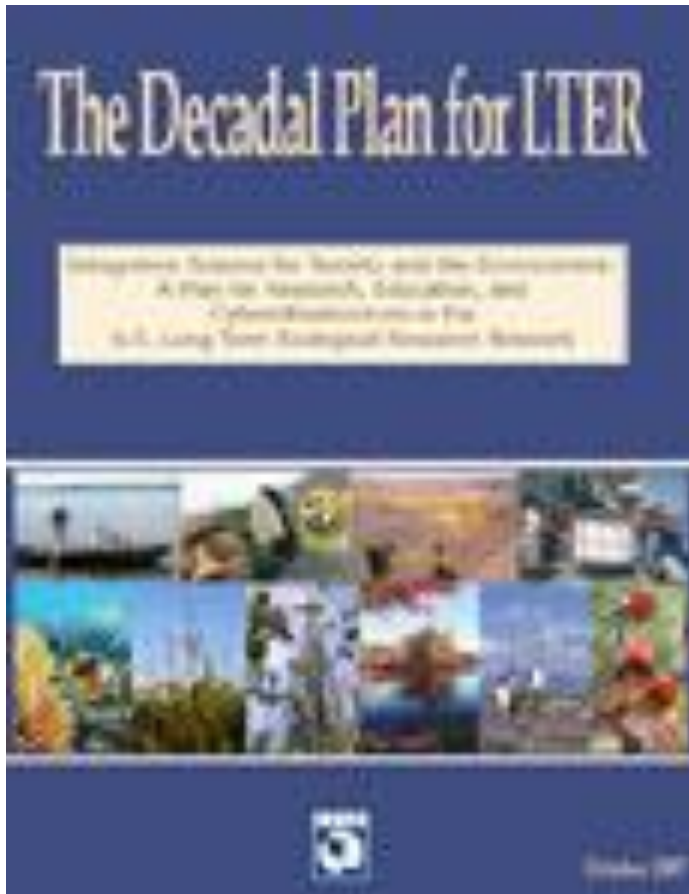# Building the LTER Network Information System

Why it is important to LTER scientists

In the Decadal Plan for LTER, the Strategic Plan for Cyberinfrastructure is designed to facilitate *Network Science*

Specific initiatives include:

• Build community-based services and a service-oriented architecture

• Build CI capacity to increase data discovery, access, and integration

• Build capacity to increase collaboration

• Build CI capacity to increase modeling and analysis activities
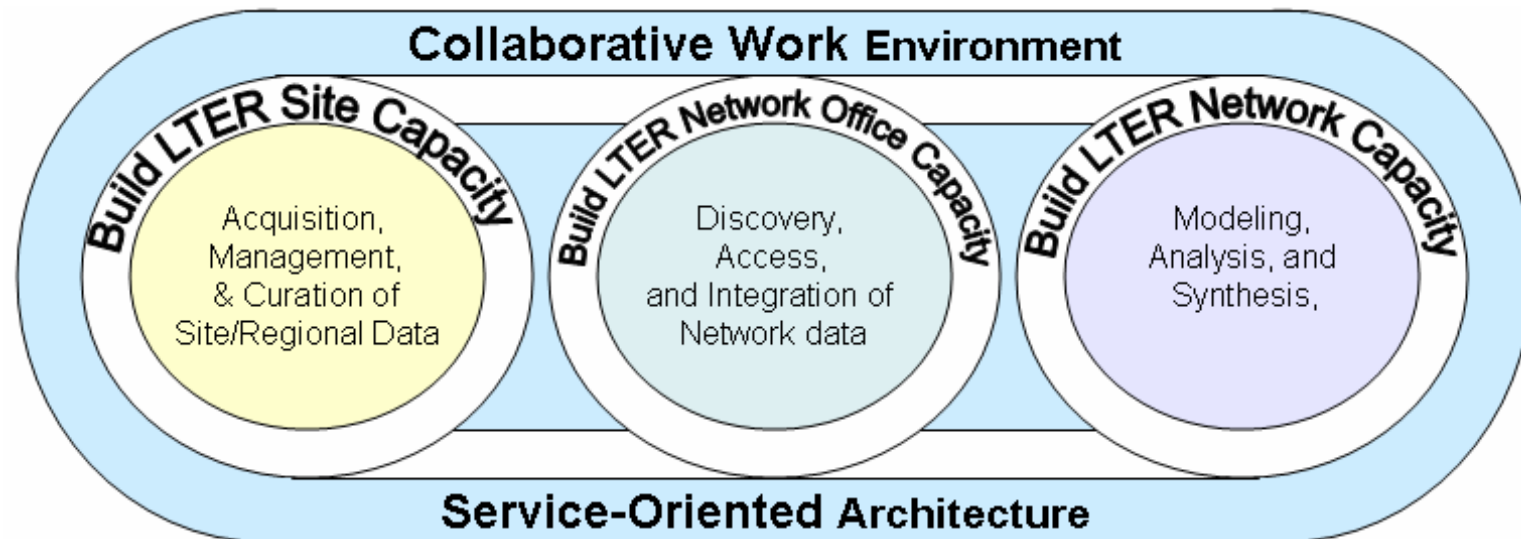
Achieving this vision will require significant enhancement of capacity at the site level, the LTER Network Office, and our science community.

An essential ingredient is the enhancement of Network-based information access, integration and derivative products.
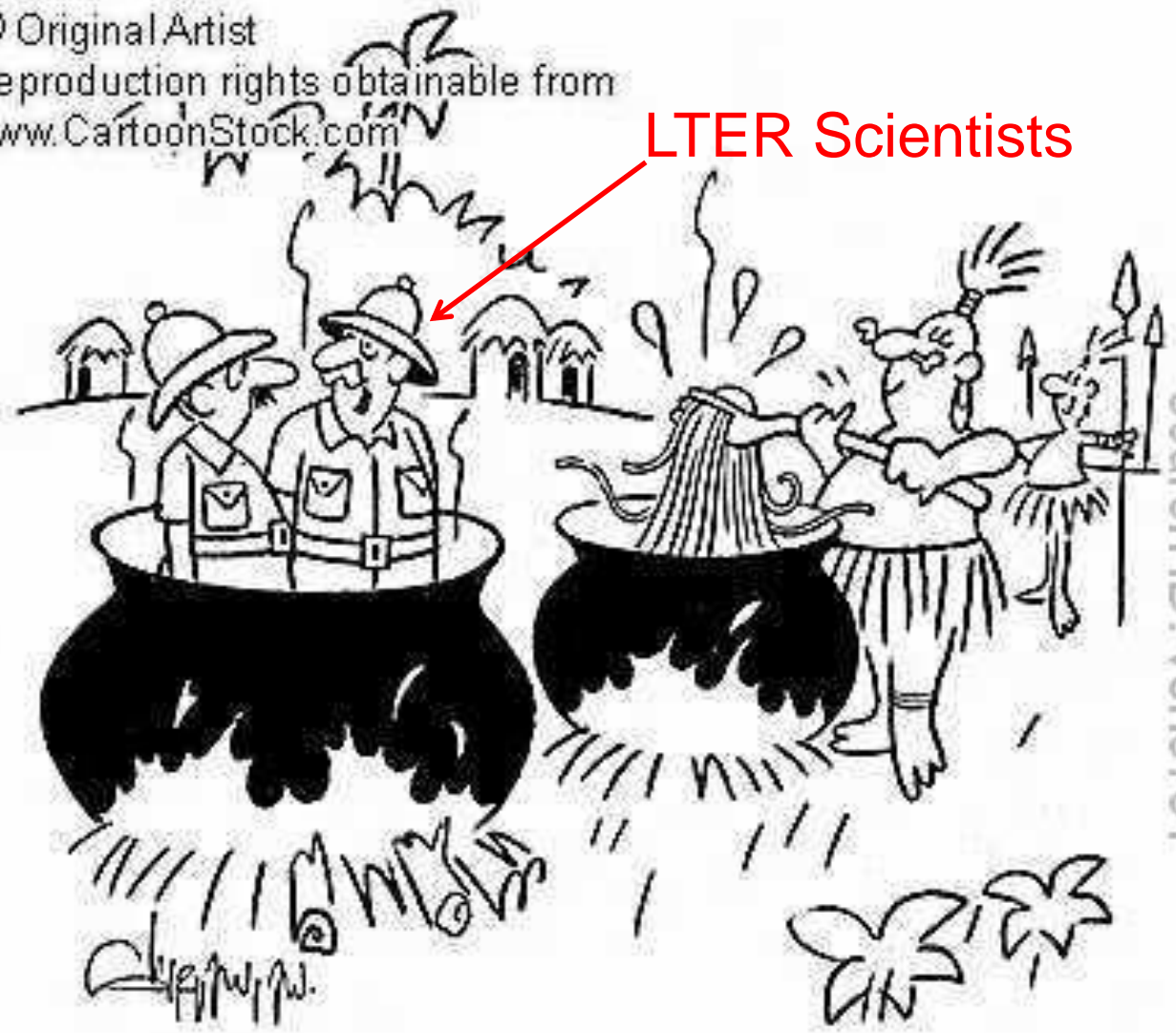
A "data warehouse" framework is designed to be part of the Network Information System (NIS). This builds on the Ecological Metadata Language (EML), the Metacat repository, and Metacat Harvester.

The framework is code-named PASTA: Provenance Aware Synthesis Tracking Architecture

But the NIS needs more than just PASTA

LTER Scientists

"We must be the meatballs"

NIS Ingredients

PASTA

- *Middleware* (software) developed at LNO or integrated from other sources (e.g., sites, open source projects)
  - Internal value-adding applications leading to derived data and metadata products
  - Data modules from other LTER science initiatives (e.g., ClimDB/HydroDB, EcoTrends)

NIS Ingredients

MEATBALLS

- Site collected data and metadata

- *Middleware* (software) developed at LNO or integrated from other sources (e.g., sites, open source projects)

  - Internal value-adding applications leading to derived data and metadata products

  - Data modules from other LTER science initiatives (e.g., ClimDB/HydroDB, EcoTrends)

- External value-adding applications

LTER Network Information System