## **vacuum**labs

## A global centre of excellence for digital design and engineering

We solve big technology problems for leading banks, fintechs, VCs, scale-ups and start-ups.

### FOUNDING PARTNERS

**vacuum**labs



Samuel Hapak, CEO Recognized by Forbes as one of the '30 under 30' samuel.hapak@vacuumlabs.com



Matej Ftacnik, CXO Founder of Be Money (LGBT+ bank) EY Technology Entrepreneur of the Year matej.ftacnik@vacuumlabs.com

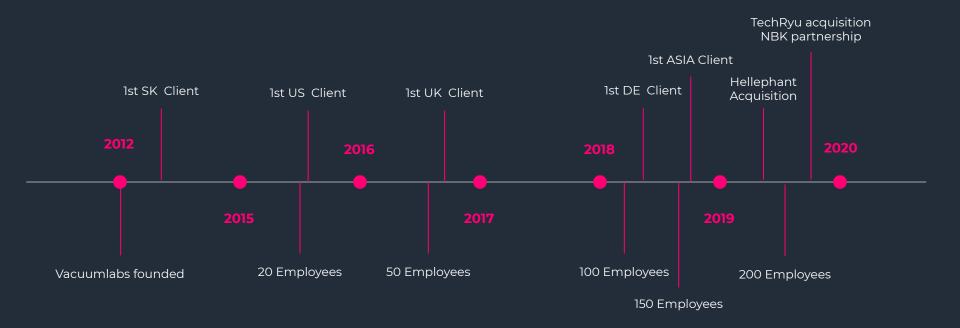


**Tomas Kulich,** CTO Vacuumlabs engineering departments leader tomas.kulich@vacuumlabs.com



## Company History





## Technology Has Changed Consumer and Business Expectations Forever

### "Every Company Will Be A Fintech Company"



Angela Strange

ANDREESSEN HOROWITZ

### THE INDUSTRY CHALLENGE

Banks Struggling to Innovate and Integrate New Technologies into their Legacy Infrastructure

2.

Non-Banks Struggling to Learn the World of Finance and Regulatory Frameworks



Technology: Expertise and Agility

Both Camps Struggling to Choose from Rapidly Growing Choices of Modular Building Blocks: Cloud, Core Banking, KYC, Payments, etc.



### **vacuum**labs

We Are Technology Builders Who Partner with Banks and Fintechs.



From Idea to Prototype to MVP to Production

Product Design. Software Engineering. Data Science.

WHY VACUUMLABS?

# Our Goal Is To Help Build The Hong Kong and Asia-Pacific Fintech Ecosystem.

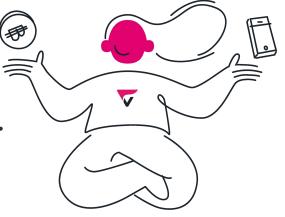
International experience transferred. Technologists cross trained.

### COMPETITORS AND RISKS

# The Greatest Challenge Is Changing Mindset.

Legacy resources and/or old school system integrators do not have the digital skills, experience, toolsets and agile approach to innovate and move quickly.

With Such a Vast Choice of Digital Agencies, Development Houses, Consultancies and Contractor Markets. Why Partner With Vacuumlabs?



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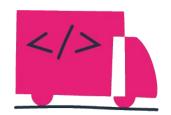
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# People Make The Difference

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Quality Engineering + Fintech Experience = Better Product + Faster To Market





### Our Areas of Expertise

#### ENGINEERING

Mobile applications Web applications Full stack development Data Pipelines Backend (micro)services

### INFRASTRUCTURE

Cloud (AWS, GCP, Azure) DevOps Containers Scalability and High Availability Automation and Testing

#### **PRODUCT DESIGN**

Styling User Experience design Visual UX (low to high fidelity) Rapid prototyping

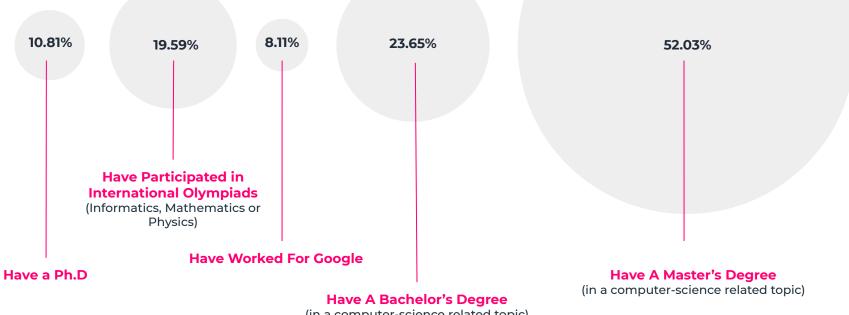
#### **SUPPORT & MAINTAIN**

Tier-N support Managed Services

#### ANALYSIS

Performance Security Architecture Tech Stack

### **Rockstar Engineers**



(in a computer-science related topic)

## Our primary industry focus

Fintech

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Blockchain & Crypto

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Challenger Banking

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## Fintech

### **Functions**



Ledgers and Digital Wallets Accounts and Savings Pots Send & Receive Money Convert & Pay + FX Prepaid Cards Debit and Credit Cards Loyalty and Rewards Instant micro-credit Installment Finance Lending Working Capital Investments Trading platforms Cryptocurrencies and Wallets

### **3rd party services**

Banking as a Service
ID&V, KYC, KYB
AML
Brokerage
Credit Decisioning
Card and Payment Processors
Exchanges
Marketplaces



### Delivery

**iOS and Android** mobile applications **Web** applications

Cloud infrastructure On-premise deployment

## Blockchain & Crypto





### General Blockchain Consulting

Hypotheses Business cases Tech solutions validation



### New Blockchain Development

Forking and development of blockchains For a specific purpose

### Lite Wallets, Clients, Tools



Mobile, Desktop & Web based Blockchain explorers Data analysis tools



### Hardware Wallets Integrations

Ledger, Trezor Any other exotic wallet



### dApps & Smart Contracts Development

Solidity, C++ or any other language



### Integration Services

Blockchains Clients Wallets Exchanges, smart Contracts etc.



# Challenger Banking

We enable you to get your digital banking or fintech proposition to market faster by turbocharging development of custom mobile and web apps. We leverage pre-built Vacuumlabs components that connect with cloud-native Banking-as-a-Service platforms or Core Banking systems and also provide a middleware layer for the integration of other 3rd party services into the apps.



## Experience With All Flavours of API-driven Banking

Cards, Payments, Digital Wallets With E-Money License		Cards, Payments, Digital Wallets, Lending With Banking License	Core Banking Systems Being Moved To The Cloud No License	Core Banking Systems Cloud-Native No License	
prepaid FINANCIAL SERVICE	Railsbank	Solarisbank \$		O¥ ■::: VAMBU Thought Machine	
Contis	🔀 Bankable	5 STARLING BANK	fiserv.	five <sup>o</sup> degrees the fintech engineers	
				10×	

Logos are examples within each category for illustration purposes only.

## **Bespoke Services**



### Greenfield builds

Exclusive Team Vision and Planning Concept and Product Design Engineering and Build Maintenance and DevOps



### Fluid workforce

Extend internal team Increase delivery bandwidth Fill skills or experience gaps

Supercharge current squads OR End-to-end responsibility for specific functionality



### Spotlight insights

Product/UX Spotlight MVP specification User testing Technology Spotlight Performance Audit Security Audit Tech stack advisory



### White label platform

Brand and style for fast go-to-market

Mix and match Accounts, Cards, Savings, Payments, FX

Integrate with internal systems or third party APIs

### Top 3 Reasons Our Clients Engage With a Development Partner and Fluid Workforce



### **STARTUPS**

- 1. Focus only on business growth not tech resourcing
- 2. Reduced time to market
- 3. Bang for the buck hire a full team that has worked together for 4+ years



### **SCALEUPS**

- 1. Access to specialised engineering talent to fill in the gaps
- 2. Highly skilled extension to the internal teams for rapid delivery of new functionality or to take full ownership of non-core parts of the product
- **3.** Effortlessly onboard and offboard new talent, scale up and down as required



#### **ENTERPRISE**

Access to specialised engineering talent to drive innovation

2. Rapid prototyping and discovery workshops to test ideas for digital transformation.

 Introduce new ways of working such as agility and continuous innovation



Standard Standard	Railsbank	💊 Solarisbank		Raiffeisen BANK
	EMURGO	T twisto	ĐanubePay	METRO
CARDANO FOUNDATION	кіш. сом	CASHWORKS	Be Money	SteadiPay
SPPS SPPS		Cledara		CYBERTONICA
Confidence in open banking	Doconomy	📿 Qredo	Stocktwits	<b>BD</b> SWISS

## What our customers say

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"Working with Vacuumlabs has been a great way for us to build our product quickly. They gave us the right people, right skills at the right pace, and it has been a great help into making us a world-class product."



Joshua Bower-Saul CEO and Co-founder of Cybertonica

CYBERTONICA

"Vacuumlabs has been a critical partner to EMURGO and Cardano, by providing us the flexibility of an extended team that feels and works as one of our own. We are pleased to have found a team that is competent, responsible and understand complex topics in crypto. We see ourselves working with Vacuumlabs for a long time."



Nicolas Arqueros CTO of Emurgo



**BLOCKCHAIN & CRYPTO** 

FINTECH

## Mox Bank By Standard Chartered

### **Scope of Our Involvement**

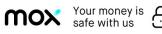
Mox is a new virtual bank in Hong Kong backed by Standard Chartered in partnership with PCCW, HKT and Trip.com.

We are providing a large and dedicated team who are leading the greenfield development of the mobile banking application.

### **Engagement Highlight**

In addition to development, the team are providing comprehensive input across design, architecture, technologies and cloud services.





Standard Chartered is a leading international banking group, with a presence in 60 of the world's most dynamic markets, and serving clients in a further 85. Standard Chartered PLC is listed on the London and Hong Kong Stock Exchanges as well as the Bombay and National Stock Exchanges in India.

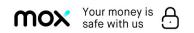


# 66

"Partnerships are a key part of our strategy. Getting the right talent on board is critical for a digitally-savvy operation and so the bank's partnership with Vacuumlabs has been fruitful."



Deniz Güven CEO of Mox Bank



## **vacuum**labs

## KIWI

### **Scope of Our Involvement**

Vacuumlabs has made travel simple and accessible to everyone. Over 65 million flight searches are undertaken every day - including up to 30,000 booking changes per minute – as consumers maximise their budget with "virtual interlining" where flight itineraries combine traditionally non-cooperating airlines with a guarantee for missed connections.

We work in a development partnership with teams across 4 Vacuumlabs locations continually enhancing the front-end, flight aggregator, flight search algorithms, scalability and performance. While we represent 25% of the overall development capacity, we provide 75% of the architecture, team lead and senior engineering talent.

### **Engagement Highlight**

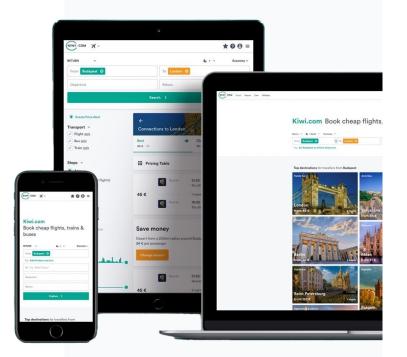
The codebase was comprehensively refactored and the front-end redesigned to improve the user experience and performance, allowing the system to scale in line with the rapid growth of the business.



Unique flight search engine, named one of the fastest growing companies in the world. US\$11m investment, 850+ employees, 1500% revenue growth YoY.

**Deloitte** 

Listed as 1st in Deloitte Technology Fast 50 companies in CEE 2017





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## Twisto

### **Scope of Our Involvement**

Vacuumlabs helps Twisto provide instant point-of-sale credit to the online generation across Central and Eastern Europe. Consumers with a thin credit history particularly young families, students and freelancers - receive fair pricing for short term credit while merchants have improved their mobile conversion rates and increased order size.

Our team is leading the enhancement of the solution and embedded Nikita risk engine to incorporate the country specific regulatory requirements and payments ecosystem.

### **Engagement Highlight**

Significant code refactoring to improve the performance and response times of the initial solution, continuous feature innovation and continuous integration of new e-shops and 3rd party partners across different countries.



Twisto is the central payments hub for daily payments, which gives customers instant credit for their purchases and provides a transparent way to track spending, aggregating all monthly spending into a single invoice to be settled in full within the 45 day interest free period or via easy instalments.



Listed in the Top 50 Most Promising Start ups by Financial IT Pathfinder 2017.



## Cledara

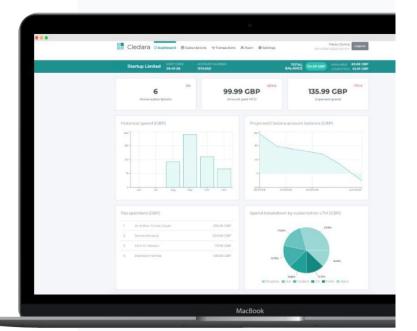
### Scope of Our Involvement

Vacuumlabs is helping Cledara provide a SaaS-based vendor management system which helps technology companies collaborate, coordinate and scale their buying processes so they can save time and money. The solution combines virtual debit card technology with subscription management and more.

Our team led the design, engineering and deployment.

### **Engagement Highlight**

Full integration with a card issuer and payments services provider.







Cledara combines financial services experience and deep technology and startup expertise. The team has worked with leading financial institutions and fintech startups including the European Bank for Reconstruction and Development, Caixa Bank, dopay and Railsbank. Cledara is supported by a wide range of advisors from companies such as Techstars, Mastercard, Bank Simple and more.



### **Scope of Our Involvement**

Vacuumlabs has helped improve the e/m-commerce purchasing experience for consumers through the provision of highly secure risk-based authentication across all channels. Consumers feel 100% safe online which reduces dropout rates and increases average basket size.

We provide a development team working in conjunction with the in-house team distributed across the UK and Russia. We are also the European hub for deployment within new corporate clients.

### **Engagement Highlight**

In addition to leading front-end and back-end developments, the team worked extensively on a mobile SDK to capture meta data used by machine learning algorithms for fraud detection.



London-based Cybertonica services merchants and platforms to prevent fraud and create robust risk scores to increase the zone of trust for payers and payment systems worldwide.



Winner MPE 2018 Best Data Analytics and Science



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**Michael Bruck** 

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### **Vacuum**labs

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