

# Charlotte Regional Data Trust

## Technical Operations Manual

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# CRDT Integrated Data System

Current Data Sharing Partners  
Partners in Process

## Social Services Data

- Child Care Resources, Inc.
- Crisis Assistance Ministry
- Goodwill Industries
- Goodwill Opportunity Campus Partners
- Mecklenburg County CSS
- Mecklenburg County DSS
- Mecklenburg Partnership for Children
- YMCA

## Education Data

- Cabarrus County Schools
- Charlotte Mecklenburg Schools
- Kannapolis City Schools
- A Child's Place
- Bethlehem Center
- Brookstone Schools
- Central Piedmont Community College
- Communities in Schools
- Freedom School Partners
- UNC Charlotte

## Housing & Homelessness Data

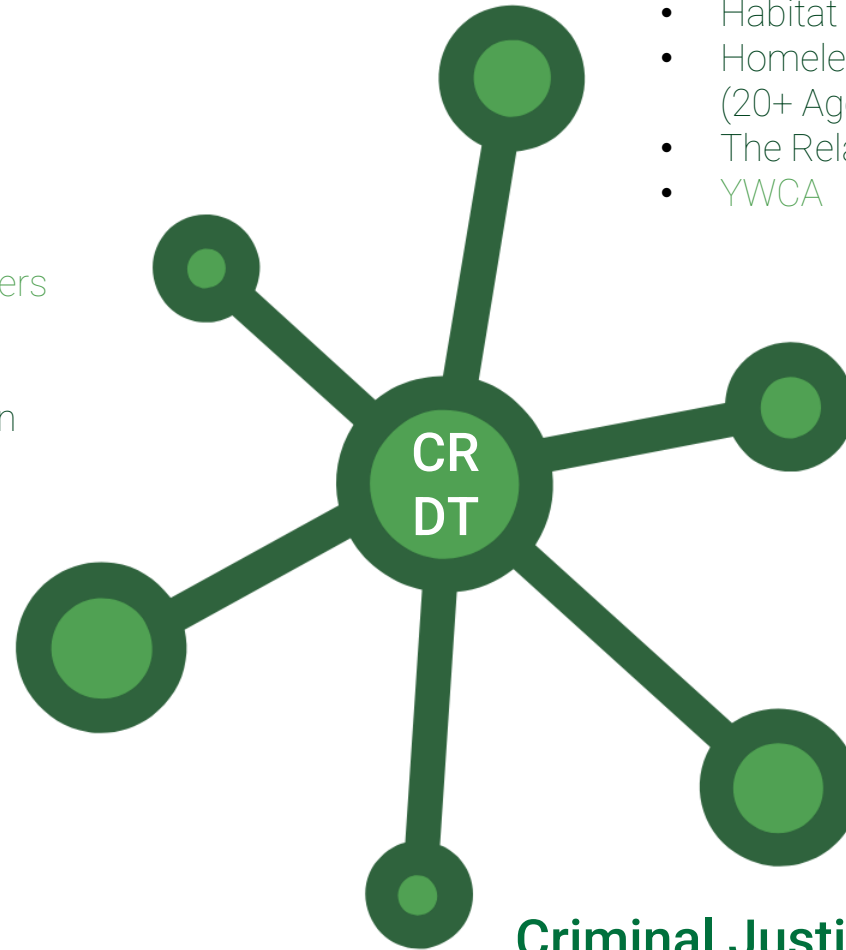
- Charlotte Family Housing
- Charlotte Housing Authority
- Charlotte-Mecklenburg Housing Partnership
- Habitat for Humanity
- Homeless Management Information Systems (20+ Agencies)
- The Relatives
- YWCA

## Health & Mental Health Data

- Atrium Health
- Cardinal Innovations
- Charlotte Community Health Clinic
- CW Williams Community Health Clinic
- Mecklenburg County Health Department
- Mecklenburg County Medic
- Novant Health

## Criminal Justice Data

- Mecklenburg County Sheriff's Office
- Administrative Office of the Courts
- Charlotte-Mecklenburg Police Department



# Data Operations

Upstream



Downstream

# Data & Research Services

- Data License Request
- Other Research Input
- Disclosure Control
- Data Security Policy



External  
Research  
Data



CRDT  
Database

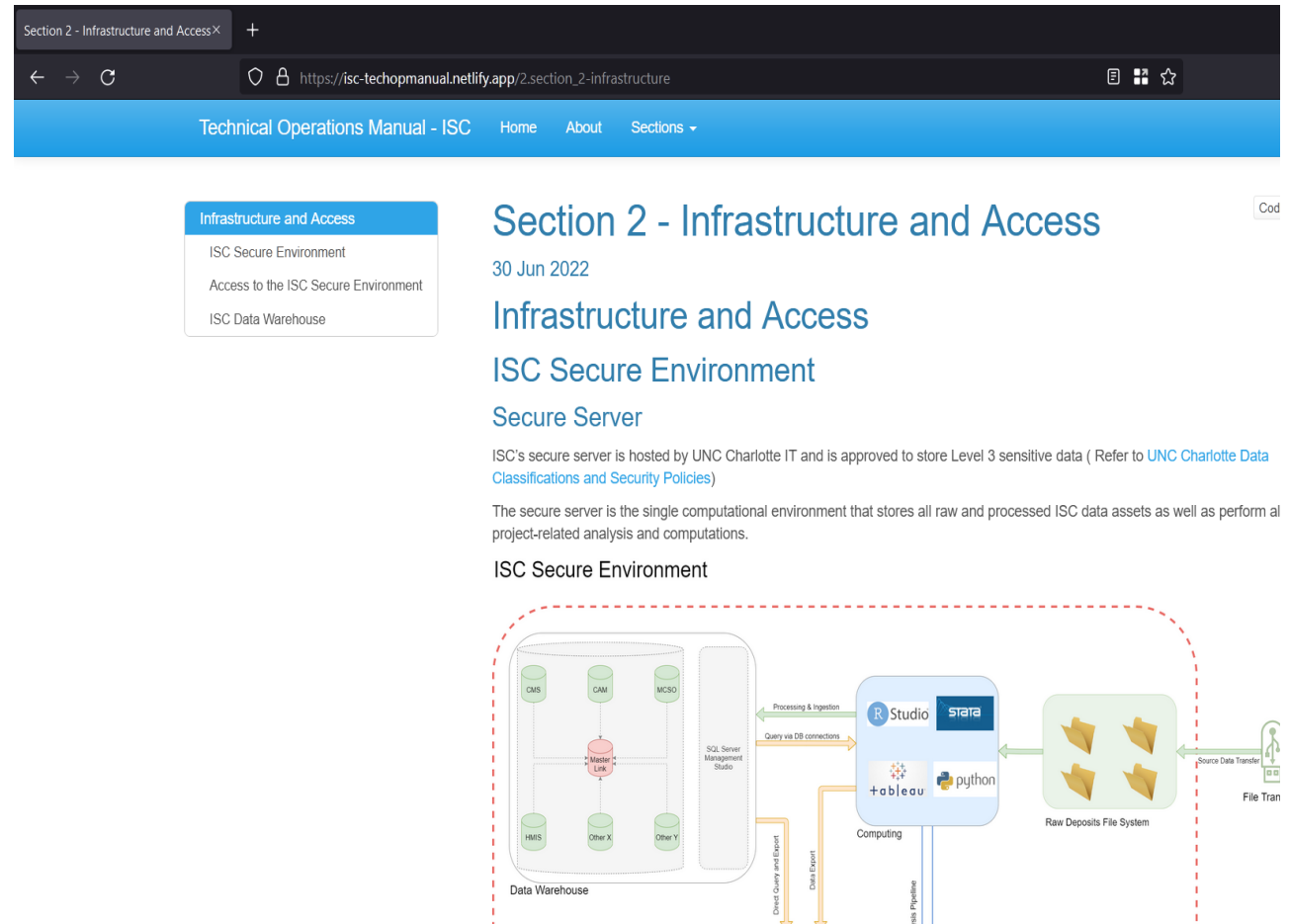


Linked  
Research  
Data

# The operations manual

# Principles

- Comprehensive
- Simple
- Extensible
- Pluralistic
- Collaborative
- Adaptive



The screenshot shows a web browser window with the URL [https://isc-techopmanual.netlify.app/2.section\\_2-infrastructure](https://isc-techopmanual.netlify.app/2.section_2-infrastructure). The page title is "Section 2 - Infrastructure and Access" and the date is "30 Jun 2022". The main heading is "Infrastructure and Access" followed by "ISC Secure Environment" and "Secure Server". The text states: "ISC's secure server is hosted by UNC Charlotte IT and is approved to store Level 3 sensitive data ( Refer to [UNC Charlotte Data Classifications and Security Policies](#))". It further explains: "The secure server is the single computational environment that stores all raw and processed ISC data assets as well as perform all project-related analysis and computations." Below this is a diagram of the "ISC Secure Environment" architecture. The diagram shows a "Data Warehouse" containing databases like CMS, CAM, WCSO, HMS, Other X, and Other Y, connected to an "SQL Server Management Studio". This is linked to a "Computing" environment with R Studio, STATA, Tableau, and Python. The computing environment interacts with a "Raw Deposits File System" and a "File Tran" (File Transfer) service. Data flow is indicated by arrows: "Processing & Ingestion" from the Data Warehouse to Computing, "Query via DB connectors" from Computing to the Data Warehouse, "Data Export" from Computing to the File System, and "Source Data Transfer" from File Tran to the File System.

Section 2 - Infrastructure and Access

30 Jun 2022

## Infrastructure and Access

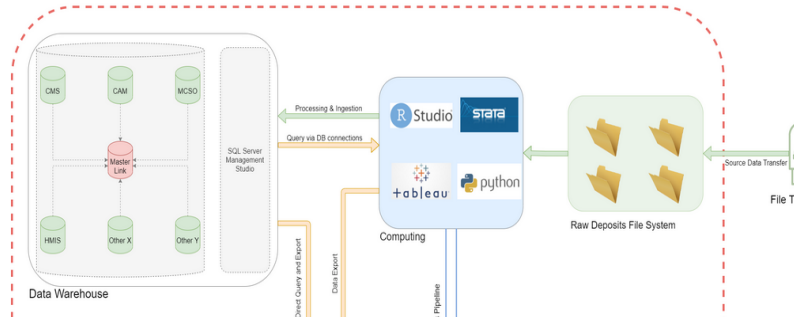
### ISC Secure Environment

#### Secure Server

ISC's secure server is hosted by UNC Charlotte IT and is approved to store Level 3 sensitive data ( Refer to [UNC Charlotte Data Classifications and Security Policies](#))

The secure server is the single computational environment that stores all raw and processed ISC data assets as well as perform all project-related analysis and computations.

#### ISC Secure Environment



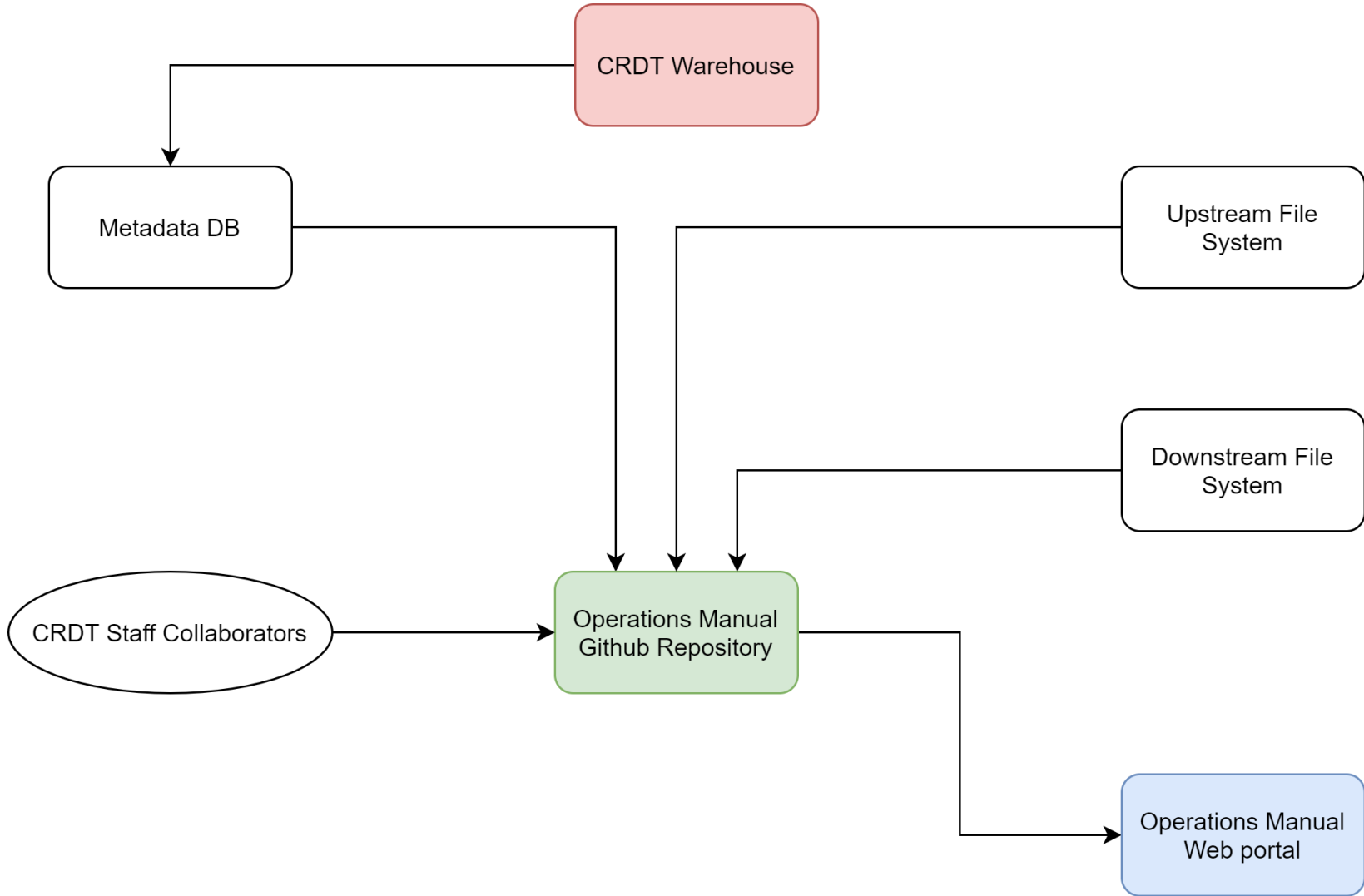
```
graph LR
    subgraph Data_Warehouse [Data Warehouse]
        CMS
        CAM
        WCSO
        HMS
        Other_X[Other X]
        Other_Y[Other Y]
        MS[Master Link]
    end
    subgraph SQL_SMS [SQL Server Management Studio]
        MS
    end
    subgraph Computing
        R[R Studio]
        S[STATA]
        T[Tableau]
        P[python]
    end
    subgraph File_System [Raw Deposits File System]
        FS[File System]
    end
    subgraph File_Tran [File Tran]
        FT[File Transfer]
    end

    Data_Warehouse -- "Processing & Ingestion" --> Computing
    Computing -- "Query via DB connectors" --> SQL_SMS
    Computing -- "Data Export" --> File_System
    File_Tran -- "Source Data Transfer" --> File_System
```

# Technology stack of the manual

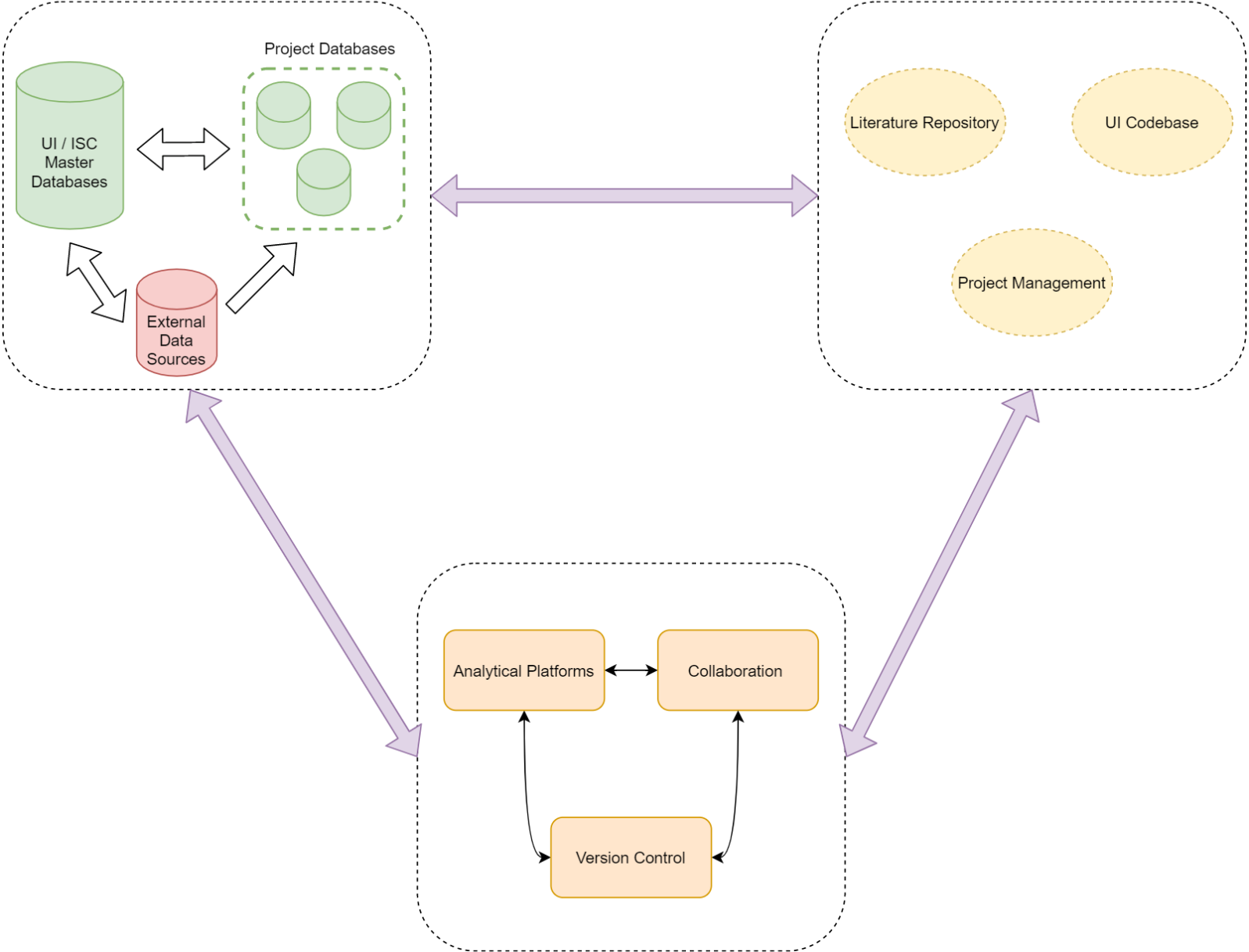


# Workflow





# Reproducible research framework at UI



# Future

- Finishing v.1.0
- Public Version
- Linking Reference Management
- Linking Project Files
- Project Management Templates
- Rmarkdown to Quarto?



Thank you

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