Seminar session – Unit 10
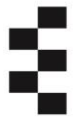
Software Engineering Project Management – Quality

(seminar is being recorded)

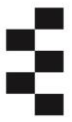**Douglas Millward**
Douglas,Millward@kaplan.com

Outline

- Announcements

- The importance of …..

- Technical Debt

- Verification & Validation

- Seminar 5 reading and questions

- QA & Next Week

Announcements/Reminders

- Forums & Posts

- E-Portfolio

- weekly check-in?

The importance of …

- Quality (ISO/IEC 25010)
- What is Quality?
  - "The standard of something as measured against other things of a similar kind; the degree of excellence of something." (OED)
  - Code Quality?
  - Test Quality?
  - Ability of the product to perform the required task?
  - Product Quality?
  - Project Quality?
- Which one(s) are the SEPM responsible for?
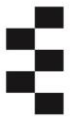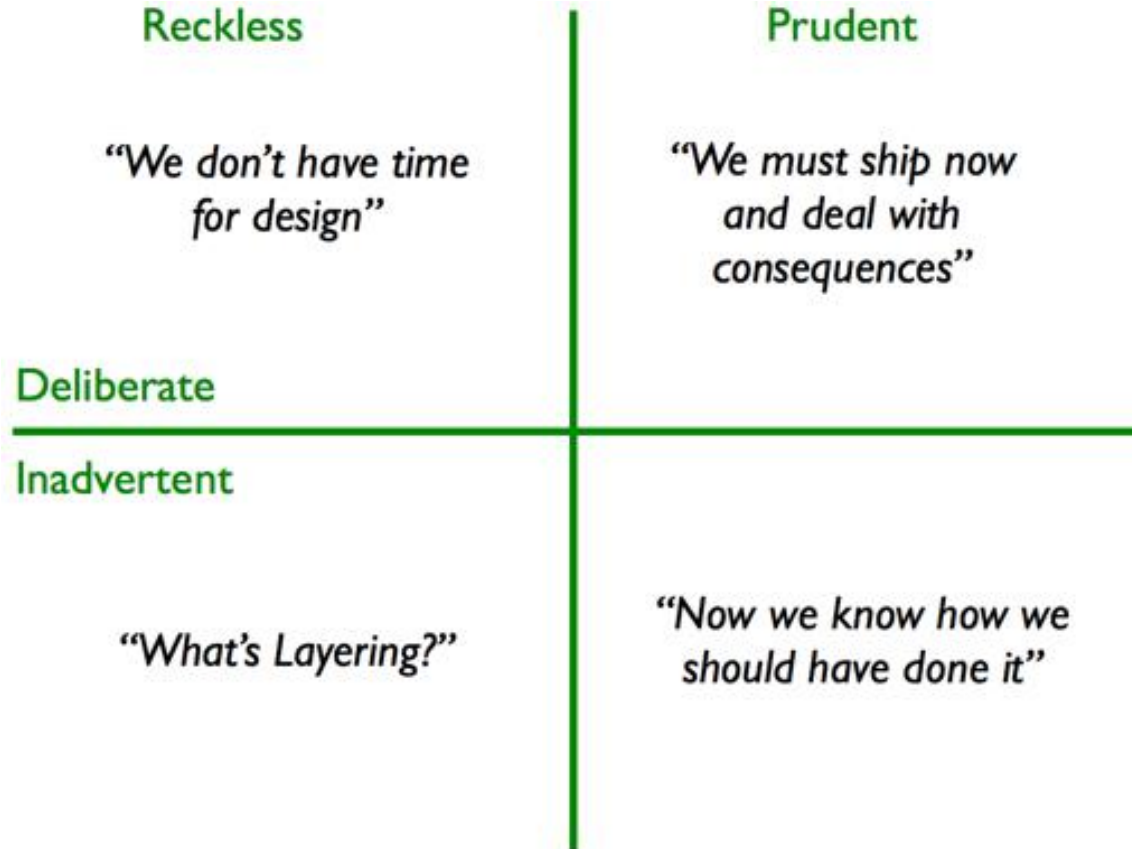
ISO/IEC 25010(NFRs)

- Functional Suitability
- Performance Efficiency
- Compatibility
- Usability
- Reliability
- Security
- Maintainability
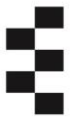- Portability.
- Which are testable?
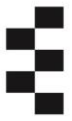
Technical Debt

- ## What is Technical Debt? (Martin Fowler, Thoughtworks, 2009)

"Technical Debt ..(is).. when people have made a considered decision to adopt a design strategy that isn't sustainable in the longer term, but yields a short-term benefit, such as making a release."

https://martinfowler.com/bliki/TechnicalDebtQuadrant.html

Reckless   Prudent

"We don't have time for design"   "We must ship now and deal with consequences"

Deliberate

Inadvertent

"What's Layering?"   "Now we know how we should have done it"

Verification and Validation

- Verification: Are we building the product right (QA testing)
- Vs
- Validation: Are we building the right product? (How do we test?)
- How do we check/ confirm the latter?
  - Simulation
  - Modelling
  - Prototyping
- Which is best?
- TDD vs. BDD – which is QA, which is validation?
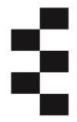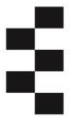
Seminar 5 – Reading & Questions

Read Mertz (2019) How do we check Python Code? What tools should be used?

What code have you reviewed with the above tools?

What changes did you make?

Demo?

The Deliverable(s)

Part 2: The Final Assessment checklist:

• **Presentation**

• The presentation should consist of a PowerPoint deck of up to 10 slides that describes:

• The project milestones,

• Summarises plans and sprints,

• Current status of the project

• A plan (and budget) to get to final implementation

• Academic references that support your project decisions.
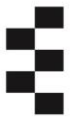
The Deliverables (2)

- **Demonstration**
- A light-weight demonstration model/ simulation of your toy that:
- Demonstrates that you have met the requirements listed in part 1
- Delivers a user experience that is accepted and approved by your customer
- Provides evidence of testing with a list of bugs and planned mitigations
- Academic references that support the features and facilities included in the demonstration.
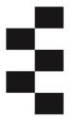
Further Info & Questions

- Next session (unit 12): Pick a trend and prepare a 5 min presentation on why it will be the most influential – we will vote to pick the winner!

- REMEMBER: Assessment due in Unit 12:

- **File Submission**

- Your final submission should include your presentation, your demonstration code with comprehensive comments and evidence of operation and testing (e.g. screenshots and output from testing tools).

- **Office Hours:**

- Wednesday 1 - 2pm (13.00 - 14.00)

- Friday 6 - 7pm (18.00 - 19.00)

- Any questions?