

9. Description of the Current Swissnex Network

Switzerland can be considered a pioneer country in terms of SICs. The Swissnex network was established more than 20 years ago and has steadily evolved since that time. There are currently Swissnex nodes in five different regions of the world, constituting strategically relevant locations: Brazil (Rio de Janeiro), China (Shanghai), India (Bangalore) and the USA (Boston, New York and San Francisco) (see also chapter 3). In addition, another Swissnex location will be opened in Japan (Osaka) in 2022 (Swissnex, 2021d). Swissnex's core mission is to “*support the outreach and active engagement of our partners in the international exchange of knowledge, ideas and talent*” (Swissnex, 2019), while it also aims to convey the image of Switzerland as a highly innovative country that “*connects tomorrow*”¹⁶². Swissnex is seen as a distinct instrument that reinforces Switzerland's international competitiveness (Schweizer Bundesrat, 2020a), while it is also similarly perceived to be an institution which plays a crucial role in terms of trend scouting and horizon scanning for Swiss science, education and innovation actors (ibid.).

Its global spread (Hertig, 2015), agility and openness to experimenting are seen as key factors in its success. Furthermore, in particular, these aspects serve to demarcate Swissnex from other existing institutions, such as embassies and consulates (interview SNX3). Swissnex is officially linked to Switzerland's external network abroad, which lies in the administrative realm of the Federal Department of Foreign Affairs (FDFA). In that respect, the network maintains close ties to the country's diplomatic representation body. This connection to diplomacy is furthermore underlined by the fact that Swissnex's CEOs have diplomatic status. Moreover, the different Swissnex locations are, to a varying degree, also linked to and embedded in the consular representation (though Swissnex largely has its own offices)¹⁶³. On a general note, it should be mentioned that each Swissnex location is deeply rooted in its respective context. This also explains why the focus and service differ slightly at each Swissnex location.

162 In the past, the Swissnex motto was “*connecting the dots*”, but this was changed to “*connecting tomorrow*” in about 2020. This is reflective of a re-branding exercise, in which Swissnex also received a new logo (cf. Swissnex (2021a)).

163 For an overview, see Swiss Federal Audit Office (2016, p. 15).

In other words, certain topics are more relevant in some regions than in others; for example, start-ups and technological developments are key topics in the USA (interview SIW2), while the focus in India or Brazil is completely different (interview SIS2). Accordingly, their exact thematic coverage is strongly context-driven¹⁶⁴.

9.1. Principal Actors

The principal actors that are relevant for Swissnex are primarily ministerial actors: the State Secretariat for Education, Research, and Innovation (SERI¹⁶⁵) and the Federal Department of Foreign Affairs. SERI thematically oversees Swissnex and is responsible for the network's daily operations and strategic direction (Swissnex, 2021b). However, the FDFA also plays a key role because Swissnex is part of Switzerland's official network abroad¹⁶⁶. In addition, the FDFA provides a framework to strengthen Swissnex's work, such as granting diplomatic status to Swissnex's CEOs¹⁶⁷. Swissnex CEOs typically maintain close ties with the respective Swiss ambassadors and the Science and Technology Counsellors. Furthermore, there is a certain level of reporting by CEOs to the ambassadors. In addition to these two minis-

164 For an overview of Swissnex's activities and its perceived impact, see the annual reports (cf. SERI (2017, 2016)) and evaluation (cf. Oxford Research A/S (2020)).

165 Translation of *Staatssekretariat für Bildung, Forschung und Innovation*. Until 2005, there were two departments: the Swiss Science Agency (*Gruppe für Wissenschaft und Forschung*), which focused mainly on international activities, and the Federal Office for Education and Science (*Bundesamt für Bildung und Wissenschaft*). In 2005, these departments merged and became SERI. In 2013, another merger took place and the department for vocational education and technology joined SERI. For a more detailed history of SERI, see *Staatssekretariat für Bildung, Forschung und Innovation*: SERI (2020, p. 16).

166 The network was previously called the ERI network (Education, Research, and Innovation Network). In addition to Swissnex, Switzerland's network abroad also includes Science and Technology Counsellors, who are stationed at various Swiss embassies (see chapter 3). Funding for these counsellors is divided between SERI and the FDFA.

167 This constellation was at times contested and proved to be a cause of dissent in the past (cf. interviews SNX3, SIS7, SIW2). Traditional career diplomats find themselves operating in a comparatively strict diplomatic corset in contrast to Swissnex employees, who are financed by SERI and given more autonomy (cf. interviews SIW1, SIS7). On a side note, the financing of science and technology attachés has similarly been subject to criticism in the past, given their perceived second-best role and payment according to local rather than Swiss standards (cf. Stoll (2018)).

terial actors, Swissnex's work is also supported by a Swissnex committee, which acts as a sounding board, providing informal advice to the ministerial actors (interview SIS2). The committee comprises key representatives from education, research and innovation institutions, representatives from business enterprises, parliamentarians, as well as SERI and FDFA members (Swissnex, 2021b). In about 2008, the committee was introduced as a structuring element to Swissnex's work (interviews SIS7, SIW1)¹⁶⁸; moreover, it advises SERI on various matters in a non-binding way. The research data revealed that even sensitive issues are discussed in this committee, such as the distribution of state funding among SERI's key stakeholders (interview SIS7). What is more, the committee even seemed to have been involved in internal evaluations in the sense that committee members visited Swissnex's locations in 2010 and 2015 (Swiss Federal Audit Office, 2016, interview SIW1). The committee seems to operate on a consensus-basis (interviews SIS7, SIW8) rather than on the basis of power struggles (SIW8):

*Everyone sacrifices a little in terms of the general budget distribution, everyone uses the services and everyone can exert an influence*¹⁶⁹ (interview SIS7).

The composition of the committee is *ad personam* (interviews SIS2, SIW1) and currently comprises the following 10 members and institutions¹⁷⁰ (Swissnex, 2021b):

- Christine Bulliard-Marbach, National Council, Swiss Parliament
- Tania Cavassini, Head of Directorate for Resources, FDFA (ex officio)
- Matthias Egger, President of the National Research Council, SNSF (ex officio)
- Beatrice Fasana, Managing Director Sandro Vanini SA and member of the ETH Board

168 The data reveals that the introduction of the Swissnex Committee is explained by an initiative that goes back to State Secretary Dell'Ambrogio. The committee was installed as a structuring element quite soon after he took office to a) formalise stakeholder involvement (concerning key science actors but also other governmental actors such as FDFA) and b) strengthen the legitimacy of Swissnex.

169 "Jeder opfert ein bisschen in der großen Geldverteilung, alle benützen die Dienste und alle können beeinflussen" (interview SIS7).

170 Membership of the Swissnex committee does not require an individual to have collaborated or prospectively collaborate with Swissnex (interview SIW8). Instead, the composition is determined by including members that can reflect a (potential) user perspective and provide a sounding opportunity.

- Yves Flückiger, President swissuniversities (ex officio)
- Michael Hengartner, President ETH Board
- Pascal Marmier, Secretary General, The Economy of Trust Foundation
- Maria Peyro Voeffray, Head of International Relations a.i., SERI
- Nicola Thibaudeau, CEO MPS Micro Precision and member of the Innosuisse Board (ex officio)
- Pascale Vonmont, CEO Gebert Rütli Stiftung and member of the Swiss Foundations Board.

9.2. Governance Architecture

To expand on the previous section, the governance architecture of Swissnex consists of a lean structure with central governance from the headquarters in Bern, while individual Swissnex locations are relatively autonomous (see Table 28). Each Swissnex location is run by a CEO, who is supported by a team composed of Swiss nationals and locals (teams vary in size at different locations)¹⁷¹. Bottom-up governance is a key principle that characterises Swissnex's governance and funding arrangements (see section 9.4.1). While SERI oversees the network thematically and determines its broader terms, individual locations operate according to a bottom-up principle and have significant autonomy. To give an example, individual Swissnex locations have significant room to manoeuvre; however, there is also an expectation that they position themselves according to regional needs and that they create an impact. This governance architecture allows each location a significant degree of autonomy and is considered an explanation for Swissnex's success (interviews SNX3, SIS6).

The work of Swissnex is monitored by two main instruments: a four-year annual development plan (Service Level Agreements), which sets the general direction and formulates objectives for each location, and annual agreements which define selected priorities and are set out in the *Lettres des Mission* (Oxford Research A/S, 2020, p. 8; SERI, 2015a). The interview data also refers to individual performance agreements, which are agreed between SERI and each CEO. In addition, CEOs were asked to design a strategic development plan for the location they presided over (interview

171 The data reflects that, in the early years, certain locations such as Boston had installed an advisory board (cf. SHARE Boston (2000)). The interview data could not reveal similar structures to be in place as of today.

Table 28 Organisational Structure: Swissnex

	Key actors	Role
Governance of the Network	SERI	* Sets out strategic direction, oversees and controls the network (performance indicators)
	FDFA	* Formally involved since Swissnex is part of the official external representative body of Switzerland * Formal role: providing, for instance, diplomatic status to CEOs
	Swissnex Committee	* Strategically advises on the development of Swissnex * Non-binding role * Ad personam composition * Key stakeholders in the research, science and innovation system, members of parliament, ministerial players (n=10)
On-Site Governance	CEO, supported by local team	* Daily & strategic management of Swissnex on-site * Reports to Bern

Source: created by the author.

SIS6). In the past, there were rotations of CEOs across the Swissnex network; however, it was not possible to identify a regular pattern to these changes from the available data¹⁷². To sum up, to a large degree, each Swissnex location operates independently in terms of defining topics, themes and formats, which should, however, align with the network's general framework and objectives. Thus, Swissnex's actual work appears to be customer-driven and, to a large extent, reflects developments in the field. This bottom-up character seems to replicate the Swiss research and science ecosystem (see section 9.4) and is an inherent characteristic of Swissnex's gradual institutionalisation.

9.3. Funding

This bottom-up approach is also reflected in the underlying funding mechanisms of Swissnex: it runs on a public-private partnership model. While SERI provides basic funding to cover general operating costs, such as rent (this accounts for around a third of the costs), the remaining amount

¹⁷² Some sources point to the anticipated four-year rotation of Swissnex CEOs (interviews SNX1, SIS7); however, this could not be confirmed. Despite this, the regular rotation of CEOs is viewed as underlining the innovativeness that Swissnex aims to represent (cf. interview SNX1). According to the annual report, recent rotation (and exchange) of CEOs took place in 2021 (cf. Swissnex (2021a)).

(two thirds) must be earned by each Swissnex location. The interview data shows that certain tasks are delegated to Swissnex by key stakeholders on a regular basis. This is manifested in annual mandates (interviews SIW2, SIW7). Apart from these annual agreements, Swissnex also has ad hoc contracts with key stakeholders, such as business representatives and other actors in the ecosystem, such as higher education institutions or the Swiss National Science Foundation (SNF), to name a few¹⁷³. This public-private partnership model is deeply rooted in the genesis of Swissnex and can be traced back to its inception (see section 10.1.4). This funding arrangement is perceived to be responsive to market needs, reflects its “customer-centric” character (interview SNX3) and underlines Swissnex’s classification as an ideal type of service-oriented SIC¹⁷⁴.

This funding mechanism is similarly considered to be an effective evaluation criterion for the work of Swissnex (interview SIS6). The underlying assumption is that if Swissnex is able to generate its own funds, this demonstrates a need and a demand for its work from its customers’ perspective. This eventually provides a layer of legitimacy for Swissnex’s work (interview SIS6). These funding arrangements constitute a distinct design principle of Swissnex; however, the division of funding is not uncontested. To give an example, the funding model could be problematic if Swissnex expands (interview SNX3). This is because there would be increased competition between Swissnex locations to generate income and cooperate with clients in Switzerland. If funding conditions remain unchanged, this would lead to a higher number of Swissnex locations chasing after the same money¹⁷⁵. Another point of criticism relates to funding through third parties; critics argue that the federal financial contribution could be paid directly to Swissnex, which would enable the network to ensure a better planning capability. In total, approximately 5.5 million Swiss Francs are provided by SERI for the operation of Swissnex (interviews SIS2, SIS6 and (SERI, 2015b)), which is a relatively small amount in relation to the overall budgets of SERI and the FDFA¹⁷⁶.

173 For an overview of these activities, a visit to the Swissnex website is recommended.

174 Elsewhere this is reaffirmed in the sense that: “Stakeholders define the scope of activities, while partners contribute to and benefit from what swissnex [...] does” (Marmier and Fetscherin (2010, p. 101)).

175 Sources suggest that, apart from federal funding, the ETHs and higher education institutions are Swissnex’s main (paying) clients (cf. SERI (2015b)).

176 To contextualise this, see the most recent *Botschaft* (Schweizer Bundesrat (2020b)), which specifies in detail how public funding is distributed to promote international

9.4. Contextualisation

9.4.1. Bottom-Up Principle for Policy-making

The development of Swissnex must be understood alongside a key principle that is inherent in Swiss politics: pragmatic bottom-up policy-making (cf. Pasternack et al., 2016; Seeber, 2014; Weingart, 2018, p. 11). According to the Swiss perception of research and science governance, the role of the state is to provide a good framework while intervening as little as possible so that stakeholders can operate on their own (interviews SIS1, SIS2, SIS5, SIS6):

We believe that science knows best what it needs, where it is strong and where it can develop well. And that is a key principle in Swiss science policy: let the stakeholders take over [...] As said, bottom up is our main principle and we only intervene where the stakeholders need it. But certainly, it is our role to provide good framework conditions. That is the role of the state, nothing more (interview SIS5)¹⁷⁷.

This bottom-up governance approach to science and technology policies has, however, been challenged in recent studies (Hofmänner, 2018, p. 61); it is seen as skewed and considered to reflect a somewhat self-created image which is promoted by the actors themselves (cf. Netzwerk Future, 2019, p. 3). In response, there were calls to revise the national science and technology policy approaches and to classify them as both bottom-up and top-down (Hofmänner, 2018, p. 61; Weingart, 2018). Nonetheless, this (self-defined) bottom-up approach has significantly impacted the development of Swissnex, as will become evident in the following sections.

research and innovation collaboration. The former State Secretary Dell'Ambrogio is quoted in Rittmeyer and Forster (2013, p. 67) and claims that in comparison to the budgets of the FDFA, Swissnex is a small yet agile dwarf: „Verglichen mit den Budgets des Aussendepartements und des Staatssekretariats für Wirtschaft (Seco) ist swissnex ein kleiner, agiler Zwerg“.

- 177 “Wir sind der Meinung, dass die Wissenschaft selber genau weiß, was sie braucht, wo sie stark ist und wo sie sich gut entwickeln kann. Und das ist ein Grundprinzip der Schweizer Wissenschaftspolitik: lassen wir die Stakeholder arbeiten. [...] Wie gesagt bottom up ist unser Prinzip und wir intervenieren nur, wo die Stakeholder es brauchen. Aber natürlich unsere Rolle ist gute Rahmenbedingungen zur Verfügung zu stellen. Das ist die Rolle des Staates - mehr nicht“ (interview SIS5).

9.4.2. Demarcations to Similar Institutions

In the Swiss ecosystem, Swissnex is situated alongside other institutions that are generally considered to operate in the public diplomacy realm, such as the *Pro Helvetia* institutes¹⁷⁸ and Presence Switzerland (see section 3.3.6). In addition, the landscape also includes other actors with a focus on the promotion of innovation activities. These are Innosuisse, Switzerland Global Enterprise and the Greater Zurich Area¹⁷⁹. The interview data suggests that, in practice, boundaries and the division of tasks are not always clearly defined, which can be a source of friction (interview SIW2). Nevertheless, an attempt is made to position and demarcate Swissnex from other institutions. To start with, the core task of *Pro Helvetia* is to promote Swiss culture and facilitate bridge-building activities between Switzerland and the host countries. Swissnex, on the other hand, is mainly concerned with education, technology and innovation (cf. Eggenberger, 1986; Kowner, 1993), although, admittedly, culture also plays a role in some locations. *Pro Helvetia* also operates abroad in selected countries, which sometimes geographically overlap with Swissnex locations, such as India (New Delhi, the Swissnex office is located in Bangalore), China (Shanghai)¹⁸⁰ and the USA (New York). Furthermore, the research data reveals that *Pro Helvetia* in fact supports the work of Swissnex financially (cf. Schweizer Bundesrat, 2020a, p. 3173)¹⁸¹. In the past, these two actors were also involved in joint projects (Schweizer Bundesrat, 2007, p. 1347) in such a way that in official documents, the work of *Pro Helvetia* and Swissnex is described as complementary and the organisations are considered to enrich each other (Schweizer Bundesrat, 2020a).

Presence Switzerland is a Swiss-based institution that is attached to the FDFA. Its key mission is to create and promote a positive image of

178 For more information, see: <https://prohelvetia.ch/de/> (accessed 20.01.2022).

179 Greater Zurich Area aims to promote the economic potential of the Zurich area abroad (for instance in the USA).

180 On a side note, in some cases there are close ties between *Pro Helvetia* and Swissnex. The research data reveals, for instance, that Swissnex Shanghai intentionally drew on close cooperation with *Pro Helvetia* during the process of establishing itself (cf. Max Dohner (2019)).

181 The official report mentions co-funding of San Francisco. It does not, however, specify whether this is ad hoc support or refers to annual mandates.

Switzerland abroad (cf. Rittmeyer & Forster, 2013)¹⁸². As such, Presence Switzerland also showcases Swiss innovation and technology; however, it does not interfere in Swissnex's realm due to a different thematic set-up (interview SIS6). At first glance, the demarcation lines for Innosuisse do not appear to be strong. Innosuisse is the Swiss Innovation Agency and a federal entity that aims to promote innovation activities in the interest of the Swiss economy and society¹⁸³. However, it mainly operates nationally (cf. Schweizer Bundesrat, 2020b, pp. 3716; 3809 ff.). Despite this, a shared role is taken on by Swissnex and Innosuisse when it comes to facilitating the work of start-ups aiming for international outreach and expansion (Schweizer Bundesrat, 2020b, p. 3814). Although this shared responsibility might lead to overlaps and blurred boundaries, this is (generally) not viewed critically by key actors; rather, it is viewed as complementary (cf. interview SIS6).

What is more, collaboration is seen as the best way to deal with intersecting domains; for example, Innosuisse is a member of the Swissnex committee as a stakeholder (see, section 9.1). Switzerland Global Enterprise¹⁸⁴ is the official organisation promoting exports and investments; it helps small and medium-sized enterprises to gain international exposure and promote their businesses. Hence, they also operate abroad. Lastly, the Greater Zurich Area¹⁸⁵ should be mentioned; this organisation is supported by nine cantons and aims to present the Greater Zurich Area abroad. While some of the institutions described above work on a national basis, others operate internationally, in a similar way to Swissnex. The interview data reveals different views on this situation: on the one hand, these organisations are considered to have a reinforcing impact on each other (interview SIS6), particularly also in the early stages of Swissnex (see next sections), while on the other hand, there are also more critical views and questions are raised regarding demarcations (interview SIW2).

182 Presence Switzerland is viewed as a PR agency that aims to spread a positive image of Switzerland abroad: *"PR-Büro, um im Ausland ein positives Image der Schweiz zu verbreiten"* (Rittmeyer and Forster (2013, p. 66)).

183 For more information, see <https://www.innosuisse.ch/inno/en/home/about-us/mision.html> (accessed 20.01.2022).

184 <https://www.s-ge.com/de/wer-wir-sind> (accessed 10.03.2022).

185 <https://www.greaterzuricharea.com/de/public-private-partnership> (accessed 10.03.2022).

