HLG-MOS Modernisation Workshop 2022

12th Annual Workshop of the High-Level Group for the Modernisation of Official Statistics
*22-23 November 2022*

HLG-MOS/ModernStats Outputs:

Models/Standards:

- **G**eneric **S**tatistical **B**usiness **P**rocess **M**odel (GSBPM)
- **G**eneric **S**tatistical **I**nformation **M**odel (GSIM)
- **C**ommon **S**tatistical **P**roduction **A**rchitecture (CSPA)
- **G**eneric **A**ctivity **M**odel for **S**tatistical **O**rganizations (GAMSO)
- **G**eneric **S**tatistical **D**ata **E**diting **M**odel (GSDEM)
- **C**ommon **S**tatistical **D**ata **A**rchitecture (CSDA)

Initiating/Leading work in Official Statistics on:

- Big Data
- Data Integration
- Machine Learning
- Strategic Communication
- Risk Management
- Linked Metadata & Core Ontology
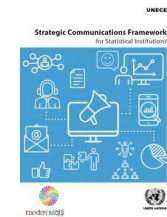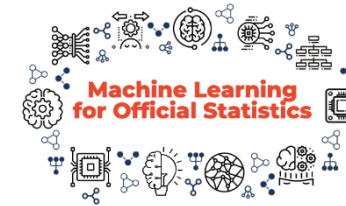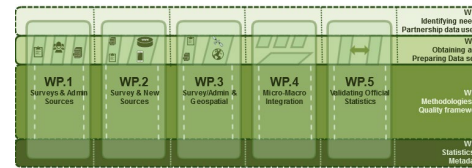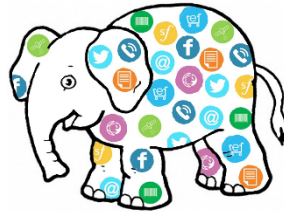
Some other outputs

Machine Learning for Official Statistics *link*	GeoGSBPM *link*	Modernisation Maturity Model & Roadmap *link*	Modernisation Maturity Model *link*	Data Integration Guidelines *link*
Synthetic Data for Official Statistics: a Starters Guide *link*	Common Metadata Framework *link*	Linked Open Metadata *link*	Brand and Reputation Management *link*	Strategic Communications Framework *link*
Guidelines on Risk Management *link*	Guidelines for Managers *link*	Statistical Metadata Glossary *link*	Big Data Inventory *link*	CSPA Catalogue *link*

modernstats
by HLG - MOS

UNECE

Objectives of HLG-MOS activities:

Ideation

Identify

Investigate

Prioritize

Concrete Output

Models

Handbooks

Guidelines

Platform

Collaboration

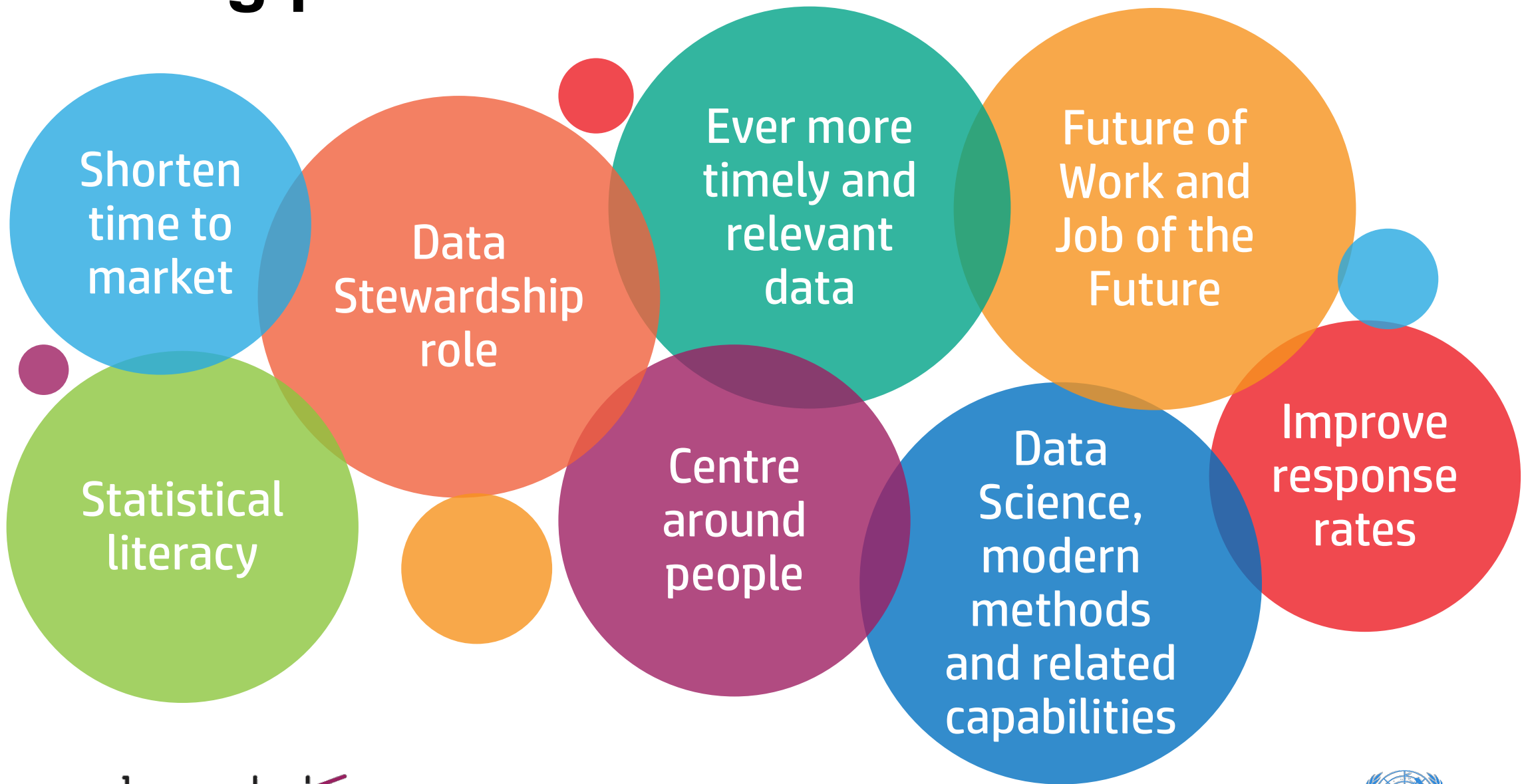*Share Experience*

Gain Capabilities
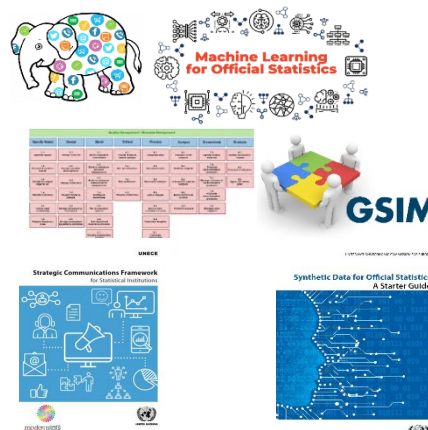
Priority & Emerging Topics (pre-Covid)

- Active engagement
  - Communicating our value
  - Role in the data ecosystem
- Trusted Data Authority
  - National Data Strategy
  - Data for better decision making
  - Data protection
  - Data access and ethics
- Agile and adaptive culture
  - Setting the vision
  - Culture evolution

Shifting priorities

Shorten time to market

Data Stewardship role

Ever more timely and relevant data

Future of Work and Job of the Future

Statistical literacy

Centre around people

Data Science, modern methods and related capabilities

Improve response rates

modernstats
BY HLG – MOS

UNECE

Revamping and updating the modernisation framework

- Redefine continuously our level of ambition and where to focus efforts
- Prioritize statistical processes and emerging services with highest potential

- Shift from producers of statistics towards providers of services
- Methods/standards/technologies at the heart, but centre around people (staff, users, stakeholders, data providers)

- Increase sharing/collaboration to accelerate progress and delivery of results
- Further optimize our expert meetings
- Identify experts beyond NSO's, in modernization fields of interest

Successes in modernizing the HLG-MOS

- Further strengthened the innovation pipeline
- Set up of new group on data science methods
- Established the ONS-UNECE Machine Learning community of practices
- Further integrated the expert meetings into the framework
- More efficient ways of working (innovative tools and platforms)
- More support from countries in managing projects and activities
- Increased involvement by Executive Board
- Engaged chairs and very active members

Challenges in modernizing the HLG-MOS

- Need additional members in particular groups to meet ambitions
- Availability of key contributors in multiple modernization activities
- Need to continue to attract more countries, create more opportunities
- UNECE remains critical
- Competing activities elsewhere: need to create synergies
- How to better measure/showcase our successes in the community and beyond
- Align activities to priorities and collaborate even more with others
- Better identify activities happening across NSOs and use these learnings
- Keep further articulating the HLG-MOS modernisation frame for the future

modernstats
by HLG - MOS

UNECE

HLG-MOS 2013-2018
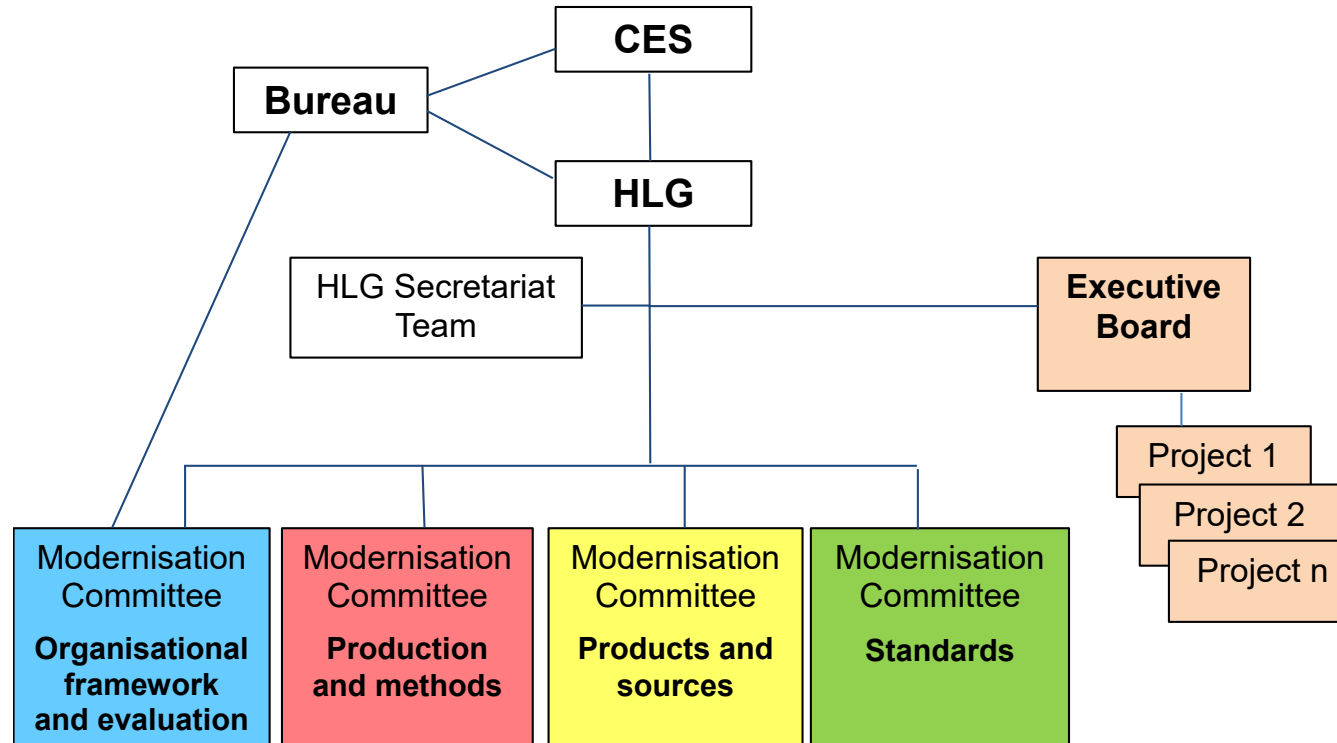
ModernStats World 2019-2020

ModernStats World 2022

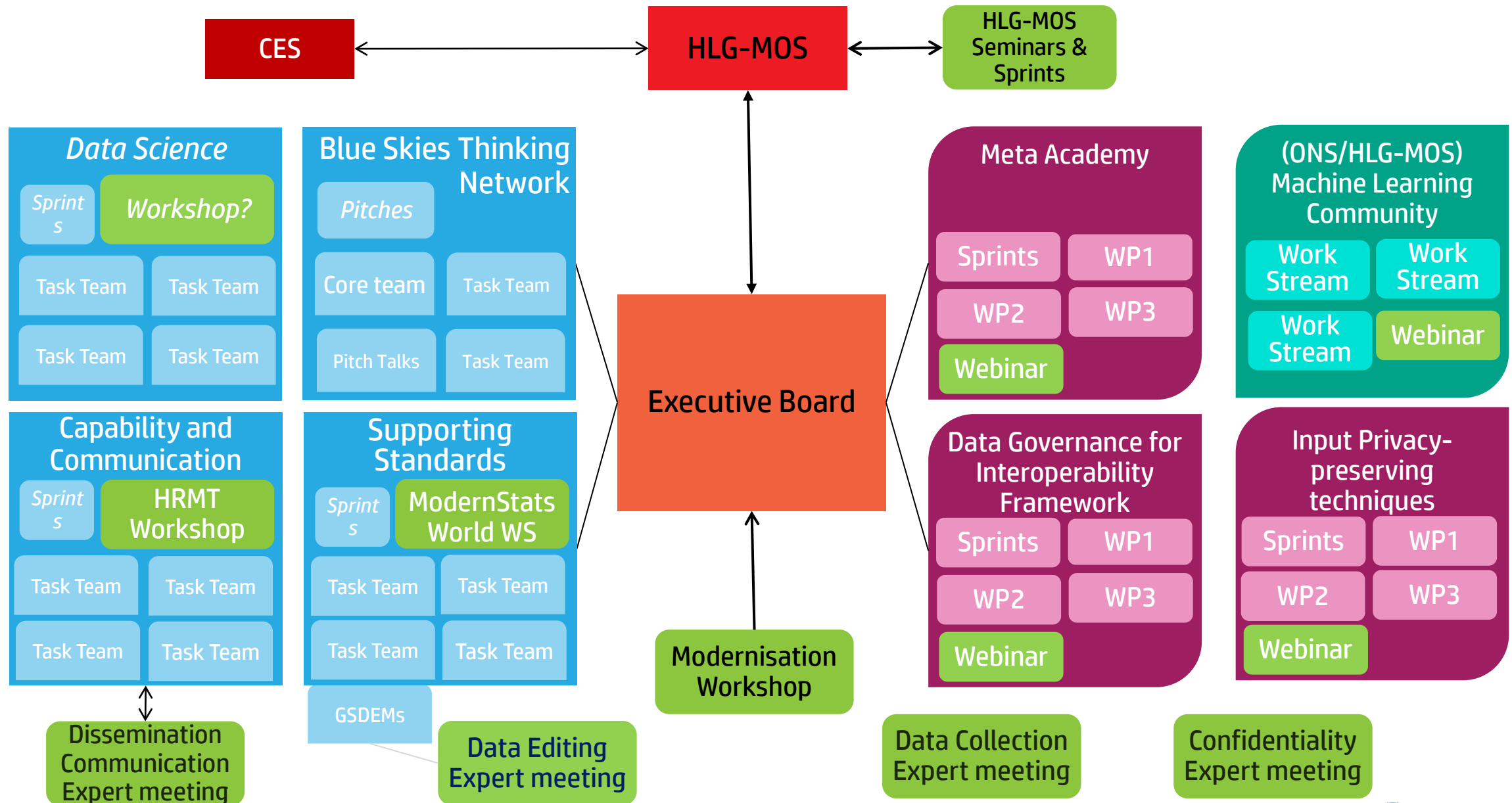**CES** ⟷ **HLG-MOS** ⟷ **HLG-MOS Seminars & Sprints**

Data Science
- Sprints
- Workshop?
- Task Team
- Task Team
- Task Team
- Task Team

Blue Skies Thinking Network
- Pitches
- Core team
- Task Team
- Pitch Talks
- Task Team

Capability and Communication
- Sprints
- HRMT Workshop
- Task Team
- Task Team
- Task Team
- Task Team

Supporting Standards
- Sprints
- ModernStats World WS
- Task Team
- Task Team
- Task Team
- Task Team
- GSDEMs

Executive Board

Modernisation Workshop

Meta Academy
- Sprints
- WP1
- WP2
- WP3
- Webinar

(ONS/HLG-MOS) Machine Learning Community
- Work Stream
- Work Stream
- Work Stream
- Webinar

Data Governance for Interoperability Framework
- Sprints
- WP1
- WP2
- WP3
- Webinar

Input Privacy-preserving techniques
- Sprints
- WP1
- WP2
- WP3
- Webinar

Dissemination Communication Expert meeting

Data Editing Expert meeting

Data Collection Expert meeting

Confidentiality Expert meeting

modernstats
BY HLG – MOS

UNECE

HLG-MOS Annual Cycle

November: Presentation of current work and proposals for future work; voting by community at HLG-MOS workshop

January-March: HLG-MOS reviews vision and agrees on priority areas and approves new work programme

March-August: Future work proposals can be submitted, and Blue Skies Thinking Network can be requested to review them

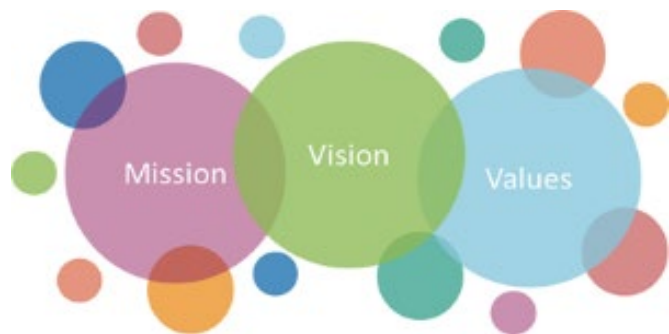**September:** Future work proposals due for review by the HLG-MOS Executive Board

Why are we here today and tomorrow?

Share and showcase our work

Celebrate our accomplishments

Get feedback on results

2022

Involve the community

Induce collaboration and participation

Engage in an open discussion

Identify and Prioritize future work

Drive new developments

Set our 2023 work programme

2023

UNECE

ModernStats
2022

Projects 2022

Meta-Academy for the Modernization of Official Statistics

- Benchmarking
  - Skills assessment strategies or frameworks
  - Competency frameworks
  - existing training
- Experimenting with Git Training
- Framework for co-creation of international virtual training
  - Carpentries
- Various Workshops
- ModernStats Carpentry proposal

Data Governance for Interoperability Framework

- Interoperability; Open Statistical Data Interoperability; Transparency in Statistical Information
- Problem statement, Scope and purpose, Core terms
- Statistical Interoperability, benefits, types
- Models to achieve interoperability, Governance, Tools and technology

Input Privacy-Preservation Project

- Generalized use cases
- Private set intersection
- Private machine learning
- Multi-party privacy preserving Machine Learning (tested)
- Test coverage of 3rd party data under limited trust
- External consultation
- Webinar
- UN EXPO2020 event

Modernisation Groups 2022

Applying Data Science and Modern Methods

- Understanding and Selecting Modelling
- International Framework on Responsible AI for Official Statistics
- Accelerating the Implementation of ML-based Solution in Data Editing
- *Data collection and integration*
- *Data confidentiality*
- *Dissemination and Service area*
- *Automation and efficiencies*

Capabilities and Communication

- Employer, Employee and Manager toolkits
- The Job of the Future
- Reaching Young People (employees, users & providers of data)
- Ethics Management and Data Ethics
- Market Research, Digital Marketing & Communication strategies
- *2022 DissComm, 2022 HRMT workshop*

Supporting Standards

- GSIM Review
- Core Ontology for Official Statistics
- GSBPM Task
- SDMX-DDI-GSBPM
- GSBPM overarching processes
- *CSPA follow-up*
- **M**odernStats **W**orld **W**orkshop 2022

Network and Community of Practises 2022

Blue Skies Thinking Network

- Identifying and evaluation new topics
- BSTN Pitch Talks
- Digital Twins
- Rapid survey system
- Statistical cloud use
- BSTN sprint sessions 12-13 July (ONS Data Science event)
- BSTN Cloud for Statistics Workshop, 29 June, Belgrade

Machine Learning Community

- Global Data Squad Workstreams/Theme Groups:
  - Web scraping data
  - AIS modelling
  - Model re-training
  - Quality of training data
  - Imagery/Earth Observation
  - IT Infrastructure
  - Text classification
- Coffee and Coding
- Sprints and Workshops
  - *ONS International Data Science Meeting, Newport*
- Communication: newsletters, web and wiki spaces, Slack channel

Expert Meetings, Workshops, Webinars and Sprints 2022

- HLG-MOS and Chief Statisticians' Sprint, 10 March 2022, online
- Synthetic Data Challenge, 24-28 January 2022, online
- ModernStats World Workshop, 27-29 June 2022, Belgrade
  - BSTN Cloud for Statistics Workshop, 29 June 2022, Belgrade
- ONS International Data Science Meeting, 12-14 July, Newport
  - ONS/UNECE Machine Learning Group sprint sessions 12-14 July
  - HLG-MOS Blue Skies Thinking Network sprint sessions 12-13 July
  - HLG-MOS Implementing Data Science and Modern Methods sprint sessions 13-14 July
- Expert Meeting on Dissemination and Communication of Statistics, 13-15 Sept., online
- Expert Meeting on Statistical Data Editing, 3-5 October 2022, online
- Workshop on Human Resource Management and Training, 11-13 October, Brussels
- Expert Meeting on Statistical Data Collection 'Towards a New Normal?', 26-28 Oct. Rome
- HLG-MOS Modernisation of Official Statistics Workshop, 22-23 November 2022, Geneva
  - Meta Academy Seminar 24 November
  - Input Privacy-Preservation Techniques Seminar 24 November

Highlights of Output produced in 2022

- Synthetic Data for Official Statistics: a Starters Guide

- Crisis Communication and Brand Management Guide

- Toolkits for blended working environments

- Surveys on Future of Work and Ethics Surveys

- GSBPM Task

- Core Ontology for Official Statistics

- Machine Learning Theme Group papers/reports

- Identification future work priorities (5 expert meetings/workshops)

- 5 Project Proposals 2023!

Community Involvement 2022

4 Steering Committees
44 members
21 org.

9 Expert Meetings/ Workshops/ Seminars
700+ participants (est.)
70 organisations (est.)

Exec Board & 4 Groups,
158 members
38 org.

ML Community
350+ members /participants

4 Sprints & Challenge
50 part.
20 org.

3 Projects
66 members
20 org.

750+ Participants

650+ Members

100+ Organisations

ModernStats
2023

Project proposals 2023

- Robotic Process Automation in Official Statistics

- Cloud Usage for Official Statistics

- Linking and Querying Statistical Classifications through the Semantic Web Standards

- Statistical Data Governance Framework to Achieve Data Interoperability phase 2

- ModernStats Carpentries

Next:

- *Presentation of Proposals (5 minutes)*

- *Small Group discussions to prioritize proposals*

- *General discussion on scoping of proposals*

Activity proposals 2023

ADSaMM | Standards | CapCom | BSTN

- Understanding and Selecting **Modelling**
- Accelerating the Implementation of ML-based Solution in **Data Editing**
- International Framework on **Responsible AI** for Official Statistics

- GSIM Revision
- GSBPM and GAMSO revision
- GSBPM-SDMX-DDI
- Core Ontology for Official Statistics

- Work and Job of the Future
- Recruitment and onboarding
- Reaching Youth
- Communication: resourcing/capabilities required, prioritization and measuring success & impact
- Data and Business Ethics Handbook

- Digital Twins
- Transitioning to Open-Source solutions
- *Non-probabilistic sampling/surveys; rapid surveys; and more*

modernstats
by HLG – MOS

UNECE

Get Involved!
Join the Force!

Consult

Contribute

Collaborate

Questions

Annex: HLG-MOS foundational pillars

- a Collaboration of the willing
- Mission, Vision and Values
- ModernStats Fundaments and Pillars
- ModernStats Innovation Pipeline

High-Level Group for the Modernisation of Official Statistics HLG-MOS
A Collaboration of the Willing

- Activities are voluntary and demand driven

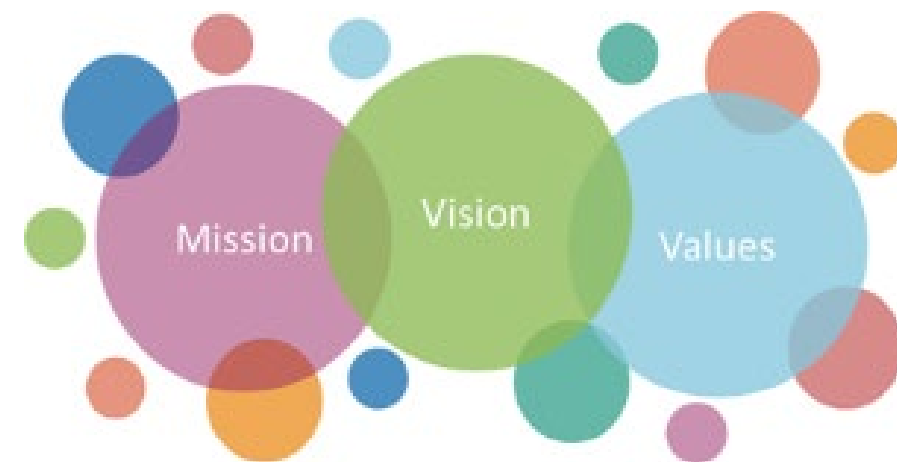- Strategic Vision and oversight by HLG-MOS

- Actively steered by an Executive Board

- Four main principles:
  - Openness
  - Flexibility
  - Participation
  - Pragmatism

- Everybody can join and participation at all levels

Mission Work collaboratively to identify trends, threats, and opportunities & provide common platform to develop solutions in a flexible and agile way.
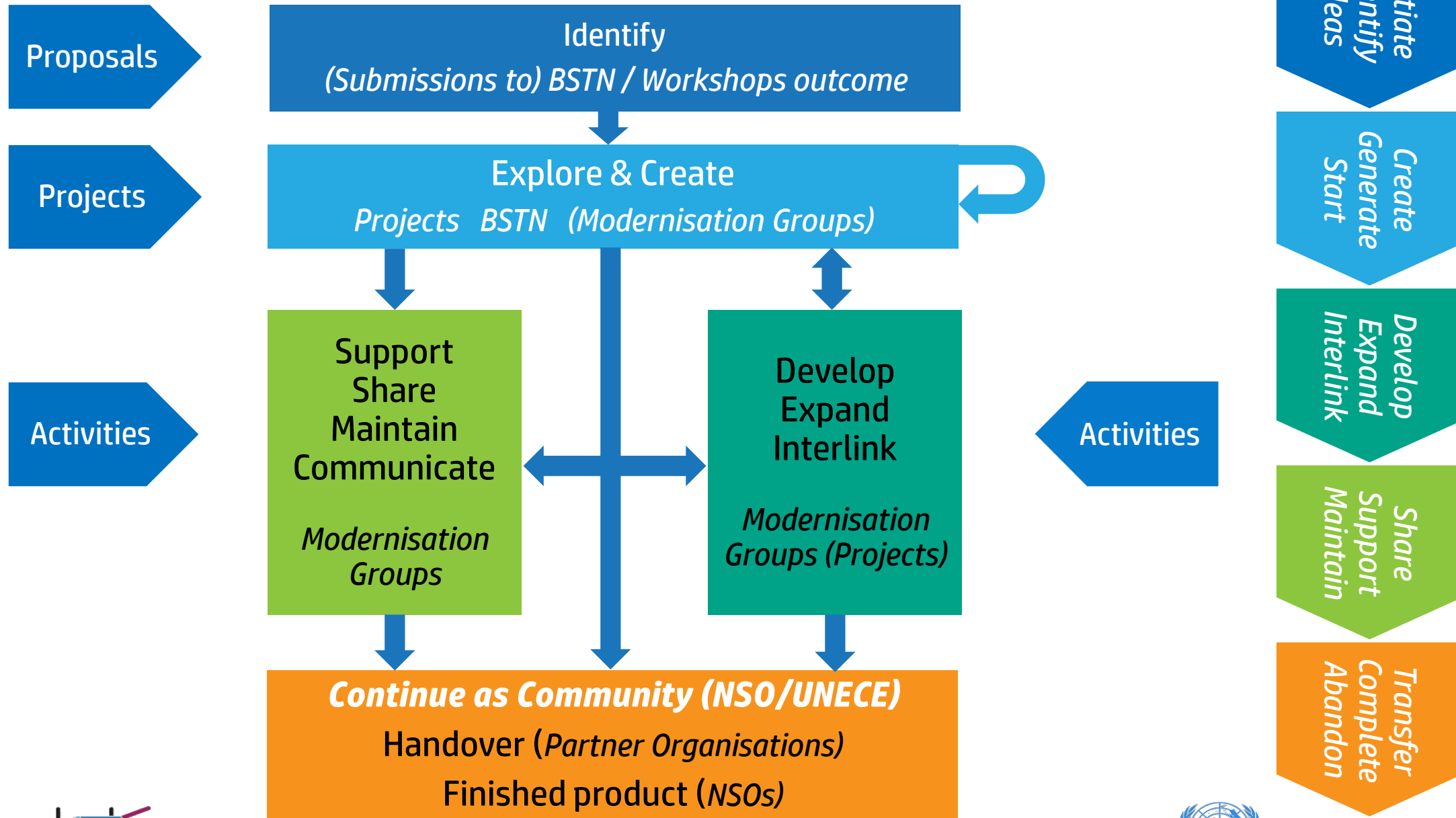
Vision

Actively engage

Be a trusted data authority

Adopt a service-oriented approach

Have an agile, adaptive culture

Values

Developing innovative solutions

Demonstrating leadership and collaboration

Discussing challenges and opportunities openly

Ensuring that priorities are community driven

Supporting a flexible, result oriented and agile approach

ModernStats Fundaments and Pillars

Proposals

Identify
(Submissions to) BSTN / Workshops outcome

Projects

Explore & Create
Projects   BSTN   (Modernisation Groups)

Activities

**Support
Share
Maintain
Communicate**

*Modernisation
Groups*

**Develop
Expand
Interlink**

*Modernisation
Groups (Projects)*

Activities

Continue as Community (NSO/UNECE)
Handover (*Partner Organisations*)
Finished product (*NSOs*)

*Initiate
Identify
Ideas*

*Create
Generate
Start*

*Develop
Expand
Interlink*

*Share
Support
Maintain*

*Transfer
Complete
Abandon*

HLG-MOS Innovation Pipeline 2022