

Panelist: Elizabeth Gerber (Northwestern University)

Title: **Collective Innovation**

In the face of looming challenges like childhood obesity, environmental collapse, and soaring health care costs, we need dramatic and sustained innovation. The driving question behind my research is how new technology can support an innovation process to tackle these societal challenges. In particular, I examine what I define as *collective innovation*, an innovation process that harnesses the diverse and untapped human, social, and economic capital from distributed networks to discover, evaluate, and implement new ideas. Open, ubiquitous social technical infrastructure supports *collective innovation* affording greater speed and deeper and broader participation than was imaginable even a decade ago. While *collective innovation* is a fast-evolving and scalable process that has the potential to influence the global economy by influencing how, why, and which ideas are introduced into the world, this process is poorly understood.

The first premise of *collective innovation* is that direct interaction between stakeholders can radically enhance rates of innovation. If stakeholders engage in authentic feedback exchange throughout an iterative design process, the idea is more likely to meet the needs of and be adopted by stakeholders. While online feedback exchange can be authentic, low cost, and accessible, designers struggle to manage the information overload and variable quality. A framework for online feedback exchange must consider the socio-psychological factors of online feedback exchange between designers and stakeholders from initial help-seeking stages to sense-making to action.

The second premise is that even across weakly connected, heterogeneous networks, changes in the design of our infrastructure can bring forth effort and resources that would otherwise lie fallow. Online requests for resources from a distributed audience and secure financial transaction services - provides a new way for individuals and teams to solicit financial support from a distributed audience across geographic boundaries. Social media afford the exchange of social capital from an on-demand audience. And crowdsourcing affords exchange of human capital from a global talent pool.

The third premise: Actively engaging a greater number and variety of people to participate in the innovation process expands the breadth of problems addressed and increases the quality of the solutions. While collective innovation offers greater distribution of roles, flexibility, and sense of agency, we need to address issues of skill variety, ownership and responsibility, fragmentation, poor communication, missing resources, planning failures, and burnout. Many underestimate the skills, necessary preparation and complexity of participation in collective innovation. We need targeted support among the novice innovators who make up the vast majority of participants. [Design for America](#), a national network of design innovators working to address social challenges and [Digital Loft](#), an open, scalable, crowd based support system are two recent developments to help address this unmet need.