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## FACTSHEET

### Swiss Propulsion Laboratory SPL

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#### GOAL

We see a low cost access to space for science and economy as a key to success for an innovative and competitive society. So, the goal of SPL is to develop and test low cost and reliable propulsion components for small- and middle-sized space-projects.

#### VALUE

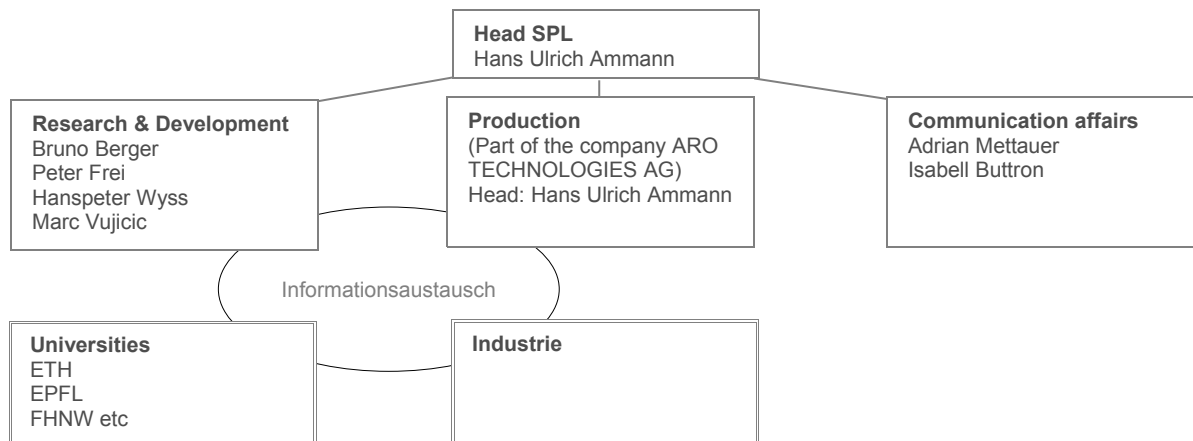
Switzerland has collected lots of space- or nearspace experiences since the fifties. For example with the development and the use of the ZENIT sounding rocket.

We believe, that it is worth, to continue with this tradition!

We do this with sound, scientific and engineering methods, in an open and ecofriendly way and for civil purpose.

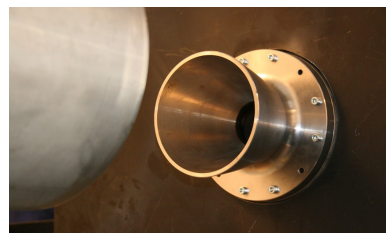
#### FACTS AND FIGURES

SPL was founded in 1998. Today a crew of 7 plus 6 students and 6 corporation employees work for SPL:



#### About our products

- Thrust of liquid engines (LOX / Kerosine): 3 - 30 kN
- Thrust of solid motors: up to 12 kN
- In Development: Engines up to 30 kN
- Additional products: Igniters, testbeds, turbines, gas generators, staging mechanisms, steam propulsion, consulting and engineering
- 2 registered patents



SLR10k-I develops a thrust of up to 1000 kg

#### About our indoor test stand

- Total weight of 100 tons (twice an empty Boeing 737)
- Thrust-limit: 100 kN
- Noise reduction better than 30 dB
- All systems are managed and controlled by an electronic system (proprietary development)



- 1 = Sound absorber  
2 = Test cell  
3 = Controllroom

#### About cooperation with university of applied science

Since 1998, coaching of some 20 students; 10 propulsion related master thesis could be realized.

### LETTERS OF INTENT / PROJECTS

- Project Ausroc 2.5 (Soundingrocket) with Australian Space Reserach Institute ASRI
- Project X-Bow (Soundingrocket) with the Swiss Space Center (EPFL Lausanne)
- Malaysia: Space Tourism Society - Malaysian Chapter (STS-MC)
- PROTAC (Bayern-Chemie); "Projet Propulsion Liquid"
- Microlaunch, Cambridge UK (cooperation Space plane)
- HMX, t/space USA (test stand)

### PARTNERS AND CONTACTS

- ARO TECHNOLOGIES [www.aro.ch](http://www.aro.ch)
- University of Zurich, devision of spacetechnology Prof. Olliver Ullrich  
[www.anatom.uzh.ch/research/researchgroupSpaceBiotecnology-1.html](http://www.anatom.uzh.ch/research/researchgroupSpaceBiotecnology-1.html)
- Australian Space Reserach Institute ASRI  
[www.asri.org.au](http://www.asri.org.au)
- Space Tourism Society – Malaysian Chapter
- FHNW (University of applied science NW-Switzerland) [www.fhnw.ch](http://www.fhnw.ch)
- Deutsches Luft- und Raumfahrtzentrum DLR  
[www.dlr.de](http://www.dlr.de)
- SpaceTravellers [www.space-travellers.de](http://www.space-travellers.de)
- Space Center ([EPFL School of Enigineering](http://www.epfl.ch))  
<http://space.epfl.ch>
- Continuum Aerospace  
<http://continuumaerospace.com>

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