

**HHM-PP-08**

**TITLE**

**IMPROVING COMPLIANCE WITH BIOSECURITY USING GEOFENCING TECHNOLOGY**

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**CONTENT**

Poor compliance with biosecurity recommendations has been shown to be a main cause of the lack of control of most infectious diseases at farm level. A computer program and smartphone application have been developed that aim at registering targeted human movements on a given farm: the app is installed in a smartphone carried by each stockperson, and beacons are placed in and between all production units of the farm. These devices are linked by blue tooth, and all detected movements are recorded in real time in a database in the Cloud (geofencing). On the web, the application (Move & Improve) analyses and processes data in order to present them in an easy-to read and user-friendly graphic format.

In order to assess its interest under real field conditions, this system was installed on a 600-sow farrow-to-finish French farm with three stock persons (the farmer and two employees). Move & Improve successfully recorded all stock person movement over a 4-week period, showing that the vast majority of movements (84%) were made within facilities of the same production phase. On average, 8% of movements did not comply with the appropriate pig flow (from low to high infectious risk). It also allowed comparing movement profiles for each person, evidencing that one stock person was more prone to neglect the expected pig flow (13% of his movements were against the low-to-high infectious risk order). This first study paves the way for multiple applications, such as tailoring biosecurity training of the stock persons, but also tracking equipment (if tagged with a beacon) such as high-pressure washer or care toolbox. In particular, Move & Improve might prove helpful in improving biosecurity compliance in PRRS herd stabilisation programs.