

## Stockport's Approach to the Technical Development of Family Context

1. We carried out a full retrospective of the Alpha phase, reviewing:
  - What went well / What didn't go well
  - Data sources
  - Data quality
  - Blockers
2. A review of the technical infrastructure and staff knowledge and skills within the organization took place and its associated costs. The Council has been rationalizing and de-risking its technical infrastructure with an emphasis upon highly skilled staff working within a smaller range of technologies.
3. Based upon the review the following decisions were made.
  - **Database – PostgreSQL**
    - PostgreSQL is the existing Database technology used by the Business Intelligence (BI) Team.
    - The BI Team have extensive skills and experience in supporting the PostgreSQL Technology.
    - The database is open source and would be cost neutral for further implementations of the technical solution for other business purposes.
    - PostgreSQL database implementations within the Council are secured through MS Active Directory
  - **ETL – FME**
    - FME has been used as the main ETL tool within the Council and has supported both BI MDM and Spatial data Warehousing
    - There are now 10plus Developers within the authority with FME skills, each ETL workflow is fully documented,
    - THE FME product has allowed the BI Team to de-risk other more traditional ETL implementations within the authority.
  - **User interface – React.js**
    - React.js is the existing frontend library used by the Councils digital developers.
    - Developers pair up with full code reviews taking place.
    - Code is managed within Git

- 
- **API - .Net Core (C#)**
  - .Net Core C# is the existing language and framework used by the Councils digital developers.
  - Developers pair up with full code reviews taking place.
  - Code is managed within Git
- **Security – Active Directory**
  - The API validates a user with Active Directory
  - The API will also check within the PostgreSQL database if a user has permission to access the requested data.
  - The API has write access to an audit table within the PostgreSQL database
- **Data – MDM Warehouse**
  - The Council already holds school and social care records within its MDM Warehouse.
  - A decision was made that where possible the MDM should be the source of the data feeding into the family contexts database. This will then also bring over a unique person index from the MDM.
  - Person matching algorithms that feed into the MDM will constantly improve the quality of data feeding into the MDM and these improvements in data quality will cascade into the family context database.
  - Any changes in business systems providers will be managed by BI Developers and the ETL processes between the source systems and the MDM – this will not impact upon the ETL processes between the MDM and the family context database.

## Technical Overview

