

Integrated Artificial Intelligence Tools for Equitable Disaster Response Planning

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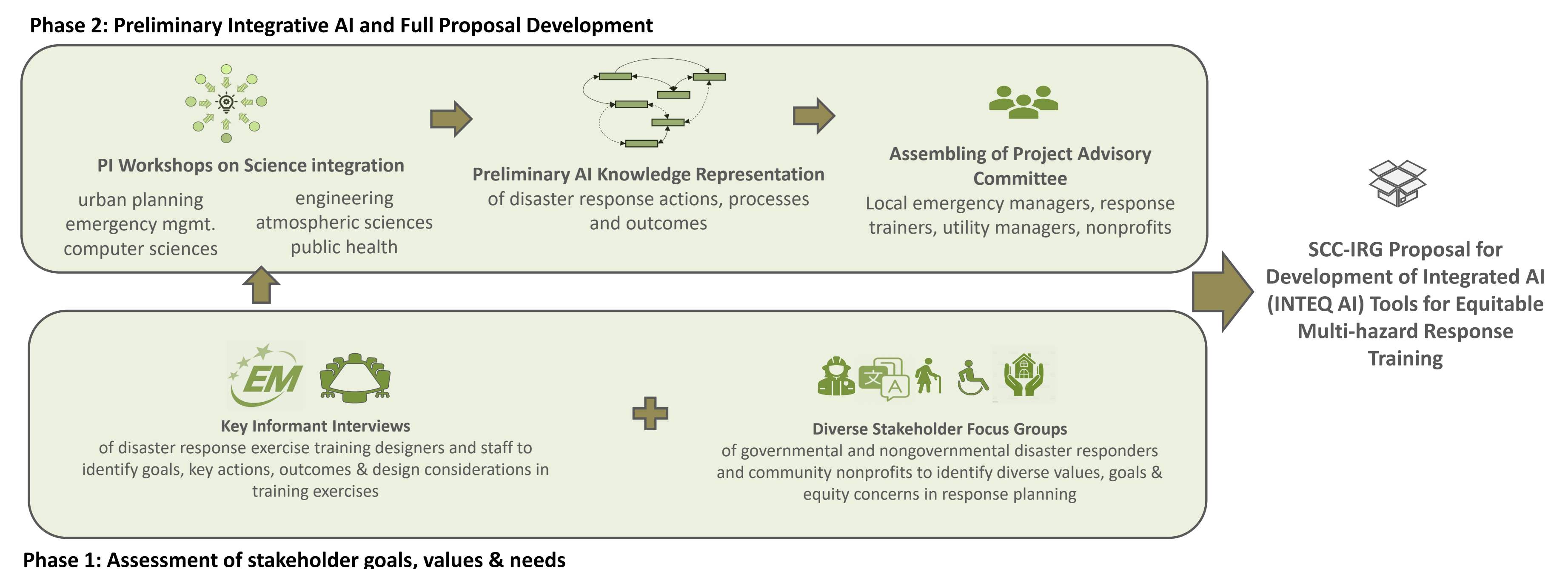
This planning study uses a bottom-up, deep community engagement approach to lay foundations for the invention of AI-based, virtual, and multi-hazard disaster response training tool that: (1) affords integrating knowledge from multiple disciplines, and (2) corrects for bias and inequity concerning its use within socioeconomically vulnerable communities.

Disaster response is challenged by the need to navigate complex, uncertain conditions; a integrate state-of-art disaster science; ensure equitable outcomes for marginalized communities; & manage increasingly frequent concurrent disasters.

Intellectual Merit: This study advances knowledge on (1) how to algorithmically model scenario complexity relative to diverse perspectives from all disaster response stakeholders; and (2) how measures of complexity guide an AI Director's generation of meaningfully equitable and varied virtual disaster response training.

Phase I Activities : Community engagement to assess stakeholder concerns, goals and values in relation to equity and to understand training exercise design process within Utah.

Phase 2 Activities: PI workshops to encourage cross-disciplinary learning about disaster science and translation of community-generated knowledge and interdisciplinary science into AI knowledge mapping. Start developing IRG proposal.



Broad Impact on Society

This study helps develops a tool that emergency managers can use to develop scientifically robust and equity-focused response training exercises for concurrent disasters in ways that are responsive to community needs.

Long-term Broad Impact

This study promotes networking between diverse stakeholders involved directly and indirectly in disaster response, thus building social capital and institutional capacity for emergency management within Utah communities.

Next Steps (FY 23)

PI Workshops to integrate interdisciplinary disaster science and community knowledge into response training through preliminary AI Knowledge Mapping. Develop IRG proposal.