

## **Kweyachisihta and pikona (Cree: Make it and break it) Community Use and Evaluations of Agent Models for Flooding and Health on Reserve**

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Two proof of concept agent-based models were created for partner Indigenous communities. The models were placed on computers in local community halls where community coordinators could run the models with community members, councilors, and other visitors for a period of 4 months. Subsequent interviews with community coordinators provided evidence of the communities' usage and evaluation of the models by the community. Four usage strategies were identified: attempts to break the models; using models to verify local experience by setting variables to specific levels reflecting real incidents; forecasting worst-case experiences; and exploring the possibility to expand the model and transfer findings to new contexts or scenarios. This feedback provides researchers and partners with concrete recommendations for future agent-based modeling on reserves, another example of the desire for sovereignty over research and the drive for survivance; and for moving Indigenous partnered research up the ladder of participation to co-design levels.