

# Previously on E&I...

Rapid prototyping techniques (paper-based and otherwise)

# A quick recap of Class 7

- ▶ A prototype is an approximation of our idea
  - ▶ Customer and functionality oriented
  - ▶ A learning tool subject to changes
- ▶ A prototyping process comprising the following steps and ingredients
  - ▶ Value Proposition
  - ▶ Process Map
  - ▶ Critical Route
  - ▶ Inputs, Outputs
  - ▶ Landing, Interaction, Exit points
- ▶ Tools to start building your own!
  - ▶ Spiral Model (Boehm 1986)

# Homework time!

- ▶ Your only homework now is to stun the judges with your projects!
  - ▶ Save the date: April 3rd. ([Three weeks from now!](#))
  - ▶ Dress-rehearsal for April 24 (Segunda entrega).
- ▶ Evaluated as a class activity
- ▶ Jumping board for the “let’s get down and dirty” part:
  - ▶ Data collection (for budgeting and else)
  - ▶ Interviews
  - ▶ Customer market research, etc.
- ▶ Thanks for your visits!

# ENTREPRENEUSHIP AND INNOVATION

Class 8 - Cost-Benefit Analysis: The pocket-size version

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# An *act of contrition* to know if the project cuts the mustard

- Profits = Revenue - Expenditure

# An *act of contrition* to know if the project cuts the mustard

- Profits = Revenue - Expenditure
- Profits > 0
  - Intertemporality
  - The so-called humanitarian and social projects?

# How can I know the resources I need to bring my project to life?

You just need to answer four simple questions.

# To learn the resources you need, ask yourself

- ▶ What is it and what is it made of?
- ▶ Who makes it?
- ▶ Who sells it?
- ▶ Who is paying for lunch?

# Why do we want this information?

Resources = Money.

# Where do we find this information?

- ▶ The items come from your process map
- ▶ The quantities are determined by the demand.

# Let's work on an example!

So you can believe me it really is that simple.



A chocolate cake

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# What is it and what is it made of?

- ▶ A chocolate cake for 8 persons, single-tier, made of wheat flour, with orange marmalade stuffing and dark chocolate icing.
  - ▶ [Sacher torte](#)
- ▶ List the ingredients with their respective quantities
  - ▶ In your case, the quantities will come from the demand estimation.

I'm giving you a (very crude but hopefully useful) toolkit

[Excel file](#)

# To learn the resources you need, ask yourself

- ▶ What is it and what is it made of?
- ▶ Who makes it?
- ▶ Who sells it?
- ▶ Who is paying for lunch?

# Who makes it?

- ▶ Workers?
  - ▶ A cook
- ▶ How long does it take them?
  - ▶ 4 hours
- ▶ What about all the supplies/machines/instruments?
  - ▶ For the time being, we will assume we rent them.
  - ▶ Remember economic theory: sunk costs do not affect the participation decision.

# To learn the resources you need, ask yourself

- ▶ What is it and what is it made of?
- ▶ Who makes it?
- ▶ Who sells it?
- ▶ Who is paying for lunch?

# Who sells it?

- ▶ Your sales force
  - ▶ A Clerk
- ▶ All other promotional and distribution costs
  - ▶ Packaging
  - ▶ Advertising
  - ▶ Free samples
  - ▶ Distribution
  - ▶ Renting a shop
  - ▶ The store's cut\*
  - ▶ VAT\*, etc.

# To learn the resources you need, ask yourself

- ▶ What is it and what is it made of?
- ▶ Who makes it?
- ▶ Who sells it?
- ▶ Who is paying for lunch?

# Who is paying for lunch?

- ▶ There is no such thing as “free lunch”
  - ▶ Electricity, water, office supplies...
  - ▶ The time of the person buying the ingredients, YOUR time!
  - ▶ Legal paperwork, etc.
- ▶ Given the (toy) model we are using, all indirect costs would go here:
  - ▶ Managers, janitors, etc.
  - ▶ Indirect costs: All the items that do not explicitly appear in the product.

# To summarize

- ▶ Just list all your cost items
- ▶ Take them to Excel
  - ▶ Register their quantities
  - ▶ Unitary prices
  - ▶ Multiply
  - ▶ Add
- ▶ Include all cost items
- ▶ Enjoy!

# You now know how much money you need yo build the good

If you only had data on the money you would be making...

# ...Some crude decision criteria could arise

- ▶ Profits  $> 0$
- ▶ Return  $>$  Putting the investment in the bank
- ▶ Unitary cost  $\geq$  market price of the cheapest rival

# And what if you were in the red?

- ▶ Lifeline from 4Fs
  - ▶ Friends, Family, Followers, and Fools.
- ▶ Playing the long game
  - ▶ Year 3 onwards...
  - ▶ A 5 year plan, IRR.
- ▶ Seed investment (through an accelerator/incubator)
- ▶ Make those non-monetary assets count!



# Before you take the decision

- ▶ This is good enough as an early back-of-the-envelope approximation
- ▶ You probably know better, more accurate, complete, realistic tools
  - ▶ By all means, use them!
- ▶ To be sure, you won't sell just one cake
  - ▶ You can divide the cost by the total quantity sold, though not technically correct.
- ▶ Is that the price? Not necessarily.
- ▶ Technicalities will come later, taxes, depreciation, etc.

# Classwork!

- ▶ Start thinking about your resources.
  - ▶ Materials (The Ingredients)
  - ▶ Supplies and equipment (The oven)
  - ▶ Workforce (The cook)
  - ▶ Salesforce (The clerk)
  - ▶ Promotion and distribution (The cute little box)
  - ▶ Indirect costs (Who pays for lunch?)

# Thanks for your attention!

Don't forget the homework and see you next class.