

NICS 11-17-04 systems architecture working group – PM Breakouts

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Private investments' incentive structures vs. public systems'

- We should really think about user interface, usability of data
- NICS isn't necessarily about user's uptake because we are building infrastructure—analogy to the web NSF built the web, Google built a great search tool—tools, applications versus infrastructure; interstate highway system- it had nothing to do with truck drivers. 'we had a generalized infrastructure' that could be broadly utilized
- Stove pipes compete with each other, and compete for resources
- Let's be frank, all large infrastructure in the US has been DOD funded. So we should look at the models they are funding
- The solution is that we have to agree. The problem is as soon as we start talking about locals, they will compete. That's the way it will work—if we can all agree, on priorities. Otherwise we're gonna come to some conclusion, and then NICS will take that approach, USGS will take another...We have to build the patchwork quilt first, before we create the tide that would bring NICS to scale.
- Think about what people's incentives are to combine their data. The hubs are often the GIS guys—the only ones who have the incentive to combine data just to complete their work.

So we realize how we can disagree, What then can we agree on ?

- You build a system based on change, knowing that technologies will change, and people will invite new uses for old technologies
- What kind of environment do you need to base it on?
 - We should be sure to distinguish open source and open architecture
 - Open architecture is more important than open source -

Let's refocus. Before we get too far down the open arch/open source discussion. Whatever stove pipes out there that are being funded are well serving their funders or their community, so we necessarily shouldn't worry about them—they will continue to exist. Let's talk about interoperable web services.

- the general public, the gov's don't know how to touch data. We need interfaces to make data user friendly. Go to the United Way, tell them

to look at the national map—they won't know how to use what *is* useful data to solve their problems. We can't expect them to know that or expect our role to teach them.

- I think we have to be more specific that discussing web services. What web services, implemented how?
- We shouldn't have a conversation about technologies.
- We need real examples of where this has impact. We need to pin down 1. what is our goal, 2. then talk about the issues on the specific technical levels, 3. then talk about what all this means to local/local governments. They need to be put into a context. State that NICS is not the solution, but it is one solution
- Approach it in a way that we provide something that someone wants to buy in bulk, develop it in terms that thinks big, and reframes systems
- But let's remember we do have a lot of influence, and should think big because technology creates behavior, (and behavior influences technology) So we need to think bigger than what do people want, what would they buy. The way we organize and implement technology changes behavior
- There's a lot of people, places that don't care about data, we have know how to 'skin that cat'--that is how to approach them either to explain why data is important, or make it so user friendly, they get it, or see its usefulness
- Whatever we do it has to be infectious. A good system spreads easily after being placed in one dept in an organization, because it depends on other branches for it to work --- create the incentive structure
- No one will participate because of the technology, only b/c of the benefits
- Let's think about the example of getting data by mobile. A good way that users get plugged into data and its use, and its a way to build scale. Domino effects once they data is made useable: People who use yellow pages on their phone see its use, and then local biz realize they should get their data in system...
- Let's think specifically, In our individual roles or organizations what can we do? Otherwise we're all just attending a meeting.
- We should learn from the web's architecture and think about how ease of entry of the web has created much innovation and allowed for widespread use. That open architecture and software is what we should use. Configuring items to communities is not the approach.
- what is the value of this? What is ROI on this thing –we need to answer.
- Lack of replication of data, you could put a dollar value on that
- We need to think of the public policy of this issue. We built the first jointly governed xml network. It wasn't easy. For gov't to plan, they

need to connect project to public policy piece – building communication language to build democracy, etc. –think about how fed will understand us. (M. McCaffery)

- This discussion sounds like it implicitly places a lot of dependency on government funding. Is that a problem? It's not the best biz model
- One role is that this group could be a clearinghouse, identify best practices—as a start to get at what needs to be done, supported by fed. I'd love if you lobby for state intermediaries.
- Foundation community is kind of a gate keeper of the non-profit world, think about that connection, that approach, how to get at that market.

- To some extent, the foundation community is plugged in, they are funding this meeting.
- We need to get away from buzz words, and get at an abstract conversation, --the abstract framework is actually productive for us to expound, and something as this group we can pin down)
- (McCaffery) We have developed specific data sharing agreements, stated principles to frame the language. I'm willing to share these with the group, or write a draft document.
- The problem is that current model is that the return on your investment is to be a stove pipe—we need to deal with that. It would be great if there is an organization that opts to step back and states that it is good to normalize. We are going to confront this issue, because not many of these will step back to see the larger picture because of the current community pressures in the CDS mkt
- We can use the fact that these stove pipes, loose relevance, can't regain costs without combining, normalizing data, setting metadata standards. There is the possibility of identifying a few examples of these systems around NICS "principles", and show why the current model is reaching its efficiency/benefit limits. Identify that the paradigm shift is upon us, b/c of technological and application advancements

To sum up, what are some case examples to give back to the group?

- We should collect case examples of how individual or the biz will benefit from the infrastructure. That can be compelling.
- Identifying local examples, and bring them up into the report—those that implement this type of architecture we are speaking of
- We do need vignettes- Example of someone with 3 computers, with 3 logins. Highlight the reality of the problem of not sharing data.
- We need to document how data sharing reduces costs. Case of VA school bus routing – with numbers of saving gas, bus purchases, admin time...

- Cites non-standardization of MAPC name in Boston cities, “this problem, of entry of admin data, won’t change.”
- Reverse 911 is a real application, made possible by this proposed data-sharing NICS architecture
- Is this better called NIC data or NICS? I’m hearing about data standards. (No, NICS fits. This effort is about building a system, not making data standards. Although the system would like to give incentives to start standardizing data elements)