

Number

LANCS-D4.1-RN-C-Flagship.1

A-PI--

<b>Title</b>	Research Note (RN) for D4.1
<b>Subtitle</b>	Ethical aspects of development <b>C : Flagship Development</b> : <i>Radio Frequency Identification</i>

PROBLEM	<input type="checkbox"/>	SOLUTION	<input type="checkbox"/>	Research Note	<input checked="" type="checkbox"/>	Selected Annotation	<input type="checkbox"/>
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Categories: | | |

Summary:

This note addresses the use of Radio Frequency Identification and draws attention to their uses for medical, commercial and security purposes.

## CONTEXT

The use of Radio Frequency Identification (RFID) has progressed far beyond its early uses which were to manage products in stock and transit and, more recently, to monitor product life cycles. Microchips on radio frequency have opened the door for more and more functionality in a network of interoperability, of controlling access and mobility, tracking and monitoring consumption and, when implanted into human and animal bodies, RFID provides the means to turn bodies into networked 'things'.

Personal data and privacy impact assessments have already addressed RFID applications to establish compliance with privacy and data protection laws and regulations, questions of how to manage risk, to clarify the potential benefits of RFID applications and think through protective measures such as 'privacy by design'.

(Key readings include: European Policy Outlook RFID, 2007; European Commission, 2007; Robinson et al, 2009; Gunnarsdóttir, 2010; Warwick, 2000; Warwick, 2010; Rodotà and Capurro, 2005).

## FACTS

RFID implants can be either passive or active. The passive kind can hold data in a record or in some other form for activation purposes when placed in the proximity of an RFID reader. An RFID device can transmit by radio frequency a sequence of pulses that represent a unique number. Such a number can be pre-programmed to act like a PIN number on a credit card.

An entire medical record, criminal record and other data on an individual or an object can be stored on a RFID device and read from the chip. A global positioning device can be embedded in order to track micro-chipped products, criminals, patients with Alzheimer's disease, children and teenagers. It can be put to use by means of a Wide Area Network or even via a cell phone network. These types of implants can also come with embedded biosensors, for example, to measure glucose levels in insulin-dependent diabetes patients or to monitor features of the environment.

## COMMENTS

There are serious human dignity issues when the technology is developed for security or commercial purposes with unprecedented intrusion into private affairs, invasion into bodies and lack of clarity on reversibility.

There is an issue of profiling and subsequent decision-making that rests on identifying the location of individuals and objects that travel with them. This could lead to all manner of unintended consequences and scenarios, including outcomes inspired by malevolence.

Apart from data protection issues, a set of concerns about safety and well-being raise questions of risk in creating new dependencies between social / occupational practices and distinct complexes of equipment. There is also a case here for thinking about how we collectively (perhaps unwittingly) contribute to the development and deployment of RFID applications. Where are they present, how are they used, what do they facilitate, and so on --whether in organisational settings, in the governance and protection of freedoms and mobility, for modification purposes, entertainment, shopping, gaming and other private capacities.

### **A host of ethical issues are implicated for reflection and debate:**

- Technicalisation of the body
- RFID Implants in selected social groups
- RFID Implants for security
- RFID Implants for tracking
- RFID Implants for managing health and illness
- Risk management
- (Ir)reversibility
- Safety and liability
- Identity
- Human enhancement / transhumanism
- Body sanctuary and body resource
- Social pressures: for and against
- Dignity and privacy
- Data protection