



# Future needs for pig Research Infrastructures in Europe



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## INTRODUCTION

Pig production is a key sector in the EU, ranking second globally in output and first in exports. However, it faces major challenges such as disease outbreaks, environmental pressures, rising costs, and generational turnover. High-quality research infrastructures (RI) are vital to address these issues.

This poster analyzes the current state of pig RI using a SWOT framework, based on surveys, expert input, and conference discussions. The PIGWEB project supports the EU Green Deal and Farm to Fork strategy by promoting innovation and sustainable pig farming. It emphasizes aligning research with industry and societal needs, integrating advanced technologies like AI, and enhancing collaboration. Recommendations aim to modernize RI, improve data sharing, and ensure long-term competitiveness and sustainability in the European food sector.

### OBJECTIVE

**TO ASSESS THE CURRENT STATE OF PIG RI IN THE EU AND PROVIDE STRATEGIC RECOMMENDATIONS FOR THEIR IMPROVEMENT, ENSURING COMPETITIVENESS, SUSTAINABILITY, AND ALIGNMENT WITH SOCIETAL AND LEGISLATIVE EXPECTATIONS.**

## METHODOLOGY

### SWOT ANALYSIS

The SWOT (Strengths, Weaknesses, Opportunities and Threats) of the current state of RI within the EU where analyzed.

### DATA SOURCES

The analysis is based on data collected from surveys of managers and users of RI, supplemented by expert insights from PIGWEB partners and discussions at animal science conferences held in 2023 and 2024.

## POLICY & IMPLEMENTATION RECOMMENDATIONS

To ensure the long-term competitiveness, sustainability, and societal alignment of pig production in the European Union, stakeholders commit to a coordinated strategy built on five pillars:

### ✔ INFRASTRUCTURE MODERNIZATION

Renovate and harmonize research facilities, integrating advanced in vitro and in silico methods to improve efficiency and reduce reliance on invasive practices.

### ✔ TECHNOLOGY INTEGRATION

Accelerate adoption of AI, smart devices, and digital tools to enhance research capabilities and support data-driven decision-making.

### ✔ OPEN SCIENCE AND DATA SHARING

Establish FAIR-compliant platforms and policies to promote transparency, collaboration, and innovation across research and industry.

### ✔ SUSTAINABILITY AND ANIMAL WELFARE

Align operations with EU Green Deal objectives by investing in renewable energy, reducing carbon footprints, and improving welfare standards.

### ✔ CAPACITY BUILDING AND COLLABORATION

Develop specialized training programs in technology, data, and sustainability; foster partnerships among academia, industry, and society; and create formal platforms for continuous stakeholder engagement.

**Implementation will be supported through targeted funding mechanisms, legislative alignment, and shared financial efforts, ensuring measurable progress through key performance indicators.**

Together, we pledge to advance innovation, sustainability, and resilience in European pig research infrastructures, contributing to a competitive and responsible food sector.

## RESULTS

### STRENGTHS

- Well-equipped research institutes and universities.
- Strong collaboration and training capacity.
- Emphasis on ethical compliance, smart technologies, and FAIR data practices.

### WEAKNESSES

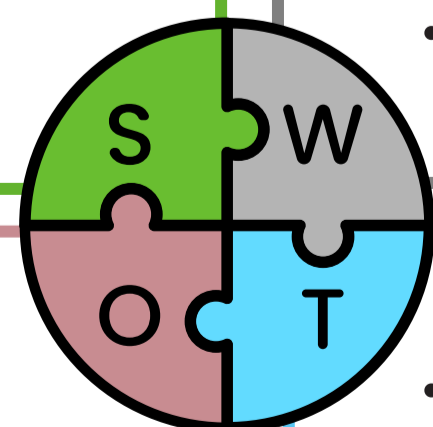
- Limited flexibility and resources.
- Shortage of qualified personnel.
- High maintenance costs and gaps between academia and industry.

### OPPORTUNITIES

- Investment in modular infrastructures, AI, and digital twins.
- Multi-center collaboration and FAIR data sharing.
- Alignment with sustainability goals.

### THREATS

- Legislative changes and public perception.
- High operational costs.
- Declining demand for external RI services.



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