

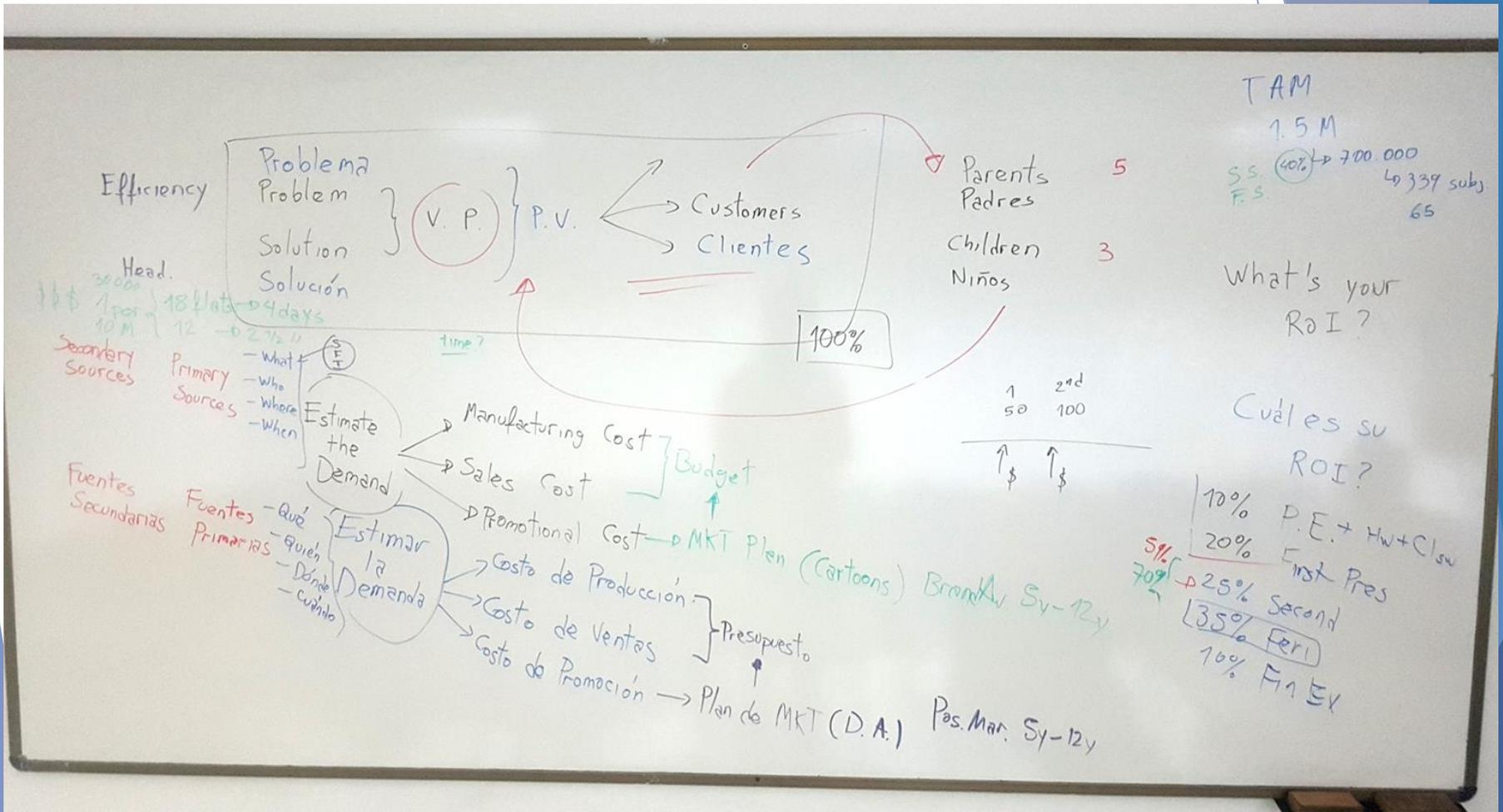
Previously on E&I...

Going from an idea to a business opportunity

A quick review

- ▶ How to jump from the first to the second presentation
- ▶ This course is a venture-creation simulator
 - ▶ Detect a business opportunity and seize on it
 - ▶ Gather credible arguments to sell it
- ▶ A management and leadership style...
 - ▶ Internal and external communication

From an idea to a business opportunity



The demand estimation is the crucial, tipping point

The cost structure, marketing plan, financial indicators, stem from it.

ENTREPRENEURSHIP AND INNOVATION

Class 10 - A roadmap to demand estimation

Javier A. Rodríguez-Camacho, Ph.D.

Pontificia Universidad Javeriana in Bogotá, Fall 2017

A sequence of steps to obtain an approximation of your demand

Not a recipe, but a logical series of steps

Customer profiles



Translate the profiles to numbers



Segment the TAM



Segment the SAM



Device a launch plan



Production and sales landmarks

Translate the customer profiles

- ▶ **Input:** Properly specified customer profiles
 - ▶ Using secondary sources you go from a literal description to a numeric one (DANE, INE, BEA, Census Bureau, OCDE)
 - ▶ Eg: PUJ MBA students from socioeconomic levels 4, 5, and 6 living in the neighborhoods of Usaquén and Chapinero
 - ▶ 178 people (De la Vega, 2017)
- ▶ **Output:** Total size of the populations representing such customers

Customer profiles



Translate the profiles to numbers



Segment the TAM

Segment the Total Addressable Market

- ▶ **Input:** Total sizes of the customer populations
 - ▶ Using secondary sources you calculate the specific size of the market/sector/industry (in \$\$\$ revenue or units shipped)
 - ▶ Eg. Monthly income devoted by a Colombian family to food: 29.7% ([DANE 2016](#))
 - ▶ Monthly expenditure of our target customers: 3.8 million COP
 - ▶ TAM: 1.13 million COP a month
 - ▶ [Ingreso y gasto de los hogares, DANE](#)
- ▶ **Output:** Total Addressable Market - the whole market's size

Customer profiles



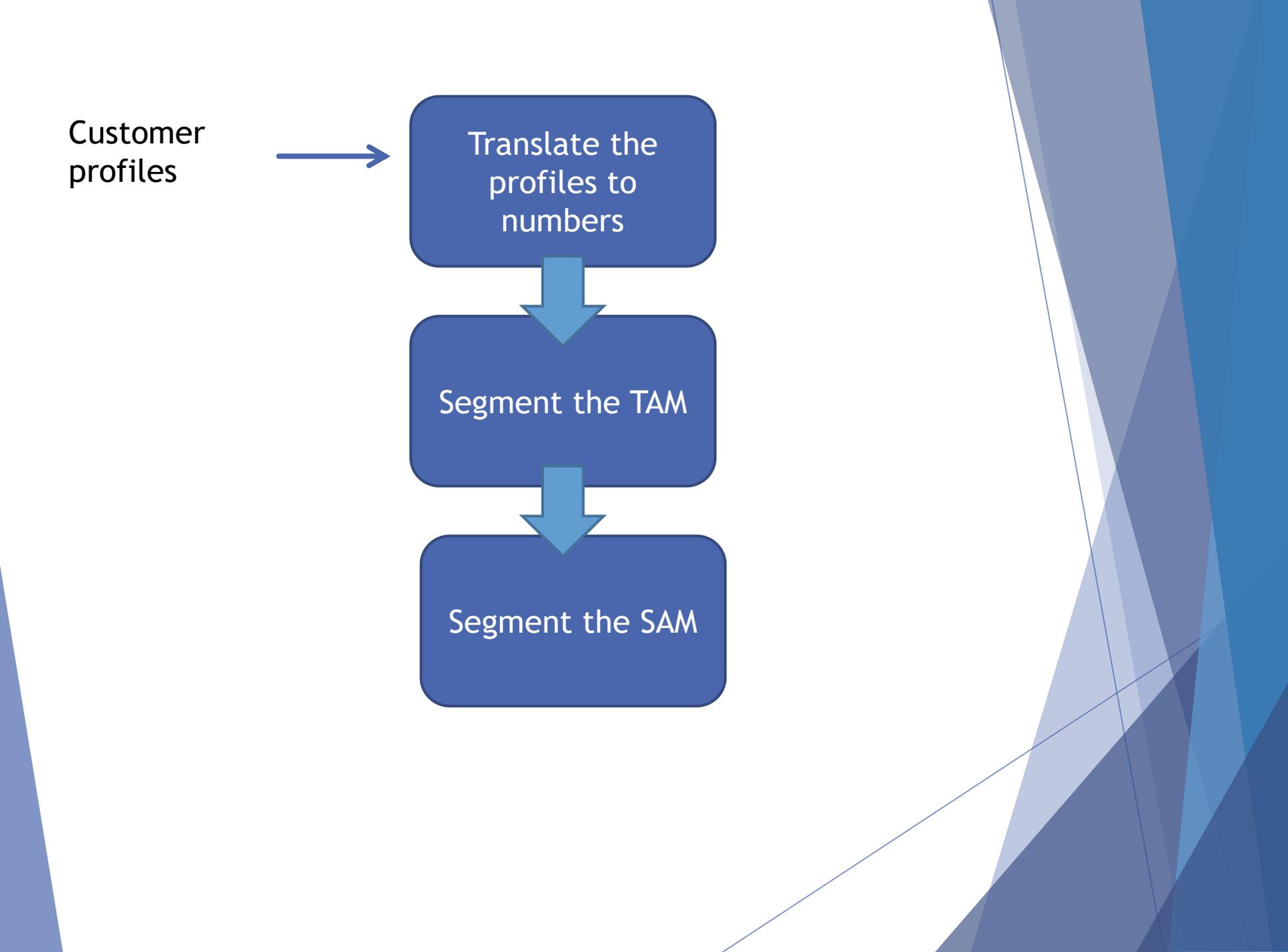
Translate the profiles to numbers



Segment the TAM



Segment the SAM



Segment the Service Available Market

- ▶ **Input: The TAM**
 - ▶ Using primary sources you calculate the maximum size of the market you could serve (TAM \geq SAM)
 - ▶ Ej. A 18% of MBA students are willing to buy our product.
 - ▶ Estimated revenue: 205 000 COP
 - ▶ Every unit is sold for (POS) 3500 COP
 - ▶ Estimated demand: 58 units a month. (Not $178 \cdot 0.18$)
- ▶ **Output: Service Available Market** - the maximum market segment you can aspire to.

Customer profiles



Translate the profiles to numbers



Segment the TAM



Segment the SAM



Device a launch plan

Device a Launch Plan

- ▶ **Input:** Total Demand. Resources needed (technology, materials, finances, etc.)
 - ▶ According to the characteristics of the project.
 - ▶ Eg: 20 units the first month, 40 on the third, 60 from the sixth month on.
 - ▶ Scale a target market share: 20% after the first year, 5% each quarter.
- ▶ **Output:** A time line with quantities to produce and sell.

Customer profiles



Translate the profiles to numbers



Segment the TAM



Segment the SAM



Device a launch plan



Production and sales landmarks

The background features abstract, overlapping geometric shapes in various shades of blue, ranging from light to dark, creating a modern and professional aesthetic. The shapes are primarily triangles and polygons, some with thin white outlines, set against a white background.

Let's work together on an
example

Example

- ▶ **Problem:** Children who go to elementary school are exposed to a number of germs and bacteria, particularly the flu. This causes them to get easily sick, becoming infection vectors to their whole families.
- ▶ **Solution: ?**



number of flu cases per year



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About 5,900,000 results (0.89 seconds)

5% to **20%** -- Percentage of the U.S. population that will get the flu, on average, each year. **200,000** -- Average number of Americans hospitalized each year because of problems with the illness. 3,000 to 49,000 -- Number of people who die each year from flu-related causes in the U.S. Oct 27, 2015

[Flu Statistics: What Are Your Odds of Getting the Flu? - WebMD](#)

www.webmd.com/cold-and-flu/flu-statistics

About this result Feedback

People also ask

How many people does the flu kill each year? ▾

How many people are hospitalized because of the flu? ▾

How many people have died from the flu in 2013? ▾

Why is there a season for the flu? ▾

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[Flu Statistics: What Are Your Odds of Getting the Flu? - WebMD](#)

www.webmd.com > [Cold, Flu, & Cough](#) > [Reference](#) ▾

Oct 27, 2015 - 5% to 20% -- Percentage of the U.S. population that will get the flu, on average, each

More evidence from secondary sources

Avoid the 'back-to-school plague'

By Jen Christensen, CNN
Updated 1823 GMT (0223 HKT) August 2, 2016



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Why do so many kids get sick at back-to-school time?



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Families of immigrants arrested in ICE raid calling advocates for help

35 years later, Vietnam through a different prism

A second, even bigger chunk of rock fell off El Capitan in Yosemite

Example

- ▶ **Problem:** Children who go to elementary school are exposed to a number of germs and bacteria, particularly the flu. This causes them to get easily sick, becoming infection vectors to their whole families.
- ▶ **Solution:** A candy that eliminates bacteria from children's soft palate using a moderate strength antibiotic, also reinforcing their immune system through a combination of amino acids and vitamins.

The magic

MIT News

ON CAMPUS AND AROUND THE WORLD

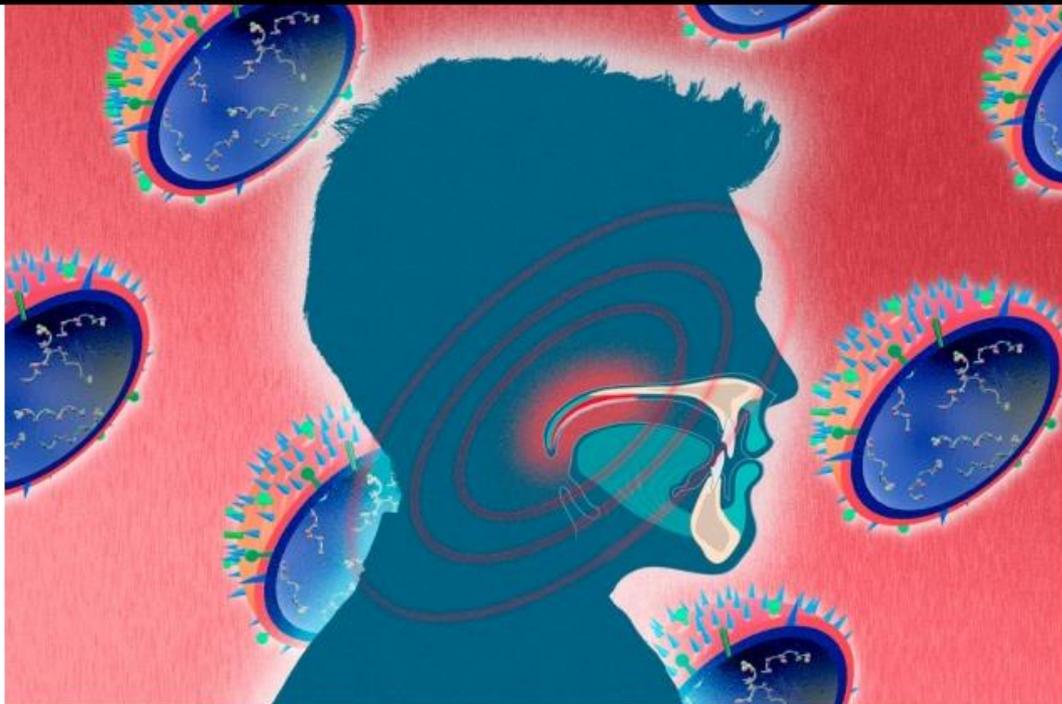
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FULL SCREEN



MIT researchers find the soft palate (in red) — the soft tissue at the back of the roof of the mouth — plays a key role in how the flu virus (in background) travels through the air.

Illustration: Jose-Luis Olivares/MIT (flu Virus illustrations courtesy of NIH)

How flu viruses gain the ability to spread

New study reveals the soft palate is a key site for evolution of airborne transmissibility.



antibiotics crisis



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About 942,000 results (0.67 seconds)

The Antibiotic Resistance Crisis

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4378521/>

by CL Ventola - 2015 - Cited by 139 - Related articles

This is the first of two articles about the antibiotic resistance crisis. Part 2 will discuss strategies to manage the crisis and new agents for the treatment of bacterial ...

[THE HISTORY AND ...](#) · [CAUSES OF THE ...](#) · [ANTIBIOTIC-RESISTANT ...](#)

Antibiotic crisis bigger than Aids as common infections will kill, WHO ...

www.telegraph.co.uk > News > Health > Health News

Apr 30, 2014 - Common infections and minor scratches could soon kill because antibiotics are becoming useless against new superbugs, World Health Organisation warns. ... The crisis is bigger and more urgent than the Aids epidemic of the 1980s, it was warned. ... Dr Lo Fo Wong warned that antibiotic ...

Too few antibiotics in pipeline to tackle global drug-resistance crisis ...

<https://www.theguardian.com> > Society > Antibiotics ▼

Sep 19, 2017 - Too few antibiotics are in the pipeline to tackle the global crisis of drug resistance, which is responsible for the rise of almost untreatable ...

Could ants be the solution to antibiotic crisis? | Society | The Guardian

<https://www.theguardian.com> > Environment > Antibiotics ▼

Sep 24, 2016 - Bacterial defences of fungus-farming ants could help in medical battle against superbugs.

After consulting some physicians



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Flu season: Fewer than half of Americans vaccinated, officials call for nearly everyone to get a shot

- Fewer than 50 percent of all Americans were vaccinated against the flu last season.
- Officials want at least 70 percent of people to get a flu shot.
- This season, officials say people should only get an injectable vaccine, not a nasal spray vaccine.

Dan Mangan | [@_DanMangan](#)

Published 11:29 AM ET Thu, 28 Sept 2017

Example

- ▶ **Problem:** Children who go to elementary school are exposed to a number of germs and bacteria, particularly the flu. This causes them to get easily sick, becoming infection vectors to their whole families.
- ▶ **Solution:** A candy that **supplies a dose of the flu vaccine to school-age children**, also reinforcing their immune system through a combination of amino acids and vitamins.

Example

- ▶ **Value proposition:** A box with 10 chewable candy of the gummy-bear type, with fruit flavor and a FLUVAX18 formula, supplying a dose of the flu vaccine to school-age children.



Example

- ▶ Customers:
 - ▶ Parents
 - ▶ School-age children (5 to 12 year-old)
 - ▶ Pediatricians and Family doctors
 - ▶ Schools
 - ▶ Drugstores, Supermarkets
 - ▶ Health centers, Insurance companies, etc.

Why is it innovative?

- ▶ Hygiene and diet problems
- ▶ Allergies and seasonal ailments
- ▶ Low vaccine take-up
- ▶ Obstacles to generating domestic protection routines in the family (other)
- ▶ We offer a convenient alternative, with a low cost and targeting the interaction point directly, clearly focused in one of the transmission factors of the flu.

How to estimate the demand?

- ▶ First verify that it is a real problem, has an attainable solution, and what we propose interests the customers
- ▶ Define the customers profile:
 - ▶ Families with children between 5 and 12 years old, living in the US
- ▶ Translate to numbers:
 - ▶ 25 million ([US Census Bureau, 2014](#))

How to estimate the demand?

▶ Calculate the TAM

- ▶ The average family expenditure in health in the US is 25000 USD ([2015](#))
- ▶ The expenditure on bronchitis treatments is 226 USD a year (13.3% corresponding to medication) ([F1](#), [F2](#))
- ▶ Antibiotics expenditure
- ▶ We take 25% of $(226 * 0,133) = 7.5 \text{ USD} * 25 \text{ million} = 187\,500\,000 \text{ USD / year}$

How to estimate the demand?

- ▶ Calculate the SAM

- ▶ We need primary sources here

- ▶ A third of Americans use alternative medicine ([2013](#))

- ▶ $187\,500\,000 * 0.3 = 56\,250\,000$ USD/year

How to estimate the demand?

▶ Calculate the target

- ▶ We need primary sources here too
- ▶ We will cover a 10% of the SAM on the first year = 5 625 000 USD
- ▶ Units? At a price that cannot go above 5 USD it would be 1 125 000 units / year
- ▶ Approximately 3200 boxes of the product every day

Now you have a chance to work on estimating your demands

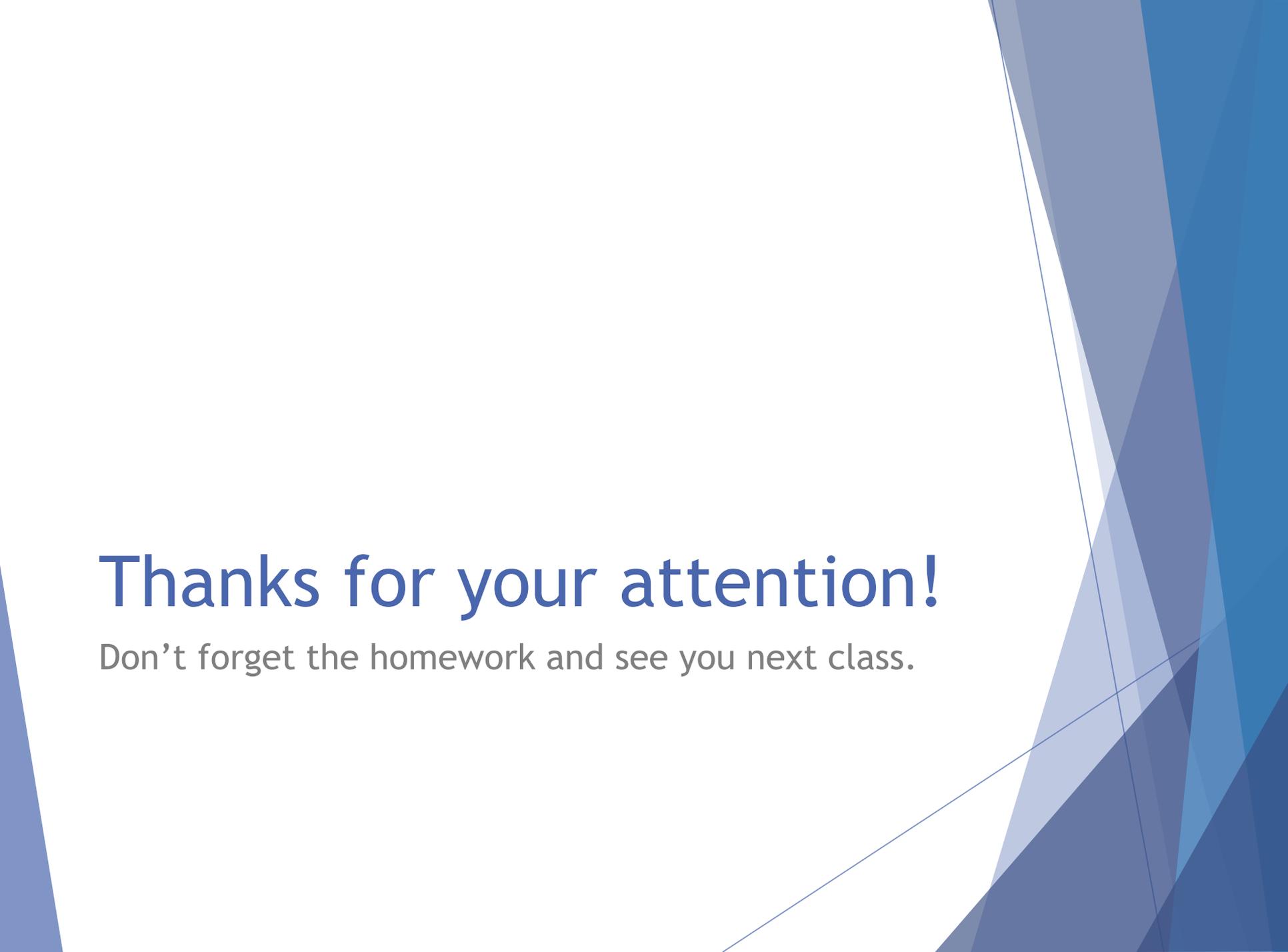
But first, each group explains to me in 2 minutes or less what you have done from the first presentation until today.

Homework

- ▶ Estimate the TAM, SAM, and target market for your projects
- ▶ Send me those answers, with properly detailed sources, before the end of the week
- ▶ Prepare for Monday a list with the resources you will need to produce those units

And what about your Primary Sources?

- ▶ Type of tools
- ▶ The questions you have prepared for each type of customer
- ▶ Sample size, etc.



Thanks for your attention!

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