

LivestockSense: A multinational project to remove barriers for PLF technology adoption within the pig and poultry industries

¹Banhazi*, T. M., ¹A. Banhazi, ²I. E. Tikasz, ²Sz. Palotay, ³K. Mallinger, ³T. Neubauer, ³L. Corpaci, ⁴U. Marchaim, ⁴I. Kopler, ⁵S. Opaliński, ⁵K. Olejnik, ⁶E. Kokin, ⁷S. Gunnarsson, ⁸T. Bjerre and ⁹C. Soerensen

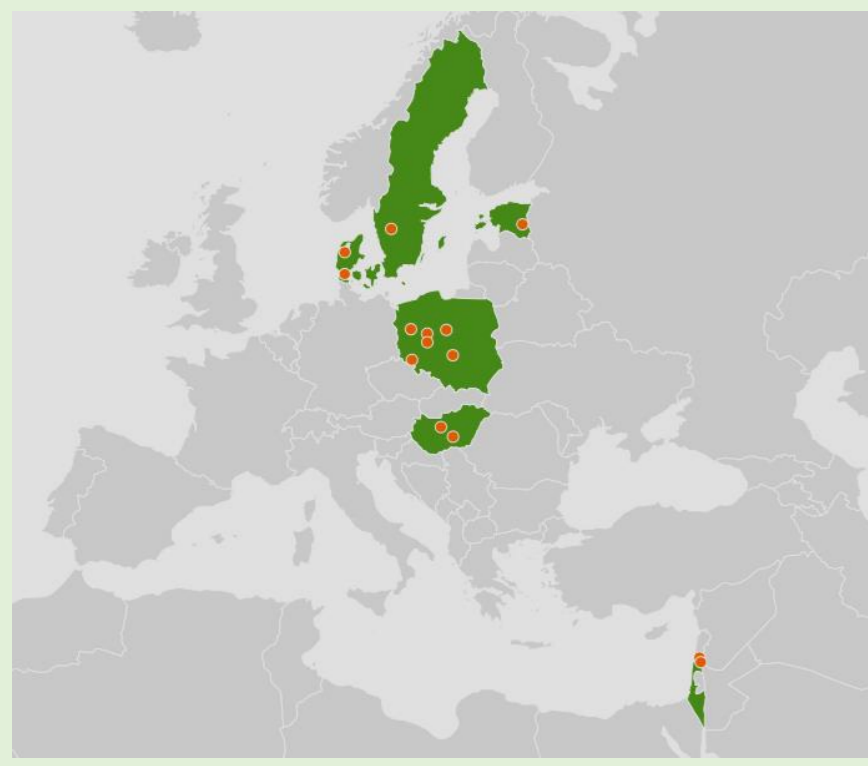
¹AgHiTech Kft., Hungary; ²AKI, Hungary; ³SBA Research, Austria; ⁴MIGAL, Israel; ⁵Wroclaw University of Environmental and Life Sciences, Poland; ⁶Estonian University of Life Sciences, Estonia; ⁷Swedish University of Agricultural Sciences, Sweden; ⁸Innvite ApS, Denmark; ⁹Aarhus University, Denmark

INTRODUCTION

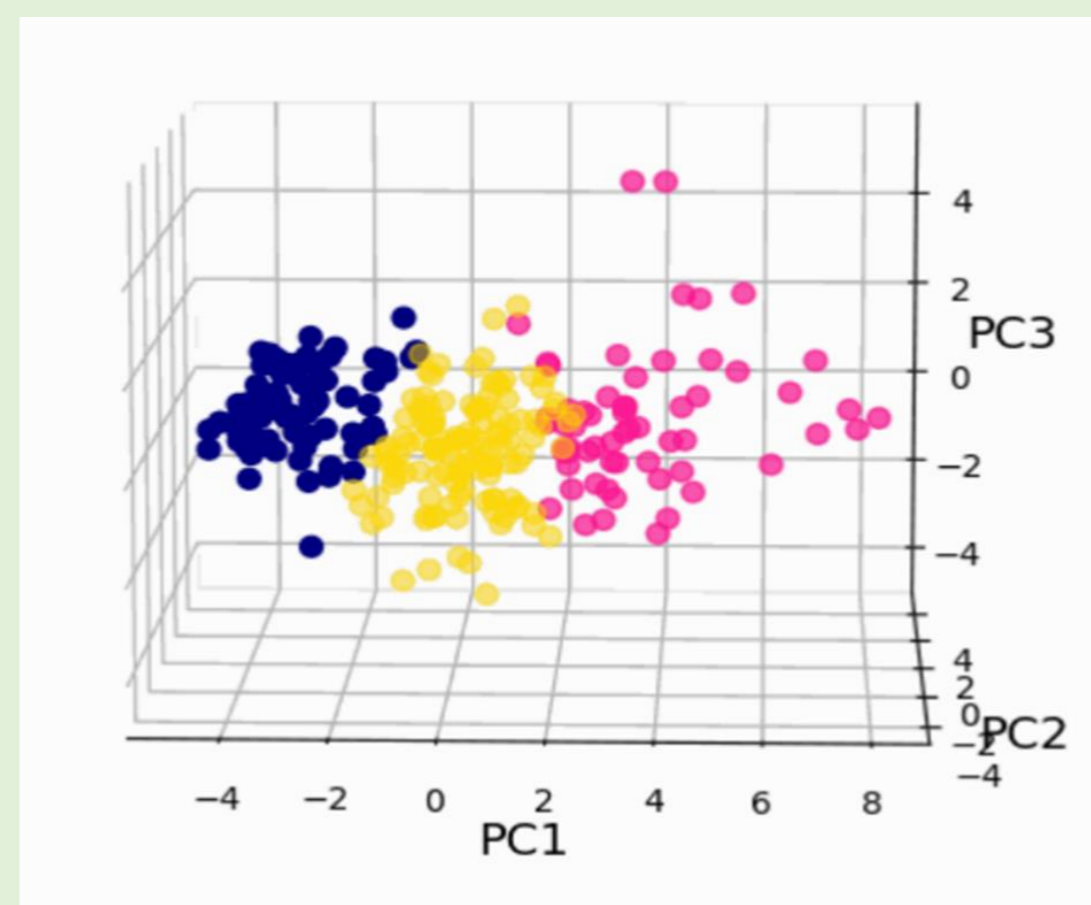
Enhancing environmental sustainability of livestock farms by removing barriers for adopting ICT technologies by:

- Improving the economic and environmental viability of livestock farms through application of advanced information and communication technologies
- Identification/removal of social barriers for technology adoption to achieve a wider use of ICT on farms

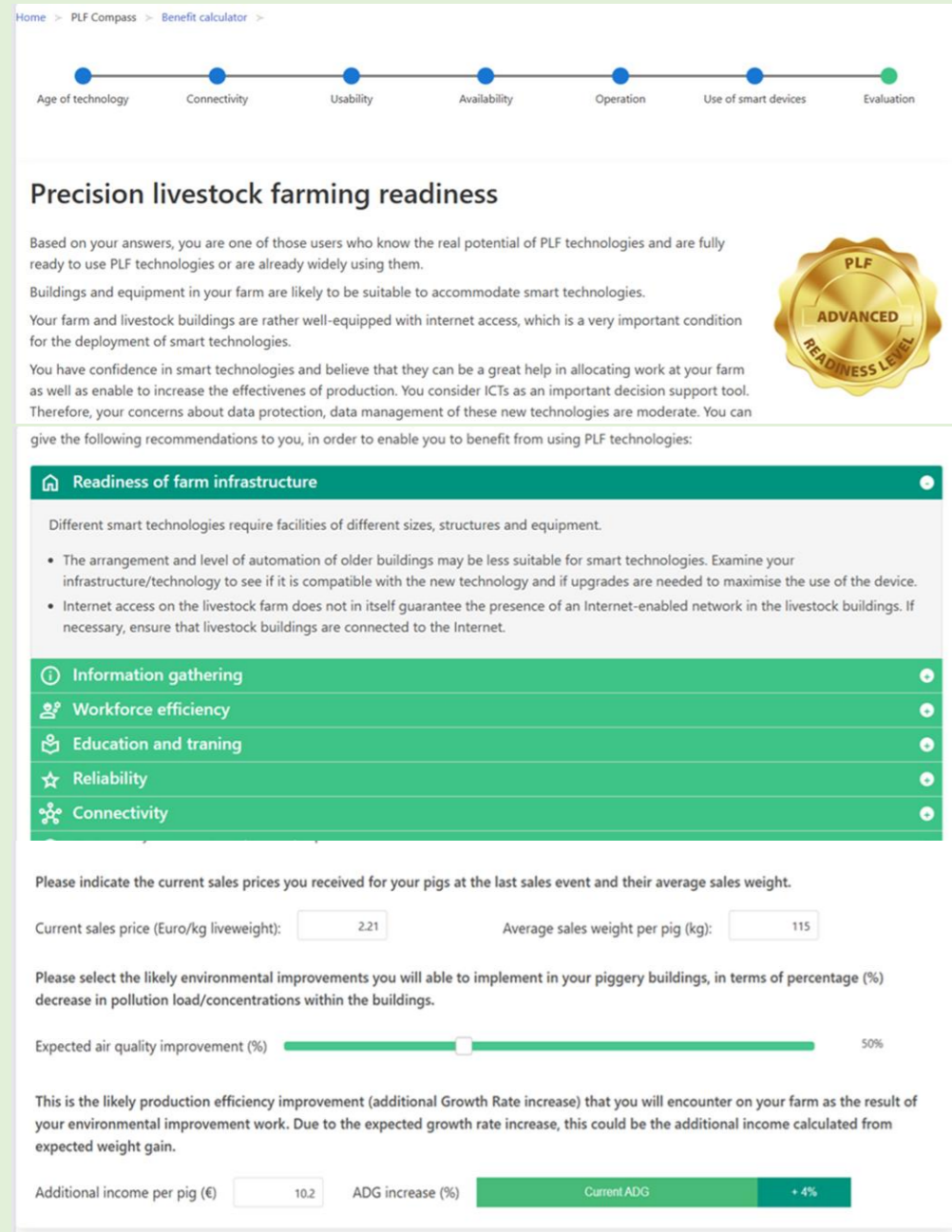
METHODS & RESULTS



Database modified and on-farm data collection undertaken (via deployment of 20+ PLF tools) on 15 farms in 6 countries



Machine learning techniques were applied to identify 3 clusters (blue, yellow and red colour) of technology users:
„Not Ready“
„Partially Ready“
„Ready“



PLF Compass applications developed to classify users, generate advice and calculate potential benefits

To try the PLF Compass and Benefit calculator scan the QR code or visit the LivestockSense website



For more results scan the QR code to visit the LivestockSense project website



Denomination	Users	Non-users
Smart technologies provide information in a real-time manner	89%	67%
Smart technologies enable to increase the effectiveness of production	88%	56%
Smart technologies provide reliable information	81%	56%
Smart technologies prove/improve transparency within production	81%	50%
<u>It is easy to access smart technologies in the market</u>	<u>69%</u>	<u>19%</u>
<u>Smart technologies operate in a reliable manner</u>	<u>61%</u>	<u>22%</u>
Smart technologies are easy to operate	59%	31%
It is easy to get information on smart technologies and distributors	56%	25%
<u>Smart technologies can be maintained at a reasonable cost</u>	<u>47%</u>	<u>8%</u>
<u>It is easy to get technical assistance to smart technologies</u>	<u>47%</u>	<u>8%</u>
Proper education is available for using smart technologies	44%	11%
Smart technologies can be purchased at an affordable price	31%	3%

Quantitative surveys implemented via standardized on-line questionnaires completed by 121 pig and 145 poultry farmers and qualitative interviews and focus group discussions (FGDs) conducted with 83 invited participants

CONCLUSIONS

Wider adoption of SMART agricultural systems is desirable, but various factors are limiting the adoption rate, such as:

- Unreliable internet connectivity on farms
- Lack of available capital/investment in farming
- Lack of available capital/investment for technology developers
- Uncertain ownership/access to the collected data
- Lack of training for AgTech users and/or unavailability of qualified personnel to interpret the information captured

Commercial/semi-commercial partners:



University partners:



The following national funding agencies contributed to the project:



This poster is based on the result of the LivestockSense project that received funding from the European Union's Horizon 2020 research and innovation programme, under grant agreement No. 862665 ERA-NET ICT-Agri-Food. The authors acknowledge the contribution of AgHiTech Kft (HU), Institute of Agricultural Economics (HU), Galilei Research Institute Ltd. (IL), SBA Research (AT), Innvite ApS. (DK), Swedish University of Agricultural Sciences (SE), Wroclaw University of Environmental and Life Sciences (PL), Estonia University of Life Sciences (EE), Aarhus University (DK) and the co-funding of the following organizations: NRDI Funds (HU), Israel Innovation Authority (IL), Bundesministerium, LRT Fund (AT), GUDP (DK), Ministry of Rural Affairs (EE), The National Centre for Research and Development (PL) and FORMAS (SE).