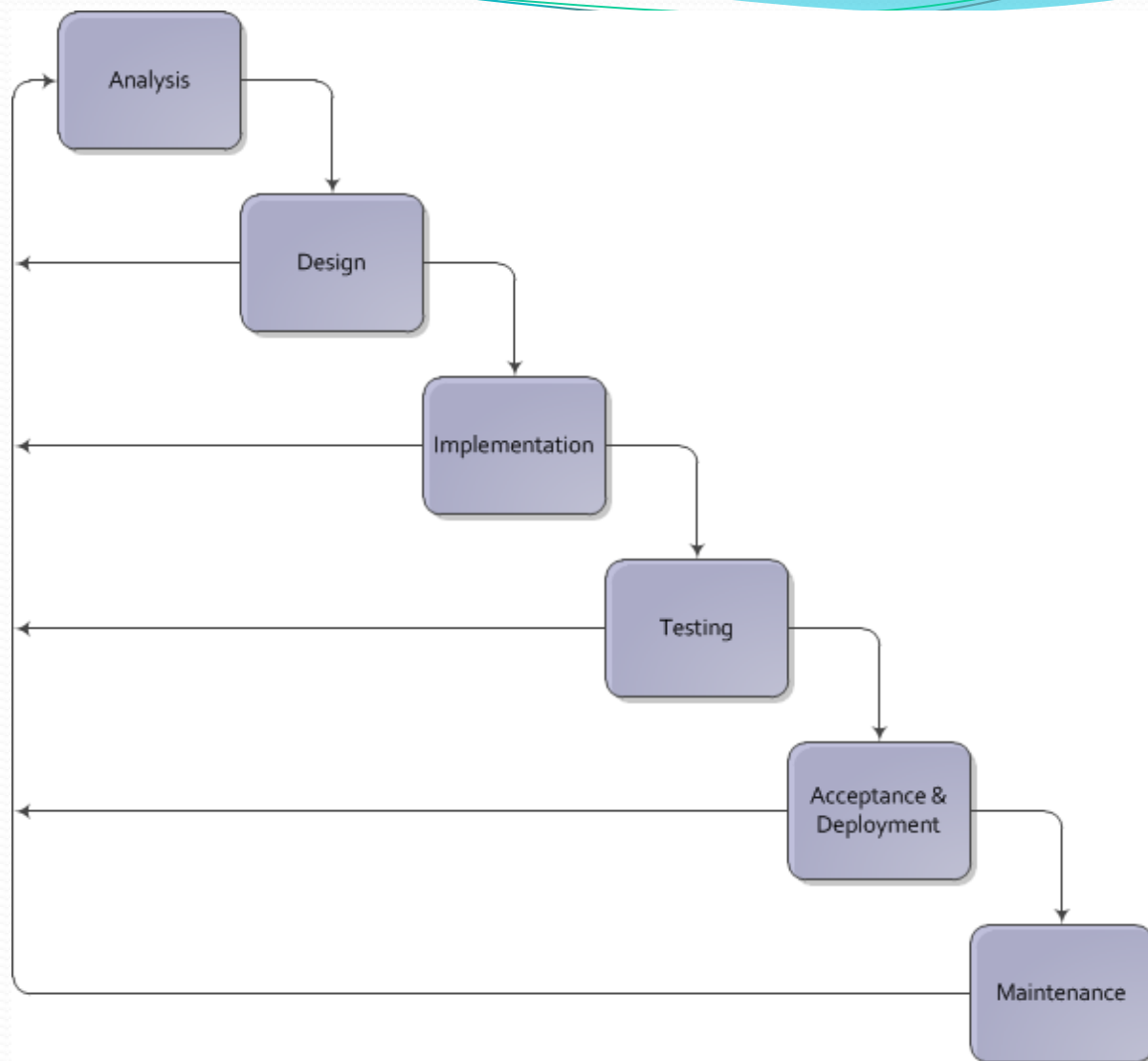
Introduction – What is the SDLC?

- Introduction to the SDLC
- Difference between SDLC and specific methodologies
- Difference between systems current undergoing implementation and systems in maintenance
- Apply the SDLC to the H1N1 Case study.

Introduction to the SDLC

- The **software development life cycle (SDLC)** is the basic framework for the software development process.
- It describes the process for building software and is intended to develop software in a very deliberate, structured, and methodical way, reiterating each state of the life cycle.
- It is iterative by nature as you repeat phases throughout the lifecycle.

SDLC



SDLC and Methodologies

- The SDLC is a life cycle, not a methodology.
- Whereas the SDLC refers to the stages all systems undergo naturally, a **methodology refers to an approach to manage the events** naturally occurring in the SDLC.
- A methodology is a set of steps, guidelines, activities, and/or principles to follow in a particular situation.
- We will be discussing Project Management Methodologies later in this presentation.

Implementation and Maintenance

- Software currently undergoing implementation is currently being developed for the first time.
- Software currently in maintenance is a system that has been released and is maintained to reflect current needs and conditions.

Requirement Analysis

Requirements analysis is the effort to establish a clear understanding of the business processes/needs to be met by the enhancement or software.

WHAT does Requirements Analysis have to do with H1N1 Case Study?

A state IIS will be required to

- Capture a new vaccine – H1N1
 - Do we have the appropriate information – trade names, mfg, CPT code? Schedule?
- Age groups for reporting
 - What are they? How often will we have to report?
- Report this info to the CDC from IIS
 - When are the specifications coming? Do we have standards? What about HL7?
- How do we handle mass vaccination?

Design

- Systems design (layouts, business rules, diagrams, pseudo-code)
- FDD (Functional Design Documents)

WHAT does Design have to do with H1N1 Case Study?

A state IIS should be reviewing and approving

- Design Documents illustrating knowledge of the business case and the functionality to be introduced to address the specific case.
- How H1N1 will be incorporated into existing immunization schedule
- Screen prints with new age group selection option or description of business rules as to how the system will generate this information.
- Detail as to what will be exported for CDC, how and what it might look like.

Implementation

Code development – implementing the requirements and design into functionality

WHAT does Implementation have to do with H1N1 Case Study?

For the State IIS

- Minimal interaction between the development group and the IIS
- Follow up from the developers/business analysts where questions may arise, or possible efficiencies or improvements could occur. Other options maybe present that meet the needs better.
- State IIS may start preparing test case scenarios to validate work completed.

Testing

- Move to testing environment, unit testing completed by developers
- Development Group complete testing (includes regression testing)
- User Acceptance Testing by IIS

WHAT does Testing have to do with H1N1 Case Study?

The State IIS engages again as part of the acceptance testing.

- Starting to initiate tracking timelines and prepping the user community for what is to come.

Acceptance & Deployment

- Move enhancements to production environment

WHAT does Acceptance & Deployment have to do with H1N1 Case Study?

IIS will

- Initiate plans made to move from user acceptance to production.
- Releases notes, documentation is being prepared and reviewed
- Announcements made to community about possible downtime
- Coordination with appropriate bodies for upcoming maintenance window and system checkout upon move to production.

Maintenance

Monitoring and maintaining the system as it exists at that point in time.

WHAT does Maintenance have to do with H1N1 Case Study?

IIS Manages the system that has been deployed.

- Captures feedback from user community
- Captures possible changes to Immz
- Initiates the SDLC for upcoming changes/enhancements.

Project Management

Introduction –

- Why Project Management?
- Overview of the Project Management Process Groups
- Introduction to the Knowledge Areas
- Apply the Process Groups to the H1N1 Case study.

Why Project Management?

- More than job security.
- Projects that follow sound project management methodologies benefit.
 - A more timely meeting of requirements
 - Quality product closer to expectations
 - Communication is clear on a routine basis
 - Reduced Risks by proactively understanding, recognizing and mitigating them.
- Common mistakes in projects
 - planning mistakes – how often do you deal with delays
 - communication mistakes – not aware of what is happening as it happens

Project Management

- What is Project Management?

Project management is the application of knowledge, skills, tools and techniques to project activities to meet project requirements.

- What is a Project?

A project is a temporary endeavor undertaken to create a unique product, service, or result.

i.e. – Typically enhancements, implementation would be a project. Maintenance would typically not be considered a project as it is routine, repetitive and ongoing.

Process Groups

The five *process groups* are:

- Initiating
- Planning
- Executing
- Monitoring and Controlling
- Closing

Process – a set of interrelated actions and activities performed to achieve a pre-specified product, result, or service. - Source PMBOK Guide (Fourth Edition)

Knowledge Area

The nine *knowledge areas* are:

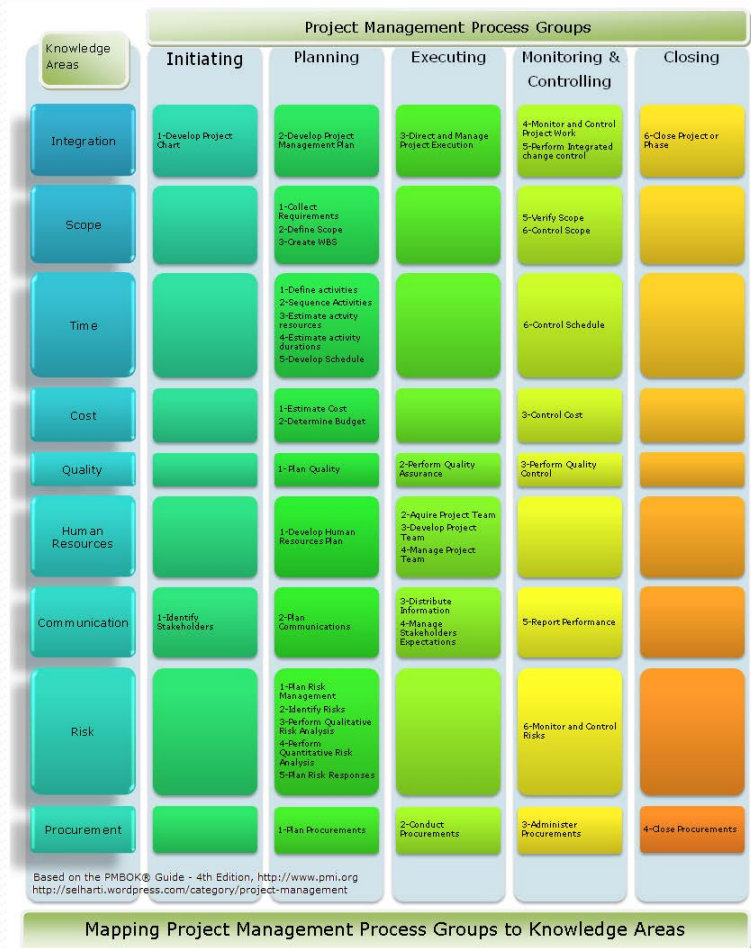
1. Project Integration Management
(visualize a juggler)
2. Project Scope Management
3. Project Time Management
4. Project Cost Management
5. Project Quality Management
6. Project Human Resource Management
7. Project Communications Management
8. Project Risk Management
9. Project Procurement Management

PMBOK Defines 42 Processes

9 Knowledge Areas - left column
5 Process Groups - across the top

This chart provides a visual as to how the process groups and the unique processes within the group relate to a knowledge area.

Each needs to be accomplished within its discipline in order to achieve an effective project management program.



Process Group- Initiating

Starting or initiating the project involves two processes:

- Developing a Project Charter
- Identifying Stakeholders

PM activities you may undertake:

- Creating Project Charter, identifying overall goals and objectives for the project.
- Possibly moving from grant related documentation to creating the structure for the project.
- Developing a list of all stakeholders (positive and negative)

Process Group - Planning

- Developing a Project Management Plan
- Collecting Requirements
- Defining the Scope
- Creating a Work Breakdown Structure
- Defining the Activities
- Sequencing the Activities
- Estimating the Activity Resources
- Estimating the Activity Durations
- Developing a Schedule
- Estimating Costs
- Determine Budget
- Planning Quality
- Developing a Human Resources Plan
- Planning the Communications
- Planning Risk Management
- Identifying Risks
- Performing Qualitative Risk Analysis
- Performing Quantitative Risk Analysis
- Planning Risk Responses
- Planning Procurements

Process Group - Executing

- Directing and Managing Project Execution
- Performing Quality Assurance
- Acquiring Project Teams
- Developing Project Team
- Managing Project Teams
- Distributing Information
- Managing Stakeholder Expectations
- Conducting Procurements

What is happening now:

- This is when you are executing the project, performing the work, reporting activity, managing people.

Process Group – Monitoring & Controlling

- Monitor and Control Project Work
- Perform Integrated Change Control
- Verify Scope
- Control Scope
- Control Schedule
- Control Costs
- Perform Quality Control
- Report Performance
- Monitor and Control Risks
- Administer Procurements

What is happening now:

- Measuring activity against baselines, how we doing? Checking quality. Monitoring risks, reassessing as needed.
CHANGE CONTROL.

Process Group - Closing

The end of the project involves two processes:

- Closing Project or Phase
- Closing Procurements

Now what?

- Project is completed and transitioned or closed as necessary.
- Tracking best practices, lessons learned.
- Finishing up any contracting or other administrative pieces.

Back to H1N1

As IIS Manager this is what you discovered in Spring 2009...

- Call centers for the providers needing to report will need to be opened up immediately.
- H1N1 impacts all ages, adult providers will need to be brought on board in an accelerated pace.

And all of this must be done by September!

How PM Methods Help

- Planning processes in place and familiar. Quickly establish the project requirements, work break down structures, costs. Call center stand up similar to helpdesk. Have the knowledge apply with a bit different framework.
- Following templates/designs can quickly update change requests through change management process to incorporate new functionality. Change would also include change to plans, assessing risk, new requirements to scope.
- Communications Plans quickly updated to include any new stakeholders, address any new communication requirements such as targeting adult providers, nursing homes etc....
- Setting achievable timeframes, setting realistic expectations for leadership and the community.

PM Summary

- Not all projects require all processes. But all projects do benefit from incorporating some processes.
- Project Management isn't rocket science. Many of you already probably incorporate processes and just have not formalized.
- Lots of information related to learning more about PM.
 - Many states have PMO offices check locally.
 - Project Management Institute www.pmi.org
 - CDC Unified Process page <http://www2.cdc.gov/cdcup/>

Where next

- Questions?

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- Would you like a webinar or more information on a specific topic discussed today?