



# HLG-MOS Modernisation Workshop 2022

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



# HLG-MOS/ModernStats Outputs:

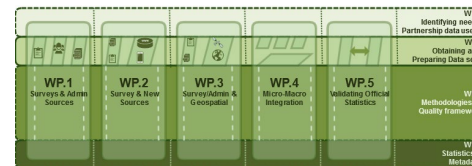
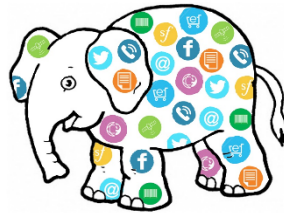
## Models/Standards:

- **Generic Statistical Business Process Model** (GSBPM)
- **Generic Statistical Information Model** (GSIM)
- **Common Statistical Production Architecture** (CSPA)
- **Generic Activity Model for Statistical Organizations** (GAMSO)
- **Generic Statistical Data Editing Model** (GSDEM)
- **Common Statistical Data Architecture** (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](#)

# Objectives of HLG-MOS activities:

## Ideation

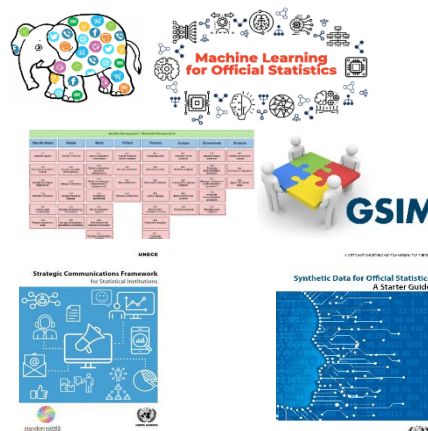
*Identify*  
*Investigate*  
*Prioritize*

## Concrete Output

*Models*  
*Handbooks*  
*Guidelines*

## Platform

*Collaboration*  
*Share Experience*  
*Gain Capabilities*

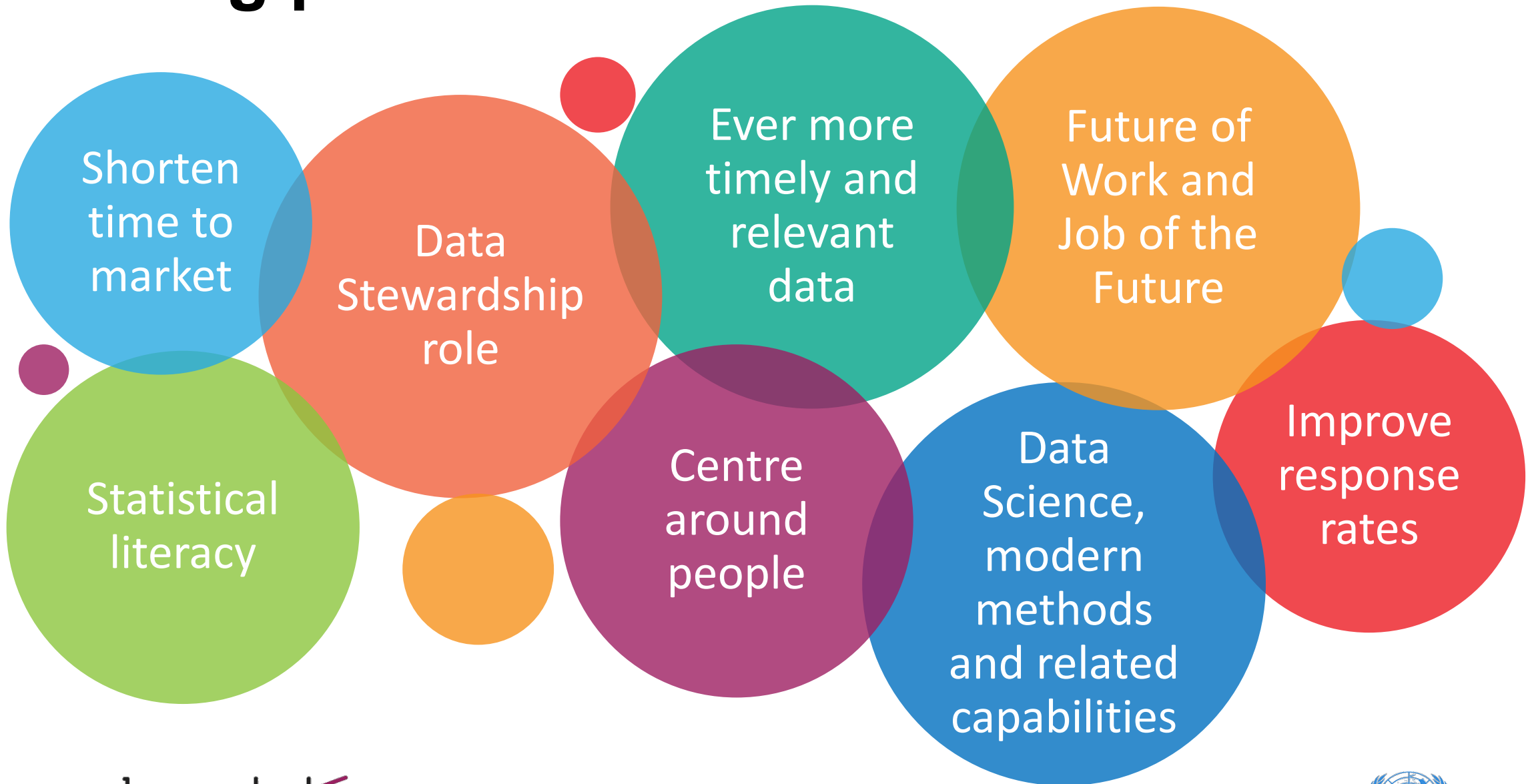


# Priority & Emerging Topics (pre-Covid)

- 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



# 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

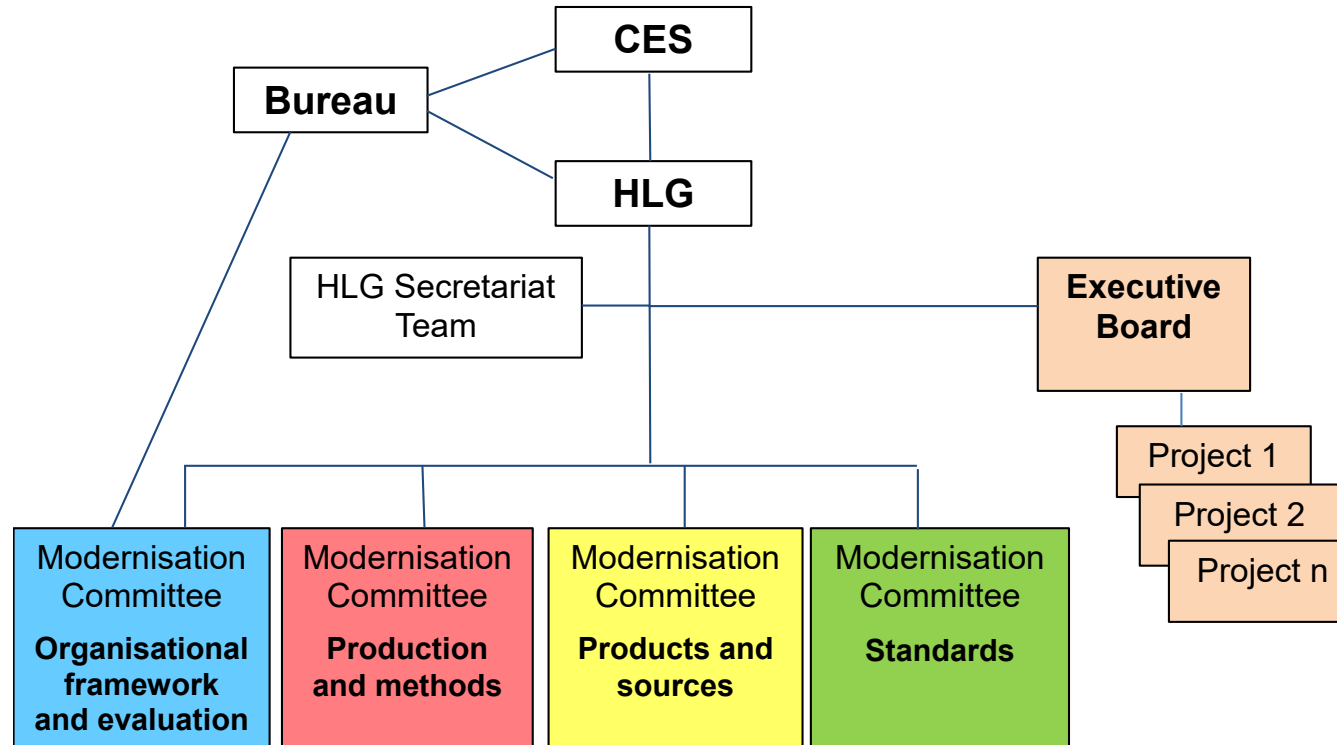
- Further strengthened the innovation pipeline
- Set up of new group on data science methods
- Established the ONS-UNECE Machine Learning community of practices
- Further integrated the expert meetings into the framework
- More efficient ways of working (innovative tools and platforms)
- More support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



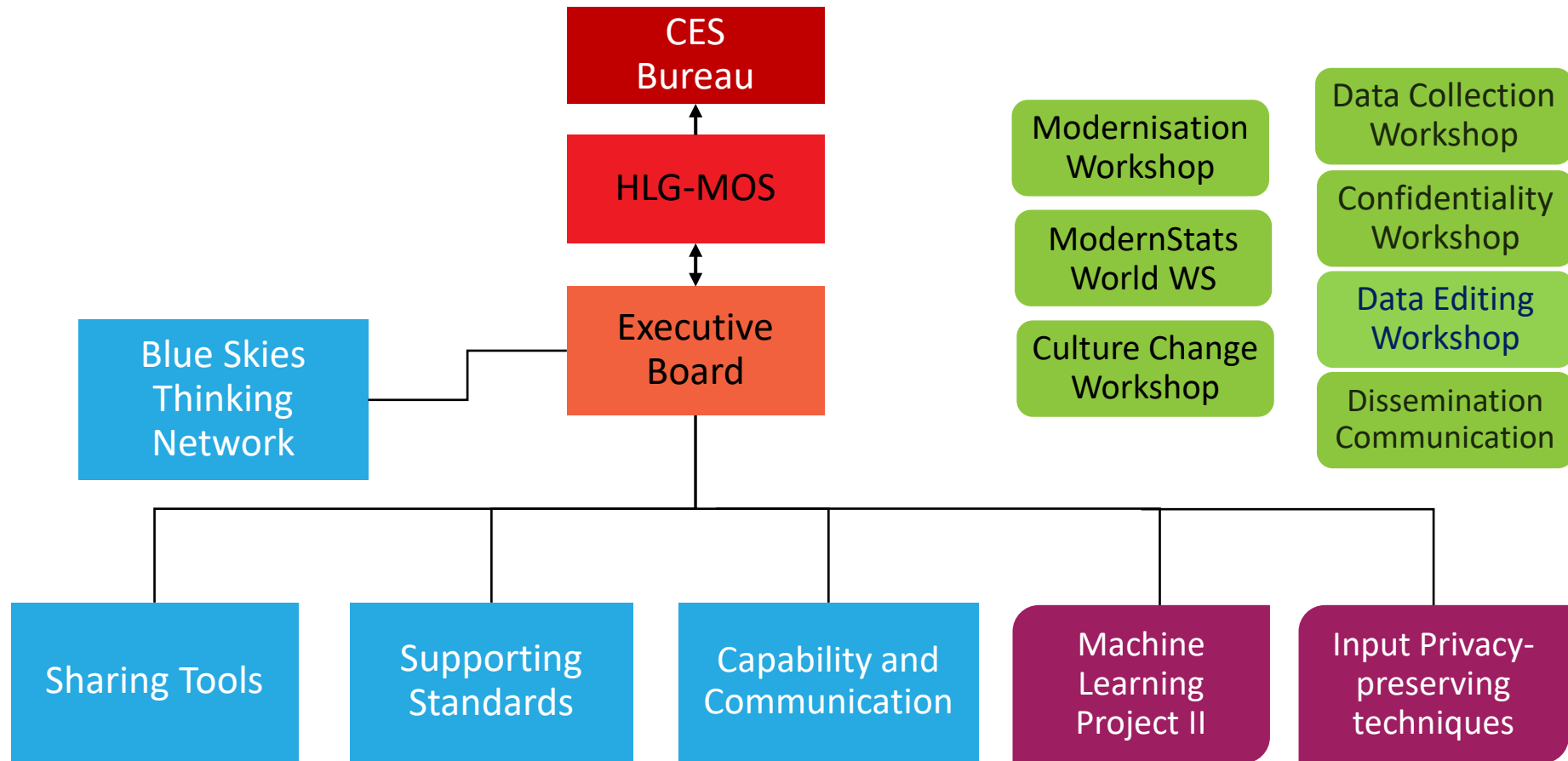
# Challenges in modernizing the HLG-MOS

- 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

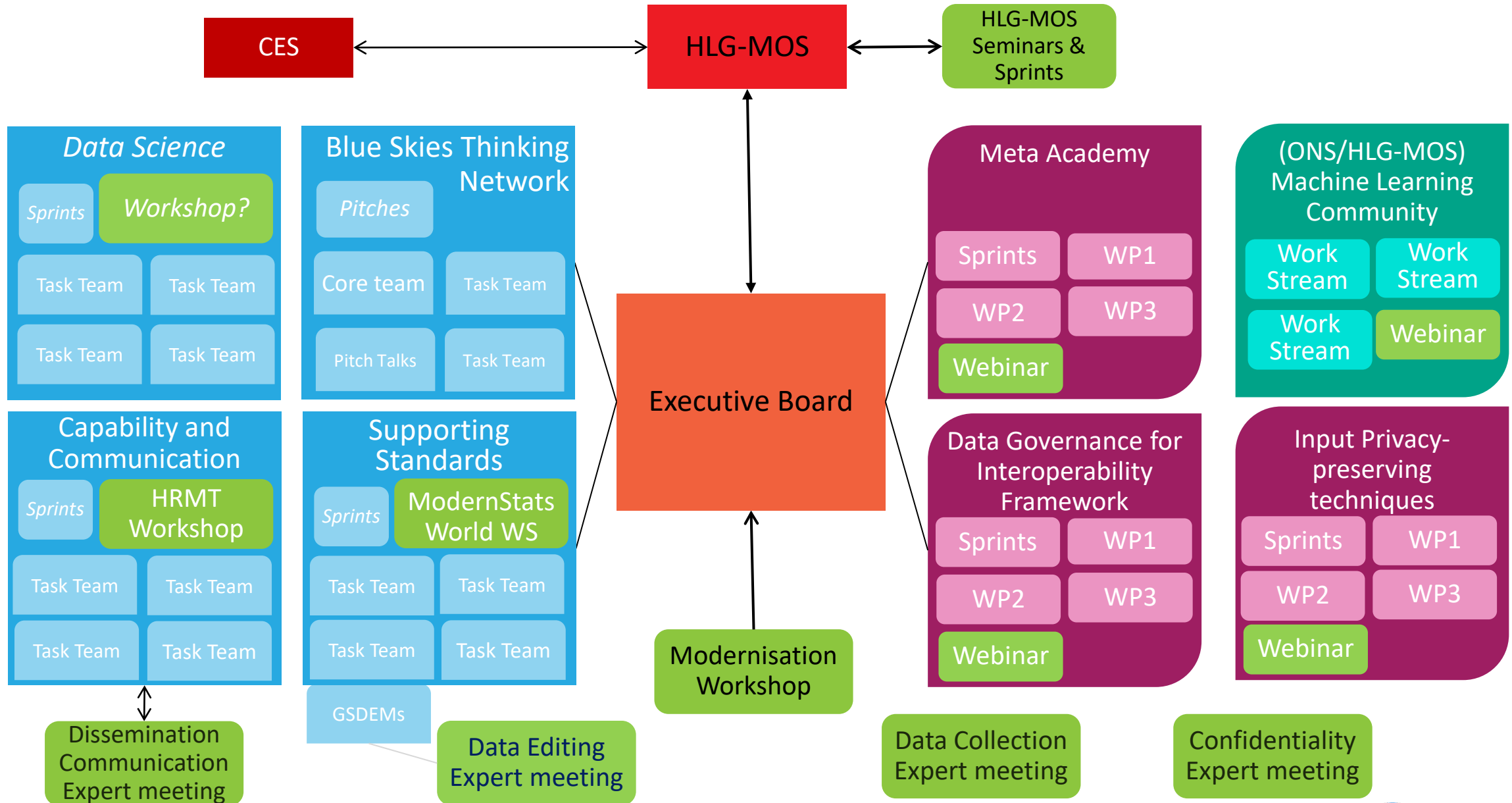
# HLG-MOS 2013-2018



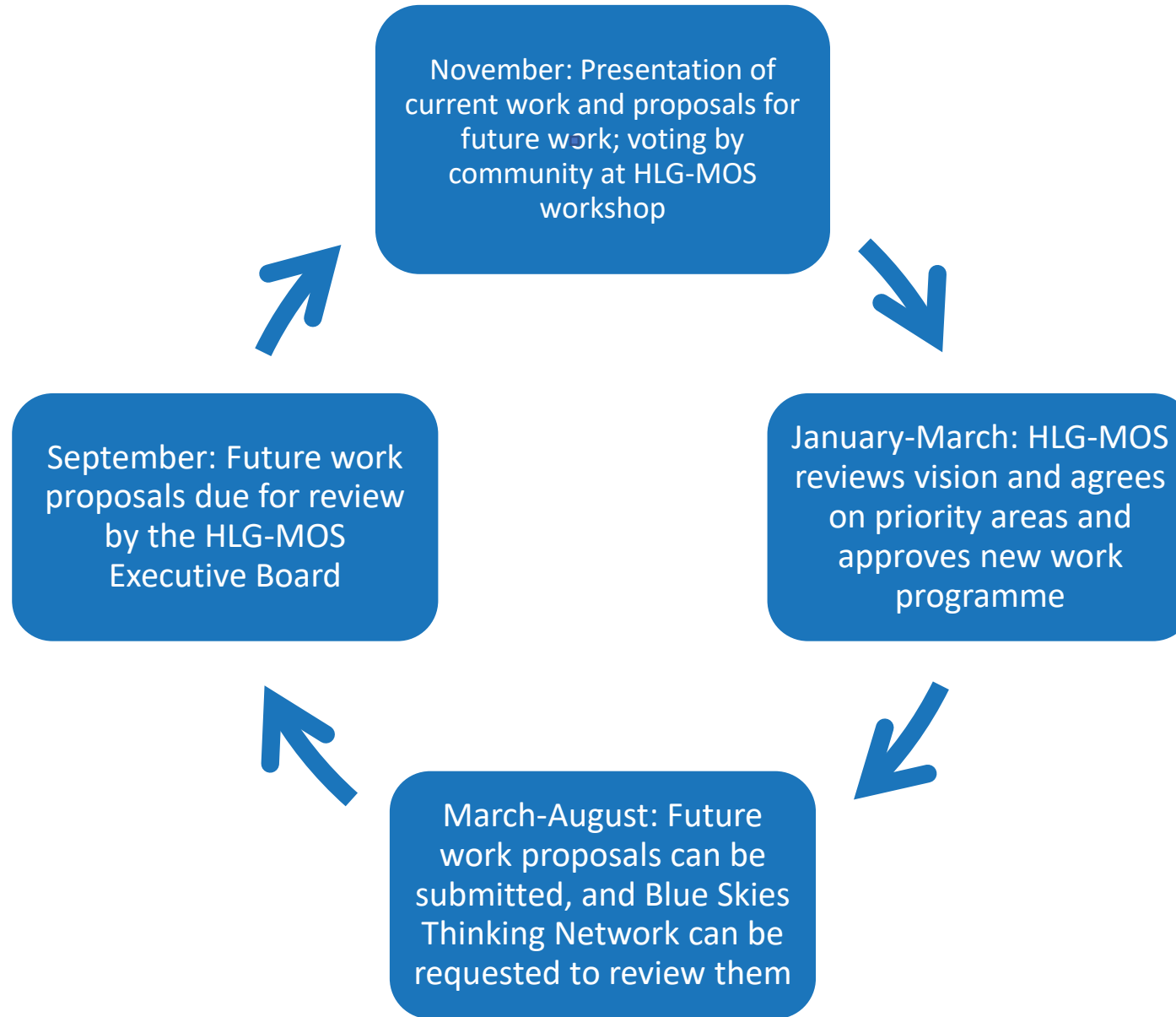
# ModernStats World 2019-2020



# ModernStats World 2022

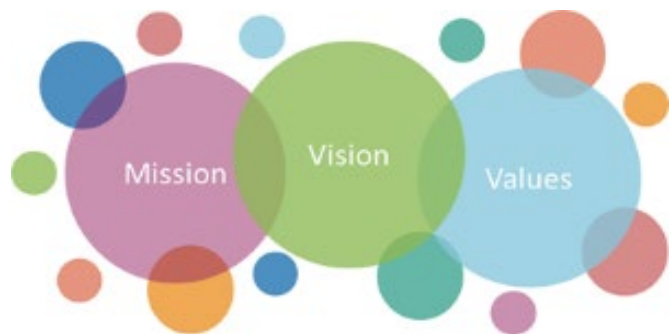


# HLG-MOS Annual Cycle



# Why are we here today and tomorrow?

Share and showcase our work  
Celebrate our accomplishments  
Get feedback on results



Identify and Prioritize future work  
Drive new developments  
Set our 2023 work programme



Involve the community  
Induce collaboration and participation  
Engage in an open discussion



# 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 3<sup>rd</sup> 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*
- **ModernStats World Workshop 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

- 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 GAMS0 revision
- GSBPM-SDMX-DDI
- Core Ontology for Official Statistics

CapCom

- 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

BSTN

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

# Get Involved! Join the Force!



Consult  
Contribute  
Collaborate



# Questions



# Annex: HLG-MOS foundational pillars

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



# High-Level Group for the Modernisation of Official Statistics HLG-MOS

## *A Collaboration of the Willing*



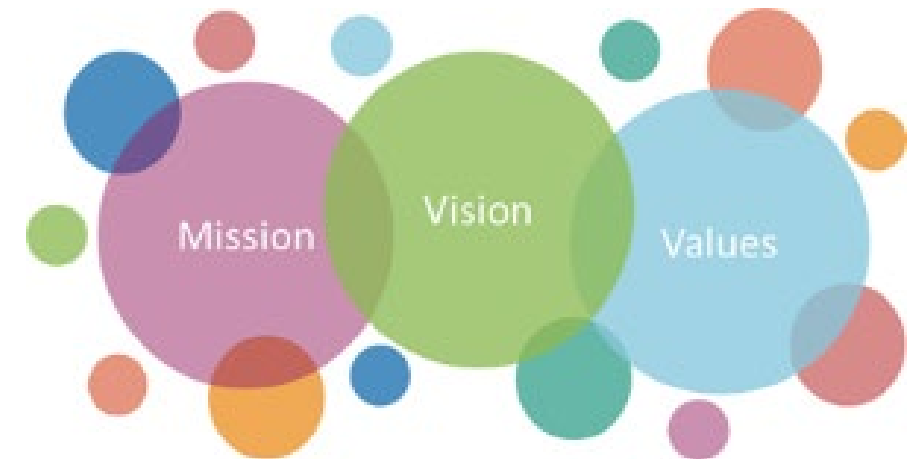
- Activities are voluntary and demand driven

- 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

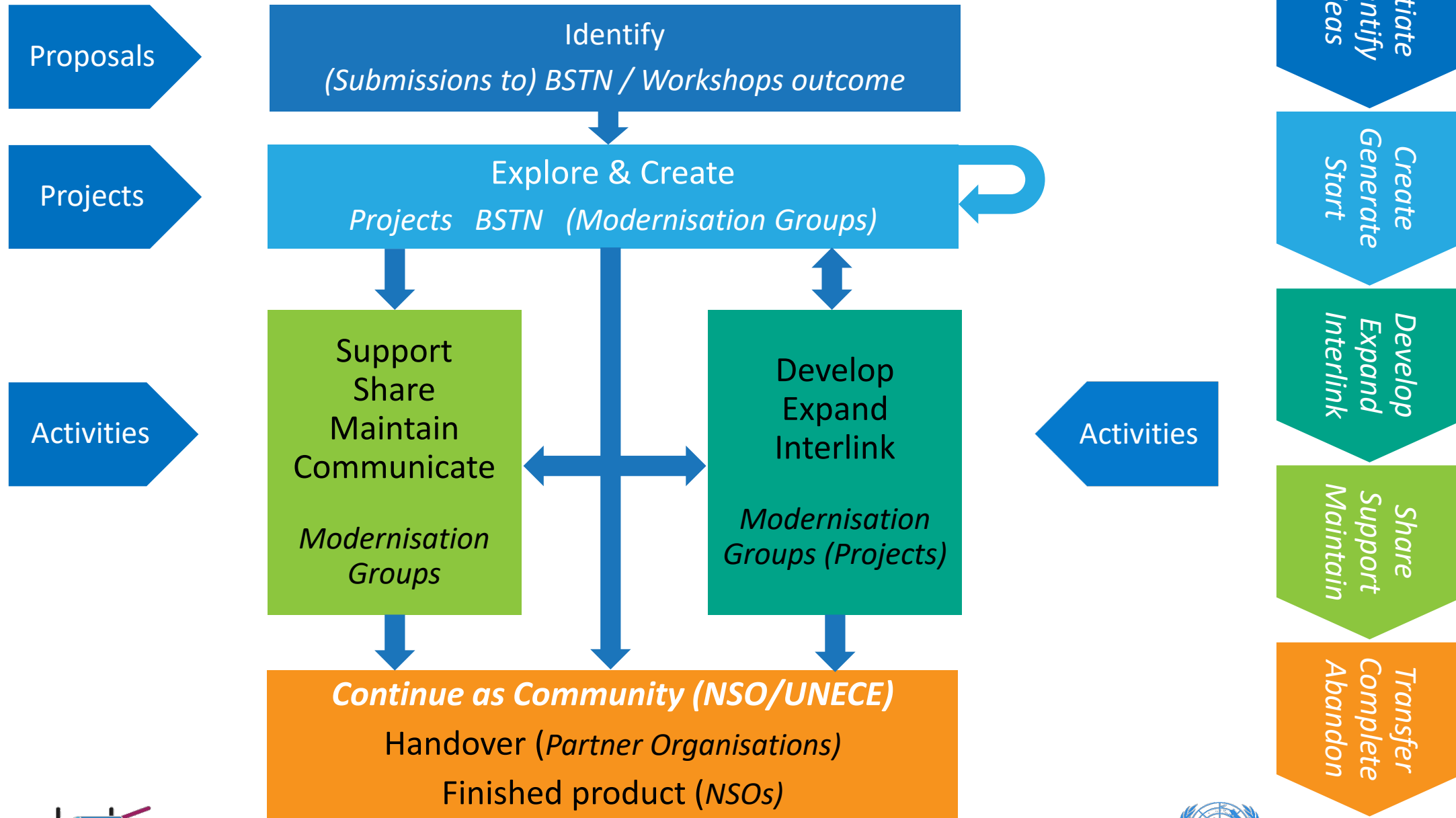
Values

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 Fundamentals and Pillars



# HLG-MOS Innovation Pipeline 2022

