REALISING THE POTENTIAL OF DIGITISATION FOR FOOD PRODUCTION, DISTRIBUTION AND NUTRITION

Inge Arents
managing director
Flanders’ FOOD
The world is changing ... opportunities ...

Lets interconnect and integrate our chain!
TRANSITION IS NECESSARY BECAUSE …

We live in an interconnected world

Future: Smart, interconnected and resilient agri-food system
FLANDERS’ FOOD: SPEARHEAD CLUSTER FOR AGRIFOOD

= Industry driven innovation platform with focus on growth and economic value creation
= Networked organization with academic partners (universities, RTO’s as imec, ILVO, …)
= Networked organization with innovation partners (other industry driven clusters)
= Collaboration with the Flemish government
= Collaboration with the farmer associations (Boerenbond and ABS) in Flanders

■ > 300 industry members
■ ± 65% food industry
■ Others: companies in the ecosystem around the food industry
SPEARHEAD CLUSTER AGRIFOOD: 4 STRATEGIC GOALS (PROCESS DRIVEN STRATEGY)

Demand driven knowledge

- LEAD TO KNOWLEDGE
  - For the industry
  - LEAD IN KNOWLEDGE
  - CREATE/CROSS VALUE CHAINS

For companies

- ACCELERATE EFFICIENT & EFFECTIVE INNOVATION
  - Exploit and disseminate state of knowledge horizons
  - Business driven knowledge
OUR AMBITIOUS GOAL: FLANDERS’ FOOD: DIGITAL INNOVATION HUB AND PLATFORM - TO ENABLE THE INTERCONNECTED, RESILIENT AND SMART AGRIFOOD SYSTEM

Prepare **all** the food companies to make the leap towards industry 4.0:

- Introduce new technologies and inspire and enable the companies to use these
- Connect to the cloud
- Use the available data in the agrifood system

...and in the end ...

**Become a more interconnected, resilient and smart agri-food system in Europe**
Flanders’ FOOD has a focus on the food industry
Interconnected in the agrifood system
Need for trust zone and real partner-partner collaboration
Digitisation will help
POTENTIAL OF DIGITISATION IN FOOD PRODUCTION?

- Better control and inspection of food quality
- Prediction of food quality
- Smaller batch-size
- In the end: machine learning and artificial intelligence to ‘steer’ the food processing
Support of the operator in the factory …

- **Example:** proceedix
POTENTIAL OF DIGITISATION IN DISTRIBUTION?

- Discover the potential of blockchain: transparency and data-information from plant to fork
- Support the development of intelligent (smart) packaging
Communication to the consumer via the retail (ex. Smart With Food, spin-off of Colruyt – Belgian retailer)
POTENTIAL OF DIGITISATION IN NUTRITION?

- Consumer has ‘tools’ to check the nutritional value or allergic risk (cfr. food scanner horizon 2020 – prizes)
- Consumer has ‘tools’ to check own health parameters to decide on daily diet
ROLE OF FLANDERS’ FOOD: HOW TO ORGANISE THIS DIGITISATION?

5 steps to success

1. Awareness
   Existing and new industry 4.0 relevant technologies. TRL 5 - 9 → Implementation oriented and demand driven

2. Platform:
   Community creation
   Create trust zone

3. Validation track:
   Define
   Test / validate

4. Implementation
   New (commercial) collaborations - spin-offs
   Bilateral projects (implementation oriented)
   New research topics

5. Leverage
   Living labs + testimonials

Partners:
   Companies (cross-sectoral), cluster organizations, RTO’s
   Collective, applied research → on site validation of technology

Missing partners
→ Build resilient and interconnected agri-food system
INVOLVED CLUSTERS/REGIONS AT THIS POINT
LESSONS LEARNED

- **Slow process:** creation of trust zone $\rightarrow$ cross-organizations + cross-chain + cross-sector

- **Involve all the relevant stakeholders:** from ‘problem owner’ over ‘technology supplier’ to ‘system integrator’ and ‘machine builder’
  - Make sure that innovations are challenged by real world feedback

- **Pareto principle:**
  - 20% ‘new’ technologies
  - 80% existing (but not always known) state-of-the-art technologies $\rightarrow$ technology watch

- **Assets of multidisciplinary team** that operates across organization borders:
  - Creation of trust zone - technology watch – benchmark - partner matching
LESSONS LEARNED

- Funding is crucial:
  - To provide the necessary framework + longterm follow-up
  - Financing of the multidisciplinary team
  - Creation of living labs
  - Funding of applied research: validation, implementation and demonstration
  - Promotion of the platform