

Leeds' Approach to the Technical Development of Family Context

Steps taken as part of the approach:

1. We reviewed the outputs from the alpha phase regarding business requirements, data requirements, data sources, data flows, data models, and user interface design.
2. We undertook an options appraisal to determine the most appropriate technical solution for the front-end user interface and back-end data platform components.
This was influenced by the following:
 - Alignment with Leeds City Council technical strategies
 - Development skills with Leeds City Council
 - Availability of technical resources
 - Re-use/enhancement of existing technical components
 - Supportability and maintainability
3. A decision was made to build on our existing Master Data Management solution - Microsoft Master Data Services (MDS) - to underpin the solution.
4. A decision was made to utilise our existing Corporate Reporting and Business Intelligence infrastructure, Microsoft BI Stack, to:
 - Develop the front-end user interface using SQL Server Reporting Services (SSRS)
 - Develop and populate the back-end data platform using SQL Server Integration Services (SSIS) and SQL Server Database
5. We assessed skills and capacity within existing development teams to deliver within the timescales – augmented internal resources with external development resource to work on the back-end data platform and data integration components.
6. We designed the overall solution with wider re-use as a core design principle – the front-end components (SSRS reports) and the back-end data platform schema (SQL Server Database) could be used by other authorities who also use Microsoft BI – they would just need to focus local, bespoke development on the extract, transform and load (ETL) of data from their source systems into this data model.
7. The back-end data platform schemas/models are designed to align as closely as possible with the API design created by Social Finance. SSRS reports are designed to align as closely as possible with the user interface design of the Stockport web application. This allows us to more easily transition to using the Stockport web application and/or the API integration approach in future should we choose to do so, without requiring either a complete overhaul of our back-end data platform, or a major change to the end user experience.

The reasoning behind such an approach:

We have a strategic approach in Leeds City Council to 'Simplify, Standardise and Share'. In practical terms what this means is that we strongly encourage the re-use of existing platforms and systems in the Council first, rather than building or buying new solutions. This helps to reduce the proliferation of systems across the Council which can become unsustainable and costly. If we do build/buy new solutions they should be considered in the context of delivering a wider set of requirements, so that we don't end up with multiple new systems delivering the same capability. We have a major programme of work in progress to rationalise our entire application estate, which is driven by factors such as cost, sustainability, information governance, GDPR, and our Cloud Migration strategy. In order to align with this, we have designed the first iteration of the Family Context tool in a way that re-uses Leeds City Council's existing infrastructure and Microsoft BI components. However, beyond the re-use within Leeds City Council, we are also keen to support the re-use of Family Context at a more national level in other local authorities. That said, it can sometimes be at odds with a more inwardly focussed strategy that an individual local authority will tend to take. To support this wider strategy, we have done the following:

- Our first iteration of Family Context has been designed using 'decoupled' components that could be used by other local authorities if they also wish to implement a Microsoft BI-based solution:
 - The user interface is reusable and is not customised heavily just for Leeds City Council – the design closely follows the UI design guidelines produced in alpha phase. The SSRS reports used in Leeds can be shared with others.
 - The data platform schema is designed to be reusable and again is not customised heavily just for Leeds City Council – the design closely follows the data model and API design guidelines produced in alpha phase. The database scripts (used to create tables, views etc.) can be shared with others.
- We are assessing the potential for a second iteration of Family Context to make use of the Stockport web application and the API to replace the front-end SSRS reports. This would further align and re-use the actual technical components of the solution