



A Preview of Sencha ExtWebComponents "Web Components in a Sencha world"

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Abstract

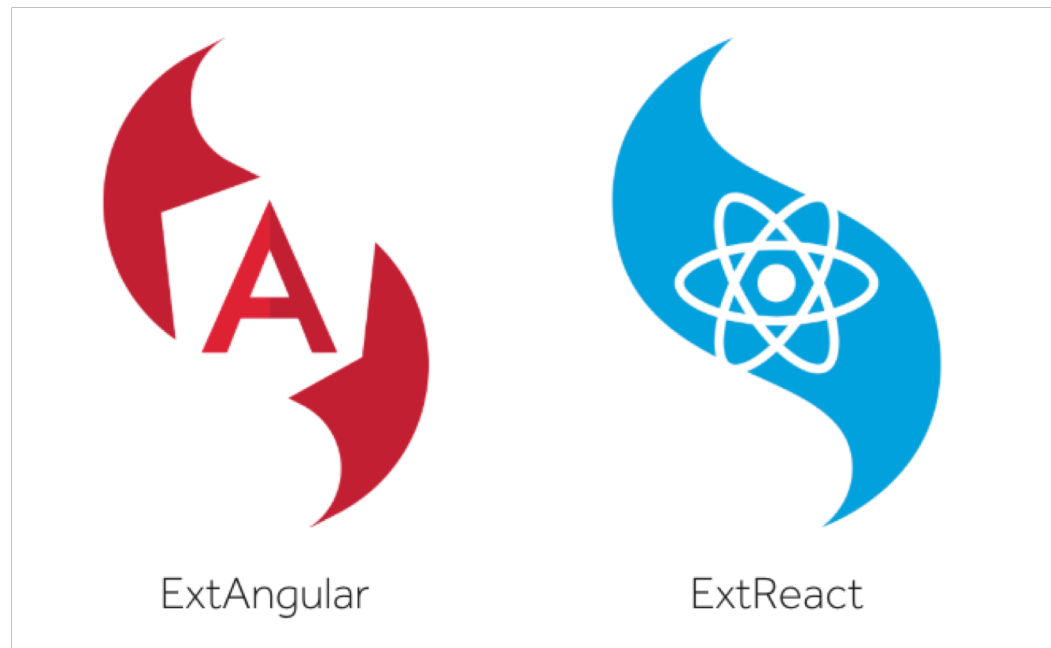
You probably have an existing JavaScript application using Ext JS and the components that you love, maybe a grid, some graphs, etc. Perhaps today your company is thinking about moving to Angular, React, or Vue, and with new frameworks appearing every week, who knows what is next. How do you bring along those great components you have been using?

That is where Web Components fits in!

In this session we will look at how you can use your favorite Ext JS components in Angular, React, Vue and any other framework

We will look at the Ext Web Components takes advantage of the Web Components spec to use the existing Ext JS components you know and love in any framework - including no framework at all!

What did we do before ExtWebComponents?



What are Web Components?

- Web components are a set of web platform APIs that allow you to create new custom, reusable, encapsulated HTML tags to use in web pages and web apps. Custom components and widgets build on the Web Component standards, will work across modern browsers, and can be used with any JavaScript library or framework that works with HTML.
- Web components are based on existing web standards. Features to support web components are currently being added to the HTML and DOM specs, letting web developers easily extend HTML with new elements with encapsulated styling and custom behavior.
- <https://www.webcomponents.org/introduction>



<http://webcomponents.github.io/>

Web Components Demo...

What are Ext Web Components?

- The Most Comprehensive Set of commercial Web Components
- **115+ powerful UI components that can be quickly and easily added to Web apps**
 - Components are commercially tested and supported – a lifeline when an app is on the line
 - Components work together seamlessly over the lifetime of the application
- **Helps accelerate time to market and reduces upgrade and maintenance burdens**
- **Enables developers to deliver visually stunning apps faster than ever before**

Why did we build Ext Web Components?



No clear framework winner

Many frameworks rising in popularity but they do not come with components

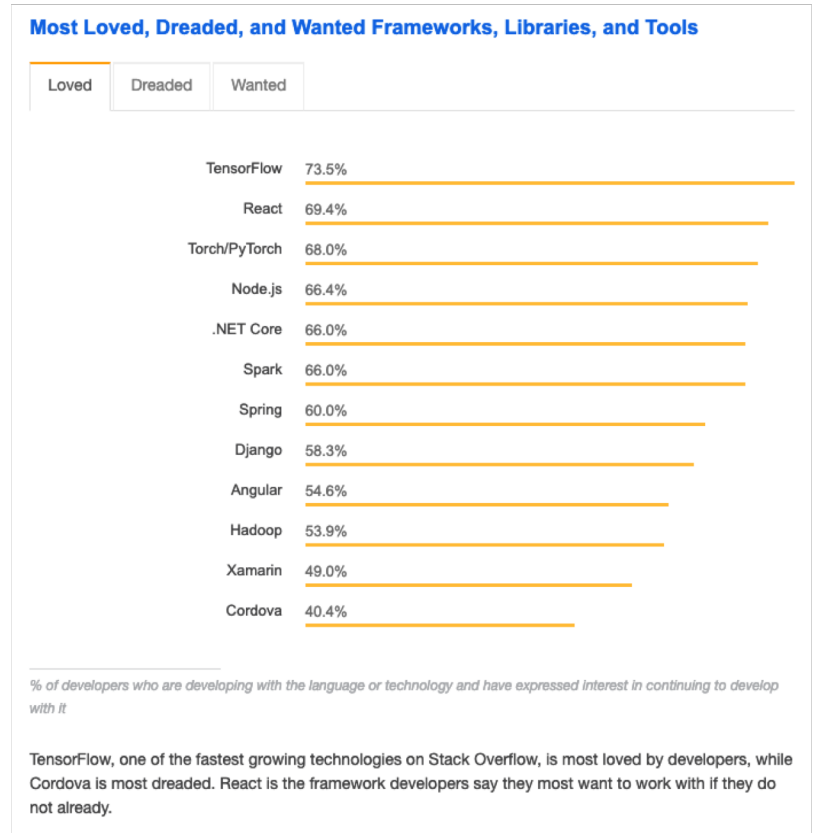
Developers can build the components themselves, assemble components from multiple vendors and open source, which introduces risks and challenges:

- Creates integration issues that can get in the way of building the app

- Open source solutions pose additional risks:

 - No commercial support and not maintained, not professionally tested

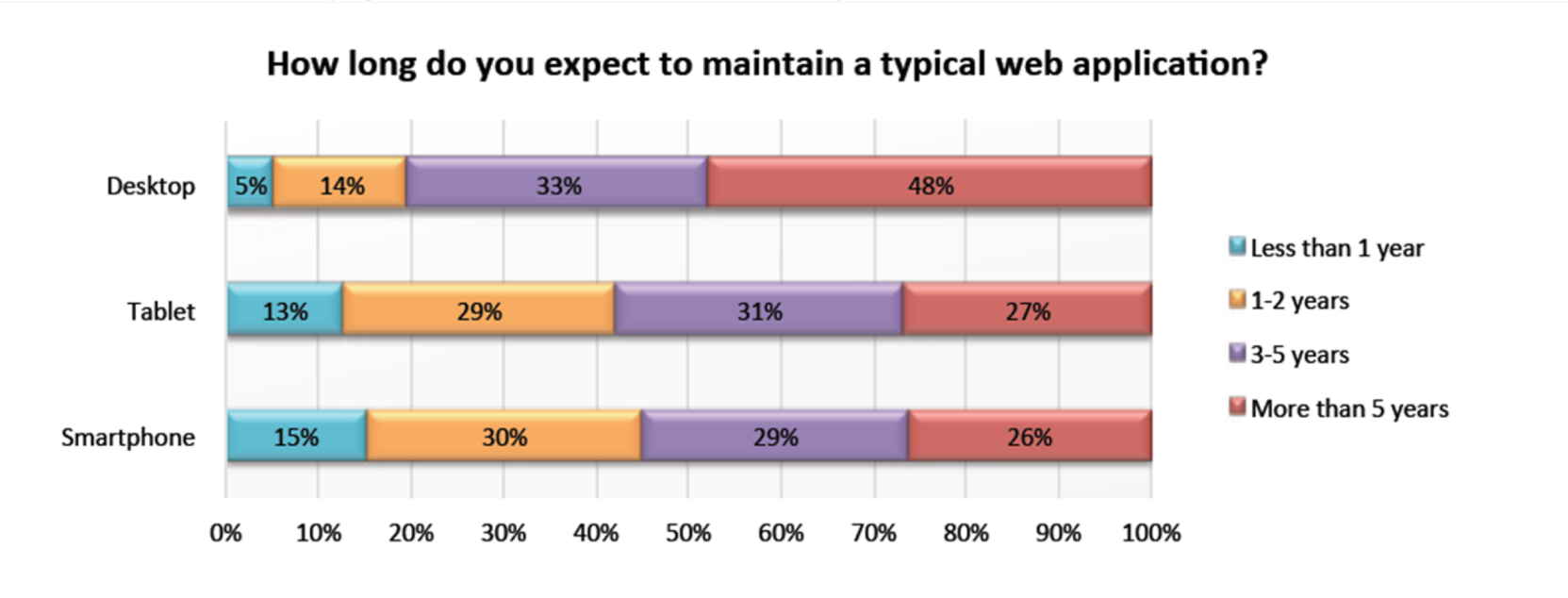
Source: Stack Overflow



Avg. Web App Lives 3+ Years



- Maintenance and Upgrades Become a Major Burden

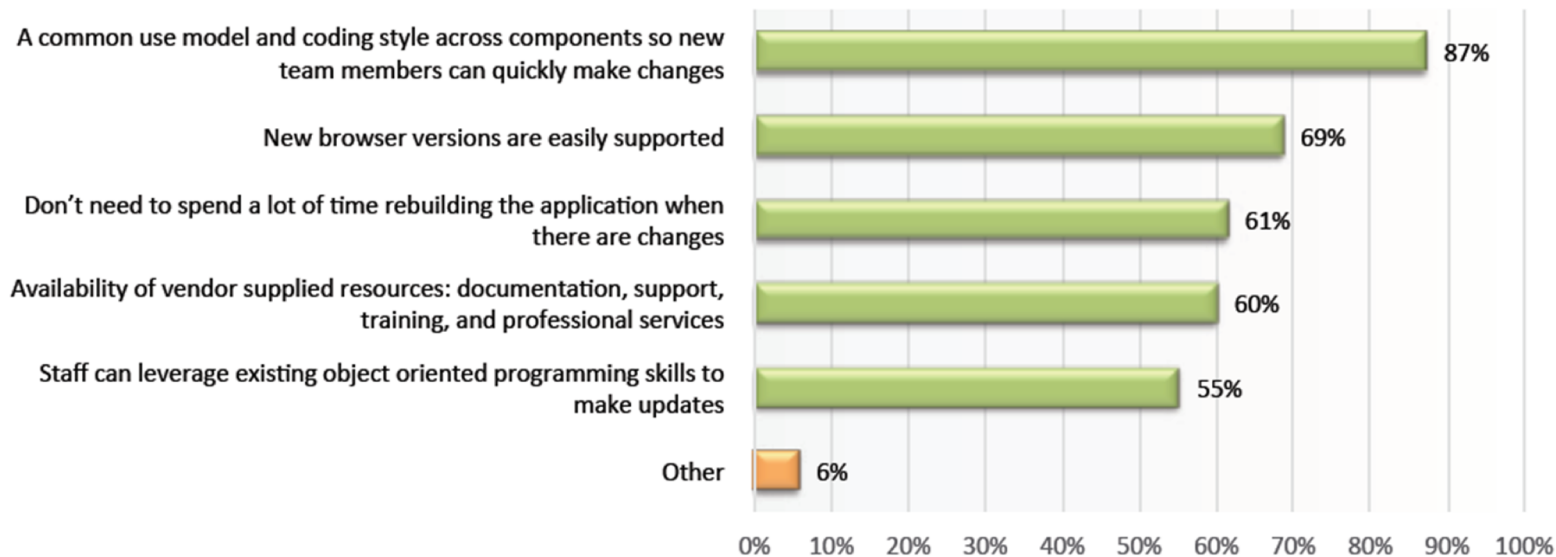


Source: Dimensional Research

Avg. Web App Lives 3+ Years

- Common Coding Style Across Components is Key to Maintaining Apps

What tools or resources are most important to you for being able to maintain your web applications?

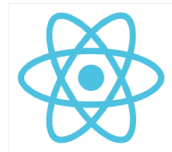


Source: Dimensional Research

Ext Web Components: Angular, React, Vue and Ext JS Similarities



- Ext.Component
- configs
- items: []



- React.Component
- props
- children



- Angular Component
- properties
- Children elements



- Vue Component
- properties
- Children elements

The Ext Web Components Kitchen Sink Just Web Components!

The screenshot displays the Sencha ExtWebComponents 7.0 Kitchen Sink application. The left sidebar shows a navigation menu with categories like Components, Grids, Core Features, Add-ons, and Advanced Features. The 'Big Data' component is selected, showing a table of data with columns for Id, Name, Verified, Ratings, and Date of Birth. The table includes a 'VERIFY' button for each row. The right pane shows the source code for the 'BigDataComponent.html' file, which is a web component using ExtJS for styling and data management. The code includes ExtJS classes like Ext.grid.Grid and Ext.grid.plugin.Summary, and uses ExtJS for styling and data management.

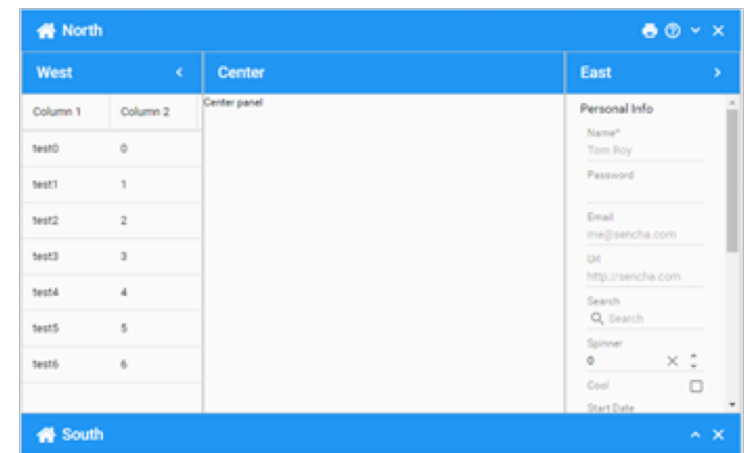
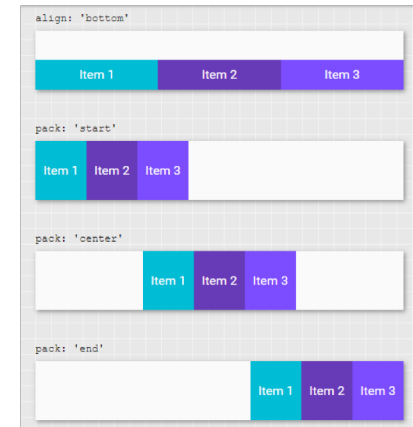
Id	Name	Verified	Ratings		Date of Birth	VERIFY
			Avg	All		
Accounting (57)						
137555	Nige White	<input type="checkbox"/>	4.60		20-01-1968	VERIFY
014607	Nige White	<input checked="" type="checkbox"/>	3.90		26-02-1958	VERIFY
361321	Ross Brocato	<input type="checkbox"/>	4.10		04-01-1962	VERIFY
432467	Vitaly Krohe	<input type="checkbox"/>	6.20		16-10-1975	VERIFY
144031	Alex Brocato	<input checked="" type="checkbox"/>	3.80		21-08-1986	VERIFY
171415	Nige Teodorescu	<input type="checkbox"/>	5.20		12-05-1970	VERIFY
437323	Alex Krohe	<input type="checkbox"/>	6.00		07-08-1968	VERIFY
157675	Phil White	<input type="checkbox"/>	6.40		08-06-1972	VERIFY
520444	Ross Gerbasi	<input type="checkbox"/>	4.70		07-06-1970	VERIFY
577303	Phil Brocato	<input type="checkbox"/>	4.40		30-01-1976	VERIFY
447714	Mark Kravchenko	<input checked="" type="checkbox"/>	4.00		18-08-1977	VERIFY
775617	Adrian Kravchenko	<input type="checkbox"/>	6.00		26-06-1958	VERIFY
672160	Phil Kravchenko	<input checked="" type="checkbox"/>	5.80		26-05-1964	VERIFY
753162	Kevin Guerrant	<input type="checkbox"/>	6.20		05-02-1962	VERIFY
276453	Vitaly Brocato	<input type="checkbox"/>	4.10		31-03-1989	VERIFY
032135	Kevin Guerrant	<input type="checkbox"/>	4.50		03-08-1985	VERIFY
061476	Donna Crockett	<input type="checkbox"/>	5.90		20-03-1969	VERIFY
			5.05			

What else do Ext Web Components give you?



Ext Web Components: Simplify Cross-Platform Layout

- Build immersive user engagement using layouts, adaptive and responsive design features
- Handles the sizing and positioning of every component in the app across different form factors and device types
- Eliminates the need to micromanage CSS settings



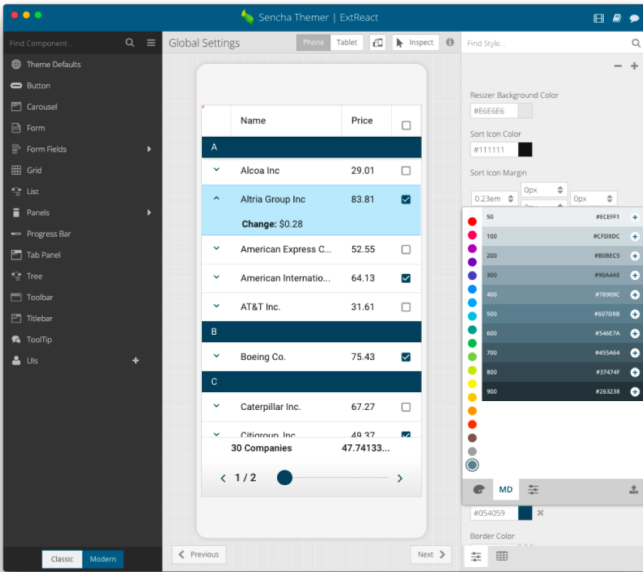
Ext Web Components: Theming Made Easy

- Built-in material design provides ready to use polished components
 - Switch to other Sencha provided themes with a one-line change
- Modify, extend or build your own theme with ease via Sencha Themer or theme APIs
- Visually design themes without writing a single line of code
 - Change fonts, colors, padding to make components fit app motif

Material Design

	Name	Price	
3			
▼	3m Co	71.72	☑
A			
▼	Alcoa Inc	29.01	☐
^	Altria Group Inc	83.81	☑
	Change: \$0.28		
▼	American Express C...	52.55	☐
▼	American Internatio...	64.13	☑
▼	AT&T Inc.	31.61	☐
B			
▼	Boeing Co.	75.43	☑
C			
	30 Companies	47.74133...	
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Sencha Themer



Ext Web Components: Simplify Data Input and App Navigation

- Gives power to users with built-in keyboard navigation support and focus management
- Keyboard navigation enables users to easily navigate the app, which improves productivity of power users and accessibility for disabled users
 - Ideal for data entry and using keyboard shortcuts
- Gesture support: tap, swipe, pinch, rotate, drag, and more

User Data

Name on Card

Phone Number

() - -

CC number

- - - - -

Expiration Date

mm/yy

Fill phone number

Reset



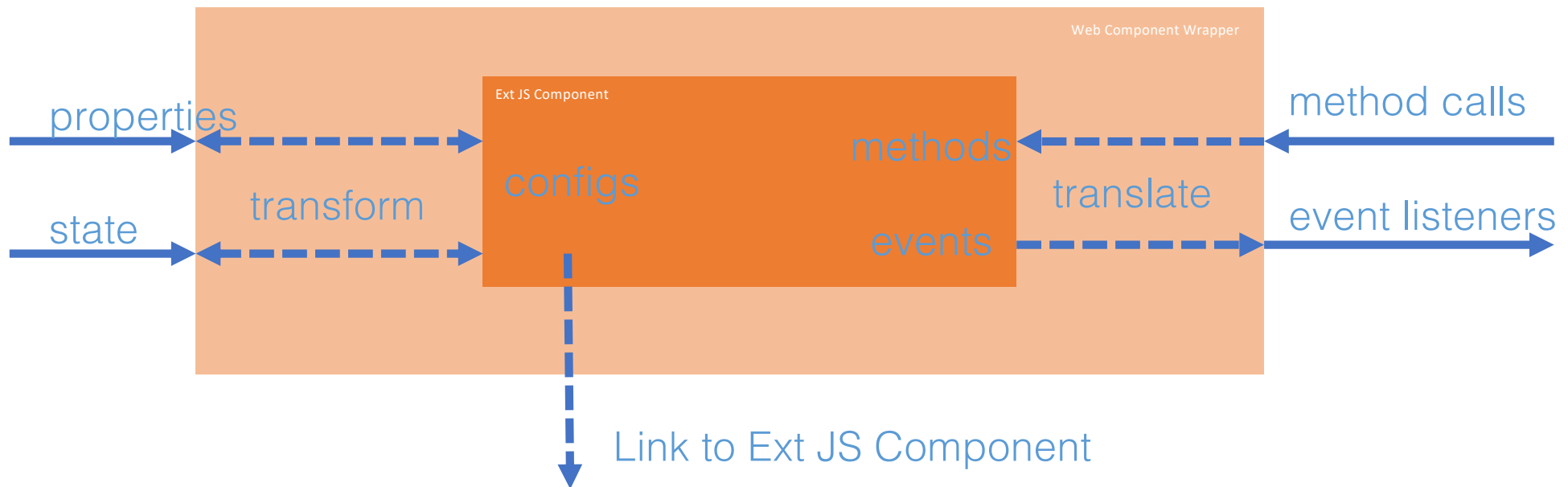
Ext Web Components: Sophisticated Data Package Improves Productivity

- Efficiently handles any size and source of remote data with ease - across device types
- Connects to any back-end data source and seamlessly handles flow of data to components, making consuming data in trees, lists and grids simple
- Sorting, filtering, grouping of data is all automatic - without manual intervention by the developer
- Extensible validation system with numerous built-in validators:
 - currency, date, email, exclusion, inclusion, format, IP address, length, number, phone, time

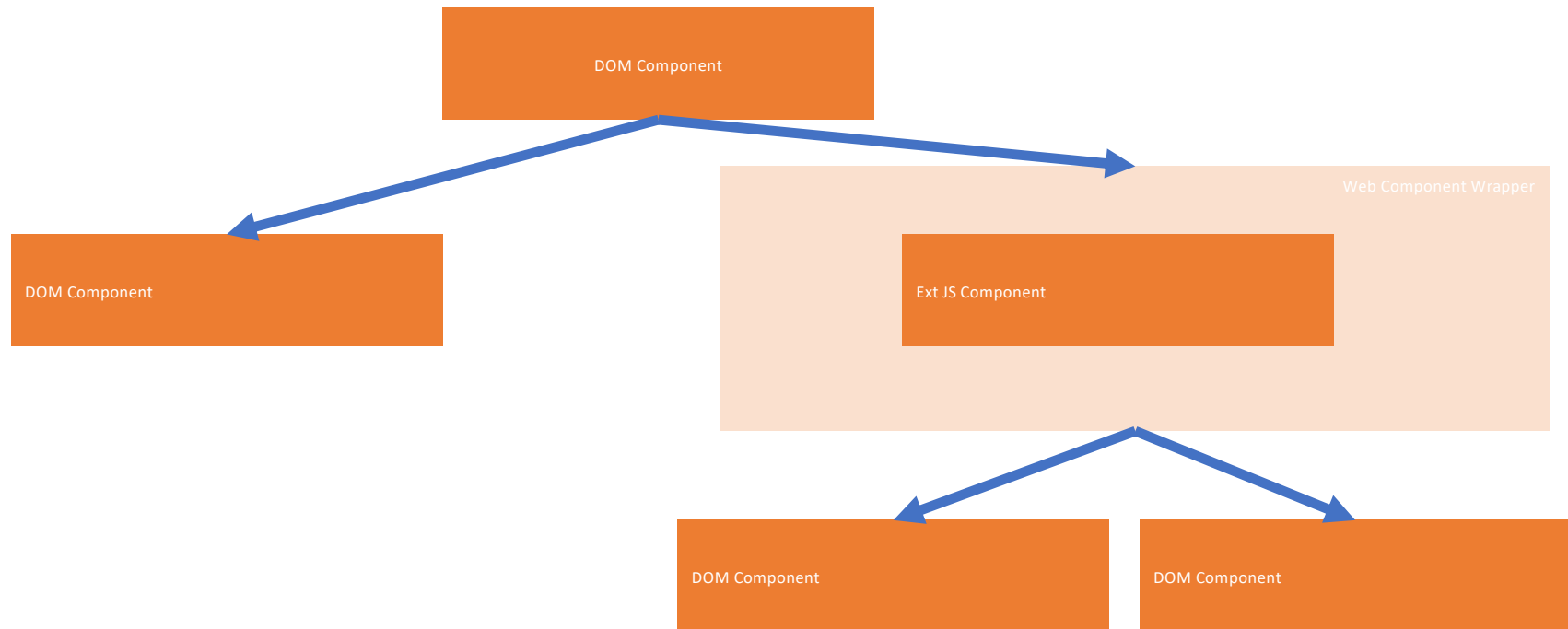
Ext Web Components 'under the hood'



Ext Web Components Concept



Web Components Component Hierarchy



Sencha Ext Web Components



- **115+ UI Components**
- **Sencha Themer**
- **Sencha Cmd**
- **Sencha Test**
- **ExtWebComponent**
- **bridge**
- **Babel: ES6 transpiler**
- **Webpack: Build**



Summary – Ext Web Components

- The most complete set of professionally tested and supported components for the Web Components specification
- Accelerates time to market, minimizes integration and upgrade burdens, and reduces business risk
- Delivers optimized web app performance
- Backed by a team of experts: developers can count on support and resources when their app is on the line

Q&A

- ExtWebComponents: <https://github.com/sencha/ext-web-components>
- Email: marc.gusmano@sencha.com