



# Makerthon #1





you can't \_\_\_\_\_ if you don't make!

2 CHALLENGES

34 MAKERS

6 TEAMS

48 HOURS

one  
**Makerthon**

March 9-11th, 2018

## Preface

“Hackathons” are a great source for companies to get new ideas and create new software. At our institute we established a new format to create hardware products following the same successful approach. In „Makerthons“ participants not only create new ideas for products, we also make the physical prototypes within 48 hours.

A number of international students grouped in teams of 5 to 6 participants are confronted with a task from the industry. At the end the student teams pitch their ideas and prototypes to the companies.

Our initiative is part of the so called „Maker Movement“, a new way of Open Innovation for companies. Maker Spaces like FabLabs offer a great opportunity to meet people who have passion for innovation and making.

This booklet is a short summary of a Makerthon with 34 participants and representatives from MAGNA Steyr AG Fahrzeugtechnik & CO KG and Miba AG. Feel free to contact us if you want to participate or if you want to know more about our new Makerthon format.

Best regards,



Prof. Dr. Christian Ramsauer  
Head of the Institute



Dr. Hans Peter Schnöll  
Dept. of Innovation

## FAQs

### What is a Makerthon?

Makerthon = MAKER & MARATHON

The Makerthon is an event, where a number of people meet to face a real life challenge by searching for new ideas, solutions, products and services within 48 hours!

### Who can participate?

Everybody

### What are the costs to participate?

None – everything is for free – including catering and prototyping.

### Why should I attend a Makerthon?

You get the chance to work/think/develop new products and or services together with other makers!

You get support from leading industrial companies!

You get support from FabLab Graz staff!

You get to know and can use every machine/tool at FabLab Graz for prototyping!

You will make new friends!

### What is a Maker?

Everybody, who is passionate about making physical things!

### What's the goal of a Makerthon?

Learning by making and to develop a (physical) prototype within 48 hours.

### What do I need to bring?

Bring your motivation and passion!  
(and your notebook)

### What do I get - are there prizes or rewards?

Festival Passes

Voucher for prototyping

Contacts to a network of company representatives and other makers

## Challenges

REINVENT URBAN MOBILITY 2030 +

MAGNA is a leading global automotive supplier with 321 manufacturing operations and 102 product development, engineering and sales centres in 29 countries. Over 159.000 employees are focused on delivering superior value to the customers through innovative processes and world class manufacturing.

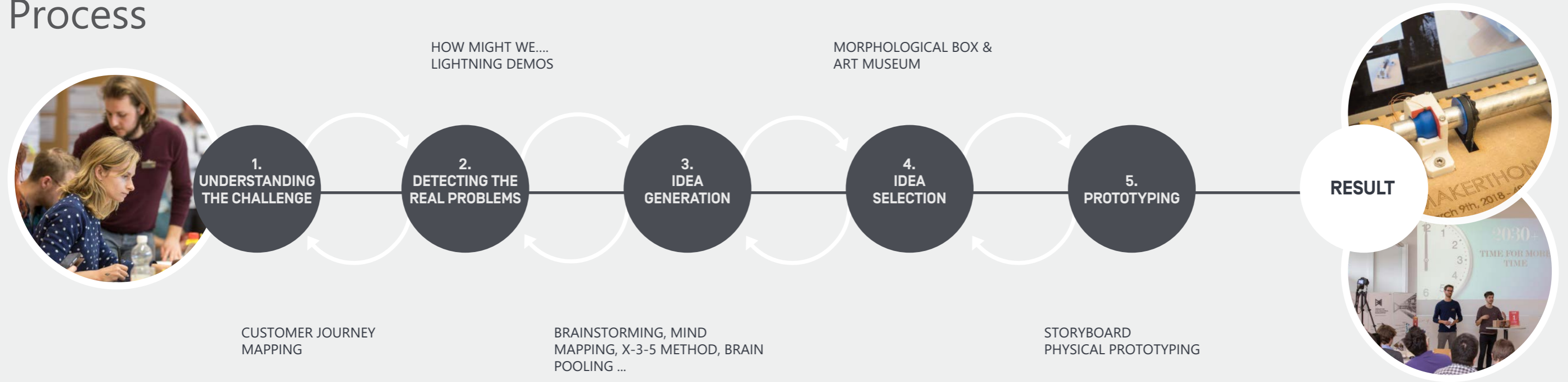


FIND NEW APPLICATIONS FOR  
(INTELLIGENT) SLIDE BEARINGS

Miba produces slide bearings, friction linings, sintered components, coatings and electronic components like resistors or cooling systems for power electronics. Miba technology makes vehicles, trains, ships, aircrafts and powerplants more powerful, safer and more environmentally friendly.



# Process



# 1. UNDERSTANDING THE CHALLENGE

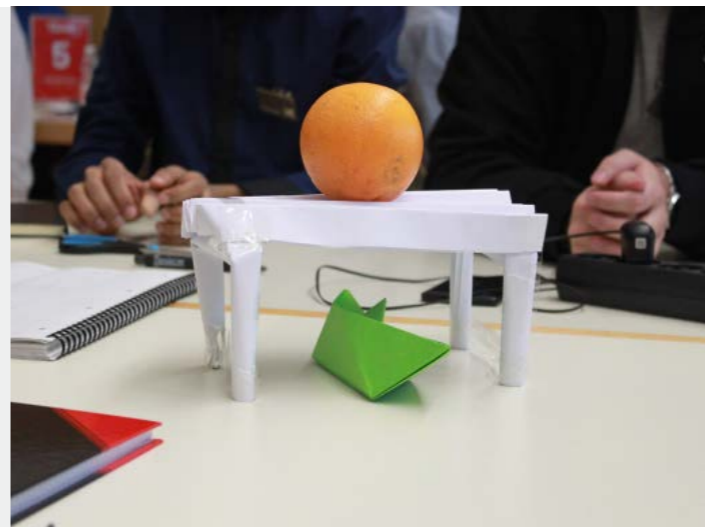


Franz Mayr  
Head of Innovation Management -  
Magna Steyr



Gunter Hager  
Head of Business Unit Engineering -  
Miba Gleitlager Austria

# 2. DETECTING THE REAL PROBLEMS



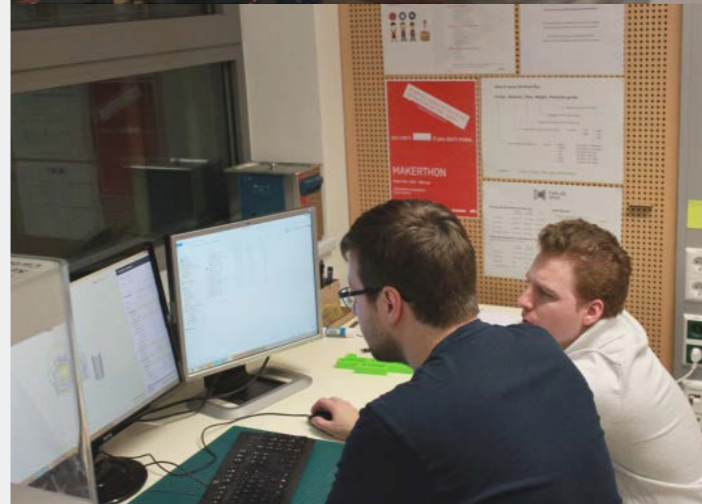
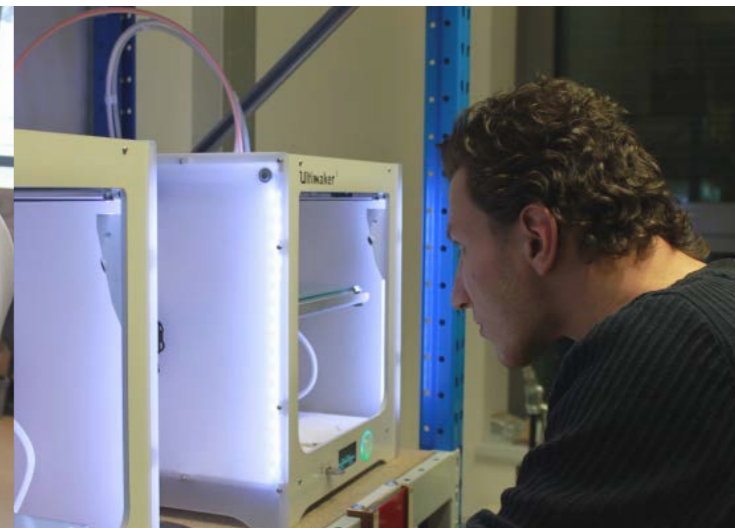
### 3. IDEA GENERATION



### 4. IDEA SELECTION

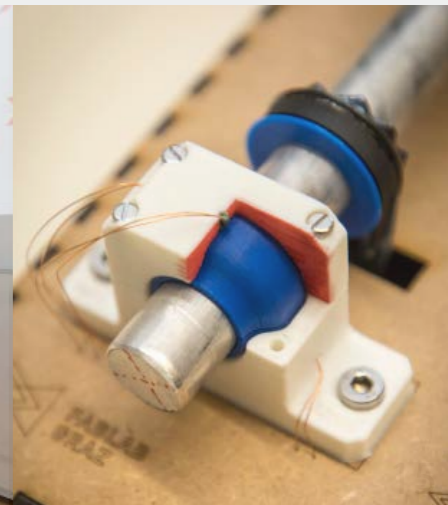


5.  
PROTOTYPING





RESULT



## Impressions



## Team 1



"Mobile Office"

Challenge: MAGNA

Emanuel Watschinger  
Philipp Kranabitl  
Elliot Lang  
Richard Schindler  
Jürgen Sicher  
Dominik Osterland

Patrick Herstätter  
Arno Sallinger  
David Oblak  
Simone Andreetto  
Christoph Resch

## Team 2



"Smart Slide Bearing"

Challenge: Miba

## Team 3

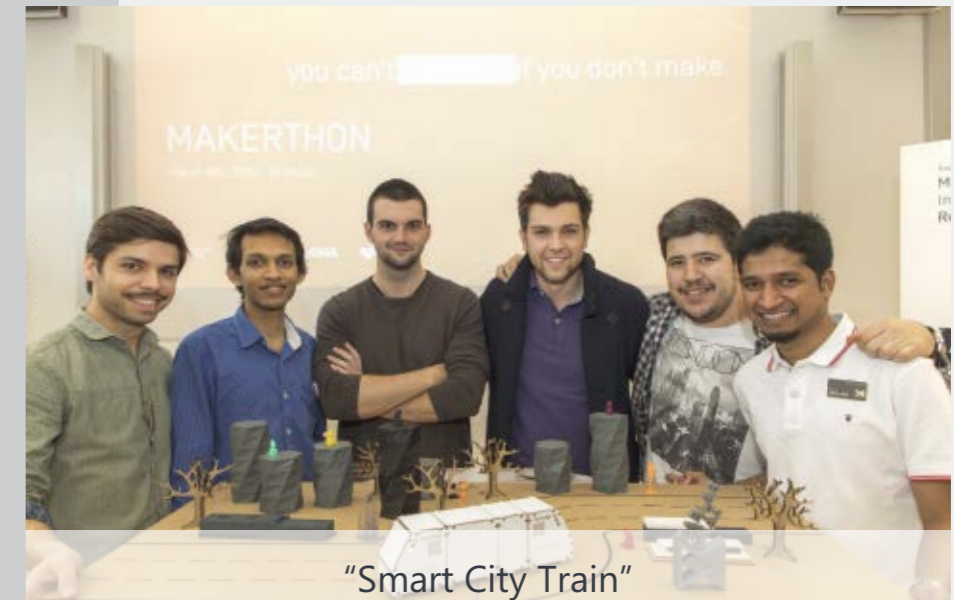


"Make Intelligent Body Atouchments"

Challenge: Miba

Marcel Wuwer  
Marius Müller  
Piotr Kupiec  
Lena Rucker  
Anna Adamczyk

## Team 4



"Smart City Train"

Challenge: MAGNA

Blaž Terlevic  
Fabian Konstantiniuk  
Kristiyan Gichev  
Martin Ratasich  
J. T. Thekkekara  
Muaaz Abdul Hadi

## Team 5



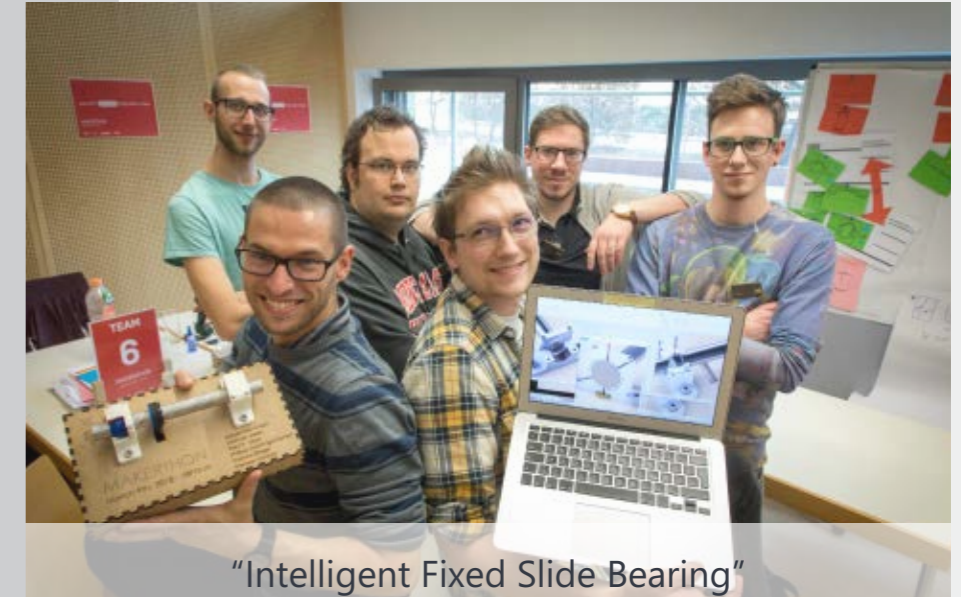
"Ergotainment"

Challenge: MAGNA

Anna Lickl  
Thomas Obwurzer  
Andreas Kaas  
Matthias Viehböck  
Raffael Sacher  
Jan Kummer

Thomas Vorauer  
Paul Torke  
Jacob Reynvaan  
Philipp G. Scherf  
Thomas Rieger  
Manuel Lesser

## Team 6



"Intelligent Fixed Slide Bearing"

Challenge: Miba

## Winners



"Mobile Office"

Challenge: MAGNA



"Intelligent Fixed Slide Bearing"

Challenge: Miba

"I really had a terrific weekend with exciting tasks and super nice people! I found the whole organization very good and had a lot of fun working! My teammates and I learned a lot and were totally thrilled! Hopefully there will be a Makerthon again in the future."

"It was great fun, I would do it again immediately!"

"The organization and the process could not have been better."

"A lot of "AHA"-moments and lessons learned for the future."

"The event actually exceeded my expectations, really glad that I was taking part."

"Way better than expected, they always gave the right input at the right time."

"I liked best the overall spirit and mentality of the participants."

"I liked the most the beer at the end of the day were you get in touch with the other teams and see/hear their solutions."

"Description of what methods are going to be used for the whole three days could have been sent out to participants in advance."

"A bit less about company, more technical details."

"The CJM could have been explained a little bit more detailed."

"Hand out the sheets for pitching earlier."

"More gear/tools for prototyping. There was a time-delay since it's sometimes quite crowded at the machine park."

"Maybe more publicity, only heard about it via a friend."

Voice of  
participants

## Supporting Team



Dr. Hans Peter Schnöll  
Dept. of Innovation



Thomas Wildbolz  
Sc. Assistant



Thomas Gerhard Pickl  
Student Assistant



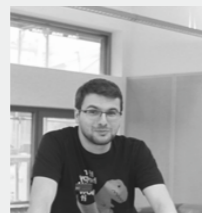
Prof. Dr. Christian Ramsauer  
Head of the Institute



Thomas Böhm  
Sc. Assistant



Lukas Kreiling  
Workshop Manager



Christoph Pirklbauer  
Student Assistant



## INNOVATION AND INDUSTRIAL MANAGEMENT

### Innovation

research

**Product Design**

**Maker Movement**

infrastructure

### Laboratory for Innovation

Assisting industry, SMEs, start-ups and students to create new products from idea generation to market launch. The FabLab is part of this infrastructure.

special initiative

### Product Innovation Project

International and interdisciplinary student teams develop within one academic year product ideas, product concepts working prototypes and a business plan.

### Industrial Management

research

**Agility, Digitalization**

**Lean Management, Ramp-up Management**

infrastructure

### LEAD Factory

Miniature industrial manufacturing site with an state-of-the-art assembly line of a real-life product to teach Lean management, Energy efficiency, Agile operations and Digitalization.

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**INNOVATION AND INDUSTRIAL MANAGEMENT**

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