Developing SmartFarming entrepreneurship II - preparing PLF spin-offs

Authors and affiliations

Heiner Lehr, Syntesa · heiner@syntesa.eu
Johan van den Bossche, SO Kwadraat
Maurice Mergeay, M&M Corporation
Daniel Rosés, Abrox
What is at stake

• In 2050 there will be 9 billion people
  – The percentage of meat will rise from 7% to 9% of calorie intake

• The Economist cites 4 ways to “feed the world”:
  – Avoidance of waste
  – Narrowing the gap between the worst and best producers
  – Taking advantage of new plant technologies
  – Spreading the so-called “livestock revolution” = switching from traditional, open-air methods of animal husbandry to closed “battery” systems, in which animals are confined to cages and have their diet, health and movement rigorously controlled.
The “livestock revolution”

• But: what about welfare?

• SmartFarming believes that we have the obligation to contribute to providing solutions
  – Through an animal and farm centric approach that seeks a balance between production, welfare and health
  – Improving living conditions and avoiding illness
  – Improving genetics and the reproduction cycle
  – Optimising feed usage along the supply chain
  – Avoiding the emission of green house gases to the atmosphere
Catering to a need: creation of a service sector

• But: SmartFarming needs a delivery vehicle

• Currently, most SmartFarming initiatives come from research
  – Need for consistent products apt to the farming market
  – Need for support
  – Need for right business models

• BrightAnimal proposed the establishment of a service provider network across Europe and beyond that will
  – Takes care of technology components
  – Interprets data coming from sensors
  – Dispatches advice to farmers
  – Works on the basis of “technology as a service”
  – Involves users in the development
- **Title:** Animal and farm-centric approach to Precision Livestock Farming in Europe

- **Objective:** Deliver a validated Blueprint for an animal and farm-centric approach to innovative livestock farming in Europe proven through extensive field studies.

- **Budget:** 5.9m€

- **Time line:** Nov 2012-Oct 2016

**The partners**

- Katholieke Universiteit Leuven, Belgium
- Swedish University of Agricultural Sciences, Sweden
- University of Bristol, UK
- National Institute for Agricultural Research, France
- University of Milan, Italy
- The Volcani center, Israel
- Agriculture and Food Development Authority, Ireland
- The Royal Veterinary College, UK
- Wageningen UR, The Netherlands
- Fancom BV, The Netherlands
- SoundTalks NV, Belgium
- PLF Agritech Europe LTD, UK
- Xenon New Technologies GCV, Belgium
- Abrox Tecnic SL, Spain
- Syntesa sp/f, Faroe Islands
- Nutrition Sciences NV, Belgium
- EAAP, European Federation of Animal Science, Italy
- M&M Corporation, Belgium
What we do to develop entrepreneurs

WP2 – Extensive field tests
1. Operational PLF systems on farms
2. Running field tests

WP1 – Animal Key Indicators & Golden Standards
Existing and New Key Indicators (KI’s)
Welfare
Health
Environmental load
Productivity
Gold Standards

WP3 – Integrated solutions & PLF as service
1. Data Analysis Labelling
2. Algorithms for monitoring
3. Automated continuously measured KIs on farms
Information for better management

WP4 – Value creation on farm and food chain level
Socio-economic value measures
Farmer workshops
Calculations from farm data (feed conversion, growth rate, mortality, energy, etc.)
Inquiries

WP5 – Innovation through high-tech SMEs
1. Identify 50 SME’s
2. Training
Validation of the Blueprint
Link to the market

WP6 – Validated Blueprint

Innovation through high-tech SMEs

Smart Farming for Europe
Value creation through Precision Livestock Farming
www.eu-plf.eu
WP5: Innovation through high-tech SMEs

• WP5 is an essential part of the validation of the blueprint

• In this WP we will bring together high-tech SMEs and leading industrial market players

• We will identify suitable entrepreneurs or start-ups and coach 10 teams in PLF and the (unvalidated) blueprint

• A competition will be held among those and a few winners chosen
  – Based on their ideas and the alignment to our blueprint
  – Based on feedback from the large industrial partners
  – Based on the business plan
  – The winners get a total of 100k€ to kick it off!

• Target: 4 newly created high-tech companies

TIMELINE

| Team selection:  | Nov 2012-Oct 2013 |
| Coaching and prototype development | Nov 2013-April 2015 |
| Creation and valorisation | Nov 2013-Oct 2015 |
Attracting new talent

- Organisation of local innovation days
  - Spread the word
  - Identify teams
  - Find multipliers
- Competition formula for breadboard development financing
  - Provide attraction for teams to join
  - Showcase technology in real conditions
- Coaching offering by experienced entrepreneurs
  - “From the comfort zone of science to the battlefield of business” (O. Gregersen)
  - Active guidance through the process of starting a business

Mayor university cities
- With local partner
- PLF activity
- Cost-effective travel for coaches

SmartFarming Innovation days
- Barcelona, March 2013
- Wageningen, May 2013
- Milan, June 2013
- Leuven, September 2013
Pillar 2: Running competition

• The selection of the winners is done by an independent jury of technicians, researchers and experienced business people that have expertise on evaluating companies and projects working on agriculture.

• The president of the jury is the director of the Agri Venture Capital Fund in Belgium, and the decision is taken based on expert advice from the organisation.

• The jury is completely independent from the SMEDrive team and therefore a possible conflict of interest is avoided between coaches and jurors.
Creation of four spin-off

- The jury gives green light (fund the project) or a red light (do not fund the project), in two major areas: technical and economic/financial viability.
- Only projects where both areas obtain a green light are funded.
Coaching

• Methodology based on a successful formula developed by SO Kwadraat
  – Not-for-profit organisation
  – Has coached over the last 8 years 200 teams,
    • 70 started their own high-tech company.
    • Most of these start-ups are based on a team of PhD students.
    • All companies are active in Europe, and 50% is active worldwide.

• Coaching is a sensitive business
  – SO Kwadraat strictly adheres to its code of conduct
  – All information is treated confidentially

• Objective: help creating sustainable new high-tech companies and
  maximize the survival chances of the new companies.
  – Also maximises the number of newly created employment opportunities
    and the return on investment for society.
Coaching team list

• The objective in the framework of the EU-PLF project is to coach 10 teams, and to support the creation of 4 new high-tech ventures

• **The current active coaching list has 17 projects.**
  – 23 teams were identified
  – 5 teams stopped the coaching process
    • lack of market opportunities and
    • lack of interest from the team in this specific market
Coaching team list

- We classified coaching projects into three categories:

  - **Projects on hold (4 teams)**: for different reasons, projects which were initiated for coaching, were put temporarily on hold.
  - **Projects with one star (8 teams)**: these projects are in the pipeline, but need at this moment more concrete information or more focus of the team.
  - **Projects with two starts (5 teams)**: these projects have all elements to get started. They are thus also intensively coached by the SMEDrive.
Creation of four spin-off

• As of today **three projects** have entered the running competition

• **Two of them got a green light in both areas.** In addition, the jury provided very valuable feedback to strengthen the projects.

• One project was rejected not on the technical potential, but for economic/financial reasons. After discussion with the related team, the project was put on hold.
Creation of four spin-off

• The two projects which passed the jury evaluation are on their way to form a new spin-off. The creation of a spin-off consists of a number of steps and thus a close follow-up by the SMEDrive team will be required.

• The most important steps are:
  – Creation of an entrepreneurial team
  – Evaluation of the developed technology
  – Business concept definition
  – Evaluation of the concept in the real world market place
  – Iteration of the concept
  – Preparation of the necessary documents
  – Start-up and continued coaching
Conclusions

• Bringing technology to farms is not per se an attractive proposition for entrepreneurs
  – Assumption: main reason for this behaviour is the lack of role models
  – English is an obstacle
• For the SMEDrive, however, the events were rather successful
  – Highly targeted and very knowledgeable attendants
  – Very motivated to enter a business coaching process
• A total of 23 teams were identified across Europe
  – 13 are under active coaching, 5 of which are ready to go
  – First 2-3 spin-offs are expected in 2014
• 3 teams have entered the running competition
  – 2 will be funded
Acknowledgments and Disclaimer

Assistance by Barcelona Activa, Wageningen University, the University of Milan and the Katholieke Universiteit Leuven with the organisation of SmartFarming Innovation Days is gratefully acknowledged.

The authors gratefully acknowledge the European Community for financial participation in the Collaborative Project EU-PLF under the Seventh Framework Programme. The views expressed in this publication are the sole responsibility of the author(s) and do not necessarily reflect the views of the European Commission.