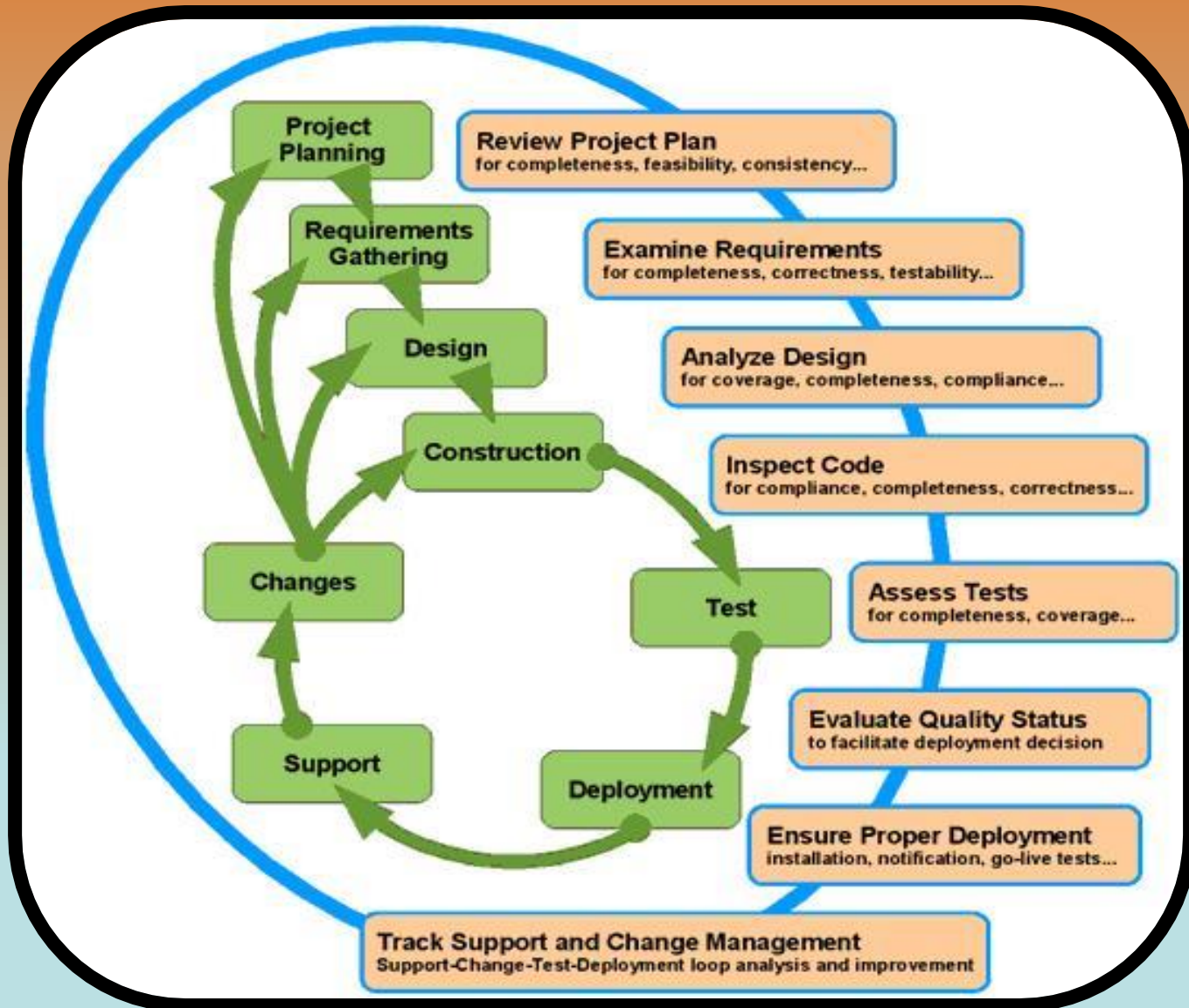# SQA in SDLC

Reference: *"Software Quality Assurance, Principles and Practice"*
By Nina S Godbole

SQA & SDLC

SQA During the Software Acquisition Life Cycle

- There are many phase-specific SQA activities that should be conducted during the Software Acquisition Life Cycle. At the conclusion of each phase, SQA concurrence is a key element in the management decision to initiate the following life cycle phase. Suggested activities in each phase are :

  - Software Concept and Initiation Phase
  - Software Requirements Phase
  - Software Architectural (Preliminary) Design Phase
  - Software Detailed Design Phase
  - Software Implementation Phase
  - Software Integration and Test Phase
  - Software Acceptance and Delivery Phase

Planning

- **Role**
  - **Project Manager**
  - **SQA TL**

- **Tasks**
  - **Resource Assignment**
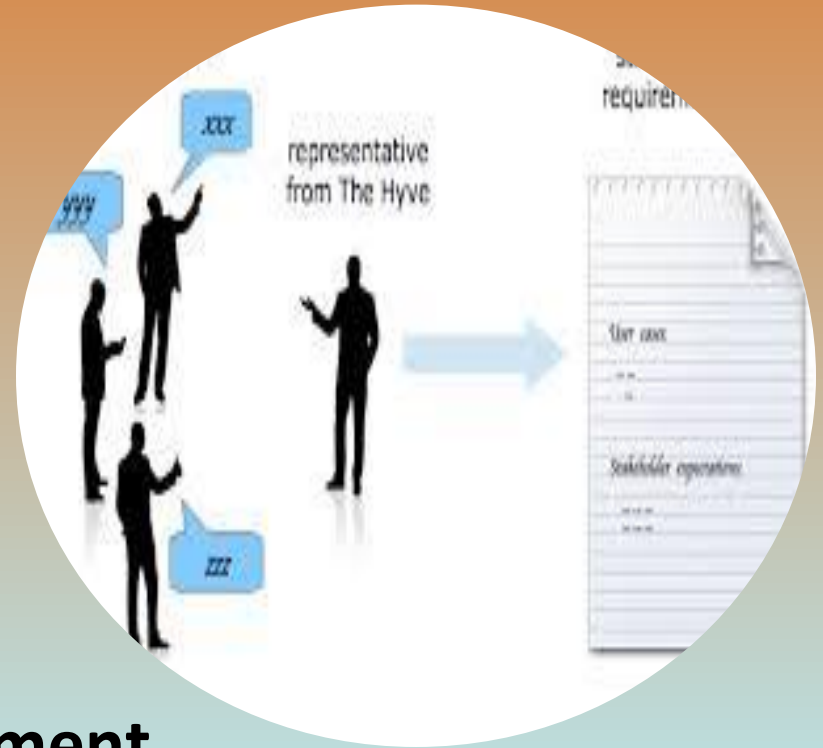 - **Task Assignment**
  - **Effort required**

Cont...

- **SQA Assures**
  - **Mention SQA Activities done in project**
  - **QA Resources Assignment**
  - **Plan Audits**
  - **Plan Reviews**
  - **Plan Testing Activities**

- **SQA Prepares**
  - **QA Plan**

Requirement Gathering

- **Role**
  - **Business Analyst**
  - **SQA Lead**

- **Tasks**
  - **Gather business Rules**
  - **Gather business Requirement**
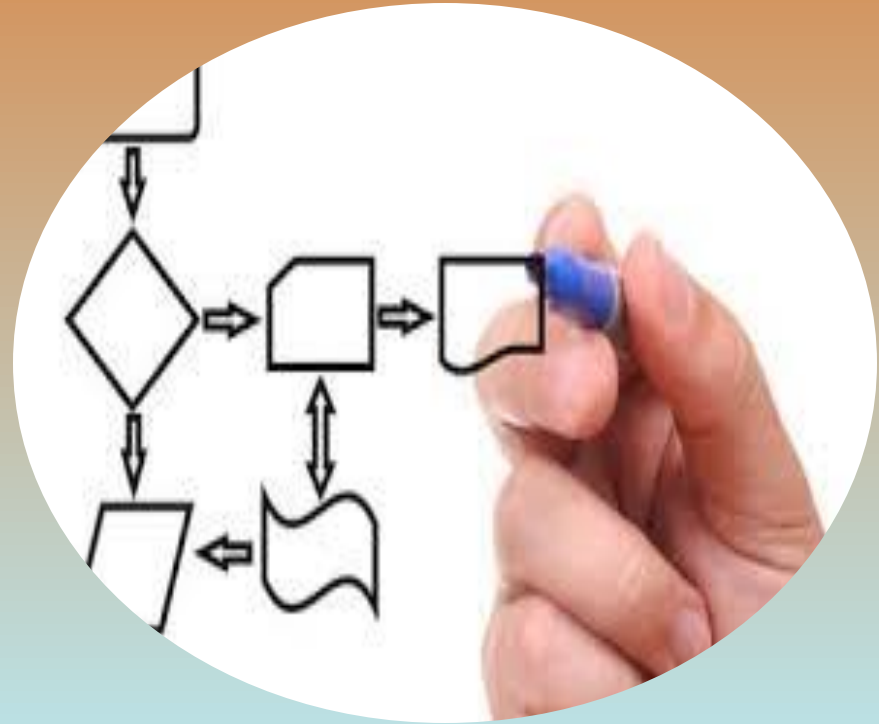 - **Functions & Features Required (What to be done)**

Cont…

- **SQA Assures for requirements:**
  - **What' but not 'How' or 'How Much'**
  - **Unambiguous**
  - **Consistent**
  - **Testable**
  - **Complete**

Design

- **Role**
  - **Business Analyst**
  - **DBA**
  - **Development TL**
  - **SQA TL**

Cont...

- Tasks
  - System flow
  - Data base schemas
  - Interfaces/Modules integration
  - Test Planning
  - State Diagrams/Classes & Objects
  - Peer reviews (design/test scenarios)

Cont…

- **SQA Assures (Reviews)**
  - **Unambiguous**
  - **Testable**
  - **Complete**
  - **Meet the User requirements**

- **SQA Prepares**
  - **Test Plan**

Development

- **Roles**
  - **Development Team**
  - **Technical Writer**
  - **Configuration Manager**
  - **QA Team**

<u>Cont…</u>

- **Tasks**
  - **Code**
  - **DDL**
  - **DML**
  - **Store Procedures**
  - **Data Dictionary**

Cont...

- **SQA Assures (Reviews)**
  - **Complete design has been transformed**
  - **Code standards**
  - **DB scripts standard**
  - **Code/Scripts has been baseline**

- **SQA Prepares**
  - **Test Cases**
  - **Test Data**
  - **Test Scripts**

Testing

- **Role**
  - **QA Team**
  - **Development Team**

- **Tasks**
  - **Execute Test Cases**
  - **Acceptance Testing**
  - **Defect Logging**
  - **Defect Fixing**

Cont...

- **SQA Assures**
  - **Release notes are updated**
  - **Reason for change is mentioned**
  - **All the required features are available**
  - **All business rules are implemented**
  - **Regression against the defects is complete**

Cont...

- **SQA Prepares**
  - **Defect report**
  - **Status Report**

Deployment

- **Roles**
  - **Development Team**
  - **QA Team**
  - **Configuration Management Team**

- **Tasks**
  - **Updating Release notes, if required**
  - **Installation manuals**
  - **QA documents/reports**
  - **Shipment Assurance**

Cont…

- **SQA Assures (Review)**
  - **Updating Release**
  - **Installation manuals**
  - **QA documents/reports**

  - **Shipment Assurance Testing**

<u>Support</u>

- **Roles**
  - **Help desk**
  - **Development/QA Team**
  - **Business Analysts**
  - **Customer**
- **Tasks**
  - **Requested changes**
  - **Resolving ambiguities**
  - **Solving identified discrepancies**

Thank You!