

*A suite of applications that provides elements for a survey or health research study... including instrument content authoring, case management, data collection on Windows, Web and mobile in connected and disconnected modes for iOS, Android and Windows, data management, integration and data delivery.*

## What is DCAS

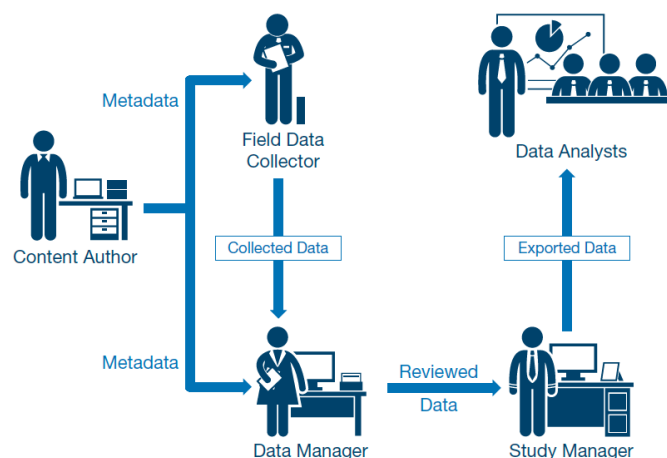
### The Data Collection Application Suite (DCAS)

is an open source suite of applications to support data collection on multiple fully interoperable platforms, review and delivery for surveys or health research studies originally developed for the CDC and significantly enhanced for NIH.

DCAS provides all elements for a survey or health research study, including content authoring, case management, data collection in multiple modes, data management and data delivery. DCAS Mobile is available on [iTunes](#) and [Google Play](#).

## The Lifecycle of DCAS Metadata

The lifecycle starts with importing an instrument's metadata "skeleton" created in MS Word. Next, multiple Content Authors create the metadata for each production instrument using the Metadata Editor (MDE) authoring tool. Then, instrument deployment packages in XML and JSON are created for deployment on multiple data collection platforms (Windows, Web or mobile). Data Collectors (or Participants) collect (or enter) data that is synchronized with and stored in the DCAS central repository. A Data Manager performs quality control, edits and prepares data for submission. Finally, the Data Factory generates the submission package.



## DCAS Main Applications

- **Metadata Editor** provides survey content authoring, researching, versioning and creating instrument metadata.
- **Case Management** facilitates the management of survey/study participants, data collection schedules, and workflow for data collection events. Also supports the transfer of cases between central and offline databases.
- **Equipment and Sample Tracking** manages data associated with biological specimens and environmental samples. Provides an inventory capability by tracking of specimens, samples and associated data elements.
- **Data Collection Instruments** allow data collection in online (connected) or offline (disconnected) modes, single or double data entry, and support Windows, Web, tablet (iPad, Android, Windows) and smartphone (iPhone, Android, Windows) platforms.
- **Data Editor** enables authorized DCAS users to edit collected data in a non-linear mode while tracking changes and comments.
- **Reporting** generates operational and instrument data reports integrated with the Case Management application or as a separate Web application.
- **Data Factory** provides the capability to export instrument and operational data in the submission format of XML, JSON or flat database automatically on-schedule or manually on-demand.
- **Data Integration** enables DCAS to exchange operational and instrument data with 3-rd party solutions.
- **Security** enables all DCAS applications to be integrated with Active Directory (AD) security groups, providing role-based access for DCAS data collectors, data entry personnel, data managers and system administrators.

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## DCAS Metadata Explained

- **Transparency:** easily visible to both technical and non-technical users
- **Maintainability:** easy GUI for both technical and non-technical users
- **Extensibility:** extend the metadata structure to add new elements
- **Standardization:** to support health IT standards
- **Exchangeability:** easily exchange between repositories in distributed environment
- **Robustness:** contains all elements and hierarchy to describe necessary processes and data
- **Documentability:** easily produces user friendly metadata reports



## DCAS Case Management

Implements a workflow for a survey or health study protocol and provides functionality that intuitively guides the data collectors to create and manage participant cases by completing various forms and data collection activities, including data collection events and appointments. This application also collects and manages instrument and operational data such as household, address, person, event, and contact, consent, and authorization information.

First Name	Last Name	Gender	DOB
Olivia	Spring	Female	04/04/2013
Jane	Silver	Female	01/02/1985
Brian	Silver	Male	
Anna	Silver	Female	06/20/2011
Sandy	Spring	Female	04/13/1987
Oliver	Spring	Male	04/04/2013
Michael	Silver	Male	10/12/1980
Catherine	Silver	Female	05/01/2013

What is your child's full name?

- IF PARTICIPANT REFUSES TO PROVIDE INFORMATION, RE-STATE FOR INITIALS OR SOME OTHER NAME SHE WOULD LIKE HER CHILD TO BE CALLED.
- CONFIRM SPELLING OF FIRST NAME IF NOT PREVIOUSLY COLLECTED CHILDREN.

FIRST NAME

LAST NAME

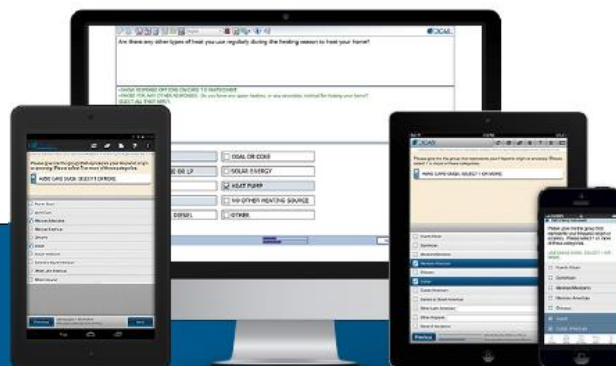
## DCAS Content Authoring System (MDE)

Is a graphical user interface for authoring DCAS instruments per instrument specifications. The MDE supports instrument authoring in 17 languages, and immediate preview of an instrument's flow and validations. Additionally, the MDE provides built-in instrument versioning, enables content reuse, and manages the DCAS Metadata Repository. After a DCAS instrument is authored, the MDE generates an instrument deployment package in XML and JSON that is ready to be administered in multiple data collection modes (CAPI/CATI/CASI/SAQ) on Web or mobile devices.

## Types of Data Collection Platforms

DCAS supports all major platforms, administration modes, and types of database connectivity. DCAS supports Windows, Web, iOS, and Android platforms for data capture, storage, and validation. Instruments can be administered in Computer-Assisted Personal/Self/Telephone or Paper and Pencil Interviews in online or offline modes. Paper forms can be entered using double data entry with merge functionality to reduce data entry errors. DCAS's dynamic representation of metadata handles skip patterns and survey flow, automatic population of participant operational data elements, and interprets predefined metadata logic. DCAS also performs

complex dynamic text substitutions based on participant information, operational, or instrument data, such as gender, name, address, and prescription medications or dietary supplements.



## Keep in Touch with DCAS

- Visit our website for more information: [www.dcasproject.org](http://www.dcasproject.org)
- Email us: [dcas@infoprosystems.net](mailto:dcas@infoprosystems.net)