Appunti ICT

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Anno 2024-2025

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1 Note sul corso

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2 Innovation

2.1 Novelty vs Innovation

Innovation is the **implementation** of a new or significantly improved product, or process, a new marketing method, or a new organizational method in business practise, workplace organizaiton or external relations.
Innovation = invention + exploitation
An innovation:

- there is a market need

- has a strong value proposition

- solves a problem

- does the job better than other

- there are custoners willing to pay

- it is technologically feasable

- it is financially sustainable

2.2 Why do we need innovation?

Bisinesses **must** innovate to keep up with the competition. The benefit to the customer is a byproduct of the race between the companies.
For the business, innovation is a necessity to survive

- to survive competition in the short and long term

- to acquire market share

- to look for premium price, better margins, higher added value

- innovation is the **real** protection of your IPRs

2.3 Kinds of innovation

Innovation can be a **process**, a **prduct**, or an entire **business model**. The only thing that matters is that it is **NEW**.

2.4 Radical vs Incrementa innovation

Incremental We call an innovation "*incremental*" when it improves on something that already exists.
It lives in a short cycle, with recurrent improvements on an existing solution.

It's a reliable investment for the companies because it relies on mainstream customers in major markets.

Radical Radical innovation is the departure from existing tecnologies and solutions to offer something **entirely** new. Radical innovations are those innovations that bring to a market a very different value proposition that hadn't been aviable previously,

2.5 Theory of disruptive innovation

In his book "disruptive innovations", Christenses presents "the innovator's dilemma". This dilemma is the one between investing in a possibly risky innovation and playing it safe.

One of the risks in NOT investing in a disruptive technology is that of a competitor investing in it and stealing potential market shares.

3 Types of problems

- **Latent problems:** Customers have a problem but the don't know it. Esempi:

  - Spotify / music streaming
  - Smart voice assistants

- **Passive problems:** Customers know they have a problem but are not motivated or aware of the opportunity to change

- **Urgent problems:** Customers recognize a problem and are searching for a solution

4 My Idea

- Who: Music enthusiasts with short attention spans

- Problem (a latent one): Someone suggests a song to you but you forget the title, or to listen to it

- Solution: An app where your friends can leave you song suggestions, and you see them as a playlist

5 2024-09-30

Idee:

- Data protection with AI - Donathan - meh

- Toilet As A Service - Fabio M. - meme

- Picture2Video - Marco L. - not feasable? cool

- University Summary - Silvanus - silvanus

- Let's play - Mario S. - no

- Automated Garden - Hunter B. - carino

- Datapool - Riccardo S. - carino

	Nome progetto	presentatore	opinione
1	Data protection with AI	Donathan	meh
2	Toilet As A Service	Fabio M.	meme
3	Picture2Video	Marco L.	not feasable? cool
4	University Summary	Silvanus	silvanus
5	Let's play	Mario S.	no
6	Automated Garden	Hunter B.	carino
7	Datapool	Riccardo S.	carino
8	Lookify	Sano	bah
9	A healthy app	Giacomo S.	fattibile
10	Deliver your groceries	Maria A.	Glovo
11	Ski App	Ludovico	unfeasable?
12	OWD	Tommaso S.	Ci sta
13	Chatbot Monitor	Lerenza B.	mercato è limitato
14	Bike Aware	Sebastian W.	buono. Ma pratico?
15	Tidy Storage	alessio z.	lazy
16	SmartPack	dems c.	esiste
17	DevConnect	Davide Z.	Github
18	OpenSourceSec	Simone A.	Unfeasable
19	Where I Train	Massimiliano	Good
20	Just Do It	Leonardo	no
21	Garbage Collector	Ale	Anche solo per il nome
22	Fridge Management	Alberto M.	Tedioso
23	Pong Stats	Francesco D.	Carino ma AI
24	Magic Mirror	Davide M	Good
25	Vending Machine Finder	gabriele M.	good
26	Delivery food 4 students		Deliveru (2)
27	Accident report ai	saras	Difficile ma bello
28	Artva		No
29	SW4G	Samuel	c'è già OWD
30	Gamification		carino
31	Smart Stoves	Gabriele V.	esiste, ma carino
32	Traffic avoidance	Francesco S.	unfeasable
33	Opportunity Seeker	Quentin M.	non ascoltato
34	One Track	Enrico T.	small market
35	Healthcare at home	Salvatore C.	too hard
36	SOS artists	Denise C.	gut
37	Slow Bonding	Matteo D.	bah
38	Smart Shoes	Nicola B.	carino
39	NoWasteFood	Andrea V.	too good to go

6 Lean

In the lean methodology the assumpion is that its possible to figure out the **unknowns** of a business in advance, before you raise money and actually execute the idea.

6.1 Principle 1

Rather than engaging in months of planning and research, entrepreneurs/intrapreneurs accept that all they have on day one is a series of untested hypotheses.

How do we test these hypothesis?

1. State your hypothesis
   L'ipotesi deve essere **specifica** e avere uno scope limitato

2. Design experiment
   L'esperimento deve essere semplice e di tipo binario (pass/fail)

3. Test
   Il test deve involgere l'utente

4. Insignt

6.2 Principle 2 - Agile Development

Minimum Viable Product   A *MVP* is a version of a product with just enough dfeatures to be useavle by early customers[1] who can them provide feedback for forther development. A minimum viable product must:

1. Test a product hypothesis with minumal resources

2. Accelerate learnings

3. Reduce wasted engineers hours

4. Get the product to early customers as soon as possible

> **es:**
>
> **Problem**   Imagine you have validated that office workers are in need of healthy food for their lunch break and the solution you have in mind is a ghost kitchen where to prepare food to be ordered though an app.
>
> **Possible Solution**   A possible MVP is the food dropshipping. Where we don't open a kitchen yet but rely on another service like deliveroo to

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[1] *Early Adopters* are those wha are actively looking for a solution. This makes them more forgiving and more likely to give feedback

> do it for us.

It is acceptable in the development of the MVPs to lose some money.

1. Sketch
2. Wireframe
3. Mockup
4. Video
5. ...

> **Never hire a banana!**

7   Business Modelling

A business model describes the rationale of how an organization creates, delivers, and captures value

7.1   Razor and Blade business model

What constitutes a business model?

1. Value proposition
2. Customer Segments
3. Distribution Chennels
4. Customer Relationships
5. Revenue streams
6. Resources
7. Activities
8. Partners
9. Cost structure

7.2   Value Proposition

7.3   Customer Segments

- mass market
- niche market
- diversified market
- ...

7.4 Channels

How a company reaches its customer segments. Channels are customers touch points that play an important role in the customer experience.

They divide in *direct* and *indirect* channels.

Direct   higher margins but costly

Indirect   lower margins but cheaper

7.5 Customer Relationships

The type of relationships a company establishes with specific customer segments. Customer relationships have impact on customer acquisition and retention.

- GET: acquire customers
  website, app store, search, emails, blogs, free triels, etc..

- KEEP: Interact, retain
  Customization, blogs, online hels, product tips, affiliates

- GROW: New revenue, referrals
  upsell, cross sell, upgrades, reorders, refer friends

7.6 Multi-sided business model

Un multi-sided business model targetta più tipologie di utenti (customer) e ha una differente value proposition per ogni uno di essi.

Nel caso di Spotify:

- I free users ricevono musica

- Gli utenti paganti ricevono musica e feature aggiuntive

- Gli inserzionisti ricevono un pubblico ampio e targettizzato

- Gli artisti ricevono pubblico e compensazione per le loro canzoni

I customer segments interessati da un multi-sided business model devono essere distinti ma dipendenti l'uno dall'altro, o uniti dal business.
Nel caso di spotify, gli inserzionisti non avrebbero motivo di pagare spotify se non avesse utenti. E gli utenti non avrebbero motivo di guardare le pubblicità se gli artisti non dessero la loro musica a spotify.

Questo business model viene anche chiamato *"news papers business model"*.

Network effect Diciamo che un business ha un *network effect* se la value proposition per un gruppo di utenti aumenta con l'aumentare in volume degli altri customer groups. Il valore di spotify per gli inserzionisti aumenta se aumentano gli utenti.

Il problema con questo tipo di business è la difficoltà iniziale. Essendo il valore del business dipendente dal numero di customer, all'inizio è difficile attirare suddetti customers. Poi quando il business cresce inizia uno "snowball effect".

Questo problema viene affrontato con un investimento iniziale che mira a "sostituire" un customer segment per il periodo iniziale.

7.7 Business model patterns

patterns are business models with similar characteristics similar arrangements of business model or similar behaviour

7.8 KPI

Key Performance Indicators tipicamente usati per la valutazione di un business che segue il modello freemium:

- cost of service

- growth and churn rate

- customer acquisition cost

- price of premium service

- percentage of premium and free users

7.8.1 Churn Rate

Churn Rate $= \frac{\#\text{lost users}}{\#\text{users at the start}}$