

Business Studies

L6 - Quality, maintenance and documentation

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6. Quality, maintenance and documentation

Development Cycle

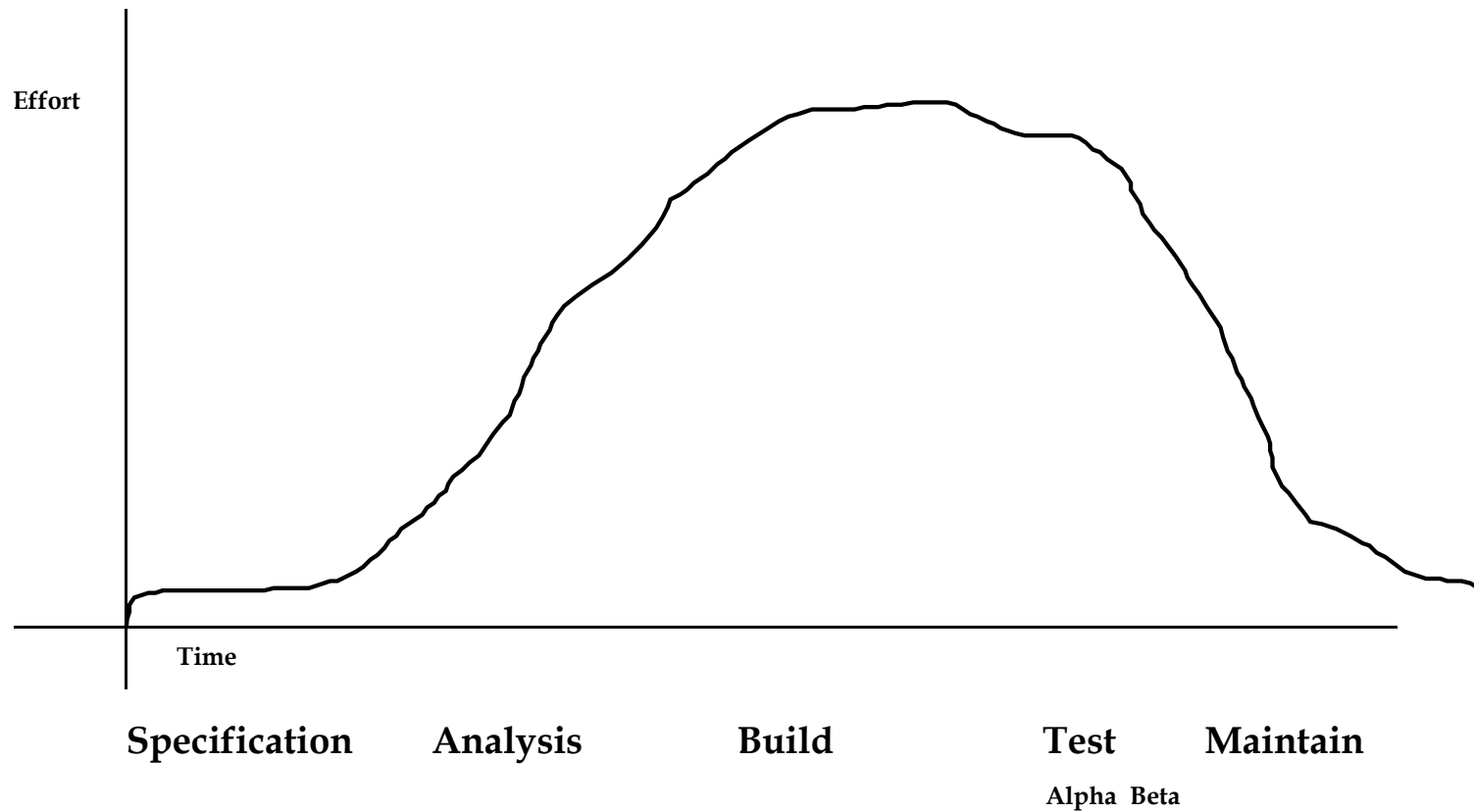
Productisation

Plans for quality

Plan for maintenance

Plan for documentation

Development cycle:



Productisation

Generalisation

- Does the product work on all target systems?
 - Hardware variants
 - OS variants (run time environment variants)
- Internationalisation
 - Language, number, date and time formats
- Testing
 - Usability
 - Market
 - Standards approvals

Productisation II

Documentation

- Installation, User Guide, Reference Manual, Help text, FAQs, examples, training
- System manual, maintenance documentation
- Conformance

Legals

- IPR generated (Copyright, trademark)
- IPR used
- Licence, contract, liability

Productisation III

Packaging

- Artwork, Box, Deliverable

Manufacture

- Reproduction, Manual printing, Stocking
- Distribution set-up

Marketing Materials

- Leaflets, brochure, advertisements
- Text, Artwork, approvals

Productisation IV

Maintenance and after sale support

- Support organisation setup and training
- Help desk, staff, facilities, FAQs, training
- Report forms, databases and summaries

Supply side management

Quality control - monitoring and contingency planning

Information Systems - stock control, JiT, shipping, supplier integration

Reliability of supply - multiple sources

Change management - evolution, tracking and support

Scale Up

Takes time and money

New markets

- Regulations, translation, adaption
- High volume manufacturing

Time

- 18 week lead time or more for new silicon
- Line set up
- Staff recruitment and training
- Approvals (and testing)

Plan for Quality

Cheaper in the long run

Build in from the start; can't be added later

Board-level function

“Good Practise”

Standards

ISO 9000 / BS 5750

- Quality management systems
- Traceability

BS 7799

- Information Management and Security

Internal standards

Control and review

Record key decisions

Control key documents

Control versions and deliverables

Define standards

- coding standards (naming, structure, testing)
- documentation standards (style, conventions and examples)

Review and Audit

Key Documents

Project Definition

- User Requirements Document
- Project Constraints Document

Base definition

- Functional Specification or prototype
- Top Level Design

Control

- Project Plan
- Project Log
- Quality Plan
- Document Plan

Detailed Controlled Documents

Sub-system specs and interfaces

Data model and dictionary

Module specs and interface

Released code and documentation

Monitoring

Early warning of impending disaster

- Time to do something about it
- Avoid unpleasant surprises

Culture

- Communication (internal and external)
- OK to ask for help
- Requests taken seriously

Milestones

- Roughly one every 1-2 weeks

Review meetings

- Weekly

Meetings

Keep it short

- meetings are expensive

Circulate agenda and papers BEFORE

Start on time

Purpose and structure

Finish on time

1 page minutes

Brain-storming

Problem solving

Purpose

List ideas/topics, no matter how crazy

Vote

Work on top three

- break up into subgroups

Report back

Board Meeting

Place for decisions, not discussions

Agenda

- Call to order
 - Attendance
 - Minutes
 - Matters arising
- Statutory Business
- Reports
 - Finance
 - Business Development
 - Personnel
 - Shareholder's Issues
- AOB
- Date of next meeting

SWOT

Strengths

Weaknesses

Opportunities

Threats

Testing

Test plan

Test suite

- Base functionality
- Specific bugs
- Performance
- Correct failure
- re-run the entire suite each time

Bug reports and database

Action plan for fixes & prioritisation

Plan for maintenance

The relationship goes on

- Revenue stream
- 12% p.a.
- Future sales channel

Levels

Help desk

Internal documentation

Record keeping

Plan for documentation

10 x the coding effort

Specialist skill

Levels of documents

- User
- Training
- System
- Maintenance

Avoid forward references!

Conformance