



Wearable Technologies Workshop Challenge Request

April 29 & 30, 2019

hosted by NASA at the Johnson Space Center

Challenge Title: Self Adjustable Waistband of Any Trouser, Jeans, Shorts

Organization Name: VF Corporation

Team Assignments Available: 1

Summary of the Challenge and Team Project

Background:

VF corporation is an apparel and footwear company with 30 plus brands under its umbrella including The North Face, Lee, Vans, Wrangler, Timberland, Dickies etc.

Problem Statement:

One of the categories of our product line is Bottoms that includes everything – pants, jeans, shorts, leggings, jeggings etc. All these products have one component that is a waistband. The function of waistband is to hold the garment at the wearer waist properly and not let it fall down. Nobody wants that to happen 😊. Also waistband has to be comfortable too. The problem is that a consumer waist changes in daytime between various meals as well as sitting, standing, squatting postures etc. The existing waistband further needs a reinforcement sometime of an external belt to hold the garment, not preferred by many consumers. Sometimes in different postures or time of the day, a wearer has to tighten, loosen or adjust the waistband or pull the pant up when he/she is sitting and when they stand up as the garment slips down during sitting/squatting.

We are looking for a self adjustable waistband that can keep up with all day changes from eating to sitting, squatting, running walking and keeps the garment at its place and make the wearer comfortable without any restrictive feeling.

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

The waistband should be able to fit without changing the existing aesthetic of the garment. It should not look odd. It should match with color, texture of the rest of the fabric. It needs to be comfortable, it needs to be seamless, frictionless and user friendly. The solution can include sensors, electronics keeping in mind that it still needs to be comfortable, user friendly.

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

It can be further negotiated, but the budget would need to be maximum \$2000.00 for all expenses including travel.

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

Some prototypes, ideas, presentation as path forward. Also ideas about suppliers, integrators etc

How Will the Results Be Used?

The results may give some new perspective and solution ideas to an identified problem.

What deliverables (if any) are to be transferred to the organization at the end of the project?

We would like all deliverable transferred to us at the end of the project.