PROGRAMME

0. Opening and introduction of participants (1 hour)

1. Livestock sector: opportunities, challenges and stakeholders (1 hour) (C. Knight)
   1.1. Worldwide situation in an era of global change
   1.2. The Mediterranean scenario including socioeconomic aspects

2. Basics of PLF and examples (6 hours)
   2.1. Understanding animals using technology (1 h) (F. Bocquier, C. Knight)
   2.2. PLF definition (2.2 and 2.3: 1 h) (D. Berckmans)
   2.3. PLF approaches: turning data into valuable information [real time] (D. Berckmans)
   2.4. Examples from different species [coordinate with 3.5 to avoid repetitions] (2 h) (D. Berckmans)
   2.5. Conclusions
   2.6. Showcasing technology (2 h) (A. Godo, G. Caja, C. Umstätter, C. Knight, D. Berckmans, I. Halachmi, F. Bocquier)

3. Developing and implementing PLF systems (3 hours) (D. Berckmans, E. Vranken)
   3.1. From algorithm to product phase 1, phase 2 and phase 3
   3.2. Data management: use of big data, cloud computing, Internet of Things (IoT) in the decision making process
   3.3. Examples of developed products and related problems
   3.4. Timing to reach product in the market
   3.5. Determinants of uptake and success including labour aspects
   3.6. Business models
   3.7. Is PLF affordable for small farms?
   3.8. Who owns data/information and general data protection rules (GDPR)
   3.9. Conclusions

4. Zooming into PLF needs in the Mediterranean countries (7 hours)
   4.1. Range of extensive and intensive systems (1 h) (F. Bocquier)
   4.2. Animal behaviour in rangeland systems (1 h) (C. Umstätter)
   4.3. Specific problem for PLF use outdoors (1 h) (C. Umstätter)
   4.4. Biology of heat tolerance and water balance (1 h) (G. Caja)
   4.5. Mediterranean PLF case studies [coordinate with 2.4 to avoid repetitions] (2 h) (I. Halachmi)
   4.6. Conclusions and discussion (1 h) (I. Halachmi, F. Bocquier, C. Umstätter, G. Caja, D. Berckmans, C. Knight)

5. Technical visits (Thursday afternoon and Wednesday)
   5.1. Demonstration of PLF technology at an experimental sheep farm (Tuesday afternoon) (J.L. Alabart, M. Joy)
   5.2. Semi-intensive sheep farm (Wednesday) (G. Caja)
   5.3. Automated goat dairy farm (Wednesday) (G. Caja)
   5.4. Robotic monitoring of broiler chickens (Wednesday) (G. Caja – H. Lehr)

6. Group work exercise: development of a creative PLF concept on a real farm (6 hours)
   6.1. Introduction to practical and composition of groups (0.5 h) (C. Knight)
   6.2. Collecting information in a technical visit (Wednesday)
   6.3. Working sessions (4 h) (I. Halachmi, F. Bocquier, C. Umstätter, G. Caja, D. Berckmans, C. Knight)
   6.4. Presentation of results and discussion (2 h) (I. Halachmi, F. Bocquier, C. Umstätter, G. Caja, D. Berckmans, C. Knight, D. Speller)

7. Round table discussion (2 hours) (I. Halachmi, F. Bocquier, C. Umstätter, G. Caja, D. Berckmans, C. Knight, D. Speller)
   7.1. Ethical considerations for all stakeholders
7.2. Milking robots, success or failure?
7.3. www - what can be learned? where are we now? where are we going?: participants' ideas [service based approaches]
7.4. www - who is doing what and when?
8. **User experience (1 hour)** (D. Speller)