This questionnaire will help to further develop the scoping paper for a 'Smart Specialisation Platform on Traceability and big data for the EU agri-food value chain: SMART FOOD. It uses the concepts and definitions of the draft scoping paper and it is recommended to read the paper before completing the survey.

Firstly, to build an evidence base for the development of the SSP Smart Food, the interested regions are invited to contribute to a prioritisation of the priorities and challenges faced in improving traceability through data applications at different steps in the agri-food value chain. It is expected that the you will draw on smart specialisation strategy priorities (&/or those from other relevant strategies such as digital agendas or rural development plans) when providing information.

Secondly, the survey aims to develop an initial mapping of the existing know-how, capabilities, organisations and initiatives in the field in each region. The aim is to ensure that the SSP Smart Food builds on rather than duplicates existing know-how and activities.

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Section A: Contact information for Region

A1. **What is your Region***:*

A2. **What is your Country:**

A3. **Person(s) responsible**

The person who has completed the questionnaire and/or the designated official of the regional authority

A4. **Organisation**

A5. **Type of Organisation**

Government department ☐

Public agency ☐

Private Enterprise ☐

Research organisation ☐

Other ▼

Other

A6. **Email**

Section B: Challenges

Please rank the main challenges facing the agro-food sector in your region in relation to traceability and 'big data'?

B1. Challenges

	1 - Not important	2	3	4	5 - Critical
Capacity of farmers, processors, etc. to manage and use data collected via installation of new automations, sensors, etc.	☐	☐	☐	☐	☐
Cost of investment for farmers, food processors or transportation firms in equipment and technologies (sensors, robots, drones, etc.) including data management tools	☐	☐	☐	☐	☐
Improved measurement and control of environmental impact (water usage, soil quality, etc.) both for agro-food organisations and public authorities, etc.	☐	☐	☐	☐	☐
Improve effectiveness of traceability and control (temperature, 'tampering', etc.) of foodstuffs along logistic chains	☐	☐	☐	☐	☐
Capacity for farmers and/or food processors to anticipate or predict market trends including price changes	☐	☐	☐	☐	☐
Methods and tools enabling the analysis or visualisation of existing data from multiple sources (devices in fields, factories, trucks, etc.) and types (proprietary, open data, etc.).	☐	☐	☐	☐	☐
Legislative or regulatory frameworks governing the collection and use of data (data standards, security, interoperability, rights of access, updating, etc.)	☐	☐	☐	☐	☐

	1 - Not important	2	3	4	5 - Critical
Availability of know-how on new materials, optics, biotech, etc. (GRIN) that enable the application of new traceability strategies	☐	☐	☐	☐	☐
Development of platforms to improve swapping/exchange of data along the food value chain, notably improving the access of farmers and food processors to consumer feedback on products.	☐	☐	☐	☐	☐
Improved labelling and content of information provided to consumers (source, health, environmental data, etc.)	☐	☐	☐	☐	☐

B2.   Other challenges, please specify:

Section C: Needs and current use of data technologies for traceability

C1.   Please rank the level of knowledge and actual application (use) of data technologies of different actors of the agro-food chain in your region?
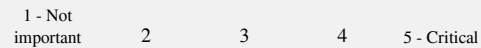
Level of knowledge – capacity to collect, process and analyse data:

Public authorities and agencies (agricultural, environmental, health and safety, etc.)								

Agricultural suppliers (feedstuffs, fertilisers, plant & animal health, etc.)								

Agro-food equipment and service providers								

Farmers								

Food and drink manufacturers/processors								

Logistic and transport companies								

Information technology companies (mobile phone operators, software developers, etc.)								

Retailers								

Consumers								

Actual application of available technologies:

Public authorities and agencies (agricultural, environmental, health and safety, etc.)								

Agricultural suppliers (feedstuffs, fertilisers, plant & animal health, etc.)								

Agro-food equipment and service providers								

Farmers								

Food and drink manufacturers/processors								

Logistic and transport companies								

Information technology companies (mobile phone operators, software developers, etc.)								

	Retailers									

	Consumers									

C2. **For which regional agro-food chains (dairy, cereals, meat, oils, beverages, etc.) is it most urgent or important to improve the capacity to collect and manage data? Please list them and briefly explain why.**

Section D: Strategies and policies relevant to smart food theme
In your region, which of the following strategies if any address the topic of traceability and data in the agri-food chain?

D1. **Strategy document (*Please indicate title of document and year published*)**

Smart specialisation strategy

Digital or information society strategy (big, open data, internet of things, etc.)

Rural Development or agricultural/agro-food strategies

D2. **Other strategy documents (*Please indicate title of document and year published*)**

D3. **Please summarise (briefly) the main relevant policy priorities of the current policy documents/strategies for your region/country.**

Section E: Policy measures in support of traceability for the agro-food chain

E1. **Please list up to five regional or national programmes/initiatives that support the development or deployment of innovative methods and technologies in support of traceability and data for the agro-food chain? These can either be (co-)funded by public funds or supported through public-private partnerships.**

Name of initiative:

1
2
3
4
5

Annual funding (if known):

1
2
3
4
5

Website (if available):

1
2
3
4
5

Section F: Regional expertise and know-how in technologies and applications for traceability and big data

Existing expertise in relevant technologies

In which of the relevant technologies for traceability and data management for the agro-food chain is your region most advanced/specialised?

Rank the <u>top three fields</u> in which the region is most specialised.

Current application of technologies

F1. Technology/Application Field 1

Radio Frequency Identification (RFID) ☐

Wireless Sensor Networks (WSN) ☐

Satellite and remote sensing technologies and devices ☐

Geotraceability, Geo Information and satellite imageries ☐

Smart tags, quality sensors, sensor enabled Refrigeration Systems ☐

Drones ☐

Genetic, Robotic, Information and Nano technologies (GRIN) ☐

Block-chain Technology ☐

F2. Technology/Application Field 2

Radio Frequency Identification (RFID) ☐

Wireless Sensor Networks (WSN) ☐

Satellite and remote sensing technologies and devices ☐

Geotraceability, Geo Information and satellite imageries ☐

Smart tags, quality sensors, sensor enabled Refrigeration Systems ☐

Drones ☐

Genetic, Robotic, Information and Nano technologies (GRIN) ☐

Block-chain Technology ☐

F3. **Technology/Application Field 3**

Radio Frequency Identification (RFID) ☐

Wireless Sensor Networks (WSN) ☐

Satellite and remote sensing technologies and devices ☐

Geotraceability, Geo Information and satellite imageries ☐

Smart tags, quality sensors, sensor enabled Refrigeration Systems ☐

Drones ☐

Genetic, Robotic, Information and Nano technologies (GRIN) ☐

Block-chain Technology ☐

F4. **Please comment your ranking or suggest other relevant key technologies for which your region is specialised – you may also provide a web link to a study or analysis of regional specialisation in these fields.**

F5. **To what extent are the key technologies applied in your region at different stages of the agri-food chain? Rank from 1 (not yet used) to 5 (widely used), you may also indicate 'don't know'.**

Input industries:

Radio Frequency Identification (RFID)

Wireless Sensor Networks (WSN)

Satellite and remote sensing technologies and devices

Geotraceability, Geo Information and satellite imageries

Smart tags, quality sensors, sensor enabled Refrigeration Systems

Drones

Genetic, Robotic, Information and Nano technologies (GRIN)

Block-chain Technology

Farmers:

Radio Frequency Identification (RFID)

Wireless Sensor Networks (WSN)

Satellite and remote sensing technologies and devices

Geotraceability, Geo Information and satellite imageries

Smart tags, quality sensors, sensor enabled Refrigeration Systems

Drones

Genetic, Robotic, Information and Nano technologies (GRIN)

Block-chain Technology

Logistic/ transport providers:

Radio Frequency Identification (RFID)

Wireless Sensor Networks (WSN)

Satellite and remote sensing technologies and devices

Geotraceability, Geo Information and satellite imageries

Smart tags, quality sensors, sensor enabled Refrigeration Systems

Drones

Genetic, Robotic, Information and Nano technologies (GRIN)

Block-chain Technology

Food manufacturers:

Radio Frequency Identification (RFID)

Wireless Sensor Networks (WSN)

Satellite and remote sensing technologies and devices

Geotraceability, Geo Information and satellite imageries

Smart tags, quality sensors, sensor enabled Refrigeration Systems

Drones

Genetic, Robotic, Information and Nano technologies (GRIN)

Block-chain Technology

Retail sector:

Radio Frequency Identification (RFID)

Wireless Sensor Networks (WSN)

Satellite and remote sensing technologies and devices

Geotraceability, Geo Information and satellite imageries

Smart tags, quality sensors, sensor enabled Refrigeration Systems

Drones

Genetic, Robotic, Information and Nano technologies (GRIN)

Block-chain Technology

F6. **Other key technologies applied in your region (please specify)**

F7. **If you wish you may comment your ranking or provide examples of specific issues in applying the technologies.**

Section G: Centres of expertise (academic/industrial research, technology or training centres, etc.)

G1. **Please list up to 10 specialised organisations in your region involved in traceability and data innovations and applications for the agro-food value chain.**

Name:

1

2

3

4

5

6

7

8

9

Type:

10

1

2

3

4

5

6

7

8

9

10

Describe briefly the expertise:

1

2

3

4

5

6

7

8

9

10

Section H: Partnerships

Existing regional involvement in European or inter-regional partnerships in the field of agro-food chains, traceability or big data applications

H1. **Please list existing involvement of regional organisations (public, private, research, clusters, etc.) in European (ERA-NETs, Horizon 2020, agricultural, open or big data, networks, etc.) as well as inter-regional programmes such as INTERREG.**

Name of initiative or project:

1
2
3
4
5
6
7
8
9
10

Organisations involved:

1
2
3
4
5
6
7
8
9
10

Specific focus or topic:

1

2	
3	
4	
5	
6	
7	
8	
9	
10	

Section I: Priority topics

Regional priorities for the proposed Smart Specialisation Platform for agro-food SSP for Advanced Manufacturing

I1. **Given the perceived challenges for your region and the priorities, which specific topics are of most interest for your region?**

Traceability and Big Data in the "Lifecycles of the value chain" ☐

Traceability and Big Data in the "Smart monitoring of the value chain (production, agrifood industry, logistics, distribution and consumer) aiming to improve the competitiveness in the agri-food sector" ☐

Traceability and Big Data to "Incorporate the experiences of the consumers and of the different operators of the food chain in decision-making processes" ☐

Cross-cutting issues such as "Open data, interoperability, data governance and information security, cybersecurity" ☐

I2. **If you wish to propose a specific additional topic or reformulate the proposed topics, please use the box below.**

Section J: Type of joint actions or activities

J1. **Please rank possible activities of a future SPP.**

Mapping specialisation in agro-food traceability technologies and specialisation in each region

1 - low priority ☐ 2 ☐ 3 ☐ 4 ☐ 5 - top priority ☐

	1 - low priority	2	3	4	5 - top priority
Mapping of key regional businesses in specific food value-chains to identify potential synergies	☐	☐	☐	☐	☐
Partner search, match-making and brokerage services for joint project development	☐	☐	☐	☐	☐
Building inter-regional innovation communities to jointly work on solutions and applications for agro-food chains	☐	☐	☐	☐	☐
Create a network of (open access) research and innovation centres that regional firms can access	☐	☐	☐	☐	☐
Co-invest in demonstrators, pilot applications, technology validation actions, etc.	☐	☐	☐	☐	☐
Cooperation on mobilising financial support for agro-food traceability projects.	☐	☐	☐	☐	☐

J2. **If you wish to propose a specific additional activity or reformulate the proposed types of activities, please use the box below.**

[ ]

Section K: Governance and membership of the future SPP

**K1.** **What role is your region willing to play in the future activities?**

	Yes	Uncertain	No
Lead region for a topic or 'flagship action	☐	☐	☐
Co-finance future activities (e.g. studies, future meetings, etc.)	☐	☐	☐
Host a match-making event	☐	☐	☐

K2. **Other (please specify)**

[ ]

Section L: Governance options

L1. **What would be your preference for future governance arrangements?**

Create a distinct legal entity ☐

Signature of a memorandum of understanding – cooperation agreement ☐

Integrated in an existing network ☐

Project based co-operation only (e.g. through existing European funding programmes) ☐
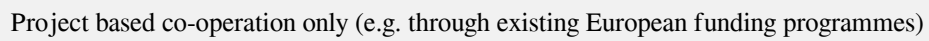
L2. **You may add a comment or suggest an alternative option**

Section M: Membership

M1. **Would you recommend that additional regions be invited to join future activities? If so, please list them and indicate why (e.g. existing co-operation, specific expertise located in the region, etc.).**
Region:

1

2

3

4

5

Specific expertise relevant for the proposed activities:

1

2

3

4

5

Thank you for your time!