



1) NCI Laboratory of Population Genetics, 2) Moxie Informatics



## caLIMS2 System Modules

### Administration

Login

Laboratory

Personnel

Organization

FileTransporter

Equipment

Meta Data

Naming Convention

Message

Units

Barcode

CustomerRequest

### Workflow

Project

Method

LabProcedure

Run

Reaction

Workflow

Process

Activity

Transition

Approval

### Inventory

Specimen

Container

Reagent

LabSupply

### Report

Query

Search

Summary

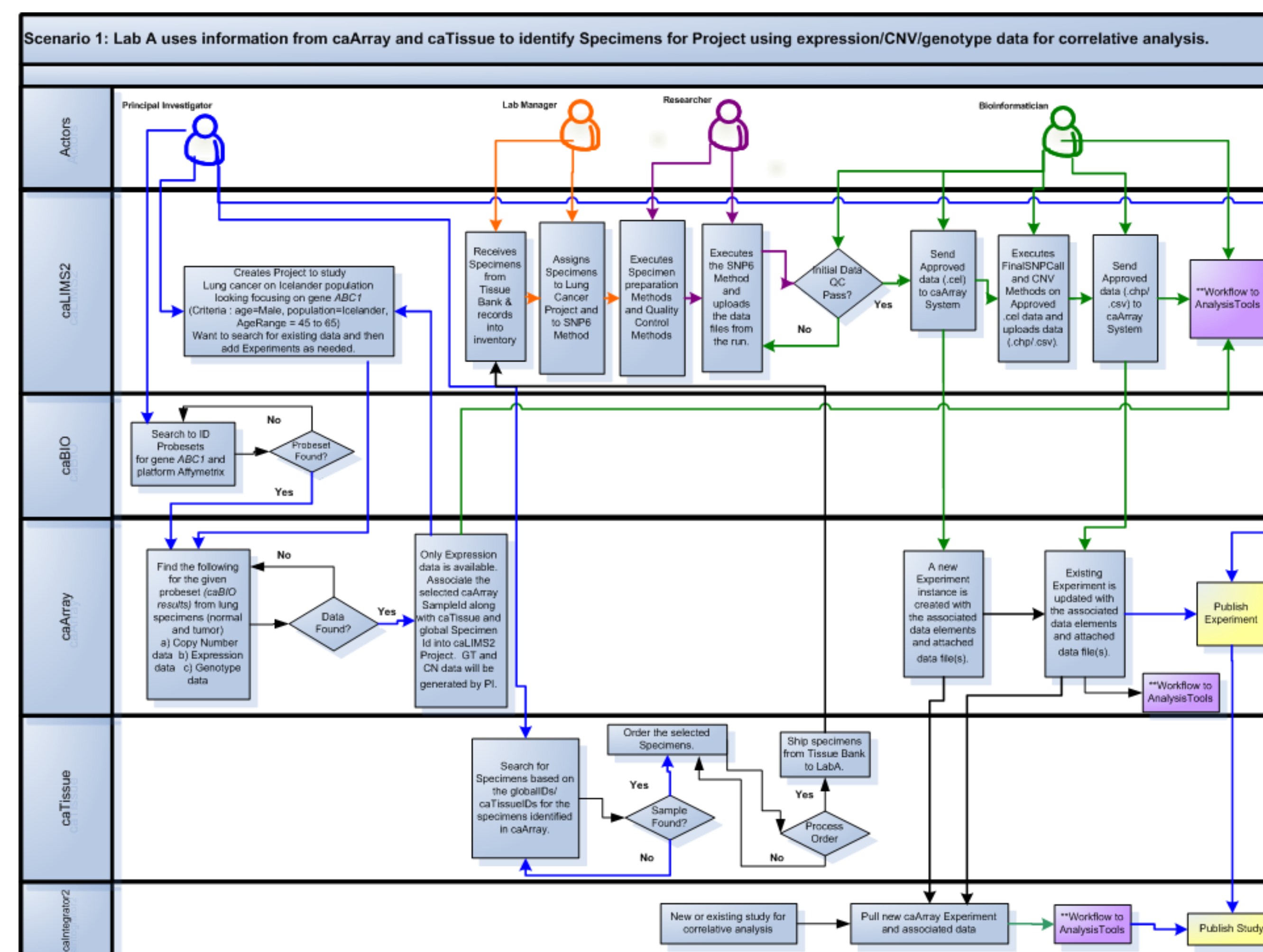
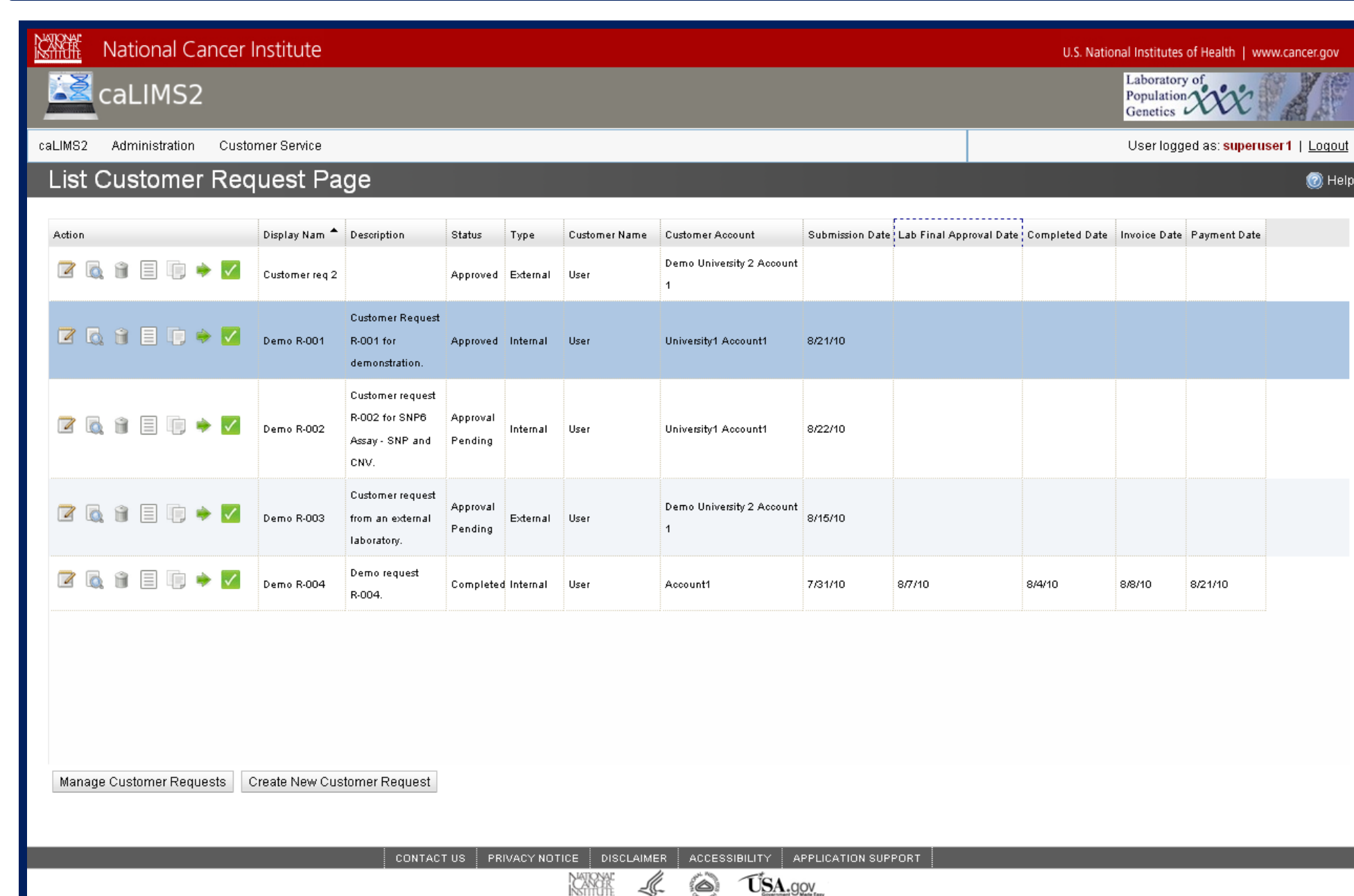
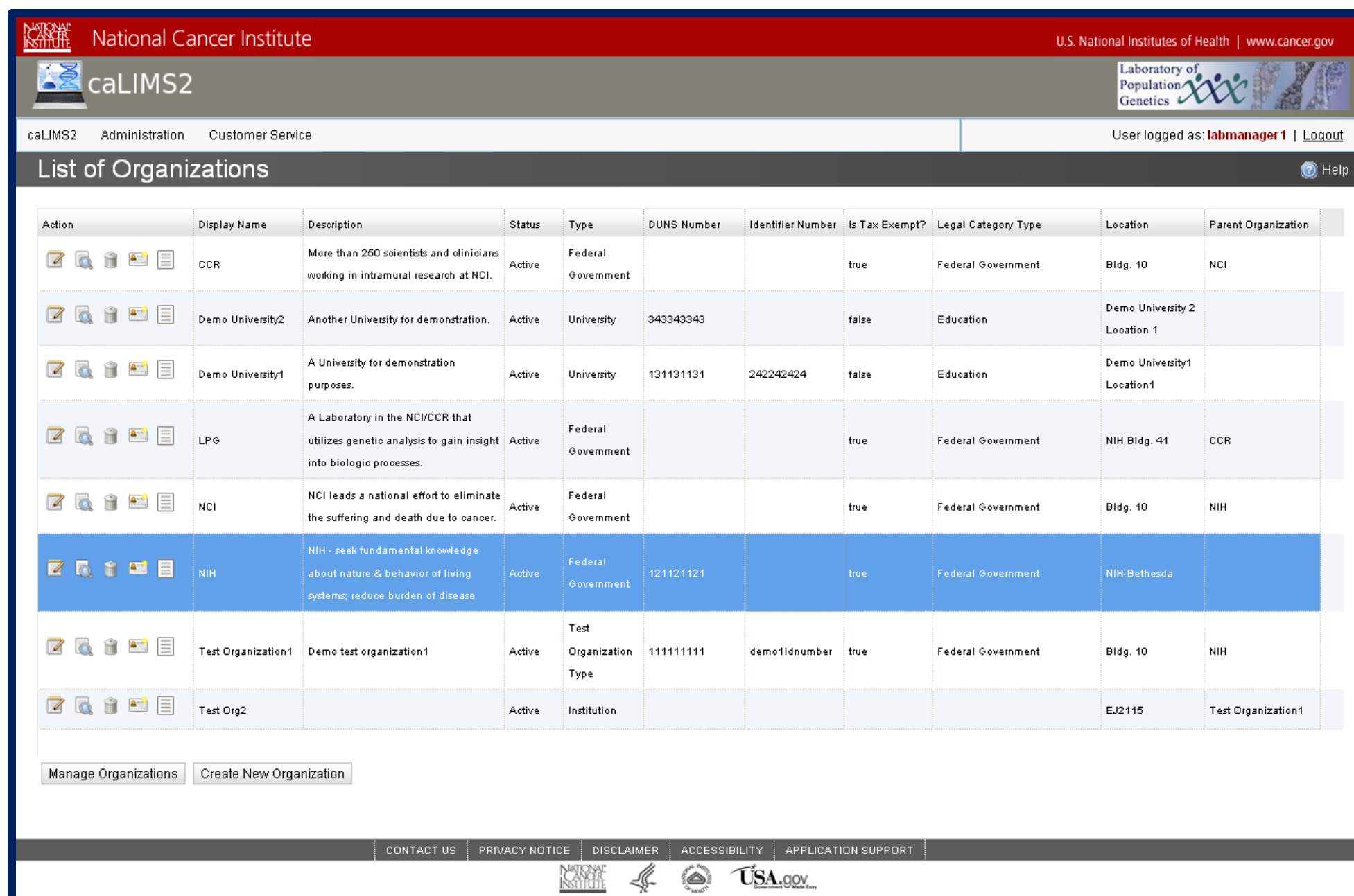
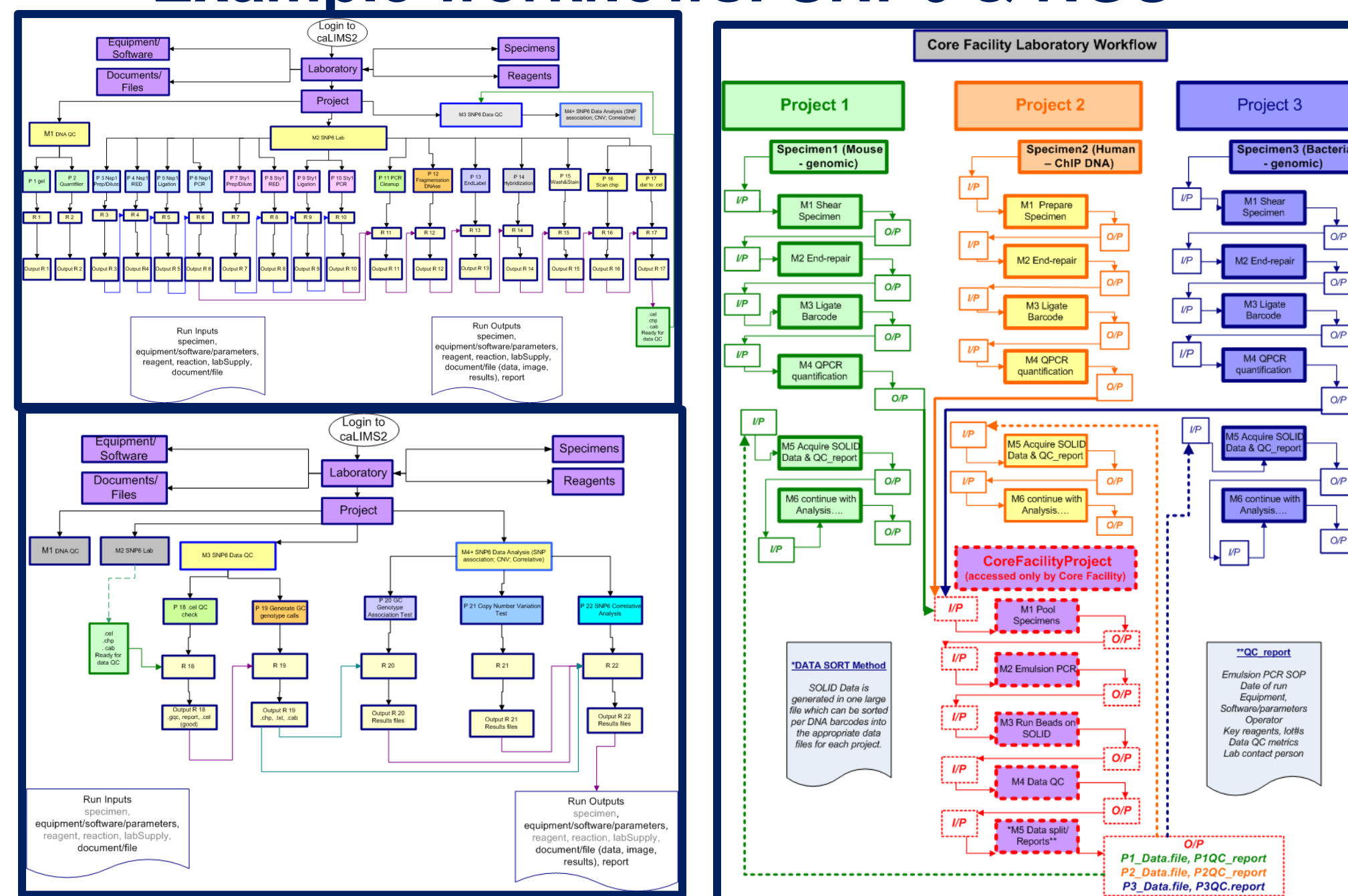
Report

## Features of caLIMS v2

- ## Equipment Service

- ## SOP (Experiment Method) Service

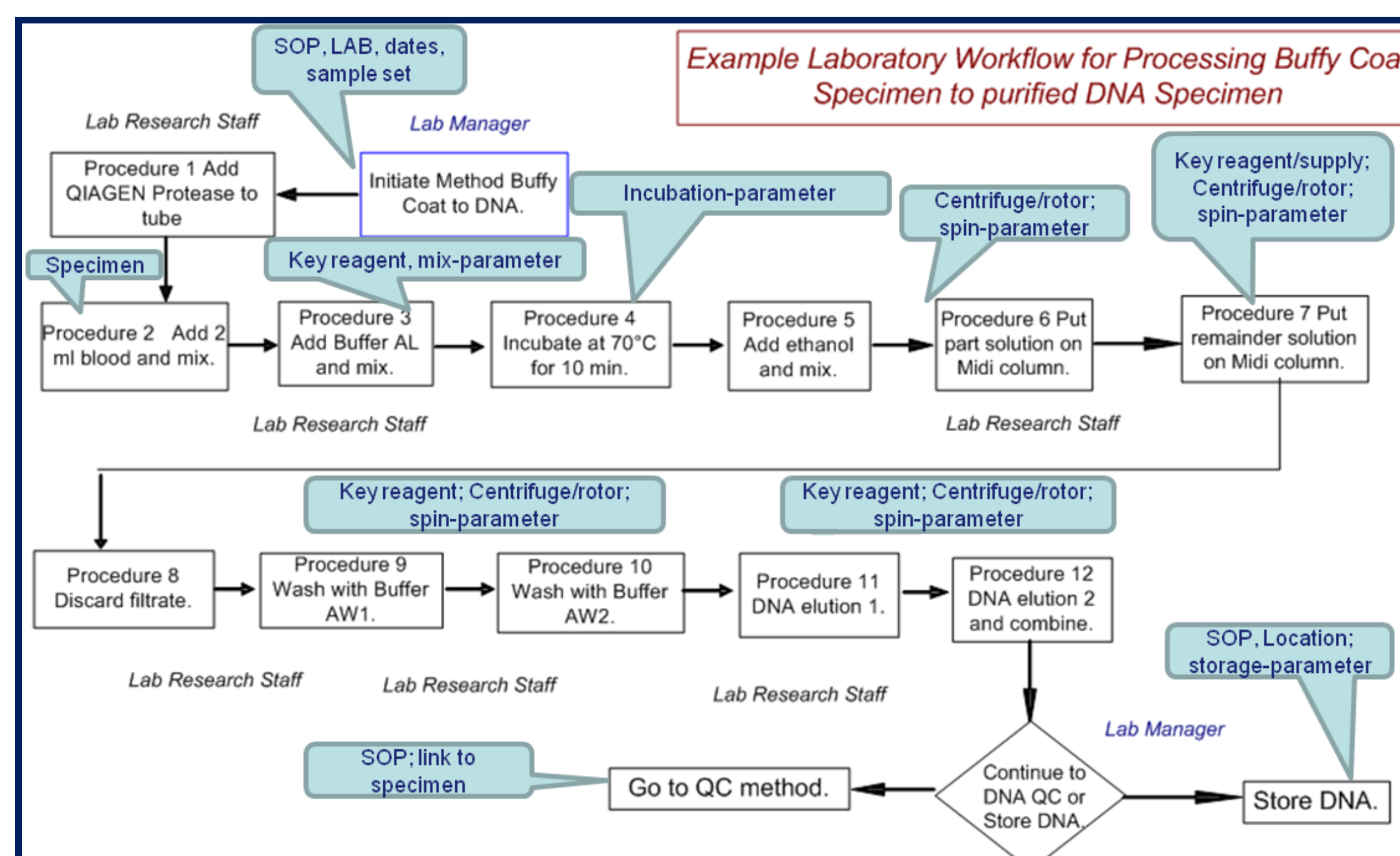
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- The diagram illustrates the component architecture for the Lab Method Experiment Framework. It shows the following components and their relationships:
- Interfaces:**
    - `interface: workflow:Input` (Blue box)
    - `interface: workflow:Output` (Blue box)
  - Concrete Components:**
    - `workflow:LSDAExperiment` (Red box)
    - `workflow:Method` (Blue box)
    - `workflow:Project` (Blue box)
    - `workflow:cal.HSEExperiment` (Purple box)
    - `workflow:LabOperation` (Blue box)
    - `workflow:Procedure` (Blue box)
    - `workflow:Run` (Blue box)
    - `administration:Equipment` (Black box)
    - `Inventory:Specimen` (Green box)
    - `Inventory:Reagent` (Green box)
    - `common:Document` (Orange box)
    - `common:Worksheet` (Orange box)
    - `LabSupplies` (Green box)
    - `report:Report` (Pink box)
  - Relationships:**
    - `workflow:LSDAExperiment` and `workflow:Method` implement `interface: workflow:Input`.
    - `workflow:Method` and `workflow:Project` implement `interface: workflow:Output`.
    - `workflow:cal.HSEExperiment` depends on `workflow:Method` and `workflow:LabOperation`.
    - `workflow:LabOperation` depends on `administration:Equipment` and `Inventory:Specimen`.
    - `workflow:Procedure` depends on `workflow:Run`.
    - `workflow:Run` depends on `Inventory:Reagent`, `common:Document`, `common:Worksheet`, and `LabSupplies`.
    - `administration:Equipment` depends on `Inventory:Specimen`.
    - `report:Report` depends on `common:Document` and `common:Worksheet`.



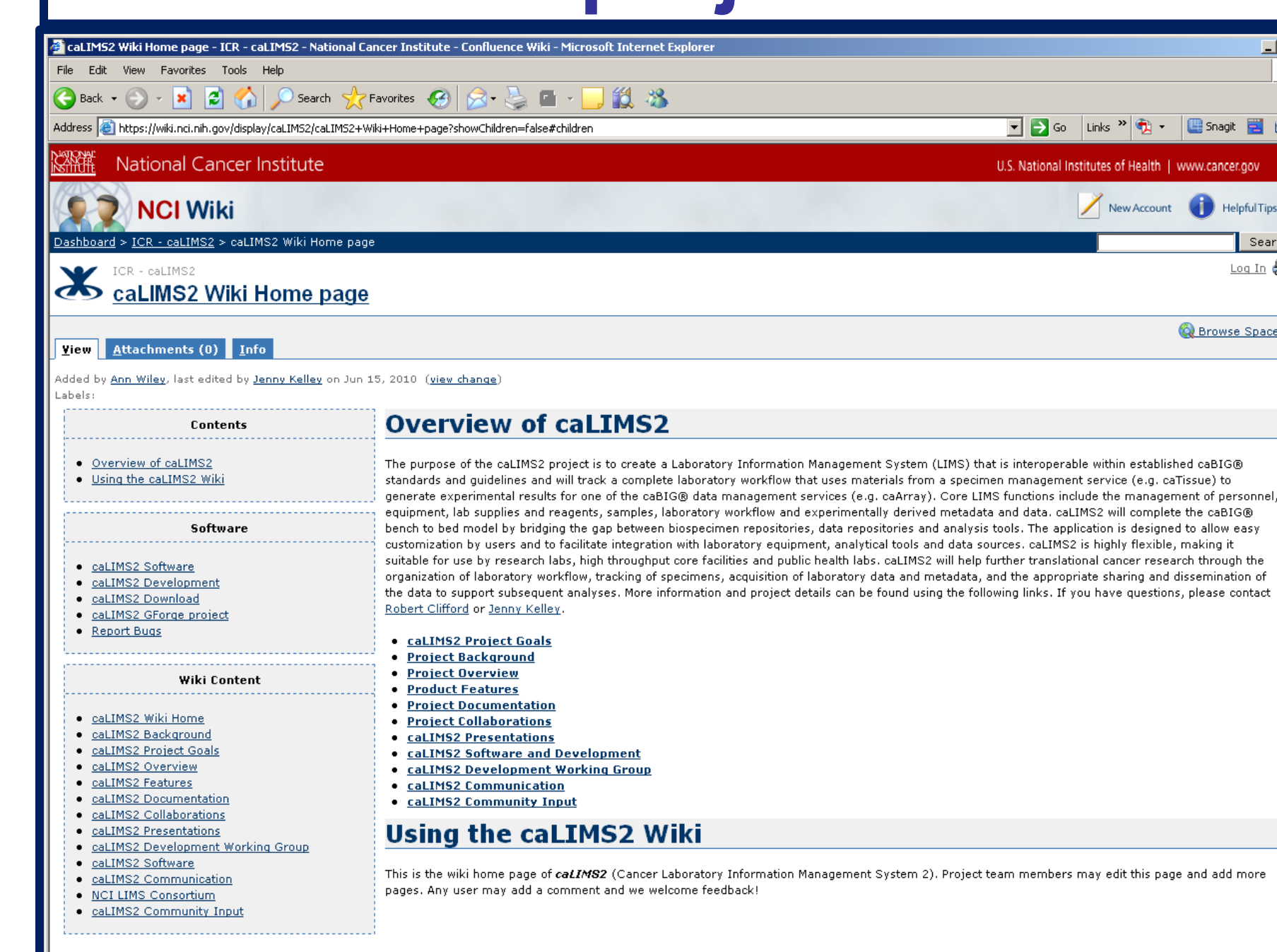
## Use Case: Integrating caLIMS v2 with caBIG® Services and Applications

- A Principal Investigator wants to participate in a collaborative study involving the relationship of gene *ABC1* and lung cancer susceptibility in men age 45 – 65. The PI is particularly interested in a population from Iceland.
- PI plans to use multiple data types (copy number, genotype, gene expression) in a new form of correlative analysis and wants to take advantage of existing data and specimen resources.
- PI obtains appropriate tissue specimens by searching caTissue and contacting Biorepository.
- PI obtains pre-existing gene expression data from caArray and generates new genotype and copy number data in her laboratory.
- PI programmatically submits final data to the caArray repository.
- PI publishes paper and makes caArray data available to public.

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**caLIMS v2 project wiki site**



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