Womanium Global Quantum Computing & Entrepreneurship Program

Cryogenic Entrepreneurship Challenge

By now, you have seen how cryogenic measurement systems work and the role they play in the operations of superconducting quantum computers. While the demand for ultra-low temperature facilities grows, not all labs and startups can afford the costs, space and time to procure and install their own dilution refrigerator (DR).

Now, develop a Dilution-refrigerator-as-a-service business model. With this model, anyone who needs a DR can access it with a service model without having to pay upfront for any equipment. This would be analogous to provisioning servers on AWS Cloud Computing versus buying, owning and operating on-premise servers.

To build this model, some items you will need to consider are:

- your target geography
- what the pricing is based on (hours, required customization, measurement support, etc.)
- feasibility of using existing DRs or modified designs
- the fastest way to start the business in 1-5 months. this means you'll have to decide if you need to design a new, better DR or rent a DR from an existing lab/original equipment maker or buy one and run it yourself. Can current DRs in the market be adapted to the shared model?

The goal is to build a pitch deck to pitch this idea before mock investors. The deck should clearly include:

- The problem you're trying to solve (e.g. high upfront costs of DR now)
- The solution (the DR-as-a-service model)
- How it's technically feasible
- The market for this service - Who are the customers? What new

markets will open up that traditional DR could not reach?
- Barriers to entry
- Other competitors
- Revenue forecasted and unit economics
- How much money are you raising

Bonus points if you:

- Speak to real DR users about their issues and collect feedback on your business model
- Get verbal agreement from a customer for a pilot