

# Lean engineering and prototyping

Maj Hrovat  
Co-founder & CTO at Juicy Marbles



# Student project





**BEVO**  
Taste the Change


Podjetniški  
Klub  
Kam

ZDR











**120L  
methane  
each day**





**120L  
methane  
each day**



**14.000L  
water for 1kg  
of body  
weight**



A photograph of a brown cow and her calf standing on a grassy hill. The cow is on the right, facing the camera, and the calf is on the left, facing away from the camera. They are both wearing yellow ear tags. In the background, there are dark, forested mountains. A speech bubble is positioned to the right of the cow, containing the text "And there is 1 billion of us!".

**And there is  
1 billion of  
us!**







# Ecotrophelia 2019





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Tekmovanje študentov  
na področju  
novih inovativnih  
proizvodov

Project's example

Food R&D experts

An invitation-only  
LinkedIn community for  
R&D professionals from

# MAJ HROVAT, VODJA EKIPE BEVO

## 1. MESTO NA TEKMOVANJU EIT FOOD INNOVATION PRIZES 2019



BUSES AND VANS  
(SEATING CAPACITY OF  
8 OR MORE PASSENGERS)  
PROHIBITED







# How can we become the next big thing?

November 2019 - Maj 2020

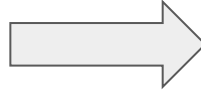
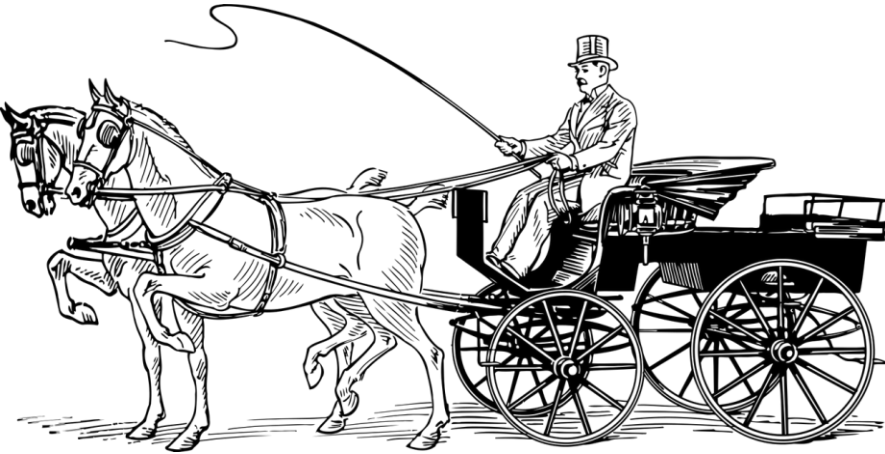
   

☐ Include non-patent literature (Google Scholar)

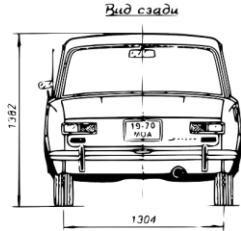
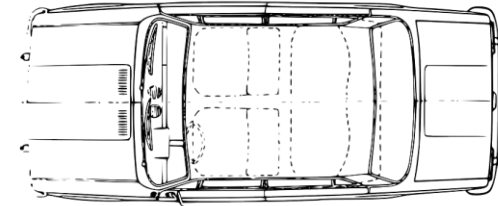
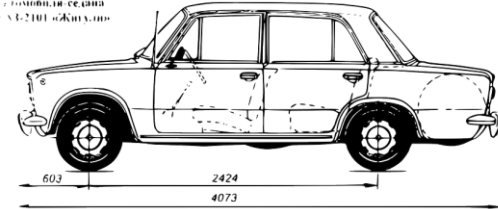
Search and read the full text of patents from around the world.



# Technology breakthroughs are leaps



Конструкторская схема  
Автомобиль седана  
АВ-2101 «Жигули»



# Meat making machines







# Combinator

A close-up photograph of several pieces of raw meat, likely beef, showing prominent white marbling (fat) within the red muscle. The meat is arranged on a dark surface. In the bottom right corner, there are two small red cherry tomatoes and some green herbs, possibly rosemary. A small, circular logo with a stylized face is visible in the bottom right corner of the image.

**JUICY MARBLES**

## Team with passion & a track record



**Tilen Travnik** Co-  
Founder & CEO  
Food Technologist  
Co-Founded and ran a  
startup studio for 10+  
years.



**Maj Hrovat**  
Co-Founder & CTO  
Hardware,  
Processing and food  
science



**Luka Sinček** Co-  
Founder & COO  
Ingredient optimisation  
and product  
management



**Vladimir Mićković**  
Co-Founder & CBO,  
Communication  
specialist, designer  
and writer

### Advisors:

**Miguel Serrano**, (advisor, ex-Nestle VP Plant-based Food EMENA)

**Ron Shigeta**, PhD (advisor, Indie Bio, SOSV, Wild Earth)



**Intramuscular fat structure is akin to prime grade cuts.**

Marbling keeps the meat moist during cooking, ensuring in a juicy steak full of beefy, deeply perturbing flavors and aromas.



**We cracked the elusive texture of a steak.**

The filet is firm, while the parallel fibre placement results in juicy chunks tearing away softly, like real muscle.







Perfect factory in the making

# Lean manufacturing

# Lean engineering



Lean

# Waste

1. Transport
2. Inventory
3. Motion
4. Waiting
5. Overproduction
6. Overprocessing
7. Defects
8. Unutilized talent



# Engineering waste

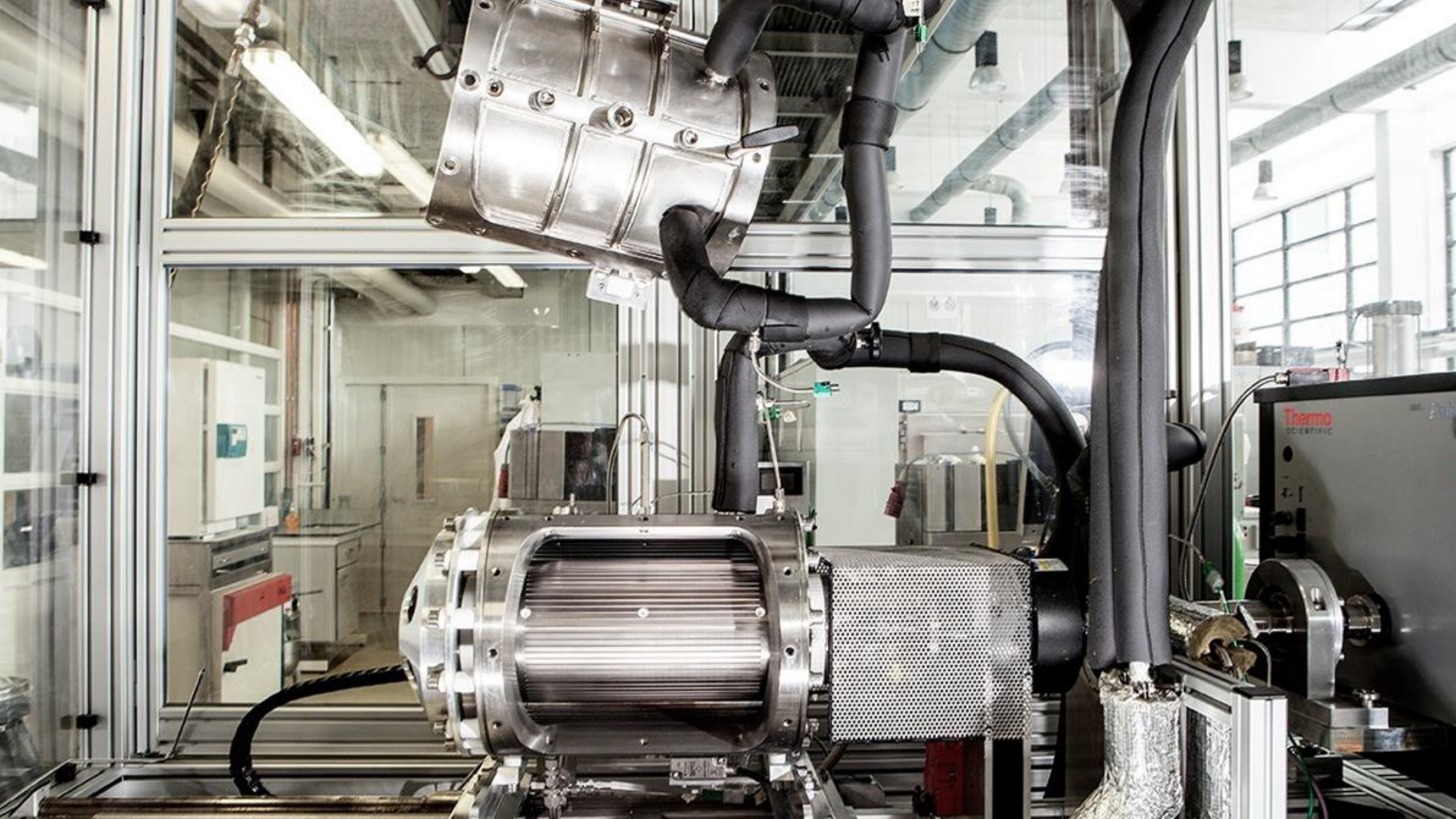
1. Parts that should not exist are being optimized
2. Perfection
3. Scaling too early
4. Off-focus
5. Specifications that require intelligence
6. Unfinished prototypes
7. Non-priority projects
8. Lack of motivation





















# JUICY MARBLES<sup>®</sup>

ABOUT  
SHOP  
RECIPES  
CONTACT  
BLOG



## Filet Mignon

🍖 4x113g

HAVE A LOOK



## Tenderloin

🍖 675g

HAVE A LOOK

# Patents

1. Get a patent attorney company that has expertise in the field
2. File a provisional patent application asap
3. 12 months of time
4. File a PCT application
5. 6 months
6. Getting the search results and patent becomes publicly visible
7. 12 months
8. File a patent application to individual markets (USA, EU, Japan etc.)
9. Patent is granted in scope of the individual markets patent office opinion

# Engineering waste

1. Parts that should not exist are being optimized
2. Perfection
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4. Off-focus
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# Thanks!

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PS: follow us on facebook, linkedin,  
instagram, twitter, youtube ;)

