








EPFL History			
1853	1946	1969	Today
			
Maison Bischoff, rue Saint-Pierre in Lausanne	Former Hotel Savoy, 29-33 avenue de Cour in Lausanne	 Ecublens-Dorigny	
Ecole spéciale de Lausanne	EPUL	EPFL	
Students 11	399	1,293	10,124 (2015)
Faculty		56	338 (2015)

EPFL
ÉCOLE POLYTECHNIQUE
FÉDÉRALE DE LAUSANNE

Fast-paced development (1969-2016)

1969 ...

2016



Building an outstanding campus in Lausanne



516 units

2013

Student housing



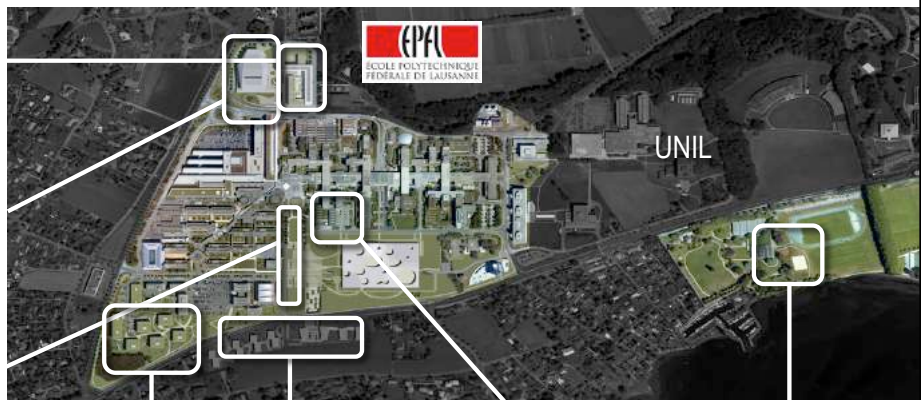
2014

Swiss Tech Convention Center



2016

ArtLab



2010
EPFL Innovation Park



2009
Les Etudiantes & Starling Hotel



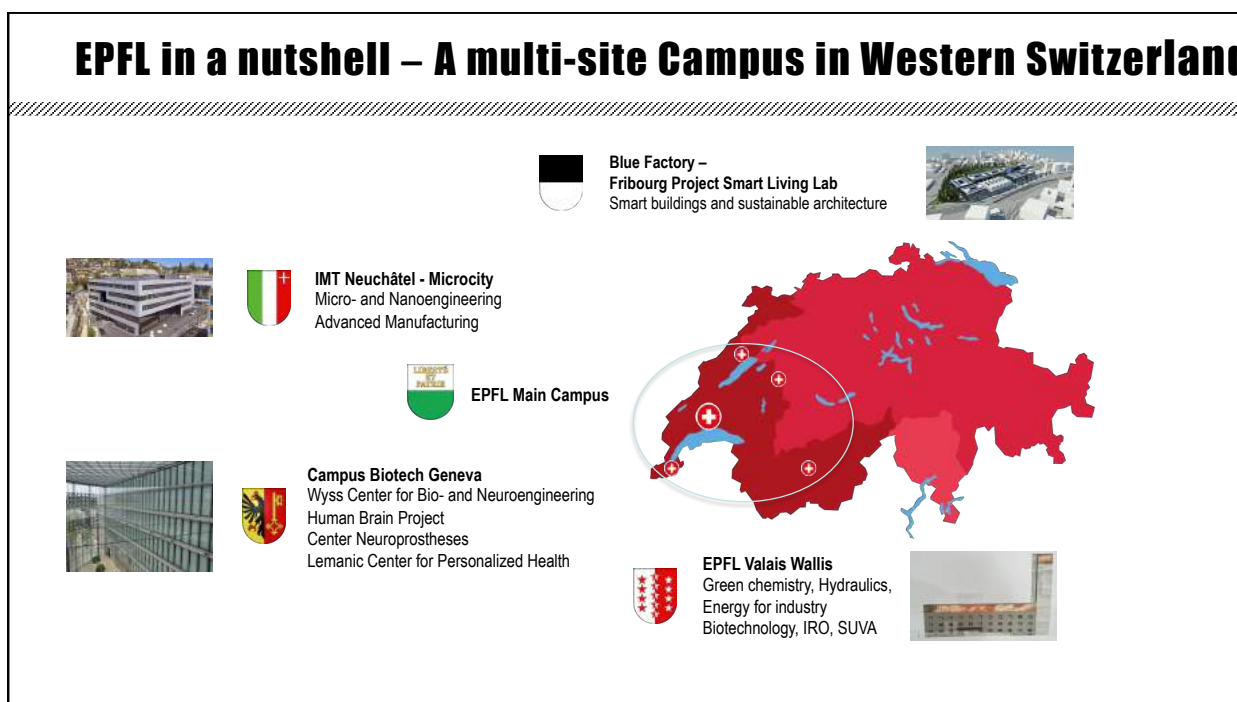
2015
Mechanical engineering halls
Neuroprosthetics Center



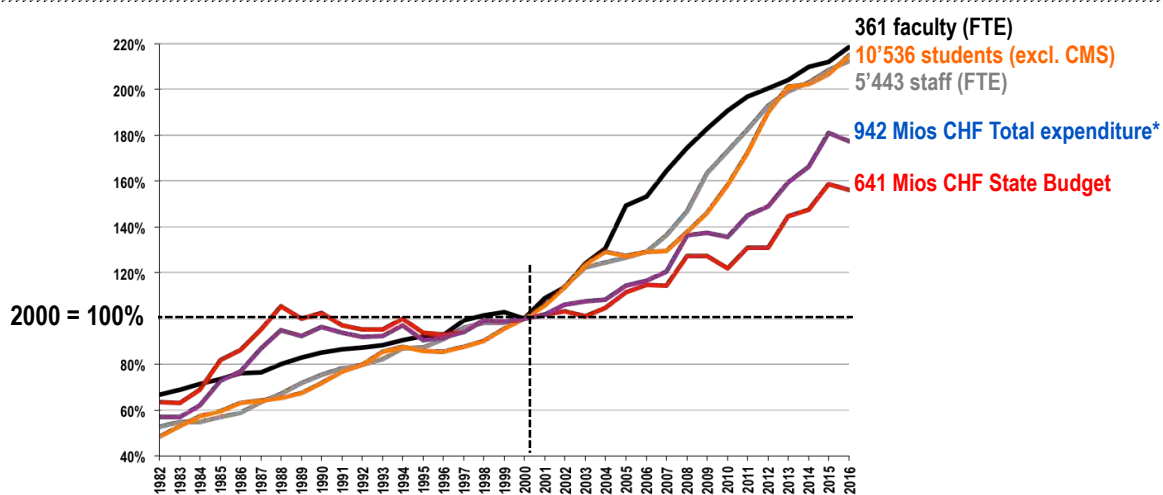
2012
Extension of the sports center



EPFL in a nutshell – A multi-site Campus in Western Switzerland

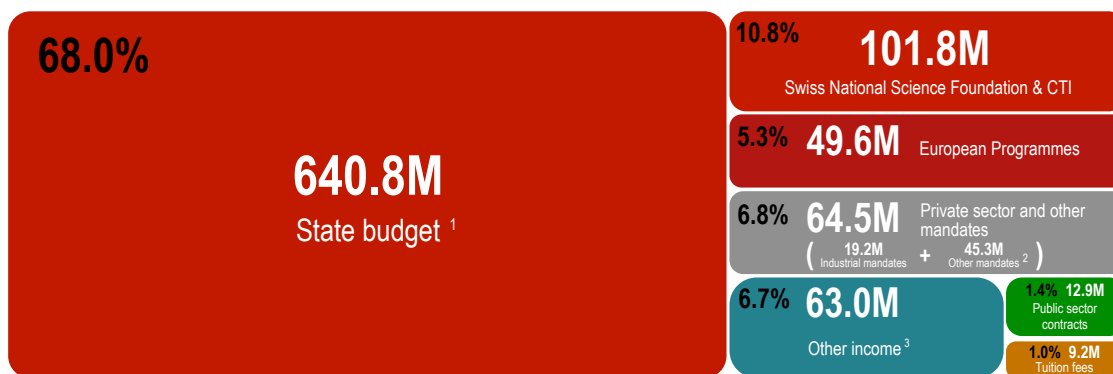


Unprecedented growth since 2000 (1982-2016)



* Expenditure including constructions, excluding internal revenue [in 2015 constant Swiss Franc value]

A budget of CHF 942 million (2016)



¹ Including construction expenses.
² Not including industry or public sector mandates (foundations, not-for-profit companies, etc.).
³ Overheads, financial revenues (excluding revenues from the DII or technological platforms), designated and reserve funds from private and public sources, congresses and other activities.



EPFL's three missions according to the Federal Act





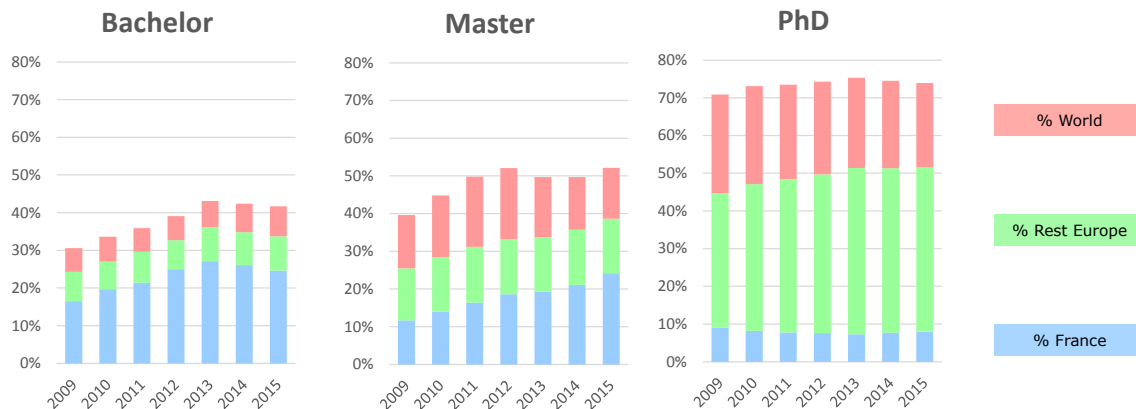
Study Programs

23 Master's Programs
master.epfl.ch

13 Bachelor's Programs
bachelor.epfl.ch

18 PhD Programs
phd.epfl.ch

EPFL in a nutshell – Origin of EPFL foreign students



EPFL

Education

Evaluating & Improving Teaching

Developing pedagogical expertise

- coaching teachers to improve their teaching (200 teaching evaluations per year)
- providing learning technologies such as Moodle (7'000 students), Clickers, antiplagiarism tools, MOOCS.
- developing the 1st year tutoring program (1600 students, 700 tutors)
- training teachers (69)

Research investigates novel learning interfaces

- tangible interfaces for vocational education
- paper-based computing and classroom workflows
- dual eye tracking methods
- human-robot interaction



EPFL

Education

MOOCs: Massive Open Online Courses

September 2012 - February 2017:

- 66** MOOCs online, 29 in preparation
 - 2/3 in english speaking MOOCs
 - 1/3 in french speaking MOOCs
- 1,573,642** registrations
- 66%** of the participants are not students, 89% of which are employed
- > 80'000** participants completed a course



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Education → MOOCs

Nurturing creativity: The Discovery Learning Program

EPFL ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE

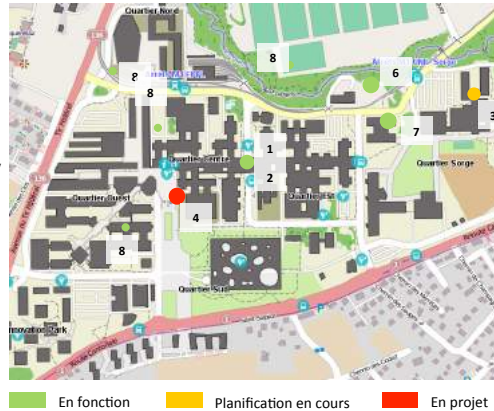
Objectives

- Reinforce **hands on** (TP) training **in the disciplines** to be able to bring a high level of expertise to interdisciplinary problems
- Reinforce **interdisciplinary skills** to prepare students for today's engineering challenges
- Develop **independent, critical thinking** and adaptive problem-solving, prepare to face unexpected challenges

The surface: a set of new infrastructures



- 1 Engineering
Electronics / Sensors-actuators
Information technologies / Embedded systems
- 2 Materials and bioengineering
Materials processing and characterization
Bioengineering
- 3 Molecular
Chemistry / Molecular biology / Biochemistry
Biotechnology / Environmental biology and chemistry
- 4 Prototyping
Mechanical and electronics workshops
- 5 Prototyping
Materials and Structures
- 6 Physics
- 7 Chemical engineering
- 8 Informatics
Fluid mechanics



The future of hands on courses

Interdisciplinary projects – List of ongoing projects at EPFL



Robot contest
EPFL internal competition
Design and development of autonomous robot



Solardecaathlon
International competition
Design and development of energy efficient buildings to meet sustainable urban density



Lab in a tube
EPFL internal competition
Design and development of flexible sensors for physiological monitoring



CHIC
From one idea to a prototype: sourcing, assembling, prototyping and manufacturing a connected hardware device



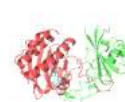
Hydrocontest
International competition
Design and development of energy efficient boats



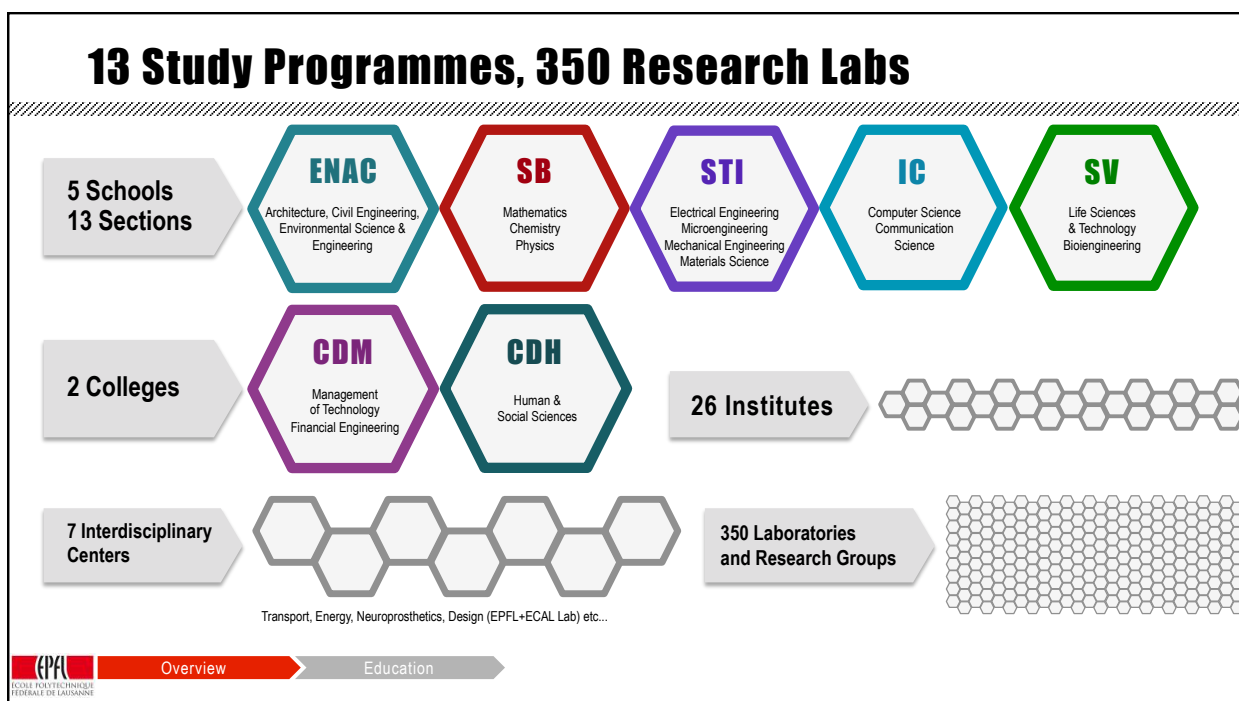
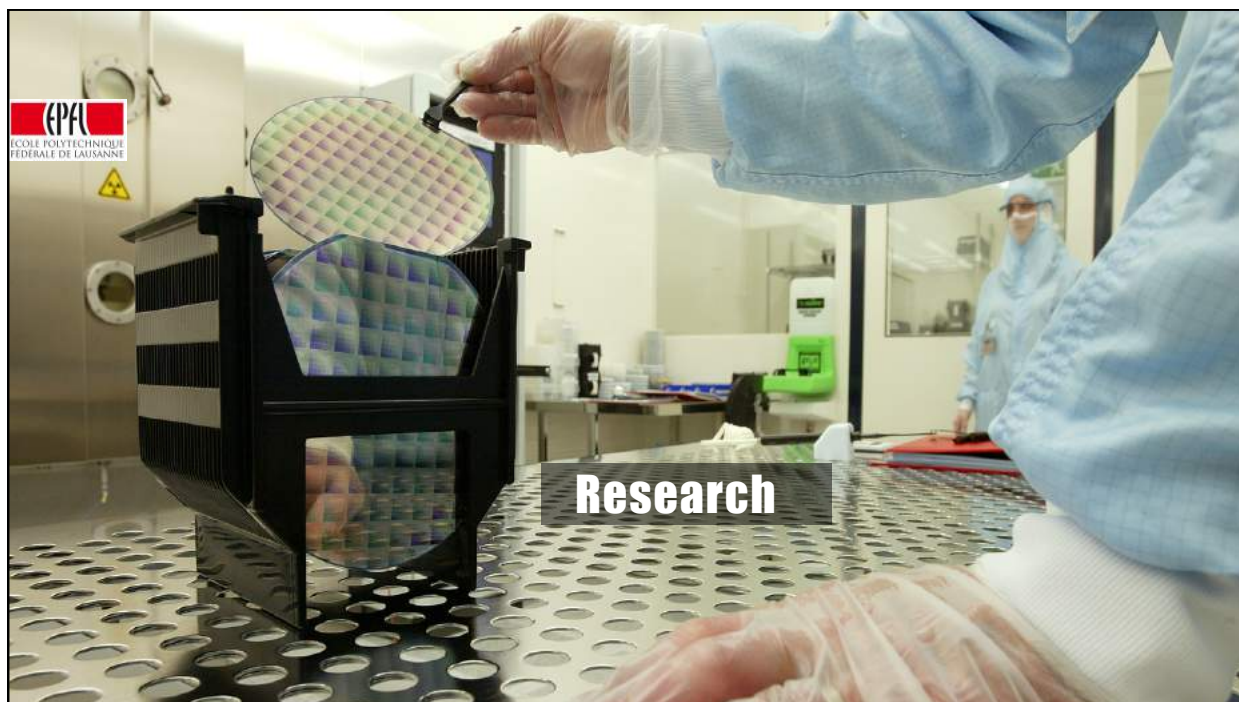
Space center
Various students projects are proposed by the space center



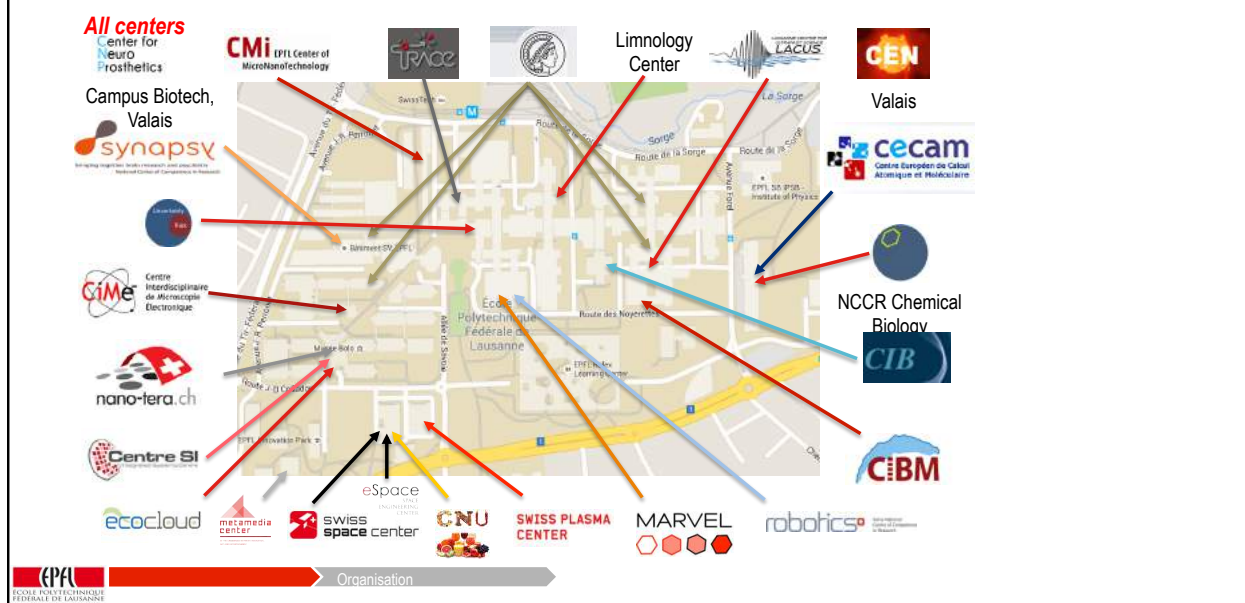
ME building monitoring
Monitoring of building – user flow and thermal management



IGEM
International competition of synthetic biology



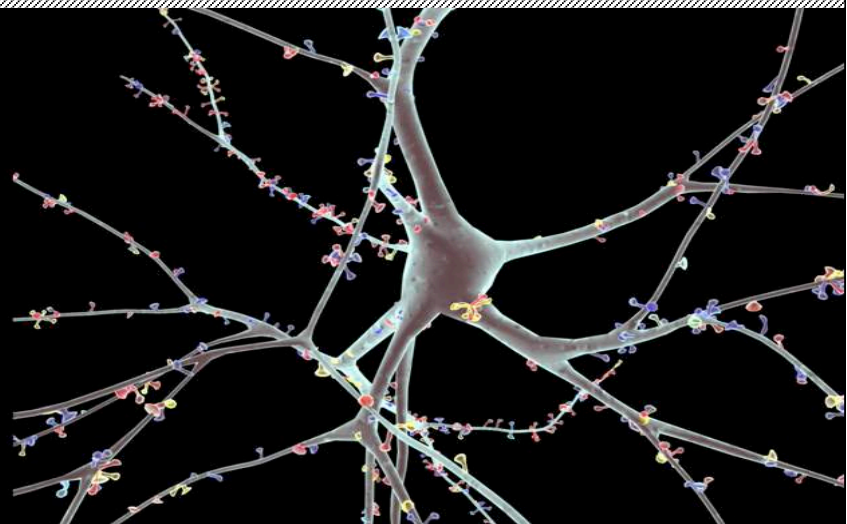
EPFL Centres and Core Facilities (Lausanne campus)



Human Brain Project

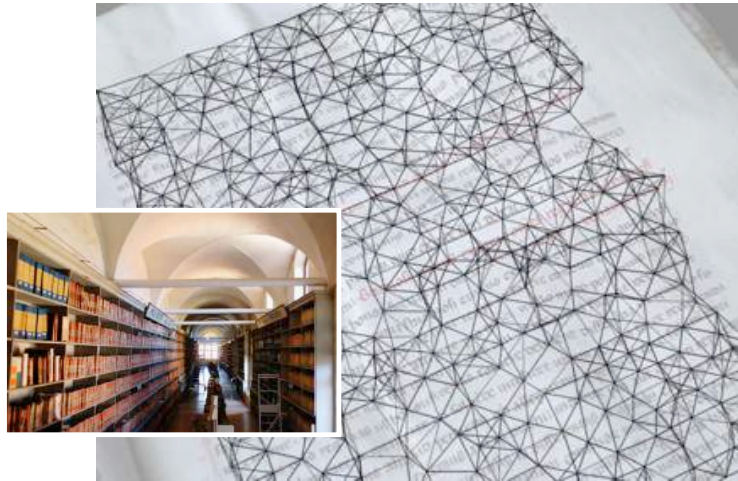
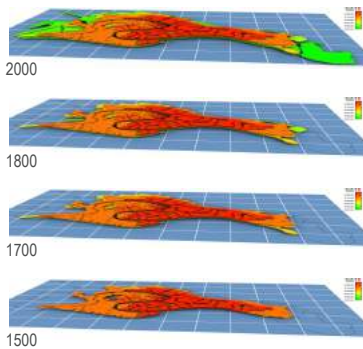
1 Billion Euros for

- New approaches for brain disease
- Insights into humanity
- Revolutionary computing technologies

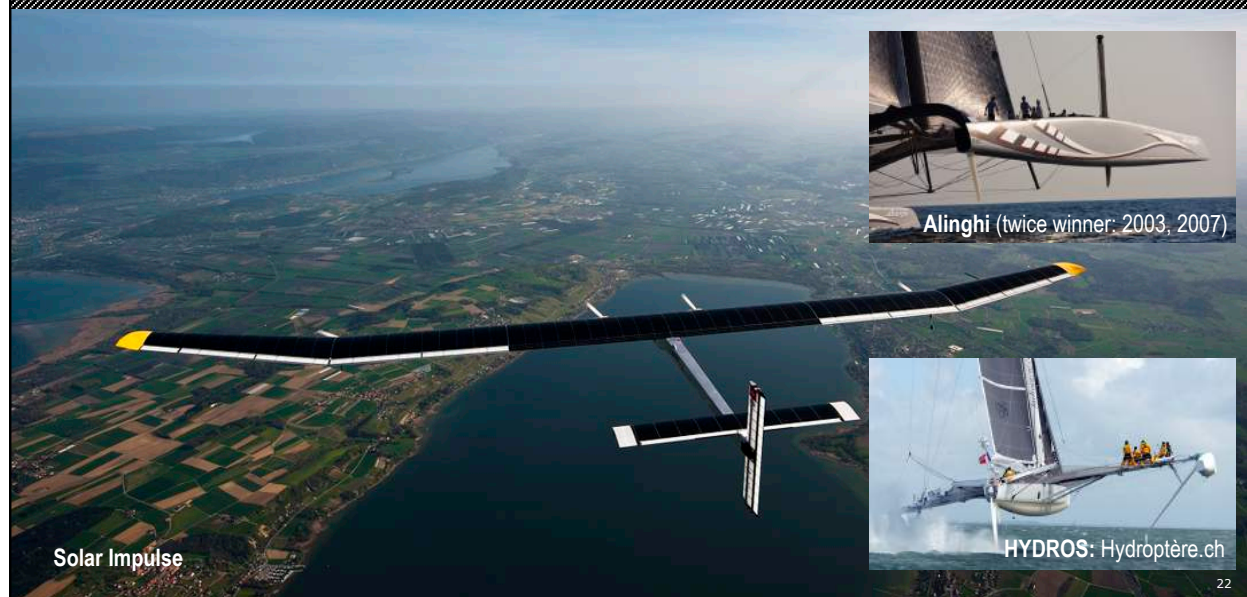


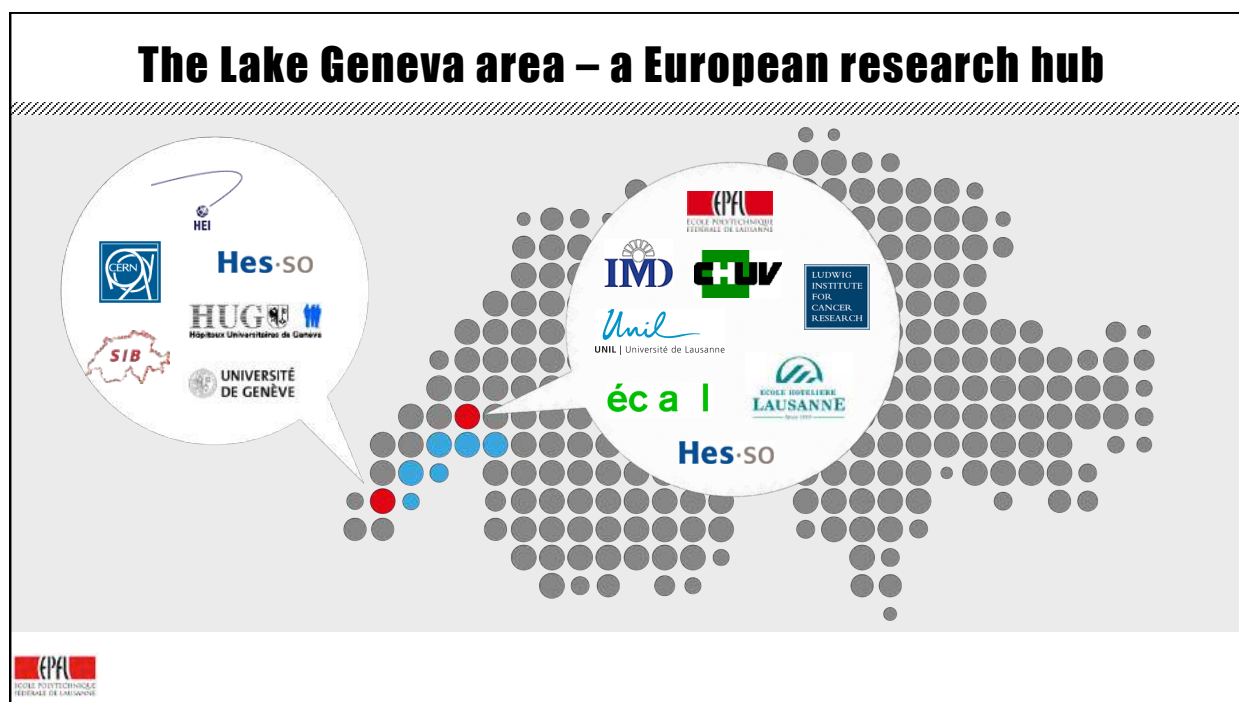
Venice Time Machine

- Big Data meets the humanities
- Digitization of 1000 years of archives
- History 2.0

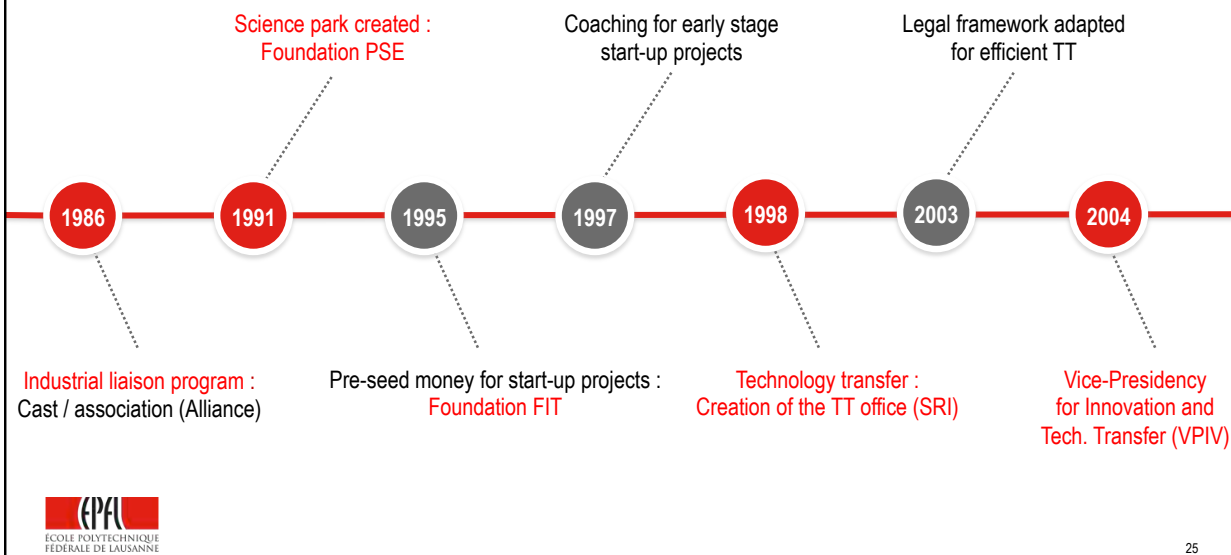


Technology Adventures

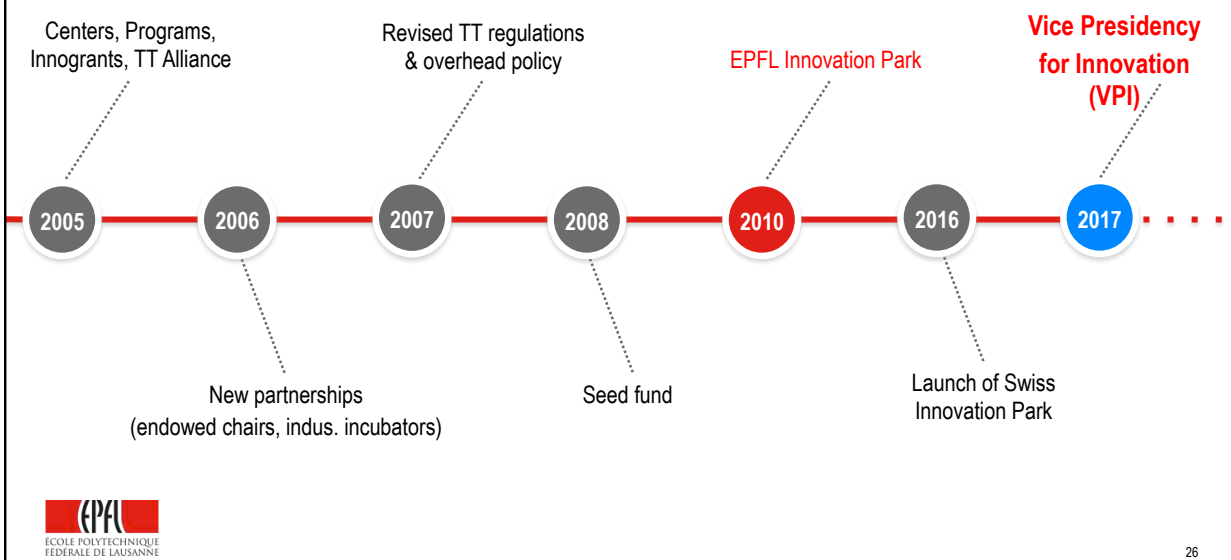




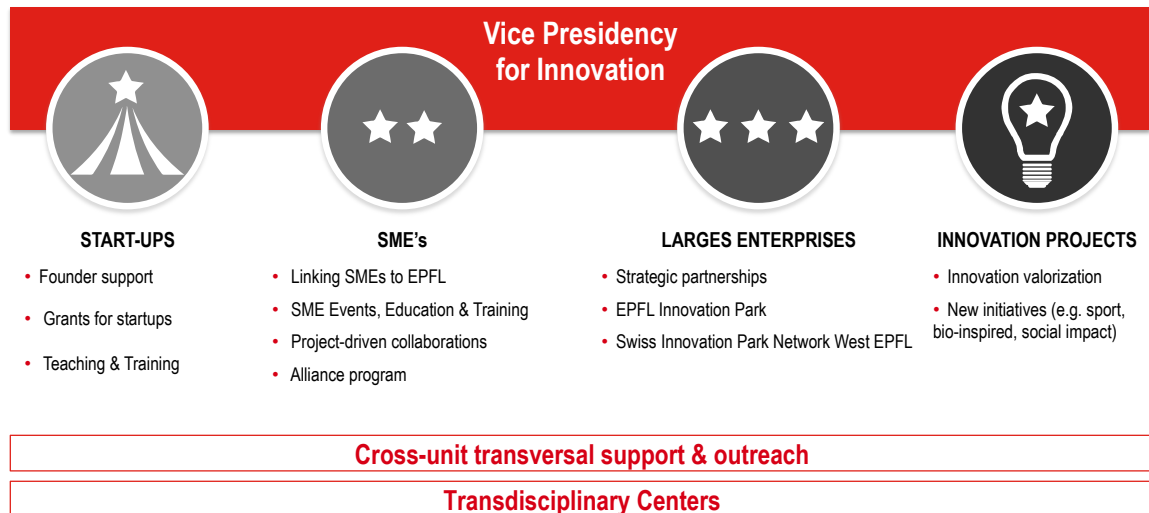
History: Early and continuous commitment of EPFL to innovation



History: Early and continuous commitment of EPFL to innovation

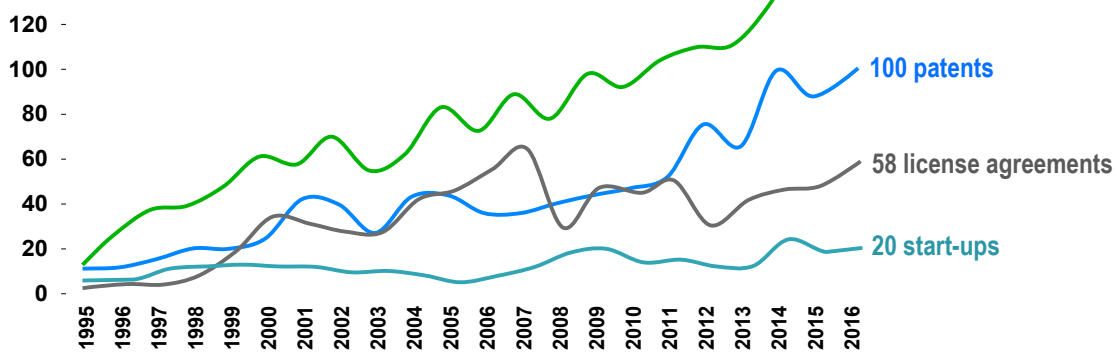


Full value chain of relationships with industrial partners

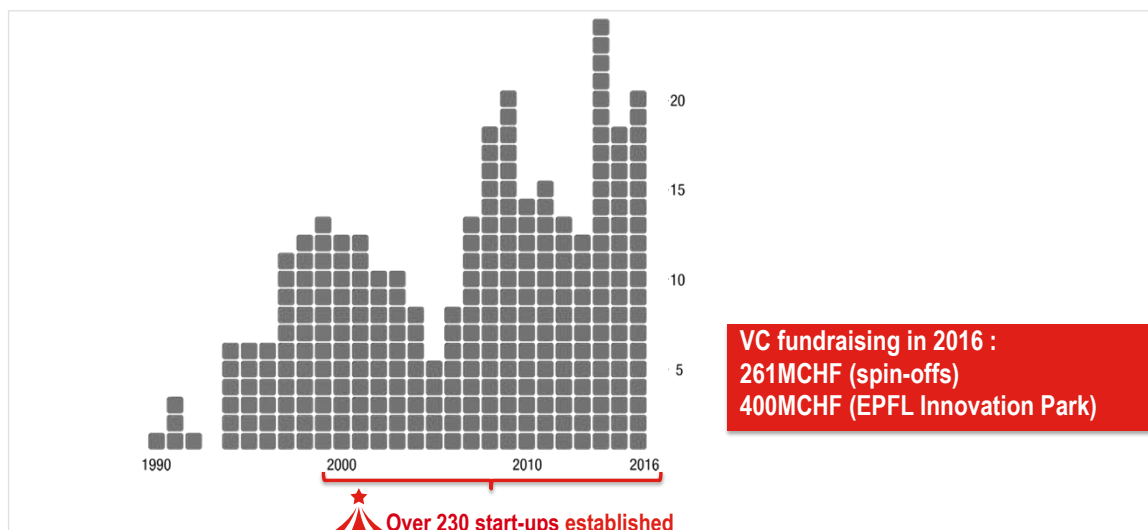


Some key facts & figures about Technology Transfer

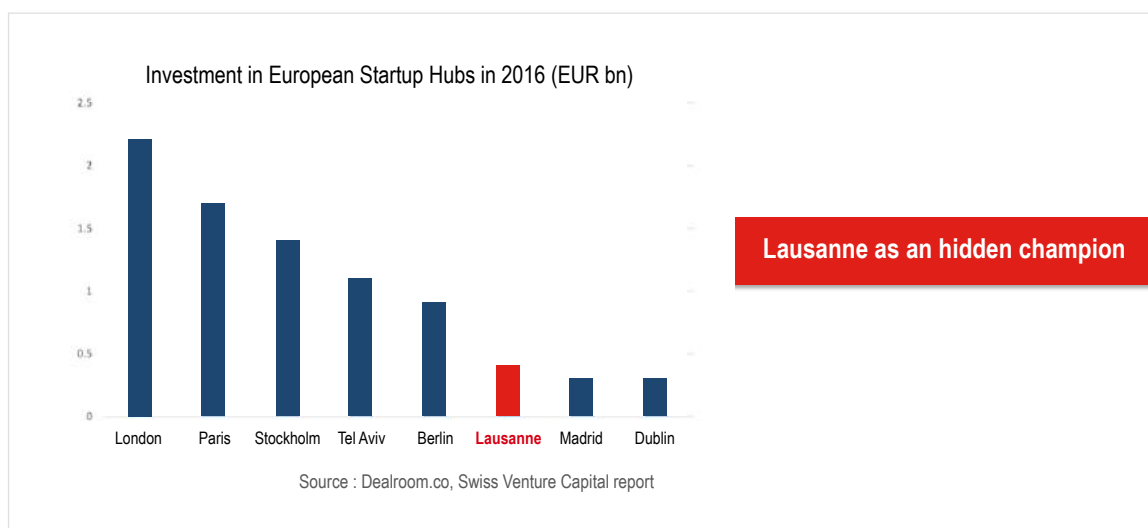
**In 2016 :
251 industrial contracts**



Start-Up development



Lausanne region – a start-up region !



A culture of start-ups – a few EPFL success stories



LIGHTBEND (ex Typesafe)

Scala Language used by Twitter,
\$41M since May 2011 with US VCs
Founded in 2010



FLYABILITY

Safe Drones for inaccessible places
Employs > 40 people
\$4.3M in 2016
Founded in 2014



BESTMILE

Cloud intelligence for driverless vehicles
Raised \$5M with Swiss
Angel investment,
entered the U.S. Market
Founded in 2014



G-THERAPEUTICS

Neuro-stimulation therapy for spinal cord injury
CHF 36M raised in 2016
Founded in 2015



NEXTHINK

Software for businesses
More than CHF60M with Swiss and French
VCs
More than 200 employees
Founded in 2004



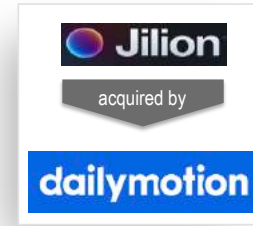
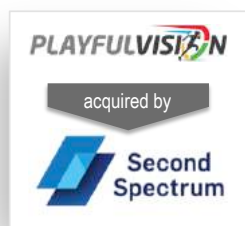
ANOKION

Controlling the immune system
Private investors injected over 33 MCHF
into the budding startup in 2014.



31

Recent exits of EPFL start-ups (2012-2016)



32

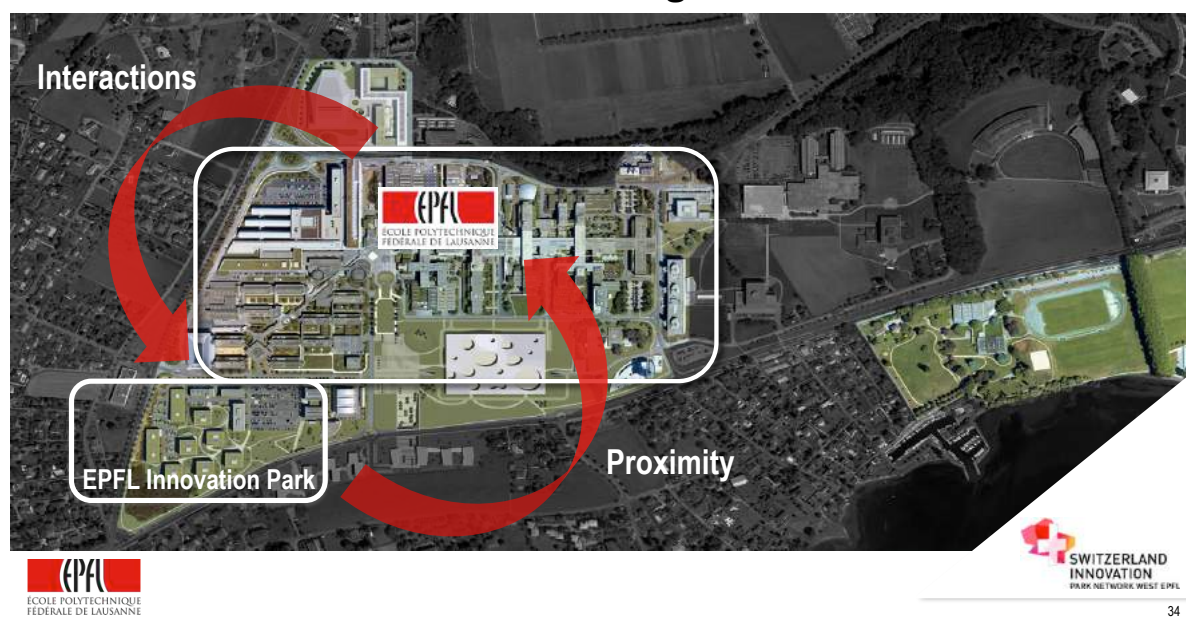
EPFL Innovation Park



EPFL
Innovation Park



EPFL Innovation Park: a model of integrated collaborations



EPFL Innovation Park

INFORMATION TECHNOLOGY • FINANCE • COMPUTING

HEALTH • NUTRITION

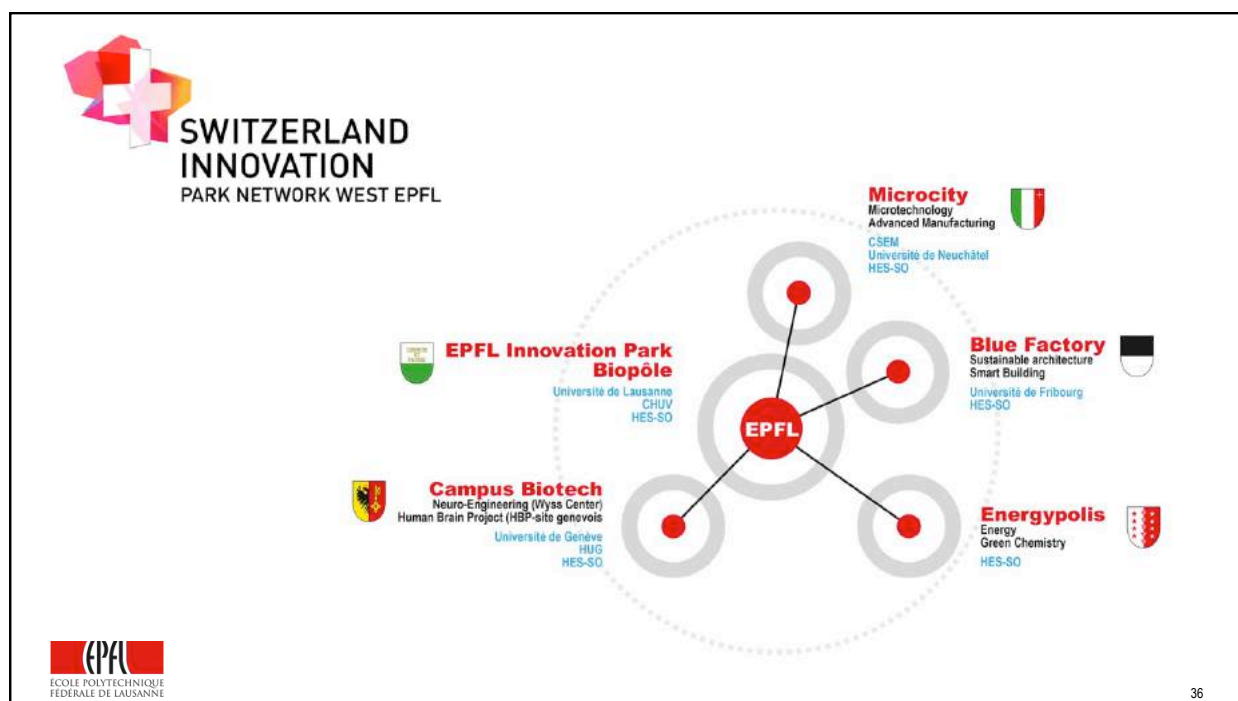
ENGINEERING • TRANSPORT MATERIALS

... and > 110 start-ups
> 30 start-ups in the Swiss EdTech Collider

EPFL
ÉCOLE POLYTECHNIQUE
FÉDÉRALE DE LAUSANNE

SWITZERLAND
INNOVATION
PARK NETWORK WEST EPFL

35



ArtLab: EPFL's Laboratory for Digital Culture

- 3 pavilions to bridge science and culture (Montreux Jazz Lab, Art-Sciences, Science/Brain Visualization)
- Public-Private Partnership, MCHF 35-40
- Place Cosandey, the EPFL main square
- International architectural competition (2012), Kengo Kuma (japan)



Campus

Pavillons