Reflecting on Firefly Fusion Internship

Kasper Holst, 10.07.2024

There were three primary criteria that I had for choosing where to do my internship. First, it needed to be aligned with my mission; to contribute to a sustainable future. This criterion can be further broken down into two levels; to what extent the mission of the company itself contributes to a sustainable future, and the impact my contributions could make.

Secondly, the company must be a startup, or at least possess startup characteristics. Startups sprout in environments where the market standard is unable to innovate (innovator's dilemma), which often leads to technological growth. I must admit a personal interest in startups as well, as I am more motivated and driven within a startup, than in a large corporation, as this internship has proven to me relative to my previous internship. For these two reasons, I see my career in the direction of startups, and want to gain experience accordingly.

The third criterion is learning. While this is mostly driven by my ability and willingness to learn, it also brings into play whether the environment fosters learning and growth.

There is no doubt that Firefly Fusion is on a sustainable mission. As for the internship's impact, I reflect on positives, though there is undoubtedly room for improvement. I have approached the last few months with a "getting my hands dirty" -approach; focusing on tasks that must be done to progress, yet do not necessarily carry a large impact. Creating the investor database is one example of this, even more so the gathering of information from different investors. Attending MassChallenge to ensure our presence at the workshop is another example. In turn, these "dirty" tasks have provided a great return in learning, as I will get into later, talking to people, and making connections. For such tasks, I reflect fairly positively on my contribution. Feedback to myself is to be even more open on events such as MassChallenge; connecting with even more interesting people and startups – give more of myself.

For constructive feedback, I would have liked to try reaching for more impactful tasks. One particular aspect in which I did not deliver to my expectations was in terms of business plan contributions. While I did draft my thoughts and suggestions on it, I was not pleased with the

result. What I look positively back on in terms of going beyond what was initially expected was the participation in events, which included having a chat with Justin and Richard Pitts - Leader in Experiments and Plasma Operations at ITER - getting an introduction leading to a €500k investment offer, and pitching the project to about 30 people at TNW – a challenging and cool experience.

That said, an internship is supposed to be a training program, which in many cases ends up being micromanagement of the intern. This was certainly not the case in Firefly Fusion. I got to take responsibility and autonomy of my work – and was also expected to do so – which I managed fairly alright, from my perspective. This is much appreciated.

For the second criterion, Firefly Fusion has certainly given me the startup experience I was looking for. In addition, it is different from most startups, which makes it all the more interesting and challenging.

To summarize the internship's learning in one sentence, I have gotten to experience nearly all critical business-related aspects of an early-stage startup, from fundraising to how to shape the strategy and business plan of a startup. While my contributions to the business plan were not to my expectations, I nevertheless spent March and April exploring it, learning in detail how to compose a startup's business plan. Learning from comparative markets, I have analyzed the semiconductor industry, particularly ASML and Nvidia – two companies highly impactful in today's global economy, and I have gotten the notion that their success provide insight into what may be key success factors for other deep-tech and hardware startups.

From April until July, the primary focus has been on fundraising. I have had no prior similar experience, and I have had no courses covering this. Thus, apart from exploring fundraising material in my spare time, it was the first time I got to dive into this critical aspect of a startup. Working on the investors' database allowed me to learn how to organize a fundraising process. Identifying investors helped me understand the different parameters at which they operate, and how to identify a potential good fit. I have spent time at events, where I have gotten the chance to talk to investors, founders, corporates, and many people curious about the project. Working on feedback from investors, I have gotten to directly understand what investors are looking for in startups, particularly deep-tech startups.

A significant part of the growth I have received is from internal operations and discussions. One aspect that I consider particularly valuable of Rustem's leadership style is his constant focus on feedback, along with Justin's willingness to answer and discuss questions I have had on fusion. While I have been aware of the importance of feedback from the market, I had not fully appreciated the importance of feedback internally. From this experience, it has become apparent to me that feedback is the fundamental building block of an environment fostering growth and learning.