



# US Higher Education Model

Data Requirements, Timeline and  
University Level of Effort

# Data Requirements

The data requirements listed below are indicative and will vary from system to system. Where the fields listed differ from actual systems used please determine the most appropriate field that most closely matches that described.

## STUDENT ENROLLMENT DATA

Student enrollment data is needed to show which students are enrolled in what Program, Course, Semester, Campus and how many credit hours are received. If there is an extract already in place that contains additional fields to those listed, please provide the entire extract to us – we may be able to use the data for additional analysis fields or better cost drivers.

### PERIOD:

- Most recent completed fiscal year

### FORMAT (IN ORDER OF PREFERENCE):

- CSV / Text File
- Microsoft Access database table
- Microsoft Excel spreadsheet

### FIELDS (EXAMPLE DATA IS CONTAINED IN BRACKETS):

- Academic Year (2014/15)
- Student Identifier (ID #)
- Fee Type (In-State, Out-of-State, International, etc.)
- Program Code (L05510)
- Program Name (Bachelor of Business)
- Program Career (Undergraduate, Postgraduate, etc.)
- Program Owning School/Faculty/Department
- Course Code and Section Code (ACC101 Section 101)
- Course Name (Accounting 101)
- Course Level (1000 Series / 1st year, 2000 Series / 2nd Year, etc.)
- Course Mode (On-campus, Off-campus / online, etc.)
- Course Campus (Campus 1, Campus 2, etc.)
- Course Credit Hours or equivalent
- Semester Code
- Semester Name (Semester 1, Trimester 2, Residential 1, etc.)
- Teaching Department Code
- Teaching Department Name (Department of Chemistry)
- Teaching School Code
- Teaching School Name (School of Applied Sciences)
- Tuition / Fee course rate by type (\$250/credit hour in-state, \$900/credit hour out-of-state)
- Actual tuition / fees paid (Nice to have if available. Often this requires a separate file.)
- Shared (this field would indicate if the same course was taught by more than one department / school, i.e. 50% by the Department of Chemistry and 50% by the Department of Biology)

# Student Timetabling/Scheduling Data

Timetable/Schedule data is required to outline the type of class, the hours of lecture/lab/etc., time, the room the course was taught in (nice to have), and the staff who taught the course (not always available).

It is appreciated that not all timetabling systems cover 100% of bookings. An initial data check is a review of the data for “completeness”. It’s not uncommon for some Schools (like Medicine) to not have any classes in the timetabling system at all. It is also not uncommon for there to be numerous timetabling files (sometimes one for each campus). This is not an issue.

With this request (and all the others), it is requested that whatever the source system supplies in the first case is what is provided to Pilbara Group. In most instances it is possible to often derive the information from out-of-the-box data extracts rather than complicate the data extract. Therefore, if there is an extract already in place that contains additional fields to those listed, please provide the entire extract to us – we may be able to use the data for additional analysis fields or better cost drivers.

## **PERIOD:**

- Most recent completed fiscal year.

## **FORMAT (IN ORDER OF PREFERENCE):**

- CSV / text file
- Microsoft Access database table
- Microsoft Excel spreadsheet

## **FIELDS (EXAMPLE DATA IS CONTAINED IN BRACKETS):**

- Room Number / Code
- Building Code
- Building Name
- Capacity (Student capacity size, i.e. 30 students)
- Class Type (Tutorial, Lecture, Lab, Clinical, etc.)
- Weeks held (e.g. 13 weeks)
- Course Code and Section Code (ACC101 Section 101 – ideally this code is the same as supplied with the student data)
- Course Name (Accounting 101)
- Duration (in hours) - sometimes this comes in the format of a Start Time field and an End Time field. If this is the case then the duration can be calculated using these fields.
- Activity occurrences (Number of occurrences per term / semester etc.) – Often this is 16, representing a 16 week semester. Sometimes this data comes in the format of a yes/no map for each week of the year (i.e. 1 1 1 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0). This format is acceptable.
- Day (Monday)
- Start Time (0900, 9:00am, etc.)
- End Time (1100, 11:00am, etc.)
- Activity size (students attending in theory)
- Teaching School Code
- Teaching School Name (School of Applied Sciences)
- Campus (Campus 1, Campus 2, etc.)
- Semester Code and/or Semester Name (Semester 1, Trimester 2, Residential 1, etc.)
- Teaching Load Percentage (only needed if the same subject is taught by multiple departments/schools)
- Teaching Load Owner (only needed if the same subject is taught by multiple departments/schools)

## HR/Payroll Data

HR data is needed to define information on personnel employed by the university. For example: what is the staff type (Academic/Non-academic)? What is their employment type (Permanent, Part-time)? What is their job function (Teaching, Teaching and Research, Research only, etc.)?

Payroll data is needed to link personnel to the financial data systems from which they were paid. HR/Payroll data is often a large extract, so it is not an issue if it comes in a number of files. Pay data often needs to come as one file for each pay-period - 26 files where staff are paid bi-weekly. HR establishment data is normally a separate file.

If there is an extract already in place that contains additional fields to those listed, please provide the entire extract to us – we may be able to use the data for additional analysis fields or better cost drivers.

### PERIOD:

- Most recent fiscal year.

### FORMAT (IN ORDER OF PREFERENCE):

- CSV / Text file
- Microsoft Access database table
- Microsoft Excel spreadsheet

### FIELDS (EXAMPLE DATA IS CONTAINED IN BRACKETS):

#### • HR Establishment Data Fields:

- » Employee number - if there is concern about data privacy, please note that no-one gets to see the HR module in the model and it is not contained in the reports at all – it is only there to help allocate salaries to the correct activity, such as teaching, research, etc. If providing the employee number will be an issue, there are other options; however it does help when wanting to allocate certain people to specific activities as it provides a key identifier.
- » Status (full time, part time, adjunct, etc.)
- » Owning Fund Source
- » Job Number and / or Position Number
- » Owning Organization
- » Level (Pay grade band or similar)
- » Position Type (Academic or General / Non-Academic)
- » Workload Function (Teaching, Teaching and Research, Research Only, General, etc.) – this data is not always available.
- » Position title (Research Assistant, Lecturer, Professor, Assistant Professor, etc.)
- » Campus

#### • HR Pay Data Fields:

Please note that with pay data, our preference would be to receive:

- » Employee number
- » Sum of Amount (pay per pay period)
- » Sum of FTE (per pay period)
- » Fund Source / Cost Center paid from
- » Organization paid from
- » Account paid from
- » Project Code paid from (if applicable)
- » If available, the entire accounting string would be ideal as this will include all elements of the fund the employee was paid from (e.g. organization code, account code, fund source, project code, etc.)

If FTE is not available, then the additional fields below would be required for us to estimate FTE:

- » Hours paid
- » Pay period number (often 1 to 26 if paid bi-weekly, 1 to 12 if paid monthly)
- » Pay code (sick leave, annual leave, overtime, etc.)

## Facilities / Asset Data

Facilities and asset data is needed to determine campus, building, room, room type, floor space and maybe even room “owner” information. This data is used (where possible) for two primary purposes:

- To link financial data related to facilities (depreciation, utilities, janitorial costs, etc.) to the appropriate area of the model. For example: personnel (for office space) and courses (for teaching spaces) and
- To link facilities usage via timetabling, for example, room 10 in building AB was “booked” by Accounting 101 Section 101 for 100 hours for lectures.

It is rare to get a perfect match between asset data and other systems, but one of the key things that we look for is a match between Room Number / Building Name used in the Asset Register, and that listed in the Timetabling/Scheduling system. That way we can pass on the relevant maintenance costs and other utility costs to the Courses that are taught in each room / building. Often clients think this data set is not complete and are hesitant to provide it to us. The asset/facilities data is a “nice to have” and failure to have good data is not a complete “show stopper”.

If there is an extract already in place that contains additional fields to those listed, please provide the entire extract to us – we may be able to use the data for additional analysis fields or better cost drivers.

### PERIOD:

- Most recent fiscal year

### FORMAT (IN ORDER OF PREFERENCE):

- Microsoft Excel spreadsheet
- CSV / Text File
- Microsoft Access database table

### FIELDS:

- Room Number / Code
- Room Name
- Building Code
- Building Name
- Campus Code
- Campus Description
- Room type (office, lab, lecture, etc.)
- Room function (teaching, research, staff admin, student services, etc.)
- Room area as number (square meters)
- Owning School/Department
- Capacity (student capacity size, i.e. 30 students)
- Current Depreciation

## GL/Financial Data

The GL / Financial data is used to determine organizational structures, the chart of accounts, fund source information and project information for all financial transactions by the university. It doesn't bother us whether the data arrives as one big table, or a table of cost centers, account codes, and project codes totals with a set of lookup tables describing the codes we are seeing – whatever is easiest from an extraction point of view.

If there is an extract already in place that contains additional fields to those listed, please provide the entire extract to us – we may be able to use the data for additional analysis fields or better cost drivers. Basically, any fields that lets us organize and categorize the data is useful, and of course, if there is anything specific that you would like included for reporting, just let us know.

### PERIOD:

- Most recent fiscal year

### FORMAT (IN ORDER OF PREFERENCE):

- CSV / Text File
- Microsoft Access database table
- Microsoft Excel spreadsheet

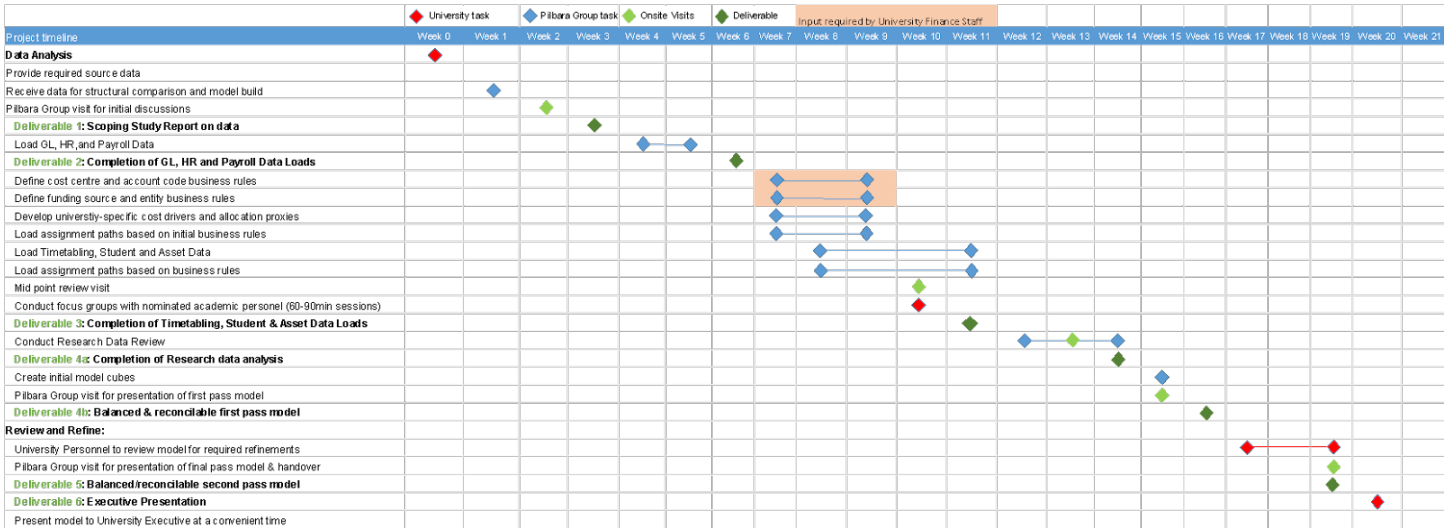
### FIELDS (FIELD NAMES ARE INDICATIVE):

- Fund Type
- Fund Type Description
- Fund Category
- Fund Category Description
- Fund Group
- Fund Group Description
- Fund
- Fund Description
- Organization (10469)
- Organization Description (Controller, School of Applied Science)
- Account (21000)
- Account Description (Supplies, Other)
- Account Type (Revenue, Expense, Asset, etc.)
- Project Code (00000)
- Project Code Description (Project X)
- Amount (\$120,350) - sum for the entire fiscal year
- Campus Code (Not always available in the GL)
- Campus description (Not always available in the GL)
- Other reporting attributes as available – particularly as they relate to endowments, research and athletics.

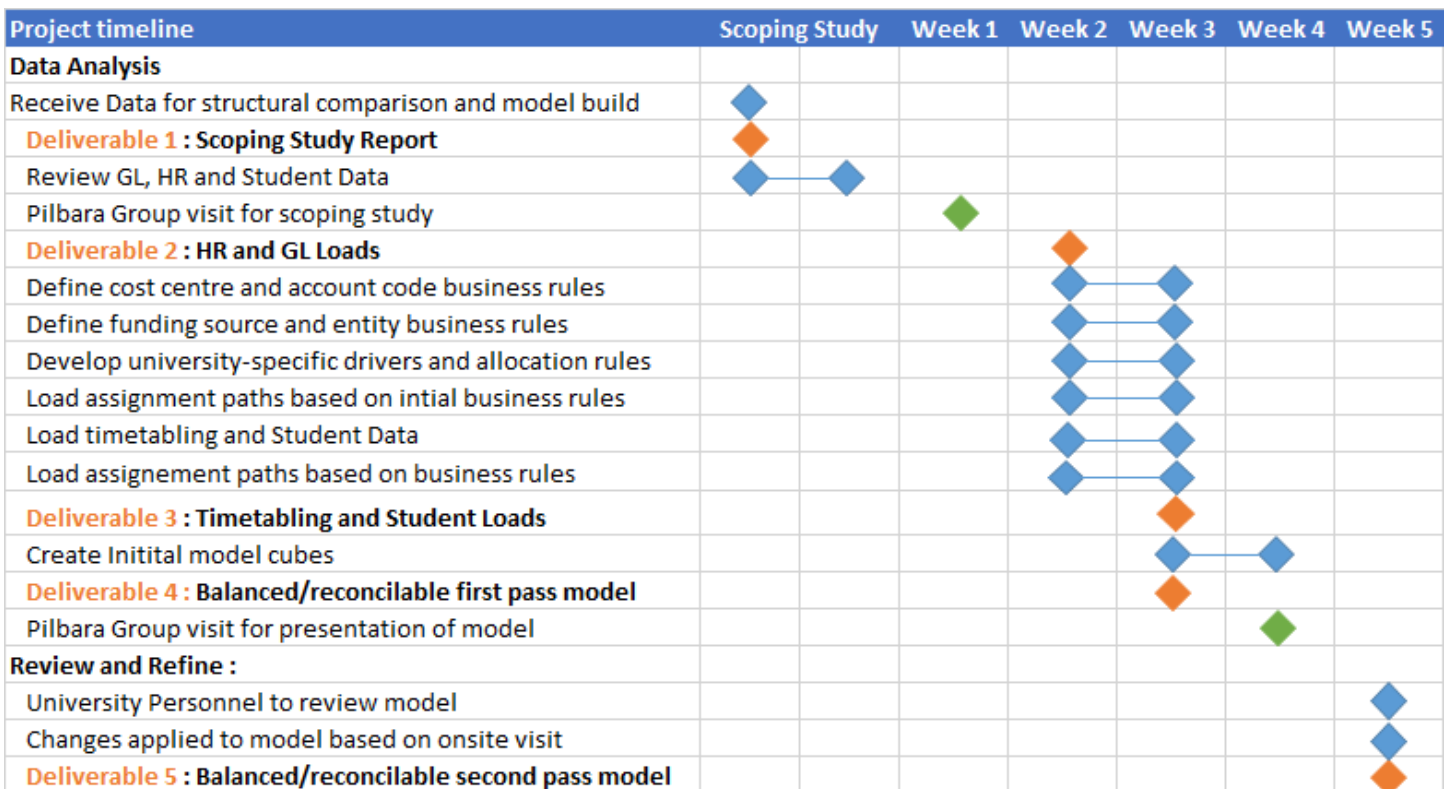
### LOOKUP DATA:

- **Chart of Accounts (COA):**
  - » Accounting string
  - » COA Level 1 Description (e.g. Fund)
  - » COA Level 2 Description (Cost Center)
  - » COA Level 3 Description (Organization)
  - » COA Level 4 Description (Account)
  - » COA Level 5 Description (Project Code)
  - » Etc.
- **Organization Hierarchy:**
  - » Organization level 1 Code
  - » Organization level 1 Description
  - » Organization level 2 Code
  - » Organization level 2 Description
  - » Organization level 3 Code
  - » Organization level 3 Description
  - » Etc.
  - » Etc.

## Example Timeline – Full Model



## Example Timeline – Executive Model



## University Personnel Estimated Commitment

University Role	Indicative Commitment	Deliverable(s)	Suggested Effort / Time
Project Manager / Team	Provides a single point of contact for Pilbara Team regarding logistics for onsite visits. Liaising with source data owners to obtain data extracts. Internal 'owner' of the model. Requires good working knowledge of University operations. Would normally be someone within Finance.	All Deliverables	Predominantly during onsite visits Liaising with source data owners (or BI/data warehouse managers) to obtain data extracts will be required prior to first visit. Depending on the quality of the data, additional requests for certain extracts may be needed.
System owners / managers / Subject Matter Experts (SME)	Meetings will be held with each of the source system owners / SMEs: - GL - HR / Payroll - Timetabling - Student Enrolment	Scoping Study	Meetings held during scoping study visit: 1 – 1.5 hours per system (or, if all data owners are available at the same time, 2-3 hours). This meeting outlines how each data set will be used, limitations of the data (if any), and an overview of what the model will look like / indicative reports. Project Manager / team would also attend.
Senior Executive (VPs/CFO etc)	Pilbara Group to present proposed model methodology to Senior Executive	Scoping Study	1 hour Ensures that Pilbara Group is aware of any specific requirements. Project Manager / team would also attend.
Project Manager / Team	ACE / Power BI /Microsoft Training	Final Deliverable	2 – 3 hours. Project Manager / team and other nominated model users to attend.
Deans /Heads of School	Pilbara Group to conduct course profile workshops with key Faculty	Final Deliverable	1.5 – 2 hours per workshop Project Manager / team would also attend.
Senior Executive (President/VPs/CFO etc)	Pilbara Group to present model methodology and results to Senior Executive at the end of the project	Final Deliverable	1 - 2 hours Project Manager / team would also attend.
Project Manager / Team	Ongoing support during annual updates. Liaising with source data owners to obtain data extracts.	Annual updates	Predominantly during annual onsite visit (2-3 days). Liaison during the Transparent Costing Survey process.
Senior Executive (President/VPs/CFO etc)	Pilbara Group to present results to Senior Executive at the end of each annual update	Annually	1 – 2 hours Project Manager / team would also attend.