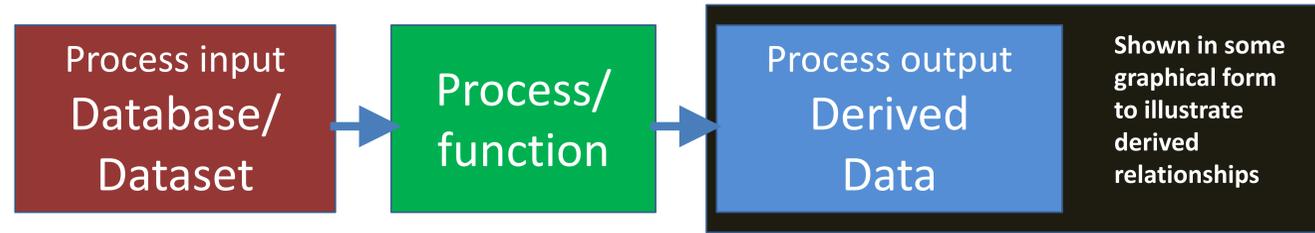


# URO Proof of Concept Architecture Diagram



## SKETCH OF LIKELY POC TOOL REQUIREMENTS

### Integrate at data source level:

- Local temperature station data
- Satellite data
- Model data

### Extract geolocation at resolution e.g.:

- Neighborhoods
- Census blocks
- Urban boundary (e.g. Metro)

### Integrate/aggregate components across articles:

- Data references (name uri)
- Citations
- Methods
- Findings/relations
- Figures, Tables
- Indexes
- Names of likely indicators

### Integrate temporal levels

- Year
- Month
- Day
- Hour

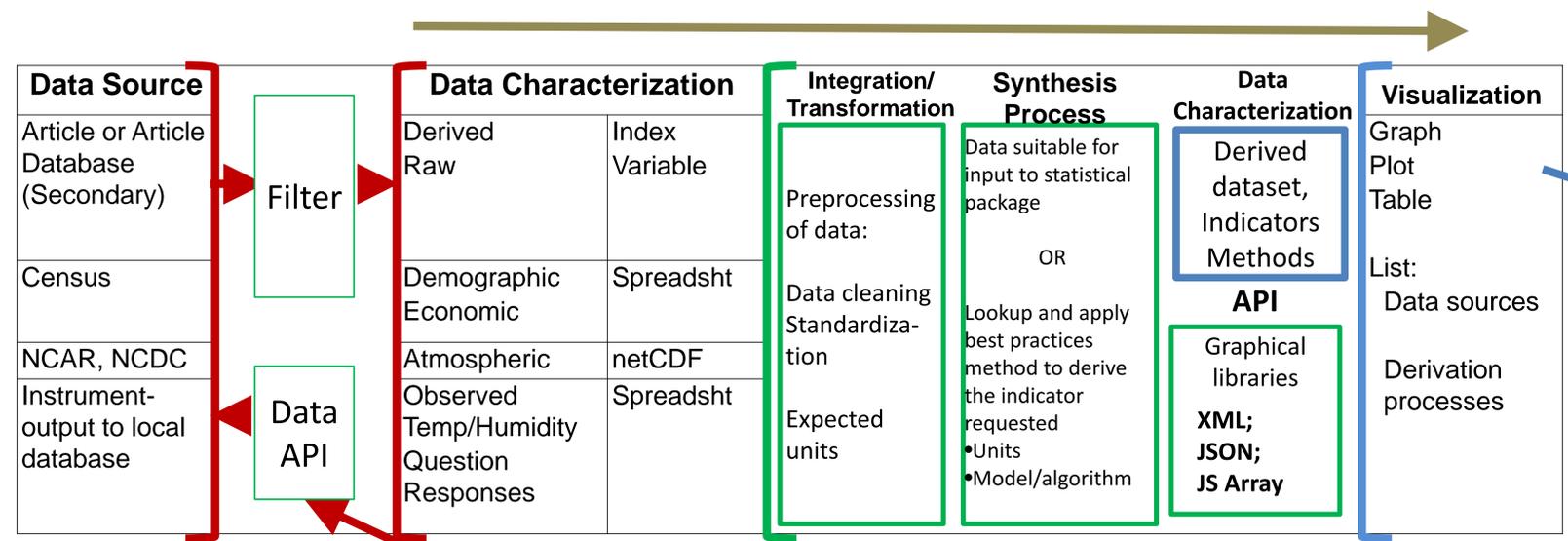
Presets	Automate (Representative)	Characterize
Age	Transformation	Data sources (name; url; query rules; type; formats (xls, xml, netCDF);
Income	Integrate	Indicators (A related to B, C ...)
Impact	Synthesize (statistical processes)	Methods (names and examples)
Cause of death	Query handling and formulation	Units (scales, bounds)
Population density	Targeted search	Visual used to display data/indicator relationship (type and example)
Air conditioning		
Land use		
Social ties		

## System Use Question:

What data and functions are needed to show derived relationship (e.g. temperature-mortality)?

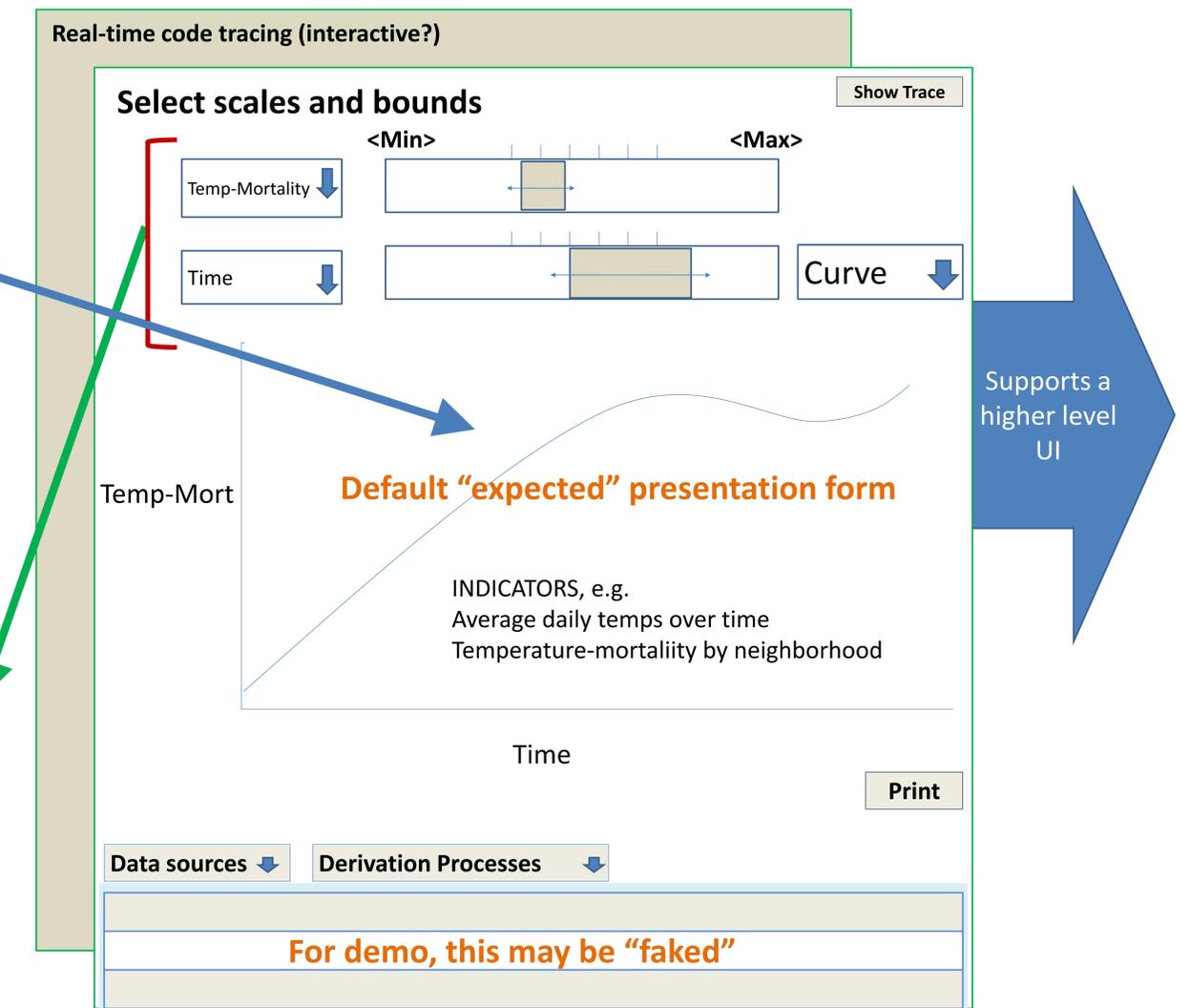
These can relate to synthesized indicators, e.g.:

What indicators and their components are available in research about temperature and urban vulnerability?



## Research Question:

What populations in Philadelphia are most affected (e.g. mortality counts) by heat waves (or temp changes??) from 1990-present?



## QUERY variables

**Vulnerability Pre-sets for POC**

EXAMPLES:

**Query elements from research question:**

- Chicago
- Populations
- Heat wave
- 1990-present

**PLUS pre-set "default" points for:**

- Age: >65 and <10 years
- Income: % under poverty level
- Impact: Mortality
- Cause of death: Respiratory and Circulatory
- Population density: people/sq km
- Air conditioning: percentage with
- Land use: % land as built environment
- Social Networks: weak

Query formulation/negotiation