

Juno

Alert System for Allergic Reactions

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Executive Summary

Juno fuses technology and innovation to provide smart alert and notification solutions that help save lives and improve the quality of life and peace of mind of our end users.

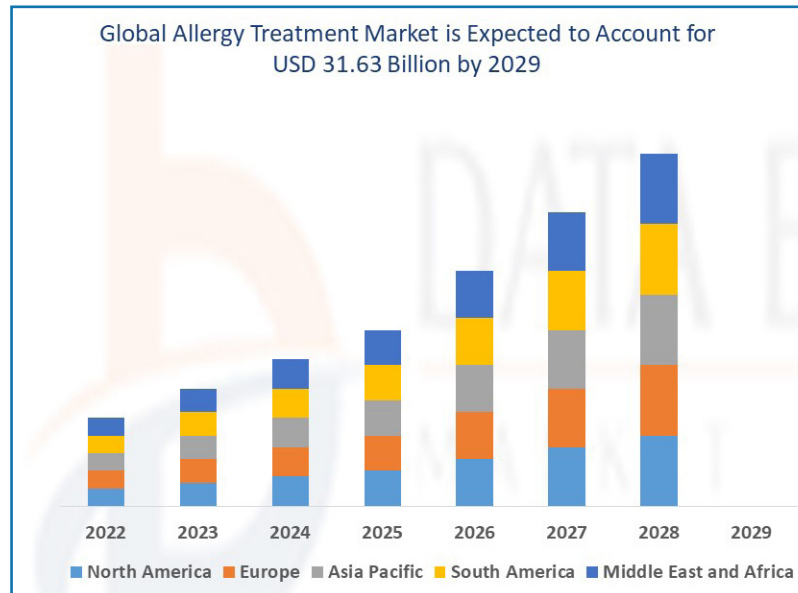
Problem and Solution

We decided to focus on providing a solution for individuals suffering from life-threatening allergies. There

are 640,000,000 people worldwide who deal with this problem directly. In the US alone, over 1,500 people die yearly from allergic reactions. The global market for allergy treatment is estimated to grow from 19.06B USD in 2021 to 31.6B USD by 2029.

Suffering from anaphylaxis means a person can get into a life-threatening situation at any moment. The immediate first aid is an EpiPen auto-injector that contains epinephrine, which helps stop the allergy attack for approximately 20 minutes, so patients still need to seek medical help immediately after using the injector. However, the intensity of the event and its consequences can prevent a patient from alerting help or even completing the injection – which can be the difference between life and death.

We developed HappyPen, an automatic alert system for situations of severe allergic reactions. HappyPen is a fully automated smart case for EpiPen injectors that provides alerts to multiple contacts and emergency services and verifies the proper immediate actions. With our system we enable patients and their loved ones to rest assured, knowing they have a trusted partner who has their back and will assure they get the needed treatment.



640,000,000
worldwide deal with this problem



The Problem

In order to find a solution to a significant and important problem we decided to focus on individuals who suffer from life threatening allergies and help them conduct a richer, worry-free lifestyle. There are 640 million people worldwide who suffer from allergies, and approximately 1,500 cases of death each year in the USA alone. Living with life threatening allergies could mean living with constant fear and anxiety, both for the patients and for those around them.

The most effective available treatment for an acute allergic reaction is the use of an EpiPen auto-injector. The EpiPen contains epinephrine, which once injected, can reverse and relieve most of the more severe allergic symptoms and save patients' lives. Every individual suffering from a life-threatening allergy carries an EpiPen with them. After the injection, the allergic patient still needs to seek immediate medical care for further treatment and observation. During the reaction, the patient might suffer severe weakness, dizziness, shortness of breath and even loss of consciousness, all of which can prevent the patient from using the EpiPen or calling for help.

Our company's vision is to become a trusted partner for developing and promoting technologically advanced life-saving solutions, easily accessible and available to patients with life-threatening allergies all over the world.

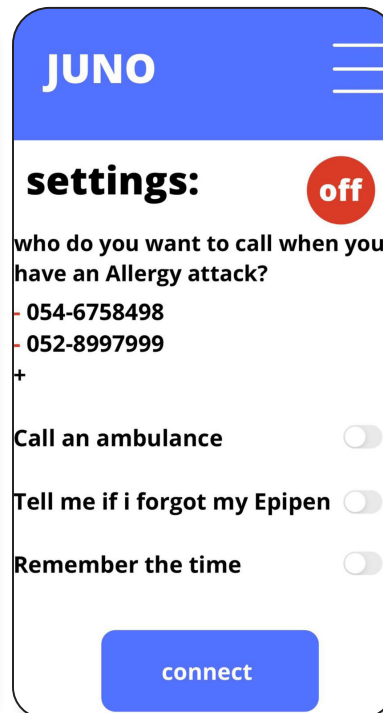
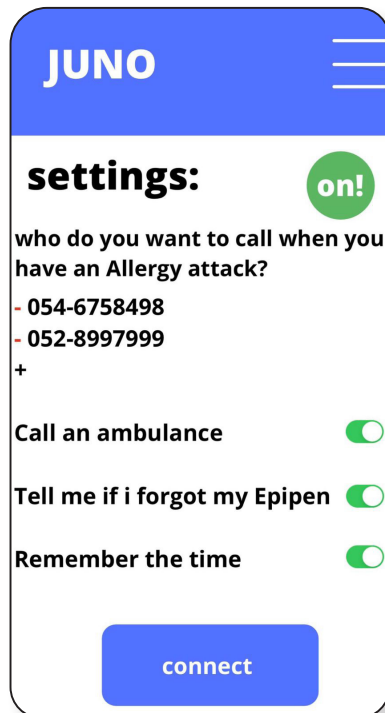
Our business goals include expanding our solutions across our target audience as well as making them cheaper and more accessible. We hope that every individual suffering from a life-threatening allergy will eventually carry our "HappyPen".



Solution

We developed a lifesaving technology that is used during an allergy attack to ensure the proper people are notified and the patient receives lifesaving treatment without delay.

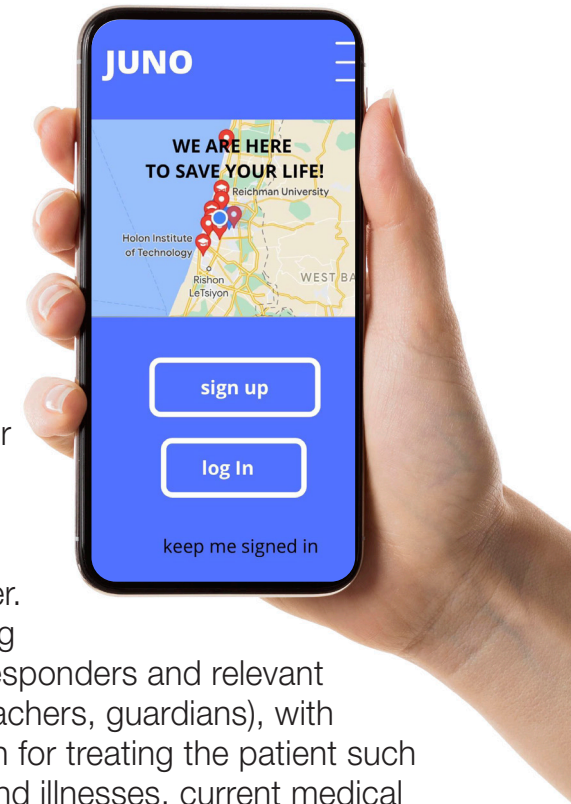
Our product - HappyPen, is an automatic alert system comprised of a smart EpiPen case and a dedicated app. The app is used to program the system, The system itself is completely standalone and operates automatically in case of an emergency, even without the phone.



The system automatically identifies when the user takes the injector out of the case it triggers a predefined set of actions configured by the user. These include sending a message to early responders and relevant contacts (parents, teachers, guardians), with necessary information for treating the patient such as: a list of background illnesses, current medical treatment and drug allergies.

Users can customize the type of information sent, number of contacts, and even switch contacts depending on the time of day (e.g. in the morning notify the teacher, the school and the parents, during the afternoon notify parents and babysitter). The system also sends pinpoint GPS information to all contacts to easily locate the patient and reduce time to treatment,

Finally, the system will also provide voice / text alerts and instructions so that people around the patient will know what to do. These include explanations and instructions such as "Help. Allergic Reaction",



“Call emergency services”, “ensure patient’s airway is not restricted”, etc.

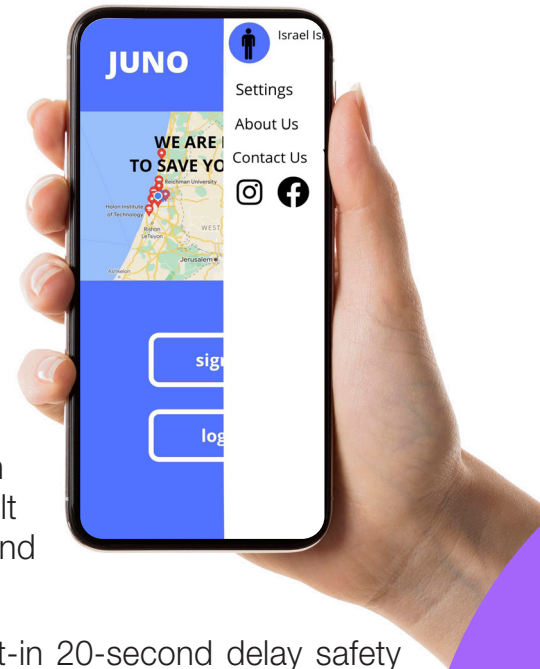
Product Roadmap

The smartcase includes a switch button, controller, SIM card, cellular communication module, GPS and a battery. When the injector is pulled out of the case the switch button is released, the controller recognizes this and as a result the communication module sends the relevant alerts and information.

In order to prevent false activation, the system has a built-in 20-second delay safety mechanism during which the user will have the opportunity to cancel the activation in case of a false alarm or accidental opening of the case. During those 20 seconds, the user can cancel the alarm by putting the injector back in the case. If the injector isn’t nearby, the user will know someone else opened it and will be able to cancel the alarm through a message that was sent to their phone.

For the future generations of ‘HappyPen’, we came up with several ideas. Our roadmap includes additional features and innovations, such as using recycled material that will be better for the environment or integrating special isolating materials that will help keep the EpiPen injector cooler and preserve its efficacy.

We also plan in the future to upgrade the communications module and move to an eSIM (Embedded Sim). eSIM works globally, which means that the users won’t have to buy a new SIM or communication’s package every time they go to a different country.



The technology that we use in our product is modular and can be easily adapted for use with other solutions that require alert and notification. This will allow us to expand our company to different fields and opportunities while collaborating each time with different partners to make their products smart.

Market and Marketing Strategy

Competition

Our platform technology caters to a broad range of target audiences in need of immediate alert and report systems for various situations. Our debut solution, currently in final stages of development is the HappyPen, an automatic alert and reporting system integrated into an EpiPen case.

Following extensive market research, we found only one direct competitor that offers a somewhat similar solution - "Veta smartcase".

The company has a similar product although they are using an inferior technology and have fewer features and versatility than HappyPen. Their solution is based on Bluetooth and therefore requires the user to have a phone nearby. If the phone is too far away, without battery or gets disconnected from Bluetooth- the product won't work.

Therefore, entire segments in our target audience, like kids and even adults that struggle with technology, are unable to use the competing product. This creates a "blue ocean" opportunity for Juno in the market.

There are no other competitors we could identify who offer a technological platform. Through our platform, we can develop a variety of applications and products to expand our business potential with minimal effort.

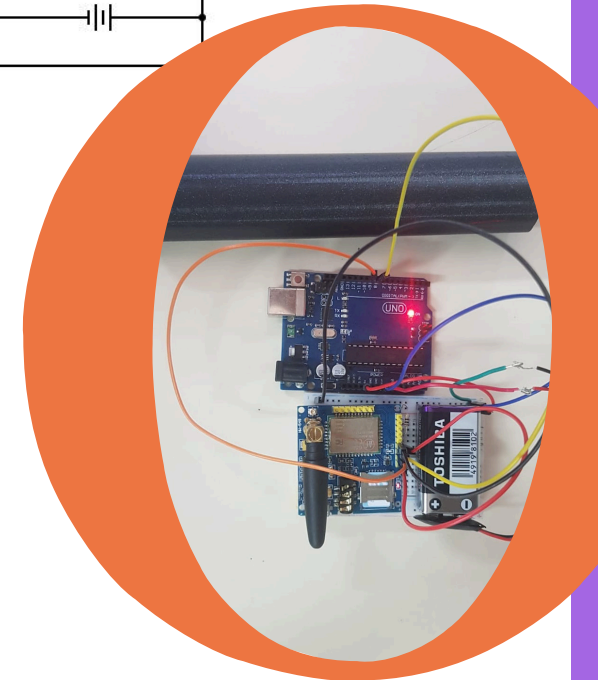
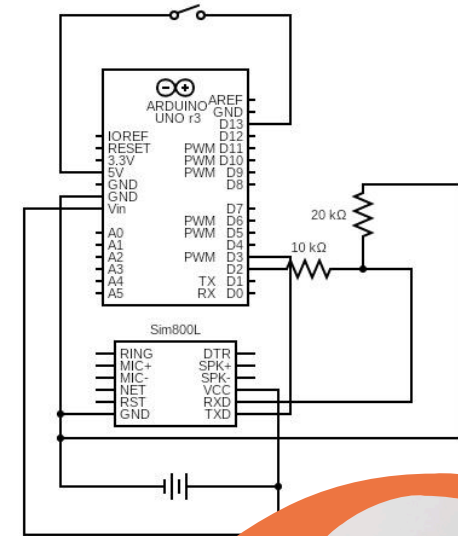
Competitive Comparison Chart

	HappyPen	Veta smartcase
Requires a connected phone nearby	No	Yes
Sending location	Available to everyone	Available only to people who downloaded the app
Sending alert	Available to everyone	Available only to people who downloaded the app
Sending medical information to EMA for immediate treatment	Available	Not available
Can be used as an alert system from unwanted openings and uses	Yes	No
Send alerts to specific contacts based on the time and choice of the user	Yes	No

Our marketing strategy is based on collaboration with relevant 3rd parties. Specifically, we will partner with manufacturers and distributors in the medical equipment and supplies market in a B2B business model while simultaneously supporting sales to end users through social media marketing and PR. Our partners will handle sales to retailers and end users, logistics and customer service. We have been in contact with several potential partners so far, including Meridian Technologies, a manufacturer and distributor of EpiPen Autoinjectors and GYE Holdings, a distributor of Israel medical supplies and technology for the Far East markets. All companies we have been in contact with have expressed the desire to collaborate and believe the HappyPen has significant market potential.

Our initial focus will be on the aftermarket, i.e. sell the system as a standalone solution to house the EpiPen, regardless of the manufacturer. Users will buy this separately from the injectors. Our goal is to eventually partner with manufacturers to embed or integrate our solution at the factory or manufacturing level.

By using the "after-market" strategy initially, we are able to cut down on regulation and complexity and significantly reduce our TTM (time to market). Furthermore, we will market our product to end users through social media. Social media enables us to target specific audiences by adjusting our content to reach specific users. Our marketing strategy includes community and content creation, collaboration with relevant associations, foundations (e.g. organizations such as "Allergy and Asthma Network", "FAACT" – Food Allergy & Anaphylaxis Connection Team, "FARE" – Food Allergy Research & Education.) and influencers while constantly receiving feedback from the community and developing our products.





Management & Team

We are a team of 11 highly motivated teenagers age 15 who understood we have the power to make a change and an impact in the world - and that's how Juno was established. We are all with the same drive and enthusiasm for achieving our collective vision; to make a change in the world led by our main values of saving lives and improving the quality of life of our users.

When we established Juno, we got to know each other and mapped out each person's strengths and weaknesses and divided the work accordingly. We created together a team full of diverse capabilities that together can move mountains. We celebrate our progress but also embrace our failures and learn, evolve, and grow from them. Through the different qualities, skills, and personalities, we all have one thing in common - the same passion and motivation about the

business and entrepreneurship world. Our company's main difficulty was working from a distance together. Our group includes people from all over our country which made it harder for us to meet up in person and sometimes affected our progress. As the generation who spent a major part of our school years online during lockdowns, we adopted those tools and solved this difficulty.

We learned how to use the online tools to our advantage. Together we worked online on calls, on different platforms, all to achieve progress and the best team work together.

We used collaboration tools and shared drives to ensure everyone has access to the company information. We held weekly meetings as a basis, but in reality ended up working together and meeting constantly as the project developed and the work grew.



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Maya Oren
under technology



Dana Rawitz
under marketing and
communications



Emma Elazar
under sales



Dan Sagi
under finance

Financials

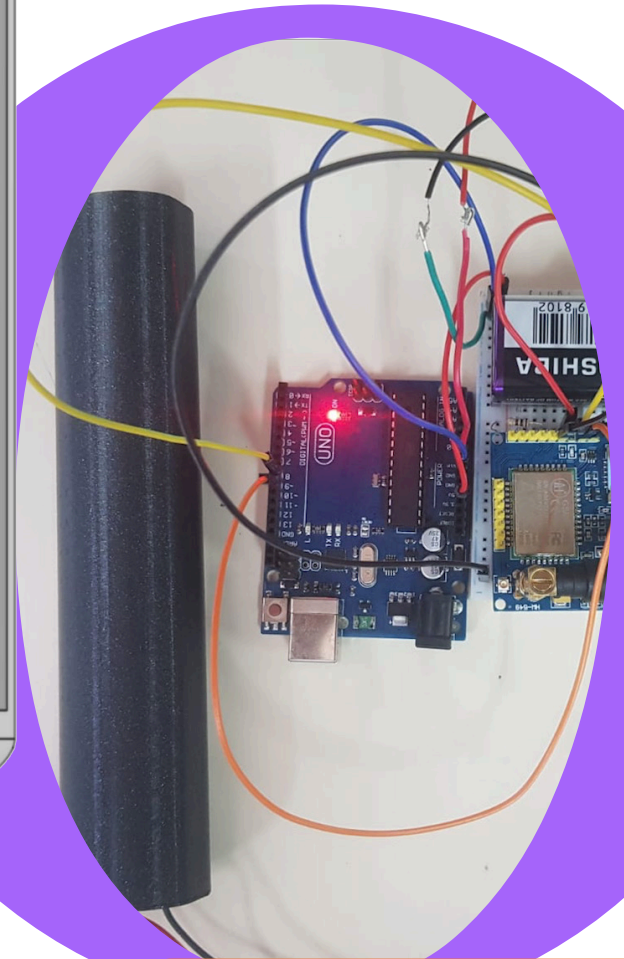
We began the working year with an initial capital (from shareholders) of 206 USD. During the year, we conducted several fundraising events during which we sold food, plants and other products to raise money for the company's activity. We managed to raise a total of 506.15 USD.

After winning the Israeli JA competition, we managed to secure a grant of 7800 USD from the KY Development Fund, in order to help finance our delegation to the JA Europe event and further develop our solution.

For the development of our prototype, we initially received a price quote of 6500 USD from a company that helps startups develop their technology. We managed to collaborate with students in the UAV program in our school, who agreed to help us build our prototype for free. This saved as significant time and money.

After the completion of the construction of the prototype, we will be starting mass production of the product in preparation for sale. The cost of one unit is approximately 15 USD, with a target end-user price of 38 USD per unit.

As a prelude to the channels described above, we plan to operate in a pilot format during which we will begin the sale of 1000 units of the product. Following our business model, which consists of two different paths of sale (B2B and B2C), we will need an additional 15,000 USD to complete the product



Over
\$8,000
from fundraising and grants

Finance and Results

Profit & Loss Account (EUR)

A	Sales	
B	Purchases	
C	Production Wages	-
D	Closing Stock	
E	Cost of Sales(B+C-D)	
	(A-E) Gross Profit	-
F	Salaries, Comissions and Bonuses	-
G	Stationery	-
H	Rent & Hire	-
I	Miscellaneous Expenditure	2354.54
J	Registration Fee	-
	Total Expenses (F+ G + H + I + J)	2354.54
K	Gross Profit Less Total Expenses (Operating Profit or Loss)	-2354.54
L	Miscellaneous Income	8512.15
M	Net Profit or Loss (K+L)	6157.61
N	Corporation Tax Payable	0
O	Profit after Tax (M-N)	6157.61
P	Appropriations of Profit (Q + R + S):	6157.61
Q	Dividends	-
R	Donations	-
S	Others	-
	Balance (should be nil) (O-P)	-

Balance Sheet (EUR)

Current Assets	
Stock	
Debtors	-
Cash at Bank	-
Cash in Hand	6363.76
(A) TOTAL CURRENT ASSETS	
Less	-
Current Liabilities	-
Bank Overdraft	-
Loans	-
Creditors	-
Corporation Tax Payable	0
VAT Due	-
(B) TOTAL CURRENT LIABILITIES	-271
(C) BALANCE (A-B)	6157.61
Represented by:	-
(D) Issued Share Capital	206.15
(E) Profit & Loss Account (Profit after Tax)	6157.61
(F) Shareholders' Funds (D +E)	6363.76



Business Activity and Profitability

As mentioned, most of our income, excluding grants and work-in-kind, was based on fundraising activity through sales of various products, such as baking pastries, selling jewellery, etc. Of the USD 8512.15 we raised, which constitutes our gross profit, we remained (after developing the prototype and other expenses for the company) with approximately USD 6157.61.

Production of the HappyPen will be done through 3rd party contract manufacturers. The main activities are production of the case itself (plastic mould injection) and assembly of the various components. Price per assembled unit (Ex-factory) will be under 15 USD for larger production runs (above 5,000 units).

provide with each HappyPen. This is recurring revenue. However, it is important to note that we will initially offer the product with a communications package included, in order to reduce complexity (need to sign users on a communications package agreement, etc.) and to make the offering more attractive.

Our company is easily scalable: our modular technology can be used in many emergencies. It is possible, for example, to use the product to alert you to the opening of weapons cabinets, the medicine drawer, etc. The expansion will have a direct impact on profitability as we turn to new markets and target audiences without investing an excessive amount in research and development

The company's profits will be generated from two streams – product and communication. The product stream is revenue from 1-time sale of our products to end users through our channels. The communication revenue stream will be generated from the subscription fees for the cellular communication package we will





<https://www.instagram.com/juno.company.official/?igshid=YmMyMTA2M2Y%3D>



https://youtube.com/channel/UCsZT9IKsT_4tGd2bDtRSswg



<https://vt.tiktok.com/ZSdWk5DCM>



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