

#### "BE SMART-HUNGARIAN SMART CITY & MOBILITY DAY"

WO? IHK AACHEN, THEATERSTRAßE 6, 52062 AACHEN WANN? 14. DEZEMBER 2017, DONNERSTAG, 15.00 UHR

# INNOVATIVE STARTUPS AUS UNGARN STELLEN SICH VOR, DIE IM ZEITALTER DER DIGITALISIERUNG DIE ZUKUNFT VON SMART CITIES UND MOBILITÄT MITGESTALTEN

# INNOVATIONS- UND DIGITALISIERUNGSSTRATEGIE UNGARNS INFORMATIONEN AUS ERSTER HAND ÜBER ATTRAKTIVE POTENTIALE UND PERSPEKTIVEN FÜR UNTERNEHMEN AUS DEUTSCHLAND

# MODERATION - VIDAR ANDERSEN "[...] ONE OF THE MOST IMPORTANT PERSONS IN THE GERMAN STARTUP SCENE." - WIRTSCHAFTSWOCHE

VERNETZEN SIE SICH MIT INNOVATIONSMANAGERN ANDERER UNTERNEHMEN UND ENTDECKEN SIE LÖSUNGEN, DIE AUCH IHR BUSINESS REVOLUTIONIEREN KÖNNEN!

ANSPRECHPARTNER: LEVENTE KARDOS, Wirtschaftsattaché - Tel.: +49 171 68 58 740 KATALIN SZABÓ, Referentin für Außenwirtsschaft - Tel.: +49 211 302 169 -408

WEITERE INFOS ZUM PROGRAMM: https://dusseldorf.mfa.gov.hu/news/be-smart-hungarian-smart-city-mobility-day





Generalkonsulat von Ungarn Düsseldorf VERANSTALTUNGSPARTNER:

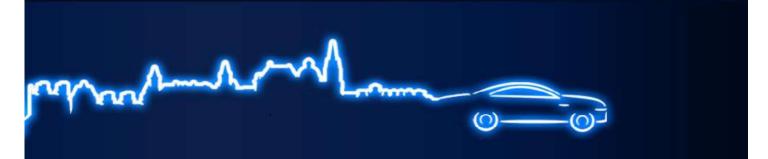












#### PROGRAMM

#### "BE SMART-HUNGARIAN SMART CITY & MOBILITY DAY"

IHK Aachen, Theaterstraße 6, 52062 Aachen, 2017. Dezember 14.

**Moderation** - Vidar Andersen (ENGL) "[...] one of the most important persons in the German startup scene." – WirtschaftsWoche

15:00-15:10	Grußworte (ENGL)
	Dr. Gunter Schaible – Geschäftsführer International, Verkehr und Handel, Industrie und Handelskammer Aachen
15:10-15:20	Eröffnungsrede (ENGL)
	Dr. Margrethe Schmeer, Bürgermeisterin der Stadt Aachen
15:20-15:30	Budapest – Be smart! Startup-Hauptstadt Mitteleuropas 2020, Digitale Partnerschaften in NRW (HU / ENGL)
	Piroska Szalai – Präsidentin des Kuratoriums, Wirtschaftsförderung Budapest
15:30-15:40	Startup- und Digitalisierungsstrategie Ungarns – attraktive Potentiale und Perspektiven für Unternehmen aus Deutschland (ENGL)
	Balázs Szegner - Generalkonsul, Generalkonsulat von Ungarn in Düsseldorf
15:40-15:55	"Rheinland Valley" – Förderung von Kooperationen mit Startups in NRW (DEUTSCH)
	Marion Troitzsch – Referatsleiterin Koordination und Förderung der Außenwirtschaft - europäische Länder, Internationale Abkommen, Außenwirtschaftsrecht; Ministerium für Wirtschaft, Innovation, Digitalisierung und Energie des Landes Nordrhein-Westfalen
15:55-16:00	Zentrum für Innovation und Technik in Nordrhein-Westfalen – Enterprise Europe Network (ENGL)
	Dr. Bernd Janson - ZENIT GmbH
16:00-16:20	Kurzvorstellung von vier innovativen Unternehmen und Projekten aus Ungarn:
	ZalaZone Teststrecke, Zoltan Bay Institut, Breuckmann Hungary, Silex (ENGL)
16:20-16:30	Erfolgreiche Strategie eines Spin-off in Aachen - FEV
	Dr. Norbert Alt – Vorstandsvorsitzender, FEV
16:30-17:30	Startup Pitches in Form eines Pitch-Wettbewerbs (ENGL)
17:30-17:45	Kaffeepause
17:45-18:00	Preisverleihung (ENGL)
	Petra Wassner – Geschäftsführerin, NRW.INVEST GmbH
	Jurymitglieder stellen sich kurz vor
	Dr. Gunter Schaible – IHK Aachen; Balázs Szegner – Generalkonsul; Elena Matekina – NRW.Invest; Iris Wilhelmi - Digihub Aachen; Christian Klapka – Vodafone, Koordinator der Digitalen Partnerschaft Budapest Düsseldorf; Dr. Norbert Alt – FEV
	Übergabe des Preises – <i>Dr. Norbert Alt – FEV</i>
ab 18:00	Networking & Buffet, ungarische Weine

#### BE SMART-HUNGARIAN SMART CITY & MOBILITY DAY,



**Bee**Rides

#### **AIMotive**

Softwaresysteme für selbstfahrende Autos. 2015 gegründet und bereits weltweit führender Anbieter der AI basierten Technologie: visuelle Fähigkeiten menschlicher Fahrer werden mit Hilfe von Kameras, als primäre Sensoren simuliert. Dieser Ansatz führt zu einer Technologie, die leicht skalierbar ist und wesentlich dazu beiträgt, autonomes Fahren auf der ganzen Welt Realität werden zu lassen. F&E Kooperation mit OEMs wie PSA, Volvo.

#### **BeeRides**

Peer-to-peer Carsharing für am Flughafen oder Bahnhöfen geparkte Autos. Am Flughafen Dortmund und Budapest bereits erfolgreich in Betrieb. Online Buchung möglich. Effektive Nutzung von öffentlichen Flächen, ein innovatives Konzept im Sinne von Nachhaltigkeit und Sharing Economy.

#### CLINDI

#### **Clean Dimension Device**

Nachrüstbares HW für die Optimierung von Verbrennungs- und Hybridmotoren: wesentliche Schadstoffminderung durch Verbesserung des Brennprozesses, Reduzierung des Verbrauchs, optimierte Motorsteuerung. Patentiert in 2015. Perfekte, einfache Lösung für die Umweltfreundliche Nachrüstung von Dieselmotoren.



Electromega Entwicklung und Herstellung von Müllwagen (13, 18, und 26 Tonnen) mit 100% Elektroantrieb. Reichweite 80 km. Max. Leistung 200 kW, max. Geschwindigkeit 80 km/h. Wenig Servicebedarf.

"Aluminium Batterie", Aluminiumschaum mit homogenen Zellgrößen und besonderen mechanischen Eigenschaften. Vielseitige Verwendung in der Autoindustrie. Verwendung von Aluminium statt Lithium für die Herstellung von Batterien.

#### 2



MINdLech

#### Mindtech

Innobay

EEG basierte Sensorik mit Anwendung beim Autofahrer – Entwicklung von Fahrassistenz- Systemen, weitere Anwendungen für Menschen mit Einschränkungen des Bewegungsapparates. Kooperation mit USA Universitäten und mit der Ungarischen Akademie der Wissenschaften.



#### Notch

Komplexe Lösung für Analyse von Bewegungen, vielfältige Anwendungsmöglichkeiten z.B. im Bereich Sport oder Gesundheitswesen. HW: am Körper tragbare, in Kleidung integrierbare Sensoren, SW: Apps und Programme für die 3D Wiedergabe der Bewegungsabläufen Demo: https://wearnotch.com/video



#### Innova-Eco – Recytrader

Weitere Infos unter: http://silex.hu/

Höhere Kapazität, niedrigeres Gewicht.

Plattform für "Recycling-Sharing", der Online Marktplatz für Abfall- und Wertstoffe. Unterstützung von Rohstoffwiderverwertung im Sinne der Nachhaltigkeit. Ziel: Angebot und Anfrage offenlegen und neue Möglichkeiten schaffen.



#### Route4U

Navigationssystem und Routenplaner für Fußgänger mit beschränkter Mobilität, Rollstuhlfahrer und Kinderwagen. Gehwegkarte mit Infos über die Beschaffenheit der Oberflächen, Barrierefreiheit, Anzeige der für die Zielgruppe relevanten Ziele POI. Auch als App abrufbar.

#### WEITERE UNTERNEHMEN UND PROJEKTE, DIE SICH AUßERHALB DES PITCHING WETTBEWERBS VORSTELLEN

zone	Zalazone Projektgesellschaft der Teststrecke für die Automobilindustrie in Zalaegerszeg. 250 Hektar, Tests und F&E von traditionellen aber auch selbstfahrenden und Elektro-Autos, Projektvolumen 129 Mio. Euro. 5G Netz, Zusammenarbeit mit großen Hersteller und Zulieferer (Bosch, ZF, Continental, ThyssenKrupp, TÜV Rheinland, FEV). Weitere Infos unter: https://zalazone.hu/
bay.	Zoltán Bay Institut für Angewandte Forschungen Internationale Projektkooperationen u.a. im Bereich F&E Autoindustrie. Aktuelles Projekt: nachrüstbares eCall-System für Fahrzeuge. Ab 2018 müssen alle Fahrzeuge mit 112-basiertem eCall-System hergestellt werden. Das Projekt bietet eine Lösung für früher produzierten Autos um den EU Vorschriften vollständig entsprechen zu können. Weitere Infos unter: http://www.bayzoltan.hu/hu/fooldal/
Breuckmann Qualitätsdruckguss und mehr.	Breuckmann Hungary Innovatives Unternehmen aus Heiligenhaus mit einer Tochterfirma in Ungarn im Bereich F&E. Entwickelt u.a. Kupferrotoren für Asynchronmotoren mit hohem Wirkungsgrad und steht bereits mit mehreren OEMs bez. Elektromobilität in Kontakt. Weitere Infos unter: https://breuckmann.de/
SEX	<u>Silex</u> Leichte Elektroportalachse für Elektrobusse und LKWs. "Sustainable Mobility" Preis 2017 der Busworld Ausstellung Kortrijk (NL) für die Weltneuheit, 8,5 Tonnen Elektroportalachse. Silex bietet CAN Steuersysteme auch in Paket an.

# AMOTIVE

technology. Using cameras as primary sensors our solutions autonomous driving a reality mimic the visual capabilities Founded by László Kishonti includes aiDrive, aiSim and technology that can readily of AI powered self-driving around the world. Our full This approach results in in 2015, Almotive is the leading global provider scale, and helps make stack suite of products of human drivers. aiWare.

# Products



Hardware and platform agnostic, scalable and customizable full-stack software suite, offering high level self-driving functionalities through Al-powered algorithms.

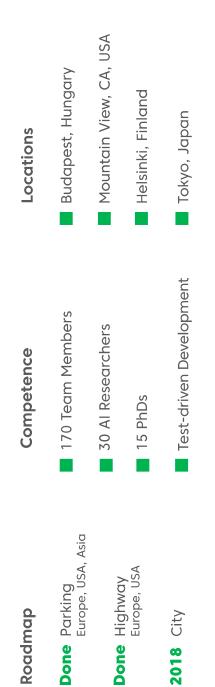
# aisim

Real-time, photorealistic simulation environment running on a purpose-built engine and designed for AV algorithm development, allowing virtual AI training and testing.



The first applicationindependent and universal Al-optimized hardware IP, which is up to 20 times more power efficient than other Al acceleration hardware solutions.

# Fast Facts



# Partners



**Bee**Rides Airport Peer-to-peer Car Sharing Platform car sharing

#### ALUE OFFERING

BeeRides is a Peer-to-peer Car Sharing Platform Connecting Car Owners and Renters Online and Offline at Airports and Other Locations Using a Low Cost and High Tech Approach.

#### The Problem

Parking fees and car rental prices are expensive at airport locations (respectively  $\sim \in 20$  and  $\sim \in 70/day$  gross in Western Europe). Despite this fact, the utilization of cars is only 4-6%: meaning 27 billion potential car use hours are wasted every day. The car rental industry is capital intensive with high fixed costs.

#### THE SOLUTION



BeeRides offers a trusted online and offline managed sharing economy marketplace that automatically connects car renters and owners and that is built on local operator networks connected with a high degree of automation.

#### **Products and Services:**

- Car Rentals at Affordable Prices (starting from €8/day)

- Car Owners receive personal income, free parking and carwash: a value of €50 to €250 per week.

**Trust & Safety** 

#### Automation

- Allianz Insurance
- Roadside Assistance IoT Telemetric Tracking
- Online contracting Online payment
- Smartlocker Systems
- **USP COMPETITIVE ADVANTAGE**
- - 1. Platform & Automation (no fixed costs, more cost efficient)
  - 2. First Mover: no airport specialized competitor in EU (except in FR)

#### PARTNERS

Contract Signed with First German Airport, Dortmund.



#### ТНЕ ТЕАМ



Botond A. Bosze Founder & CEO Former VC (Director at iEurope Capital) 2nd time Entrepreneur



Andras Piller Head of Int. Expansion Former CEO of blue

chip telco companies.



Szilard Bozoki Co-Founder & CTO

Former software engineer at Ericsson.



Andras Eisenberger Backend Expert

Ranked among Top 200 Global Developers. Gold medalist in Info tech Olympiads.

Gergo Vladiszavlyev Front & Backend Expert Former software engineer at Ericsson.

**OWNERSHIP STRUCTURE** 

Product owner experience.

CONTACT BeeRides Ltd. HQ: Hungary beerides.com/en botond@beerides.com +3620 3193530

#### FINANCE

Seed Investment received to date: €345k Seeking: Local Operator partners for international expansion and advertising partners in the travel space escpecially OTAs and GDN/GDS providers.

47.4% Founders ESOP 22.8% Investors 29.8% [iEurope, Conor Fund, Angels]

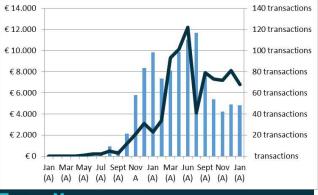


**TRACTION – HUNGARIAN OPERATION** 

16,000+ Cumulative Car Parking Days 7,000+ Cumulative Car Rental Days

#### 3% Market Share in Hungary

6X YoY growth in 2016 (EUR 110.000 GTV)



Target Market

Price sensitive car rentals at airports & airport parking:

- €65B+ Global Car Rental Industry
- €32B+ Global Airport Car Rental Industry
- 11% YoY Growth in Airport Car Rental Market
- €6B+ Global Airport Parking

Low cost airlines enable travel to price sensitive consumers  $\rightarrow$  online travel industry is booming.

#### COMPETITORS

<u>Company / Funding</u>								
EU			Other					
Drivy	FR,BE,GER	€ 43m	Turo	US,CA	a€97m			
TravelerCar	FR	€ 10m	Getaround	US	€ 56m			
TripNDrive	FR	€ 1m	CarHood	AU	€0.6m			



#### **DESCRIPTION OF AUTOMOTIVE INVENTION**

The 'Diesel scandal' has prompted a number of questions recently concerning the harmful emission of traditional combustion engines. Exhaust fumes contain higher levels of harmful gases and soot than EU regulations and standards would allow and as engines wear out emission data continually worsen. Our invention aims at providing an effective a cost-efficient solution to this problem. When installed either in new, used, diesel or petrol cars significant reduction in harmful emission can be attained. Our test results have yielded a maximum reduction of 40%. Improving the measurement results of MAP sensors we can perfect the combustion process. As a result consumption decreases and the life-span of the engine increases. With the aid of the invention the design of combustion engines can take a new direction especially when considering stricter and stricter environmental regulations.

#### Background

With more than 10 years of experience Károly Nyíri and László Pillman have been looking for ways to avoid the blockage of particulate filters in diesel cars. In their research they have managed to decrease harmful emission by perfecting the combustion process. By doing so consumption has decreased and engines can yield optimal performance even at lower revolutions. With the application of the invention they have managed to optimise intake sensors thus engine control units can set now more optimal parameters. Experiments and tests have proved that the invention is applicable in every type of internal combustion engines including hybrid technologies. The invention was submitted for patenting in Hungary in 2015 at which time the international patenting process was also initiated at PTC. Other similar inventions have not been patented so far. Currently the patenting process is in phase PCT2, which is followed by European and national patenting procedures.





#### **Results:**

- After installing the device changes the emission parameters of the engine immediately. THC (Total HidroCarbon) and CO values decrease with a maximum of 20-40%, the soot content of the combustion decreases as well. Further development can yield significant NOx reduction.
- Racing sports: an increase of 5-10% in performance can be attained by engines that are tuned to their limits. Torque range increases; the engine is capable of greater strength even at low revolutions.
- Regular use: a reduction of 5-10% in consumption at average use, lower harmful emission owing to the perfected combustion, the engine runs with less noise and more evenly. Soot build-up decreases in engines with particulate filters and/or catalyst.
- With the use of the invention the parameters of the engine change and basic resonance and mechanical engine friction decreases, the life-span of the engine increases.
- Engine parameters continually improve with the inner cyclical updating of the controller unit: power output at lower revolutions increase, consumption and harmful emission data improve (depending on the vehicle these changes apply within 200-300 km).

#### Technical parameters, installing:

Installing the CLINDI does not require modifications in the vehicle or in the controlling software. The optimizing units need to be installed differently according to vehicle type, this does not alter the original engine layout. If the vehicle contains a MAP sensor, the unit can be installed in new or 10-15-year-old vehicles as well.

#### Tests:

- Flue gas analysis at Athéné Pallasz University in Kecskemét (measurements: under load, constant torque at given revolutions)
- Computerised measurements (OEM test equipment, VW, Mercedes)
- Comparing brake test results
- Own measurements on same vehicle types with several engineering solutions, manual data gathering (OBD)
- The invention has been installed in more than 400 vehicles. Over thousands of kilometres of testing and 2 years of test experience testify the benefits of the invention.





#### **Application:**

- motorcycles (street and racing)
- personal vehicles (petrol, diesel, hybrid and gas)
- · lorries and trucks
- ship engines
- aeroplane engines
- industrial engine types (e.g. gas engines, uninterruptible stations, generators)
- more efficient, new engine types can be developed with the invention

#### **Contact:**

For more information please contact us so that we can arrange an appointment. We offer demos by brake testing vehicles before and after installing the invention. CLINDI will immediately result in improved performance values. We offer the same demo method combined with emission tests as well.

Dunaújváros, 1st August 2017

Contact person: Szabolcs Gerendás (+36 30 400 5791, email: gerendás@gerinfo.hu)

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#### Electromega Ltd.

Info Room Email: info@electromega.eu

**One Line Pitch:** Electromega is a research and development manufacturer business assembling full electric waste shipment heavy weight trucks.

**Business Summary:** Establishing the company in March 2009, our engineering team built their first product in operation over 15,000 KM without serious issues. Today our prototype is ready for mass production, homologated and tested and assessed by an independent organization. By 2020 we would like to extend our operation up to 400 all electric garbage trucks per year. Continue with bus electrification and our R&D of the range extender technology, launching the hybrid truck which capable travelling 800-1000 Km range.

**Management:** Co-founders Dániel Kőszegi, István Bartha and Attila Vitéz have a synergistic combination of skills. Daniel is recognized as a proven business leader who brings a lifetime experience from his retail company managing 200+ teams over 10 Mrd HUF. István continues to be the guiding force behind the development team bringing all 20 years of R&D electrical and mechanical engineering experience. Attila supports as a software engineer responsible for all coding and user experience. Ruben, joined the team later as a Chief Operation Officer bringing international project and program manager experience. Together they continue to effectively innovate, operate and market Electromega Ltd.

**Customer Problem:** In waste transportation, today are consumed daily cca. 60-80 liter of gasoline, the trucks starts and stops, during collection when the vehicle stops the hydraulics requires still energy hence the increased consumption with environment unfriendliness.

**Product:** Electromega offers all electric version of a traditional garbage truck enabling all features of the EV technology in this niche market. 3<sup>rd</sup> party study shows/proves a gap in this market segment. Our product focuses on the cities who want to reduce pollution and noise and cut their maintenance costs.

**Target Market:** In Hungary, today there are 15000 traditional garbage trucks, we aim in the first phase to fabricate 20 full electric trucks in 3 versions (13, 18 and 26 Tones). Taking Europe, where there are over 100K garbage trucks, the objective would 10% full electric by 2030.

**Customers**: municipalities and waste management companies, body manufactures and resellers.



#### Company Profile

URL: <u>www.electromega.eu</u> Industry: Automotice, EMobility, Reseach and Development Employees: 17 Founded: 2009

#### Contact:

Ruben Banto ruben.bant@electromega.hu w: +36293159998

#### Management:

Dániel Kőszegi, co-founder István Bartha, co-founder Attila Vitez, co-founder Ruben Banto, COO

Advisors: Lawyers: Nagy Zsolt, Glósz és társa

Other information:

2013-2014 Start Research and Development 2015 Spring First EV test, in Békéscsaba 2016 Spring Second EV test, in Debrecen 2016 September Budapest: Normafa, Istenhegyi út test 2016 November Smart City Expo – Barcelona 2017 – Homologation, green license plate

**Sales\Marketing Strategy:** We work closely with several Hungarian government institutions to promote our business internationally and partaking in well-known trade shows and pitching to the biggest market leaders in EU. Locally we are contacting municipalities and the national organization of waste management.

**Business Model:** Electromega's buys the chassis and electrify it. We an generate revenue by selling the whole garbage truck or only the electric propulsion part.

**Competitors:** In Hungary Electromega is the only company manufacturing electric garbage trucks. Internationally we only know about a handful of startups which still working on their prototype model.

**Competitive Advantage:** Electromega's owns the patent rights which includes tagging specific technological solution enabling Electromega to use and monetize the asynchronous motor as a power train for their electric vehicles.

#### WE INVENT FOR YOU



Innobay is an independent Innovation Service Company. The main mission of our company is innovation consultations services: create new inventions for companies and governmental institutes, manage innovation projects from TRL1 to TRL9 and contract management of economy and business development.

#### Overview -----

Innobay Hungary Ltd. was established in 2011, serving companies and governmental organizations on the field of innovation, business and economy development. The background of the company is based on the discipline of physics and engineering, led by Dr. Norbert Babcsán. His expertise covers

the field of Materials and Energy research and development even on the field of complex biological systems and processes. **The main activity of the company is contract invention (patent filing) and innovation management on the field of advanced materials**, develop and introduce advanced material innovations into different industrial fields to implement green technologies for a sustainable economy. Main references of our team members are: development of space furnace to NASA, innovation management of generic nanomedical drug development for Gedeon Richter pharmaceutical company (TRL5-TRL7), innovation and innovation management of aluminium foam production technology (TRL1-

TRL9), technology transfer of L-malic acid technology, market survey of future ultralight car materials, feasibility study of herbal plants for functional foods, conceptional design of high throughput tire CT scanner, feasibility study of foam assisted oil recovery technology. The managing director Dr. Norbert Babcsán awarded by the Hungarian Industrial Innovation Award in 2015 for his aluminium foam innovation, he received also the highest personal innovation awards in Hungary the Jedlik Ányos and the Gábos Dénes awards. Innobay have several partners in the world like Fraunhofer Institutes, European Space Agency etc. and connected with more than 2000 experts of advanced materials all over the world. We are looking for innovation service contracts, which can help companies and governmental institutes to start or implement innovation projects.

#### **Project offer: Aluminium Battery**

Our household and mobility are and will be driven by electricity. Most of the alternative energy production provides discontinuous supply of electrical energy where cost effective storage is not solved yet. Electrical Energy Storage require batteries, fuel cells or supercapacitors. Aluminium is an Energy Bank which can store nearly three times energy than lithium batteries per weight. The implementation of increased capacity of aluminium batteries depends on the improved electrochemistry and the



increased surface of anode materials. Our solution is implement a high surface area percolated or cellular aluminium anode where the oxidation of the aluminium is properly controlled.





www.mindtechapps.com // international@mindtechapps.com // Software industry //

#### Our goal

Mindtech aims to utilize brainwaves in driver attention level monitoring in order to lower the number of accidents caused by the lack of alertness.

#### The problem

Drivers are likely to lose focus, especially at night, or at long monotonous rides. The lack of attention can lead to fatal accidents. Anti - sleep systems do already exist, but these are rather aiming to prevent the driver from falling asleep, than keeping up their attention level.

#### **Our solution DriveAlert**



DriveAlert is a mobile application, that detects the attention level of the driver, and if it drops drastically during a drive, the app sends an alert to the driver. The brainwaves are detected by a Neurosky EEG headset. Brainwaves are giving us information about the mental state of the driver Our app processes the incoming signal and decides wether the driver is paying attention or lacks alertness.

Our brain is different day by day, therefor the app is calibrated to the actual attention level of the driver at the beginning of the journey.

In the future we are planning to replace the sensor with our own hardware.

#### Achivements

2017 - BVK Be Smart Award

2017 - V4 Eyes National Winner

2017 - Startup of the Month, September, (by the Hungarian Ministry of National Economy)

#### **Cooperation partners**

University of Notre Dame (USA) - Research & Market validation Pazamany Peter University Faculty of IT and Bionics (HUN) - Research Hungarian Academy of Sciences's Inst. of Cognitive Neuroscience and Psychology (HUN) - Research

#### Commercialization

The free version of our application is already available at Google Play.

We are going to distribute both the software and hardware, both in B2B and B2C model. The B2B model is going to cover transportation companies with a full range of remote monitoring services. The customers will be able to purchase the pro version of the app and the hardware for a fixed price, the remote monitoring service will be available for licensing.





#### NOTCH

Notch is a wearable motion tracker for the go-pro generation. It provides affordable movement capture utilizing state-of-the-art sensors and reconfigurable low-power bluetooth radios which work together to pass motion data to smartphone. Besides being the most advanced and affordable wearable motion tracker, Notch is also a platform that people can build apps and products on.

Notch modules are designed to be used anywhere from casual activities to extreme movements without limiting motion and without being visually obtrusive. The system is small and light; a Notch device is a size of a coin, weighing less than 10 grams allowing seamless integration onto clothing and equipment.

First "powered by Notch" products for sports has already been developed and deployed by third-party companies to golf and baseball markets (<u>http://</u><u>4dmotionsports.com</u>). Since 2016 Notch Interfaces Inc. has sold over 2000 Notch kits to B2B and B2C (developers) and is currently preparing to ship second generation of devices with updated specs.

In 2017 Notch has been awarded a "Best of CES" title among thousands of presented wearable devices (1,2). Among the companies that are integrating Notch kits into their workflow and product lines are companies like Daimler Benz, Mt. Sinai Health Group and others.

Currently Notch Interfaces Inc. is preparing to launch applications and products in 3 more markets as a joint venture with other companies - leaders in their respective segments of sports and healthcare markets.

#### http://www.wearnotch.com <a href="mailto:connect@wearnotch.com"><u>connect@wearnotch.com</u></a>

1) http://arstechnica.com/gadgets/2017/01/notch-is-a-3d-motion-trackingsystem-youll-actually-want-to-use/

2) http://arstechnica.com/gadgets/2017/01/the-best-pcs-gadgets-andwearables-of-ces-2017/

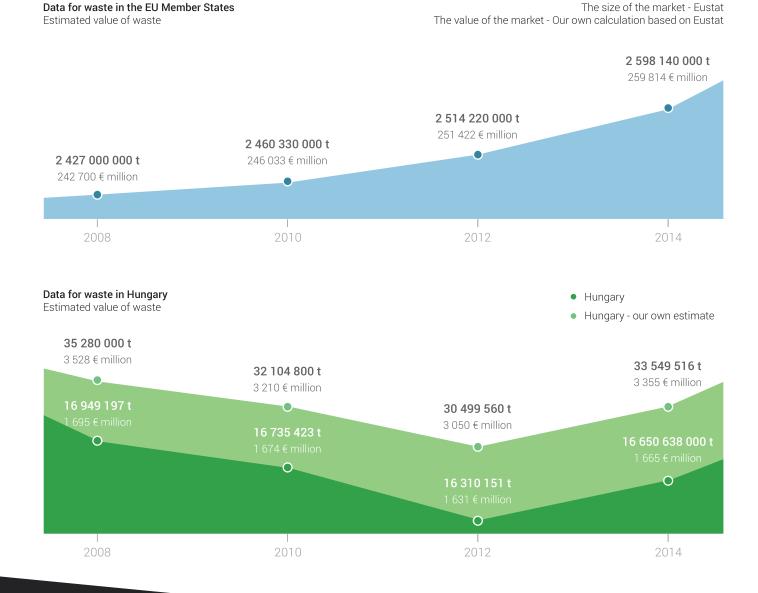




## THE ALTERNATIVE WASTE EXCHANGE

We market everything that can be to any use. Be it paper, plastic, glass, metal, electronic or any other waste, it can be sold and bought in the portal.

Recytrader.com began its operation towards the end of 2016 in order to give a new, modern tool to business undertakings active in the trade in and use of waste and secondary raw materials, by bringing opportunities and real demand together in a common platform.



#### THE FOUNDERS

The founders of recytrader.com have decades of wide-ranging experience in the management of online marketplaces, waste and financial processes.



János Csonka

As designer or project manager, he participated in many a waste management project in both the private and the public sector over the past two decades.



Szabolcs "Sabie" Valner

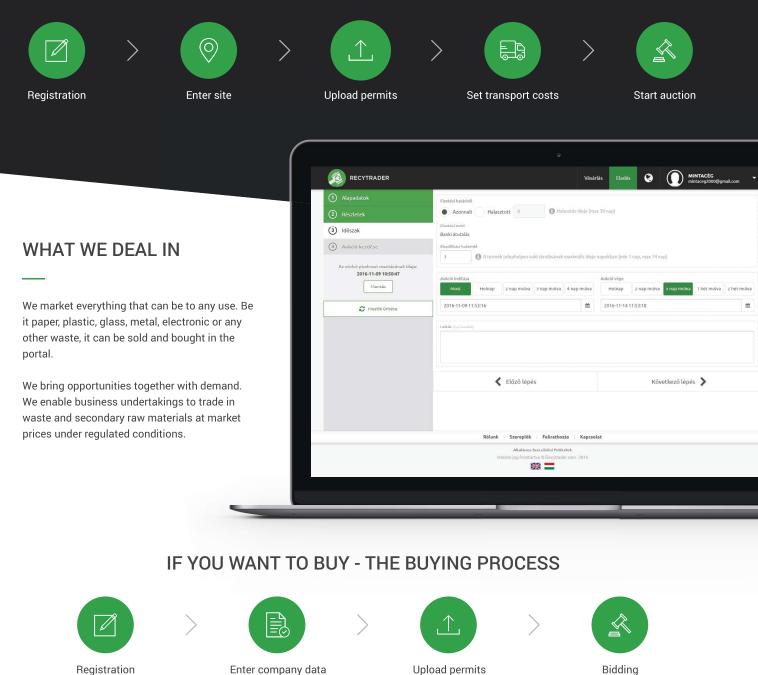
An expert in online marketplaces, founder of Hungary's first internationally known, successful auction portal.



**Richárd Tóbiás** 

Third generation businessman, owner of Hungary's first private optics chain, also supporter of and participant in a number of technology development projects.

#### IF YOU WANT TO SELL - THE SELLING PROCESS



#### WHAT ELSE CAN WE OFFER?

- Presentation of waste and secondary raw materials in the platform that are either absent from the market or hard to get
- Equal opportunity: both small and big companies can trade under the same conditions in the portal
- "Specialised" auction portal unique in Europe
- We expand the number of your partners in the market



#### WHY CHOOSE US?

- Selling and buying is **easy** and **fast** once you completed the registration process
- You can buy and sell waste and secondary raw materials at real market prices
- It is safe since only approved Users with appropriate permits are able to trade in the platform
- As buyers, you will be able to include the cost of transport into the total purchase price

Haller

- You may participate in an **unlimited number of auctions**
- Product guarantee: only real products appear in the auction interface
- You can follow trading in real time
- You have a tool supporting **every actor** in the market

For additional information please visit our websites:

recytrader.com

ér 🔳

sták

#### Please do not hesitate to contact us if you have any questions:

- 🔗 H-1095 Budapest, Lechner Ödön fasor 3/C.
- ─ info@recytrader.com
- +36 20 586 7771



### world's first wheelchair navigation

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https://www.facebook.com/route4u.org https://www.linkedin.com/in/peterbodo <u>http://www.route4u.org/</u> Video: <u>https://youtu.be/iIZtgbKUHuA</u>

**Management:** CEO – Peter Bodo CMO – Tamas Szekely

Advisors: IT – Zsolt Kocsi Wheelchair use – Zoltan Vincze

**Industry:** smart city, assistive technology: navigation, reference

Number of employees: 3

Amount of Financing Sought: €700 000

**Current Investors**:

€22 000 – Angel investor €32 000 – Virgo Systems €162 000 – Aquincum Technological Incubator

**Revenue**:€40 000

Monthly burn rate: €10 000

#### **Business Description:**

Route4U is the Waze for accessibility. We provide navigation and reference service for wheelchair users and a gamified platform to collect data automatically on accessible routes and places. We enable our users to help each other, while building the best available database of pedestrian infrastructure.

#### Management:

CEO – Peter Bodo is an entrepreneur for 14 years, developed the most popular bicycle route planner for Budapest.

CMO – Tamas Szekely is an entrepreneur for 20 years, provided trade marketing services for international brands like Unilever, Sony, Dr.Oetker or L'Oreal.

#### **Products/Services:**

Lack of information on accessibility is a pressing problem, which limits mobility and independent life. Route4U provides real time accessible tourism maps with routes and places and built in automatic survey. The app is also a reference of accessible local businesses.

#### **Technologies/Special Know-how:**

We have developed a scalable automatic method to collect data (vibration, slopes, curbs). Some of the algorithms we use to process collected data are protectable. Barriers for potential competitors include our quick traction and successful cross-sectoral coalition building.

#### Market:

Accessible tourism is rapidly growing and currently reached 124 million trips annually in the EU by people with mobility disabilities. The number of wheelchair users grows 7.5% per year in US and the increase of senior population (6.2%) is similarly high in the developed world. Our customers are municipalities, transportation and tourism authorities, universities, facility managers and local businesses on the \$6bn (CAGR 165%) location based marketing market.

#### **Revenue streams:**

1) accessibility maps 2) public and private crowdsourcing sponsorships and grants. 3) listing fee of businesses || Long term: monetizing pedestrian infarstructure database.

#### **Distribution Channels:**

**Key partners** (wheelchair NGOs, city councils, public and CSR funds, transportation companies, open data communities). Community mapping **events** to gain publicity and build community. Network of local partners.

#### **Competition:**

POI only: <u>wheelmap.org</u> (DE nonprofit), <u>www.disabledgo.com</u> (£2M turnover UK), <u>www.planat.com</u> (CND); Have routes, but not scalable: <u>mapability.org</u> (IT);

Awa	ards:
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Pioneers Challenge Top 150	09 2014
gen Innovative Generations winner!	01 2015
SmartCityLab winner	04 2015
DBH Seedstar Battle winner	05 2015
Hungarian Innovation Tech Show	05 2015
audience grand prize	
ITU Telecom World Best startup	10 2015
1776 Challenge Cup global finalist	06 2016

#### Selected media:

Financial Times Portsmouth News

and basically all Hungarian TV, radio, online and press media