

BI Software Development Lifecycle

Lesson 1: BI Project Execution Overview

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Lesson Objectives

- Introduction to Software Systems
- Software Project Types
- Execution Models
- Typical Stakeholders



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I.O: Software Systems Overview

Introduction to Software Systems

- **Evolution of Software Systems**
 - Specialized to All Pervasive
- **Complexity Involved in Building Software Systems**
- **Need for a framework for building Software**
 - Software Engineering
- **Generic Phases of Software Engineering**
 - Definition or What/ Why Phase – Analysis Phase
 - Design – How Phase
 - Development - Implementation/Construction Phase
 - Testing Phase
 - Maintenance Phase

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Just as hardware and programming languages have evolved through several generations, so have software systems.

In the early days, the software systems were specialised problem solving tools. Today, they are present everywhere!

Programming was more or less an art then - there were few formal methods and the software world was virtually undisciplined. But software systems grew more and more complex and also critical. They also became time bound. This complexity came from various factors. For eg., the complexity of problem domain; or the difficulty in managing changes to requirements or the software building process.

To deal with this rising complexity & criticality, it became necessary to have a disciplined and systematic approach for software development. This framework for building software is provided by software engineering.

1.1: Software Project Types

Software Project Types

- **Development**
 - Translating Users' Needs into New Software Systems/ Product
- **Conversion / Migration**
 - Modifying Existing Software Systems to Different Environments
- **Maintenance**
 - Modifying Existing Software Systems to Correct/ Adapt/ Enhance
- **Support**
 - BI system need to provide ongoing support to use its user community

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In the Development Projects, user's needs are translated into a New Software system or Product. For example, development of a new financial system.

In the Conversion Projects, modification of existing software is done to enable it to operate with similar functionality/ capability, but in a different environment. For example, conversion from C to C++, Port from Windows to Solaris etc.

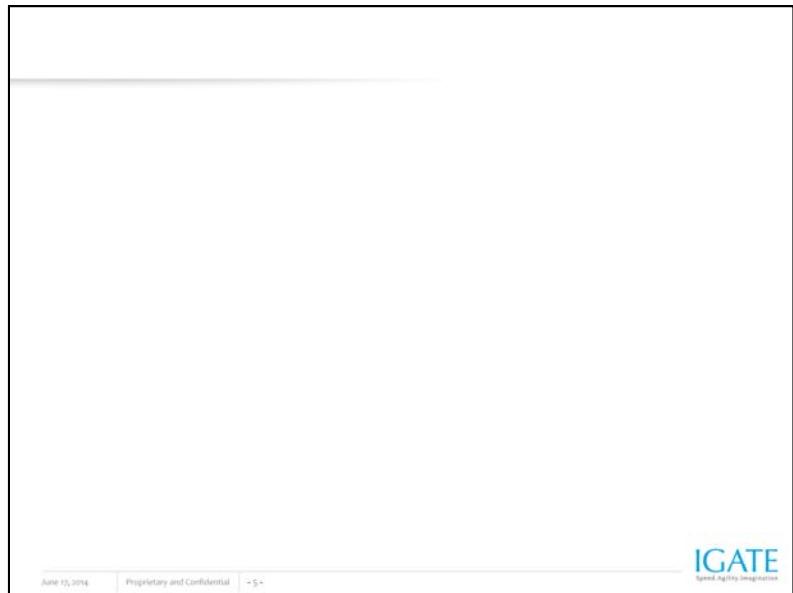
In the Maintenance Projects, s/w system is modified to:

- a. Correct Faults (Corrective Maintenance)
- b. Modify software to accommodate changes to different environment (Adaptive Maintenance)
- c. Add functionality/ improve performance or other attributes (Enhancement)

Examples could include maintaining a financial application or a CAD application

There is also another kind of maintenance called as Preventive maintenance, where changes to system

are made so that they can be more easily corrected/ enhanced or adapted. One should note that regardless of the project type, similar life cycle activities - albeit in various measures – would exist.



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Support projects are also considered as a different project type. Typical activities that comes under support projects are as follows: Provide User Support, Maintain BI Portal, Manage Security
Estimation is different for each of these project types.

1.2: Execution Models
Execution Models (On/Off, Off, On)

Onsite/Offshore	Offshore	Onsite
Is used for development / maintenance projects	Is used for maintenance / support projects	Client manages resources which could be single-slot or two-slot for time frame projects
The OPM works from the client site and coordinates project related aspects with the ODC and the client	Onsite presence is not required.	Connectivity to offshore is not available.
As nature of project involves intense collaboration or interaction on a continual basis, an onsite presence is maintained.		There are some legal limitations such as not to give access to offshore.

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Execution methodology uses of commonly following three approaches:

- Onsite/Offshore
- Offshore
- Onsite

Based on the nature and scope of the projects, resources get allocated to it. Accordingly it could be single slot where-in only one resource manage the entire implementation or could be two slot or more.

1.2: Execution Models
Onsite/Offshore Model

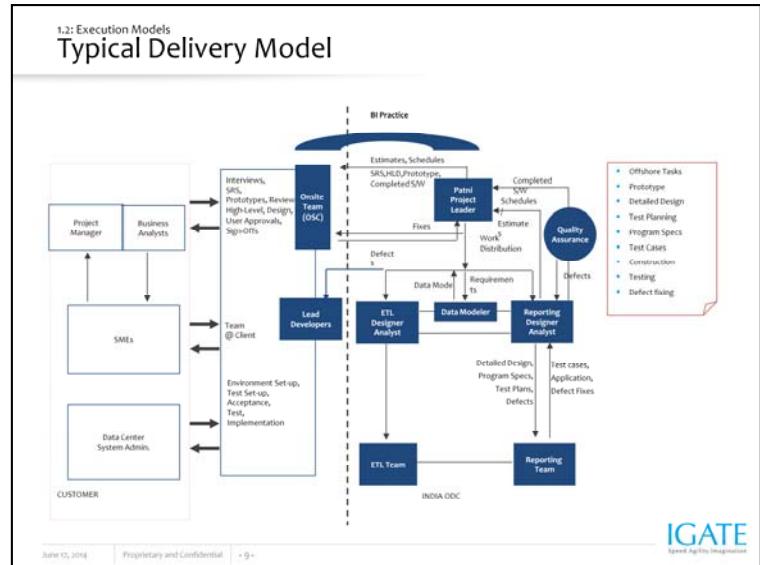
- Where the nature of the project involves intense collaboration or interaction on a continual basis or there is a customer specific requirement, an onsite presence is maintained
- The onsite manager works from the customer site and coordinates project related aspects with the ODC and the customer
- This onsite presence may involve a single resource or an entire project services team, depending on the nature, size, and complexity of the development initiative.

1.2: Execution Models

Onsite/Offshore Model (Contd...)

➤ **The important features of this approach are:**

- The approach requires an onsite coordinator (OSC) or an onsite project manager.
- The onsite component may include one or more resources depending upon the size and complexity of the project.
- A considerable amount of the work effort can be transitioned to the offshore facility. That transition can result in a significant cost benefit to the customer and highest usage efficiency of resources.
- OSC can interact directly with the clients to accommodate any changes, if there are any, so as to minimize/eliminate last minute changes.



The project execution team at INDIA ODC handles following activities: Offshore Tasks, Prototype, Detailed Design, Test Planning, Program Specs, Test Cases, Construction, Testing, Defect fixing, etc

Onsite work is handled by the highly qualified consultants present locally.

These consultants are engaged in continuous interaction with the clients directly in understanding their requirements/specifications, communicating on functionalities and best business practices available, as well as formulating solutions to unique business needs of the client.

Activities carried out by Onsite team includes Interviews, SRS(System Requirement Specification)/RAD(Requirement Analysis Document), Prototypes, Review, High-Level Design, User Approvals, Sign-offs from customer etc.

1.3. Typical Stakeholders

Stakeholders

- A stakeholder is anyone who is a direct user, indirect user, manager of users, senior manager, operations staff member, the "gold owner" who funds the project

Business Users ➤ Dashboard Users ➤ Reporting Users - Static Report Users - Ad-hoc Report Users	IT Team ➤ Data Owners / Data Analyst ➤ OLTP IT Team ➤ OLAP IT Team ➤ Admin Team (DBA, infrastructures, etc) ➤ Support Team (for above mentioned stakeholders)	Help Desk Is maintained for the Support projects
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Stakeholders

- a project stakeholder is anyone who is a direct user, indirect user, manager of users, senior manager, operations staff member, the "gold owner" who funds the project
- supports (help desk) staff member, your program/portfolio manager, developers working on other systems that integrate or interact with the one under development,
- maintenance professionals potentially affected by the development and/or deployment of a software project.

Project success often requires a greater level of involvement by project stakeholders – senior management needs to publicly and privately support your project, operations and support staff must actively work with your project team towards making your production environment ready to accept your system, other system teams must work with yours to support integration efforts, and maintenance developers must work to become adept at the technologies and techniques used by your system.

Business people, such as direct users and their managers, aren't the only stakeholders of a project. As you know there is a wide range of people potentially affected by a new system, therefore to succeed you must understand and then synthesize their requirements into a cohesive vision. This is one of the things that makes software development hard – each project stakeholder will have their own requirements, their own vision, and their own priorities – but it also makes software development fun.

Summary

- Software Project Types
- Execution Models
- Typical Stakeholders



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Add the notes here.

Review Questions

- Question 1 A project stakeholder is anyone who is a direct user, indirect user, who funds the project
 - True/ False?
- Question 2 _____ project type is used for translating Users' Needs into New Software Systems/ Product



Add the notes here.