

2020 Wearable Technologies Workshop Challenge Request

Challenge Title: Fog-proof Snow Mobile Helmet

Organization Name: Klim

Team Assignments Available: 5

Summary of the Challenge and Team Project

Background:

At Klim we are always pushing the envelope to make the most technically advanced motorsports apparel. Our consumers ride their machines in extreme conditions around the world and they expect their apparel to be as functional and durable as their machines. Thru the endless pursuit of innovation Klim apparel is engineered to exceed their expectations.

This challenge is directed at the snow mobile trail rider. This is a highly aerobic activity done in extreme cold conditions. The rider is exposed to the elements and wears a full-face helmet to protect their head and face from both the environment and impact (in the event of an accident). The result of the aerobic activity is increased moisture in the exhaled breath. This high moisture content, the confined area in the helmet and cold temperatures create an environment where the inside of the face shield quickly fogs. Anti-fog coatings and dual pane lenses alone do not solve the problem.

Problem statement:

Design a solution to prevent the inside of the helmet visor from fogging.

Important design considerations (These can be discussed, and possibly negotiated, in more detail after the Team has been assigned):

- Universal fit.
- Does not inhibit the donning or doffing of the helmet.
- The solution cannot invalidate the helmets testing certification.
- Cannot compromise weather protection.

What funding and/or resources can be provided to each Team? (The details of the payment arrangements must be negotiated with the Team.)

3 full face modular helmets per team.

Deliverables (the final product you expect the Team to provide – such as a report, garment, user evaluation, ...):

Working prototype with lab validation.

How will the results be used?

Used to inspire the inhouse design team of a different way of solving the problem.

What deliverables (if any) do you want transferred to you at the end of the project?

Klim will retain the working prototype.