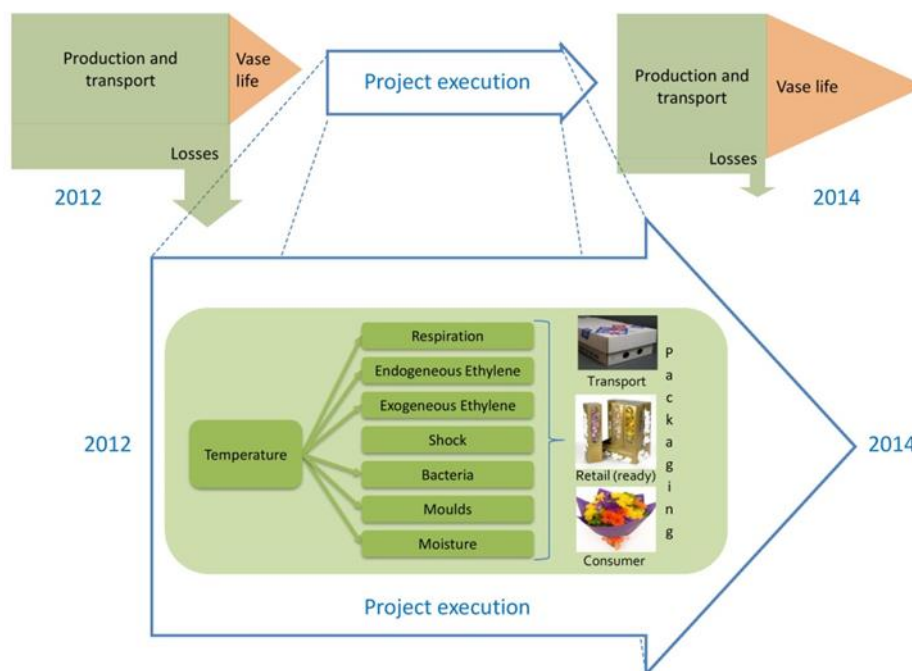# DEVELOPMENT AND IMPLEMENTATION OF SMART BIO-BASED PACKAGING SYSTEMS FOR B2B FLOWERS SECTOR:

Impact

Before flowers reach consumers there is a **15-20% loss** of produce due to damaging and ripening of flowers; this loss has many causes, like ethylene emissions of internal and external sources, fungi, bacteria, shock and especially wrong temperatures combined with long transport distances. By analysing these causes, most of these deterioration mechanisms can be counteracted with **active packaging** to limit or even completely avert the negative effects. The goal is to improve the vase life of flowers at the consumer, maintain (or improve) quality standards, simplify supply chains and reduce the loss of produce in the flower supply chain. Economic benefits are therefore anticipated for all participating parties within the flower supply chain as well as the generation of new products and services.
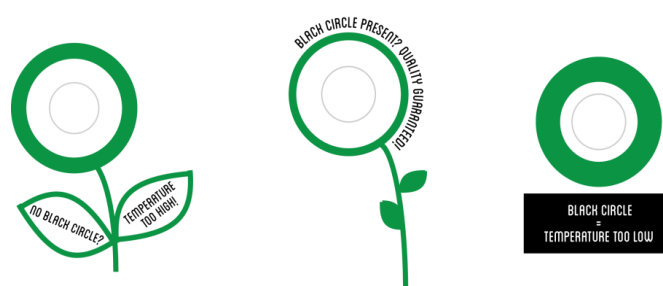

Innovation

SmartFlowerPack is based on material research and business case studies regarding the development of active bio-based flower packaging in close cooperation with the participating companies. The project combines requirements of both packaging industry (especially paper and board) and cut flower industry to assure the possibility of implementation and exploitation of new innovative technologies for active flower packaging.

SmartFlowerPack
Period: January 2013 – December 2014
Project coordinator: KCPK, s.tiekstra@kcpk.nl
Research partner: ZUT/CBIMO, psuminska@zut.edu.pl

SmartFlowerPack

Implementation

During the project there is a strong cooperation of all partners including the screening of materials, technologies and active components which would be beneficial to the vase life and quality of flowers. The developed packaging should be usable in current production environments and supply chains. The second year contains business case studies in close cooperation with companies for a technical and economic feasibility assessment of the developed packaging system.

Transport tests with boxes coated with an active substance to enhance flowers' vase life.

Three preliminary concepts for temperature indicator, left to right: consumer application, transport application, industrial application.

Partners: