

CLS – UI COMPONENTS

PROPOSAL FOR IMPLEMENTING BOTH

TABLE AND DATA GRIDS UI COMPONENTS

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BACKGROUND

As Clinisys moves to Material UI (MUI), there has been some uncertainty around whether to use Tables or MUI X Data Grid for tabular data. Clinisys currently uses grids extensively, but not every workflow needs the level of interaction a Data Grid provides. This became clearer during the keyboard shortcut audit. Tables and Data Grids may look similar, but their keyboard navigation and interaction differ significantly.

The proposal is to support both Table and Data Grid, with clear guidance for when each should be used.

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WHY BOTH

Table and Data Grid have a lot in common. Both can support sorting, filtering, selection, actions, editing, column configuration, and pagination.

The main difference is how users interact with the data.

- **TABLE** is better suited to workflows where users primarily work with records. They may review information, search or filter a list, select records, and take an action. This reflects many healthcare workflows, where the focus is on patients, specimens, orders, results, or other records. Users generally do not need to navigate through every individual cell.
- **DATA GRID** is better suited to workflows where users need to work directly with data values. This includes moving between cells, entering or editing a series of values, selecting cells or ranges, and copying and pasting data. These interactions are particularly important in scientific and batch-entry workflows.

Supporting both allows us to use the interaction model that fits the workflow rather than using Data Grid for all tabular data simply because Clinisys has historically used grids.

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KEYBOARD NAVIGATION

The keyboard audit highlighted one of the clearest differences between the two components.

In a Table, keyboard navigation can remain focused on the records and interactive controls within the table.

A Data Grid, however, requires navigation within the data itself. The existing Data Grid specification includes arrow-key navigation between cells, Tab and Shift+Tab between cells, row and column selection, range selection, edit mode, copy and paste, fill operations, and undo and redo. This is useful when users are entering or manipulating data. It is unnecessary complexity when users are primarily reviewing information.

The keyboard behavior for Table and Data Grid should therefore be defined separately.

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CHOOSING BETWEEN TABLE AND DATA GRID

A simple way to make the component decision is to look at what the user needs to do.

USE TABLE WHEN:

- The primary task is reviewing or finding records.
- Actions apply mainly to a row or record.
- Users need sorting, filtering, search, or row selection.
- Editing is occasional and does not require moving through cells.
- Cell-level keyboard navigation would not improve the workflow.

USE DATA GRID WHEN:

- Users need to enter or edit multiple values.
- Users need to move between cells using the keyboard.
- Repeated or batch data entry is part of the workflow.
- Cell or range selection is required.
- Copy and paste between cells is useful.
- Users need to work quickly through a large set of values.

Editing by itself does not require a Data Grid. Tables can also support editable content. Data Grid is appropriate when cell-level interaction is an important part of the workflow.

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DATA GRID INTERACTION

If Data Grid is implemented, there are several interaction details that need to be addressed.

EDITABLE CELLS	Users should be able to tell which cells are editable before trying to edit them. Editable and non-editable cells need a clear visual difference.
FOCUS AND EDIT MODE	A cell with keyboard focus and a cell being edited are different states and should look different. Users need to know whether they are navigating the grid or entering data. This is particularly important in scientific workflows, where users may enter many values sequentially.
SELECTION	Cell, range, row, and column selection should have clear visual states. Users should be able to see what is selected before performing an action such as delete, copy, paste, or bulk edit.
KEYBOARD SHORTCUTS	Keyboard shortcuts are important to existing Clinisys users and came up repeatedly during client discussions. The available shortcuts should be discoverable within the product rather than requiring users to already know them.
LOCKED CELLS	Where useful, a tooltip can explain why a cell cannot be edited—for example, because the value is calculated, interfaced, or restricted by permissions.
CONSISTENCY	Table and Data Grid should still feel like part of the same product. They share many elements, including toolbars, headers, search, filtering, column settings, actions, and pagination. Where functionality is shared, the controls and behavior should remain consistent. The main differences should be where the interaction actually changes: cell navigation, focus, selection, and editing.

MIGRATION

Existing Clinisys grids should not be automatically replaced with the MUI X Data Grid. During migration, each workflow should be reviewed to determine whether it needs grid-level interaction. If users primarily review and act on records, use Table. If users need to navigate, enter, or manipulate individual values across the dataset, use Data Grid.

06**RECOMMENDATION**

Implement both Table and Data Grid as supported components within the Clinisys MUI design system. This gives healthcare workflows a more appropriate Table experience while retaining the richer Data Grid interaction needed for scientific and batch-entry workflows. It also establishes a clearer standard for future development: the component is selected based on the workflow's required interaction, rather than treating all tabular data as a grid.