

```
import from '../app/components';
```

# Icon Guidelines

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Icons can be a great visual aid to enhance the usability of your application. If designed carefully, icons are fast to recognize, save up screen space and require no translations. However, if icons are not properly used, they can be misleading as well.

*[MaterialDesignDescription Component - Interactive React component]*

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*[TOC Component - Interactive React component]*

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# Icons, Pictograms, and Logos

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*[Design System Image]*

This guide talks specifically about the design of icons, which should not be confused with other glyphs, such as pictograms and logos. Icons symbolize common actions, objects, or ideas used to aid users. Pictograms are typically used on websites for decorative purposes only. [Logos](#) are symbols of products and organizations, usually protected under trademark laws.

*Note: if you need to use logos from other companies — such as a payment processor — make sure that you are compliant with their branding guidelines.*

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# Icon Usage

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## Text Labels and Icons

Where possible, you should avoid using icons in isolation. In many situations, text labels convey the message more accurately, while icons may require a lot of guesswork. Introducing new icons / meanings is like forcing your users to learn a new language. If your application is a mission-critical system, users might even be reluctant to press a button if they do not understand its meaning.

*[MaterialDesignDescription Component - Interactive React component]*

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*[Design System Image]*

## Icon Buttons

Icon buttons are standalone icons that are clickable. On desktop applications, you should always use a tooltip on hover (unless it is a universal icon — see [below](#)). On mobile, icon buttons are generally discouraged unless they are one of the universal icons.

*[Design System Image]*

Icon buttons are primarily used where space is limited, such app bars and lists / tables.

*[Design System Image]*

Icon buttons are usually displayed at **24x24dp** to ensure that they are easily recognized, while their touch areas are sized at least **40x40dp** to ensure that they are accessible.

*[Design System Image]*

## Decorative Icons Inside a Component

Inactive icons are frequently used in components, either as a decorative visual aid to help guide users' attention or to clarify a situation.

*[Design System Image]*

Note that not everything needs an icon to decorate it. If an icon does not help users quickly recognize something at a glance, it will only distract them.

*[Design System Image]*

## Common Universal Icons

A few icons are so widely used these days that they are considered “universal” icons — they carry the same meaning no matter which application they are used in.

*[Icon Browser - Interactive icon library browser]*

You should never use a universal icon in a distorted way that mismatches its original meaning.

*[Design System Image]*

## Common Device Icons

Brightlayer UI offers a wide variety of icons for industrial equipment-related icons. Some of them are designed based on their function, while others are designed based on how the device itself looks. We also offer symbols commonly used in one-line diagrams ([@brightlayer-ui/symbols](#) and [@brightlayer-ui/symbols-mui](#)).

Icons are meant to be simple — it is unwise to try to use icons to convey very specific or very technical concepts. For example, it's a losing battle to try to define an icon for every single parameter in every single device — users will not be able to remember / distinguish what all of these icons mean. It's better to use a more general icon that can refer to categories of devices or parameters. You may read more about this in the "[No Single-Purpose Icons](#)" section below.

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## Icon Variations

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### Multi-Colored Icons

[WCAG 2.2 AA level requires](#) that non-textual contents of a webpage, including icons, must achieve a minimum color contrast ratio of 3:1. However, yellow icons are used for warnings and often have a contrast ratio of less than 2:1. In this situation, using two colors can make these icons more legible.

*[Design System Image]*

## Filled and Outlined Icons

Material Design offers icons in both filled and outlined styles. Brightlayer UI applications typically use the filled style, as it provides better legibility at a small scale. If you choose to use outlined styles instead, however, you must ensure your icon style stays consistent through the application.

*[Design System Image]*

You also have the option to use filled and outlined icons to indicate state. In this case, a filled icon indicates that the item is active, while an outlined icon indicates that the item is inactive.

*[Design System Image]*

*[Design System Image]*

## Progress Icons

Progress icons are used as a mini data visualization to display percentages over a whole. It can be the remaining device's health, battery life percentage, etc.

*[Design System Image]*

Brightlayer currently offers the following progress icons to its designers and developers:

*[ProgressIconCard Component - Interactive React component]*

# Internationalization

In right-to-left languages, icons with directionality must be mirrored. Read more about it on our [internationalization pattern page](#)-support>).

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## Design Your Own Icons

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Brightlayer UI welcomes new suggestions to our existing icon repositories. However, before you start designing, there are a few things you should keep in mind.

### No Single-Purpose Icons

If you find yourself struggling for more than 30 seconds to design an icon concept, it's probably too complicated and your users won't understand it anyway.

Icons designed for a very specific purpose, such as “transfer admin rights” instead of “transfer”, tend to be so complicated that the icon no longer serves as an easy-to-recognize symbol, because it is impractical to pack so much information in a confined 24x24 space.

Similarly, avoid inventing an icon for a very specific device model, unless this device stands out and is iconic in the industry (example: Dyson fans). If an average user cannot easily tell devices apart from each other in real life from a glance, a 24x24 dp icon usually contains fewer details and more abstractions, and will not bring a positive user experience.

### Existing Icon Repositories

Before going down the path of defining new icons, make sure to check existing icon resources. In addition to Material Design's [official icon set](#) and Brightlayer UI's [icon set](#), you may also check out [materialdesignicons.com](https://materialdesignicons.com), a community-driven icon repository that follows Material Design's icon guidelines.

You are welcome to take design inspirations from other sources like [Font Awesome](#) or follow regulation documents such as those from ANSI and ISO. You are also encouraged to refer to your competitors and see if they have any established conventions. However, you should follow the style guide, as explained below.

*Note: just because an icon exist in an icon repository does not mean you have to use it. Before taking design inspirations, make sure that you first evaluate if an icon is appropriate in your app design.*

## Follow the Style Guide

*[MaterialDesignDescription Component - Interactive React component]*

You **must** follow the existing Material Design style guide when creating your own icons. You may take inspiration from other sources, but you must update the style so that they fit with existing Brightlayer UI icons.

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*[MaterialDesignDescription Component - Interactive React component]*

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## Test the Icon

You must test your new icons through usability testing, either by asking participants questions ("what do you think this icon represents") or by observing them completing a

task using the icon. We also encourage you to test the icon next to other visually-similar icons.

For icons that are meant to be used inside buttons — usually icons representing an action, you are required to test them at 16x16dp to ensure that they are still recognizable at a smaller scale.

*[MaterialDesignDescription Component - Interactive React component]*

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} />
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## Inner-source into Brightlayer UI

We welcome icon suggestions. If you would like to request your icon design to be added to our icon repository or request us to design an icon for you, please [contact us](#). The UX team will review your request and provide a recommendation within 48 hours on whether to introduce a new icon or use an existing icon instead.

If you are requesting us to add your icon design, please follow [the guideline for exporting SVG icons](#). You shall also provide us (1) the icon author we can publicly attribute to, (2) a brief description of what the intended use is, and (3) if possible a picture of where it will live in the context of your application.

If you are requesting us to design an icon for you instead, please provide us a brief description of what the intended use is along with your request. Please note that going this route may take extra time, so try to get requests in as early as possible.