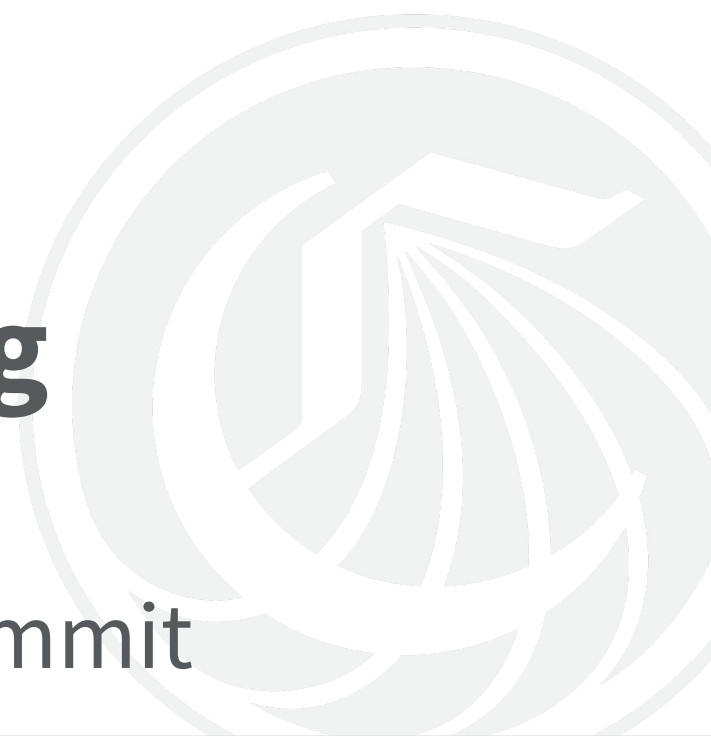




California  
Community  
Colleges

# CCC Data: Connecting Colleges with Data

## CISOA Virtual Technology Summit



# Introductions



**Mark Cohen**

Product Manager, Infrastructure and Data Services  
California Community Colleges Technology Center  
[mcohen@ccctechcenter.org](mailto:mcohen@ccctechcenter.org)



**Alex Jackl**

Executive Consultant, EdTech Data Governance  
Digital Innovations & Infrastructure  
California Community Colleges Chancellor's Office  
[ajackl@cccco.edu](mailto:ajackl@cccco.edu)



# CCC Data

Supported by the Data Services Program (DSP) initiative from the California Community Colleges Chancellor's Office, CCC Data provides our Colleges with access to critical data used to support institutional decision-making aligned with the CCCCO Vision for Success.



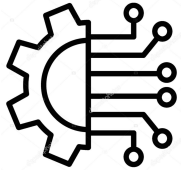
California Community Colleges  
Chancellor's Office

# Agenda

- Overview
- Flow of Data
- Available Data Sources
- Accessing the Data Warehouse
- Project Update
- Stakeholder Engagement
- Next Steps
- Discussion



# CCC Data Overview



## Data Pipelines

- Several proven methods available to integrate data with CCC Data
- Extract, Transform, and Loads data
- Runs nightly (or more frequently)



## CCC Data Warehouse

- Structured source of master data segmented by MIS code
- Connects data to generate reports and analytics for end-users
- Built on Amazon AWS Redshift



## CCC Data Lake

- Collects data, preserving changes
- Used to power Data Warehouse, Data-Marts, and analytics
- Built on Amazon AWS S3



## Data Warehouse Connections

- Colleges may connect local BI/ analytics tools or use the DW Report Server
  - Direct (ODBC/JDBC) Connection
  - CCC Data Report Server

# Available Data Sources

CCC Apply Credit & Noncredit Application

CCC Apply International Application

CCC Apply Promise Grant

Multiple Measures/MMPS (placement data)

MyPath (usage data)

Canvas (learning analytics)

COCI (courses and programs)

C-ID (articulations)

CCCCO-MIS

Cal-Pass+ (K-12)

Launchboard

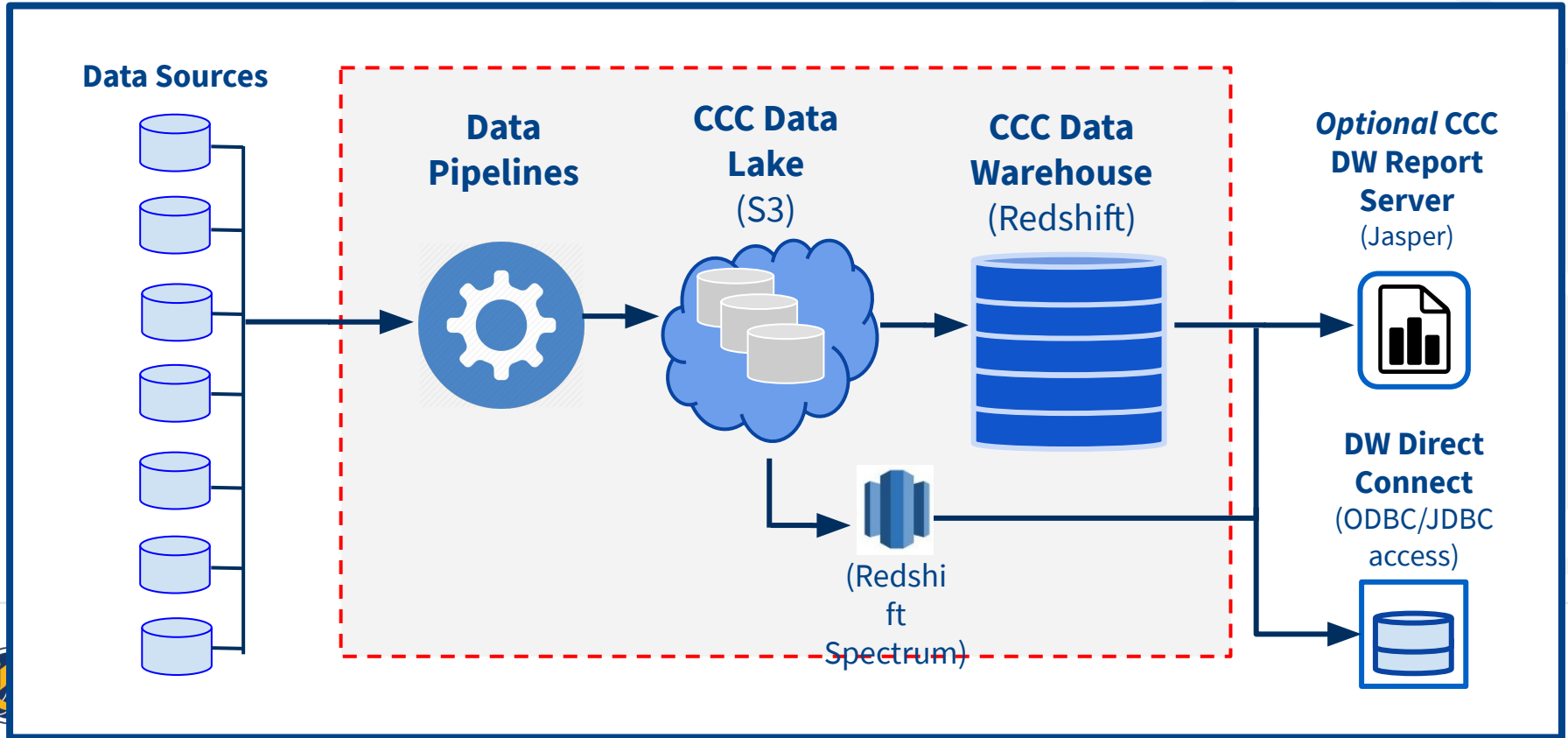
NOVA

Available to colleges 20/21

Availability pending governance

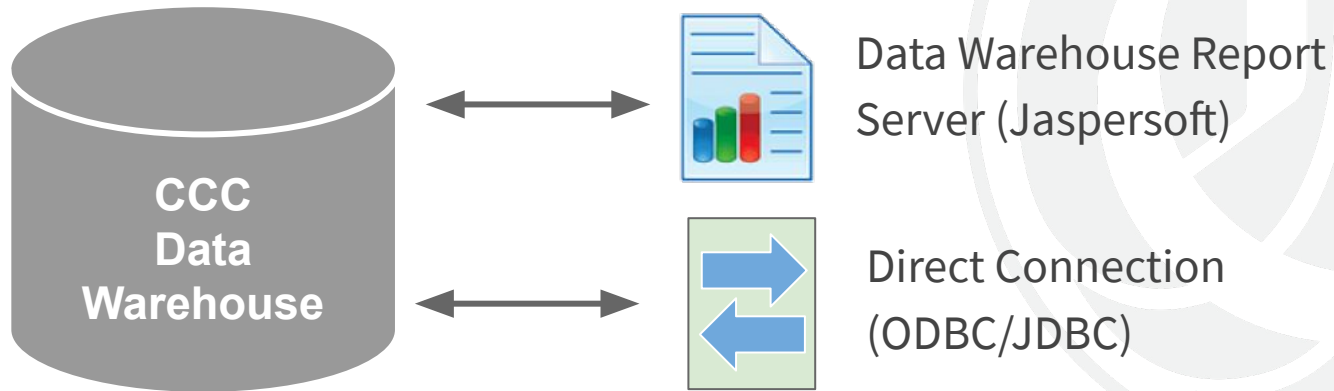
In progress/pending governance

# CCC Data Platform



# Accessing the CCC Data Warehouse

CCC Data available to approved college and district staff,  
through:





# CCC Data: Direct Connect

- Supports colleges and district offices connecting data in the CCC Data Warehouse, with:
  - Available BI/analytic applications, such as Tableau and Power BI,
  - SQL Workbench for direct queries
  - Local data warehouse, connected as external tables
- Connection requires:
  - Installation of custom site-to-site VPN
  - Data Warehouse log-in credentials

# CCC Data: DW Report Server

dw-reports.ccctechcenter.org/jasperserver-pro/login.html

California Community Colleges | Data Warehouse Report Server [Help](#)

**Organization (MIS Code):**

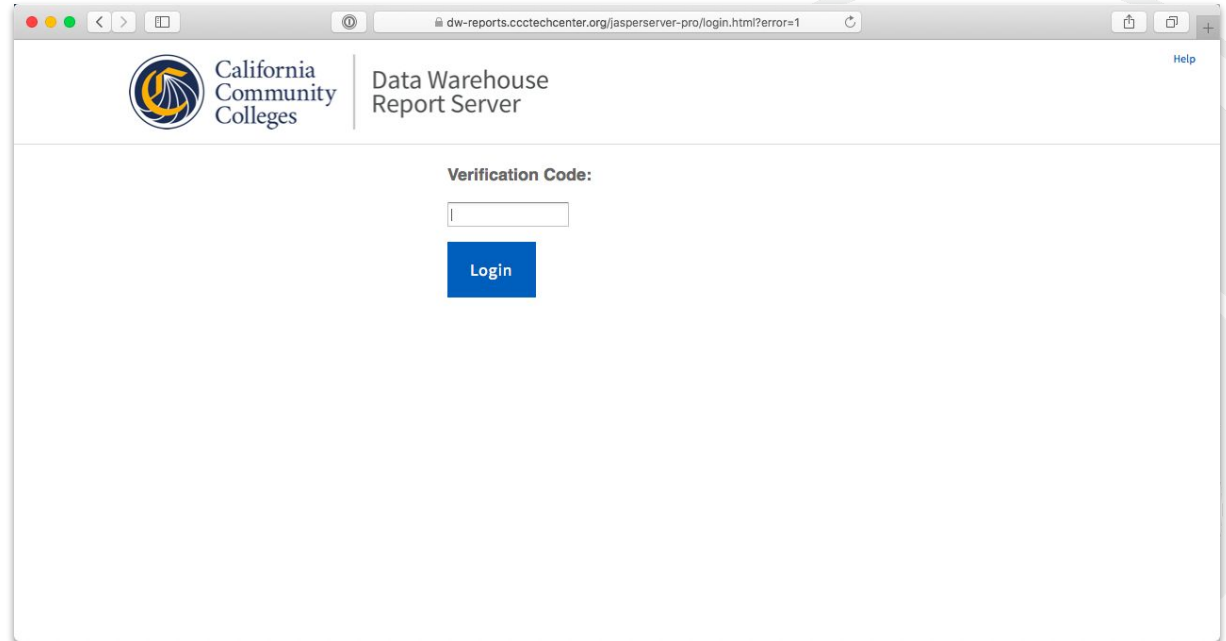
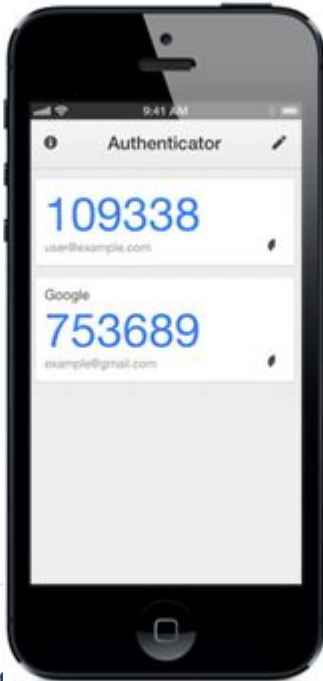
**User ID:**

**Password:**

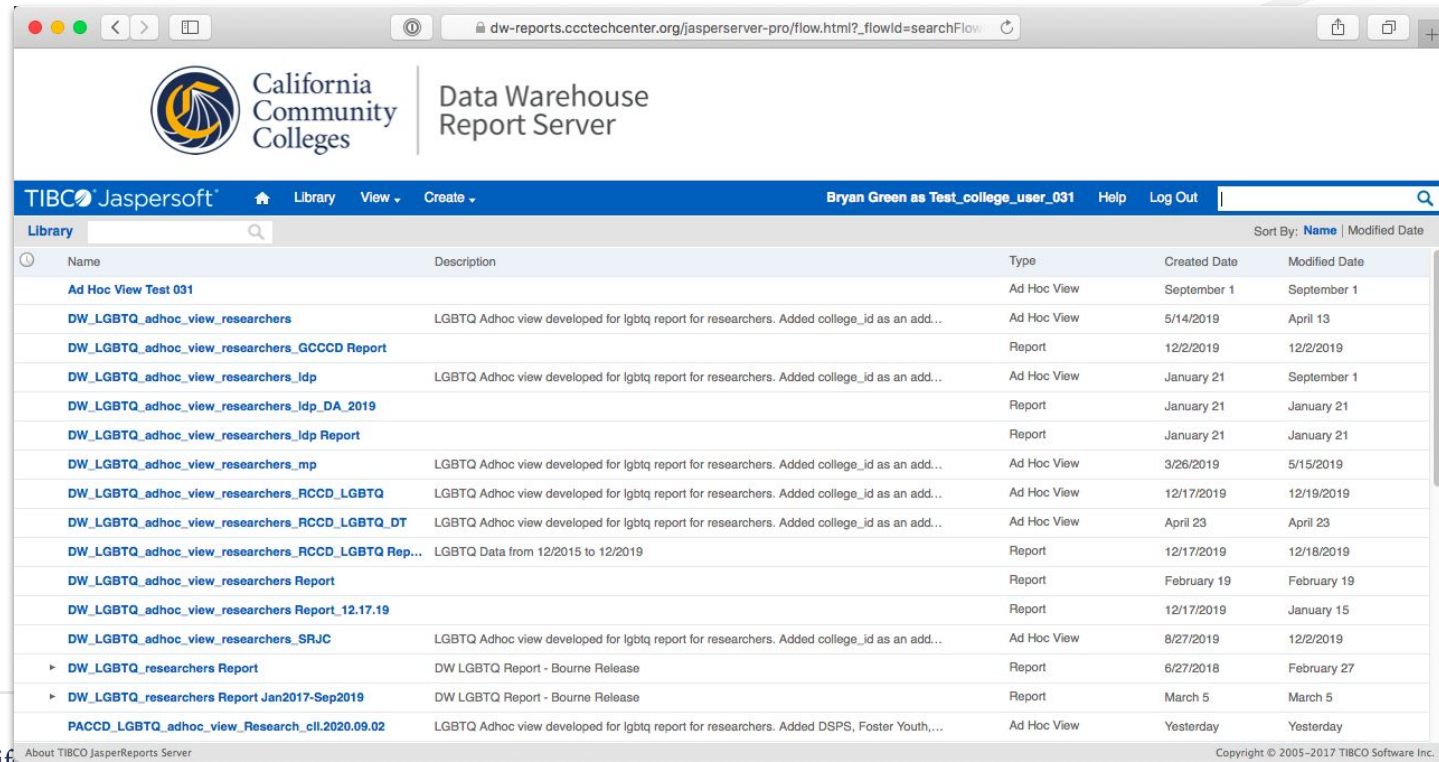
[Show locale & time zone](#)

[Login](#)

# Accessing the DW Report Server



# DW Report Server - Available Reports



The screenshot displays a web browser window with the URL `dw-reports.ccctechcenter.org/jasperserver-pro/flow.html?_flowId=searchFlow`. The page header includes the California Community Colleges logo and the text "Data Warehouse Report Server". The navigation bar shows "TIBCO Jaspersoft" and the user "Bryan Green as Test\_college\_user\_031". The main content area is a table of reports, sorted by Name. The table has columns for Name, Description, Type, Created Date, and Modified Date.

| Name  | Description  | Type        | Created Date | Modified Date |
|---|--|-------------|--------------|---------------|
| Ad Hoc View Test 031                              |  | Ad Hoc View | September 1  | September 1   |
| DW_LGBTQ_adhoc_view_researchers                   | LGBTQ Adhoc view developed for lgbtq report for researchers. Added college_id as an add... | Ad Hoc View | 5/14/2019    | April 13      |
| DW_LGBTQ_adhoc_view_researchers_GCCCD Report      |  | Report      | 12/2/2019    | 12/2/2019     |
| DW_LGBTQ_adhoc_view_researchers_idp               | LGBTQ Adhoc view developed for lgbtq report for researchers. Added college_id as an add... | Ad Hoc View | January 21   | September 1   |
| DW_LGBTQ_adhoc_view_researchers_idp_DA_2019       |  | Report      | January 21   | January 21    |
| DW_LGBTQ_adhoc_view_researchers_idp Report        |  | Report      | January 21   | January 21    |
| DW_LGBTQ_adhoc_view_researchers_mp                | LGBTQ Adhoc view developed for lgbtq report for researchers. Added college_id as an add... | Ad Hoc View | 3/26/2019    | 5/15/2019     |
| DW_LGBTQ_adhoc_view_researchers_RCCD_LGBTQ        | LGBTQ Adhoc view developed for lgbtq report for researchers. Added college_id as an add... | Ad Hoc View | 12/17/2019   | 12/19/2019    |
| DW_LGBTQ_adhoc_view_researchers_RCCD_LGBTQ_DT     | LGBTQ Adhoc view developed for lgbtq report for researchers. Added college_id as an add... | Ad Hoc View | April 23     | April 23      |
| DW_LGBTQ_adhoc_view_researchers_RCCD_LGBTQ Rep... | LGBTQ Data from 12/2015 to 12/2019   | Report      | 12/17/2019   | 12/18/2019    |
| DW_LGBTQ_adhoc_view_researchers Report            |  | Report      | February 19  | February 19   |
| DW_LGBTQ_adhoc_view_researchers Report_12.17.19   |  | Report      | 12/17/2019   | January 15    |
| DW_LGBTQ_adhoc_view_researchers_SRJC              | LGBTQ Adhoc view developed for lgbtq report for researchers. Added college_id as an add... | Ad Hoc View | 8/27/2019    | 12/2/2019     |
| ▶ DW_LGBTQ_researchers Report                     | DW LGBTQ Report - Bourne Release   | Report      | 8/27/2018    | February 27   |
| ▶ DW_LGBTQ_researchers Report Jan2017-Sep2019     | DW LGBTQ Report - Bourne Release   | Report      | March 5      | March 5       |
| PACCD_LGBTQ_adhoc_view_Research_cil.2020.09.02    | LGBTQ Adhoc view developed for lgbtq report for researchers. Added DSPS, Foster Youth,...  | Ad Hoc View | Yesterday    | Yesterday     |

# DW Report Server - Creating Reports



The screenshot displays the user interface of the Data Warehouse Report Server. At the top left is the California Community Colleges logo, followed by the text "California Community Colleges" and "Data Warehouse Report Server". Below this is a blue navigation bar with the "TIBCO Jaspersoft" logo and a home icon, and menu items for "Library", "View", "Manage", and "Create". The "Create" dropdown menu is open, showing options: "Ad Hoc View" (highlighted), "Report", "Dashboard", "Domain", and "Data Source". On the left side of the interface, there are sections for "Home", "Recently Viewed Items", and "Popular Resources".

# DW Report Server - Creating Reports

The screenshot displays the 'Data Warehouse' report server interface. A 'Select Data' dialog box is open, showing a list of report categories. The background interface includes a navigation bar with 'Library', 'View', and 'Create' options, and a user menu with 'lege\_user\_031', 'Help', and 'Log O'. The report categories listed in the dialog are:

- BOG Fee Waiver
- EPPN Mapping
- International Application
- MMPS
- Schools
- Submitted Applications
- Submitted Applications (DW) Domain\_lgbtq
- Submitted Applications - Spam
- XAP Applications

The dialog box has an 'OK' button and a 'Cancel' button at the bottom.

# DW Report Server - Creating Reports

The screenshot displays the TIBCO JasperReports Server interface. The browser address bar shows the URL: `dw-reports.ccctechcenter.org/jasperserver-pro/flow.html?_flowId=adhocFlow`. The page header includes the California Community Colleges logo and the text "Data Warehouse Report Server". The user is logged in as "Bryan Green as Test\_college\_user".

The interface shows a "New Ad Hoc View" configuration. The "Columns" section is set to "Table" and "Sample Data". The selected columns are: College ID, Citizenship Status, Academic Counseling, CA Foster Youth, and Comfortable English. The "Groups" section is empty.

The main content area displays a table with the following data:

| College ID | Citizenship Status | Academic Counseling | CA Foster Youth | Comfortable English |
|------------|--------------------|---------------------|-----------------|---------------------|
| 031        | 1                  | true                | false           | true                |
| 031        | 1                  | true                | false           | true                |
| 031        | 1                  | false               | false           | false               |
| 031        | 1                  | false               | false           | true                |
| 031        | 1                  | true                | false           | true                |
| 031        | 1                  | false               | false           | true                |
| 031        | 1                  | false               | false           | true                |
| 031        | 3                  | false               | false           | true                |
| 031        | 1                  | false               | false           | true                |
| 031        | 1                  | false               | false           | false               |
| 031        | 1                  | true                | false           | true                |
| 031        | 1                  | false               | false           | true                |

# DW Report Server - Creating Reports

The screenshot displays the TIBCO JasperReports Server interface. The main window shows a 'New Ad Hoc View' configuration page. A 'Save As' dialog box is open in the foreground, allowing the user to save the current configuration as a new data view.

**Save As Dialog Box:**

- Data View Name (required):** Ad Hoc View 101
- Data view Description:** (Empty text area)
- Location:** Imperial Valley College
- Structure:** Ad Hoc Components, Organizations, Public
- Buttons:** Save, Cancel

**Background Interface:**

- Header:** California Community Colleges Data Warehouse Reports
- Navigation:** TIBCO Jaspersoft, Library, View, Create
- Domain:** Submitted Applications
- Fields:** Searchable list of fields including Cal Works, Career Planning, Child Care, Comfortable English, Counseling Personal, DSPS, Employment Assistance, and EOPS.
- Measures:** Searchable list of measures.
- Columns:** College ID, Citizenship Status
- Table:** A table with columns 'College ID' and 'Citizenship Status' containing 15 rows of data.

| College ID | Citizenship Status |
|------------|--------------------|
| 031        | 1                  |
| 031        | 1                  |
| 031        | 1                  |
| 031        | 1                  |
| 031        | 1                  |
| 031        | 1                  |
| 031        | 1                  |
| 031        | 1                  |
| 031        | 3                  |
| 031        | 1                  |
| 031        | 1                  |
| 031        | 1                  |
| 031        | 1                  |
| 031        | 1                  |
| 031        | 1                  |
| 031        | 1                  |



# DW Report Server - Creating Reports

The screenshot displays the TIBCO JasperReports Server interface. At the top, the browser address bar shows the URL: `dw-reports.ccctechcenter.org/jasperserver-pro/flow.html?_flowId=adhocFlow`. The page header includes the California Community Colleges Data Warehouse Report Server logo and navigation links: Home, Library, View, Create. The user is logged in as `Bryan Green as Test_college_user_031`. The main content area shows a report titled `DW_LGBTQ_adhoc_view_researchers_ldp` with columns: `college_id`, `Homeless Student`, `Sexual Orientation`, `Transgender`, `Veteran_Status`, and `Foster_Youth`. The report is displayed as a table with 13 rows of data. On the right, filters are applied: `A.tstmp_submit` is between `2017-01-01 00:59:59` and `2017-12-31 00:59:59`, and `B.college_id` equals `031`. An `Apply` button is visible at the bottom right of the filter section.

| college_id | Homeless Student | Sexual Orientation    | Transgender  | Veteran_Status | Foster_Y |
|------------|------------------|-----------------------|--------------|----------------|----------|
| 031        | No               | No Selection          | No Selection | Non-Veteran    | No       |
| 031        | No               | Straight/Heterosexual | No           | Non-Veteran    | No       |
| 031        | No               | Straight/Heterosexual | No           | Non-Veteran    | No       |
| 031        | No               | No Selection          | No Selection | Non-Veteran    | No       |
| 031        | No               | Straight/Heterosexual | No           | Non-Veteran    | Former F |
| 031        | No               | Straight/Heterosexual | No           | Non-Veteran    | No       |
| 031        | No               | No Selection          | No           | Non-Veteran    | No       |
| 031        | No               | No Selection          | No Selection | Non-Veteran    | No       |
| 031        | No               | Straight/Heterosexual | No           | Non-Veteran    | No       |
| 031        | No               | No Selection          | No Selection | Non-Veteran    | No       |
| 031        | No               | Straight/Heterosexual | No           | Non-Veteran    | No       |
| 031        | No               | No Selection          | No Selection | Non-Veteran    | No       |
| 031        | No               | Straight/Heterosexual | No           | Non-Veteran    | No       |



# Requesting Access

## Approved College/District Access

- Request made to: [CRMs@cctechcenter.org](mailto:CRMs@cctechcenter.org)

## Chancellor's Office Access:

- Request made to: [mcohen@cctechcenter.org](mailto:mcohen@cctechcenter.org)
- Approval by: Barney Gomez, Vice Chancellor for Digital Innovation & Infrastructure

# Project Update: 2020/2021 Priorities

- New data sources to Data Lake & Data Warehouse, aligned with CCCCCO priorities and guidance from the Data Warehouse Advisory Group
- Support colleges with appropriate access to the Data Warehouse & DW Report Center
- Update CCC Data access controls per revised CCCCCO policies
- Focus on Maintenance & Operations
  - Updates to DL/DW data sources as necessary
  - Upgrade Jaspersoft DW Report Server
  - Technical debt and enhanced security

# Project Update: CCC Data 1.4

Data Sources

CCC Data Access

Data  
Warehouse  
Report  
Server

Apply App

Apply International App

Apply Fee Waiver

Multiple Measures (MMPS)

LGBTQ Data & Report

**CCC Data 1.4.1**

Production:

August 27, 2020

# Project Update: CCC Data 1.4

## Data Sources

CCC Data Access

Data Warehouse Report Server

CCC access to Data Warehouse Report Server, with access to:

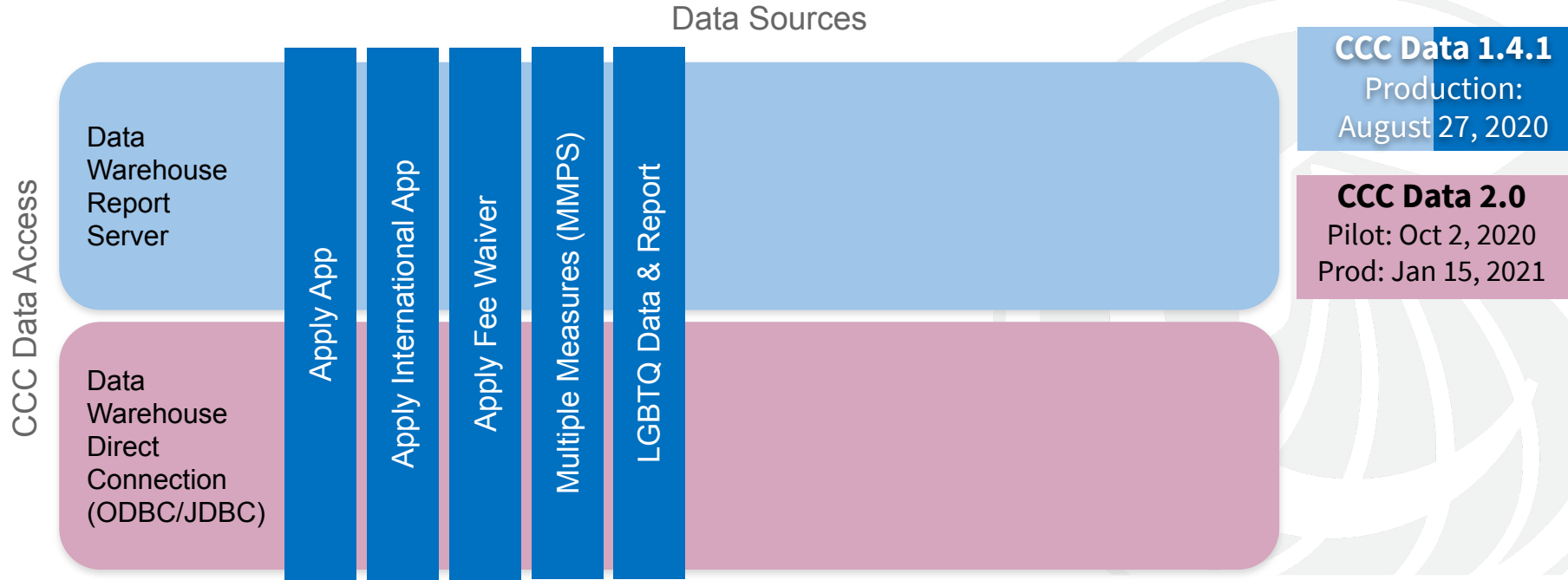
- CCCApply: Application (includes Non-Credit App)
- CCCApply: International Application
- CCCApply: College Promise
- Multiple Measures Placement Service (MMPS)
- LGBTQ data and report

Production deploy Aug. 27 2020

**CCC Data 1.4.1**

Production:  
August 27, 2020

# Project Update: CCC Data 2.0



# Project Update: CCC Data 2.0

## Data Sources

CCC Data Access

Data Warehouse Report Server

Data Warehouse Direct Connection (ODBC/J

Direct (ODBC/JDBC) access to DW, to include CCC access to:

- CCCApply: Application (includes Non-Credit App)
- CCCApply: International Application
- CCCApply: College Promise
- Multiple Measures Placement Service (MMPS)

Pilot: October 2020, Production January 2021

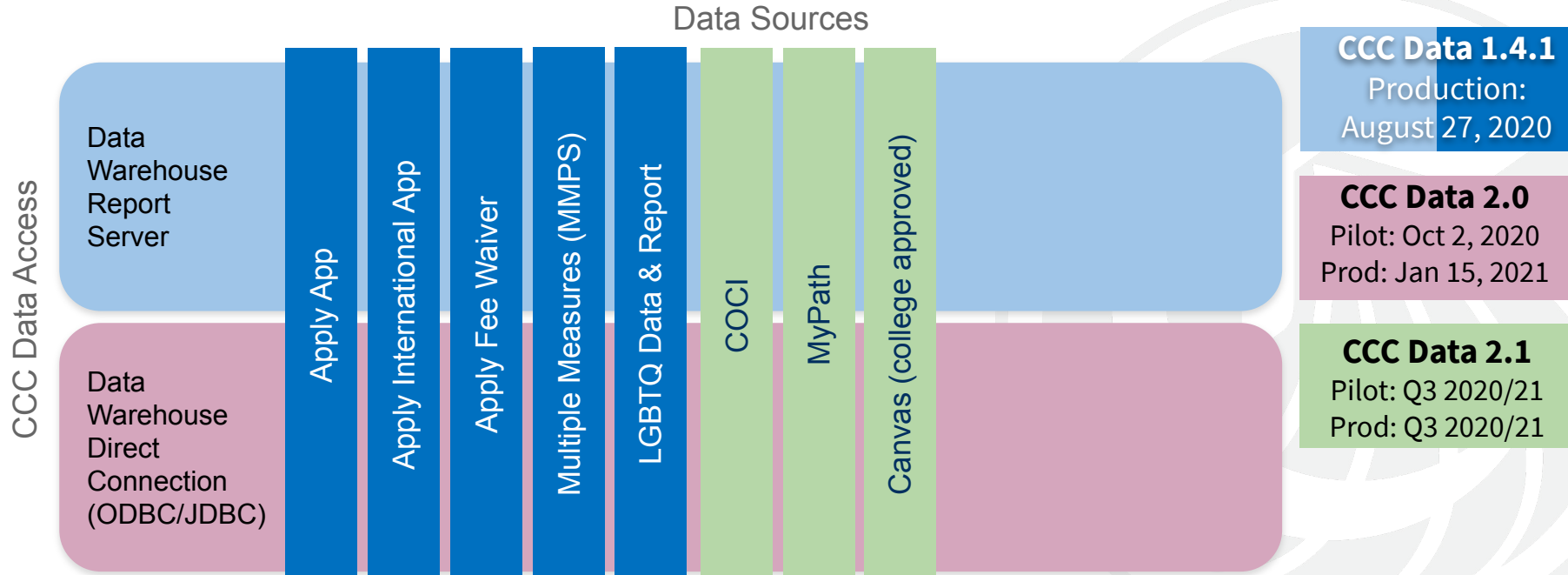
**CCC Data 1.4.1**

Production:  
August 27, 2020

**CCC Data 2.0**

Pilot: Oct 2, 2020  
Prod: Jan 15, 2021

# Project Update: CCC Data 2.1





# Project Update: CCC Data 2.1

## Data Sources

CCC Data Access

Data Warehouse  
Report Server

New data sources in DWRS & direct DW access:

- Canvas (as opted-in by individual colleges)
- MyPath
- COCI

New data sources in DL & made available to CCCCO

- Nova
- Launchboard

DWRS CVC-OEI enrollment report

Pilot: FY 20/21 Q3 - Production FY 20/21 Q3

Data Warehouse  
Direct Connection  
(ODBC/JDBC)

**CCC Data 1.4.1**

Production:  
August 27, 2020

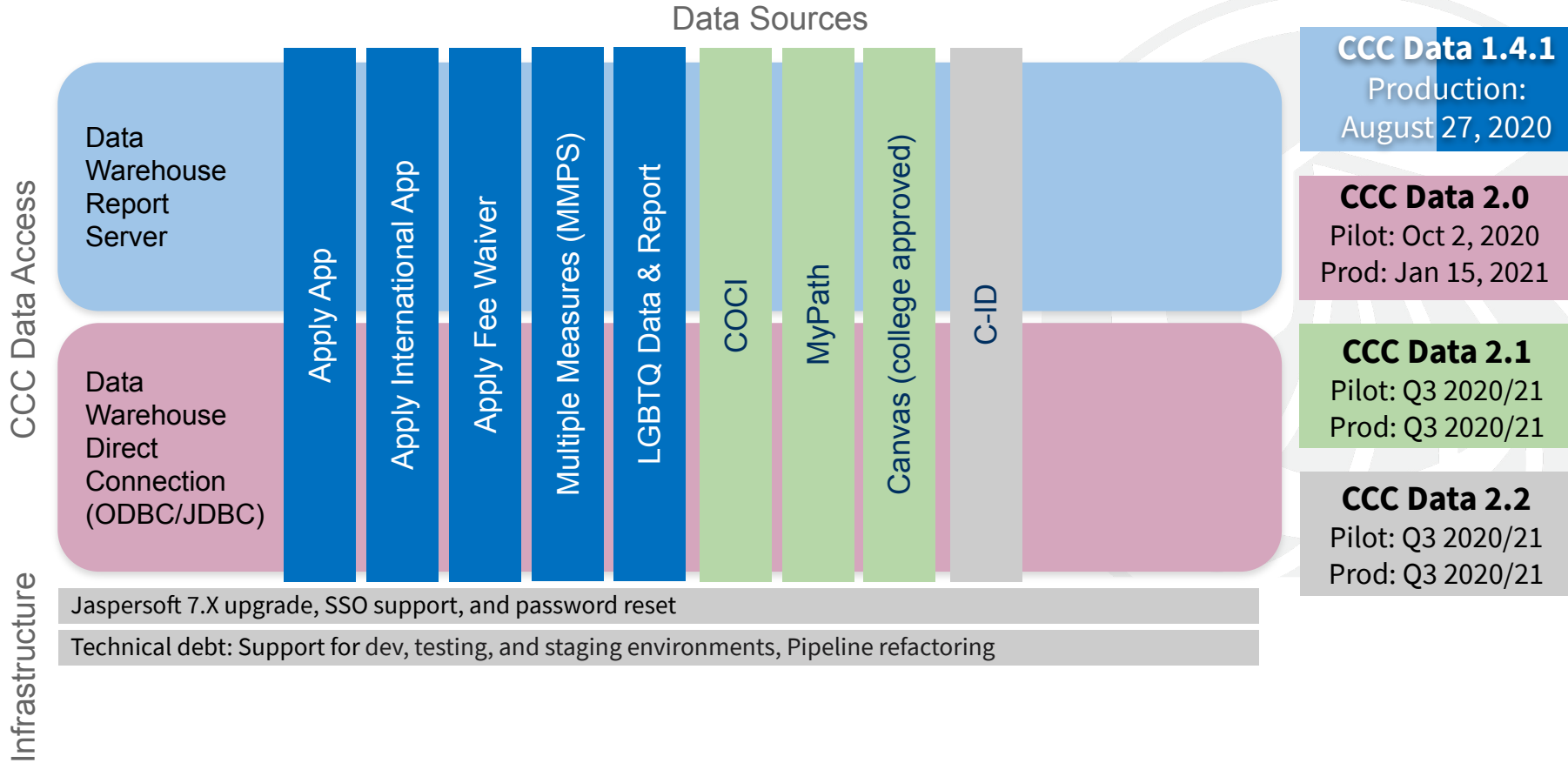
**CCC Data 2.0**

Pilot: Oct 2, 2020  
Prod: Jan 15, 2021

**CCC Data 2.1**

Pilot: Q3 2020/21  
Prod: Q3 2020/21

# Project Update: CCC Data 2.2



# Project Update: CCC Data 2.2

## Data Sources

CCC Data Access

Data Warehouse Report Server

Jaspersoft 7.X upgrade

C-ID data in DW Report Server and direct DW access  
SSO support and password reset for DWRS

Technical debt, which may include:

- Support for development, testing, and staging environments
- Pipeline refactoring to AWS recommendations

Pilot: FY 20/21 Q3 - Production FY 20/21 Q3

**CCC Data 1.4.1**

Production:  
August 27, 2020

**CCC Data 2.0**

Pilot: Oct 2, 2020  
Prod: Jan 15, 2021

**CCC Data 2.1**

Pilot: Q3 2020/21  
Prod: Q3 2020/21

**CCC Data 2.2**

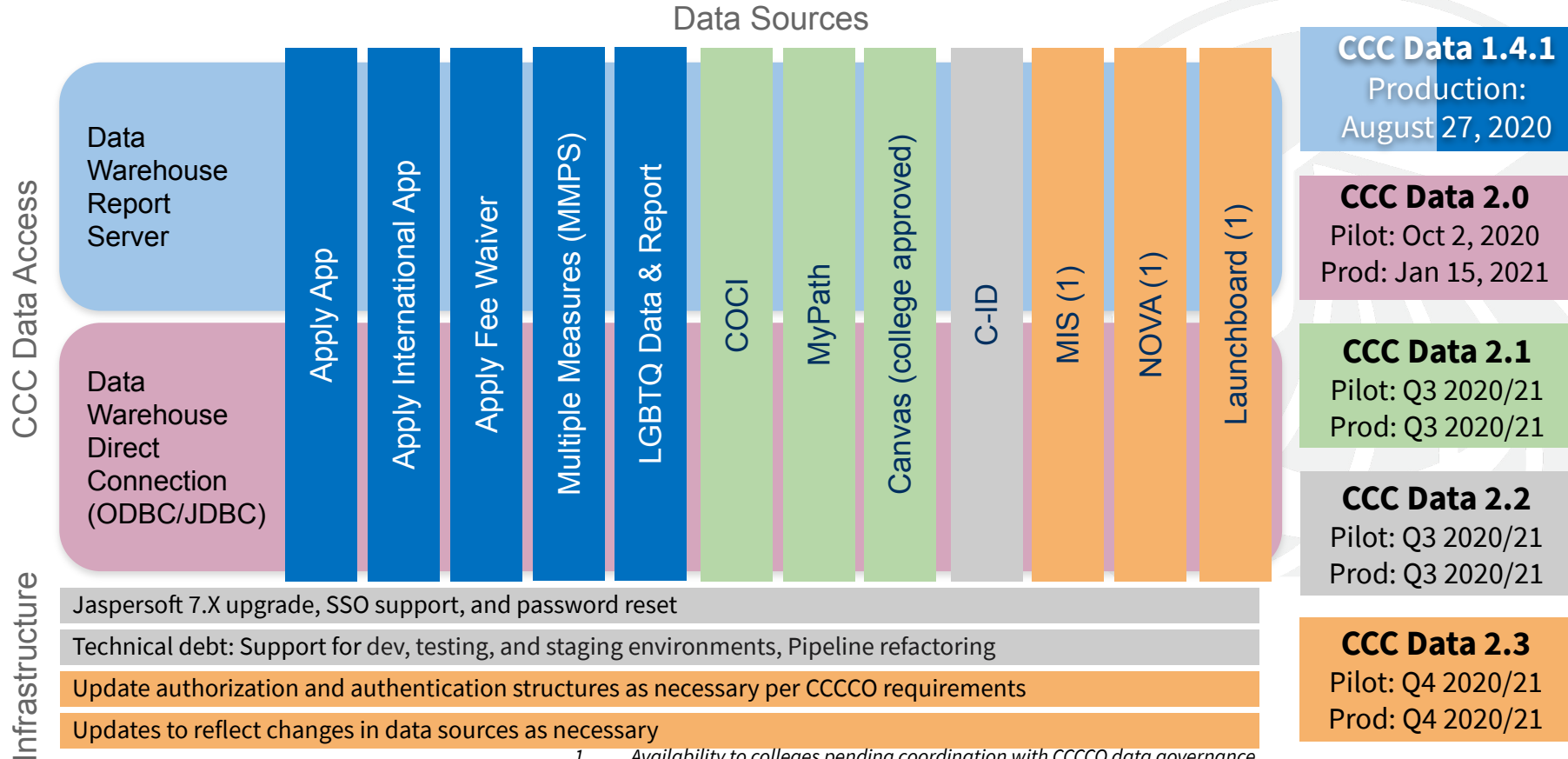
Pilot: Q3 2020/21  
Prod: Q3 2020/21

Infrastructure

Jaspersoft 7.X upgrade, SSO support, and password reset

Technical debt: Support for dev, testing, and staging environments, Pipeline refactoring

# Project Update: CCC Data 2.3



1. Availability to colleges pending coordination with CCCCCO data governance

# Project Update: CCC Data 2.3

## Data Sources

CCC Data Access

Data Warehouse Report Server

Data Warehouse Direct Connection (ODBC/JDBC)

- MIS, NOVA, and Launchboard data to the Data Warehouse
- Update authorization and authentication structures as necessary per CCCCCO requirements
- Updates to reflect changes in data sources as necessary
- Pilot: FY 20/21 Q4 - Production FY 20/21 Q4

Infrastructure

Jaspersoft 7.X upgrade, SSO support, and password reset

Technical debt: Support for dev, testing, and staging environments, Pipeline refactoring

Update authorization and authentication structures as necessary per CCCCCO requirements

Updates to reflect changes in data sources as necessary

**CCC Data 1.4.1**

Production:  
August 27, 2020

**CCC Data 2.0**

Pilot: Oct 2, 2020  
Prod: Jan 15, 2021

**CCC Data 2.1**

Pilot: Q3 2020/21  
Prod: Q3 2020/21

**CCC Data 2.2**

Pilot: Q3 2020/21  
Prod: Q3 2020/21

**CCC Data 2.3**

Pilot: Q4 2020/21  
Prod: Q4 2020/21

# Stakeholder Engagement

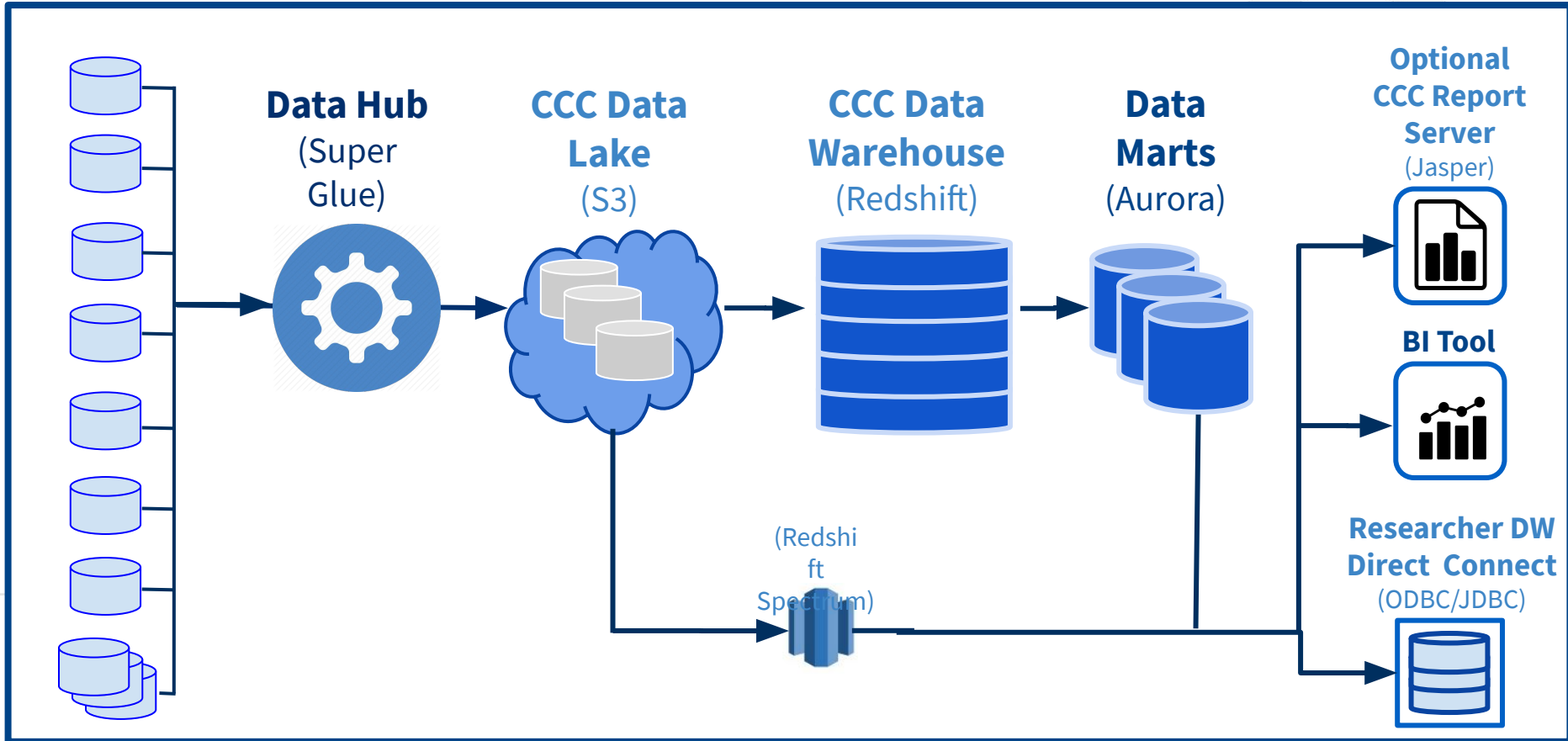
- Data Warehouse Advisory group made up of
  - CCC Institutional Research, Planning and Effectiveness Professionals (identified by the RP Group)
  - Chancellor's Office stakeholders
- Meets monthly to:
  - Inform and help to prioritize requirements for how college connect and leverage data
  - Recommend system and college data sources for inclusion in CCC Data

# Prioritizing Potential Data Sources

| Data  | Business Need  |
|---|--|
| MIS data                                      |  |
| Student Centered Funding Formula (SCFF)       | Support compliance with SCFF, validation of formula results  |
| EDD Unemployment Insurance Wage File          | Critical data aligned with desired outcome or employment   |
| UC (cohort match)                             | Support compliance with SCFF, validate SCFF and Student Success Metrics results                        |
| Perkins                                       | Access data from all funded programs   |
| Strong Workforce                              | Access data from all funded programs   |
| CSU (cohort match)                            | Support compliance with SCFF, validate SCFF and Student Success Metrics results                        |
| Apportionment Attendance Report (CCFS-320)    | Support compliance with SCFF, support ability to validate of SCFF formula results                      |
| CDE   | Validated GPA, free & reduced lunch, and other data points from HS systems/reporting                   |
| Student Tracker (NSC)                         | Support compliance with SCFF, validate SCFF and Student Success Metrics formula results                |
| Pell grant                                    | Access data from all funded programs   |
| Tops Pro Enterprise (CASAS)                   | WIOA Title I and Title II accountability requirements  |
| Enterprise Resource Planning system           |  |
| Department of Apprenticeship Standards        | Support CCC ability to validate of Student Success Metrics formula results                             |
| Insight Center for Community Econ Development | Support CCC ability to validate of Student Success Metrics formula results                             |
| CCGI  | Validated GPA, free & reduced lunch, and other data points from HS systems/reporting                   |
| CTE Outcome Survey                            | Support reporting to strong workforce, and ability to validate Student Success Metrics formula results |
| Insight Center, Self-Sufficiency Tool         | Support compliance with SCFF, support ability to validate of SCFF formula results                      |
| DSPS  | Access data from all funded programs   |

POTENTIAL DATA SOURCES TO BE SUPPORTED

# CCC Data Platform Extended





# Discussion



For more information

CCC Data Warehouse Documentation: <https://ccnnext.jira.com/wiki/spaces/DWPub/overview>

Information on CCC Data & Tech Center products: <https://ccctechcenter.org/highlights>



California  
Community  
Colleges

# CCC Data: Connecting Colleges with Data

## CISOA Virtual Technology Summit

