# Foundatiov VS Boostrap



## Grid System

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| Bootstrap syntax | Foundation Syntax |
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| Foundation block grids kan een <ul> in een grid veranderen. |  |

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| Foundation kan kolommen makkelijk centreren met de centered columns syntax. | Bootstrap gebruikt offset om de kolommen te centreren. Je moet de offset berekenen gelijk aan de helft van de resterende grootte. |
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**Conclusie:** De syntax voor de grid system verschillen een beetje van elkaar. Foundation kan ook een <ul> in een grid veranderen en Bootstrap niet. Bootstrap kan centreren maar moet je de offset berekenen terwijl Foundation dat niet hoeft.

## Sizing Units

Calculating widths, typography and nearly everything else, Bootstrap uses pixels and Foundation uses rems. There are functional differences between these two units but both are capable of producing the same result. Pixels might be more familiar to graphic artists and new web designers. Pixels are an absolute unit but in the age of responsive design, a relative unit like rems helps me think in terms of porportions. It’s a matter of perspective and personal workflow. Example: 1em is 10px, instead of the default 16px. To set the font-size to 14px is 1.4em. For browsers that don’t support rem units we can specify the fall-back using px. Example: body { font-size: 14px; font-size: 1.4rem; }

**Conclusion**: Bootstrap uses pixels and are an absolute unit. Graphic artists and new web designers are more familiar with this. Foundation uses rems and are a relative unit and helps to think in terms of porportions.

## Features and Components

Foundation has built-in form validation through Abide. That’s not to say that Bootstrap couldn’t also have form validation, but for some, the pre-made Foundation solution might be a nice head start. Foundation also includes Interchange, which is a robust solution for responsive images, altough it might be more than you need. In addition to these two, there’s other handy features like right-to-left support, pricing tables, tours and off-cancas navigation.

Bootstrap isn’t quite as feature-full, but in my own opinion, I also feel like many of Bootstrap’s features are in a more complete state. The default look of Bootstrap components seems more suited to quickly building a one-off website and adding a theme. Bootstrap also now includes responsive embeds, which makes it easy to add responsiveness to elements like <iframe>, <embed> and <object>.

**Conclusion:** Foundation has built-in form validation (Abide). Foundation includes interchange (robust solution for responsive images). Bootstrap isn’t feature-full but the features they have are in a more complete state. Default look of Bootstrap components suites quickly building a one-off website and adding a theme. Bootstrap includes responsive embeds which makes it easy to add responsiveness to elements.

## Customization

Bootstrap tries to give you everything you need to get a site up and running quickly, while Foundation tends to provide a better environment for customization. Bootswatch provide free themes of Bootstrap. Bootstrap tends to make sites that look like they were made with Bootstrap. It’s only after digging deep into custom styling that the default look starts to fade. Bootstrap is underscored by the fact that Bootstrap gained more early popular a few years ago. Foundation’s default look feels closer to browser defaults in many cases, which makes it easier to mold into a unique aesthetic. Bootstrap has a wider variety of themes readily available.

**Conclusion:** Bootstrap tries to get a site up running quickly with a wide variety of themes that you can find on Bootswatch. Bootstrap makes sites look like they were made with Bootstrap only after digging deep into custom styling the default look starts to fade. Foundation default look feels closer to browser defaults makes it easier to mold into a unique aesthetic.

## Browser Support and Performace

For both frameworks is so good that the diffrences are almost negligible and are highly dependent on the context. Some permutation of different framework components and browser environments might have a trivial performace gap. The important diffrences revolve around features that support designers and developers.

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## CSS Preprocessor and JavaScript

Both frameworks are based on SASS. They both have a nice set of mixins, a separate settings sheet, reusable components etc. Both frameworks Javascript are written on the latest ES, which meand you do need Babel or any other transpiler if you want to individually include each of their JS tools into your development pipeline. Bootstrap is a little bit ahead when it comes to JS because their components are simpler, less bloated and well tested. Foundation has way more JS toys to play with, which is always handy. Both frameworks allow you to choose which JS components you want if you decide not to use Babel. Foundation was rewritten early ago which has given it enouch time to iron out any issues and bugs thanks to the community.

**Conclusion:** Both frameworks are based on SASS and written in the latest ES and allow you to choose which JS components you want if you decide not to use Babel.