COMET®

DATA SHARING MANGEMENT (DSM) SERVICES

▶ Foundational Concepts

Data Sharing Management is implemented using three complementing layers and is accessible by COMET Data Sharing Management (DSM) administrators.

- Mapping Layer: records the mapping of each single child across the data owner databases
- Filtering Layer: filters which child record is accessible based upon recorded parent consent and organizational data sharing agreements

The Reporting Layer provides reports and data extraction based upon the (1) child mapping in the Mapping Layer (2) access authorization in the Filtering Layer and (3) report format - aggregated, de-identified or single identifiable subject.

▶ COMET DSM Administrator

DSM administration services are provided by COMET. COMET needs to be authorized as a third party in the data sharing community agreement. The DSM administrator has access to all the data owner databases. The DSM administrator will appropriately access the data owner databases to build and maintain the Mapping and Filtering Layers as a part of the DSM database.

▶ The Mapping Layer – What is it?

A child that is served by multiple organizations or data owners will have a specific record in each of the organization's associated databases. The mapping layer establishes equivalence between these records. The mapping layer uses an additional COMET database that records a set of child demographics and creates a mapping for all children in all data owner databases. Some children may be recorded in a single data owner database and will have a single "entry" in the DSM mapping table; others will be present in multiple data owners' databases and will have corresponding entries in the DSM database.
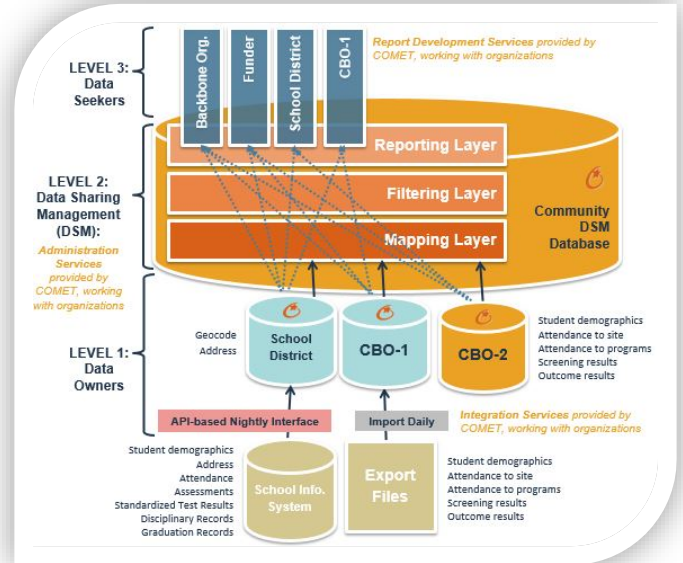
▶ Mapping Layer Maintenance Services

The COMET DSM administrator will regularly provide the following services:

✓ Identify and review all new child records regularly to build a consolidated record in the DSM database, leveraging known demographics

1. First check if the child already exists in the DSM database. If so, the data owner child is mapped to the existing DSM child.

2. Second, if no corresponding child is found in the DSM database, then a new child is created with a basic demographics set from the data owner.

3. Third, check if that child exists in other data owner databases. If so, the child is further mapped with these other databases.

✓ Review of data integrity to properly maintain the mapping layer, such as identification of possible duplicates within each data owner database

✓ If applicable, recommend corrections to the data owners' identified differences in the child record

✓ Interact with various data owners' COMET Primary Administrators (CPAs) to facilitate data integrity throughout the DSM database

The Filtering Layer – What is it?

The filtering layer enables access by data seekers in the collaborative to either aggregated reports or reports with de-identified records. The filtering layer is also used to record and manage parent consents. Proper consents enable access by data seekers to identifiable records.

Filtering Layer Maintenance Services

The COMET DSM administrator will regularly provide the following services:

✓ Record and maintain parent consent, as provided by the data owners, for data seekers

✓ Manage data seekers' requests for data sharing (aggregated, de-identified or identifiable records)

✓ Obtain access authorization or denial from the various data owners involved

✓ Help to resolve open requests for data access

Data Quality Considerations

Data quality from data owners is a major factor in maintaining a valid mapping layer. Mapping layer maintenance can be used to improve the data integrity of the various data owners. Note that COMET can also offer Data Quality Services for data owners, if desired.

Duplicate Records

One very common data quality issue is duplicate records - multiple records for a single child in a single data owner database. Note that duplicate records are generally better controlled in school district reporting. In contrast, organizations with on-line self-registration often have duplicates.

■ COMET offers mechanisms to identify duplicate records using a multi-field scoring technique, and to merge these records.

■ Child records can be tagged as "valid duplicates" to confirm that records that appear to be duplicates are actually two separate children (such as twins or children with the same name).

■ When duplicate records have been identified in a data owner database, the DSM administrator reviews that situation with the data owner. Then such records can be merged in the COMET database without loss of activity data.

DSM Services – Key Concepts

■ The DSM administrator (COMET personnel) will not interact directly with children / families.

■ The DSM administrator will limit their interactions to the COMET Primary Administrator (CPA – a customer employee) of each data owner of the collaborative project.

■ Data quality remains the responsibility of each Data Owner and should be implemented by each CPA.

■ DSM mapping layer records and data elements will not be shared with any data owner / data seeker without proper permission and will be used exclusively to build a reliable mapping layer between the data owners.

■ Some children will be able to be mapped automatically; some children will require more specific attention and communication with the various data owners.

■ When children are found in multiple databases, it may happen that some of their demographics do not match. The DSM administrator is not in a position to identify which data owner is correct or not. Reports are accessible by the DSM administrator listing such differences, allowing them to alert data owners to reconsider their records and therefore improving the overall data quality of the entire system.

Interested in more information?
Contact support@comet4children.com