EBMUD's

Technology Project Management Toolkit

2014

EBMUD's

Technology Project Management Toolkit

2014

TPM TOOLKIT OVERVIEW

- What the EBMUD Technology Project Management Toolkit is built to do
- Guidelines for using the TPM Toolkit
- Core principles for Project Team collaboration at the District
- Typical causes of technology project failures in the IT industry
- The basic components of the project management process

The TPM Tools:

Page 16: Project Roles
Page 23: Project Governance
Page 26: Project Charter
Page 30: Forming the Project Team
Page 32: Business Requirements
Page 42: Technical Options & Solutions
Page 47: Selecting the Vendor
Page 50: The Implementation Plan
Page 54: The Communication Plan
Page 61: Project Team Collaboration
Page 71: Managing the Vendor
Page 73: Project Monitoring
Page 76: Project Close & Retrospective
Page 78: Glossary of Terms
Page 87: District Forms, Templates & Work Samples

The Technology Project Management Toolkit

What the TPM Toolkit is built to do

What the TPM Toolkit is built to do

Technology is key to our future. Our ability to design and implement complex technology projects is critical to the ongoing success and reputation of EBMUD. Many of these technology projects will require the District's Business Functions and ISD to bring together cross-functional project teams that will work in close partnership in order to complete these projects on time, within budget, and meet the changing needs and heightened expectations of our customers.

The Technology Project Management Toolkit is not designed to replace, revise or reinvent the existing project management methodology used by the District. Instead, the **TPM Toolkit** focuses on the communication and collaboration between project partners that is critical to achieving project success:

- ✓ **Senior leaders** who set direction for a project, define its scope and then provide guidance and oversight throughout the project
- ✓ **Project leaders** who ensure the District addresses the business needs with appropriate technical solutions and who manage the activities that must be juggled, prioritized and completed by others
- ✓ **Project team members** who carry out the myriad time-bound tasks with in-depth knowledge, skill and accuracy in order to complete the project on time and within budget
- ✓ **3rd party vendors and contractors** brought in to design and deliver all or part of the technology solution
- ✓ **Others throughout the District** who provide input on the design of requirements, the testing of solutions, and the evaluation of the end product and overall success of the project

The TPM Toolkit provides a systematic approach, suggested guidelines and action-oriented tools for each phase of the project lifecycle; from the initial conceptualization of the project and determination of project scope to the closing out of the project before it transitions to operations. Tools are designed to be adapted to the specific needs of the project and the people involved. This flexibility will help ensure that technology projects involving EBMUD Business Functions and ISD have a more proactive, comprehensive, consistent and transparent approach to project planning and project management, all key to achieving project success at the District.

Guidelines for using the TPM Toolkit

The **TPM Toolkit** includes planning tools and action-oriented checklists that focus on specific interfaces that need to be well-planned and managed throughout the project life cycle. Each Tool provides information and suggested questions for consideration by project leaders and/or the project team. These Tools are directional in nature and can be modified if needed.

When to use the TPM Tools:

At the start of the project:
- ✓ Project Roles
- ✓ Project Governance
- ✓ Project Charter
- ✓ Forming the Project Team

Early on as scope is defined and the Project Plan is developed:
- ✓ Business Requirements
- ✓ Technical Options & Solutions
- ✓ Selecting the Project Vendor
- ✓ The Implementation Plan
- ✓ The Communication Plan

As the Project Team begins their work and collaborates over time:
- ✓ Project Team Collaboration
- ✓ Managing the Vendor
- ✓ Project Monitoring

As the project draws to a close:
- ✓ Project Close & Retrospective

Refer to the "Glossary of Terms" to clarify project terminology

Refer to "District Forms, Templates & Work Samples" to expedite work and to ensure compliance with required District processes

Suggested use of the TPM Tools:

- ✓ In preparation for meetings, review the Tools to determine which guidelines, discussion questions or recommended actions will support thinking and effort and advance the project plan
- ✓ During meetings, review and agree on which parts of a Tool will be useful to discuss and what specific actions should be taken
- ✓ Adapt Tools if needed to reflect the needs of the project or the people involved
- ✓ Refer to the Tools to clarify expectations about roles and responsibilities or for ideas about ways to constructively address and resolve issues
- ✓ Periodically assess the usefulness of the Tools, and document any modifications made to a Tool for use in future projects

THE TPM TOOLKIT DESIGN TEAM

Accounting
Scott Klein and Lawrence Fan

CIS Control
Regina Cullado and Carolyn Woods

Contact Center
Tom Fox and Carol Trotter

Human Resources
Lisa Sorani and Helen Argyres

Information Systems Department
Andy Levine, Wendy Wells and Will Sharp

Operations & Maintenance
Hilary Anderson and Teri Alderson

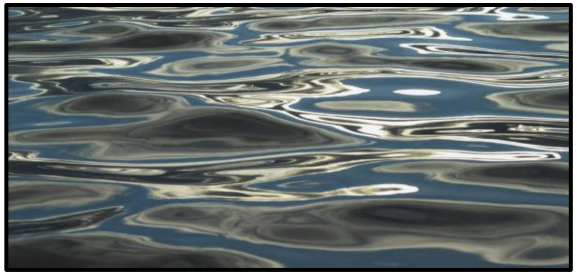
Purchasing
Andy Akelman and Kelley Smith

Wastewater
Chandra Johannesson and Angela El-Telbany

Steering Committee
Carol Nishita (Administration), Eric Sandler (Finance) and Nick Irias (ISD)

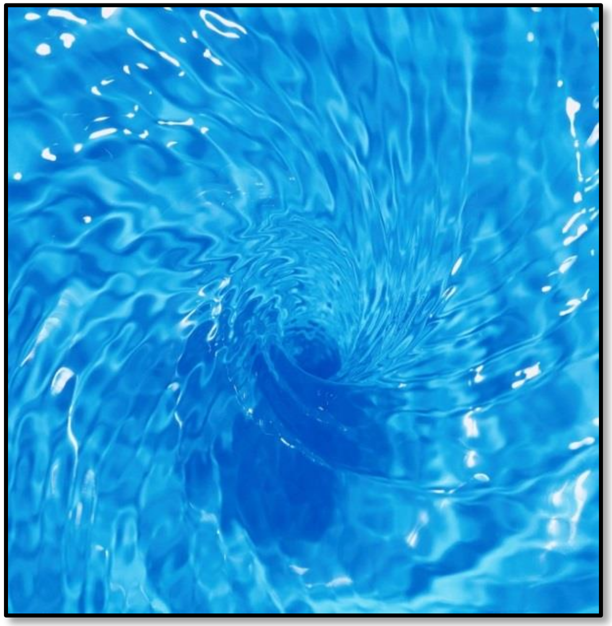
Toolkit Architect
Roberta Streimer, Founder, "Organizational Diplomacy"

THE EVOLUTION OF A TEAM



Typical causes of technology project failures in the IT industry

1. The project is a solution in search of a problem.
2. Only the project team is interested in the end result.
3. No one is in charge.
4. The project plan lacks structure.
5. The project plan lacks detail.
6. The project is under-budgeted.
7. Insufficient resources are available.
8. The project is not tracked against its plan.
9. The project team does not communicate.
10. The project strays from its original goals.



In the news…….

Lawmakers, SAP pointing fingers over failed payroll project

A new state senate report stirs up controversy over who is responsible for problems with the stalled, $373 million project

By Chris Kanaracus
August 15, 2013 02:38 PM ET

IDG News Service - The failure of a massive payroll project involving SAP software has California lawmakers, state officials and the vendor pointing fingers of blame at each other.

California fired SAP from the project in February and suspended work on it, saying that despite the expenditure of more than $200 million, the system was error-prone and far behind schedule. Officials have been weighing what to do next.

Controversy is now mounting anew over who is responsible for the project's woes.

The system "suffered from a failure to resolve core issues raised early and often, chronic leadership turnover and lapses in due diligence," states a report released this week by the state Senate Office of Oversight and Outcomes.

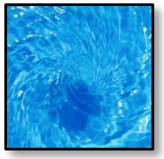
State Controller John Chiang's office, which sponsored the project, "was not always candid about the difficulties" being faced and "delivered upbeat reports to the Legislature and others that often only hinted at the turmoil churning within the project," the report adds.

The Senate Budget and Fiscal Review Subcommittee 4 was expected to discuss the report during a hearing on Thursday.

Chiang's office and SAP "blame each other for the project's collapse, with the dispute expected to be settled in court," with as much as $190 million at stake between the $135 million the state wants to recover, and another $55 million SAP believes it is entitled to, the report adds.

Dubbed MyCalPays, the system was supposed to modernize the state's payroll for 240,000 workers across 160 departments. An initial pilot was rolled out last year in Chiang's office, covering 1,300 workers, but rampant errors persisted until Chiang halted the project in February.

The Senate report cited "frequent turnover at the top" of the Controller's office as a possible contributor to the project's issues.



….Lawmakers, SAP pointing fingers over failed payroll project (cont'd)

Three different controllers have been in charge of it during the past 10 years, although Chiang accounts for seven of those, it states. "In addition, the Controller's team had at least five different project directors and four different project managers, with half of those leadership changes in the last 18 months alone."

A Chiang spokesman fired back at the report, saying it "demonstrates a misunderstanding or oversimplification for some of the key issues involved in MyCalPays."

For one, Chiang's office "was forthcoming and had great communication with the legislature" about the project, said spokesman Jacob Roper, via email. "We held nine formal legislative briefings in 2011 and 2012, alone. The report only mentions some PowerPoints used in those briefings, which don't reflect all the information offered to legislative staff."

"We have also issued our own, internal, preliminary report on the project's history: what went wrong, what worked, and what lessons can be learned," Roper added.

The Senate report also includes "troubling misstatements," such as a suggestion that there was confusion regarding responsibilities on the project, Roper said. "But the responsibility it references -- data conversion -- is not only clearly defined in the contract as SAP's responsibility, but also in the statement of work for the company."

SAP is unmoved by the report's conclusions, according to spokesman Andy Kendzie.

"We stand behind our software and our actions on this project," he said. "As we said before, we believe we have satisfied all contractual obligations. SAP and the state were jointly responsible for implementation of the system. We believe we upheld our side and share of the responsibilities. We dedicated our best resources to this engagement and had every confidence we could have completed it."

It may be impossible to reach a final determination of everything that went wrong with the project, according to one observer.

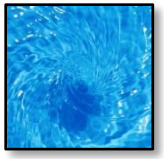
"Clearly a tapestry of fault is woven through the project to such an extent that even the auditors could not untangle the threads," said analyst Michael Krigsman, CEO of consulting firm Asuret.

While with any IT project there is a shared responsibility between customers and vendors, "the question is to what extent is the vendor responsible to make sure they're selling the right thing," he added.

The question now is what next steps state officials take regarding MyCalPays as well as other large IT projects.

Earlier this year, Chiang and California Gov. Jerry Brown convened a task force charged with making recommendations on how the state could improve its IT procurement and implementation processes. A report with its findings was released Thursday.

"Abstract, high-level recommendations are fine in theory but projects succeed or fail based on the details of execution," particularly training, Krigsman said. "It's very easy to talk about this stuff but going from the 50,000-foot view to the 10-foot view is a very big leap."



Core Principles

In support of collaboration

CORE PRINCIPLES…in support of collaboration

BE THOUGHTFUL ABOUT YOUR COLLABORATION WITH OTHERS

- “No man is an island” (John Donne); consider the upstream and downstream impacts of your actions
- Consider how best to approach, structure and accomplish the work with the people involved; be efficient when involving others
- Be accessible and follow-through on responsibilities

COMMUNICATE CLEARLY & OFTEN

- Invest time to clarify roles, work processes and how decisions will be made before starting the work
- Keep people informed; what do they need to know, want to know, or will have concerns about if they don’t have information
- Give clear direction so others can take action and follow through; provide explanation and examples so they understand unfamiliar content
- Define your terms (project, technical and business jargon) so everyone has a similar understanding
- A picture’s worth a thousand words: Use diagrams, flowcharts, storyboarding and other visuals to promote understanding
- Document anything that requires accuracy, consistency or is needed to move work forward

BE INCLUSIVE

- Consider who wants to have input; it may be wiser to include others even if it requires extra time and effort
- Strive to understand things from other people’s perspective, not just your own
- Build on ideas rather than debating who’s right; listen for something useful even if you disagree
- Be appreciative of input; give credit where credit is due

SEEK AGREEEMENTS AND WAYS TO MAKE PROGRESS

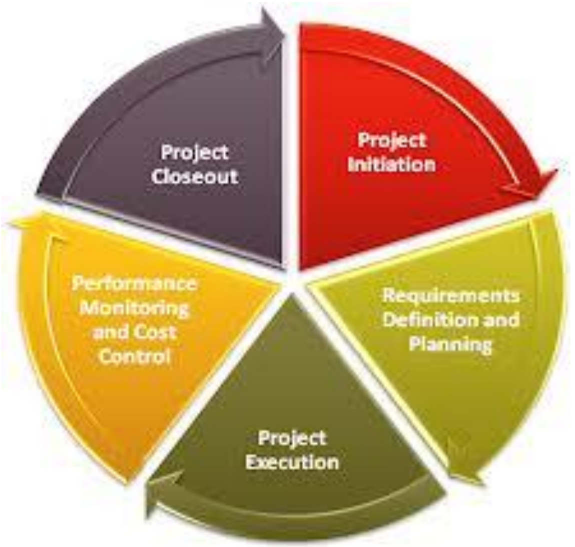
- Suggest options, make recommendations, offer possible solutions, point out commonalities, areas of agreement and shared sentiment
- Blend past practice and innovative thinking, seek hybrid solutions, workable agreements and realistic compromises
- Keep the tone constructive, defer discussion if things escalate and follow up to address and resolve issues

FOCUS ON THE FUTURE

- Focus on ways to make progress: “What can we do now?” versus “What’s not working…”
- Presume good intent, even when interactions become strained or difficult
- Show patience and tolerance, even when you’re frustrated by pace, personality or work style
- Admit error then work quickly to remedy the situation
- Take each project as an opportunity to start on the right foot and stay appropriately on track
- Always take the high road; remember, you’re all in this together

The components of project management

The Technology Project Management Toolkit


Project Initiation
Requirements Definition and Planning
Project Execution
Performance Monitoring and Cost Control
Project Closeout

**Although carefully planned,
a project is always a work in progress
and requires a continual balancing
of tasks, needs and interests
against the project timeline and budget.**

Project Initiation

- Develop project charter: purpose/reason/need for the project
- Analyze business needs & business requirements
- Perform cost-benefit analysis
- Perform stakeholder analysis (users & support personnel needed)
- Develop specifications & translate business reqs needed to implement solution

Project Planning

- Identify project deliverables
- Establish a budget
- Identify risks and how to mitigate them
- Gain formal approval to begin work
- Identify activities to complete deliverables
- Logical sequence, milestones, critical path
- Estimate resource requirements, including time and cost

Project Execution

- Direct and manage project execution
- Acquire, develop and manage project team members, vendors, contractors
- Distribute information
- Manage stakeholder expectations
- Conduct procurement
- Implement project deliverables
- Test deliverables against project design

Performance Monitoring & Cost Control

- Measure ongoing project activities (“Ground Truth”)
- Monitor project costs, effort, etc. against established schedule and plan
- Identify corrective actions for issues and risks encountered

Project Closeout

- Complete and settle each contract tied to the project
- Finalize all activities across all process groups

TPM TOOLS

- Guidelines
- Checklists
- Glossary of Terms
- District Forms
- Templates
- Work Samples

Page 16: Project Roles
Page 23: Project Governance
Page 26: Project Charter
Page 30: Forming the Project Team
Page 32: Business Requirements
Page 42: Technical Options & Solutions
Page 47: Selecting the Vendor
Page 50: The Implementation Plan
Page 54: The Communication Plan
Page 61: Project Team Collaboration
Page 71: Managing the Vendor
Page 73: Project Monitoring
Page 76: Project Close & Retrospective
Page 78: Glossary of Terms
Page 87: District Forms, Templates & Work Samples

The Technology Project Management Toolkit

Project Roles

Every contribution matters

Project Roles

THE PROJECT SPONSOR

- ✓ A Senior Leader (or Leaders) in the organization who identifies with, and can justify the need for, the technology project
- ✓ Champions the business case and provides executive level support to ensure the project has what it needs to be successful
- ✓ Works with SMT peers to identify appropriate Steering Committee members

THE PROJECT STEERING COMMITTEE

- ✓ Communicates the vision of the technology project and the anticipated benefits of a successful implementation
- ✓ Selects the Product Owner, Project Manager and others to fill critical project roles and approves recommendations for Project Team members
- ✓ Approves and communicates Project Governance (project charter, roles, responsibilities, reporting relationships, authority levels, decision-making processes, and the communication plan)
- ✓ Approves project scope and schedule; ensures the project stays within scope and stays aligned with organizational strategy; approves/rejects proposed changes to scope or schedule
- ✓ Approves business requirements; evaluates costs/benefits, selects and approves technical solutions
- ✓ Reviews, revises and approves RFI’s, RFP’s, SOW’s and approves selection of project vendor(s) and contractors
- ✓ Ensures the project has the resources needed for each phase of the project; uses influence and leadership authority to assist the project in achieving its goals
- ✓ Provides direction and decisions on business and technical issues and resolves strategic level issues and risks
- ✓ Resolves substantive issues escalated by the Product Owner and Project Manager (related to scope, schedule, functionality, costs, vendor selection, and vendor management)
- ✓ Reviews and approves project deliverables and ensures deliverables meet organizational needs
- ✓ Engages stakeholders, communicates decisions and keeps Senior Management informed
- ✓ Clearly delegates responsibilities when appropriate
- ✓ Makes final decisions related to the project

Project Roles

THE PROJECT TEAM

- ✓ Comprised of the **Product Owner, Project Manager** and **Project Team Members**
- ✓ Project Team Members report directly to the Project Manager if there are no Project Team Leads; otherwise they report to the Team Leads
- ✓ Each Team Member is accountable for ensuring the project delivers maximum value to EBMUD on time and within budget
- ✓ Team Members maintain an organizational perspective and understand the need for the Business Department(s) and ISD to work in partnership to successfully implement the project
- ✓ Team Members provide input on the project plan, execute tasks and produce deliverables as outlined in the Project Plan and as directed by the Project Manager
- ✓ Team Members are responsible for communicating to each other on a regular basis about project progress
- ✓ Team Members are responsible for involving each other in planning and decision making when it is appropriate, required or in the best interest of making progress on the project
- ✓ Team Members identify, clarify, and then address and resolve issues that may put the project at risk
- ✓ Team members escalate unresolved issues to the Project Manager and Product Owner if they are unable to resolve them within the team

Project Roles

THE PRODUCT OWNER

- ✓ Works for and reports to the Steering Committee
- ✓ Maintains a big-picture view of what the technology project needs to do to support the business and a long term view of what will be needed to meet the future needs of the business
- ✓ Is the Project Team's single point of contact for requirements, priorities, and business needs
- ✓ Represents all key business stakeholders; understands, prioritizes and communicates their business needs, expectations and preferences
- ✓ Works with the Project Manager to prioritize and balance business and technical needs
- ✓ With the Project Manager, recommends to the Steering Committee the choice of project team members, Business Lead, Technical Lead and the preferred vendors
- ✓ Clarifies for technical staff any business process or requirement that will impact their ability to design, select, test or implement a solution
- ✓ Ensures business staff understands the rationale for proposed technical solutions that may support business objectives and project goals
- ✓ **With input from stakeholders and end users**, identifies and prioritizes requested functionality and requirements (on a large project, the Product Owner may delegate the following tasks to **Functional Lead(s):**
    - Identifies business requirements; ensures input from stakeholders addresses business requirements (WHAT and HOW) versus technical solutions
    - Determines which business processes should be automated, which should be done manually, and which cannot be automated given scope, cost or resource limitations
    - Determines which business functionality should be delivered and which should be deferred given the cost/resource limitations on the project
    - Understands how each of the business functions and processes will need to change based on selected technical solutions and whether this meets short and long term business needs
    - Builds agreements and gets buy-in from different business units as to the trade-offs of different solutions and what business functionality can't be delivered or automated

Project Roles

THE PRODUCT OWNER (CONTINUED)

- May not attend all Project Team meetings, but stays connected to Functional Lead(s) to provide guidance and support as needed
- Attends Steering Committee meetings; provides updates on project status
- Constructively resolves issues related to functionality and requirements to the satisfaction of the stakeholders involved
- With the Project Manager, brings unresolved substantive issues to the Steering Committee (related to scope, schedule, functionality, costs, vendor selection, and vendor management) with recommendations for how to address them in ways that represent the views of the stakeholders involved
- Helps create the framework for implementation and ongoing operations. Typically responsible for the operation and ongoing monitoring of the product after project ends

THE PROJECT MANAGER

- Works for and reports to the Steering Committee
- Has substantial technical knowledge and extensive experience in IT being a Project Manager on IT solutions and uses best practice project management methodologies and tools
- Maintains a long term view of the project and what technical solutions are needed to meet the current and future needs of the business and will mitigate any known or potential risks
- With the Product Manager, recommends choices to the Steering Committee for Project Team members, Technical Lead, Business Lead and the preferred vendor(s)
- Recommends technical solutions that address prioritized Business Requirements
- Develops the detailed Project Plan and Schedule with input from the Project Team and the Product Owner
- Accountable for ensuring Project Team delivers within scope, on time, within budget and in accordance with the Project Schedule
- Manages vendor contracts; reports to the Steering Committee on project status and vendor performance

Project Roles

THE PROJECT MANAGER (CONTINUED)

- ✓ Ensures technical staff fully understands any business process or requirement that will impact its ability to select, test or implement a solution
- ✓ Ensures that questions by the Business regarding how proposed technical solutions may support business requirements are addressed and clarified
- ✓ Verifies acceptance and approval of deliverables by the Project Sponsor/Steering Committee
- ✓ Identifies any risks and their potential impacts that may threaten the committed functionality or delivery date of a project
- ✓ Verifies that requested changes in functionality made with proper authority and buy-in
- ✓ Communicates general updates, project status, project changes, and decisions to stakeholders who are directly impacted or need to be informed
- ✓ Constructively resolves project issues to the satisfaction of the Project Team, Product Manager and other stakeholders
- ✓ With the Product Owner, brings unresolved substantive issues to the Steering Committee (related to scope, schedule, functionality, costs, vendor selection, and vendor management) with recommendations for how to address them in ways that represent the views of stakeholders involved
- ✓ The Project Manager will typically no longer be associated with the product after the project has closed

Project Roles

TEAM LEADS

- ✓ Team Leads (Functional and Business) report to and work for the Project Manager
- ✓ On larger projects, some Project Team members may serve as **Team Leads**, providing task and functional or technical leadership and may be responsible for a managing a portion of the project plan
- ✓ The Functional Lead and Technical Lead work in partnership to ensure Project Team communicate frequently with one another and collaborate in efficient and effective ways
- ✓ The Functional Lead provides daily operational oversight for the project, addresses specific issues that arise, investigates and proposes alternative business function solutions
- ✓ The Technical Lead provides daily technical oversight for the project, addresses specific issues that arise, investigates and proposes alternative technology solutions

TASK FORCE MEMBERS:

- ✓ The Task Force is a representative group of the staff who will use the new system once it is live
- ✓ The go-to people when the Project Team has questions, needs business clarification or wants to review new processes with end users
- ✓ Responsible for providing input that represents all end users and for providing feedback as the system is being designed and tested
- ✓ Responsible for ensuring that communication to staff is consistent, timely and complete throughout the implementation of the project (general training and suggested communication will be provided to facilitate communications)
- ✓ As the revised business processes are worked out and the Task Force has provided input, the end users will be contacted to provide further review and feedback on the system. After the system is stable there will be a period for End User acceptance signoff

STAKEHOLDERS

- ✓ Stakeholders are all those groups, units, individuals, or organizations, internal or external to our organization, which are impacted by, or can impact, the outcomes of the project. This includes:
  - Work Units who may be impacted by changes in work processes
  - IT Security
  - Audit Office
  - External Customers

Project Governance

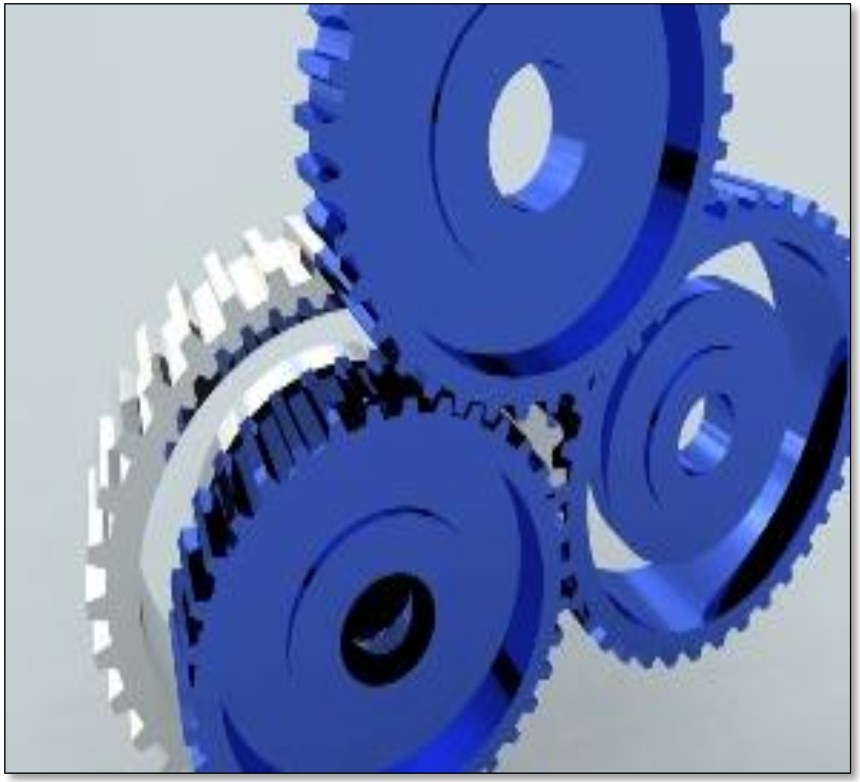
The rules of engagement

Project Governance

Project Governance defines the management structure and the rules of engagement for the technology project.

Governance is established and documented at the beginning of the technology project by the Steering Committee or Project Sponsor and then communicated to the Project Team and to other stakeholders when useful or required**.**

Governance ensures that expectations for the technology project are clear and aligned among all stakeholders, and that the Project Team has the support and direction it needs to deliver the project on time and within budget to the benefit of the District, the Business Function, the end users, and the customers and communities that EBMUD serves.



The Steering Committee establishes and communicates Project Governance:

- ✓ The Steering Committee **selects the Product Owner, Project Manager** and others to fill critical project roles
- ✓ **Defines roles, responsibilities, reporting relationships, accountabilities, authority levels and decision-making processes** during the project between Client departments and ISD and between the Product Owner, the Project Manager and the Steering Committee
- ✓ Provides **initial framing of project scope and initial project schedule**
- ✓ Reviews, revises (as needed) and approves **business requirements**
- ✓ Reviews proposed **technical solutions**, evaluates costs/benefits, selects and approves
- ✓ Decides what work will be done **internally and what will be outsourced** based on assessment of alternative solutions; advises on addressing outsourcing issues with the Union
- ✓ **Approves project scope**; clarifies what specific operational functions are in scope/out of scope
- ✓ **Gains authorization and funding** to proceed with the project; provides **oversight of project budget** and secures the resources (personnel, equipment, vendor, etc.) needed to complete the project
- ✓ **Reviews, revises, and approves RFI's, RFP's, SOW's**
- ✓ **Approves selection of project Vendor(s)** and contractors if outside resources are needed
- ✓ **Provides project approvals at key milestones**; approves changes to project scope or schedule
- ✓ Reviews, revises and approves project **Communication Plan**
- ✓ **Resolves substantive issues escalated by the Project Team** (related to scope, schedule, functionality, costs, vendor selection, vendor management, and project team interactions)
- ✓ **When serious setbacks are encountered**, decides appropriate course of action for the project

Project Charter

Direction that drives the work

Project Charter

The Project Charter is the document that describes the scope and objectives of the technology project, the main stakeholders involved, and the anticipated benefits of implementing the project.

The Charter sets initial direction for the Project Team and other stakeholders and includes the following information (the level of detail in the Charter document may vary depending on the size of the project):

- ✓ A description of the problem(s) this project will address (e.g., unmet business needs; outdated technology; inconsistent processes; redundant systems; declining customer satisfaction)
- ✓ Why we are doing this project and why now
- ✓ Who is participating in the project (key stakeholders, departments, others)
- ✓ Which activities and issues are within project scope; which are outside project scope
- ✓ Budget and required assets
- ✓ A brief description of any agency or regulatory requirements that must be met
- ✓ The expected benefits once the project is implemented (e.g., reduced costs, state of the art technology, improved service delivery, enhanced customer satisfaction, streamlined operations, enhanced employee morale)
- ✓ The anticipated start and completion dates of the project; key milestones in the project schedule
- ✓ The risks associated with not doing or deferring the project

Project Charter (CONTINUED)

Who may need to provide input during Charter development?

- ✓ Project Sponsor; Steering Committee; Senior Management Team; Board of Directors
- ✓ Key staff from departments involved in the project (Business Functions and ISD)
- ✓ End Users

Who may be involved in writing the Charter?

- ✓ Department Heads/Directors
- ✓ The Business or Function Lead
- ✓ The ISD Technical Lead
- ✓ A designee from the project Steering Committee or committee member(s)

Who approves the Project Charter?

- ✓ The Steering Committee or Project Sponsor

Who should get information about the project and Project Charter?

- ✓ Anyone who may participate in or be impacted by the project (participating departments, project team members, internal and external customers, Senior Leadership and the Board)
- ✓ Stakeholders, so they have the opportunity to provide input on the draft charter before it is finalized and sent to the Steering Committee for review and approval

How might the Project Charter be communicated?

- ✓ Distributed/discussed at staff meetings (before and after Steering Committee approval)
- ✓ Described in a Factsheet (e.g. for Customer Services), E-mail Milestones, Pipeline/Newsletters
- ✓ Posted on the Intranet/Launchpad, a District Wiki page

THE “TECHNOLOGY PROJECT MANAGEMENT TOOLKIT” PROJECT CHARTER

The Technology Project Management Design Team is being chartered to assist in the design and development of the “Technology Project Management Toolkit” that builds on (rather than replaces or reinvents) existing project management tools and methodologies used by the District.

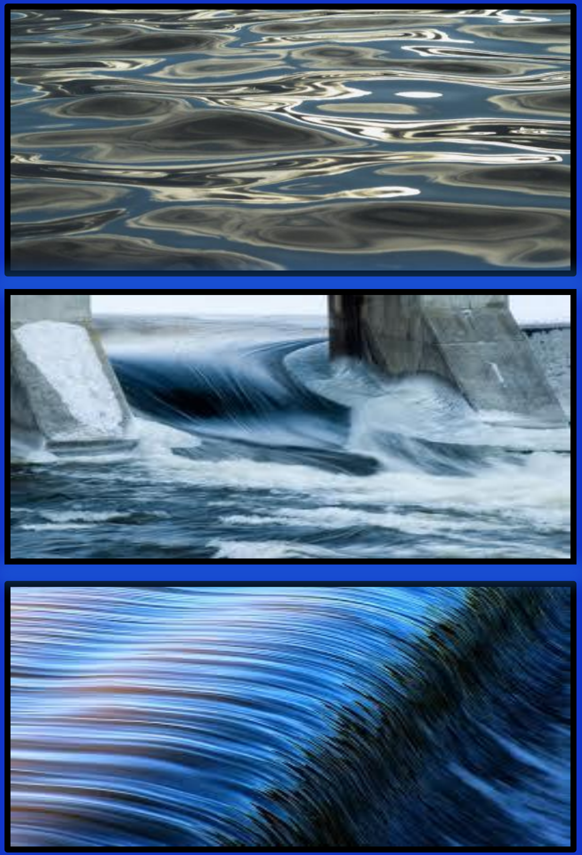
Between September 1, 2013 and January 1, 2014, the TPM Toolkit Design Team will meet on a periodic basis to provide general direction and specific input that will be used to develop planning tools and checklists for technology projects involving EBMUD Business Functions and ISD. ‘The TPM Toolkit’ will focus on specific interfaces and the communication critical throughout the project lifecycle. The TPM Toolkit will address the following areas:

- ✓ **Project Roles**
- ✓ **Project Governance**
- ✓ **Project Charter**
- ✓ **Forming the Project Team**
- ✓ **Business Requirements**
- ✓ **Technical Options & Solutions**
- ✓ **Selecting the Project Vendor**
- ✓ **The Implementation Plan**
- ✓ **The Communication Plan**
- ✓ **Project Team Collaboration**
- ✓ **Managing the Vendor**
- ✓ **Project Monitoring**
- ✓ **Project Close & Retrospective**
- ✓ **Glossary of Terms**
- ✓ **District Forms, Templates & Work Samples**

sample charter

The DT’s input during the development of ‘The TPM Toolkit’ will help ensure that future projects involving EBMUD Business Functions and ISD adopt a more proactive, comprehensive, consistent and transparent approach to project planning and project management, all key to achieving project success in the District.

Forming the Project Team



FORMING THE PROJECT TEAM

✓ Department Managers propose their preferred choice of Project Team members to the Product Owner and Project Manager for their consideration and approval:

- Who has the knowledge, skills and abilities that will be needed during the project to bring the project to a successful completion?
- If Temporary positions are established, how will they be filled?

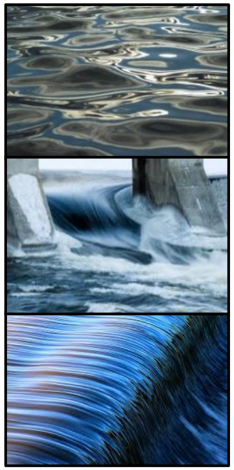
✓ Product Owner and Project Manager propose a list of Project Team members for Steering Committee review and final approval:

- What additional skills and expertise needed in the project are not within the Project Team or within the District; how will gaps be addressed (e.g., train key staff, hire consultants, etc.)

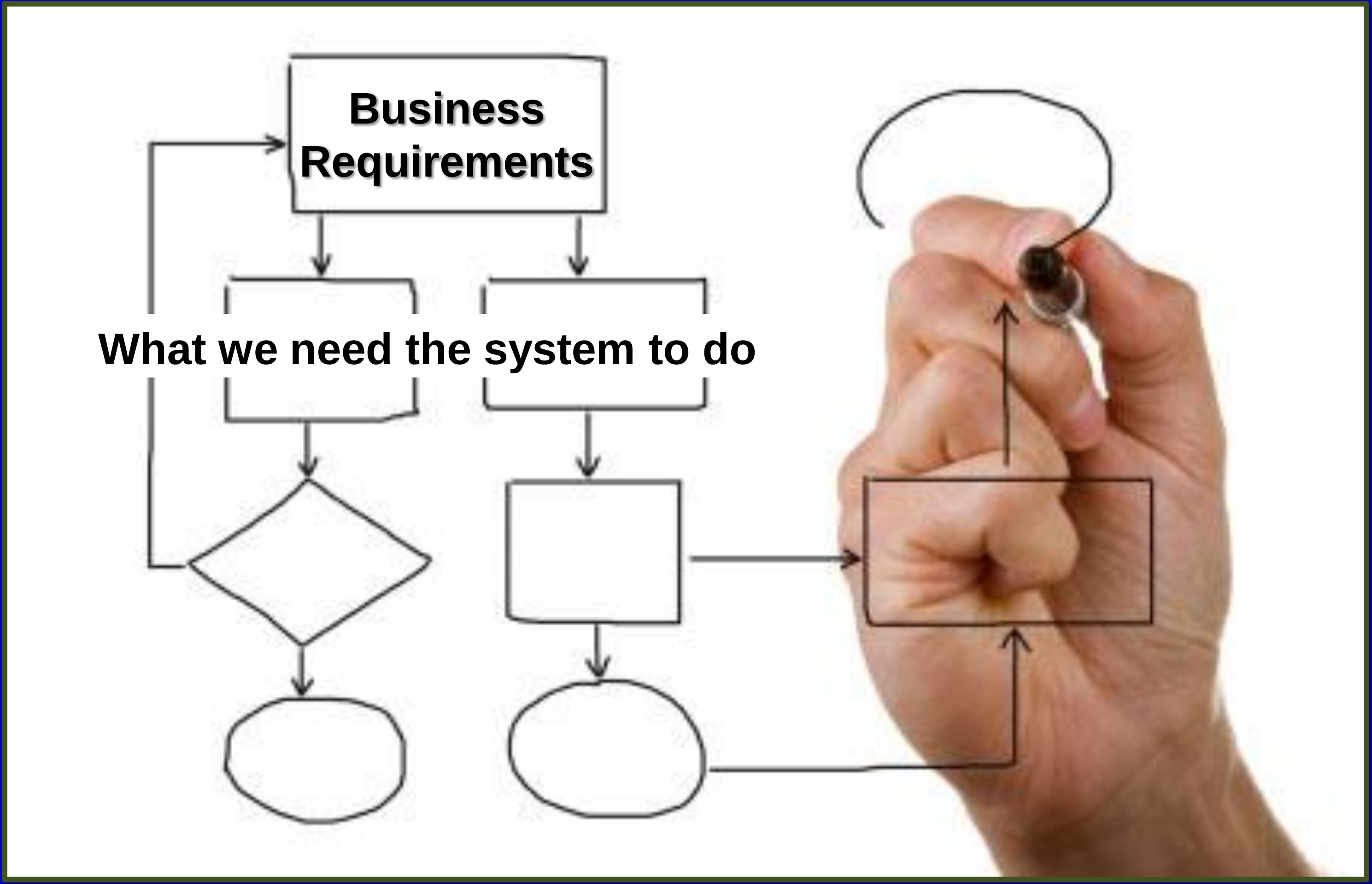
✓ Project Manager and/or the Team Members' manager clarifies the role and expectations with each Project Team Member:

- Is this their primary job? How does this project fit in with other priorities?
- What is their specific role and scope of responsibility?
- What are the expectations for results, deliverables, or support to others?
- Who will they report to and how does it impact their existing reporting structure?
- Who is responsible for evaluating their performance on the project for appraisal input?
- With whom are they expected to collaborate?   Are shared responsibilities clear?
- Who do they need to keep informed of their efforts, project progress, etc.? How frequently should communication occur?
- What decisions are they expected to make? Whose input do they need before making decisions? Who do they need to let know of decisions they make?
- Admin details: Who will do timesheets, performance plans, appraisals, approve vacation, etc.?

✓ Discuss roles and expectations with the entire Project Team together to ensure consistent communication and shared understanding about roles and responsibilities



The Technology Project Management Toolkit



Business Requirements

What we need the system to do

Business Requirements

Business Requirements describe what the new or enhanced system needs to be able to do.

Requirements gathering focuses on 3 key areas: **PURPOSE, PEOPLE AND PROCESS**

Clear agreement between the Business Function and ISD on Requirements in each of these areas is key to ensuring that the technology **PRODUCT** meets the business and end-user needs.

PURPOSE
+
PEOPLE
+
PROCESS

PRODUCT

PURPOSE:

- ✓ **Clarify and agree or reiterate a Problem Statement and Technology Project goals**
- ✓ **Identify, clarify, agree on and document Business/Function requirements**
- ✓ **Distinguish what requirements are IN versus OUT of project scope**

PEOPLE:

- ✓ **Determine roles and responsibilities in determining requirements**
- ✓ **Determine the level of internal and external support needed**

PROCESS:

- ✓ **Agree on how requirements will be documented, reviewed, revised and finalized before going to the Steering Committee for their input and final approval**

This section of the Toolkit includes:

- Questions for the Business Function and ISD to discuss and agree on before the project begins
- Questions for the Business Function only
- Questions for ISD only
- Minimum information to include in Requirements documentation

Business Requirements

PURPOSE

- ✓ **Clarify and agree or reiterate a Problem Statement and Technology Project goals**
- ✓ **Identify, clarify, agree on and document Business/Function requirements**
- ✓ **Distinguish what requirements are IN versus OUT of project scope**

QUESTIONS FOR THE BUSINESS FUNCTION & ISD

- ✓ What are the goals of this project and what District business priorities/strategies are these goals supporting?
- ✓ Why is a new or revised system necessary? What problem(s) will this Technology Project address?
- ✓ What is the vision and desired outcome for the new or revised system? Are the Business and ISD aligned on their view of the desired outcomes?
- ✓ What are the data requirements of the future system that an ISD-designed system or an “off the shelf product” must meet?
- ✓ Are there records storage and document management requirements related to records retention?
- ✓ What data needs to be kept, what presentation format does the old data and the new data need to be in?
- ✓ Are there data security issues that flow from the nature of data the system must manage?
- ✓ What policies or procedures will be affected and/or changed?
- ✓ What work units will be impacted? When and how will we get their input and involvement?
- ✓ What ancillary business systems (electronic or manual) will be affected by the implementation of the system? What data or system integration will be needed?
- ✓ What safety, security or regulatory requirements need to be met, addressed and resolved?
- ✓ At what points in the project might there be a need to change requirements/project scope?
  - Knowing that such a change would be expensive and inefficient, how do we minimize the chance this occurs?
  - How do we address necessary changes in requirements and scope?

Business Requirements

PURPOSE

- ✓ **Clarify and agree or reiterate a Problem Statement and Technology Project goals**
- ✓ **Identify, clarify, agree on and document Business/Function requirements**
- ✓ **Distinguish what requirements are IN versus OUT of project scope**

Questions for the Business Function

- ✓ What do we want out of the new or revised system? What data and information do we need? What new functionality do we need?
- ✓ What are the existing Business process flows for all work processes included in the project scope:
  - Describe existing workflows (write out the steps; use flow diagrams, process mapping)
  - What are the existing reports? Who uses them? For what?
  - Any improvements that you can envision in a new system/automated process? Can these be combined or streamlined?
  - If it is an existing system – does it need to be replaced? Why?
- ✓ If an existing system is being replaced, do the users understand the business rules that were implemented in the existing system?
- ✓ What is your expectation of this system's functionality that was not provided by your previous system?
- ✓ What features from your current system do you want to see in the new or revised system?
- ✓ What new functionality and features do you envision?
  - Are there functions that you are currently doing outside of your system that you want to be able to do inside your system – sort of a one-stop-business-shop? And vice versa?

Business Requirements

PURPOSE

- ✓ **Clarify and agree or reiterate a Problem Statement and Technology Project goals**
- ✓ **Identify, clarify, agree on and document Business/Function requirements**
- ✓ **Distinguish what requirements are IN versus OUT of project scope**

QUESTIONS FOR THE BUSINESS FUNCTION (CONT'D)

- ✓ What are the general types of functions that the Business Function requires of this system?
- ✓ What are the key things the business function, the customer, the end user needs to do?
- ✓ What use cases would help specify requirements? (For example, in an online pizza ordering system, User needs to be able to review the pizza order and verify that all toppings are correct before finalizing the order.)
- ✓ What are your functional requirements (WHAT) and non-functional requirements (HOW), such as availability, capacity, cost, quality, reliability, speed, etc.?
- ✓ What are the business/process priorities?
  - Are there any reports that are required by outside agencies or meet other compliance requirements in which a specific document must be produced (like a customer billing statement) (versus a report, dashboard or other device that may be the solution for a business requirement)?
- ✓ What use cases would help specify potential reporting requirements? (For example, the manager needs to be able to get metrics on how much of each pizza topping customers ask for in a year and how much each of those toppings is costing from the wholesaler.)
- ✓ What will the ongoing support requirements be ($, FTE, etc.)?
- ✓ What are the data requirements of the future system that an ISD-designed system or an "off the shelf product" must meet?
- ✓ Are there records storage and document management requirements related to records retention?

Business Requirements

PURPOSE

- ✓ **Clarify and agree or reiterate a Problem Statement and Technology Project goals**
- ✓ **Identify, clarify, agree on and document Business/Function requirements**
- ✓ **Distinguish what requirements are IN versus OUT of project scope**

QUESTIONS FOR THE BUSINESS FUNCTION (CONT’D)

- ✓ What data needs to be kept, what presentation format does the old data and the new data need to be in?
- ✓ Are there data security issues that flow from the nature of data the system must manage?
- ✓ Are there any business continuity concerns for the project?
- ✓ Does it need to be accessible 24/7 or outside of our normal support hours?
- ✓ Does it need a rapid recovery time?
- ✓ Of all the requirements identified which are the must-have features and which are the nice-to-have features? What is their relative priority to each other?
- ✓ Which requirements of all identified are non-negotiable in terms of:
  - Business needs?
  - Regulatory requirements?
  - Risk management?
- ✓ What changes in needs or requirements do you anticipate as this project evolves? What questions, data gathering o analysis can we do now to minimize the chance we will need to change or add requirements?

Business Requirements

PURPOSE

- ✓ **Clarify and agree or reiterate a Problem Statement and Technology Project goals**
- ✓ **Identify, clarify, agree on and document Business/Function requirements**
- ✓ **Distinguish what requirements are IN versus OUT of project scope**

QUESTIONS FOR ISD

- ✓ What technology infrastructure issues may impact or benefit this project?
- ✓ How does ISD think the future system will affect business processes?
- ✓ What are all of the touchpoints of this technology (e.g. who else besides my team enters data to the system, borrows data from the system, sends file feeds to/from, physically connects)?
- ✓ Where do we need to ensure system compatibility?
- ✓ Are there things ISD can suggest as possible modifications to the scope or requirements which will increase our department's effectiveness and/or ability to successfully implement the new system?
- ✓ What data is involved? Does it impact other tables/applications?
- ✓ If an existing system is being replaced, does ISD understand the current system?
  - From a business perspective?
  - From a technology perspective?
  - From a data/process flow perspective?
- ✓ What ISD work units and subject matter experts will need to be involved in the project?

Business Requirements

PEOPLE

- ✓ **Determine roles and responsibilities in determining requirements**
- ✓ **Determine the level of internal and external support needed**

QUESTIONS FOR THE BUSINESS FUNCTION & ISD

- ✓ Who is the primary point of contact/Function Lead to provide the business specs, help write requirements and test the system?
    - Is this their primary job?
    - How will this project fit in with their other responsibilities?
- ✓ Who is the primary point of contact/Technical Lead to provide the technical specs, help write requirements and test the system?
    - Is this their primary job?
    - How will this project fit in with their other responsibilities?
- ✓ What are the expectations of the business group and ISD of each other; their respective roles, and level of involvement in gathering requirements?

Business Requirements

PROCESS

- ✓ **Agree on how requirements will be documented, reviewed, revised and finalized before going to the Steering Committee for their input and final approval**

QUESTIONS FOR THE BUSINESS FUNCTION & ISD

- ✓ What level and types of communication will be needed from the project team?
    - Whom does the project team need to communicate with and how often?
    - What are the best methods/formats for communicating effectively and keeping stakeholders informed?
- ✓ How much time do we anticipate it will take to gather and confirm requirements
- ✓ Verify who will be responsible for producing the requirements.
- ✓ Who else outside the Business/Function and ISD needs to have input on the development of requirements? How and when do we get their involvement?
- ✓ What is the format for documenting requirements? What dialogue, instructions, definition of terms, or guidance is needed to ensure clear and comprehensive requirements gathering?
- ✓ How will the requirements be organized? What are the major components or subject areas under which requirements should be categorized?
- ✓ What is our process for reviewing and revising draft requirements?
- ✓ What is the review and sign-off process between the Business/Function and ISD before the requirements go to the Steering Committee for their input and final approval?

Business Requirements

PROCESS

- ✓ **Agree on how requirements will be documented, reviewed, revised and finalized before going to the Steering Committee for their input and final approval**

QUESTIONS FOR THE BUSINESS FUNCTION & ISD

- ✓ In the event we cannot agree on the priority of requirements that will drive the statement of Work, how will the disagreement be resolved?
- ✓ What are the minimum standards that are needed for fully documenting requirements?
- ✓ Identify each user and specify their role?
- ✓ Per role, explain the use cases needed for that role?
- ✓ Prepare a storyboard to tell the story for each significant use case?
- ✓ For each use case, identify security requirements related to PII, PCI, or HIPAA that significantly impact how that use case can be performed?
- ✓ For each use case, specify the performance expectations that must be met in order for the use case to be considered fully supported? (For example, does the user need something right now or can they get an automated email tomorrow with the same information).

The Technology Project Management Toolkit

Technical Options & Solutions

Technical Options & Solutions

This tool addresses what questions need to be asked, what information needs to be exchanged or clarified, and discussions that need to occur among project partners after requirements are gathered.

WHAT TO DISCUSS AND AGREE ON BEFORE DISCUSSING POSSIBLE OPTIONS AND SOLUTIONS:

- ✓ Verify who is responsible for developing different parts of the solution, based on the Charter and governance decisions made by the Steering Committee. For example:
  - ISD is responsible for developing solutions involving any software or hardware, internal or external
  - The business groups are responsible for non-technical portions of any solution (e.g., Customer Billing Statement Design, development of a new Private Sewer Lateral Collection Process)
  - The Project Team identifies all possible viable solutions and makes the final selection(s) for recommendation to the Steering Committee
  - If the Project Team cannot reach agreement on technical solutions, then the Product Owner and Project Manager present top recommendations and rationale to the Steering Committee for their consideration and decision.
- ✓ Who makes which decisions?
  - Identify those decisions that the Steering Committee makes, and what decisions are delegated and to whom.
  - Identify those decisions that the Business Department and the Product Owner makes.
  - Identify those decisions that ISD and the Project Manager makes.
- ✓ Are there any known constraints or decisions already in place (reflected in the Charter, project governance document, or made by the Steering Committee or the Board) that need to be considered during the discussion of options and solutions?
- ✓ When weighing options and solutions, questions that need to be answered and costs that need to be determined should be considered for both the implementation and for on-going operations.
- ✓ In order for the Steering Committees to make well-informed decisions on whether some or all of the work should be done internally or by a 3rd party vendor, the portfolio of options they will be asked to review should include internal options, outsourced options, and blended options (internal and external) for their consideration.

Technical Options & Solutions

GENERAL QUESTIONS:

- ✓ Are there any technical options that you think we should explore or any technical solutions that you envision might be appropriate based on your requirements?
  - A desired user interface?
  - Example schematics of how the computer screen might look?
  - How key data elements will relate to each other?
  - Reporting tools that enable the end user to get information for them self so they are empowered and not reliant on others for information?
- ✓ What is the life cycle Cost-Benefit Analysis of the option/solution being considered that will need to support the new system and required interfaces during go-live and ongoing operations?
  - Long-term budget impacts?
  - Security impacts?
  - Regulatory impacts?
  - Life-safety impacts?
  - Customer service impacts?
  - Staff time required to perform ongoing tasks and/or provide support?
- ✓ Who will be doing the work?
  - What work will be done internally?
  - Who will be assigned to the team and for what portion of time?
  - Does the team have the requisite expertise? How do we fill gaps in expertise?
  - What work will be outsourced to a 3rd party vendor? How will they be managed?
  - What level of support will be needed from internal or external resources?

Technical Options & Solutions

GENERAL QUESTIONS (CONT'D)

- ✓ When will ISD (and others involved in generating alternatives) circle back with the business groups to get feedback on priorities of requirements in the event all cannot be met by a given solution?
- ✓ In the event of a divergence between the business group's requirements and preferences (business process requirement, specific product, third-party vs. in-house, etc.) and technical solutions being considered :
- ✓ What are the specific technical concerns so we can explore alternative ways to address the business needs/concerns?
- ✓ In what ways will the business group staff/users and customers be impacted if the business requirement is not met?
- ✓ What are the potential risks of overlooking business requirements or technical requirements?
- ✓ What risks are the business groups/District willing to take and what compelling reasons are there to take such risks?
- ✓ What technical options exist that can mitigate risks for the District?
- ✓ What are the pros and cons of each option from a technical and business perspective?
- ✓ Which of the available options recommended by ISD is/are acceptable to the business group?

Technical Options & Solutions

ALTERNATIVE ANALYSIS:

(“option” = alternative solution)

- ✓ What is the cost of implementing the solution?
- ✓ What is the cost/risk of not delivering this solution? What happens to the cost/risk overtime of not delivering a solution for the business problem?
- ✓ What are potential impacts and the on-going support costs after the solution is delivered (e.g., FTEs, budget, equipment upgrades, licensing, training, technology support, data base management, documentation, etc.)?
- ✓ For each option involving a vendor, how do we guard against/mitigate the vendor going out of business and/or the vendor deciding to no longer support the solution?
- ✓ For each option, what EBMUD Business processes will need to change? Have the groups related to these processes been consulted?
- ✓ For each option, what existing systems will need to change? Have the people who maintain these systems (ISD and/or Vendor) been consulted?

The Technology Project Management Toolkit

Selecting the Vendor

who meets our needs

WRITING AN RFI

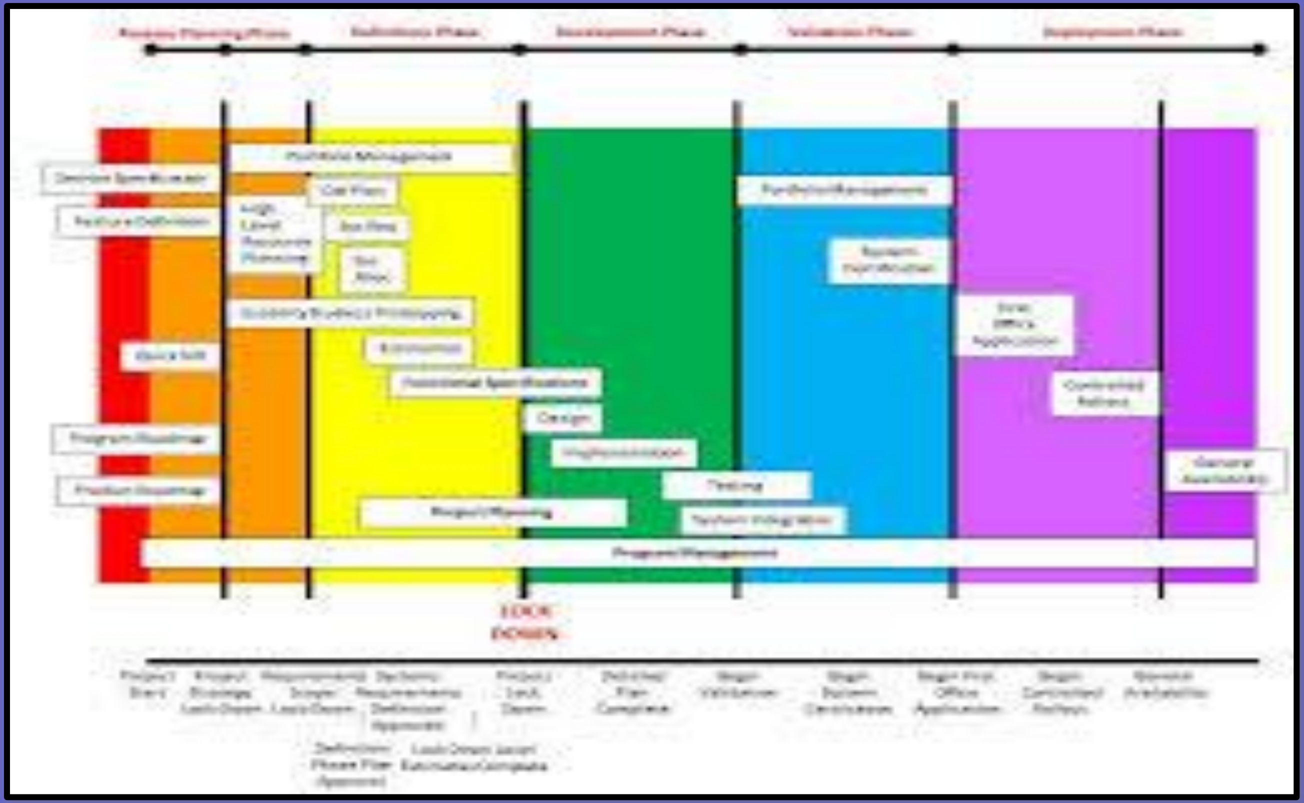
- ✓ Use District Forms and District approved language where appropriate or required (see **TPM Toolkit Library**)
- ✓ Is an RFI needed to gain a better understanding of the potential technology solutions before sending out an RFP?
- ✓ Should the RFI cover the entire solution or just part of the solution?
- ✓ Would demonstrations of the Vendors' solution be helpful?
- ✓ Who will be involved in drafting the RFI? Seek Steering Committee guidance, if necessary.
- ✓ Who else from the Business and from ISD need to have input? Others?
- ✓ What is the process for interim reviews before the RFI is sent to the Steering Committee for review and approval?

WRITING AN RFP

- ✓ Use District Forms and District approved language where appropriate or required (:\PURCH\Templates\EBMUD RFP Template (evaluation based award).doc)
- ✓ Who will be involved in drafting the RFP (i.e., Business Function, ISD, Purchasing, outside consultant)? Seek Steering Committee guidance, if necessary.
- ✓ Who will have input while requirements are being written?
- ✓ Who from the Business Function will review the draft requirements to ensure they address functional requirements?
- ✓ Who from ISD will review the draft requirements to ensure they are detailed enough to develop appropriate technical solutions?
- ✓ What is the process for interim reviews before the RFP is sent to the Steering Committee for review and approval?

SELECTING THE VENDOR

- ✓ Use the District approved process for screening proposals and interviewing Vendors (I:\PURCH\Templates\EBMUD RFP Template (evaluation based award).doc)
- ✓ What specific criteria are we using to select a Vendor for this specific project (i.e., Technical criteria, cost, implementation plan and schedule, relevant experience, references, oral presentation and interview, understanding of the project, methodology)?
    - What is the weight or priority of each criterion based on project objectives?
    - Which evaluation criteria are non-negotiable and must be met by any Vendor we consider?
    - What other criteria will we consider once basic requirements are met?
- ✓ How will we assess and compare costs and perceived value among Vendor proposals?
- ✓ What role and input will the Project Team have in the Vendor Selection process?
- ✓ Would a site visit to a vendor client be helpful? If so, would the visit be weighted and considered as part of the evaluation or would it be after preliminary selection as final confirmation?
- ✓ What information does the Steering Committee need from the Product Owner and Project Manager regarding their recommended choice of vendor?
- ✓ What additional information does the Steering Committee need to make a decision if the Product Manager and Project Manager do not agree on which Vendor to hire?
- ✓ What information will be shared with key stakeholders and the Project Team regarding the choice of Vendor and the Steering Committee's rationale for selection?

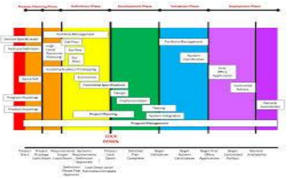

Definition Phase
Development Phase
Validation Phase
Deployment Phase
Portfolio Management
Functional Specifications
Design
Implementation
Testing
System Integration
Project Planning
Program Roadmap
Product Roadmap
Controlled Rollout
General Availability
Program Management
LOCK DOWN

The Implementation Plan

Getting the project from here to there

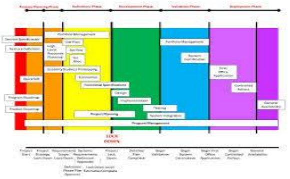
The Implementation Plan

- ✓ **What milestones can be established to guarantee that the project is on schedule and that the implementer of the solution is delivering what is requested?**
  - What tasks are required to hit each milestone?
  - How will the milestone be verified as having been completed?
  - Who has authority to accept the milestone? If there is a dispute over whether the milestone has been delivered as expected or not, how will this be resolved?
- ✓ **Who will be involved in the project?**
  - What is the involvement effort needed from each person in the project?
  - What are the specific tasks for each person in the project?
  - What communication needs to occur with the users/others?
- ✓ **Create a Test Plan that includes:**
  - Who will do the testing?
  - At what points do ISD and the business need to review the test plan?
  - How and when will testing be done? How many test environments are needed? Is there a suggested sequence? What types are appropriate? Automated testing?
  - How will items ready for testing be identified?
  - How will test results be documented? Is there a standardized test results format/form for reporting issues?
  - What types of integration testing will be needed (data flowing between separate systems?)
  - Will any parallel testing occur?
  - How much time is required to fully test the solution(s)?
  - How and at what frequencies will the various environments be updated?



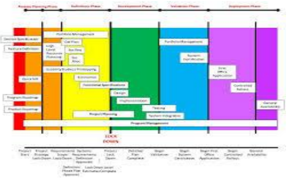
The Implementation Plan

- ✓ **What is the plan for data conversion and when and how will this be accomplished?**
  - Is there a need to migrate data from an existing solution to the new solution? All data, some data or no data? What are the retention requirements?
- ✓ **Create a training plan:**
  - Who is ultimately responsible for training?
  - Who will conduct training?
  - Who needs to be trained? What are the various groups of users?
  - What is the format for the training? Does everyone need the same type of training?
  - How can we confirm students have learned the new skills needed to use the new technology?
  - When will training need to happen?
- ✓ **What types of documents are needed?**
  - Do we need to update/develop new desk manuals?
  - Who will create user documentation/user guides/FAQ sheets?
  - Do we need a glossary of terms to clarify terms between the old and new systems?
- ✓ **If a system external to the project needs to change:**
  - When does the change need to take place?
  - Do we need a change order for an existing vendor?
  - Does the interface between an existing system need to change to support the new system? If yes, how will this happen?
  - Can the vendor change the interface ahead of time or does the vendor need to change the interface at the same time the system becomes live?



The Implementation Plan

- ✓ **What is the plan for Cutover and Go Live activities?**
  - Who will be leading this effort? Who else's input will be needed
  - How will users transition to using the new system? Will we go live all at once, or via some form of phased approach? Based on user groups? Based on functionality?
  - What is the schedule for cutover? Will there be any time without access to the old/new system?
  - When will we stop making changes to the old system?
  - What new processes will require union notification or involvement? When will that occur?
  - What systems need to be decommissioned?
  - How will users know that they can start using the new system?
  - Can/should we run parallel systems? For what period of time?
  - Will there be a time when a user won't have access to a business function? If yes, how long will this gap be? If yes, what should the user do while this business function isn't available?
  - What information needs to go to the user? By when?
  - What will signify success?
- ✓ **Create a Communications Plan to ensure stakeholders are involved and updated in a timely manner** (refer to the Communications Plan Tool in the Toolkit):
  - What info needs to be shared, with whom, by when?
  - What input and feedback needs to be gathered, from whom, by when?
  - What meetings need to be held, how often, with whom?
  - How will project related communication be documented, distributed, archived?
  - After implementation, how often will the Business client and ISD communicate to ensure issues that arise are addressed quickly and effectively?



The Communication Plan

Keeping stakeholders engaged and informed

The Communication Plan

- ✓ The purpose of the Communication Plan is to ensure that stakeholders are kept appropriately informed of the project's status, progress and outstanding issues during the project, and that stakeholders are appropriately included when their input, guidance or feedback is needed to move the project forward.
    - The Communications Plan is a document that is created at the beginning of a project by the Project Manager, with input from the Product Owner and the Project Team.
    - The Communication Plan is reviewed and approved by the Steering Committee as one component of Project Governance that the Steering Committee oversees.
    - The Project Manager, with input from the Product Owner and the Project Team, is responsible for updating the Communication Plan and informing others of any changes.
- ✓ Communication Plans vary in format and level of detail, depending on the scope and complexity of the project, and may include the following:
    - **A project description with goals and objectives** (use or adapt project charter)
    - **The stakeholders who needs to be kept informed or who need to provide input during the project** (i.e., Steering Committee, Project Team, Subject matter Experts, other EBMUD departments, external customers, and others)
    - **What needs to be communicated per identified stakeholder** (i.e., District announcements, Business Department/ISD updates, project status, end user feedback, outstanding project issues, Vendor information, etc.)
    - **Purpose of the communication** (i.e., to inform, provide status, solicit feedback, announce decision, monitor and report on project progress regarding scheduled tasks, troubleshoot problem areas or escalate issues as appropriate, etc.
    - **Who originates the communication and/or the person responsible for the communication** (i.e., Project Manager, Product Owner, Steering Committee, Project Team, Vendor, other)
    - **How it will be communicated** (i.e., monthly project status reports, email, District intranet, letter to customers, etc.)
    - **How feedback will be managed (**How requested, summarized, reported back with response or resolution)
    - **Location** (where District meetings or public events will be held)
    - **Frequency**
- ✓ **The Communication Plan gets reviewed on a regular basis and updated as needed.**

The Communication Plan

COMMUNICATION TOOLS

Sample Project Description (or use project Charter approved by Steering Committee)

The XXXXXXX Project will replace XXXXXXXXXXX System with XXXXXX System which allows the District to take advantage of state of the art technology and proven customer interface software, both of which will help us improve customer service and expedite bill pay and the updating of all customer accounts by Q1 2015.

Sample Project Goals and Objectives:

- ✓ Obtain robust functionality, minimize life-cycle costs, and reduce risk
- ✓ Enable staff to serve customers quickly, accurately, and efficiently
- ✓ Consolidate the many separate systems into a single, user friendly tool that can be accessed across the entire organization allowing for more efficient data sharing and improved response time to customers
- ✓ Reengineer business processes to maximize the use of the tools included within the technology solution
- ✓ Install a system that minimizes downtime related to hardware or software failures, and to backups and system maintenance
- ✓ Install a technology solution that is reliable and sustainable over an X-year life at the District
- ✓ Ensure accurate billing of ______________________ charges to our customers
- ✓ Provide tools to District staff that facilitate ongoing exceptional customer service to our customers
- ✓ Enhance and modernize systems that can meet changing customer expectations
- ✓ Exceed customer expectations into the future
- ✓ Create an up to date automated tool that will upgrade the quality of our work life

The Communication Plan

COMMUNICATION TOOLS

Core Messages

Core messages are agreed-upon written or verbal statements about the project that are delivered by project leadership (Steering Committee, Project Sponsor, Product Owner, Project Manager, Business/Technical Leads).

Core messages can be used to provide updates, set direction, respond to issues that arise during the project, address concerns among stakeholders, provided recognition to the Project Team, etc.

Core messages are intended to be delivered by all “messengers” with consistency in order to achieve to a common understanding, create shared expectations, and based on consistent information received, recipients can take appropriate action.

Sample Core Messages:

- ✓ We have an opportunity to rework our business processes to help people accomplish their goals more efficiently by automating many of our manual processes.
- ✓ Once implemented, we will do the same work, but with up to date tools.
- ✓ It’s time to update an aging, out of date system with technology that can take us the next 20 years.
- ✓ We are confident the Project Team will bring this project in on time and within budget.
- ✓ You are encouraged to ask question or ask for help at any time you are unclear about the project status, your role and expectations for deliverables, or have concerns about how the project is progressing.
- ✓ Detailed training plans will be incorporated in the main project plan. Users will be trained on the processes they need to use at go-live.
- ✓ Significant cross training will be managed after go-live.
- ✓ There is a considerable amount to learn when implementing a new software system of this size.
- ✓ The focused training effort is intended to minimize user concerns and maximize user adoption of the system at go-live.
- ✓ A system replacement will impact not only District staff but also our external customers. The Project Team needs to work closely with Public Affairs and the Customer & Community Service department to facilitate appropriate customer communications.

The Communication Plan

COMMUNICATION TOOLS

Reports

- ✓ Weekly update reports from Project Team to PM
- ✓ Monthly reports from PM to Steering Committee

Website

- ✓ Provides general project information (plan, milestones, all newsletters etc.) as well as ongoing posting of updates

Newsletters

- ✓ Regular newsletters to general user community.

Milestones

- ✓ Established at time of scope/contract development.
- ✓ Main milestones will be listed on project
- ✓ Web site along with expected deadlines.

Department meeting updates

- ✓ Functional and Technical leads will be available for any individual department meetings requested.
- ✓ Frequent meetings and discussions will take place with key stakeholders to ensure all concerns are identified and resolved.

Communication with external customers

- ✓ Bill messages
- ✓ Article in the bill insert
- ✓ Information on the EBMUD.com website.

The Communication Plan

SUPPORTING ADOPTION OF THE NEW SYSTEM

The replacement of a system may impact many different work groups, even if they don't use the system on a daily basis. As change can be difficult, consider what communication needs to occur to ensure that End Users and other Stakeholders are prepared and comfortable to transition to the new system. Communication may include core messages from District Leadership, information from Project leadership, and facilitated discussion with staff to assess their readiness to make change, respond to their questions and address any concerns which may impact their transition to the system and to new ways of working.

Has the change been appropriately communicated?

- ✓ Do employees know it's coming?
- ✓ Is staff "ready" or sufficiently prepared for the change?

What will change?

- ✓ What will the system do and not do?
- ✓ How will my work group know what we will "get" from the new system?
- ✓ When can we expect to see the new stuff?
- ✓ Will we have enough time to learn it?
- ✓ How will this impact my day to day job?
- ✓ What are the project phases and what changes happens when?
- ✓ What's in it for me? Our customers? The District?

Are staff expectations accurate?

- ✓ "I heard the system can do…… ".
- ✓ "I heard that won't happen until later."

The Communication Plan

SUPPORTING ADOPTION OF THE NEW SYSTEM (cont'd)

Does staff realize the new system means letting go of the way it was?

- ✓ Past “experts” will need to see where they fit in
- ✓ New “experts” will emerge.
- ✓ Everyone will have to work through the changes and will do so differently…. And it’s OK.

How will the Project Team prepare staff for these changes?

- ✓ What communication channels are in place for staff to voice questions and concerns?
- ✓ What is the correct level of communication for users to understand the changes?
- ✓ Who do we need to communicate with?
- ✓ What form is appropriate for communicating about specific work group impacts?
- ✓ How often is appropriate?
- ✓ What does SMT think is happening?
- ✓ Need to address employees’ wondering “Does my manager know what is happening?”

Prep for Go-Live

- ✓ When will Go Live happen?
- ✓ What does my group need to do to prepare?
- ✓ How will we know what we need to do and when?
- ✓ When will I lose access to the old system(s)?
- ✓ Will we be able see the old system after go-live?

At Go-Live

- ✓ How will we know we are supposed to use the new system?
- ✓ What if we have questions on day one?
- ✓ What process do we use to report problems?
- ✓ Is problem reporting different depending on how bad the problem is?

Project Team Collaboration

all parts working together

Project Team Collaboration

Thinking strategically about time spent in meetings

Meeting productivity is a shared responsibility, not just the responsibility of the meeting leader or facilitator. Whether your meeting involves two people or the entire project team, every member of the meeting can help make the meeting a productive use of time by considering the following:

What do we want to accomplish in our limited time together? What are our desired outcomes?

- ✓ Share information?
- ✓ Provide input on the project plan?
- ✓ Review project progress?
- ✓ Discuss functional requirements?
- ✓ Explore technical solutions?
- ✓ Solve a problem?
- ✓ Develop new processes?
- ✓ Make a decision?

Who should be included in the meeting?

- ✓ Who needs to hear the information? Who will be directly impacted by what this meeting addresses?
- ✓ Whose input is needed? Who has the skills, information, expertise, a perspective on the project, or direct experience that will be useful or of interest to the Project Team?
- ✓ Who needs to have buy-in to what we're discussing, even if they are not directly involved? Should they be present at the meeting, or is there another way to get their input?
- ✓ Whose support will be needed going forward when we implement our decision? Should they be present at the meeting, or is there another way to get their input or involve them?
- ✓ Who will want to be part of this discussion and may become upset, concerned, or will have an issue if they are not included? Should they be present at the meeting, or is there another way we can update or involve them?
- ✓ Are there assignments from previous meetings that need to be completed before we are ready to meet?

Project Team Collaboration

Thinking strategically about time spent in meetings (cont'd)

Are we ready to meet?

- ✓ Do we have the appropriate people, sufficient information, the necessary tools and resources to do the work we need to do in the meeting?
- ✓ Is there any information, input or context needed by the Steering Committee, Product Owner, Project Manager, customer or other that we will need to consider during our meeting?
- ✓ Is there any information or material that needs to be reviewed in advance in order to have a focused and productive discussion?
- ✓ How much time will people need to review and prepare for the meeting? How far in advance should materials be sent out?

How will we structure our time spent in the meeting:

- ✓ Do we have a clear outcome or goal for each agenda topic (i.e., have a general discussion, review the status report to identify problem areas, brainstorm possible solutions, prioritize requirements, revise the training plan, make a decision, etc.)
- ✓ Is everyone clear about what specifically we're trying to accomplish for each agenda topic so we are all focused in the same way at the same time?
- ✓ Do we have enough time to address and finish each agenda topic?
- ✓ Are we allowing everyone who wants to provide input the time and opportunity to do so?
- ✓ Have we allowed enough time to allow for discussion among team members?
- ✓ Are there some agenda topics that we can defer to another meeting to provide us more time for other topics?

Project Team Collaboration

Thinking strategically about time spent in meetings (cont'd)

What decisions need to be made?

- ✓ Who has the authority to make the decision?
- ✓ Do we have the right people involved in order to make a decision?
- ✓ Do we have sufficient information, expertise, experience to make a decision?
- ✓ Is there any input we need from stakeholders in advance before we make a decision?
- ✓ Are we trying for consensus (everyone agrees to implement the decision) or a majority vote (will the dissenting opinion still be on record?)
- ✓ Do we have enough time to make decision? If not, how will the decision be made?
- ✓ When and how will we review whether our decision was effective? Will be revise our plan, implement a Plan B, or start over?
- ✓ If we can't come to agreement, how will the decision be made?
- ✓ If someone else will be making the decision, is there any input, information or recommendations we want to provide to help them make a well-informed decision?

Project Team Collaboration

Thinking strategically about time spent in meetings (cont'd)

What questions, issues or concerns do we anticipate arising in the meeting?

- ✓ How can we provide team members with a safe and confidential forum for expressing issues and concerns so they don't fear retribution or a consequence?
- ✓ Are there discussions we need to have in advance of the meeting to gather input, clarify the issues or address individual's concerns before everyone gets together?
- ✓ Is there a way to address concerns within the team without pointing the finger at anyone or revealing what an individual may have said in private?
- ✓ What information can we provide during the meeting or before that will answer questions or addresses issues and concerns?
- ✓ How do we defuse tension from past experiences or interactions that still have a negative impact on the Project Team and affect our meetings?
- ✓ How do we build trust among team members so they can collaborate productively?
- ✓ How do we help team members focus on the future and finding a solution instead of dwelling on the past or what's not working?

What are our next steps?

- ✓ What actions do we agree to?
- ✓ What issues are still unresolved? How and when will we address them?
- ✓ Who do we need to update about the outcomes of our meeting?
- ✓ What is the focus of our next meeting?
- ✓ How soon should we meet? How much time will we need?
- ✓ Document and distribute minutes or meeting notes within 2 business days; allow a window of 3 days for comment and then post in a project folder for future reference by Project Team members and others

Project Team Collaboration

Keeping discussion focused in order to move work forward

Whether you're a team leader, the facilitator or a meeting participant, you can help keep the meeting focused and productive by doing or saying the following:

Help to clear up discussion drift or confusion by restating the focus of the discussion, the question being addressed, or the goal of the discussion.

- ✓ "What specifically are we addressing now?"
- ✓ "I'm a little confused. Could you say it another way?"
- ✓ "Can you please define what you mean by requirements?"
- ✓ "I think what you're getting at is….."
- ✓ "What I'm hearing you say is…."
- ✓ "I think we're talking about requirements and solutions interchangeably; as we agreed, today's discussion is about requirements; we'll talk about possible technical solutions in our next meeting"
- ✓ "Just a reminder that we're only brainstorming options right now, we don't need to pick one and agree yet"
- ✓ "Let's get back on track. We only have another 20 minutes to resolve this issue"

Encourage others to provide input, ask questions and contribute:

- ✓ "What questions do any of you have about….?"
- ✓ We want to be sure we've fully addressed both the Business Function's and ISD's respective concerns; any other perspective anyone wants to share?"
- ✓ "This issue is too complex to resolve with any easy solution, does anyone have any other ideas we should consider?"
- ✓ "Before we move on to the next agenda topic, any final comments?"
- ✓ "It's important we hear from everyone on the team, so anyone who has not yet commented want to do so?"
- ✓ "We will need to make a decision we can all support, so now is the time to chime in…"

Project Team Collaboration

Keeping discussion focused in order to move work forward (cont'd)

Help to resolve differences before they escalate or divide the team by first legitimizing the different points of view then offering a suggestion for how to move forward

- ✓ "We clearly have some disagreements about how to proceed; I'm not surprised given the complexity of the problem"
- ✓ "Let's write our different views up on the whiteboard so we can address them one at a time"
- ✓ "I think our disagreement may stem from the fact we each see the problem very differently, based on our functional or technical perspective. I think it will help if we each clarify how we view the situation so we are all better informed"
- ✓ "I now have a much better understanding of the situation from your perspective; I didn't realize this decision would have such a negative impact on you"
- ✓ "There is no one right answer to this issue, so let's see what our options are"
- ✓ "Before we start talking about how to resolve this, let's make sure we've fully understood what may have caused or contributed to the problem. How did this situation evolve?"
- ✓ "Although I don't agree with everything you've said, what I do agree with is…."
- ✓ "Since we're never going to fully resolve this, let's figure out how to go from here. What are our options?"
- ✓ "It's okay to disagree"
- ✓ "Despite our differences, I know we both want this project to succeed"

Summarize the highlights of the discussion many times during the meeting (not just at the end) so people are clear on what's been discussed, agreed to, or where they are at any point during the meeting:

- ✓ "So, what we've been debating here is….."
- ✓ "Well, we seem to agree on……"
- ✓ "Let's recap where we are: I've agreed to do XYZ, and you've agreed to do 123…"
- ✓ "I'd like to recap the highlights of our meeting today; what we've agreed to and what we need to follow-up with"
- ✓ "Looks like we can't resolve this today, so let's put this on next week's meeting"

Project Team Collaboration

Suggested process for collaborative decision making

- ✓ Determine who has the authority to make a decision specific to the issue or situation (seek guidance from the Steering Committee, if needed)
- ✓ If one person owns the decision, that person should:
    - Seek input or information needed to make a well-informed decision; consider the needs and perspective of all stakeholders involved
    - Communicate and document the decision and rationale to the Project Team or stakeholders in a timely manner
- ✓ If the decision needs to be made by two or more people:
    - Involve those whose input is needed to make a well-informed decision (e.g., Steering Committee, Product Owner, Project Manager, Project Team members, end-users, other District departments, customers)
    - Provide them with general context in which the issue exists or a decision is required
    - Gather, review and discuss input, data and information to gain a shared understanding of the situation or issue
    - Determine if additional input or information is needed to better understand the issue or make a decision; agree on a plan and timeline for getting that input/info and getting back together to review and discuss
    - Explore alternatives for resolving issues and making progress; assess pros and cons of various options
    - Assess potential impact of taking action or taking no action with the options being considered
    - Select the optimal decision(s) or course(s) of action; identify a fallback decision or option, in case a “Plan B” will be needed
- ✓ Document and communicate decisions to the Project Team and to stakeholders:
    - The issue that needed to be resolved
    - Options considered
    - Option selected
    - Who made the decision
    - Rationale for the choice

Project Team Collaboration

Suggested agenda for the Project Kick-Off meeting

- ✓ **Welcome by Sponsors and/or Steering Committee Members:**
  - Each describes their role at the District
  - Shares their own personal interest or aspiration for this Technology project
- ✓ **Introduction of all Team members**; experience working on past Technology projects, years with the District, professional experience outside the District
- ✓ **Set context for the Technology Project; why this project and why now**
  - Review project charter or provide a high-level description of the project
  - Describe issues or problems being addressed and their recent or historic impact on District services to internal and external customers
  - Cite any needs or concerns raised by the Business Function(s) about the inability to accomplish X with the current system or constraints on business processes
- ✓ **Describe anticipated benefits once the project is implemented** (see Core Messages in the Communications Tool for examples)
  - How project is strategically aligned with the District's goals and priorities
  - Anticipated impact on the District's business processes and service delivery
  - Anticipated benefits to end users of the system and internal and external customers
- ✓ **Emphasize the importance of the partnership between the Business Function and ISD and the collaboration among all Project team members**
- ✓ **Describe general scope of the Technology Project**; what's in scope, what's out of scope

(continued)

Project Team Collaboration

Suggested Agenda for the Project Kick-Off meeting (cont'd)

- ✓ **Clarify roles and responsibilities and reporting relationships during the project** (see Roles Tool):
  - Steering Committee
  - Product Owner
  - Project Manager
  - Business & Technical Leads
  - Project Team
  - Between the Business Function and ISD
  - Other stakeholders
- ✓ **General comments on choice of vendor** (if timing is appropriate), why selected, and whose input shaped the decision by the Steering Committee
- ✓ **Product Manager and Project Manager each share their expectations and aspirations for the Technology Project** and how they will be working together to lead this project to a successful conclusion
- ✓ **Project Manager provides overview of next steps**
- ✓ **Steering Committee describe their expectations for the Project Team to use the TPM Toolkit during the project and expected benefits;** Project Manager and Product Owner briefly describe how they intend to use the Tools as the project begins and specific next steps
- ✓ **Ask for comments, reactions, or questions** regarding the project or next steps
- ✓ **Recap highlights and next steps**

Managing the Vendor

Directing the flow

Managing the Vendor

- ✓ Clarify the role and interactions among Product Manager, Project Manager and the Vendor (seek input from Steering Committee, if needed):
  - How and when will the EBMUD Project Manager work with the Vendor project manager?
- ✓ How and when will the Product Owner interface with the Vendor regarding functionality?
- ✓ How frequently will meetings be held with the Vendor? Who from EBMUD will be involved?
- ✓ Is the Vendor willing to commit to having the same team members throughout implementation? If not, how do we plan for expected turnover so there is minimal adverse impact on the project?
  - What other collaboration, coordination and communication will be required to ensure project success?
- ✓ How will issues related to Vendor performance be addressed?
  - Who deals with the Vendor if the Project Team or a Project Team member has a difficult time working with the Vendor or getting agreed upon deliverables on time?
  - How will issues, whether resolved or unresolved, be documented and communicated to the Project Team or other stakeholders?
- ✓ What needs to be communicated to the Project Team so they are familiar with the expectations for the Vendor's role, responsibilities and deliverables and know what the process will be for addressing and resolving any issues they have in their own interactions with the Vendor?

Project Monitoring

Is everything
going as planned

Project Monitoring

- ✓ Guidelines for tracking milestones and verifying that deliverables are working:
  - Milestones that are coming due to make sure they will be hit
  - Test scripts for verifying
  - Testers available for testing
  - Project Team member's planned vacation and general availability and the impact on project schedule
  - Results of tests reported in a timely manner; use a standardized test results format/form for reporting issues
  - Identify and communicate corrective actions/solutions when a project is at risk.
- ✓ General criteria for when to adjust the project schedule and who needs to be informed:
- ✓ If the adjustments to the project schedule don't change the release date and/or release content, then there isn't a need to get approval from the Steering Committee.
- ✓ A summary of the changes should be made available to the Steering Committee.
- ✓ If adjustments do affect the release date and/or release content, then need approval from the Steering Committee.
- ✓ Track effort and hours remaining against the schedule:
  - Team member and Vendor status reported in the form of effort remaining versus percent remaining (i.e. "I have 3 hours left" not "I'm 90% done")
  - Track where we are versus where we planned to be (i.e. on November 12, 2013, we have 250 person days of effort remaining, but we had planned to have only 150 person days of effort remaining); any concerns about rate of progress?
  - Have we been at the same hours left since the last meeting (e.g. last week ago a task had 10 hours left, this week it has 9 hours left); any concerns about rate of progress?
  - Do the hours reflect the tasks that are on the schedule? If not, are new tasks needed to produce deliverables?
  - Identify and communicate corrective actions/solutions when a project is at risk

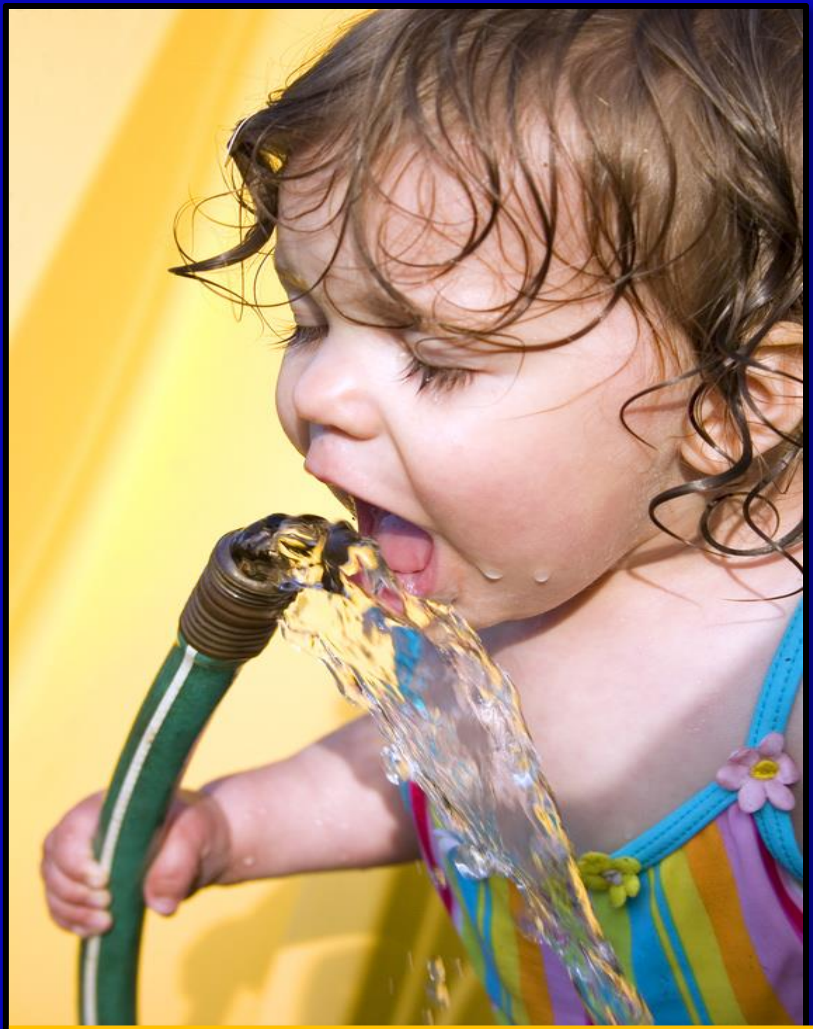
Project Monitoring

- ✓ How will issues related to Vendor performance be addressed? Resolved?
    - Who from EBMUD needs to be involved in documenting, addressing and resolving issues?
    - How will issues, whether resolved or unresolved, be documented and communicated to the Project Team or other stakeholders?
- ✓ Provide updates and communicate about project status on a regular basis:
    - Hold regular Project Team meetings to understand what is happening on the project and to get feedback from team members
    - Hold regular meetings with the Steering Committee to ensure project progress is meeting their expectations or to solicit their input and assistance if needed
    - Recommend meeting individually with stakeholders to get their opinion as to how the project is progressing and to see if they have any questions/concerns; who best to hold that meeting?
    - Recommend meeting individually with Project Team members to get their opinion as to how the project is progressing and to see if they have any questions or concerns; who best to hold that meeting?
- ✓ Document all decisions made on the project made by the Product Manager, Project Manager and Project Team members.
- ✓ Document and track any action items and/or decisions as a result of any meeting/encounter.

Project Close and Retrospective

Project Close & Retrospective

- ✓ Verify that the project is ready to close out:
  - Verify that any remaining items committed to by the Project Team or the Vendor have been completed or reassigned, cancelled, deferred, etc.)
  - Make sure that all contracts have been paid/settled
  - Dispose of equipment related to the previous solution that is no longer needed
  - Verify that licenses and services no longer needed are cancelled or will not be renewed
- ✓ Build time into the project schedule to conduct a Project Retrospective after completing each project phase and again within 1-2 weeks of all tasks on the schedule being completed
- ✓ Conduct the Project Retrospective with the Project Team and stakeholders:
  - To assess and discover what went right and what to do differently in future projects
  - For stakeholders to provide input that will support future project success
- ✓ What questions need to be asked when conducting a project retrospective?
  - What went well? How do we build on these efforts?
  - What issues impacted progress on the project?
  - What could have been done differently to minimize or resolve these issues?
  - What were the biggest challenges during the project? How can we minimize them in the future?
  - Are there other ways to enhance productivity, teamwork and morale on future projects?
  - What findings from the retrospective should be documented so they can be used in future projects? How best to communicate these findings to others?
  - What are appropriate ways to recognize individual and Project Team progress and accomplishments?
- ✓ Document and share the results of the Project Retrospective with the Steering Committee and add to the TPM Toolkit Master Library in the "Lessons Learned" folder



Glossary of Terms

Like learning a new language

Guide to the Project Management Body of Knowledge

(TPMBOK® Guide) Third Edition

Acceptance Criteria. Those *criteria*, including performance *requirements* and essential conditions, which must be met before project *deliverables* are accepted.

Authority. The right to apply *project resources**, expend *funds*, make decisions, or give *approvals*.

Change Request. Requests to expand or reduce the *project scope*, modify policies, *processes*, plans, or *procedures*, modify *costs* or *budgets*, or revise *schedules*. Requests for a change can be direct or indirect, externally or internally initiated, and legally or contractually mandated or optional. Only formally documented requested changes are processed and only approved change requests are implemented.

Communication Management Plan [Output/Input]. The *document* that describes: the *communications* needs and expectations for the *project*; how and in what format information will be communicated; when and where each communication will be made; and who is responsible for providing each type of communication. A communication management plan can be formal or informal, highly detailed or broadly framed, based on the requirements of the project *stakeholders*. The communication management plan is contained in, or is a subsidiary plan of, the *project management plan*.

Constraint [Input]. The state, quality, or sense of being restricted to a given course of action or inaction. An applicable restriction or limitation, either internal or external to the project, that will affect the performance of the *project* or a *process*. For example, a schedule constraint is any limitation or restraint placed on the *project schedule* that affects when a *schedule activity* can be scheduled and is usually in the form of fixed *imposed dates*. A cost constraint is any limitation or restraint placed on the *project budget* such as *funds* available over time. A project *resource* constraint is any limitation or restraint placed on resource usage, such as what resource *skills* or *disciplines* are available and the amount of a given resource available during a specified time frame.

Contract [Output/Input]. A contract is a mutually binding agreement that obligates the *seller* to provide the specified *product* or *service* or *result* and obligates the *buyer* to pay for it.

Contract Administration [Process]. The process of managing the *contract* and the relationship between the *buyer* and *seller*, reviewing and documenting how a seller is performing or has performed to establish required *corrective actions* and provide a basis for future relationships with the seller, managing contract related changes and, when appropriate, managing the contractual relationship with the outside buyer of the *project*.

Contract Management Plan [Output/Input]. The *document* that describes how a specific *contract* will be administered and can include items such as required documentation delivery and performance requirements. A contract management plan can be formal or informal, highly detailed or broadly framed, based on the requirements in the contract. Each contract management plan is a subsidiary plan of the *project management plan*.

Guide to the Project Management Body of Knowledge

(TPMBOK® Guide) Third Edition

Contract Statement of Work (SOW) [Output/Input]. A narrative description of *products, services, or results* to be supplied under contract.

Corrective Action. Documented direction for *executing* the *project work* to bring expected future performance of the project *work* in line with the *project management plan*.

Critical Path Method (CTPM) [Technique]. A *schedule network analysis technique** used to determine the amount of scheduling flexibility (the amount of *float*) on various logical *network paths* in the *project schedule* network, and to determine the minimum total project *duration*. *Early start and finish dates** are calculated by means of a *forward pass*, using a specified *start date*. *Late start and finish dates** are calculated by means of a *backward pass*, starting from a specified completion date, which sometimes is the project *early finish date* determined during the forward pass calculation.

Customer. The person or *organization* that will use the project's *product* or *service* or *result*. (See also *user*).

Decomposition [Technique]. A planning technique that subdivides the *project scope* and project *deliverables* into smaller, more manageable *components*, until the project *work* associated with accomplishing the project scope and providing the deliverables is defined in sufficient detail to support *executing*, *monitoring*, and *controlling* the *work*.

Deliverable [Output/Input]. Any unique and verifiable *product*, *result*, or capability to perform a *service* that must be produced to complete a process, phase, or project. Often used more narrowly in reference to an external *deliverable*, which is a deliverable that is subject to approval by the project sponsor or customer. See also product, service, and result.

Expert Judgment [Technique]. Judgment provided based upon expertise in an *application area*, *knowledge area*, *discipline*, industry, etc. as appropriate for the activity being performed. Such expertise may be provided by any group or person with specialized education, *knowledge*, *skill*, experience, or training, and is available from many sources, including: other units within the performing organization; consultants; *stakeholder*s, including *customers*; professional and technical associations; and industry groups.

Functional Manager. Someone with management *authority* over an organizational unit within a *functional organization*. The manager of any group that actually makes a *product* or performs a *service*. Sometimes called a line manager.

Functional Organization. A hierarchical *organization* where each employee has one clear superior, staff are grouped by areas of specialization, and managed by a person with expertise in that area.

Human Resource Planning [Process]. The *process* of identifying and documenting *project roles*, responsibilities and reporting relationships, as well as creating the *staffing management plan*.

Guide to the Project Management Body of Knowledge

(TPMBOK® Guide) Third Edition

Influencer. Persons or groups that are not directly related to the acquisition or use of the project's *product*, but, due to their position in the *customer organization**, can influence, positively or negatively, the course of the *project*.

Information Distribution [Process]. The *process* of making needed information available to *project stakeholders* in a timely manner.

Initiator. A person or *organization* that has both the ability and *authority* to start a *project*.

Master Schedule [Tool]. A summary-level *project schedule* that identifies the major *deliverables* and *work breakdown structure components* and key *schedule milestones*. See also *milestone schedule*.

Matrix Organization. Any organizational structure in which the *project manager* shares responsibility with the *functional managers* for assigning priorities and for directing the *work* of persons assigned to the *project*.

Milestone. A significant point or *event* in the *project*. See also *schedule milestone*.

Monitor and Control Project Work [Process]. The process of *monitoring* and *controlling* the processes required to initiate, plan, execute, and close a *project* to meet the performance *objectives defined* in the *project management plan* and *project scope statement*.

Operations. An organizational function performing the ongoing execution of *activities* that produce the same *product* or provide a repetitive *service*. Examples are: production operations, manufacturing operations, and accounting operations.

Plan Contracting [Process]. The *process* of documenting the *products*, *services,* and *results* requirements and identifying potential *sellers*.

Plan Purchases and Acquisitions [Process]. The *process* of determining what to purchase or acquire, and determining when and how to do so.

Portfolio. A collection of *projects* or *programs* and other work that are grouped together to facilitate effective management of that *work* to meet strategic business *objectives*. The projects or programs of the portfolio may not necessarily be interdependent or directly related.

Portfolio Management [Technique]. The centralized management of one or more *portfolios*, which includes identifying, prioritizing, authorizing, managing, and controlling *projects, programs*, and other related work, to achieve specific strategic business *objectives*.

Position Description [Tool]. An explanation of a *project team* member's *roles* and responsibilities.

Guide to the Project Management Body of Knowledge

(TPMBOK® Guide) Third Edition

Procurement Documents [Output/Input]. Those *documents* utilized in bid and proposal activities, which include *buyer's* Invitation for Bid, Invitation for Negotiations, Request for Information, Request for Quotation, Request for Proposal and *seller's* responses.

Procurement Management Plan [Output/Input]. The *document* that describes how procurement *processes* from developing procurement documentation through *contract closure* will be managed.

Product Scope. The features and functions that characterize a *product*, *service* or *result*.

Progressive Elaboration [Technique]. Continuously improving and detailing a plan as more detailed and specific information and more accurate estimates become available as the project progresses, and thereby producing more accurate and complete plans that result from the successive iterations of the planning *process*.

Project. A temporary endeavor undertaken to create a unique *product*, *service*, or *result*.

Project Charter [Output/Input]. A *document* issued by the project *initiator* or *sponsor* that formally authorizes the existence of a *project*, and provides the *project manager* with the authority to apply organizational *resources* to project *activities*.

Project Initiation. Launching a *process* that can result in the authorization and *scope* definition of a new *project*.

Project Management (TPM). The application of *knowledge*, *skills*, *tools*, and *techniques* to *project activities** to meet the project *requirements*.

Project Management Body of Knowledge (TPMBOK®). An inclusive term that describes the sum of *knowledge* within the profession of *project management*. As with other professions such as law, medicine, and accounting, the body of knowledge rests with the practitioners and academics that apply and advance it. The complete project management body of knowledge includes proven traditional *practices* that are widely applied and innovative practices that are emerging in the profession. The body of knowledge includes both published and unpublished material. The TPMBOK is constantly evolving.

Project Management Office (TPMO). An organizational body or entity assigned various responsibilities related to the centralized and coordinated management of those *projects* under its domain. The responsibilities of a TPMO can range from providing project management support functions to actually being responsible for the direct management of a project. See also *program management office*.

Project Management Plan [Output/Input]. A formal, approved *document* that defines how the projected is executed, monitored and controlled. It may be summary or detailed and may be composed of one or more subsidiary management plans and other planning documents.

Guide to the Project Management Body of Knowledge

(TPMBOK® Guide) Third Edition

Project Management Process. One of the 44 *processes*, unique to *project management* and described in the *TPMBOK® Guide*.

Project Management Professional (TPMP®). A person certified as a TPMP® by the Project Management Institute (TPMI®).

Project Management Team. The members of the *project team* who are directly involved in *project management activities*. On some smaller *projects*, the project management team may include virtually all of the *project team members*.

Project Manager (TPM). The person assigned by the *performing organization* to achieve the *project objectives**.

Project Organization Chart [Output/Input]. A *document* that graphically depicts the *project team* members and their interrelationships for a specific *project*.

Project Schedule [Output/Input]. The planned *dates* for performing *schedule activities* and the planned dates for meeting *schedule milestones*.

Project Scope. The *work* that must be performed to deliver a *product, service, or result* with the specified features and functions.

Project Scope Management Plan [Output/Input]. The *document* that describes how the *project scope* will be defined, developed, and verified and how the *work breakdown structure* will be created and defined, and that provides guidance on how the *project scope* will be managed and controlled by the *project management team*. It is contained in or is a subsidiary plan of the *project management plan*. The project scope management plan can be informal and broadly framed, or formal and highly detailed, based on the needs of the *project*

Request for Information. A type of *procurement document* whereby the *buyer* requests a potential *seller* to provide various pieces of information related to a *product* or *service* or *seller* capability.

Request for Proposal (RFP). A type of *procurement document* used to request proposals from prospective *sellers* of *products* or *services*. In some *application areas*, it may have a narrower or more specific meaning.

Requirement. A condition or capability that must be met or possessed by a *system*, *product, service*, *result*, or *component* to satisfy a *contract*, *standard*, *specification*, or other formally imposed *documents*. Requirements include the quantified and documented needs, wants, and expectations of the *sponsor*, *customer*, and other *stakeholders*.

Resource. Skilled human resources (specific disciplines either individually or in crews or teams), equipment, *services*, supplies, *commodities*, *materiel*, *budgets*, or funds.

Guide to the Project Management Body of Knowledge

(TPMBOK® Guide) Third Edition

Resource-Limited Schedule. A *project schedule* whose *schedule activity*, *scheduled start dates* and *scheduled finish dates* reflect expected resource availability. A resource limited schedule does not have any early or late start or finish dates. The resource-limited schedule *total float* is determined by calculating the difference between the *critical path method late finish date** and the resource-limited scheduled finish date. Sometimes called resource-constrained schedule. See also *resource leveling*.

Rework. Action taken to bring a defective or nonconforming *component* into compliance with *requirements* or *specifications*.

Project Scope Statement [Output/Input]. The narrative description of the *project scope*, including major *deliverables*, project *objectives*, project *assumptions*, project *constraints*, and a *statement of work*, that provides a documented basis for making future project decisions and for confirming or developing a common understanding of *project scope* among the *stakeholders*. The definition of the *project scope* – what needs to be accomplished.

Project Team. All the *project team members*, including the *project management team*, the *project manager* and, for some projects, the *project sponsor*.

Project Team Members. The persons who report either directly or indirectly to the *project manager*, and who are responsible for performing *project work* as a regular part of their assigned duties.

Risk Management Plan [Output/Input]. The *document* describing how *project risk management* will be structured and performed on the *project*. It is contained in or is a subsidiary plan of the *project management plan*. The risk management plan can be informal and broadly framed, or formal and highly detailed, based on the needs of the project. Information in the risk management plan varies by *application area* and project size. The risk management plan is different from the *risk register* that contains the list of project *risks*, the *results* of risk analysis, and the risk responses.

Risk Register [Output/Input]. The *document* containing the *results* of the *qualitative risk analysis*, *quantitative risk analysis*, and *risk response planning*. The risk register details all identified *risks*, including description, category, cause, probability of occurring, impact(s) on objectives, proposed responses, owners, and current status. The risk register is a component of the *project management plan.*

Role. A defined function to be performed by a *project team member*, such as testing, filing, inspecting, coding.

Schedule Management Plan [Output/Input]. The *document* that establishes *criteria* and the *activities* for developing and controlling the *project schedule*. It is contained in, or is a subsidiary plan of, the *project management plan*. The schedule management plan may be formal or informal, highly detailed or broadly framed, based on the needs of the *project*.

Guide to the Project Management Body of Knowledge

(TPMBOK® Guide) Third Edition

Schedule Milestone. A significant *event* in the *project schedule*, such as an event restraining future work or marking the completion of a major *deliverable*. A schedule milestone has zero *duration*. Sometimes called a milestone *activity*. See also *milestone*.

Scope. The sum of the *products*, *services*, and *results* to be provided as a *project*. See also *project scope* and *product scope*.

Scope Change. Any change to the *project scope*. A *scope* change almost always requires an adjustment to the project *cost* or *schedule*.

Scope Creep. Adding features and functionality (*project scope*) without addressing the effects on time, *costs*, and *resources,* or without *customer* approval.

Service. Useful *work* performed that does not produce a tangible *product* or *result,* such as performing any of the business functions supporting production or distribution. Contrast with product and result. See also *deliverable*.

Specification. A *document* that specifies, in a complete, precise, verifiable manner, the *requirements*, design, behavior, or other characteristics of a *system*, *component*, *product*, *result*, or *service* and, often, the *procedures* for determining whether these provisions have been satisfied. Examples are: requirement *specification*, design specification, product specification, and test specification.

Sponsor. The person or group that provides the financial resources, in cash or in kind, for the *project*.

Staffing Management Plan [Process]. The *document* that describes when and how human *resource requirements* will be met. It is contained in, or is a subsidiary plan of, the *project management plan*. The staffing management plan can be informal and broadly framed, or formal and highly detailed, based on the needs of the *project*. Information in the staffing management plan varies by *application area* and project size.

Stakeholder. Persons and *organizations* such as *customers*, *sponsors*, *performing organization* and the public, that are actively involved in the *project*, or whose interests may be positively or negatively affected by execution or completion of the project. They may also exert influence over the project and its *deliverables*.

Statement of Work (SOW). A narrative description of *products, services, or results* to be supplied.

Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analysis. This information gathering technique examines the project from the perspective of each project's strengths, weaknesses, *opportunities*, and *threats* to increase the breadth of the *risks* considered by risk management.

Guide to the Project Management Body of Knowledge

(TPMBOK® Guide) Third Edition

Task. A term for *work* whose meaning and placement within a structured plan for project work varies by the *application area*, industry, and brand of *project management software*.

User. The person or *organization* that will use the project's *product* or *service*. See also *customer*.

Validation [Technique]. The *technique* of evaluating a *component* or *product* during or at the end of a *phase* or *project* to ensure it complies with the specified *requirements*. Contrast with *verification*.

Verification [Technique]. The technique of evaluating a *component* or *product* at the end of a *phase* or *project* to assure or confirm it satisfies the conditions imposed. Contrast with *validation*.

Voice of the Customer. A planning *technique* used to provide *products*, *services*, and *results* that truly reflect *customer requirements* by translating those customer requirements into the appropriate technical requirements for each *phase* of project product development.

Work Breakdown Structure (WBS) [Output/Input]. A *deliverable*-oriented hierarchical *decomposition* of the *work* to be *executed* by the *project team* to accomplish the project *objectives* and create the required deliverables. It organizes and defines the total *scope* of the *project*. Each descending level represents an increasingly detailed definition of the *project work*. The WBS is decomposed into *work packages*. The deliverable orientation of the hierarchy includes both internal and external deliverables. See also *work package*, *control account*, *contract work breakdown structure, and project summary work breakdown structure*.

Workaround [Technique]. A response to a negative *risk* that has occurred. Distinguished from *contingency* plan in that a workaround is not planned in advance of the occurrence of the risk event.

The Technology Project Management Toolkit

tap existing resources

District Forms

Templates

Work Samples

Work with impact.