Lecture 11: Product Development Processes Christos Sermpetis

1. How many phases in a typical PDP?

- Usually between 5 and 8 phases (again 7 +-2 rule)

2. How formal are the phase transitions at IDEO?

- Not formal, aligned with "informal" culture
- From the shopping cart video: Image of disarray in the process but the transition from "Deep Dive" brainstorming to the next phase seems to be quick and formal.
- "the only policy is that we don't have any policy" - may be a bit of an overstatement
- The fact that they keep customers in the loop may eliminate the need for formal transitions.

3. Where is the cutoff between small and large projects (tension between left and right, slide 18)

- The distinction is not only dependent on the number of parts but also on the number and complexity of the interfaces.
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- A part can be a subsystem or a design feature - definition of what a "part" is
- It is the couplings between modules that determine how complex a designis
- Complexity (parts, interfaces and feedback loops) is a better metric than the number of parts.

4. Comment on rigidity of the outcome of the reviews.

- Rigidity of the review outcomes may depend on the specific stage of the review: The requirements review phase has to be very rigid. A design review may not have to have an outcome that is absolute (binary).
- "Stage-gates are a just for the managers to get an (often distorted) image of the advancement of the project.
- In the beginning it's important to have milestones
- You can have a rigidly defined stage-gate process. The more rigidly defined, the more people take it seriously. The rigidity depends on the business impact of each gate. The CEO keeps track of the different "gates" that were conditionally accepted and goes back to make sure rework was done satisfactorily.
- In reality teams sometimes prepare "overoptimistic" reviews, waiting for other teams to delay the stage-gate milestone.
- The most successful stage-gates are those where the customer is present.

5. How do you get the stage reviews to reveal the real problems?

- Different stakeholders should be present - deliberation before approval.

That Henderson and Clark Paper Ion Freeman

This is reading (5) in the System Architecture course pack. So, I have it.
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· [5] Henderson, R., Clark. K. (1990), ?Architectural Innovation: The Reconfiguration of Existing Product Technologies and the Failure of Established Firms?, Administrative Science Quarterly, Col. 35 pp. 9-30.