

# MJML, HTML, CSS

## EMAIL DEVELOPMENT WORKFLOW FOR BRAZE

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### Laughlin Email Team members

- Jenny Maglio - Marketing Automation, Associate Director - [jmaglio@laughlin.com](mailto:jmaglio@laughlin.com):
- Cathleen LaFond - Automation Specialist - [-clafond@laughlin.com](mailto:-clafond@laughlin.com)

### What is Braze?:

Braze is a customer relationship management and mobile marketing automation software that businesses use to manage their mobile applications. This system is used by Laughlin exclusively for the Indiana Hoosier Lottery.

### History:

History: The Laughlin Email development strategy was created by Dariusz jarosz and perhaps other Dev's that I am not aware of. I started developing emails for Laughlin when Dariuz left the company in Oct 2019.

**Laughlin Email Repo** - Repository for the final email that has been launched.

- [https://github.com/laughlin/lc\\_client\\_emails](https://github.com/laughlin/lc_client_emails)

### General Observations:

Email rendering is highly inconsistent across different client apps

Email rendering is occasionally inconsistent within the same client-app on different devices of the same type. Sometimes a bug is unresolvable which may require a design change.

## MJML

We use MJML to generate the HTML for our emails. Sometimes it is necessary to further handcode the rendered MJML before launching the final email. MJML stands for "Mailjet Markup Language" is a markup language. It is designed to make coding a responsive email easier. It has a semantic syntax that makes it simple and straightforward.

## Email Design:

The graphic designers are currently creating desktop-view-comps only. Comp layouts show the relative positions of text and graphics. mobile-view-comps are NOT provided to the developer therefore, the developer can determine the best-fit mobile view and then present it to the project manager for approval.

Sometimes the graphic/UI designer will create a desktop comp that is out of the ordinary and would be too difficult or impossible to create within the budget and time available. In those cases a design change will be necessary.

Many times it is obvious to the developer that the graphic/UI designer does not consider how the comp will naturally render on mobile devices.

When using MJML the columns are stacked in order from left to right. So if it has three columns on desktop, the left (first) column will be at the top of the stack followed by columns 2 and 3 underneath.

If MJML's mobile's natural stacking order of the original design is not satisfactory to the designer then it may be necessary to do the following.

- Add element to the email that are hidden when in desktop-view
- Reveal the hidden elements when rendering the email in mobile-view
- When in mobile-view, hide some elements that were visible in desktop-view

Here are 2 links that email graphic designers should review before building emails.

- **Understanding Email Layout and Structure**

<https://chamaileon.io/resources/understanding-email-layout-and-structure/>

- **What Do Scalable, Fluid, Responsive and Hybrid Email Design Mean?**

<https://chamaileon.io/resources/what-do-scalable-fluid-responsive-and-hybrid-email-design-mean/>

## Laughlin Developed Documentation Links

MJML, BRAZE, HUBSPOT AND PARDOT – HTML EMAIL PROGRAM KNOWLEDGE SHARING

[https://laughlinconstable.sharepoint.com/:w:/s/MarketingAutomationCRM/ETbOzwJ1lq5lI8pveAQTxpEB\\_NvillnKlnbtQc-n6velpQ?e=DBs0NH](https://laughlinconstable.sharepoint.com/:w:/s/MarketingAutomationCRM/ETbOzwJ1lq5lI8pveAQTxpEB_NvillnKlnbtQc-n6velpQ?e=DBs0NH)

Best Practices Book. **READ THIS ENTIRE DOCUMENT**

[https://laughlinconstable.sharepoint.com/:w:/r/sites/MarketingAutomationCRM/\\_layouts/15/Doc.aspx?sourcedoc=%7B5FA3FE1B-6549-46D5-A766-6FFD60B09242%7D&file=James\\_Bond\\_BPB.docx&action=default&mobileredirect=true&CID=C44C0948-5CDA-43BB-B99A-46336BB1216A&wdLOR=cB1323621-8714-42B0-9D3C-CD3A1B38B4E8](https://laughlinconstable.sharepoint.com/:w:/r/sites/MarketingAutomationCRM/_layouts/15/Doc.aspx?sourcedoc=%7B5FA3FE1B-6549-46D5-A766-6FFD60B09242%7D&file=James_Bond_BPB.docx&action=default&mobileredirect=true&CID=C44C0948-5CDA-43BB-B99A-46336BB1216A&wdLOR=cB1323621-8714-42B0-9D3C-CD3A1B38B4E8)

Best Practices Additional Notes - **READ THIS ENTIRE DOCUMENT**

<https://laughlinconstable.sharepoint.com/:w:/s/MarketingAutomationCRM/EUUb1UPjb3pGsJwL3JvvfmQBSxGpVpelAfJH9fRMdwkbpw?e=9ZJv8D>

MAC Process Overview - Email Focused

[https://laughlinconstable.sharepoint.com/:b:/s/MarketingAutomationCRM/EbmVCC2gPoFKl6rQ7hvoW1wBaX\\_2hp2443fXLpRryU\\_UzQ?e=XeKUQj](https://laughlinconstable.sharepoint.com/:b:/s/MarketingAutomationCRM/EbmVCC2gPoFKl6rQ7hvoW1wBaX_2hp2443fXLpRryU_UzQ?e=XeKUQj)

Media Query Support in Email Clients

<https://www.litmus.com/blog/understanding-media-queries-in-html-email/>

Using Media Queries in HTML Email

<https://www.emailonacid.com/blog/article/email-development/media-queries-in-html-email/>

## Laughlin Email Test Accounts

Testing email box accounts logins

- lcqatest1@gmail.com – [REDACTED]
- usertesting@laughlin.com - [REDACTED]
- lcqatest@outlook.com – [REDACTED]
- lcqatest1@yahoo.com – [REDACTED]

## Laughlin Remote Test Servers

To test for Outlook 2010 or 2013 or 2016 (Remote Desktop Connection - Windows)

-----  
REMOTE DESKTOP

Outlook 2010

- Server: win10office2010.laughlin.com
- PASS: [REDACTED]
- USER: [REDACTED]
- EMAIL: [REDACTED]

-----  
REMOTE DESKTOP

Outlook 2013

- Server: [REDACTED]
- PASS: [REDACTED]
- USER: [REDACTED]
- EMAIL: [REDACTED]

-----  
REMOTE DESKTOP

Outlook 2016

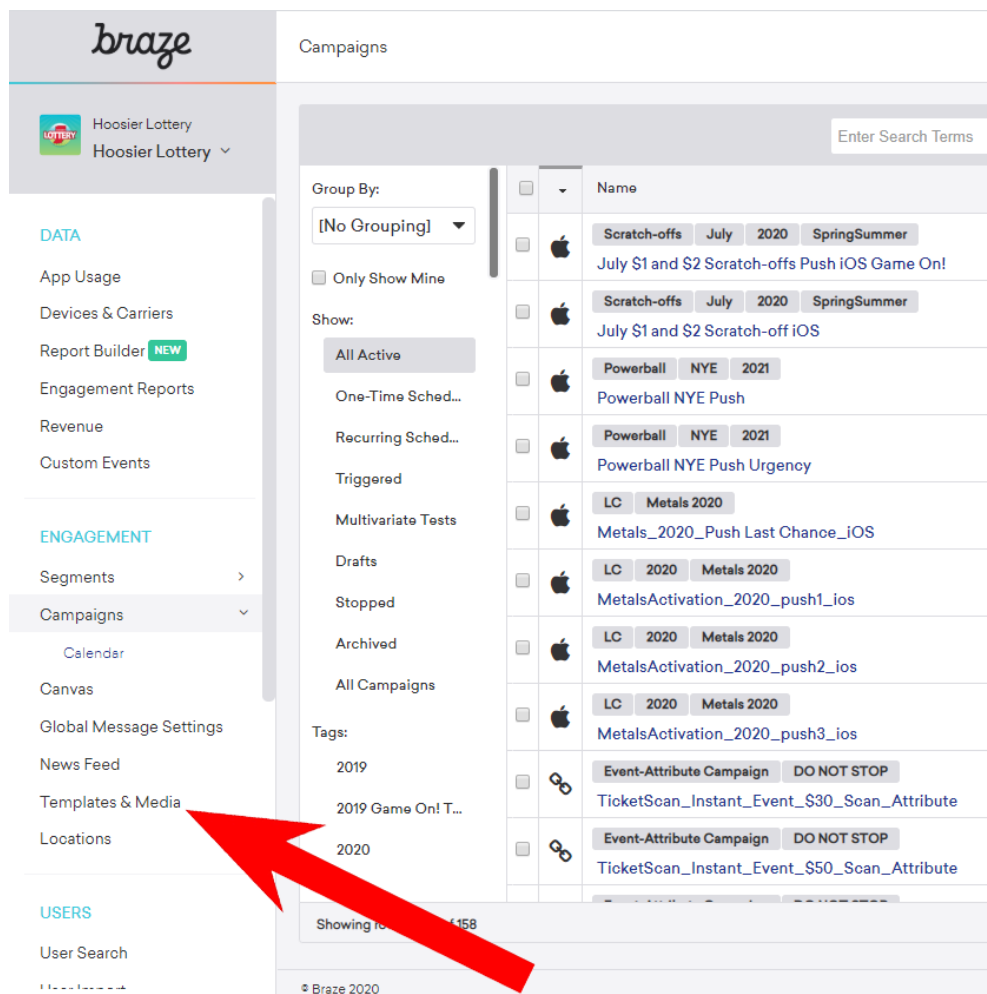
- Server: [REDACTED]
- PASS: [REDACTED]
- USER: [REDACTED]
- EMAIL: [REDACTED]

## Step 1 - Code the email

- Create email markup **locally** in MJML or other tools
- You should upload your images to HubSpot as you develop locally and use their paths in your local code.

Upload your compressed images to the Media Library

[https://www.braze.com/docs/user\\_guide/engagement\\_tools/templates\\_and\\_media/media\\_library/](https://www.braze.com/docs/user_guide/engagement_tools/templates_and_media/media_library/)



### Basic Email Templates



### Saved Email Templates

Enter Search Terms

Show:

Active

Archived

All Templates

- ☐ Name
- ☐ 2020\_Announcement\_Template
- ☐ Jackpot Alert Template

dashboard-07.braze.com/engagement/templates\_and\_media/media\_library/3975b2b150a4a8b1654edf


braze

Resources ▾ Get Help ▾ Celine Patis 🏆

Templates & Media

Email Templates Content Blocks Library Webhook Templates Link Templates In-App Message Templates Media Library

#### Upload To Library














DRAG & DROP

OR

UPLOAD

Enter Search Terms

Group By	Preview	Name	#	Type	Date Added	URL	Size	Dimensions
Tags		PS In-app_PS_1.png		IMG	Mar 27, 2020	https://appboy-images.com/appboy/communications/...	569.2KB	580 x 1080
2019		Winner Announce - App - Weekly Winner: 13 Indiana Cash Bonus cumulative 46500.png		IMG	Mar 27, 2020	https://appboy-images.com/appboy/communications/...	1.42MB	1001 x 1600
2020		Winner Announce - App - Weekly Winner: 12 21 Karat Gold cumulative 42000.png		IMG	Mar 27, 2020	https://appboy-images.com/appboy/communications/...	749.05KB	1000 x 1600
Real Chance		Winner Announce - App - Weekly Winner: 18 JAMES BOND 9007 cumulative 10000.png		IMG	Mar 27, 2020	https://appboy-images.com/appboy/communications/...	334.9KB	1000 x 1600
30th Anniversary		Winner Announce - App - Weekly Winner: 09 MCR Short Shop Daily 3195000.png		IMG	Mar 27, 2020	https://appboy-images.com/appboy/communications/...	390.86KB	1001 x 1600
As		Winner Announce - App - Weekly Winner: 10 Boku Sprinkles Daily 4 25000.png		IMG	Mar 27, 2020	https://appboy-images.com/appboy/communications/...	390.47KB	1001 x 1600
App		Winner Announce - App - Weekly Winner: 07 Drones GASH 15 294000 .JPG.png		IMG	Mar 27, 2020	https://appboy-images.com/appboy/communications/...	1008.89KB	1001 x 1600
Kitchen		Winner Announce - App - Weekly Winner: 10 Boku Sprinkles Daily 4 25000.png		IMG	Mar 27, 2020	https://appboy-images.com/appboy/communications/...	390.47KB	1001 x 1600
Black Pearl		Winner Announce - App - Weekly Winner: 07 Drones GASH 15 294000 .JPG.png		IMG	Mar 27, 2020	https://appboy-images.com/appboy/communications/...	1008.89KB	1001 x 1600
Cafe Ticket Give...		Winner Announce - App - Weekly Winner: 10 Boku Sprinkles Daily 4 25000.png		IMG	Mar 27, 2020	https://appboy-images.com/appboy/communications/...	390.47KB	1001 x 1600
CGR		Winner Announce - App - Weekly Winner: 07 Drones GASH 15 294000 .JPG.png		IMG	Mar 27, 2020	https://appboy-images.com/appboy/communications/...	1008.89KB	1001 x 1600

## Step 2 - Upload your code to Braze

How to Upload your HTML Email Template

[https://www.braze.com/docs/user\\_guide/message\\_building\\_by\\_channel/email/html\\_email\\_template/](https://www.braze.com/docs/user_guide/message_building_by_channel/email/html_email_template/)

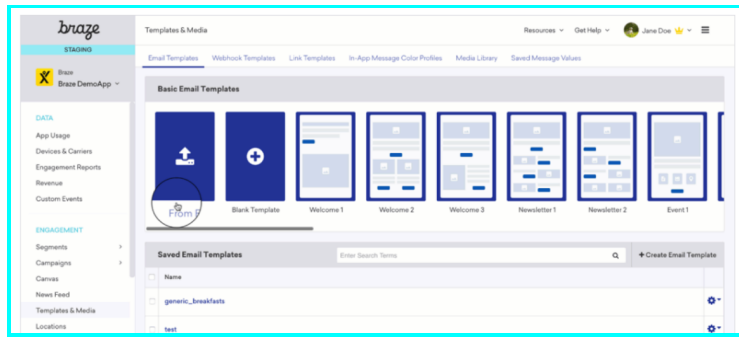
Locate your campaign and click on it's name.

The screenshot shows the Braze dashboard interface. On the left is a sidebar with navigation menus for DATA, ENGAGEMENT, USERS, and INTEGRATIONS. The main content area is titled 'Campaigns' and displays a table of active campaigns. A red arrow points to the 'Name' column header in the table. The table lists various campaigns, including 'Holiday 2019', 'Hoo Knew Trivia', 'Hoosier Lotto', and several '2020Apr\_PetDay' campaigns for different platforms and content types. Each row includes a status indicator (Draft, LC) and a 'Name' field.

Name	Status
Holiday 2019	Draft
Hoo Knew Trivia	LC
Hoosier Lotto	Draft
Immediate Winne...	LC
iOS	LC
iOS Event App 20...	Draft
IP Warming	LC
Jackpot 2019	Draft
Jackpot Alerts	LC
Jackpot Winner	Draft
James Bond	LC
January	Draft
July	Draft
June	Draft
LC	Draft
Learning	Draft
Lucky 7	LC
Lucky Dog	Draft
Lucky Tripler	Draft
LuckyDog	Draft

Showing rows 1 to 8 of 8

Zip up your html file and upload it into your campaign.



After you upload your code you can then make more edits to your code if necessary.

## Customize your template

[https://www.braze.com/docs/user\\_guide/message\\_building\\_by\\_channel/email/creating\\_an\\_email\\_template/#step-3-customize-your-template](https://www.braze.com/docs/user_guide/message_building_by_channel/email/creating_an_email_template/#step-3-customize-your-template)

Name: Learning\_1

Sending Info Body Live Preview Content Library

HTML Editor Editor Settings From: Hoosier Lottery <no-reply@mylotterynotifications.hoosierlottery.com>  
Reply-To: info@hoosierlottery.com  
Subject: test

1815 <div class="mj-column-per-100 mj-outlook-group-fix" style="font-size:0px;text-align:left;direction:ltr;display:inline-block;vertical-align:top;width:100%;">  
1816 <table border="0" cellpadding="0" cellspacing="0" role="presentation" width="100%">  
1817 <tbody>  
1818 <tr>  
1819 <td style="vertical-align:top;padding:0;">  
1820 <table border="0" cellpadding="0" cellspacing="0" role="presentation" style="" width="100%">  
1821 <tr>  
1822 <td style="font-size:0px;padding:0;word-break:break-word;">  
1823 <div style="height:20px;">  
1824 <div style="height:20px;">  
1825 <div style="height:20px;">  
1826 <div style="height:20px;">  
1827 <div style="height:20px;">  
1828 <div style="height:20px;">  
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1852 <div style="height:20px;">  
1853 <div style="height:20px;">

It's always playtime for the pups featured in the Hoosier Lottery's new \$1 Lucky Dog Scratch-off.

**Wanna Play?**

Introducing the \$1 Lucky Dog Scratch-off, on sale now.

MEET THE DOGS

**Meet the Lucky Dog Scratch-offs.**

12 lovable dogs, 6 chances to win and a \$1,000 top prize. There's never been a better time to be a pet lover.

Actual rendering may not be identical to this preview depending on the user's environment.



- Note: Sometimes you have to click “Send Test” multiple times before receiving your emails. This seems to be a bug in the system

[illegible]

### Initial device and client testing

The following devices and clients should be used to test the email while the developer is creating the initial code.

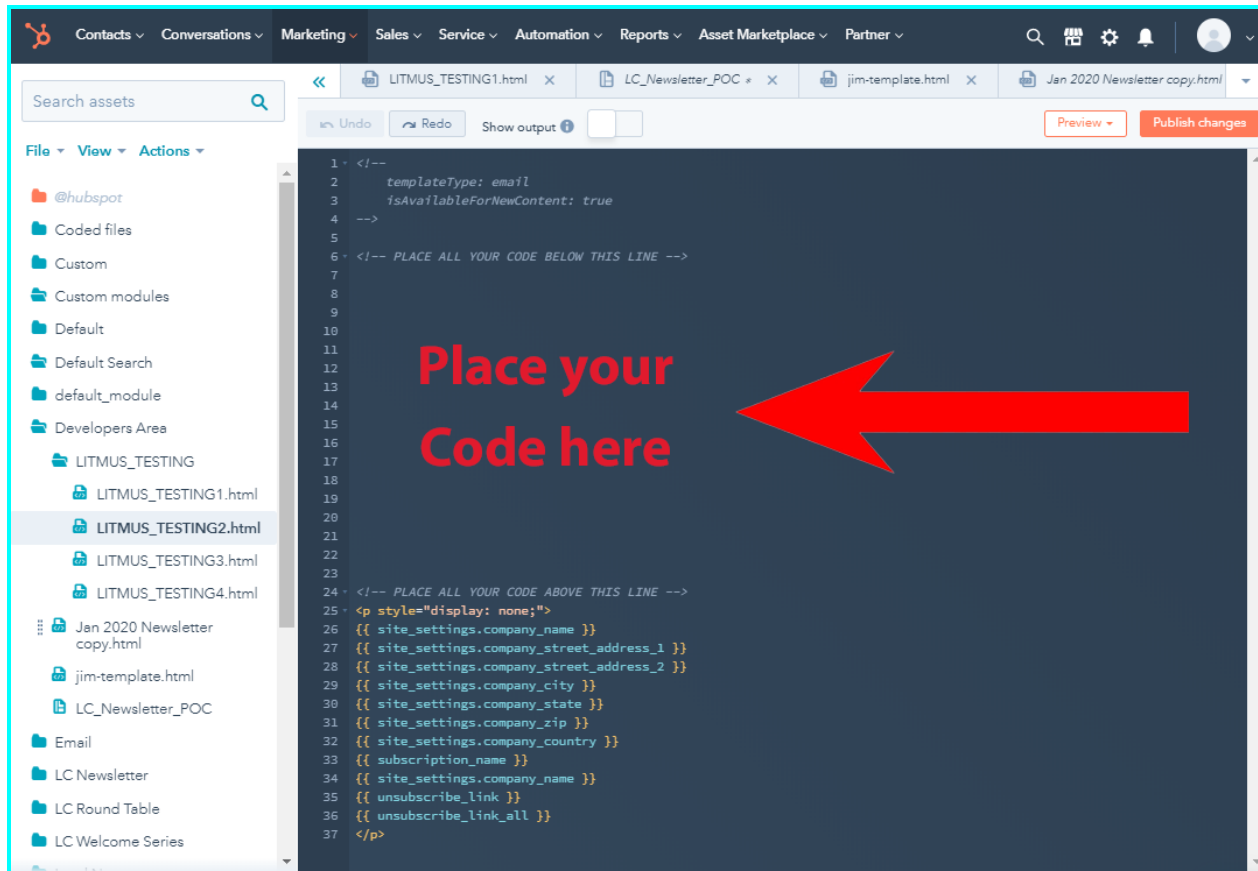
- Iphone
  - Gmail App
  - Native App
- Android
  - Gmail App
  - Native App
- Laptop/Desktop
  - Outlook 365 App - most current version
  - Gmail (Browser)

**Note: For a comprehensive list of all clients, browsers and devices that we support please refer to the “EMAIL BEST PRACTICE BOOK ”**

### Laughlin owned device testing

- 1) Android S9(Not sure of model)
- 2) iPhone (7-plus)
- 3) iPhone (6)
- 4) IPad (Air)
- 5) Assigned work laptop
- 6) Remote Servers

## LITMUS TESTING via HUBSPOT



**In the Developer Area → LITMUS\_TESTING folder choose any unused template. Note: sometimes a template may have been abandoned and has old HTML in that case you can delete the old HTML and use that template. HOWEVER make sure you leave the requires HubSpot code in place.**

**Below is the required HubSpot Code.**

**<!--**

**templateType: email**

**isAvailableForNewContent: true**

**-->**

**<!-- PLACE ALL YOUR CODE BELOW THIS LINE -->**

**<!-- PLACE ALL YOUR CODE ABOVE THIS LINE -->**

**<p style="display: none;">**

**{{ site\_settings.company\_name }}**

**{{ site\_settings.company\_street\_address\_1 }}**

**{{ site\_settings.company\_street\_address\_2 }}**

**{{ site\_settings.company\_city }}**

**{{ site\_settings.company\_state }}**

**{{ site\_settings.company\_zip }}**

**{{ site\_settings.company\_country }}**

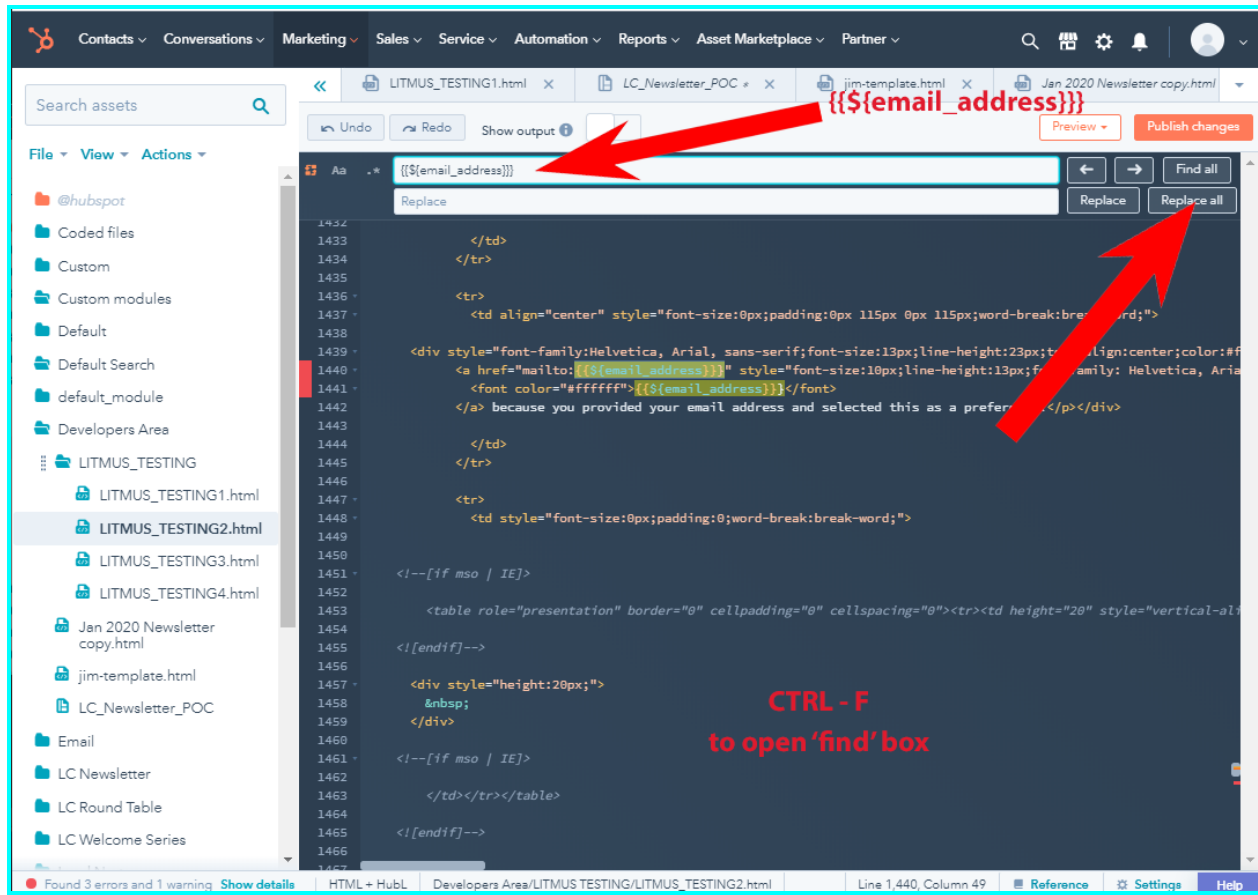
**{{ subscription\_name }}**

**{{ site\_settings.company\_name }}**

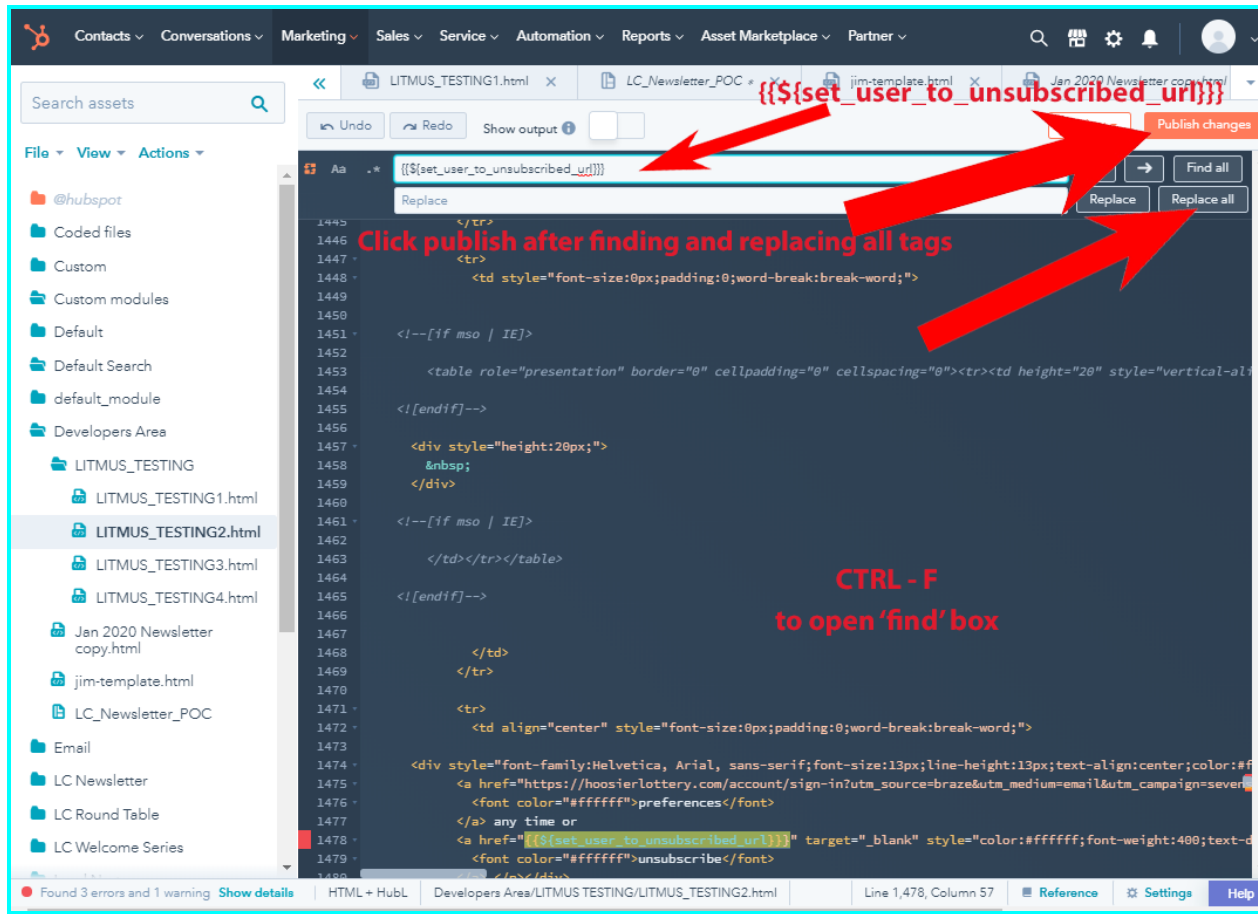
**{{ unsubscribe\_link }}**

**{{ unsubscribe\_link\_all }}**

**</p>**

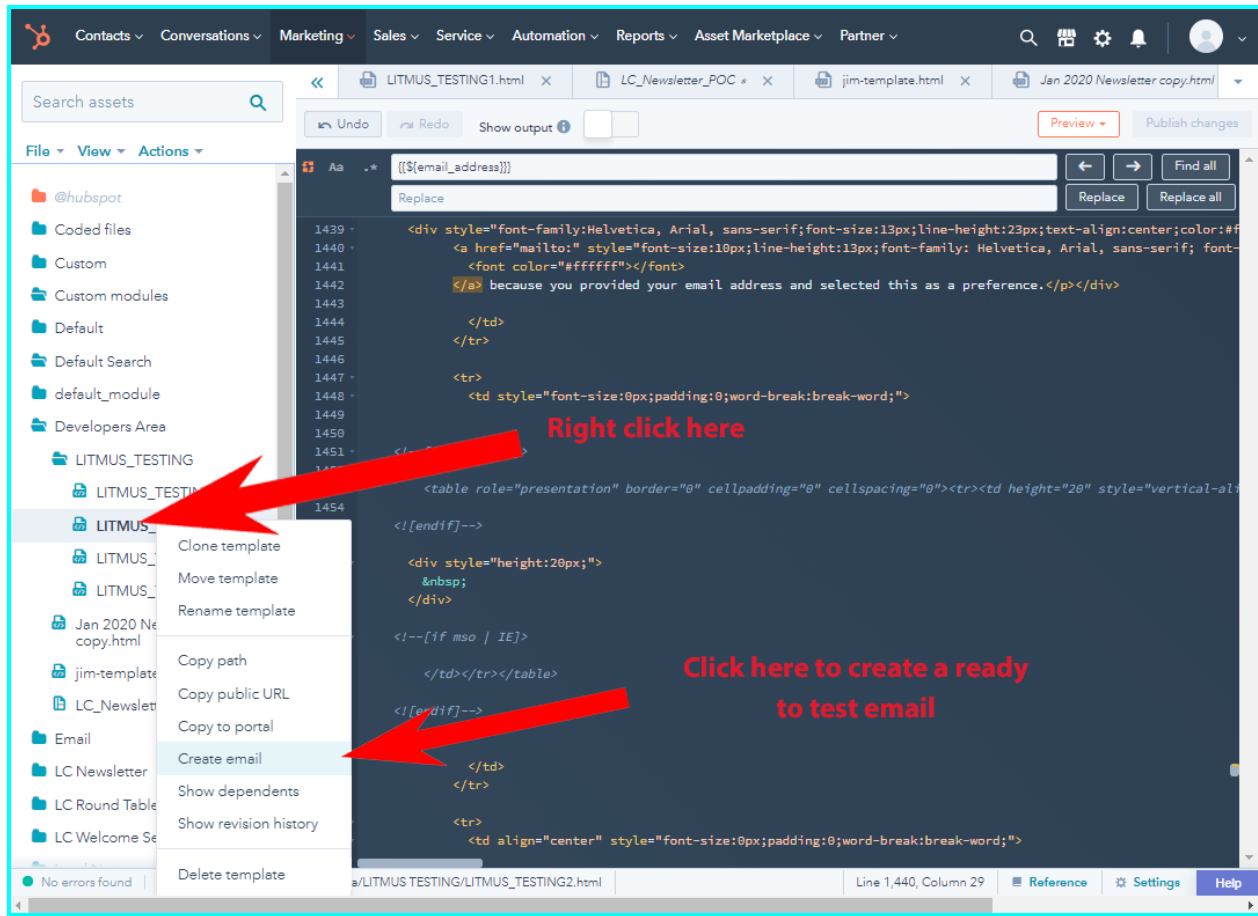


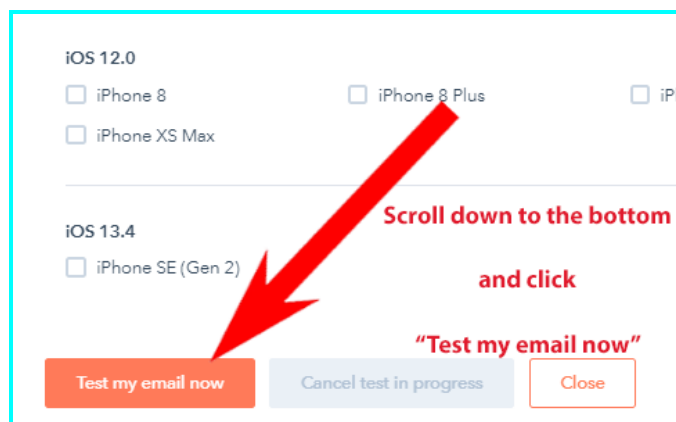
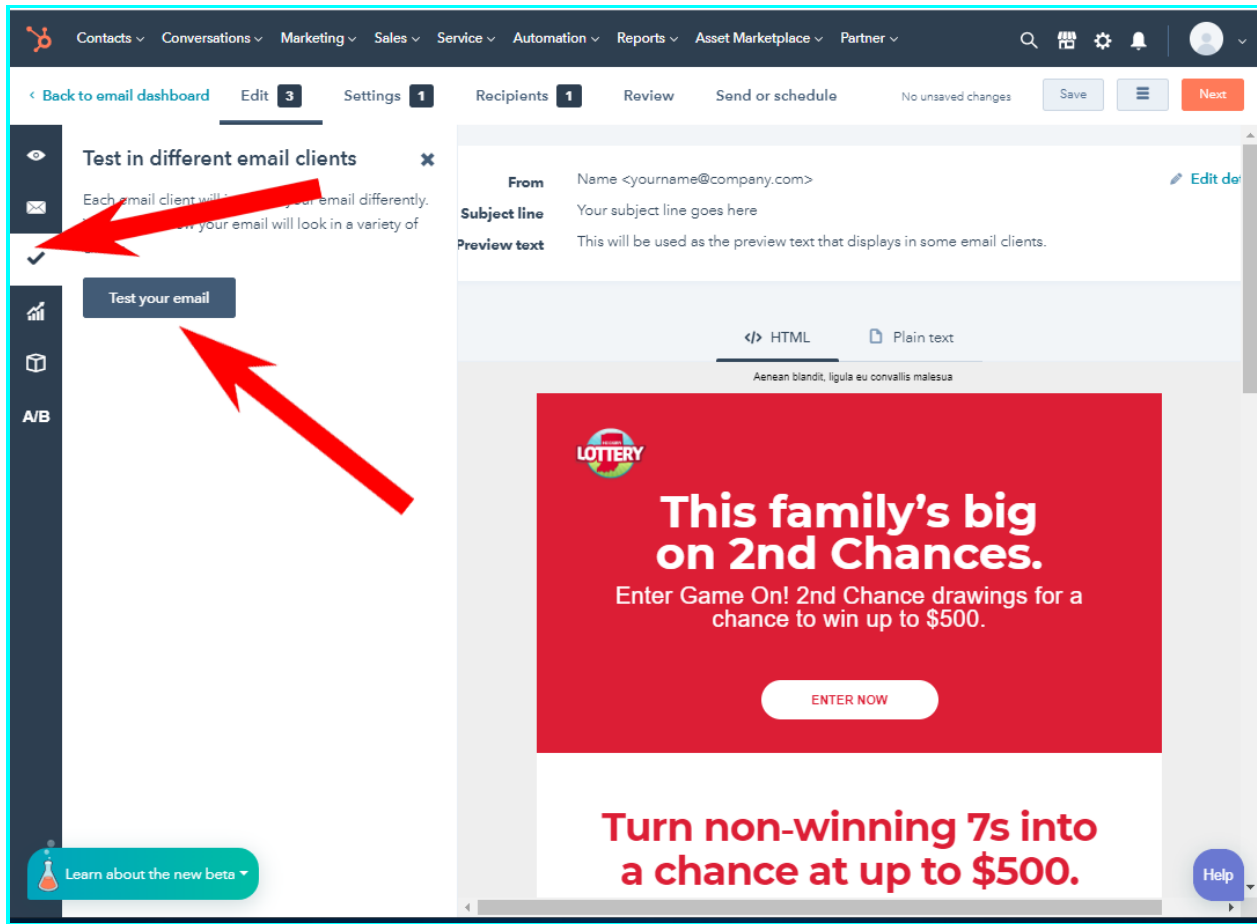
**Remove Braze Variable {{email\_address}} from HTML**



Remove Braze Variable `{{set_user_to_unsubscribed_url}}` from HTML

Then publish the Template.







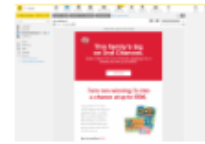
## Firefox



Comcast (Firefox)



Gmail (Firefox)



Web.de (Firefox)

## iOS 10.3

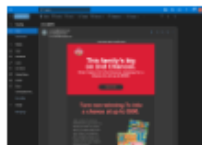


iPhone 6s

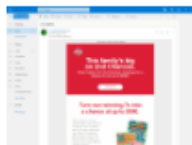
**Your test results are displayed**

**Click on the result thumbnail that you want the details on.**

## Chrome



Outlook.com Dark (Chrome)



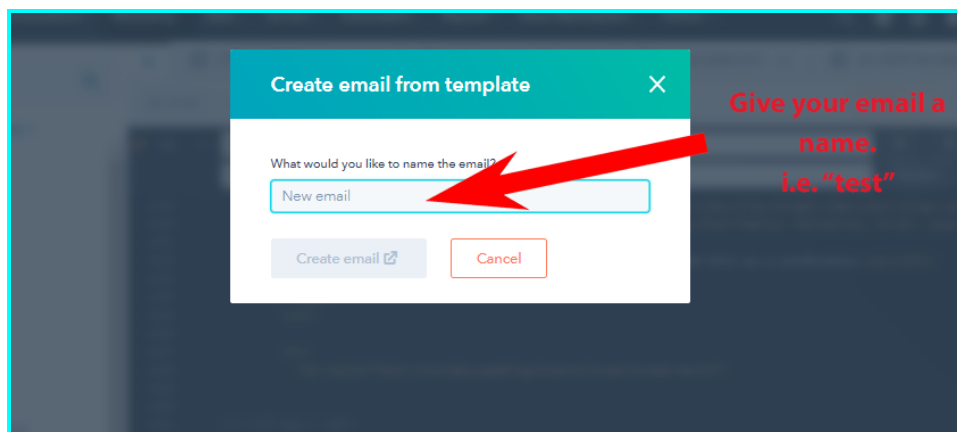
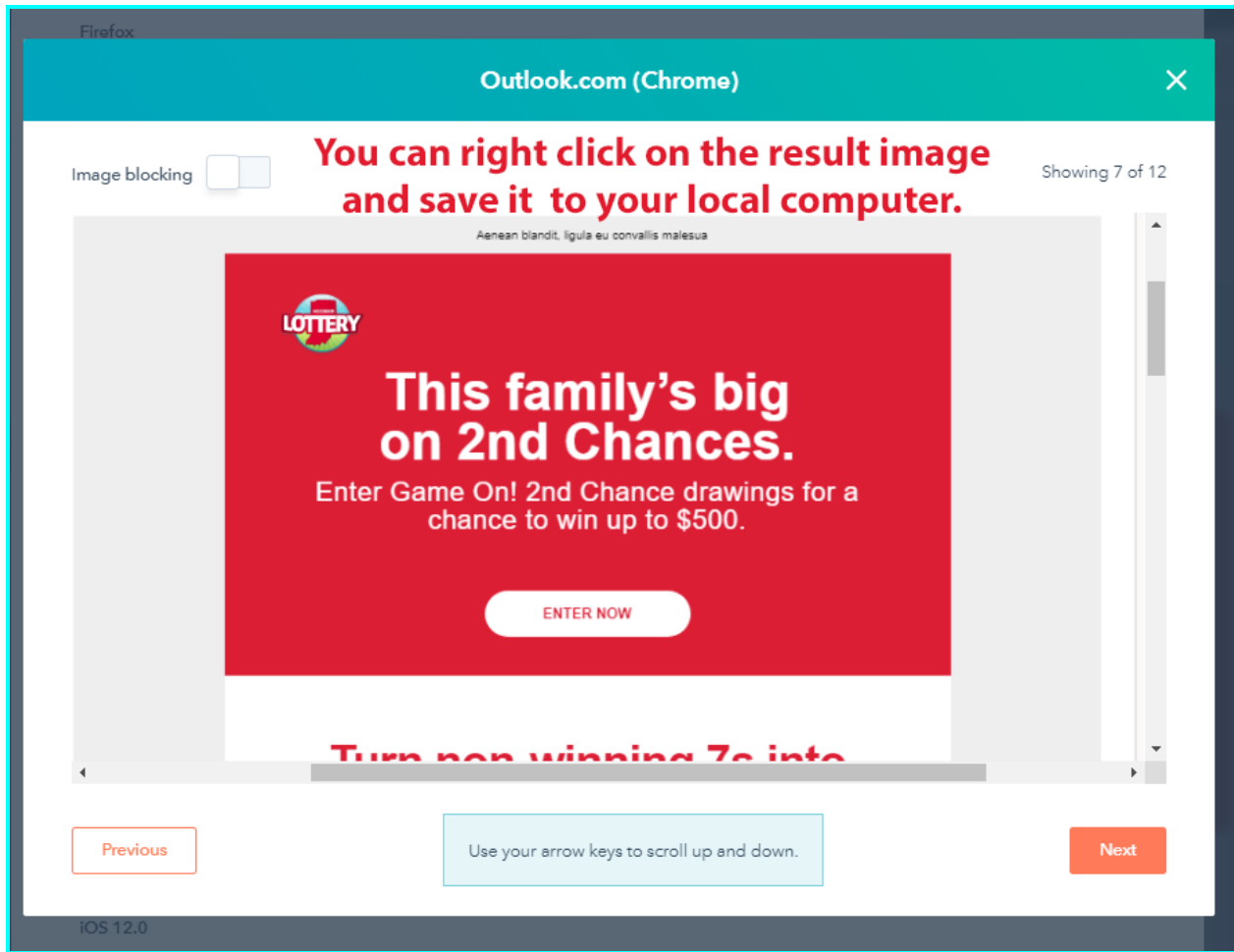
Outlook.com (Chrome)



freenet.de (Chrome)

## iOS 12.0





## Test in different email clients



Each email client will interpret your email differently. You can test how your email will look in a variety of clients.

Email apps and devices

View results

**Choose the devices/clients that you want to test your email on.**

We've selected 4 popular email clients for this test. Feel free to customize your test by adding or removing clients below. You can also customize the contact you are previewing as. And remember, this is only a test and won't send any email to your contacts.

Select a contact



### Chrome

Deselect all

- |  |  |   |  |
|--|--|---|--|
| <input type="checkbox"/> AOL Mail (Chrome)               | <input type="checkbox"/> Comcast (Chrome)          | <input type="checkbox"/> freenet.de (Chrome)  | <input type="checkbox"/> G Suite (Chrome)    |
| <input type="checkbox"/> Gmail (Chrome)                  | <input type="checkbox"/> GMX.de (Chrome)           | <input type="checkbox"/> Mail.ru (Chrome)     | <input type="checkbox"/> Office 365 (Chrome) |
| <input checked="" type="checkbox"/> Outlook.com (Chrome) | <input type="checkbox"/> Outlook.com Dark (Chrome) | <input type="checkbox"/> T-Online.de (Chrome) | <input type="checkbox"/> Web.de (Chrome)     |
| <input type="checkbox"/> Yahoo! Mail (Chrome)            |  |   |  |

### Explorer

Deselect all

- |   |   |  |   |
|---|---|--|---|
| <input type="checkbox"/> AOL Mail (Explorer)    | <input type="checkbox"/> Comcast (Explorer)     | <input type="checkbox"/> freenet.de (Explorer) | <input type="checkbox"/> G Suite (Explorer)     |
| <input type="checkbox"/> Gmail (Explorer)       | <input type="checkbox"/> GMX.de (Explorer)      | <input type="checkbox"/> Mail.ru (Explorer)    | <input type="checkbox"/> Office 365 (Explorer)  |
| <input type="checkbox"/> Outlook.com (Explorer) | <input type="checkbox"/> T-Online.de (Explorer) | <input type="checkbox"/> Web.de (Explorer)     | <input type="checkbox"/> Yahoo! Mail (Explorer) |

### Firefox

Deselect all

- |  |   |  |   |
|--|---|--|---|
| <input type="checkbox"/> AOL Mail (Firefox)    | <input type="checkbox"/> Comcast (Firefox)          | <input type="checkbox"/> freenet.de (Firefox)  | <input type="checkbox"/> G Suite (Firefox)    |
| <input type="checkbox"/> Gmail (Firefox)       | <input type="checkbox"/> GMX.de (Firefox)           | <input type="checkbox"/> Mail.ru (Firefox)     | <input type="checkbox"/> Office 365 (Firefox) |
| <input type="checkbox"/> Outlook.com (Firefox) | <input type="checkbox"/> Outlook.com Dark (Firefox) | <input type="checkbox"/> T-Online.de (Firefox) | <input type="checkbox"/> Web.de (Firefox)     |

**Marketing Email**

After you are done analysint delete your email to reduces clutter in the system.

Compare emails Create email

Manage Analyze Health **BETA**

List Folders Campaign: All campaigns Type: All emails Manage columns Export emails Search for emails

All emails

- Draft
- Scheduled
- Sent
- Archived

Email tools

1 email selected Delete Move Archive

checkbox	test		13 minutes ago	0%
<input checked="" type="checkbox"/>	Draft - Updated 10/3/2020 by calvin parks			
<input type="checkbox"/>	LITMUS_TESTING1	Draft - Updated 10/3/2020 by calvin parks	44 minutes ago	0%
<input type="checkbox"/>	lc_2020_september_los_cabos_email_c	Sent - Updated 9/24/2020 by Cathleen LaFond	Sep 24, 2020	13.31%
<input type="checkbox"/>	lc_2020_september_los_cabos_email_l	Sent - Updated 9/24/2020 by Cathleen LaFond	Sep 24, 2020	13.44%

Search assets

File View Actions

- @hubspot
- Coded files
- Custom
- Custom modules
- Default
- Default Search
- default\_module
- Developers Area
- LITMUS\_TESTING
  - LITMUS\_TESTING1.html
  - LITMUS\_TESTING2.html**
  - LITMUS\_TESTING3.html
  - LITMUS\_TESTING4.html
- Jan 2020 Newsletter copy.html
- jim-template.html
- LC\_Newsletter\_POC
- Email
- LC Newsletter
- LC Round Table
- LC Welcome Series

Undo Redo Show output Preview Publish changes

```

1 <!--
2   templateType: email
3   isAvailableForNewContent: true
4 -->
5
6 <!-- PLACE ALL YOUR CODE BELOW THIS LINE -->
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24 <!-- PLACE ALL YOUR CODE ABOVE THIS LINE -->
25 <p style="display: none;">
26   {{ site_settings.company_name }}
27   {{ site_settings.company_street_address_1 }}
28   {{ site_settings.company_street_address_2 }}
29   {{ site_settings.company_city }}
30   {{ site_settings.company_state }}
31   {{ site_settings.company_zip }}
32   {{ site_settings.company_country }}
33   {{ subscription_name }}
34   {{ site_settings.company_name }}
35   {{ unsubscribe_link }}
36   {{ unsubscribe_link_all }}
37 </p>

```

DELETE ALL YOUR HTML!!!  
Only delete what you added!!!

Click publish after deleting Your html.

After you are done with your testing.

#### **Step 4 - Internal team review**

Inform the Marketing Specialist that the email is ready for the internal team to review and the template location inside of hubspot..

After review The team might request updates to the email. If so then complete the change request and **repeat step 3**.

#### **Step 5 QA Testing an Debugging**

Once the internal team has reviewed the email and is satisfied, they will send it to the QA department for comprehensive device/client testing.

Any bug found will be for a specific device/client combinations

You should then fix any bugs reported and then on the specific device/client where the bug was reported. Then you should **repeat step 3 & 4**

**If no more bugs are found, then the Internal team will inform you that the email is completed and will soon be approved.**

#### **Step 6 Upload it into REPO.**

After the email is officially approved add it to the repo.