# AirAtlas · Visualizing the link between Air Quality and Mortality

Canadian Environmental Health Atlas

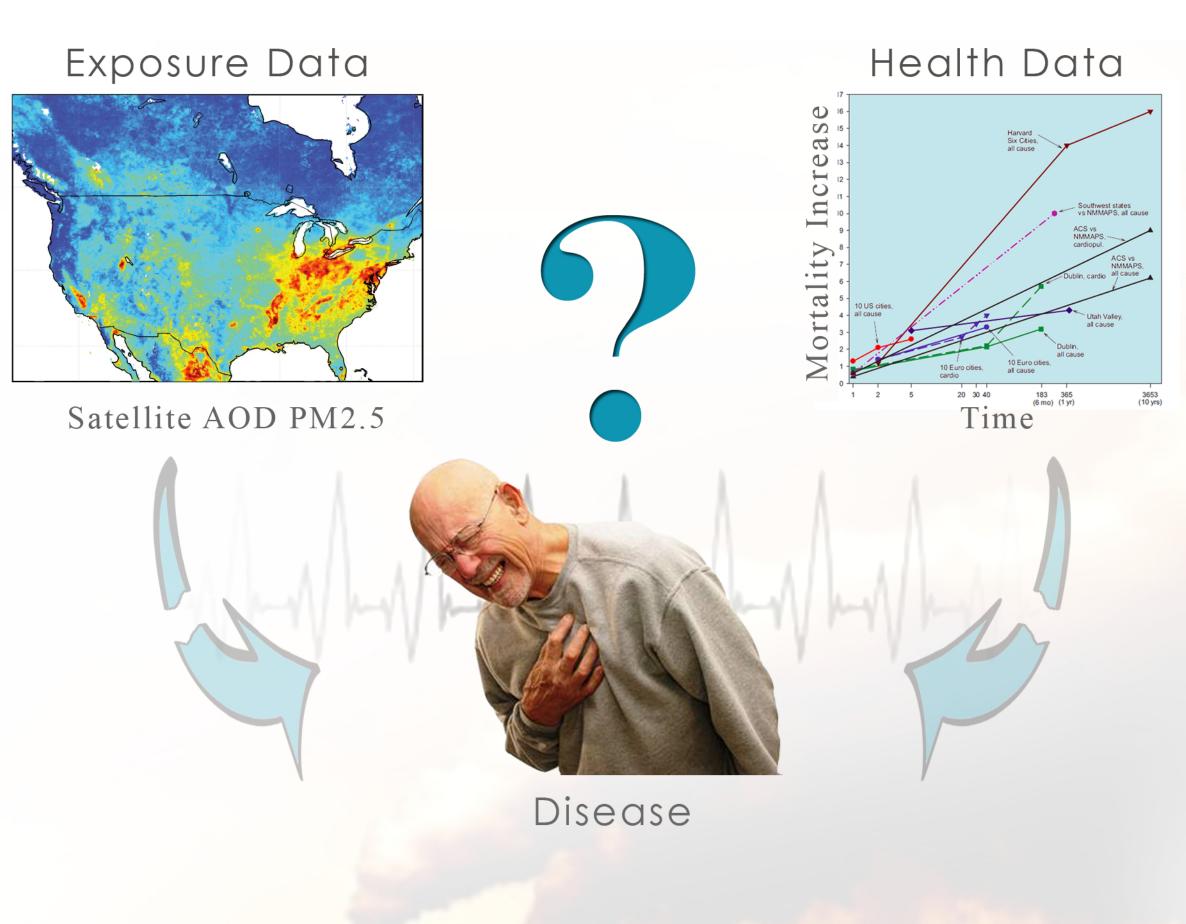
Data Visualization and Analysis

Degree Capstone Project: June 6, 2013 Master of Science in Information Management, The Information School, University of Washington

#### PROBLEM

#### The **link** between polluted air and disease is invisible

At least 80% of the world's population breathes unhealthy air that contributes to preventable hospitalizations and premature deaths from heart disease, stroke, and other ailments. Public awareness about these risks is remarkably limited.



Decades of research link air pollution and mortality, yet informational tools that demonstrate this link in an accessible, straightforward manner are scarce.

The Canadian Environmental Health Altas, a project of Simon Fraser University, seeks to bridge this gap.

Our goal is to present complex science through a comprehensible, interactive visual experience.

### PROCESS

Visualizing complex science for the public is the challenge

- Learned epidemiological concepts and pollution detection science Reviewed existing visualizations
- Interviewed stakeholders
- Acquire Domain Knowledge Story

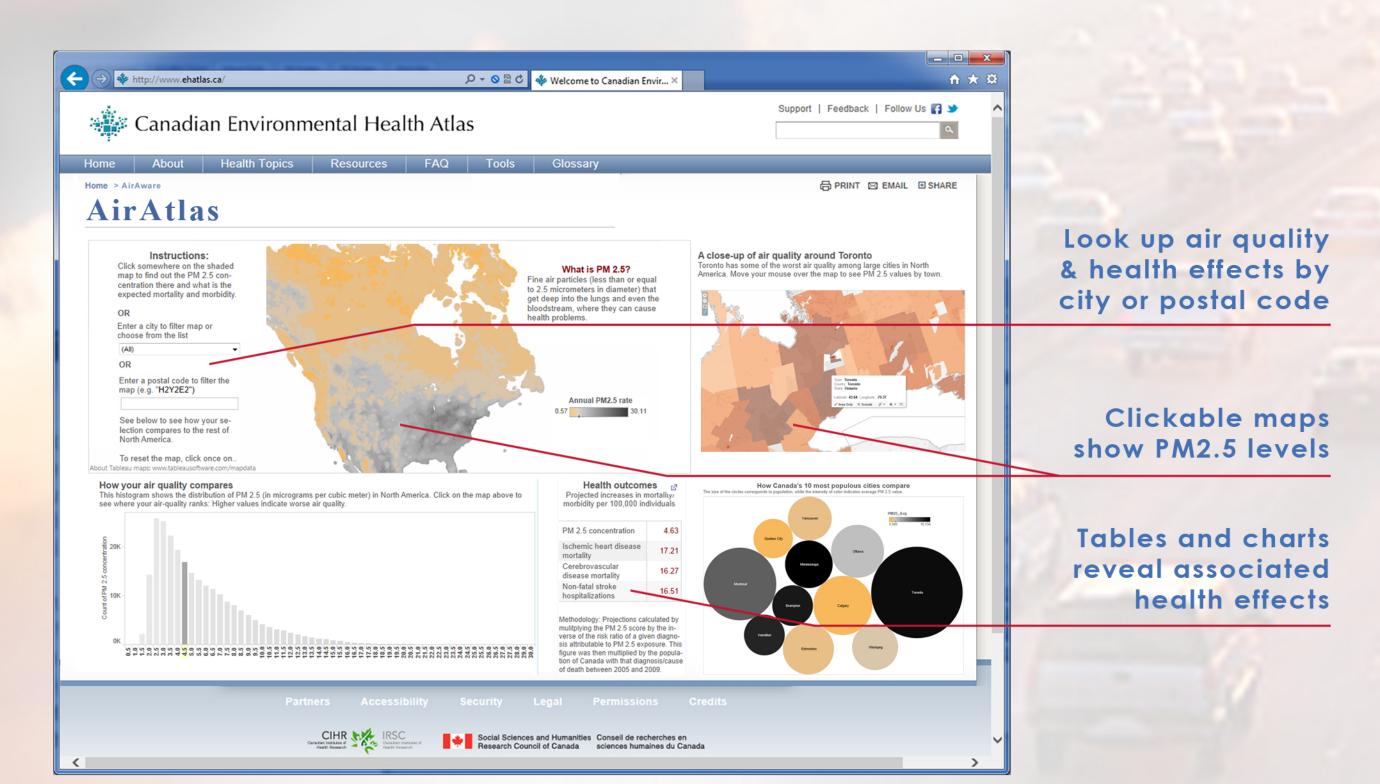
Develop the

- Strategized ways to show the visual link between PM2.5 and disease
  - Tested the message with potential audience

- Tested visualization features
- Visually mapped pollution data and the link to health outcomes
- Developed data dashboards
- Design Build the Tool and Analysis
- Identified epidemiological data Performed statistical modeling
- Selected visualization technology
- Distilled story into visual elements

## PRODUCT

AirAtlas makes the link visible



Exposes disparities in access to clean air and associated health outcomes.

Informs local discussions on pollution sources and ways to mitigate the impact.

**Empowers** citizens and policymakers to take informed action on air pollution and its effects.

**Demonstrates** an extensible, sharable template for future visualizations of environmental health threats.

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