Order of Operations

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Overview

- What is NEFIN?

  - Web based forest inventory data acquisition tool that allowing users to browse, compare, and access CFI information

- What will we accomplish?

  - Systematic inventory of program metadata and methodological changes

  - Unified and comprehensive CFI database

  - Peer-reviewed and technical publications related to database development and assessment.

Background

◈ Continuous Forest Inventory (CFI) Program Comparison Tool

  ◈ Methodology comparison

  ◈ Applicability

  ◈ Incorporation into NEFIN

Inventory	Species Composition	Diameter Distribution	Structure	Volume, Biomass and Carbon	Mortality and Ingrowth	Merchantable Volume and Product Valuation
Maine Baxter State Park Continuous Forest Inventory	●	●	●	●	●	●
Maine Ecological Reserves Program Inventory	●	●	●	●	●	●
New Hampshire Fox Research and Demonstration Forest Inventory	●	●	●	●	●	●
Vermont State Lands Continuous Forest Inventory	●	●	●	●	●	●
Shaw Mountain Inventory	●	●	●	●	●	●
Northeast Temperate Inventory and Monitoring Network	●	●	●	●	●	●

Current CFI Program Land-base

◈ 12 programs have been incorporated into the initial effort

◈ 16 more have been targeted for inclusion
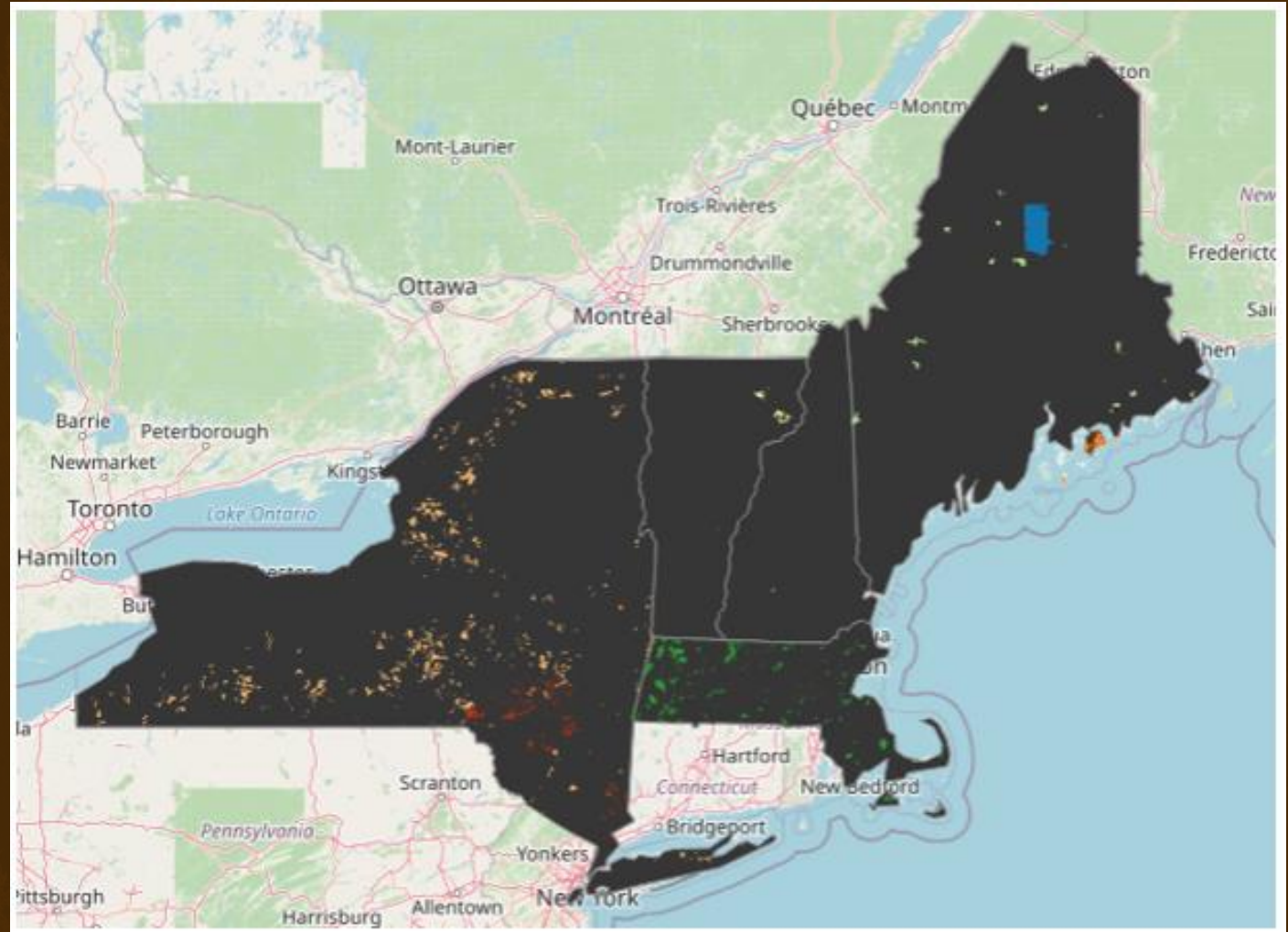
The project team

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Goals

- Increase accessibility of CFI data
  - Unified
  - Simplified
  - Efficient
- Demonstrate utility of data resource
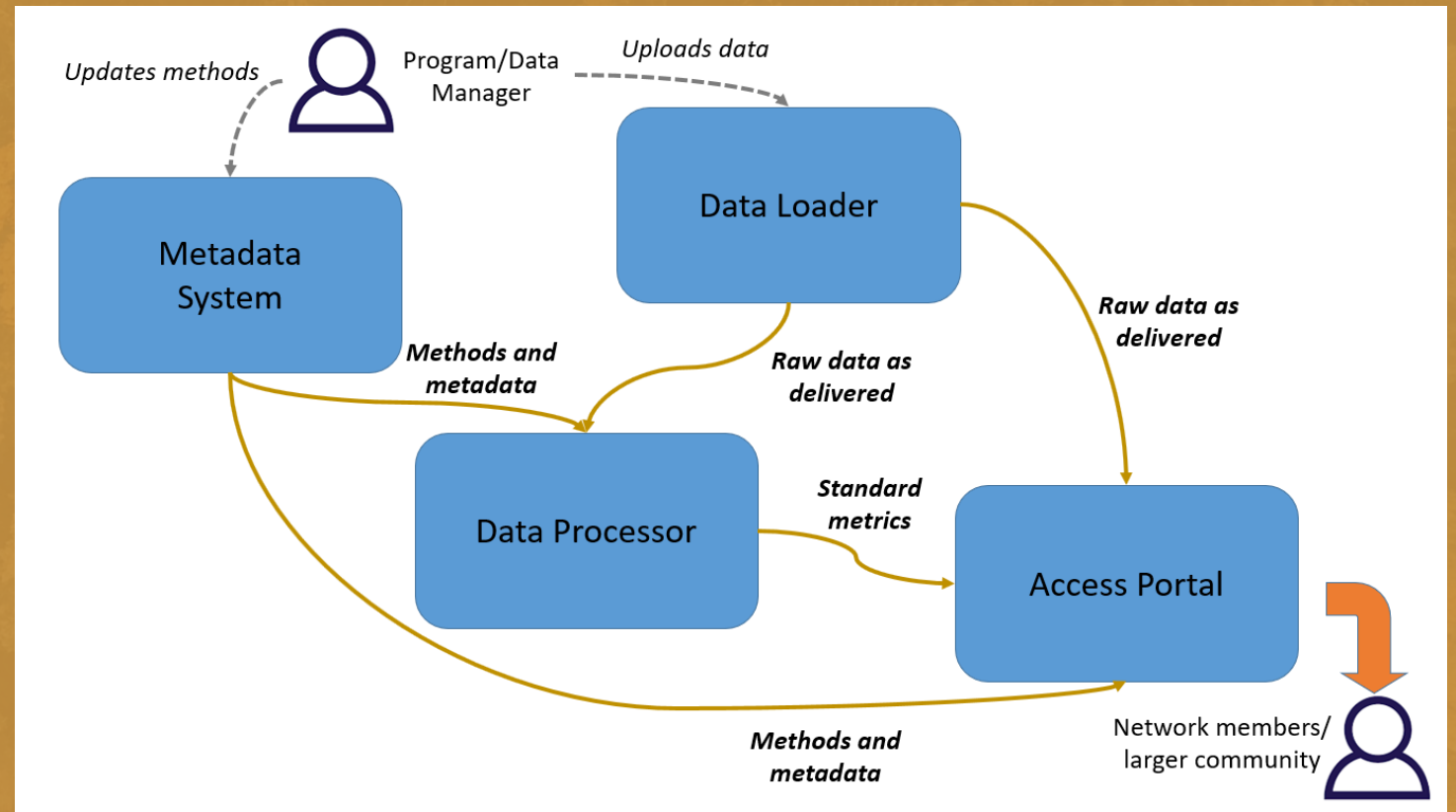- Increase connections between practitioners

Infrastructure

- Data uploader
  - Automated
- Metadata
  - Temporally resilient
- Data processor
  - Metric output
- Access Portal
  - Visualization

Blueprints

- Data Archive
  - Retains origin script integrity
- Field Translation
- Standardized Attributes
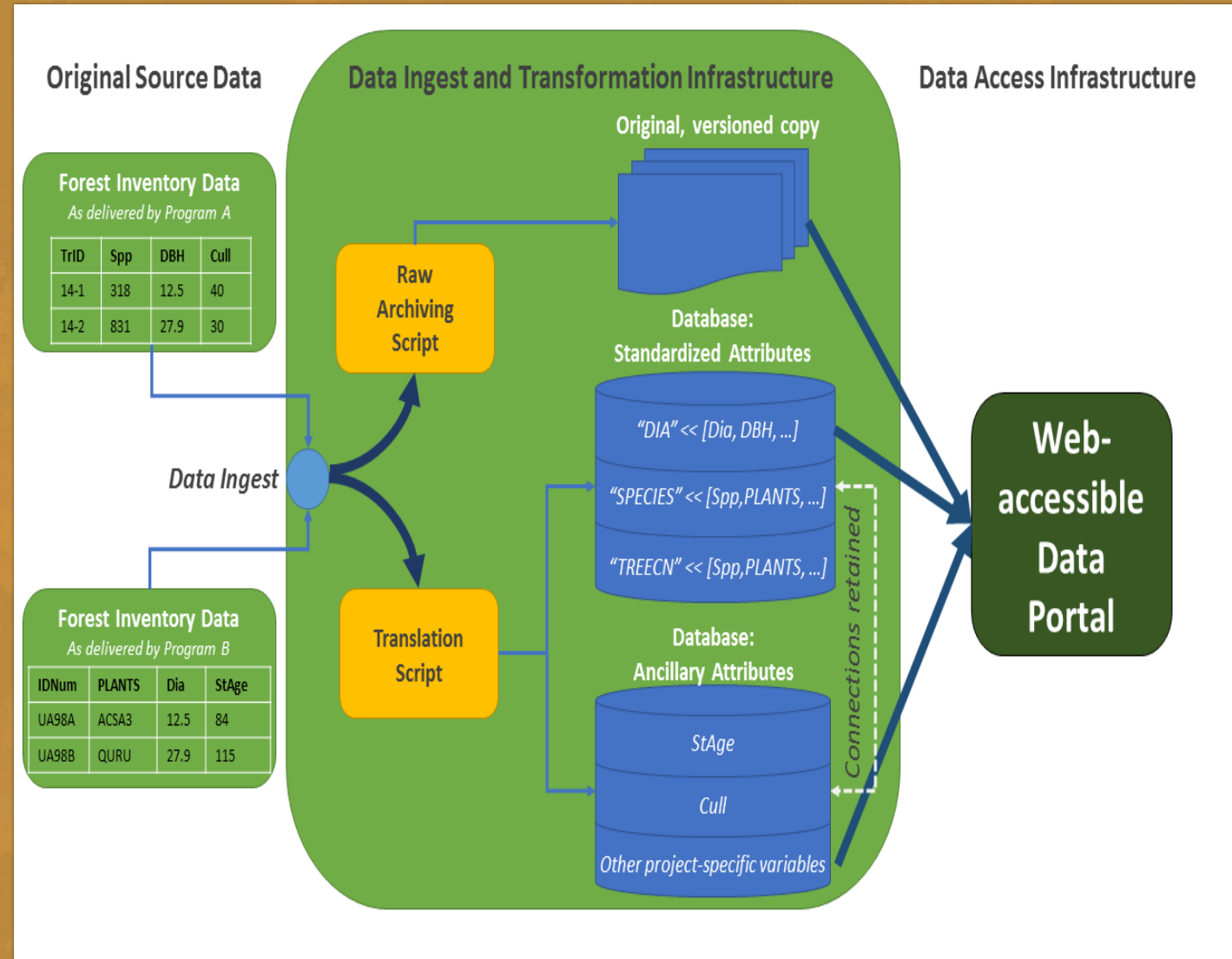- Ancillary Attributes

Target Output

Access portal
  Intuitive
  Customizable
Data output
  Forest Inventory and Analysis (FIA)
 Forest Vegetation Simulator (FVS)

Original Source Data

Data Ingest and Transformation Infrastructure

Data Access Infrastructure

Original, versioned copy

Forest Inventory Data
As delivered by Program A

TrID	Spp	DBH	Cull
14-1	318	12.5	40
14-2	831	27.9	30

Raw Archiving Script

Data Ingest

Database: Standardized Attributes

"DIA" << [Dia, DBH, …]

"SPECIES" << [Spp,PLANTS, …]

"TREECN" << [Spp,PLANTS, …]

Forest Inventory Data
As delivered by Program B

IDNum	PLANTS	Dia	StAge
UA98A	ACSA3	12.5	84
UA98B	QURU	27.9	115

Translation Script

Database: Ancillary Attributes

StAge

Cull

Other project-specific variables

Connections retained

Web-accessible Data Portal

Utility

- Geospatial
  - Ground truthing in remote sensing
  - Tying geospatial products to plot data
- Forest monitoring and research
  - Long term evaluation of regional species composition and structure
  - Regeneration and ingrowth dynamics
  - Temporally isolated or continuous assessments of forest productivity, growth and yield, carbon storage and sequestration
- Modeling
  - Creation
  - Enhancement
  - Evaluation

Personal Research Application

- Forest tension zone dynamics
  - A geographic area that marks a change from one type of vegetation to another
  - Literature review and methodology of research
  - NEFIN FIA joined
    - Identify tension zone(s)
    - Compare
      - Relative evaluation of NEFIN data enhancement
  - Evaluate
    - Regional climactic variability
    - Spatial and temporal variability
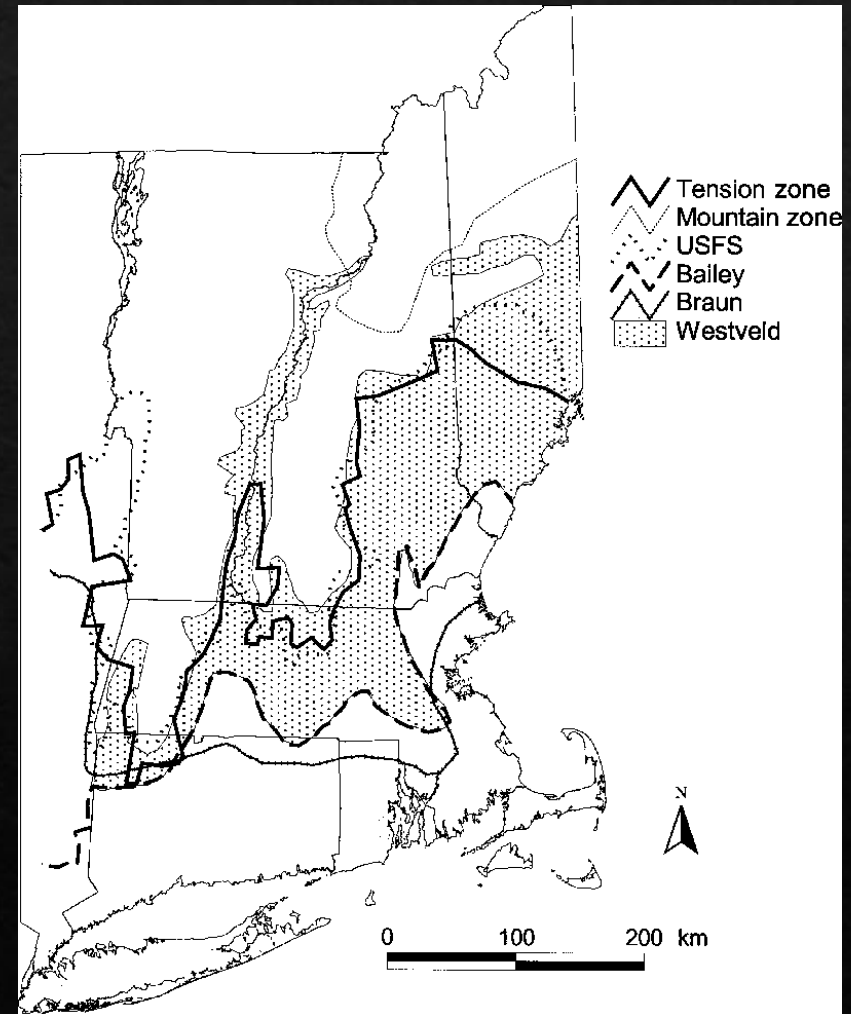
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