

IAF HUMAN SPACEFLIGHT SYMPOSIUM (B3)
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A REDEFINED ASTRONAUT SELECTION PROCESS FOR LOW COST COMMERCIAL SPACE
FLIGHT MISSIONS**Abstract**

Space travel is mostly dominated by state-wide organisations such as *NASA* and *ESA* with their own regulations and processes. The entrance of new, commercial actors into the space traveling market is as imminent as needed in order to disrupt the market and generate competition to reduce the costs. As the slogan of the 69th IAC states, the goal is to *involve everyone*, such as countries that prior to the availability of commercial carriers were not able to afford their own space program. Now, individual per-customer space missions can be designed and conducted with the assistance of companies such as *SpaceX* and *Boeing* (among others). This, however, induces the need for counselling services as to how to select the appropriate astronaut candidates in a time- and cost-effective manner.

Driven by the private German initiative *Die Astronautin* and based on the currently accessible information ¹ from *NASA*, *ESA*, *CSA*, *OeWF* and *BBC Astronauts: Do you have what it takes?* an overview of selection requirements and processes was analysed. Using predefined metrics, the processes were compared to identify bottlenecks and hidden costs. The data was then used to define a new, modularized selection process.

The comparative analysis showed, that the processes utilized by the different actors are similar in structure, but differ greatly in time spent on the overall selection process. Possible cost reductions should focus on the initial stage of selection (application phase). This could be achieved by a more strict set of initial requirements and a timeline with predefined stages of reporting.

The new, modularized selection process derived from this is based upon the assumption, that for different mission, different requirements for the astronauts and therefore the astronaut selection apply.

The new selection process has been built in close collaboration with experts on the field.

¹public domain