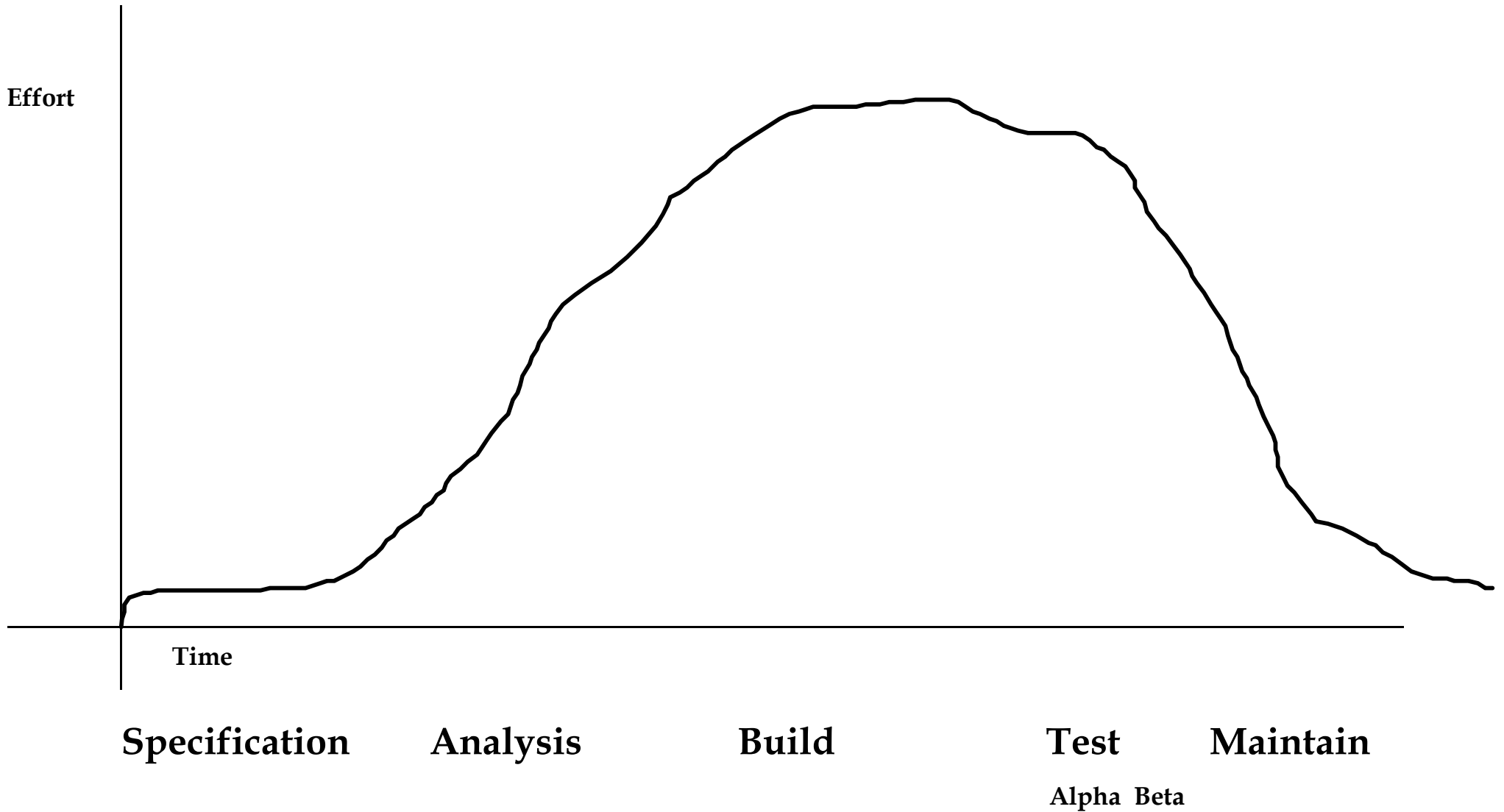


6. Quality, maintenance and documentation

- Development cycle
- Productisation
- Plan for quality
- Plan for maintenance;
- Plan for documentation:

Development cycle:



Productisation

- Generalisation
 - Does the product work on all target systems?
 - Hardware variants/constraints
 - O/S variants
 - Internationalisation
 - Language, number, date and time formats
- Documentation
 - Installation, User Guide, Reference Manual, Help texts, examples, training
 - System manual, maintenance documentation
 - Conformance
- Legals
 - IPR generated (Copyright, trademark)
 - IPR used
 - Licence, contract, liability

Productisation II

- Packaging
 - Artwork, Box, Deliverables
- Manufacture
 - Reproduction, Manual printing, Stocking
 - Distribution set-up
- Marketing Materials
 - Leaflets, brochures, advertisements
 - Text, Artwork, approvals
- Testing
 - Usability
 - Market
 - Standards approvals
- Maintenance
 - Organisation setup and training
 - Help desk - staff, facilities,, FAQs, training
 - Report forms, database and summaries

Supply side management

- Quality control
 - Monitoring
 - Contingency planning
- Information systems
 - Stock control
 - Just in time
 - Shipping
 - Integration with suppliers
- Reliability of supply
 - Multiple sources
- Change management
 - Evolution

Scale Up

- Takes time and money
 - New markets
 - Regulations, translation, adaption
 - High volume manufacture
 - Time:
 - 18 week lead time or more for new silicon
 - Line setup
 - 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 Practice”

Standards

- ISO 9000/BS 5750
 - 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 conventions
 - Routine structure
 - Testing
 - Documentation standards
 - House style
 - Conventions and examples
- Review and Audit

Key Documents

- Project Definition
 - User Requirement 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
 - With client
 - 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

Agenda

- Typical Board meeting
- Place for decisions, not discussion
 - CALL TO ORDER
 - Attendance
 - Minutes
 - Matters arising
 - STATUTORY BUSINESS
 - REPORTS
 - Financial Report
 - Business Development
 - Personnel
 - Shareholder's Issues
 - AOB
 - DATE OF NEXT MEETING

SWOT

- Strengths
- Weaknesses
- Opportunities
- Threats

ACCTO

- Criteria for customer acceptance
 - Everett Rogers “The Diffusion of Innovation”
 - 80% of new product failures are due to new customer acceptance
- A - relative Advantage
 - competitive advantage over existing products
- C - Complexity
 - Can I understand it
- C -Compatibility
- T -Trialability
 - Can I test it without risk first?
- O - Observability
 - Can I see the benefits?

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