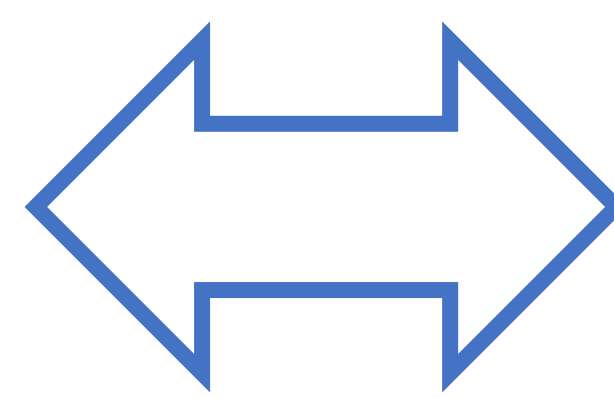


DESIGNING FOR DISTRIBUTED COLLABORATION IN WILDERNESS SEARCH AND RESCUE

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WHAT IS SEARCH AND RESCUE?

- In wilderness **search and rescue** (SAR), an agency with multiple members searches for one or more lost people in a wilderness area.
- There are two major locations of concern in a SAR response:
 1. The **command centre**
 2. The **field**



*How can we design technologies to support richer forms of **distributed collaboration** in wilderness SAR?*

INVESTIGATION

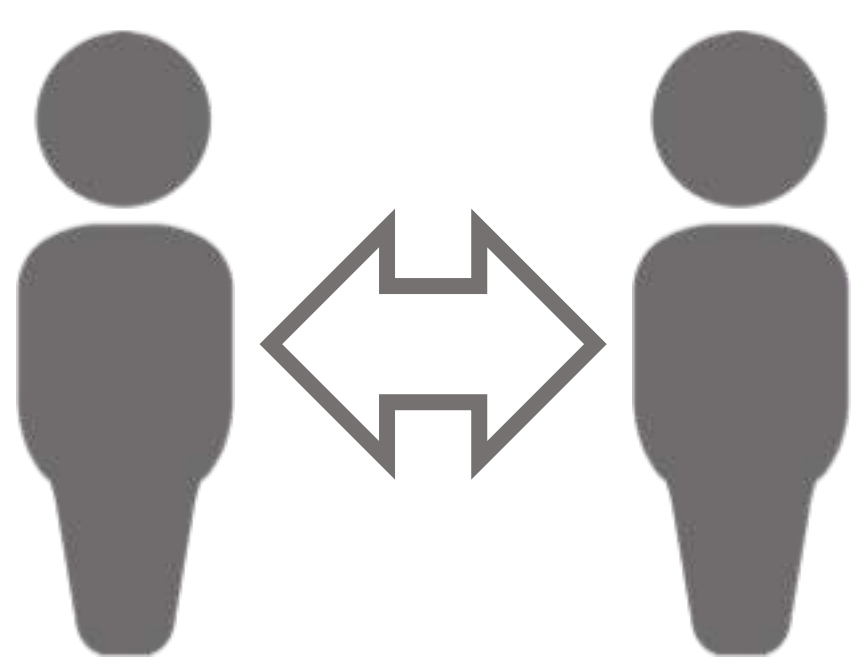
Interviews with wilderness SAR workers and observations of mock searches to:

- Understand how SAR workers **collaborate** and maintain **situation awareness**.
- Understand the **challenges** they face in doing so.

Preliminary Design Implications:

- 1 *Design to help **management** build a **bigger-picture awareness** of the response.*
- 2 *Design to allow **field workers** to effectively share and receive **relevant information***
- 3 *Design to allow **field workers** to understand their **contributions** to the '**bigger picture**'.*
- 4 *Design to **not detriment** the **situation awareness** of field workers.*

PROTOTYPING



Co-design process with wilderness SAR workers.

Main Goals:

- (1) Arrive at a set of real design ideas and working prototypes that adhere to the design guidelines derived from the previous phase.
- (2) Have a set of prototypes ready to test with SAR members and other users in simulated scenarios and SAR training exercises.



EVALUATION

- (1) Shorter-term field experiments
 - Participants from the general population; outdoor search and navigation tasks.
 - *Goal:* Understand how well the prototypes support **distributed collaboration** in **semi-controlled outdoor team activities**.
- (2) Longer-term deployments with SAR teams
 - Use by SAR workers during training activities and mock searches.
 - *Goal:* Understand how SAR teams use these tools over **longer periods** in **varying conditions**.