

Project

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- ◆ project management is the process of scoping, planning, staffing, organizing, directing, and controlling the development of an acceptable system at a minimum cost within a specified time frame.

Project Management

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Types of Software Projects

- ◆ Manual to Computer based System
 - This system make software after analyzing the user's requirement.
 - This system also make software based on the knowledge of development also called COTS.
- ◆ Changing one type to another type system
 - This project could include porting the code, training users and testing new implementation.
- ◆ Software from Flat file system to RDBMS
- ◆ Computer Based Information Processing System

Classification of Software Projects

◆ SDLC Based Projects

- Full Life Cycle Projects
- Partial Life Cycle Projects

◆ Approach Driven Software Projects

- Fresh Development (User requirement to development)
- COTS (Product Customization/Implementation)
- Porting
- Migration
- Conversion from Existing software

Classification of Software Projects

◆ Maintenance Projects

- Defect Repair
- Functional Expansion
- Operation Support
- Fixing old Behaviour
- Software Modification
- Web Application Projects

Agile Development Projects

◆ Agile Development Projects

- Agile is a time-bound, iterative approach to software delivery that builds software incrementally from the start of the project, instead of trying to deliver all at once.

Important Points on Agile Development

- Individuals and interactions over processes and tools. ...
- Working software over comprehensive documentation. ...
- Customer collaboration over contract negotiation. ...
- Responding to change over following a plan.

Project Management Framework

- The project management framework provides structure and direction to a project.
- Project management methodologies is neither too detailed nor too rigid.
- Frameworks guide projects to their goal while being flexible enough to adapt to evolving conditions.

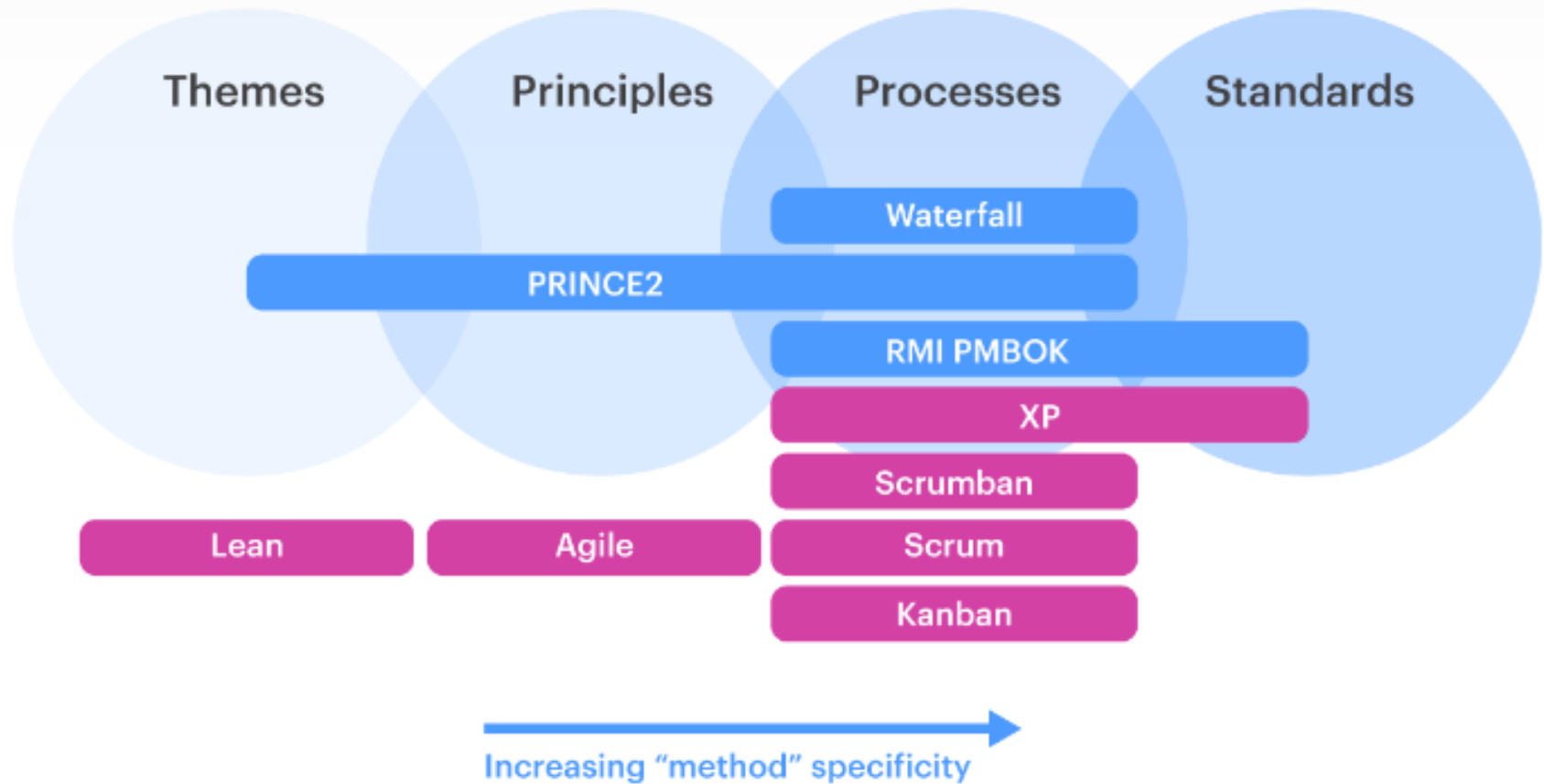
Framework

- ◆ Gives an overview of how guidelines can be implemented.
- ◆ Preferred by experts.
- ◆ Traditional project management is a framework.

Methodology

- ◆ Offers rigid rules and practices for completing a project.
- ◆ Preferred by beginners.
- ◆ Prince2 is a well known project management methodology.

Project Management Methodologies and Framework



Techniques of PM Framework and Methodologies

◆ Waterfall Methodology

- This framework is one of the traditional approaches to project management. Waterfall requires a project to be planned from beginning to end, with no phase of a project beginning until the previous one has ended.

◆ Critical Chain Project Management(CCPM)

- Critical chain project management focuses primarily on resource allocation across the project.

Project Management Framework

◆ Scrum Methodology

- This framework was also designed for industries undergoing rapid change. Using this framework, projects are often broken down and planned in 2-4 week sprints.

◆ Lean Methodology

- A lean framework focuses on minimizing wasted effort and resources. Process improvement techniques are often incorporated into this framework.

◆ PRINCE2 Methodology

- This framework is highly structured with a heavy emphasis on upfront planning.

Ad Hoc Approach

- ◆ An ad-hoc project is one that happens unexpectedly, usually in response to a problem. Projects are almost always scheduled in advance but an ad-hoc project is sprung upon the team without time for any prior planning.
- ◆ Ad-hoc projects also focus on one goal (or group of people) and tend to use fewer resources, including team members.

Tips to manage Ad Hoc Projects

- Don't neglect Risk
- Stay Flexible
- Make short plan
- Standardize work request
- Facilitate transparency

Project Management Life Cycle

- A **process-driven application** is a software application that is driven by an underlying process or workflow engine where the process can be exposed and reused.
- In this context, the so-called Process-Driven Approach (PDA) offers a sustainable and tool-neutral opportunity for process and tool orchestration, enabling an easy integration of individual software applications by consistent utilization of the separation of concerns principle.

Advantages of Process Driven Approaches

- Proper Visualization
- Better Interaction
- Cost reduction
- Proper alignment with plan
- Proper management activities

Disadvantages of Process Driven approaches

- ◆ Lack of data management
- ◆ Separate module is required for data centric operation.
- ◆ Extra cost for data management

Comparison between process centric and Ad Hoc.

- Better plan and well documented.
- It takes more time for analysis and design.
- Phases and process are well distinguished.
- Better tested in all test cases.
- Better for long term projects.
- ◆ No plan and less documentation.
- ◆ Focus is given on development.
- ◆ Phases and process are not mentioned clearly.
- ◆ Not work in all process.
- ◆ Can be used for smaller projects.

Software Project acquisition

- ◆ Software acquisition includes the processes typically associated with the software engineering life cycle.
- ◆ Acquisition also includes processes that fund, manage, integrate, deploy and support software systems before, during, and after their software engineering life cycle.
- ◆ This acquisition process ensures effective selection, implementation, and management of systems.

Software Acquisition process

- Planning
- Contracting or Procurement
- Implementation and Acceptance
- Follow up

Software Proposal

- Software proposals are formal business plans that convince organizations to purchase and use your software or development services.
- They describe your product, team members, features, pricing, and benefits for customers.
- Proposal should focus on showing proof of your skills, product, and team rather than empty promises.

Software Proposal Include

- Description of the organization
- Details scope of the project
- An estimated timeline
- Price details
- Restrictions

Points include in project Proposal Template

- Cover Page
- Overview of problem goals
- Why us
- Solution
- Implementation
- Case Studies
- Pricing
- Contract and Signature

Project Negotiating

- ◆ Negotiation is a process consisting of the activities necessary to resolve different types of disputes through consultations between the parties involved in order to reach a consensus.
- ◆ Negotiations can take place at any time in the project lifecycle and may be formal or non-formal.

Stages of Negotiation

- Preparation and planning.
- Definition of ground rules.
- Clarification and justification.
- Bargaining and problem solving.
- Closure and implementation.

Software service contracts

- A software development or service contract is a service agreement between client and software development company about mutual expectations and responsibilities.
- Dealing with a vendor without a proper agreement can leave your business in the red. along with poor development quality and money loss, you risk putting your company's intellectual property at stake.

Service Contract Include

- Service description and scope
- Project Time and Cost
- Acceptance Testing and Delivery
- Warranties and Liabilities
- Intellectual Property transfer
- Privacy and Confidentiality
- Success Matrix
- Pricing and Billing