

## **Abstract Rick Passenier**

In today's world we are hooked on plastics... and for the right reasons.

Now that the persistence of plastics becomes a real threat to the quality of life and our impact so visible, we try to retrofit our plastics usage into a circular economy.

Nature, however, presents us with circular solutions *avant la lettre*. Biopolymers, such as PHA, that have been part of natural metabolic systems in bacteria, show us the value of using natural materials, that are biocompatible and circular through their biodegradability.

Our journey with these materials shows us that we can create advanced functionality, while maintaining true circularity in many ways; through material and chemical recycling in the technosphere AND through carbon recycling in the biosphere.

Biodegradation is a concept with many facets and heavily context-dependent. So how can biodegradable materials help us in our journey towards a circular economy?