Deliverable report D4.11

X-ray imaging module ready

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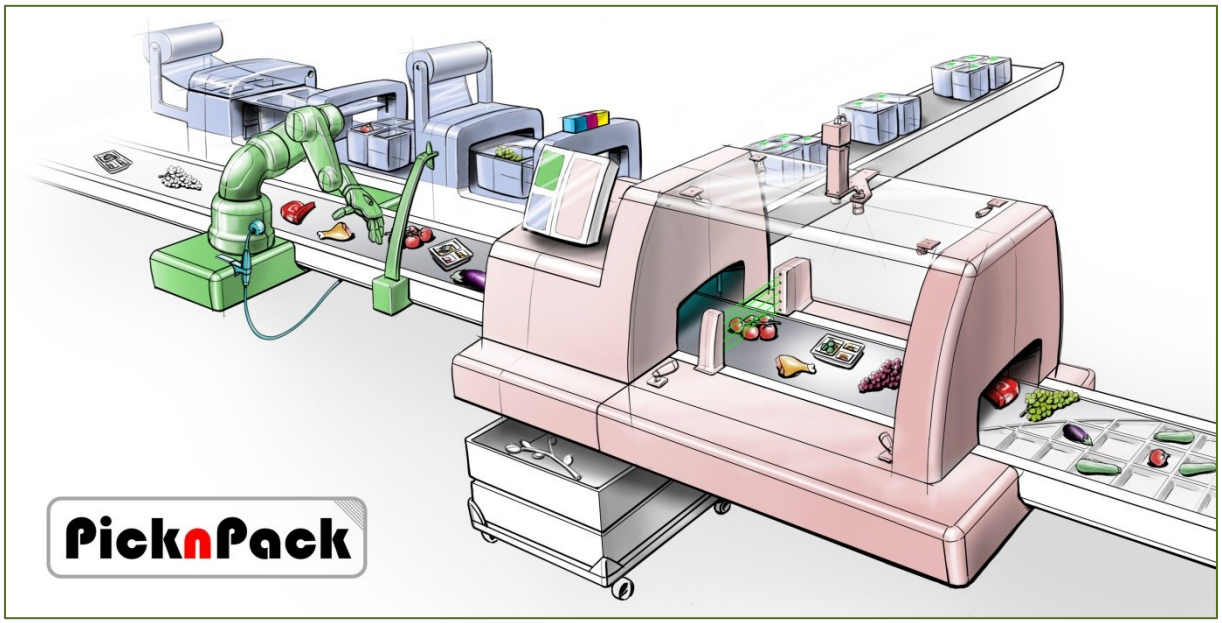

Flexible robotic systems for automated adaptive packaging of fresh and processed food products

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Dissemination level		
PU	Public	X
PR	Restricted to other programme participants (including the EC Services)	
RE	Restricted to a group specified by the consortium (including the EC Services)	
CO	Confidential, only for members of the consortium (including the EC Services)	

Table of Contents

1 Introduction

This deliverable report gives a status report of the X-ray module in the PicknPack line.

2 X-ray module status

The X-ray module was designed and built by InnoS in collaboration with KUL and delivered to the food hall in WUR in January 2016. The module has since then been integrated into the line (Figure 1). More technical details on the X-ray setup can be found in deliverable report D4.6 and previous status reports are given in D4.10.

Figure 1. The X-ray sub-module in the PicknPack Line.

The module has been designed to be able to handle the movement speed of the PicknPack line. In the last month the following extensions and tests have been made on the module:

1. Safety parts have been mounted and tested
    a. The system is completely safe in front
    b. There are some X-ray leakages in the back and there is some leakage coming from the right tunnel
2. The Encoder signal can be read to trigger the measurement
3. Images can be captured

These issues will be solved in the coming weeks after which data can be collected to further develop the processing algorithms.

3 Future work

Safety issues will be solved by improving shielding. The communication software (zyre protocol) will be implemented on the X-ray sub-module. The sub-module will act as a device of the QAS module and will therefore not communicate directly with the line controller, but will be linked to it through the QAS module server. In the coming weeks and months, the X-ray module will be further tested. This will allow to verify the quality of the recorded data and implement the processing algorithms accordingly.