



Contamination Lab Pisa



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PET busters

For a circular
economy

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The problem

- 2021: world plastic consumption = 139 million tons
- Only 9% of it is recycled
- Price of recycled PET: **1,70 €**
- Price of PET: **0,90 €**

The solution

- Building equipment to recycle PET with an innovative technique.
- Fast and cheap method, based on recent scientific studies.
- PET recycling at competitive prices: **1 €** al kg
- Pre-order purchase
- PET circular economy





The market

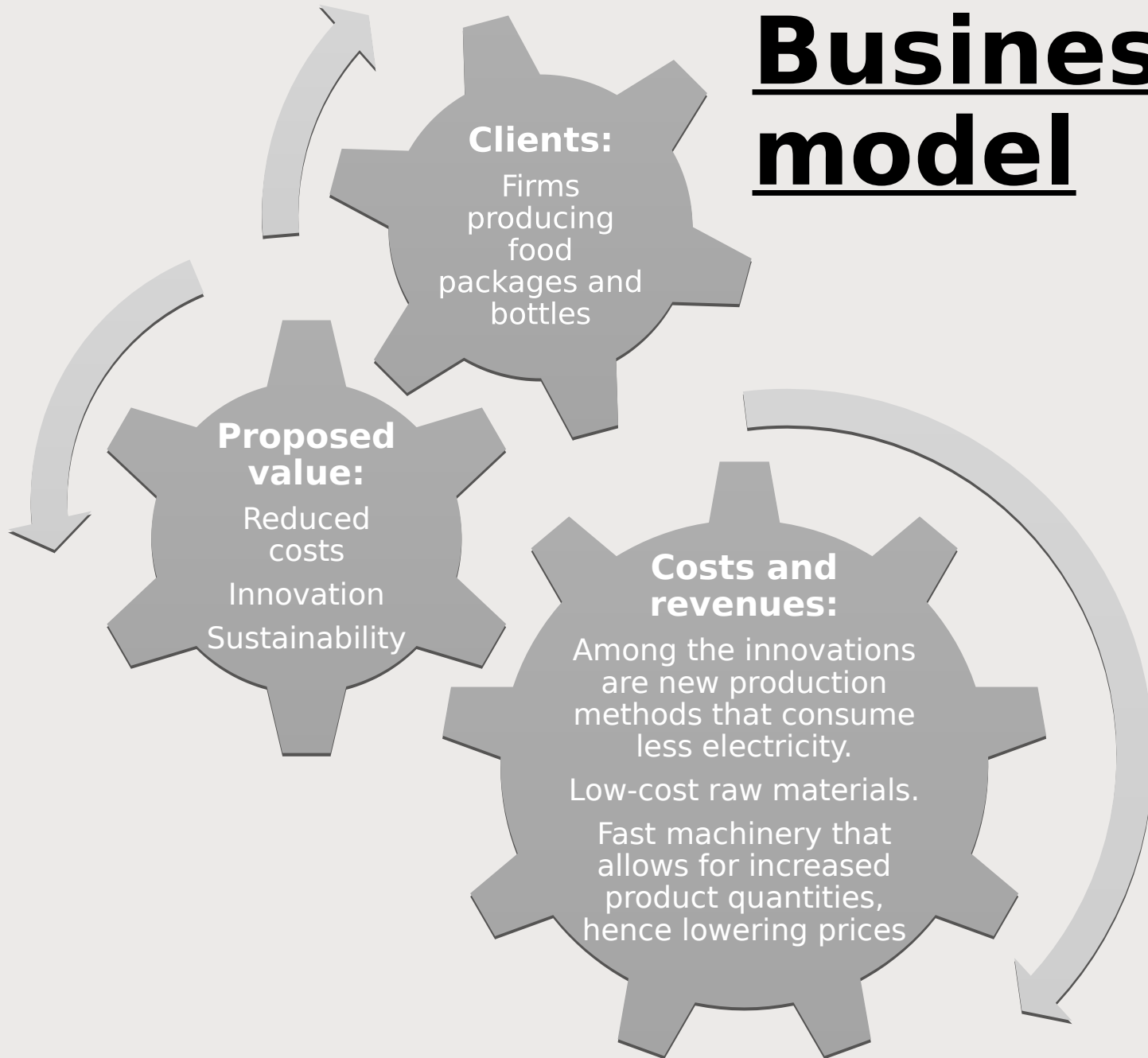
- The global PET market is estimated to be 80 million tons in 2020
- In Italy the producers of food packaging and bottles require 5.9 million tons of PET, of which only 1.4 million tons are currently recycled
- PET busters aims to cover 2% of the Italian demand

The Italian market

- Italy is leader in Europe in plastic recycling
- 140 recycling facilities
- Each of them can recycle between 2000 and 2700 tons.
- The price is between 1.69€ and 2.1€
- We will produce 4000 tons of PET in our third year.



Business model



The team

Sebastian Serra: Master student of Materials and nanotechnology



Paolo Tognini: Ph.D. of quantum physics at Scuola Normale di Pisa



CEO: Noemi Incorvaia:
Master student in Molecular and cellular biology



Filippo Neri: student in Business Economics

Hosnelly Rostele Gombi
Govin: student in Political Sciences



Maria Chiara Vincesi:
Master student in Molecular and cellular biology

Acknowledgements and Contacts

Scientific papers

- **Biodegradation of highly crystallized poly(ethylene terephthalate) through cell surface codisplay of bacterial PETase and hydrophobin** (Zhuochi Chen, Ronghdi Duan, Yi Wei, Hanxiao Zhang, Xinzhaio Sun, Shen Wang, Yingying Cheng, Xue Wang, Shanwei Tong, Yunxiao Yao, Cheng Zhu, Haitao Yang, Yanyang Wang, Zefang Wang).
- **Microbial and enzymatic degradation of synthetic plastics** (Nisha Mohanan, Zahra Montazer, Parven K., Sharma and David B. Levin).
Department of Biosystem Engineering, University of Manitoba, Winnipeg, MB, Canada, Faculty of food engineering, The Educational complex of Agriculture and animal science, Torbat-e-Jam, Iran.
- **Structure of the plastic-degrading *Ideonella sakaiensis* MHETase bound to a substrate** (Gottfried J. Palm, Lukas Reisky, Dominikue Bottcher, Henric Muller, Emil A.P. Michels, Miriam C. Walczak, Leona Berndt, Manfred S. Weiss, Uwe T. Bornscheur and Gert Weber).

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