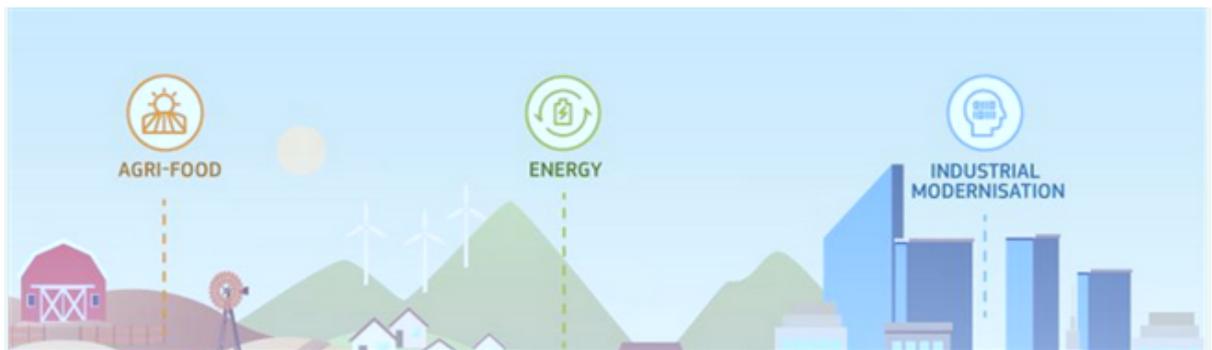


Thematic Smart Specialisation Platforms Monitoring Progress Report

Fields marked with * are mandatory.



Thematic Smart Specialisation Partnership Monitoring Progress Report

This report is presented to the relevant Working/Steering Committee.

The report is updated every six months.

Confidentiality:

The management report (section I) and progress report (section II) will be made available to the public via your Partnership's web page.

The part on self-assessment is confidential.

Based on the monitoring results, the European Commission will decide on the following term's support.

* Reporting period

July - December 2020

* Please select the name of your partnership

Smart sensors for agri-food

*** Start date of your partnership**

April 2017

*** Partnership's webpage**<https://www.ss4af.com/>

I. Management report

*** Please provide the executive summary and the objectives of your partnership**

Vision:

Support all the agri-food companies to ensure they make the leap towards Industry 4.0 and that the agri-food sector evolves into an interconnected, resilient and smart agri-food system in Europe.

The agri-food industry is taking its first steps towards Industry 4.0. Larger enterprises with a broad network, connections with Research & Technology Organisations (RTOs) and international affiliations are up-to-date and aware of the most recent technological developments and its opportunities. However, all over Europe the agri-food industry is typically a small and medium-sized enterprises driven sector.

For the agri-food industry the creation of an IoT environment and introducing big data management is a huge challenge. As 'Smart Sensors 4 Agri-food' (SS4AF) Partnership we believe that a down to earth, stepwise approach, starting from the challenges and needs of the agri-food companies is needed.

The aim of our SS4AF Partnership is to contribute to the development and roll-out of the Smart Specialisation Strategies of the involved regions. Our objectives are:

1. the set-up of a platform between agri-food clusters and cluster organisations representing the technology- or digital solution providers, relevant RTOs and other related stakeholders, lowering the barriers for agri-food companies to access and implement the newest technologies linked to digitalization;
2. the establishment of a network of living labs, where these newest technologies can be demonstrated and tested;
3. the collaboration between clusters and RTOs to create a trust zone between the involved sectors, facilitating the exchange of know-how and accelerating the introduction of technologies.

As physical backbone of our Partnership we are setting-up a network of shared, open access Living Labs, where new Industry 4.0 related technologies can be demonstrated and tested. Competition and duplication within EU regions limits the development of critical scale. It is clear that collaboration between complementary EU regions is more effective and sustainable than competition.

*** Please provide the list of leading regions**

Flanders (BE), BE2
Wallonia (BE), BE3

*** Please provide the list of participating regions.**

If possible, please follow this format: "Name of the region in English (Country abbreviation), NUTS code".

e.g.: Lapland (FI), F11D7

Asturias (ES), ES12
Auvergne Rhône-Alpes (FR), FR7
Brittany (FR), FR5
Galicia (ES), ES11
Central Transdanubian Region (HU), HU21
Navarre (ES), ES22
North Brabant (NL), NL41
North-Rhine Westphalia (DE), DEA
Slovenia (SI), SI0
South Ostrobothnia (FIN), 194

Please provide the list of interested regions or other entities (other than national /regional authorities)

Gelderland (NL), NL22 - in the process of signing the Partnership Agreement
Lombardia (IT), ITC4

Please provide an overview of the **working areas** of your partnership

	Working area	Region in charge	Involved regions	Other actors
1	Working Group Communication	North-Rhine Westphalia (DE) - Food Processing Initiative	Auvergne Rhône-Alpes (FR) - Innov'Alliance; Brittany (FR) - BDI and Photonics Bretagne; Galicia (ES) - Clusaga; Central Transdanubian Region (HU) - Innoskart; Slovenia (SI) - CCIS; South Ostrobothnia (FIN) - SeAMK; Flanders (BE) - Flanders' FOOD	
2	Working Group Project Generation	North-Rhine Westphalia (DE) - TH OWL	Asturias (ES) - ASINCAR; Auvergne Rhône-Alpes (FR) - CIMES and Innov'Alliance; Brittany (FR) - BDI and Photonics Bretagne; Navarre (ES) - AIN; Central Transdanubian Region (HU) - Innoskart; Galicia (ES) - ITG - Clusaga; Wallonia (BE) - Wagrallim; Flanders (BE) - Flanders' FOOD;	

3	Working Group Technology Intelligence	Flanders (BE) - DSP Valley	Asturias (ES) - ASINCAR; Brittany (FR) - BDI and Photonics Bretagne; Auvergne Rhône-Alpes (FR) - CIMES and Innov'Alliance; Flanders (BE) - Flanders Make; North-Rhine Westphalia (DE) - Food Processing Initiative; Central Transdanubian Region (HU) - Innoskart and CTRIA; South Ostrobothnia (FIN) - SeAMK; Navarre (ES) - AIN; Galicia (ES) - Clusaga	
4				
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10				

Please provide information regarding past meetings, workshops and dissemination activities (six months prior to filling out the survey)

	Event	Date	Place	Any other information
1	Meeting WG Technology Intelligence	07/10/'20, 29/10/'20 and 14/12/'20	Online	
2	Board meeting SS4AF	8/10/'20	Online	
3	Workshop with European Wireless ICT Platform	12/10/'20	Online	Meeting with EWI (Flanders) and the coordinating regions to share lessons learnt from our TSSP
4	Data Driven Agrifood Future Event	26/10/'20	Online	In the framework of the Ten Bosch Data Week
5	European Cluster Conference 2020	10/11/'20	Online	Booth of SS4AF, Connsensys and S3 FOOD + pitch given
6	Steering Committee meeting of SS4AF	16/11/'20	Online	Amongs other things, the annual workplan of 2021 was discussed and approved
7	TH-OWL Live-Webcasts	3/12/'20	Online	Presentation about our Partnership and how this contributes to our European collaboration, funding and support of the agri-food companies in Europe.
8	Board meeting SS4AF	9/12/'20	Online	
9	Meeting WG Communication	16/12/'20	Online	

10	S3 Thematic Platforms - Joint online event	18/12/'10	Online	
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Please provide information regarding planned future meetings, workshops and dissemination activities

	Event	Date	Place	Any other information
1	Virtual International Week organized by SeAMK (FI)	15-19 February '21	Online	Presentation by Simon Maas (Chair) and Veerle Rijckaert (Coordinator): 'Smart Sensors 4 Agri-food - Thematic Smart Specialization Partnership for ecosystem development, interregional collaboration and RDI
2	R&D meeting FoodDrinkEurope	13/01/'21	Online	Presenting SS4AF
3	Meeting with EIT Food	16/03/'21	Online	Looking into a joint event on digitisation of the agri-food industry (Fall '21)
4	Next Steering Committee meeting of our TSSP	TBD	Online	
5	Next Board meeting of our TSSP	TBD	Online	
6	Meetings of the different Working Groups	TBD	Online	
7	Meeting of agri-food industries with a digital focus (title to be confirmed)	16/09/'21	Clermont-Ferrand (FR)	Event related to the digital in agri-food industries within Auvergne-Rhône-Alpes region

8	Ambition Europe Day	October / November '21	Lyon or online (FR)	Conferences, workshops, networking, expert meetings: access all the resources you need to understand European funding (Horizon Europe, Green Deal ...)
9	UNVEX congress	7-9 July 2021	Santiago de Compostela, Galicia (ES)	Focused on drone technologies, the program counts with varied themes, among them sensors, agriculture, fisheries
10	Global Industry 2021	7-10th September 2021	Lyon (FR)	CIMES will take part to one of the leading exhibitions in the world dedicated to industry. Will be the occasion to share information about our European activities and networks.

II. Progress report

Innovative results

Please describe innovative results and achievements that could be attributed to the partnership (specific examples of results vs. objectives)

With our TSSP we have elaborated and signed a Partnership Agreement to structure our Partnership and guarantee its long-term sustainability. The following Annexes form an integral part of this agreement:

- Annex 1: Governance Structure
- Annex 2: Strategy
- Annex 3: Implementation Roadmap

Next to this important Partnership Agreement we have developed the Operational Handbook for the network of living labs. The network of Living Labs is clearly described on the SS4AF website (www.ss4af.com); the different crucial documents, referred to above, can be downloaded from our website.

In the framework of our S3FOOD project we also elaborated a mapping tool (technology interactive map), which can be consulted on the website of S3FOOD (<https://s3food.eu/>). Via this tool the agri-food companies can consult the capabilities, technology and digital solution providers, relevant living labs and RTOs in the different involved regions of our TSSP. Via this tool the different Industry 4.0 stakeholders can showcase their services, equipment, etc. and this will facilitate the matchmaking with the agri-food SMEs. Once this project will be finished we will transfer this mapping tool to the website of our TSSP. Also linked to S3FOOD we elaborated a value chain mapping to determine whether the 'Smart Sensors4 Agri-food' Partnership misses important players / regions and to get a better overview on the overall structure of the ecosystem revolving around the digitisation of the agri-food industry.

The 'technology interactive map' is continuously updated and expanded by adding new technology providers (companies), technology centres, living labs, etc.

In the framework of the INNOSUP-1 project, S3FOOD, within the first voucher call, 19 projects received funding, representing 27 SMEs in total and including two cross-border projects. Focus areas vary widely from smart sensors for high-speed processing of Brussels sprouts over mobile cobots for improved processing flexibility to smart milk metering for the dairy industry.

Tangible short- and medium-term socio-economic impacts achieved or expected (specific examples)

As described in the previous answer we have done a detailed mapping of the needs of the agri-food industry in the involved regions and the opportunities the technology and digital solution providers can give. Matching these needs and potential solutions, but also study visits, events and ideation sessions, etc. gave us the opportunity to bring together offer and demand and in the end come to new investments and innovation projects.

Also in the framework of the INNOSUP-1 S3FOOD 2 open calls are elaborated and launched that will give SMEs the opportunity to apply for vouchers (up to € 60.000 per SME) to do feasibility studies (exploration voucher), validate promising technologies (validation vouchers) and implement technologies (application voucher) in relation to and to tackle their industry 4.0 challenges. The first voucher call is closed and from the over 100 applications, 19 innovative projects were selected, awarding 1 mio € to the involved SMEs. These vouchers projects will support the SMEs in their digitization process. Numerous SMEs already attended study visits, ideation sessions, regional brainstorm sessions, etc. that we have organised, showing us their concrete interest in our Partnership and projects.

The voucher call of S3FOOD is open now and will close on the 10th of March. The S3FOOD consortium is guiding SMEs to apply for the right voucher, maximizing their success rate. SMEs that were not successful in this call, will be guided to other funding schemes and financing possibilities by the consortium.

Inter-regional and inter-partnership collaborative results

Additional results obtained from working with other partnerships under the thematic S3 Platforms (specific examples)

The TSSP Nutritional Ingredients has developed a Governance Structure, starting from the Governance Structure of 'Smart Sensors 4 Agri-food'. Signing of this Governance Structure is now in progress.

Several other TSSPs (Agri-food and Industrial Modernization) are involved in the Advisory Board of Connsensys, providing us relevant feedback on the further development of our Partnership.

Gave a presentation about 'Smart Sensors 4 Agri-food' and the lessons learnt at the coordinators of a TSSP under development: European Wireless ICT Platform

Evaluation of the involvement of relevant business sector (clusters, SMEs, business associations, chambers of commerce, Digital Innovation Hubs (DIHs), etcetera) in the Partnership activities (specific examples)

Our Partnership is based on a network of cluster organizations, supported by their respective regional authorities. These cluster organizations, linked universities and RTOs are active in the agri-food sector or in the technology and/or digital solution providers sector. They represent and support a broad network of companies, both large companies and SMEs. In this perspective it can be stated that the relevant business sectors are very much involved.

Also, several of the Associated Organizations of our Partnership are business associations, chambers of commerce, etc.

Several partners are registered and fully operational Digital Innovation Hubs. Also, several partners are involved in consortia that will apply in the framework of the restricted European call, to become an European Digital Innovation Hub.

Evaluation of whether the level of inter-regional cooperation is sufficient to potentially provide practical and relevant socio-economic impacts (specific examples)

The Connsensys project and the INNOSUP-1 project, S3FOOD, really kick-started the interregional cooperation. In the framework of Connsensys we have:

- Elaborated and signed a Partnership Agreement, including the Governance Structure of our TSSP, our Strategy and Implementation Roadmap. This Partnership Agreement supports the long-term sustainability of our Partnership, ensures that the work is divided between the different partners and structures our Partnership
- We have set-up a network of living labs and developed the operational handbook
- We developed a Technology Catalogue linking the challenges of the agri-food industry to the potential solutions of the technology providers
- Have developed demo-cases and generic business models in the framework of Connsensys, facilitating the set-up of cross-border collaborations and investments in the Living Labs.
- In S3FOOD concrete cross-sectoral and interregional innovation projects between companies are facilitated and set-up --> via the voucher calls (2 calls in the course of the 3 year project).

In the framework of the Governance Structure we have initiated 3 Working Groups to further structure our Partnership and support the roll-out of our strategy and roadmap:

- WG Communication: communication strategy has been developed, next to a corporate identity, website, folder and roll-up
- WG Project Generation: continuous screening of calls and tenders and develop proposals with (part of) the Partnership in calls/topics that are aligned with our strategy and roadmap
- WG Technology Intelligence: specifically follow the activities linked to the Digital Europe Program and gather inspirational cases, success stories, videos, etc. to create awareness about the possibilities of industry 4.0, inspire agri-food companies, etc.

To further roll-out our strategy and implementation roadmap, we are urgently looking for additional funding. In this perspective we have applied in several project calls.

New activities

Involvement of regions from EU13 Member States in the Partnership, in particular with respect to scoping, mapping and/or matchmaking. In addition, justification should be provided if no EU13 regions are involved

Közép-Dunántúl (Hungary) is one of the member regions in our partnership. They were actively involved in the working-out of the scoping note and the related mapping. In the COSME project Connsensys they are Work Package leader and had an active role in the preliminary discussions and the writing of the dossier. They were also highly involved in the elaboration of the S3FOOD project and are a key partner in the project (member of the Project Management Team).

Slovenia (whole country) is also a member of our Partnership. They actively participate in the collection of data and input (via the survey and regional consultation rounds), although they are not involved in Connsensys nor S3FOOD and thus don't receive funding for this. They give valuable contributions in the framework of the Steering Committee meetings and the established Working Groups. They have been involved in the elaboration of new proposal that have been submitted in the fall of 2020 and Jan-Feb of 2021.

Involvement of regions/countries from outside of EU28 Countries. (Number of participants from non-EU countries (specify their contribution))

Not at this point.

AgriFood Capital, with the province of North-Brabant (the Netherlands), has established the Data Driven Agri-food Future Alliance (<http://www.ddaff-alliance.org/>)

The Data Driven AgriFood Future (DDAFF) Alliance Partners experience growing importance and possibilities of data driven developments in the agri-food value chain. By sharing knowledge and insights from research and real-life cases the DDAFF Alliance Partners aim to learn and inspire each other. And by doing so speeding up innovation and integration of a data driven agri-food value chain.

Currently the following partners are part of the DDAFF-Alliance:

- The VINE (California, United States)
- AgriTech New Zealand (New Zealand)
- Flanders' FOOD (Belgium)
- ILVO (Belgium)
- Danish Agriculture & Food Council (Denmark)
- GIL e.V. (Germany)
- FME (Netherlands)
- AgriFood Capital (Netherlands)
- Province of Noord-Brabant (Netherlands)

Via Flanders' FOOD and AgriFood Capital this international alliance will also be highly linked with our TSSP, 'Smart Sensors 4 Agri-food'.

Advancement and promotion of the Partnership through publications and other communication/outreach activities (number of outreach activities that resulted from the partnership)

- Innov'Alliance (Auvergne-Rhône-Alpes):

1. Cascade funding workshop on 13/10/'20: The European Commission finances thematic projects led by several European structures. These European structures redistribute, via simplified calls for projects, part of their funding to third parties, companies (SMEs) in particular. This funding takes the form of flat-rate tickets / coupons ranging from € 15,000 to € 100,000 depending on the project. This principle is as following: cascade funding allows companies to access European funding more easily for their projects.

<https://auvergnerhonealpes-entreprises.fr/event/atelier-de-formation-sur-les-financements-europeens-en-cascade-2020-10-13-7122/register>

2. Ambition Europe day on 12/11/'20: Ambition Europe 4 day will be 100% virtual this year! Our goal: to overcome constraints of distance and schedule to allow the greatest number of companies and academic structures in the Auvergne-Rhône-Alpes region to participate in the day regardless of their location in the region. Conferences, workshops, networking, expert meetings: access from your office all the resources you need to understand European funding (Horizon Europe, Green Deal ...).

<https://live.eventtia.com/fr/journee-ambition-europe/Accueil/>

- CCIS (Slovenia):

E-newsletter about the SS4AF collaboration platform

Annual year report of CCIS – Chamber of Agriculture and Food Enterprises (printed and e- version)

- ITG (Galicia):

1. Dissemination about the 2nd call for S3FOOD vouchers mentioning the belonging to SS4AFood platform.

Date: December 2020. Place: online, several social networks and own website

2. Water Knowledge Europe 2020 - Horizon Europe Brokerage event. Date: 09/12/2020-16/12/2020. Place: online. Info: ITG participated in the brokerage meetings presenting the Institute, the projects managed (S3FOOD) and the Partnerships in which ITG participates (SS4AF Partnership).

3. Face-to-face meetings with enterprises and clients. Date: upon demand. Info: PowerPoint with information about ITG, projects and partnerships (SS4AF Partnership among them)

- Clusaga (Galicia):

1. Info session to inform the members of Clusaga (108 members) on the progress and achievements of SS4AF will take place at the Clusaga General Assembly. Date: 24/09/'20. Place: Santiago de Compostela (ES). Remark: Due to COVID-19 restrictions a separate info session could not be organised. Nevertheless the membership was informed about SS4AF's goals and main achievements have been included in the Clusaga's activity report.
2. Meeting of the Innovation Committee of Clusaga, which involved different companies of the Galician food and ICT sectors. Date: 12/11/'20. Place: Santiago de Compostela (ES).

- CIMES (Auvergne-Rhône-Alpes):

1. <https://www.cimes-hub.com/europe>: creation of a part dedicated to the Partnership on CIMES's website
2. Communication of the website link in every CIMES's newsletter (first sending: 4th February, 2021)

- On the SS4AF website we have developed an inspirational page, where success cases and stories, videos, etc. are gathered, linked to the digitization of the agri-food industry. This page is currently under construction, but soon agri-food companies will be able to find inspiration and information there: <https://www.ss4af.com/inspiration>

- The SS4AF Partnership also has set-up a LinkedIn and Twitter account to further develop the SS4AF community and interact with them. These some accounts are also connected with the SS4AF website.

- At this point the Partnership is also looking into the establishment of a newsletter. This newsletter will be developed by the WG Communication of SS4AF.

Activities and projects with partnerships working under other S3 Thematic Platforms (AgriFood, Energy and Industrial Modernisation)

- Together with 2 other ESCP-S3 COSME projects (Track and Digiclusters) we organized a final event for Connsensys on the 26th of October: 'Boosting digitalization in European agrifood sector' - Cluster recommendations towards the policy makers. All 3 of these COSME projects are closely linked with or find their origin in TSSPs ('Smart Sensors 4 Agri-food', 'Traceability and big data' and 'High Tech Farming').

In relation to our COSME project Connsensys we established an Advisory Board. The coordinators of the following TSSPs are member of our Advisory Board:

- High Tech Farming
- Traceability and Big Data- Photonics (Industrial Modernisation)
- Efficient and Sustainable Manufacturing (Industrial Modernisation)

Flanders' FOOD frequently interacts with Fabio Boscaleri from High Tech Farming, to exchange ideas, keep each other up-to-date and look for potential ways to collaborate.

Your Partnership and the UN 2030 Sustainable Development Goals (SDGs)

The EU has a strong position when it comes to sustainable development and is also fully committed to be a frontrunner in implementing the UN's 2030 Agenda, together with its member countries and regions. Many interregional partnerships under the thematic S3 Platforms contribute strongly to the attainment of these 17 goals.

Please indicate to which Sustainable Development Goals and to what extent your thematic Partnership contributes?

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Not applicable
Goal 1. End poverty in all its forms everywhere	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Goal 2. End hunger, achieve food security and improved nutrition & promote sustainable agriculture	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Goal 3. Ensure healthy lives & promote well-being for all at all ages	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Goal 5. Achieve gender equality & empower all women and girls	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Goal 6. Ensure availability and sustainable management of water and sanitation for all	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment & decent work for all	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialisation & foster innovation	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Goal 10. Reduce inequality within and among countries	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Goal 11. Make cities & human settlements inclusive, safe, resilient and sustainable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Goal 12. Ensure sustainable consumption & production patterns	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Goal 13. Take urgent action to combat climate change and its impacts	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Goal 14. Conserve and sustainably use the oceans, seas & marine resources for sustainable development	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation and halt biodiversity loss	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Goal 16. Promote peaceful & inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Goal 17. Strengthen the means of implementation and revitalise the Global Partnership for Sustainable Development	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>