

## Draft HLG-MOS 2019 Work Program

### Introduction

1. The High Level Group for the Modernisation of Official Statistics (HLG-MOS)<sup>1</sup> provides a collaborative platform for experts in statistics to develop strategies and solutions in a flexible and agile way. The work of the HLG-MOS is open to all who are willing to contribute. HLG-MOS must ensure that it remains adaptive to the changing environment and shifting landscape of challenges and opportunities. Its strategic vision is therefore regularly updated and new priorities are set. The annual work program has to reflect these changing needs while at the same time relevant earlier output needs to be supported or further developed. To guarantee an optimal outcome, a process of a combined top-down and bottom-up approach is taken.
2. The chair of the HLG-MOS sends out an open call for submission of project and activity proposals for the next year. After an initial evaluation, the Executive Board of the HLG-MOS provides feedback and decides which proposals will be admitted for consideration for projects or other types of follow-up. At the annual Workshop on the Modernisation of Official Statistics<sup>2</sup> at the end of November, these proposals are presented and discussed by experts that are working on national and HLG-MOS modernization activities. Through small group discussions, two project proposals are selected for the next year and suggestions are made for follow-up on activity and other proposals. Ensuing, the Executive Board further refines, prioritizes and recommends the proposals for endorsement by the HLG-MOS.
3. This document outlines the work program that was created as a result of the discussions at the Workshop on the Modernisation of Official Statistics that was held on 27- 28 November 2018 in Geneva and of subsequent further refinements by the Executive Board. The intention of the paper is to provide information to the community on the work that will take place so they can participate in the activities that are of most benefit to them.

### HLG-MOS Projects 2019

4. The following two project were selected and will be recommended for HLG MOS approval for 2019: Machine Learning and Strategic Communication Framework Phase 2. The content was refined by the Modernisation Workshop and the Executive Board as summarized below. Updated detailed project descriptions will be provided by the submitters of the projects.
5. **Machine Learning (ML)** – the proposal is based on the ML position paper prepared by the Blue Skies Thinking Network in 2018. The following Work Packages were identified:
  - **WP0: Will refine the scope** of the ML Project and define clearly the business case. It was felt that the project proposal needs further refinement and should build on expertise present in the group. As soon as members are identified, a sprint will be organised for this as well as to kick-start the work on the other work packages.

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<sup>1</sup> Refer to Annex 2 for the structure of the HLG-MOS.

<sup>2</sup> The participants of the workshop are the experts that were active under the various projects and groups under the auspicious of the HLG-MOS in the current year and other experts sent by NSOs of CES member countries as well as members of the HLG-MOS and the Executive Board.

- **WP1: Pilot studies.** These should be built on existing national projects on ML in specific domains such as image recognition, websites analysis and automated coding. It was felt that a good area to start would be data editing and imputation, and could be for traditional sources as well alternative approaches such as using Big Data sources.
- **WP2: Quality Issues.** Although it is too early to develop a full quality framework for ML, quality issues should be addressed. Traditional statistical quality frameworks assume that the data-generating process and further data processing steps are explicitly known. When applying ML methods, especially to 'found' big data or in multisource statistics, these assumptions are usually not valid. To guarantee quality, reproducibility and transparency, which are core values of official statistics, it is important to identify suitable quality indicators and performance metrics.
- **WP3: Lessons Learned.** Enough handbooks on ML exist, however, the official statistics community will benefit from lessons learned and an overview of most promising areas for ML. Defining areas for future work will complement this, so National Statistical Organisations (NSOs) can use it to (jointly) develop strategies for follow-up.

6. **Strategic Communications Framework Phase 2** - the Project will build on the experience and momentum gained in Phase 1 and will focus on developing a strategic approach to internal communications and stakeholder management and analysis in support of two priority topics for 2019 identified by HLG-MOS - Communicating our value and Setting the vision. It will also explore the experience of national statistical organizations in the development of government-wide data strategies in support of a third HLG priority – National Data Strategies. It will include the following work packages:

- **WP1: Guidelines to Develop Organizational Vision and Strategic Staff Engagement Strategies.** This work package will increase the ability of statistical organizations to adopt strategic communication as a foundational building block to change management. Based on best practices and case studies, the outcome of this work package would be a toolkit that includes: clear steps on how to establish an organization vision, assessment guidelines, and methods and approaches to successfully engage staff. The work will be closely coordinated with the Developing Organisational Resilience Group to reuse their work and to prevent duplication.
  - **WP2: Developing Stakeholder Engagement Management Strategies.** This work package will provide statistical organizations with the tools to effectively manage stakeholder relationships using analytical tools. It will also provide the organizations with approaches to better understand the range of stakeholder relations in order to effectively engage the stakeholder community in support of issues and crisis management. The work will consider meaningful stakeholder engagement approaches and increase staff awareness of the importance of communication.
- WP3: Statistical organizations engagement in Government-wide data strategies.** This work package will gather the experiences and examples of countries who are engaged in a whole-of-government approach. It will include examples of national data strategy frameworks (including legislative frameworks, infrastructure and tools), guiding principles, governance, communication approaches and service delivery models. An inventory of existing and upcoming National Data Strategies (NDS) will be established as well as other aspects related

to NDS (trust, reputation, quality and our value proposition). The outcome of the CES seminar on NDS can further steer the content of this WP for the second half of 2019.

7. The work of the HLG-MOS projects is normally led by project managers that are either assigned by a member of the HLG-MOS (in kind) or contracted by UNECE using the HLG-MOS Trust Fund. The aim is to have identified project managers by the end of January or early February latest. The UNECE wiki and web conference are used to monitor the progress of the projects. UNECE provides additional administrative and secretariat support. Experience has learned that sprint workshops are the most effective way to progress the work.

### **Modernisation Groups**

8. Several activity proposals were submitted for the three modernisation groups under the HLG-MOS. At the 2018 Modernisation Workshop, several suggestions were made to add activities that were originally submitted as (part of) project proposals<sup>3</sup>. Based on the current and anticipated capacity of the groups and the UNECE secretariat, the Executive Board prioritized the work. As UNECE can only support effectively four Modernisation Groups, each with a maximum of three Task Teams, additional work can only be undertaken if resources are added to the groups and if it only needs minimum support (wiki and WebEx are available as well as the ModernStats World Workshop).

9. Activities can only be executed if expertise is present in the groups. The call for participation from the HLG-MOS Chair for the 2019 work program will need to secure sufficient experts, otherwise the groups will not be able to take up all planned activities and deliver the expected results. It is further important to note that new priorities may emerge during the year. In these cases, the proposed work will be presented to the Executive Board and potential realignment considered based on capacity. The following paragraphs outline the work that is currently expected to be progressed by these groups.

### Developing Organisational Resilience

10. The Modernisation Group on Developing Organisational Resilience (DOR) focuses on the organisational changes necessary to support modernization in statistical organizations. Currently, this group is chaired by Poland. The group will setup task teams to consider the following substantive topics during their monthly web conference meetings:

- **Skills and Capability framework for NSO's** – Group will work on showing connection between technical and complementary skills necessary in NSOs, to increase awareness about it at all levels. Complementary (soft) skills make it easier for people to adapt to changing work environment and are essential as our work changes during the modernisation process. The group will specifically address the skillsets requirements for the Strategic Communication Framework. The project members will provide assistance on this.
- **Forum for promoting and sharing earlier work** – The group will keep increasing awareness and making available earlier output and similar work done at NSOs and evaluate where past and current work is relevant for other initiatives under the HLG-MOS, or the CES.
- **Setting vision in NSO's** – The group will share its work on Vision and Mission statements and Target Operating Models and collaborate with the Strategic Communications Framework Phase 2 project.

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<sup>3</sup> See report of the workshop: [link]

11. Extra meetings to progress elements of these topics will be set up on an ad hoc basis. Work will be coordinated with the Strategic Communication Framework project.

12. The DOR Group will organise a **Workshop on Culture Evolution**, in September 2019 in Geneva, Switzerland. Experiences in achieving business agility will be one of the topics.

### Supporting Standards

13. The Supporting Standards Group provides support for the implementation of the “ModernStats” models (GAMSO, GSBPM and GSIM) through a range of activities which include development, promotion and maintenance of the models. Currently, this group is chaired by Italy.

14. The group has plenary meetings every month via web conferences. The group may have additional meetings or organise a sprint workshop to expedite the work progress, as necessary.

15. In addition to the plenary meeting, three separate task teams will progress work on the following topics:

- **Linking GSBPM and GSIM** – The activity will map the information objects of GSIM to the processes and sub-processes in GSBPM as input or output of individual process steps. The aim is to better understand how the models are related and to provide a more integrated view of the ModernStats models. CSPA implementation will benefit from this too.
- **Core Ontology for Official Statistics** – The activity will create a common semantic model and vocabulary for official statistics. It will allow model integration, interoperability, activation and globally unique identification. The aim is to provide precise definitions of the core ontology concepts and their properties and define their identification in relation to a clearly documented naming policy. It will be articulated with more sectorial and in-depth works existing on GSIM, CSPA or the Single Integrated Metadata Structure (SIMS) model for quality metadata (based on the SDMX metadata model) and address their management and governance.
- **Alignment of overarching processes in GSBPM with GAMSO** – GSBPM underwent a revision, GAMSO was only slightly adapted to reflect the main changes in GSBPM. Therefore, a better explanation of the relationships between the two models when it comes to activity/processes mentioned in both models is needed to clarify the overarching processes in GSBPM and how they relate to activities in GAMSO.

16. Work on a **Metadata Glossary** is important in order to create a central, unified and definitive source for the terms and definitions in the ModernStats Models that can identify and address disambiguation between homographs and synonyms. This work is only feasible if a sufficient number of experts sign-up for a task team and the team is self-supporting. If enough experts will join the group, **communication materials for ModernStats Models** can be prepared.

17. In collaboration with the Sharing Tools Group, the Supporting Standards Group has setup an Organisation Committee to organise the **ModernStats World Workshop** in June 2019 in Geneva, Switzerland. The workshop aims to progress work on development and maintenance of the ModernStats models and provide a ModernStats models user platform. In particular, the workshop will: i) promote the new developments of the ModernStats models and related works; ii) increase the understanding of the models and interrelationships between them; iii) facilitate the sharing of experiences, ideas and

plans for modernising statistical production by implementing the models; and iv) identify opportunities for international collaboration activities.

### Sharing Tools

18. The Sharing Tools Group provides implementation support for CSPA and works on further defining and promoting the shareability concept. Currently, this group is chaired by New Zealand and meets monthly. Extra meetings to progress elements of these topics will be set up on an ad hoc basis. In addition to the monthly meeting, separate task teams will progress work on the following topics:

- **Digitising of CSPA document** – The aim is to create an on-line version of the CSPA documentation that makes the content easy accessible for different users and with different knowledge of CSPA. The document will be layered from general to detailed levels and by type of user. Additionally, links to real examples of developing and implementation of services will be provided.
- **Adding Services to the CSPA Catalogue** – The group will focus on adding services to the catalogue and provide support to submitters and users of services. Existing entries will be evaluated and checked if the shareability level can be increased. The aim is to add at least ten new services during 2019. Surveys and outcomes of substantive workshops will be considered and a survey might be conducted to identify potential services.
- **Communicating the Restated CSPA Concept** – To increase awareness and to lower the threshold for submitting services to the CSPA Catalogue, products will be developed such as slide decks to be used at various workshops under HLG-MOS and within ESSnet and related programs. A leaflet on new CSPA concept will be developed as well as a redesigned CSPA wiki with easy access to all key information.

19. If sufficient methodologist sign-up for the group, the group can address the **methodology architecture and inventory** as proposed in 2017 and 2018 for consideration as a project. This Task Team would need a separate chair to steer and coordinate the work with support from the UNECE secretariat.

20. In cooperation with the Supporting Standards Group, the Sharing Tools Group will organise through a joint Organisation Committee the **ModernStats World Workshop** planned for June 2019 in Geneva, Switzerland.

### **Innovation Stream**

21. The Blue Skies Thinking Network is the ideas factory of the ModernStats community. A core group comprising of around 5 persons from various NSOs with an in-depth as well as broad knowledge of innovation related aspects to facilitate the development of the work and of sufficient heterogeneity to allow for a variety of expertise and views will be set-up. The core group will do the initial scan of proposals that are brought to the Network, evaluate them and propose some to the Executive Board when they merit further consideration and will also actively engage with the statistical community to identify potential topics that could merit further work. The core group will draw from a flexible pool of resources to assist in the evaluation of proposals.

22. HLG-MOS members will bring the Network to the attention of their innovation groups and actively stimulate idea-generation for proposals to be submitted to the Network. To not only depend on proposals and ideas being brought to them, the core group will also actively search and identify

potential topics for consideration. One initial task will be to evaluate project proposals that were submitted and not selected and assess whether these merit further consideration.

### **Other Physical Meetings**

23. Under the auspices of the HLG-MOS several other workshops and work sessions will be organized. The focus is always on innovative developments and modernization in the substantive area of the workshop. Another key output is the identification of areas for future work and collaboration. The target audience for these workshops includes senior and middle-level managers. They are organised by the UNECE secretariat in collaboration with expert Steering Committees. In 2019, the following additional workshops will occur:

- **Workshop on Statistical Data Dissemination and Communication, 12-14 June, Gdansk, Poland** – the focus of the workshop will be on cutting edge ideas, new trends, experiments, and approaches in the areas of statistical data dissemination and communication. The following substantive topics will be considered: i) issue management, ii) internal communication and positioning of the communication department, iii) tailoring communication to the audiences and iv) branding. In addition to the traditional presentations, the agenda of the workshop will include target-driven small group discussions, a practical exercise, and a panel discussion.
- **Work Session on Statistical Data Confidentiality, 29 – 31 October, the Hague, Netherlands** – This work session aims to progress work on statistical confidentiality in the context of Statistical Modernisation and emerging topics arising from new data sources and new roles of statistical offices. In particular, the work session will address topics such as: access to microdata, tabular data, confidentiality issues of the Census 2020/2021 Round, risk assessment (privacy, confidentiality, disclosure), software tools for statistical data confidentiality, compliance with legal requirements and crisis management when there is a breach of confidentiality.
- **Workshop on Statistical Data Collection, September or October, place and venue to be determined** – The objective of this workshop is to identify innovative ways and best practices in statistical data collection, and to provide a platform for practitioners to exchange experiences and foster collaboration in this area. The workshop has several interactive items and also provides a market place for exchange of services. The workshop addresses topics such as modernisation of data collection processes and infrastructures, innovative survey design, integration by design, use of alternative sources, mobile first approach and communication with stakeholder.

### **Monitoring Progress and Coordination**

24. The work of the Groups and Projects is reported on a monthly basis at the UNECE [ModernStats wiki](#). The Executive Board discusses the modernization updates and evaluates the progress together with the chairs of the groups and the project managers in their monthly meeting. If needed, the work program is adjusted. All activities are continuously aligned and coordinated with other international initiatives like the programs under the European Statistical System and the UN Global Platform.

## Annex 1: 2019 Project Proposals

### Business Case for Machine Learning

This business case was prepared by Barteld Braaksma (Statistics Netherlands) based on the position paper 'The use of machine learning in official statistics', and is submitted to the HLG-MOS for their approval.

Type of Activity			
<input checked="" type="checkbox"/>	New project	<input type="checkbox"/>	New activity
<input type="checkbox"/>	Extension of existing project	<input type="checkbox"/>	Extension of existing activity
Projects are undertaken by separate project teams. Projects are expected to produce a significant contribution to achieving the HLG-MOS vision		Activities are undertaken by Modernisation Groups. These activities produce smaller, more detailed outputs to help achieve the HLG-MOS vision	
Purpose			
<p>The interest in the use of Machine Learning (ML) for official statistics is rapidly growing. For the processing of some secondary data sources (including administrative sources, big data and Internet of Things) it seems essential to look into opportunities offered by modern ML techniques, while also for primary data ML techniques might offer added value, as illustrated in the ML position paper mentioned above. Although ML seems promising there is only limited experience with concrete applications in the UNECE statistical community, and some issues relating to e.g. quality and transparency of results obtained from ML still have to be solved.</p>			
Description of the project			
<p>The project is divided a priori into four work packages (WPs). If the project materialises the project manager and project team may decide that a slightly different layout is preferable, but the key elements will remain.</p> <p><b>WP0. Refine the scope and define business case.</b> The scope of the ML Project needs further refinement and should build on expertise present in the group. As soon as members are identified, a sprint will be organised for this as well as to kick-start the work on the other work packages.</p> <p><b>WP1. Pilots Studies.</b> Based on mutual interest and building on existing national ML projects, a number of concrete pilots (three to five) for ML in specific domains will be done. Example domains, for which already interest has been expressed, are image recognition, websites analysis and automated coding; further areas can easily be identified. Another good area to start would be data editing and imputation. A pilot may either relate to common statistics production using e.g. survey data or alternative approaches using e.g. big data. In each pilot study at least two countries and/or international organisations collaborate. A pilot should preferably be comprehensive and practical, that is: develop the appropriate methodology, build CSPA-compliant tooling, test on realistic use cases and consider quality and transparency aspects.</p>			

**WP2. Quality issues.** It is too early to develop a full quality framework for ML, but quality issues should be addressed. Traditional statistical quality frameworks assume that the data-generating process and further data processing steps are explicitly known. When applying ML methods, especially to ‘found’ big data or in multisource statistics, these assumptions are usually not valid. To guarantee quality, reproducibility and transparency, which are core values of official statistics, it is important to identify suitable quality indicators and performance metrics. The work on quality issues could either be a stand-alone effort or an extension of an existing quality framework.

**WP3. Lessons Learned.** This is where the usual project coordination, reporting and planning go.

In principle all WPs can run in parallel although there are some temporal interdependencies between them that require explicit attention. Most work can be done in a virtual setting but two or three physical sprints will be necessary.

The application of ML methods by nature implies interdisciplinary work. Modellers (methodologists), programmers (computer scientists) and subject matter specialists must work together. For each WP, teams should be formed that combine these different skills to achieve optimal results. It may be useful to engage interested project members from areas outside the official statistics community.

Due to the mostly exploratory nature of the project, an agile approach works best. It could be helpful to identify an explicit product owner for each WP (member of the Executive Board?) in order to decide on deliverables and next steps. A sandbox-like environment could be helpful as a common workspace.

The project is designed for a one-year duration but given the complexity of the ML topic an extension could be necessary; depending on progress and appetite for deeper results.

### Alternatives considered

Instead of a full-fledged coherent project, it may be possible to isolate some of the WPs and allocate them to appropriate Modernisation Groups as separate activities. In particular WP2 and WP3 would seem suitable for this. It could also be possible to try and collaborate with the academic community in scientific programs like the European Horizon2020 program.

### How does it relate to the HLG-MOS vision and other activities under the HLG-MOS?

ML is a key modern technologies that the worldwide statistical community should consider and the methods, IT solutions and other related issues can be dealt with in a universal; manner. Since, at this moment in time, basically all NSOs are in the same pioneering phase this is an excellent opportunity for shared development and mutual collaboration. The ML proposal seamlessly fits the HLG-MOS mission, all four elements of its vision are covered and all five HLG-MOS values are addressed.

### Proposed start and end dates

**Start:** *January 2019*

**End:** *December 2019*



## Business Case for Strategic Communication Framework Project – Phase 2

This business case was prepared by the Strategic Communication Framework Project members and is submitted to the HLG-MOS for their approval.

<b>Type of Activity</b>			
<input type="checkbox"/>	New project	<input type="checkbox"/>	New activity
<input checked="" type="checkbox"/>	Extension of existing project	<input type="checkbox"/>	Extension of existing activity
The project is an extension of the 2018 Strategic Communication Framework Project sponsored by the HLG-MOS.			
<b>Purpose</b>			
<p>The objective of the Strategic Communication Framework Project is to guide statistical offices in the development of a strategic approach to protect, enhance and promote the organization’s reputation and brand. Phase 2 of the Project will build on the experience and momentum gained in Phase 1 and will focus on developing a strategic approach to internal communications and stakeholder management/analysis in support of two priority topics for 2019 identified by HLG-MOS - Communicating our value and Setting the vision. It will also explore the experience of national statistical organizations in the development of government-wide data strategies in support of a third HLG priority – National Data Strategies.</p>			
<b>Description of the activity</b>			
<p>Within the context of today’s ever-changing data environment, many statistical organizations are in the process of developing or reviewing their strategic objectives and their business models – leading to the articulation or a review of their mission and/or vision statements. More and more statistical organizations are involved in government-wide data strategy formulation. For statistical organizations to become strategic partners in the development of a national data strategy and for the successful development of a solid business model or the transition to a new business model, the vision must resonate with staff at all levels. For mission and vision statements to resonate with employees, staff need to be engaged.</p> <p>Phase 2 of the Strategic Communication Framework Project will focus on the development of guidelines and strategic approaches to better engage staff so that they can become ambassadors of the organization’s key messages to external partners and stakeholders; and the development of stakeholder engagement strategies. It will also explore statistical organizations involvement in the development of national data strategies.</p> <p>The following work packages are proposed for the Project:</p>			

### **Work Package 1 – Guidelines to Develop Organizational Vision and Strategic Staff Engagement Strategies**

This work package will increase the ability of statistical organizations to adopt strategic communication as a foundational building block to change management. Based on best practices and case studies, the outcome of this work package would be a toolkit that includes:

- Methods and approaches to set the vision and mission of an organization. The output will provide clear steps on how to create vision and mission statements and provide country examples. It should also explain how to design Target Operating Models and advantages of having it in the NSOs. The work will be linked to similar activities under the CES.

- Guidelines on how to assess the engagement of staff throughout the organization as well as their level of understanding of the organization’s vision; identifying and communicating core values and the organization’s value proposition.

- Methods and approaches to successfully engage staff and encourage innovation and sharing; including the development of user-friendly internal communications channels and sharing protocols and exploring the effective use of various engagement tools such as social media, news bulletins, town hall meetings, innovation channels, etc.

The work will be closely coordinated with the Developing Organisational Resilience Group to reuse their work and to prevent duplication.

### **Work Package 2 – Developing Stakeholder Engagement Management Strategies**

To succeed in the increasingly competitive data environment, statistical organizations must engage with the full range of their stakeholder community. To do so effectively, staff at all levels must understand and embrace the organization’s mission and vision. Staff must know with whom to engage and how to analyse the level, type and most effective engagement strategy to deploy. This work package will provide statistical organizations with the tools to effectively manage stakeholder relationships using analytical tools.

It will also provide statistical organization with tools to better understand the range of stakeholder relations in order to effectively engage the stakeholder community in support of issues and crisis management. The work will consider meaningful stakeholder engagement approaches and increase staff awareness of the importance of communication.

### **Work Package 3 – Statistical organizations engagement in Government-wide data strategies**

Governments, worldwide, are increasingly dependent on data. This data revolution is forcing governments to consider data as a strategic asset and is transforming the way governments collect, share and use data – fundamentally changing the way they make decisions and deliver services to their citizens. Many countries are developing government-wide strategies focused on the protection, use, management and sharing of data – with statistical organizations playing the critical role of data steward. This work package will gather the experiences and examples of countries who are engaged in a whole-of-government approach. It will include examples of national data strategy frameworks including environment (ie legislation, infrastructure and tools), guiding principles, governance, communication approaches, and service delivery models. An inventory of existing and upcoming National Data Strategies (NDS) will be established as well as other aspects related to NDS

(trust, reputation, quality and our value proposition). The outcome of the CES seminar on NDS can further steer the content of this WP for the second half of 2019.

**Alternatives considered**

An alternative to phase 2 of the project would be a task team convened under the Organizational Resilience Modernization Group. The work however would progress more slowly without the coordinated project structure or the stakeholder management/analysis component.

**How does it relate to the HLG-MOS vision and other activities under the HLG-MOS?**

The project supports the HLG-MOS mission and vision. Through collaborative engagement, the project team will use their expertise, input from other experts and information collected from various statistical organizations, other government departments and private sector companies to help achieve their work objectives. All information developed will be available online and will include best practices and case studies.

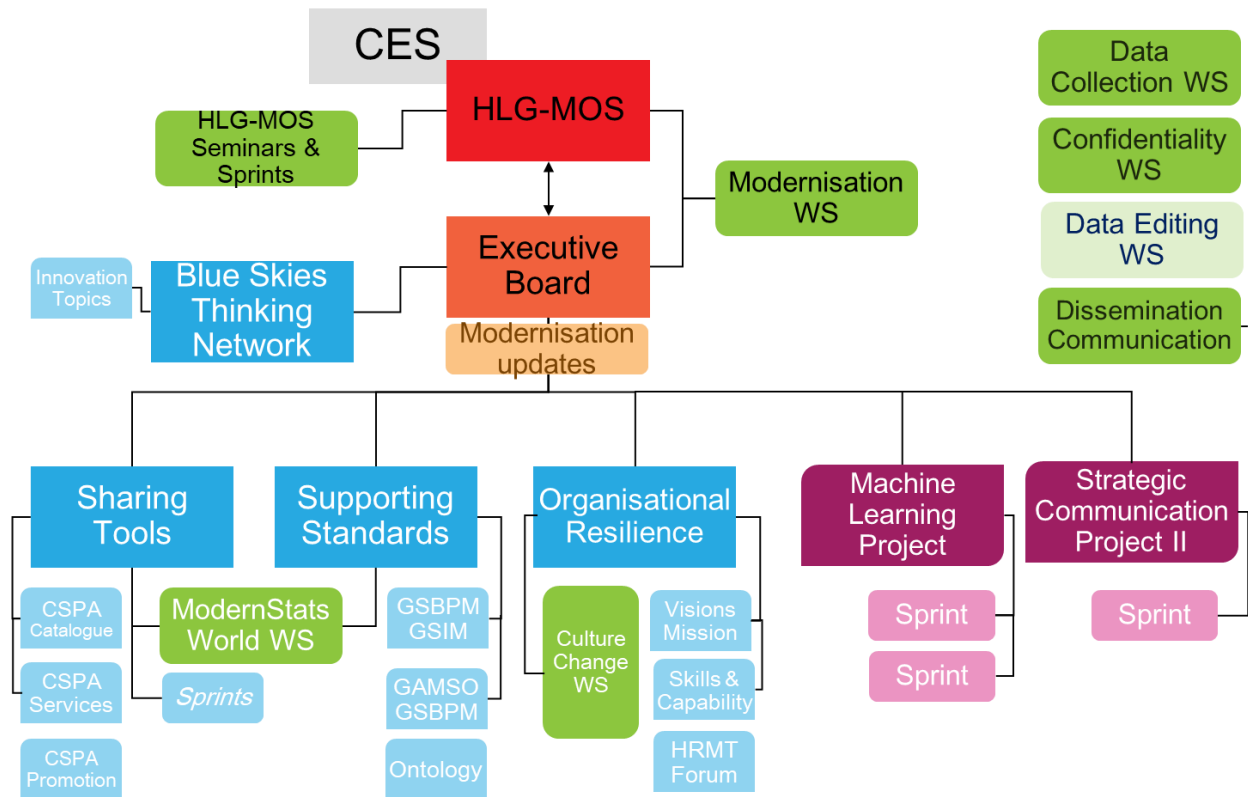
**Proposed start and end dates**

**Start:** January 2019

**End:** December 2019

The project will aim to complete its work by the end of 2019. All work packages proposed will start simultaneously and run for the full period of the project.

## Annex 2: HLG-MOS Structure



## Setting the Annual Work Program

