Development and Quality Plan

Ver. 1.0

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Software Quality Assurance from Theory to Impelementation,
Daniel Galin, Pearson Education, 2004.

Dev & Quality Plan

- Dokumen ini merupakan dokumen yang menggambarkan secara detail rencana eksekusi project dalam hal kegiatan pengembangan dan penjaminan mutunya.

- Merupakan dokumen yang sangat penting untuk dibuat dalam penerapan standard ISO 9000.3 dan IEEE 730

Dev & Quality Plan (2)

- Dokumen dev & quality plan harus berdasarkan pada dokumen proposal project yang sudah di verifikasi dan diperbarui.

- Kontent nya lebih spesifik dibandingkan dengan dokumen proposal project terutama dalam hal timeline pengembangan, budget dan evaluasi risiko.

- Biasanya dibuat di awal project untuk memberitahukan bahwa ada potensi permasalahan yang harus segera di follow-up. Misal, adanya perubahan terhadap timeline / tim pengembangan.

Dev & Quality Plan Objective

- Scheduling development activities and estimating the required budget and manpower resources.

- Recruiting team member and allocation development resources.

- Resolving development risk.

- Implementing required SQA activities.

- Providing management with data needed for project control.

Elements of Dev. Plan

1. Project Products
2. Project Interfaces
3. Project Methodology and Development Tools
4. Software Development Standards and Procedure
5. The mapping of development process.
6. Project milestone
7. Project staff organization
8. Development facilities
9. Development risk.
10. Control Method
11. Project Estimation

Elements of Dev. Plan (2)

- **Project Products**
  - Design documents specifying dates of completion, indicating those items to be delivered to the customer.
  - Software products.
  - Training Tasks.

Elements of Dev. Plan (3)

- **Project Interfaces**
  - Interfaces with existing software packages
  - Interfaces with other software and/or hardware development teams that are working on the same system or project.
  - Interface with existing hardware

Elements of Dev. Plan (4)

- **Project methodology and development tools**
  - List of all tools and activities to be applied at each phase of development process.

- **Software development standard and procedures.**
  - List of development standards and procedures to be applied in the project

Elements of Dev. Plan (5)

- **The mapping of development process**
  - Providing detailed definitions of each of the project phases:
    - An estimates of the activity duration
    - The logical sequence in which each activity to be performed. Including activity dependency.
    - The type of professional resources required and estimates of how much of these resources are necessary for each activity.

Elements of Dev. Plan (6)

- **Project Milestone**
  - For each project milestone, the completion time and project product (documents and code) are to be defined.

- **Project staff organization**
  - Organizational structure
  - Professional requirement
  - Number of team members required for each period of time
  - Names of team leader and team member

Elements of Dev. Plan (7)

- **Development Facilities**
  - Required development facilities including hardware, software, office space and other items.
- **Development Risk**
  - State or property of development task or environment, which, if ignored, will increase the likelihood of project failure.
    - Technological Gaps
    - Staff Shortages
    - Interdependence of organizational elements.

Elements of Dev. Plan (8)

- **Control Methods**
  - Series of monitoring practices to be applied at the project.

- **Project Cost Estimation**
  - The project cost estimates based on project proposal costs estimation.

Elements of Quality Plan

1. Quality Goal.

2. Planned Review Activities.

3. Planned Software Test.

4. Planned Acceptance Test for externally developed software.

5. Configuration Management.

Elements of Quality Plan (2)

- **Quality Goal**
  - The term "quality goal" refers to developed software system's substantive quality requirement.
  - Quantitative measure usually preferred to qualitative measure.
    - Qualitative: The software must be fast
    - Quantitative: The software processing time must be less than 3 seconds.

Elements of Quality Plan (3)

- **Planned Review Activities**
  - The scope of review activities
  - The type of review activities
  - The schedule of review activities
  - The specific procedures to be applied.
  - Who is responsible carrying out the review activity?

Elements of Quality Plan (4)

- **Planned acceptance test for externally developed software**
  - A Complete list of planned acceptance test of externally developed software:
    - Purchased software
    - Software developed by subcontractor
    - Customer supplied software.
- **Configuration Management**
  - Configuration management tools and procedure, including those change-control procedures meant to be applied throughout the project.

Dev & Quality Plan for Small Project

- Development and quality plan procedures that applicable in large projects cannot be automatically applied to small projects.

- Recommended elements of development and quality plan for small project:
  - Dev Plan: Project products (deliverables), Project benchmark, Development Risk and Estimates of project costs.
  - Quality Plan: Quality Goals

Dev & Quality Plan for Small Project (2)

- Several advantages to "planned" small projects over "unplanned" projects can be identified even for "reduced" plans:
  - A more comprehensive and through understanding of task is attained.
  - Greater responsibility for meeting obligations can be assigned.
  - It easier for management and customers to share control of the project and to identify unexpected delays early on.
  - Better understanding with respect to the requirements and timetable can be reached between the developer and customer.