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

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FLANDERS INNOVATION & ENTREPRENEURSHIP

FF FLANDERS' FOOD

Clusters for Growth

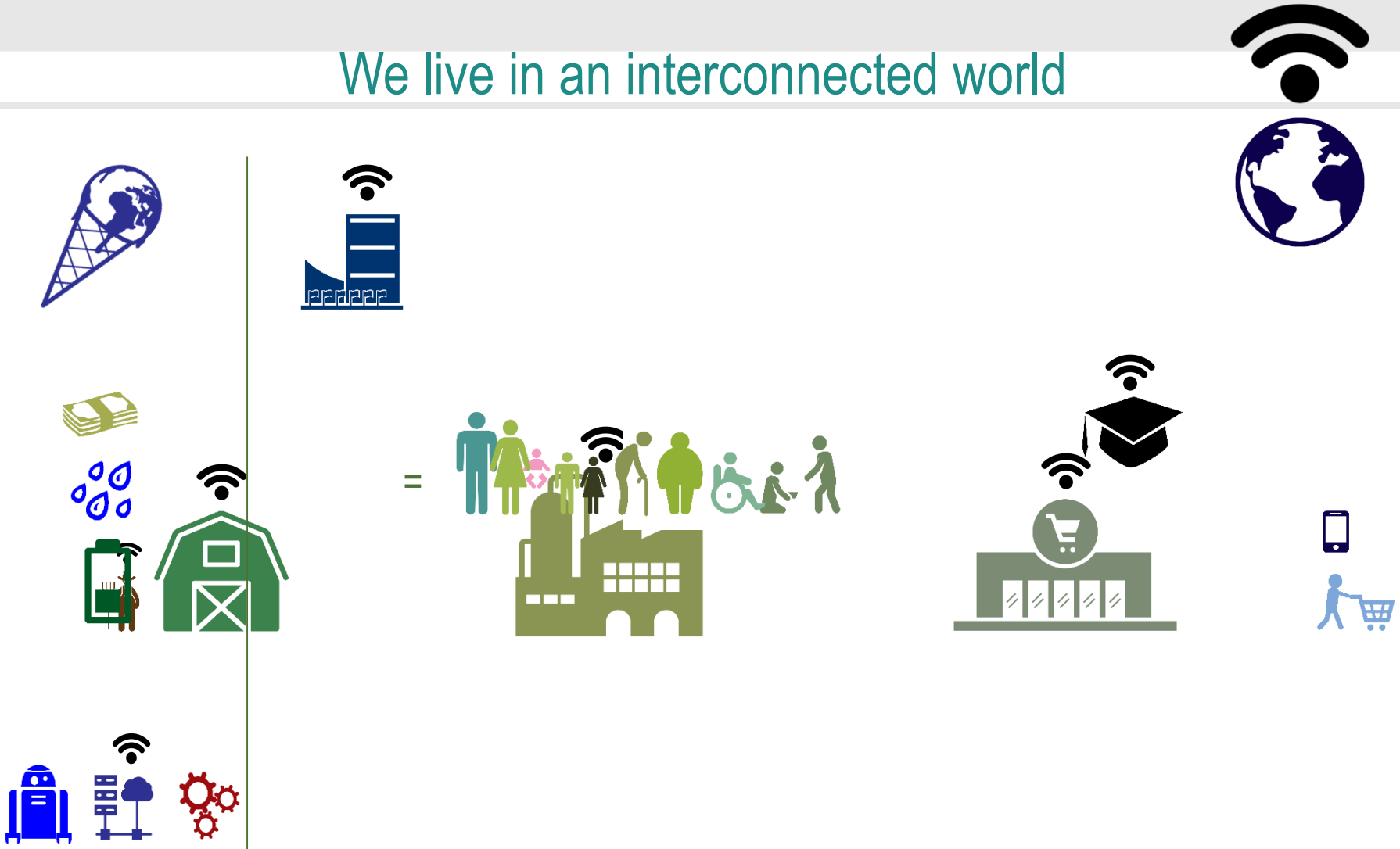
SOME FACTS

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)

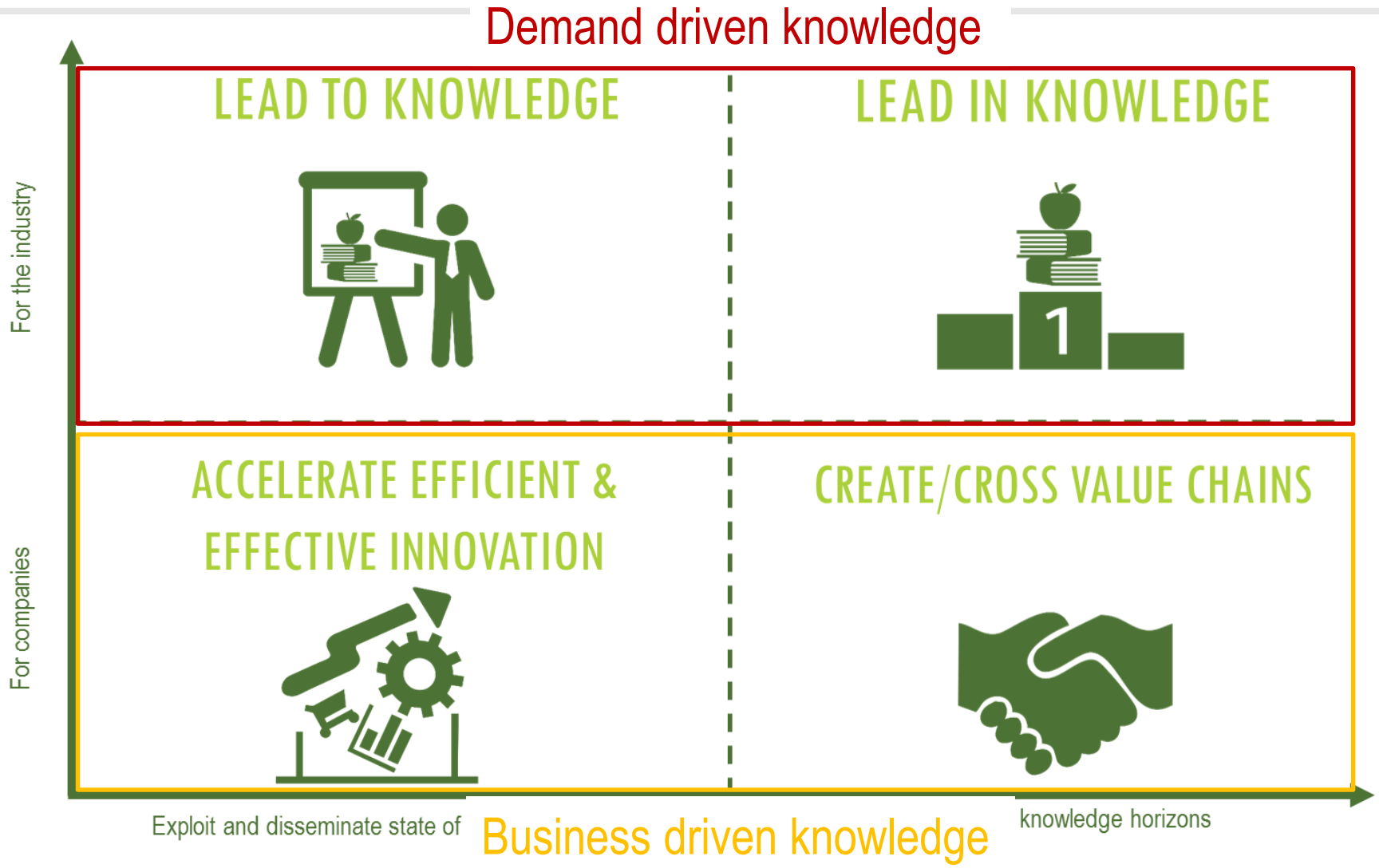
= Collaboration with the Flemish government

= 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

- Ingredients (20%)
- Meat products (12%)
- Technology (9%)
- Confectionary (9%)
- Dough systems (5%)
- Analytical labs & equipment (6%)
- Feed (5%)
- Potatoes, vegetables & fruits (5%)
- Dairy (4%)
- Cleaning & disinfection (3%)
- RTE (4%)
- Packaging (3%)
- Flour milling (2%)
- Oils & fats (2%)
- Egg products (2%)
- Sauces & soups (1%)
- Other (7%)

SPEARHEAD CLUSTER AGRIFOOD:
4 STRATEGIC GOALS (PROCESS DRIVEN STRATEGY)



OUR AMBITIOUS GOAL:
FLANDERS' FOOD: DIGITAL INNOVATON 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 …

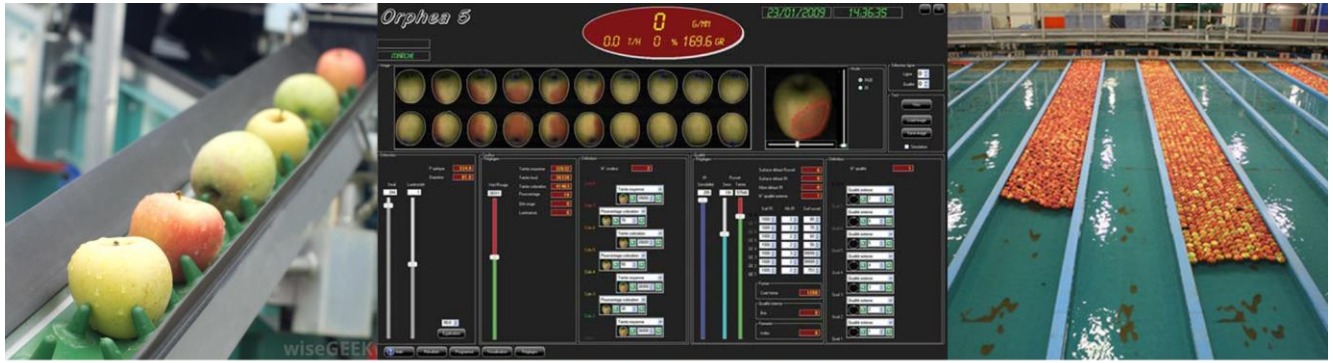
Become a more interconnected, resilient and smart agri-food system in Europe

POTENTIAL OF DIGITISATION IN FOOD PRODUCTION?

- 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



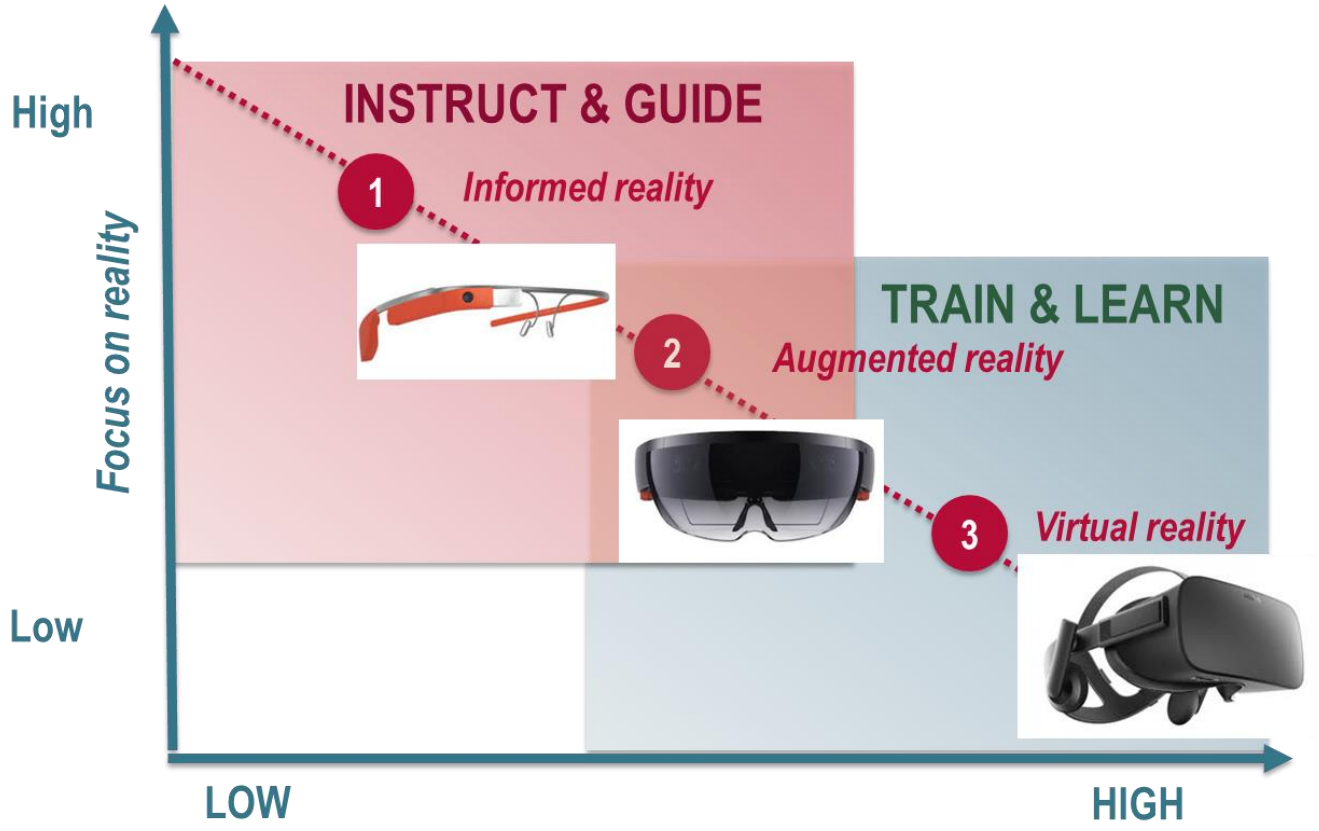
Transport belt of apples
Apples will be imaged one by one

classifications by skin tightness, width and height

classifications in 3 categories before packaging

POTENTIAL OF DIGITISATION IN FOOD PRODUCTION?

- Support of the operator in the factory …



Example: proceedix

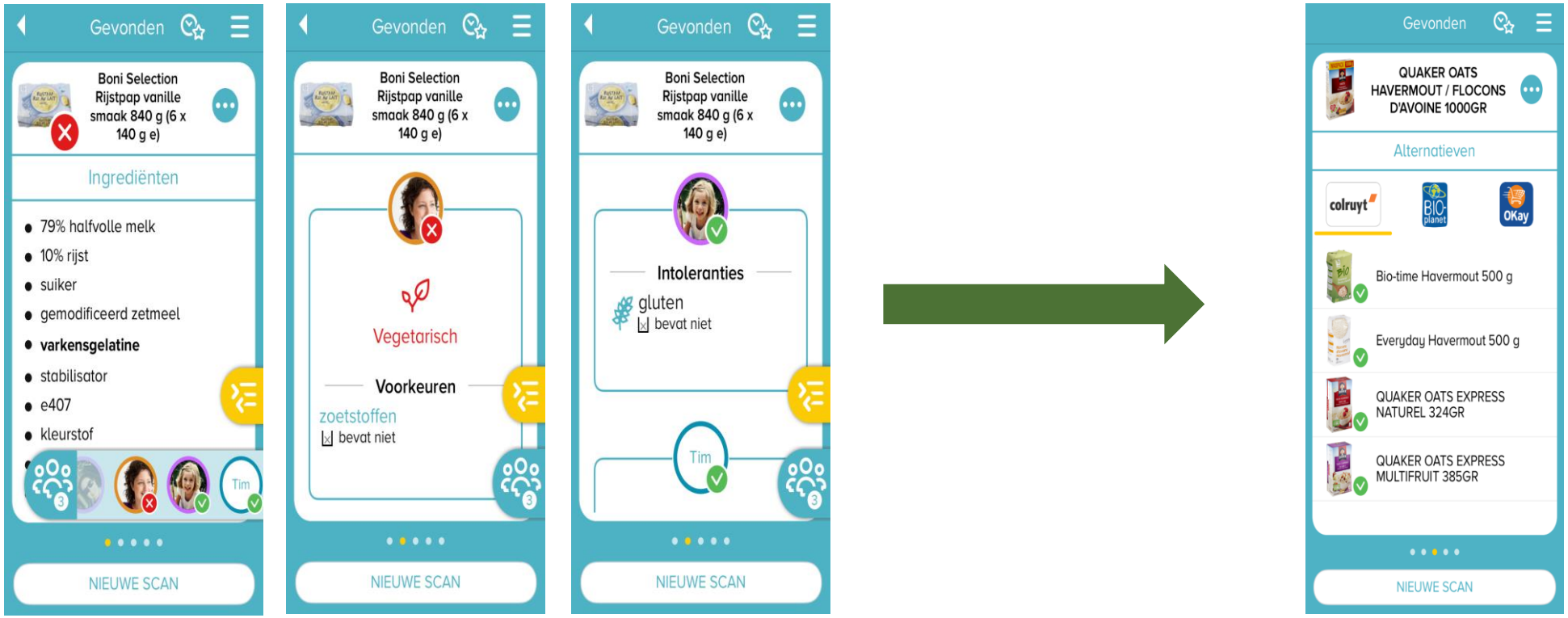
POTENTIAL OF DIGITISATION IN DISTRIBUTION?

- Discover the potential of blockchain: transparency and data-information from plant to fork
- Support the development of intelligent (smart) packaging

CheckPack

POTENTIAL OF DIGITISATION IN DISTRIBUTION?

- Communication to the consumer via the retail (ex. Smart With Food, spin-off of Colruyt – Belgian retailer)

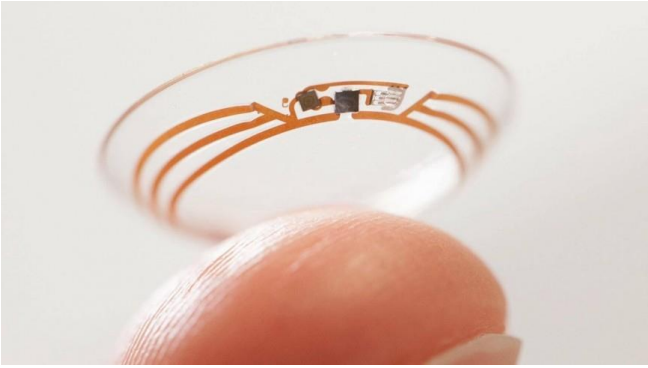


POTENTIAL OF DIGITISATION IN NUTRITION?

- 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

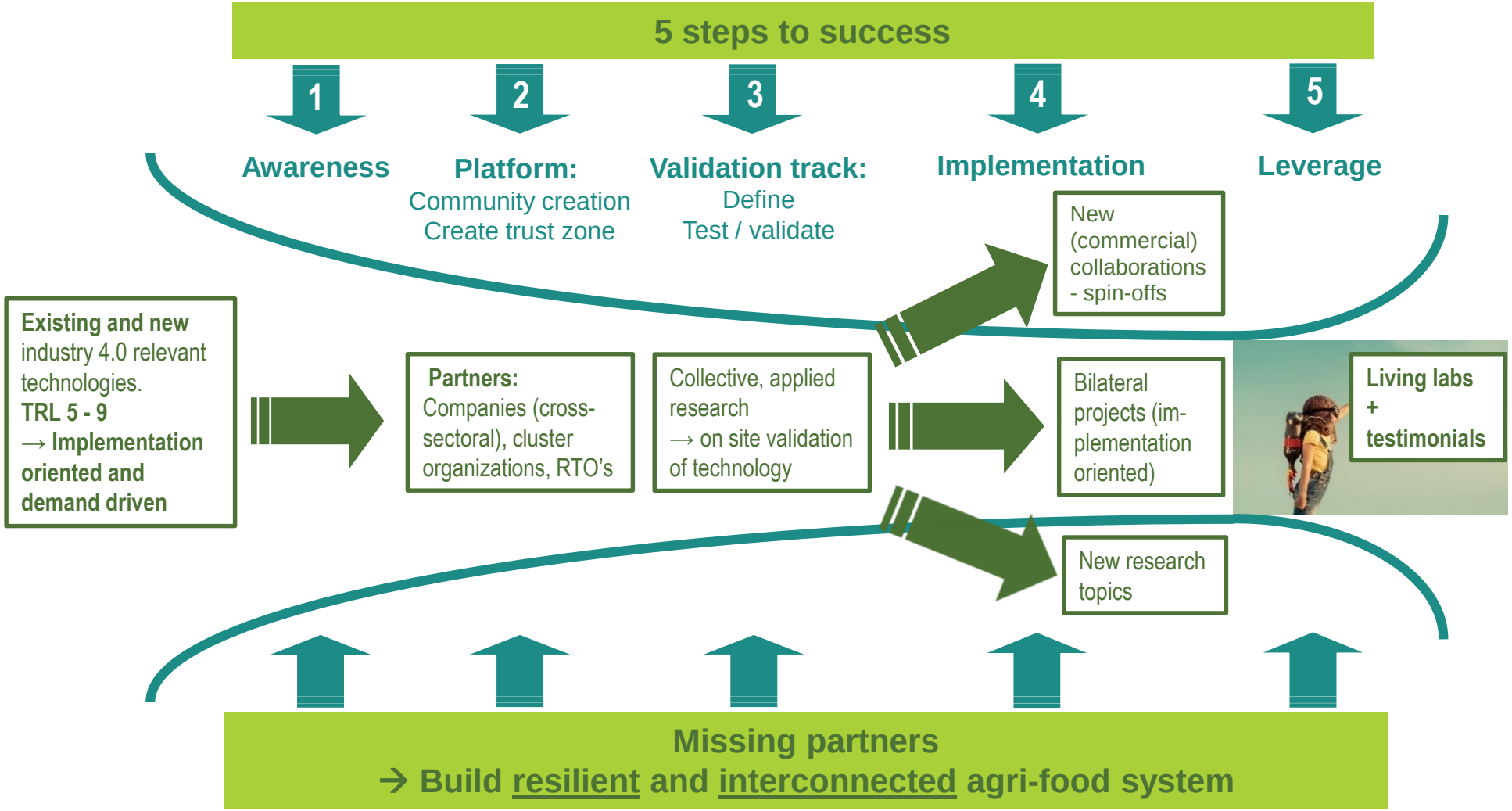
Cargill - scio

Fooducate
eat a bit better™



Blood glucose contact lenses

ROLE OF FLANDERS' FOOD: HOW TO ORGANISE THIS DIGITISATION?



INVOLVED CLUSTERS/REGIONS AT THIS POINT

LESSONS LEARNED

- Slow process: creation of trust zone → 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 → 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

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