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ŽONGLÉRSKÉ MÍČKY INFINITY

INFINITY JUGGLING BALLS

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BACHELOR THESIS

AUTOR/KA PRÁCE **VÁCLAV PECA**

AUTHOR

VEDOUCÍ PRÁCE **Mgr. ZUZANA KUBÍKOVÁ**

SUPERVISOR

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1. Abstract

The goal of the Bachelor's Thesis is to describe the author's path of designing juggling balls and setting up a juggling balls brand, and to explain the decisions, which he as a designer, entrepreneur and juggler in one person makes. The main issue is not only product design as such but also production and marketing as a non-negligible part of design.

2. Introduction

The thesis is concerned with the design and business strategy of Infinity juggling balls and the specific ethical questions that the author dealt with in the process.

In the first part, I describe the history of the project, explaining how I began to work on the development, what the challenge of making a new kind of juggling balls was and how I went about specific parts of the process, such as travelling to Pakistan or being a vendor at a juggling festival.

In the second part, I reflect on the decisions I made both as an entrepreneur and socially conscious person. I deal with the global issues of consumerism and the outsourcing of unskilled labour to the developing world on one side, and the style of marketing and customer relations on the other.

3. The history of the project

3.1 The beginning

The juggling equipment brand Jugglequip was founded in 2012 by Tomáš Zahradník. Tomáš was an enthusiastic juggler, who set himself a goal to promote juggling in the Czech Republic. He also wanted to become an entrepreneur, so he combined the two by starting the Czech Juggling Association and founding Jugglequip.

The beginnings of his efforts were tough, as he found that trying to make money from organizing events was not a well-received idea in the juggling community. Other juggling events were organized voluntarily, and efforts to professionalize the domain were seen almost as an 'invasion of corporate practice' by some.

I related to Tomáš's motivation to uplift the sport of juggling and I felt that it can be realised, if done more carefully and in debate with other jugglers. We organised three big events together, and slowly his activities became more accepted by the Czech juggling community.

3.2 Designing juggling balls

In 2014, I started to design juggling balls on behalf of Jugglequip. Prior to that, I had already had eight years of experience in ball juggling and I had tried many different juggling balls during that time. My favourite were 'Sportco juggling balls' made by Cheryl Sayers in the United States, although they had one flaw: they were not very durable – a set usually lasted me only 6 months. So, the challenge of the design process was to imitate the Sportco's in terms of the feel but make them more durable.

Tomáš found, in an online business directory, a Pakistani company specialising in production of various types of balls. The choice of an outsourced production in Asia was based solely on the financial convenience, neither Tomáš nor I was thinking about the ethical side of it, although later on, I started to be curious. Tomáš entitled me to communicate with them by email. I started by explaining to them all the important stuff: the outer material, filling, panel layout and sewing

techniques. When I thought that everything was clear and ready, we placed the first order of 100 balls, only to find out that this wouldn't be so easy. The 100-ball batch arrived – but the balls were nothing like I expected. In fact, they turned out to be unusable.

I realised that the production shouldn't have been started without having checked physical samples. The other and not-so-obvious takeaway from this was that it was crucial to understand the nature of the developing world and the mentality of the people who work in the factories there. The conditions in which the production takes place are poor in every way. The workers and even the owners of the factories are poorly educated, they have never travelled abroad and they have to work very hard just to feed themselves and their families. (Why it is like that and if there is anything to do about it will be discussed in the second part.) That's why one has to lower the expectations to the minimum.

The solution to this is to anticipate any potential issue that might occur. Czechs have a nice saying for that: whatever there is that can go wrong, will go wrong. For example, you should not forget to state that a print must be centred and correctly oriented (not upside-down), and so on. The best practice is to create a production manual full of pictures, ship all the materials and instruments to the producer and let them do the manual part only.

After a couple more failed prototypes, we finally had something that was workable as a product for sale. We embraced the strategy of a 'continuous development' and always sold the best version of the ball we had, even though it still had to be worked on. We called the product line 'Perfect', because that was simply what I wanted them to be for me.

Between 2016 and 2018, we were selling Perfect both online and at juggling festivals in Europe. I saw that there was a demand for this type of juggling balls, so I was motivated to continue developing them in order to find a more original design. However, to try out new design ideas, such as different kinds of filling or stitching, I knew I'd have to meet the producer personally and have prototypes made and checked in real time, rather than shipped back and forth across the globe. Therefore, the next step was to visit the factory.

3.3 The trip to Pakistan and the creation of Infinities

On 8 December 2018, I flew to Lahore, a 10-million metropolis just 130 kilometres away from Sialkot, where Perfect were produced. Before the trip, I had arranged seven meetings with different factories producing balls (the factory we had been working with among them) – which was, in fact, a tiny fraction of all the businesses specializing in ball manufacturing in Sialkot (60 million footballs are produced there every year).

The plan for the ten days I had in Sialkot was to spend the first half exploring and the second half exploiting.[1] First I wanted to compare the companies and find the most reliable one, and then use the rest of the time to develop the ball with them. The plan turned out working very well. First, there were the meetings and surprisingly, they were quite diverse and they revealed a lot about the natures of the factory owners. There were those, who stuck to a serious business culture, showed me dozens of products in their showrooms, spoke about their brilliance and wanted to negotiate the prices. And then there were much friendlier ones, who wanted to take me on a ride in the city, introduce me to their family and factory workers, probably thanks to the fact that I looked more like a traveller than a tuxedo-wearing businessman.

1 CHRISTIAN, Brian. GRIFFITHS, Tom. *Algorithms to Live By: The Computer Science of Human Decisions.* United States: Henry Holt and Co., 2016. ISBN 978-0-00754-798-2.

I concluded that staying faithful to our previous producer wasn't of any value to me, so I simply chose the two best factories (one producing juggling balls and the other producing drawstring bags), based upon the responses to my ideas and the subjective feelings from the meetings.

The biggest success was, however, the prototyping phase. The idea for an improvement of the ball filling was to replace the previously used millet by plastic pellet. Although millet has the perfect mechanical properties (mainly the roundness of individual grains combined with their smooth surface), it has the disadvantage of being a biotic material that degrades over time, reacts with water and attracts pests (bugs and mice). That's why I tried to find such kind of plastic pellet that would have similar mechanical properties as millet. We found and chose to use a melt-pelletized polyoxymethylene, which as a filling in the ball felt similar to millet with the only difference of a slightly bigger weight.

The other idea for an improvement was to make the shape of the ball rounder and more precise by using a different technique of stitching. We found that the machine-sewn balls are imprecise because they are sewn on a machine (like clothes), so we decided to eliminate this by using hand stitching instead (like footballs), which allows to use industrially pre-cut panels with holes.

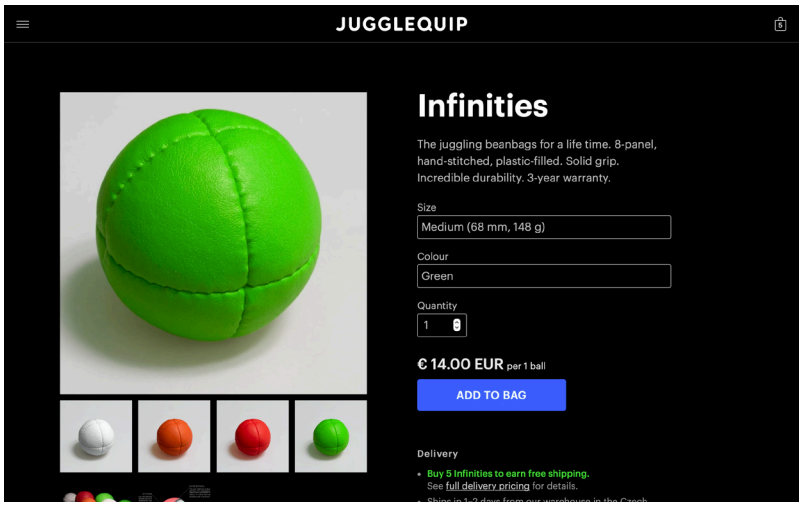
These improvements had created a whole new look of the ball together with a more stable structure. I decided to call this new line of juggling balls 'Infinities'. The reason for the name was a new feature coupled with the product, a lifetime warranty.[2] I decided for that since I was very confident about the build quality and I wanted them to stand out among all the other juggling balls on the market, most of which were very short-lived. So, when I was preparing the promo materials later, I emphasized this to position the product as high-end: expensive but long-lasting and well-performing.

2 Regarding the lifetime warranty, I later got the feedback that it is too hard to believe, since the balls must have a limited durability, too. I was also afraid that I might replace them by newer generations and not have the original ones, so I wouldn't be able to replace them. That's why I decided to change to warranty time to 3 years.

3.4 Introduction of Infinities and their presentation

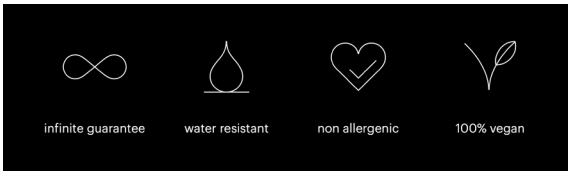
Following my return from Pakistan, I took over Jugglequip (buying Tomáš's share) and started preparing for the launch of Infinities at European Juggling Convention 2019 in England.

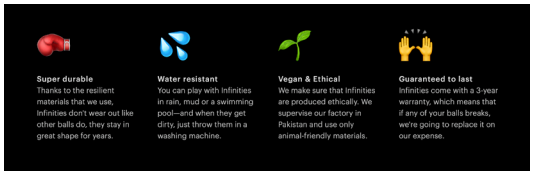
I completely redesigned the visual identity of Jugglequip, so that it was obvious that this was a big launch. As for the identity, I set the default colours to white type on a black background as a reference to performing on stage. As secondary colours, I used the colours of Infinities, which are orange, red and green at the moment. The exemption from that is the 'Add to bag' button, which is blue so that it doesn't blend in with other elements.



The logo is a custom-made typographic wordmark. It is all caps because caps make for a more solid, rectangular form and it fits well into the thin header. The rounded corners ought to be a bit playful but not too attention-grabbing, because there is a more important brand on the website, which is the brand 'Infinities'.

Content-wise, I focused everything on Infinities and their qualities; older products were discontinued and sold out to resellers. The four key qualities of Infinities I decided to pinpoint were: 'Super durable', 'Water resistant', 'Vegan & Ethical' and 'Lifetime Warranty'. I first designed linear icons to complement these for an easier navigation but later replaced them with oversized emojis, which give the presentation a more contemporary look. Coupled with the contemporary social-media look there is a review section under it, taking advantage of the distinctive Messenger interface (the reviews were added after the launch). For more considerate buyers, I created a 3D model of an Infinity ball with a partial cross-section, where there is a break-down of all components and why they were used.





At EJC, I had a ‘trader’s booth’ (a 4×3m space where you’re allowed to sell) and I also bought a double-spread advertisement in the official EJC booklet for which I designed an ad in a form of a personal message with a photo of myself.

The launch ended up being successful, about two thirds of the stock were sold at the convention and since then, the ecommerce sales are going up. To this point, more than 2,000 Infinities were sold.

3.5 Plans for the future

The project is profitable; however, it demands quite a lot of my time and energy. The long-term plan is to outsource the work and earn a passive income. The work includes (listed from the most time-consuming to the least) ecommerce orders fulfilment, marketing, production management and product development, wholesale and trading at conventions. This year, I outsourced the ecommerce work – a friend of mine who has a physical shop with juggling toys in Prague is now sending the orders on my behalf. Most of the categories of work can be outsourced and I hope that I will achieve that in the near future.

4. The analysis of ethical aspects of the project

In the previous part, I mentioned that Infinities were 'Vegan & Ethical'. That Infinities are vegan is an obvious fact, but that they are actually ethical may need more justification. In this part, I will discuss the ethical aspects in three categories: the social impact on the developing world, the environmental impact and the customer satisfaction.

4.1 Social impact

William MacAskill in his book *Doing Good Better* discusses the issue of production of consumer goods in sweatshops and the moral question whether to support it from the position of a consumer.[3] He starts by showing that many clothing brands respond to the rising demands of 'ethical consumerism' by relocating their production from sweatshops in the developing countries to own factories in the developed world. The companies then often declare being sweatshop-free.

According to MacAskill, the ethical consumers boycotting the sweatshop produced goods miss the key question *'What would have happened otherwise?'*. The common belief is perhaps that the workers are enslaved by the corporations, so that when the corporations withdraw the production from the developing countries, the workers would be living better lives. Although there may be such cases, MacAskill argues that for the most part, this is not the case: *"In developing countries, sweatshop jobs are the good jobs. The alternatives are typically worse, such as backbreaking, low-paid farm labour, scavenging, or unemployment. (...) A clear indicator that sweatshops provide comparatively good jobs is the great demand for them among people in developing countries. Almost all workers in sweatshops choose to work there, and some go great lengths to do so. In the early twenty-first century nearly 4 million people from Laos, Cambodia and Burma immigrated to Thailand to take sweatshop jobs, and many Bolivians risk deportation by illegally entering Brazil in order to work in sweatshops there."*

John Halstead and Hauke Hillebrandt in their paper *Growth and the case against Randomista Development* look into the relation between economic growth and human welfare in different countries.[4] They compare measures indicating economic situation of a country such as GDP per capita or poverty rate with measures indicating welfare, such as self-reported life satisfaction or life expectancy. The data used by Halstead and Hillebrandt show strong correlations between the two areas, suggesting that the economic growth might be a precursor of the growth of human welfare.

Lastly, MacAskill points out that all countries, which we now regard as developed, went through an 'undeveloped' phase in their history characterized by the domination of unskilled labour in

3 MACASKILL, William. *Doing Good Better.* United Kingdom: Guardian Books, 2015. ISBN 978-1-78335-051-3. p. 158.

4 HALSTEAD, John; HILLEBRANDT, Hauke. *Growth and the case against randomista development.* 2020. https://forum.effectivealtruism.org/posts/bsE5t6qhGC65fEpzN/growth-and-the-case-against-randomista-development

factories, only to become a more developed economy later: *"During the Industrial Revolution, for example, Europe and America spent over a hundred years using sweatshop labour, emerging with much higher living standards as a result. It took many decades to pass through this stage because the technology to industrialise was new, and the twentieth century has seen countries complete this stage of development much more rapidly because the technology is already in place. The four East Asian 'Tiger economies' – Hong Kong, Singapore, South Korea and Taiwan – exemplify speedy development, having evolved from very poor, agrarian societies in the early twentieth century to manufacturing-oriented 'sweatshop' countries mid-century and finally emerging as industrialised economic powerhouses in recent decades."*

Still, these arguments may sound weak to some people and that may be because they are following a different ethical theory. MacAskill, in order to decide for the more ethical behaviour, compares two alternative scenarios and chooses the one with a higher moral value. In contrast, some people prefer having a precisely defined set of rules, which must be followed so that a certain behaviour qualifies as 'ethical'. If one of that rules is Do not participate in poorly paid work, the ethical behaviour according to that theory is to buy goods produced in the developed world and not to buy goods produced in sweatshops. This conflict of ethical views is often addressed in modern philosophy (John Stuart Mill, Jeremy Bentham, Immanuel Kant) and the ethical theories are known as consequentialism and deontology (respectively).

4.2 Environmental impact

As juggling balls are a physical product, the environmental impact is a non-negligible part of the impact of the project. Quantitatively it can be analysed by counting the total carbon footprint of one ball (the sum of the CFs of the materials, production, transportation and other energy usage). Although these values should be possible to identify, it is possible to take a shortcut in evaluating the effect by comparing the product with its competition.

The key presumption for the comparison is that the customer (juggler) chooses one product or another in the given category (juggling balls). It may not be true for all real-life cases but I suppose that it is true for a majority of cases (although this may be the weakest part of the argument).

Given the presumption, we can compare the amount of balls the juggler uses up per time unit if he repetitively uses an average competing juggling ball or Infinities. From my experience, the average juggling ball wears off after 2 to 6 months, so let's count 4 months on average. Infinities have an average life time of 3 years. Thus, the two options differ by a factor of 12.

That means that an average competing juggling ball would have to have less than 8.3 % of the carbon footprint of an Infinity juggling ball in order to be more environmentally friendly. My best guess is that it might be 25 to 50 %, because cheaper materials are used and bigger quantities are produced at once in the case of the competing juggling balls, therefore Infinities are most likely more environmentally friendly in the case of the carbon footprint per use.

4.3 Customer satisfaction

To account for all the kinds of impact of the project, we should of course consider the customers' satisfaction with the product, too. To make sure that it is generally positive, I try to know my customers and get feedback from them. This is relatively easy in juggling, since the community is small (tens of thousands of people who identify as toss jugglers worldwide) and there are opportunities to meet in person and talk at juggling conventions.

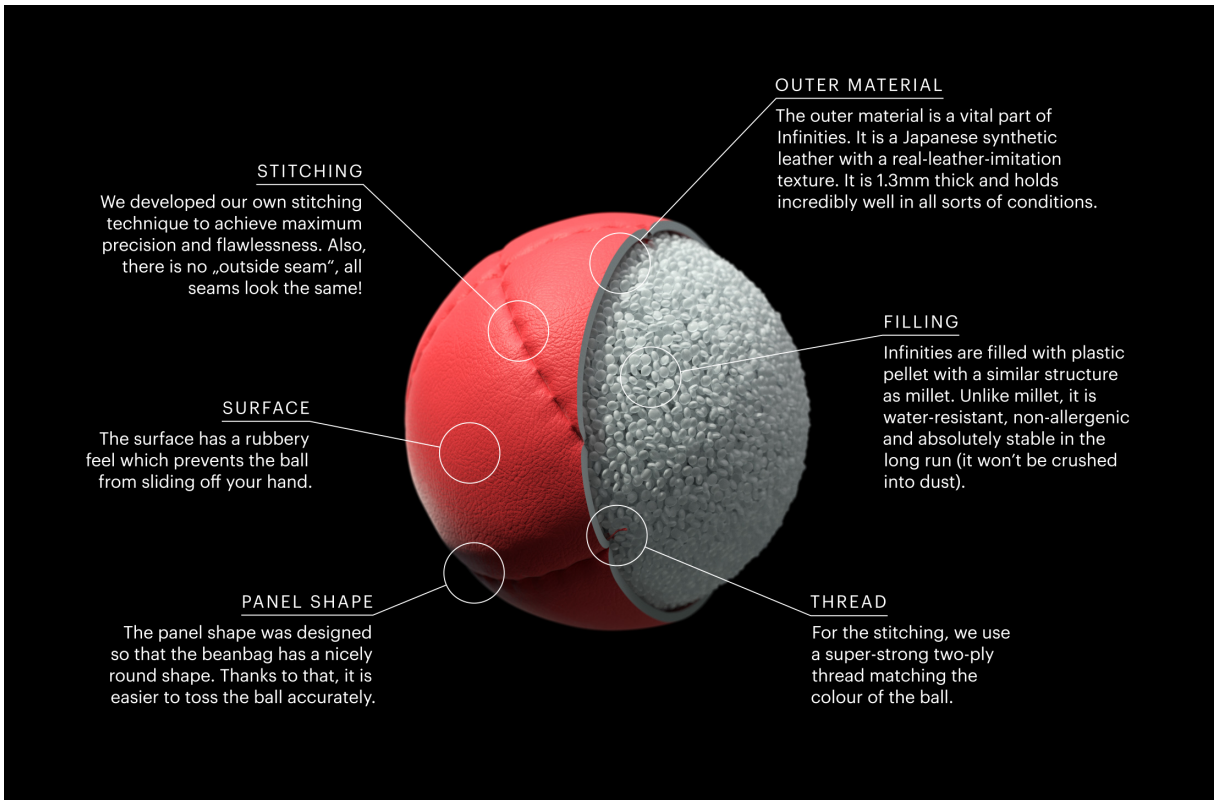
The general rule I abide by is that I am truthful and open about anything regarding the business. I also give the extended warranty, which reassures the customers that the product is of great quality. I believe that Infinities have a great reputation since the new customers often say that these balls were recommended to them by a friend of theirs.

5. Conclusion

I described the history of the project, including the design of the Infinity juggling balls, their digital presentation and visual identity. The project is a stable source of my income. Although the financial benefit is one of the main goals of the project, I try to reflect on the ethical aspects of it so that it doesn't do good only for me but also for other people who are influenced by it. Therefore, I analysed the social, environmental and customer-satisfaction impact of the project in the second part. I arrived at the conclusion that all the three areas probably have a positive impact.

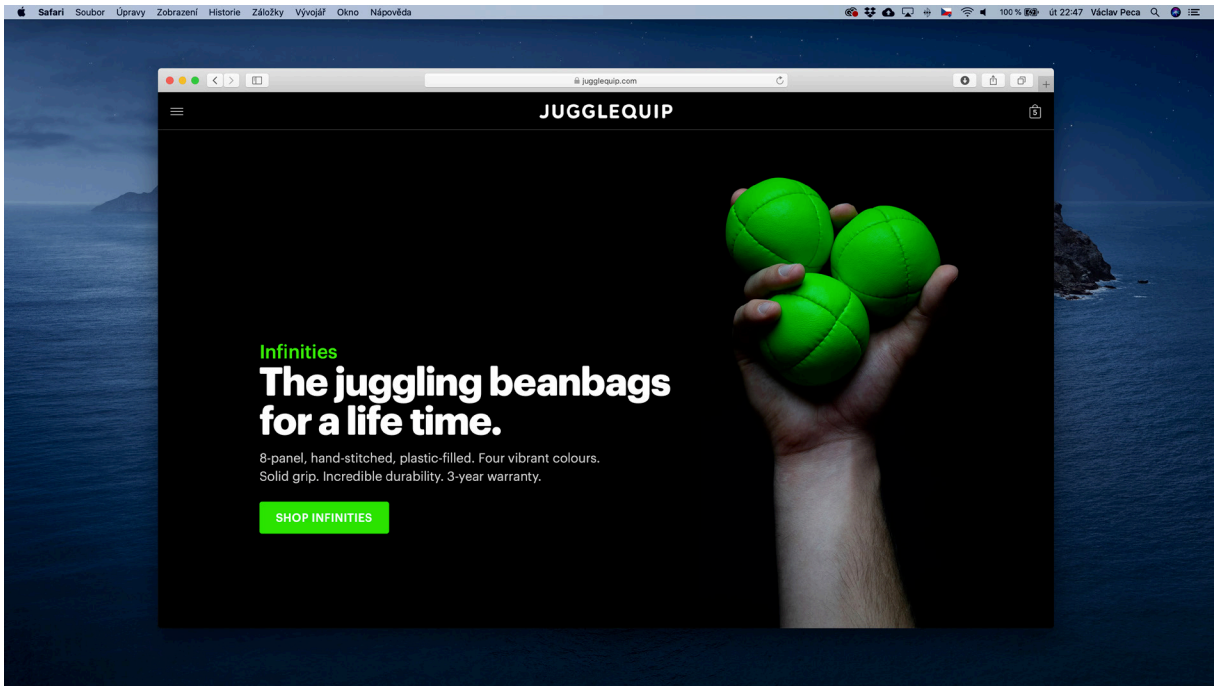
Infinity juggling ball, product photo

Infinity juggling balls in all colours and sizes

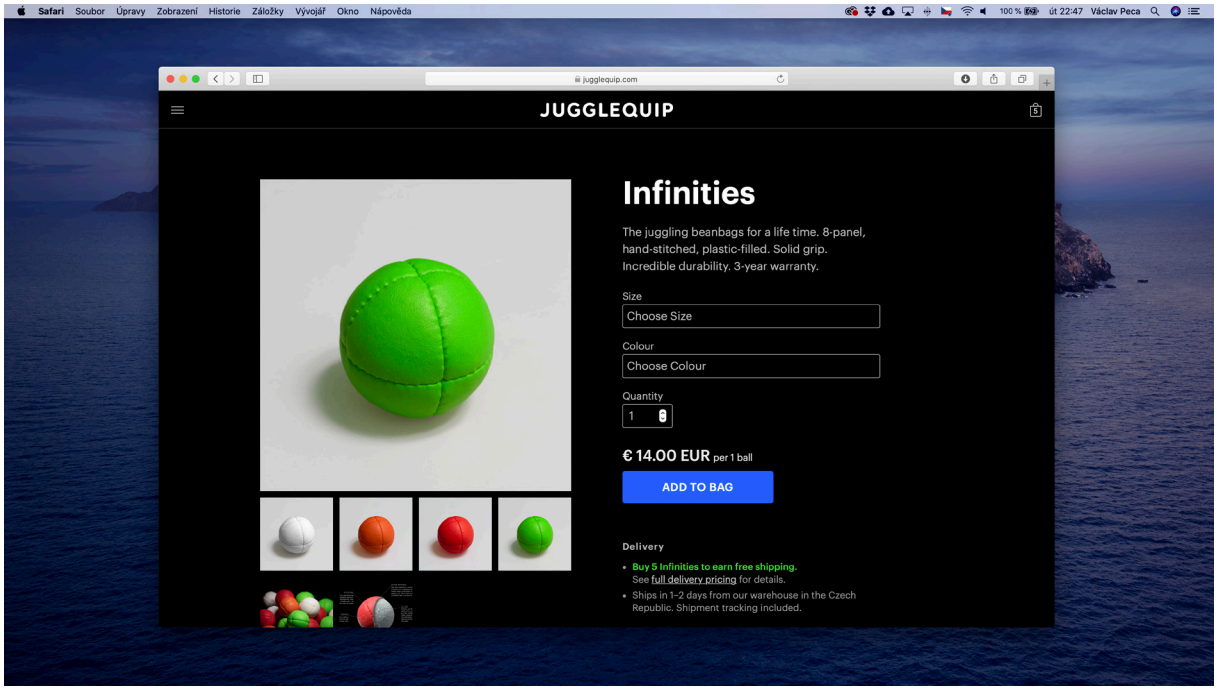


The components of the ball (3D rendered model)

Václav Peca juggling Infinities



Landing page (desktop)



Product page (desktop)

Landing page (mobile)