

# ECE 188

**Project Planning and Product Development** 



### New Venture Formation – Traditional Approach

- Come up with a concept / product idea
- 2. Put together detailed business plan and product development plan
- 3. Raise sizeable investment to support product development and R&D
- 4. Assemble engineering team, design and build product(s)
- 5. Sell product(s) and make tons of \$\$\$

What could possibly go wrong?



### <u>Product Development – Traditional Approach</u>

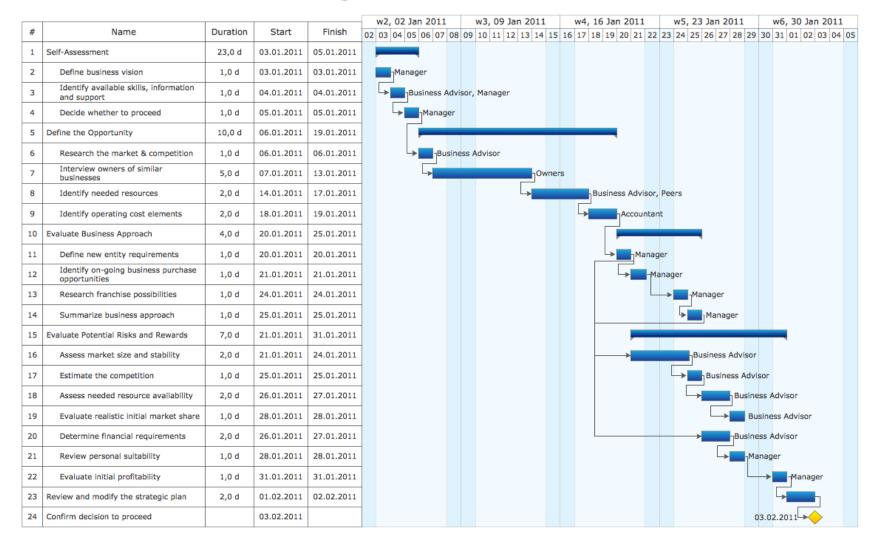
- 1. Conduct extensive research on your idea / product
- 2. Come up with a concept / product idea
- 3. Put together detailed product development plan
  - a. Detailed product / design specs
  - b. Detailed project plan Gannt Chart
- 4. Allocate resources, design and build product according to dev plan

What could possibly go wrong?



### **Example Gantt Chart**

#### Strategic Plan for New Business





### New Venture Formation – Lean Launch

"A startup is a temporary organization designed to search for a repeatable and scalable business model." – Steve Blank

- 1. Come up with a concept / product idea. TREAT AS A HYPOTHESIS!
- 2. Obtain immediate market validation / feedback
  - a. Survey / interview partners, customers, etc.
  - b. MVP: Minimum Viable Product
  - c. Pivot when necessary
  - d. Iterate and repeat
- 3. Raise small seed fund for initial work, then more \$\$\$ after validation
  - a. Friends & Family
  - b. Crowd funding
  - c. Angel investors



### Alex Osterwalder's Business Model Canvas

#### Key Partners



- Who are our key partners?
- Who are our key suppliers?
- Which key resources are we acquiring from partners?
- · Which key activities do partners perform?

#### Key Activities



- What key activities do our value proposition require?
- Our distribution channels?
- Customer relationships?
- Revenue streams?

#### Key Resources



- What key resources do our value proposition require?
- Our distribution channels?
- Customer relationships?
- Revenue streams?

#### Value Propositions



- · What value do we deliver to the customers?
- Which one of our customer's problems are we helping to solve?
- What bundles of products and services are we offering to each customer segment?
- Which customer needs are we satisfying?

#### Customer Relationships

relationship does each

segment expect us to

· Which ones have we

establish and maintain

What type of

with them?

established?

of our customer



· For whom are we creating values?

Customer Segments

· Who are our most important customers?

### Channels



- · Through which channels do our customer segments want to be reached?
- How are we reaching them now?
- How are our channels integrated?

#### Cost Structure

- What are the most important costs inherent in our business model?
- Which key resources are most expensive?
- Which key activities are most expensive?

#### Revenue Streams

- For what value are our customers really willing to pay?
- For what do they currently pay?
- . How are they currently pay?
- · How would they prefer to pay?
- How much does each revenue stream contribute to overall. revenues?







## Agile Product Development (adapted)

- Conduct preliminary research on your idea / product, sketch out initial concepts.
- 2. Identify key questions, risks, and unknowns.
- 3. Identify prototype ideas that can give insight on questions / risks / unknowns. Begin prototyping, iterating, and testing.
  - a. Start simple optimize for speed of feedback over quantity
  - b. "Sprints"
  - c. "Scrums"
- 4. Refine and repeat.
- 5. Goal is to break the problem into small "chunks" that can be readily addressed and obtain quick learning/feedback.
- 6. Feedback is key!