Making money flow sideways: cross-agency geospatial investment coordination

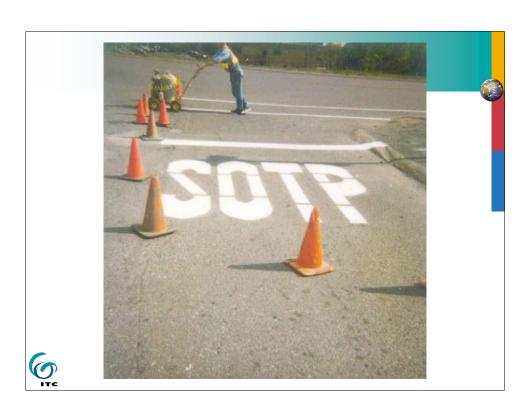
GDSI-9 Santiago, Chile 7 November 2006

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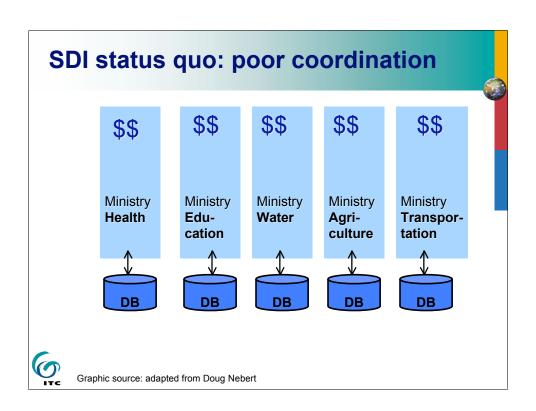
INTERNATIONAL INSTITUTE FOR GEO-INFORMATION SCIENCE AND EARTH OBSERVATION

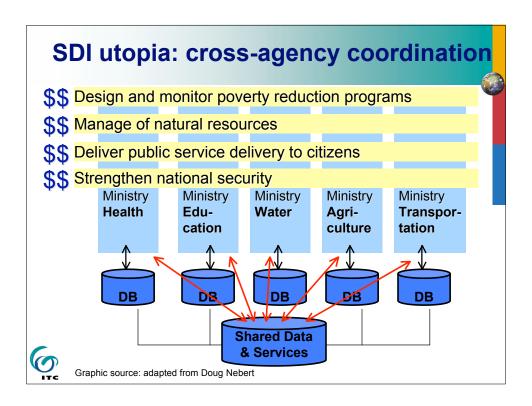


Narrative

- My entry point.... (and biases)
 - SDI, a coordination dilemma
 - scope: public sector / central government
- Argument: Budgeting process is a tool for coordination
 - all agencies (staffing/activities) linked to the budget
 - central budget agency, a sort of regulator (network administrator)
- Evidence from Canada and the US
 - incentives, coercion, investment portfolio, performance measurement...
- Research challenges







Departmentalism (1)

- Disincentives for cross-agency coordination
 - government budgets the result of a powerful and often contested decision-making process
 - programs face stiff competition for limited funds
 - managers must invest time to negotiate with other units about proposals (time they don't have)





Departmentalism (2)

- 6
- Government, by design, is constructed around boundaries.
 - Boundaries between programs fuel political debate.
 - Boundaries between administrative agencies shape clarity of purpose.
 - Boundaries within agencies, through hierarchy and authority, promote efficiency.
- These boundaries are essential for defining administrative responsibility and, ultimately, democratic accountability (Kettl, 2001)



How to get to horizontal coordination (in a vertical environment)?





Argument: central budget agency is key





Influence exerted through:

planning and budgeting, incentive arrangements, allocation of responsibility and accountability, management information systems, and performance evaluation practices



Argument: principle – agent relationship Central budget agency Performing Informing Enforcing Figure source: 2004 World Development Report

Coordination: incentives

Pooled resource (or fund)

Encouraging partnership with 'carrots'





Coordination: coercion

Budget control

Enforcing desired behavior with 'sticks'





Photo source: The Economist

US example



- "A complete and up-to-date strategic plan to coordinate geospatial investments is missing." GAO (2004)
- "We need to get to the issue of accountability and managing information strategically." (OMB Administrator for E-Government and IT)



US example: OMB learning curve

- OMB is getting smarter at this.... "like peeling layers off an onion"
 - annual IT budget review process (Exhibit 300)
 - Dol geospatial blueprint
 - Geospatial Line of Business (LoB)

"I don't think things are going to change unless someone is forcing change."



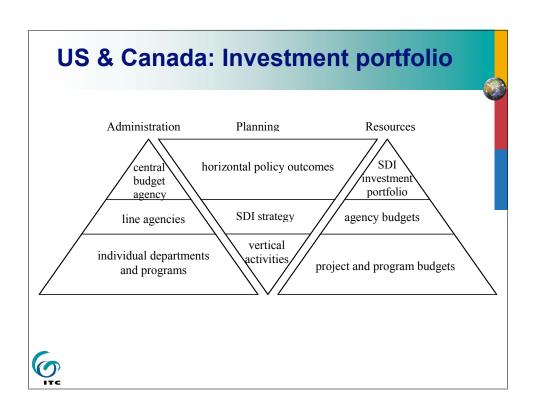


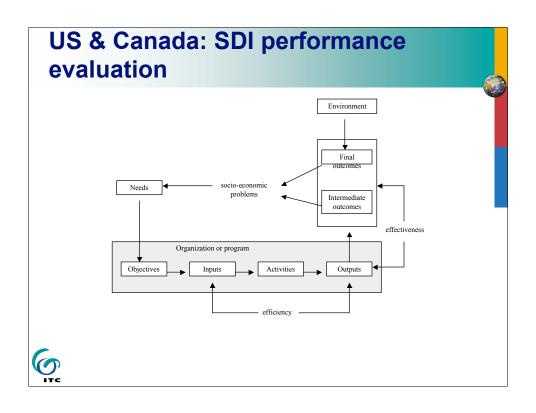
		Geospatial	One Stop I	nteragenc	y Funding	Estimates	5			
Agency	FY02 Estimated In-kind FTEs	FY03 Estimated In-kind FTEs	FY04 Estimated In-kind FTEs	FY02 Estimated Cash	FY03 Estimated Cash	FY04 Estimated Cash	FY02 Estimated Total \$	FY03 Estimated Total \$	FY04 Estimated Total \$	
NOAA	3.25	6.95	6.95	\$200	\$200	\$200	\$525	\$895	\$895	
Census	3.45	6.7	5.7			\$100	\$345	\$670	\$670	
DOT	5	4	4	\$690	\$200	\$200	\$1,190	\$600	\$600	
USACE	3.2	5.5	5.5		\$100	\$100	\$320	\$650	\$650	
NIMA	1	3.45	3.45	\$475	\$325	\$325	\$575	\$670	\$670	
FEMA	3.25	5.45	5.45	\$100	\$100	\$100	\$425	\$645	\$645	
EPA	1.85	5.1	5.1	\$320	\$160	geodata.go	1996200	for federal, ocal geographic data	8 () P	0
USDA	2.55	5.35	5.35	\$90	\$135	Make a Map	Geodata o	v is part of the Geospatia	One-Step E-Gov initiative lation. For help use the Quis	providing k Start Guid
NASA	2.45	5.2	5.2		\$200	The National Map		spatial data that meets y "Search all data in this sit coess to featured geospa		
BLM	3.45	6.7	5.7				Click o	n one of the Categories on a sign to see sub-categories	r Sub-Categories below.	
USGS	6.85	11.2	10.2			Search for Data Search all the data in this s	1	Ocean Disaster		
FGDC	2.5	2.5	2.5	\$1,500	\$245	About This Site How to find the maps & dat and how to publish your da		Categories		
Total	38.8	68.1	65.1	\$3.375	\$1,665	GOS Partnerships	→ + Ac	ministrative and Politi priculture and Farming mosphere and Climatio		

Canada example

- Inter-Agency Committee on Geomatics (IACG) Steering Committee to provide advice on Treasury Board budget submissions with a geomatics component.
- Geoconnections Value Management Office: mapping spending to outcomes by recoding budget items (improving accounting to report both vertically and horizontally)
- Geomatics Community Coordinators: horizontal management of data sets through GCC).... but with GCC vertical accountability.
- Geoconnections, a sunset program: discrete activities with focus on accountability for delivering what is proposed, with potential for closing out of program if performance is poor.











SDI 'fiscal archeology' (example Egypt)

Ministry / Agency	Project	Project Amount	Funding	Implementation Period
Egyptian Environmental Affairs Agency (EEAA)	Egyptian Environmental Information System	CIDA Contribution: \$12,783,000 EEAA Contribution: \$1,800,000 CDN in Egyptian L.E.	Government of Egypt and Canadian International Development Agency (CIDA)	1997 to 2004
General Organization for Physical Planning (GOPP), part of the Ministry of Housing, Utilities and Urban Communities (MHUUC)	Support to GOPP in Planning and Geographic Information Systems		SIDA, Government of Sweden	Began in January 2005
General Organization for Physical Planning (GOPP)	Development of Regional Physical Planning Centers by the Establishment of a Network for a Geographical Information System	US \$ 1,165,019	UNDP	1999-2004
Egyptian Survey Authority (ESA)	Training Programme for the Development of Managers and Supervisors for the National Cadastre	€ 1.256.053	Royal Netherlands Embassy	2001-2004
Egyptian Survey Authority (ESA)	Egyptian Cadastral Information Project (ECIM)	€7 million	Finnish government	2002 -
Ministry of Health and Population, National Population Council	Demographic and Health Survey		USAID	

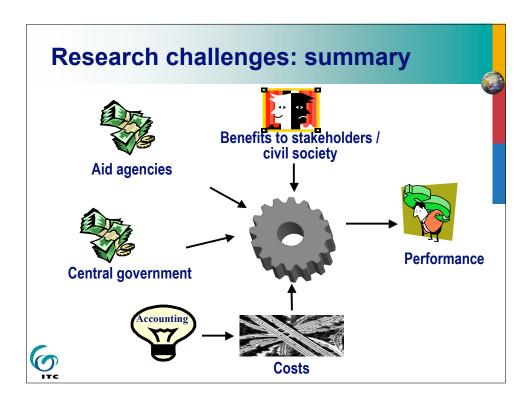
Research challenges: SDI 'fiscal archeology' obstacles

- Most geospatial investment tucked into program budgets
- Projects with geospatial component are not 'flagged' as geospatial.
- Lack of common definitions for the terms IT and GIT
 - broad understanding for each, but neither have specific descriptions and classifications for accounting/expenditure tracking purposes.
- The boundaries of geospatial investment are difficult to define.
 - e.g., water quality monitoring, georemediation, etc.
- Agencies treat geospatial investments differently in their accounting.
 - capital versus recurring budgets
- Lack of clarity of responsibility for tracking
 - IS managers, GIS manager, or accounting departments









To end at the beginning...

- Title from González (2003) administration of interdisciplinary programs at the University of California-Davis (UC-Davis).
- Interdisciplinary programs cut across college lines within the university, and thus budget lines, challenging the university's old 'vertical' funding model.
- González pointed out, "Money naturally runs downhill, and it is hard to make it flow sideways."
 - predicament of university administrators similar to SDI administrators
- UC-Davis experimented with different approaches to overcome this funding law of gravity.
 - In both approaches, a central office with budgetary discretion played a key role in ensuring 'horizontal' coordination.



Final thought: social vs formal control

- Not an "either / or" debate
- Such juxtaposition is unhelpful
- Rather, a balance or blend between formal control in certain high risk areas and social control (autonomy) in other areas
 - High risk areas are those where 'voluntary coordination' is problematic
- Control should be viewed as a continuum ranging from traditional "command and control" to codes of conduct
 - A spectrum of instruments (tools of governance)



Thank you

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