



Strengthening cross-regional DIH collaboration in aquaculture innovation support services (AquaHubs)

IE service needs assessment

Innovation Experiment needs assessment and validation framework

Part II introduces **the framework on aqua-tech needs assessment**; a process of practical interaction with SMEs developing IEs within the aquaculture and fishery industry, where the requirements and needs of their endeavor are being identified and evaluated. The purpose of such framework is twofold:

- 1. Assessment of the organization seeking for partners** creates an understanding of the organization seeking for external services and enables the possibility to register the organization to the *compendium of DIH and CC services, digital tools and resources* (also developed in the AquaHubs project).
- 2. Assessment of the service need** helps to specify the service need of an organization, enabling the possibility to search for appropriate partners from the *compendium of DIH and CC services, digital tools and resources*.

The framework of needs assessment and the corresponding compendium are developed specifically to the context of aquaculture. These project results have similarities with **the Agricultural Technology Navigator (ATN)** that has been recently implemented as part of the SmartAgriHubs Innovation Portal for helping stakeholders to register and showcase their competences, technology solutions and systems.

In order to take advantage of ATN and to enable the search for partners also from the wider scope of agriculture, we have planned for compatibility between ATN and the Aquaculture specific deliveries of AquaHubs project. To this end, the framework presented below describes how each of the questions are related to the fields of ATN framework (Figure 1).

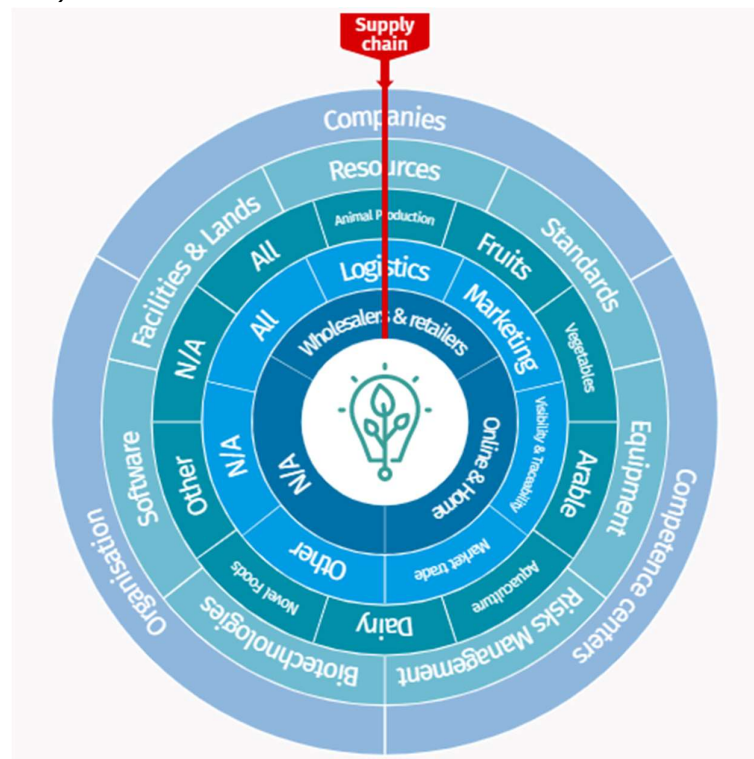


Figure 1. Framework for Agricultural Technology Navigator (<https://www.smartagrihubs.eu/competence-centers>)

IE SERVICE NEEDS ASSESSMENT FRAMEWORK

Assessment of the organization seeking for partners

1. Please specify type of your organization (ATN: Entities)

- Commercial organization (Private company, SME, ...)
- Research organization (Competence center, Academic Institution, ...)
- Platform (Cluster, DIH, ...)
- Non-profit organization (Interest groups, Aquaculture associations, NGO, ...)
- Other

2. Please describe your organization shortly (ATN: Short summary of the competence)

Free-form text

3. Please specify types of services you offer (ATN: Competence/System; ATN: Inputs)

- DIH related services
- Digital tools (*software and hardware*)
- Resources (*reports, platforms, projects, and networks to stakeholders in aquaculture*)

4. Please specify aquaculture -related keywords that describe your competence areas best (ATN: Keywords)

free-form keywords.

For example: "Fish farming, Fish production, Fish processing, Fishing gear development, Fresh water fishing, Maritime fishing"

5. Please specify technologies that describe your competence areas best (ATN: Technologies supporting the system or competence)

Free-form keywords.

For example: "IoT, Robotics, ERP Systems, Machine Vision"

6. Please estimate your technology readiness level (ATN: Technology readiness level)

1. Basic principles observed
2. Technology concept formulated
3. Experimental proof of concept
4. Technology validated in lab
5. Technology validated in relevant environment
6. Technology demonstrated in relevant environment
7. System prototype demonstration in operational environment
8. System complete and qualified
9. Actual system proven in operational environment

7. Please specify your services in more detail (ATN: Key services related to the system or competence)

Free-form keywords.

For example:

- DIH related services:
Community building; Strategy development; Ecosystem learning; Representation, promotion; Strategic RDI; Contract research; Technical support on scale-up; Provision of technology infrastructure; Testing and validation; Incubator/accelerator support; Access to finance; Skills and education; Project development; Offering housing
- Development services:
Collaborative R&D; Concept validation / prototyping; Process optimization; Technical support on upscaling; Technology transfer; Commercial infrastructure; Product design; Technologies integration; Testing infrastructure / validation

8. Please specify your end users (ATN: End-users of system or competence)

- Fishermen
- Fish farms
- Catch consolidators
- Fish processors and packers
- Supply chain management
- Scientific and technical advisors
- Marketing and communication support
- Others

Assessment of the service need

1. What kind of offering are you looking for? (ATN: Competence/System; ATN: Inputs)

- DIH related services
- Digital tools (*software and hardware*)
- Resources (*reports, platforms, projects, and networks to stakeholders in aquaculture*)

2. What kind of a partner organization are you looking for? (ATN: Entities)

- Commercial organization (Private company, SME, ...)
- Research organization (Competence center, Academic Institution, ...)
- Platform (Cluster, DIH, ...)
- Non-profit organization (Interest groups, Aquaculture associations, NGO, ...)
- Other

3. Please specify aquaculture -related keywords that describe best your need?
(ATN: Keywords)

free-form keywords.

For example: "Fish farming, Fish production, Fish processing, Fishing gear development, Fresh water fishing, Maritime fishing"

4. Please specify technologies for which you seek solutions or competences
(ATN: Technologies supporting the system or competence)

Free-form keywords.

For example: "IoT, Robotics, ERP Systems, Machine Vision"

5. What kind of technology readiness you expect from the potential partner?
(ATN: Technology readiness level)

1. Basic principles observed
2. Technology concept formulated
3. Experimental proof of concept
4. Technology validated in lab
5. Technology validated in relevant environment
6. Technology demonstrated in relevant environment
7. System prototype demonstration in operational environment
8. System complete and qualified
9. Actual system proven in operational environment

6. What services you need from the partner? (ATN: Key services related to the system or competence)

Free-form keywords.

For example:

- DIH related services:
Community building; Strategy development; Ecosystem learning; Representation, promotion; Strategic RDI; Contract research; Technical support on scale-up; Provision of technology infrastructure; Testing and validation; Incubator/accelerator support; Access to finance; Skills and education; Project development; Offering housing
- Development services:
Collaborative R&D; Concept validation / prototyping; Process optimization; Technical support on upscaling; Technology transfer; Commercial infrastructure; Product design; Technologies integration; Testing infrastructure / validation

7. Who are the end users of a solution you are developing? (ATN: End-users of system or competence)

- Fishermen
- Fish farms
- Catch consolidators
- Fish processors and packers
- Supply chain management
- Scientific and technical advisors
- Marketing and communication support
- Others

8. Please describe your need shortly (ATN: Short summary of the system)

Free-form text