



— Redesign —

# RE DESIGN



Loop project - National research  
**INTERVIEWS:** Entry # 66



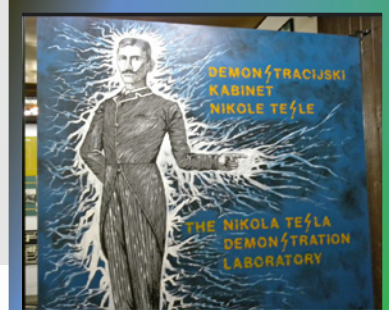
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## MARIJO ZRNA

curator  
at the Technical Museum



Nikola Tesla (cc), <https://www.flickr.com/photos/jasonparis/6602268453>

### **Marijo Zrna**

has finished 1st Technical school in Zagreb and has been working as a curator in this museum for 30 years.

## **TELL US a little about your business and how the idea of changing the approach for a greater circularity of design was born.**

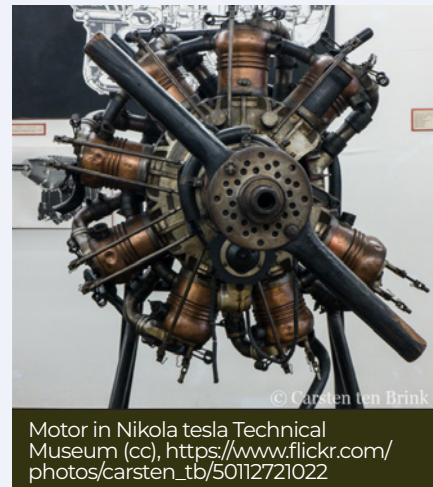
I work as a curator in the Technical Museum in Zagreb. Here we often organise different workshops which are related to innovations in design and technology. Those workshops encourage people to compare examples from museums with some newer models. Our museum is filled with different automobile models. We have everything from an example of the first automobile ever created by Karl Benz to more recent examples from approximately twenty years ago.



Nikola Tesla Technical Museum (cc), <https://www.flickr.com/photos/jasonparis/6602291573>

The first stationary gasoline engine was a one-cylinder two-stroke unit which ran for the first time on New Year's Eve 1879. Benz had so much commercial success with this engine that soon he started creating more vehicles of this sort and many other companies started doing the same.

As described, the design of the first car was very simple. With time manufacturers started adding parts like for example the roof that had an important functional role as well as adding some details that were just for aesthetic purposes.



In the last decade people have become more aware of climate change and because of that are starting to buy more environmentally friendly items. It is a well-known fact that cars aren't good for the environment. That is why the companies like Tesla or in Croatia Rimac have specialized in the production of electric vehicles.

The benefits of electric vehicles are clear, with more than 20 manufacturers now investing with even more to be launched next year. The growing choice means that there's an EV to suit a range of budgets and user needs – making purchasing or leasing an electric car a more viable proposition than ever before.

Drivers also need to look beyond the upfront costs when considering an electric car. Over the life of owning or leasing, you could benefit from more than just improving the environment around us; there are also major cost efficiencies, greater convenience, comfort and performance.

Overall, even if they are more expensive to buy, they are much cheaper to maintain. While the growth in electric cars is happening faster than we thought, truly meeting climate goals will take riding the momentum of another big transition – one to the circular economy.



Nikola Tesla museum pavilion (cc), [https://commons.wikimedia.org/wiki/File:Technical\\_Museum\\_Zagreb.JPG](https://commons.wikimedia.org/wiki/File:Technical_Museum_Zagreb.JPG)

A circular economy is an economic system that aims to eliminate waste throughout manufacturing, production and use as opposed to our current 'linear economy' which transforms raw materials into products that are made, used and disposed of, finding value in producing and selling as many goods as possible. Transitioning away from the 'linear economy' means systems-wide changes, including decarbonizing production and designing products for recyclability at 'end of life'. For the automobile industry, it means achieving transformation at the scale of Henry Ford's legendary assembly line, or Toyota's famous 'Just In Time' production system, one that timed manufacturing to dealer orders to minimize parts inventory.



**WHAT  
WERE THE  
MAIN**

## **difficulties you encountered in dealing with processes of change in product (or service) design?**

There's no denying that change in product design will improve and innovate service and help you design new ones, but I can confirm that there are many barriers along the way. In our museum we always asked ourselves "how to approach these barriers". Everyone took the part in creating a solution to overcome them. One of the most typical problems is a lack of accountability for solving actual problems.

There are too many decision-makers for individual projects, but not enough for true ones. I think the solution is to work out who you need to speak to in order to get things done. You must be convinced in the success of your project and prove your project is ecologically acceptable. Resistance to change is always present in our society. Our Technical Museum (Tehnički muzej) 'Nikola Tesla' is no exception.



People are always the biggest barrier when implementing service design. You will always come up against individuals who are resistant to change, both structurally and culturally. You must be patient with them and explain to them exactly how it works. You are supposed to increase communication and constantly keep them informed. Time and pressure also contribute to difficulties in dealing with processes of change in product design.



You are convinced to plan time and to use every single minute for a good cause. Sadly, lack of communication between team members is also present when team members do not want to share information or knowledge with other individuals in the same organization.

This blocks collaboration, co-creation and innovation. If you want to have a successful project, you must organize meetings and include every single team member in the project's meetings.



Lack of buy in (buying supplies or products in large quantities) is widely spread in Croatia. The Technical Museum and many more organizations still feel like engaging with consumers is a waste of time. They see it as a "nice to have" but not essential. These problems slow down an entire project and process. The solution is simple: change in mindset. All members need to take part in making decisions and be co-operative. Otherwise, there is no point in the project if you work alone.

Short-term thinking also represents a challenge. People are making short-term decisions to stop small problems and they usually forget the main source of the problem. You are supposed to remember the bigger picture when thinking of service design. It is much harder to solve problems without any plan. To summarize everything that I have said, I will emphasize the most important things from my speech. Communication is vital and always the solution for every problem. We can't do everything on our own and we need to hear different opinions for making smart and productive decisions.

Give people clear insight to remove all mysteries. You must answer every question, encourage people to collaborate and keep them informed with fresh news. The process of change in product design is paramount today.

Applying service design to every other organisation is extremely rewarding, even if you will be forced to overcome many obstacles along the way.





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### **SPEAKING OF DESIGN: what shape do you think the future of your business could have in terms of circularity and sustainability?**

We, in the cultural zeitgeist, understand that exhibitions and museums in general, have a significant impact on individuals, societies, the economy, and the environment; and for that reason, we need to understand that we are inextricably linked to sustainability principles.



Led light (cc), [https://commons.wikimedia.org/wiki/File:Lampada\\_LED\\_Albrillo\\_con\\_sensore\\_2.jpg](https://commons.wikimedia.org/wiki/File:Lampada_LED_Albrillo_con_sensore_2.jpg)

Museums seek to have a positive impact on sustainability and circularity, while involving the community in its efforts to help the planet and us, as its inhabitants. The basic setup for the future is: going “green” (recycling, using bikes in our day-to-day commutes, etc.), reducing the energy required to run our museum and raising awareness of the community through our programs. Going green is the largest of these three pillars that form the future look of our museum.

For several years we have been recycling, even before the government mandated programs, and with that we also influence the community with our eco-friendly ways. With that, we also reuse most of our assets in other projects, almost never throwing out unnecessary materials, instead using them in other projects, and with that we minimise our impact on the planet.



Exhibits made from recycled or reusable materials, <https://www.flickr.com/photos/ferrucciozanone/14438072303>

In our furthering of the sustainability goals, we travel to work and from on bikes, rarely using heavier motor vehicles, except when transporting bigger exhibits in our temporary exhibitions, which in recent time, we have put up less and less.



Bike to work (cc), <https://www.bicitech.it/aumento-ciclismo-risparmiare-miliardi-alla-societa/>

We mainly focus on our main and permanent exhibitions, and with that we have almost neutralised our carbon footprint. In our programs with the community, one of the most important ones is the placing of bike “terminals” or racks whose purpose is the free use of any of the bikes situated there with the obligation of returning them after the person is done with their activities.

With this we influence and help the people of our city, while providing them safe and easy transport that has no environmental down-side. The last, but not least, program is the reduction of necessary energy used in the running of the museum. For that purpose, we have replaced all our old lighting infrastructure, with new and modern LED based illumination, that reduces the spent energy.

The heating elements have also been replaced from the old 100% natural gas-based system to a newer one which uses electricity and gas to heat-up the premises. Besides the main plans, there is also a couple more secondary ones. We plan on making more exhibits made from recycled or reusable materials so that they can be taken apart and put into other projects at a later date.

The other plan is to put-up donation boxes so that the people in our community can give us their old, unused or broken materials, technology or things as such and put them to good use. In the end, the thing we want is to include the community and with their help make ourselves greener and better.

# RE DESIGN

# QUESTIONNAIRE

## 1. What is the so-called “circular economy”?

A	B	C
10%	30%	60%

## 2. Do you believe that a more sustainable economic system can be equally productive than the current one?

A	B	C
70%	10%	20%

## 3. Which of these consumer choices have you decided to implement in the last 10 years to protect the environment?

A	B	C
10%	40%	50%

## 4. How will the so-called “circular economy” affect the job market?

A	B	C
80%	15%	5%

## 5. In your work, how many strategic choices related to sustainability have been made in the last 10 years?

A	B	C
40%	10%	50%



**6. Which of these 4 “Rs” is more important to ensure a better future for humanity?**

A	B	C	D
5%	45%	25%	25%

**7. Which of these 4 “Rs” is most present in your family’s daily life?**

A	B	C	D
40%	10%	30%	20%

**8. In your opinion, what link is there between technology and the “circular economy”?**

A	B	C
50%	50%	0

**9. Do you think we will be able to change the way we consume so as not to affect the environment and its limited resources?**

A	B	C
20%	30%	50%

**10. Are you familiar with the UN 2030 Agenda or have you ever heard of SDGs?**

A	B	C
100%	-	-

## QUESTIONNAIRE



# QUESTIONNAIRE

**11. Do you think that the economy in the past was more sustainable than it is today?**

A	B	C
10%	80%	10%

**12. Which of these 3 statements do you consider the most true and important?**

A	B	C
45%	55%	0

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