



SCRIBO

Teacher: Mgr. Eva Wolfová

School year: 2020 – 2021

Slovakia



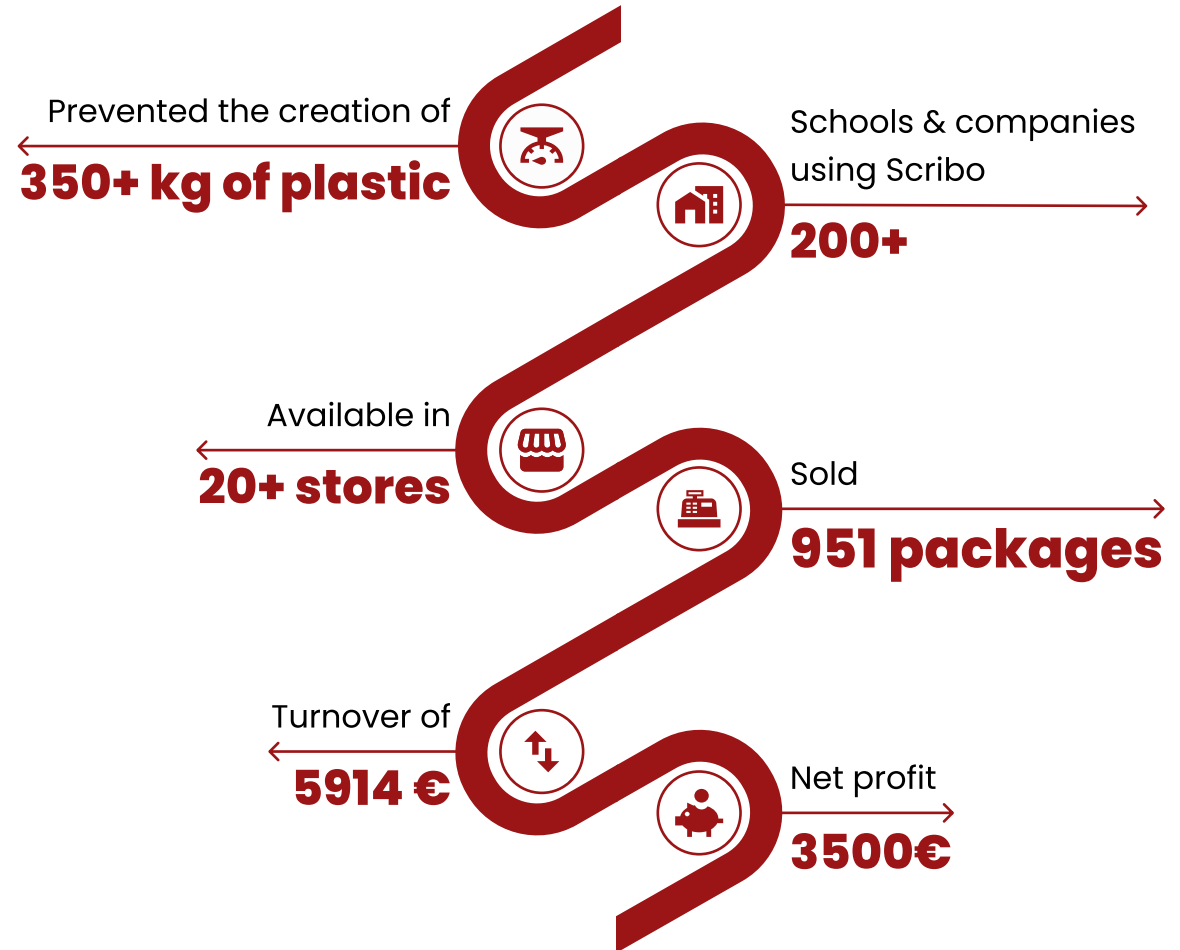
Executive summary

Mission

We are helping schools, companies, and the society to become progressively more sustainable with a novel, ecological way of writing on whiteboards. We are raising people's awareness about the impact of plastic markers to eliminate thousands of tons of plastic created each year.

Product

Scribo Markers are ecological whiteboard markers made of recycled wax waste. Our product offers a solution to dry-erase markers that are not being recycled, hence producing 700 000 tons of plastic waste every year worldwide. Scribo Markers will never dry out so you can write your green ideas and produce no waste at all.



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Problem analysis & Product

Plastic dry-erase markers

Plastic waste from whiteboard markers is a global environmental problem. Every year 35 billion plastic markers are being produced worldwide. These markers are rarely recycled, as their plastic cover cannot be separated, generating 700 000 tons of waste that end up in landfill.

Wax printers

Wax printers are a more cost-effective technology for big companies, but produce a considerable amount of wax waste that was being discarded until now. We collect this wax from several companies and agencies in Slovakia and then recycle it to produce Scribo Markers.



dry-erase



non-drying



recycled material



vibrant colours



odourless



zero-waste

Our product

Scribo Markers are zero-waste wax markers intended for writing on whiteboards and flip charts. They don't have a plastic cover so their whole body is used up when writing, thus not producing any excess waste. Their main additive is the waste produced by wax printers that we recycle by our production.

Scribo Markers are not based on a liquid base, so they never dry out, making them economically efficient. They guarantee vibrant colors and dry erasability without the need for cleaning agents. Their ergonomic shape guides even the smallest kids to the right grip. This makes Scribo Marker ideal for school, but also office environments.



Production

We've developed the perfect Scribo Marker after performing more than 350 different experiments with several additives. Firstly, we melt the main materials in precise ratios to achieve comfortable writing and erasing qualities. Subsequently, the mixture is poured into molds that guarantee even cooling of the markers, thus achieving the desired stiffness.

We apply a layer of protective coating, preventing it from staining the hands of users. We ensure the consistency of the product using systematic quality checks on each production batch. Thanks to our customers' feedback, we managed to change the composition of the coloured markers after a month of sales and achieved far more vibrant colours.



1 weighing ingredients

2 melting ingredients

4 protective coating

3 pouring into the molds

5 packing

6 final product - Scribo Marker

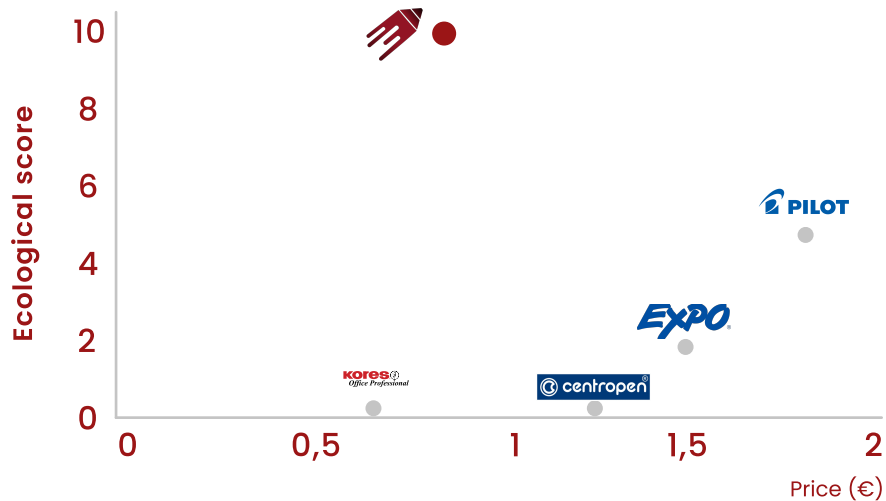
Production optimization

Initially we had silicone molds that could produce 3 markers at once. However, in order to supply the increasing demand we had to speed up the production process. We researched the production process of crayons from other companies and decided to use a similar method as the company Rodas. In cooperation with Technical University of Košice we have developed new 3D printed molds from high-resistant onyx material that allow us to produce 20 markers at once. In addition we have implemented a parallel production of several colors at the same time. These steps bring us closer to our goal of a fully automated production process.

Finances

Calculation of price

We determined the price based on the research of the market. By comparing the 30 best-selling whiteboard markers in Slovakia, we determined that the average price of the competition is 1.07€/pc. We set a more favorable price of €5.00 for a package of 6 markers, i.e. 0.83€/pc, so that people don't have to choose between price and ecological impact. Unlike our competition, we save on the main component of the markers, which we collect for free. In our survey, 74% of respondents showed interest in this price out of total 156 respondents asked. The demand for coloured sets was 500% higher than for the black sets, which led us to increase their price to 6.00 €, which equalized the demand for both sets.



Pay raise

After reaching the initial sales target of 300 packages, we increased the purchased quantities of materials in order to reduce the production costs. By establishing cooperation with suppliers PAM, Anjel and Frogpack, we have reduced the price of materials by 30%. Thanks to minimizing the material costs and optimizing our production, we were able to raise the salary of our employees from 0.6€/hour to 3€/hour.



	plan	reality
packages sold	300	951
turnover	1 650 €	5 914,93 €
profit	1 120 €	3 500,05 €

Competition

Our only competitors are classic plastic markers for whiteboards. The best-selling ones are Expo and Centropen, but even their eco-friendlier alternatives, the refillable markers such as the Pilot V Board Master, still produce plastic waste. We realised the value that the competition provides is a convenient way of writing on whiteboards. Our markers match the mentioned need and the unique added value of Scribo Markers is that they are zero-waste and they will never dry out.

Profitability

The company's profit comes from the sale of the Scribo Markers with a margin of 75% and its delivery. This way, we were able to quintuple the issued share capital of € 500 after three months. Our variable costs represent the production price, which at current quantities is 1.10€ per package, including wages of 3.00€ per hour.

profit & loss account		
A	sales	5 914,93 €
B	purchases	1 857,79 €
C	production wages	508,60 €
D	closing stock	160,00 €
E	cost of sales (B+C+D)	2 206,39 €
	gross profit(A-E)	3 708,54 €
F	salaries, commissions and bonuses	60,00 €
G	stationery	61,07 €
H	rent & hire	0,00 €
I	miscellaneous expenditure	82,42 €
J	registration fee	5,00 €
	total expenses (F+G+H+I+J)	208,49 €
K	gross profit less total expenses=operating profit	3 500,05 €
L	miscellaneous Income	0,00 €
M	net profit (or loss) (K+L)	3 500,05 €
N	corporation Tax Payable (15%)	525,01 €
O	profit after tax (M-N)	2 975,04 €
P	appropriations of profit (Q+R+S)	2 975,04 €
Q	dividends	2 231,28 €
R	donations	0,00 €
S	other	743,76 €
	balance (O-P)	0,00 €

balance sheet		
	current assets	
	stock	160,00 €
	debtors	0,00 €
	cash at bank	0,00 €
	cash in hand	3 840,05 €
(A)	total current assets	4 000,05 €
	current liabilities	
	bank overdraft	0,00 €
	loans	0,00 €
	creditors	0,00 €
	corporation tax payable	525,01 €
	VAT due	0,00 €
(B)	total current liabilities	525,01 €
(C)	balance (A-B)	3 475,04 €
(D)	issued share capital: shares at 5 €	500,00 €
(E)	profit & loss account (profit after tax)	2 975,04 €
(F)	shareholders funds (D+E)	3 475,04 €

Fixed costs consist of one-time purchases of molds and production equipment. With the next expansion to Germany, England and the rest of Europe, we estimate an increase in demand of 200%, based on our successful expansion to Czech Republic and Austria from April.

We strategically chose these countries based on demographic data of our website visitors and the number of schools. For this we will have to adjust our production capacity, by employing 2 people and purchasing more molds. We'll split 75% of profit between our shareholders and 25% will be given to our employees as special rewards.

Wolfová

Mgr. Eva Wolfová

*balance by May 27th 2021

Marketing

Target groups

Schools

45,95% of sales

Every school gradually replaces classic blackboards with modern whiteboards, this enlarges the demand for markers. We contact schools directly via email from our database with a personalised offer. They also find out about us through webinars on ecology and education. We spread the message of our product in Facebook groups focused on teaching.

Companies

27,97% of sales

Companies, especially in the tech industry, use whiteboards during presentations and meetings. We promote our product through business-focused media articles, such as the economic section of the Denník N newspaper or through social network LinkedIn.

Households

26,08% of sales

Part of our target group are individual households, where children and students use whiteboards for drawing and learning. We effectively reach this group through social media on Instagram and Facebook and also through media appearances in RTVS national television and newspaper Nový Čas thanks to their popularity.

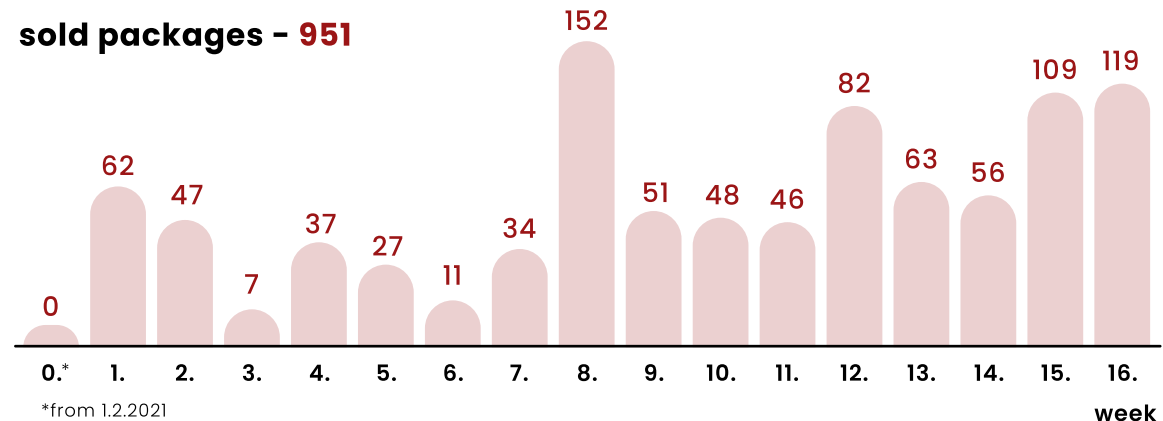
Sales channels

E-shop

We've sold 90% of all packages through our e-shop. By optimizing the website, we were able to increase the percentage of visitors who purchase Scribo Markers from 10% to 15%. In addition, our product is available on ekonetka.sk, but also on Amazon for the whole European market.

Stores

Despite our expectations, Scribo Markers have not been popular in zero-waste eco-shops, as only a few of their customers seek whiteboard markers. Based on this experience, we further focused on stationeries and wholesale office supplies, and Scribo markers are now available in 20 such shops.



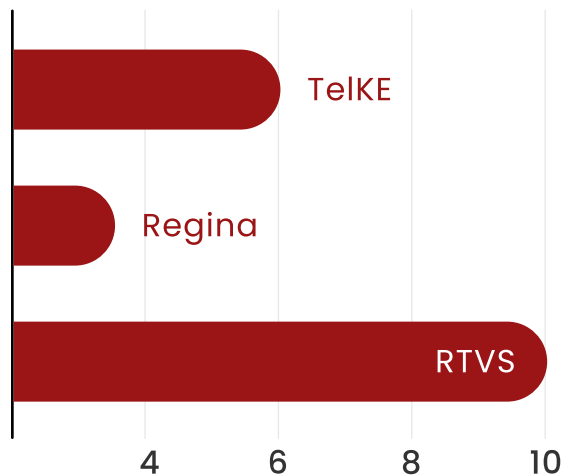
Promotion



Radio & Television

At first, after appearing in radios, we realized that this is not the ideal promotion of our product. Live interviews on television allow the viewers to see the product and its properties, which increases its credibility. Our expected sales were confirmed by television appearances that brought us almost three times more sales than radio appearances.

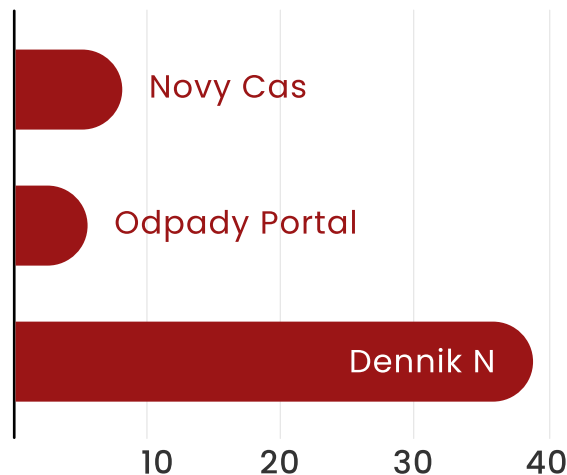
Number of orders after promotion



Online media

We measured the greatest impact to sales after appearing in online magazines that shared a direct link to our website. The best results are mainly achieved by media focused on business and ecology, such as the economic section of Denník N newspaper and Odpady-portal blog site.

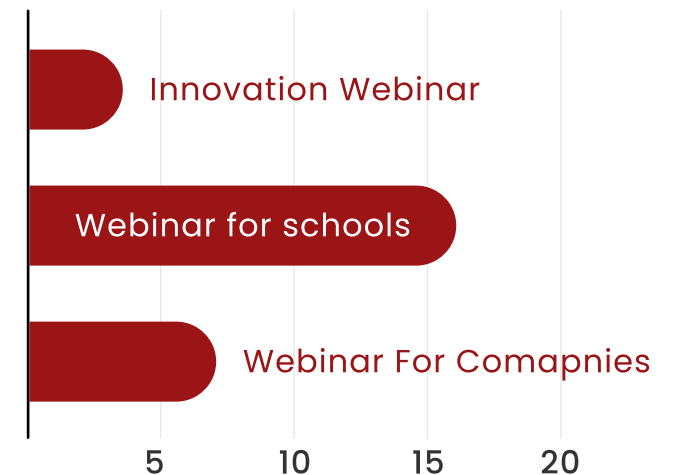
Number of orders after promotion



Webinars

We promoted Scribo Markers through webinars that focused on education and ecology to spread the idea of using recycled materials. We introduced our solution to the viewers more personally and gave them the opportunity to get to know us. We suppose that the great sales are a result of direct contact with the audience.

Number of orders after promotion



The management

Our Team

Our team consists of 20 members with clearly defined roles under 4 departments. We found out how important it is that more people are responsible for each area, in case a team member is temporarily absent. We schedule synchronization calls on a weekly basis, which we use to set our short-term goals and evaluate the work done. We use open-book management, so that everyone has access to all the shared documents and spreadsheets. Thanks to the task managing application Trello, we always have clearly defined tasks and deadlines.



Oszkár – the great dreamer

Oszkar is an example of a strong-minded leader who doesn't take "impossible" as an answer. With his hard work and motivation he always brings the team to the best results.

Grétka – the real motivator

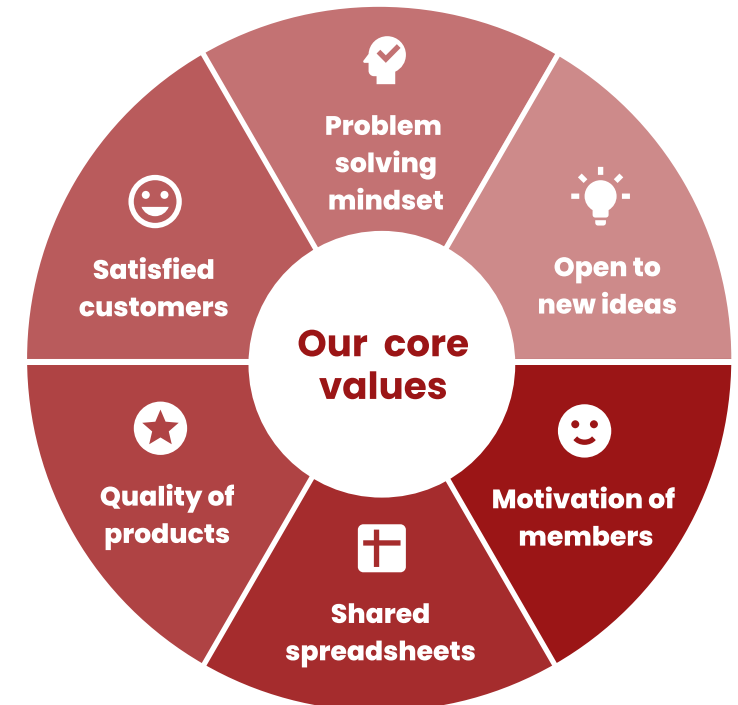
Grétka is our expert on marketing who always pushes the produkt to our customers. With her positive mood she always cheers up the team.

Mirka – the silent force

Mirka can organize the entire production and manages to keep the track of all the logistics and orders every day. She is always ready to offer her time for the good of the company.

Jakub – the critical thinker

Besides finances Jakub has an overview of every single department. His critical thinking allows him to come up with new ideas on improving the product and the company itself.



Challenges

Customer feedback

A common early feedback that we received was that our coloured markers were not vibrant enough and that they stained users' hands. We tackled this issue with a month of additional experimentation, and by the end of March 2021, we developed an improved version of Scribo Marker with vibrant colors and a protective coating layer that prevents markers from staining hands.

Difficulty: 🟡🟡🟡🟡🟡

Solution: Testing new additives

Wax printers

After the increased demand for our markers, the wax from the Košice bailiff's office was no longer enough. We decided to contact the manufacturer of the wax printers, Xerox, to collect the wax waste in larger amounts. After promoting our product in the media, other companies producing this waste material, such as Freudenberg or Reprocentrum, also contacted us.

Difficulty: 🟡🟡🟡🟡🟡

Solution: Expand wax resources

Production limit

To be able to keep up with the demand, in cooperation with Technical University in Košice we have designed new molds. They enable us to produce several markers at once. We have also 3D printed graduated cylinders to speed up the weighing process, thanks to which we can quickly measure the right amount of materials. These improvements allow us to produce twice as many markers in the same timespan.

Difficulty: 🟡🟡🟡🟡🟡

Solution: Production optimization

Home office

During the covid-19 pandemic, most offices were closed and the companies were forced to work remotely from home. This lowered the consumption of whiteboard markers, however we managed to increase sales again by focusing on primary schools that remained open.

Difficulty: 🟡🟡🟡🟡🟡

Solution: Focus on elementary school

Future

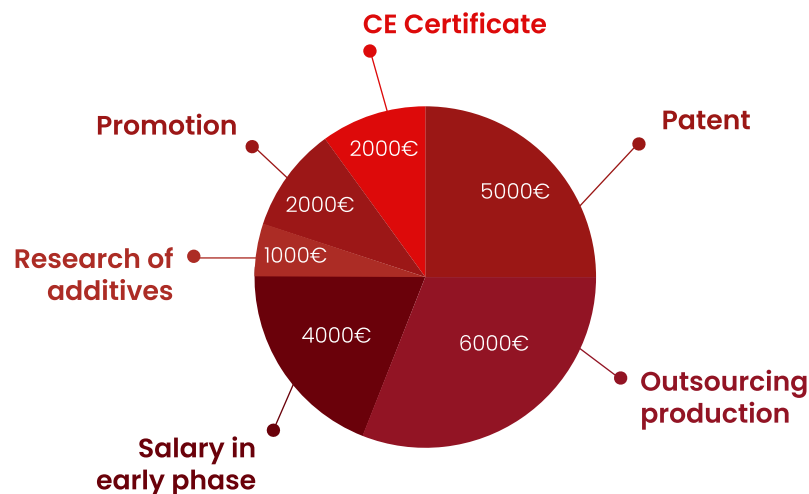
We focus on the uniqueness of our product and the added value it brings to society, which motivates us in developing this idea even after the end of our student company. After seeing the success of Scribo Markers in Slovakia, Czech Republic and Austria, our goal is to enable the rest of Europe to write green as well.

Near future

We estimate the current share of our Scribo Markers on the Slovak market of the 2 million dry-erase markers at 0.3%, which we want to increase to 1% by the end of 2021. We have increased the sales from 200 to 350 packages a month. To achieve this goal, we need to maintain this rate of sales.

Crowdfunding

In order to accelerate our production rate, we researched the production process of crayons of other companies. We're launching a crowdfunding campaign on Startlab to finance our new improved molds for production, premises and 2 workers to supply the increasing demand. Thanks to these changes, we will be able to produce over 250 packages per week and reach our goal for this year.

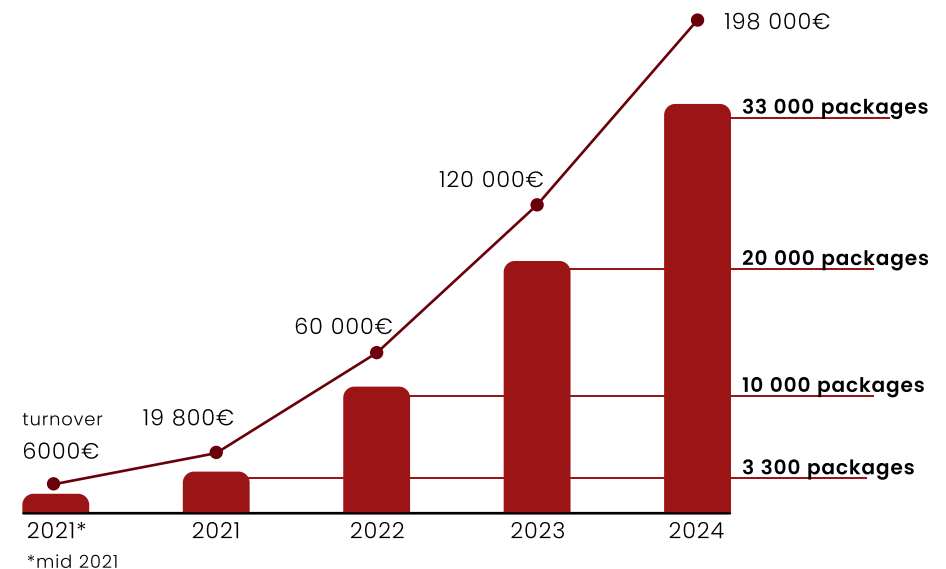


Long-term

Our long-term goal for the next 3 years is to reach 10% of the Slovak dry-erase market and focus on increasing our share on the international market as well. We'll ensure the demand for our product by contacting Slovak and foreign schools and companies directly.

Investment

We plan to raise a 20,000€ investment. So far, three private individuals and a startup accelerator called Crowdberry have contacted us. We will use this amount to get a CE certificate, patent, and gradually outsource the production. We will need 500 kg of wax waste, which is why we are currently in contact with Xerox - a manufacturer of wax printers.





Special thanks to

PAM s.r.o. – supplier of pigment

iPaint – whiteboard manufacturer

Kaviareň Take it – pickup point of orders

Ľuboš Čapčara – photograph

Michal Šašala – expert from Technical University in KE

Alex Blandón, Lukáš Weiszer – mentoring

Gymnázium, Poštová 9, Košice

