ITI0209: User Interfaces

15. Dashboard

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Source: https://www.geckoboard.com/dashboard-examples/company/excel-dashboard/

Dashboards often provide at-a-glance views of key performance indicators (KPIs) relevant to a particular objective or business process. For example, a manufacturing dashboard may show numbers related to productivity. Similarly, a human resources dashboard may show numbers related to staff recruitment, retention and composition.

The term dashboard originates from the automobile dashboard where drivers monitor the major functions at a glance via the instrument cluster.

Operational Dashboards

Operational dashboards tend to focus on processes and track short-term goals by design. Their metrics tend to be rapidly changing and evolving from day-to-day. The dashboard UX here should be nucleated on actionable data, and how easy or difficult it would be to change it.

Examples: https://www.geckoboard.com/dashboard-examples/operations/

Strategic Dashboards

Strategic dashboards are the most broadly focused of them all. They look at long-term goals, and how they are being achieved with respect to large volumes of metrics, over long periods of time. Generally, the data here is used much more as a benchmark, than as a KPI. Dashboard UX designers should focus on how to neatly represent large volumes of data, in a few metrics.

Examples: https://dashthis.com/blog/impress-your-boss-with-these-6-strategic-dashboard-examples/

Analytical Dashboards

Analytical dashboards are the odd ones out since they are either created by, or for analysts. The data here is either displayed after synthesis from an analyst, or present for analysts to further act on. The goal here is to allow analysts to view as much high-quality data as possible in order to make inferences and observations on the same. In general, dashboard UX designers would want to make the analyst's job as easy as possible, by featuring plenty of data categories, and analytical tools.

Examples: https://www.geckoboard.com/dashboard-examples/marketing/web-analytics-dashboard/

Tactical Dashboards

Tactical dashboards are the most short-sighted of all dashboards, they focus on day-to-day KPI's, and are normally not actionable, much more focused instead on data collation, and visualization, allowing senior management to keep a track of employee performance in most cases. Dashboard UX designers should focus on letting users get as up close and personal with the data as possible, visualizing even the smallest details and changes in metrics.

Examples: https://ezdatamunch.com/tactical-dashboards-example-templates/

Building the Dashboard: Steps

1. Understand the motive

Like any other view in your product, the dashboard has a specific purpose. Getting this wrong renders your further efforts meaningless.

Ask questions:

- Determine the type of dashboard: operational, tactical etc.
- Determine the users and needs the dashboard satisfies.

Building the Dashboard: Steps

2. Choose the right representation for data

When we talk dashboards, we talk charts. You will want to display multiple types of information in a dashboard, be it static or dynamic changes over time.

To choose the right chart type for the chart, ask yourself:

- How many variables do you want to show in a single chart?
- Will you display values over a period of time, or among items or groups?
- How many data points are needed to display for each variable?

Charts for visualizing relationship
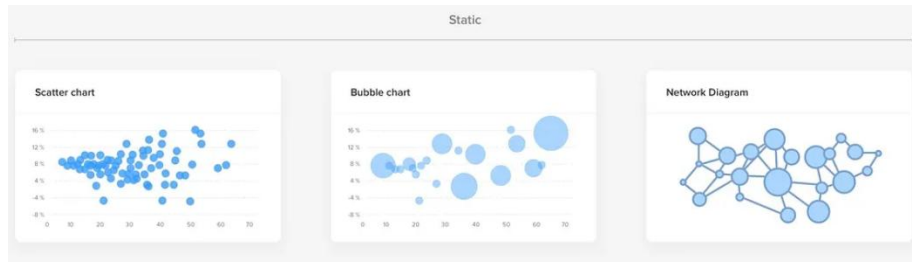
Scatter charts are primarily used for correlation and distribution analysis. Bubble chart helps introduce the third dimension into the chart. A network diagram is handy when even the most minor connection between data points are very important.

Charts for Comparison
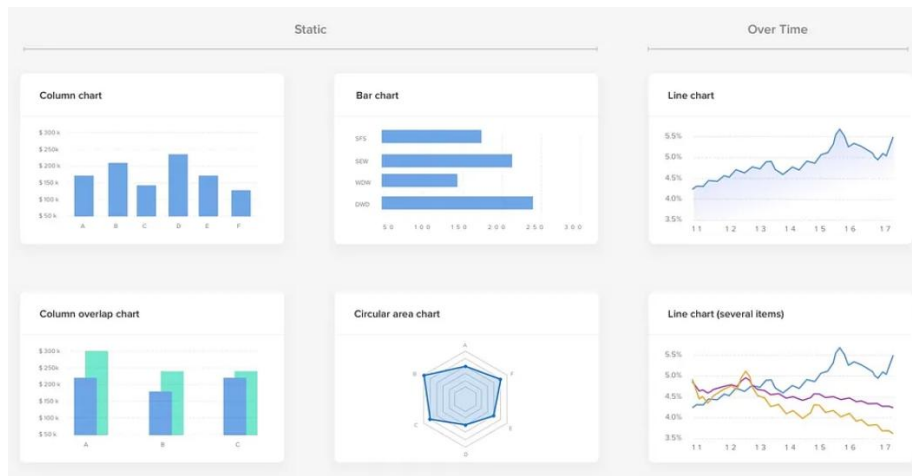
Charts for Showing Composition

Pie and Donut charts have a bad reputation for data visualization. These charts are among the most frequently used, and they are also the most frequently misused charts. They are quite difficult to read when there are too many components or include very similar values. It is hard for humans to differentiate values when it comes to angles and areas.

Charts for Showing Distribution
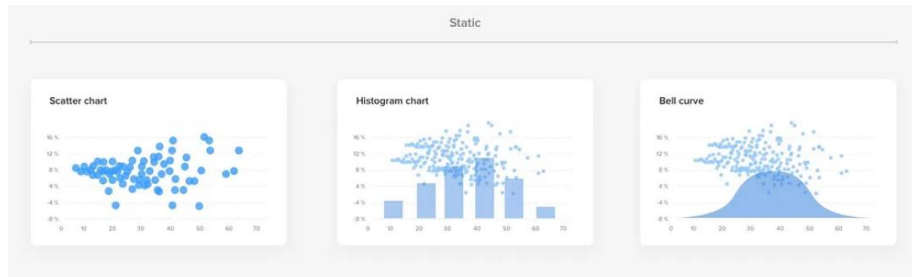
Distribution charts help you to illustrate outliers, the normal tendency, and the range of information in your values.

Building the Dashboard: Steps

3. Naming Conventions and Formatting

- Follow clear and consistent naming conventions
- Follow consistent date formatting
- Truncate large values

Building the Dashboard: Steps

3. Define the layout and flow. Prioritize.

Grids can help you to achieve effective alignment and consistency with little effort and create a basic structure or a skeleton for your design.Doing so ties them together in an overall "system" and supports your composition rationally.

- The top left corner of the screen will naturally get more attention so try to position key info from left to right.
- If there are dependencies that will affect decisions making on one group of information from based on info from another, create a layout in a way that users do not need to go back and forth — create a continuous flow for easy scanning across the dashboard.
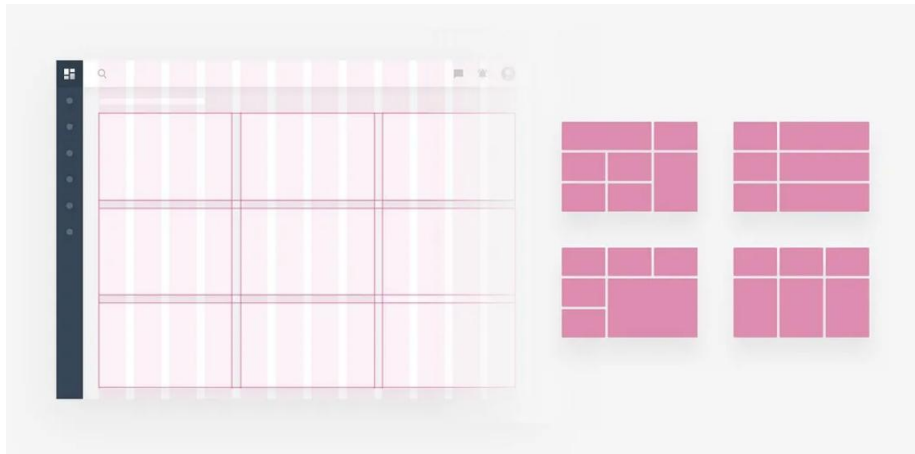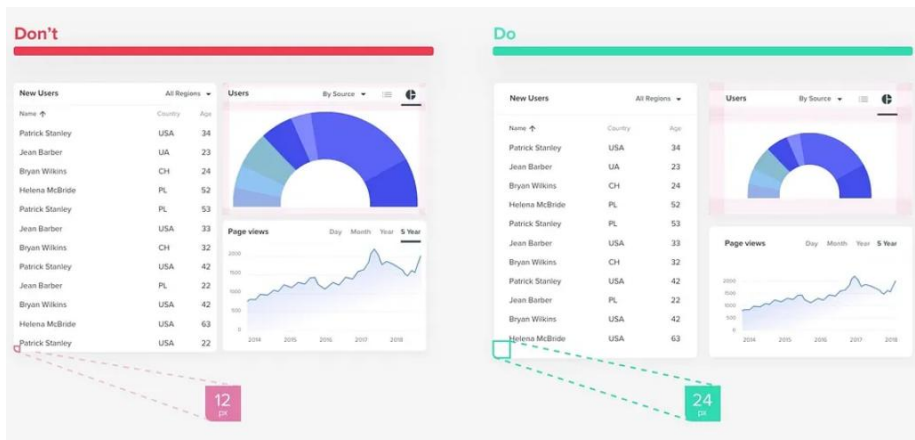
Building the Dashboard: Steps

5.Use Building Blocks

After we defined the grid, we can start work with multiple "widgets" that will hold the info, charts, and controls. Cards are easy to arrange. They are a good choice for responsive design since cards act as content containers that easily scale up or down.Having consistent structure makes it easy for users to work with the interface.

Building the Dashboard: Steps

6.Double your margins

If the white space is not balanced, a copy will be hard to read. That's why whitspace matters as much as any other element.

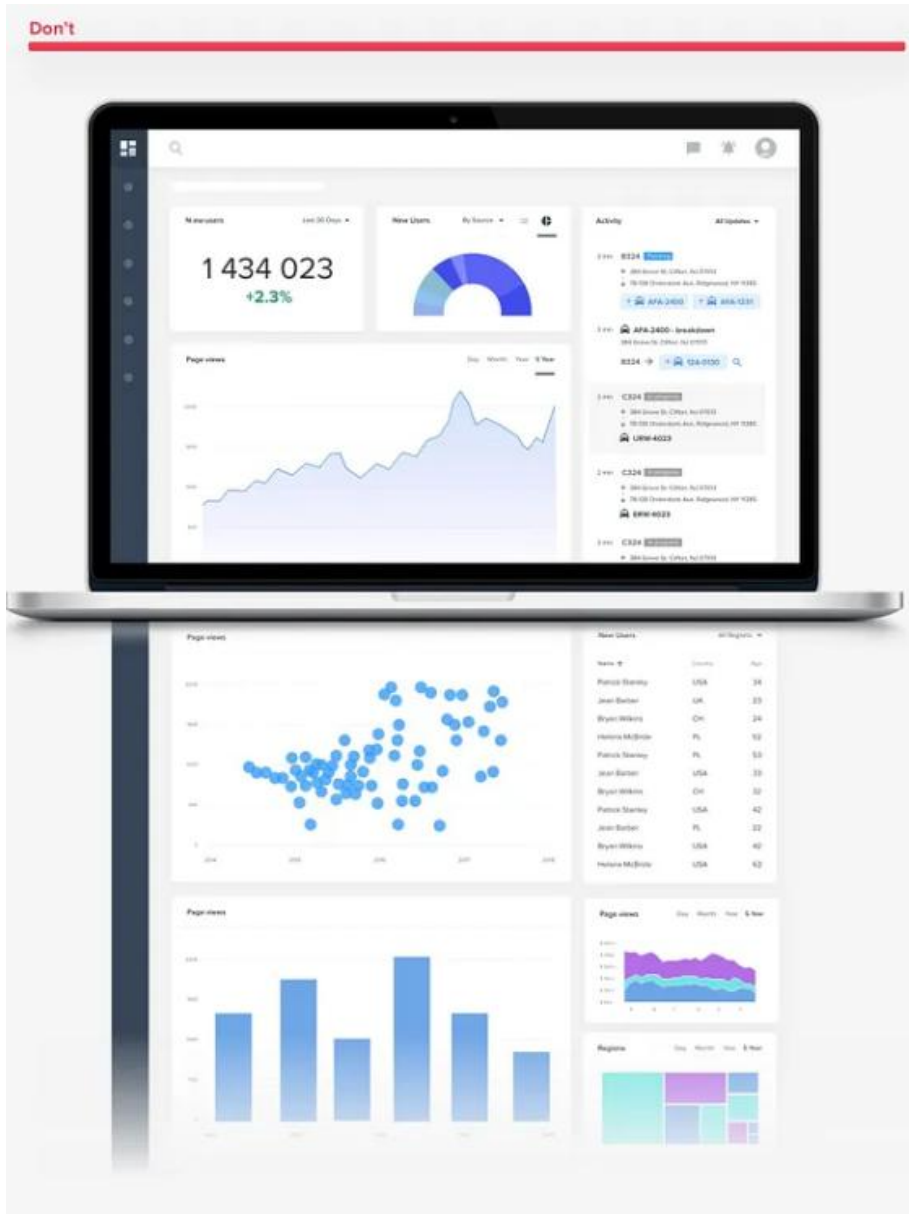**Building the Dashboard: Steps**

## 7. Don't hide information or rely on interactions too much.

As one of the primary goals of the dashboard is to surface information at a glance, relying on scrolling or many interactions dilutes the whole purpose.

The solution is prioritization.

- Research and interviews should uncover core information.
- Work only with space above the fold to display it.
- Do not tell the full story — summarize instead, and surface only key info.
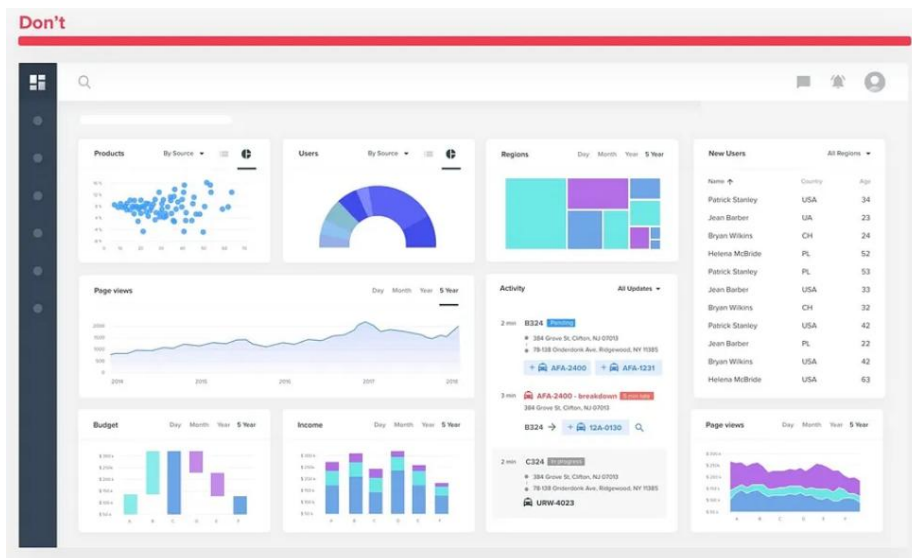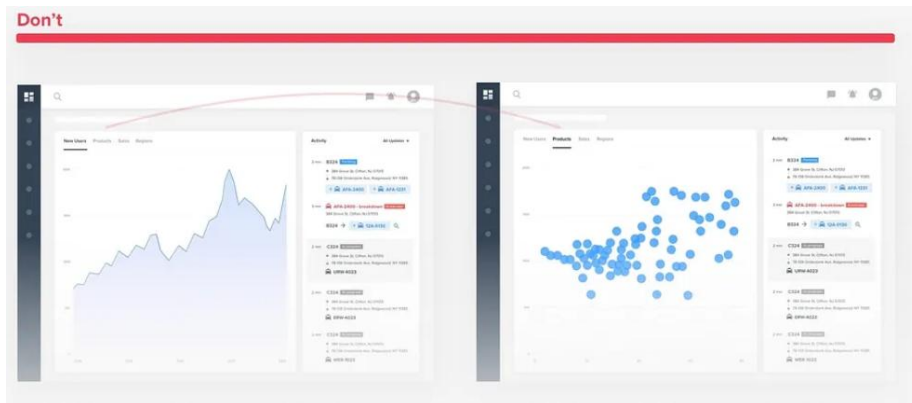
Building the Dashboard: Steps

8. Personalization rather than customization.

Users expect that the content they see will be relevant to their individual needs.

- Personalization is done by the system itself. The system should be set to identify users and deliver to them the content, experience, or functionality that matches their role.
- Customization is done by the user and is often an excuse to avoid a tedious process of truly finding out what each user role truly needs to see

Building the Dashboard: Steps

9. When integrating data tables or lists, make sure they are interactive and data is aligned correctly

A data table is a great solution when you need to show a lot of information for a large number of items.

Building the Dashboard: Steps

10. Design the dashboard last.

A dashboard is a summary view of everything else and displays key info from various parts of the application. It's just more practical to design it at the end. Otherwise, you will need to constantly go back and update your dashboard designs while you are working on all the other pages. Furthermore, once a majority of the views are designed, you will have a ton of components to work with when putting together a dashboard.

An Effective Dashboard Shoud

- Be viewed on a single one-page display screen (no scrolling required).
- Feature three to seven metrics.
- Present data that is as close to real as possible.
- Include metrics that can be affected by users of the system.
- Be simple and easy to read with minimal effort.
- Eliminate the need for paper reports.

An Effective Dashboard Should Not

- Be everything to everyone.
- Have more than seven metrics.
- Require scrolling to view the main metrics.
- Contain a lot of text.
- Remove the need for detail reports.

References

- Top 10 Dashboards UX/UI https://medium.com/movade-studio/top-10-dashboards-ux-ui-1-fd73f24a2661
- Big Book of Dashboards: http://www.bigbookofdashboards.com/dashboards.html
- 10 rules for better dashboard design: Practical Guide. https://uxplanet.org/10-rules-for-better-dashboard-design-ef68189d734c
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Thank you!