Date: October 19, 2015

MEMORANDUM

FROM: Cameron Wilson, National Contact Point Canada; Lorna Schmid, Lead, Arctic SDI Secretariat and National Contact Point U.S.

SUBJECT: Arctic SDI Standards and Communication Pilot

OBJECTIVE: The goal of this Pilot is to demonstrate the diversity, richness and value of Spatial Data Infrastructure (SDI) solutions applied to policy questions. This will included use cases derived from Arctic Council working groups with Canadian and American stakeholders' requirements incorporated. This will guide the exploration of OGC and other standardized services, architectures, industry solutions and a video to communicate results to Arctic Council and other stakeholders. The Pilot is financed by Canada and USA with a North American focus, yet is scalable to the circumpolar community.

LINKAGES: The Pilot references the recently approved Arctic SDI 2020 Strategic and Implementation plans. It directly contributes to objectives 1 and 4 and influences all other objectives. Within North America, it supports the expansion of the Canadian Geospatial Data Infrastructure and National Spatial Data Infrastructure North of 60 into the Canadian Territories and Alaska. The Strategy Working Group, Technical Working Group will be informed on a regular basis.

BACKGROUND: To be successful, the Arctic SDI has to take particular requirements into account; including responding to policy needs, influence Arctic Council information management methods, and working in zero/low bandwidth regions, and within the realities of frontier economies. These aspects will be addressed by this proposed "Arctic Spatial Data Infrastructure Standards and Communication Pilot" (short: Arctic SDI Pilot).

The project will use scenario(s) relevant to Arctic Council Working Group priorities within the context of the Iqaluit Declaration 2015[1]. The project will be executed in two phases, the first being organized as an OGC concept development study, the second phase as an OGC Pilot activity.

Canada and the U.S. are funding the Pilot (Appendix A) and it is managed by the OGC. The OGC has existing programs to guide the process to build the Arctic SDI Pilot. The OGC's Interoperability Program[2] includes methods to conceptualize and further SDI's.

[1] Iqaluit Declaration 2015
[2] OGC Interoperability Pilot Policies and Procedures

PROJECT PHASES: Pilot activities will occur in two phases.

Phase 1:

Phase 1 initiates the project to ascertain current state, clients' needs, and technical activities in order to effectively scope the project and Arctic SDI for furtherance at Board meetings:

- an inventory of available geospatial Web services (standards) across the Arctic which can be used to reflect a broad range of thematic data layers;
- the definition of a common Arctic SDI architecture and its core components;
- the development of use case scenarios, to be implemented in Phase 2, that will use identified data and services to tell the story while testing the Arctic SDI architecture;
- a Request for Information (RFI) developed by OGC and sent out to OGC membership to solicit interest in supporting the development of the inventory, the architecture, and the definition of the use cases to be implemented.
- the development of a detailed plan and scope for Phase 2.

Phase 2:

The goal of Phase 2 is to articulate the value of interoperability and to demonstrate the usefulness of standards. This will be done by implementing the recommended Arctic SDI architecture along with a video that will tell the story of the scenario(s) and showcases incorporation of the services into Arctic SDI Geoportal and other applications.

The OGC will develop a Request for Quotation / Call for Participation (RFQ/CFP) to solicit proposals from industry in response to the set of requirements for the Artic SDI Pilot as defined in Phase 1.

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Appendix A: Arctic SDI Pilot - Implementation Plan and Budget Summary

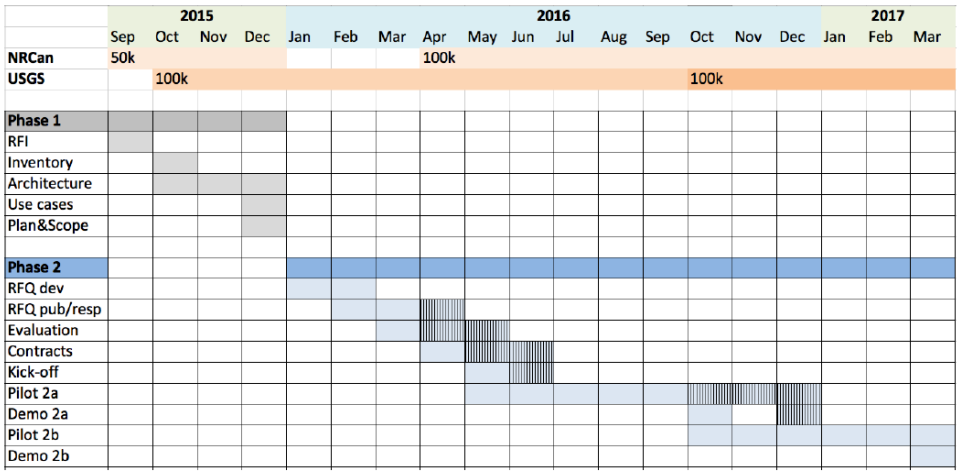

Figure 1: Timing of project activities, shaded fields indicate shifted activities due to available funding

Table 11: Budget Summary Table (First figure: USD, italic and in brackets: CAD)

Budget Summary								
Project Expense and Description	**OGC** (proponent)		**USGS** (collaborating organization)			**Geo-Connections**		Total Project Costs
	In-kind	Cash	In-kind	Cash	Hours	Cash	Hours	
Labour *(including benefits – max 20%)*	$0	$0	$50.000	$200.000	24	$114.513	40	$364.513
			(CAD 65.472)	*(CAD 261.886)*		*(CAD 150.000)*		*(CAD 477.304)*
Software	$5.000	$0	$5.000	$0		$0	0	$10.000
	(CAD 6.547)	*(CAD)*	*(CAD 6.547)*	*(CAD)*		*(CAD)*		*(CAD 13.094)*
Training								
Materials, Supplies, Components								
Travel and Living	$0	$0	$5.000	$0	0	$0	0	$5.000
	(CAD)	*(CAD)*	*(CAD 6.547)*	*(CAD)*	*(CAD)*	*(CAD)*	*(CAD)*	*(CAD 6.547)*
Subcontracts								
Other								
Sums	*$5.000*	*$0*	*$60.000*	*$200.000*	*24*	*$114.513*	*40*	*$379.513*
TOTAL COSTS	$5.000		$260.000			$114.513		$379.513
Percentage	1,3%		68,5%			30,2%		100,0%