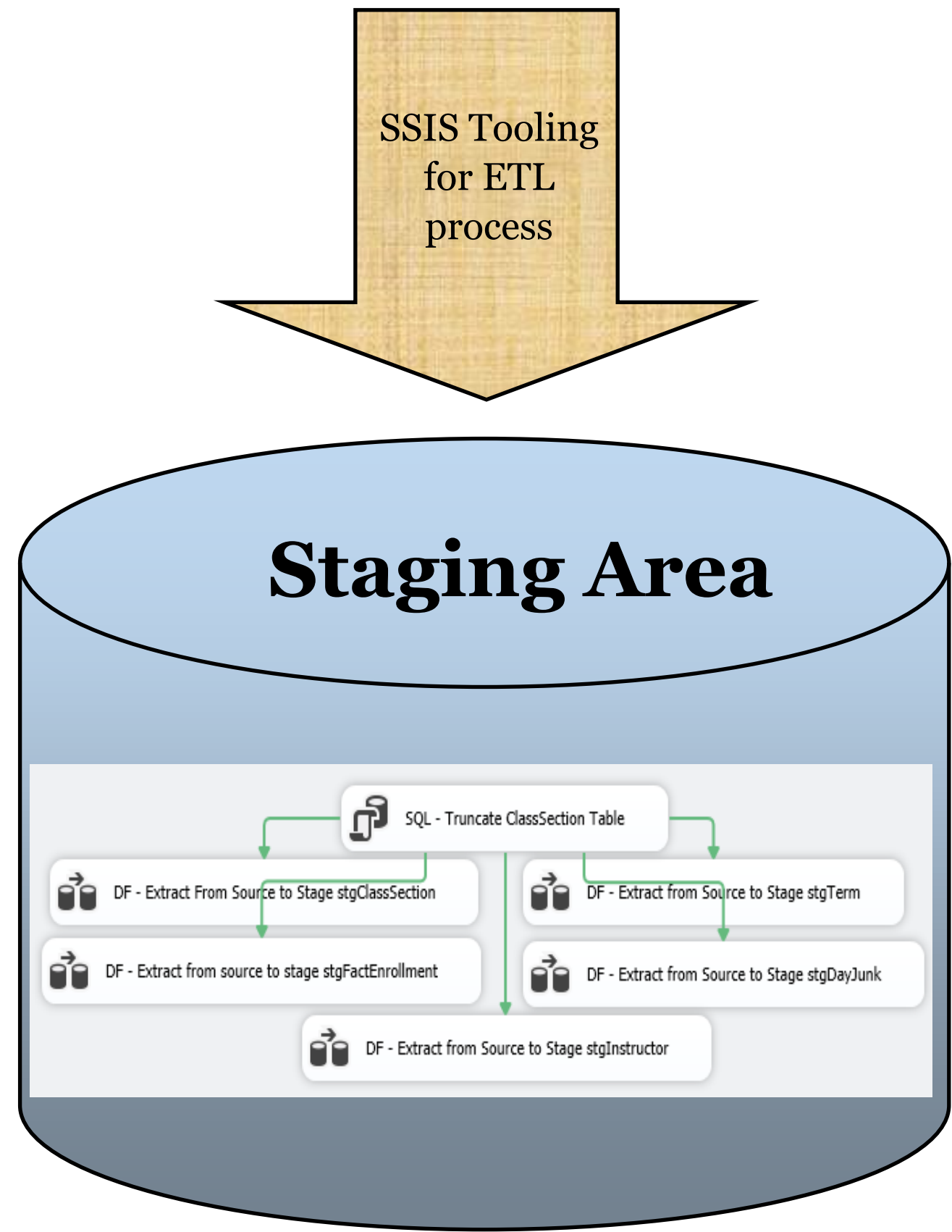


For this project, we used the External Sources database that includes iSchool enrollment data provided by Professor Fudge. These data are available through views that anonymize personal information. This data is structured, meaning it is in tables with metadata associated with each column. We analyzed which tables and data were most suitable for data dimensions that eventually make up the data warehouse.



Staging areas hold data temporarily before moving it to the data warehouse. This allows for some data transformation and limits the number of calls against source data while also mitigating risk against data loss from source data.

About the Project

Background

The School of Information Studies (iSchool) offers many courses that are popular and students immediately enroll in them, resulting in a lack of seat supply to accommodate student demand. Alternatively, there are class sections that are under-enrolled, leading to an inefficient use of professor time, when they could be assigned to an additional class section of a popular course.

Business Question

- Based on waitlist data, which iSchool courses warrant addition class sections?
- Based on enrollment data, which iSchool course sections should be dropped in future semesters?

Audience

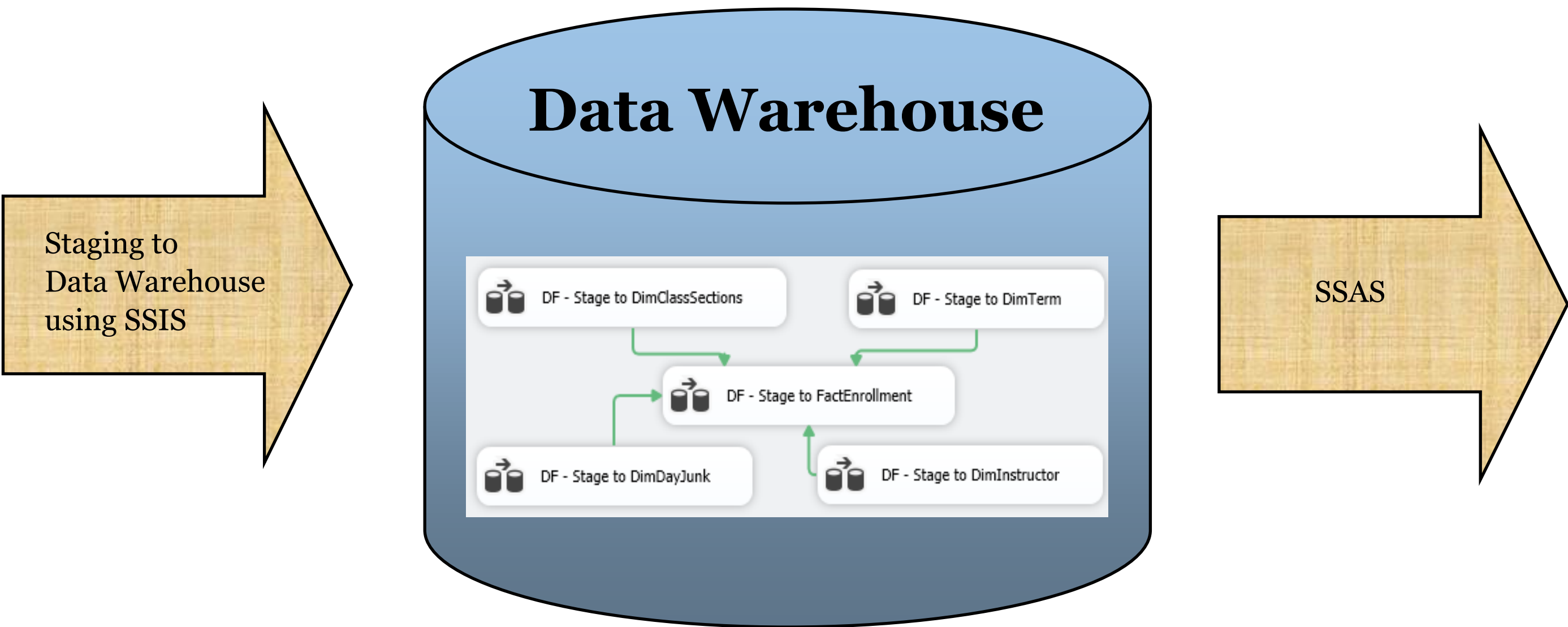
- iSchool administration, including Deans, Program Directors and Enrollment Management
- iSchool Professors
- Faculty Advisors
- Used as reference for Syracuse University administration to scale University-wide

Tools Used

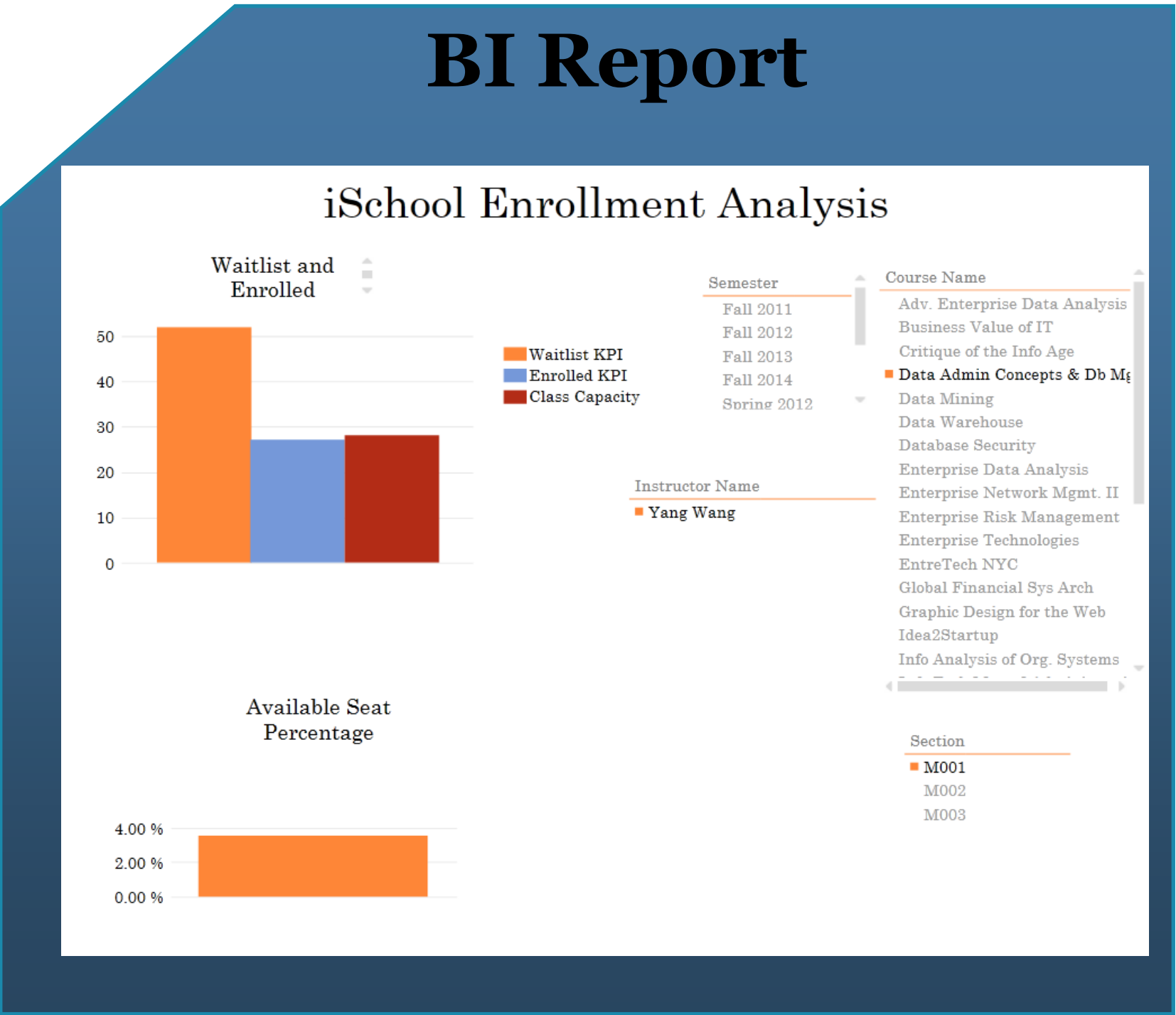
- Microsoft SQL Server 2014 Management Studio
- Microsoft SQL Server Integration Service (SSIS)
- Microsoft SQL Server Analysis Service (SSAS)
- Microsoft Excel 2013

Key Insights

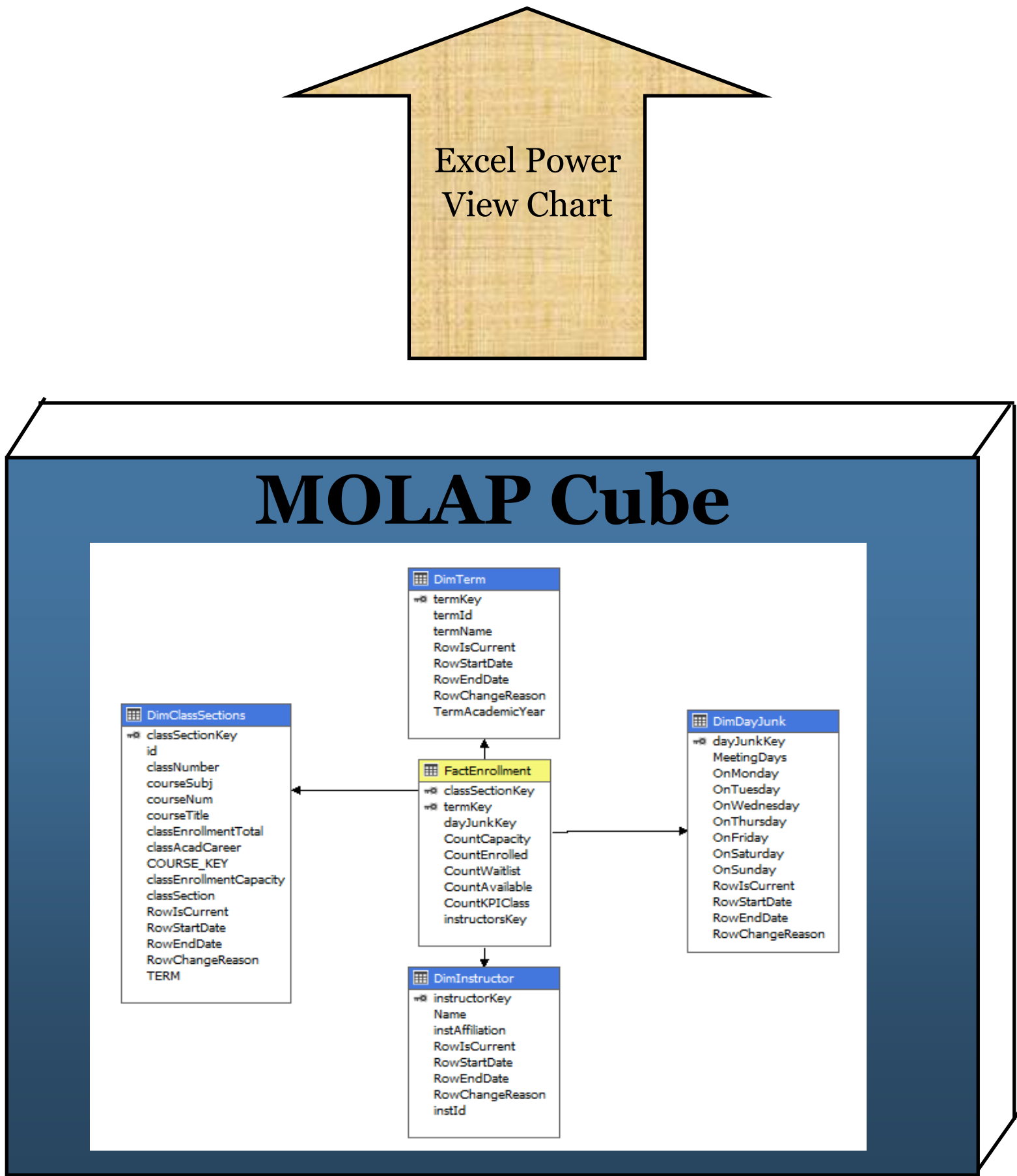
By using iSchool enrollment data, we are able to determine and measure key performance indicators related to each class and recommend more or fewer sections within each course. For example, IST 659 (Data Administration Concepts and Database Management), a required course for the Information Management Masters Degree, exceed the 15 person waitlist KPI in multiple sections for Spring 2015. Our recommendation would be to add an additional class section in the future.



The data in the data warehouse is in a Relational Online Analytical Processing (ROLAP) schema that includes dimensions and facts. The dimensions all feed the fact table, resulting in a star schema (also known as dimensional modeling), as seen above.



Business Intelligence products allow for easy analysis of data that lives in the data warehouse. Tools like Power View in Excel 2013 let business users answer their questions independently, without needing highly technical staff to understand the data. In the example to the left, the data can be filtered, visualized, and modified easily. Many business users are also comfortable with Microsoft Office products.



The Multidimensional Online Analytical Processing schema allow for fast data retrieval and act as an input for Business Intelligence tools. Users can then easily slice data as needed to best answer business questions.