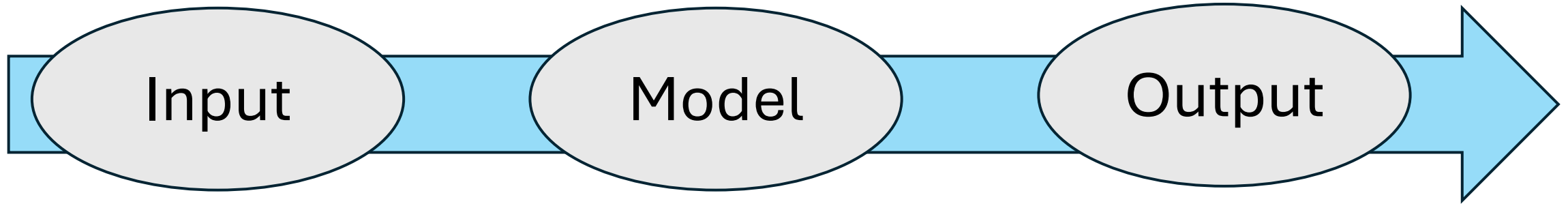


Risk Assessment Upgrade



A set of matrices, one for each hazard, consisting of a set of alternatives (census tracts) each with a set of criteria (vulnerability indicators)

	$f_1(\cdot)$	$f_2(\cdot)$	$f_j(\cdot)$	$f_k(\cdot)$
a_1	$f_j(a)$					
a_2						
...						
a_i						
...						
a_n						

Method **PROMETHEE II** ranks the actions by **total pre-order**:

$$\Phi(a) = \Phi^+(a) - \Phi^-(a)$$

A ranked list of alternatives: in our case a ranked list of census tracts organized from most to least vulnerable

City	Rank PROM-usual
Ontario	1
Nyssa	2
Milton-Freewater	3
Sheridan	4
Keizer	5

Indicator: ¶ Elderly ▢	▢
Metric: Percentage-of-the-population-age-65-and-older ▢	▢
Raw-Data-Source: ACS-2-17-2021 five-year -estimates,-Table-S0101 ¶	▢
¶ Cleaned-data: All Indicators Census Tracts ACS2021--Overview-(arcgis.com) ▢	
Publication-Date: Apr-2,-2023 ▢	▢
Available-Geographic-Scale: <input type="checkbox"/> Census-tract <input type="checkbox"/> Zip-Code <input type="checkbox"/> County <input type="checkbox"/> Tribal <input type="checkbox"/> Other ▢	▢
Relevant-Natural-Hazards: ¶ <input checked="" type="checkbox"/> Coastal-Hazards <input type="checkbox"/> Drought <input checked="" type="checkbox"/> Earthquake <input checked="" type="checkbox"/> Extreme-Heat <input checked="" type="checkbox"/> Flood <input type="checkbox"/> Landslide <input type="checkbox"/> Tsunami <input type="checkbox"/> Volcano <input checked="" type="checkbox"/> Wildfire <input checked="" type="checkbox"/> Windstorms <input checked="" type="checkbox"/> Winter-Storms ▢	▢
Category: <input checked="" type="checkbox"/> People <input type="checkbox"/> Built-Environment <input type="checkbox"/> Culture <input type="checkbox"/> Economy <input type="checkbox"/> Environment <input type="checkbox"/> Governance <input type="checkbox"/> Social-Cohesion <input type="checkbox"/> Other ▢	▢
Vulnerabilities: ¶ <ul style="list-style-type: none"> • → Less-mobile. ¶ • → May-need-assistance-from-family,-friends,-neighbors. ¶ • → Not-familiar-with-modern-communications-technologies. ¶ • → May-have-health-challenges-that-require-medication-or-outpatient-treatments ¶ • → More-sensitive-than-younger-people-to-excess-heat. ¶ • → May-use-durable-medical-devices-at-home-that-require-electricity. ¶ 	▢
How-do-these-vulnerabilities-support-the-selection-of-mitigation-area? ¶ Hardened-buildings-and-infrastructure-may-ensure-that-the-elderly-can-safely-stay-in-place-and-obtain-the-services-they-need. ▢	▢
PROMETHEE ¶ Valence: <input type="checkbox"/> Maximize <input type="checkbox"/> Minimize ¶ Preference-Function: ¶ Weight: ▢	▢
References ▢	▢