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LETTER REPORT: Analysis of Multi-Agency Situational Awareness System (MASAS) Transition Assessment

INTRODUCTION

1. Situational awareness (SA) is essential to the planning and execution of emergency response efforts. Several different SA tools are used across Canada and the ability to connect these different tools for shared SA is a critical capability to improve interoperability and ensure efficient and effective response. MASAS enables a system-of-systems collection of interoperable systems¹ that can exchange real-time, location-based information relevant to emergency managers, using common technologies that are based on national geospatial and public safety standards. MASAS enables pan-Canadian and Canadian/US interoperability^{2 3} and is recognized as a leading operational pilot project enabling national public safety community interoperability.

2. Work is underway to transition the MASAS capability from a DRDC/CSS funded operational pilot project to an ongoing independent self-sustainable program. MASAS as a 'national' capability is specifically mentioned by name in the 2013 Communications Interoperability Strategy and Action Plan for Canada⁴, approved by Senior Officials Responsible for Emergency Management (SOREM). This entails developing a governance, business and operations model for a self-sustainable capability that enhances national situational awareness in support of the wider emergency management community. To inform this process, a transition assessment was administered to the MASAS user community. This Letter Report briefly presents the methodology, key results and recommendations to further advance MASAS transition.

METHODOLOGY

3. During the first quarter of 2013, CSS and Public Safety Canada had meetings with representatives of the Federal Provincial/Territorial Interoperability Working Group (FPT IWG) to discuss the transition of MASAS to a sustainable business model. During these sessions, several topics were discussed including products, services, community membership, governance, operations and a cost recovery model. Information from these sessions was used to determine the focus of the assessment questions.

4. A web-based assessment was developed to gather information from personnel that have tactical, operational and strategic roles in the national emergency management community. The assessment was provided to registered MASAS users, the MASAS developer community, the Federal Operations Centre Working Group and the Federal Provincial

¹ (Pagotto et. al) Canada's Multi-Agency Situational Awareness System http://cradpdf.drdc-rddc.gc.ca/PDFS/unc124/p537608_A1b.pdf

² CAUSE 1 – West Coast Report http://cradpdf.drdc-rddc.gc.ca/PDFS/unc118/p536604_A1b.pdf

³ CAUSE 2 - CA/US Joint Report http://cradpdf.drdc-rddc.gc.ca/PDFS/unc128/p537613_A1b.pdf

⁴ Communications Action Plan <http://www.publicsafety.gc.ca/cnt/rsrscs/pblctns/ntrprblt-ctn-pln/index-eng.aspx>

Territorial Interoperability Working Group. The overall response rate was (19.7%) (i.e. 144 out of 730) participants, where at least one question was answered. This response rate is consistent with web-based surveys⁵.

5. The assessment focused on the current and future use of MASAS with a specific focus on data relevant to the value of the system, patterns of usage, membership types and requirements and options available for sustaining the system. The results of the assessment were used to generate a final report with quantitative (i.e., descriptive statistics) and qualitative data analyses with recommendations⁶.

RESULTS

6. From the inception of the MASAS pilot in November 2011, a level of trust has been established with the user community with 87.29% of respondents (N-118) indicating they were typically satisfied with the accuracy of the information. Overall, 88.3% of respondents (N-117) provided a positive response regarding the usefulness of the MASAS. However, within the levels of government, municipal level respondents indicated that MASAS had a higher level of usefulness as opposed to Federal and Provincial/Territorial agencies. Currently, 43.22% of respondents (N-51) only use MASAS when an emergency incident is on-going (not unexpected as the main objective of MASAS is to support information sharing that is only relevant to emergency situations). The assessment also indicated there are opportunities to improve the MASAS capability by improving the 'ease of use' and the quality of the online training information.

7. As the current MASAS membership policy for system access is primarily focused on Canadian public sector emergency management and response agencies, the web assessment evaluated whether Critical Infrastructure (CI) owners and U.S. Border States public sector emergency management agencies should become MASAS members. There is strong support to include both groups in MASAS membership. For example, 96.43% of respondents (N-112) agreed that U.S. Border States and 92.86% of respondents (N-112) agreed that CI owners should be permitted to become members.

8. In 2012, Public Safety Canada commissioned a report from KPMG that provided options for a business model and governance structure for MASAS⁷. The analysis was carried out with the base assumption that a governance model could be established independently of the form of the MASAS business organization. A key observation was that a governance model which placed more emphasis on user community representation, rather than corporate monitoring, was likely more applicable to the MASAS business case. The KPMG study confirmed that a Public-based, Not-for-Profit organization is preferred. From the recent assessment, 68.14% of respondents (N-113) agreed that the MASAS capability could be managed effectively by a Not-for-Profit organization.

9. In order to assess the sustainability of MASAS, a key unknown is to determine funding and cost recovery options. The KPMG study also examined viewpoints on the viability of a cost recovery model based on user fees. The assessment results indicated there is not strong support for the payment of user fees as only 35.14% of respondents (N-111) supported the position that member organizations should pay fees for the MASAS capability. The relative support across the three levels of government for the user-fee based model varied, with most of the responses in favor of the payment of user fees coming from the municipal level.

CONCLUSIONS

10. The MASAS transition assessment has provided valuable information to guide MASAS towards an independent self-sustainable program. It is concluded that the MASAS capability is gaining acceptance amongst all three levels of government with the municipal level of government agencies showing the strongest interest. The assessment also highlighted the view that greater benefits will be achieved when more members of the EM community share information via the MASAS capability. This is particularly important for EM organizations in the same geographic region. The

⁵ Deutshens, E., Ruyter, K. Wetzels, M. & Oosterveld, P. (2004). Response rate and response quality of internet-based surveys: an experimental study. *Marketing Letters* 15(1), 21-36, <http://arno.unimaas.nl/show.cgi?fid=2724>

⁶ MASAS Transition Assessment DRDC CSS CR 2013-038, http://cradpdf.drdc-rddc.gc.ca/PDFS/unc131/p538278_A1b.pdf

⁷ Business Model and Governance Structure Options Analysis for the Multi-Agency Situational Awareness System. Report to Public Safety Canada. Draft for Discussion by KPMG. 27 March 2012.

MASAS capability will only fully enhance local situational awareness if the majority of the organizations in that region are participating. The inclusion of U.S. Border States and the Critical Infrastructure community would provide additional partners to contribute to national situational awareness. The transition of MASAS to a Not-for-Profit organization is seen as a viable and preferred option by the EM community. However, while MASAS was rated as a valuable capability, the assessment highlights that the majority of the community does not believe participants should pay for the capability directly. Reasons for this disfavor of a user-pay model was not further studied and may be a result of a number of factors, not the least of which relating to the perceptions of what types of information sharing services should be funded at the federal level. Whatever the rationale behind reluctance to support a user-pay model, the longer term sustainability of MASAS will require further cost recovery options than only user fees.

RECOMMENDATIONS.

11. It is recommended that further exploratory work be conducted on other innovative business model and cost recovery mechanisms for the MASAS capability. Additional work to enhance the training content for MASAS and the means by which its value is communicated to various types of stakeholders should also be invested in. Since much of the MASAS adoption to date has been through user agencies becoming aware and interested with the capability, it is recommended that a more structured approach to advocating/guiding on usage of MASAS now be applied nationally through the appropriate EM governing bodies which can also establish and communicate specific advice or direction on usage policy for the MASAS capability within their regions of jurisdiction (F/PT/M). Furthermore, it is recommended that the FPT IWG provide guidance on the approach for allowing U.S. Border States and the Critical Infrastructure community to be eligible for user accounts to MASAS.

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