



INNOVATION COUNCIL

Introducing Innovation Council Member All-Weather Roads Engineering

Introductions.

My name is Emmanuel Mothabi, and I am the founder of All-Weather Roads Engineering in South Africa.

What is the story of your business?

All-Weather Roads Engineering was created to commercialize a novel, resilient asphalt binder solution. I wanted to solve the major challenges relating to potholes in the tarmac on roads in Witbank, in Mpumalanga Province, where I was living at the time. Witbank is a coal mining town, so heavy laden trucks were causing a lot of damage on the roads. Over time, this resulted in endless pothole formation on the roads - and countless deadly road accidents for motorists.

What have you invented?

A double-confined road structure (it is impermeable to groundwater and sea level rise, as well as to rising water levels due to rainfall) that is made up of engineered subgrade (that is, resilient to freeze-thaw actions in cold regions), subbase (secondary load-spreading layer) and base (main load spreading layer). I am proud to have solely invented this innovative road material and innovative construction approach.

What impact will your innovation have on society?

My innovation will result in safer roads that are free of potholes and ruts, and that remain passable and safe even during extreme weather events. This will generate cost reductions for the government in road maintenance since AWRE resilient roads will be longer lasting regardless of the climatic conditions (warm regions and cold regions alike can benefit). I am also improving road safety.

Has IP played a role in your activities so far?

We have already applied for IP rights. Our company is carefully managing how the innovation gets rolled out worldwide, with the approval of the inventor (me). We are developing strategies to commercialize the innovation in other countries; by five years from now, our business will have splits worldwide, to help with its organic growth. It is very challenging for an SME to effectively use IP rights, but we are confident that with the help of our incubation partners and other experts in IP, it will get easier.

How do government policies affect what you do?

I think that government policies in South Africa are very conducive to innovation. I have used the CSIR (Council of Scientific and Industrial Research) laboratories and technology platforms to develop the innovation. Also, government backed "innovation hubs" in South Africa have long worked with our start-ups to get through the "valley of death" with their innovations. I am looking forward to creation of the Start-up Act, which should make it easier for start-ups to grow and scale.

Click [here](#) for more information about All-Weather Roads Engineering. To learn more about Innovation Council, please visit our [website](#) or contact Jennifer Brant at jbrant@innovationcouncil.org.

