

# LOST IN TRANSLATION

**Are Swiss Universities of Applied Sciences too entrepreneurial to promote science-based start-ups?**

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## STARTING POINT: TOWARDS THE «ENTREPRENEURIAL UNIVERSITY»

(Source: Lepori & Müller 2016)



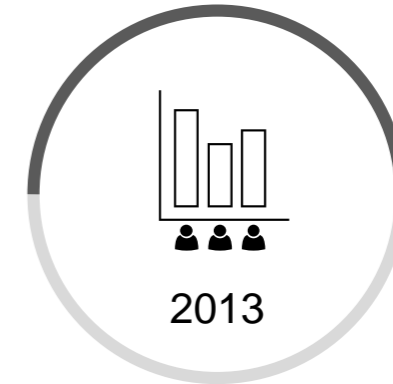
1995

The performance mandate of research is laid down by law.



2000 – 2013

R&D expenditures are increasing from less than 100 million CHF to more than 550 million CHF



2013

Three quarters of R&D expenditure (76%) was spent in the four specialist areas of architecture, technology, chemistry and economics

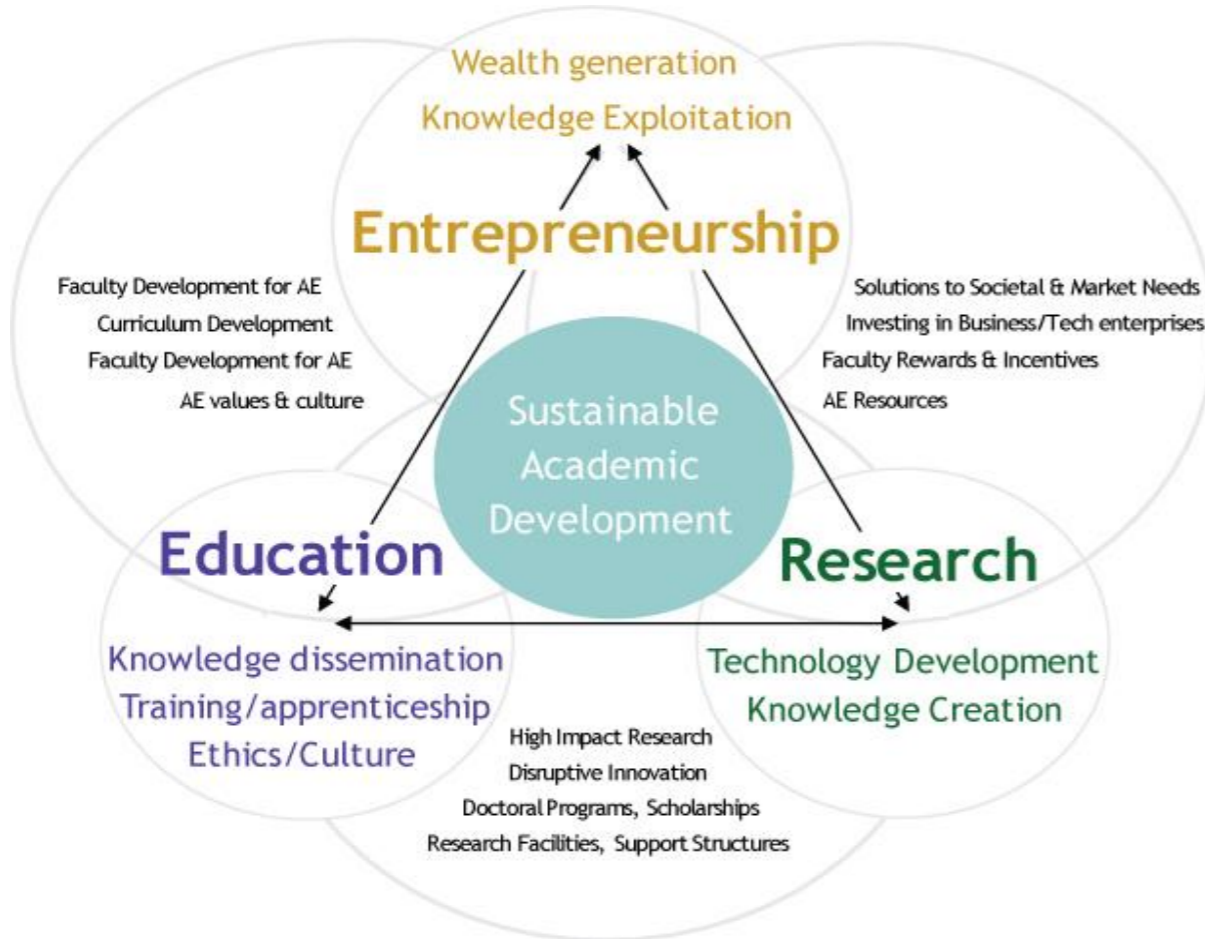
*“Today, universities generally foster entrepreneurship and start-up activities of researchers and encourage students to pursue entrepreneurship education”*

(Rasmussen/Gulbrandsen 2012; Díaz-García et al. 2015).

Social Work	Design
Applied Psychology	Economy and Consulting
Health	Agriculture and Forest management
Applied Linguistics	Chemistry und Life Science
Music, Theatre and other Arts	Architecture & Construction
Facility management	Engineering and IT

# Theoretical Perspective & Research Questions

## Innovation and entrepreneurship

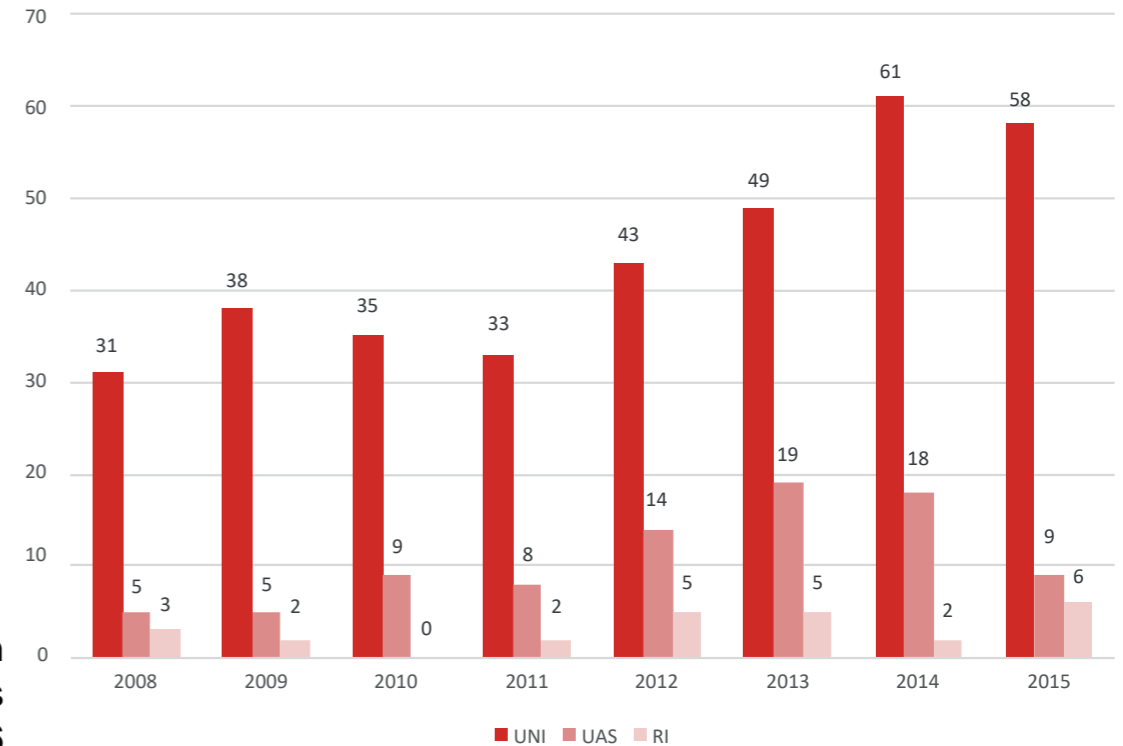


Number of Start-up/Spin-offs founded which were based on Licensing or Contractual Transfer of an Institution's Technology SWITT-REPORT, 2016

## The 'Entrepreneurial University'



UAS show many characteristics of an "Entrepreneurial University" - with one important exception: **The spin-off rate is very low!**



## Methods / Design



### Federal Statistical Office

- Data from 2005-2016 on the financing of the R&D budget at the seven Swiss Universities of Applied Sciences
- Financing of the R&D budget at the level of the sub-universities



### TTO questionnaire

- I. Framework conditions for Startups/Spin-offs ( $N=10$ )
- II. Support for scientific Start-ups/Spin-offs ( $N=3$ )
- III. Entrepreneurship Education ( $N=4$ )
- IV. Degree of professionalization of evaluations ( $N=8$ )
- V. Female Entrepreneurship ( $N=6$ )



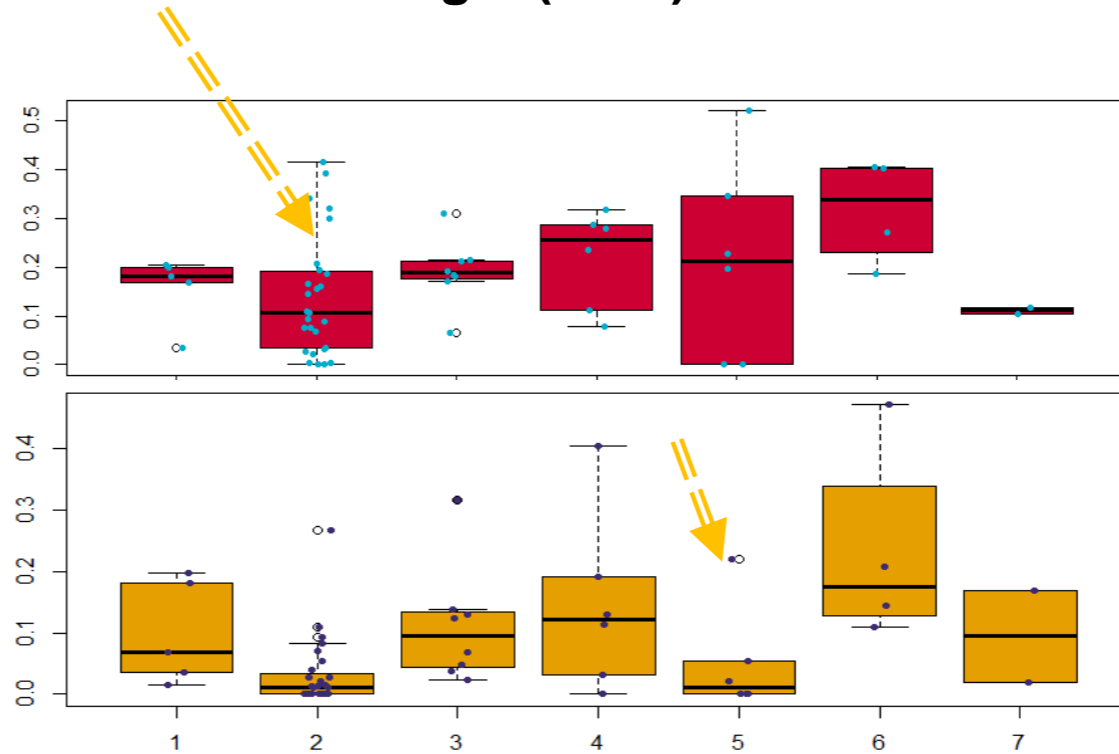
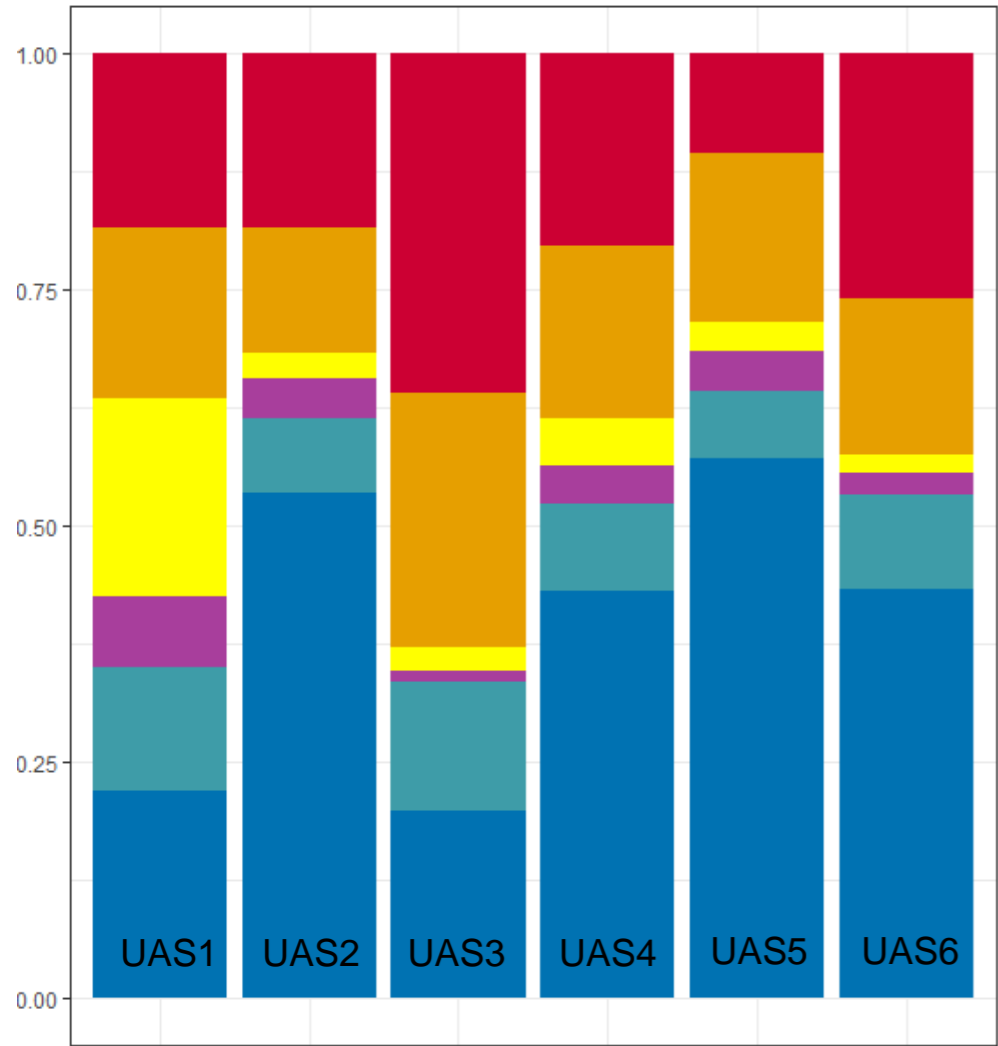
n=6 (7 UAS)



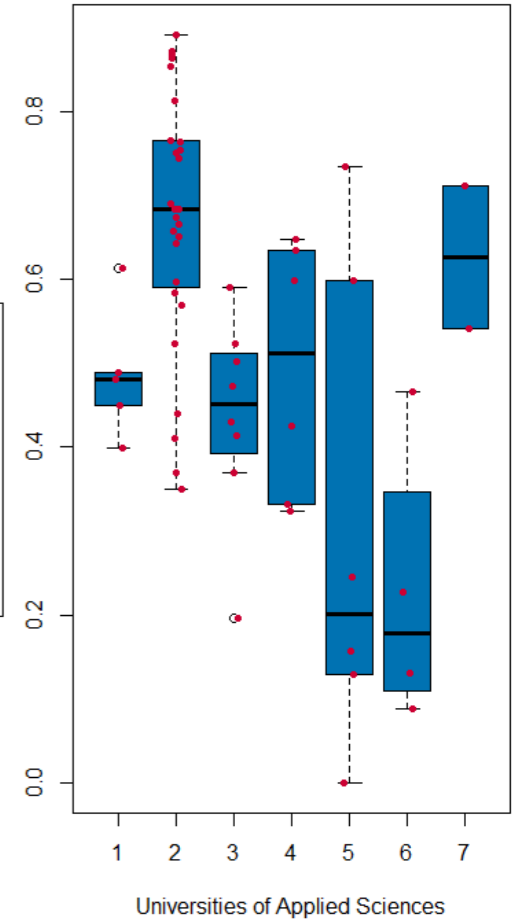
### Qualitative data - interviews

- Data from focus groups with 12 knowledge transfer officers from seven public UAS and the ETH Zürich ,
- Six expert interviews based on a guideline with representatives of business incubators who either belong to a university of applied sciences or work closely with one

## Results I - Comparison of revenues on the R&D budget (2016)



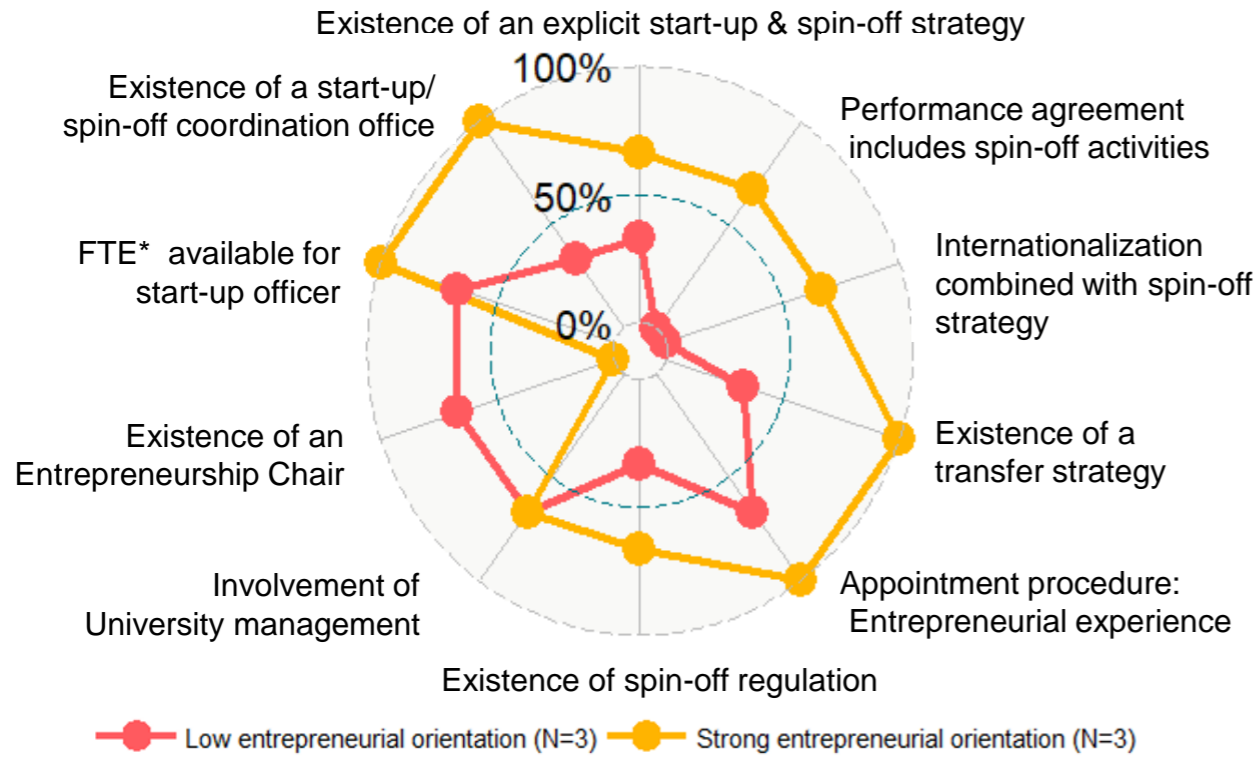
- Third-party funding (mostly contract research for private companies)
- National Agency for Economic Development (Innosuisse)
- International Grants (European Union)
- Swiss National Science Foundation
- Financing by public authorities (Federal government)
- Financing by public authorities (cantons)



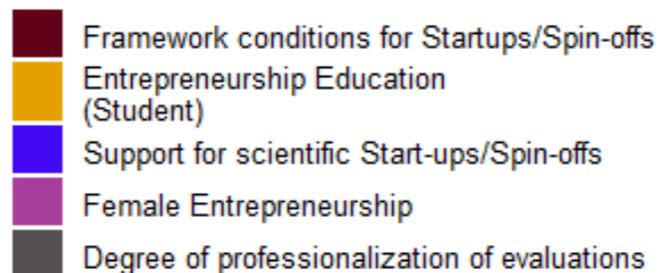
Source: BFS, R&D 2016

## Results II – TTO Analysis

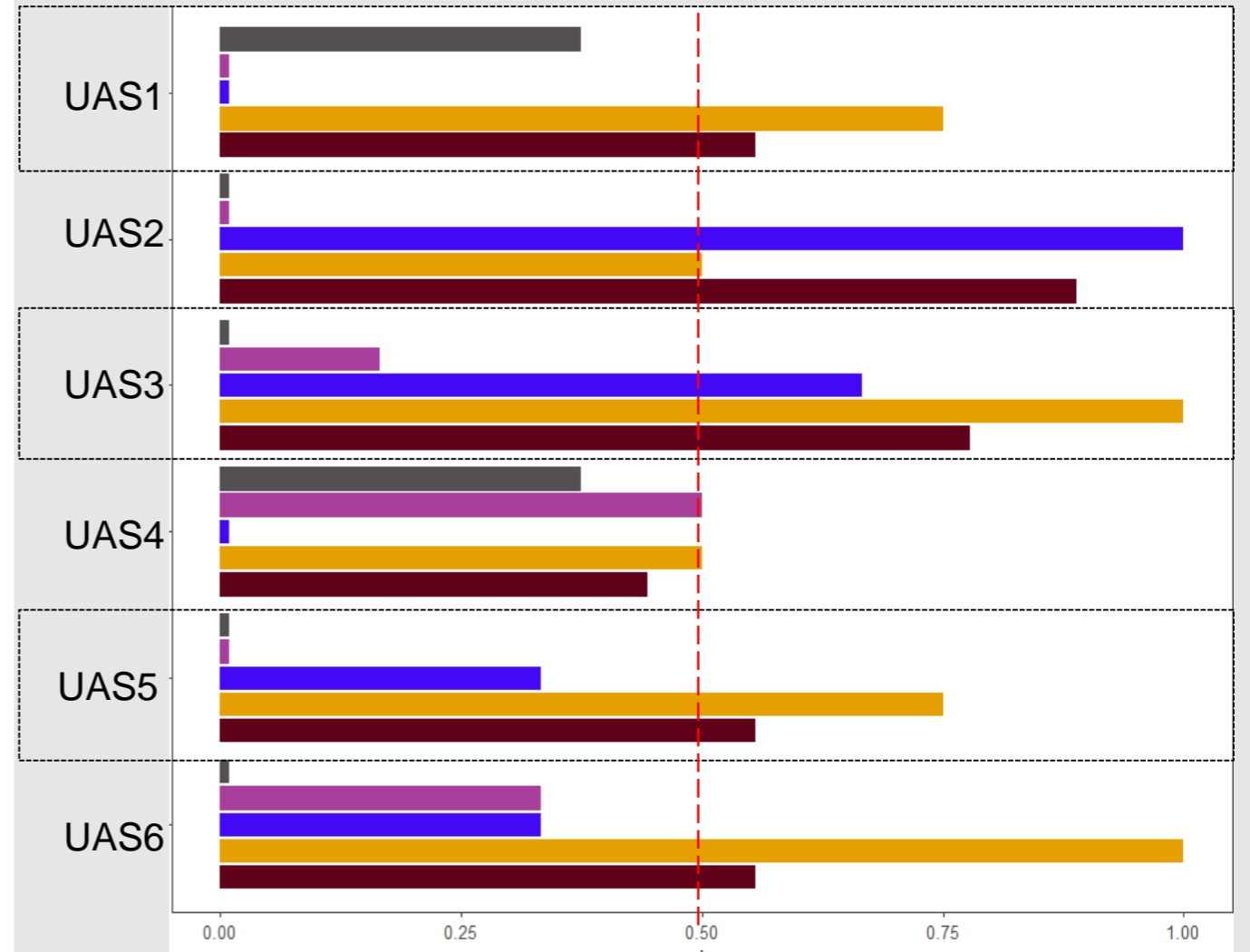
### 1) Example: Framework conditions for Start-ups/Spin-offs (N=10)



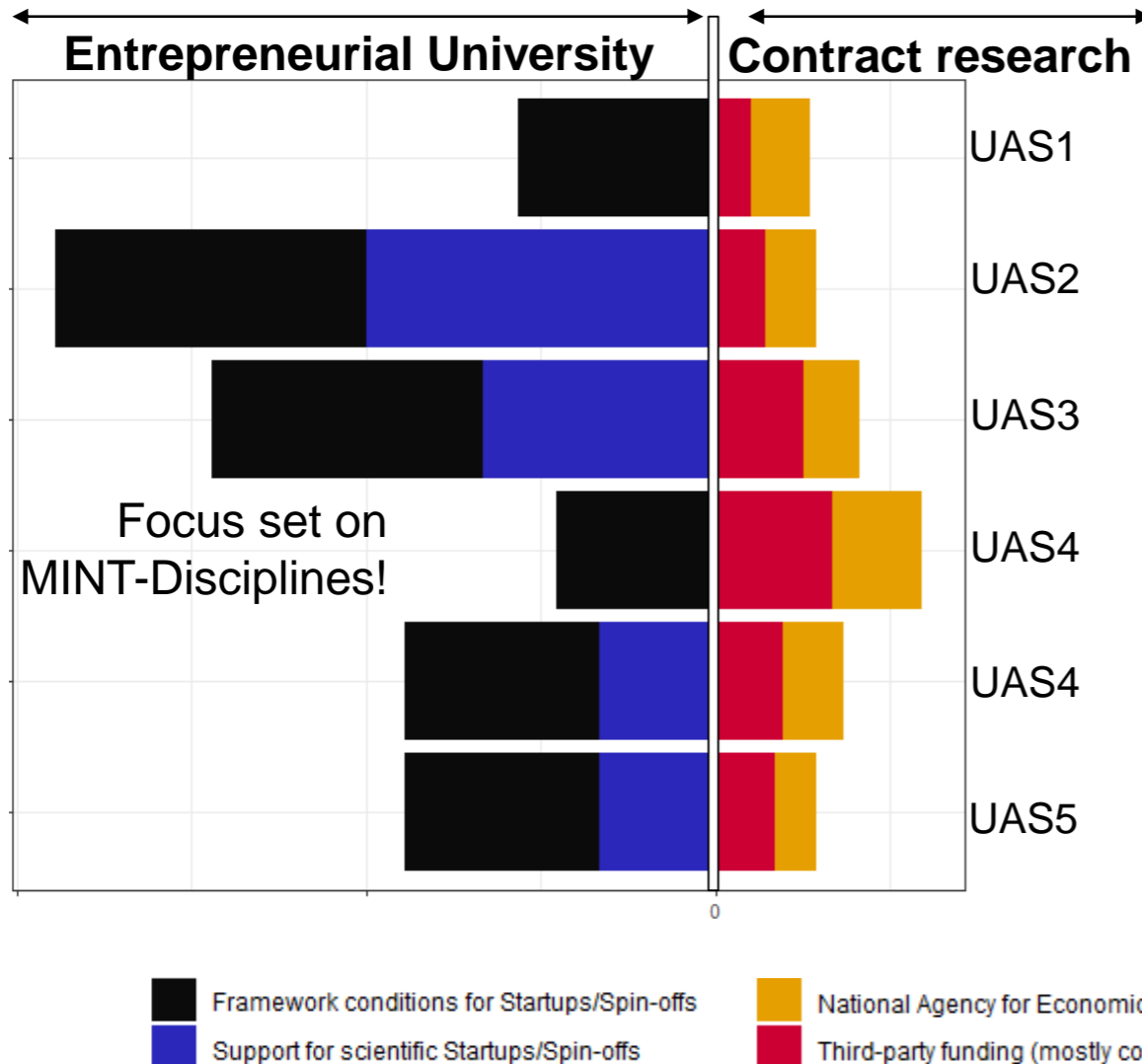
FTE\*- Full time equivalent



### 2) Overview of the Start-ups/Spin-off- environment



## Results III – Interviews



## INTERVIEWS

Interviews with focus groups and guideline interviews with experts, showed the following results:

- Research institutes, which primarily act as extended workbenches for companies and carry out contract research, find it difficult and costly to generate IP for spin-offs and to support researchers who want to implement spin-off projects
- Those responsible for start-up support at universities of applied sciences therefore often focus their support activities, including entrepreneurship education, on student start-up projects – also for lack of alternatives

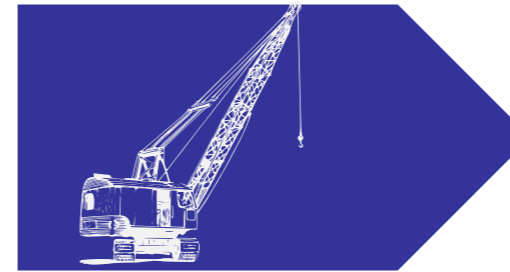
## Conclusions

In many respects, universities of applied sciences and their research institutions are certainly more entrepreneurially oriented than many universities and their research institutions.

However, they can apparently hardly use this strength to initiate more research-based spin-off projects than universities.

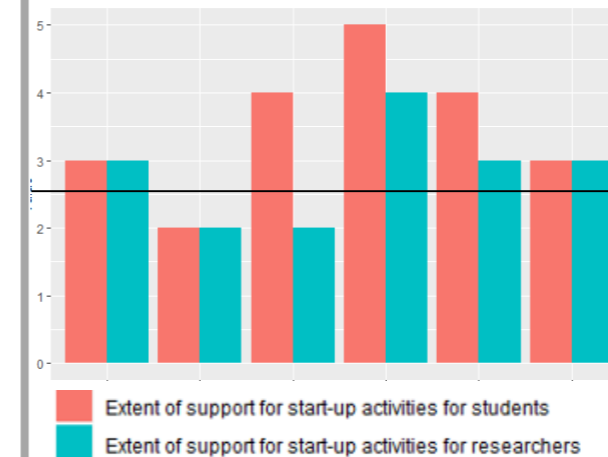
The freedom and opportunity to take promising, albeit risky, paths of exploitation within knowledge transfer, therefore also seems to be a key element for the development of a sustainable entrepreneurial university.

## FUTURE STEPS

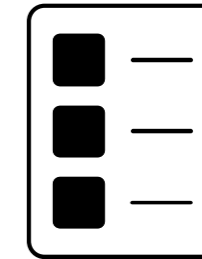


### TTO

Problem awareness?



*"The offers are only for students."  
TTO-office UAS2*



## SURVEY

Intention to set up a business and funding conditions in the individual departments  
(**Start->** October 2018)

**We need more, better, and more sensitive DATA on Department-Level.**



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