



# Innovative Farm Concepts

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# Innovation



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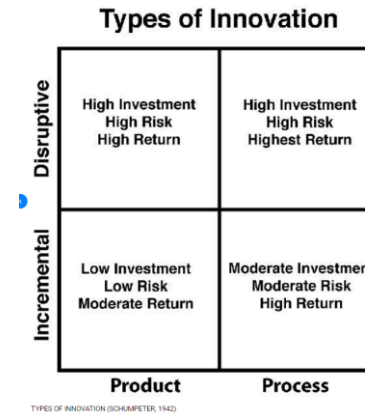


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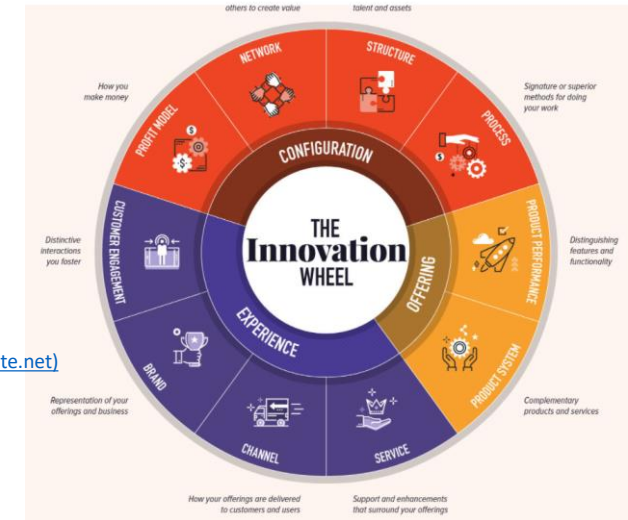
- Used already from F. Bacon, Machiavelli in 16th century
- Traditional definition: New combination of production means which increase value of production (narrowed to technological and economic purpose, Schumpeter, 1912)

- Modification of products or services
- Change in production processes
- Use of new energy, material resources
- Changes of company's organisation  
(Bontems, V.K., 2014)

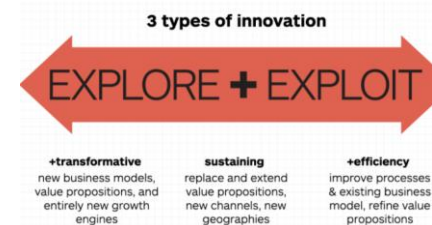
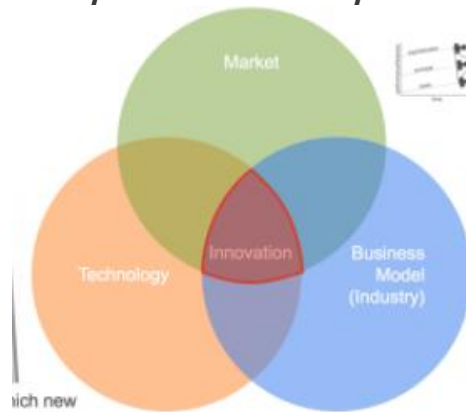
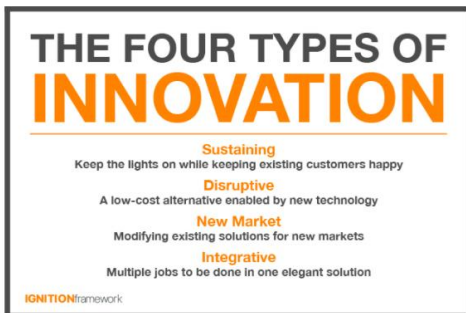
- Various types, structures, subdivisions, extensions, questions



[TYPES OF INNOVATION \(SCHUMPETER, 1942\) | Download Scientific Diagram \(researchgate.net\)](#)



[How many different types of innovation are? | World Economic Forum \(weforum.org\)](#)



[What type of innovation are you talking about? \(strategyzer.com\)](#)

# Recent trends/notions



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- **Innovation Management** - comprises all measures contributing to innovation in all aspects leading to added values (not only monetary...) ([Innovationsmanagement • Definition | Gabler Wirtschaftslexikon](#))
- **Innovation Policy** - principle planning for (public) support of innovation ([Innovationsmanagement • Definition | Gabler Wirtschaftslexikon](#))
- **Innovation System** - “At its simplest an innovation system is the groups of organisations and individuals involved in the generation, diffusion and adaptation, and use of knowledge of socio-economic significance, and the institutional context that governs the way these interactions and processes take place.” (Hall et al., 2003: 3). [Innovation Systems - what are they? \(nri.org\)](#)
- **Social Innovation** - redesigning of social practices to improve societal welfare with involvement and commitment of the civil society (Polman et al., 2017: 12; SIMRA, s.a.)
- **Open Innovation** - innovation of various sources, combination of internal and external competences (co-creation, crowd sourcing, customized marketing, swarm intelligence...) ([Open Innovation • Definition | Gabler Wirtschaftslexikon](#))

# Innovation in EU policies (examples, hierarchical)



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- **Research and Innovation Strategy** - “innovation” 200 times on 59 pages... (Strategic Plan 2020-2024, DG Research and Innovation ,EC Ref: ARES(2020)5352987-08/10/2020)
- **Green Deal** - mobilising research and fostering innovation in various specific objectives, also via Horizon Europe research projects (The European Green Deal, COM(2019) 640 final)
- **Common Agricultural Policy** - innovation as cross cutting objective, support for strategic plans of EU Member States, proposed sharing, fostering and encouraging innovation (e.g. via farm advisory services and other measures) (EU CAP strategic plan regulation, 2021)
  - **Agricultural Knowledge and Innovation System** - means the combined organisation and knowledge flows between persons, organisations and institutions who use and produce knowledge for agriculture and interrelated fields (EU CAP strategic plan regulation, 2021)
  - **European Innovation Partnership** - for agricultural productivity and sustainability- shall support and stimulate innovation, connect innovation actors, care for wider use of innovation measures via networks (EU CAP strategic plan regulation, 2021)

# Role of Innovation in Clusters

from UniClaD Cluster examples collection

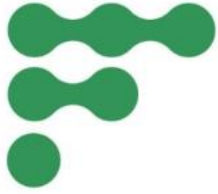


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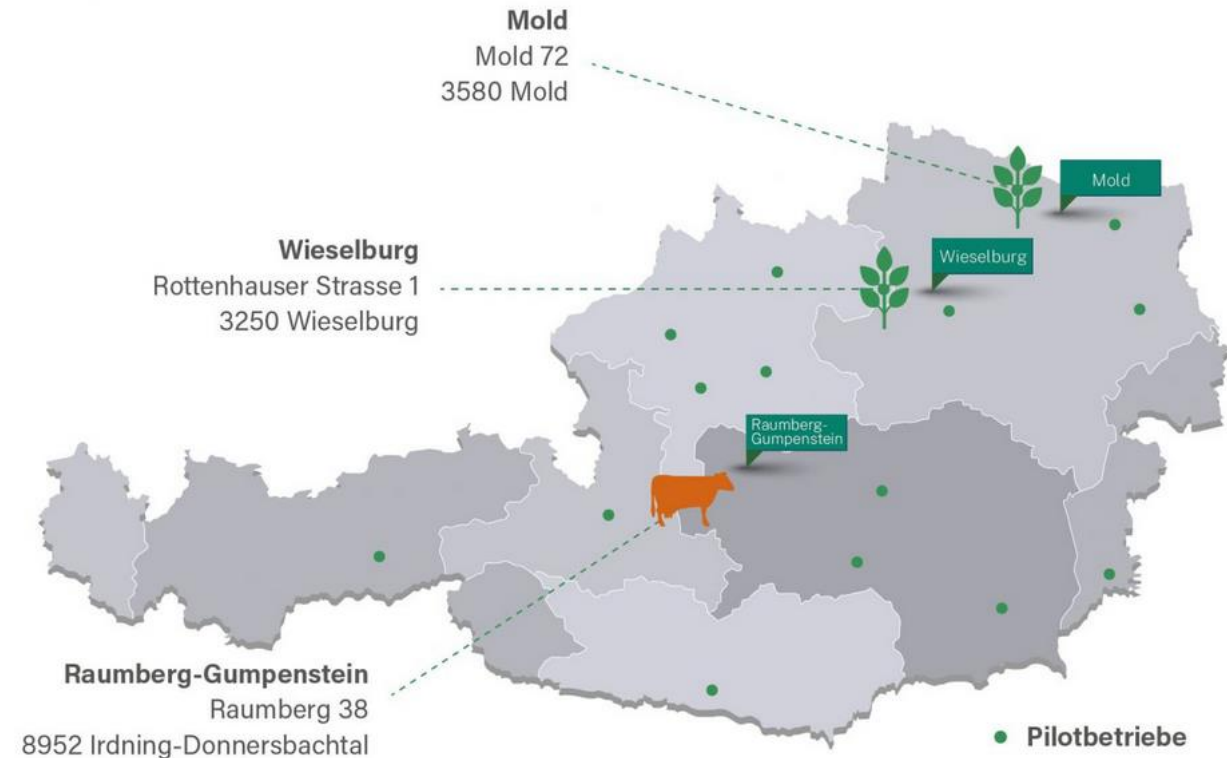
- **Support of Innovation as Cluster objective** often in the statutes of clusters
- **Incentives for Innovation** widen the horizon via providing access to a wide range information, prepared in a targeted manner
- **Options for and examples of Innovation** via study tours, conferences, seminars, workshops,...
- **Enabling and supporting implementation of innovation** via trainings, workshops, spreading information, newsletters, networking activities - vertical and horizontal



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## Organization Chart

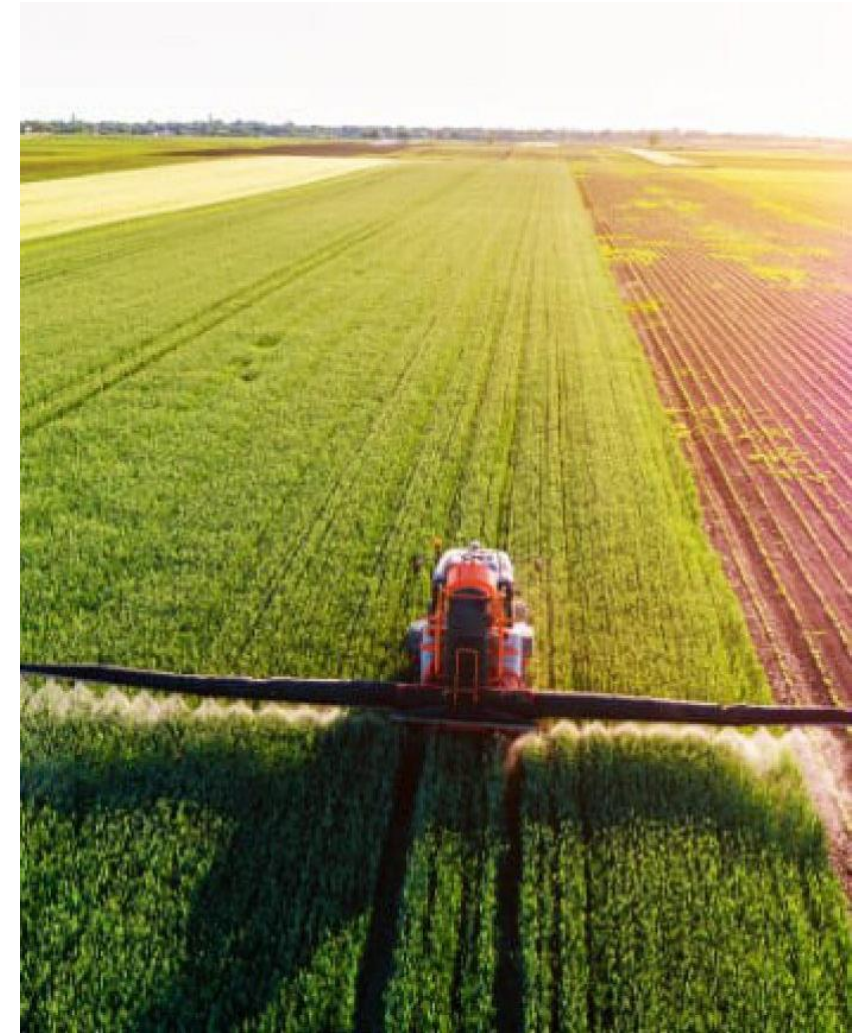
- **Innovation Farm Raumberg-Gumpenstein**  
Federal Research Institute for Agriculture in Alpine Regions
- **Innovation Farm Wieselburg**  
Federal Institute of Education and Research  
Agriculture and food technology, agricultural computer sciences
- **Innovation Farm Mold**  
Training and Formation Centre Mold run by the  
Agricultural Chamber of Lower Austria
- **Pilot farms** about 20



**Innovation Farm focuses on new technologies, trends and developments. It makes them visible, tangible and above all applicable for agriculture.**

## Core Tasks

- Knowledge transfer to farmers, teachers and students from universities and agricultural training centres
- Practical application of new technologies
- Training, formation and workshops



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## Weed detection and spot spraying

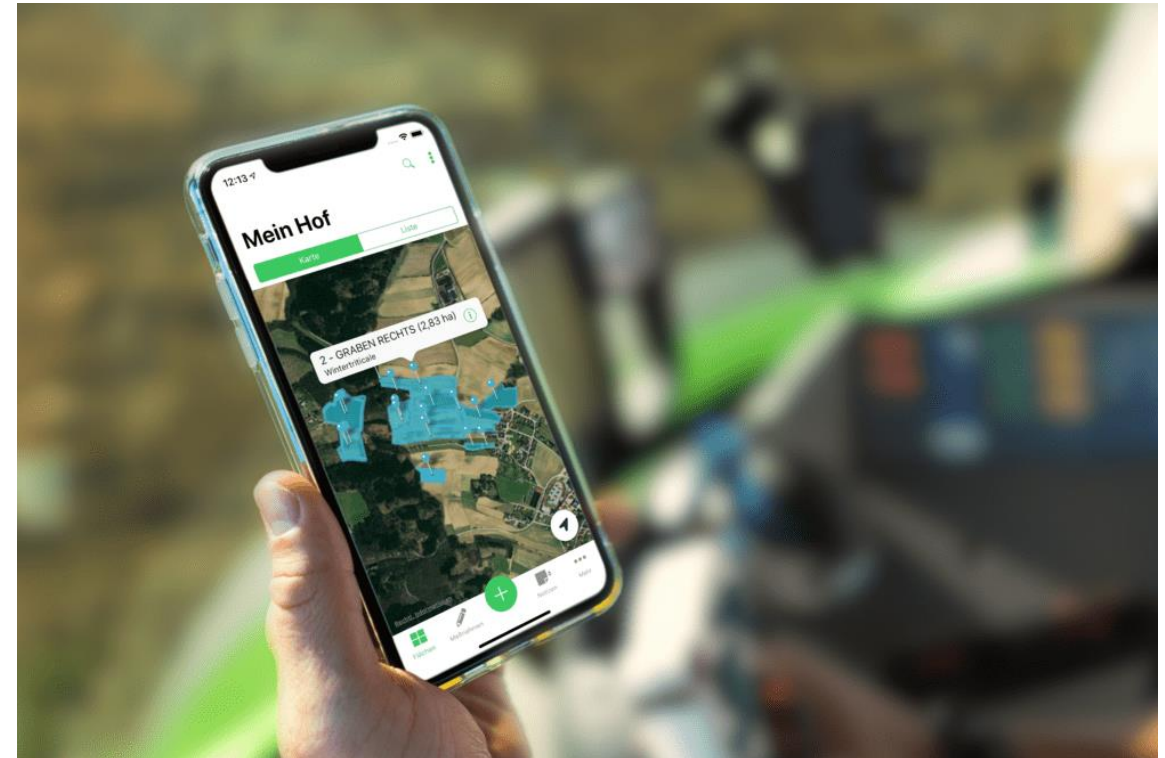
Drones fly over the entire area using high-resolution sensor technology and copy it digitally. The data material is searched by software with support of artificial intelligence for the previously trained objects (weeds). In this process, the detected weeds are marked with precise coordinates and these are then transferred to a tractor terminal or a drone in order to combat the weeds locally and selectively.



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## Farm Management: Digitale planning and recording

Planning of cultivation and crop rotation in a large number of relatively small fields. Planning and organization of field work across farms or with the involvement of non-farm workers (contractors, machinery ring, seasonal workers, neighborhood help) who are not sufficiently familiar with the farm and fields. Work records and documentation of the use of resources. Coping with a growing number of regulations, legal requirements, framework conditions, inspections, obligatory submission of reports etc.



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## FarmLife-Welfare

### Developing an assessment system for the animal welfare potential in dairy farming

The issue of animal welfare is becoming increasingly important in agriculture, but also in society, both nationally and internationally. It is part of the strategy of sustainable and comprehensive business evaluation and consultancy.



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## SMART COMMAND an application for Smart Farming

Agriculture 4.0 refers to the automation of processes, the networking of devices with vehicles or vehicles with each other as well as the environmentally friendly and resource-saving control of processes.

SMART COMMAND is an app that provides the farmer with cross-application functions via mobile devices such as smartphones and tablets. The focus is on a module which acts as a translator for mobile communications and WLAN.



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## Robotic Feeding

Fresh feed must be provided daily and refilled regularly. Feed push requires a lot of manual work and represents an enormously high physiological burden. The feed push can be automated with modern robots. They not only do the manual work, but also promise increased feed intake, increased rumination time and improved animal health through the frequent and regular feed boost.



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# Thank you for your attention

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