

# Multi-Purpose Cross Platform Grid - Whitepaper

(Reusable component for all the projects)

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## VERSION HISTORY

Date	Version	Author	Description
25/8/2015	0.1	Nathan, Monashini <a href="mailto:monashini.nathan@accenture.com">monashini.nathan@accenture.com</a> Varadarajan, Baskaran <a href="mailto:baskaran.varadarajan@accenture.com">baskaran.varadarajan@accenture.com</a>	First draft
8/9/2015	0.2	Varadarajan, Baskaran <a href="mailto:baskaran.varadarajan@accenture.com">baskaran.varadarajan@accenture.com</a> Ramasamy, Govindaraj <a href="mailto:govindaraj.ramasamy@accenture.com">govindaraj.ramasamy@accenture.com</a>	Added Multi-Level Grid, added for freeze columns for CR108, added modal window for navigating away or attempting to edit two inline rows, right aligned Drill Down Grid.
24/3/2016	1.1	Sundaram, Aravindhan <a href="mailto:aravindhan.sundaram@accenture.com">aravindhan.sundaram@accenture.com</a> Soundararajan, D. A. <a href="mailto:d.a.soundararajan@accenture.com">d.a.soundararajan@accenture.com</a> Joseph, Jerish <a href="mailto:jerish.joseph@accenture.com">jerish.joseph@accenture.com</a> Manoharan, Ramasamy <a href="mailto:ramasamy.manoharan@accenture.com">ramasamy.manoharan@accenture.com</a>	Added Grid Header Freeze to Section 3.2  Styling has been updated for all screenshots; Section 3.5 removed show all and updated styling; Section 3.6 has only text filter; Section 5 & 6 Amended Complex Grid to remove Show/Collapse All due to the performance issue of loading many child grids at one time; Section 5 & 6 Drilldown and Complex Grids show only up to 15 child rows due to performance issue with showing multiple child rows;

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## 1. INTRODUCTION

### 1.1 PURPOSE

This document describes the functionality of the UI Grid. The objective is to ensure:

- **Effectiveness:** Governance through UI standards to ease the performance of user tasks on the system.
- **Efficiency:** Consistent structure, reusability of interface components, and scalability across UI screens on the portal.

## 2. UI GRIDS

### 2.1 OVERVIEW

The characteristic of project data is high volume with numerous fields where a simple tabular format is insufficient – grouping, sorting and data operations need to be performed quickly. The UI Grid facilitates use of that data, as a User Interface (UI) control, displaying a data grid with the ability to manage columns, filter, drill down, save settings and export. It is an advancement of the HTML table seen on common webpages.

### 2.2 USE CASE SCENARIOS INVOLVING GRIDS

The diagram below illustrates the Use Case Scenarios in grey lines where UI Grids are commonly used.

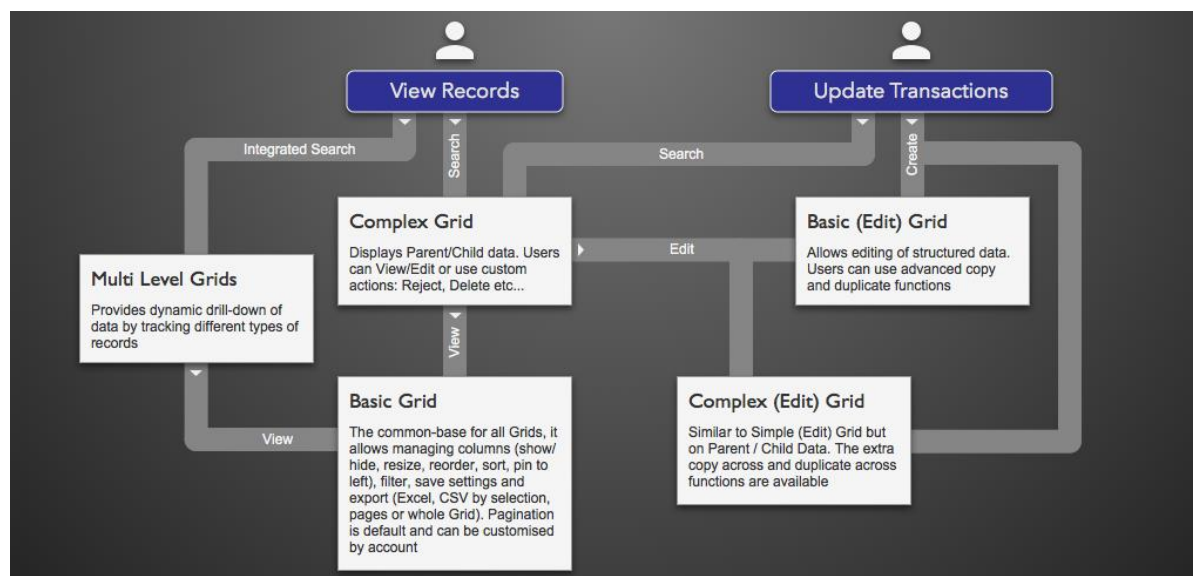


Fig 1: Use Case Flow for UI Grids.

#### Search for Data

The results in UI Basic Grid, Complex Grid and Multi Level Grid can be filtered, sorted in ascending or descending order, to find relevant records. Once the records are found, they can be selected and viewed or edited.

#### Viewing Data

Similar to the grids used in Search, only minor data operations should be performed when viewing. Examples of such data operations are inline-edit, delete or convenience updates (change status).

#### Creating and Editing Data

UI Basic Editable Grid and Complex Editable Grid are more suited to quickly entering rows of data and data operations Copy To and Duplicate. Refer to Section 2.4 for explanation of Data Operations.

## 2.3 LIST OF FUNCTIONALITIES

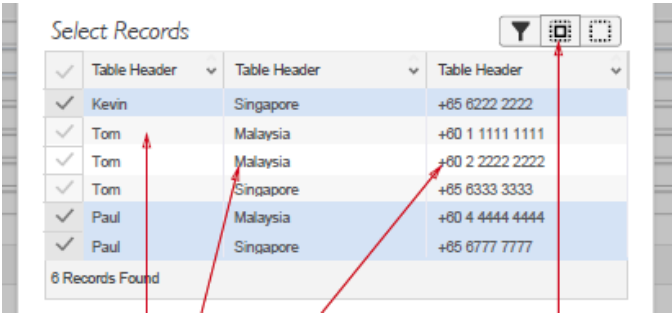
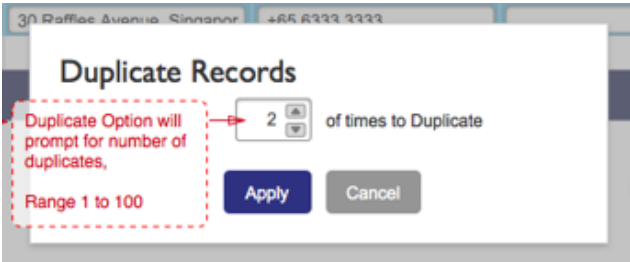
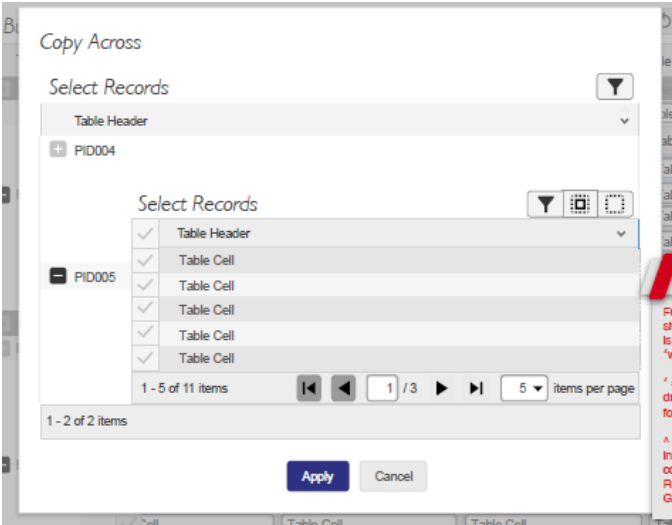
The UI Grid has a wide base of configurable options. The following diagram lists functionalities that can be enabled in the UI Grid.

*Fig 2. List of Grid Functionalities*

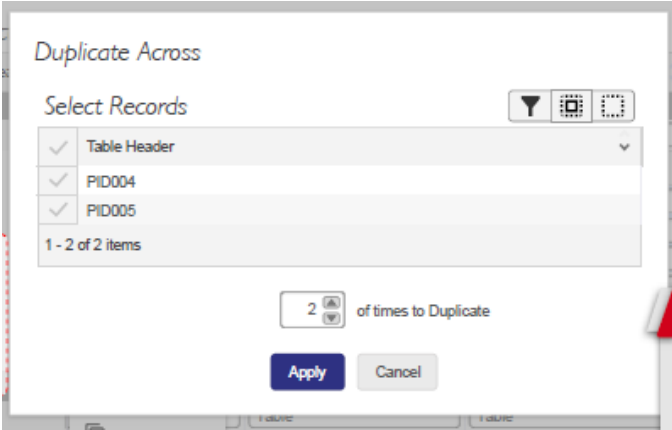
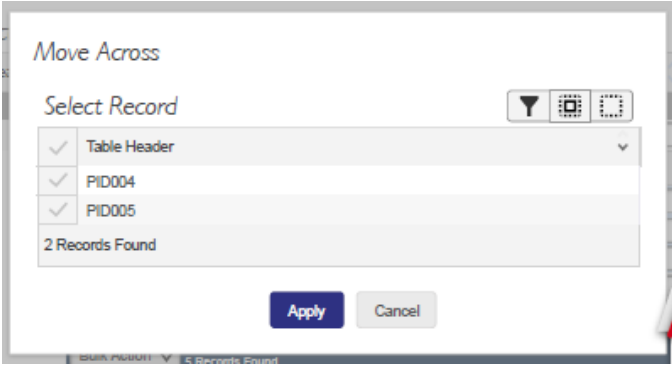


## 2.4 DATA OPERATIONS

The structure of the grid allows for selecting one or many records and performing data operations to copy, duplicate or move records. These three operations have been standardised to cater to a wide variety of use cases. The table below describes their behaviour:

Name	Relationship	Behaviour
Copy To	One to Many	<p>A single record is copied to existing records as selected in the modal window.</p> 
Duplicate	Many to Many	<p>Selected records are created new, N number of times. N is chosen by the user.</p> 
Copy Across	One to Many	<p>A single record is copied from a child grid, to existing records in another child grid as selected in the modal window.</p> 



Duplicate Across	Many to Many	<p>Selected records from a child grid are created new, N number of times in another child grid. N is chosen by the user.</p> 
Move Across	Many to Many	<p>Selected records are removed from a child grid and moved to another child grid.</p> 

### Unique Fields

When records are copied or duplicated, the unique record number is not overwritten. Furthermore, some records have multiple identifying fields which should not be overwritten. Firstly, the fields which are copied to or duplicated should be indicated in the Functional Design Document (FDD) Control-Action-Response (CAR). Where there are only a few fields not being copied, the opposite approach can be taken; indicate which fields are not overwritten. Secondly, the behaviour of the identifying fields should be specified to be auto-filled, pending or blank. Refer to 4.2.1 to 4.2.4 for examples.

### Discrete Fields in Records

Copy To and Duplicate do not offer the user a choice of discrete fields to be affected. Where the record being affected has child records attached or information is not displayed in grid (e.g. Search) a modal window can be used to allow selection of sections or discrete fields. Refer to the following diagram where 3 sections and sub sections can be selected.

<input type="checkbox"/>	Booking Header
<input type="checkbox"/>	Booking Header Details
<input type="checkbox"/>	Contact Details
<input type="checkbox"/>	Location Details
<input type="checkbox"/>	Equipment Details
<input checked="" type="checkbox"/>	Customs
<input checked="" type="checkbox"/>	Export Customs Details
<input checked="" type="checkbox"/>	Import Customs Details
<input type="checkbox"/>	Booking Lines
<input type="checkbox"/>	ISF Details

OK

*Fig 3. Booking Sections that can be duplicated*

### 3. BASIC GRID

The Basic Grid presents a set of data for quick information and comparison. The following sections detail functionalities of the grid.

#### 3.1 SIZING AND PAGINATION

*Basic Grid - Sizing and Pagination*

The screenshot displays a grid with five columns, each labeled 'Table Header' with a dropdown arrow. The grid contains 15 rows of data, each labeled 'Table'. A red dashed box with an upward arrow points to the grid, containing the text: '1. Vertically, no scroll within Grid. New Default View Height of 15 Rows displays data within the typical viewing height of 500px (Grid is 460px total). The items per page can be selected and customised by user profile. The page scroll will appear if more than 25 are chosen.' Below the grid, a pagination bar shows '1 - 15 of 177 items', navigation buttons, and a dropdown menu for 'items per page' with options 15, 25, 50, and 100. A red arrow points from the '15' option in the dropdown to the grid. Another red dashed box with a horizontal double-headed arrow points to the grid, containing the text: '2. Horizontally, recommend no scroll by having Display Columns less than Grid Width. Functional Design to recommend which columns to display, which to hide.'

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Basic Grid - With Many Columns

1 - 15 of 177 items

1 / 12 15 items per page

**Recommend Fit**

By default the column width should fit Table Header size.

However, if the Table Cells are known to be wider than Table Header, adopt the following approach:

- Give some sample values in the Grid and scale the column width so that build team can approximate.

1. The columns width should fit either:

- Header (e.g. Reason Code= 11 Character Length)
- Values (e.g. approximate 40 Character Length)

This should be recommended by the page designer.

2. A Horizontal Scrollbar is present.

In the example below, the Build Team will approximate 20 character length to <Customer>, 40 character length to <Address>, 4 numeric character length to <Style>, 6 character length to <Status>, and shorten the <Last Update Date>:

Customer	Address	Style	Status	Last Update...	++
NEW BALANCE ATHLETIC...	1234 LOWER TURNSTILE AVENUE, #44-7642, M...	0000	Active	9-20-2015	++
DEICHMANN SHOES U.K -...	7 GREEN MEADOWS, MARKET MARKET HABO...	0602	Inactive	9-20-2015	++

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[illegible]

### 3.2 HEADER FREEZE FOR SCROLLING

When the grid is taller than the page height, the Grid Header row is frozen at the top of the page as scrolled through the page. This provides the user with reference to the columns above.

Table Header	Table Header	Table Header	Table Header	Table Header
Table	Table	Table	Table	Table
Table	Table	Table	Table	Table
Table	Table	Table	Table	Table
Table	Table	Table	Table	Table
Table	Table	Table	Table	Table
Table	Table	Table	Table	Table
Table	Table	Table	Table	Table
Table	Table	Table	Table	Table
Table	Table	Table	Table	Table
Table	Table	Table	Table	Table
Table	Table	Table	Table	Table
Table	Table	Table	Table	Table
Table	Table	Table	Table	Table
Table	Table	Table	Table	Table
Table	Table	Table	Table	Table
Table	Table	Table	Table	Table
Table	Table	Table	Table	Table
Table	Table	Table	Table	Table
Table	Table	Table	Table	Table

1 - 50 of 177 items

1 / 4 50 items per page

When Grid height is more than page height, Header is fixed to top of the Page for scrolling.

### 3.3 OPTIONS

*Basic Grid - With All Grid Options*

Table Header	Table Header	Table Header	Table Header	Table Header
Table	Table	Table	Table	Table
Table	Table	Table	Table	Table
Table	Table	Table	Table	Table
Table	Table	Table	Table	Table
Table	Table	Table	Table	Table
Table	Table	Table	Table	Table
Table	Table	Table	Table	Table
Table	Table	Table	Table	Table
Table	Table	Table	Table	Table
Table	Table	Table	Table	Table
Table	Table	Table	Table	Table
Table	Table	Table	Table	Table
Table	Table	Table	Table	Table
Table	Table	Table	Table	Table
Table	Table	Table	Table	Table

1 - 15 of 177 items

**Grid Options**

The default options (top right menu) are:

- Reset
- Column Options

Functional Designers to indicate in wireframe other options are included

- Filter
- Save
- Export

Utilise white space by having Grid Options on same line with Grid Title. The Grid Options are represented by icons for quick recognition

### 3.4 COLUMN RESIZE & REORDER

*Basic Grid - Resize Columns, Reorder Columns and Tooltips*

1. By dragging column edges, the width will be resized. Long labels and values will be shortened with "..."

2. Column width can be resized to a minimum of 40px to allow at least 3 characters and trailing "..."

3. Entire columns can be reordered by dragging the header. Left most columns such as the bulk select, actions cannot be reordered or hidden. These are failsafes to prevent important columns from being hidden.

4. Tooltip shown for any text that is shortened "..."

### 3.5 COLUMN SORT & SHOW / HIDE

*Basic Grid - Sort Columns, Show / Hide Columns*

1. Clicking on the sort toggles between:  
- Sort Ascending  
- Sort Descending  
- No Sort

2. Clicking in this area will activate the column menu.

3. Column Options allows users to have an overview of toggling visibility.



### 3.6 FILTER

Basic Grid - Filters Applied

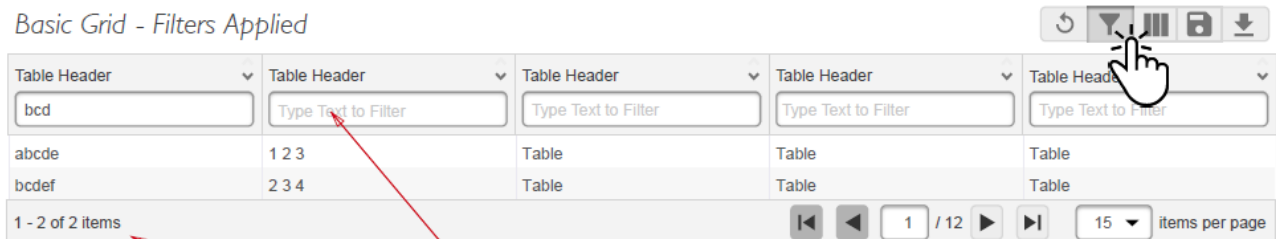


Table Header	Table Header	Table Header	Table Header	Table Header
bcd	Type Text to Filter	Type Text to Filter	Type Text to Filter	Type Text to Filter
abcde	1 2 3	Table	Table	Table
bcdef	2 3 4	Table	Table	Table

1 - 2 of 2 items

1 / 12 15 items per page

Multiple columns can be filtered at the same time, only accepting alphanumeric and special characters, no expressions.

Number of results are updated in Footer

#### Filter Option

Functional Designers should indicate if this option is available by placing its icon in the wireframe.

### 3.7 SAVE

Grid - Save Grid

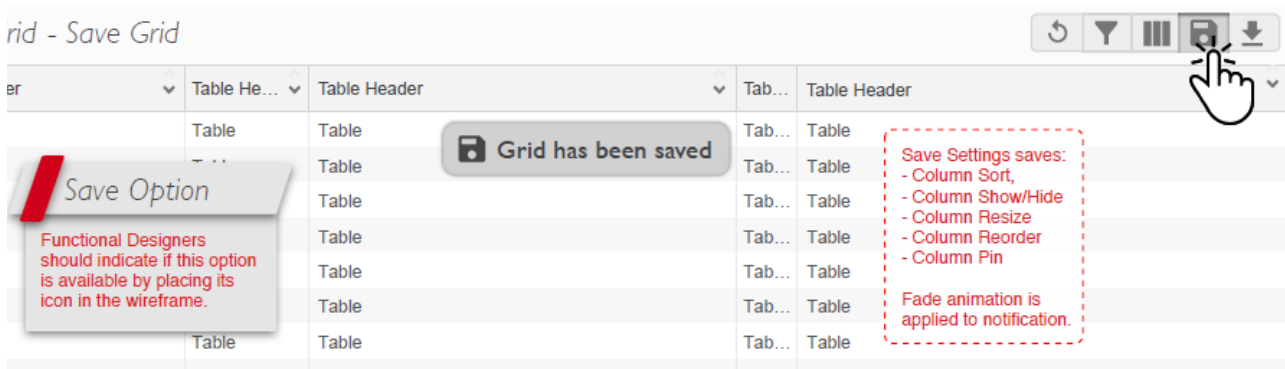


Table Header	Table Header	Table Header	Table Header	Table Header
Table	Table	Table	Table	Table
Table	Table	Table	Table	Table
Table	Table	Table	Table	Table
Table	Table	Table	Table	Table
Table	Table	Table	Table	Table
Table	Table	Table	Table	Table
Table	Table	Table	Table	Table
Table	Table	Table	Table	Table
Table	Table	Table	Table	Table

Grid has been saved

Save Settings saves:

- Column Sort
- Column Show/Hide
- Column Resize
- Column Reorder
- Column Pin

Fade animation is applied to notification.

### 3.8 RESET

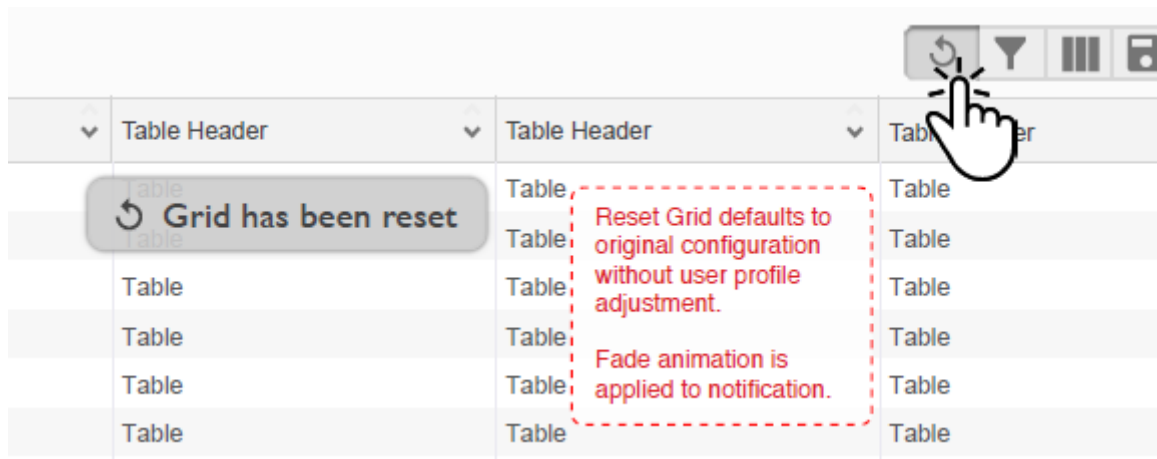


Table Header	Table Header	Table Header
Table	Table	Table
Table	Table	Table
Table	Table	Table
Table	Table	Table
Table	Table	Table
Table	Table	Table
Table	Table	Table

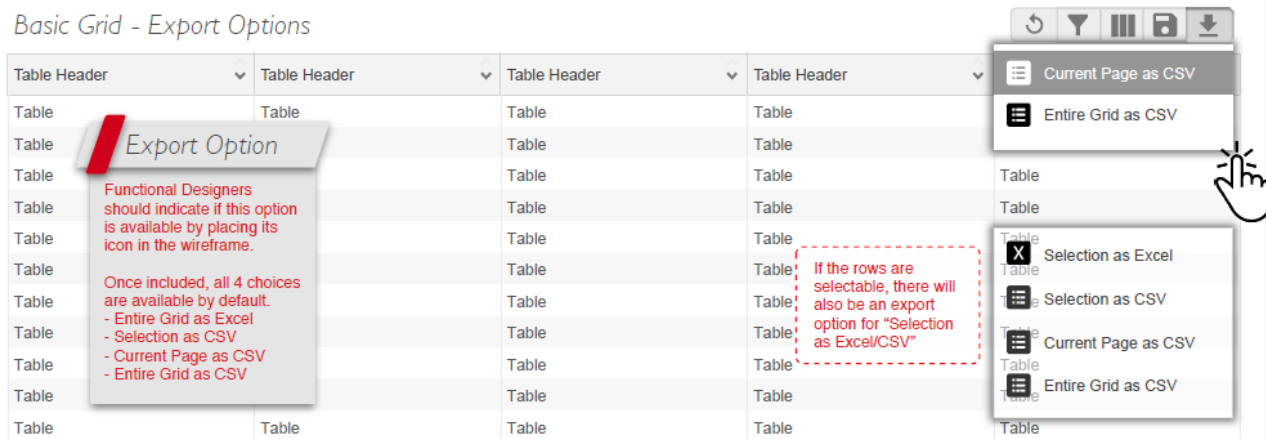
Grid has been reset

Reset Grid defaults to original configuration without user profile adjustment.

Fade animation is applied to notification.

### 3.9 EXPORT

Basic Grid - Export Options



### 3.10 ACTIONS



### 3.11 ACTIONS – INLINE-EDIT / ADD ROW

Basic Grid - Inline Edit / Adding Row

**Action Result**

Each action will take the default flow; indicate otherwise in your wireframe footnote and FDD:

- "Eye" : navigates to view page
- "X" : prompts for confirmation to delete row
- "+" : add new row to inline edit
- "Pen" on search page : navigates to edit page
- "Pen" on edit page : inline edit
- "Disk" : saves record to DB
- "Circle (/)" : discards new record, or reverts to original

Also note:

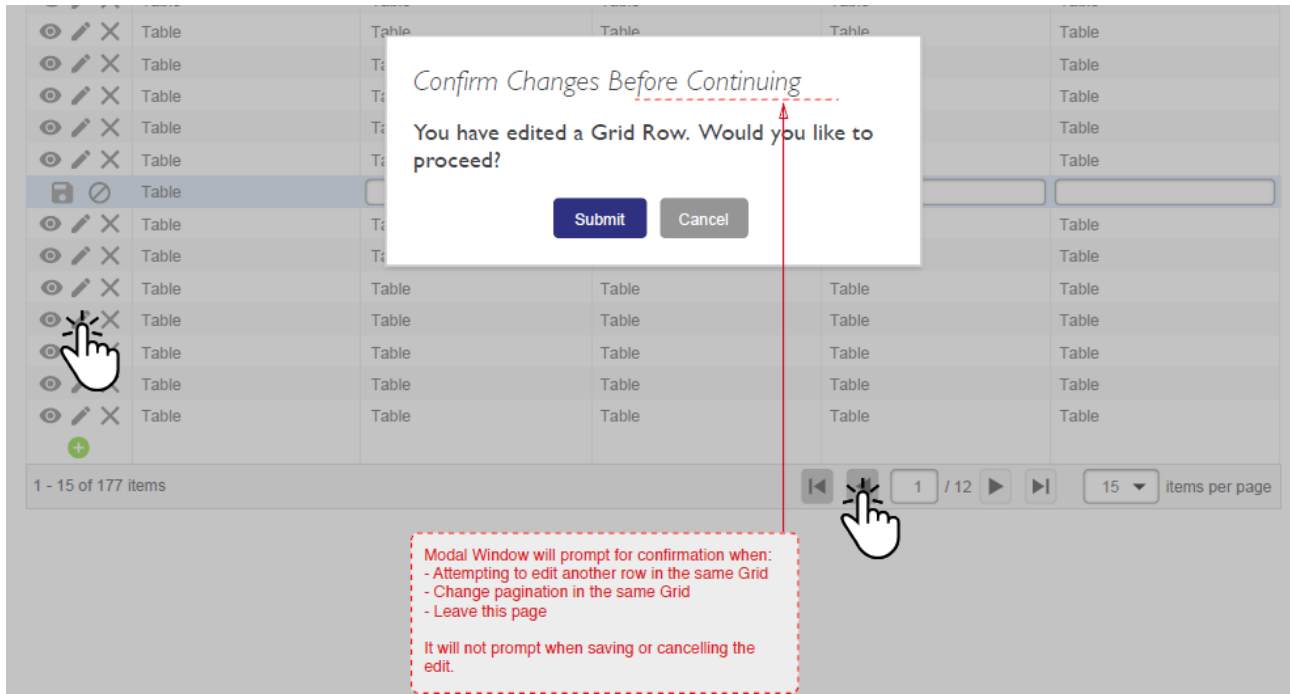
- "Add" on search page: navigates to create page (do not use "+" on search page)

#### 3.11.1 ACTIONS – SUCCESSFULLY ADDED ROW

3. After successfully adding a new row the grid is refreshed. Default behaviour to navigate the pagination to the last page.

By ascending sort, moving to the last page will show the newly added row as confirmation to the user.

### 3.11.2 ACTIONS – ATTEMPT TO DOUBLE EDIT



### 3.12 ACTIONS – MODAL EDIT

The wireframe shows a modal window titled "Record 0019" with a close button (X) in the top right corner. The window contains a grid of input fields organized into two main sections, each starting with a "Group Header".

**Section 1:**

- Group Header**
- Label: Input value
- Label: Input value
- Label: Input value
- Label: Input value

**Section 2:**

- Group Header**
- Label: Input value
- Label: Input value

At the bottom left of the modal are two buttons: "Submit" and "Cancel".

A red dashed box highlights the following text:

The Modal Window is applicable when there are many fields to be filled in. This avoids side-scrolling Grid and validation messages are clearer.

A callout box labeled "Modal Edit" contains the text:

A new wireframe for this screen must be included if this flow is required

### 3.13 BULK ACTIONS

## Basic Grid - Bulk Actions

**Basic Grid - Bulk Actions**

✓	Table Header	✓	Table Header	✓	Table Header	✓	Table Header	✓	Table Header
✓	Table		Table		Table		Table		Table
✓	Table		Table		Table		Table		Table
✓	Table		Table		Table		Table		Table
✓	Table		Table		Table		Table		Table
✓	Table		Table		Table		Table		Table
✓	Table		Table		Table		Table		Table
✓	Table		Table		Table		Table		Table
✓	Table		Table		Table		Table		Table
✓	Table		Table		Table		Table		Table
✓	Table		Table		Table		Table		Table
✓	Table		Table		Table		Table		Table
✓	Table		Table		Table		Table		Table
✓	Table		Table		Table		Table		Table
✓	Table		Table		Table		Table		Table
✓	Table		Table		Table		Table		Table
✓	Table		Table		Table		Table		Table
✓	Table		Table		Table		Table		Table
✓	Table		Table		Table		Table		Table
✓	Table		Table		Table		Table		Table
✓	Table		Table		Table		Table		Table
✓	Table		Table		Table		Table		Table

Action ✓ 1 - 15 of 177 items  
 Inspect is only available for a single record

⏮ ⏪ 1 / 12 ⏩ ⏭ 15 items per page

- Inspect
- Status Complete**
- Duplicate
- Delete

Inspect is only available for a single record

Inspect is disabled, a tooltip appears when hovered over.

Status Complete (custom example) changes each selected record to complete

Duplicate (custom example):  
 < 15 rows - "Duplicate..." will prompt for number of times to duplicate. On apply it will bring user to another page with editable grid.  
 >=15 rows - "Duplicate" will bring the user to the create record page with fields filled.

## Bulk Actions

Functional Designers should indicate which bulk actions are available in the wireframe.

The default actions that can be available is:

- Delete

### 3.14 DRILL DOWN

### Basic Grid - Drill Down

**Basic Grid - Drill Down**

	Table Header	Table Header	Table Header	Table Header	Table Header
+	Table	Table	Table	Table	Table
+	Table	Table	Table	Table	Table
+	Table	Table	Table	Table	Table
+	Table	Table	Table	Table	Table
+	Table	Table	Table	Table	Table
+	Table	Table	Table	Table	Table
+	Table	Table	Table	Table	Table
+	Table	Table	Table	Table	Table
+	Table	Table	Table	Table	Table
+	Table	Table	Table	Table	Table
+	Table	Table	Table	Table	Table
+	Table	Table	Table	Table	Table
+	Table	Table	Table	Table	Table
+	Table	Table	Table	Table	Table
+	Table	Table	Table	Table	Table
+	Table	Table	Table	Table	Table
+	Table	Table	Table	Table	Table
+	Table	Table	Table	Table	Table
+	Table	Table	Table	Table	Table

1 - 15 of 177 items      1 / 12      15 items per page

1. Clicking anywhere in first column of parent cell will expand / collapse child. User will not have to click exactly on the "+" / "-".

## Drill Down

Functional Designers should indicate if this option is available by showing samples in the wireframe.

### 3.14.1 DRILL DOWN – EXPANDED & SCROLLING

*Drill Down Grid - Expanded*

1. Child Grid cells are right aligned to differentiate with Parent Grid.

2. Child Grid shows 5 items per page by default, showing many rows would be overwhelming to the user. Max 15.

3. Saving the Complex Grid, saves the column settings for Child Grid. Exporting the Complex Grid exports the Child Grid.



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### Drill Down Grid - Expanded and Scrolling

↺ ⌵ ⌚ 💾 ⬇

	Table Header	Table Header	Table Header	Table Header	Table Header	Table Header	Table Header	Table Header	
+	Table	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	
-	Table	100	Table	Table	Table	Table	Table	Table	
		10	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell
		10	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell
		10	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell
		10	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell
		10	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell
		50	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell
		0	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell
		0	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell
		0	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell
		0	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell
1 to 11 of 11 items		<span>⏪</span> <span>⏴</span> <span>1 / 1</span> <span>⏵</span> <span>⏩</span> <span>15</span> items per page							
+	Table	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	
+	Table	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	
+	Table	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	
+	Table	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	
+	Table	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	
+	Table	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	
+	Table	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	
+	Table	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	
+	Table	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	
+	Table	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	
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+	Table	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	
+	Table	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	
+	Table	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell	
1 - 15 of 177 items		<span>⏪</span> <span>⏴</span> <span>1 / 12</span> <span>⏵</span> <span>⏩</span> <span>15</span> items per page							

1. The scroll bar is synchronised.  
Scrolling of the parent/child affects the other.

2. Child Scroll bar only appears when  
mouse pointer is over Child Grid.

### 3.15 EXPANDABLE

### Basic Grid - Expandable Group

### Basic Grid - Expandable Group

Functional Designers should indicate if expandable group is available in the wireframe.

The grouping should be indicated in the wireframe footnotes.

A secondary group of columns are shown upon click.

Otherwise only the primary columns are shown to avoid horizontal scroll.

1 - 15 of 177 items

1 / 12 15 items per page

### 3.15.1 EXPANDABLE – EXPANDED

### Basic Grid - Expandable Group

*Basic Grid - Expandable Group*

Hide Country & Ports Information, Cut-off Dates...

Table H... ▾	Long Table H... ▾	Table H... ▾	Table H... ▾	Table Header ▾	Table H... ▾	Table H... ▾	Table H... ▾	Extra Very Long Table ... ▾
Table Cell	Long Table Cell	Table Cell	Table Cell	Very Long Table Cell	Table Cell	Table Cell	Table Cell	Extra Very Long Table Cell
Table Cell	Long Table Cell	Table Cell	Table Cell	Very Long Table Cell	Table Cell	Table Cell	Table Cell	Extra Very Long Table Cell
Table Cell	Long Table Cell	Table Cell	Table Cell	Very Long Table Cell	Table Cell	Table Cell	Table Cell	Extra Very Long Table Cell
Table Cell	Long Table Cell	Table Cell	Table Cell	Very Long Table Cell	Table Cell	Table Cell	Table Cell	Extra Very Long Table Cell
Table Cell	Long Table Cell	Table Cell	Table Cell	Very Long Table Cell	Table Cell	Table Cell	Table Cell	Extra Very Long Table Cell
Table Cell	Long Table Cell	Table Cell	Table Cell	Very Long Table Cell	Table Cell	Table Cell	Table Cell	Extra Very Long Table Cell
Table Cell	Long Table Cell	Table Cell	Table Cell	Very Long Table Cell	Table Cell	Table Cell	Table Cell	Extra Very Long Table Cell
Table Cell	Long Table Cell	Table Cell	Table Cell	Very Long Table Cell	Table Cell	Table Cell	Table Cell	Extra Very Long Table Cell
Table Cell	Long Table Cell	Table Cell	Table Cell	Very Long Table Cell	Table Cell	Table Cell	Table Cell	Extra Very Long Table Cell
Table Cell	Long Table Cell	Table Cell	Table Cell	Very Long Table Cell	Table Cell	Table Cell	Table Cell	Extra Very Long Table Cell
Table Cell	Long Table Cell	Table Cell	Table Cell	Very Long Table Cell	Table Cell	Table Cell	Table Cell	Extra Very Long Table Cell
Table Cell	Long Table Cell	Table Cell	Table Cell	Very Long Table Cell	Table Cell	Table Cell	Table Cell	Extra Very Long Table Cell
Table Cell	Long Table Cell	Table Cell	Table Cell	Very Long Table Cell	Table Cell	Table Cell	Table Cell	Extra Very Long Table Cell
Table Cell	Long Table Cell	Table Cell	Table Cell	Very Long Table Cell	Table Cell	Table Cell	Table Cell	Extra Very Long Table Cell
Table Cell	Long Table Cell	Table Cell	Table Cell	Very Long Table Cell	Table Cell	Table Cell	Table Cell	Extra Very Long Table Cell
Table Cell	Long Table Cell	Table Cell	Table Cell	Very Long Table Cell	Table Cell	Table Cell	Table Cell	Extra Very Long Table Cell
Table Cell	Long Table Cell	Table Cell	Table Cell	Very Long Table Cell	Table Cell	Table Cell	Table Cell	Extra Very Long Table Cell
Table Cell	Long Table Cell	Table Cell	Table Cell	Very Long Table Cell	Table Cell	Table Cell	Table Cell	Extra Very Long Table Cell

1 - 15 of 177 items

<<
<
1 / 12
>
>>
15 items per page

## 4. BASIC EDITABLE GRID

The Basic Editable Grid allows quick data entry of multiple-lines with validation – all changes are saved only upon 'Submit' button being clicked. To support bulk actions of users, the rows can be copied to or duplicated.

The functionality for validation and Add, Copy and Duplicate must be specified during design phase, please refer to the individual sub section and section 8. Summary of Documentation Required in FDD.

### 4.1 EDIT

Basic (Editable) Grid

Editable Grid is typically used for Create scenarios, to enter rows of data. The Grid supports these functionality:

- Adding new rows,
- Entering data into new rows,
- Duplicate row entry to multiple rows in same Grid,
- Copy a row entry to other rows
- Deleting rows,
- Bulk Deleting rows, and
- Bulk Duplicate of rows in same Grid.

Column sorting is not possible for data entry

### 4.2 DUPLICATE

**Duplicate**

Functional Designers should indicate if this option is available in the \*wireframe and \*FDD.

\* = Either by showing in the dropdown or in the footnotes.

^ = The FDD should indicate in CAR how the duplicate record functions. See the next 2 pages for examples.

### 4.2.1 DUPLICATED – OPTION #1

Basic (Editable) Grid - Successfully Duplicated 4 Rows (Option #1)



✓	Actions	Table Header	Table Header	Table Header	Table Header	Table Header
✓	✕	BK7321				
✓	✕	BK1234	2 Orchard Turn, Singapore 2	+65 6222 2222		
✓	✕	BK2762	30 Raffles Avenue, Singapor	+65 6333 3333		
✓	✕	TBC	2 Orchard Turn, Singapore 2	+65 6222 2222		
✓	✕	TBC	30 Raffles Avenue, Singapor	+65 6333 3333		
✓	✕	TBC	2 Orchard Turn, Singapore 2	+65 6222 2222		
✓	✕	TBC	30 Raffles Avenue, Singapor	+65 6333 3333		
	+					

Action ▾ 1 - 7 of 7 items

Submit

1. Columns are filled by Duplicate.

2. Option#1 Identifier column is 'TBC' by Duplicate. This is when transaction number is to be generated by the system.

### 4.2.2 DUPLICATED – OPTION #2

Basic (Editable) Grid - Successfully Duplicated 4 Rows (Option #2)



✓	Actions	Table Header	Table Header	Table Header	Table Header	Table Header
✓	✕	1				
✓	✕	2	2 Orchard Turn, Singapore 2	+65 6222 2222		
✓	✕	3	30 Raffles Avenue, Singapor	+65 6333 3333		
✓	✕	4	2 Orchard Turn, Singapore 2	+65 6222 2222		
✓	✕	5	30 Raffles Avenue, Singapor	+65 6333 3333		
✓	✕	6	2 Orchard Turn, Singapore 2	+65 6222 2222		
✓	✕	7	30 Raffles Avenue, Singapor	+65 6333 3333		
	+					

Action ▾ 1 - 7 of 7 items

Submit

3. Option#2 Identifier column is a running sequence. This is when the record number is only tied to a (parent) record.

### 4.2.3 DUPLICATED – OPTION #3

Basic (Editable) Grid - Successfully Duplicated 4 Rows (Option #3)



✓	Actions	Table Header	Table Header	Table Header	Table Header	Table Header
✓	✕	Kevin				
✓	✕	Stuart	2 Orchard Turn, Singapore 2	+65 6222 2222		
✓	✕	Bob	30 Raffles Avenue, Singapor	+65 6333 3333		
✓	✕	Stuart	2 Orchard Turn, Singapore 2	+65 6222 2222		
✓	✕	Bob	30 Raffles Avenue, Singapor	+65 6333 3333		
✓	✕	Stuart	2 Orchard Turn, Singapore 2	+65 6222 2222		
✓	✕	Bob	30 Raffles Avenue, Singapor	+65 6333 3333		
	+					

Action ▾ 1 - 7 of 7 items

Submit

4. Option #3 Identifier column is auto-filled by Duplicate. This is when other columns must differ.

### 4.2.4 DUPLICATED – OPTION #4

Basic (Editable) Grid - Successfully Duplicated 4 Rows (Option #4)



✓	Actions	Table Header	Table Header	Table Header	Table Header	Table Header
✓	✕	Kevin				
✓	✕	Stuart	2 Orchard Turn, Singapore 2	+65 6222 2222		
✓	✕	Bob	30 Raffles Avenue, Singapor	+65 6333 3333		
✓	✕	Enter Text	2 Orchard Turn, Singapore 2	+65 6222 2222		
✓	✕	Enter Text	30 Raffles Avenue, Singapor	+65 6333 3333		
✓	✕	Enter Text	2 Orchard Turn, Singapore 2	+65 6222 2222		
✓	✕	Enter Text	30 Raffles Avenue, Singapor	+65 6333 3333		
	+					

Action ▾ 1 - 7 of 7 items

Submit

5. Option #4 Identifier column is blank. This is when column is unique.

### 4.3 COPY TO

**Copy To**

Select Records

✓	Table Header	Table Header	Table Header
✓	Kevin	Singapore	+65 6222 2222
✓	Tom	Malaysia	+60 1 1111 1111
✓	Tom	Malaysia	+60 2 2222 2222
✓	Tom	Singapore	+65 6333 3333
✓	Paul	Malaysia	+60 4 4444 4444
✓	Paul	Singapore	+65 6777 7777

6 Records Found

Apply Cancel

1. The 3 unique fields that make up the compound key are shown.

2. Menu Options:  
- Filter  
- Select All  
- Select None

**Copy To**

Functional Designers should indicate if this option is available in the \*wireframe and ^FDD.

\* = Either by showing in the dropdown or in the footnotes.

^ = The FDD should indicate in CAR how the copied record functions.

### 4.3.1 COPIED

Basic (Editable) Grid - Successfully Copied 1 Row to 3 Others



✓	Actions	Table Header	Table Header	Table Header	Table Header	Table Header
✓	✕	Kevin	Singapore	+65 6222 2222	Senior Manager	Research Department
✓	✕	Kevin	Singapore	+65 6777 7777	Senior Manager	Research Department
✓	✕	Tom	Malaysia	+60 1 1111 1111		
✓	✕	Tom	Malaysia	+60 2 2222 2222		
✓	✕	Tom	Singapore	+65 6333 3333		
✓	✕	Paul	Malaysia	+60 4 4444 4444	Senior Manager	Research Department
✓	✕	Paul	Singapore	+65 6777 7777	Senior Manager	Research Department
	+					

Action ▾ 1 - 7 of 7 items

Submit

Kevin as 'Senior Manager' of 'Research Department' has been copied.

As the first 3 columns are unique (compound key) they are not copied over.

### 4.4 FREEZE COLUMN

Basic (Editable) Grid - Freeze Columns



✓	Actions	Booking Lin...	30. PO Numb...	31. Style Nu...	36. Sub Styl...	PP Code	26. Hazardous Cargo	27. Fish and Wildlife	Comments
✓	✕	1					<input type="checkbox"/>	<input type="checkbox"/>	
✓	✕	2					<input checked="" type="checkbox"/>	<input type="checkbox"/>	
✓	✕	3					<input type="checkbox"/>	<input type="checkbox"/>	
✓	✕	4					<input type="checkbox"/>	<input type="checkbox"/>	
✓	✕	5					<input type="checkbox"/>	<input type="checkbox"/>	
✓	✕	6					<input checked="" type="checkbox"/>	<input type="checkbox"/>	
✓	✕	7					<input type="checkbox"/>	<input type="checkbox"/>	
	+								

Action ▾ 1 - 7 of 7 items

Submit

1. "Booking Lin..." column is 'frozen', it does not scroll with the other columns.

2. Columns can be rearranged by dragging.

**Freeze Column**

Functional Designers should indicate which columns are frozen in the footnote of the wireframe.

## 4.5 ACTIVE TOGGLE

Basic (Editable) Grid - Active Toggle

↶ |||| 📄

✓	Active	Table Header	Table Header	Table Header	Table Header	Table Header
✓	●	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell
✓	●	Table	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
✓	●	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell
✓	●	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell
✓	●	Table Cell	Table Cell	Table Cell	Table Cell	Table Cell
✓	●	Table	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Action 1 - 6 of 6 items

Submit

1. User has control over which rows are active in the system; they can be edited.
  2. The inactive rows cannot be edited.
- This caters for the scenario of configuring profiles. Where there are a fixed set of Options and each profile will have a permutation on Options active.

### Active Toggle

Functional Designers should indicate if this option is available by placing its icon in the Grid of the wireframe.



## 5. COMPLEX GRID

The Complex Grid facilitates deeper understanding of data by showing the next level of information. This caters for more scenarios than the Drill Down feature as now separate column data can be included. The Complex Grid is an extension of the Basic Grid so it's functionalities are also supported.

## 5.1 EXPANDED

The screenshot displays a complex grid interface with multiple tables and a sidebar. A red arrow points from the top right toolbar to the grid area, and another red arrow points from the bottom right pagination controls to the grid area. The grid contains several tables with headers and data rows. The sidebar on the left has a minus sign icon. The bottom of the grid shows pagination information: "1 - 15 of 177 items" and "1 / 12" items per page. The top right toolbar includes icons for undo, redo, filter, expand/collapse, save, and download. The grid area has a table with 5 columns and 11 rows, and another table with 5 columns and 15 rows. The bottom right pagination controls show a dropdown menu for items per page with options 5, 10, and 15.

1. Child Grid shows 5 items per page by default, showing many rows would be overwhelming to the user. Max 15.

2. Saving or exporting the Complex Grid, does not include the child grid.

## 5.2 SCROLLING

### Complex Grid - Parent and Child Scrolling

### Complex Grid - Parent and Child Scrolling

The screenshot displays a complex grid interface with a main table and a child table. The main table has 177 items, and the child table has 11 items. The child table is expanded for the first parent item. The interface includes a toolbar with icons for undo, redo, save, and delete. The main table has a scrollbar on the right. The child table has a scrollbar at the bottom. A red arrow points to the child table's scrollbar.

1. Scrolling of the parent and child tables are independent.

## 6. COMPLEX EDITABLE GRID

The Complex Editable Grid is an extension of the Complex Grid and Basic Editable Grid so any additional functionalities are also supported. In addition, it allows operations across Child Grids such as Copy Across, Duplicate Across and Move Across.

### 6.1 EXPANDED

Complex (Editable) Grid

1. 'Copy/Duplicate/Move Across' affect other Child Grids. 'Duplicate Across' would create duplicates in other Childs such as PID004, PID005

2. All Child Grids are synchronised with each other in the following functionality:

- Items per page,
- Column Sorting,
- Column Order,
- Column Width, and
- Horizontal Scrolling.

3. All Child Grids are independent from each other in the following functionality:

- Current page / Max pages.

## 6.2 DUPLICATE ACROSS

**Complex Grid - Bulk Action**

Active Actions Table Header

Duplicate Across duplicates one or many Child records to another Child Grid - Identified by the Parent Id.

The records are created at the end of the Child Grid and in the same order.

### Duplicate Across

#### Select Records

- Table Header
- PID004
- PID005

1 - 2 of 2 items

2 of times to Duplicate

Apply Cancel

Duplicate Delete

Action	Table Header	Table Header
Cell	Table Cell	Table Cell
Cell	Table Cell	Table Cell
Cell	Table Cell	Table Cell
Cell	Table Cell	Table Cell
Cell	Table Cell	Table Cell

11 Records Found

1 / 3 items per page

Action 5 Records Found, 3 Records Active

Submit

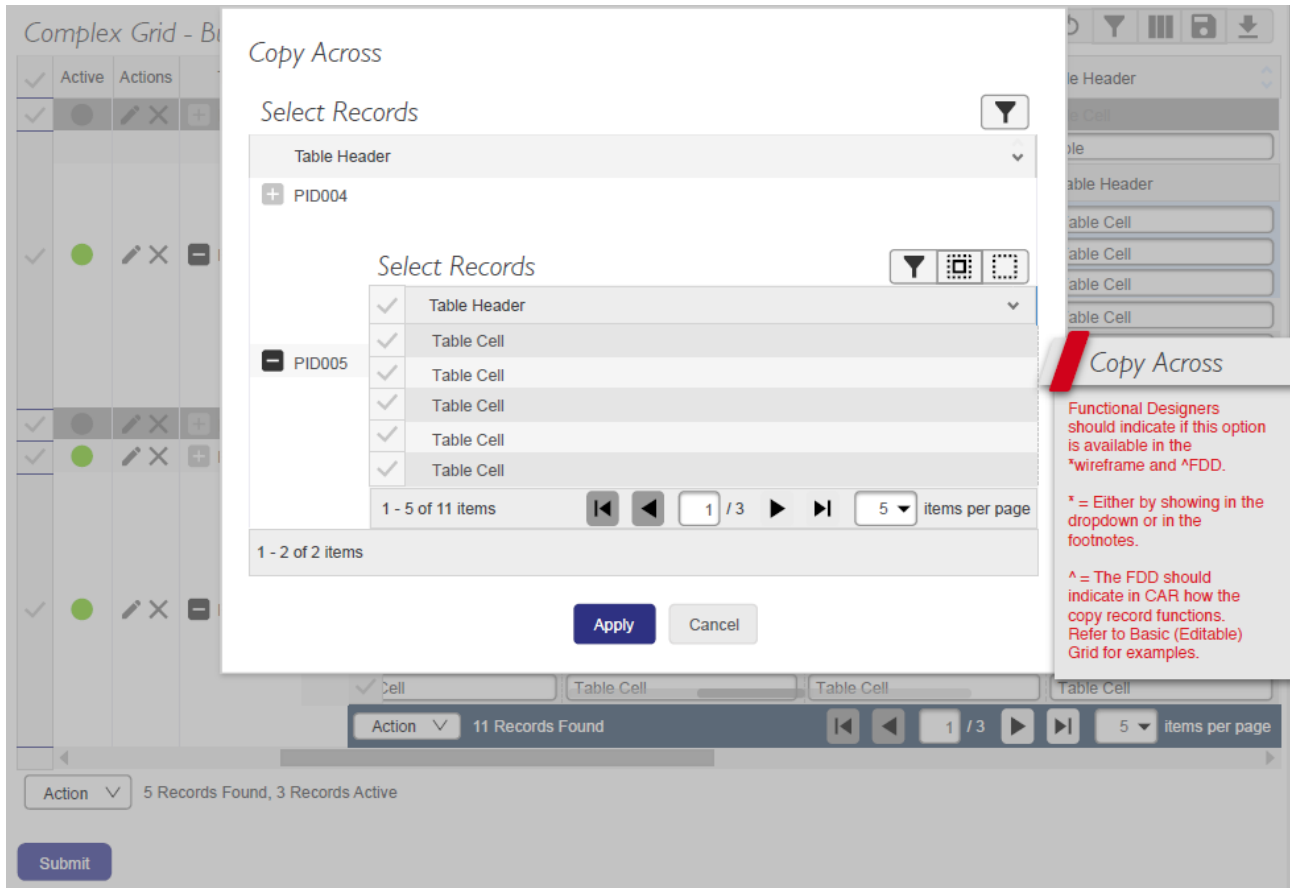
**Duplicate Across**

Functional Designers should indicate if this option is available in the \*wireframe and ^FDD.

\* = Either by showing in the dropdown or in the footnotes.

^ = The FDD should indicate in CAR how the duplicate record functions. Refer to Basic (Editable) Grid for examples.

## 6.3 COPY ACROSS



**Copy Across**

Select Records

Table Header
+ PID004
- PID005

Select Records

Table Header
Table Cell
Table Cell
Table Cell
Table Cell
Table Cell
Table Cell

1 - 5 of 11 items

1 / 3

5 items per page

1 - 2 of 2 items

Apply Cancel

**Copy Across**

Functional Designers should indicate if this option is available in the \*wireframe and ^FDD.

\* = Either by showing in the dropdown or in the footnotes.

^ = The FDD should indicate in CAR how the copy record functions. Refer to Basic (Editable) Grid for examples.

## 6.4 MOVE ACROSS

**Move Across**

Select Record

- ☒ Table Header
- ☒ PID004
- ☒ PID005

2 Records Found

Apply Cancel

**Move Across**

Functional Designers should indicate if this option is available in the "wireframe and ^FDD.

\* = Either by showing in the dropdown or in the footnotes.

^ = The FDD should indicate in CAR how the move record functions.

## 7. MULTI LEVEL GRID

The Multi Level Grid is a variant of the Complex Grid to allow more than two levels of drill down while keeping the user interface simple. The caveat is that only one record is selected in each grid.

### 7.1 FIRST LEVEL

First Level

Table Header

Type Text to Filter

Table Header

Type Text to Filter

Table Header

Type Text to Filter

Table Header

Select

Table Header

01/01/2015

Table Cell	Table Cell	Table Cell	Table Cell	Table Cell
Table Cell	Table Cell	Table Cell	Table Cell	Table Cell
Table Cell	Table Cell	Table Cell	Table Cell	Table Cell
Table Cell	Table Cell	Table Cell	Table Cell	Table Cell
Table Cell	Table Cell	Table Cell	Table Cell	Table Cell
My Choice #1	Table Cell	Table Cell	Table Cell	Table Cell
Table Cell	Table Cell	Table Cell	Table Cell	Table Cell
Table Cell	Table Cell	Table Cell	Table Cell	Table Cell
Table Cell	Table Cell	Table Cell	Table Cell	Table Cell
Table Cell	Table Cell	Table Cell	Table Cell	Table Cell
Table Cell	Table Cell	Table Cell	Table Cell	Table Cell
Table Cell	Table Cell	Table Cell	Table Cell	Table Cell
Table Cell	Table Cell	Table Cell	Table Cell	Table Cell
Table Cell	Table Cell	Table Cell	Table Cell	Table Cell
Table Cell	Table Cell	Table Cell	Table Cell	Table Cell
Table Cell	Table Cell	Table Cell	Table Cell	Table Cell

1 - 15 of 177 items

1 / 12

15 items per page

Second Level

No Records Found.

Third Level

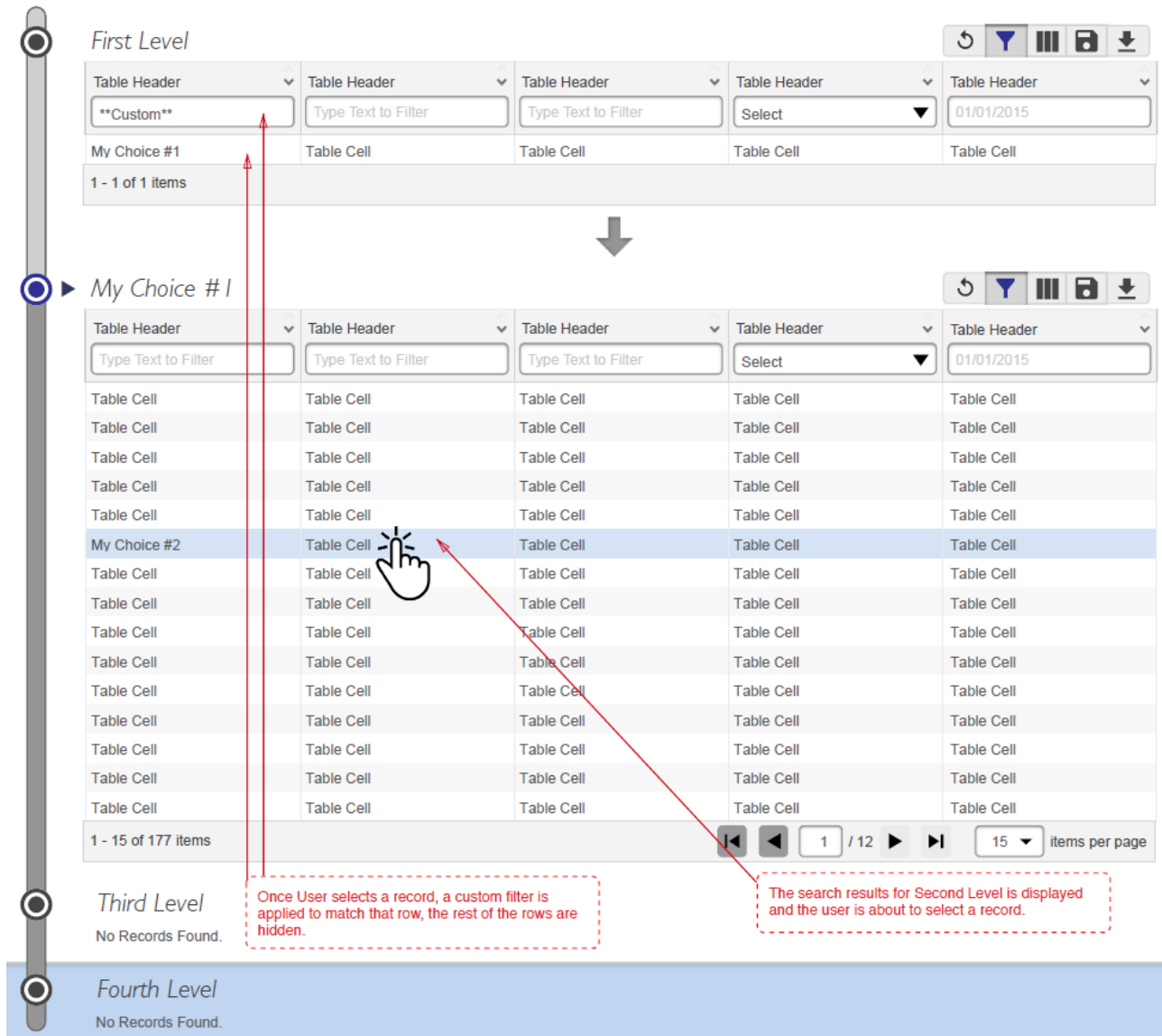
No Records Found.

Fourth Level

No Records Found.

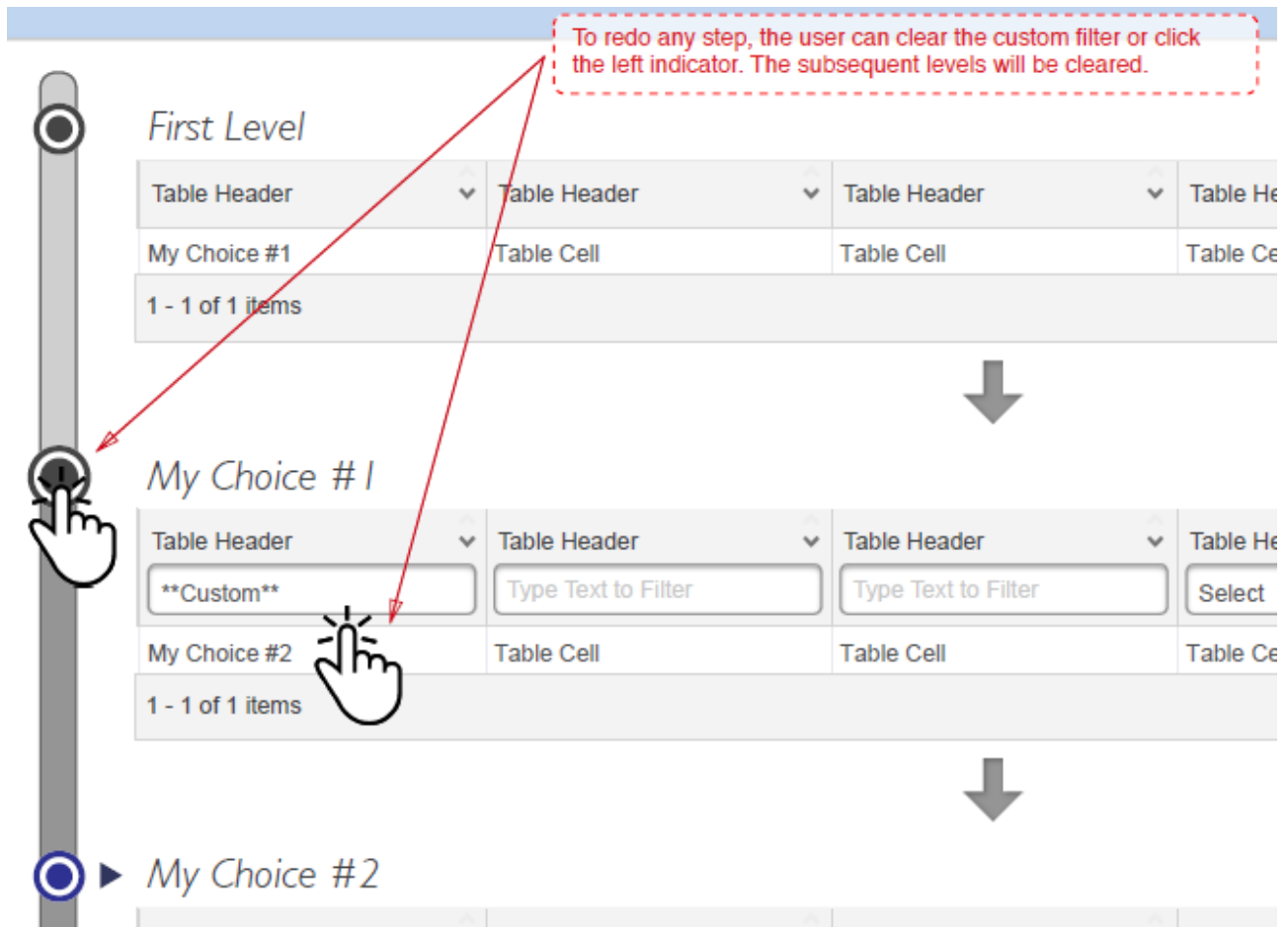
The search results for First Level is displayed and the user is about to select a record.

## 7.2 SECOND LEVEL





### 7.3 REDO A SEARCH



## 8. SUMMARY OF DOCUMENTATION REQUIRED IN FDD

The Functional Design Document should specify how data operations are handled as despite the common UI actions, they vary from record to record.

### 8.1 LIST OF FUNCTIONALITIES REQUIRING DOCUMENTATION

The following functionalities require documentation:

Functionality	Documentation in FDD
Grid with options or buttons	Element Information (Specify the options or buttons)
Filter	Element Information (Specify the filter controls used)
(View) Add Row + Save	Control-Action-Response, Element Information, Use Case Flow
(View) Edit Row + Save	
(View) Delete Row	
(View) Enable / Disable Row	
(Edit) Copy To	Control-Action-Response, Element Information
(Edit) Duplicate	
(Edit) Move Across	
(Edit) Copy Across	
(Edit) Duplicate Across	
<Any custom functionality that requires data operations>	Control-Action-Response, Element Information, Use Case Flow