

Swiss Venture Capital Report

At a glance

CHF 676 million raised

Sectors

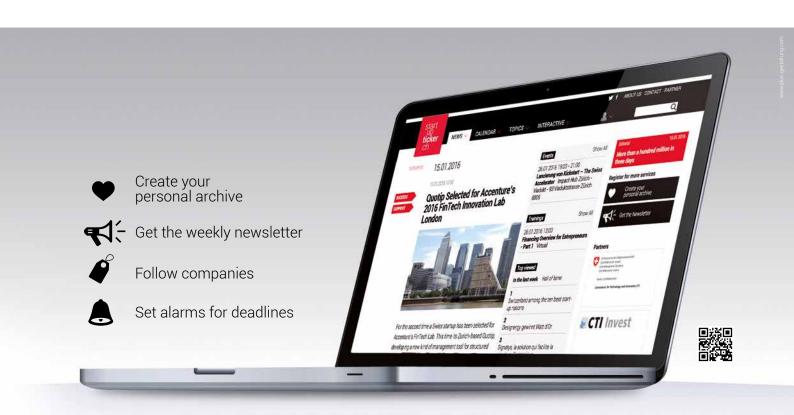
Fintech climbs the ranks

Future Fund Switzerland

Henri B. Meier's thoughts 75



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Editorial



Hot news for the start-up community: in 2015, venture capital investment in the development and growth of young companies reached a peak of CHF 676 million. But is this enough to make the research location of Switzerland a breeding ground for high-tech start-ups? Current hotpoints such as Berlin, London and Silicon Valley provide the global headlines for the start-up community, and it's these places to which Switzerland

aspires – for example, with the Switzerland Innovation Park at five locations and with new funding programmes and initiatives, including Venturelab, Kickstart Accelerator, Mass Challenge and DigitalZurich 2025. And additional capital should flow into the high-growth company, thanks to projects such as the Future Fund Switzerland. The basis has been laid – now it's up to innovators and young entrepreneurs to seize the opportunities. This requires individuals with courage and perseverance, such as the founders of the three companies – Knip, ObsEva and Luma Beef – presented on pages 12 and 13. We hope you enjoy reading the Swiss Venture Capital Report.

Claus Niedermann Editor-in-chief startupticker.ch

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Swiss Venture Capital Report 2016 For the fourth consecutive year, the news portal startupticker.ch, in collaboration with the Swiss Private Equity and Corporate Finance Association (SECA), is publishing the Swiss Venture Capital Report, the overview and analysis of all publicly announced investments in Swiss start-ups. Our implementation partners are the School of Management Fribourg, Swisscom and Technopark Zurich.

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Methodology: strict criteria

The database of the Swiss Venture Capital Report forms the list of 120 rounds of financing that can be found on pages 30 to 33. These rounds of financing were reported on startupticker.ch or in other media in 2015.

In addition, this year we actively approached investors and therefore are able to report on more investments. Of course, some investments have not been made public; however, we assume that they were either very small financing rounds or that the money did not come from professional financial investors, and therefore is not venture capital in the true sense. This does not affect the results to a large degree.

To obtain as unbiased a result as possible, the report focuses exclusively on venture capital investment. Buy-out investments and strategic partners are not included in the analysis; however, a short separate list on page 33 provides an overview of such deals.

In addition, the analysis takes into account only Swiss start-ups; that is, those companies that have their head-quarters in this country or their roots and major operational activities in Switzerland.

The investment phases are defined as follows:

- Seed: founders, 3Fs, foundations.
 Average amount: below CHF1 million.
- Early stage: Round A, first round, business angels and venture capitalists. Average amount: between CHF1 million and CHF5 million.
- Later stage: growth, expansion, after Round A, VCs. Average amount: more than CHF 5 million.

Support: long-term upward trend

This year we analysed again whether start-ups that have been supported by three different programmes are able to attract investors. Our analysis shows improved results year-on-year.

Of the 120 total funded enterprises, 26 carry the CTI Startup Label. Together, they generated CHF 159.5 million with an average of CHF 8 million each, a considerable amount for Switzerland. The CTI Label companies with the largest investments proved to be GetYourGuide, Genkyotex, InSphero, PIQUR, Sophia Genetics and Flisom.

No fewer than 49 start-ups that presented at CTI Invest attracted investors in the past year, with overall CHF164.5 million flowing into them.

As part of the venture kick initiative, 31 start-ups were awarded and they raised a total of CHF 71.7 million.

Investment in supported start-ups is showing a stable upward trend. For CTI Startup Label companies, the amount rose from CHF100 million in 2013 to CHF137 million in 2014 and to CHF159.5 million in 2015.

For start-ups that presented at CTI Invest, the total increased from CHF100 million (2013) to CHF158 million (2014) and CHF164.5 million in 2015.

For companies supported by venture kick, the amount increased from CHF14 million (2013) to more than CHF50 million in 2014 and CHF71.7 million in 2015.

At a glance Strong growth in all areas

With 120 financing rounds and a volume of more than CHF 670 million, 2015 saw the start-up scene in Switzerland take a significant step forward. Since 2012, the total amount invested has more than doubled. Stefan Kyora

The increase in funding rounds and total investment over the past year are impressive. Swiss start-ups generated 47.9% more funds than in 2014. The number of rounds increased by 30.4% from 92 to 120. The end result in the

After two years of slight decline, ICT start-ups rose again with a significant turnaround

.....

medium term is very gratifying. In 2012, a total of CHF316 million was invested; since then, it has more than doubled with an increase of 114%.

The upswing in 2015 was broadbased with a contribution from all sectors. The largest increase was generated by more life sciences start-ups – in biotech in particular. The capital invested in this area has increased by almost two thirds, up from CHF189.6 million to CHF310.7 million. After two years of slight decline, ICT start-ups rose again with a significant turnaround: the sector (including fintech) rose by 50%, from CHF86.3 million in 2014 to CHF129.3 million in 2015.

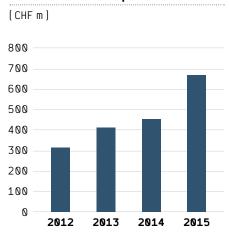
Weaknesses mitigated

Figures for the IT sector are not the only example that in 2015 the typical weaknesses of Switzerland occurred less. After the average very small rounds of financing of 2014, in 2015 the median of all investments increased from CHF1.8 million to CHF2.6 million. In addition, the number of rounds of between CHF2

million and CHF10 million, which traditionally are difficult to complete in Switzerland, increased from 19 to 27.

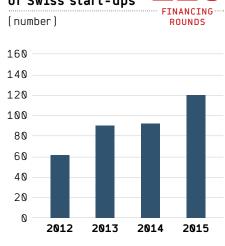
Analysis of the figures by canton shows Vaud and Zurich at the top again. After 2014 when Vaud was the clear leader in sums invested, the two cantons are now on a par with CHF173 million each. But the regional analysis also shows a particularly positive image of the other cantons, where hitherto little venture capital had flowed. Their share in 2014 stood at 28%, rising in 2015 to 49%, with the amount more than doubling from CHF126.8 million to CHF 329.5 million. This increase was broadly based: Geneva, Basel and Zug grew significantly both in the amount of invested funds and in the number of financing rounds.

Invested capital in Swiss start-ups



INVESTED CAPITAL CAPIT

Financing rounds of Swiss start-ups



The Top 20 The Top 20 venture capital rounds in Switzerland in 2015 amounted to a total of CHF 560.9 million (2014: CHF 392 million), 83% of total capital expenditure (2014: 86%). Just under half the financing volume (47%) accounted for the top five rounds, as in the previous year (49%), with the top 10 accounting for 65% of total financing (2014: 71%).

Company	Sector	Phase	Canton	Amount (CHF m)
CeQur	by many sufferers that provides pati Investors Woodford	of type 2 diabetes: Ce ents with insulin for tl	LLP, Arthurian Life Sciences,	96.2
ADC Therapeutics	investors have pro antibody-based ca		The goal is to develop new	77.0
ObsEva	demand in drugs focuses on this at Investors HBM Heal	related to pregnancy a tractive market. Ithcare Investments, New Is Capital, Sofinnova Partne	Enterprise Associates (NEA),	60.0
GetYourGuide	investor that caus	ed a sensation, as KKR ment funds, joined Ge		50.2
	Nokia Growth Partne		k cupital, sunstone cupital,	
CRISPR Therapeutics	biotech CRISPR is a new m CRISPR Therapeut technology.	early stage nethod of selectively cuics has developed inno	BS utting and changing DNA. ovative drugs based on this ociates (NEA), Abingworth,	33.0

Company	Sector	Phase	Canton	Amount (CHF m)
CRISPR	biotech	later stage	BS	27.8
Therapeutics	came more good no venture with CRISP	ews: Bayer is investi PR Therapeutics.	d in April, and in December ng \$ 335 million in a joint ssociates (NEA), Abingworth,	2/.0
Nutresia	consumer products	later stage	VD	25.0
		m up high quality co le internet.	vaterbath and steam oven, nvenience foods marketed	25.0
Genkyotex	biotech	later stage	GE	20 D
·	ment of our lead di in January. In Septe the Phase 2 clinical	rug," said Ursula Ney ember, she announce programme.	ue independent develop- y, CEO of Genkyotex, ed top-line results for ers, Edmond de Rothschild Group,	20.0
TaCabaaa		lator stage	7⊔	
InSphero	biotech	later stage	ZH our model systems for use	20.0
	•	s global footprint, bue ervices.	cess. Now the company roaden the portfolio and	
PIQUR	biotech	early stage	BS	18.0
Therapeutics	drugs. The Series A raised by PIQUR to	_	develops novel tumour rought the total capital illion.	TO.0
Knip	ICT (fintech)	later stage	ZH	1 E 7
	Switzerland; howe The Series B fundin	ver, the target is the ng last October shou	ance broker in Germany and European market leader. Id help. re, QED Investors, Orange Growth	15.3
Kuros	medtech	later stage	ZH	4 5 0
Biosurgery	Gerhard Ries, mana is convinced: "Kuro in the rapidly grow Investors LifeCare Pa	aging partner of lead s has the potential t ing orthobiologics n	d investor LifeCare Partners, o become a leading player narket." Partners, Omega Funds,	15.0
Sophia	healthcare ICT	later stage	VD	<i>A A C</i>
Genetics	•••••		ılarly in the analysis, visuali-	14.8
	sation and storage platform is already Investors Alychlo			

Company	Sector	Phase	Canton	Amount (CHF m)			
SIS-Schwager	medtech	later stage	ZH	120			
Group	of vascular disease. I	· ·	roducts for the treatment and very small balloon narket.	12.0			
Flisom	cleantech	later stage	ZH	10.0			
	manufacture of flexi	•	ve technologies in the erformance thin-film solar uction plant.	TO.0			
Prexton	biotech	early stage	GE	0 5			
Therapeutics	animal models," says Therapeutics. His con neurodegenerative o		EO of Prexton kinson's disease and other	9.5			
Demiurge	ICT	early stage	ZG	0 1			
Technologies	•	oping the next genera hips.	urge Technologies, have ation of neural networks	9.4			
Sequana Medical	medtech	later stage	ZH	\cap \cap			
	system that pumps the engineer had already 2014. Investors NeoMed, Bio	y generated \$ 23 millio	inal cavity. The American on in equity financing in	9.0			
Hulbee	ICT	later stage	ZG	0 7			
	The Secure Search Endata, IP addresses, tr founder Andreas Wie Investors private inves	8./					
	Swiss institutional investors						
	Start-ups from the continue to lead the (medtech). ADC The	he ranking: CeQur	Generally, larger fina were completed within median per round in 20	the Top 20. The			

(medtech), ADC Therapeutics (biotech) and ObsEva (biotech). Biotech is represented by nine financing rounds, with medtech and ICT (including fintech) represented by four rounds each.

The ICT sector has accounted for six to seven transactions in previous years; however, the round of GetYourGuide with a high of CHF50.2 million more than compensated for the decline.

median per round in 2015 increased to CHF19 million from a total of CHF14.3 million in 2014.

Four biotech companies and an ICT start-up managed to procure relatively high financing at an early stage (Series A): CRISPR (CHF 33 million), Asceneuron (CHF 30 million), PIQUR (CHF 18 million), Prexton (CHF 9.5 million) and Demiurge (CHF 9.4 million).

Foreign investors: US shows start-up interest

The majority of Swiss venture capital investment comes from abroad. Even the Americans are increasingly pleased with Swiss start-ups, with two venture capitalists from the life sciences sector already on site in Basel: Versant Ventures and Bay City Capital. Other prominent names, such as Spark Capital and the private equity giant KKR, have also invested in 2015. Thomas Heimann

The top 20 investment rounds contain many well-known global investors with excellent reputations, and for those companies that were able to attract these investors, it is a great proof of

Judged by sector, the results give a somewhat one-sided picture: the largest investments are mainly - and as in recent years - in life sciences companies and ICT start-ups, with one big (GetYourGuide) and a few minor (Knip, Demiurge, Hulbee) exceptions.

The life sciences sector owes its leading role to a vital ecosystem with global leaders (Roche, Novartis), leading niche providers, suppliers and educational institutions, which enable a highly effective juxtaposition of research and development. Here we find a very wellfunctioning cluster.

Few Swiss investors

On the other hand. Swiss venture capitalists (VCs) - with the exception of a few actors, financially strong private investors and corporate ventures - are unfortunately few and far between. Swiss fund vehicles lack a substantial size, so that participation in the big rounds is not possible. This structural problem applies to Europe in general: an analysis of the European Union (Invest Europe; formerly EVCA), published at the end of 2014, calculated a median fund size of just €27 million.

US funders have sprung into the breach: Invest Europe calculates a share of about 25% for US investment in Swiss start-ups – and rising. In order to be geographically and time-wise closer, Versant Ventures and Bay City Capital known as 'West Coast VCs' from the life sciences sector - have pitched their tents in Basel. Bay City Capital has been

in Switzerland since 2014, as its managing director Lionel Carnot explains: "As part of our geographical expansion, we were looking for a city with an international mindset and exposure from which to base our European operations. After reviewing the alternatives across Europe, Basel came out clearly on top."

European or Swiss deals are attractive in comparison with US opportunities, Carnot continues: "Europe offers great opportunities and lots of high quality innovation. Some of the advantages may be less competition for deals and sometimes lower valuations due to scarcity of capital and a less mature VC ecosystem."

So it is not surprising that the venture capitalist intends to make a first investment in Switzerland this year, and the facility in Basel will be expanded from today's one-man operation to a 'European centre'.

Bay City Capital



Lionel Carnot, managing director, Bay City Capital

Founded in 1997, Bay City Capital is a life sciences investment firm with a global diversified strategy ranging from seed stage to public companies, and including innovation, restructuring opportunities and growth investing. Bay City Capital's general life sciences funds represent approximately \$1.3 billion in capital commitments.

Lionel Carnot, managing director of Bay City Capital, says: "Switzerland is closest to what could be called a hub – think Boston or the SF Bay Area - in Europe for life sciences, whether biotech or medtech.

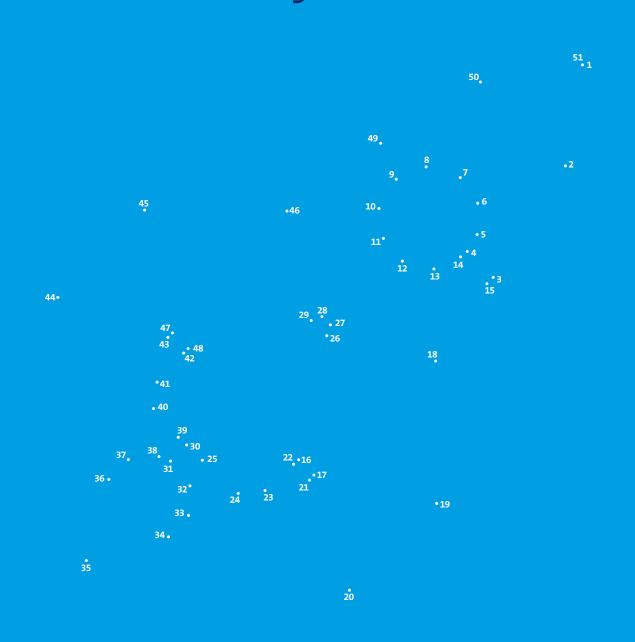
"On the back of a long tradition of wellestablished companies with expertise in life

sciences-related areas, Switzerland offers key ingredients for a successful cluster. The country's strong position is due to a balanced mix of academia/ research-generating, top-notch innovation (EPFL, ETH, CHUV, etc.), a concentration of private life sciences companies and high net worth angels, and optimal conditions and infrastructure – tax incentives, political stability, high standard of living, among others.

"In particular, Basel offers a fertile environment for the creation and development of innovative life sciences companies, whether it is scientific innovation, access to funding, a large multilingual talent pool or a general entrepreneurial spirit."



A successful launch — all the way down the line.

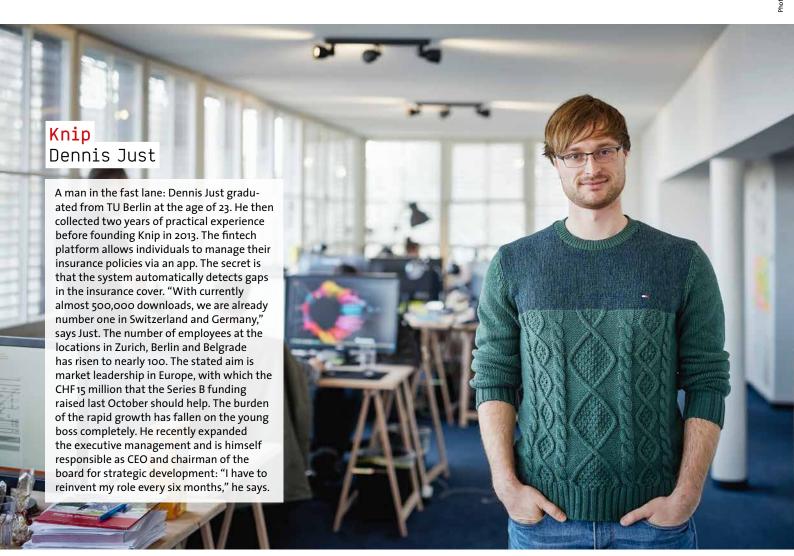


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Entrepreneurs The faces behind the figures

They are either very young or can look back on a long working life. They work alone or in teams. They collaborate with Swiss business angels or collect millions through international venture capital funds. But one thing unites the Swiss start-up entrepreneur: the desire to implement new ideas.





Sectors Strong increase in biotech

In 2015 biotech start-ups received an increase of more than 63% in funds over the previous year. The ICT sector also increased significantly with a growth rate of 50%.

> For a second consecutive year, life sciences companies obtained the largest sum of venture capital in 2015: CHF 483.8 million was invested in biotech, medtech and healthcare IT companies, representing approximately 72% of the financing volume in the past year (78% in 2014). Of the total amount, 19 % was invested in ICT companies. The remaining sectors played a minor role in terms of total investment.

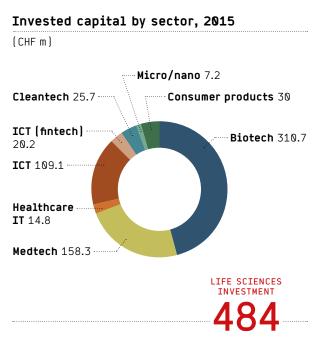
> All sectors received more capital than in 2014, but in greatly varying degrees. The largest increase over the previous year was achieved by the biotech sector. The invested capital increased by almost two thirds, from CHF189.6 million to CHF310.7 million (2013: CHF185.1 million). The ICT sector

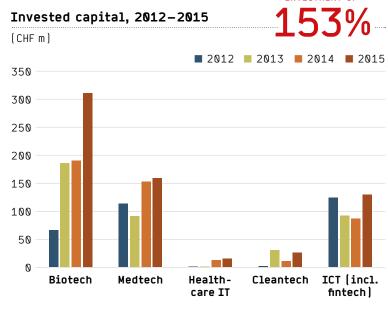
(including fintech) rose by 50%, from CHF86.3 million to CHF129.3 million, with which the sector reached the level of 2012 again after declines in 2013 and 2014. Medtech was able to maintain the previous year's level. The remaining sectors were significantly higher, but at a relatively modest level.

Fintech in forward gear

Fintech is becoming increasingly important, albeit at a low level for the time being. Knip's financing round of CHF15.3 million was the largest round in the sector over the past year and also the largest in the young history of the Swiss fintech industry. Until now, Numbrs' financing round of more than CHF11 million in 2013 held the record.

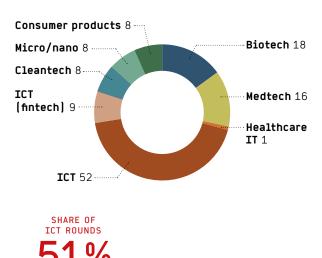
FINTECH



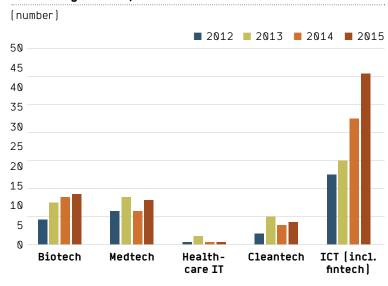


Financing rounds by sector, 2015





Financing rounds, 2012-2015



36%

As usual, a different picture emerges when looking at the number of rounds. As in previous years, the ICT sector (including fintech) had the most financing rounds, with 61 completed rounds or about 51% of the total 120 transactions. The life sciences sector recorded 35 rounds – 18 biotech (15%) and 16 medtech (13.3%). The remaining sectors (cleantech, micro / nano, consumer products) contributed to a slightly more diversified image than in the previous year: their share rose from 16% to 24%.

Within the major sectors, the ICT sector showed the largest increase in number of rounds with a rise of 36% (61 up from 45). This was followed by medtech with an increase of 33% (16 up from 12) and biotech with a rise of 5.9% (18 up from 17).

The median in the ICT sector remained at CHF1.5 million per round as in 2014, while the median in the biotech sector increased significantly from CHF4.5 million to CHF13.8 million. In general, larger rounds were made.



Carole Ackermann, president of Business Angels Switzerland

Case study

Lean and fast

Investment in ICT start-ups has increased again, both numerically and in volume. Nothing has changed, however, in the fact that ICT investment rounds are comparatively modest compared with the very different sums of money in play in biotech start-ups. Carole Ackermann, president of Business Angels Switzerland (BAS), thinks this gap can be explained: "The areas of mobile and internet in particular are aligned to relatively little money." This makes the sector attractive to business angels: most of the 13 investments that BAS pulled through last year concerned ICT companies.

To Ackermann, many small rounds indicate the maturity of an ecosystem. The magic words are lean start-up. "Founders and investors have learned how important it is to put out new ideas with favourable beta versions as early as possible." So all is good then in Swiss ICT financing? Ackermann will not go as far as that: "We still have a bottleneck in follow-on financing."

Phases

Weaknesses alleviated

Analysis of the investment phases shows in principle an encouraging development. The median rose at all stages and in particular more rounds of between CHF2 million and CHF10 million took place, a traditionally difficult area in Switzerland.

> All phases experienced a growth in 2015. The 120 financing rounds were divided into 20 seed, 53 early stage and 47 late stage (in 2014: eight, 45 and 39, respectively). The analysis attributes the clear surge in seed financing in particular to the better coverage of business angel activities. Seed financing rounds received a total of CHF7.9 million (2014: CHF 0.7 million), early stage CHF 158.5 million (2014: CHF122.6 million) and later stage CHF 509.6 million (CHF 333.9 million).

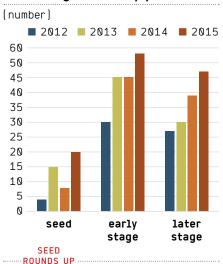
> In the later stage area, more and larger rounds were completed. The biotech sector is chiefly responsible for this increase: the sum of invested capital almost doubled from CHF109.5 million in 2014 to CHF 208.1 million in 2015, with the same number of financing rounds (eight). In the ICT sector, the number of

later stage rounds rose from 12 to 19, and total investment from CHF52.7 million to CHF 91.7 million. Cleantech and consumer products both posted growth in later-stage investment: invested capital increased from CHF 5.8 million to CHF18.8 million for the same number of rounds (three), and from zero to CHF29 million (zero to five rounds), respectively.

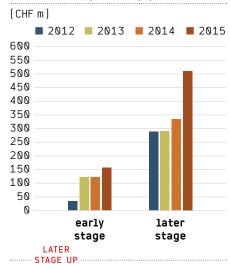
Rising median

Both medtech (one to seven rounds) and biotech (seven to nine rounds) recorded higher activity. Investment in medtech in the early stage, however, remained modest, climbing from CHFo.8 million to CHF13.2 million, while biotech raised CHF 98.9 million in the early stage. As in previous years,

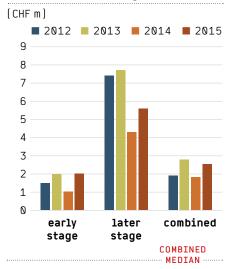
Financing rounds by phase



Invested capital by phase



Median of financing rounds



Distribution of financing rounds, 2015 [total number = 74]No. of transactions 12 10 8 6 4 2 0 0.1 0.5 1 1.5 2 2.5 3 3.5 5 6 15 20 >20 4 4.5 10 Financing amount (CHF m)

ROUNDS CHF2M - CHF10M Distribution of financing rounds, 2012-2015 (total number = 242) No. of transactions 50 45 40 35 30 25 20 15 10 5 0 2 2.5 3.5 4 4.5 5 1.5 3 10 15 20 >20 Financing amount (CHF m)

most ICT rounds were between zero and CHF2 million per round.

The median per financing round in the early stage sector grew clearly. The average sum of invested capital doubled compared with 2014, from CHF1 million to CHF2.1 million, reaching again the level of 2013. The median of late stage rounds increased from CHF4.3 million to CHF5.6 million, but is still below the value of 2013 of CHF7.7 million. Overall, across all rounds, the median rose to CHF2.6 million from CHF1.8 million.

The problem of the oft-quoted 'Valley of Death' (financing rounds of between CHF2 million and CHF10 million), in which the availability of capital is particularly scarce and which has been greatly accentuated in recent years, particularly in Switzerland, was a little less obvious in 2015. In this bandwidth, 27 rounds were completed compared with 19 in 2014. In general, the rounds were more evenly distributed in 2015 than in the previous year.

Case study

ROUNDS

Optimistic perspective

Gianni Gromo has 30 years of experience in the pharmaceutical industry. For three years he has been a partner in the Basel office of Versant Ventures. It is the only office of the healthcare investment firm, which has \$1.9 billion under management, outside North America. Five employees are responsible for European investment and coordinate Canadian and US east coast activities. "But we also follow closely what happens in Switzerland in terms of biotech start-ups," says Gromo. Three Swiss companies have been cofinanced by Versant so far: Anokion, CRISPR Therapeutics and PIQUR. "And we have a fourth one in the pipeline," reveals the investor.

Gromo says that we can look back on a good three-year stretch for the industry. Venture firms have used the wave of biotech IPO exits and M&A deals to go back and raise more money from institutional investors.

"Having said that, I think that there have been some exaggerations in the recent past and we will see a market adjustment," he comments. In the mid to long term, Gromo is optimistic about Europe: "I am convinced that the European biotech industry will catch up with the US."



Gianni Gromo, partner, Versant Ventures

Cantons Growth in breadth

Zurich and Vaud were in a head-to-head race in 2015, but at the same time other cantons also increased their share of total invested capital. Switzerland now has not just two start-up hotspots but several.

In 2014, significantly more was invested in the canton of Vaud than in the canton of Zurich. In 2015 the two cantons at the top of the rankings were on a par, with Vaud losing (-14%) and Zurich gaining (+34%). Both Zurich and Vaud are the clear winners in this indicator. The number of investments, however, shows a familiar picture: Zurich is clearly ahead of Vaud and the other cantons.

However, the significant growth in total invested capital is due to the strong increase in other cantons. Their share in 2014 stood at 28%, rising in 2015 to 49%, with the amount more than doubling from CHF126.8 million to CHF 329.5 million.

This increase was broadly based: Geneva, Basel-Stadt and Zug increased significantly both in the amount of invested funds and in the number of fi-

nancing rounds, and a very big financing round took place in the canton of Lucerne.

ICT: Zurich and Zug ahead

An analysis of investment by sector shows the usual picture in ICT investment. Zurich again towers over the rest: more than half of ICT companies that attracted investors in 2015 are based here, with about 60% of total funds invested in ICT companies in this canton. And although biotech companies received more money in the other main start-up cantons, the ICT sector in Zurich is clearly on top.

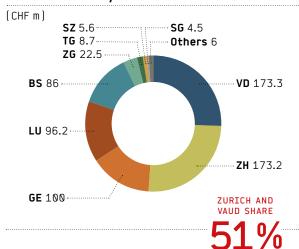
In second place for ICT investment follows not Vaud, but the canton of Zug - both in the number of funding rounds and invested capital. The canton of Vaud, in contrast, is distinguished

mainly by its large diversification: startups from various growth industries are almost equally represented.

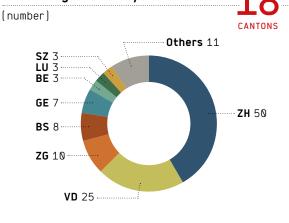
A rather surprising picture emerges in the biotech field. In invested amounts, the cantons of Vaud, Geneva and Basel-Stadt are at similar levels, with Zurich following at a considerable distance. Overall, significantly more money was invested in western Switzerland: nearly two thirds of biotech investment went to start-ups in the cantons of Vaud, Geneva and Valais.

INVESTMENT IN

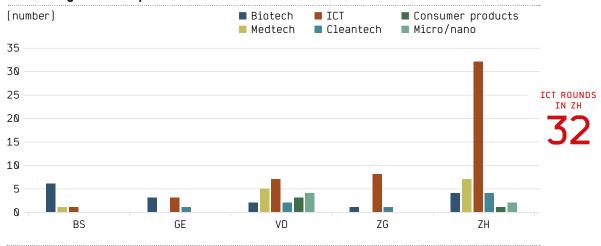




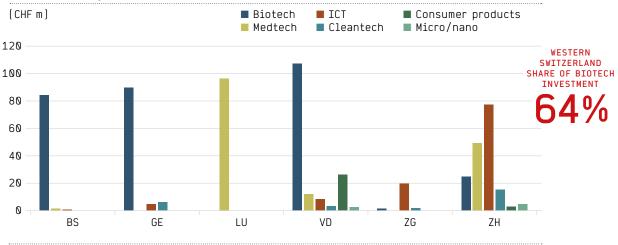
Financing rounds by canton



Financing rounds by sector and canton



Investment by sector and canton





Erika Puyal, director of the Startup Finance programme at ZKB

Case study Vibrant atmosphere

Last spring, Zurich as a biotech location made international headlines when Big Pharma took over the two start-ups GlycoVaxyn and Redvax. And the best part is that the pipeline is well filled, as investment in Zurich biotech start-ups reached its highest point ever in 2015. "What's happening in Biotechnopark Schlieren is sensational," says Erika Puyal, director of the Startup Finance programme at ZKB. No other institute has invested so steadily and widely into the regional start-up scene as ZKB; its portfolio currently includes about 140 companies from all high-tech industries. "For ambitious founders, Zurich has great locational advantages," says Puyal. In addition to the vibrant atmosphere in the co-working spaces and incubators, the main benefit is the proximity to one of the largest financial centres in the world. The finance industry is facing some major technical and regulatory changes, and for Puyal "fintech companies will play a key role in this transformation". So it is not surprising that six of the nine fintechs funded in 2014 are domiciled in the Zurich area.

Digitalisation Missing lighthouses

The digitalisation of the economy promises astonishing growth opportunities, but Switzerland is liable to miss the boat. So say the two SECA experts, Maurice Pedergnana and Thomas Heimann. To them, it is clear that the Swiss economy needs an ICT ecosystem that produces true global leaders as well as niche players.

The meaning of a true 'Global Leader' is indisputable: companies that are dominant in their fields. They do not necessarily have to be the market leader, but in one dimension at least - technology, service or quality – they must lead.

With this definition in mind, companies such as Novartis, Roche, Nestlé, ABB, Schindler or the Partners Group

Companies with the potential of Google, Apple or Uber are hard to find in Switzerland

are undoubtedly Global Leaders. SUVA, which must be considered from a quality aspect with its rehabilitation and prevention approach, and the Swiss Paraplegic Centre in Nottwil are also globally outstanding. EPFL Lausanne and ETH Zurich are among the leaders in their field.

But how does it look in that field in which the Global Leaders of tomorrow grow? In the field of information and communication technology (ICT). This

is where companies promise significant efficiency gains across all industries and which sometimes forge entirely new value chains.

Let's face it, companies with the potential of Google, Apple, Uber or booking.com are hard to find in Switzerland. In leading reports on highimpact entrepreneurs or ICTs for inclusive growth, we search in vain for domestic businesses. There are reasons.

Control vs. growth

Let us take two typical examples: the end of 2012, the founders of start-up company threema (Pfäffikon SZ) developed the app threema, which enables encrypted communication from phone to phone. But they did not believe in their own strength and worked in parallel on a second project. Meanwhile, the app has been downloaded 3.5 million times and in the last 16 months alone has generated CHF4 million in sales.

Equity financing, which could have brought the firm significant growth, was avoided: for the founders, 100% control of the company was the most important factor.

Berlin calling

The second example is GetYourGuide. Here, global success was the driving factor. After the start-up financing, the rapid internationalisation of the business became the focus. The speedy growth led to an expansion and shift in location to Berlin. The last round of investment was led by KKR. Swiss investors, however, were not there.

Of course, the idea must come first, but much more important is then the swift implementation of a strategy that addresses the global market from the very beginning.

External financing has become central if you want to bring an innovation to a global market-leading position in a fast changing global economy. The



Thomas Heimann (I.) is a lecturer at the Lucerne School of Business

Maurice Pedergnana is managing director at SECA and a professor at the Lucerne School of Business

Photo: pisonic

crucial role in this environment, and not only because of the inflow of funds they provide – attention must also be directed to the multipliers. That is, corporate VCs that provide not just money but also networks, procurement, production and sales channels, and research capacities.

Big Pharma as role model

An important condition for growth for Global Leaders is the spatial environment. It's always good when one is exposed to tough competition in the immediate vicinity, as an incentive as well as for exchange. Countless historical examples testify to this.

The Basel Big Pharma firms prove it, just as Maggi (Kemptthal-Winterthur) and Knorr (Thayngen, Schaffhausen), embedded today in Nestlé

> and Unilever, possess a global leadership role. Or the Dassler brothers, who separately took Adidas and Puma to world fame.

> > And the

Swiss watch industry has built a geographic economic 'cluster'.

A cluster is characterised by the fact that the financial and human resources can be transferred from one competitor

It's always good when one is exposed to tough competition in the immediate vicinity

......

to the next. A globally ambitious cluster engages. It's always about 'coopetition': the duality of cooperation on the one hand and market competition on the other.

In the IT world, Silicon Valley is the undisputed most effective field of coopetition and thus probably the most effective breeding ground for Global Leaders. In Switzerland, as in Europe, such an innovative ecosystem is missing. Politics, science and industry would do well to change this state of affairs as soon as possible.

With Google and Gates

Severin Hacker, the 30-yearold from Zug, developed the language learning app Duolingo with his professor. Google participated in the company, founded in 2009 by the PhD student, in 2015 with just under \$45 million through its corporate venture company Google Ventures. The start-up employs 45 people and is valued at approximately \$470 million. The app has more than 100 million users. One of the most prominent is Bill Gates. "I felt stupid that I could not speak a foreign language and so learned French with Duolingo," the Microsoft founder said recently on Reddit.

The service has been available since 2012 and offers free courses for a number of languages, including German, English, Spanish, French and Italian. Hacker and his team have developed adaptive algorithms that adjust to individual learning progress. Each lesson contains personalised learning content tailored to the goals and pace of the user. Studies at two American universities came to the conclusion that 34 hours of learning with Duolingo could replace a full semester course.

Hacker graduated from secondary school in Zug, studied computer science at ETH Zurich and then spent a year at Carnegie Mel-Ion University in Pittsburgh, one of the world's best in computer science. There, he was able to share with smart fellow students and professors, and in this environment he also found co-workers, all of whom are involved in the company.



Severin Hacker, co-founder and CTO of Duolingo

Exits

Sought-after Swiss start-ups

No IPOs were recorded in 2015, but a record number of trade sales took place. The most important at a glance. Jost Dubacher

Biotech

GlycoVaxyn, Schlieren, founded 2004

The British pharma group GSK had long held a minority stake in GlycoVaxyn. In February, it acquired the remaining shares for \$190 million. www.glycovaxyn.com

Redvax, Schlieren, founded 2006

Through Redvax, a spin-off of the privately owned Redbiotec AG, Pfizer came to Zug. The price was not disclosed. www.pfizer.com

Cleantech

Helion Solar, Luterbach SO, founded 2008

Alpiq is committed to renewable energy and with its takeover of Helion Solar gains a specialist in planning, construction and maintenance of photovoltaic and storage systems. http://helion-solar.ch

ICT Architonic, Zurich, founded 2003

Veit Dengler, CEO of NZZ, was clear: Architonic, an online community for architecture and design, "fits perfectly with our specialist media strategy". www.architonic.com

Bay31, Zug, founded 2012

Identity governance and administration (IGA) is a growth market. US firm Courion is one of the technology leaders and is strengthened further through its acquisition of Bay31. www.bay31.com

BugBuster, Lausanne, founded 2011

In summer, US software company AppDynamics took over EPFL spin-off BugBuster and its highly innovative web testing platform. https://bugbuster.com

Ciiva, Horw LU, founded 2012

San Diego firm Altium sells software for electrical engineers. Ciiva's cloud-based tools and services will be integrated and further developed. https://ciiva.com

Faceshift, Zurich, founded 2012

It finally became clear in November that Apple was the buyer of Faceshift and its highly traded facial motion tracking software. www.faceshift.com

iBrows, Wattwil SG, founded 2006

PwC Switzerland is expanding its digital literacy and with its takeover of iBrows has acquired a leading developer of web and mobile applications. www.ibrows.ch

iConcerts, Geneva, founded 2006

With its acquisition of iConcerts, Canadian firm Stingray has at a stroke become the world's largest broadcaster of live music concerts on television. www3.iconcerts.com

Mila, Zurich, founded 2013

Collaborative service models are in vogue. Mila develops such platforms and Swisscom took a majority stake in November. www.mila.com

My-Store, Meyrin GE, founded 2009

Ringier is expanding its non-journalistic activities and took over 60 % of My-Store, operator of a highly successful digital outlet shop. www.my-store.ch

Paradox Engineering, Novazzano, TI, founded 2000

Minebea had worked for some time with Paradox Engineering as a strategic partner. Now the Japanese firm has taken over the IoT specialist completely. www.pdxeng.ch

SixSq, Geneva, founded 2007

SixSq develops innovative cloud solutions for aerospace, military and security technology, and in early 2015 it went to the Belgian Rhea Group. http://sixsq.com

Sobrado Software, Cham ZG, founded 2011

Sobrado is an offer and transaction platform for brokers and insurers; its owner since the end of September has been Swiss Life. https://sobrado.ch

Stromberg, Dietlikon ZH, founded 2003

Media group Tamedia has further expanded its commitment to online fashion through its takeover of online fashion shop stromberg.ch. www.stromberg.ch

Upicto, Zurich, founded 2011

The ETH spin-off has developed an algorithm that recognises the relevant moments in videos. Since February 2015, two of the three founders have been on Logitech's payroll. www.logitech.com

Zattoo Schweiz, Zurich, founded 2007

Tamedia again: the media company is pushing into the European market for internet TV and has taken 31% of Zattoo International. http://zattoo.com

Interdisciplinary

Health Care Research Institute, Zurich, founded 2009

Swiss Post wants to assume a key role in the healthcare sector and has acquired Health Care Research Institute, a specialist in data-driven quality management. www.hcri.ch

H-Net, Zurich, founded 2007

Swisscom is also pushing into the health sector and in March took over H-Net, a leading company in the field of medical data exchange. www.h-net.ch

Koubachi, Zurich, founded 2009

Swedish firm Husqvarna AB is a global leader in outdoor power equipment; ETH spin-off Koubachi has integrated gardening and IT. In July, the two came together. www.koubachi.com



David Hug, managing director, Ringier Digital Ventures

Corporate venture

Learning or earning

The combination of market power on the one hand and good ideas on the other leads to striking leverage. Thus, the acquisition of start-ups has become routine for many large companies.

However, the potential is not exhausted yet. This is the conclusion of a recent study by Accenture and the Young Entrepreneurs Alliance. A systematic cooperation between start-ups and corporates, it says, could enable a rise in global GDP of up to €1.4 billion by 2020, which corresponds to approximately 2.2% of current economic performance.

From the corporate perspective, there are two ways to reach this goal. First, co-working spaces, incubators and innovation competitions stimulate knowledge and technology transfer, and, second, capital gains can be achieved through venture capital investment.

A look at the Swiss corporate VC scene reveals that most local companies take a mixed strategy; from Novartis and Roche to ABB, Swisscom and – since the beginning of 2015 – media company Ringier. Ringier Digital Ventures has about CHF30 million available and has been involved for over a year in mobile and internet start-ups. So far, four investments have been made. "In the long term," says managing director David Hug, "we want to make between five and seven transactions a year."

Hug has studied about 1,000 business plans since early 2015. Some promising projects that do not fit into the investment strategy are passed on to colleagues at Ringier: "They then check whether there is any interest in a business partnership."

Synergies between partnering and venturing are desirable, but must be regulated so that no disadvantages arise for the venture business. Problems may occur, for example, in participation agreements where the corporate VC has a right of first refusal, thus restricting the room for manoeuvre of the financed company and its co-investors.

At Ringier Digital Ventures, clauses of this kind are not the focus, for reputational reasons, as Hug stresses: "We want to be perceived as a normal VC."

Medtech

Sias, Hombrechtikon ZH, founded 1999

Sias' expertise in automated immunoassays and molecular diagnostics workflows fits perfectly into the corporate strategy of Tecan, which acquired it last December. www.sias.biz

Micro/nano

ACL Instruments, Burgdorf BE, founded 2008

ACL Instruments' motto is 'understanding oxidation' and so laboratory services firm ReseaChem acquired the company last March. www.reseachem.com

Composyt Lights Labs, Lausanne, founded 2014

Intel is convinced that smart glasses are the future, so the semiconductor company has acquired EPFL spin-off Composyt Lights Labs. www.intel.com

Lemoptix, Lausanne, founded 2008

Lemoptix's small laser projectors also caught the interest of Intel. In March 2015, the deal went through and now Lemoptix is also part of the Intel family. www.intel.com

Skybotix, Zurich, founded 2009

US camera manufacturer GoPro is aiming high and has taken over drone specialist Skybotix, a spin-off of ETH Zurich. https://gopro.com



"Opportunity for Switzerland as a business location"

Pension funds for the technologies of tomorrow: the Future Fund Switzerland is intended to safeguard pensions and create value-added jobs for contributors. Henri B. Meier, the fund's guiding spirit, talks about the background of the Graber Motion. Jost Dubacher

What prompted you to ring the alarm bells at your age, Mr. Meier?

Henri B. Meier: Direct investment in the value-added economy has been declining for years. For a high-wage location that thrives on knowledge and capital-intensive products and services, this is fatal.

We need to eliminate the harmful effects of the current economic BVG legislation

What do you think is the reason for this?

The savings rate in Switzerland is more than 30% of national income, so money for investment is available. But about two-thirds of these funds are tied up in government-mandated or supported collective benefit schemes, of which, in turn, half is in pension funds. These currently manage about CHF850 billion and invest mainly in debt securities, such as bonds and mortgages.

But the pension fund managers are following the statutory requirements, are they not?

I do not share this opinion. The federal law on occupational pension provision (BVG) of 1985 did not for-

mulate any specific guidelines on how the savings should be invested. It stated only that the investments must be 'safe'.

So what in your opinion should be done?

We need to eliminate the harmful effects of the current economic BVG legislation; namely, by enabling pension funds to invest part of their assets in promising technologies and young Swiss growth companies. This would be a huge opportunity for Switzerland as a business location.

Then you must be a happy man now. In September 2014, the National Council referred a motion from CVP senator Konrad Graber to the second council. The motion calls for the initialisation of a 'Future Fund Switzerland' and the adoption of legislation that favours start-up companies at the forefront of technological progress over their competitors from abroad. Currently, a federal working group is consulting on the 'Graber Motion'. What do you expect from it?

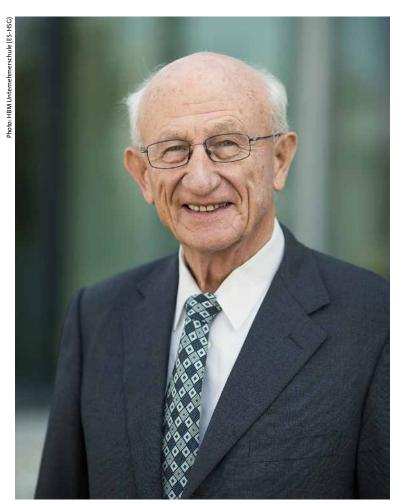
Currently, stewardship of pension funds puts safety first. This requirement needs to be reinterpreted. After all, what good is it if retirees receive their pension, but their children have no work? The Anglo-Saxon countries have solved this problem by investing a portion of pension assets in start-up companies through professional intermediaries, such as venture capitalists.

Money for start-ups

In Europe, only the Norwegians save more than the Swiss. But despite a savings rate of about 30 %, in this country – at least as measured by the innovative strength of the economy – significantly less money flows into start-ups with long-term growth potential. Attempts have been made to change this situation since

the 1980s, and even now there is no lack of ideas or projects. In addition to the Future Fund, for example, the Swiss Investment Fund (SIF) is about to start. A team from SECA and CTI Invest is planning to build a CHF 500 million fund for institutional investors, which will co-finance about 20 Swiss start-ups annually. Also under dis-

cussion is a federal guarantee for a national VC fund of funds. And there is the possibility that Switzerland might join the European Investment Fund. This joint project of the European Investment Bank and the EC has invested about €8 billion in venture capital and growth funds over the past few years.



Henri B. Meier: former CFO at Roche, investor, founder and honorary doctorate

Venture capital in the US

Because of their long-term investment horizon, pension funds are the ideal source of venture capital for investment in companies at the frontier of technological development, which can require up to 10-year investment periods. In the US, where 90% of the world's top innovations are made, pensions funds are the largest investors in US venture capital, encouraged by the state through the Employee Retirement Income Security Act (ERISA), which became effective in 1974. Venture capital investment in the US creates on average 2.5 times more jobs than established companies, and investment of 0.2% of GDP has created 21% of GDP. The US economy's growth motors, such as Intel, Amgen, Genentech, HP and Google, were financed and coached by venture capital companies.

What do you suggest specifically?

According to current accounting regulations, venture capital (VC) investments must designated as losses. That does not make pension fund managers happy. Therefore, we envisage that pension fund investment in high-tech start-ups should be reported over the first 10 years at the original cost price.

Would this measure be enough to steer pension funds increasingly into new technologies and business

Unfortunately, no; of the approximately 2,000 pension funds in Switzerland, only a few are large enough to invest in VC through their own efforts.

We need a fund of funds in which all the pension funds can participate

Why?

Investment in high-tech start-ups requires a lot of expertise and management effort. You, as a start-up investor, need an adequate risk diversification, which can be achieved by a broad diversification of exposure. The financing of a single start-up is highly risky; but if you put your money in 20 companies, your risk is compensated by the good return on others, and professional investment in 1,000 start-ups is absolutely safe. That is why we need a fund of funds in which the individual pension funds can participate.

It's been proposed that the federal government should contribute financially to such a structure. Why?

A commitment from the federal government would enhance the fund's reputation among pension institutions. At the start, the fund's assets should ideally be CHF 0.5 billion; a quarter from the federal government, a quarter from private investors and the other half from interested pension funds.

According to regulations, pension funds may invest a maximum of 5% of savings in alternative investments, such as hedge funds and private equity. Do you want to acquire the whole 5% for the Future Fund?

No, we're assuming 1% of new assets, which corresponds on current premium volume to CHF 0.5 billion a year. We are talking about a few thousandths of total pension fund assets.

Let's turn to operation of the fund of funds. Who should receive the money?

You have to understand how a fund of funds works. Put simply, it does not invest directly in start-ups, but in teams of venture capitalists that have proven they can make a profit with start-up investment. The object

of the fund of funds' management is to find the right team and accompany it during the investment process.

The involvement of the Federal Council should therefore ensure that a Swiss VC manager is able to obtain money more easily?

The Future Fund would attract highly qualified venture capitalists from around the world. Switzerland's financial centre thus has the opportunity to expand its expertise in an area in which it has hitherto lagged behind many other countries.

In what should the new fund invest?

Mostly in Swiss start-ups from particularly high valueadded and promising technology fields, such as materials and nanotechnologies, IT, biotech, medical technology, energy and cleantech – and also companies that operate at the interface of IT and micromechanics.

Why these fields exactly?

It is crucial that we invest where the Swiss research and development location has particular strengths. Our colleges and universities are among the best in the world. Along with the research departments of large firms and numerous start-ups, they form a highly dynamic ecosystem in which new ideas develop continuously. This is where the Future Fund comes in – to ensure that marketable products flow from these ideas within a reasonable period of time.

This reasoning is clear for biotechnology – Switzerland is a world-renowned cluster. But is this also true for nanotechnology? Is a construct such as the future fund not a little early here?

Not at all. Nanotechnology is an area of knowledge that has the potential to change the world. The sooner we invest here, the greater the future return will be. Thus, the Future Fund will secure the retirement of those who are still at school now. This is something we have to think about.

What makes you so confident that the commitment will eventually rise?

I will soon be 8o. When I compare the goods on offer in my youth to the present, I come to the conclusion that a revolutionary shift has taken place. This process – I am deeply convinced – will continue and so we should not only be spectators, but actors too. Then, high-cost Switzerland will have an economic future.



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Chronicle 2015 Headlines from the ecosystem

More money for Venture Kick, Zurich will become the digital superhub and MassChallenge comes to Geneva. What moved the promoters in 2015. Claus Niedermann

> centre between ETH and the University of Zurich, which was made possible by Wyss with a donation to the tune of \$120 million and which was opened by him in December.

Brigitte Baumann was crowned European Business Angel of the Year in Eindhoven. For the first time, the prize went to

investor Dieter Meier from Zurich.

According to a study by IG Bank Switzerland, every 11th fintech company worldwide originates from Switzerland. In 2015 alone, the study counted more than 100 start-ups and there is little to suggest that this dynamic will decline. The many start-up programmes that have

measures intended to improve the competitiveness of the financial centre in the field of new finance technologies.

Jul The greater Zurich area is to become a digital superhub. Ringier CEO Marc Walder has initiated the Digital Zurich 2025 initiative, which is broadly based across the Swiss economy.









20 Jan

Synthes founder Hansjörg Wyss is involved at all levels. At the start of the year, it became known that he had joined the supporter group of the Venture Kick initiative. Venture Kick aims to identify, support and promote Swiss university spin-offs and is thus in line with the Wyss **Translational Center** Zurich, a joint research

Switzerland and a woman was awarded for the second time. Brigitte Baumann campaigns for female angels and investors, and wants to professionalise start-up financing in Switzerland. She is CEO of Go Beyond Early Stage Investing and commission member and head of diversity management at the CTI. in July 2015, as Swiss Business Angel of the Year, SECA named the concept artist, musician and

pushed the major players into the Swiss financial centre over the last year will ensure that. On 21 May, for example, the Swiss exchange operator SIX announced the start of the 'Six Technology Incubators'. Now a handful of SIX people are working together with fintech start-ups. In November, the politicians responded: the Committee for **Economic Affairs and** Taxation requires the Federal Council to provide

It includes start-up and innovation community promoters, such as the **Zurich FDP National** Councillor and ICT entrepreneur Ruedi Noser, and lawyer and investor Christian Wenger. Noser is the driving force behind Switzerland Innovation Park. Wenger presides over the investor association CTI Invest and also the newly founded Kick Foundation. The latter, together with DigitalZurich, implements

In Switzerland people are reluctant to talk about money and profits. It may pass for modesty in private, but in the VC and start-up scene it ensures a lack of transparency. It is therefore to be welcomed that the Swiss venture investor Redalpine not only announced on 8 July that it had sold its stake in biotech company InSphero, but did it because "it was a timely opportunity to secure a multiple of more than 10x on our investment". Shortly before, the angel club Go Beyond reported that the weighted average annualised return of its

strong Swiss franc, the federal government cut the CTI's budget by CHF 20 million. And in the winter session, the government referred the dispatch on the Innosuisse Act to parliament. It is intended to create the legal basis for conversion of the CTI to a public-law institution.

16 Sep Venture capital firm

b-to-v Partners. with offices in St. Gallen and Berlin, has successfully raised its third fund with a first closing of € 63 million focused on internet and mobile ventures. And Blue Ocean Ventures from western Switzerland announced the completion of a

have created a total of 850 new jobs in the canton of Vaud. Current examples of funded start-ups include Abionic, Sophia Genetics and NetGuardians. And also in the mid-1990s in Frenchspeaking Switzerland, EPFL targeted start-up funding. This has become established and now 10 to 20 spin-offs are founded at EPFL every year.

Dec

MassChallenge announced the expansion of its global accelerator network to Switzerland with detailed plans to launch a Mass-Challenge accelerator in Geneva in 2016. Four founding partners are supporting the MassChallenge Switzerland launch:









members' portfolios had increased to 25%, thanks to the sale of Lemoptix.

At the beginning of August, Annalise Eggimann took over her new role as managing director of the Commission for Technology and Innovation CTI. And much work awaits her. Because in order to offset the negative impact of the

private equity fund with a target size of CHF 25 million.

Nov

The Foundation for Technological Innovation (FIT)

can look back on 20 years of funding activities in western Switzerland. Since the mid-1990s, the foundation has granted more than 150 loans to new companies, which

Bühler Group, Nestlé, Inartis Foundation and Swiss Economic Forum. "Switzerland is a wellestablished leader for innovation and industry," says MassChallenge Founder and CEO John Harthorne. Based in the Lake Geneva region, the accelerator will attract start-ups from Switzerland, other parts of Europe and beyond. The first programme will start in June 2016 and run through to October.

Investments 120 financing rounds

Transparency is at the centre of the Swiss Venture Capital Report. All financing rounds that make up the report database are listed below including the publicly available information on investors and invested sums.

Company වෝ Link to source	Sector	Amount (CHF m)	Phase	Investors	Canton	O CTI Start-up H Pres. at CTI A Venture Kick
☼ 3Baysover	ICT	n.a.	later stage	investiere	VD	
∞ ActLight	cleantech	n.a.	early stage	Swisscom Ventures, investiere, Go Beyond, BAS	VD	I, V
	biotech	77	later stage	Auven Therapeutics, AstraZeneca, private investors	VD	
○ Advanced Osteotomy Tools	medtech	n.a.	later stage	SHS, ZKB, private investors	BL	C, I, V
	ICT (fintech)	n.a.	early stage	private investors	ZH	V, I
	ICT	n.a.	seed	private investors	SO	
	ICT	1.4	early stage	private investors	ZH	
	biotech	30	early stage	Sofinnova Partners, SR One, Kurma Partners, Johnson & Johnson Innovation, JJDC Inc., MS Ventures 06. 01. 2016	VD	
	micro/nano	n.a.	later stage	investiere	VD	C, I, V
ලා Ava	medtech	2.6	early stage	Swisscom Ventures, investiere, BAS, ZKB	ZH	I, V
bexio(formerly easysys)	ICT (fintech)	4.5	early stage	Armada Investment, Redalpine	SG	
∞ BLINQ	ICT	1	early stage	BAS	ZH	I
	cleantech	1.8	early stage	Luzerner Kantonalbank, ZKB, StartAngels, investiere	ZG	С, І
∞ Boldomatic	ICT	0.7	seed	private investors	ZH	
∞ Bring! Labs	ICT	n.a.	early stage	private investors	ZH	I
○ CashSentinel	ICT (fintech)	n.a.	early stage	BAS, Go Beyond	VD	I, V
○ Cellestia Biotech	biotech	n.a.	early stage	private investors	BS	
∞ CeQur	medtech	96.2	later stage	Woodford Investment Management LLP, Arthurian Life Sciences, Endeavour Vision, Schroder & Co. Banque SA, VI Partners	LU	
∞ CHRONEXT	ICT	5.3	later stage	Partech Ventures, InVenture Partners, MGO Digital Ventures, Altus Capital, Playfair Capital	ZG	
∞ CRISPR Therapeutics	biotech	33	early stage	SR One, Celgene, New Enterprise Associates (NEA), Abingworth, Versant Ventures	BS	
∞ CRISPR Therapeutics	biotech	27.8	later stage	SR One, Celgene, New Enterprise Associates (NEA), Abingworth, Versant Ventures	BS	
© Crowd	ICT	n.a.	early stage	Swisscom Ventures, investiere, private investors	ZH	
© Dacadoo	ICT	n.a.	early stage	Samsung Venture Investment, private investors	ZH	ı
© Dacadoo	ICT	n.a.	later stage	private investors	ZH	1
○ Dahu Sports Company	consumer products	1	early stage	private investors	FR	С, І

Company	A					CTI 9 Pres Vent
Company © Link to source	Sector	Amount (CHF m)	Phase	Investors	Canton	CIV
∞ DealMarket	ICT (fintech)	n.a.	later stage	n.a.	ZH	
☼ Demiurge Technologies	ICT	9.4	early stage	Hongdao Capital, private investors	ZG	
○ EffRx Pharmaceuticals	biotech	2.3	later stage	n.a.	SZ	
Encuentra24.com ■	ICT	n.a.	later stage	Frontier Digital Ventures	BE	
∞ Equippo	ICT	n.a.	seed	VI Partners	ZG	
∞ Equippo	ICT	n.a.	seed	b-to-v	ZG	
○ Fanpictor	ICT	1.8	later stage	ZKB	ZH	С
○ Fans Nation	ICT	0.5	early stage	Oclaner	GE	
	ICT	n.a.	early stage	private investors	ZH	
Fashwell	ICT	1	early stage	n.a.	ZH	C, I, V
	micro/nano	n.a.	seed	Go Beyond, A3 Angels	VD	I, V
☼ fineartmultiple	ICT	n.a.	early stage	ProSiebenSat1 Media	LU	
∞ flatev	consumer products	2.8	later stage	n.a.	ZH	I, V
○ Flisom	cleantech	10	later stage	Tata Group	ZH	С, І
∞ Flyability	micro/nano	n.a.	seed	Go Beyond	VD	I, V
∞ Flyability	micro/nano	2.5	early stage	MKS Alternative Investments, Go Beyond	VD	I, V
∞ GAIA	consumer products	n.a.	early stage	SVC	SZ	
∞ Gene Predictis	medtech	0.5	early stage	n.a.	VD	С
∞ Genkyotex	biotech	20	later stage	NeoMed, VI Partners, BioMedInvest, Edmond de Rothschild Group, Vesalius Biocapital	GE	С, І
Geosatis	ICT	2.2	later stage	private investors	JU	I, V
∞ GetYourGuide	ICT	50.2	later stage	KKR, Highland Capital Partners, Spark Capital, Sunstone Capital, Nokia Growth Partners	ZH	C, I
Go Beyond Investing	ICT (fintech)	n.a.	later stage	private investors associated with Go Beyond	ZH	
Goodwall	ICT	2.1	early stage	BAS, investiere	GE	ı
∞ Gymhopper	ICT	0.2	seed	BAS	ZH	
∞ Hguitare.com	ICT	n.a.	seed	BAS	VD	
○ HR Matching	ICT	1	later stage	private investors	ZH	C, V
∞ Hulbee	ICT	8.7	later stage	private investors	TG	
© НҮТ	consumer products	n.a.	later stage	private investor	NE	
∞ iMusician	ICT	n.a.	later stage	investiere	ZH	I
∞ Inflamalps	biotech	1.8	early stage	private investors	VS	
○ InnoMedica	biotech	1.3	early stage	private investors	ZG	
□ InSphero	biotech	20	later stage	HP WILD HOLDING	ZH	C, I, V
∞ Inthera Bioscience	biotech	3.7	seed	MS Ventures, Aglaia Oncology Fund II, Novo seeds, EVA Basel	ZH	
∞ JMC Lutherie	consumer products	1.2	later stage	private investors	VD	
∞ Kizy Tracking	ICT	n.a.	early stage	BAS	NE	
∞ Knip	ICT (fintech)	15.3	later stage	Route 66 Ventures, Creathor Venture, QED Investors, Orange Growth Capital, Redalpine	ZH	
∞ Konduko	micro/nano	n.a.	early stage	BAS	BE	С, І
∞ Kuros Biosurgery	medtech	15	later stage	LifeCare Partners, LSP Life Sciences Partners, Omega Funds, VI Partners, The Swiss Helvetia Fund, private investors	ZH	
***************************************		· · · · · · • · · · · · · · · · · · · ·	.			

Company		Amount				CTI Start-up Label Pres. at CTI Invest Venture Kick
© L.E.S.S.	Sector cleantech	(CHF m) 3	early stage	Investors VI Partners, venturelab Founders	Canton VD	C I V
© Locatee	ICT	n.a.	early stage	Cash Pot, private investors private investors	ZH	V
© Lockstyler	consumer	n.a.	later stage	Go Beyond	VD	<u>.</u>
© Luma Beef	products	n.a.	early stage	private investors	SH	
	products	.		•		1.1/
○ Lunaphore Technologies	medtech	2	early stage	Redalpine Venture Partners, private investors	VD	I, V
™ Medirio	medtech	n.a.	early stage	Go Beyond	VS	C, I, V
Medyria	medtech	2.2	early stage	Fongit SeedInvest, investiere, ZKB, StartAngels	ZH	C, I, V
○ Memo Therapeutics	biotech	2.3	early stage	EVA Basel, Redalpine, ZKB	BS	
MiniNaviDent	medtech	1.4	early stage	W & H Dentalwerk Bürmoos GmbH, Aargauische Kantonalbank, Nobel Biocare, Go Beyond, private investors	BS	C, I
™ Monetas	ICT (fintech)	n.a.	later stage	n.a.	ZG	
™ovu.ch	ICT	n.a.	early stage	Go Beyond, private investors	ZH	
⊚ Movu.ch	ICT	n.a.	early stage	Ringier Digital Ventures, b-to-v, private investors	ZH	
™yoPowers	medtech	4.7	later stage	Truffle Capital, Novartis Venture Fund, Gran Plasa	VD	C, I
○ NBE-Therapeutics	biotech	3	early stage	Boehringer Ingelheim Venture Fund	BS	С, І
⊚ Nutresia	consumer products	25	later stage	LDC, private investors	VD	
© ObsEva	biotech	60	later stage	HBM Healthcare Investments, New Enterprise Associates (NEA), OrbiMed, Rock Springs Capital, Sofinnova Partners, Sofinnova Ventures, Novo Ventures, MS Ventures	GE	
© Once	ICT	3.3	later stage	Partech Ventures, private investors	SZ	
☼ Parquery	ICT	n.a.	seed	BAS	ZH	I
○ Pcloud	ICT	2.9	later stage	private investors	ZG	
⊚ PIQ	ICT	5.1	early stage	Foxconn (FIH Mobile Ltd), Ginko Ventures, Robolution Capital I, Swisscom Ventures	VD	
○ PIQUR Therapeutics	biotech	18	early stage	Versant Ventures, private investors	BS	C, V
Prexton Therapeutics	biotech	9.5	early stage	Sunstone Capital, Ysios Capital, MS Ventures	GE	
○ ProteoMediX	biotech	1	later stage	Altos Venture, ZKB, private investors	ZH	C, I, V
☼ ProtonMail	ICT	2	early stage	Charles River Ventures, Fongit SeedInvest	GE	
ඟ Qipp	ICT	0.5	seed	private investors	BS	1
○ QualySense	micro/nano	2.1	later stage	private investors	ZH	C, I, V
	micro / nano	2.6	early stage	Cyberdyne Inc., SBI investments Fuji Creative Corporation, V-Cube Inc.	ZH	
☼ Safe Swiss Cloud	ICT	n.a.	early stage	Go Beyond	ZH	
☼ SamanTree Medical	medtech	4.5	early stage	private investors	VD	I, V
○ ScanTrust ○	ICT	1.1	seed	AngelVest Group, SOS Ventures, private investors	VD	I, V
☼ Scientific Visual	micro/nano	n.a.	seed	n.a.	VD	ı
☼ Securosys	ICT	1	seed	private investors	ZH	
∞ Sequana Medical	medtech	9	later stage	NeoMed, BiomedInvest, Capricorn Health-tech Fund, Entrepreneurs Fund, Life Sciences Partners, Salus Partners, Quest for Growth	ZH	
○ ShapeShift	ICT	1.5	early stage	Digital Currency Group, Roger Ver, Bitfinex, Bitcoin Capital, Mardal Investments, private investors	ZG	

CII Start-up Label Pres. at CII Invest

Company Company Link to source	Sector	Amount (CHF m)	Phase	Investors	Canton	C T V
© Sharely	ICT	n.a.	seed	BAS	ZH	
SIS Schwager Groupe	medtech	12	later stage	SHS	ZH	
⊚ Skioo	ICT	1.5	early stage	private investors	VD	ı
SmarterBetterCities ■ ■ ■ ■ ■ ■ ■	ICT	0.9	early stage	ZKB	ZH	ı
☼ Sophia Genetics	healthcare IT	14.8	later stage	Alychlo	VD	С, І
Squirro Squirro	ICT	n.a.	later stage	private investors	ZH	С, І
Symetis	medtech	n.a.	later stage	Wellminstone, Novartis Venture Fund, BioMedInvest, Aravis und andere	VD	
∞ TawiPay	ICT (fintech)	0.4	seed	MKS Alternative Investments, private investors	VD	I, V
○ TestingTime	ICT	0.85	early stage	private investors, investiere	ZH	
○ TrekkSoft	ICT	1	later stage	n.a.	BE	I
	cleantech	5.9	later stage	n.a.	GE	
○ TwingTec	cleantech	n.a.	seed	BAS, private investors	ZH	I, V
○ Uberchord	ICT	n.a.	seed	Ebner Publishing, investiere	ZH	V
○ UrbanFarmers	cleantech	2.9	later stage	SVn, private investor	ZH	C, V
∞ UrbanFarmers	cleantech	2.1	early stage	Eckenstein-Geigy-Stiftung, Walden Woods Holdings	ZH	C, V
○ Virometix	biotech	n.a.	later stage	private investor	ZH	C, I, V
○ WealthArc	fintech	0.3	seed	Novit LP	ZG	V
◯ Wine & Gourmet Digital	ICT	n.a.	early stage	Ringier Digital Ventures	ZH	
∞ Xeltis	medtech	3.2	later stage	Life Sciences Partners, Kurma Partners, VI Partners, private investors	ZH	I
☼ Xtendx	ICT	n.a.	later stage	SVC, AquilaDirekt	ZH	
	ICT	n.a.	seed	BAS	LU	
♥ YOOTURE	ICT	1.6	early stage	n.a.	ZH	

Strategic investments Swiss start-ups not only attract investors but also strategic partners. Although these investments do not play a part in the analysis, they are listed here as additional information.

CTI Start-up Label Pres. at CTI Invest

ompany © Link to source	Sector	Amount (CHF m)	Phase	Investors	Canton	 C	I	 V
☼ Bontique	ICT	n.a.	later stage	jobindex media ag, HR Today	ZH			
○ Concretum Construction Science AG	interdisciplinary	n.a.	later stage	Eberhard Bau AG	ZH	С		
○ GeNeuro	biotech	n.a.	later stage	Servier	GE	С	•	
○ Hotelcard	ICT	n.a.	later stage	Tamedia	BE		••••	•••••
⊚ Joiz	ICT	n.a.	later stage	DuMont Schauberg	ZH		•••••	
Skim.com	ICT	n.a.	later stage	Joiz	ZH			
∇aloc	medtech	n.a.	later stage	Straumann	AG			

BioMed Partners

a Basel-based Swiss Life Science Venture Capital Firm

- BioMedPartners was established in 2003 and is one of the leading European Life Science Venture Capital Firms
- We provide venture capital and mezzanine financing out of our BioMedInvest I and II Funds to 52 innovative, private life sciences companies in Switzerland and neighboring countries
- We have CHF 250 million under management from blue chip institutional and private investors
- We had 15 successful exits (including Glycart Biotechnology, ESBATech, Santhera, Okairòs)
- We provide financial returns to investors, contribute to medical progress, and help strengthen Switzerland as an innovative work place
- ◆ We raise a third fund (BioMedInvest III) in 2016
- We are an accomplished team of investment professionals with a solid track record and a strong network of experts from industry and academia

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Venture capital: a potent catalyst in the US economy

Long-term savings must flow to productive, value-creating investment at the frontier of technological development. The prerequisite: highly specialised intermediaries. The US's growth motor is its highly developed VC market

The American Research and Development Corporation (ARD), established in 1946 in Boston, is a worldwide pioneer in the professional mediation of venture capital in a specially created institution. Founder Georges F. Doriot formulated priority areas for ARD to first eliminate one of the imperfections of capitalism – that start-ups generally find it very difficult to obtain capital – and, second, to provide professional knowledge for young entrepreneurs. Doriot's attitude to the financial industry was formative in the founding of ARD: "I do not know anyone on Wall Street who has ever built a company."

VC catalyses economic development

At the instigation of ARD, a requirement for trust funds was modified in the postwar period, allowing them to invest up to 5% of their volume in venture capital funds, previously denied to them almost entirely. The first targets for ARD were start-ups in the PC industry, medical industry, environmental engineering and oil



industry. With the first successful exits, further US VCs established themselves in the Boston area. These developments are considered groundbreaking for the high-tech industrial area around Route 128 and also as a precursor to Silicon Valley, leading to a fundamental change in the economic landscape in the US.

Funding for many other companies took place with the help of VC in the decades that followed; companies that today act as global players and make a hugely positive contribution to the development of the US economy, such as Amgen, Apple, Genentech, Google, Hewlett Packard, Intel, Microsoft and Starbucks, to name just a few.



Dr. Simon Zaby is a post-doc research fellow and associate lecturer at the Department of Financial Management, Faculty of Business and Economics, University of Basel.

The development of a VC scene was supported by the US government with the Small Business Investment Act of 1958 for the creation of Small Business Investment Companies (SBIC), which gave tax breaks to SBICs and their shareholders. Companies such as Apple, Intel and Federal Express were financed largely by these vehicles.

Later, the deregulation in 1978 of investment rules for US pension funds was a major driver for the VC industry. The country has also experienced a significant competitive advantage through the endowments of US universities. In 2015, university foundations possessed assets of more than half a trillion US dollars, of which more than 10% was invested in VC.

The outstanding contribution of venture capital to the development of the US economy is as strong as ever. A study by the industry association NVCA comes to the conclusion that between 1970 and 2005 alone, VC-funded start-ups in the US created more than 10 million jobs, earning 17% of GDP. Since 2007, VC investment has amounted to less than 0.2% of US GDP, but generated 21% of GDP.



CTI Invest: a key actor in the start-up ecosystem

We were very pleased with the findings of the evaluation report on CTI Invest initiated by the Commission for Technology and Innovation last year. This official quote sums it up: "CTI Invest: a key actor in the start-up ecosystem."

Review of 2015

Our match-making **Swiss Venture Days** took place again in Zurich and Romandie, and for the first time in Ticino. We also supported >>venture>> Investor Day 2015 at ETH Zürich again and two Investor Forums in St. Gallen with STARTFELD. In total, more than 100 innovative Swiss start-ups pitched in front of investors, including the Pitching Battle at Swiss Startup Day.

We introduced our new **Deal Flow Tool**, enabling investors and start-ups to benefit from a permanent deal flow. The new platform, developed by **Deal Market**, will also allow the exchange of information directly on the platform in the near future.

During 2015, the concept of **Lean Innovation** was presented at our three **Angeldays** for business angels. We welcomed the best-selling author **Ash Maurya** (author of *Running Lean*) for a full **Lean Day** with startups and investors in October 2015, with more than 100 participants.

In October, we initiated the first real **Elevator Pitch** in Switzerland as a qualification round for the Pitching Battle at Swiss Startup Day. With the kind support of **Clouds restaurant** in the Prime Tower, start-ups pitched to win a slot at the event.



Dr. Christian Wenger (left), chairman of CTI Invest, and Jean-Pierre Vuilleumier, managing director of CTI Invest, enjoying the great success of Swiss Venture Day 2015.

At **Swiss Startup Day** (formerly CEO Day), on 21 October 2015, we welcomed more than 600 participants to the Stade de Suisse in Berne. Johannes Reck (CEO of GetYourGuide), Ash Maurya, Pascale Vonmont (deputy director of the Gebert Rüf Foundation) and Christian Wenger took part in the **panel** discussion on the Swiss start-up ecosystem.

With a new record of 720 1:1 meetings in the afternoon, the event closed with the final of the Pitching Battle. The winners were BookBedder, Topadur and AVA. To learn more, watch our After Event Movie now online at www.swiss-startup-day.ch.

Outlook for 2016

Mike Baur, co-founder of the **Swiss Startup Factory** (SSUF), joined CTI Invest as **Deputy Managing Director** this year. He is also the designated successor to Jean-Pierre Vuilleumier in the near future. Furthermore, we announced a close collaboration with the SSUF in order to further foster the Swiss start-up ecosystem.

At the our next **General Assembly** in March 2016, the investor members will be asked to choose a new name for CTI Invest. And two new **board members** will be proposed: **Michael Sidler** and **Marc Bernegger**, both well-known investors and actors in the ecosystem.

Swiss Startup Day 2016 will be **half a day longer**, giving start-ups the opportunity to benefit fully from our experts during the **Best Practice** sessions (more info: www.swiss-startup-day.ch).

We will continue our collaboration with the CTI, albeit on a different basis, with our primary goal at the forefront: to ensure the success of Swiss start-ups. Only start-ups will create new and sustainable jobs for the future.

We would like to thank all our members, partners and sponsors for their support.

Dr. Christian Wenger Chairman Jean-Pierre Vuilleumier Managing Director



Debt financing for start-ups

In the last few years, the granting of loans — convertible, bridge, shareholder — has become increasingly popular in the venture capital business for several reasons: compared with equity financings, it's relatively fast, the agreements are shorter and simpler, and the overall transaction costs lower. Nevertheless, issuers should be aware at least of the following points when issuing loans.

Interest rates

Interest rates can not be agreed at its discretion; the Federal Tax Authority (FTA) publishes annual 'safe harbour' tax rates for (shareholder) loans in Swiss francs (or any other currency). Deviation from these interest rates must be well founded; if not, the portion that is too high is considered to be a hidden dividend distribution and the portion that is too low is considered to be a hidden capital contribution.

Thin capitalisation rule

According to our tax rules, the proportion between debt and equity must meet a certain ratio, also published by the FTA. Depending on the exact business purpose of the venture, it may be, for example, that the debt/equity ratio should not be more than 6:1. Again, if an issuer does not comply with such rules – i.e. higher debt financing than allowed – it may be deemed to be a hidden dividend distribution.

10/20 rule

If the issuer grants more than 10 loans with identical terms, or more than 20 loans with different terms, with a total principal amount of at least CHF500,000, interest payments are subject to a 35% withholding tax. Depending on where the lenders are located, such withholding tax may not be reclaimed in full or at all.

Wenger & Vieli Ltd.

We are a leading law firm with offices in Zurich and Zug. One of our strengths is in the area of venture capital (VC), where we advise investors, companies and founders alike through the whole life cycle: on tax-efficient fund structures, acquisition of portfolio companies, exit routes, etc. As a one-stop shop, we take care of intellectual property, regulatory, employment, general contract and corporate law. We offer the full range of all notarial services needed in the VC business.



Dr. Beat Speck, partner, attorney-at-law and civil law notary

Convertible loans

If lenders are entitled to convert their loans into issuer shares, the issuer has to grant the preferential rights to subscribe for such convertible loans (und underlying shares) to all shareholders; they are entitled to subscribe for the full number of loans and underlying shares first, unless the issuer has justified reasons to exclude them from such rights. Furthermore, the board of directors of the issuer must ensure that in the event of a conversion, the required number of shares is immediately available, without having to consult shareholders first. Usually, this is done by implementing a conditional share capital before the issuance of the convertible loan. Finally, an issuance tax of 1% may apply (if the issuer has already been equity-funded by at least CHF1 million in the past).

Subordination

If subordinated, loans are treated economically as equity; i.e. the lenders agree to be paid, in the worst case of bankruptcy, as the very least in the same category as the shareholders. With subordinated loans, the board is not required to file for bankruptcy. Hence, subordination is not required by law, but may help the board in the future when structuring the loan.

Termination

In the absence of any specific provision in the agreement, each lender could terminate its loan with a notice period of six weeks (subject to subordination, of course). This may jeopardise the venture, since the maturity date will be known at too short notice to refinance such loans. In addition, even simple loan agreements contain clauses for early repayment or conversion in the event of certain events, such as bankruptcy of the borrower, exit or financing rounds.

Bearing these principles in mind makes debt financings a viable alternative to equity rounds. Careful drafting of loan agreements saves issuers and lenders alike from unforeseen legal and tax problems.

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Rechtsanwälte

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Walder Wyss in a nutshell:

- One of the most successful and fastest growing
 Swiss law firms with a team of over 150 legal experts
- 6 offices in all relevant business regions of Switzerland (Zurich, Geneva, Berne, Basel, Lausanne, and Lugano)
- A dedicated start-up desk with years of experience in advising all kinds of start-ups
- Knowing the needs of entrepreneurs and investors
- Engagement with major local and international market players, the investor community and regulators

In 2015, we advised (selection):

- Zurich/Berlin-based GetYourGuide (the leading online marketplace for travel activities) on its
 USD 50m financing round led by KKR
- US-based Route 66 Ventures on Switzerland's largest fintech financing round (CHF 15m) for a Swiss start-up (Knip AG)
- Bayer on its USD 300m joint venture with Baselbased CRISPR Therapeutics AG
- netrics hosting on its acquisition of a majority stake in Lyss-based in4U AG, involving the two leading Swiss ICT companies
- Tamedia on its acquisition of Ricardo-Group (which runs the auction platform)

 $Tax-Hot\ Topic$ Under Swiss tax law, Swiss resident individuals can benefit from tax-exempt capital gains when selling privately held shares. However, under certain circumstances, the tax-exempt capital gain may be re-qualified as taxable income (e.g. in case of an indirect partial liquidation, a professional securities dealer, shares received as consideration for employment, etc.). Based on recent court decisions on the re-qualification of a tax exempt capital gain into taxable income, the Swiss tax authorities are tightening up their practice in this respect. Careful tax structuring is thus key to avoiding negative tax and social security consequences, in particular if an exit transaction includes non-competition undertakings, earn-out mechanics and/or continuance in employment of founders. With regard to employees incentivized by an equity participation in the company, the main issue connected with a later exit is that the shares are in most cases acquired by the employee based on a valuation formula (e.g. nominal value, simplified valuation ("Praktikermethode") applied by Swiss tax administration for non-listed shares, etc.) rather than at fair market value. Upon exit, the increase in value due to the change of the formula (in practice, the largest part) is treated as taxable salary for the employee, in particular if the exit happens within five years since the acquisition of the shares. Moreover, based on the current practice of the Swiss tax authorities, the wealth tax liabilities for founders, participating employees and other minority shareholders could be substantial after successful financing rounds, notably due to the fact that the Swiss tax authorities apply the issuance price of the financing rounds also for wealth tax purposes, hereby disregarding that the relevant start-ups are still generating losses. Walder Wyss is participating in the current initiatives taken to agree with local tax authorities on more favourable rules for start-ups.

Equity-based participation plans for start-ups: a delicate balancing act

Equity-based participation plans are an attractive instrument for start-ups to incentivise employees. However, if the participation is not planned thoroughly, it can also turn into a severe tax risk.

Timing: when to pay taxes

Different types of employment participation result in different tax consequences for employees. While options increase the taxable income only at time of exercise, shares generally trigger income taxes at grant. In contrast, the income generated from phantom participations (virtual shares/options) is not taxed until received in cash.

Tax basis: how much to pay

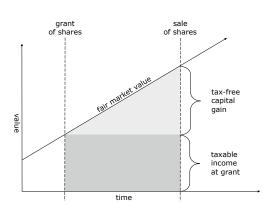
■ Shares and options

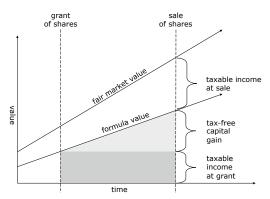
Generally, the tax authorities use the fair market value at the time of taxation to determine the taxable income derived from shares or the exercise of options. For start-ups, this bears the considerable risk that tax authorities look to the valuation used in financing rounds to determine the fair market value (even if such financing rounds occur up to nine months before or after the grant/issuance of employee shares). This may obviously cause liquidity problems for employees, especially in the case of share plans but also in the case of option plans where options are exercised outside the context of an exit transaction. In addition, the determination of the tax basis affects the company as it will have to deduct and pay social security contributions calculated on the taxable income.

However, the law allows for a partial tax deferral for the employee: the company may request that the income tax is not levied on the actual fair market value but rather on a formula value pre-approved by the tax authorities (e.g. based on EBIT, EBDITDA, revenue or another financial indicator). If applied to start-ups, the value will almost always be much lower than the fair market value and thus reduce the taxable amount. However, in the case of a later sale, only the increase of the formula value (at the time of sale) will be considered tax-free, and any further capital gain will be taxed as income. Furthermore, this tax treatment requires that the company has an unlimited right to buy back the shares at the formula value (repurchase right).

Virtual shares and options

In contrast to shares and options, the tax treatment of income generated from phantom stocks (virtual shares/options) is simple: the cash amount paid out to





the employee is fully taxable as income. There is no preferential tax treatment available under the current law. Hence, phantom participation plans may create incentives for employees, but these incentives are not and can not be tax-optimised.

Planning is key

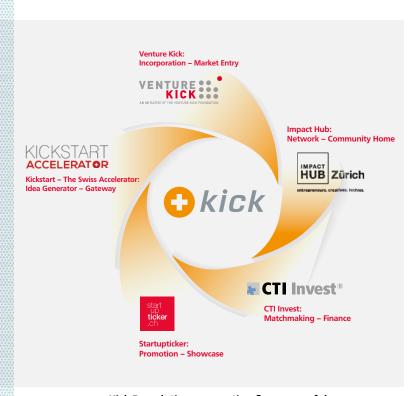
These are only a few of the aspects to be considered when implementing an employee participation plan. Furthermore, the practice of the cantonal tax authorities is constantly developing and changing. Therefore professional support is recommended to avoid unwelcome surprises. We're happy to take your call!

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Kick Foundation: exploiting potential and shaping the future

The Kick Foundation comprises a consortium of noted private and public partners. With an integrated program that connects and enhances existing and new initiatives, it plays a key role in strengthening Switzerland's locational edge by expanding the talent pool, creating visibility, crosslinking communities and thus catalysing innovation.



Kick Foundation: connecting five successful or promising national initiatives

Kick Program

The Kick Program connects five successful or promising national initiatives, and guarantees optimum links and interfaces in order to accelerate the innovation process. At the core of the program is the Venture Kick initiative, which was launched in 2007 and boasts an impressive track record.

The newly opened Impact Hub Zurich is to be a home for the Swiss innovation community, as well as a meeting point and workplace for Kick start-ups. The Venture Kick community moved in in late 2015.

Besides Impact Hub and Venture Kick, the program relies on two further national initiatives with a proven track record, CTI Invest and startupticker – the latter has the CTI as principal from this year.

The fifth initiative is Kickstart Accelerator, a cooperative venture with DigitalZurich2025, a new initiative with great potential. The internationally focused summer camp will, for the first time, bring promising business ideas to Switzerland and so sustainably expand the country's pool of talent and commercial vision. www.kickfoundation.ch

Kickstart - the Swiss accelerator

Kickstart is a non-equity three-month intensive accelerator program for the best international early-stage start-ups. It provides free office space and up to CHF 25,000 in grant funding, so founders can dedicate their time to learning and launching their business. The program imparts crucial skills and best practices in business fundamentals, and connect teams to serial entrepreneurs, industry experts, corporate mentors and start-up investors in DigitalZurich2025's and Kick Foundation's vast network. The program culminates in Demo Day, where teams present to investors from all over the world.

Applications are open to anyone from around the world with a promising business idea in one of the program's four verticals: fintech, smart & connected machines, food, and future & emerging technologies. www.kickstart-accelerator.com





SINCE 2007, VENTURE KICK SELECTS AND SUPPORTS MORE THAN 50 HIGH POTENTIAL ENTRE-PRENEURS PER YEAR WITH OVER 2 MILLION SWISS FRANCS OF FUNDING. WE PROVIDE THEM WITH A STRUCTURED ENTREPRENEURIAL PATH TOWARDS BUILDING A WINNING NEW VENTURE.

IMPACT OF VENTURE KICK IN A NUTSHELL

- 250+ active high-tech companies
- CHF 750+ MILLION
 financing volume invested in these companies
- 3.500+ high-quality active jobs

Venture Kick combines early stage financing of up to CHF 130.000 in 3 stages together with execution support and access to a powerful network of business contacts, experienced entrepreneurs and investors.

From presenting in front of experts in 3 stages to obtain funding, getting "kicking feedback" and learning about execution in building a startup at the kickers camps, to exchanging with other Venture Kickers about their challenges, Venture Kick offers a unique experience to launching entrepreneurs.

www.venturekick.ch

VENTURE KICK STARTUPS: TOP HIGHLIGHTS OF 2015

InSphero secures a CHF 20 million financing round and wins the "Emerging Entrepreneur" prize at the EY "Entrepreneur Of The Year" competition.





Flyability wins the USD 1 million "Drones For Good Award" in Dubai and starts shipping its first units to customers.

Climeworks launches the construction of the first commercial scale CO₂ capture plant to grow green foods.





L.E.S.S closes a CHF 3 million round and becomes Switzerland's best startup in the TOP100 ranking.

Venture Kick is a philanthropic initiative of a private consortium:

— GEBERT RÜF STIFTUNG —

ERNST GÖHNER STIFTUNG



FONDATION LOMBARD ODIER







Equity crowdinvesting and the challenge for wealth managers

A recent global report illustrates the threat that crowdfunding poses to private banks and wealth managers. Some of these platforms will not only grab assets from the wealth management industry, but also steal the 'hearts and minds' of wealthy investors. investiere, the self-proclaimed largest private source of early-stage venture capital in Switzerland, is the leading European example of this challenge.

> Yves de Montmollin, CEO of private bank Bonhôte, recently stated in *Le Temps* that investment models made available by crowdfunding represent an opportunity for private banks. However, most wealth managers are not yet paying sufficient attention to crowdfunding's disruptive potential and are largely ignoring the opportunities as well as risks. This is the conclusion that we at MyPrivateBanking, an independent research firm, reached in a global report 'The rise of crowdfunding: threats and opportunities for the glob-

Access to billions of AuM from thousands of HNWIs Digital Access to and innovative entrepreneurs -What channels tomorrow's accredited to interact with wealth clients investor **HNWIs** crowdfunding offers private banks Access to Access to an increasingly innovation important thought new asset leaders class

al wealth management industry'. According to our analysis, one of the main challenges for private banks stems from the dynamic, interactive and confident way in which crowdfunding platforms are able to benefit from their digital relationship with their communities and offer their clients an entirely new level of interaction that private banks lack.

Most wealth managers underestimate the relevance of crowdfunding for their clients. A type of crowdfunding of particular relevance is equity crowdinvesting, a new form of venture capital for wealth clients. Globally, a handful of platforms focuses specifically on traditional wealth clients and offers a quickly

growing customer base of HNWIs and UHNWIs systematic access to start-up investments in an engaging and innovative manner. With direct investments starting at CHF10,000, Swiss-based investiere is a prime example of this development.

investiere claims to have built a diverse, engaged and active investor community comprising business angels, C-level executives, industry specialists and increasingly also successful serial entrepreneurs. This last group in particular has become an interesting target group for the wealth management industry, as entrepreneurs are seen as the 'wealthy of tomorrow'. By striving to offer its investors the opportunity to invest in pre-selected start-ups on the same terms as professional investors, investiere has opened up a previously elusive asset class.

It claims to place a strong emphasis on start-up selection, as well as favourable deal terms, and provides investors with support throughout the investment process. Although platforms such as investiere do not remove the inherent risks of investing in early-stage firms, they grant investors the opportunity to get involved with start-ups in a well-informed and levelheaded manner.

Given the current climate of low interest rates and uncertainty around stock markets, interest in private equity is on the rise. As more wealthy investors seek to diversify their portfolio, the possibilities made available by platforms such as investiere will gain traction.

Whether investments via crowdinvesting become a part of asset allocation strategies remains to be seen. What is clear is that wealth clients will increasingly ask their bankers about such possibilities and the wealth management industry would be well-advised to prepare for this growing interest in order not to lose the battle for the hearts and minds of their clients.

Steffen Binder Head of Research, MyPrivateBanking

To purchase the full 159-page report, visit myprivatebanking.com

School of Management Fribourg: investment in entrepreneurship and innovation

The School of Managment Fribourg (HEG-FR) focuses its efforts on innovation and entrepreneurship at multiple levels, with synergies between teaching, research and development, and services.

Teach different

Several majors in the Bachelor programme at the School of Management Fribourg (HEG-FR), such as Adventure HEG-FR, entrepreneurship competencies, entrepreneurial strategy and innovation in combination with the CTI Entrepreneurship programme, offer students a wide range of learning experiences. Students have the opportunity to follow the entrepreneurial way with an international Master of Science in Business Administration, Major in Entrepreneurship (Innovation & Growth).

A key element of the programme is the Ventures in Action module. Real businesses have to be launched, as the market is the best teacher. From idea generation to pitching to prototyping, each student has to implement a product/service within nine months and then generate money over the next nine months. Establishing a business gives students a link between academic courses and the reality of the challenges they will face.

Applied research & development

In combination with education, HEG-FR enhances applied research and development through the Center for Entrepreneurship & Innovation and the Global Business Competence Center for SMEs. The School of Management is responsible in Switzerland for the Global Entrepreneurship Monitor (www.gemconsortium.org) and the Swiss International Entrepreneurship Survey (SIES), which gives insights into the internationalisation strategies of Born Globals and SMEs.

Innovation lab Fribourg (ILF) www.innovationlabs.ch

The Innovation Lab Fribourg (ILF), on the campus of Pérolles Fribourg, fosters entrepreneurship and offers start-ups led by Fribourg students an innovative space, mentoring, access to a network of resources and support designed to accelerate their success and create jobs and revenue for the region.

The ILF provide direct opportunities for students to obtain hands-on experience with practitioners and early stage businesses, and for faculty to work with practitioners and bring the experience back to the classroom.

The School of Management Fribourg (www.heg-fr.ch) as team leader is responsible for the Global Entrepreneurship Monitor (GEM) in Switzerland (Baldegger et al. 2016). GEM measures entrepreneurship in economies and has gained widespread recognition as the most authoritative longitudinal study of entrepreneurship in the world.



Rico Baldegger, Dean & Professor, School of Management Fribourg, author of the GEM Report on Switzerland

The pre-incubation programme is designed to serve approximately 10 to 20 student initiatives (teams), at any given time, in a facility of approximately 420 square metres. Students will spend about six months to a year in the space and then graduate into the community and other incubation spaces, such as FriUp and the BlueFactory.

One-on-one coaching and mentoring are the primary form of assistance for students. The ILF team provides coaching and creates a network of resources to enhance the business expertise available. It connects the businesses with bankers, accountants, lawyers and others in the community that provide assistance and guidance to the students.

The ILF also work on a technology commercialisation programme to benefit technology businesses and faculty in developing intellectual property with the School of Engineering & Architecture and the Adolphe Merkle Institute (UNI-FR).

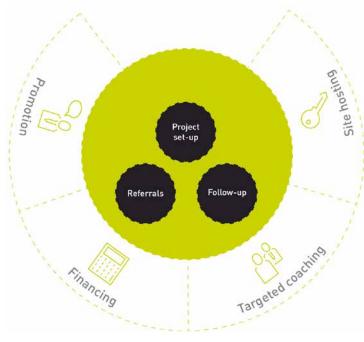


Innovaud: your key to innovation in Vaud

Innovaud assists new business leaders - free of charge - in every development phase of their company. As the key to innovation in the canton of Vaud, Innovaud acts as a compass for innovators, helping them to optimise their effort by taking advantage of local support mechanisms. Innovaud helps innovative companies in life sciences, information and communication technology (ICT) and the precision industry.

> Are you a start-up or a small to medium-sized company (SME) that wants to develop technology-based innovations within your company? Innovaud helps

- implement a winning strategy by connecting you with the right partners and support mechanisms - COACHING
- find investors FINANCING
- find the ideal location at innovation parks/incubators. Take advantage of a privileged collaboration with renowned research institutes in one of the six Vaud technoparks (EPFL Innovation Park, Biopole, Y-Parc, Tecorbe, Technopole St-Croix and Ateliers de la Ville de Renens) - HOSTING
- promote your company through various channels (articles, videos, newsletters, social media and events) - PROMOTION



Innovaud supports start-ups and SMEs with coaching, financing, hosting and promotion

CombaGroup reinvents agriculture for the future

An example of a start-up - CombaGroup - supported by Innovaud, illustrates cleantech and the precision

Future agricultural challenges are considerable in terms of ecology, technology, logistics and commerce. How can high quality products be produced locally in restricted spaces and simultaneously minimise fertiliser use and save precious resources such as water?

CombaGroup is a young company that is formulating the next green revolution near Yverdon by growing aeroponic 'smart lettuce'. It uses a simple principle that greatly conserves resources. Planted in a foam cube, the lettuce roots grow in open air, absorbing precise quantities of sprayed water and mineral salts.

Aeroponics uses only about 10 % of the water of an open field irrigated crop, providing environmental improvement, security of supply all year round and great flexibility in crop location.

In its initial phase in 2012, CombaGroup received significant support from the Foundation for Technological Innovation (FIT) with a 'FIT Seed' loan of CHF 100,000. At that time, the company also obtained direct financial support and a bank credit guarantee from Vaud's Office for Economic Affairs (SPECo). Guided by Innovaud since 2013, CombaGroup has benefited from valuable advice at key stages of progress.

With entry into full-scale development, the Vaud start-up was granted a 'FIT Early' loan of CHF 500,000 in 2014. This enabled the company to build two new production lines and increase its lettuce production, which in turn allowed it to establish two large-scale joint ventures, one in Switzerland with Sylvain & Co. and the other in France with a leading salad processing company. With Innovaud and FIT support, Comba-Group began a second round of financing from a solid position and took a crucial step into its future.



An inspiring environment

Located at the heart of EPFL, Europe's most cosmopolitan science and engineering university, EPFL Innovation Park provides a dynamic location in which high tech companies can innovate and thrive.

In constant evolution since it was founded in 1991, when it was known as the Science Park (PSE) and the Innovation Square, EPFL Innovation Park today houses:

- 13 buildings, including four with bio and chemical laboratories and 10 with (modular) office space for a total of 55,000 m².
- More than 160 companies, including over 140 start-ups and 20 large companies.
- More than 2,000 people, mainly engineers, researchers, scientists and administrative staff working for companies in the Park.

EPFL Innovation Park is devoted to housing start-ups, SMEs, research teams and innovation cells from major companies that operate in fields as diverse as IT, computing, health and nutrition, engineering, transport, telecommunications and materials.

EPFL Innovation Park is integrated into the core of EPFL's scientific community made up of 329 laboratories and more than 10,000 students. This unique environment favours knowledge and ideas exchange, and provides a distinct advantage to start-ups and partner companies located at the Park.

Investment momentum strong in 2015

More than CHF 100 million in private capital was raised in 2015 by EPFL start-ups after the record-setting year of 2014.

The biggest share was raised by companies active in life sciences, mainly in biotech and medtech. This remarkable result reflects Switzerland's excellence in research. ICT and nanotechnologies should also continue to perform very well in the coming years.

Further analysis shows that business angels are increasingly active in the first financing rounds, investing up to CHF10 million. From there on, foreign and Swiss venture capital funds start to become involved.

As highlights of the year, four investment cases in different fields stand out.

Asceneuron SA announced in September the closure of a Series A financing of CHF30 million. The Merck Serono spin-off created in 2012 is an emerging biotech leader in the development of first-in-class small molecules that target tauopathies, such as progressive supranuclear palsy (PSP), Alzheimer's disease and related neurodegenerative diseases.

Sophia Genetics, the global leader in data-driven medicine (DDM), announced in December the completion of a new \$15 million Series C financing with the support of Omega founder Marc Coucke. Sophia Genetics supports more than 100 healthcare institutions across 20 countries. Its innovative analytics platform Sophia DDM™ hosts the world's largest clinical genomics community, placing Europe ahead of the US in precision medicine.

In April, L.E.S.S. (Light Efficient Systems) raised CHF3 million in a Series A financing round through institutional and private investors. This will allow the company to boost sales of its revolutionary lighting systems and support the development of production in response to the demand of key customers in Japan, Germany and Switzerland.

Last but not least, Nanolive closed its first financing round with accrued capitalisation of CHF 2.7 million thanks to 25 F & F investors and its initial founding. Incorporated in 2013, the start-up announced the launch of its live cell imaging tool in December.



EPFL Innovation Park: home to 160 innovative companies with 2,000 employees

EPFL Innovation Park

Two exclusive learning platforms for life sciences start-up companies

Università della Svizzera italiana (USI) develops and offers leading-edge programmes to provide young life sciences companies with the theoretical and practical skills needed to develop, fund and market biomedical innovations. The advanced training has ambitious objectives: to create an executive network where academia, industry and venture capitalists interact fruitfully.

BioBusiness: advanced short training on bio-entrepreneurship

In 2010, USI launched BioBusiness, a five-day bioentrepreneurship programme for life sciences executives that teaches scientists the skills to develop biomedical innovations. The programme has been held six times since then with more than 150 participants in total and a maximum number of 27 participants per programme. The course teachers are internationally recognised industry experts.

Participants are enthusiastic about the programme: "The BioBusiness programme is by far the best course I have attended. The course gave me the courage and trust to really go all the way with my own company. I highly recommend it," says Dr. Patrick Kugelmeier, surgeon and senior physician from Zurich.

The programme was developed following global market research to identify existing offers in the continuing education sector and to fill a national gap. Course participants are carefully selected on the basis of their educational background and entrepreneurial intention.

So far, a high percentage of the most promising Swiss life sciences start-ups have participated in the programme, including a large percentage of the start-ups that have completed a first round of financing in the last two years; for example, InSphero, ProteoMediX and BioVersys. Many companies value the training so highly that they send people each year, and a significant number of course participants come from other European countries.

MedTech Business: comprehensive programme for medtech start-ups

In response to the success of BioBusiness and to participants' requests, the offer was diversified and supplemented by MedTech Business, which focuses on medtech entrepreneurship. This one-week comprehensive programme provides young and future entrepreneurs with the necessary insights and skills to tackle the critical issues in order for their companies to establish a strong position and grow in today's market. The programme includes topics on assessment of



Dr. Heidrun Flaadt Cervini, initiator and director of BioBusiness and MedTech Business

technology and market opportunities, leverage of various funding opportunities and compliance with regulations to increase the value of the company.

Examples of high calibre academic knowledge transfer

This entrepreneurship training, together with a series of new educational initiatives, will complement the teaching at the new Faculty of Biomedicine and complete the scientific/biomedical education at USI. Thus, both BioBusiness and MedTech Business can directly foster the development of biomedical innovations.

www.biobusiness.usi.ch www.medtechbusiness.usi.ch

UBS









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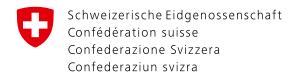
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We invest in high-potential companies and create successful ventures to generate attractive returns, provide beneficial contributions to the economy, and foster entrepreneurial spirit.

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