Swiss FinTech Innovation Lab

Proposal for a University Collaboration Program
The emerging field of “Financial Technology” (“FinTech”) aims at developing new business models, products and services, processes and systems for the financial services industry based on the convergence of innovative technologies and services. FinTech can help banks, insurers, providers and other organizations within the financial ecosystem to rethink their business in creative new ways and drive improvements in core activities like client advisory, the design of bank and insurance products, risk assessment, investment management and many others. Several examples illustrate how companies can benefit from various topics up- and downstream the financial services value chain:

• New business models and easier adaption of regulations: FinTech enables incremental and disruptive changes towards new business models. Examples of such new business models are robo-advisor platforms, peer-to-peer platforms to optimize risk sharing among consumers and alternative exchanges like crowdfunding. Additionally, regulation adaption may be improved through new intelligent mechanisms and automatic detection.

• New modes of customer interaction and behavioural finance: FinTech enables a paradigm shift from a product-centric, inside-out perspective to a client-centric outside-in one. With this, financial service companies can more easily connect with their clients through mobile apps and social networking platforms and better adapt to their behaviour.

• New forms of collaboration and operating models: Data-driven financial services enable new forms of intelligent decision making and thus can support to improve collaboration and operations. Financial service companies can for example better identify client needs, crowdsource single tasks from financial app stores, better assess risks and optimize underwriting processes.

• New forms of communication systems, big data and computer linguistics: FinTech enables financial service companies to interact in more flexible and virtual value chains. Experiments with distributed ledger technologies like the blockchain for example demonstrate highly decentralized value chains. And in the realm of asset management, social network-based stock prediction as part of computer linguistics can improve portfolio management.
The Swiss FinTech Innovation Lab is an answer to the industry’s challenges along the whole value chain induced by major developments such as customers’ increasing use of digital channels, new market actors from outside the industry positioning themselves at the customer interface, rising costs due to regulatory changes and continued low interest rates that create a need for new investment strategies.
Benefits of Innovating in the Swiss FinTech Innovation Lab

The Swiss FinTech Innovation Lab is built on tight collaboration between science and practice involving all relevant stakeholders from the ecosystem. In such a setting, researchers and practitioners first develop research topics comprising areas of common interest, with the researchers’ perspective ensuring that the work will be innovative and broadly relevant, and the practitioners’ perspective ensuring that it will be practical and grounded. The researchers together with practitioners then undertake work on these jointly agreed-upon topics. The benefits for companies conducting research with the Swiss FinTech Innovation Lab are:

- **International cross-disciplinary expertise:** Access to an international network of universities and researchers for FinTech (MIT, NUS, etc.), FinTech events, publications on different FinTech topics.
- **Neutral & physical collaboration platform:** Bundling of scientific FinTech competencies within Switzerland based on a neutral, scientifically and forward-looking platform (incl. a physical office and meeting space) for collaboration of the FinTech ecosystem.
- **Top resources:** “Fresh” and independent outside-in perspective through doctoral students.
- **Open lab technology platform:** Specific, actively managed FinTech hardware and software environment with virtual banking and insurance platforms and tools for developing innovations and testing of solutions.
- **Talent access:** Possibility to win future talents through active involvement of master and doctoral students in FinTech working groups (e.g. student innovation workshops).
- **Improved innovation transfer:** Faster transfer of research results into own company (intrapreneurship) through close collaboration with doctoral students in research development.
- **Education access:** Possibility for close participation in education through lectures in FinTech master program courses, bachelor/master theses, FinTech graduate doctoral school and FinTech start-up school.
- **Access to and co-founding of university start-ups:** Foundation of and participation in FinTech start-up companies from universities with university start-up organizations.
Benefits of Innovating in the Swiss FinTech Innovation Lab

- International visibility of the Swiss Financial Center
- Single point of contact for FinTech research and expertise
- Close cooperation with the FinTech ecosystem
- Fostering innovation, education, entrepreneurship and innovation transfer
The Swiss FinTech Innovation Lab connects the Swiss FinTech ecosystem by providing services in four major areas:

- **International FinTech network and expertise**: Access to experts from international FinTech networks, such as MIT, Hong Kong City University, Singapore Management University, Stanford, etc.), yearly held international FinTech conference in Zurich, professional and popular science publications on different FinTech topics.
- **FinTech collaboration space**: Physical collaboration space for the connection of the Swiss FinTech ecosystem including researchers, students, start-ups, banks, insurers, providers and other institutions, monthly events, such as start-up pitches, student and doctoral FinTech events like for example innovation workshops, hackathons etc. held at the collaboration space.
- **FinTech technology platform and research environment**: Lab environment with technology infrastructure as a development, prototyping & testing environment for FinTech innovations and regulations, research environment to connect researchers and students collaborating on specific FinTech topics, access to FinTech student projects, master and doctoral student trainings on bank and insurance systems, access to student start-ups, bachelor and master theses on FinTech topics.
- **FinTech education program**: FinTech start-up school (together with CTI), FinTech master program (planned), FinTech graduate doctoral school (planned together with the University of St. Gallen & ETH Zurich).
International FinTech network & expertise

Events and experts from international FinTech network, yearly held international FinTech conference & publications

FinTech collaboration space

Physical collaboration space, innovation projects and events for regular knowledge exchange on FinTech topics

FinTech technology platform & research environment

FinTech students & researchers & technology infrastructure as a development, prototyping & testing environment

FinTech education program

FinTech master program, FinTech graduate doctoral school and FinTech start-up school
Research Focus of the Swiss FinTech Innovation Lab

The Swiss FinTech Innovation Lab conducts research on topics along the whole financial services value chain. All topics are theoretically grounded and in some areas complemented with prototypes. Among the research topics of the Swiss FinTech Innovation Lab are:

- New business models and adaption of regulations: The Swiss FinTech Innovation Lab aims at identifying new business models for financial services companies and analyzes how the adaption of new regulatory requirements can be improved or even lead to new requirements and services.
- New modes of customer interaction and behavioural finance: Within the lab, novel ways of hybrid client interaction shall be developed and the required intelligent forms of digital identity and privacy and future client platforms will be explored.
- New forms of collaboration and operating models: With digitization leading to a new proportion of electronic and manual labor, this topic analyzes future human / digital role allocation and entirely new ways of organization such as crowdsourcing.
- New forms of communication systems, big data and computer linguistics: Cryptocurrencies and blockchain technologies will be explored as new types of financial market infrastructures which are complemented with open API approaches, data- and sentiment-driven driven services.
Research Focus of the Swiss FinTech Innovation Lab

Future financial market infrastructure

Business models, regulation

Client

Financial services provider

Non-financial services provider

Provider

Customer interaction, behavioural finance

Collaboration, operating models

Future financial market infrastructure

Communication systems, big data, computer linguistics
The Swiss FinTech Innovation Lab enables different forms of collaboration among research and practice. One major distinction is between bilateral and multilateral projects. The latter one describes projects where multiple companies and organizations form a community and jointly conduct research on a topic of common interest. In contrast, bilateral projects are custom-tailored to a company's specific requirements. While PhD students and master theses can contribute to both project types and are short- to medium-term oriented, FinTech professorships as well as courses and (executive) education programs are long-term oriented. Independent of the time horizon all four forms are possible ways of collaboration with the Swiss FinTech Innovation Lab:

- **FinTech professorships**: They enable the establishment of long-term topics in research and education. Examples are professorships for cryptocurrencies, digital insurance, digital wealth management etc. Their funding focus is 6+ years.
- **Courses & executive education**: Education of students and managers is strongly built on courses which focus on specific areas like for example the design of digital client advisory etc. These courses enable companies to collaborate with students.
- **FinTech PhDs**: PhD students contribute with in-depth expertise by working over a period of 3-4 years on a specific topic. Their funding is medium-term. Close collaboration with companies ensures practical relevance.
- **Master theses**: Master theses typically have a runtime over approx. 6 months. This form of collaboration enables companies to drill down on a specific topic. As with PhD students, this form of collaboration is in close partnership with companies.
Collaboration with the Swiss FinTech Innovation Lab

- **Bilateral projects**
- **Multilateral projects**

**FinTech (Ass.) Professorships**

**Courses & (executive) education**

**FinTech PhDs**

**Master theses**

**Bilateral projects**

**Multilateral projects**

**(Ass.) Prof. for certain FinTech topics**

FinTech courses with close company collaboration to develop concepts with students

PhDs which work on a topic with close company collaboration

Runtime over 6 months with close student collaboration

Long-term funding (6 years)

Medium-term funding (3 years)

Short-term funding (6 months)
The “Swiss FinTech Innovation Lab” is unique for three reasons:

- First, it is the only research effort that brings together the whole FinTech ecosystem and researchers to think about innovation throughout the whole industry value chain.
- Second, it involves an interdisciplinary team of various researchers and experts with a wide range of expertise and from within and from outside the financial services industry.
- Third, located at the University of Zurich the Swiss FinTech Innovation Lab is built on a research network connecting researchers from different universities.
**Steering Committee:**
- Prof. Dr. A. Bernstein (IfI)
- Prof. Dr. T. Hens (IBF)
- Prof. Dr. G. Schwabe (IfI)

**Directors:**
- Lab: Dr. Thomas Puschmann (IfI)
- Prof.: Prof. Dr. Stefan Zeisberger (IBF)
- Prof.: Additional FinTech Profs.

**PhDs and Technical Coordinator:**
- Client relationships & APIs
- Technical Coordinator
- Regulation
- Distributed Ledgers
- Digital Identity
- Robo-Advisors

**Collaboration (others planned):**
- Prof. Dr. R. Weber (RWI)
- Prof. Dr. Dirk Helbing (COSS)
- Prof. Dr. O. Gassmann (ITEM)

**2017+**
- EPFL

*EPFL will join in 2017 with the handover to the new president.*
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research. education. innovation. community.