**UNECE High-level Group for the  
Modernisation of Official Statistics**

**Business case for Statistical Methodology Architecture Project**

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| This business case was prepared by the Office of National Statistics (UK), StatsNZ, Statistics Norway and Statistics Sweden and is submitted to the HLG-MOS for their approval. |

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| **1 Purpose** | | | | |
| Statistical methods refer to how statistical activities are carried out. They are used in both statistical production, as well as statistical design and analysis and are key to describe how statistical products are conceived and produced.  Methodology architecture is needed to:  • Explain how statistics are produced to external users  • Provide common language within and across NSOs  • Interface between statistical methodologists and other roles  • Support statistical production and secondary data analysis  • Facilitate interoperability  • Support statistical corporate memory  • Plan statistical methodology development, support and training  Methodology Architecture contributes to a common strategy, vocabulary and vision for business capability across the organisation/community. | | | | |
| **2 Description of the activity** | | | | |
| The proposed activity is to create a categorisation of methods used within the GSBPM. It should include machine learning and data science methods if they are used for the production of official statistics. The work involved includes:  **Activity 1: Categorisation of methods**  Creation and agreement of the categorisation of methods for official statistics. This will form a tree structure to understand and place the different topic areas in methodology. There are several options for categorising methods:   * 'rational' mutually exclusive family tree of methods * a series of business problems the statistician want to solve * what the methods are used for (official production, statistical decision making, quality of statistics and methods)   **Activity 2: Methods Library**  Creation of wiki-based methods library based on the categorisation. The library would include short, simple descriptions of most common method topic areas  **Activity 3: Incorporate into standards**  The work of method architecture needs to be incorporated in standards, GSIM and LIM, to strengthen the implementation of a metadata-driven statistical production for process and analysis. This is an important step for building services that could be shared between different statistical organisations. | | | | |
| **3 Alternatives considered** | | | | |
| 1. A more in depth piece of work could be undertaken to create the categorisation and fully document all the methods in the categorisation. This would be a large amount of work and would add limited value to the community as most methods are already well documented. 2. Do nothing. Numerous statistical offices are already starting to undertake this work on their own. By working together, this could be done more efficiently. | | | | |
| **4 Expected Benefits** | | | | |
| ☒ | | | Reduced costs | |
| ☒ | | | Increased efficiency | |
| ☐ | | | Reduced risks | |
| ☐ | | | New capabilities to meet user needs | |
| Justification:  This work will allow statistical offices to:   * more effectively compare and contrast their methodologies * identify opportunity for collaboration and alignment of methods * facilitate sharing of CSPA compliant systems and services, and * accelerate the adoption of new methodologies across NSOs | | | | |
| **5 Type of Activity** | | | | |
| ☒ | | New activity | | |
| ☐ | | Extension of existing activity | | |
| ☐ | | Other *(specify below)* | | |
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| **6 Which key priorities in the HLG-MOS Strategic Framework does the proposed project relate to?** | | | | |
| ☐ | Take cost out of our organisations to reinvest in more value added areas | | | |
| ☒ | Explore new areas collectively and leverage each other’s' research investments in specific areas | | | |
| ☒ | Provide whole of government data ecosystems based on international standards, for better estimates in key policy areas | | | |
| ☐ | Renew our governance and operating processes | | | |
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| **7 How does the proposed activity relate to other activities under the HLG-MOS?** | | | | |
| The proposed activity has strong links to the Common Statistical Production Architecture, especially related to how the interface to input data and output data should be described, and how statistical methods, and algorithms should be packaged to ensure re-usability.  The activity also has links to the GSBPM and GSIM reviews. | | | | |
| **8 Proposed start and end dates** | | | | |
| **Start:**  **End:** | | | | March 2018  September 2018 |
| **9 Expected costs** | | | | |
| It is estimated that the work will need the involvement of a team of methodologists over a 7 month period. Support would be provided by experts from the CSPA community due to links with architecture. | | | | |