

FOOD 2030 Pathways: Future Research & Innovation Needs in view of the transition to sustainable, healthy, safe and inclusive food systems

Fields marked with * are mandatory.

Introduction

The **purpose** of this survey is to gather your opinion on how EU research and innovation can accelerate the transition to sustainable, healthy, safe and inclusive food systems.

This survey will take **about 30-40 min of your time**.

You will be asked **questions** about:

1. Your awareness of [FOOD 2030](#) and of the [Green Deal proposal](#)
2. 10 selected 'Pathways for Action' that support the transition to sustainable, healthy, safe and inclusive food systems
3. Research and Innovation actions and needs related to each of these Pathways

The survey focuses on **clarifying R&I needs** that :

- are relevant to achieve the FOOD 2030 priorities
- are relevant to reach the targeted impacts that are outlined in the [strategic orientations document of Horizon Europe](#), in particular for Cluster 6 "Food, Bioeconomy, Natural Resources, Agriculture And Environment" (pages 113-114) ;
- could be addressed by R&I actions described under Intervention Area "Food Systems" (strategic orientations document, pages 123-125).

It is an **open survey** to which a wide range of stakeholders are encouraged to participate.

The **deadline** for completion is Thursday 27 February 2020, 18h00 CET.

A summary of the **results** of this survey will be made available by European Commission services. Results will serve as input to a workshop entitled "FOOD 2030 Pathways: Future Research & Innovation Needs in view of the transition to sustainable, healthy, safe and inclusive food systems" (4 March, Brussels).

PART 1: General questions

* First Name

* Last Name

* Type of Organisation

- Research/Academia
- Civil Society Organisation/NGO/Foundation
- Private sector/agriculture
- Private sector/food industry
- Private sector/food service
- Private sector/retail
- Public Sector/ EU Institutions
- Public Sector/ Local, regional and national
- Public Sector/ International
- Other

* Country of Organisation

- Afghanistan
- Albania
- Algeria
- Andorra
- Angola
- Antigua and Barbuda
- Argentina
- Armenia
- Australia
- Austria
- Azerbaijan
- Bahamas
- Bahrain
- Bangladesh
- Barbados
- Belarus
- Belgium
- Belize
- Benin
- Bhutan
- Bolivia
- Bosnia and Herzegovina
- Botswana
- Brazil
- Brunei Darussalam
- Bulgaria

- Burkina Faso
- Burundi
- Cabo Verde
- Cambodia
- Cameroon
- Canada
- Central African Republic
- Chad
- Chile
- China
- Colombia
- Comoros
- Congo
- Costa Rica
- Côte D'Ivoire
- Croatia
- Cuba
- Cyprus
- Czechia
- Democratic Republic of the Congo
- Denmark
- Djibouti
- Dominica
- Dominican Republic
- Ecuador
- Egypt
- El Salvador
- Equatorial Guinea
- Eritrea
- Estonia
- Eswatini
- Ethiopia
- Fiji
- Finland
- France
- Gabon
- Gambia
- Georgia
- Germany
- Ghana
- Greece
- Grenada
- Guatemala
- Guinea
- Guinea Bissau
- Guyana

- Haiti
- Honduras
- Hungary
- Iceland
- India
- Indonesia
- Iran
- Iraq
- Ireland
- Israel
- Italy
- Jamaica
- Japan
- Jordan
- Kazakhstan
- Kenya
- Kiribati
- Kuwait
- Kyrgyzstan
- Laos
- Latvia
- Lebanon
- Lesotho
- Liberia
- Libya
- Liechtenstein
- Lithuania
- Luxembourg
- Madagascar
- Malawi
- Malaysia
- Maldives
- Mali
- Malta
- Marshall Islands
- Mauritania
- Mauritius
- Mexico
- Micronesia
- Monaco
- Mongolia
- Montenegro
- Morocco
- Mozambique
- Myanmar
- Namibia

- Nauru
- Nepal
- Netherlands
- New Zealand
- Nicaragua
- Niger
- Nigeria
- North Korea
- North Macedonia
- Norway
- Oman
- Pakistan
- Palau
- Panama
- Papua New Guinea
- Paraguay
- Peru
- Philippines
- Poland
- Portugal
- Qatar
- Republic of Moldova
- Romania
- Russian Federation
- Rwanda
- Saint Kitts and Nevis
- Saint Lucia
- Saint Vincent and the Grenadines
- Samoa
- San Marino
- Sao Tome and Principe
- Saudi Arabia
- Senegal
- Serbia
- Seychelles
- Sierra Leone
- Singapore
- Slovakia
- Slovenia
- Solomon Islands
- Somalia
- South Africa
- South Korea
- South Sudan
- Spain
- Sri Lanka

- Sudan
- Suriname
- Sweden
- Switzerland
- Syrian Arab Republic
- Tajikistan
- Tanzania
- Thailand
- Timor-Leste
- Togo
- Tonga
- Trinidad and Tobago
- Tunisia
- Turkey
- Turkmenistan
- Tuvalu
- Uganda
- Ukraine
- United Arab Emirates
- United Kingdom
- United States of America
- Uruguay
- Uzbekistan
- Vanuatu
- Venezuela
- Viet Nam
- Yemen
- Zambia
- Zimbabwe

Your Email

PART 2: FOOD 2030 - a policy framework for research & innovation

EU policies and objectives, including the [European Green Deal](#) proposal, emphasize the importance of the transition to sustainable, healthy, safe and inclusive food systems from 'farm to fork'. The [forthcoming 'Farm to Fork' strategy on sustainable food](#) will be key in order to roll out such transition.

FOOD 2030 stresses the **important role of R&I to achieve EU goals** related to food and nutrition and to deploy new opportunities and solutions to benefit people and planet, and to make the transition of food systems fair and just. You can quickly find out more on FOOD 2030 from this [2 min video](#).

Key to FOOD 2030 is that it advocates a system approach to research and innovation policy to **deliver on 4 priorities**:

1. NUTRITION for SUSTAINABLE AND HEALTHY DIETS
2. CLIMATE smart and ENVIRONMENTALLY SUSTAINABLE food systems
3. CIRCULARITY and RESOURCE EFFICIENCY of food systems
4. INNOVATION and EMPOWERMENT OF COMMUNITIES

More detail on FOOD 2030 priorities can be found [here](#).

* **Question:** How familiar are you with FOOD 2030?

- First time I hear about it
- Partially aware
- Fully aware

* **Question:** How familiar are you with the EU's Green Deal Proposal?

- First time I hear about it
- Partially aware
- Fully aware

PART 3: FOOD 2030 "Pathways of Action"

What is a "Pathway of Action"?

"Pathways for Action", as developed under Food 2030, aim to provide an **evidence-based intervention logic to future-proof food systems** through R&I action and investment.

Each of these pathways is set to deliver impact on not just one but multiple policy priorities (referred to as "co-benefits"). *For example: alternative proteins and dietary shift can help climate mitigation and nutritional health; however, such a shift will also have some negative impacts such as on animal farming.*

Under FOOD 2030 , 10 Pathways for Action have been identified:

1. **Governance and Systems Change:** improving the governance of R&I policy for food systems to deliver change
2. **Urban Food System Transformation:** promoting the re-shaping of urban food environments towards sustainable, healthy, inclusive and resilient ones
3. **Food from the Oceans:** increasing the supply of food from oceans and fresh water resources in a sustainable way
4. **Alternative Proteins and Dietary Shift:** foster the shift to sustainable and healthy diets and to increase the share of alternative proteins
5. **Halving Food Waste:** halving food waste (and losses) and rethinking food packaging
6. **The Microbiome:** leveraging our insights and understanding of the microbiome across all parts of the food system
7. **Personalizing Nutrition:** empowering individuals and healthcare professionals to adapt their diet for better health and sustainability
8. **Food Safety Systems of the Future:** setting a new world reference for food safety and food authenticity while tackling emerging challenges and creating new knowledge

- 9. **Transforming African Food Systems:** supporting the sustainable development of African Food Systems
- 10. **Food Systems and Data:** leveraging data and digital technologies to future proof food systems

In what follows, and **for each Pathway of Action**, we will ask your opinion about:

1. **the importance** (in terms of impact) of different R&I actions (closed question)
2. **important** and **urgent R&I needs** that you want to detail (open question, optional)

R&I needs can be related to (a) addressing specified **knowledge gaps** (b) developing, testing and demonstrating innovative **solutions to systemic challenges** or (c) building the **capacity of research and innovation systems**. For these actions to be effective and provide systemic solutions, attention should be given to citizen and multi-actor engagement upstream and throughout the R&I process.

PATHWAY 1. GOVERNANCE AND SYSTEM CHANGE

Improving the governance of R&I policy for food systems to deliver change

* On a scale of 1 to 3, indicate how others rate your knowledge of this pathway

- Low
- Medium
- High - You are pathway expert

Please rate each R&I action according to its importance. Importance is to be assessed in function of impact.

	I don't know	Low importance	Medium importance	High Importance
* R&I Action 1: Mapping and monitoring of food systems, markets and behaviour (actors across the food system, consumers)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 2: New knowledge, insights, data models and methods to support policy development and support decision making, especially to enhance climate resilience.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 3: Engaging society for the future of food systems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 4: Boosting demonstration and testing of solutions to systemic problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 5: Supporting and investing in innovation deployment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
*				

R&I Action 6: Improve education and training to support transition	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 7: Developing R&I strategies and aligning R&I policies.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

OPTIONAL QUESTION : Are there important and urgent **R&I needs** that you want to highlight and detail (knowledge gaps, solution development, testing, demonstration, capacity building)?

500 character(s) maximum

OPTIONAL QUESTION: Which other R&I action has high importance and is **missing** in the above list?

150 character(s) maximum

PATHWAY 2. Urban Food System Transformation:

Promoting the re-shaping of urban food environments towards sustainable, healthy, inclusive and resilient ones

* On a scale of 1 to 3, indicate how others rate your knowledge of this pathway

- Low
- Medium
- High - You are pathway expert

Please rate each R&I action according to its importance. Importance is to be assessed in function of impact.

	I don't know	Low importance	Medium importance	High Importance
R&I Action. 1 Improve food production (e.g. Short food supply chains)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
R&I Action 2. Innovate food supply and distribution (e.g. Green public procurement for healthy and sustainable meals; gastronomy and food service)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
R&I Action 3 Ensure social and economic equity (e.g. Healthy food environments, enhancing urban social resilience to ensure urban food and nutrition security)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
R&I Action 4. Improve governance (e.g. Mapping of local food systems, analyses of governance models, study impact of urban food policies)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

OPTIONAL QUESTION : Are there important and urgent R&I needs that you want to highlight and detail (knowledge gaps, solution development, testing, demonstration, capacity building)?

500 character(s) maximum

OPTIONAL QUESTION: Which other R&I action has high importance and is **missing** in the above list?

150 character(s) maximum

PATHWAY 3. Food from the Oceans:

Increasing the supply of food from oceans and fresh water resources in a sustainable way

* On a scale of 1 to 3, indicate how others rate your knowledge of this pathway

- Low
- Medium
- High - You are pathway expert

Please rate each R&I action according to its importance. Importance is to be assessed in function of impact.

	I don't know	Low importance	Medium importance	High Importance
* R&I Action 1 Increase availability of aquatic biomass, within planetary boundaries	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 2. Boost sustainable aquaculture innovation (including building climate resilience)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 3 Improve biological knowledge and management tools for fisheries and aquaculture	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 4 Implement monitoring programs for risk assessment (animal health, emerging risks, pollutants...)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 5 Improve consumer knowledge and perception on seafood. Develop labeling strategies for awareness and fraud control	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 6 Diversify species, products and processes to reduce the environmental impact	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 7 Reinforce R&I capacity to support this pathway	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

OPTIONAL QUESTION : Are there important and urgent R&I needs that you want to highlight and detail (knowledge gaps, solution development, testing, demonstration, capacity building)?

500 character(s) maximum

OPTIONAL QUESTION: Which other R&I action has high importance and is **missing** in the above list?

150 character(s) maximum

PATHWAY 4. Alternative Proteins and Dietary Shift:

Foster the shift to sustainable and healthy diets and to increase their share of alternative proteins

* On a scale of 1 to 3, indicate how others rate your knowledge of this pathway

- Low
- Medium
- High - You are pathway expert

Please rate each R&I action according to its importance. Importance is to be assessed in function of impact.

	I don't know	Low importance	Medium importance	High Importance
* R&I Action 1. Fill knowledge gaps on health-related and environmental aspects of alternative proteins sources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 2. Increasing market uptake of alternative proteins	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 3. New processing methods and technologies (e.g. for pulses, algae)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 4. Stimulating and connecting actors of the food system for the production and provision of alternative proteins	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 5. Bioavailability of protein sources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 6. The potential of controlled-environment farming in 2030	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 7. Regulatory science and right policy mix for alternative proteins	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 8. Dietary shift: Developing healthier and sustainable food environment (access to healthy products)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
*				

R&I Action 9. Dietary shift: Changing behavior across the food system towards sustainability and health	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 10. Dietary shift: Strengthen education on food systems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

OPTIONAL QUESTION : Are there important and urgent R&I needs that you want to highlight and detail (knowledge gaps, solution development, testing, demonstration, capacity building)?

500 character(s) maximum

OPTIONAL QUESTION: Which other R&I action has high importance and is **missing** in the above list?

150 character(s) maximum

PATHWAY 5. Halving food waste:

Halving food waste (and losses) and rethinking food packaging

* On a scale of 1 to 3, indicate how others rate your knowledge of this pathway

- Low
- Medium
- High - You are pathway expert

Please rate each R&I action according to its importance. Importance is to be assessed in function of impact.

	I don't know	Low importance	Medium importance	High Importance
* R&I Action 1 New insights on the drivers of food losses and waste; on success factors and barriers to reducing and valorising food waste	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 2 Improving and harmonizing food losses and waste measurement and monitoring methodologies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 3 Impact analysis of food losses and waste prevention actions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 4 Developing sector-specific guidance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 5 Improving the information flows and the coordination along the food supply chain	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 6 Better food processing and preservation facilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* R&I Action 7 Improving shelf-life & Better technology for date marking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 8 New schemes for food surplus redistribution	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 9: New approaches to sustainable food packaging	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

OPTIONAL QUESTION : Are there important and urgent R&I needs that you want to highlight and detail (knowledge gaps, solution development, testing, demonstration, capacity building)?

500 character(s) maximum

OPTIONAL QUESTION: Which other R&I action has high importance and is **missing** in the above list?

150 character(s) maximum

PATHWAY 6. The Microbiome:

Leveraging our insights and understanding of the microbiome across all parts of the food system

* On a scale of 1 to 3, indicate how others rate your knowledge of this pathway

- Low
- Medium
- High - You are pathway expert

Please rate each R&I action according to its importance. Importance is to be assessed in function of impact.

	I don't know	Low importance	Medium importance	High Importance
* R&I Action 1 Citizen engagement to better understand the benefits of microbiomes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 2 New generation of scientist on systemic microbiome research	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 3 Microbiomes for human health	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 4 Microbiome for more sustainable and climate resilient agriculture	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 5 Microbiome for healthier soils	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 6 Microbiome for tackling AMR	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
*				

R&I Action 7 Microbiome for heather and taster food	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 8 Life Cycle Analysis and risk-benefit assessment of precision fermentation and farm free proteins.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

OPTIONAL QUESTION : Are there important and urgent R&I needs that you want to highlight and detail (knowledge gaps, solution development, testing, demonstration, capacity building)?

500 character(s) maximum

OPTIONAL QUESTION: Which other R&I action has high importance and is **missing** in the above list?

150 character(s) maximum

PATHWAY 7. Personalizing nutrition:

Empowering individuals and healthcare professionals to adapt their diet for better health and sustainability

* On a scale of 1 to 3, indicate how others rate your knowledge of this pathway

- Low
- Medium
- High - You are pathway expert

Please rate each R&I action according to its importance. Importance is to be assessed in function of impact.

	I don't know	Low importance	Medium importance	High Importance
* R&I Action 1. Combating non-communicable diseases through nutrition and diet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 2. Personalizing nutrition for groups and individuals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 3. Combating undernutrition and micronutrient deficiencies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 4. Unravelling neurological triggers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 5. Dietary assessment methods	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 6. Develop sustainable and healthy dietary guidelines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
*				

R&I Action 7. Understanding people's food & nutrition behavior	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 8. Improve food systems communication, education and engagement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 9. Digital tools and labeling for citizens and health care workers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 10. Human gut microbiome and its impacts on immune system, mental & non-communicable diseases	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 11. New food products, services & processes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

OPTIONAL QUESTION : Are there important and urgent R&I needs that you want to highlight and detail (knowledge gaps, solution development, testing, demonstration, capacity building)?

500 character(s) maximum

OPTIONAL QUESTION: Which other R&I action has high importance and is **missing** in the above list?

150 character(s) maximum

PATHWAY 8. Food Safety Systems of the Future:

Setting a new world reference for food safety and food authenticity while tackling emerging challenges and creating new knowledge

* On a scale of 1 to 3, indicate how others rate your knowledge of this pathway

- Low
- Medium
- High - You are pathway expert

Please rate each R&I action according to its importance. Importance is to be assessed in function of impact.

	I don't know	Low importance	Medium importance	High Importance
* R&I Action 1. Innovation in risk assessment methodologies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 2. Control biological and chemical hazards, including emerging risks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 3. Traceability and authenticity in the digital era	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* R&I Action 4. Communicating on and engaging citizens in risk assessment and risk perception science	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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OPTIONAL QUESTION : Are there important and urgent R&I needs that you want to highlight and detail (knowledge gaps, solution development, testing, demonstration, capacity building)?

500 character(s) maximum

OPTIONAL QUESTION: Which other R&I action has high importance and is **missing** in the above list?

150 character(s) maximum

PATHWAY 9. Transforming African Food Systems:

Supporting the sustainable development of African Food Systems

* On a scale of 1 to 3, indicate how others rate your knowledge of this pathway

- Low
- Medium
- High - You are pathway expert

Please rate each R&I action according to its importance. Importance is to be assessed in function of impact.

	I don't know	Low importance	Medium importance	High Importance
* R&I Action 1. Supporting African food cities & towns	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 2. Improving food safety for an African Free Trade Zone	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 3. Combating malnutrition	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 4. R&I support for African food entrepreneurs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 5. Nutrition sensitive bio-diverse agriculture, resilient to climate change	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 6. Reducing food losses and waste	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 7. Data based digital and mobile food solutions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 8. Human gut microbiome and its link to malnutrition and food safety in Africa	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

OPTIONAL QUESTION : Are there important and urgent R&I needs that you want to highlight and detail (knowledge gaps, solution development, testing, demonstration, capacity building)?

500 character(s) maximum

OPTIONAL QUESTION: Which other R&I action has high importance and is **missing** in the above list?

150 character(s) maximum

PATHWAY 10. Food Systems and Data:

Leveraging data and digital technologies to future proof food systems

* On a scale of 1 to 3, indicate how others rate your knowledge of this pathway

- Low
- Medium
- High - You are pathway expert

Please rate each R&I action according to its importance. Importance is to be assessed in function of impact.

	I don't know	Low importance	Medium importance	High Importance
* R&I Action 1. Improving the understanding of the data economy and the free flow of data in food systems (functioning, issues, barriers, opportunities, future policy) with a view to inclusiveness, fairness, sustainability and climate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 2. Enabling platforms and technologies that support data driven innovation in food systems by citizens (including citizen science) and food system actors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 3. Boosting the innovation ecosystem for data-driven solutions that support food system transition	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* R&I Action 4. Addressing the digital divide among consumers, supply chain actors and researchers in the food system	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

OPTIONAL QUESTION : Are there important and urgent R&I needs that you want to highlight and detail (knowledge gaps, solution development, testing, demonstration, capacity building)?

500 character(s) maximum

OPTIONAL QUESTION: Which other R&I action has high importance and is **missing** in the above list?

150 character(s) maximum

Personal data and privacy statement

The European Union is committed to protecting your personal data and to respecting your privacy. When carrying out consultations we adhere to the policy on protection of individuals with regard to the processing of personal data by the Community institutions', based on [Regulation \(EU\) 2018/1725](#) on processing of personal data by the EU institutions. Further information on [the protection of your personal data](#).

* The Commission will publish the responses to this questionnaire in a workshop report. You can choose whether you would like your details to be made public or to remain anonymous:

- Anonymous
Only your type of respondent and contribution will be published.
- Public
Your personal details (name) will be published with your contribution.

* I agree with the [personal data protection provisions](#)

- Yes

THANK YOU FOR PARTICIPATING !

The FOOD 2030 Team

Join the conversation: #FOOD2030EU