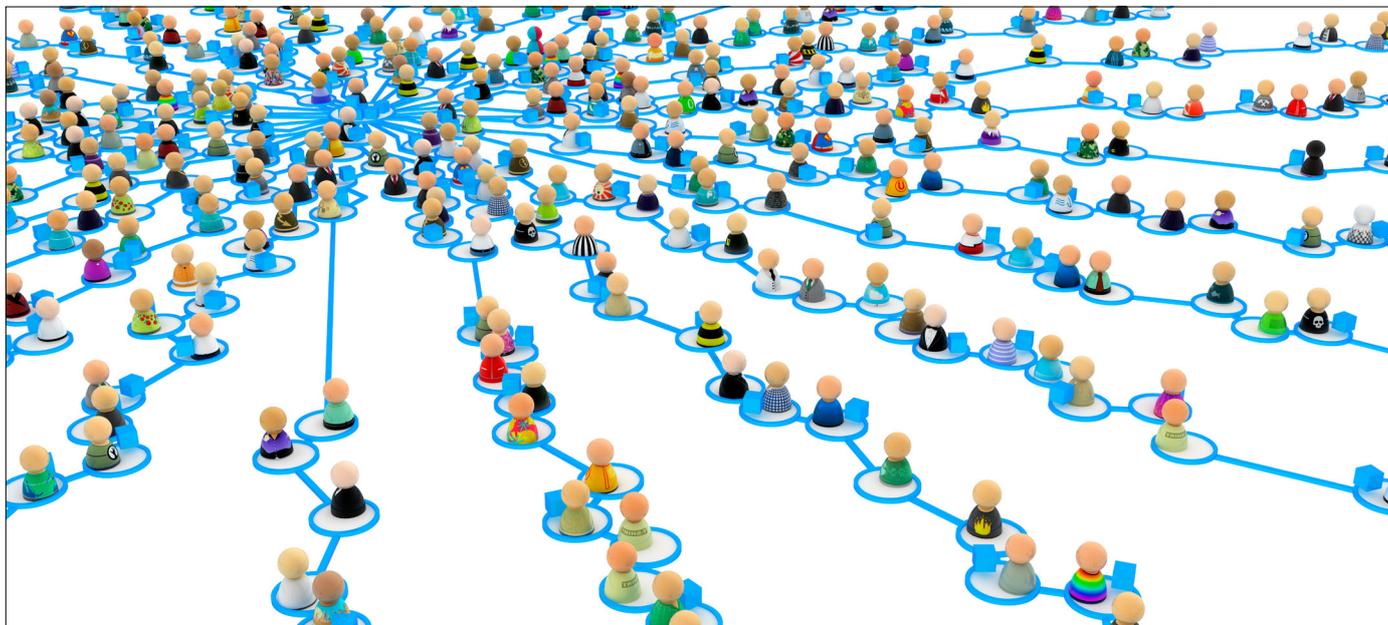


# INNOVATION ECOSYSTEM DEVELOPMENT



**TNO** innovation  
for life

The Netherlands is one of the Innovation Leaders in Europe. A strong science base, world class companies and government support policies result in an ecosystem with strong linkages between innovation partners. How can you create such an environment that stimulates development of innovation? What are the required building blocks of such an ecosystem? Being one of Europe's leading Research and Technology Organisations, TNO can help you to develop effective innovative ecosystems and policies to support these.

An innovation ecosystem focuses on the relations (national and international) between actors whose goal is to enable technology development and innovation. Different entities need to participate in the ecosystem: private commercial companies, universities and research institutes, government policy makers and finance institutions. The participants contribute material resources such as tools, facilities and funds, but can also participate with human capital such as students, staff and industry researchers.

#### **CORNERSTONES OF AN INNOVATION ECOSYSTEM**

- **Interconnections and networking between participants**  
Base of an innovation ecosystem is a network of participants in which strengths of all participants can be combined. Working together will stimulate development of innovation.

- **Sharing and creating knowledge and technology**

Knowledge and technologies are developed and shared within the innovation ecosystem. Partnerships between the participants create new knowledge and technologies.

- **Diversity in financial sources**

New sources of financial support can become available based on connections between partners in the innovation ecosystem.

- **Boost for business climate**

The improved relationships will boost the business climate and create new commercial initiatives. This will have a positive influence on both economy and wellbeing of society.



### Flying Food Project

TNO together with several partners established a completely new cricket value chain in Kenya and Uganda because crickets are highly nutritious and affordable for most vulnerable groups.

The partners: TNO (coordinator), ICCO, VENIK, Krecia, NGN Pro-Active, Nostimos B.V., Ruig en Zonen B.V., BoPInc, HAS, JOOUST University, ADS, MIXA Foods and Beverages, Kenya Biologics Ltd., EntoAfrica, Achmea Foundation and Ministry of Foreign Affairs of the Netherlands.

This public private partnership results in entrepreneurship, access to nutritious food and knowledge transfer between the Netherlands and African countries. This partnership facilitates the collaboration between different actors in one country and can be seen as a small part of an innovation ecosystem. Further development of the eco system is required to boost future innovations in the agricultural sector and other sectors as well.

### TNO

TNO, the Dutch applied scientific research institute, is an important stakeholder in the Dutch innovation eco-system. TNO connects people and knowledge to create innovations that boost the sustainable competitive strength of industry and well-being of society. We can be the linking pin between private sector, knowledge institutes, government and civil society organizations; four different types of actors known as the 'Quadruple Helix' or 'Dutch Diamond'. The TNO Innovation for Development program focuses on creating inclusive innovations in developing countries and emerging economies. TNO develops and launches products and services with sound business models in the field of nutrition, renewable energy, health, water, ICT and safety which have a boosting impact on entrepreneurship, income and wealth of people. TNO can add value in supporting the development of innovation eco-systems in emerging economies.



### HOW CAN TNO SUPPORT LOCAL INNOVATION ECOSYSTEMS?

Most international projects are organized in a public-private partnership with multiple partners from several countries. For example, in the Flying Food project, where national and international, public and private partners are involved is TNO playing a coordinating role. Besides the current

project activities, this network of partners creates an environment where new projects can be developed and realized. There is a local need to continue this network and expand this to other sectors and regions. This is exactly the role that TNO plays in the Netherlands and that is lacking in African countries. TNO has the ambition to strengthen the local innovation eco-system in order to stimulate the implementation of innovation and to reach socio-economic impact.

#### TNO can support with:

- 1 Analysing existing innovation ecosystems. This can be done for the ecosystem in general or on a specific subject such as the role of research or external connections.
- 2 Determination of the potential of the future innovation ecosystem, with respect to stakeholder management or financial resources
- 3 Coaching certain actors to grow towards a Research and Technology Organisation (RTO) with a corresponding commercially viable business model
- 4 Mentoring role during the realisation of an innovation ecosystem. Knowledge and information can be provided about topics such as intellectual property or the development of a strategic plan.
- 5 Innovation policies needed to support effective innovation ecosystems

#### ONLINE INFORMATION

[TNO Innovation for Development](#)  
[TNO Strategy and Policy](#)

**TNO.NL**

#### TNO INNOVATION FOR DEVELOPMENT

The TNO Innovation for Development program works on sustainable innovations that empowers the 4 billion people with lowest income in developing countries and emerging economies.

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