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Much of what Neulogy does is about connections, the creation of meaningful links between the right people. From bridging Slovak diaspora with communities back home to fostering cooperation between academics and entrepreneurs, our team has a rich portfolio of connections and partnerships formed. As of September this year, we have extended our network and joined forces with EIT Digital.

After a decade at the epicenter of innovation activities in Slovakia, this partnership marks a significant milestone for Neulogy, as well as the ecosystem that has evolved dramatically over the years. One of the most indicative proofs of these transformations are the annual Startup Awards that we have been organizing since 2011. The number and quality of applicants increase every year, as does the audience of innovation scouts and supporters.

Similarly, this study in itself demonstrates that there is no shortage of world-class innovative companies from Slovakia. As success usually generates more success, we have to take advantage of these favorable circumstances and assist Slovak innovators to scale their businesses even faster. EIT Digital, being the most extensive European network of investors, can help accelerate the growth of many of these emerging companies.

I invite you to read this report and find out more about those fifteen amazing companies. We call them Slovak Challengers.

Peter Kolesár
CEO at Neulogy
The organization delivers breakthrough digital innovations to the market and breeds entrepreneurial talent for economic growth and improved quality of life in Europe. It does this by mobilizing a pan-European ecosystem of over 130 top European corporations, SMEs, startups, universities and research institutes.

As a Knowledge and Innovation Community of the European Institute of Innovation and Technology, EIT Digital is focused on entrepreneurship and is at the forefront of integrating education, research, and business by bringing together students, researchers, engineers, business developers, and entrepreneurs. All of this happens through a pan-European network of co-location centers in Berlin, Eindhoven, Helsinki, London, Paris, Stockholm, Trento, as well as Budapest and Madrid. The organization also operates its hub in Silicon Valley.

EIT Digital invests in strategic areas to accelerate the market uptake of research-based digital technologies focusing on Europe’s strategic, societal challenges: Digital Industry, Digital Cities, Digital Wellbeing and Digital Infrastructure. EIT Digital breeds T-shaped entrepreneurial digital talent focused on innovation through a blended Education Strategy that includes a Master School, Doctoral School, and Professional School.

Cooperation with the top CEE experts in startup advisory, long-term experience in technology commercialization, and innovation policy consulting, enables Neulogy to maintain its prominent position in Slovakia and the surrounding region. This also means that the company can tap into the pipeline of the most promising startups, maintain a strong foothold in academia and R&D sectors, as well as cultivate access to high-level stakeholders and broader audience.

The company’s strong track record includes setting up the first Slovakia-based management company to run a fully regulated seed and venture capital fund (Neulogy Ventures). Furthermore, Neulogy is designing collaborative research centers, establishing and organizing the largest startup and innovation event in the country called Startup Awards, and leading international projects to support the global expansion of startups and business-academia collaboration.

About us

EIT Digital is a leading European digital innovation and entrepreneurial education organization driving Europe’s digital transformation.

Neulogy is one of the leading companies that specialize in knowledge and technology transfer in the Central European region.

SAPIE” The largest innovative alliance in Slovakia

Founded in 2014, The Slovak Alliance for Innovation Economy is the largest innovative alliance in Slovakia, representing over 60 innovative companies. SAPIE is a leading forum for debate on innovation and digital economy in Slovakia. SAPIE is committed to building collaborative networks of private and public actors, creating national and regional partnerships and advocating for innovation. Three key pillars include supporting entrepreneurial education, fostering startup ecosystem and helping companies go global. The alliance also actively advocate for innovation-friendly policy in Slovakia and on the EU level.

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Over the past decade, the Slovak innovation ecosystem has grown by leaps and bounds into an extensive and active network of stakeholders. As shown by the rising number of incubators, investors, co-working spaces and newly emerging startups, innovation and new technologies have shifted from being the preoccupation of only a few to a sector of the economy attracting many professionals from various backgrounds. Even more importantly, success stories of Slovak companies scaling their business internationally and generating extraordinary growth rates are no longer an obscurity. This makes us optimistic about the prospects of Slovakia being a country where innovators are not only born but also a place where internationally successful companies are founded.

The following pages attempt to shed light on a handful of such companies that scaled up internationally and on the explanatory factors behind their growth. The report identified the Top 15 Slovak Scale-ups that have outgrown the stage of "emerging startups" and entered a phase where ideas are refined, business models set, and products validated. The report focuses specifically on (1) the value created by these scale-ups, (2) their scale-up mechanisms, (3) funding processes and (4) internal R&D activities. Examining these variables through the lens of Slovakia's most promising scale-ups reveals the barriers and opportunities these companies face. The report's findings may, therefore, provide some useful insights for readers interested in improving the standing of the Slovak's innovation ecosystem.

The first part of the report presents the definitions, methodology and selection criteria used for the study. The second part evaluates how the Slovak innovation ecosystem evolved over the past decade. The following chapter introduces the Top 15 Slovak Scale-ups and an analysis of the collected data. Conclusions and recommendations are noted in the final section. An annex of company profiles is included at the end of the report.

Key Insights

- **Extraordinary value to the local economy**: The Top 15 Slovak Scale-ups generated revenues of more than 23 million EUR in Slovakia during 2016. With high annual growth rates exceeding 20%, the added value of the scale-up companies to the economy is likely to increase in the years to come significantly. Cumulatively, they employ more than 800 people, most of which are Slovak nationals (a little over 85%).

- **Ambitions and growth know no boundaries**: Every company in the Top 15 serves customers in foreign markets. While one-third of the scale-ups already selling globally, the American, British and Czech markets are the most popular destinations. All but one of the scale-ups run a part of their operations abroad. This includes anything from physical offices to sales teams.

- **Where there is will, there is funding**: Two-thirds of the companies included in this report raised more than 500,000 EUR each. Four of those companies hit a home run and raised more than 5 million EUR to date. Venture capital funds and angel investors are the leading sources of investment.

- **Both domestic and foreign investment matter**: The Top 15 Slovak Scale-ups generated revenues of more than 23 million EUR in Slovakia during 2016. With high annual growth rates exceeding 20%, the added value of the scale-up companies to the economy is likely to increase in the years to come significantly. Cumulatively, they employ more than 800 people, most of which are Slovak nationals (a little over 85%).

- **R&D as an investment growth**: All except one of the companies in this report continuously conduct some R&D activities. On average, they commit a little over one-third (37%) of their costs to research and development, and one-third of the companies obtained patent protection for their product.

- **Partnering with researchers is welcome**: An overwhelming majority of the companies included in this report recognize the value of collaborations with other research entities. While 60% of the scale-ups have previously collaborated on their research with other entities and found it valuable, 26% have not had a chance to do so yet, but are open to the idea.
This report highlights the positive transformations that have taken place within the Slovak innovation ecosystem over the past decade. The country moved from being a place where the term 'startup' was virtually unknown to a vibrant ecosystem with many emerging companies. However, moving to the next stage requires the most promising startups to overcome the challenges of scaling up and growing into the future ESETs and Sygics of Slovakia. The potential contribution of similar companies to the local economy and society is potentially very valuable.

Compared to emerging startups or typical SMEs that often demonstrate little to no growth, scale-ups receive very little attention. Earlier in 2017, SAPIE put together the first-ever study on Slovak scale-ups called Scale-up Study for Slovakia: The Fast Growing Firms of the Internet Age. Our effort is to elaborate on the findings in their report and expand the knowledge about emerging scale-up companies that grow by more than 20% annually.

Success tends to inspire more success. Therefore, shedding light on the achievements of the top scale-ups allows other Slovak innovators to envisage the possibility of success both home and abroad. In turn, higher visibility for the best Slovak scale-ups fosters the country’s reputation and position within the greater European innovation ecosystem. The collaboration on this report with EIT Digital, a pan-European accelerator program, made our efforts particularly worthwhile.

This report was written for an audience of stakeholders active in innovation and entrepreneurship-related activities, wishing to understand the Slovak innovation landscape better. We can only hope that both domestic and international investors will find it useful. The insights generated by this study can potentially inform policymakers, investors and other active stakeholders in the formulation of their targeted agendas that could help create more scale-ups and support the existing ones.
According to the OECD’s definition, a ‘scale-up’ is an enterprise with an average annual growth in employees or turnover greater than 20 percent per annum over a three year period, and with more than 10 employees at the beginning of the period.\(^2\) The initial phases of a startup lifecycle revolve around idea validation, business model formulation, scalability, and multiplication. In the scale-up phase, a company has already resolved these challenges and is looking to accelerate its growth, gain a significant market share and expand internationally. The best scale-ups then graduate to established corporate companies.\(^3\)

Why do scale-ups matter? One of the most prominent studies on scale-ups, the Scale-up Report on UK Economic Growth by Sherry Coutu CBE, identifies several essential characteristics of a scale-up.\(^4\) First, due to their fast growth, these companies are incredibly productive in what they do. Secondly, they create many jobs, and these jobs tend to be of a very high quality. Because of their innovative and outward-looking nature, scale-ups often expand into multiple international markets and thus are more active in exporting than traditionally domestic SMEs. Lastly, scale-ups tend to have international, diverse and well-educated teams of employees.

Our selection process

In our search for the best Slovak scale-ups, we asked our pool of experts from the ecosystem to put together a list of Top 15 Slovak scale-up companies. After reviewing the nominations, we consulted databases like Crunchbase and Finstat to maximize the chances of identifying as many potential candidates as possible. After shortlisting a larger sample of companies, we reviewed their performance from 2011 to 2016. To determine the final list presented in this study, we also applied a further set of qualitative and quantitative criteria displayed on the next page. Nevertheless, our list might not be exhaustive of all companies that fulfill the selected criteria.

Data sources

The analysis in this report relies on a variety of primary and secondary data. After receiving nominations from the expert pool, qualitative criteria and secondary databases like Crunchbase and Finstat were used to determine the Top 15 Slovak Scale-ups listed in this report. Founders were contacted and further data collected through a questionnaire which contained some two dozen questions. For the qualitative analysis of the Slovak innovation ecosystem, semi-structured interviews were conducted with experts from corporate companies, VC funds, and other relevant organizations.

Methodology & Selection Process

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Selection criteria for the Top 15

Either a 20% increase in annual revenues or a 20% increase in the number of employees over a period of 3 years. We also included super-fast growing companies which grew by more than 100%, as long as they reached the indicative threshold of 150,000 EUR in revenues.

A company with Slovak founders. If headquartered outside Slovakia, there need to be ongoing strong links to the country.

A well-established and tested business model, with a product or service already validated by customers in at least two markets.

The business model should be easily scalable to other countries, and the company itself should be looking to expand beyond its national market.

The companies should have at least 10 employees (both contracted employees and self-employed) at the beginning of the growth period.

We only considered companies that reached annual revenues higher than 150,000 EUR at the end of the growth period.

The company provides its customers with innovative products and services that challenge the way things are being done.
They are networks of stakeholders engaging in innovation-related activities. This may include innovative companies, co-working spaces, incubators, researchers, established corporations, venture capitalists, angel investors, policymakers and government officials, consultancies, mentors, and enthusiasts.5

Why do we keep talking about the ‘ecosystem’? Fast-growing startups and scale-ups cannot resolve all of their challenges internally. Issues like availability of funding, access to knowledge and human capital, or barriers to entering international markets, largely depend on a company’s surrounding environment. Therefore, ecosystems and the conditions they create for companies are a part of the ‘scale-up equation.’ For that reason, we also give the readers of this study a helicopter overview of the Slovak innovation ecosystem.

First, we provide a brief overview of the ecosystem’s growth. Afterwards, we focus on four important aspects of the ecosystem. These are (1) community and support mechanisms for innovative companies, (2) investment environment, (3) role of corporations, and (4) the importance of research and development.

Understanding innovation ecosystems

The major positive change in our ecosystem has been that it started to serve as a support system for emerging companies. Investors, angels, accelerators, co-working spaces and others are now helping startups succeed. The availability of funding has also improved significantly. Lastly, a lot of cumulative knowledge has been created by startups and their supporters over the years. This can be very helpful for new and growing companies in Slovakia. However, it is hard to determine what would make the Slovak ecosystem better as a lot of small and seemingly unrelated things need to come together for an ecosystem to function effectively. This is what happened in innovation hubs like Berlin or London.”
Chapter 2: A helicopter overview

A brief overview of the Slovak innovation ecosystem

In the early 1990s, as the Internet boom was taking much of the world by a storm, Slov-akia began its transition into a market economy. The first wave of Internet software companies emerged in the country, and along with them, now well-rec-ognized technology companies like ESET came about. Nobody called them startups in those days. The term in itself was an obscurity.

Interaction and cooperation between different parts of the ecosystem were very sporadic. It took a long time before meaningful synergies formed and the ecosystem started to come together. First, few business and innovation centers popped up here and there and started providing some elementary incubation services for aspiring entrepreneurs.

Mobilization around startups and innovation intensified only in the late 2000s and early 2010s. Then the small community of innovation enthusiasts and accomplished entrepreneurs initiated projects like Startup Weekends and Startup Awards. In those times, the first Slovak co-working spaces, Connect and the SPOT, started bringing innovative entrepreneurs under their roofs and assisting them with the acceleration of their growth. Additionally, specialized venture capital funds and dedicated angel investors began to play a more active role in the ecosystem.

Despite the fact that much of the uptake has taken place in the past few years, the two previous decades indeed produced now globally known companies like ESET, Sygic, Pixel Federation, or Innovatrics. The following pages look more closely at more specific aspects of the ecosystem that can potentially complement the growth of most promising companies in our country.

Ten years ago, there was little to no innovation ecosystem in Slovakia. We were just a bunch of people who wanted to create something great and started doing it. We were thrown into the water and had to swim. Nowadays, young people have a lot more opportuni-ties what makes things both easier and harder at the same time. I feel like they definitely have more courage. Good examples and role models played a critical role in this. Globally successful companies like ESET made success relatable and more accessible. It was definitely important at least for us at Pixel Federation to see a Slovak company that made it really big in the world.”

Community as a support system

The added value of innovation ecosystems where people never cross paths might be very limited. The innovation process is indeed often reliant on ‘out-of-office’ activities like discussing, networking, collaborating and celebrating. In recent years, sever-al impactful initiatives have been helpful in bringing people together and forming an active community of stakeholders. We picked four short case studies which highlight the various ways in which communi-ties can serve as a support system for innovative companies.

Inspiring through discussion

A worldwide series of events called Startup Grind was first introduced to the audience of Slovak entrepreneurs in 2015. This monthly affair powered by Google for Entrepre-neurs usually features a fireside chat with accomplished entrepreneurs, followed up by a startup mixer. The event provides its attendees with an opportunity to form new connections and gain inspiration and advice from others.

Motivating meaningful collaboration

The very first Startup Weekend took place back in 2011. Since then, people with experience in software development, graphic design and business have been meeting to build web or mobile applications at this event every year in Bratislava, Žilina, Košice and Banská Bystrica. The purpose of these weekend-long events is to induce collaboration that may form a basis for meaningful connections among the participants and even new business ideas.

Creating networking opportunities

If you asked a regular person in the streets what a startup was ten years ago, ten out of ten would have had no idea. Since then, the most positive change that has taken place in the ecosystem is the improved perception of entrepreneurship. According to the Global Entrepreneurship Monitor, Slovakia started its transition into a market economy. The first wave of Internet software companies emerged in the country, and along with them, now well-rec-ognized technology companies like ESET came about. Nobody called them startups in those days. The term in itself was an obscurity. Globally successful companies like ESET made success relatable and more accessible. It was definitely important at least for us at Pixel Federation to see a Slovak company that made it really big in the world.”

“SAPIE (Slovak Alliance of Innovative Economy) is the Slovak Alliance Innovation Economy (SA PIE), established in 2014. The alliance brings together over 60 innovative companies, ranging from startups and scale-ups to investors, corporations and innovative infrastruc-ture. Apart from traditional networking, SAPIE also serves as a forum for debate and a platform for policy advocacy. It is a perfect example of how a community can provide value to its members, as well as to the entire ecosystem.”

Michaela Kršková
Co-founder of Startup Awards
& Investment Manager
at Neulogy Ventures

Lucia Šicková
Co-founder of Pixel Federation

Celebrating success and hard work

For seven years, the Startup Awards competition has had a mission to inspire entrepreneurship by recognizing the best innovative companies. Since 2011, it has served as a ‘jumpstart platform’ for 80 finalists who pitched their business-nesses during a gala that airs on national television. The event attracts entrepreneurs, investors, corporate execu-tives and others coming together to celebrate the best of Slovakia’s world of innovations.

“Startup Awards played a vital role in this as it provides promising entrepreneurs with a platform to promote their business ideas in front of an expert audience. Just like in any other industry, let’s say advertising or film industry, people need to have such opportunity to showcase their talent and success needs to be celebrated.”

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Investment environment

The availability and ease of access to capital are often necessary for startups to turn their ideas into business models, and scale them later on. Historically, ‘bootstrappers’ were behind many successful companies in Slovakia. Over the years the availability of investment capital has been growing steadily, and it now plays a more active part in success stories of many Slovak businesses in the country.

This trend is best explainable by the changing investment environment. The change was marked by growing angel investor activity, the rise of incubators and accelerator programs, and the emergence of first specialized venture capitalists. In 2016, the venture capital investments in Slovakia totaled 10 million EUR, an increase by almost a million from the year before. In the last year, Slovakia ranked third in the CEE region in terms of total venture capital investment and fourth in the number of companies that received investment. While the former variable has gone up and down over the years, the latter has been growing fast and steadily as the chart on the next page demonstrates. Even though the investment environment has improved over the past few years, there is only a handful of professional investment bodies present in the country. As the four examples below demonstrate, even the few are diversified.

Crowdberry

Founded in 2015, Crowdberry is an equity investing platform which links promising businesses with its network of investors. The investment requires that companies exchange a percentage of their equity. The platform targets companies in later stages, already generating growth. The closed deals with the platform amount to 3.5 million EUR.

Limerock Advisory

The company primarily provides services in the fields of corporate finance and financial advisory services. However, the company has also established a subsidiary company Limerock Fund Manager which invests in small and medium enterprises with growth potential. The fund’s portfolio comprises of five companies.

IPM

InfraPartners Management is a company providing multi-asset class fund management and advisory services. The fund’s HQs are in London and Bratislava. Other offices are in Korea, China, Turkey, and Guernsey. The company’s investment focus areas are commodities, growth and infrastructure verticals. The ‘growth vertical’ is directed at investing specifically in scale-up companies.

Neulogy Ventures

It is the first management company to run fully regulated seed and venture capital fund in Slovakia. Early-stage seed capital investments range from 50K to 200K, 300K to 1.5 million in later stages, with the possibility of multiple rounds of funding per company up to €4.5 million. In 32 months, the fund received 760 applications to date and concluded 37 investments.
The role of corporations

Established corporations, can be very instrumental in providing startups and scale-ups with valuable experience and resources that could accelerate their growth. As Nestle’s study Scaling Together: Overcoming Barriers in Corporate-Startup Collaboration puts it neatly, “many startups and scale-ups hope to gain a large firm as a customer, but also recognize many of the other benefits, including visibility and enhanced publicity or reputation, business development (entering new markets or gaining new customers), and gaining market knowledge or access to key contacts.”

Unfortunately, many large enterprises in Slovakia do not consider cooperation with startups and scale-ups their priority. This is despite the possible improvements in their products or services, or even the overall performance, that could result from such cooperation. While some may strategically avoid adopting disruptive innovations, others might not be aware of the possible benefits that cooperation with innovative companies can bring. At the moment, the number of corporate companies in Slovakia that cooperate with startups and scale-ups remains low but is slowly rising.

To name a few, O2, ZSE, Skoda Auto and Tatra Banka have a proven track-record of working with startups. While O2 runs its global network of accelerator programs, Skoda has recently launched its DigiLab platform which targets mature IT startups or university students to work on mobility solutions for the future. The role of corporate companies in Slovakia, that cooperate with startups and scale-ups, is gaining disruptive innovations, or the other might not be aware of the possible benefits that cooperation with innovative companies can bring. At the moment, the number of corporate companies in Slovakia that cooperate with startups and scale-ups remains low but is slowly rising. To name a few, O2, ZSE, Skoda Auto and Tatra Banka have a proven track-record of working with startups. While O2 runs its global network of accelerator programs, Skoda has recently launched its DigiLab platform which targets mature IT startups or university students to work on mobility solutions for the future.

Driving innovation through R&D

The government led innovation strategies, and funding has been at the core of some of the greatest innovation success stories abroad. The growth of Silicon Valley into the world’s innovation hotspot, the gradual transformation of Israel into ‘the Startup Nation,’ the success of Scandinavian states like Finland - all of these would have been impossible without the commitment of public institutions and government, working in hand in hand with innovative companies.

In Slovakia, public investment in R&D continues to represent one of the major shortfalls within the ecosystem. While the gap has somewhat narrowed down in recent years, Slovakia still spends only 1% of its GDP on R&D, compared to the EU average of 2%. Public institutions invest far more than private companies, while foreign investment, particularly EU structural funds, often supplements the low levels of domestic funding. What is more, the percentage of workforce in science and engineering continues to represent inadequate structure of R&D financing can hamper the potential of many excellent researchers in Slovakia to deliver world-class scientific outputs. Moreover, excellent research and the availability of high-quality human capital are important variables that can also affect the growth of research-intensive startups and scale-ups in the ecosystem. If those companies do not find the resources they need for growth in Slovakia, they are going to look for them elsewhere.

Inadequate structure of R&D financing can hamper the potential of many excellent researchers in Slovakia to deliver world-class scientific outputs. Moreover, excellent research and the availability of high-quality human capital are important variables that can also affect the growth of research-intensive startups and scale-ups in the ecosystem. If those companies do not find the resources they need for growth in Slovakia, they are going to look for them elsewhere.
<table>
<thead>
<tr>
<th>Company</th>
<th>Headquarters</th>
<th>Sector</th>
<th>Total Funding (in EUR)</th>
<th>Founded</th>
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<tbody>
<tr>
<td>ColosseoEAS</td>
<td>Slovakia</td>
<td>ICT</td>
<td>Less than 500,000</td>
<td>2005</td>
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<tr>
<td>Datamolino</td>
<td>UK</td>
<td>ICT</td>
<td>500,000 – 1 million</td>
<td>2013</td>
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<tr>
<td>DECENT</td>
<td>Switzerland</td>
<td>ICT</td>
<td>Over 5 million</td>
<td>2015</td>
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<td>Exponea</td>
<td>Slovakia</td>
<td>ICT</td>
<td>Over 5 million</td>
<td>2015</td>
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<tr>
<td>GA Drilling</td>
<td>Slovakia</td>
<td>Industrial</td>
<td>Over 5 million</td>
<td>2012</td>
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<tr>
<td>Inloop</td>
<td>US</td>
<td>ICT</td>
<td>Less than 500,000</td>
<td>2011</td>
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<td>Instarea</td>
<td>Slovakia</td>
<td>ICT</td>
<td>Less than 500,000</td>
<td>2008</td>
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<tr>
<td>Nicereply</td>
<td>Slovakia</td>
<td>ICT</td>
<td>Less than 500,000</td>
<td>2010</td>
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<tr>
<td>Photoneo</td>
<td>Slovakia</td>
<td>ICT</td>
<td>2.5 – 5 million</td>
<td>2013</td>
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<tr>
<td>Piano</td>
<td>US</td>
<td>ICT</td>
<td>Over 5 million</td>
<td>2010</td>
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<td>Saferpass</td>
<td>Slovakia</td>
<td>ICT</td>
<td>2.5 – 5 million</td>
<td>2013</td>
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<td>SEAK</td>
<td>Slovakia</td>
<td>ICT</td>
<td>1 – 2.5 million</td>
<td>2011</td>
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<td>Sensoneo</td>
<td>Slovakia</td>
<td>ICT</td>
<td>500,000 – 1 million</td>
<td>2014</td>
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<td>Sli.do</td>
<td>Slovakia</td>
<td>ICT</td>
<td>Less than 500,000</td>
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<td>Staffino</td>
<td>Slovakia</td>
<td>ICT</td>
<td>500,000 – 1 million</td>
<td>2014</td>
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The table below provides a brief overview of the Top 15 Slovak Scale-ups listed in alphabetical order. More information about individual companies is available in the final chapter of this report. It should be noted that three companies (DECENT, Exponea and Sli.do) received the highest number of votes in the initial phase of the selection process, and therefore were shortlisted for the Challenger Award. This is an award for the most promising Slovak scale-up company presented at the Startup Awards 2017. Therefore, we also enclose a brief interview with a representative of each of these companies on their company profile page.
Cumulatively, they are employing over 850 people, of which 85% are Slovaks. Even though some of the companies moved their headquarters abroad, their links and contribution to the local economy remain significant. First, they are essential role models to other Slovak entrepreneurs. Second, the knowledge and experience that they accumulate can be shared with others in the ecosystem.

With high annual growth rates, the added value of scale-ups to the local economy increases exponentially over the years. If they successfully move to the next evolutionary stage and become stable corporates, the benefits to the ecosystem, economy, and society are even more significant.

As far as the business models go, two-thirds of scale-ups are purely running the Business to Business model; the remaining five companies run it in conjunction with Business to Customer or Marketplace models. Selling to other businesses might be viewed more favorably due to the lower marketing costs, as well as a healthy network of IT companies in the country. Cooperation with established corporates also tends to be relatively popular among the companies on our list - 80% of them previously worked with corporates or had them as clients. The majority of the scale-ups consider this form of cooperation somewhat negatively.

Extraordinary value to the local economy

Based on our findings, in Slovakia only, the companies on our list generated revenues of more than 23 million EUR in 2016.

<table>
<thead>
<tr>
<th>23 MILLION €</th>
<th>850+</th>
<th>85%</th>
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An overwhelming majority of the scale-ups on our list operate within the information and communication technology vertical and do business with other businesses. GA Drilling, a company with a unique plasma-based drilling technology, is the only company on our list that falls under the industrial vertical.

The dominance of ICT vertical among the scale-ups can be explained in different ways. First, for companies within this vertical, the time between founding and first sale tends to be shorter. For 75% of the scale-ups on our list, this took less than 12 months. Second, industrial or medical solutions can require much more time and capital. Availability and training of professional workforce can be more limited too. Lastly, the information technologies, as the highest paying job sector, attract some of the brightest talents in the country.

If one wanted to describe the “Average Joe” on the Slovak scale-up scene, their best shot would be mentioning two abbreviations – B2B and ICT.
Furthermore, all fifteen companies are already serving customers in foreign markets. While one-third of the scale-ups are already selling globally, the American, British and Czech markets remain most attractive salespoints. The relatively small population and economy are contributing factors that motivate Slovak founders to go abroad. The presented findings underline high levels of mobility and the global potential of the best innovative companies founded in Slovakia.

<table>
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<th>3 OFFICES</th>
<th>15%</th>
<th>1/3</th>
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<tbody>
<tr>
<td>The average number of international offices run by the Top 15</td>
<td>Percentage of foreign employees within the companies</td>
<td>The proportion of scale-ups serving clients globally</td>
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These figures indicate that Slovak scale-ups do not hesitate to use resources from abroad to accelerate their growth. This notion holds true even when it comes to funding - 73% of interviewed scale-ups received some part of their total funding from an international investor. Four of those companies hit a home run and raised more than 5 million EUR to date. Venture capital funds and angel investors are the leading sources of investment. As data about funding in databases like Crunchbase is often outdated or missing, and Slovak founders tend to be reluctant about sharing the total funding raised, we asked them to indicate a range rather than an exact figure. With this in mind, we estimate that the total funding raised among the Top 15 exceeds 40 million EUR.

Because the distribution of the companies among different verticals was very one-dimensional (14 firms fall under ICT), the presented figures are most indicative of the ICT vertical. GA Drilling, as the only company within the Industry vertical, raised over 5 million euros.

Where there is will, there is funding

Venture capital funds and angel investors are the leading sources of private investment. VC funds invested in nine scale-ups from the list, angel investors invested in eight. Only one scale-up relied on a bank to fund their business. The fact that 14 out of 15 scale-ups received funding from a domestic investor indicates the commitment of Slovak investors to the ecosystem.
Apart from internal R&D activities, a majority of the interviewed companies are interested in cooperation with other research entities (universities, research centers, and institutes, or individual researchers). While 60% has previously cooperated with other subjects, 26% would like to do so in future. The nature of finished collaborations varies. While 40% of past cooperation was either a formal research project or consultations, another 40% were more informal forms of collaboration (e.g., assistance in thesis research).

One-third of the scale-ups have protected their businesses with patents. In total, ten patents have been issued to the Top 15 (GA Drilling accounts for 6 of them). The chart displays how many firms received other forms of legal protection.

One, but one scale-ups in the Top 15 continuously conduct research and development activities. On average, 37% of total costs spent among the firms is attributable to R&D.
Factors influencing growth

One of the final questions that we ask the Top 15 Slovak Scale-ups were factors affecting the growth of their business. We identified six factors: (1) Investment, (2) Skilled employees, (3) Network of contacts in Slovakia, (4) Network of contacts abroad, (5) Conduct more research & development to improve our products and services, and (6) Expert knowledge and advice availability in Slovakia.

The companies were supposed to mark whether the listed factors influence their growth positively or negatively. For example, if the investment was marked as a positive factor, it means that the level of investment was sufficient for the company to grow. On the other hand, if the factor was marked as negative, it implies that the company would like to raise more funding as its current level is negatively affecting the company’s acceleration. Companies also had a choice to mark a factor as neutral which means that it had a very minimal effect, either positive or negative, on the growth. In case a variable was not relevant for a particular company, they were able to skip it altogether.

Based on our findings, two-thirds of the interviewed companies considered the level investment that they have received as a positive factor. Similarly, the companies were positively influenced by the availability of skilled employees. Over half of the companies also benefited from a good network of contacts abroad and R&D activities targeted to improve their products or services. The companies seem to be split on the influence of contacts in Slovakia and availability of expert knowledge in Slovakia.
Conclusions

When putting together the concluding remarks, the authors of this report kept coming back to one word – potential.

The evolution of the local innovation ecosystem has been marked by considerable progress. Many impactful initiatives have been helpful in bringing people together, motivating collaboration, strengthening networks and promoting innovation across all industries. The availability and ease of access to capital have also improved thanks to a growing network of serial entrepreneurs turned angel investors and venture capital funds. A lot more progress is needed, but the potential is there.

More importantly, the ecosystem’s performance and the list of companies in this report demonstrate that this progress has not been a temporary ‘hype’. Multiple startups that emerged in recent years have matured into fast-growing companies that generate millions in revenues and employ dozens of highly skilled employees. We have identified fifteen such companies and conducted a study about their growth.

Surely, the Top 15 Slovak Scale-ups presented in this report may not be a genuine representation of the entire ecosystem. These scale-ups represent a small subset of Slovak companies that were able to overcome many challenges despite the prevailing shortcomings of their surrounding conditions. However, their stories can be instrumental in driving further growth of the ecosystem.

We can only hope that this report will inspire greater discussion about scale-up companies, their needs and possible strategies that would support their future growth.
DECENT is a Decentralized Blockchain Content Distribution Platform that is Open-Source and utilizes Blockchain to ensure Trust and Security. The company intends to revolutionize data distribution on the Internet. Unlike other content distribution platforms, there are virtually no limitations as to the type of media that are publishable on DECENT Network (from books, pictures, movies to music). To make transactions viable and user-friendly, the DCT – a crypto-token, has been implemented. The encrypted DCT tokens help mitigate attacks, promote funding and ensure transaction validation.

Website
www.decent.ch

What were DECENT’s beginnings like?
Three years ago, we started out in a small office and worked relentlessly on our business plan. Our first seed funding came a few months after. We hired first employees and worked hard for over two years until securing further investment. It was mostly about figuring out the business and looking for ways how to become world leaders in content distribution.

What has changed since those early weeks and months?
Almost everything. In the beginning, it was just me and my other co-founder. Nowadays, we are hiring two employees every week, we have a team China, and setting up a new one in Hong Kong. The challenges that we face today are much different to those at the beginning, from keeping up with the growing business to intercultural communication.

What contributed to your success the most?
Passion and dedication. These two things are essential and make everything go easier.

Matej Michalko
Founder, CEO
Exponea is a company with global presence in advanced data analytics-enabled marketing automation. Its marketing cloud helps businesses get maximum value from collecting, analyzing, and acting upon customer interactions. Unlike any other cloud solution, this platform delivers one-on-one customer experience in just a few days and allows marketers to run, automate, and evaluate campaigns independent of their IT departments. Companies on five continents have already chosen Exponea for its cutting-edge customer analyses and predictions, rich API that allows third-party integration, and marketing automation enriched with artificial intelligence.

Website —— www.exponea.com

**What were Exponea’s beginnings like?**

There was a lot of excitement and stress, a mixed bag of feelings and high expectations.

**What has changed since those early weeks and months?**

Nowadays, as our business is well defined, we focus execution and growth. As to that, we have to adapt and learn continuously. What drives us is the fact that more and more customers choose Exponea over other well-established names in the marketing cloud industry. We are trying to grow in our key markets – Russia and the United Kingdom, as well as expand beyond the European continent.

**Any advice for scaling up?**

Get the basics right. These are culture, brand, and people.

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Sli.do is an audience interaction platform for meetings and events. It allows event organizers to crowd-source the best questions for Q&A sessions, gets instant feedback via live polls and share presentations with audiences in real-time. Sli.do’s focus is on simplicity, allowing organizers to create an event in less than a minute, while participants can join from any device with a unique code.

Since its foundation in 2012, Sli.do has helped to transform over 50,000 events, working with clients such as SXSWedu, LeWeb, SAP, Eventbrite, Prezi, KPMG or Cisco.

Website —— www.sli.do

**What were the beginnings at Sli.do like?**

The early weeks and months at Sli.do were about figuring out the product and looking for a solution that would bring meaningful change to our potential customers. Everything was moving fast, and everyone was doing everything.

**What has changed since those early weeks and months?**

We learned that to become a global leader in our market segment; we need to work with the world’s best customers. Everything was moving fast, and everyone was doing everything.

**Any advice for scaling up?**

Customers are our priority. In addition to serving world-class events and driving meaningful discussions there, we are now focusing on enhancing internal communication within corporate companies.

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Jozef Kovac
Co-founder, CTO

Matus Horvath
Head of People Operations

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**Growth expectations for next year**

• 400% revenue growth

**Growth priorities for next year**

• Reach a valuation of 100 MIL
• Set up a new development office
• Expand throughout the US

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**Growth expectations for next year**

• 300% growth in the number of events

**Growth priorities for next year**

• Continue to provide a high-quality product to the customers
ColosseoEAS specializes in the LED design, multimedia and statistics solutions for sports venues. The company's integrated system approach, introduced in 2010, allows stadium and arena owners to input all data from any source into one platform. Moreover, the solution automates tasks, reduces redundant operations and distributes information to a variety of devices like LED screens, IPTVs, advertising fasciae, mobile applications and even wearable devices.

Website —— www.colosseoeas.com

GA Drilling is a high-tech company developing and commercializing a groundbreaking technology platform PLASMABIT. The technology enables massive time and cost savings compared to other existing drilling technologies and opens up vast new possibilities in oil & gas, geothermal energy, mining, and tunneling. The team has accomplished the first ever plasma milling underwater and the first ever plasma milling in HP/HT environment.

Website —— www.gadrilling.com

Inloop is a company based in the US and Europe, focusing on mobile application development and consulting. Their services cover all phases of development for mobile applications, web, and AR/VR. From design and development to testing and ongoing support, the company covers the whole process. Most of its 132 team members have dedicated themselves to mobile application development since the inception of modern mobile platforms.

Website —— www.inloop.eu

Datamolino removes the pain of manual data entry for accountants, bookkeepers, and SMEs. The company's online application automatically extracts critical information from purchase and sales invoices, bills, and receipts, and pushes the data directly to Xero or Sage One accounting systems in minutes. Datamolino is capable of extracting all amounts, dates, tax rates, supplier details including line item level information. PDF or scanned invoices are simply uploaded to Datamolino via email or desktop 'drag and drop'.

Website —— www.datamolino.com
Instarea, formerly known as Adastra Partnering, is a labo-
atory for innovative greenfield ideas. Their latest crea-
tion is the Market Locator big data monetization solution
which brings together the worlds of population analytics
& targeted marketing in one simple web-based solution.
Instarea also focuses on the interactions between com-
panies and their clients. Their omnichannel event hub,
Adalytics, is growing fast in popularity among telecom-
munication companies and banks, which emphasize their
client satisfaction.

Website  www.instarea.com

Nicereply produces a customer satisfaction survey
software, including CSAT, NPS & CES 2.0. The product
enables companies to improve their customer service
and provide better customer experience. The company is
full of data crunchers, pixel officers and algorithm loving
geeks that strive to provide the best customer satisfac-
tion survey tool.

Website  www.nicereply.com

Photoneo creates high-quality, easy to use 3D area sen-
sors. We also create a “visual cortex” for robots: we teach
them to pick objects and navigate in space. The compa-
y’s mission is to produce valuable 3D scanners (static
scene) and 3D cameras (dynamic scene) and support its
users with game-changing SDKs and APIs, change the
traditional 2D machine vision approach in the industrial
environment and bring to the market unique devices with
new functionalities. Photoneo’s devices enable manufac-
turers to build more flexible production lines, and robot
integrators will get a powerful tool for new applications.

Website  www.photoneo.com

Piano is a fast-growing enterprise headquartered in NYC.
The company provides enterprise software to the world’s
leading media companies, including GateHouse, Grupo
Abril, NBC, the Economist, Condé Nast, Hearst, and
Gannett. Its software enables these companies to create
customized digital experiences for users, restrict and sell
access to content online, and analyze user behavior to
maximize revenue.

Website  www.piano.io
SaferPass is an innovative online identity and password manager integrated across all devices and platforms. It allows the user to securely access his information and passwords using his private master password. The auto fill and password generator function of SaferPass saves time and creates stronger passwords without the need of memorizing them all. The unique “Secure Me” option allows the user to log out of all devices remotely. SaferPass encrypts the data using current encryption standard AES-256.

Website → www.saferpass.net

SEAK Energetics is a provider of unique technology to control street lighting as well as lighting in commercial and industrial buildings over 230 V power line. They can turn the existing luminaires into energy-saving smart lighting grid with no excavation and no additional wires required. SEAK’s applications include overall solutions for energy saving achievement and to have a power control over the lighting installations. The uniqueness of the applications is the ability to control the lighting over power line cables, whether it is indoors or outdoors.

Website → www.seakenergetics.com

Staffino is easy to use tool for receiving feedback from customers on staff that they meet. Giving customers the ability to flip through staff faces, creates the new standard for collecting, analyzing and resolving real-time feedback. Thanks to GPS location and Foursquare API universal Staffino solution gives customers opportunity to leave feedback quickly on all the venues ranging from retail stores, telco companies, automotive, financial sector, healthcare, education, call centers, utility providers to public organizations. Progressive stats allows venue managers to track real-time customer feedback, response time and conversion rate.

Website → www.staffino.com

Sensoneo company came into existence in 2014 as a spin-off of a reputable IT company providing senior management of complex IT projects, programs, and integrations. Sensoneo, smart waste management solutions, automates the waste lifecycle to ensure all waste is under control. In addition to the optimization of the whole process, we achieved significant time and cost savings for waste collection companies and lowered the environmental footprint of cities and municipalities.

Website → www.sensoneo.com
References


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