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**STRATEGIC PARTNERSHIP IN THE FIELD OF
VOCATIONAL EDUCATION AND TRAINING**

PROJECT

Drone European Platform

PROJECT NUMBER N.º 2017-1-ES01-KA202-038136

Drone-use for a better orchard management



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Project:	2017-1-ES01-KA202-038136
Intellectual Output	IO1
Deliverable	IO1 Platform
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Authors:	H. Vijverberg
Document Type:	Report
Distribution:	Public
Status:	Draft
Document file:	Good Practice
Version:	0.0
Date:	29-04-2018
Number of pages:	5




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Title	Use of drones in orchard management / fruit growing
Summary	<p>Students of Helicon Opleidingen have contact with fruit-growing companies in the region. They follow the latest developments and work closely with “Proeftuin Randwijk”. “Proeftuin Randwijk” is the central place in Netherlands where independent and practical innovation and knowledge development for the Dutch fruit-growing takes place.</p> <p>In the fruit-growing project 4.0 drones are deployed to create a better orchard management.</p> <p>Students are involved by going on excursions and follow practical lessons at Proeftuin Randwijk.</p>
Major area of work	Improve management fruitgrowing
Key Facts	<p>Partners: NFO, Wageningen University, Proeftuin Randwijk, Fruitconsult, Aurea Imaging, GPX Solutions and five fruitgrowers in the Betuwe-area, The Netherlands.</p> <p>Three moments in a year observations takes place in Conference lots. In spring the first observation of the bloom takes place.</p> <p>Financial support by provence governement Gelderland by Fruitpact.</p> <p>Contactfarmer van Ossenbruggen from Ingen uses taskcards, based on information collected by drone-pictures, root pruning applied to bad bearing and hard growing trees.</p> <p>Use of three cameras with high resolution and chlorophyll sensors.</p>
Context and problem addressed	Orchard management on the basis of drone images translated into useful data. This project is about the extent of blooms, vigor and fruit.
How does it work	The collected data are processed in a taskcard. And with this taskcard, a kind of map, is on GPS autonomous work carried out in the plot on those “necessary “places. In fall they start with root pruning.
Validation	Control growth power of Conference will be on a "modern" and effectively way addressed. With less use of fertilizers and chemicals.



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Impact	This innovative project "Orchard management" should improve yield rate and a more regular production.
Innovations and Success factors	Translation of images to taskcards and carrying out the tasks by machines on GPS
Constraints	In pilotfase
Lessons learned	Starts/evaluation in april 2018 for fruitgrowth 4.0
Sustainability	Delivers benefits in performance of orchards. With on term may have environmental benefits, less labour, etc.
Farmers' story	Application of precision horticulture supplies-oriented management-tools for the entrepreneur.
Contact	<i>Pieter van Daltsen, Dirk de Hoog en Peter Frans de Jong by Proeftuin Randwijk</i>
Websites and other resources	 http://precisietuinbouw.nl/ http://precisietuinbouw.nl/WERKPAKKETTEN/Fruit-40