

CHHS Cross-Department [pilot] Research Projects

April 22, 2021

Children's Data Network

Two “pilot” projects...

- GOALS

- Create routinized approaches to preparing, linking, and sharing data with external researchers
- Promote knowledge generation that benefits Californians through the use of existing data
- Reduce data processing burden on agency analysts
- Improve reproducibility by maintaining code and data
- Create documentation critical to the proper use of data
- Ensure highest levels of client confidentiality and data security

Two “pilot” projects...

- USING THE CHHS RESEARCH DATA HUB

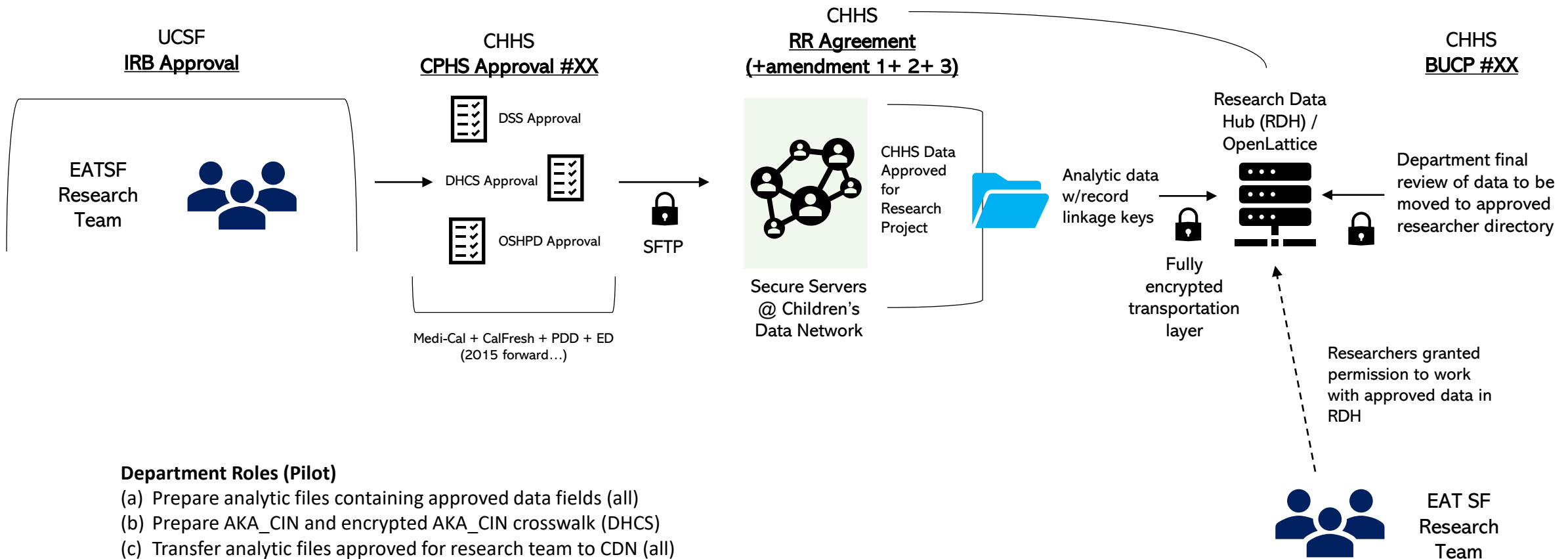
- *Expanding Access to SNAP*
- EATSF Research Team from UCSF
- Admin data only, policy relevance to CA, three departments, interested in using secure analytic environment
- Requires linkage keys (record reconciliation)
- Data to be processed by researchers in secure environment...ensures security for multi-department data

- USING THE COMMON APPLICATION

- *Stockton Economic Empowerment Demonstration (SEED)*
- UBI Research Team from the University of Tennessee
- Small number of records, participant consent, flexible timeline, four departments
- Requires linkage keys (record reconciliation)
- Data to be released to researchers...but only for fully consented study participants

Data Flow (the short version)

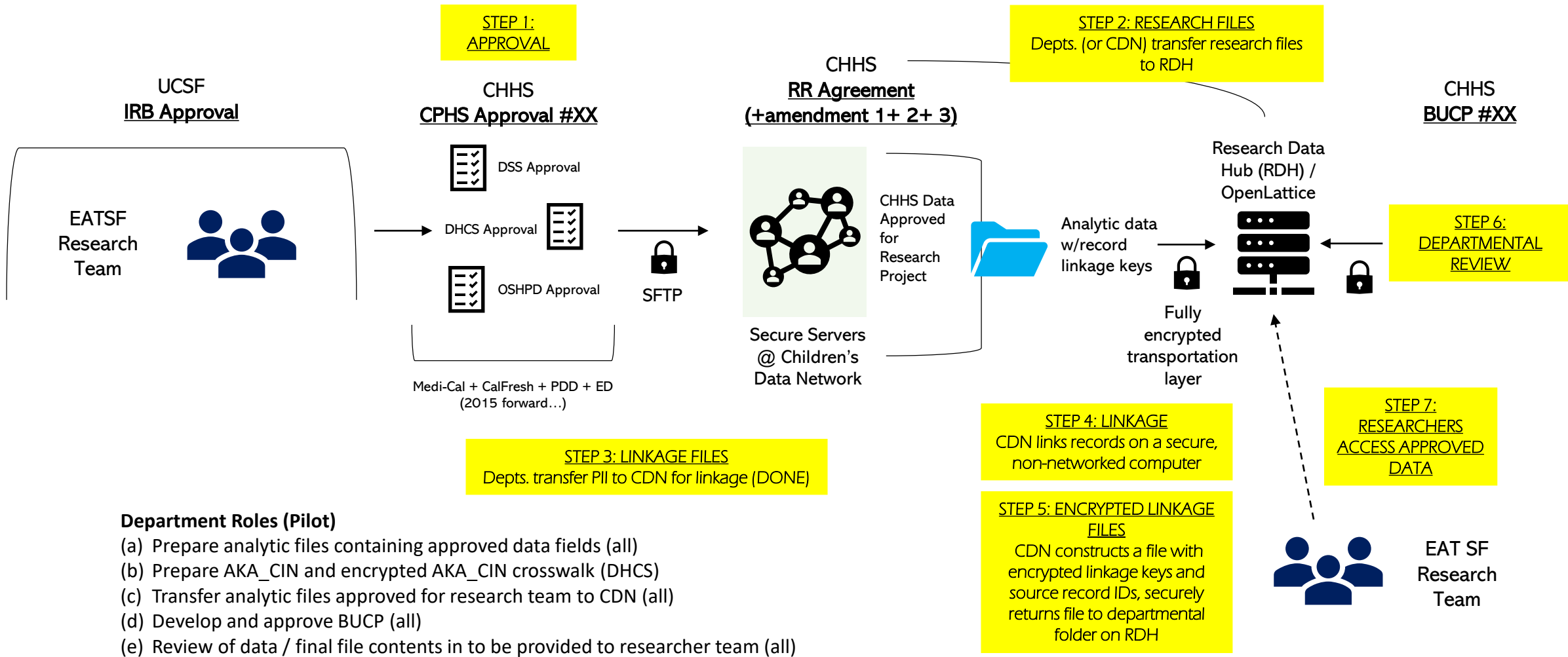
1. **APPROVAL:** Researchers obtain approval to access a defined dataset (i.e., CPHS and Departmental approvals through Common Application).
2. **RESEARCH FILES:** Each department (or the CDN in these early stages) transfers research file(s) to the respective departmental folder on RDH that will be merged with other approved datasets via the encrypted linkage keys.
3. **LINKAGE FILES:** Each department transfers PII to CDN for linkage.
4. **LINKAGE:** CDN links records using probabilistic algorithm on a non-networked / air-gapped server. Linkage generates pairwise, encrypted linkage keys.
5. **ENCRYPTED LINKAGE FILES:** CDN constructs a file with encrypted linkage keys and source record IDs to allow the keys to be merged at the person-level to source research / analysis files (no direct identifiers). CDN securely returns linkage keys + source record IDs to respective departmental folder on the RDH.
6. **DEPARTMENTAL REVIEW:** Departments review / approve data to be accessed by researchers.
7. **ACCESS TO APPROVED DATA:** Researchers receive permission to view and analyze approved datasets (research files + encrypted linkage files) from designated workspace



Department Roles (Pilot)

- (a) Prepare analytic files containing approved data fields (all)
- (b) Prepare AKA_CIN and encrypted AKA_CIN crosswalk (DHCS)
- (c) Transfer analytic files approved for research team to CDN (all)
- (d) Develop and approve BUCP (all)
- (e) Review of data / final file contents in to be provided to researcher team (all)

[EATSF Data Hub Pilot Project]

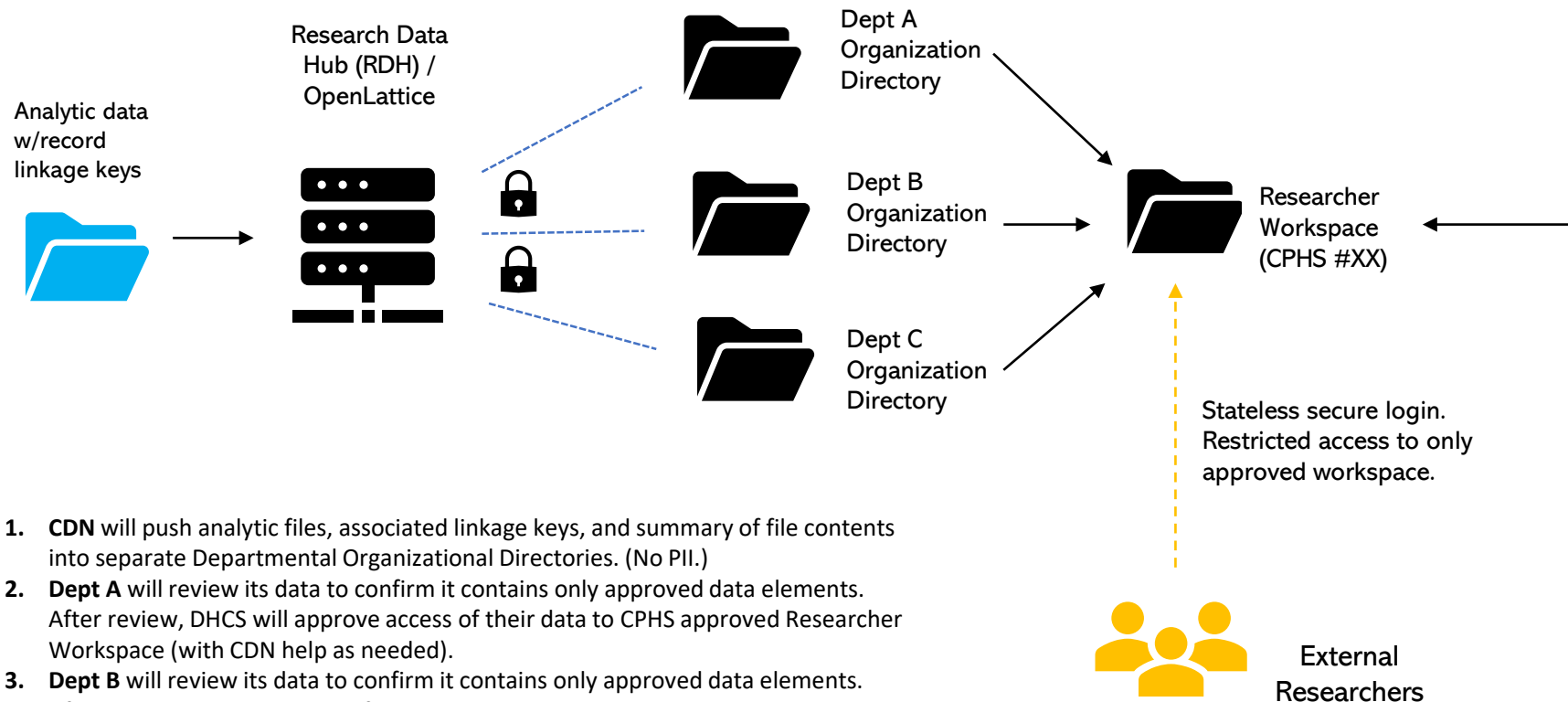


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[EATSF Data Hub Pilot Project]

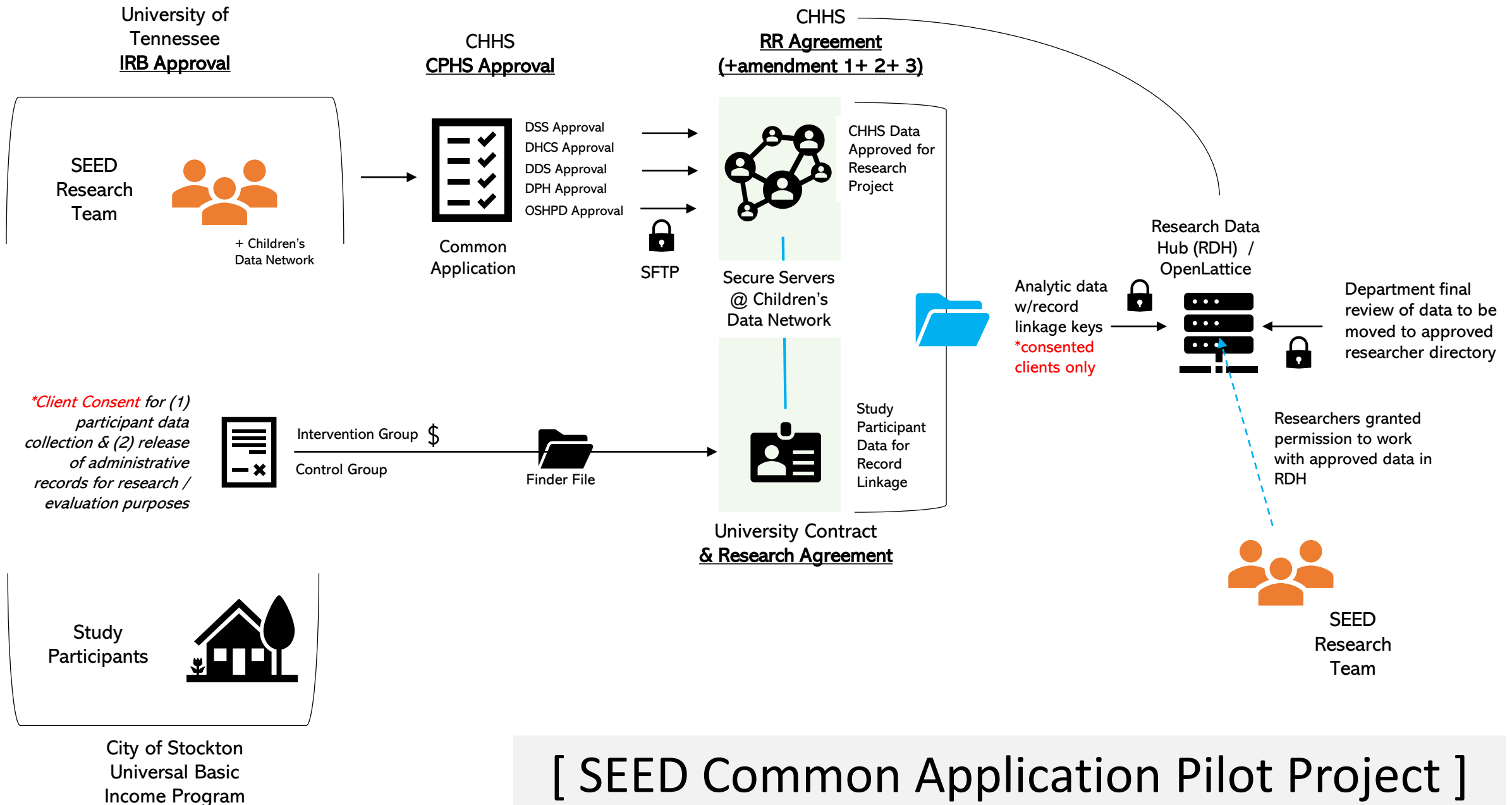
[Partitioned / Secure Organizations]

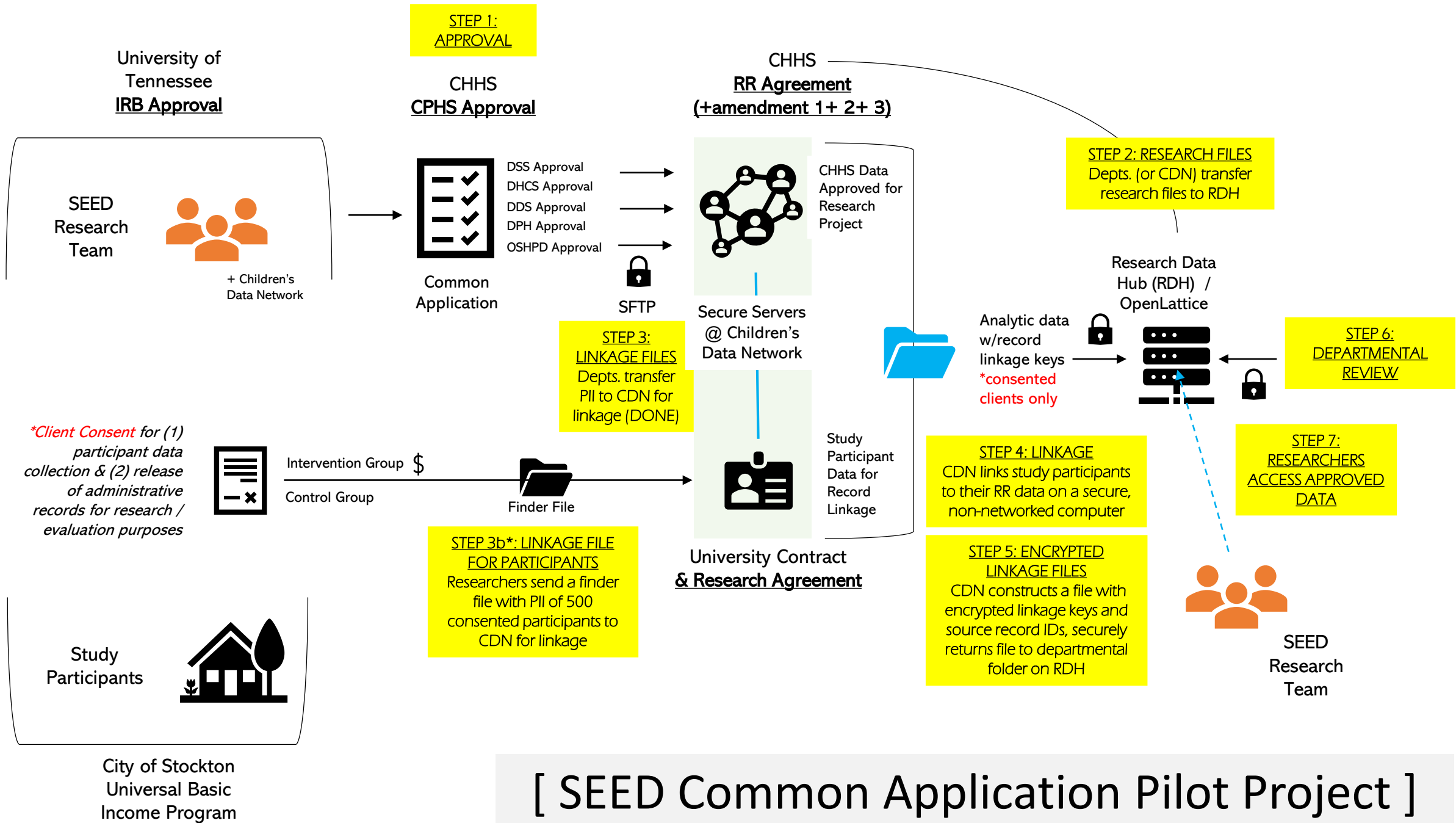


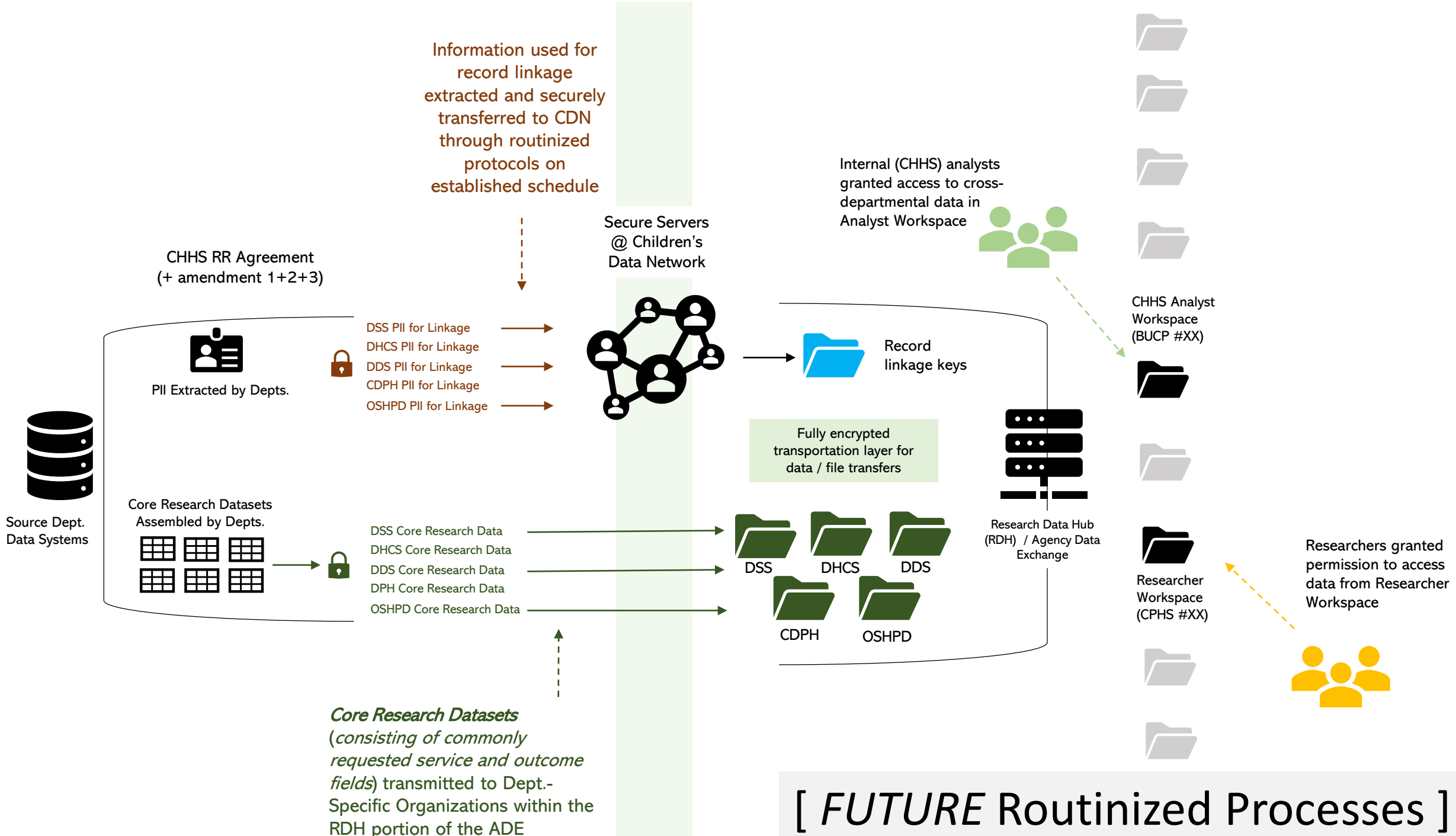
1. **CDN** will push analytic files, associated linkage keys, and summary of file contents into separate Departmental Organizational Directories. (No PII.)
2. **Dept A** will review its data to confirm it contains only approved data elements. After review, DHCS will approve access of their data to CPHS approved Researcher Workspace (with CDN help as needed).
3. **Dept B** will review its data to confirm it contains only approved data elements. After review, DSS will access of their data to CPHS approved Researcher Workspace (with CDN help as needed).
4. **Dept C** will review its data to confirm it contains only approved data elements. After review, DSS will approve access of their data to CPHS approved Researcher Workspace (with CDN help as needed).

REMINDER:

- External researchers will not have access to a data in a Department's organization. They will have a separate workspace / directory organized by their CPHS approval number where they will be able to access data they have been approved to work with.
- Internal analysts will only have access to an organization and specific datasets that they have been granted access to by the Department who has authority for the data
- Cross-departmental projects will be carried out in a separate workspace / directory organized by their BUCP approval number.







Questions?

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