

ENGAGING ENTREPRENEURIAL ECOSYSTEMS FOR THE YOUTH

Kinetik Automotive Ltd: Venture Biography



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Content

DisclaimerIII		
1	ID Card	1
2	Founder(s)' Background and Motivation	1
3	Business Modell	5
4	Startup development	5
4.1	Idea-Generation6	5
4.2	Incubation / Founding	5
4.3	Scaling-up / Consolidation	7

Disclaimer

The document presents a story of an existing startup prepared through desk research and a narrative interview with the founder. For reasons of data protection, the names of people, cities, support programmes and companies are exchanged with pseudonyms. The biography has been approved for publication by the startup and can be used for further research by citing it accordingly (see below).

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1 ID Card

Name of the startup	Kinetik Automotive Ltd		
Which ecosystem?	Varna		
Founding date	2016		
Sector	Automotive		
No of employees	15		
(Expected) Turnover	250 000 – 300 000 EUR		
Male/female founder	Male		
Timeslots of startup phases			
idea generation	2016-2018		
incubation	2018-2021		
consolidation	2021-2023		
Funding / financial support	Own funds, crowdfunding (fundraising campaign)		

2 Founder(s)' Background and Motivation

Theodor is a serial entrepreneur who has started seven or eight businesses in the last 13 years. His first venture involved the development of banking software, which had the unfortunate luck of coming to light months before the 2008 global financial crisis.

One of his favourite projects is Emailio – a software application aimed to improve the habits and overall experience of users of email services. The idea for the app won Startup Weekend in Varna and, soon after that, became one of the first startups to receive support from Venture Capital fund Eleven. The founder's team is young and ambitious. They apply and are accepted into one of the most prestigious startup accelerators in the world - Y Combinator- and he moves to Silicon Valley.

"They invited us for an interview before we even had an existing product – we only had one demo, but they liked us and gave us a chance", he recalls. Although Emailio did not reach business success, this idea continued to be developed at Duke University in the United States to help organise the data from research studies received by email.

He spent 5 years in the United States, working on various projects while running his software company, Dev Laps, based in Varna.

On one of his returns to Bulgaria, he and his long-time friend from high school discussed trends in the electric car market. "Back then, Tesla was not what it is now," recalls the entrepreneur. At that point, they both decided to take on a "side project" to design and build their own sports electric car from scratch, not as a business project or solving a specific problem but based only on their shared passion for electric cars and naive believe that they can do something that usually requires huge investments and hundreds of qualified professional staff.

Looking back at his entrepreneurial path, he marks some important milestones, like his passion for STEM and graduating from the High School of Mathematics in Varna, Bulgaria. His then schoolmate was

passionate about drawing cars, later becoming a professional graphical designer and a co-founder of Kinetik Automotive.

As to his professional experience, the entrepreneur greatly values his first job at an Irish company as an intermediary in returning taxes to students and workers who worked or studied abroad. The company later became one of his major clients when he had his own software business, proving how important it is to keep good relations with former employers.

He had always been eager to explore other countries and cultures. That was one of the main reasons to enrol in an 18-month Japanese management course at the University of National and World Economy in Sofia. He was also a student in telecommunications at the Technical University in Varna at that time.

Although he was the youngest and least experienced from the group in the management course, he was highly motivated to graduate among the top four – who were awarded a visit to Japan, including meetings with top management at some of the most renowned factories like Honda and Toyota.

He values his experience in Japan highly and says that it changed his views in many ways. He also valued how crucial the culture and mentality of the people is for a company's success. "Culture eats strategy for breakfast", he cites a famous quote from Peter Drucker.

After his return from Japan, he started as an entrepreneur. His first idea was for an online platform that connects people who are looking for credits with banks, then into the insurance business and so on through his experience in Silicon Valley and then finally returning to Bulgaria, where he founded Kinetik Automotive and Kinetik Karting, a few years after.

3 Business Modell

The initial business idea was to create a highly customisable sports electric car. Using rapid prototyping technologies and large 3D printing, the idea was to create a unique user experience for high-end customers who can choose their own car characteristics and, with the help of the Kinetik automotive designers' team, create the sports car of their dreams. This is how Model 07 was created following the vision of Kinetik Automotive Company.

One major setback of the realisation of their product are the legal requirements that must be met to prove its technical safety and to be approved for driving on the roads. It would cost thousands, even for a small part, to pass the necessary tests and millions for the whole car to be officially "road legal".

In parallel, the team was developing eKart - an electric karting vehicle – a niche that was not yet fully exploited. The other products on the market were often normal cars that were electrified without considering the changes in the weight distribution of the battery and other specifics of the design of electric vehicles.

Finally, an incident at the production plant in 2021, when all equipment, including the Model 7 and 3D printers, burnt in a fire caused by an electric short-circuit, led to the decision to restart the company, and rebuild everything, but this time fully in the direction of electric karting.

The business model was further developed to offer electric karting as a service: The company has developed one of the best designs, combined with their own software. This made it possible to adjust the car's characteristics to the pilot's progress by only changing the software settings, thus eliminating the necessity to change the vehicle itself – as was the case with the other vehicles.

4 Startup development

Like every great story, that of Kinetik began with a single idea and the question, 'Why not?'. Back in 2016, they embarked on a journey to create the world's first all-electric sports car for the track. It was envisaged to be highly customisable and extremely exciting to drive, with proprietary software and completely built in-house.

The project was met with a lot of scepticism, and the team was told they were way out of our reach and had no chance of succeeding. People's attitudes changed, however, as Kinetik unveiled their fully operational prototype at the John Atanasoff Innovation Forum in late 2019, having accomplished all the above-mentioned criteria and a lot more.

4.1 Idea-Generation

The idea for establishing Kinetik started as an experiment, led by the enthusiasm of its founders to try something new that no one has done before. The restrains in the resources and lack of experience they compensated by trying new approaches like 3D printing and learning from their own experience and failures.

Their first project envisages the electrification of the Lotus 7. "It's a classic track car - light, with great handling," says the entrepreneur. Another important factor is that the entire Lotus 7 design is in the public domain and can be used freely.

The initial idea was to try to replace the diesel motor with an electric one. The moment the "car", a chassis with a motor, goes to the test track, they decide to continue and create their own design for an electric car.

4.2 Incubation / Founding

2018-2021

The company Kinetik Automotive was founded in 2018. It started as a hobby in the garage of the software company Dev Lab, which he also founded.

They realised from the moment they wanted to design their own electric car that this could not be done in a conventional way – neither did they have the means or the experience to do so. The founders saw an opportunity in the new 3D printing technologies. They purchased the largest printer on the market from Germany and started experimenting with it. It took almost a year and a half to study the technique. For example, they had to learn how to regulate the temperature in the hall so that the details could cool down in the proper conditions. The slightest change from opening the door of the premises could lead to damaging the parts and having to start all over again. The printer could make details up to 1 m2, so the engineers had to figure out how to assemble the larger parts by joining several small ones. The manufacturer of the 3D printers supported them in this challenge by donating the consumables for the 3D printing. For them, as the printer's seller, it was also useful to learn about this new type of application and the capabilities of their equipment.

The first prototype of Model 07 was ready and operational in 2019 and was successfully showcased at the John Atanasov forum that held place in Sofia Tech Park.

The rapid prototyping technology helped develop several prototypes of eKarts in parallel, which was to become their main division and develop in a successful business model of eKarting as a service.

An unfortunate event marks the end of this phase – a fire broke out in the production base, burning the Model 07 prototype and all the machinery. Only two of the eKarts were saved by the team. Fortunately, no one was harmed. Soon after the fire, Kinetik started a fundraising campaign for donations and attracted volunteers and other companies who offered their help to clean up and rebuild the factory. Only a few months after the incident, the team decided to start over with their projects, even though with a much-reduced capacity. This time, they put their effort into the more promising eKarting project.

4.3 Scaling-up / Consolidation

Starting from three people in the beginning, the team of Kinetik now consists of 15 people. Most of them have studied abroad or had careers in large multinational companies but were attracted to the challenge of creating something new and revolutionary.

From the beginning, it was decided to "reinvent" the electric karting: to make own chassis with the necessary distribution of the weight of the batteries, make their own optimised design and help considerably reduce the eKart's weight.

Furthermore, Kinetik Karts developed in-house software that would allow one eKart to have settings to be piloted in different piloting classes through software modifications. This makes it possible for a pilot to develop and progress through the different levels without buying a new eKart for each new category. Other features include using cloud solutions to see real-time data for the pilot performance and for the specific track and terrain.

For the future, the main goal remains to create a new business model of "eKarting as a service": To offer a fleet of 20 eKarts, to be able to position them in a given country or on a given track and, together with local partners, to organise eKarting championships. Pilots who want to participate can use the eKarts and all the accompanying services. All they have to do is to pay a participation fee. New features in the software platform are envisaged, using AI, to help collect data from many pilots on a given terrain. The data will then be analysed and used for reference by the pilots to train them and use it as a tool to improve their performance.

Furthermore, having realised the importance of STEM education, Kinetik has developed its <u>STEAM</u> <u>Educational Go-Kart Kit</u> as a way to give back to the community and inspire the next generation of electric automobiles and engineers.

The EduKartGo is an educational kit provided to high schools, educational organisations, colleges, and universities. The recipients will receive their karts disassembled part by part until the very last nut. Together with that, the kit will have all the needed tools to be assembled, video instructions for the students, a learning curriculum for the participants (both students and teachers), and extra materials such as graphics for the bumpers.

The STEAM EduKartGo Kit is foreseen to be built by students between 8th and 12th grade or 1st-grade university students, where up to 20 future engineers and car enthusiasts will be able to join forces.

It is calculated that the whole assembly of the STEAM EduKartGo Kit can take up to 70 lessons. This includes theory and practices. In matters of studied disciplines, the kit covers SEVEN directions:

Science Electronics; Mechanics; Software and hardware programming; 3D printing and modelling; Green mobility; Graphic design & Digital Marketing

Imprint

Publisher and Contact

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Ecosys4you – Engaging Entrepreneurial Ecosystems for the Youth (2023-2026) strives to bridge the entrepreneurial ecosystems of the Ruhr, Germany, Varna, Bulgaria and Slovenia by connecting young founders, startups, HEIs and other ecosystem actors.

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