Biocult App for controlling Reocto

TL;DR
Develop a mobile app to show data from sensors and control actuators of a bench-top bioreactor.

What
We are developing Reocto, a device which maintains the functionality of commercial bioreactors while at the low costs and simplicity of flask processes. Our solution lets you measure and control: Temperature, Mixing, Substrate addition, Sample taking, OD, pO\textsubscript{2}, and pH. Low cost, quick to use, fits on any benchtop. Comes with a user-friendly app to track and act quickly. The multi-unit system allows you to run several experiments at the same time and control all of them in real time over the phone.

This app Biocult, not only allows for device use but is a gateway to a worldwide community that adds infinite value to the product, as a strong community will facilitate: discussion forums, peer support, idea generation, brand engagement, networking, collaboration opportunities, mentorship and more. What the subscription offers to customers:

**Control**
- Design the bioprocess.
- Control all the variables.
- Measure, visualize and react to what is happening in the Reocto.
- Automate, program and set rules for the different actions.
- Get alerts and notifications - don’t miss what’s important.
- Analyse results on the go, and share them with others.

**Support**
- Get automated alerts/suggestions
- Get specialised feedback/curation from experts
- Take part and interact with the community
- Easily share your fermentation data with peers.

**Outcome**
Mobile application which can control motor(s), pumps, lights, and read sensors. Should show data, and provide action buttons to control the reactor’s features. Other functionalities will be determined together with the specific team.

[An unfinished mockup video of the app.](#)

**Conditions**
Any outcomes produced by the student team under and within the framework of the Software Project and any transferable intellectual property rights related thereto, incl. all the economic rights of the author and rights to protect intellectual property are transferred to the Biocult Group or its members from the moment of creating them.

**Benefits**
Longer-term collaboration is possible if the team is interested. Other benefits could be discussed.

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