A Framework for Using Crowdsourcing in Government

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What is Crowdsourcing?

- The crowd (public) are used as a source of labor, idea generation, and/or problem identification.
- Combination of Crowd and Outsourcing
- Harnesses technology as a primary interface
- Falls within the literature of co-production and collaboration, but also has a home in digital enterprise and technology.

The History / Genesis of Crowdsourcing

- Marine Pocket Clock Invented: 1714
- Toyota Holds a Logo Contest: 1936
- Sydney Opera House Architecture Contest: 1955
- American Idol Season 1: 2002
- Youtube launched: 2005
- Crowdsourcing term coined: 2006
What is Crowdsourcing?

- Jeff Howe and Mark Robinson (Wired Magazine editors) coined the term in 2005.
- Deren Brahbam (2007) scientific literature defined it as: “Online distributed problem solving and production model.”
How do public administrators begin to think about uses for crowdsourcing.

- “administrative thought must establish a working relationship with every major province in the realm of human learning” – Dwight Waldo
- Knowledge generation contains varying perspectives – indicating a diversity of thought (David Farmer)

Applying crowdsourcing to the idea of diversity of thought supercharges the complexity of process and feedback – especially in a politically charged environment.
The image we entered into with our research

Began with: [Image of a formal meeting]

Moved toward: [Image of a casual work environment]
Our research job involved thinking about crowdsourcing as a mode of inquiry

- To develop a framework that could inform discourse amongst public administrators when embarking upon a crowdsourcing initiative.
We first developed the theory:

Figure 1: Analytic Framework
### Figure 2: The Addition of a New Theoretical Framework to Brabham’s Typology

<table>
<thead>
<tr>
<th>Type</th>
<th>How it Works</th>
<th>Kinds of Problems</th>
<th>Our Analytical Framework</th>
<th>Administrative Expertise (AE) and Diversity of Thought (DT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge Discovery and Management</td>
<td>Organization tasks crowd with finding and collecting information into a common location and format</td>
<td>Ideal for information gathering, organization, and reporting problems, such as the creation of collective resources</td>
<td>Individual Opinion</td>
<td>Lower DT Lower AE</td>
</tr>
<tr>
<td>Broadcast Search</td>
<td>Organization tasks crowd with solving empirical problems</td>
<td>Ideal for ideation problems with empirically provable solutions, such as scientific problems</td>
<td>Wisdom of the Experts</td>
<td>Lower DT Higher AE</td>
</tr>
<tr>
<td>Peer-Vetted Creative Production</td>
<td>Organization tasks crowd with creating and selecting creative ideas</td>
<td>Ideal for ideation problems where solutions are matters of taste or market support, such as design or aesthetic problems</td>
<td>Wisdom of the Crowd</td>
<td>Higher DT Higher AE</td>
</tr>
<tr>
<td>Distributed Human Intelligence Tasking</td>
<td>Organization tasks crowd with analyzing large amounts of information</td>
<td>Ideal for large-scale data analysis where human intelligence is more efficient or effective than computer analysis</td>
<td>Collective Opinion</td>
<td>Higher DT Lower AE</td>
</tr>
</tbody>
</table>
Apply Framework to Cases

Collective Opinion:
The Bump App

Wisdom of the Crowd:
Box on Euphrates

Individual Opinion:
Nuisance Abatement via 311

Wisdom of the Experts:
NASA Internal Wiki
### Challenges and Changes for Crowdsourcing

<table>
<thead>
<tr>
<th>Challenges</th>
<th>Changes</th>
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<tbody>
<tr>
<td>• Does not replace “boots on the ground.” (Zingale, 2013)</td>
<td>• Lowered transaction costs</td>
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<tr>
<td>• Buyer Beware – the crowd can be wrong...dead wrong</td>
<td>• CRAC</td>
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<tr>
<td>• Benevolent dictator vs. adaptive lateral complexity</td>
<td>○ Collaboration, Co-production and Connectivity</td>
</tr>
<tr>
<td>• Information vs. Action</td>
<td>○ Real time feedback</td>
</tr>
<tr>
<td></td>
<td>○ Access and input</td>
</tr>
<tr>
<td></td>
<td>○ Creativity and Imaginative Chaos</td>
</tr>
</tbody>
</table>
Keys to success

- Accept that crowdsourcing has already changed the meaning of public involvement
- Frame the initiative appropriately – use framework as a guide.
- Become comfortable with adaptive planning and implementation
- Establish a mood of mutual respect
- Expect the crowd to be finicky and temperamental