

# Evolution of the JavaScript Ecosystem

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# JavaScript

Where to invest  
your time as a  
JavaScript  
developer?

# Framework fatigue



# TodoMVC

Helping you **select** an MV\* framework

63

jQuery  
Created 2005

"Revolutionizes the way  
you can get Javascript  
to interact with HTML"

John Resig on jQuery  
January 2006



Prototype  
Mootools  
Dojo  
ExtJS  
YUI

The winner of the  
framework wars?

**Ruby**

**1995**

**Ruby on Rails**

**2005**

**Monolithic  
Monoculture**

Why not a  
monolithic  
winner?

"X" developer  
or  
JavaScript  
developer

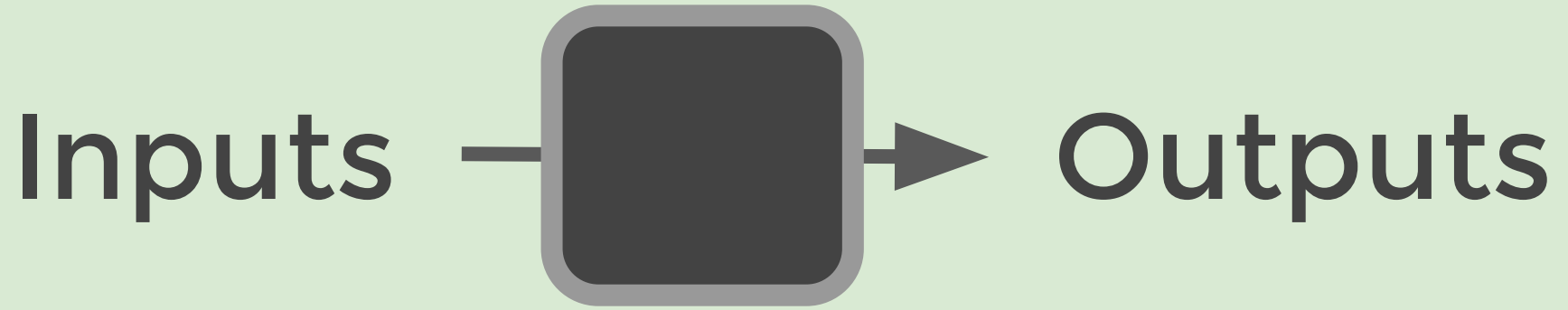
# The UNIX Philosophy

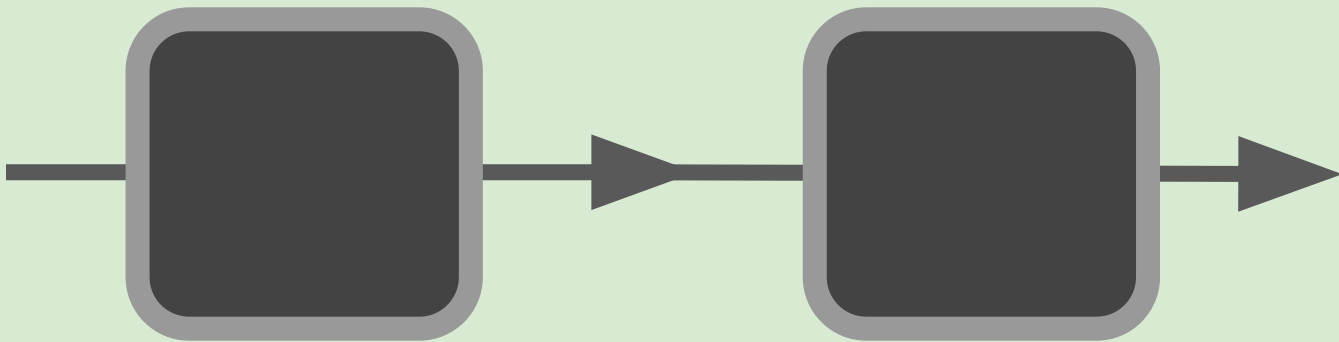
**Do one thing  
and do it well**



**Compose well  
with others**

# UNIX pipes





**Those who do not  
understand UNIX are  
condemned to  
reinvent it, poorly.**

Henry Spencer

Backward  
compatibility

Python  
1995

A diagram illustrating the transition from Python 2 to Python 3.000. It features two dark green circles on a light green background. The first circle contains the text 'Python 2'. A horizontal grey line connects the right side of the first circle to the left side of the second circle. The second circle contains the text 'Python "3000"'. A grey arrow points from the right side of the second circle towards the right edge of the frame.

Python  
2

Python  
"3000"





A diagram on a green background showing the divergence of Python. A horizontal grey arrow from the left splits into two diagonal arrows pointing towards two dark green circles. The top circle contains the text 'Python 2.7' and the bottom circle contains 'Python 3'. The year '2008' is written in white between the two arrows.

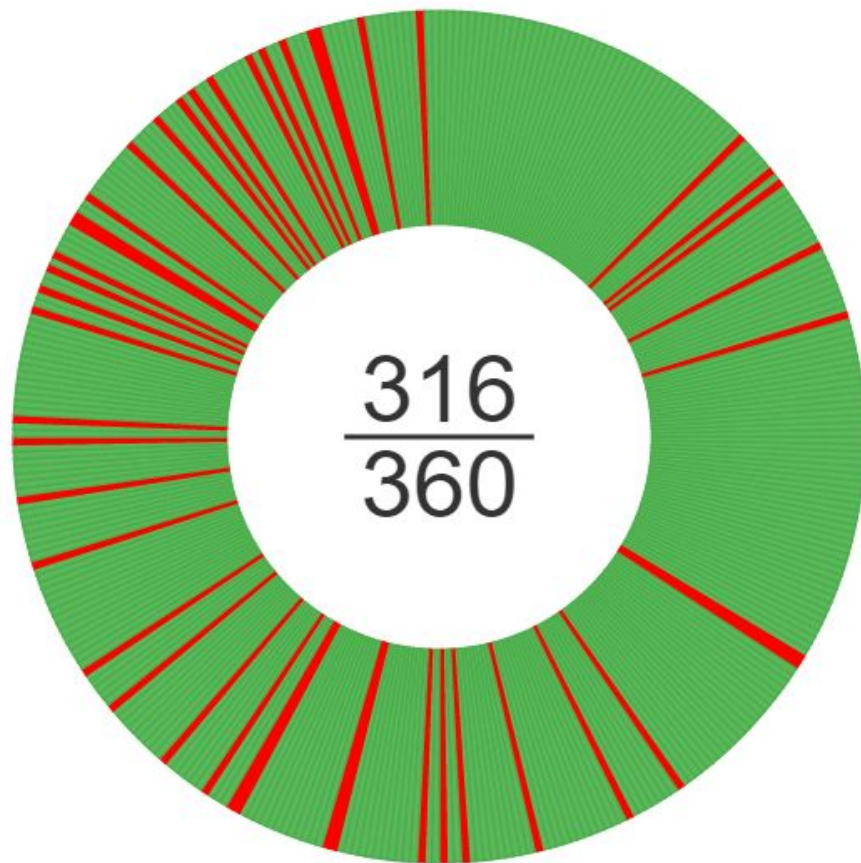
Python  
2.7

2008

Python  
3

# Python 3 Readiness

Python 3 support graph for 360 most popular Python packages!



Angular 1

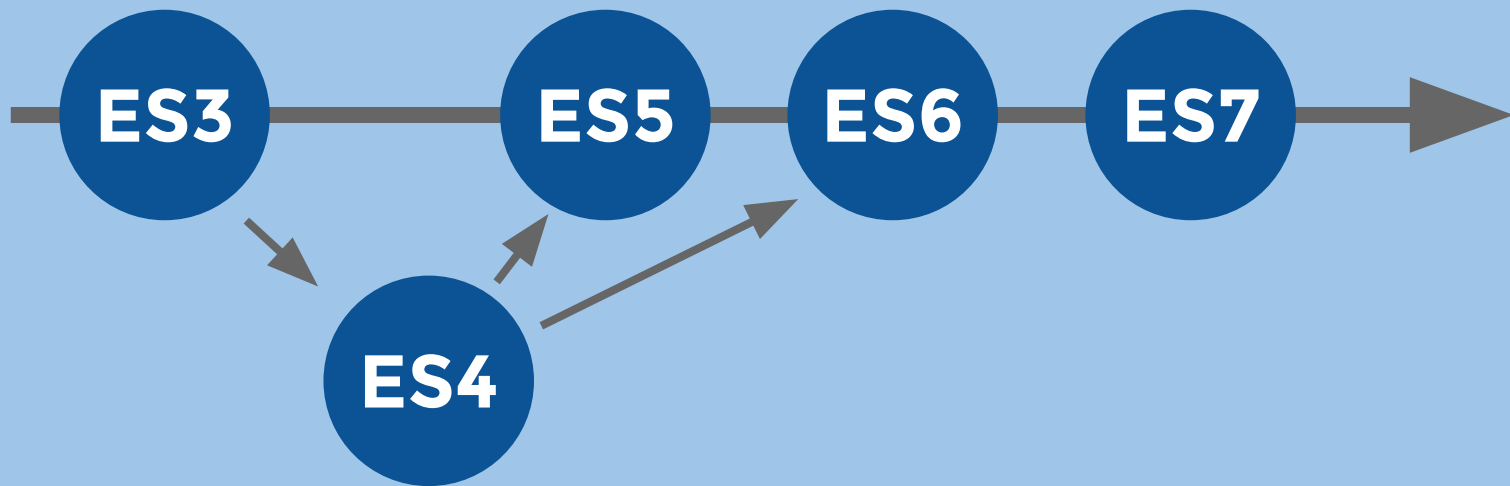
Angular 2

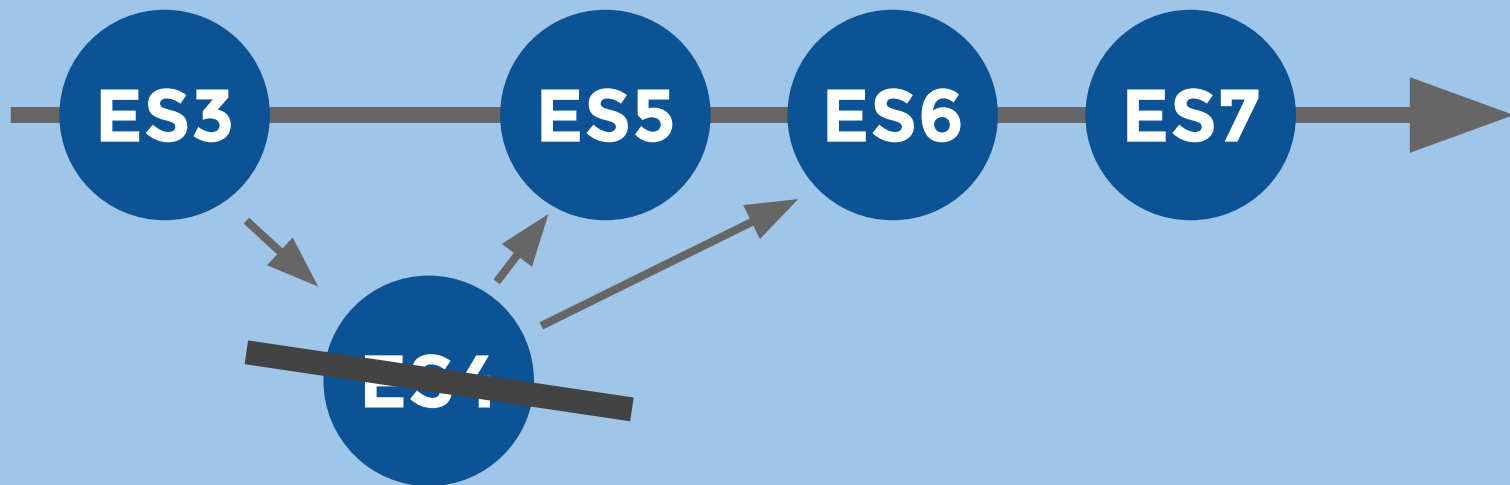
# Second System Effect

"The tendency is to over-design the second system, using all the ideas and frills that were cautiously sidetracked on the first one."

"The second system is the most dangerous system."

Fred Brooks



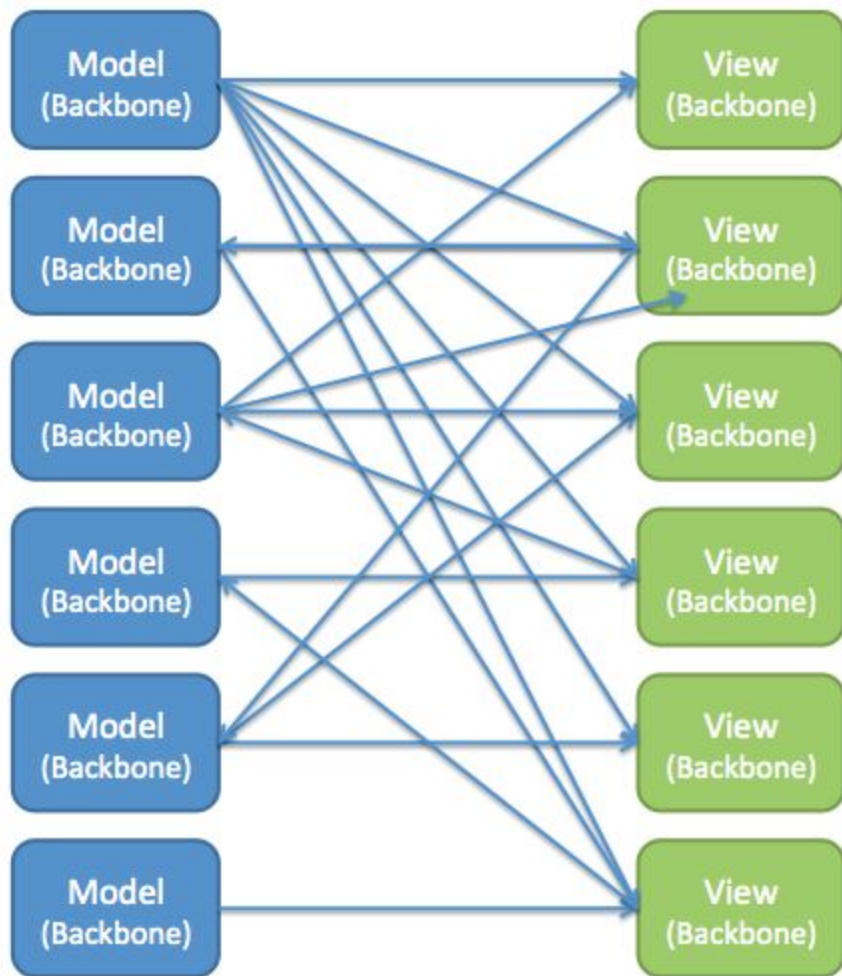


**"The thing to do now is to  
focus on incremental  
improvements."**

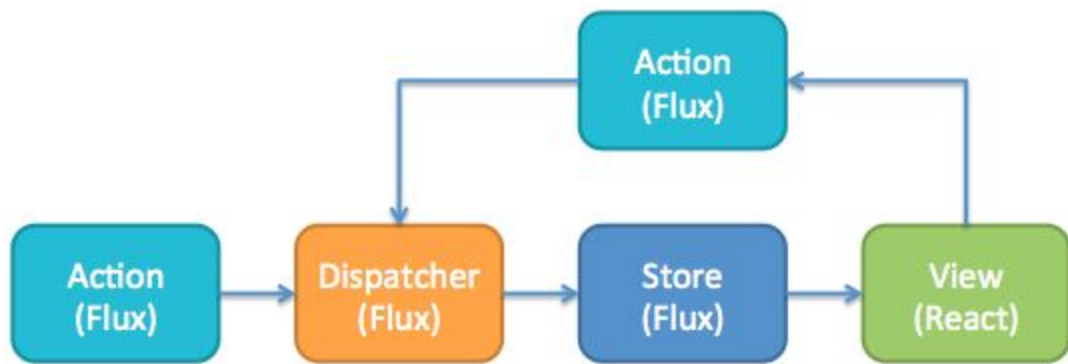
**Brendan Eich**



**Flux**



Unidirectional data flow



Facebook Flux

Fluxible

Reflux

Alt

Flummox

Marty.js

McFly

Lux

Material Flux

Redux

Nuclear.js

Fluxette

Fluxxor

Freezer

Ideas  
over  
Frameworks

React+Flux

vs

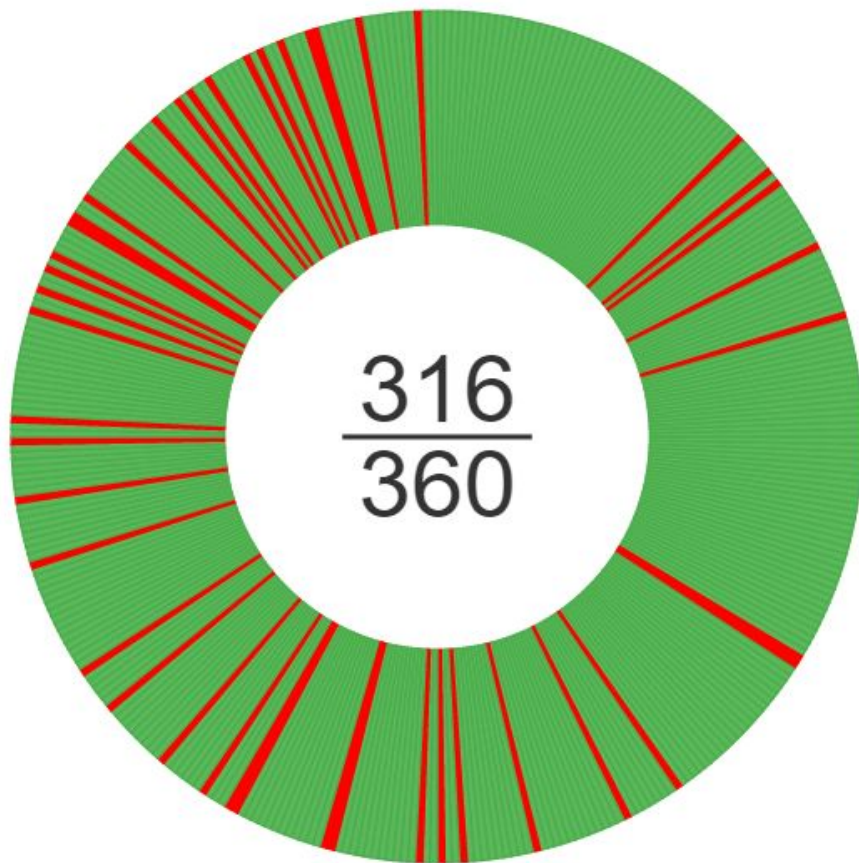
Angular?

"Our plan is to continue support for Angular 1 until the majority of developers have moved to Angular 2."



# Python 3 Readiness

Python 3 support graph for 360 most popular Python packages!



~~Monolithic~~  
~~Monoculture~~

# Small libraries

...that do one thing  
and do it well

...that compose  
well with others

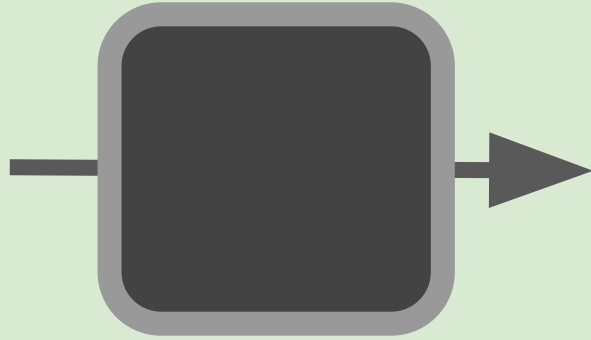
Ideas  
over  
Frameworks

# React JSX

```
var element = <div>Hello</div>;
```

```
function(name) {  
    return <p>Welcome, {name}</p>;  
}
```

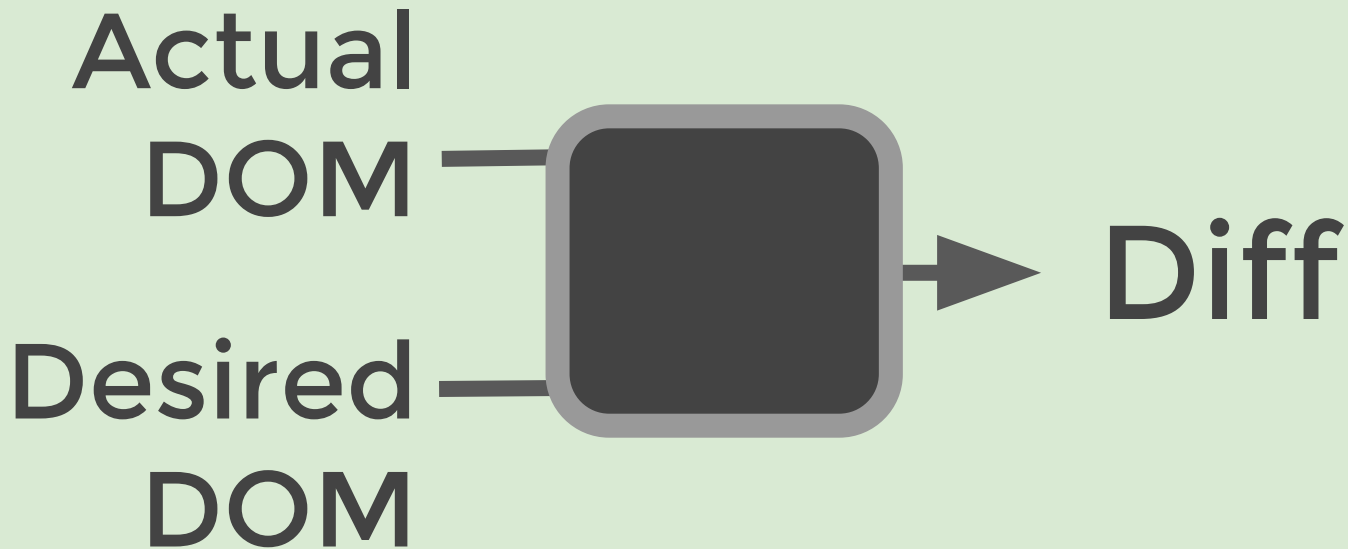
Data  
or  
State



DOM  
output



# Virtual DOM



filter map reduce

**Immutable.js**

# Angular 2

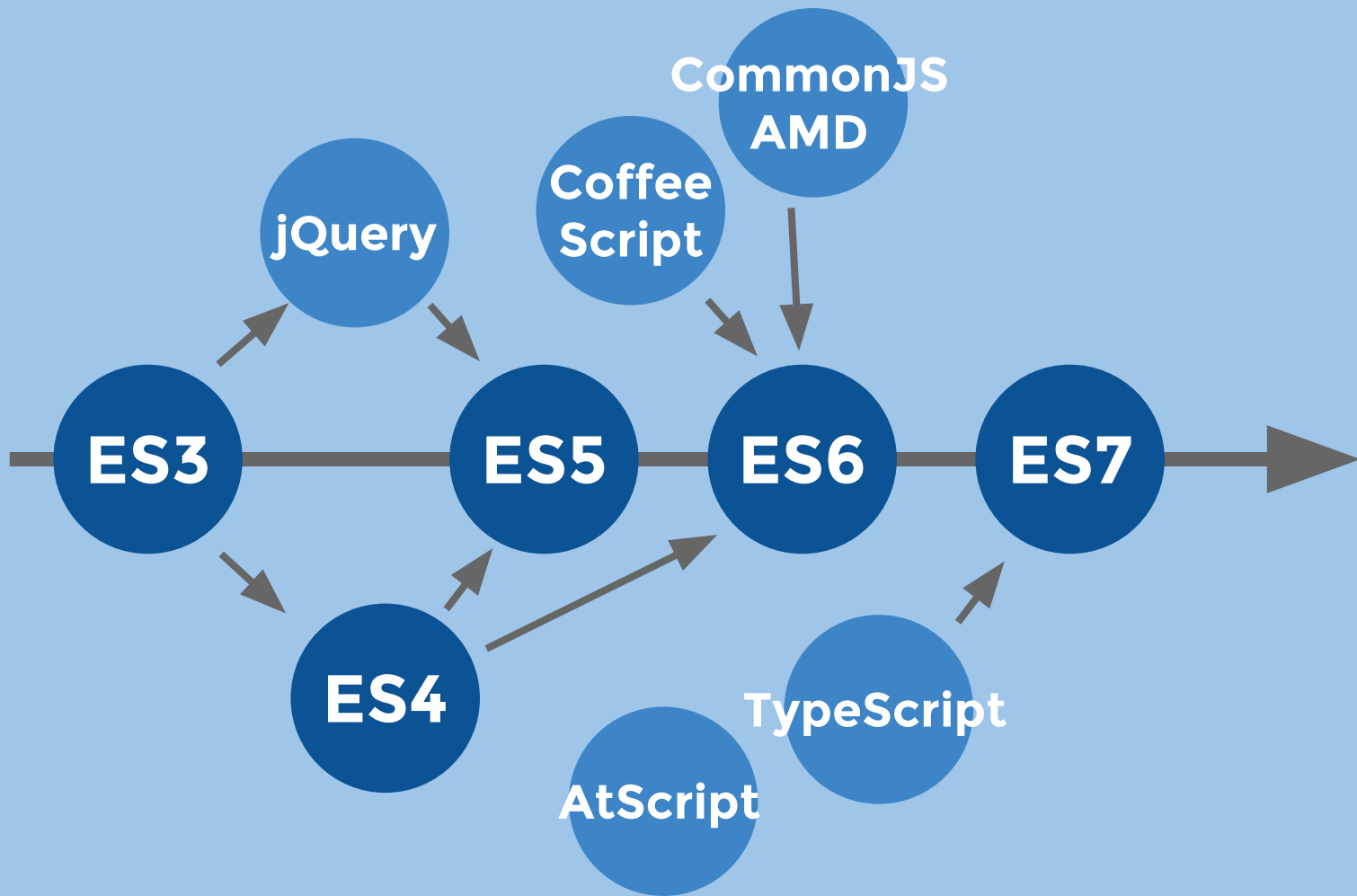
## Great Ideas

# TypeScript

# Decorators

# Imports and System.js

```
import MyLib from 'my-lib'  
import * as _ from 'lodash'
```





# jQuery

```
$ ( ' .foo .bar ' )
```

# DOM (Selectors API Level 1)

```
document.querySelectorAll ( ' .foo .bar ' )
```

**Iterators**

**Generators**

**String interpolation**

**Arrow functions**

**Module imports**

**Promises**

**async + await**

# JavaScript Ecosystem Predictions

Ideas over frameworks

Incremental improvements

Good ideas become standards

The winner of the  
framework wars?

"X" developer  
or  
JavaScript  
developer

# WebAssembly







**Binary bytecode**  
**Memory management**  
**Threading**  
**SIMD**

**"All these big bangs that  
try to remake the web in its  
own grand planned fashion  
do not work."**

**Brendan Eich**

**Not the end of  
JavaScript**

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