

You are tasked with developing a dbt model from scratch in order for data analysts and self-serving stakeholders. We suggest using BigQuery alongside dbt, although any SQL engine may be used. We also recommend following dbt best practices in order to structure your project.

The data analysts need a reporting table that will allow them to analyse the progression of cohorts by product and region.

- A customer cohort may be defined as the first day in which a customer transacted, irrespective of product and region.
- Two accounting methodologies are used: accrual and profit & loss:
 - Accrual revenue should be recognised on the day of invoice.
 - For profit & loss, all subscription revenues should be into twelve instalments, amortised across a 12 month period beginning on the day of the invoice.
 - Non-subscription profit & loss revenues should be recognised in the same way as accrual.

The table must therefore have:

- The following dimensions: customer cohort, days since cohort start, product and region.
- The following metrics: revenue on day (accrual basis), revenue on day (profit & loss basis).
- The following cumulative metrics: cumulative revenue to date (accrual basis), cumulative revenue to date (profit & loss basis).
- The cohort size.
- Missing values imputed with 0 for every cohort, days since cohort start, product and region.

Self-servers also require the below mart tables. The columns of these tables are for your own interpretation from experience, but an example of self-servers typical might be: segmenting customers by combinations of products purchased and observing records by account manager.

- Companies
- Invoices

When complete, please send across your project. We would also love you to run us through your logic, the models/scripts and the tables produced by running dbt in our next call.