Approved

FOLLOW-UP TO THE CES 2017 SEMINAR ON THE NEXT GENERATION OF STATISTICIANS AND DATA SCIENTISTS

Note by Statistics Finland

*This note presents proposals on follow-up work arising from the conclusions of the seminar on the next generation of statisticians and data scientists. **The Bureau discussed the proposals and decided to approve the follow-up actions to the seminar.***

1.   This paper presents proposals on how to follow-up on the issues raised during the seminar on the next generation of statisticians and data scientists held at the 2017 plenary session of the Conference of European Statisticians (CES). The Conference asked the Secretariat and the CES Bureau to follow up on the issues raised.

2.   The Conference also encouraged countries and organizations to use the rich resource of papers and ideas produced by the seminar, and recognized the importance of the skills and capabilities needed to address the challenges that statistical offices face. The Conference endorsed a 2-pager reflecting the conclusions of the seminar.

I.   ACTION BY THE CONFERENCE

3.   The Conference discussed the following possible actions for the way forward:

(a) Identify strategies to create an innovative culture where experimental activities are encouraged and rewarded, while addressing behaviours that suppress innovation;
(b) Investigate how to build capacity in soft skills, for example communication, and how to build teams with a mixture of competencies;
(c) Exchange experiences where partnerships and collaboration with academia, other government organizations and the private sector have supplied the needed skills for statistical organizations;
(d) Explore possibilities of how statistical organizations can develop a reputation of being an attractive workplace for talented individuals.

II.   PROPOSALS FOR THE WAY FORWARD

4.   The proposals presented below are based on the main considerations presented in the 2-pager, including:

(a) In order to remain competitive and credible as the official data providers statistical organizations are required to significantly invest in modern statistical skills. The data revolution generates new user needs, and stiffer competition from the private sector;

(b) The skills that are impacted most by the emergence of new data sources are 1) statistical skills, 2) IT (management) and 3) other skills, including leadership, creativity and communication;

(c) These new skills will not be found on just one staff member. Statistical organizations should consider building and maintaining collaborative and multidisciplinary data science teams;

(d) Statistical organizations can benefit from close collaboration with universities, other government organizations and the private sector. There are important examples of collaboration with the higher education institutions that could be emulated elsewhere;

(e) Talented new graduates are interested in self-development, learning opportunities, fully utilizing their potential, and the societal impact they may have. Statistical organizations can stress these points when recruiting and attracting future personnel;

(f) Statistical organizations can benefit from the network of peers by sharing best practices. The UNECE High-Level Group for the Modernisation of Official Statistics (HLG-MOS) proposed a common competency framework of skill development that serves as a blueprint for all the statistical organizations.

5.   The above may give further ideas for the CES Bureau on priorities for follow-up work. The proposals presented below respond to each action proposed by the Conference:

A.   *Create an innovative culture in support of experimental activities*

- UNECE should promote platforms and networks, such as the Blue Skies Network, for international experimental activities within the work of the HLG-MOS;
- UNECE should support expert networks and promote regular seminars/work sessions where experimental activities (including failures and success stories) are presented;
- Hackathons should be organized on a regular basis. "Telling stories with SDG data", on 5-7 September 2017, and "the European Big Data Hackathon", on 13-15 March 2017 are good examples of promoting and sharing experimental work;
- Experimental work should be explicitly acknowledged and rewarded. This can be done by awarding the best paper presenting a statistical innovation, new product based on new (big) data or thesis discussing official statistics;
- UNECE could discuss and recognize leadership practices that support innovative culture and the ways directors' and managers' competence can be developed accordingly. The HLG-MOS Sprint Session on "Innovative Organizations: Strategies to stay relevant" and workshops on Human Resources issues can be considered as suitable forums.

B.   *Build capacity in soft skills, such as communication and team building*

(a) The in-depth review of emerging issues in statistical communication will be a good starting point for further strategic work. The challenges in this area may require building soft skills in team work and communication;

(b) The 2018 CES seminar on "Getting our message across: strategic reflections on modernizing statistical communication" will build on the findings of the in-depth review;

(c) The review and the 2018 CES seminar may lead to further work internationally as communication is a strategic challenge to all statistical offices and should be addressed together. Part of such work could focus on what are "the soft skills" needed in statistical teams for better communication, and how to acquire and develop these skills;

(d) HLG-MOS carried out a survey (2014) with an outcome of a comprehensive competency framework. The Capabilities and Communication modernisation group is currently developing the competency framework;

(e) Good practices on using spokespersons, blogs and video blogs as well as social media communication channels should be exchanged in relevant UNECE forums.

C. *Partnerships and collaboration to acquire new skills*

(a) The Conference called for an exchange of experiences on new skills acquired through partnerships. This would be a great topic for a seminar or a session dedicated to partnerships for statistical development;

(b) The UNECE Workshops on Human Resources Management and Training in Statistical Offices have discussed related topics, such as strategic personnel planning, and recruitment and training of new staff. This should continue to be encouraged;

(c) Experts should be encouraged to work abroad in other statistical organizations. Information on such opportunities and experiences from past secondments should be shared between organizations;

(d) Students should be appointed as thesis trainees at statistical organizations. This traineeship would include working on research problems provided by statistical organizations;

(e) Hackathons should be used as a way to engage in collaboration with external and private partners. Inspiration can be drawn from previous events ("Telling stories with SDG data" and "the European Big Data Hackathon").

D. *Statistical offices as an attractive workplace for talented individuals*

(a) It would be useful to prepare a desk study on recent research findings related to attractive workplaces, their attributes and talent management practices. Then consider how these could apply to statistical offices; what are the current strengths and weaknesses of statistical offices?

(b) The human resource experts from statistical offices that take part in the UNECE work on human resources management and training would be well placed to consider the development of statistical offices as a modern and attractive workplace;

(c) Statistical organizations should develop a reputation of being an attractive workplace by communicating career stories, taking part in recruitment events and improving visibility by actively participating in public debate. In particular, the purpose of statistics and facts should be underlined in the post-truth era.

III.   SUMMARY OF ACTIONS

6.   This paper proposes that the UNECE should support expert networks and promote regular seminars/work sessions where experimental activities (including failures and success stories) are presented.

7.   The HLG-MOS is asked to consider the following recommendations:

(a) Promote platforms and networks, such as the Blue Skies Network, for international experimental activities
(b) Continue to provide forums to discuss and recognize leadership practices that support innovative culture
(c) Organize Hackathons as appropriate and consider using them to engage in collaboration with external and private partners.
(d) Continue to progress work related to strategic personnel planning, promotion of statistical offices as an attractive workplace, recruitment, and training of staff through the Capabilities and Communication modernisation group and the Workshop on Human Resources Management and Training should continue.

8.   It is proposed that statistical offices undertake the following actions:

(a) Explicitly acknowledge and reward experimental work
(b) Encourage staff to work abroad in other statistical organizations, and share information on such opportunities (including lessons learned)
(c) Appoint students as thesis trainees at statistical organizations

9.   The recommendations related to communications and partnerships depend on the outcomes of discussions related to the in-depth review of communications and future work on strategic partnerships.

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