

```
"dataset" : {
  "subjects" : [
    {
      // The output of the export includes one record for each local authority whose label starts with 'E090'.
      // Effectively this will export one record for each of the London Boroughs.
      "subjectType" : "localAuthority",
      "provider": "uk.gov.ons",
      "matchRule": {
        "attribute": "label",
        "pattern": "E090%"
      }
    }
  ]
},
```

1 Identify the “subjects” over which you want your data to be exported. Imagine the “subjects” corresponding to rows in a table. These are often geographical entities e.g. LSOAs but can also be tweets or hospitals.

```
"datasources" : [
  {
    // Importer for importing the geographic areas of local authorities
    "importerClass" : "uk.org.tombolo.importer.ons.OaImporter",
    "datasourceId": "localAuthority"
  },
  {
    // Importer for DfT traffic counts in London
    "importerClass" : "uk.org.tombolo.importer.dft.TrafficCountImporter",
    "datasourceId" : "trafficCounts",
    "geographyScope" : ["London"]
  },
  {
    // Importer for air quality
    "importerClass" : "uk.org.tombolo.importer.lac.LAQNImporter",
    "datasourceId": "airQualityControl"
  }
],
```

2 Identify the “datasources” needed to provide the “subjects” AND the “datasources” needed for your “fields”.

```
"fields" : [
  {
    "fieldClass": "uk.org.tombolo.field.aggregation.GeographicAggregationField",
    "label": "NitrogenDioxide",
    "subject": {
      "provider": "erg.kcl.ac.uk",
      "subjectType": "airQualityControl"
    },
    "function": "mean",
    "field": {
      "fieldClass": "uk.org.tombolo.field.value.LatestValueField",
      "attribute": {
        "provider" : "erg.kcl.ac.uk",
        "label" : "N02 40 ug/m3 as an annual me"
      }
    }
  },
  {
    "fieldClass": "uk.org.tombolo.field.transformation.ArithmeticField",
    "label": "BicycleFraction",
    "operation": "div",
    "field1": {
      "fieldClass": "uk.org.tombolo.field.aggregation.GeographicAggregationField",
      "label": "BicycleCount",
      "subject": {
        "provider": "uk.gov.dft",
        "subjectType": "trafficCounter"
      },
      "function": "sum",
      "field": {
        "fieldClass": "uk.org.tombolo.field.value.LatestValueField",
        "attribute": {
          "provider" : "uk.gov.dft",
          "label" : "CountPedalCycles"
        }
      }
    },
    "field2": {
      "fieldClass": "uk.org.tombolo.field.aggregation.GeographicAggregationField",
      "label": "CarCount",
      "subject": {
        "provider": "uk.gov.dft",
        "subjectType": "trafficCounter"
      },
      "function": "sum",
      "field": {
        "fieldClass": "uk.org.tombolo.field.value.LatestValueField",
        "attribute": {
          "provider": "uk.gov.dft",
          "label": "CountCarsTaxis"
        }
      }
    }
  }
],
```

3 Identify the “fields” you want in your data. Imagine the “fields” corresponding to columns in a table. Here we specify three fields but two are used in the generation of a new “ArithmeticField” and so the output file would have two columns: “NitrogenDioxide” and “BicycleFraction”

4 In this yellow box we specify a new field by summing two new fields. NOTE: point 5 is at the bottom of the page!

7 Once we have created these new fields we divide “field1” (“BicycleCount”) by “field2” (“CarCount”) to generate a new field “BicycleFraction” which will be exported along with “NitrogenDioxide”.

6 Note that we have to specify that “trafficCounter” is the subject over which the data currently exist (in this case the data have a geography which is a point in Latitude/Longitude). The Digital Connector will then aggregate these “trafficCounter” subjects to Local Authority level.

5 First we specify the two new fields. These fields are summations of the number of “CountPedalCycles” and the number of “CountCarsTaxis” for each “trafficCounter” in each “localAuthority” respectively.

```
"exporter" : "uk.org.tombolo.exporter.GeoJsonExporter"
```