

Local Ecosystem Key Actors

Area 4 – Entrepreneurship in Farming

Lesson 11 – Entrepreneurship in SPA

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DIPARTIMENTO DI SCIENZE
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DISCLAIMER

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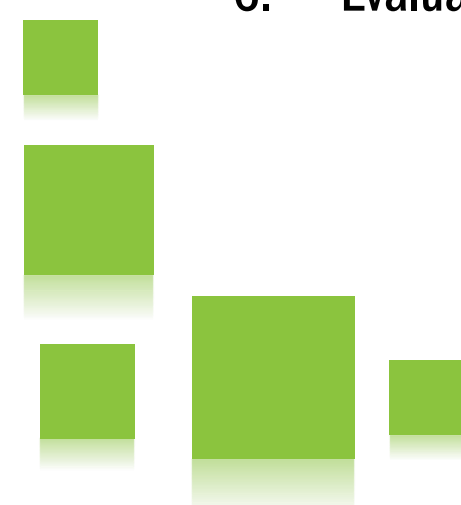
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Overview

Effective use of technologies is very much related to direct and ancillary supports. The reliability of a technological support system is essential, and the local development of these skills is necessary for a trustworthy introduction of innovation.

The performance of the introduced technologies depends on an appropriate support at both local and enterprise level. Any technology requires providers and services (HW and SW) to be maintained, repaired, and set up, which means well-trained consultants and human capital from the appropriate educational system.

The efficiency of the local ecosystem, that supports the introduced technologies, is determined by the growth of skills and competence, and it is defined by the Local Ecosystem Readiness Level (LERL) required by the newly introduced technology.



1. The local innovation development experience



The evolution of agricultural mechanics has become profitable when:

- ✓ the machines have become suitable and reliable (historic failures include the Borello tractor and Bonmartini pneumatic tubular track);
- ✓ retailers, motorists, mechanics, and tire specialists have settled in the region (within 100 km);
- ✓ training centres have been established

In Tuscany (Italy), e.g., the Agricultural Mechanization Training Centre of Borgo a Mozzano, financed by the Government and by the Exxon Mobil Corporation “ESSO”, enjoyed widespread fame.



Borello tractor during field testing

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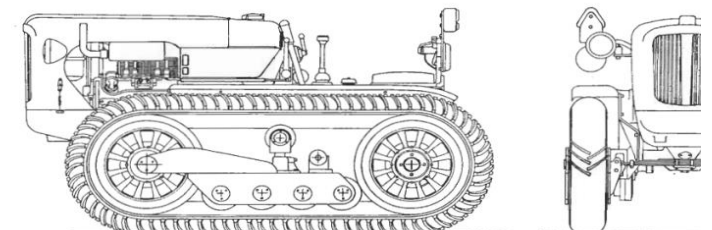
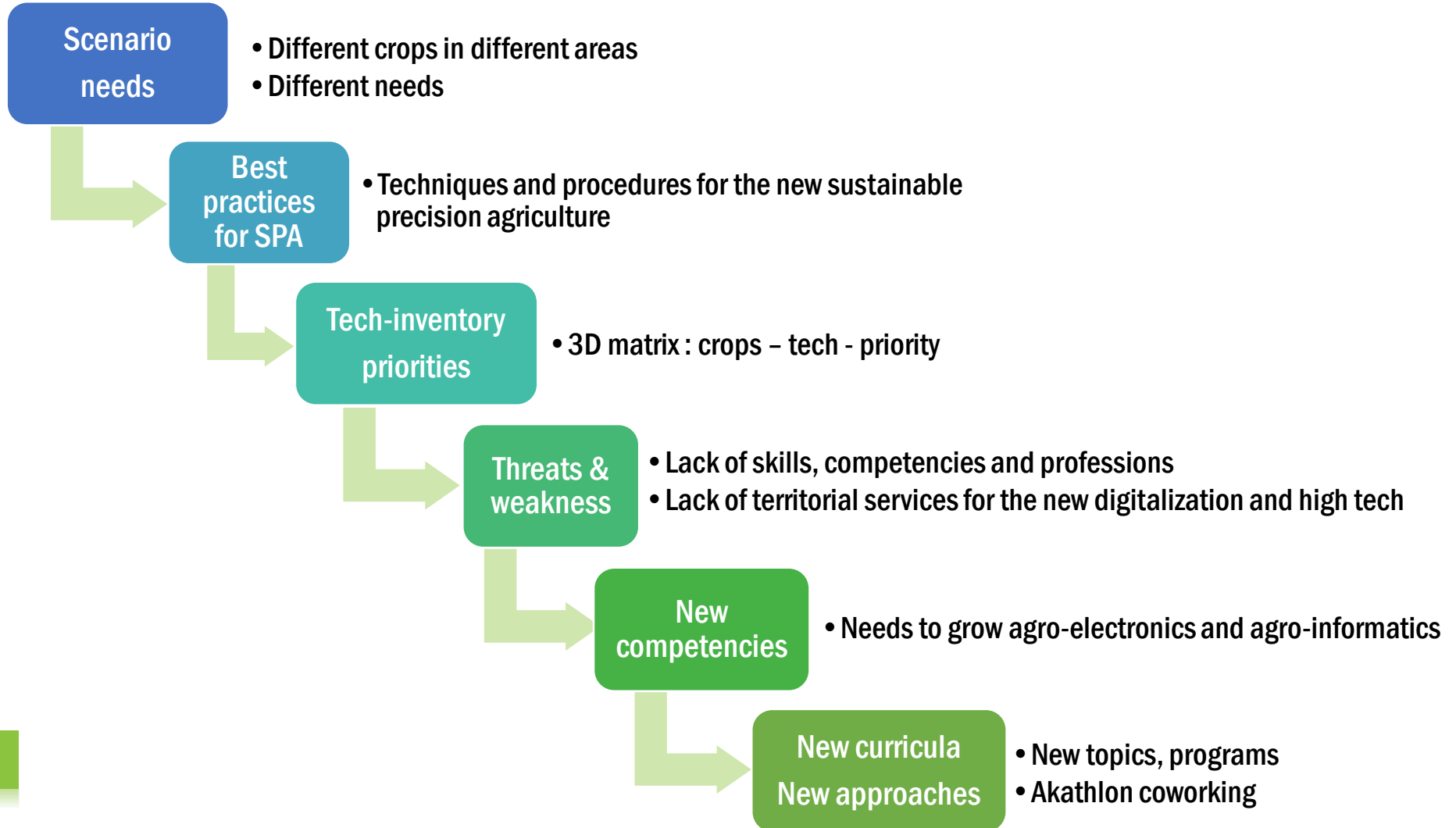


Fig. 302
Cingolo tubolare Bonmartini montato su trattore agricola.

<https://patents.google.com/patent/US3155436>

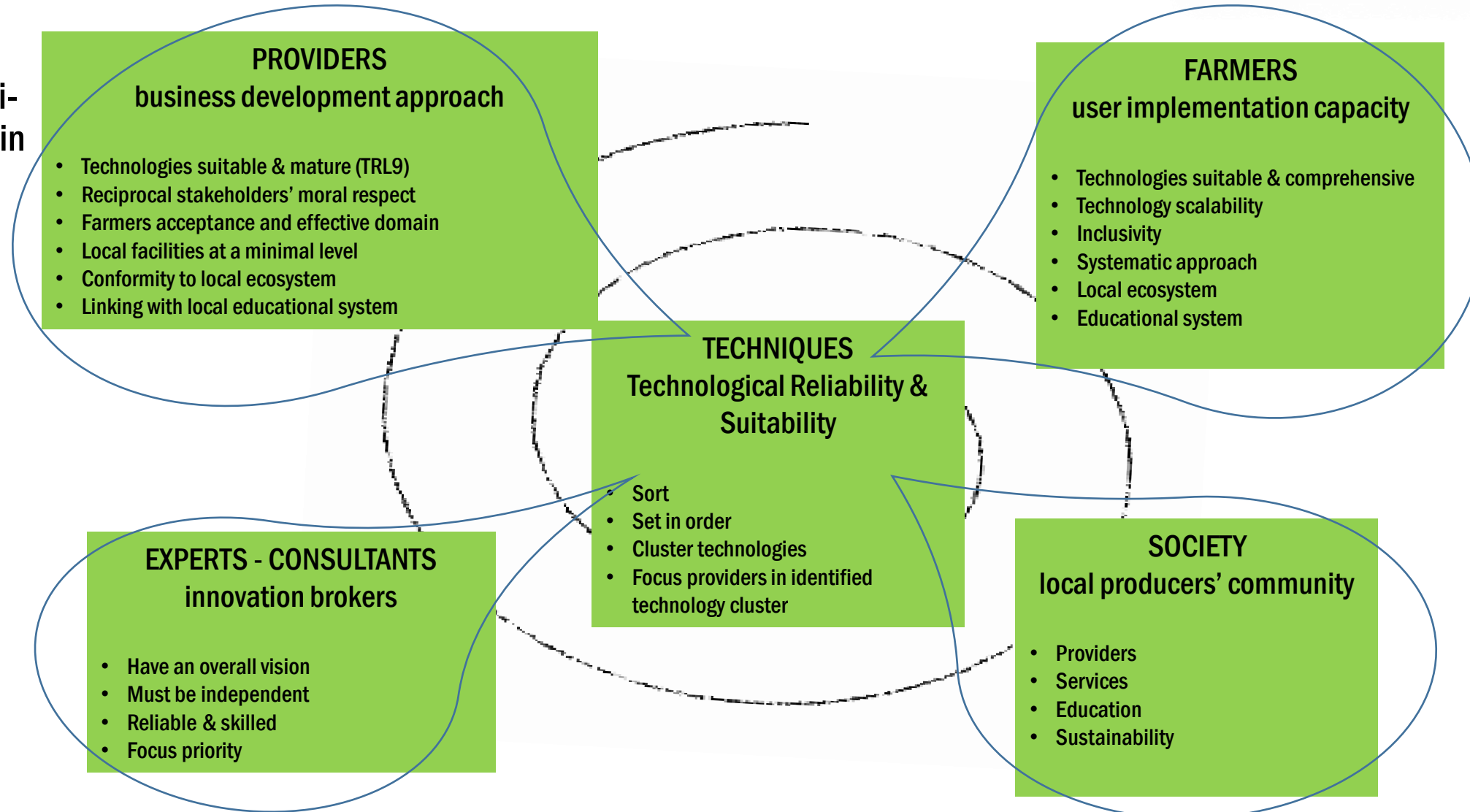
2. Necessity analysis for the innovation you want to introduce



3. Local producers' ecosystem approach



Ecosystem multi-actor approach in fostering innovation in agriculture

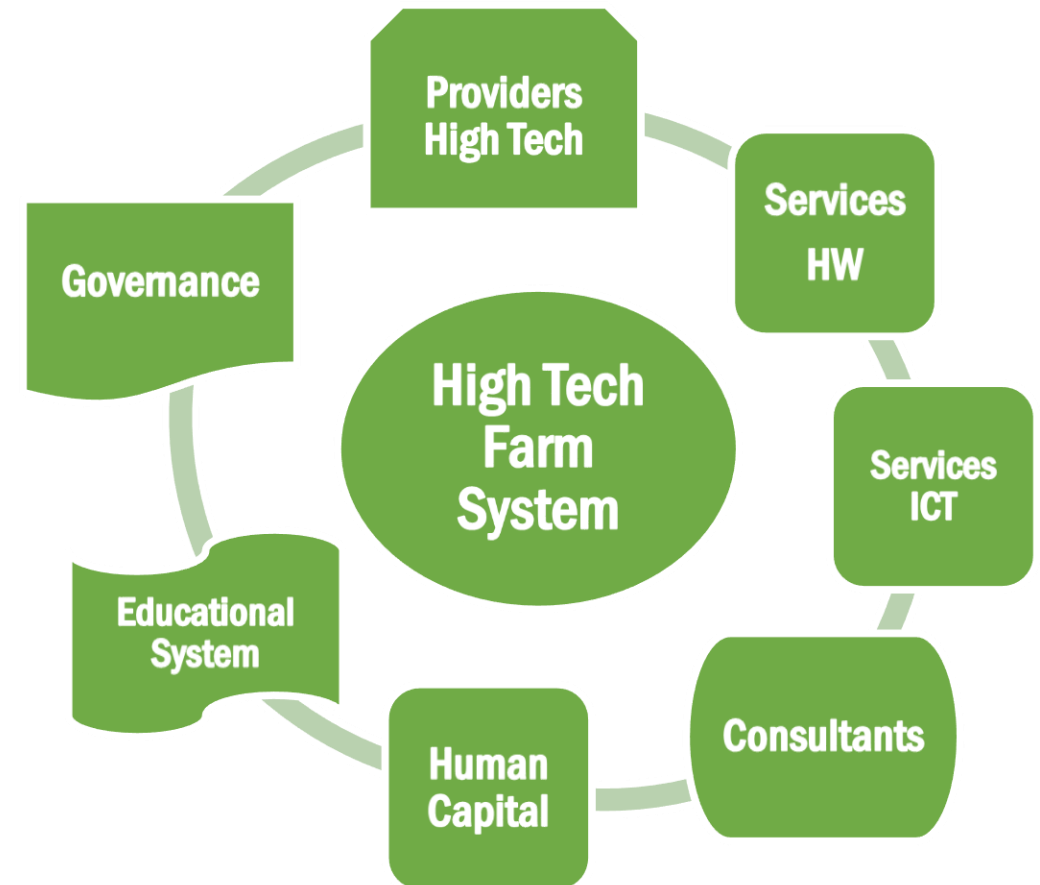


4. The necessary local ecosystem for innovation



Trust and Reliability for new technologies require a local support system to the High Tech Farm Enterprises:

- Providers of High Tech Systems
- Services for Hardware
- Services for Software
- Services for ICT, Connectivity, Network
- Competent Consultants
- Human Capital with adequate Skills and Competencies
- The Updated Educational System
- An appropriate regional Governance

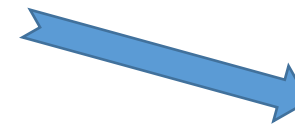
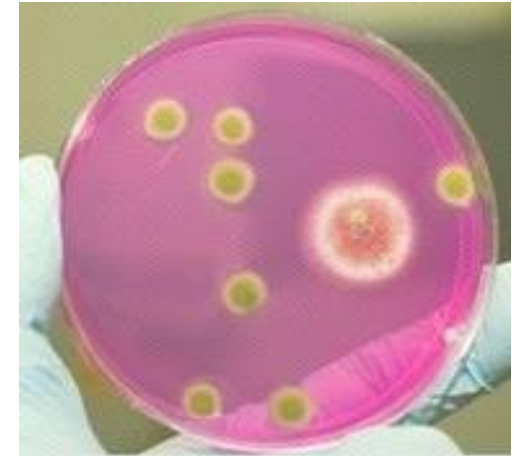
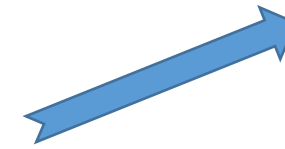


5. Expanding the local producers' ecosystem

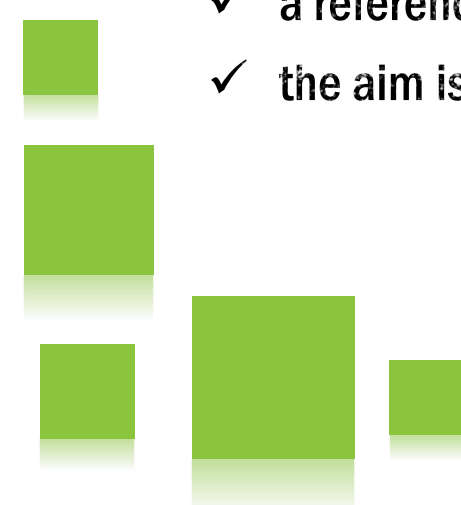


Diffusion model of innovation

- ✓ ecosystem integration is the reference business case
- ✓ inclusive development is key ...
- ✓ with internal, professional, and structural sustainability ...
- ✓ with preparatory and scalable applications
- ✓ a reference is the biological growth of bacteria
- ✓ the aim is to sustain the local biodiversity



Ecosystem integration in a co-working multi-actor system
is the local reference for business cases



6. Evaluation of the appropriate local support for innovation



The performance of the introduced technologies depends on the support at both local and enterprise level: any technology requires providers and services to be maintained, repaired and set up, which means well-trained consultants and personnel. For example, in the “trial period” of a chosen technology, in the so-called “use cases”, the KPIs (Key Performance Indicators) are affected by a particular care of providers, services, and researchers. But which are the conditions to maintain the same performance after the “trial period”, when the entrepreneur is not on the spot? The pertinence of all key actors should be assessed when introducing new technologies.



6. Evaluation of the appropriate local support for innovation



Consequently, it is important to define a minimum readiness level (MRL) composed by:

- **Provider Readiness Level (PRL)**
- **Hardware Services for the New Technologies (ShdRL)**
- **Software Services for the New Technologies (SswRL)**
- **Consultants Readiness Level (CRL),**
- **Human Readiness Level (HRL),**
- **Farming Readiness Level (FRL)**
- **Educational System Readiness Level (EduRL)**
- **Government Readiness Level (GovRL)**

The efficiency of the local ecosystem, that supports the introduced technologies, is determined by the growth of skills and competence level (as the Readiness Level in the Technologies) of all key actors; each single actor is responsible for maintaining or increasing the efficiency of the whole system. In this way, it could be also possible to define the Local Ecosystem Readiness Level (LERL) required by the new technology.

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