

# Serverless MJML editor

Angular + AWS Lambda + MJML = ❤️

# What are we going to talk about

- PART 1
  - HTML email templates
  - MJML framework
- PART 2
  - Serverless architecture
  - Amazon Lambda
- PART 3
  - Demo time

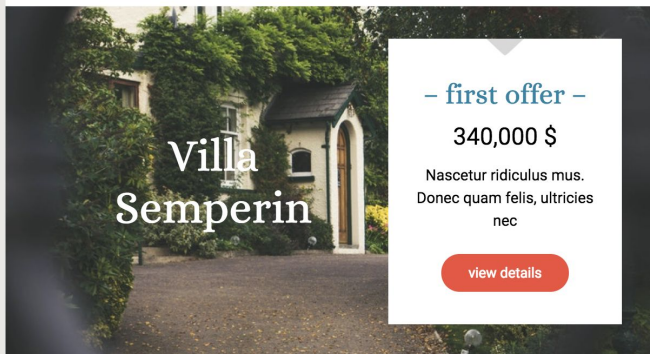
# PART 1



# Rich marketing HTML email templates

## Real Estate

Aliquam lorem ante, dapibus in hasellus  
viverra nulla ut metus varius laoreet.  
Quisque rutrum lorem dellorus. Aenean  
imperdiet.



– first offer –

340,000 \$

Nascetur ridiculus mus.  
Donec quam felis, ultricies  
nec

[view details](#)

## Lorem Ipsum

Aliquam lorem ante, dapibus in, viverra  
quis, feugiat a, tellus. Phasellus viverra  
nulla ut metus varius laoreet. Quisque  
rutrum. Aenean imperdiet. Lorem  
Ipsum



# RACOON

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amet, consectetur  
adipiscing elit

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Writing rich HTML emails is hard

# Different ecosystems

- **Desktop:** Outlook, Apple Mail, Thunderbird
- **Web:** Gmail, Outlook, Aol e.t.c.
- **Mobile:** iOS Mail, Gmail, Mail (Android), Yahoo (iOS), Outlook (iOS)

# Email Clients Market Share

Calculated from **823 million** opens tracked by [Litmus Email Analytics](#) in February 2019

- |     |                |            |
|-----|----------------|------------|
| 1.  | Apple iPhone   | <b>28%</b> |
| 2.  | Gmail          | <b>27%</b> |
| 3.  | Outlook        | <b>9%</b>  |
| 4.  | Apple iPad     | <b>9%</b>  |
| 5.  | Apple Mail     | <b>8%</b>  |
| 6.  | Yahoo! Mail    | <b>7%</b>  |
| 7.  | Outlook.com    | <b>2%</b>  |
| 8.  | Samsung Mail   | <b>2%</b>  |
| 9.  | Google Android | <b>2%</b>  |
| 10. | Thunderbird    | <b>1%</b>  |



# Common problems

1. Email clients use different engines to render HTML emails
2. Using HTML Tables For Layout (also for buttons)
3. Inline CSS
4. Typography
5. Images And Media



Bloated and hard to support code  
as a result

# Which options do we have?

- Build from scratch by hand
- Use a boilerplate template
- Use a framework

# MJML



- MJML stands for "Mailjet Markup Language".
- MJML is a transpiler.
- MJML engine is built in ReactJS.
- MJML engine takes the MJML (Mailjet Markup Language) as an input and outputs HTML.
- The generated HTML is email responsive and compatible with most email clients.
- Find it at [mjml.io](https://mjml.io)

```
<!-- Hero Image -->
<mj-section full-width="full-width" background-color="#f2f2f3" padding="0">
  <mj-column background-color="#fff" css-class="ninety">
    <mj-image
      src="http://projects.brevitysites.com/img_host/brevity_email1/hero.jpg"
      href="https://seekbrevity.com/maximum-website-usability-roi-plan/"
      padding="0"/>
    </mj-column>
  </mj-section>
<mj-section full-width="full-width" background-color="#f2f2f3" padding="0 0 75px">
  <mj-column background-color="#fff" css-class="ninety">
    <mj-text padding="10px 35px">
      <h1>Successful Discovery Process</h1>
      <h3>Build for maximum website usability and ROI</h3>
      <p>The marketing challenges that brands face today aren't always as obvious as you might think. It is important to truly understand your company, your target audience, and what brings value to that relationship. Learn about the importance of the discovery process when building a website.</p>
    </mj-text>

    <mj-button background-color="#333e48"
      font-weight="500"
      padding="10px 50px 30px"
      text-transform="uppercase"
      href="https://seekbrevity.com/maximum-website-usability-roi-plan/">Read Full Article
    </mj-button>
  </mj-column>
</mj-section>
```

# Why do I love MJML?

- Easy setup
- Fantastic documentation
- Lightweight and flexible
- Modular design
- Reduced testing time




How do I build emails with MJML?

# Online editor

email-template.mjml

```
178
179
180 <!-- Hero Image -->
181 <mj-section full-width="full-width" background-color="#f2f2f3" padding="0">
182   <mj-column background-color="#fff" css-class="ninety">
183     <mj-image
184       src="http://projects.brevitysites.com/img_host/brevity_email/hero.jpg"
185       href="https://seekbrevity.com/maximum-website-usability-roi-plan/"
186       padding="0"/>
187   </mj-column>
188 </mj-section>
189 <mj-section full-width="full-width" background-color="#f2f2f3" padding="0 0 75px">
190   <mj-column background-color="#fff" css-class="ninety">
191     <mj-text padding="10px 35px">
192       <h3>Successful Discovery Process</h3>
193       <h3>Build for maximum website usability and ROI</h3>
194       <p>The marketing challenges that brands face today aren't always as obvious as you might
195       think. It is important to truly understand your company, your target audience, and what brings
196       value to that relationship. Learn about the importance of the discovery process when building
197       a website.</p>
198     </mj-text>
199
200     <mj-button background-color="#333e48"
201       font-weight="500"
202       padding="10px 50px 30px"
203       text-transform="uppercase"
204       href="https://seekbrevity.com/maximum-website-usability-roi-plan/">Read Full Article
205     </mj-button>
206   </mj-column>
207 </mj-section>
208
209 <!-- Epilogue -->
210 <mj-section full-width="full-width" background-color="#f2f2f3" padding="0">
```

MJML Preview



## SUCCESSFUL DISCOVERY PROCESS

BUILD FOR MAXIMUM WEBSITE USABILITY AND ROI

The marketing challenges that brands face today aren't always as obvious as you might think. It is important to truly understand your company, your target audience, and what brings value to that relationship. Learn about the importance of the discovery process when building a website.

[READ FULL ARTICLE](#)



# Use MJML engine locally

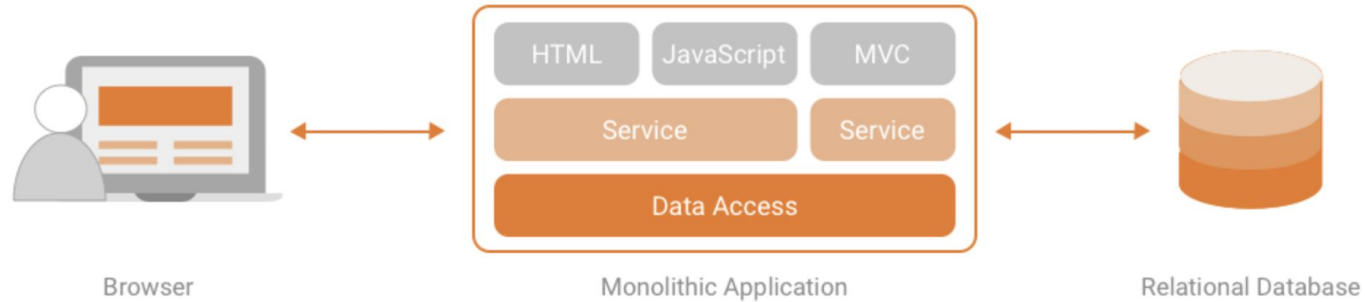
```
mjml input.mjml -o output.html
```

## PART 2



What is Serverless?

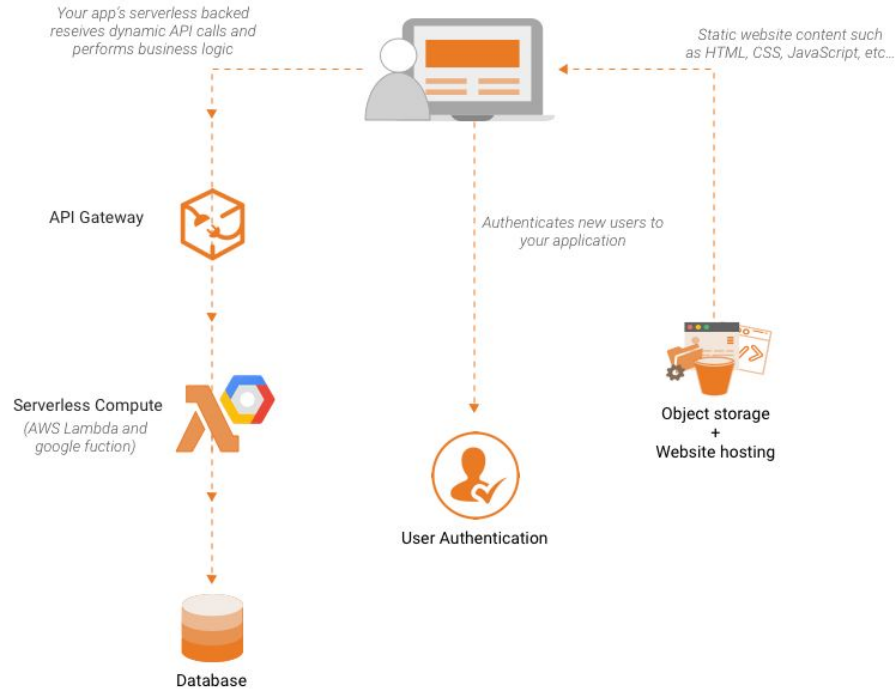
# Monolith application

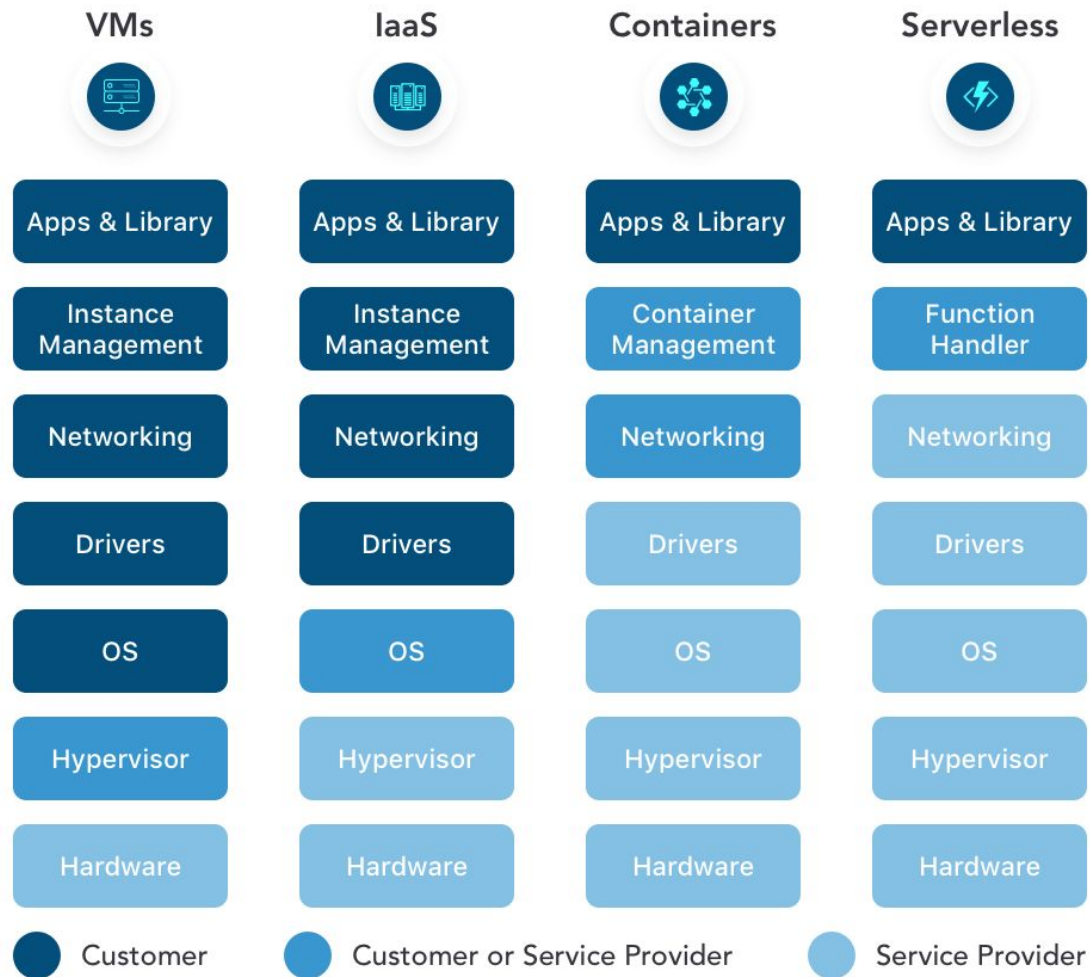




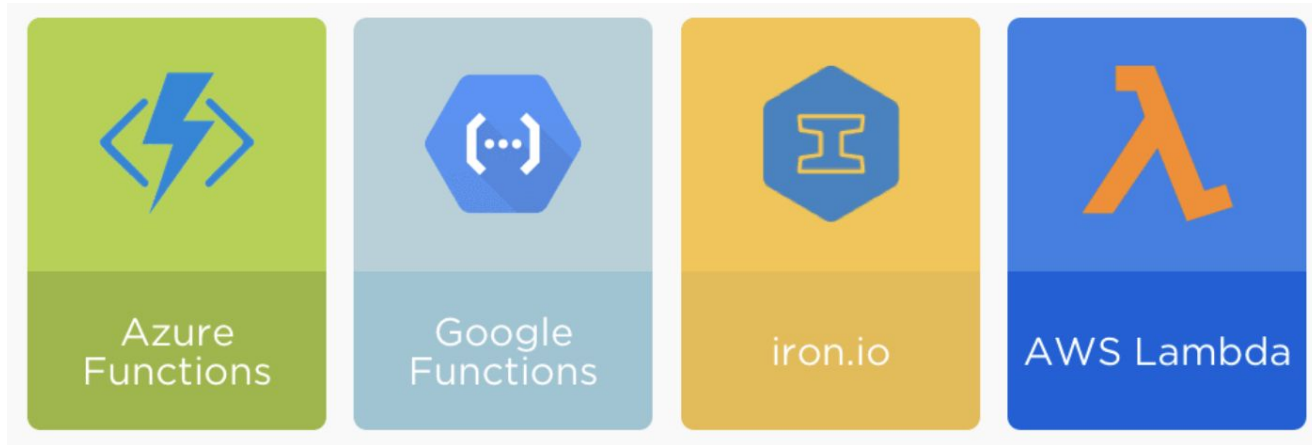
Focus on your application, not the  
infrastructure

# Serverless architecture





# Function as service (FaaS) vendors

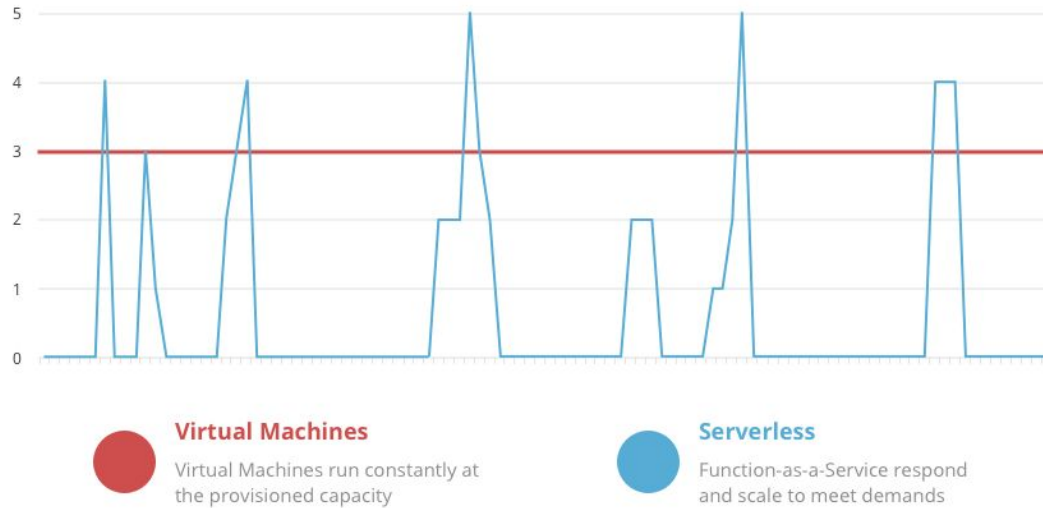




# Benefits of FaaS

- Focus on app logic not infrastructure
- Scaling and high availability
- Labour cost has reduced

# Serverless usage






Let's build something!

# MJML online editor

email-template.mjml

```
178 <!-- Hero Image -->
179
180 <mj-section full-width="full-width" background-color="#f2f2f3" padding="0">
181   <mj-column background-color="#fff" css-class="ninety">
182     <mj-image
183       src="http://projects.brevitysites.com/img_host/brevity_email/hero.jpg"
184       href="https://seekbrevity.com/maximum-website-usability-roi-plan/"
185       padding="0"/>
186   </mj-column>
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188
189 <mj-section full-width="full-width" background-color="#f2f2f3" padding="0 0 75px">
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198     </mj-text>
199
200     <mj-button background-color="#333e48"
201       font-weight="500"
202       padding="10px 50px 30px"
203       text-transform="uppercase"
204       href="https://seekbrevity.com/maximum-website-usability-roi-plan/">Read Full Article
205     </mj-button>
206   </mj-column>
207 </mj-section>
208
209 <!-- End -->
210 <mj-section full-width="full-width" background-color="#f2f2f3" padding="0">
```

MJML Preview



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# MJML custom editor

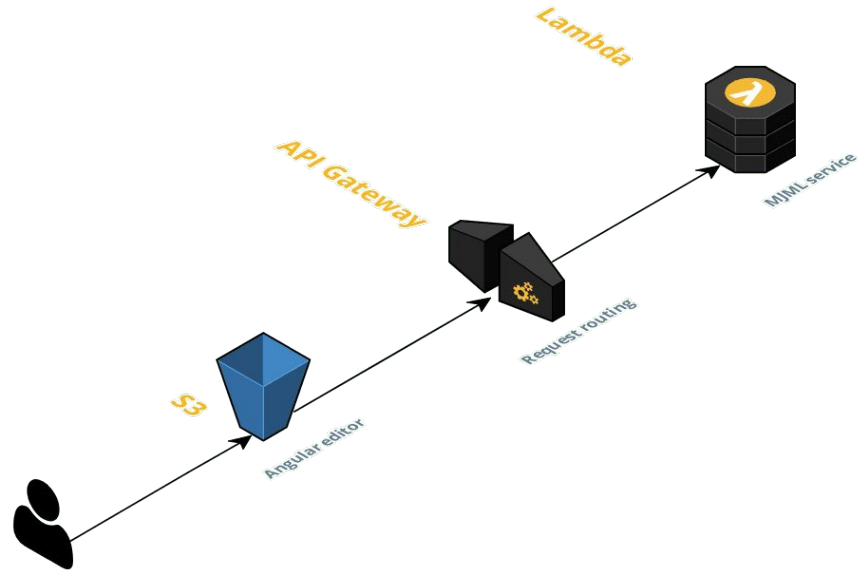
## MJML Editor

```
1 <mjml>
2   <mj-body>
3     <mj-section>
4       <mj-column>
5         <mj-divider border-color="#F45E43"></mj-divider>
6       <mj-text font-size="20px" color="#F45E43" font-family="helvetica"
7         </mj-text>
8     </mj-column>
9   </mj-section>
10 </mj-body>
11 </mjml>
```

---

Hellos ddsWorld

# Architecture



# DEMO

<https://github.com/sm0g/mjml-editor>

# Who am I?

- My name is Alexey Smirnov
- IT consultant at [E-engineers](https://e-engineers.com)
- 10+ years of experience in IT
- Huge fan of web development & DevOps



[E-ENGINEERS.COM](https://e-engineers.com)