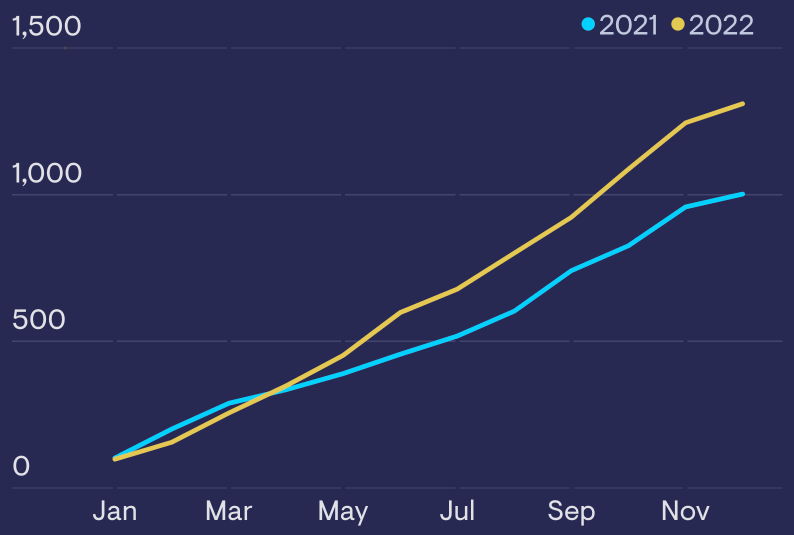
ITI0209: User Interfaces

15. Dashboard

Martin Verrev

Spring 2025

New customers

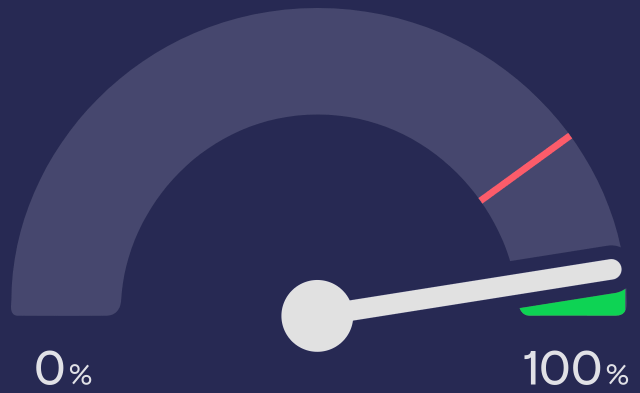


$1,773

New MRR today

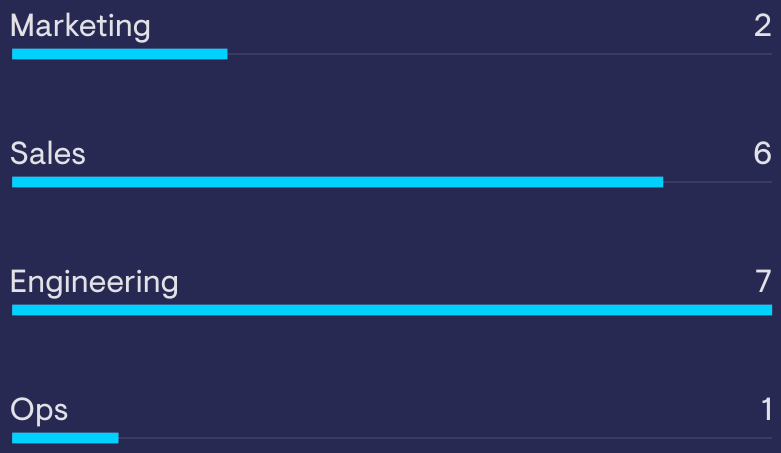
▲ $352 vs yesterday

Customer Satisfaction



95%

Hires this month



Recent customers

	Customer	Plan	△ MRR
⇩	Patty's	Team	-$72
☆	AMBD	Team+	$279
⚠	Insup	Team	-$160
⇧	T-Grind	Team+	$135
⇧	Montezuma	Company	$599
☆	R. Rosen	Team+	$279
☆	Alice Springs PT	Basic	$49
⇧	FGYS	Team	$96
⇩	Roy Corps	Team	-$72
☆	BBG	Team+	$279
⚠	Monkd	Team	-$160
⇧	B. Cake	Team+	$135
⇧	Roadfeeder	Company	$599
☆	Monzo	Team+	$279
☆	Blight	Basic	$49
⇧	YYT	Team	$96

A dashboard is a visual display of essential information needed to achieve specific business objectives.

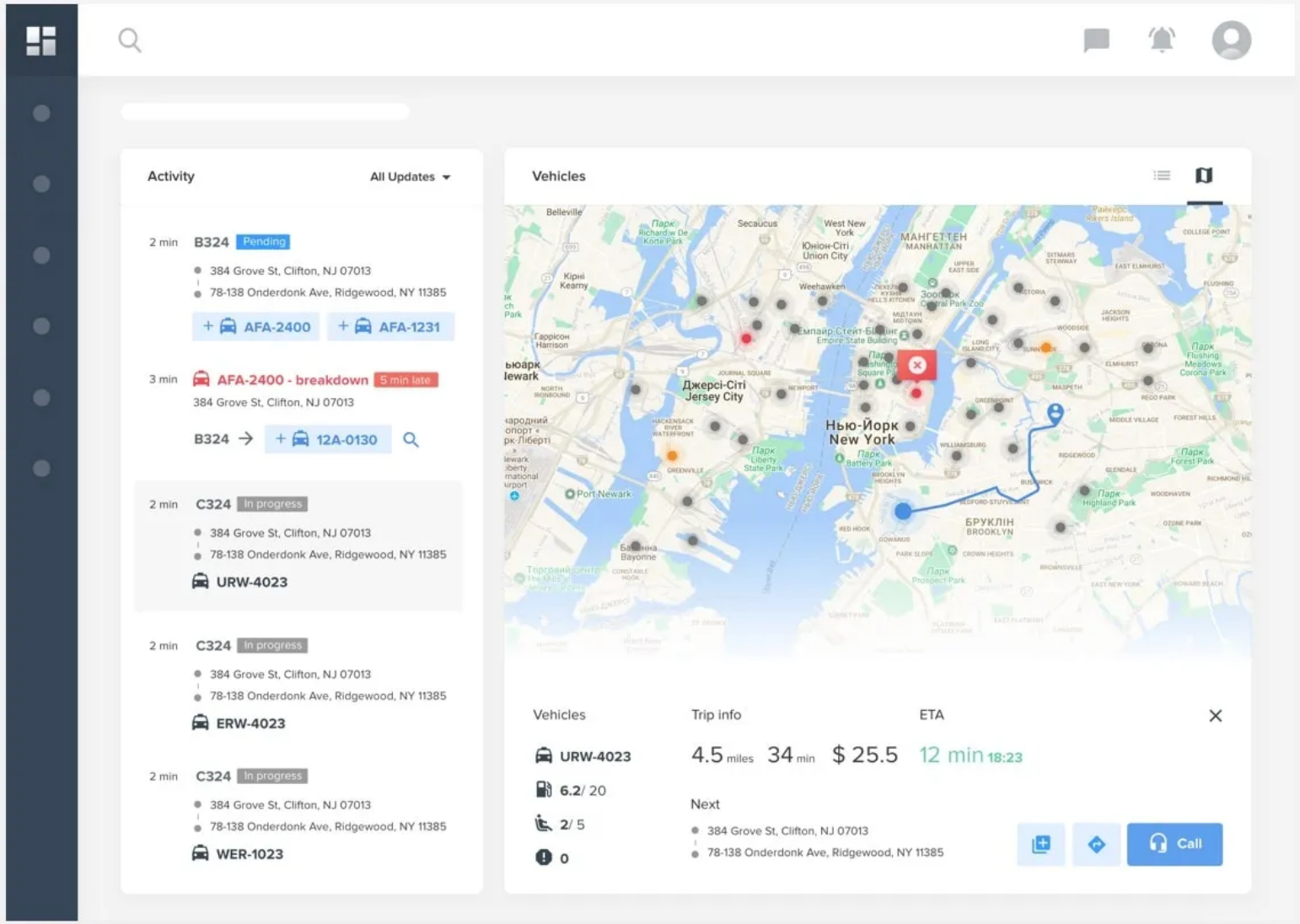
It consolidates data from various sources into a single interface, using visualizations such as charts, graphs, and tables to present insights clearly and concisely and are primarily used for tracking and analyzing KPIs, identifying trends, and making informed decisions based on real-time data.

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/



Time-sensitive

Immediate action

Digital control room

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.

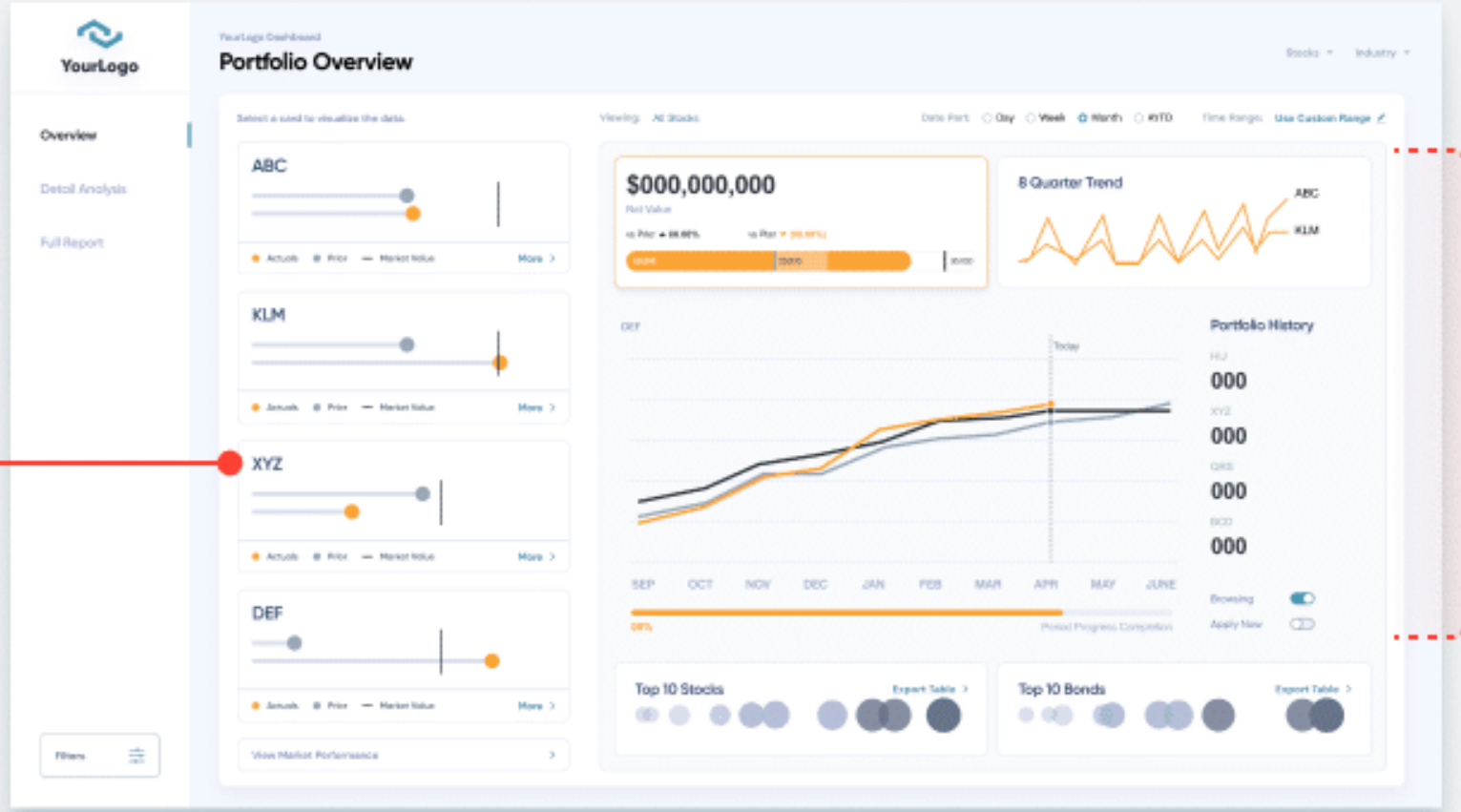
Examples: https://ezdatamunch.com/tactical-dashboards-example-templates

Tactical Dashboard

Key Focus: Tracking progress of projects and resource allocation for mid-term goals

Primary Action: Course correction, resource adjustment, and project updates

Important comparisons help identify any course corrections or resource adjustments needed.

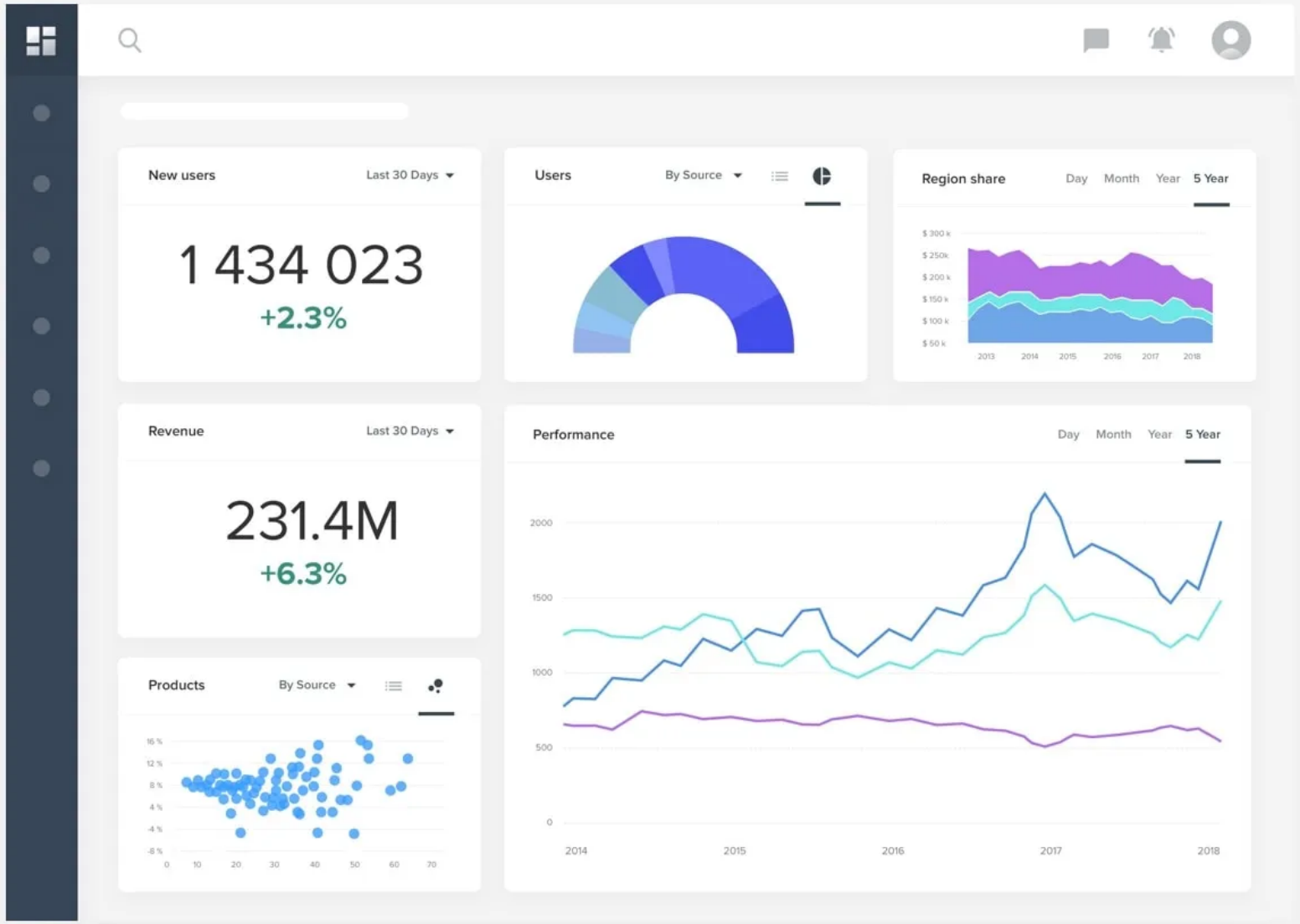


Progress tracking using a known target and comparisons with previous performance.

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/



Longer time periods

Trends and analytics

Digital report

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/

What question are you looking to answer?	Best fit: Operational	Best fit: Strategic	Best fit: Analytical
What problem are we trying to solve?	Increased data awareness and access to time-sensitive data	Line of sight into top-line organizational KPIs	Access to trends or deeper insights
Who will use the dashboards?	Managers and their teams	Directors and executives	Analysts and executives
What gaps exist in our performance?	Daily performance	Monthly, quarterly performance	Performance issues, weekly performance
What are our goals?	Increased employee awareness and tracking against goals	Setting strategic goals, achieving KPI targets	Setting analytics goals and increased visibility into key processes

1/11: Building the Dashboard

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.

2/11: Building the Dashboard steps

Gather the data

Easiest way is to start from news sites and popular science blogs. Gather the facts, store them and if needed clean them. See for instance https://docs.google.com/spreadsheets/d/1uN5TA8uq5nkzuPjSXFk9ib7jZ72-xw_muu0H0qb16pc/edit?gid=634229683#gid=634229683

See also: https://hbr.org/2013/04/how-to-tell-a-story-with-data

3/11: Building the Dashboard: Steps

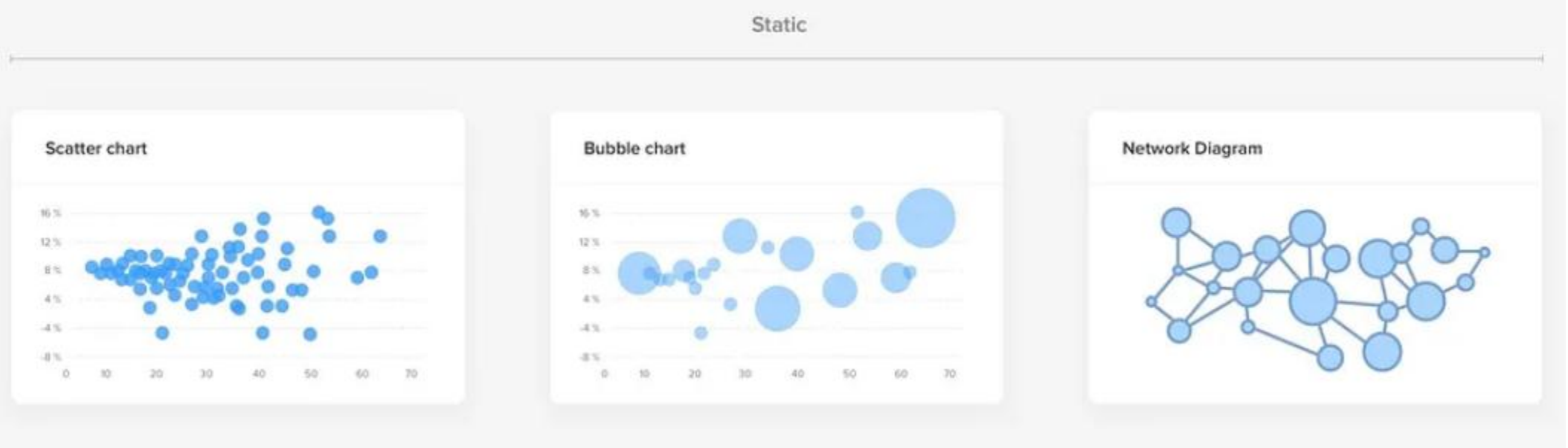
Choose the right representation for data

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:

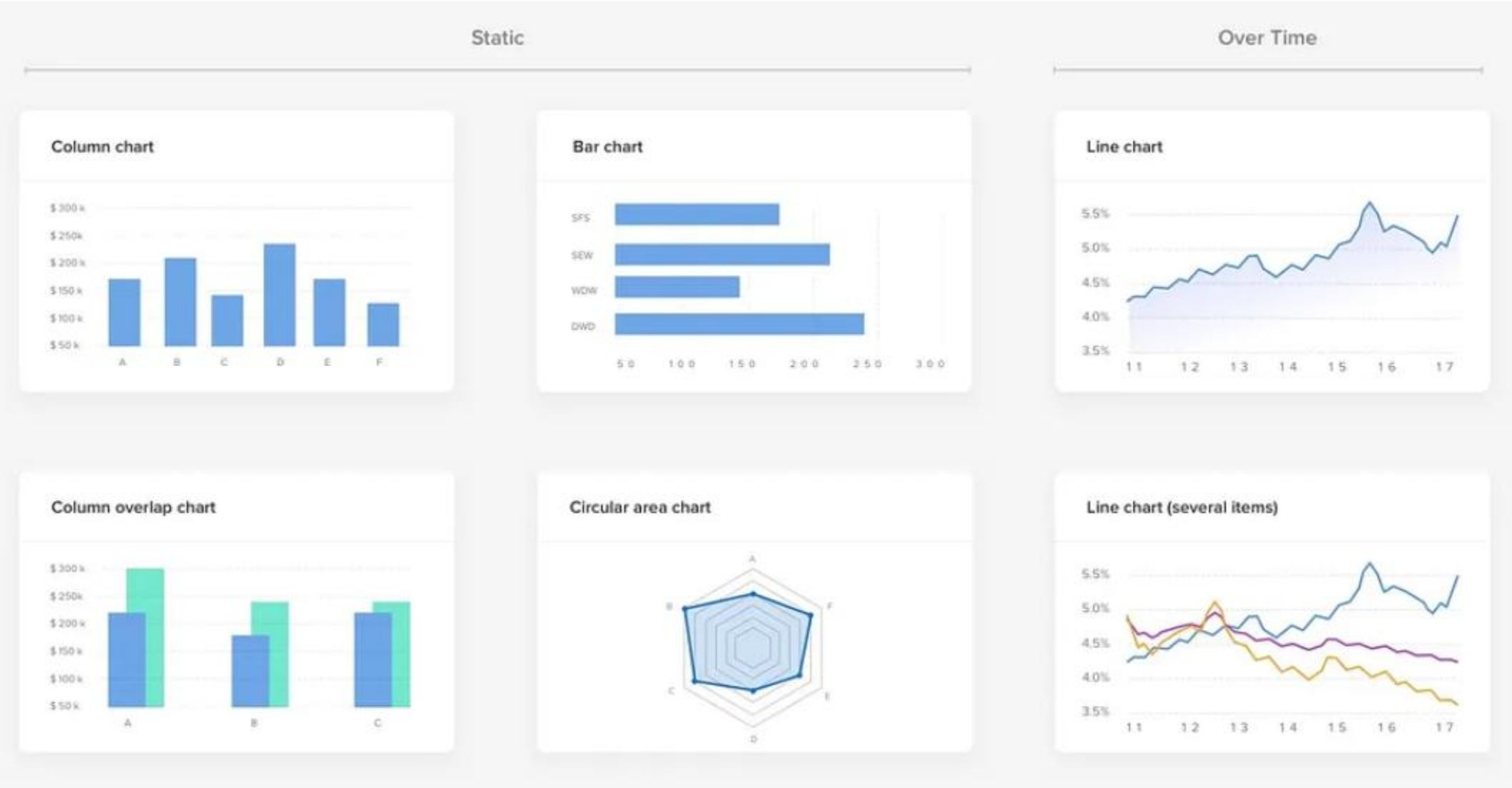
- How many variables do you want to show in a single chart?
- Will you display values over a period of time, or among items or groups?
- How many data points are needed to display for each variable?

Charts for visualizing relationship



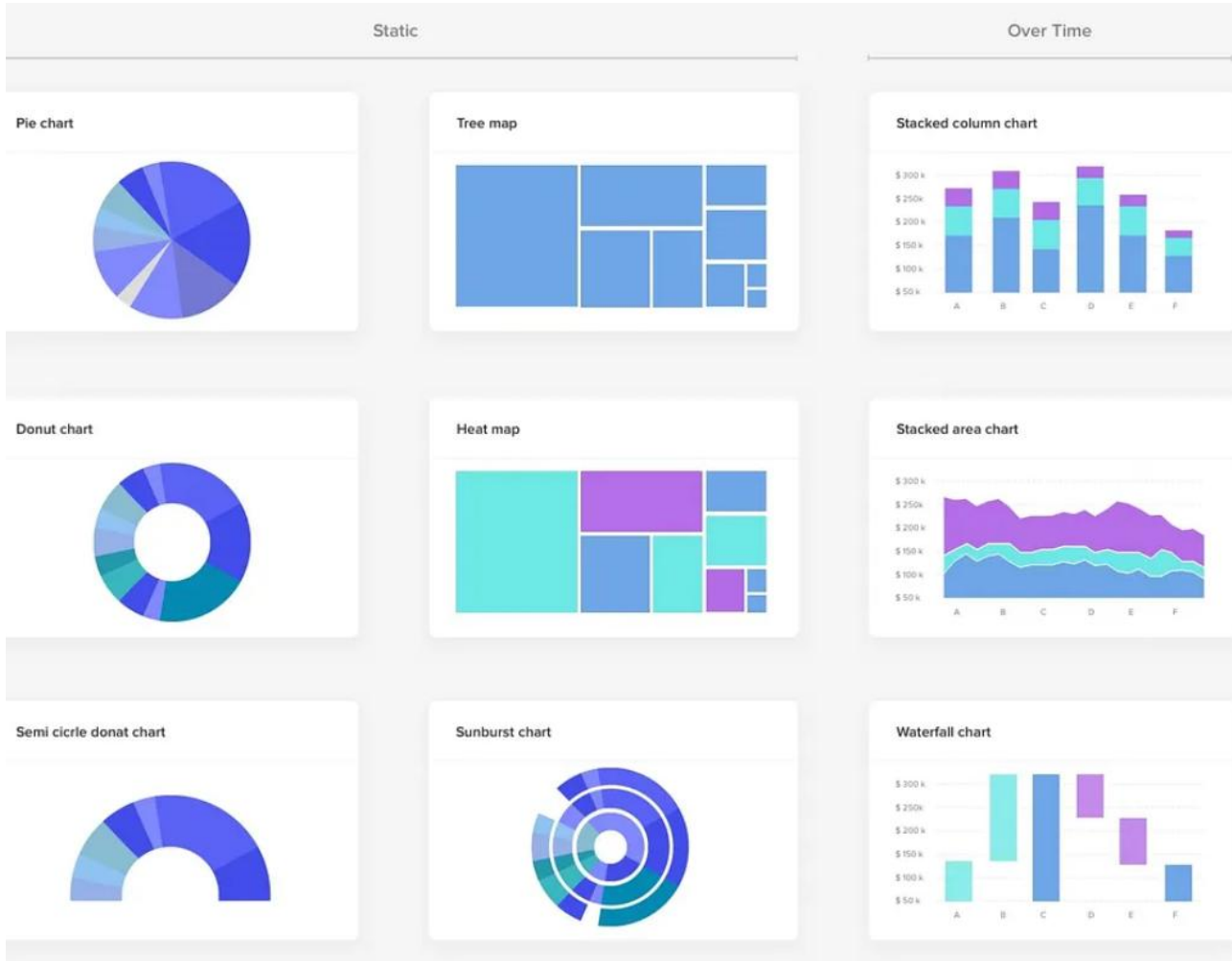
Scatter charts are primarily used for correlation and distribution analysis. Bubble chart helps introduce the third dimension into the chart. A network diagram is handy when even the most minor connection between data points are very important.

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

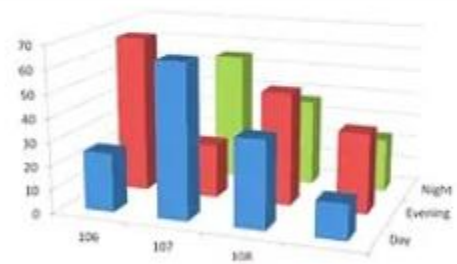
Distribution charts help you to illustrate outliers, the normal tendency, and the range of information in your values.

Don’t

Gauges

Don’t

3D charts



Don’t

?????????

4/11: Building the Dashboard: Steps

Naming Conventions and Formatting

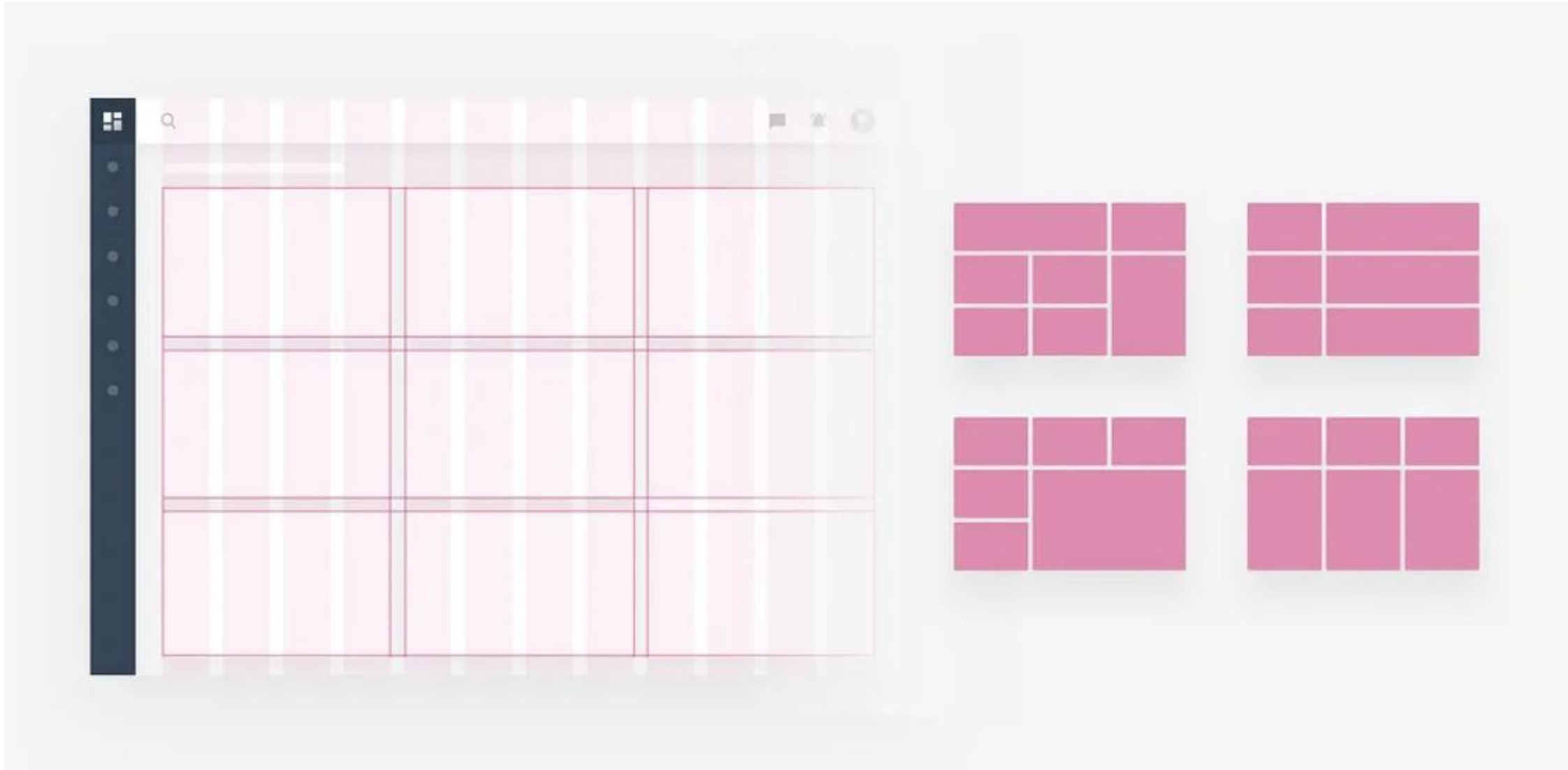
- Follow clear and consistent naming conventions
- Follow consistent date formatting
- Truncate large values

5/11: Building the Dashboard: Steps

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.

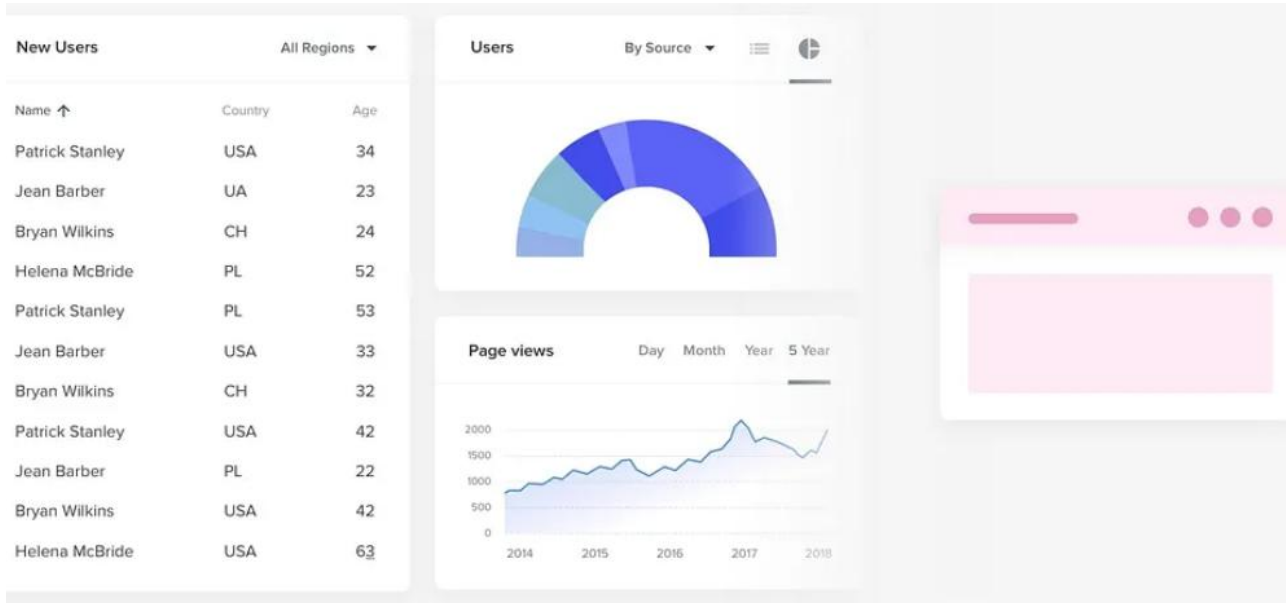
- The top left corner of the screen will naturally get more attention so try to position key info from left to right.
- If there are dependencies that will affect decisions making on one group of information from based on info from another, create a layout in a way that users do not need to go back and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



6/11: Building the Dashboard: Steps

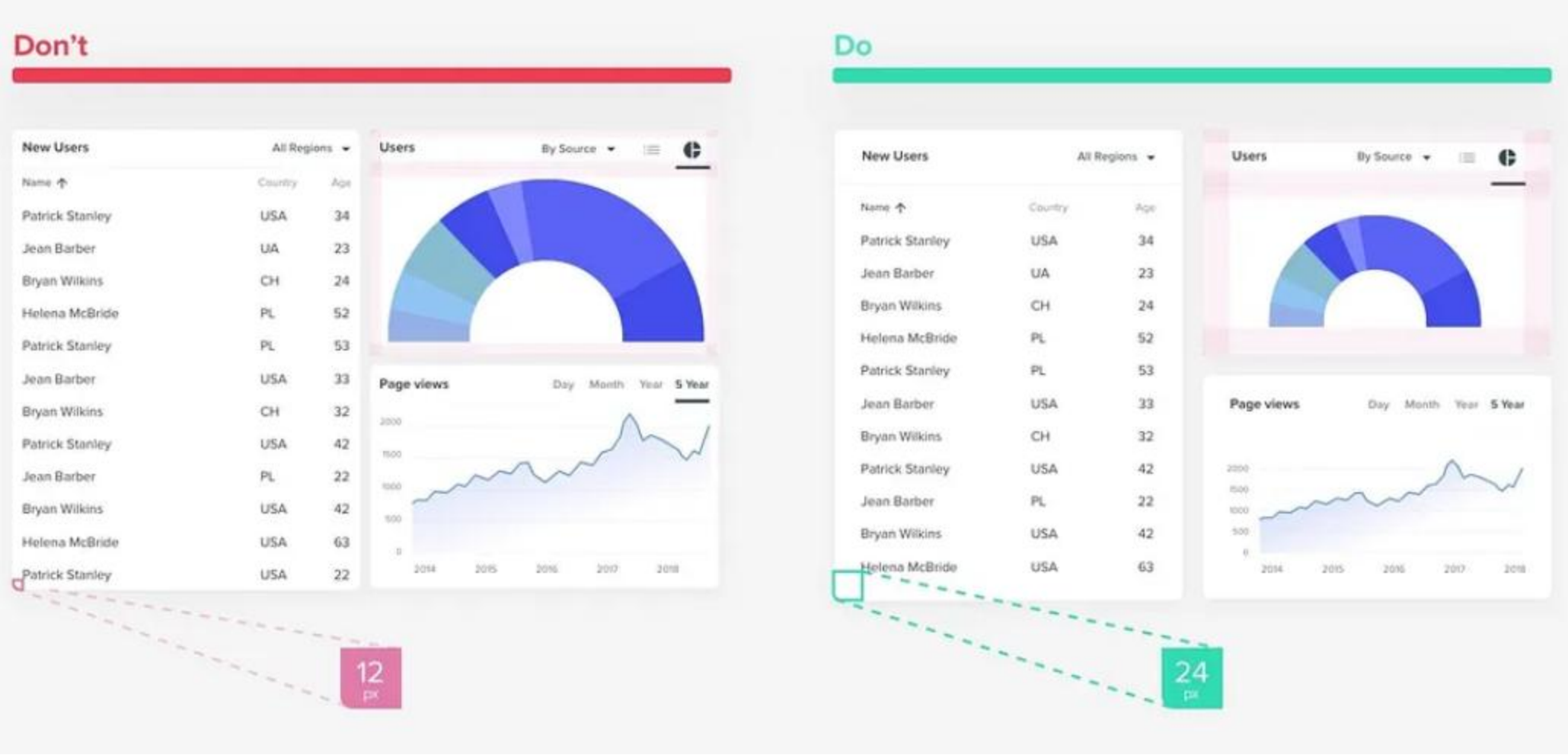
Use Building Blocks

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.



7/11: Building the Dashboard: Steps

Double your Margins



8/11: Building the Dashboard: Steps

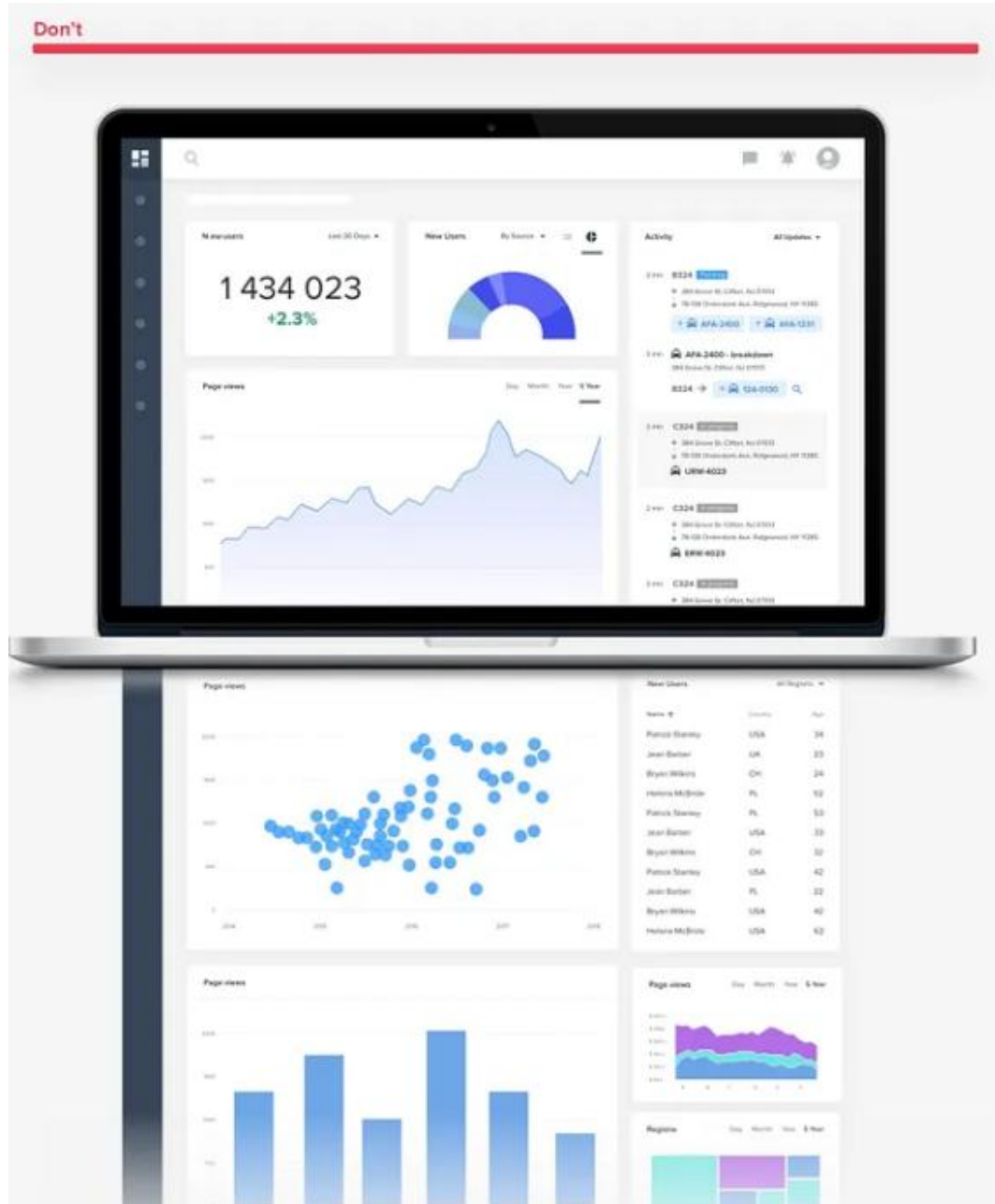
Don’t hide information or rely on interactions too much.

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.

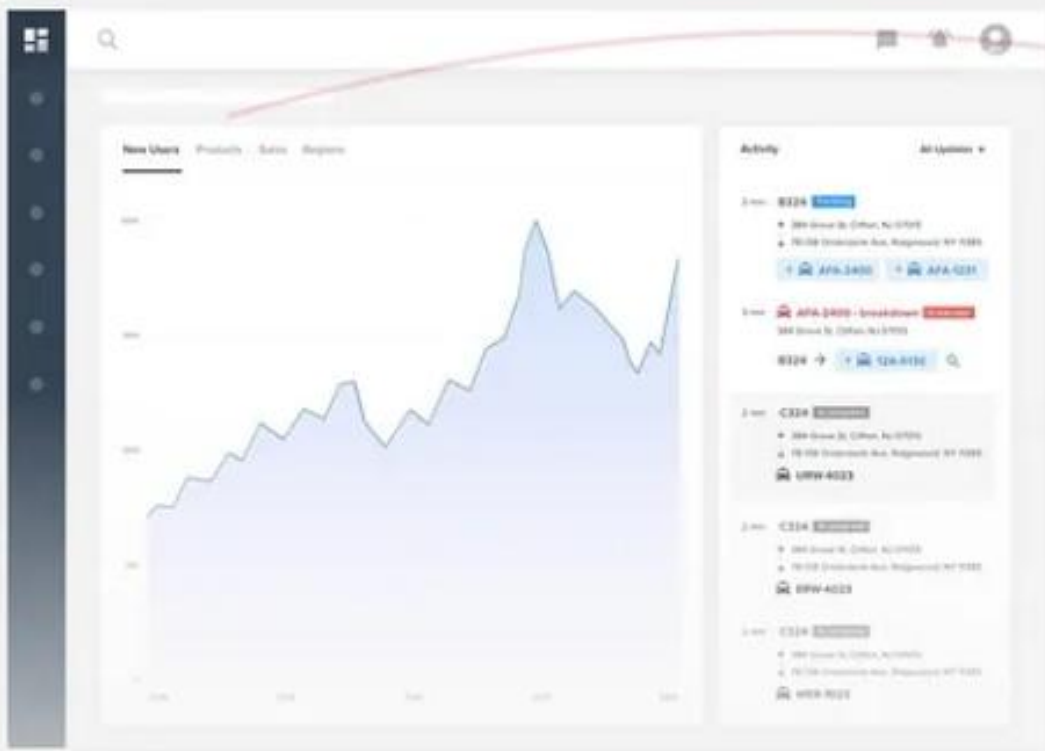
The solution is prioritization.

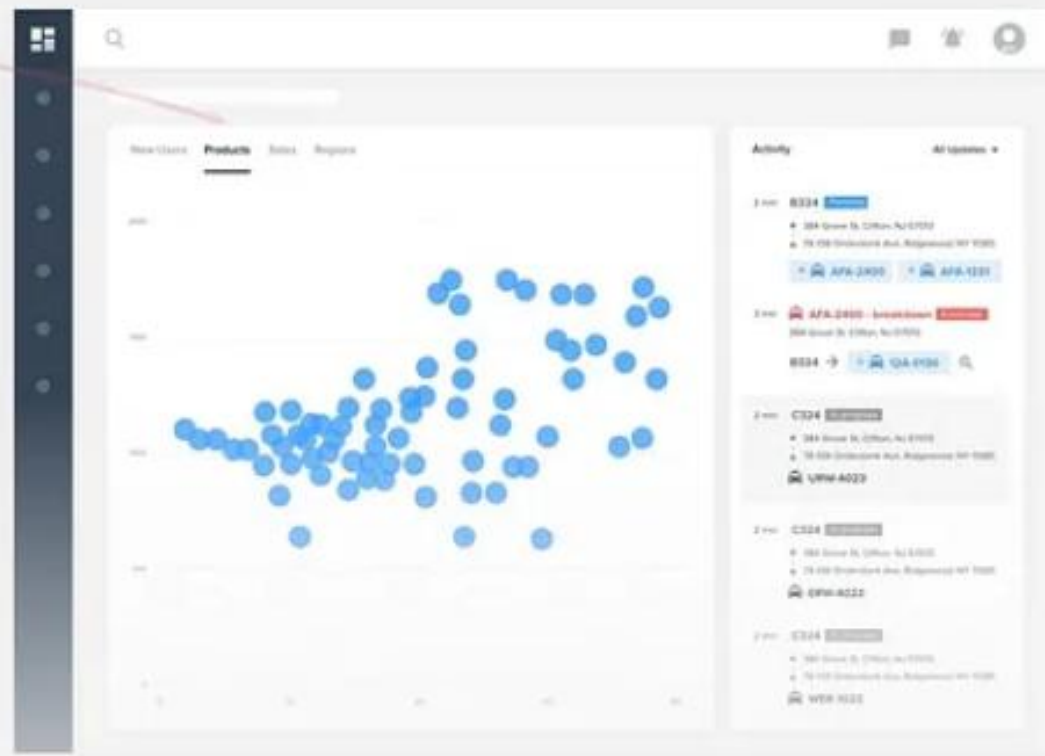
- Research and interviews should uncover core information.
- Work only with space above the fold to display it.
- Do not tell the full story — summarize instead, and surface only key info.

Don't

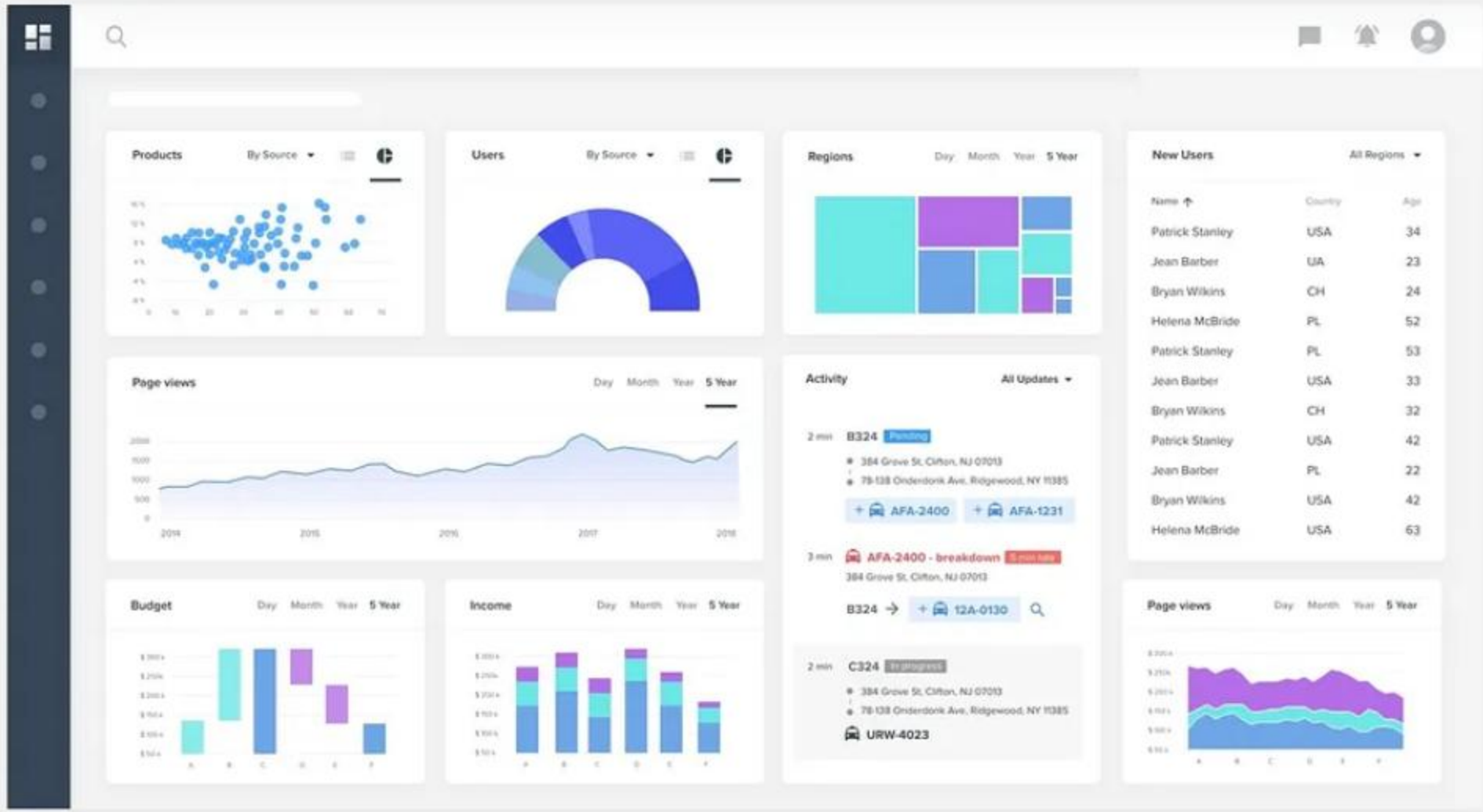


Don’t





Don’t


Products
By Source
Users
By Source
Regions
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New Users
All Regions
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Age
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Jean Barber UA 23
Bryan Wilkins CH 24
Helena McBride PL 52
Patrick Stanley PL 53
Jean Barber USA 33
Bryan Wilkins CH 32
Patrick Stanley USA 42
Jean Barber PL 22
Bryan Wilkins USA 42
Helena McBride USA 63
Page views
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2015
2016
2017
2018
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All Updates
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78-138 Onderdonk Ave, Ridgewood, NY 11385
AFA-2400
AFA-1231
3 min AFA-2400 - breakdown
384 Grove St, Clifton, NJ 07013
B324
12A-0130
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Page views
Day Month Year 5 Year

9/11: Building the Dashboard: Steps

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

10/11: Building the Dashboard: Steps

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

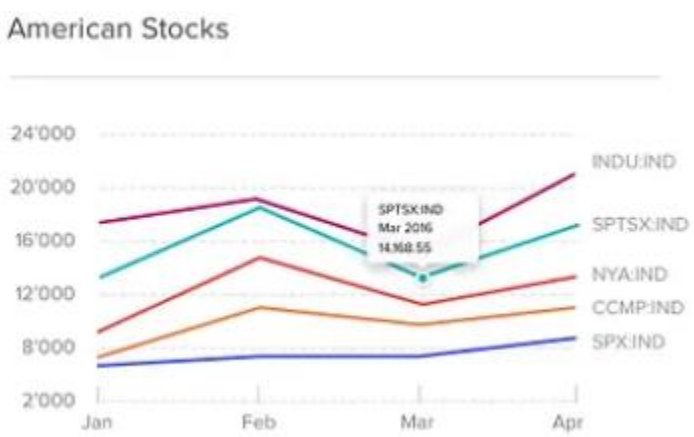
A data table is a great solution when you need to show a lot of information for a large number of items.

Grid

American Stocks

Name	Jan	Feb	Mar
INDU:IND	17,834.17	18,004.03	21,134.17
SPX:IND	1,932.60	2,012.60	2,132.60
CCMP:IND	4,958.95	5,058.95	5,158.95
NYA:IND	9,609.85	10,209.85	10,609.85
SPTSX:IND	13,468.55	14,168.55	14,468.55

Chart



11/11: Building the Dashboard: Steps

Design the dashboard last.

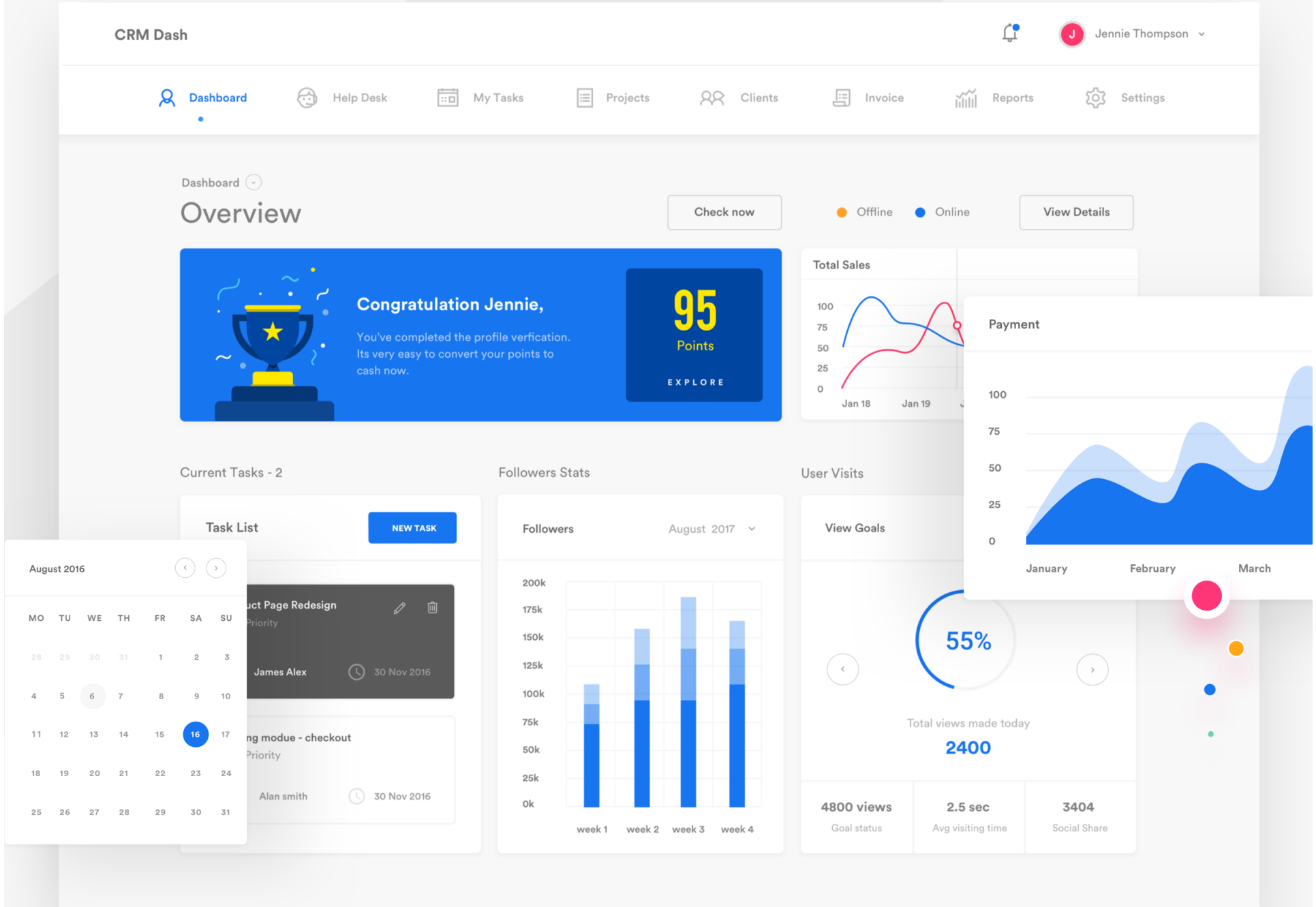
A dashboard is a summary view of everything else and displays key info from various parts of the application. It’s just more practical to design it at the end. Otherwise, you will need to constantly go back and update your dashboard designs while you are working on all the other pages. Furthermore, once 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 Should

- 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.


CRM Dash
Jennie Thompson
Dashboard
Help Desk
My Tasks
Projects
Clients
Invoice
Reports
Settings
Dashboard
Overview
Check now
Offline
Online
View Details
Congratulation Jennie,
You've completed the profile verfication. Its very easy to convert your points to cash now.
95
Points
EXPLORE
Total Sales
100
75
50
25
0
Jan 18
Jan 19
Payment
100
75
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February
March
Current Tasks - 2
Task List
NEW TASK
uct Page Redesign
Priority
James Alex
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week 2
week 3
week 4
User Visits
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Total views made today
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4800 views
Goal status
2.5 sec
Avg visiting time
3404
Social Share
August 2016
MO TU WE TH FR SA SU
28 29 30 31 1 2 3
4 5 6 7 8 9 10
11 12 13 14 15 16 17
18 19 20 21 22 23 24
25 26 27 28 29 30 31

Links

- 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
- How to design better dashboards? https://uxdesign.cc/how-to-design-better-dashboards-c90d84460734
- Effective Dashboard Design Principles for 2025. https://www.uxpin.com/studio/blog/dashboard-design-principles/

Thank you!