Evaluation of the swissnex Network

Evaluation report by Oxford Research for the Swiss State Secretariat for Education, Research and Innovation (SERI)



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This Venn diagram is a stylistic representation of Oxford Research efforts to combine competences in research, strategy and communication, in providing knowledge for a better society.

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Terms used in the report

Term	Definition
End-user	An end-user refers to partners on the individual level, such as researchers, entrepreneurs and artists.
Partner	A partner is one of these five specific institutions 1) a higher education and research institution, 2) a governmental or publicly funded institution 3) a start-up or innovation-driven company 4) a non-governmental, non-profit organisation 5) a creative industry linked to education, research or innovation.
Key stakeholder	A key stakeholder is defined as an individual representative of a public or private institution. These individuals have been identified on the basis of their considerable experience and personal interaction with the swissnex Network over several years.
Local collaboration partner	A local collaboration partner refers to non-Swiss partners that swissnex collaborates with locally.

1. Executive summary

The Swiss State Secretariat for Education, Research and Innovation (SERI) commissioned Oxford Research to conduct a retrospective evaluation of swissnex in which we assess the relevance, value creation and added value provided by swissnex until now. It is also prospective, in the sense that we have developed recommendations and suggestions about how swissnex can increase its relevance and added value in the future.

Key findings

Looking across all five swissnexes, the overall conclusion is that swissnex creates value as an instrument for internationalising and connecting the Swiss education, research and innovation community to global innovation hotspots around the world.

swissnex provides added value to its different stakeholders (partners, end-users, key stakeholders and local collaboration partners). The Swiss partners and end-users acquire access to opportunities, connections and local knowledge that they would not be able to establish or access by themselves.

Key stakeholders in Switzerland consider that swissnex provides added value as part of the Swiss international promotion system, because swissnex meets a specific need within the Swiss education, research and innovation system as the only Swiss body that focuses on the intersection between research, innovation and education.

The local collaboration partners highlight the unique swissnex way of collaborating (compared to other foreign diplomatic or cultural representations), including the swissnex emphasis on co-creation and its responsive, flexible and cooperative nature.

The evaluation findings enable us to conclude that swissnex is **qualitatively different from the rest of the Swiss international promotion system** (including the embassies and consulate generals, Presence Switzerland, Switzerland Global Enterprise, Switzerland Tourism and Pro Helvetia). This is because swissnex is the only Swiss organisation that operates in the intersection between research, innovation and education, focusing on assisting its partners and end-users in the early R&D stage and the precommercial phase.

Key strengths of the swissnex model

As the evaluation shows, the success of the swissnex model can be attributed to the following key characteristics:

swissnex is strongly rooted in the local education, research and innovation ecosystems

Through many years of existence in the local education, research and innovation ecosystems, swissnex has built up strong, reliable connections to key R&D and innovation players in the local ecosystems. In the survey, 74 per cent of the respondents strongly agree or agree that swissnex is able to provide access to a relevant local network, and in the interviews the partners and end-users generally highlight the value that the local networks of swissnex gives them. One reason for swissnex' strong local presence in such

education, research and innovation ecosystems is that swissnex offices interact at eye level with the local community – by co-creating activities with local partners on hosting events and exhibitions, for example. In the interviews, some of the local collaboration partners state that they find this form of collaboration unique to swissnex compared to other foreign diplomatic representations and cultural institutions that they have worked with.

swissnex has an innovative edge and is up-to-date with the latest technology trends and developments in the education, research and innovation ecosystems

Through its well-fostered connections to the leading local education, R&D and innovation players, but also due to its proactive approach in finding synergies in the intersection of research, innovation, education and arts, swissnex is able to maintain its innovative edge and stay up-to-date with the latest trends and developments.

Furthermore, swissnex acts as a local thought leader and agenda-setting organisation that puts forward new topics for consideration. As the interviews and the survey show, the partners and end-users find that they receive new insights and valuable knowledge about the foreign market and the local education, research and innovation landscape from using swissnex, varying from insights about legislation to more tacit knowledge about cultural practices.

swissnex offers a range of relevant services and activities that meet the needs of their partners and end-users

The interviews and survey with the Swiss partners and end-users of swissnex show that they use the range of differentiated activities and services offered by the swissnexes, and generally find that the services are relevant to their needs. In the survey, 80 per cent agree that swissnex offers services relevant to their needs. In addition, the vast majority of swissnex' partners and end-users are satisfied with the activities and services that they have received from the swissnexes (81 per cent are either very satisfied or satisfied with the services/activities that they have received from swissnex).

swissnex has a strong reputation and is generally considered to be a client-centred organisation

In the interviews conducted with Swiss end-users, partners, key stakeholders and local collaboration partners, words like "flexible", "pragmatic", "responsive" and "entrepreneurial" occur frequently when they describe their collaboration with swissnex. Many of the partners and end-users report that working with swissnex is rarely formulaic, and the more experienced partners and end-users, in particular, have established personal contacts to a person in the swissnex team enabling them to engage with swissnex in an open and trustful dialogue. During our field visits, we also observed that swissnex staff manage to create a welcoming, inviting atmosphere for the local guests and Swiss visitors.

Key weaknesses of the swissnex model

However, we also identified a set of key weaknesses and challenges of the swissnex model that hamper their value creation. These include:

'Time-consuming' and demanding

The access to local connections offered by the swissnexes is one of the main strengths of swissnex, but at the same time it is an inherent challenge of the model because it is time-consuming and takes a lot of resources to build up.

The current swissnexes are adding value due to their long existence and efforts in tapping into the local education, research and innovation ecosystems, but if new swissnex offices are to be established, it is worth taking this weakness of the model into consideration.

Fuzzy profile and unclear value proposition

The autonomy of the swissnexes is in many ways a strength, but it also results in communication challenges (both internally and externally) about what swissnex is, about what swissnex is actually doing, and what you can gain from interacting with swissnex.

In the interviews with the swissnex staff and the Swiss partners and end-users, we encountered different interpretations and definitions of what swissnex is (which is not necessarily a weakness).

Grey zone between swissnex and Switzerland Global Enterprise (S-GE)

In principle, the divide between science promotion and business promotion in Switzerland is clear, hence the signed agreement between SERI and S-GE.

The interviews with the swissnex team members suggest, however, that in day-to-day operations (when a start-up knocks on the door, for example), the boundaries between innovation and commercialisation are less well defined, which occasionally results in collaboration and coordination difficulties.

Which outcomes does swissnex generate?

The survey data and interviews show that the **main outcomes** (**short-term and long-term**) **from using swissnex** are:

Network to relevant partners in R&D and innovation systems abroad

The Swiss partners and end-users in both the survey and interviews find that the five swissnexes enable them to make the right connections in the education, research and innovation landscape and link them with key players in the education, research and innovation communities abroad. In the survey, one of the key results is that the Swiss partners and end-users expanded their network from using swissnex, such that around half of the start-ups (49 per cent) expanded their business network in the country, while almost two thirds within academic research relations (62 per cent) expanded their academic network. In the field of academic research relations and educational activities, we also see that universities and research institutions develop formal and binding relations to universities and research institutions abroad through their engagement with swissnex, as around one third have developed cooperation agreements/relations with a university/body in the country or have been/are in the process of exchange of researchers.

Know-how and an overview of the education, research and innovation landscape in the country

The Swiss partners and end-users indicate in the survey and interviews that they receive new and valuable knowledge and insights about the national market and education, research and innovation landscape from using swissnex, varying from knowledge about the business and governance structure in the particular country to an overview of the education, research and innovation system as well as important cultural know-how about doing business and contacting partners. In the field of academic research relations, 39 per cent indicate that they have better knowledge about the research agenda/landscape as a result of using swissnex, while almost two thirds (65 per cent) within the area of

start-up programme or support for business growth learned more about the education, research and innovation ecosystem and innovation landscape from using swissnex.

Increased visibility of Switzerland within the global education, research and innovation landscape

Another important outcome that swissnex achieves is the contribution to an increased awareness and visibility of Switzerland as one of the world's leading countries in terms of innovation and economic performance. A benefit highlighted in the interviews with end-users and partners of swissnex is that they were able to boost their international visibility by using swissnex. In the interviews with key stakeholders, a number of them underline the importance of swissnex for internationalising the Swiss education, research and innovation by complementing the activities of other Swiss internationalisation organisations, e.g. Presence Switzerland, S-GE. From our interviews with the local collaboration partners, we learned that swissnex has a strong reputation and is considered a visible organisation in the local education, research and innovation communities. We also learned that swissnex attracts international interest from foreign countries, as the swissnexes received numerous visitors and delegations from other foreign science, education and innovation ministries, trade commissioners and regional representatives interested in the swissnex model.

Development of new ideas for research and joint research projects

By using swissnex, the Swiss partners and end-users within the field of academic relations and research develop new ideas for research (37 per cent), indicating that the contact the Swiss researchers and universities establish to their peers abroad results in the advancement of new research ideas. Also, within the field of start-up programmes/support or business growth and innovation support in general, more than a quarter (27 per cent) develop new ideas for research and product development. Among the individual researchers, 16 per cent took a step even further and have developed or are developing joint research publications or applications for research funding in collaboration with researchers abroad, while 10 per cent have accessed funding for new research and innovation projects.

Development of new products/services/commercial activities

A quarter of the start-ups, scale-ups and innovation-driven companies develop new products, services and commercial activities (24 per cent) by using swissnex. Participation in the start-up camps enables the companies to validate their products or services for the local market by leveraging swissnex infrastructure, guidance and local connections, and it provides a valuable platform for start-ups to validate their product/service directly with potential partners and investors etc. Furthermore, 17 per cent sold services/products in the particular country, showing that swissnex support directly benefits the companies' economic growth.

The future of swissnex

As swissnex is an important instrument for internationalising and connecting the Swiss education, research and innovation community to global innovation hotspots around the world, we are able to conclude that the swissnex model is still relevant in the future.

Overall, we find that swissnex in the future should retain its high degree of autonomy, because this enables the swissnex offices to reflect their local environments, giving the flexibility and creativity that make swissnex able to stay relevant. However, we also see that there is room for improvement in order

to increase swissnex value creation and to maintain its relevance in a still more complex globalised world, where the pace of change is accelerating constantly, and interactions take place in a myriad ways.

In order to strengthen swissnex and increase its value creation capabilities, we have developed a set of key thematic recommendations for future action (described in more detail in chapter 5, but also presented in general terms below).

Improvements in operations

On the operational side, we identified certain challenges and potentials for improvement. In particular, we see a potential in increasing the coordination and exchanging of knowledge between the swissnex offices, but also a potential for a more coherent planning of activities in the swissnex offices. To improve swissnex operations, we recommend:

- More coordination and joint development when it comes to infrastructure
- Focus more on exchanging of ideas and 'best practice' in the swissnex Network
- Rethink the approach to trendspotting and outsource it to the frontrunners
- Stronger alignment of communication with what swissnex does on a day-to-day basis
- A discussion with SERI in Bern about the presence and visibility of swissnex in Switzerland

Stronger focus on longer-term projects and goals

swissnex offers relevant, tailor-made services and is a client-centred and demand-driven organisation. However, we see a need for a stronger and more systematic focus on longer-term projects and generally a higher awareness of the impact created by swissnex. We therefore recommend:

- Focus even more on raising funding from larger programmes
- Increase collaboration with established accelerator programmes and incubators
- Look into the possibility of allocating specific funding for longer-term impact projects (with inspiration from the ICDK 'innovation projects')
- Greater alignment of the focus areas with the UN Sustainable Development Goals

A clearer role in the Swiss education, research and innovation landscape

swissnex is part of an increasingly crowded education, research and innovation ecosystem both locally as well as in Switzerland, and there is a risk that swissnex' profile and visibility weaken. We find that a stronger internal alignment of communication and day-to-day operations (see recommendation above) can help clarify its role in the Swiss education, research and innovation landscape. In addition, we recommend:

- Greater awareness of the impact created by swissnex and its unique focus on science, education and innovation
- Renewed joint discussion with S-GE to clarify the grey-zone issues

Right balance between agility and rootedness

swissnex creates unique value, first and foremost by the rootedness and long-term relations that the offices have built up in the local education, research and innovation communities, but at the same time building up stable relations is demanding and time-consuming – a challenge in an increasingly fast-changing world. As a result, swissnex needs to strike a balance between agility and rootedness within

the conventions and guidelines of FDFA, which is an inherent challenge of the swissnex model. However, some recommendations for how swissnex can keep on strengthening the balance between flexibility and stability include:

- Focus on the continuity of 'core staff', because it is important to have experienced staff who have relevant local knowledge and networks
- **Initiate more joint projects** between the swissnexes that can increase knowledge sharing and exchange of 'best practice' (faster access to know-how)
- **Focus on more coordination and joint development** when it comes to web infrastructure for more organisational stability and knowledge exchange across offices
- New swissnexes? If considering setting up new swissnexes in other locations, it is important that these are tested in a small, lean set-up before a full swissnex is established
- Continuously evaluate the relevance and value creation of the local swissnexes by asking fundamental questions about the location, the relevance of swissnex, added value, etc.

2. Introduction

The continuing internationalisation of science and innovation means that tapping into sources of knowledge in other key countries has become increasingly important. As stated in Switzerland's International Strategy on Education, Research and Innovation, the vision is that Switzerland continues to occupy a leading global position in education, research and innovation.

Key factors for implementing this vision include committed and internationally active education, research and innovation players and the required framework conditions as well as financial resources. Swiss education, research and innovation players rise to the international challenges emerging from the tension between competition and cooperation. This enables them to strengthen their ability and willingness to learn, to conduct research, and to innovate and be creative. They promote the exchange of ideas and contribute to the development of solutions to global problems.

Tapping into education, research and innovation systems in other countries is a challenging endeavour. Knowing where to begin and whom to contact for finding the relevant knowledge and networks that match your needs in a foreign education, research and innovation landscape is far from easy. Moreover, the direct economic outcomes are typically not just around the corner, and the medium of exchange is not simple definable, priceable goods, but complex knowledge, ideas and information. This calls for delicate approaches that involve trust and relation-building. Engaging in networks and collaborations on innovation, research and education in a foreign country with a different culture, policy and education, research and innovation system adds to this complexity and delicacy. Against this background, Switzerland has formed swissnex – a policy instrument that targets internationalisation and international competitiveness in education, research and innovation.

The State Secretariat for Education, Research and Innovation in Switzerland (SERI) commissioned Oxford Research to carry out an evaluation of swissnex that is retrospective – studying the relevance, value creation and added value of swissnex until now – and forward-looking, with focus on developing recommendations and suggestions on how swissnex can increase its relevance and added value.

The evaluation is based on a triangulation of data and methodologies in order to validate the evaluation findings and deepening the understanding of the subject matter. We combined quantitative data through a web-based survey with the partners and end-users of swissnex with qualitative data in the form of field visits to all the five swissnexes and qualitative interviews with high-level Swiss stakeholders, the swissnex team members, Swiss partners and end-users as well as local collaboration partners.

In addition, we carried out comparisons with the Innovation Centre Denmark setups (ICDKs) for identifying relative strengths, weaknesses and look for practices that can inspire swissnex. We have chosen to compare swissnex with ICDK, because this organisation has similar goals and its offices are located in the same regions (enabling us to implement country-by-country comparisons). In addition, Denmark and Switzerland are comparable countries in terms of size as well as innovation performance.

This report contains the findings of the evaluation. The report begins with a background chapter on the swissnex set-up, including the organisational set-up, key characteristics, focus areas and tasks. The

evaluation then looks into the performance, value creation and added value of the swissnex Network, followed by a chapter on the future of swissnex, in which we present a SWOT analysis and key recommendations for future action. Lastly, the five swissnex locations are evaluated and assessed individually.

3. The swissnex set-up

In 2000, Switzerland opened the world's first scientific consulate of its kind in Boston. Since then, five more swissnexes have been set up – in San Francisco (2003), Singapore (2004 – closed 2015), Shanghai

(2008), Bangalore (2010) and Rio de Janeiro (2014), respectively. In addition to the five existing swissnex offices, three outposts have been established in New York (swissnex Boston), São Paulo (swissnex Brazil) and Guangzhou (swissnex China).

All the five swissnexes have by now existed between five (swissnex Brazil) and nineteen years (swissnex Boston), focusing on tapping into local ecosystems and connecting people from Switzerland with peers in their respective locations. As we have learned in the interviews with key stakeholders, swissnex staff and local collaboration partners, **it takes time to**

Key facts - swissnex

- Size of swissnex: In 2018, the five swissnexes had 58.1 FTEs plus 15 interns.
- Costs and funding: In 2018, the total costs of the five swissnex locations and their outposts amounted to CHF 9.94 million. SERI provided funding amounting to CHF 5.61 million, and public and private partners supported and co-funded the swissnex activities with CHF 4.33 million.

build up a strong local presence and learn how to approach the right people and build up trusting, long-lasting relations.

An insight from the evaluation of the Danish Innovation Centres (ICDKs)¹ was also that the maturity of the centres influences their value creation capabilities, because accessing ecosystems, finding the relevant research departments, scientists and entrepreneurs, and – not least – to establish a strong trusting connection, is extremely time-consuming.

3.1 Governance

swissnex is led by the **Swiss State Secretariat for Education, Research and Innovation (SERI), in close collaboration with the Federal Department of Foreign Affairs (FDFA)**. The swissnexes are managed by defining four-year strategic priorities and a list of tasks (enclosures to the Service Level Agreement) as well as yearly objectives (*Lettres de Mission*).

The CEO follows up on these in the yearly activity reports, in which the purpose is to present an analysis of the previous year in terms of activities, strategy and resources. The Head of the International Division at SERI, after consultation with the Head of Mission, decides whether a swissnex has reached its objectives or not. While swissnex CEOs report directly to SERI on subject and financial matters, they are subordinated to the Head of Mission at the embassy in question. In Switzerland, the swissnex Committee advises the State Secretary on strategic issues relating to the swissnex Network. It comprises high-ranking representatives from the most important education, research and innovation institutions (Swiss National Science Foundation (SNSF), Innosuisse, swissuniversities), foundations and the public and private sector.

In terms of financial governance, swissnex is **based on a public-private partnership model**. While SERI covers one third of the project costs, the swissnex offices are required to finance two thirds of the

¹ Oxford Research (2015): Evaluation of the Danish Innovation Centres

costs through third-party funds. This model has led to partnerships and sponsorships with the private sector as well as signed mandates with Swiss universities and other federal or cantonal institutions.

The five swissnexes have a high degree of autonomy, and they are bottom-up driven. This means that they can propose their own performance objectives (discussed and validated by the SERI headquarter), the partners and the projects to be supported, the development of new services, the recruitment of personnel and the allocation of resources. They manage the basic funding autonomously and take internal as well as external risks (such as decreasing partner contributions, increasing salary costs, etc.) into account in their planning. Based on observations from our field visits and the interviews with the swissnex staff, it is clear that this autonomy is highly valued, and – as several of the swissnex team members emphasise – it is the autonomy of the swissnexes that brings in an entrepreneurial and innovative work culture, enabling them to think creatively and offer tailored services to their end-users and partners.

"swissnex is a very unique place, where you have the level of freedom to pursue an idea that you have it's really based on people's passions, and we are encouraged to learn and develop ... I think this is also reflected in the services we provide to our clients."

-Team member, swissnex San Francisco

The interviews also suggest that the end-users, partners of swissnex and the key stakeholders in Switzerland perceive swissnex as an organisation with an innovative mindset.

The use of young creative people who have a taste for trying out new things is something distinct for swissnex swissnex is a trial-and-error place, where you can try out different things."

-Key stakeholder, public authority

Besides being bottom-up driven with a high degree of freedom, the observations from our field visits at the swissnexes, along with the interviews with the swissnex staff, show — with some variation — that they focus on creating synergies and promoting collaboration between their different team members in education, research and innovation. The idea is to promote interdisciplinarity, where new types and forms of collaborations can arise.

3.2 Focus of swissnex

The swissnex mission consists of **connecting the dots in education, research and innovation**. It does so by:

- *Connecting* scientists, researchers, entrepreneurs, policymakers and thought leaders with inspiring peers and new ideas across the globe
- Facilitating academic programmes, global innovation strategies and knowledge exchange
- Supporting internationalisation efforts of Swiss academic institutions and companies, with a special focus on start-ups

- Networking with relevant contacts at universities, research institutions and companies to maintain a
 powerful web of worldwide knowledge
- Participating in their local communities and interacting with Swiss and local partners to bring added value

The spectrum of partnerships encompasses players at the intersection of fields that include art, design, technology and innovation, and the swissnex CEOs and their teams are directly responsible for acquiring end-users and partners. As we can see from the data collected for this evaluation, the swissnexes **collaborate with a broad spectrum of end-users and partners related to international education, research and innovation** on an institutional as well as individual level, i.e. the swissnexes work with institutional partners such as Swiss universities, higher educational institutions and public authorities, but also with individual researchers, entrepreneurs and artists.

As part of Switzerland's official network abroad, the swissnex Network also develops services and cooperates closely with other Swiss organisations, including embassies and consulate generals, Presence Switzerland, the Swiss Business Hubs (Switzerland Global Enterprise) and Switzerland Tourism as well as Pro Helvetia Liaison offices.

Almost half of the respondents in the survey are universities/research institutes/other educational or research bodies (47 per cent), thus constituting the largest user segment of swissnex. This is followed by companies, including start-ups (14 per cent), scale-ups (3 per cent), established SMEs (6 per cent) and established larger companies (7 per cent) that represent almost one third of its partners and endusers (30 per cent). Other significant user segments are public authorities/agencies (8 per cent) and artists/designers (5 per cent). 10 per cent are in the 'other' category, featuring a diversified group that includes journalists, investors, foundations, NGOs, etc.

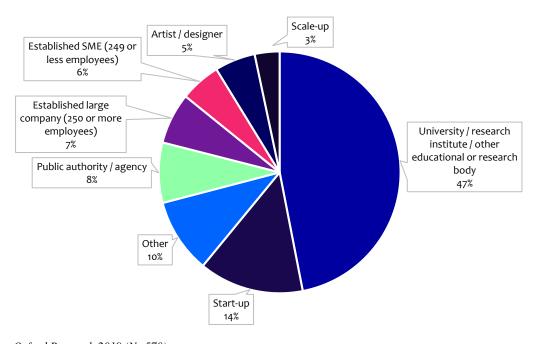


Figure 3.1 Which type of company/ organisation do you work for?

Source: Oxford Research 2019 (N=570)

As described initially, the swissnexes are autonomous and offer a variety of services in different areas. The differences between them are reflected in figure 3.2 below, where it is evident that the partners and end-users use the swissnexes in different areas.

We observe that every other partner and end-user (50 per cent) of swissnex India uses the services/activities related to start-up support/business growth and innovation support, making this the area that is most widely used at the Indian office. Since Bangalore has a vibrant education, research and innovation ecosystem, and swissnex India has a strong partnership with Innosuisse on hosting the Market Entry Camps for Swiss start-ups in India, it has become an attractive destination for Swiss start-ups.

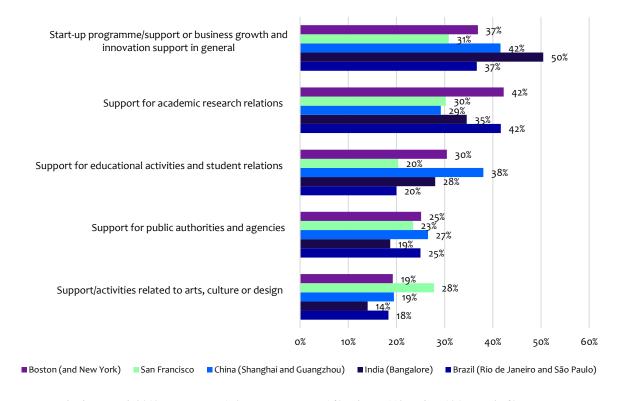


Figure 3.2 Which area did you use swissnex for?

Source: Oxford Research 2019 (N: Boston=178, San Francisco=160, China=112, India=104, Brazil=60)

Within the academic field, swissnex Boston (42 per cent) and swissnex Brazil (42 per cent) both have a large share of partners and end-users. swissnex Boston is located in what is probably the world's densest academic ecosystem, and thus an obvious magnet for Swiss researchers, and swissnex Brazil has a strong focus on supporting academic relations, which seems to be generated by a combination of a big and quite strong academic research scene in Brazil together with challenges in attracting attention from Swiss start-ups and businesses towards Brazil.

In educational activities, i.e. higher education cooperation, student mobility programmes, swissnex China has almost 38 per cent of its end-users and partners making it the swissnex office with the highest share of users in this area. It can partly be explained by the successful Sino-Swiss Science and Technology Cooperation Program (SSSTC), which has paved the way for increased student exchange and academic collaboration between Swiss and Chinese education and research institutions.

Partners and end-users in the field of arts, culture and design are particularly attracted to swissnex San Francisco. 28 per cent of swissnex partners and end-users use a service within this field, making it one of the most popular areas at swissnex San Francisco. One reason for this is the attractive location of the San Francisco office at Pier 17, with ample room for continuously hosting exhibitions related to arts and design. With its high visibility, the idea is to be on the radar in the Bay Area and attract potential partners and end-users.

3.3 Country-by-country comparison to Innovation Centre Denmark

To identify the strengths and weaknesses of the swissnex model and look for inspiration for how to finetune the model, we compare the swissnex Network with Innovation Centre Denmark (ICDK). By comparing swissnex to ICDK, we are able to carry out a country-by-country comparison, because ICDK offices are in the same regions as the swissnex offices². As part of our field visits to the swissnexes, we conducted interviews with key representatives of the local ICDKs to gain insights into their focus, governance and organisational set-ups.

3.3.1 Focus and activities

The focus of the two models (ICDK and swissnex) is similar, because both have a broad focus in the fields of science, innovation and education, collaborating with a broad spectrum of partners and endusers related to international education, research and innovation.

However, our comparison shows that the two models are not fully identical in their focus, as they differ in two areas::

- 1. ICDK is based on three pillars: 1) research and education, 2) commercialisation and 3) investment promotion. Investment promotion is an area managed by the staff of Invest in Denmark (the Danish export promotion agency). This is different to swissnex, because investment promotion is not a focus of swissnex activities in this field belong under S-GE.
- **2.** The arts (often in combination with science) are a specific focus area in some of the swissnexes (swissnex Boston, swissnex San Francisco and swissnex China), but not a focus area for ICDKs.

The services provided by the two models are also similar, because they both offer a range of

A systematic focus on 'impact cases'

- Purpose: The Danish ministries behind ICDK asked the ICDKs to deliver 3–5 impact cases partly to communicate their value creation to stakeholders, and partly as an internal exercise to raise awareness about their impact, since communicating such impacts is particularly important in the innovation field and precommercial phase, where impact is more long-term and less tangible than in commercial projects.
- Focus and communication: The focus of the cases
 was mainly on the end-users, and they were published
 on their website, but also used strategically and to build
 up an identity internally.

differentiated activities and services that aim to give their partners and end-users access to local networks, knowledge, technology and markets. These include meetings with local partners, different events, participation in workshops, conferences and exhibitions, workspaces, residencies, participation in market validation and/or market entry situation in the country and participation in delegations/visits. However, we see that there is a difference between swissnex and ICDK concerning participation delegations/visits to foreign countries. 79 per cent of ICDK clients took part in delegations/visits (in 2015) compared to 31 per cent of swissnex' end-users and partners. Another difference concerns how they

document and communicate the outreach and impact of their services, where ICDK has had a more

² The ICDKs are located in Boston (US), Silicon Valley (US), São Paulo (BR), New Delhi (IN), Shanghai (CN), Seoul (KR), Munich (DE) and Tel Aviv (IL)

systematic approach to collecting 'impact cases' across the local centres (see the text box for a more detailed description).

3.3.2 Governance

The ICDKs are established and managed as a partnership between the Ministry of Foreign Affairs of Denmark and the Danish Ministry of Higher Education and Science. Based on the evaluation of ICDK, we find that the Danish ministries are more closely involved in the operational side of the local ICDKs than SERI and Federal Department of Foreign Affairs (FDFA) is involved in the operations of the swissnexes. The ICDKs are held accountable via the performance contract with the ministries

concerned, in which they are assessed against measurable output targets. The objectives of the swissnexes are often more qualitative, and the CEOs of the swissnexes have more influence on defining the goals than the executive directors of the ICDKs.

The evaluation of ICDK revealed that the performance objectives influence the operations of the ICDKs. The innovation officers in the commercial area of the ICDKs have annual earning targets and charge the clients for their services. As the evaluation laid out, the ministries, directors and employees in general agree that the model has a number of positive effects, but - as the evaluation also demonstrated – an implication of the yearly earning targets is that the innovation officers at the ICDKs too often take on assignments that are not innovation-related but are instead more commercial and export-oriented. At the same time, the innovation attachés in the research and education field have different targets than the innovation officers, and this sometimes hampers local collaboration between the fields education

'Innovation projects' focusing on a theme of strategic importance

- Purpose: ICDK initiates 'innovation projects' as a tool for building up competences and knowledge internally and for testing and developing new ideas and projects in the precommercial phase. The 'innovation projects' are projects that can help strengthen synergies between the areas in 'research and education' and 'commercialisation'. The 'innovation projects' can also include collaboration and knowledge exchange between the Danish centres and engagements with local stakeholders and with existing or potential end-users back in Denmark.
- Funding mechanism: To create an incentive for creating 'innovation projects', an employee who has an earning requirement gets a reduction in order to be able to focus resources on the 'innovation project'.
- Examples: ICDK Silicon Valley has previously initiated 'innovation projects' with a focus on 'the Future of FinTech', 'Applied Al' and 'the Future of Work'. In 2019, the focus is on the Future of Digitalization and the challenges and opportunities that digital developments present for businesses and organisations.

commercialisation, respectively. In order to increase cooperation and synergy between the research and education area and the commercial area, the ICDKs have been given opportunities to develop and launch so-called 'innovation projects' that focus on the intersection between the two areas (see text box for a more detailed description).

3.3.3 Local organisational set-up

The comparison between swissnex and ICDK shows that the local swissnexes have a wider extent of autonomy than the local offices of ICDK have. It is mainly due to two key local differences:

1. The ICDKs (except the Innovation Centre Denmark in Silicon Valley) are located at embassies/consulates, meaning that they are under the jurisdiction of the respective consuls or

ambassadors, and have to follow diplomatic conventions and routines at the embassy and at the same time their own objectives. By contrast, the swissnexes operate more as independent entities (giving them a strong organisational identity and visibility), as they have the opportunity to have exhibitions and host larger community events (also due to larger venues than ICDK).

2. The CEOs of the swissnexes have the authority to recruit staff, and all team members at each particular location refer directly to the CEO. For the ICDKs, the organisational set-up is less clear-cut, because the innovation attachés refer to the Danish Ministry of Higher Education and Science, while the executive director is appointed and employed on a contract with the Danish Ministry of Foreign Affairs.

4. Performance and results

In the following, the performance and results of swissnex are presented. First, we study the activities/services offered by swissnex and to which extent the partners and end-users are satisfied with these activities/services and find them relevant to their needs. Second, we study the value creation of swissnex and the added value resulting from this.

4.1 Which activities/services offered by swissnex do clients use?

The interviews with the partners and end-users of swissnex show that **they use the range of differentiated activities and services offered by the swissnexes**, and as the survey data in figure 4.1 shows, almost half the swissnex end-users and partners use the swissnexes for **meetings with local actors regarding possibilities for collaboration within education, research or innovation** (45 per cent).

This result corresponds well with one of the main swissnex objectives about connecting its partners and end-users with relevant peers in the respective location. As we can see from the interviews with the partners and end-users, the meetings take various forms and are more or less formalised. For instance, in China they form a part of a study tour, where the Swiss education, research and innovation players get to meet their Chinese counterparts in more official settings, whereas in the San Francisco Bay Area meetings are often more informal and oriented towards a specific purpose.

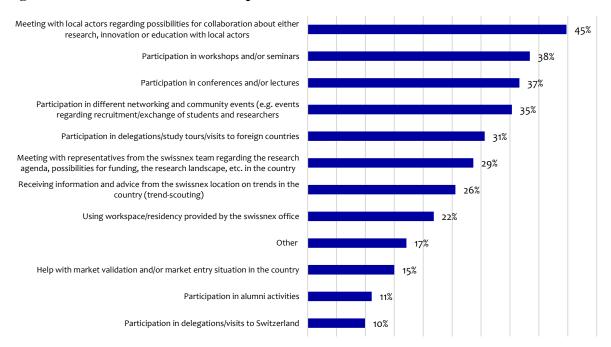


Figure 4.1 Activities that the swissnex partners and end-users have used

Source: Oxford Research 2019 (N: Boston=178, San Francisco=160, China=112, India=104, Brazil=60)

Another important role of swissnex is to **facilitate events, workshops, conferences and exhibitions**, and as we see from figure 4.1, a large share of the partners and end-users take part in these types of

activities – such as workshops and/or seminars (38 per cent), conferences and/or lectures (37 per cent) and the different networking and community events (35 per cent). Besides being fora for the acquisition and exchange of knowledge, we observed from our field visits and learned in the interviews that these events are a way to promote the swissnex brand locally and to raise awareness in the community by attracting interested researchers, companies and artists, and thus a way for the attendees to network and meet with relevant peers.

Providing Swiss actors with insights into the local ecosystems is a key task of the swissnexes. One way to provide this is by participating in delegations and study tours, which almost one third of the partners and end-users have done (31 per cent). Here they get an opportunity to visit and meet with leading tech companies, universities and policymakers. Many also use the local knowledge of the swissnexes to learn about the research agendas and funding possibilities in the country (29 per cent) and to receive information and advice about trends in the country (26 per cent).

Other key swissnex services used by the partners and end-users are the workspace/residency provided by the swissnex office (22 per cent), help with market validation and/or market entry situation in the country (15 per cent), participation in alumni activities (11 per cent) and participation in delegations/visits to Switzerland (10 per cent).

The survey data presented above apply to all swissnexes and do not show the differences between them, but since they vary in size, operate in different ecosystems and consequently are drawn upon for different reasons, we see some variation in the services that the partners and end-users use. The most notable differences we find are:

Participation in delegations/study tours/visits to foreign countries. Almost half of the end-users and partners of swissnex India (48 per cent) have used this service, while on average it is 26 per cent of the partners and end-users of the other swissnexes. As we learned from our field visit to swissnex India, they have previously prioritised this activity, but have downgraded it. in recent years

Help with market validation and/or market entry situation in the country. About a quarter of the partners and end-users of swissnex India (26 per cent) have received help with market validation and/or market entry. This is a higher share than for the other swissnexes, where the share of partners and end-users receiving this help ranges from 15 per cent for swissnex Brazil to 10 per cent for swissnex San Francisco. From our field visit to the Bangalore office, we learned that swissnex India has recently – and for the first time – defined four thematic key areas that have given the team a clearer profile and a stronger focus on creating new opportunities for Swiss start-ups by proactively identifying areas of interest to Indian industrial players. These focus areas, together with a consolidated partnership with Innosuisse, have given swissnex India an ability to support start-ups with market validation and market entry in an efficient way.

Using workspace/residency provided by the swissnex office. There are also differences in the use of the workspace/residency provided by the swissnex offices. Around one third of the end-users and partners of swissnex San Francisco (34 per cent) have made use of the workspace/residency provided, while this is on average 18 per cent of the partners and end-users of the other swissnexes. However, this result does not come as a surprise, because swissnex San Francisco has ample room to offer its users and has a strategic focus on having residencies.

Meeting with representatives from the swissnex team regarding the research agenda, possibilities for funding, the research landscape, etc. in the country. A larger share of swissnex India's partners and end-users (38 per cent) have met with the swissnex team to learn about the research agenda/landscape and funding possibilities in the country than is the case for the other swissnexes (27 per cent on average). This is probably connected to the fact that there are far more partners and end-users of swissnex India that have participated in delegations and study tours than the other offices, where they are accompanied by swissnex representatives.

Participation in different networking and community events (e.g. events regarding the recruitment/exchange of students and researchers). swissnex Brazil (27 per cent) and swissnex India (26 per cent) have fewer partners and end-users who have participated in networking and community events than the other swissnexes have (39 per cent on average). This reflects the different priorities and activities of the swissnexes, where swissnex Brazil (45 events) and swissnex India (35 events) have arranged the smallest number of events among the swissnexes in 2018 compared to – for instance – swissnex China that has arranged 128 events.

4.2 Satisfaction with the activities/services offered by swissnex

In the survey, the partners and end-users have assessed their satisfaction with the activities/services that they have received from the swissnexes. 81 per cent of the partners and end-users are either very satisfied (55 per cent) or satisfied (26 per cent) with the activities/services that they received from swissnex, as shown in figure 4.2.

100% ■ Very satisfied 90% 80% ■ Satisfied 48% 51% 53% 55% 70% 61% 64% Neither satisfied 60% nor dissatisfied 50% Dissatisfied 40% 21% 29% ■ Very dissatisfied 28% 26% 30% 25% 25% Don't know 20% 2% 10% 1% 0% Boston (and San Francisco China India Brazil (Rio de Total New York) (Shanghai and (Bangalore) Janeiro and Guangzhou) São Paulo)

Figure 4.2 Overall how satisfied are you with the activities/services that you received from swissnex?

Source: Oxford Research 2019. (N: Boston=155, San Francisco=156, China=110, India=100, Brazil=57)

There are some smaller variations between the swissnexes with regard to the levels of satisfaction reported by their partners and end-users. The most notable differences concern the share of very satisfied partners and end-users, where swissnex India (64 per cent) and swissnex China (61 per cent) stand out by having the largest share of very satisfied partners and end-users.

Generally, there are very few dissatisfied partners and end-users, and across all swissnexes only 5 per cent are either dissatisfied or very dissatisfied. swissnex Brazil differs from the other swissnexes, as 11 per cent of its partners and end-users respond that they are very dissatisfied with the activities/services that they have received.

In the interviews, the Swiss end-users, partners and local collaboration partners emphasise the flexible, pragmatic, responsive and entrepreneurial nature of swissnex. Many of the partners and end-users have the experience that working with swissnex is easy, and the more experienced partners, in particular, have established personal contacts to a person in the swissnex team, and have easy access to collaborating with swissnex as a result of such relationships. As an example, swissnex

Partnership between swissnex Boston and Switzerland's Federal Office of Civil Aviation (FOCA)

The feedback from the interview with the manager of FOCA is that the collaboration with swissnex Boston went very smoothly:

"swissnex had a pragmatic approach. We had arranged a private event in the US, and swissnex suggested that we also made a public event with other relevant actors and helped us navigating who it would be relevant to invite, and then helped us with communicating the event to these actors. They helped us in filling the gaps that we needed. My impression is that they are very agile and complement our need."

Boston arranged an event in collaboration with Switzerland's Federal Office of Civil Aviation (FOCA), in which the partner from FOCA reported that swissnex Boston was easy and smooth to collaborate with (see text box).

Overall, swissnex has a strong reputation as a client-centred organisation. In the survey, most partners and end-users also agree that swissnex is a flexible and responsive organisation:

- 79 per cent strongly agree or agree that swissnex is flexible
- 84 per cent strongly agree or agree that swissnex is responsive

The high level of satisfaction documented in the survey data and interviews is backed by our field visits, where we observed that the staff manage to create **a welcoming and inviting atmosphere** for the local guests and Swiss visitors..

4.3 Relevance of the activities/services offered by swissnex

Based on the survey results and the interviews with swissnex' partners and end-users as well as key Swiss stakeholders we find that swissnex offers relevant activities that meet the needs of the partners and end-users by enabling them to tap into the innovation ecosystems and build relations. In the survey, most partners and end-users agree that swissnex offers access to a relevant network and provides services that are relevant to their needs and interests:

• 74 per cent strongly agree or agree that swissnex can offer access to a relevant local network.

 80 per cent strongly agree or agree that swissnex offers services relevant to the needs of their organisation and their interests

A key point from the interviews with key stakeholders, partners and end-users is that swissnex can target the services to their needs because of their flexibility and responsiveness. As one end-user puts it in an interview:

"To me, as long as you are in touch with swissnex and in the midst of a discussion on a collaboration, there is a fair amount of flexibility to adjust the services/activities to your needs, which I appreciate and that's why I don't think that any specific services/activities are missing."

End-user, swissnex Boston

Generally, it is clear from the feedback in the interviews with the partners and end-users that they particularly value the local networks that the swissnexes can offer, because meeting with the right persons/organisations is decisive for the relevance of the service.

"They were very committed and had excellent local connections ... they were really good at seeing what types of organisations and things that could be interesting for me. Some of the things they suggested I would not even have thought of myself – but they were really relevant."

End-user, swissnex Brazil

In the academic and educational field, some researchers point out in the interviews that they themselves have strong networks within their respective scientific disciplines, but **through swissnex they can establish connections with persons from industrial sectors and other academic fields that they otherwise would probably not have met.** The assessment of the relevance of the local network in the academic field however seems to depend on their position and role at the university. Some of the management representatives at the universities interviewed for the evaluation question the relevance of swissnex' network, since their university already at an institutional level has connections to other leading international universities (varies between the universities), whereas individual researchers are more inclined to find swissnex connections relevant.

In the business and innovation field, the start-ups and businesses generally find swissnex' services to be relevant to their needs, since they **can explore and understand foreign markets and connect more deeply with the local ecosystems**. To reach this, the start-ups take among other things part in the start-up camps, but also participate in different events, workshops and engage in person-to-person meetings with the swissnex team.

"With the market entry camps, we learn how to approach new customers in Shanghai or San Francisco. The approaches in each country are different, and we get an overview of all the actors in the ecosystem and how to approach them."

End-user, swissnex China

In the interviews with artists and designers, they generally also express that the services of swissnex are relevant to their needs, as swissnex can connect them with the science and innovation actors in the local ecosystems. These are connections that the artists and designers would have difficulties finding themselves. Often, the artists and designers work as freelancers, so the assistance offered by the swissnexes in setting up meetings, arranging events and exhibitions are services that they do not have the capacity to do themselves and thus find highly relevant to their needs. A general comment, however, is that swissnex is not strongly connected to the art scene, as art is not one of the primary focus areas for swissnex (although this varies between the swissnexes).

"They are used to working with start-ups, scientists and designers, too, but they are not so much in the art world. Ideally, they could improve their contacts in the arts. I needed to find the people myself and spend a lot energy on it."

End-user, swissnex San Francisco

The public authorities (confederation, cantons, city councils, etc.) also find the swissnex services and activities to be relevant to their needs. Some of them have an interest in meeting with corresponding public authorities abroad and gaining a deeper understanding and knowledge about the education, research and innovation ecosystems, e.g. by participating in study tours and delegations. Others have a formalised collaboration with swissnex, e.g. Pro Helvetia where swissnex and Pro Helvetia set up different cultural programmes combining art, science and technology.

Other public authorities engage with the swissnexes by signing mandates, as the Swiss cantons have done, and enter into partnerships on establishing summer schools to student and faculty exchanges and joint innovation programmes. One example is the collaboration between the Canton of Vaud and swissnex China, where the Canton of Vaud has expanded the presence of higher education institutions from the Canton of Vaud in China, through their partnership.

4.4 Value creation by swissnex

Looking across all five swissnexes, we find that swissnex creates value as an instrument for internationalising and connecting the Swiss education, research and innovation community to global innovation hotspots around the world. This can be attributed to certain key characteristics of swissnex:

- swissnex is strongly anchored in the local education, research and innovation ecosystems: Through many years of existence within the local ecosystems, swissnex has built up strong and reliable connections to key education, research and innovation players in the local ecosystems.
- swissnex has an innovative edge and is up-to-date with the latest technology trends and developments in the ecosystems: Through its well-fostered connections to the leading local education, research and innovation players, but also due to its proactive approach in finding synergies at the intersection of research, innovation, education and arts, swissnex is able to maintain its innovative edge and stay up-to-date with the latest trends and developments.
- swissnex offers a range of relevant services and activities that meet the needs of their partners and end-users: As the evaluation shows, the Swiss partners and end-users of swissnex use the range

of differentiated activities and services offered by the swissnexes, and are generally satisfied with the services that they receive and find them to be relevant to their needs.

swissnex has a strong reputation as a client-centred organisation: Swiss partners and end-users
find that swissnex is client-centred with its entrepreneurial mindset and high degree of flexibility
and responsiveness.

4.4.1 Short-term results

Based on the survey, the observations from the field visits and interviews with the Swiss partners and end-users, we see that the **main short-term outcomes from using swissnex** are:

- Linking Swiss education, research and innovation players to partners in R&D and innovation systems abroad
- Providing know-how and an overview of the education, research and innovation landscape in the country
- Promoting the visibility of the Swiss education, research and innovation landscape internationally

Linking Swiss education, research and innovation players to partners in R&D and innovation systems abroad

A main objective of swissnex is to make connections and build up networks with players in the education, research and innovation communities abroad. The perception from Swiss partners and endusers in both the survey and interviews is that all five swissnexes fulfil this objective to a great extent, which enables them to make the right connections in the education, research and innovation landscape. Since the swissnexes have had many years to build and cultivate their networks and contacts, they all have very elaborate and strong networks to a range of partners in the local education, research and innovation ecosystems.

"swissnex is unique because of the network that they have, which is much more specifically oriented towards research and innovation than the embassies. My personal opinion is that it is an advantage that they have personal networks and they are cultivating these networks – they take many years to build."

- Key stakeholder, university

From the interviews we learned that many Swiss partners and end-users have gained benefits from accessing the network that swissnex have fostered and developed. Below we see an example of this from a Swiss start-up that contacted swissnex Brazil to find their right way to connect with relevant business partners in Brazil.

"I am very satisfied with the service. They have done a cool job and they should keep doing it. With the help from swissnex we were able to make multiple contacts and reach several stakeholders. swissnex also recommended that we participate in the Inovabra innovation programme, which is where all the big guys are. That gives us great opportunities."

- End-user, swissnex Brazil

In addition, our field visits and the responses from partners and end-users revealed that the swissnex Network is evaluated as particularly strong, as their connections range from research, innovation, education to arts enabling the swissnexes to bring different perspectives and suggestions for possible partners to the table, as highlighted in the interview below.

"I do not know any other organizations offering these services. I really think this science diplomacy setup is unique and is working well. Getting in touch with other professors is easily done via other institutions or programs. What swissnex can do, I think, is much broader, linking us up with many different types of stakeholders in society. They are really good matchmakers who know what they are dealing with. This also means that it is not necessarily the level of the academic institutions in a given country that decides if it is relevant for me to visit."

- Partner, swissnex San Francisco

In the survey, one of the main results is that the partners and end-users have expanded their network by using swissnex. Around half of the end-users and partners (49 per cent) in start-up programmes/business support have expanded their business network in the country, as shown in figure 4.4. while almost two thirds within academic research relations (62 per cent) have expanded their academic network, as shown in figure 4.3.

We have expanded our academic network in the country We have made contact with new researchers 50% We have gained knowledge about the possibilities for 48% collaboration in the country We have gained better knowledge about the research agenda and/or the research landscape in the country We have new ideas for research We have connected with the Swiss alumni community We have connected with new start-ups/companies in the country Other results 10% We have NOT achieved/do not expect to achieve any immediate results

Figure 4.3 Short-term results by using swissnex for support for academic research relations

Source: Oxford Research 2019 (N: Boston=69, San Francisco=49, China=32, India=35, Brazil=24)

From figure 4.3, we also see that more than one third (37 per cent) of the end-users and partners in the academic research field have generated new ideas for research based on their support from swissnex. This indicates that the contact the Swiss researchers and universities make to their peers abroad actually results in the advancement of new research ideas. As we also see from the long-term results (paragraph

4.4.2), it seems that some of the new research ideas form the basis of joint research publications or applications for funding.

Partners and end-users that have used swissnex for other purposes, for educational activities and student relations and for activities related to arts, culture or design, have either expanded their university/academic networks (53 per cent) or made contact with new researchers/artists/alumni (56 per cent).

Providing know-how and an overview of the education, research and innovation landscape in the country

Another main outcome from using swissnex is that the partners and end-users find that they receive new and valuable knowledge about the national market and education, research and innovation landscape, as for example insights into the business and governance structure, an overview of the education, research and innovation system in the region or cultural know-how about doing business and contacting partners. The type of knowledge swissnex provides varies depending on the location, type of partner and their specific needs.

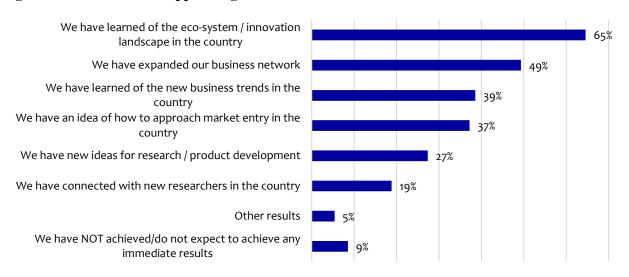
As an example, both China and India have major cultural differences from Switzerland in terms of business mentality and how to approach potential collaboration partners. From our field visits and interviews, we see that swissnex India and China have a large focus on informing and guiding partners and end-users about the economic development, the cultural differences through the different kinds of activities and services they provide, as for example during the delegation visits, the networking events and programmes/camps for start-ups and researchers. However, swissnex' role as a local "translator" is also relevant in the U.S. offices, despite certain cultural similarities. We learned from our field visits that particularly many start-ups come to the US and expect that they can enter the market (they speak the language, etc.), but that many of them underestimate the difference in culture and the way the education, research and innovation ecosystem works. Tapping into this is a so-called 'codified process' as explained by a staff member from swissnex San Francisco in the interview below.

"You can view Silicon Valley as a place where you plug in small start-ups and big corporations come out. It's not that Silicon Valley has better technology or better ideas. They have the whole ecosystem that can transform start-ups and make them grow, and tapping into this is really a codified process, e.g. you have to pitch in a certain way. You have to develop relationships, and you have to behave in a certain way. And it's like this whole culture that they completely underestimated when they come here. And they come here with this mindset, which is completely different."

- Staff member, swissnex San Francisco

Aligned with the findings from the interview, we also see that knowledge about the national market and education, research and innovation landscape is one of the main results from the survey data. However, it varies depending on the purpose the partners and end-users have used swissnex for. In figure 4.3 above, we see that 'better knowledge about the research agenda/landscape' is the fourth-most important results from using swissnex for academic research relations (39 per cent), while figure 4.4 below shows that 'lessons about the ecosystem and innovation landscape' ranks as the most important result of using swissnex for start-up programmes or support for business growth (65 per cent).

Figure 4.4 Short-term results by using swissnex for start-up programme/support or business growth and innovation support in general



Source: Oxford Research 2019 (N: Boston=54, San Francisco=51, China=45, India=52, Brazil=21)

Furthermore, the swissnexes act as local thought leaders and agenda-setting organisations that can put

forward new topics. As an example, we learned from our field visit to swissnex San Francisco that they have had a line of programming with a particular focus on humanitarian issues in the digital age (see text box on the right), since Silicon Valley has not traditionally had a strong focus on promoting humanitarian issues, and there was a potential with this line of programming to reinforce swissnex San Francisco's and Switzerland's reputation and image as a neutral place to advance humanitarian and human rights conversations in the area.

The perception of swissnex as a local thought leader is also reflected in the interviews with the local collaboration partners, where they highlight the ease of "Everyone a Humanitarian" and "Crisis Code" conference

In 2017, swissnex San Francisco explored the future of humanitarian action in the in the form of a three-month exhibition and event series called "Everyone a Humanitarian" and the two-day follow-up "Crisis Code" conference.

These programmes were carried out in collaboration with the ICRC, including both its Director-General and President, five Swiss foundations, six Swiss universities, Presence Switzerland, Pro Helvetia and many US partners.

collaborating with swissnex compared with other governmental support actors. One example is given from the interview below where a local collaboration partner in Shanghai emphasises how smooth the collaboration with swissnex China has been.

"It's been very nice and smooth. Even though they have a governmental background, you can't feel that. They are very flexible with our requests and clear on the needs from the Swiss companies... it's very easy to go directly to the real collaboration."

- Local collaboration partner, swissnex China

Promoting the visibility of Switzerland's education, research and innovation landscape internationally

Another important outcome that swissnex achieves is that the network contributes to an increased awareness and visibility of Swiss education, research and innovation players internationally. A benefit that is highlighted in the interviews with end-users and partners of swissnex.

"From our activities with swissnex, we have increased our international visibility as a leading Swiss university, eventually leading to opening the doors to new university partnerships."

- Partner, swissnex Boston

Switzerland is one of the world's leading countries in terms of innovation and economic performance, and Swiss education, research and innovation players are highly competitive by international comparison. Some of the key stakeholders interviewed also highlight that swissnex is contributing to increasing the awareness of the Swiss capabilities in education, research and innovation and complements the activities of other Swiss international promotion organisations, e.g. Presence Switzerland, S-GE. From our interviews with the local collaboration partners, we learned that swissnex has a strong reputation and high visibility in the local education, research and innovation communities as an organisation working with internationalising Swiss science, technology, innovation, education and arts.

"They're bringing Swiss content, so they represent their country well and they have their finger on the pulse. They know what is innovative and what's going on ... They attend a lot of events and are very well connected. If I compare them to other consulates, they are a lot more outward-going."

- Local collaboration partner, swissnex Boston

From our field visits, we have also seen that swissnex inspires other foreign countries and attracts international interest, since the swissnexes receive numerous visitors and delegations from other foreign science, education and innovation ministries, trade commissioners and regional representatives interested in the swissnex model (swissnex San Francisco estimates that they receive two-three visits every month). An example of the international interest is The Swedish Foundation for International Cooperation in Research and Higher Education (STINT) – a Swedish government body that visited swissnex China to find out more about the swissnex public-private-partnership model.

4.4.2 Long-term results

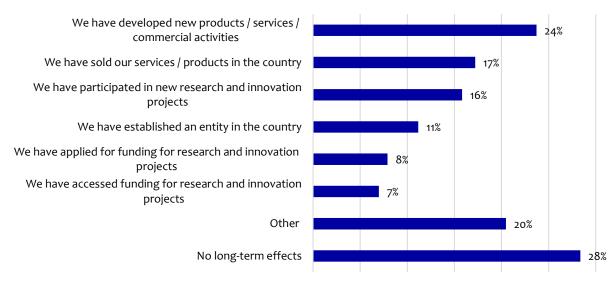
Based on the survey, the observations from the field visits and interviews with the Swiss partners and end-users, we see that a considerable share of the partners and end-users achieve significant results in the longer term, i.e. around a quarter of the start-ups develop new products/services/commercial activities (24 per cent), while in the academic and educational area, around one third have developed corporation agreements/relations with a university/body in the country (32 per cent) or have been or are in the process of exchanging researchers (31 per cent).

However, we also see that a substantial share of the end-users and partners have not achieved any long-term effects (28 per cent in start-up programme/support or business growth and innovation support in general and 25 per cent in academic research relations). It is also expected from the type of projects and services offered by swissnex, as within the innovation field, the activities are in the pre-commercial innovation phase and still at a distance from the actual introduction. Within the area of research and education it also takes time before the long-term outcomes are brought to fruition.

Development of new products/services/commercial activities

swissnex facilitates programmes and camps for innovative start-ups. In the interviews, some of the start-ups highlight their positive experience from participating in these Market Validation Camps or Entry Camps. The programmes enable them to validate their products or services for the local market by leveraging swissnex infrastructure, guidance and local connections. In addition, it provides them with a valuable platform for validating their product/service directly with potential partners and investors, etc.

Figure 4.5 Long-terms results by using swissnex for start-up programme/support or business growth and innovation support in general



Source: Oxford Research 2019 (N: Boston=47, San Francisco=51, China=45, India=51, Brazil=21)

We also received some concrete success stories during our field visits and interviews with both Swiss partners and end-users as well as the swissnex team in terms of long-term results. One example is a Swiss start-up that got in contact with swissnex San Francisco, which then facilitated a showcase meeting with a wide range of relevant partners in the U.S. The meeting later developed into a strong collaboration with one of the partners, which has resulted in the setting up of a sister company in the U.S. (see text box below).

Development of new ideas for research and joint research projects

In academic research relations and educational activities, we also see that the engagement with swissnex

on the institutional level gives access to universities and research institutions abroad. Around one third have developed corporation agreements/relations with a university/body in the country (32 per cent) or have been or are in the process of exchanging researchers (31 per cent).

These long-term results correspond well with our interviews. Swiss universities and research institutions often highlight that the main long-term results of using swissnex have been the collaborative agreements with some of the leading foreign universities. As an example, swissnex Brazil has signed a Memorandum of Understanding with Oswaldo Cruz Foundation (IOC/Fiocruz), one of the leading biomedical research centres in Brazil and Latin America. The MoU has so far resulted in a concrete collaboration agreement between Fiocruz and the Swiss MedTech Center (SIPBB) in which they exchange results and researchers.

Created a new company with Steven Spielberg in Los Angeles

ArtAnim – a non-profit foundation that specialises in motion capture technologies – was invited by swissnex San Francisco to showcase its technology at swissnex, and there was interest from Google, Twitter and Lucasfilm. They were also invited to display it at Sundance, where there was huge public interest.

As a result of this exposure, they connected with Steven Spielberg's team, and a year later ended up forming a new company in Los Angeles called Dreamscape Immersive backed by Steven Spielberg and Hollywood studios.

"We are very interested in collaborating with swissnex and Swiss research and innovation actors...In Brazil we need to learn how to transform our research into products. We have had a bilateral meeting with a Swiss healthtech innovation park to share experiences and discuss collaboration. We really learned a lot from this visit."

- Local collaboration partner, swissnex Brazil

For universities and educational institutions, swissnex facilitates the exchange between Swiss and foreign researchers who are interested in exploring collaboration potentials and knowledge exchange. An example of a successful collaboration facilitated by swissnex India is the ThinkSwiss Research Scholarship (Asia-Pacific) that opens doors to the world of Swiss academia for students from India, Singapore and Australia. The programme was originally conceived in the US in collaboration with Presence Switzerland to attract American students to Switzerland, and its success led to it being extended to the Asia-Pacific region.

We have developed cooperation agreements / relations with a university / body in the country We have had/are in the process of exchange of 31% researchers We have developed/are developing jointly research 16% publication We have developed an application for/are developing 16% application on funding for research We have accessed new funding for research and 10% innovation projects Other 19% No long-term effects 25%

Figure 4.6 Long-term results by using swissnex for support for academic research relations

Source: Oxford Research 2019 (N: Boston=65, San Francisco=49, China=31, India=35, Brazil=24)

Among the individual researchers and scientists, 16 per cent have either developed/are developing joint research publications or have developed an application for/are developing a funding application for research with researchers abroad. 10 per cent have now accessed new funding for research and innovation projects.

In the interviews with researchers, we gained insights into how connections between researchers are established, and eventually lead to longer-term partnerships. One example is from an interview with a professor from a Swiss university that contacted swissnex India to find out if it was feasible to launch an interdisciplinary programme for student exchange in Bangalore, to give these students inspiration and experience with how to work with social entrepreneurship. After getting in contact with swissnex India and several meetings with local collaboration partners in Bangalore, the programme is now launched for Swiss students.

- End-user, swissnex India

[&]quot;They helped us with the scouting activities and introduced us to some really important people that helped us to understand the possibilities for our programme. That was really helpful in terms of reassuring us that it was feasible to launch the programme in Bangalore."

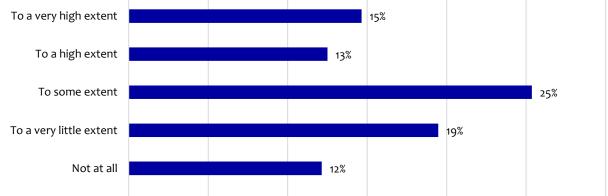
4.5 What is the added value of swissnex?

swissnex gives an added value to the end-users, partners, key stakeholders and local collaboration partners that the swissnexes interact with.

The Swiss end-users and partners gain access to opportunities, connections and local knowledge that they would not have been able to access by themselves. In the interviews, several end-users and partners point out that swissnex has been decisive for their ability to connect with local partners and tap into new knowledge. The key stakeholders in Switzerland generally also find that swissnex is a unique organisation in the Swiss context and is different to the other bodies of the Swiss international promotion system. swissnex targets and meets a particular need, since it is the only Swiss organisation with a focus on the intersection between education, research and innovation. Abroad, the local collaboration partners generally agree that swissnex provides an added value, because they can co-create activities and services with swissnex and find the swissnex staff to be flexible and cooperative (in a way that they don't experience with other foreign diplomatic or cultural representations).

A key indicator of the level of added value of swissnex is if the Swiss partners and end-users find that they would have been able to complete projects/activities and achieved the same results without the support of swissnex. In figure 4.7, we see that the Swiss partners' and end-users' answers to this question in the survey are mixed. Almost one third respond that they would not or to a very little extent (31 per cent) have been able to complete their projects/activities and achieve the same results, while 28 per cent of them consider that they would have been able to complete their projects/activities and achieved the same results to a very high extent or to a high extent without the support of swissnex.

Figure 4.7 Without the support of swissnex, would you have been able to complete your projects/activities and achieved the same results? To a very high extent To a high extent



Source: Oxford Research 2019 (N: Boston=145, San Francisco=149, China=108, India=101, Brazil=57)

Don't know

From interviews with the partners and end-users it has become clear that some of them might have been able to complete their initial planned activities themselves, e.g. the Swiss universities connecting with universities abroad. However, most of the interviewed partners and end-users point out that collaboration with swissnex is tailored to their needs adding new activities of high added value and/or meet-ups with a much broader range of local stakeholders and potential collaboration partners than they would have been able to arrange themselves.

"They are quite unique I would say. The way they operate is very specific to our needs. They don't have a curriculum that they need to follow, and they try to provide a tailor-made solution for each start-up. Most of the other programs/actors have a hammer and see nails, they use the same program for many companies."

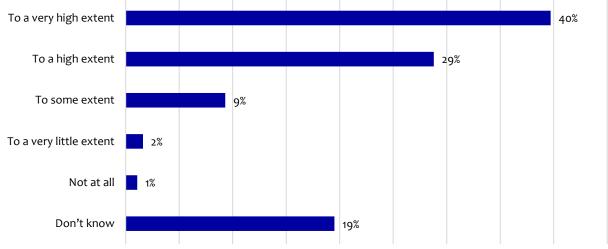
- Partner, swissnex Boston

In conclusion, when we look into the services and activities offered by swissnex compared to other Swiss governmental organisations abroad — such as the embassies and consulate generals, Presence Switzerland, Switzerland Global Enterprise, Switzerland Tourism, Pro Helvetia — and the feedback that we have from key stakeholders in Switzerland and Swiss partners and end-users, we find swissnex to be **qualitatively different from the rest of the Swiss international promotion system**, because swissnex has a specific focus on the intersection between research, innovation and education and assists its end-users and partners in the early R&D stage and pre-commercial phase.

From figure 4.8 below, it is also clear that most partners and end-users think swissnex offers services and activities that are unique to other Swiss actors or public support services.

Figure 4.8 To what extent do you think that swissnex offers services and activities that are unique to other Swiss actors or public support services?

To a very high extent



Source: Oxford Research 2019 (N: Boston=144, San Francisco=149, China=108, India=101, Brazil=57)

This is also reflected in the interviews with Swiss partners, end-users and key stakeholders, in which many of them highlight that swissnex is less formal and more dynamic when compared to other Swiss public institutions.

In the day-to-day operations, we learned from the interviews with the swissnex staff and key stakeholders that there is a grey zone between swissnex and S-GE, although in principle they have different focuses. S-GE offers a network of foreign offices with in-market advisors in foreign countries offering a number of specialised services to promote exports, including the identification of potential customers. swissnex, on the other hand, has a focus on pre-commercial activities enabling their partners and end-users to have a presence in key technology and innovative clusters by supporting them with a

deep local knowledge and understanding of R&D and innovation processes, as well as insights into technology and market trends.

5. Prospective analysis and recommendations

Overall, the evaluation shows that swissnex has been successful in bridging the geographical distance for Swiss researchers, businesses and institutions to foreign markets, R&D and innovation systems and plays a crucial role for their ability to tap into the education, research and innovation ecosystems and build relations.

Building on the findings of the evaluation, the purpose of the prospective analysis is to sum up the relative strengths and weaknesses of swissnex, but also the potential threats and opportunities for the future development of swissnex and develop recommendations and concrete suggestions for how swissnex can increase its relevancy and added value for its partners and end-users.

5.1 Still a need for swissnex?

Since the swissnex Network is a key instrument in internationalising and connecting the Swiss education, research and innovation community to global innovation hotspots around the world, we can conclude that **there will still be a need for swissnex in the future**. As the evaluation has shown, the current partners and end-users of swissnex are generally satisfied with the swissnex services that they receive, find these to be relevant to their needs and many of them gain significant benefits.

This is also reflected in their future engagement with swissnex, where most of the current swissnex partners and end-users (39 per cent) are planning to engage even more with swissnex in the future, as shown in figure 5.1. 37 per cent of them are planning to keep their engagement with swissnex at the same level in the future, and only 8 per cent are planning to engage less with swissnex in the future.

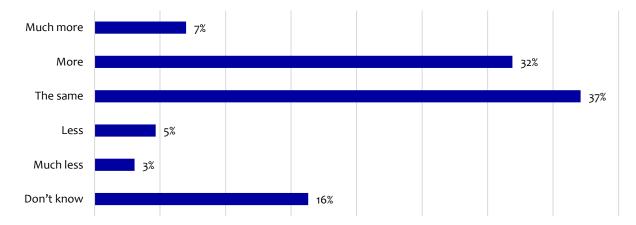


Figure 5.1 How do you see your engagement in swissnex in the future?

Source: Oxford Research 2019 (N: Boston=143, San Francisco=149, China=108, India=101, Brazil=57)

In the light of this result, the feedback from the partners and end-users is that they are content with the range of services and activities offered by swissnex, and most the partners and end-users (41 per

cent) generally do not see a need for other activities/services provided by swissnex, as shown in figure 5.2 below.

Don't' know 35%

Figure 5.2 Do you see a need for other activities/services provided by swissnex?

Source: Oxford Research 2019 (N=570)

However, around a quarter (24 per cent) find that there is a need for other activities/services provided by swissnex. The articulated need for other services depends on the type of partner and enduser, i.e. if it is a researcher, start-up or an artist, and some general suggestions for other services are put forward in the interviews. We have included these as part of the SWOT analysis of swissnex in the following section.

No 41%

5.2 Strengths, weaknesses, opportunities and threats

Based on the findings of the evaluation, we have identified a set of key strengths, weaknesses, opportunities and threats for swissnex.

The SWOT analysis is based on a comparison with ICDK and the data from our observations from the field visits, interviews with key Swiss stakeholders, interviews with Swiss partners and end-users, interviews with local collaboration partners as well as the survey with the partners and end-users of swissnex. Figure 5.3 below presents the key findings of the SWOT analysis.

Figure 5.3 SWOT analysis of swissnex

Strengths	Weaknesses		
Strong visibility in local education, research and innovation ecosystems	'Time-consuming' and demanding model		
Autonomy and the bottom-up nature	Fuzzy profile and value proposition Grey zone between swissnex and Switzerland Global		
Focus on cross-collaboration and interdisciplinarity	Enterprise (S-GE)		
Opportunities	Threats		
Capitalise even more on their strong networks	Right balance of experienced staff members		
Stronger coordination and exchange of practices	Effects of the public-private partnership model		
between the swissnexes	Experiences of a weak presence in Switzerland		
Stronger alignment of communication with what swissnex does on a day-to-day basis			
Alignment of the focus areas with the UN Sustainable Development Goals			

5.2.1 Strengths

Based on the evaluation results, we identified the following key strengths of swissnex.

Strong visibility in local education, research and innovation ecosystems

The evaluation shows that the swissnexes have built up a strong visibility and brand through their physical presence in the local communities. This enables the swissnexes to meet and build relations with the relevant leading innovation, education and science players in the ecosystems, thus bringing value to its partners and end-users. swissnex is a well-known player in the local education, research and innovation ecosystems and interacts at eye level with the local community, such that many of the local collaboration partners highlight the transactional character of swissnex (that they bring something to the table in order to get something back), and some of the local collaboration partners find this unique for swissnex, compared with other foreign diplomatic representations and bridge organisations.

Autonomy and bottom-up nature

The autonomy of swissnex is reflected in the swissnexes' freedom to set their own strategic priorities and tailor the services to their partners and end-users. Compared to ICDK, swissnex has a greater degree of autonomy, and from the interviews with the staff, they emphasise that it allows them to have a flexibility and tailor the services to the needs of their partners and end-users applied to the local context and culture where they are located. The key Swiss stakeholders, Swiss partners, end-users and the local collaborators also have a perception of swissnex as a flexible, responsive and entrepreneurial organisation that is unique, compared with other Swiss public authorities that they have worked with.

Focus on cross-collaboration and interdisciplinarity

The swissnexes focus on creating synergies in their teams between the different domains in education, research and innovation. The purpose with this cross-collaborative approach is to create synergies internally and develop new ideas with an innovative edge. We find that it allows them to be thought leaders in the education, research and innovation ecosystems. In addition, the focus on interdisciplinarity brings value to its academic partners and end-users that can access relevant resources and knowledge in other academic fields, in start-ups or in the bigger tech companies. Compared to ICDK, swissnex in

principle has more room to develop projects and partnerships with a wide range of organisations, but due to its public-private model also needs to find a balance with the shorter-term activities that generate revenue (see Threats).

5.2.2 Weaknesses

The key weaknesses and challenges of the swissnex model are:

'Time-consuming' and demanding

An added value that swissnex provides is that the Swiss partners and end-users through swissnex are able to tap into local ecosystems and establish new contacts. These are networks that the partners and end-users can't access themselves without the support of swissnex, as swissnex has spent many years and resources to build up trust and personal relations. The access to local connections offered by the swissnexes is one of the main strengths of swissnex, but at the same time we see it as an inherent and unavoidable weakness of the model, since it is time-consuming and takes a lot of resources (this is something to take into consideration if new swissnexes are established).

Fuzzy profile and value proposition

The autonomy of the swissnexes is in many ways a strength, but it also presents challenges for the communication (both internally and externally) of what swissnex is, what swissnex is actually doing, and what you can gain from interacting with swissnex. In the interviews with the swissnex staff and the partners and end-users, we encountered different interpretations and definitions of what swissnex is (which is not necessarily a weakness). As a flexible bottom-driven organisation, it is important to be aware that the services are conceptually understandable.

Grey zone between swissnex and Switzerland Global Enterprise (S-GE)

In principle, the divide between science promotion and business promotion in Switzerland is clear, as per the signed agreement between SERI and S-GE. The interviews with the swissnex team members suggest, however, that in day-to-day operations (when a start-up knocks on the door), the boundaries between innovation and commercialisation are less well-defined and occasionally result in collaboration and coordination difficulties.

5.2.3 Opportunities

In the evaluation, we have identified opportunities that swissnex can take advantage of focusing on:

Capitalise even more on their strong networks

In the interviews with the swissnex staff, several employees see a potential in capitalising even more on the networks that they have built up. They find that it is challenging (given their time and resources) to maintain a frequent dialogue with their connections. Our suggestion to ensure that the networks of swissnex are kept alive is to create communities, where relevant Swiss researchers and companies are brought together with their peers abroad around emerging technologies, e.g. AI, blockchain. A suggestion from one interviewee is that this could be in the form of a digital platform, where you can exchange knowledge and ideas by posting and discussing recent trends and possibilities for collaboration.

Another measure for reaching this is to increase the awareness about alumni activities. Some swissnexes, e.g. swissnex China, host a large number of alumni events, where members of the network can meet, stay connected, exchange ideas and be informed about the latest news. In Switzerland, alumni activities have taken place three times. However, we learned in the survey and the interviews that there is a demand for more alumni activities, meaning that there is a potential to raise the awareness about the many alumni events taking place in the swissnex Network.

Stronger coordination and exchange of practices between the swissnexes

Among some of the key stakeholders that have experience with collaborating with more swissnexes, there is a perception that the service level varies between the swissnexes. We also learned from our field visits and interviews with the swissnex team members that the collective memory could be stronger, i.e. the awareness of what other swissnexes have done/are doing and the documentation of the impacts that they generate. A suggestion to meet this is to establish a knowledge repository in the format of a simple online database, where the swissnexes can share their good practices with each other and potential partners in order to showcase the outcomes that they generate as well as to ensure that the knowledge is kept alive and shared in the network.

Stronger alignment of communication with what swissnex does on a day-to-day basis

Since the content and activities of swissnex are so eclectic and dynamic, stronger coordination and planning between the communication team and the rest of the swissnex team can contribute to a clearer swissnex profile. To reach a clearer profile and alignment, a concrete measure is to have a stronger focus on the impact that swissnex generates. In the ICDKs, there was a focus on the impact that they create, as the ministries behind ICDK asked the centres to deliver 3–5 impact cases – partly to communicate their value creation for stakeholders, and partly as an internal exercise to raise awareness about their impact. The focus of the cases was mainly on the end-users, and they were published on the ICDK website, but also used strategically and to build up an identity.

Alignment of the focus areas with the UN Sustainable Development Goals

Due to swissnex competencies within science, innovation and entrepreneurship and their locations in some of the world's emerging markets with high population density and major societal challenges, we see that it is particularly relevant for swissnex to align their focus areas with the development goals that UN countries have agreed to target and achieve by 2030.

5.2.4 Threats

Based on the evaluation, we have identified threats that can hamper the value creation of swissnex and are areas that swissnex should be aware of.

Right balance of experienced staff members

The swissnexes have generally managed to retain key staff members for a long period of time securing a continuity and stability of the swissnexes. However, some swissnexes (swissnex Brazil, swissnex Boston and swissnex San Francisco) explain that they have been challenged by a high turnover of key staff members, and find that they as a consequence have lost vital connections. Some staff members also see some advantages in relation to the turnover of staff, since ex-swissnexers find new positions within the Swiss education, research and innovation landscape. On the basis of these developments, we find that it is necessary for the swissnexes to keep an eye on finding the right balance of experienced staff

members. Retaining experienced staff members is even more important, when junior project managers and interns represents about one third of the staff at all five swissnexes (varying from one swissnex to another). We acknowledge that juniors and interns are an important part of the swissnex model, but at the same time it is important not to rely too heavily on less experienced staff members in terms of responsibility and tasks.

Effects of the public-private partnerships

The public-private partnerships contribute to keeping swissnex relevant as a demand-driven organisation, but we have also learned from the observations from our field visits and in the interviews with the swissnex team that it may hamper their ability to reach a longer term impact, as they constantly are on the search of meeting the requirement to cover two thirds of the funding. One potential effect is that even though swissnex offers services that are considered relevant and meet the demands of the partners and end-users, the value created is immediate and short term, thus not creating a longer-term impact. Of course, the swissnexes can offer both types of services, but it is important to be aware of this effect. The interviews with the swissnex staff indicate that they are aware of this inherent dilemma and have ongoing internal discussions about finding the balance.

Experiences of a weak presence in Switzerland

The staff of the swissnexes generally report that they don't have a strong presence in Switzerland, and that they are therefore unable to participate adequately in strategic discussions and in engaging in conversations with the relevant stakeholders.

However, a project manager based in Switzerland has been hired to ensure the visibility of swissnex and foster more network-wide projects. Moreover, the entirety of the swissnex Network gathers once a year for one week of strategic discussions and visits of education, research and innovation institutions.

The interviews with key Swiss stakeholders, partners and end-users indicate that swissnex is relatively known in Switzerland, but that there is a potential to raise such awareness even more. This is backed by the survey results that show that the swissnex Network is well-known among its core target group, while established companies (established SMEs and established large companies) and artists/designers are unfamiliar with swissnex (not in the core target group of swissnex).

5.3 Recommendations for future action

In order to strengthen swissnex and increase its value creation, we have developed a set of key thematic recommendations for future action:

5.3.1 Improvements in operations

On the operational side, we have identified some challenges and potentials for improvement. Particularly, we see a potential in increasing the coordination and exchanging knowledge between the swissnex offices, but also within the offices, we see a potential for a more coherent planning of activities. To improve the operations of swissnex, we recommend:

 More coordination and joined development when it comes to infrastructure. As an example, building up a more effective CRM system across the whole network could be a solution to alleviate the loss of contacts resulting from the high staff turnover. Also, we see a need for a new website with a more aligned structure presenting swissnex as one organisation, because this can give swissnex a clearer profile.

- Focus more on exchanging ideas and 'best practices' in the swissnex Network. As suggested, a way to reach this would be to establish a knowledge repository with good practices, where the swissnexes can share their good practices with each other, but also potential partners and end-users in order to showcase the outcomes that they generate as well as to ensure that the knowledge is kept alive and shared in the network.
- Rethink the approach to trendspotting and outsource it to the frontrunners. The feedback from the partners and end-users is generally that the swissnexes have an in-depth knowledge and understanding of the local ecosystems. However, some also find that there is a risk that the themes and events hosted by swissnex are too generic. A suggestion to meet this risk is to let the frontrunners (artists, scientists or companies) curate the events, since they know what is cutting-edge. swissnex can still play a role by offering the necessary infrastructure and assistance.
- Stronger alignment of communication with what swissnex does on a day-to-day basis. As the interviews with swissnex team members, but also the partners and end-users of swissnex show, the definition of what swissnex is and what swissnex is doing varies. It stems from the fact that the content and activities of swissnex are so eclectic and dynamic. On this basis, we see a need for stronger coordination and planning between the communication team and the rest of the swissnex team contributing to a clearer swissnex profile.
- Need for a discussion with SERI in Bern about the presence and visibility of swissnex in Switzerland. Many swissnex team members experience that they are not sufficiently present in Switzerland and point out that they are worried about not being included in strategic discussions or being able to engage sufficiently with potential Swiss education, research and innovation players. From SERI's perspective the swissnex staff has the time and opportunity to engage with key Swiss stakeholders (they participate in annual meetings and bilateral meetings in Switzerland). This illustrates the conflicting views on the matter, and we therefore see a need for a renewed discussion between SERI and the swissnexes on finding an appropriate balance.

5.3.2 Stronger focus on longer-term projects and goals

swissnex offers relevant and tailor-made services and is a client-centred and demand-driven organisation. One reason for this is that swissnex is based on the public-private partnership model, in which it has to cover two thirds of the funding from partners and end-users. In the swissnex offices, they are aware of the challenge in balancing short-term projects generating revenue and longer-term projects that may generate less revenue on the short term, but have more impact.

We see a need for a more systematic focus on longer-term projects and a greater awareness about the impact created by swissnex, and thus we recommend:

• **Focus even more on raising funding from larger programmes.** The swissnexes could be better at keeping an eye on larger calls in the Swiss and international research and innovation programmes,

and on approaching them strategically. This can be achieved by pooling the resources of the whole network and working more closely together on projects. Longer-lasting projects and deeper relations can generate stronger and more lasting impacts than stand-alone events and study tours.

- Increase collaboration with established accelerator programmes and incubators. A growing number of incubators, accelerators, etc. are popping up in the different innovation ecosystems, and these are constantly opening new chances for collaboration. Stronger relations to these could help improve the visibility of Swiss start-ups, knowledge exchange and further advance ideas and innovation for start-ups, academia, and corporations.
- Look into the possibility of allocating specific funding for longer-term impact projects (with inspiration from the ICDK 'innovation projects'). While the swissnexes have room to develop projects and partnerships with longer-term perspectives, they also need to focus on generating revenue by focusing on projects with a more immediate shorter-term impact. In order to ensure that the swissnexes initiate longer-term impact projects, the ICDKs have an interesting approach, in which they allocate funds to launch the so-called 'innovation projects' as an instrument for focusing on pre-commercial and innovation-oriented activities. As ICDK has a different model than swissnex, the 'innovation projects' are not directly transferable to swissnex, but a more systematic focus on building up competences and knowledge internally and testing and developing new ideas and projects could strengthen swissnex' focus on longer-term projects.
- A greater alignment of the focus areas with the UN Sustainable Development Goals. The swissnex Network is located in some of the world's most innovative hubs and emerging markets, including areas that have a high population density as well as some major societal challenges. Together with swissnex competencies within science, innovation, education and entrepreneurship, it is highly relevant to have a strategic focus on the Sustainable Development Goals that UN countries have agreed to target and achieve by 2030. Working with these goals is particularly for swissnex India and swissnex Brazil.

5.3.3 A clearer role in the Swiss education, research and innovation landscape

swissnex is part of an increasingly crowded education, research and innovation ecosystem both locally and in Switzerland, and we see a risk that swissnex' profile and visibility weaken, as more private-sector actors offer similar services, and swissnex is perceived to be "just one" of the many Swiss organisations abroad. We find that a stronger internal alignment of communication and day-to-day operations (see recommendation above), can help clarify the swissnex Network's role in the Swiss education, research and innovation landscape.

In addition to this, we recommend:

• Greater awareness about the impact created by swissnex and its unique focus on science, education and innovation. This helps to showcase the results of swissnex externally and also to raise awareness internally about what impact is, how it can be measured, and how the swissnexes can work to ensure the long-term impact of their activities. They can achieve this by focusing more on concrete impact cases, in which they demonstrate the impact they generate, and how they

generate impact. A way to approach this is to look to the ICDKs for inspiration that have had a systematic focus on impact cases.

• Renewed joint discussion with S-GE to clarify the grey-zone issues. We acknowledge that a grey zone between swissnex and S-GE cannot completely be avoided, and that there does exist an agreement outlining the different roles of S-GE and swissnex. However, a renewed discussion between S-GE and the swissnexes about how areas of responsibilities are defined and how overlaps can be dealt with may be fruitful, as we have learned about different concrete examples in which swissnex staff members experienced unclear roles between S-GE and swissnex.

5.3.4 Striking the balance between agility and rootedness

Summing up, we find that swissnex creates unique value, first and foremost by the rootedness and long-term relations that the offices have built up in the local education, research and innovation communities, but at the same time it is demanding and time-consuming to build up stable relations, which is a challenge in an increasingly fast-changing world. As a result, swissnex needs to strike a difficult balance between agility and rootedness within the conventions and guidelines of FDFA.

Some recommendations for how swissnex can keep on strengthening the balance between their flexibility and stability include:

- Focus on continuity of the 'core staff', because it is important to have experienced staff members. At the same time, an advantage of swissnex lies in its innovative edge and ability to stay relevant. This means it is important to be agile and cover new fields of expertise (by hiring new and different team members), e.g. when new trends arise.
- **Initiate more joint projects** between the individual swissnex offices, with a view to increasing knowledge sharing and the exchange of 'best practices' (faster access to know-how).
- **Focus on more coordination and joint development** when it comes to web infrastructure for more organisational stability and greater knowledge exchange across offices.
- Before **setting up new swissnexes**, these should be tested before a full swissnex is established. The trial period should however not be of considerable length (as a minimum two years). Concerning the potential locations of new swissnexes, the key stakeholders have in the interviews suggested African growth economies (e.g. Kenya and Nigeria) and Tel Aviv, Israel as particularly interesting locations.
- Continuously evaluate the relevance and value creation of the local swissnexes: Asking key questions. Are the local education, research and innovation ecosystem and potentials for doing business and R&D locally still relevant for sufficient numbers of Swiss stakeholders? Do the local markets and ecosystems still have sufficient international quality and opportunities? Are the local political and economic framework conditions still relevant/attractive, etc.?

6. Country studies

The key findings from the five swissnex offices are presented in the following.

- swissnex Boston
- swissnex San Francisco
- swissnex China
- swissnex India
- swissnex Brazil

6.1 swissnex Boston

After a 19-year presence near Harvard Square in Cambridge, swissnex Boston (established in 2000) seems to have built up a strong brand and become a trusted player in the education, research and innovation ecosystem. Located in what is probably the world's densest academic ecosystem, swissnex Boston has naturally been a big draw for the Swiss research community, attracting numerous Swiss universities and researchers.

In addition to the impressive array of world class academic and research institutions, the Boston area holds a position of strength in the life sciences, as well as also thriving in robotics, autonomous devices, learning machines and deep tech in general. In New York, incubators, accelerators and co-working spaces with innovative start-ups in fintech, foodtech, media, etc. are opening all the time.

The key partners and end-users in general express high satisfaction with swissnex Boston and find that it is a relevant, competent and flexible partner that is easy to work with. They find that the added value provided by

swissnex Boston evaluation highlights

Key strengths

- With a 19-year presence in the Boston area, swissnex Boston has built up a strong network involving a broad range of actors and has a long track record of activities.
- An event space that enables swissnex Boston to host events and bring different people from different spheres together.
- The focus on synergies and combination of its different domains enables swissnex Boston to stay relevant and always one step ahead of the emerging trends.
- Strong interconnectedness between universities like MIT and companies. This makes the ecosystem attractive for start-ups and innovators.
- Possibility to tap into a strong, vibrant tech start-up ecosystem in the New York City area.

Key challenges

- High staff turnover challenges the continuity of swissnex Boston services and the network that it can offer.
- With one full-time employee in New York, it is challenging to really get a feeling and engage with the ecosystem in the New York area.
- Established SMEs are a segment that swissnex Boston finds it difficult to reach and engage with.

swissnex Boston lies in the professionalism of the staff and their ability to spot new trends and use their connections proactively to link Swiss partners and end-users to peers in large, complex organisations, such as MIT and Harvard as well as large hospitals and biotech companies.

6.1.1 Organisation and main activities

swissnex Boston is the oldest of the swissnex offices. The office has around 9 full-time employees and a total cost base of CHF 2.3 million (in 2018). Despite its name, the office is not located in Boston itself, but in Cambridge, close to some of the world's leading universities and research institutions. With its outpost in New York, swissnex Boston also has access to one of the largest and most vibrant tech start-up ecosystems in the world. Generally, the feedback we received from the staff – and also from their partners and end-users – is that swissnex Boston still has a mission to fulfil, since there are still plenty of opportunities to harvest. Strategically, swissnex Boston has a focus on prioritising impactful and longer-term initiatives over the short-term activities, with an emphasis on deepening the relationships with its stakeholders.

In 2017, there was a change of CEO at swissnex Boston and, following this, the office has seen a relatively high staff turnover in 2018, when two staff members left (one in communication and one in project management) and three new team members started. With a new CEO and new employees, a new vision and renewed strategic objectives were defined, and time was spent on getting acquainted with the many partners and end-users that swissnex Boston has been in contact with over the years. Key

challenges that the office faces are 1) the disconnect between the main office in Boston and the outpost in New York - a relation that swissnex Boston now has a focus on strengthening - and 2) the lack of synergies internally between the academic, innovation and arts areas. These are now key focus areas for swissnex Boston.

A draw for researchers, but also for innovation-oriented businesses

Since swissnex Boston is located near some of the world's most prominent research institutions, such as MIT and Harvard, Swiss universities, researchers are naturally attracted to the Boston area. This is also reflected in the survey, where support for academic research relations is the area that most partners and end-users of swissnex Boston use (42 per cent).

At the same time, start-ups and research-driven businesses see a potential in swissnex Boston, as they can access two of the leading innovation hubs in the US (the Greater Boston area and the New York City area). A large number of Swiss tech businesses therefore go to the US east coast to validate their ideas and find ways to get a foothold in these markets.

6.1.2 Results and relevance of swissnex Boston

In general, end-users and partners are very satisfied with their collaboration with swissnex Boston and find its services relevant and unique. Of the end-users and partners surveyed:

- 79 per cent think swissnex Boston offers services relevant to their needs
- 81 per cent are satisfied with the services/activities they received from swissnex Boston
- 69 per cent think swissnex Boston offers access to relevant local network
- 65 per cent think swissnex Boston offers services and activities that are unique to other Swiss actors or public support services

From the engagement with swissnex Boston, this evaluation shows that the academic partners and endusers expand their academic networks, establish contacts with new researchers and learn about the research landscape and possibilities for collaboration. In the interviews with key partners on institutional level, many emphasise that swissnex Boston has enabled them to engage and conclude bilateral agreements with leading universities, e.g. between Harvard Medical School and EPFL, the Swiss Federal Institute of Technology in Lausanne – with the support of the Bertarelli Foundation or the Memorandum of Understanding that the Canton de Vaud has signed with Boston College with regard to health services and nursing.

"From our engagement with swissnex Boston, we increased our visibility as a leading Swiss university and expanded our network in the US, which eventually led to opening the door to new university partnerships."

- Partner, swissnex Boston

Between the individual researchers, swissnex Boston plays a role in facilitating new relations and contacts that sometimes lead to longer-term relations. As an example, a Swiss researcher from the University of Lausanne was invited to Boston to make a presentation at the Museum of Fine Arts,

Boston. swissnex Boston played a role by introducing him to other researchers based at MIT, and this eventually led to his participation in a cross-national archaeological project in Jordan, where he collaborated with researchers from MIT who were introduced to him by swissnex Boston.

In the start-up field, we also see that swissnex Boston has helped participants establish connections and develop strategic partnerships through the Market Entry and Market Validation Camps with Innosuisse. An example is the Swiss start-up Lunaphore, which was able to validate its business idea by engaging with multiple medtech experts and practitioners from Massachusetts General Hospital and eventually signed a new strategic partnership.

Creating value at the intersection of research, education, innovation and arts

From observations and interviews with the staff at swissnex Boston, it is obvious that they see their added value in cross-collaboration and interdisciplinarity, with the result that swissnex Boston has a focus on bringing in perspectives from research, education, arts and innovation in its projects and services. One example of this is Aerial Futures: The Drone Frontier – a programme series that highlighted key players at the forefront of drone technology and the major societal shifts in many different spheres that could come as a result of the growing drone industry. The programme series brought together Swiss and US research institutes, but also specialised companies. An example is the Swiss start-up Skypull, which established a range of new American contacts after it showcased its products.

With its event space, swissnex Boston also has the ability to host exhibitions and different events. An example of this (in which we also participated) was the LASER event that features local and visiting artists, scientists, technologists and creative professionals, and provides a networking opportunity between these different domains. In general, however, we also learned from the interviews with key staff members that creating synergies with the arts is seen as particularly challenging.

6.1.3 Comparison with the Innovation Centre Denmark in Boston

Comparing swissnex Boston to ICDK Boston is currently almost impossible, because ICDK Boston is a very new office, with less than one year of activity in Boston (it opened in the beginning of 2019). In terms of staffing, it is also considerably smaller than swissnex (when we visited there was one full-time employee and an intern), but they are now in the process of hiring more staff. This means that ICDK Boston is currently working on gaining a foothold in the dense education, research and innovation ecosystem of the Greater Boston area.

In terms of location, there is a key difference between the two Danish and Swiss set-up. ICDK Boston is located in Kendall Square – the hotspot for life sciences, built around MIT, and home to some of the leading innovative life science companies in the world, whereas swissnex Boston has its premises close to Harvard, which seemed to be the logical choice when it was set up in 2000. The location of ICDK Boston also reflects the fact that the centre has a strategy targeted on life sciences, while swissnex Boston has a broader scope and a focus on the intersection between different academic disciplines and domains.

6.2 swissnex San Francisco

swissnex San Francisco is located in the Bay Area, which still holds the position as the global centre for start-ups and the place to go, if you need to stay ahead of the game and understand the tectonic shifts taking place in the realm of artificial intelligence, machine learning and big data. The vibrant education, research and innovation ecosystem of the Bay Area has produced some of the world's leading tech companies, and can provide connections, investors and talent to help entrepreneurs take their businesses to the next level. But it is also an extremely difficult ecosystem to survive in, which is why swissnex has a role to play.

swissnex San Francisco has undergone a lot of changes in recent years and moving into new premises on Pier 17 has in many ways transformed the role of swissnex San Francisco. It has induced a more proactive culture in the team, and swissnex San Francisco has become an attraction in itself, receiving visitors daily. However, it is also a demanding task to 'keep the building alive', as it takes time from other core tasks and challenges the daily interaction and collaboration across the team. In addition, swissnex San Francisco saw a change in leadership in 2017, which was an opportunity to take stock of the new situation and collectively find a new way to address the challenges and harvest the opportunities.

swissnex San Francisco evaluation highlights

Key strengths

- The many years spent on creating connections and visibility and its tacit knowledge about how to approach the ecosystem the right way.
- The Bay Area is the world's most vibrant technology hub, giving access to knowledge and funding from an array of VCs, incubators and accelerators
- The focus on synergies and combination of its different domains enables swissnex San Francisco to stay relevant and always one step ahead of the emerging trends.
- An attractive, visible location with ample room to host exhibitions, events as well as residencies.

Key challenges

- The high staff turnover and change in location requires a different mindset and challenges the culture.
- A shift towards more revenue-generating activities may challenge the longer-term impact.
- Unaffordable cost levels for services, accommodation and travel make it increasingly difficult to attract new partners and end-users to the Bay Area.
- Many underestimate how difficult it is to successfully tap into the Silicon Valley ecosystem and establish valuable connections.

6.2.1 Organisation and main activities

Established in 2003, swissnex San Francisco is the second oldest swissnex. It is now the largest swissnex office, with approximately 20 full-time employees and a cost base of CHF 3.76 million (in 2018). swissnex San Francisco shares its location on Pier 17 with the Consulate General of Switzerland, the Swiss Business Hub and Switzerland Tourism. Organisationally, swissnex San Francisco has seen significant staff turnover since its move to Pier 17 (12 new team members including CEO have been recruited, hired and/or onboarded since 2016). This resulted in loss of expertise and networks, but also considerable time and resources spent on recruiting and onboarding new team members. In the wake of these changes, a substantial change process was launched, including the development of a new vision, new guiding principles and a new organisation around the so-called "Emergent Futures".

Gaining foothold in a new space and changing environment

The new venue at Pier 17 brings in many new opportunities for swissnex San Francisco, but at the same time it requires that swissnex San Francisco rethinks its business model in order to reap the benefits of the new space. swissnex San Francisco has a near-future focus on revenue-generating activities to keep the office on the right track and continuously activate the large space, but still be able to offer something more than mundane services like study tours, delegations and connections. From our observations and

interviews with the swissnex team, we learned that this dilemma is also present in the day-to-day business, in which the staff need to balance how they keep a relevant innovative edge, while meeting the requirement in the public-partnership model of covering two thirds of their funding from other sources.

6.2.2 Results and relevance of swissnex San Francisco

In general, end-users and partners are very satisfied with their collaboration with swissnex San Francisco and find its services relevant and unique. Of the end-users and partners surveyed:

- 76 per cent think that swissnex San Francisco offers services relevant to their needs
- 77 per cent are satisfied with the services/activities they received from swissnex San Francisco
- 69 per cent think that swissnex San Francisco offers access to relevant local network
- 66 per cent think that swissnex San Francisco offers services and activities that are unique to other Swiss actors or public support services

The most frequent results from using the services and activities offered by swissnex San Francisco is to learn about the education, research and innovation ecosystem and to expand and develop networks to researchers and businesses locally. In the interviews with the partners and end-users, swissnex San Francisco is perceived to be a flexible, responsive partner that is visible locally and can prepare them to tap into the education, research and innovation ecosystem of the Bay Area.

"swissnex is a really good platform to gain your first experiences. They really bring different disciplines together, and if we eventually decide to go to the American market, it will be a great platform. I wouldn't hesitate to go back there ... It's normally hard to attract people to events in San Francisco, but swissnex managed to attract a lot of people to their events."

- End-user, swissnex San Francisco

A successful thought-leader

Start-ups in particular – but also curious researchers, artists and public authorities – are attracted to the Bay Area, since it is probably the best place in the world to get an accurate glimpse of where the future of technology and business is headed. We learned from our observations and interviews that swissnex San Francisco contributes to the education, research and innovation ecosystem in the Bay Area by shaping the agenda with its focus on organising events and programmes with experimental and political features, e.g. events such as 'Speculative Body Semantic in the Digital Spaces', where swissnex San Francisco, the Consulate General of Switzerland in San Francisco, and Collective Future brought together a group of diverse experts and practitioners with a focus on investigating the bodies in the context of future intelligent and immersive environments. Another example is the focus on humanitarian issues, including human rights legislation, standards and norms in the light of new cyber-realities, where swissnex San Francisco along with the Consulate General of Switzerland and Crisis Code initiated workshops and panel discussions that bring in different voices and perspectives around these issues and raise general awareness in Silicon Valley.

Establishing networks and tapping successfully into the Bay Area is challenging

Getting insights and learning about the education, research and innovation landscape is one thing, but in order to really establish the connections with leading VCs, incubators and accelerators that can pave the way to successfully enter the U.S. market, start-ups need to learn how to approach this the right way, i.e. how to pitch, how to develop relationships and how to behave.

A challenge that swissnex San Francisco faces is that in order to generate long-term impact, their partners and end-users need to be willing to go all the way. However, we learned in some interviews with the swissnex team that they experience that many of the start-ups underestimate the cultural differences and get cold feet. In addition, many of swissnex' partners and end-users find it increasingly difficult to justify short- or long-term projects in the Bay Area since cost levels for services, accommodation and travel are constantly rising. This is a trend that will most likely continue in the future.

Despite these challenges, we see from the survey that one third of the companies that use swissnex San Francisco develop new products, services and commercial activities, and almost a quarter (22 per cent) sell their products in the country. This indicates that there is a clear benefit from engaging with swissnex San Francisco, as one partner in an interview also explains.

"Even though we are a rather large organisation, we wouldn't have been able to go to San Francisco and have the same impact ... through swissnex our interests were represented and heard in different circles. It's not something that we could do with an office there. They really have a unique understanding of how the ecosystem works."

- Partner, swissnex San Francisco

6.2.3 Comparison with the Danish Innovation Centre in Silicon Valley

Compared to the Danish set-up in Silicon Valley, there are some considerable differences to swissnex San Francisco. First, the ICDK Silicon Valley is located in Palo Alto, which is close to Stanford University and in the midst of the education, research and innovation ecosystem. However, due to its location, its visibility in the area is more limited than that of swissnex San Francisco. Second, the focus of ICDK Silicon Valley is compared to swissnex San Francisco more direct on linking Danish stakeholders to the education, research and innovation ecosystem in Silicon Valley, while we find that swissnex to a wider extent than ICDK shapes the agenda locally and through its events, workshops, etc. engages more in ethical and political conversations. It should, however, be noted that the Danish Tech Ambassador has a physical presence in Silicon Valley with the mandate of putting 'techplomacy' on the political map. Third, it is our impression that the ICDK Silicon Valley team has less synergy between the team members in its day-to-day operations, compared with swissnex San Francisco, and mainly interacts through the 'innovation projects', in which the staff from the research area and innovation area can proactively create a longer-term project.

6.3 swissnex China

swissnex China marked its tenth anniversary in 2018, having been founded on 7 August 2008 in the light of a fast-growing economy and the prospect of a more open economy. Today, China is on the way to becoming a global innovative hi-tech powerhouse and is quickly transitioning from low-cost manufacturing to a higher value innovation-led economy with a 10year national plan to upgrade Chinese industry called "Made in China 2025".

Switzerland and China have increased their bilateral cooperation in recent years, including the 'innovative strategic partnership' that was established in 2016 and several exchange agreements and joint scientific research programmes between Swiss and Chinese universities and research institutions.

Internally, swissnex China has been affected by some changes in their core team in the past two years, but despite these challenges, the evaluation points towards swissnex China performing well, which is supported by the fact that partners and end-users of swissnex China are very satisfied and find them relevant, competent and a flexible collaboration partner. The evaluation points towards one of their key strengths being their success in facilitating networking and community events that give swissnex high visibility and serve as a strategic platform for fostering opportunities for collaboration and exchanges.

swissnex China evaluation highlights

Key strengths

- Partners and end-users find swissnex China a relevant, reliable, flexible and competent partner.
- swissnex China has knowledge about and access to a very broad range of actors and stakeholders in the Chinese education, research and innovation landscape.
- Facilitating successful networking and community events that give swissnex high visibility and serve as a platform for collaborative opportunities.
- Supports the capacity building of strong collaborative agreements for exchange of researchers and students and joint research projects.

Key challenges

- Within recent years, the team behind swissnex China has experienced a change in management and in key employees, which presents a challenge in terms of rebuilding relations.
- Compared with the other swissnexes, the team in China relies on interns to a greater extent in terms of tasks and responsibility. This is perceived as a challenge by some of their collaboration partners due to the interns' limited experience and knowledge about the Chinese market.
- Swiss actors are increasing their interest in China, which is a challenge due to the manpower it requires to offer and provide quality services and activities.
- The political and economic development in China is changing at a rapid pace - important to remain observant and flexible to changes of needs.

6.3.1 Organisation and main activities

swissnex China was established eight years after the first swissnex was founded in Boston in 2000. swissnex China has about 10 full-time employees and a total cost base of a little more than CHF 2 million (in 2018), which makes it one of the large swissnexes, with a size similar to swissnex Boston. The head office is located in Shanghai, in the same building as the Swiss Consulate, and there is also an outpost in Guangzhou, with a small team of two employees.

In the past two years, swissnex China has experienced some organisational challenges due to a change in the management team, including a new operational manager and a project leader in academic relations. This meant that relations to Swiss stakeholders and local collaboration partners had to be rebuilt (to some degree). In this context, swissnex China has started a process of implementing a new CRM system to manage the data about contacts and projects better. Another organisational challenge mentioned in the interviews is the high level of responsibility that the academic interns have, and as we observed in the field visit this has been necessary due to the staff requirements resulting from a high level of activities. However, the interns' role in terms of responsibility and tasks is something that swissnex should pay attention to.

"I think it was a problem that it seems like interns were in charge of the event. We need to work with more experienced persons who better understand Chinese partners and have professional skills in communication. The logistics around the event were good but my feeling is that the communication and project management could be better."

- Partner, swissnex China

Strong focus on networking and community events

We see that the main areas for which end-users and partners use swissnex China are services/activities related to start-up support/business growth and innovation support (42 per cent) and services/activities related to educational activities and student relations (38 per cent). The latter area has the largest share of partners and end-users compared to the other swissnexes.

When it comes to concrete activities most end-users and partners participate in a range of different networking and community events. This also reflects the number of networking and community events swissnex China facilitates, which is the highest among the swissnexes in 2018 - 53 events compared to an average of 14.5 events for the four other swissnexes. As we have learned from our field visit to Shanghai and from the interviews, these community events are a priority because they serve as strategic platform to highlight Swiss presence and visibility in China with the benefit of fostering opportunities for meaningful collaboration and exchanges. Aligned with the focus on networking events, a comparably large number of partners and end-users have also participated in alumni activities (19 per cent) compared to an average of 11 per cent.

6.3.2 Results and relevance of swissnex China

In general, end-users and partners are very satisfied with their collaboration with swissnex China and find its services relevant and unique. Of the end-users and partners surveyed:

- 82 per cent think swissnex China offers services relevant to their needs
- 86 per cent are satisfied with the services/activities they received from swissnex China
- 83 per cent think swissnex China offers access to relevant local network
- 69 per cent think swissnex China offers services and activities that are unique to other Swiss actors or public support services

Furthermore, we see from the survey that 'expanding business or academic network' and 'learning about the ecosystem/innovation landscape in China' are the most common immediate results of using swissnex China. In the interviews with partners and end-users, many emphasise the lessons and insights they get about the Chinese education, research and innovation system and the understanding of the Chinese cultural and political context. The political, economic and cultural environment in China is very different from Switzerland, which makes it difficult for Swiss partners and end-users to enter the Chinese market and establish networks and partnerships without having Chinese interpreters at hand and access to strong, trustworthy connections with local partners in China. From our field visit in Shanghai, it was

also evident that the local, native-speaking Chinese employees at swissnex China play an important role in reducing the risk of information asymmetry between the Swiss and Chinese sides.

Successful in facilitating events and building mutually beneficial academic agreements

The evaluation points towards one of the key strengths of swissnex China being its success in facilitating fruitful events, programmes and networking activities in China. In general, we find that these events get positive feedback from the Swiss partners, end-users and local collaboration partners. The Swiss partners and end-users often emphasise the importance of these events because they help them understand the Chinese education, research and innovation system and create strong visibility and branding impact for the Swiss education, research and innovation community towards a wide range of potential collaboration partners in China, including investors, entrepreneurs, businesses and scientists.

"I use swissnex to organise the programme (to learn about the opportunities and challenges in China) as they have an excellent network. I tell swissnex every year which kinds of companies and people we should focus on, and they come back with suggestions for different speakers. It's gone well every year – of course, in the beginning it was more needed than today, I have also my own network, but despite that, I still think it is important to have the support from swissnex."

- Partner, swissnex China

Another strength of swissnex China lies in its success in building mutually beneficial partnerships for exchanges of both researchers and students. Over the years, swissnex China has supported universities, research institutions and public institutions in Switzerland in signing collaborative agreements with some of the leading Chinese universities. One example is the exchange agreement that was signed between Shanghai Jiao Tong University and the University of Zürich in 2018, as part of the tenth anniversary of the foundation of swissnex China. This agreement enables students for Bachelor's, Master's and PhD degrees, as well as faculty members from both institutions, to benefit from an international experience.

6.3.3 Comparison with the Innovation Centre Denmark in Shanghai

In terms of organisational set-up, the Innovation Centre Denmark (ICDK) in Shanghai stands out from swissnex China. ICDK Shanghai is closely connected to the Danish Consulate General in Shanghai and is under the respective consul's jurisdiction, thus following diplomatic conventions.

We observe that there are both advantages and disadvantages of the Danish set-up compared to swissnex China. One of the advantages is that the close connection to the diplomatic activities creates synergies between the focus on innovation, education and research at ICDK Shanghai and the export focus of the Trade Council within the Danish Consulate General. On the other hand, the evaluation team got the impression that swissnex China, due to its degree of autonomy and flexibility compared to ICDK Shanghai, is better suited to work with innovation, research and education, because activities within these areas often require a longer time perspective and an agile, flexible approach to work with startups, entrepreneurs and researchers.

6.4 swissnex India

swissnex India is located in Bangalore, which is often compared to the Bay Area in the U.S. due to its vibrant tech scene and entrepreneurial spirit that characterises the city today. Around 20 years ago, India removed its economic barriers, with aspirations of becoming an international market contender. Since then, brand-name conglomerates have established many large technology and international IT departments and call centres, and this has subsequently led to certain culturally applied negative connotations for business based in India.

However, these are now starting to dissipate as the economy and technological developments in India are growing fast, currently surpassing China. The vibrant, hi-tech and innovative ecosystem in India encompasses many opportunities for Swiss–Indian collaboration within education, research and innovation. However, India is also very challenging as the result of an often-dysfunctional infrastructure and due to the administrative and political setting that makes it difficult to make successful connections with the education, research and innovation ecosystem. This is the reason for establishing a swissnex office in Bangalore, India.

swissnex India evaluation highlights

Key strengths

- A consolidated team with many years of experience in fostering and developing a strong network and visibility in the Indian education, research and innovation ecosystem.
- Valuable insights and knowledge about how to approach the ecosystem the right way, and how to overcome some of the bureaucratic challenges encountered in India.
- Strong focus on start-up programme and innovation support – the evaluation shows that swissnex India is successful in supporting and guiding researchers and entrepreneurs to understand the Indian market and how to tap into the education, research and innovation community by facilitating fruitful meetings with potential collaboration partners.

Key challenges

- Risk of change in human resources in the coming years

 important to support retention of key employees and
 anchoring some of the person-dependent relations
 wider in the organisation.
- An experience of low visibility in Switzerland, which according to the swissnex team makes it difficult to promote the collaborative opportunities in the Indian education, research and innovation market among Swiss partners and stakeholders.
- Challenges with an often-dysfunctional infrastructure and administrative and political challenges for foreigners and business in India.

Our evaluation points towards swissnex India both organisationally and performance-wise being on the right track, after almost ten years in operation. This is reflected in the survey and interviews with partners and end-users, which highlight a well-performing team with strong connections to the local education, research and innovation community. Overall, swissnex India is therefore perceived as a highly relevant, competent and flexible collaboration partner.

6.4.1 Organisation and main activities

Established in 2010, swissnex India is the second latest of the swissnexes. Despite being one of the youngest, swissnex India has a consolidated team that has gathered many years of experience in offering innovation services to Swiss partners and end-users. Internally, there have not been any major changes regarding staff turnover, and swissnex India therefore has an experienced team with strong local connections. However, according to the interviews with management and employees at swissnex India, we see a risk of change in human resources in the coming years because the career opportunities in swissnex are perceived as being quite limited. We therefore recommend that swissnex India takes a stronger focus to support retention of key employees as well as a strong focus on anchoring the person-dependent relations in the Indian education, research and innovation ecosystem more widely within the organisation. swissnex India has undergone an internal process since the change in leadership in 2017,

which was seen as an opportunity to revitalise the strategy and focus. As a result, swissnex India has identified four thematic areas: Healthtech, Renewable Energy, Deeptech and Science for Society. We see these focus areas as a positive direction for swissnex India as it gives them a clearer profile externally. However, these focus areas should constantly be evaluated in terms of their relevance, because it is important to continue to be demand-driven and open to new, emerging topics.

Strong focus on start-up programmes

We see that services related to start-up support/business growth and innovation support (e.g. coaching and training for researchers and business) in swissnex India is the most widely used area among its endusers and partners, as well as being the most used area compared to the other swissnexes. When it comes to concrete activities, swissnex India also has a higher share of end-users and partners that come to get help with market validation and/or market entry compared to the other swissnexes, as well as getting information and advice on trends in the country (trend-scouting).

Another main area for swissnex India is meetings with local partners regarding possibilities for collaboration about either research, innovation or education where we also see that the main concrete activity end-users and partners come to swissnex India for is to participate in delegations/study tours/visits. A reflection from our field visit regarding activities and services is that in recent years swissnex India has shifted focus from spending a large amount of their resources on networking and community events towards prioritising services and activities that are less general and more specific, such as B2B meetings, guidance and validation programmes for a selected partner group.

6.4.2 Results and relevance of swissnex India

Overall, end-users and partners are very satisfied with their collaboration with swissnex India and find its services relevant and unique. Of the end-users and partners surveyed:

- 88 per cent think swissnex India offers services relevant to their needs
- 89 per cent are satisfied with the services/activities they received from swissnex India
- 86 per cent think swissnex India offers access to relevant local network
- 79 per cent think swissnex India offers services and activities that are unique to other Swiss actors or public support services

For end-users and partners, the most common immediate result from using swissnex India is that they have learned and gained knowledge about the education, research and innovation landscape and about the possibilities for collaboration with possible partners in India. Since the political and cultural environments in India and Switzerland are very different, many emphasise in the interviews that the most important results from using swissnex India is based on in its insights into the local education, research and innovation system, which is often described as a 'chaotic, bustling ecosystem', and where Swiss partners and end-users have a need for support, since the cultural differences affect the possibilities of establishing joint projects and collaborative agreements in the country.

"They helped us with the scouting activities and introduced us to some really important people who helped us to understand the possibilities for our programme. That was really helpful in terms of reassuring us that it was feasible to launch the programme in Bangalore."

- Partner, swissnex India

Successful in providing tailored services and programmes for start-ups and applied researchers to tap into the Indian market

One of the strengths of swissnex India lies in its success in supporting Swiss partners and end-users in connecting them to the Indian education, research and innovation ecosystem, especially for applied researchers and start-ups that are interested in networking, B2B meetings and entry programmes that can validate and prepare them to tap into the market. One example of this is the partnership that swissnex India has with the industry leader Robert Bosch (REBEI), via a programme in which Swiss researchers and start-ups have been coached by swissnex India to connect with Bosch India's Open Innovation programme. Another example is the long-standing partnership with Innosuisse to assist start-ups to leverage their readiness to enter the Indian market. From our field visit to swissnex India, we learned that there are several success stories from researchers and start-ups entering the innovation programmes that swissnex India has facilitated. One example is Linda Swiss GmbH, which participated in the swissnex start-up drone programme. Through B2B meetings with potential partners, this company partnered up with the Indian drone start-up Huviaire to jointly deploy its software/AI in India.

We find that one of the reasons why swissnex India is successful in supporting Swiss partners and endusers with fruitful meetings and guidance to tap into the Indian education, research and innovation ecosystem lies in its high degree of autonomy, which is emphasised as one of their key strength in the interviews. According to the management, swissnex India has a high level of flexibility, as for example in terms of its economy because staff are able to initiate pilot projects without having demonstrated their value first. This can be an important approach when working with innovation, partly due to unused funds from previous projects. The high level of flexibility and autonomy also enables them to make effective decisions and change direction if necessary, and thereby tailor services to the needs of their partners and end-users.

6.4.3 Comparison with the Innovation Centre Denmark in India

Compared to the Innovation Centre Denmark in India (ICDK India), swissnex India has some clear differences when it comes to set-up and resources. First, ICDK India is primarily located in New Delhi in conjunction with the Danish Embassy, with a small outpost in Bangalore where the Consul General serves as the CEO of the centre (in swissnex India the CEO is also Consul General). In addition to the counsellor, the staff consists of an innovation attaché (connected with the Danish Ministry of Education and Research) in New Delhi and two science counsellors in New Delhi and Bangalore, respectively (connected with the Foreign Ministry). It is our impression that swissnex India can work more proactively and create more strategic and long-term projects.

6.5 swissnex Brazil

swissnex Brazil was established in 2014 in the light of a fast-growing international interest in Brazil due to high economic growth rates, new social and economic reforms taking place and Rio de Janeiro's hosting of the FIFA World Cup and the Olympic Games in 2014 and 2016. However, the Brazilian economy has experienced severe troubles in recent years and the political environment has been rather unstable, also influencing the conditions for swissnex Brazil. Internally, swissnex Brazil has been affected by high staff turnover.

In spite of this, the evaluation points towards swissnex Brazil being on the right track both organisationally and performance-wise. This is also backed by the fact that key partners and endusers in general express high satisfaction with swissnex Brazil and find it a relevant, competent and flexible partner. One of the key strengths of swissnex Brazil lies in its success in building mutual relations with strong local partners within areas such as health, social innovation and

swissnex Brazil evaluation highlights

Key strengths

- Partners and end-users find swissnex Brazil a relevant, reliable, flexible and competent partner.
- Staff have knowledge about and access to a very broad range of actors in the local research and innovation ecosystem.
- Success in building mutual relations with strong local actors within areas such as health, social innovation and agritech.
- As a country and society, Brazil offers many possibilities for Swiss actors working with sustainable development and impact-oriented business models.

Key challenges

- Has had high staff turnover need to focus on consolidation of the team.
- Weak focus on long-term impact increased focus on building long-term relations and activities and documenting their impact is needed.
- While the start-up and innovation scene is growing in Brazil, the country is not on the radar of Swiss companies and start-ups.
- Economic downturn and a turbulent political arena make Brazil a difficult environment for building long-term innovation activities.

agritech, thus being able to offer unique possibilities for Swiss end-users and partners working with sustainable development and impact-oriented business models.

6.5.1 Organisation and main activities

swissnex Brazil is the youngest of the swissnex offices and, with its six full-time employees and a total cost base of a little less than CHF 800,000 (in 2018), also the smallest. It is headquartered in Rio de Janeiro in the same building as the Swiss consulate and has a small outpost in São Paulo. Organisationally, swissnex Brazil has been challenged by a complete change in staff since 2016 and by the physical split of the organisation between Rio and São Paulo. This has meant that relations to Swiss partners and end-users as well as local collaboration partners have had to be rebuilt and that considerable time and resources have been used in setting the new team, defining internal roles and responsibilities, agreeing on how to collaborate and coordinate on a daily basis, aligning admin and operational processes, etc. The evaluation points towards swissnex Brazil having developed positively in recent years and now being on the right track organisationally and performance-wise. These observations are backed by positive feedback in interviews with swissnex staff and partners, and by end-users reporting swissnex Brazil to be a relevant, reliable, flexible and competent collaboration partner.

Furthermore, collaboration and coordination between the offices in Rio de Janeiro and São Paulo has improved considerably and all staff members see it as working well. Concrete results of this include more activities involving events or visits to both Rio de Janeiro and São Paulo, which – as an example

– was the case for the latest version of the Academic-Industry-Training programme (AIT), implemented in collaboration with St. Gallen University.

Strong focus on academic relations

The main activities and services of swissnex Brazil are related to supporting academic relations and next to this, support to start-ups. When it comes to concrete activities, most end-users and partners come to meet with local (research) players to explore collaboration potentials and for participating in conferences and lectures. Fewer come for getting knowledge about the latest trends in markets and technologies.

The strong focus on supporting academic relations seems to be generated by a combination of a big and quite strong academic research scene in Brazil with several top researchers and research institutes within certain areas such as agriculture, together with challenges in attracting attention from Swiss start-ups and businesses towards Brazil, which is only rarely on their radar when looking for markets and innovation systems to tap into. According to the local partners and swissnex staff interviewed, the start-up and innovation scene in Brazil is now growing significantly, however, and there should be potential for swissnex Brazil to strengthen its focus on servicing and collaborating with start-ups and businesses in the future.

6.5.2 Results and relevance of swissnex Brazil

In general, end-users and partners are very satisfied with their collaboration with swissnex Brazil and find its services relevant and unique. Of the end-users and partners surveyed:

- 77 per cent think swissnex Brazil offers services relevant to their needs
- 72 per cent are satisfied with the services/activities they received from swissnex Brazil
- 72 per cent think swissnex Brazil offers access to relevant local network
- 65 per cent think swissnex Brazil offers services and activities that are unique to other Swiss actors or public support services

The most common immediate results from using swissnex Brazil are learning and getting inspiration from the local education, research and innovation ecosystem and expanded business or academic network. In the qualitative interviews, many respondents emphasise that swissnex Brazil's broad, holistic knowledge about the local research and innovation ecosystems in Brazil is of high value and unique compared to other Swiss actors. Also, its role and competencies as a cultural broker are emphasised as important, because the languages, cultures and habits in Brazil and Switzerland are very different.

"I'm doing research on digital transformation. swissnex Brazil organised a very interesting event gathering different people and groups like civil rights movements talking about the digital age and its influence on different aspects of society. I also had the chance to visit the traffic light control centre in Rio, where they work with big data. This I could not have achieved that on my own. And they also arranged for me to do a TV contribution about the digital age when I was visiting. They were very committed and had excellent local connections. And they were really good at seeing what types of organisations and things that could be interesting for me. Some of the things they suggested I would not even have thought of myself – but they were really relevant."

Success in building mutually beneficial relations with local partners

One of the strengths of swissnex Brazil is its success in building mutually beneficial partnerships and collaborations with important local partners. Brazilian education, research and innovation players in general show a strong interest in learning more about the European education, research and innovation ecosystems and in forging collaboration with Swiss actors. For them, collaboration with Swiss partners means access to state-of-the-art knowledge and ways to build strong innovation and start-up ecosystems.

On the other hand, the Brazilian partners can offer access to relevant knowledge, clients, test sites and end-users within areas such as health, social innovation and agritech for Swiss organisations interested in working with sustainable development in less-developed parts of the world. As an example, in 2018 swissnex Brazil signed a Memorandum of Understanding with Oswaldo Cruz Institute (IOC/Fiocruz), one of the leading biomedical research centres in Brazil and Latin America. This MoU has so far resulted in a high-level Swiss–Brazilian symposium within life sciences, healthtech and biotechnology, and a concrete collaboration agreement between Fiocruz and the Swiss MedTech Center (SIPBB), in which they exchange results and researchers.

"We are very interested in collaborating with swissnex and Swiss research and innovation actors. We get valuable contacts in Europe — and we learn a lot. We can see how the research is very innovationand product-oriented in Switzerland. In Brazil we need to learn how to transform our research into products. We have had a bilateral meeting with a Swiss healthtech innovation park to share experiences and discuss collaboration. We really learned a lot from this visit."

- Local collaboration partner, swissnex Brazil

Need for focus on long-term impact

While most partners and end-users are satisfied with their collaboration with swissnex Brazil and the immediate outcome of their Brazil-visit, it is few end-users and partners that report more long-term impact of their collaboration. Also, swissnex Brazil has only had limited internal focus on documenting and understanding how they create long-term impact. Management is aware of this challenge and plans to increase focus on building more long-term relations, partnerships and activities with partners and end-users.

6.5.3 Comparison with the Innovation Centre Denmark in Sao Paulo

Innovation Centre Denmark in Brazil (ICDK Brazil) is quite different from swissnex Brazil when it comes to set-up and resources. ICDK Brazil is located at the Danish consulate in São Paulo, and the Consul General serves as the CEO of the centre. In addition to the general consul, the staff consists of a science counsellor and two part-time employees working partly with innovation counselling and partly with traditional export matters. One of the advantages of the lean Danish set-up, according to the Danish consul general, is that synergies and coordination between innovation, export and diplomatic activities are easily achieved.

This is not always the case for swissnex Brazil, where interviews with the staff and management indicate that coordination between and collaboration with the consulate and Swiss Business Hub Brazil does not always work effectively, sometimes resulting in missed synergies and/or lack of clarity about the division of roles and responsibilities. But compared to swissnex Brazil, the ICDK's outreach seems much more limited and its activities are strictly prioritised to be mainly supporting academic relations in health research. It is the impression of the evaluation team that swissnex Brazil manages to play a much stronger, proactive role in offering services and building relations to Brazilian as well as Swiss actors across the broader education, research and innovation system.

7. Methodology

The data collection consists of:

- Desk research and systematic review of written material
- Qualitative interviews with key Swiss stakeholders
- Field visits to all the swissnexes, including qualitative interviews with the swissnex staff, local collaboration partners and representatives of the Innovation Centre Denmark offices (ICDKs)
- Qualitative interviews with Swiss partners and end-users
- Web-based survey with partners and end-users of swissnex

Three main sources of data were used throughout the evaluation: desk research, qualitative interviews and surveys. In combination with the broad scope of informants and respondents, these methods constitute a methodological triangulation that has the benefit of minimising the impact of idiosyncratic opinions and views of the different groups involved and, as such, strengthening the validity of the data. In addition, the evaluation team conducted meetings with representatives of SERI, and maintained a close dialogue with the contractor throughout the data collection and maintained an ongoing assessment of the data.

Desk research and systematic review of written material

Oxford Research carried out systematic desk research to understand the organisation, strategy and activities of swissnex. The desk research consisted of thorough reading and analysis of written material such as strategy and action plans, activity overviews, evaluations and summaries. This established background knowledge about swissnex and the different stakeholders. It also qualified Oxford Research to further point out relevant sources of information among clients, collaborators and employees and to produce meaningful drafts for the interview guides for the qualitative interviews and for the survey.

Qualitative interviews with key Swiss stakeholders

Oxford Research conducted 17 qualitative interviews with key stakeholders representing key players in the Swiss education, research and innovation landscape. In the interviews, we focused on the history, background and set-up of swissnex, but also received inputs on their assessment of swissnex' role in the Swiss education, research and innovation landscape, its value creation and added value as well as swissnex' strengths, weaknesses, opportunities and threats.

Table 7.1 List of key Swiss stakeholders interviewed

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Name	Organisation	Position					
Thomas Först	SGE	Head of Global Network at Switzerland Global Enterprise (Import and Export Promotion Agency)					
Stefan Flückiger	FDFA	FDFA diplomat and former Head of Sectoral Foreign Policies and member of the swissnex committee					
Nicolas Bideau	Presence Switzerland	FDFA diplomat and Head of Presence Switzerland (responsible for Switzerland's image abroad)					
Dominique Gruhl Bégin	Innosuisse	Innosuisse, Head of Startup and Next Generation Innovators Division					
Michael Hengartner	University of Zürich and swissuniversities	President of the University of Zürich and President of swissuniversities					

Walter Steinlin	Innosuisse	Former President of the Commission for Technology and Innovation (now Innosuisse)		
Walter Steinmann	Swiss Federal Office of Energy	Former director of the Swiss Federal Office of Energy		
Lino Guzzella	ETH	Former President of ETH		
Pascal Marmier	Swiss Re	Head SRI Engagement Americas		
Jordi Monsterrat	Venture Lab	Co-founder		
Claudia Pletscher	Post	Head of Innovation		
Jürg Brunnschweiler	ETH	Head ETH Global		
Nicola Rohrseitz	Cisco	СТО		
Olivier Küttel	Ecole Polytechnique Federal de Lausanne (EPFL)	Head of International Affairs		
Christian Schneider	University of Basel	Head of Innovation, former STC Seoul		
Michel Rochat	Ecole Hotelier de Lausanne (EHL)	Director		
David Biegeleisen	Embassy of Switzerland in Tel Aviv	Science Counsellor		

Field visits to all the swissnexes, including qualitative interviews with the swissnex staff, local collaboration partners and representatives of Innovation Centre Denmark (ICDK)

A key element of the data collection was the field visits to all the swissnex offices. The face-to-face approach was valuable, as it provided a confidential platform for interviewing employees from every segment of the staff. At the same time, it gave us an opportunity to interview local collaboration partners and representatives from the Innovation Centre Denmark offices (ICDKs).

In total, **57 qualitative interviews** were conducted in conjunction with the field visits.

Table 7.2 Interviews conducted in relation to the field visits

	swissnex San Francisco	swissnex Boston	swissnex Brazil	swissnex China	swissnex India	All swissnexes
Interviews with team members	6	6	5	6	6	29
Focus group interviews (swissnex team)	1	1	0	1	1	4
Interviews with local collaboration partners	3	3	5	4	4	19
Interviews with ICDKs	1	1	1	1	1	5
Total interviews	11	11	11	12	12	57

Qualitative interviews with Swiss partners and end-users

As a last element of the data collection, Oxford Research conducted **18 qualitative interviews with Swiss partners and end-users** by phone – approximately four from each swissnex. The interviewees were selected by the swissnexes themselves, based on criteria presented by Oxford Research.

In general, the interviewees represented the diversity of the services and deliverables of the swissnexes and included different types of partners and end-users. The focus in these interviews was on results, value creation and satisfaction.

Web-based survey with partners and end-users of swissnex

The survey focused on satisfaction with the collaboration, the quality and relevance of swissnex services as well as the results and value obtained. The survey was sent out to 3,126 partners and end-users of swissnex. In total, 403 answered the survey with a total response rate of 12.9 per cent The response rates for the individual swissnexes were:

- swissnex Boston: 21.2 per cent (143/673)
- swissnex San Francisco: 12.9 per cent (150/1162)
- swissnex Brazil: 39.9 per cent (51/143)
- swissnex India: 24.2 per cent (102/421)
- swissnex China: 11.6 per cent (109/943)



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