

National Living Labs Academic Meeting: March 18, 2015

Comments of Al DeSena, NSF

Slide 1

- I am sorry not to be able to be with you today since it is a wonderful opportunity to engage with you who have participated with gusto on the Living Labs initiative.
- It has been such a pleasure to have been the cognizant program officer for both awards to the Museum of Science and their colleagues around the country for the Living Labs project. Watching the progress, the growth and accomplishments unfold over the years has been extremely gratifying...and not only for me, but for NSF in general since the project has received considerable attention and acclaim at NSF.
- The intent today is to provide an overview of the NSF perspective on Living Labs as well as more general areas of potential interest to you. We are looking at the initiative through the lenses of EHR and SBE, both of which have considerable interest in the work.
- From the point of view of the Education Directorate, it's helpful to understand that the whole directorate is increasing its attention to research. There are four divisions: Graduate Education (DGE), Undergraduate Education (DUE), Human Resource Development (HRD), and Research on Learning in Formal and Informal Settings (DRL). Most of the research-based programs are in DRL, thus I'm focusing on DRL in particular.
- See the url links in the slides for the main DRL programs. Most of these attend to issues of integration of research and practice in different configurations. The EHR Core Research program (ECR) focuses more on foundational education and related research. You may find that these programs, while probably not where you typically look for funding, could be places to explore, either as a PI or perhaps a co-PI or collaborator.
- It's important to understand that for the Education Directorate, in many cases what is "broader impacts" in research proposals to the rest of NSF is actually "intellectual merit" in EHR. For example, if you applied to SBE, the work that you do in a museum setting might be one aspect of a broader impact. In Education, the research work is folded into the intellectual merit of a program development activity – which is how we think about Living Labs. So, Living Labs is really a great blend of your research with practice (museum program and exhibit development) and evaluation, where, as I see it, it's a win for the museum staff and general public AND a win for the faculty, post-docs, graduate and undergraduate students.
- Of course, EHR and SBE fund high quality, innovative work that advances disciplines and fields. In Education, where much of the work is "applied," there are methodological issues with how one sorts out real-life variables and in ways that can inform practice – and vice versa, I might add. The range of methodologies represented in proposals to DRL, for example, is quite huge, depending on the needs. You may be aware that over the past few years NSF and the Department of Education developed a document, Common Guidelines for Education Research and Development – an attempt to provide some reasonable structure to the range/variety of R&D activities that one may encounter. In the informal science education arena, the field also

created a Framework for Evaluating Informal Science Education Projects. And you may be aware that we funded the NRC to produce in 2009 the Learning Science in Informal Environments report. I should also mention that we are seeing many more proposals that draw on design-based research and design-based implementation research, where the inter-relationships of research and practice are more finely integrated.

- Since EHR and SBE have many common interests, we have also co-funded some awards over the years, the Living Labs project being one. Obviously we do this because we see how both domains can benefit from fruitful collaborations of scholars and practitioners.

#### Slide 2

- You may be interested to know that Living Labs represents, in our view, one example of a new model of relationships between academic researchers and museum staff. The Museum of Science is applying this model to other areas of their building – exhibits and programs. In addition, there are some notable examples around the country of collaborations of researchers and museums in disciplines beyond what you are doing, where the universities have established labs in the museum setting and, in some cases, have arranged for joint appointments. Two main examples that come to mind are the North Carolina Museum of Natural Sciences in Raleigh and its collaborators from NC State and other NC universities. Another is in Columbus, OH, between the Center of Science and Industry (COSI) and Ohio State. Thus, what you are doing is seen by us as the exploration of a potentially transformative model that connects institutions and, as I've mentioned, also combines intellectual merit and broader impacts in meaningful new ways.
- I'd like to say a bit more about the visibility of Living Labs at NSF. It is a project – and a network – that has been used in many ways as an exemplar of NSF-funded work of the highest caliber and with significant impact. It has become somewhat of an embarrassment actually, because leadership at EHR calls on it for so many occasions to represent the best of NSF, that sometimes I wonder, aren't we funding at least a few other projects of similar quality!!
- One more point – not only is Living Labs situated in a larger context of researcher-museum collaborations, but it is also situated within recent efforts to improve broader impacts and the public understanding of science. I'll just mention that you may want to look at [www.informalscience.org](http://www.informalscience.org) – the section on Outreach for Scientists, where these larger connections should be apparent to you.

#### Slide 5: Q&A

- We really would like to hear from you about your experiences at different levels represented by the three questions. There are so many opportunities still to be explored by you - and by NSF – and, as we know, also many challenges to which we need to apply our mutual creative attention.