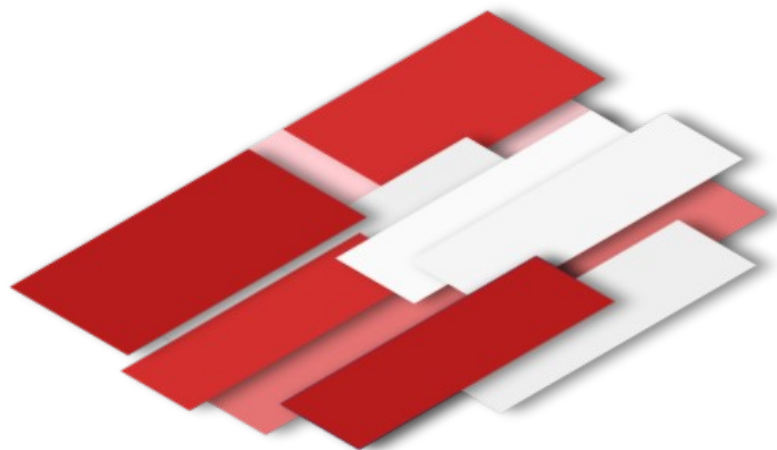


# Static Site Generator

Introduction to SSG for beginner  
for Personal Educational Purpose.

**Jakarta, Indonesia**  
11 October, 2020



# About Epsi



Yet, another underachiever.  
But hey, I have my own blog.

***SORRY FOR MY ENGLISH***

# About This Material

After watching this, you will understand:

How SSG can be utilized  
to make a **fully mature website**  
**without the burden** of **complicated backend**.

This material is not really comprehensive.  
I still have so much to learn.

# What is Static Site Generator?

11 October, 2020

Static Site Generator  
[epsi-rns.gitlab.io](https://epsi-rns.gitlab.io)

# What is **SSG**?

## **SSG** short abbreviation

Static Sites Generator.

## **Static**

No dynamic server (backend).

## **Static Sites**

Just plain HTML + CSS + JS.

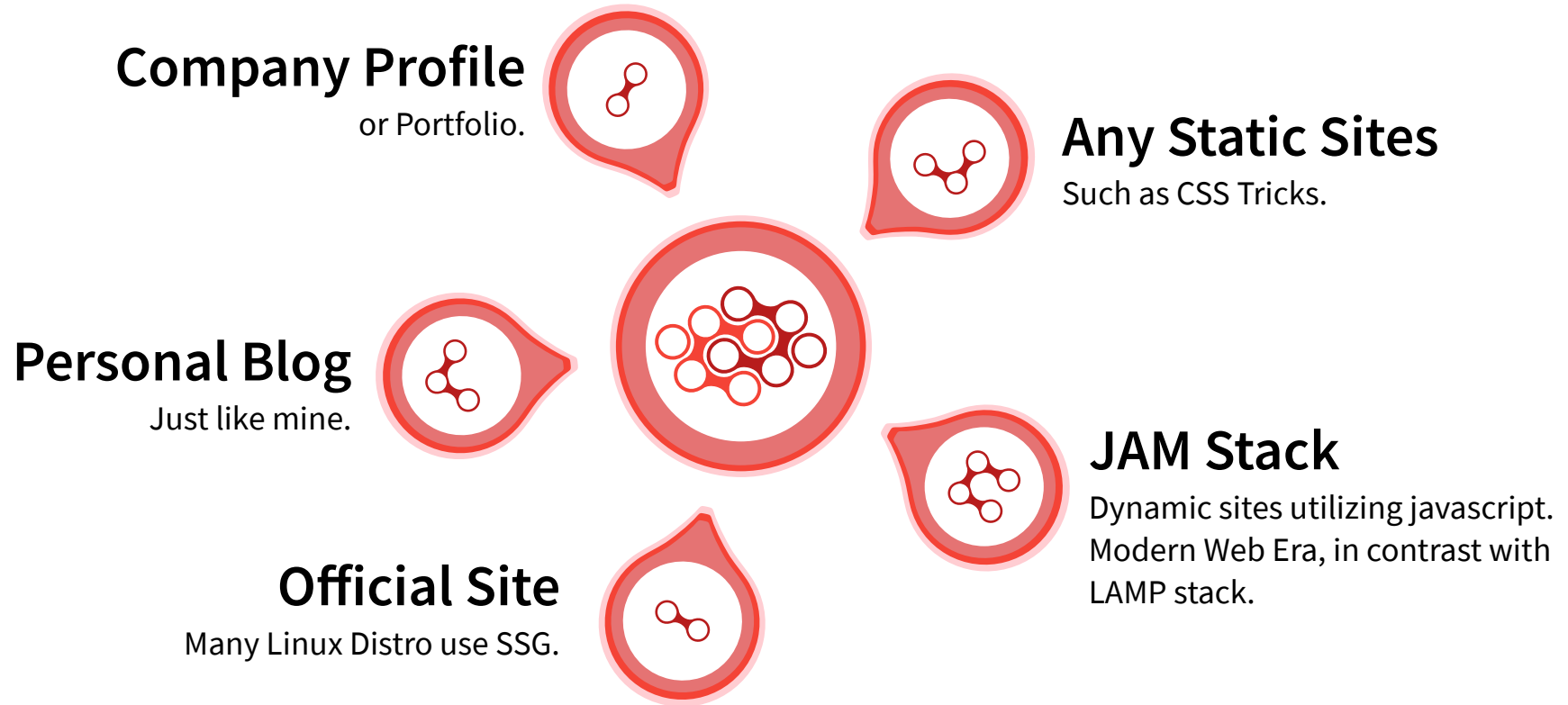
## **Generated**

Built once, on every change.

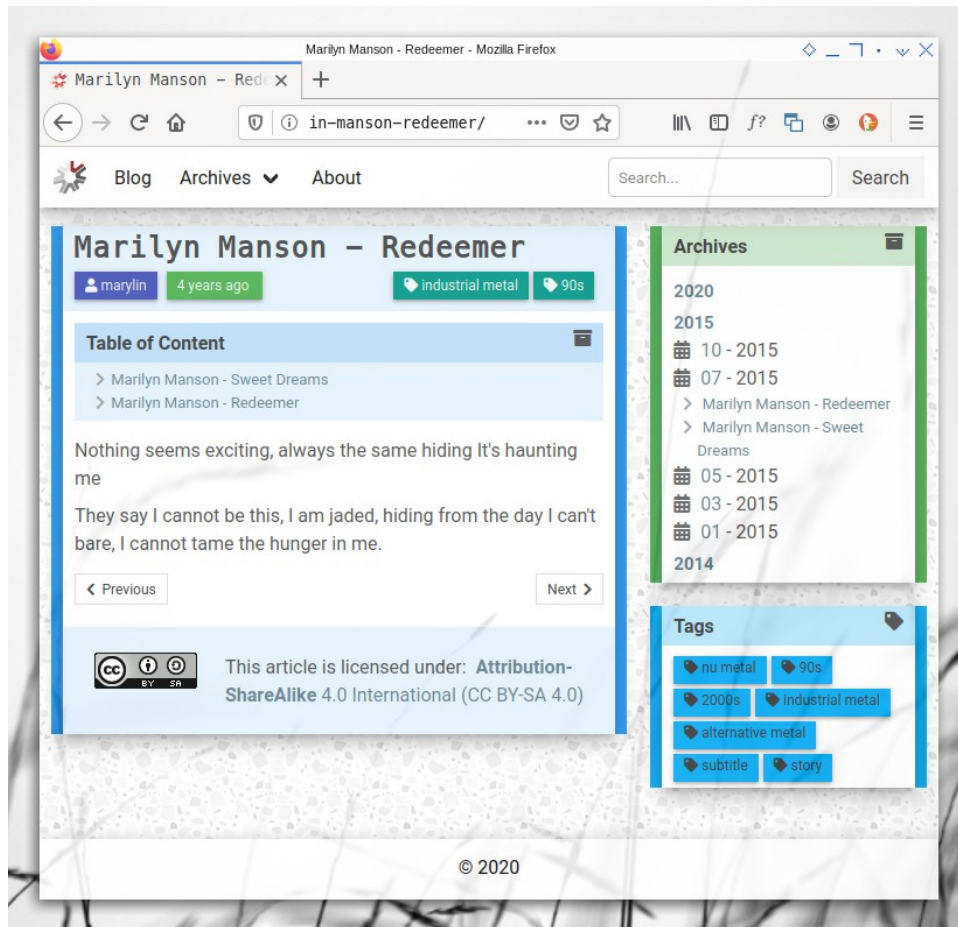
Put on server.

Serve as many request as needed.

# What is **SSG** good for?



# Blog Preview



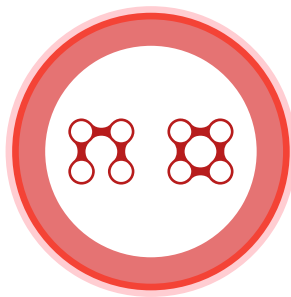
# What case **is not**?

## Non tech savvy end user

should use blogger, or wordpress instead.

## Startup

With a lot of infrastructure.



## Dynamic website

Anything that require login.

## Walk your dog, or feed your cat

You still have to do it yourself.



# Why Static Site Generator?

11 October, 2020

Static Site Generator  
[epsi-rns.gitlab.io](https://epsi-rns.gitlab.io)

# Why Static Sites?

## Markdown

More on Writing Content.

## No complex backend

Focus on frontend: Great theme.

## Local Copy

Own Your Own Site.

## Git-able

Cheap.  
Free Hosting = murah meriah.

# Tech Savvy

## Embrace modern technology

SPA, JAM stack, serverless, CI/CD.



## OS Agnostic (simpler ecosystem)

No racial issue between,  
Windows, Mac and Linux/BSD user.

## Many Option of SSG Choices

Jekyll, Hugo, Hexo,  
Pelican, Gatsby, 11ty.



## Easier to migrate content between generator

After all, it is just markdown.

## Easier to port tailor made custom theme

No scary language feature.



## Way cooler web developer

Over traditional CMS

# Other Technical Performance



## Fast

No server side processing.



## Less Security Issue

SQL Injection and Vulnerabilities.



## Cacheable

Can be cached reliably,  
and served as CDN.



## No scaling issue

It is all just static html and assets.

# User Tasks

# Simplified User Tasks

Only consist of this two tasks

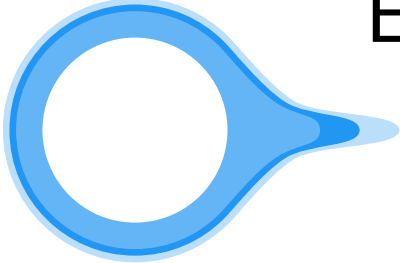
- 1) **Design Theme and Layout**
- 2) **Writing Content, then Deploy**

No complex backend setting.

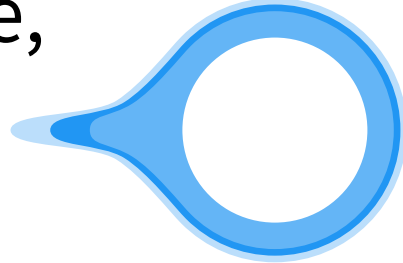
It means, more focus on the content.

Especially, with 3rd party theme.

# Caveat!



Even with a ready to use theme,  
you still **need customization**  
to **suit your needs**.



# Install



Some are easy to install.  
Some are harder for non tech-savvy.



Depend on the choice of SSG.



# Own Your Own Site

You can have it all locally.

Writing content in your favorite text editor.



**No upload image.**

Edit image directly in your notebook.

No need to dump database.



In short:

**More control**

# Theming

# Split HTML Task

## Theme

Structure (Layout, and Skeleton)



## Markdown Engine

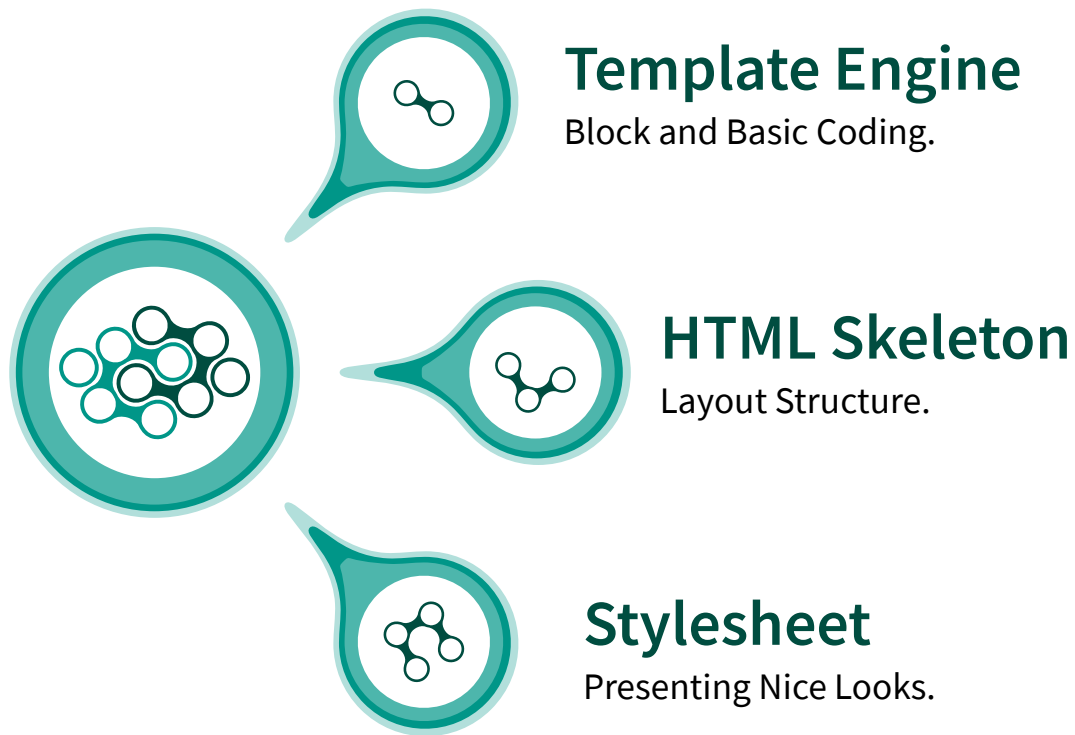
Formatting

In short:

**Clear division**

between these two tasks.

# Theme Making



# Template Engine

liquid, chroma, ejs, nunjucks, jinja2, etc...

**Block Building**



**Specific Feature**

Pipeline.



**Basic Language**

Variable, Loop, Conditional.

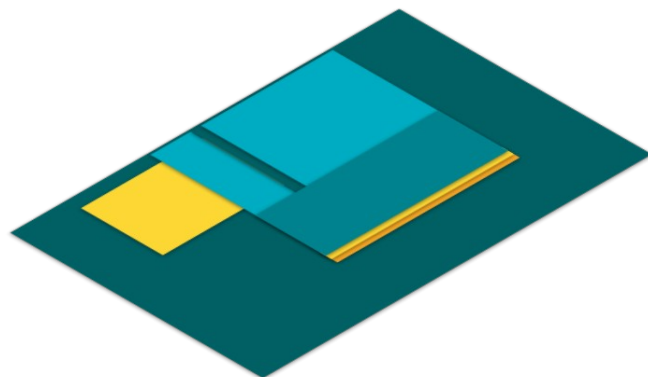


**Static Data Files**

from yaml, or toml, or json.

# Stylesheet

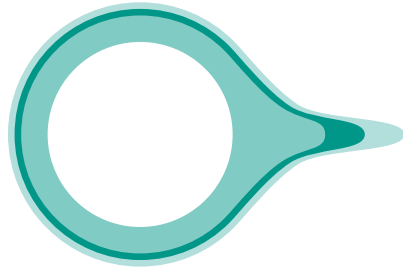
You might also need to understand CSS Tools



[CSS Frameworks and CSS Tools]

Yet Another Presentation.

# Main Configuration



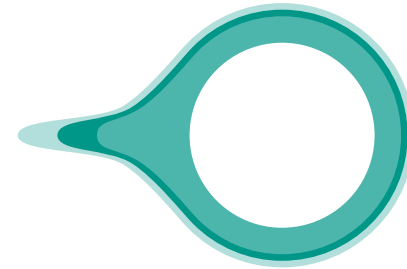
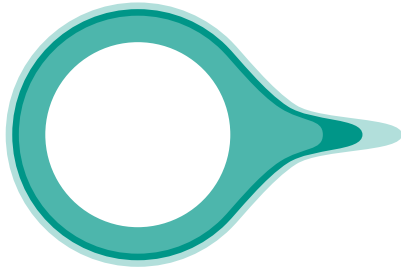
Contain:  
Global Stuff



# Page

**Frontmatter:**

Per-page configuration



**Content:**

Markdown or HTML



# Free Tutorials

11 October, 2020

Static Site Generator  
[epsi-rns.gitlab.io](https://epsi-rns.gitlab.io)

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# Step by Step Examples?

## Eleventy (11ty) Article Series

[\[Eleventy Overview\]](#)

(Nunjucks + Bulma MD)

## Jekyll Article Series

[\[Jekyll Overview\]](#)

(Liquid + No Stylesheet)

## Hugo Article Series

[\[Hugo Summary\]](#)

(Chroma + Bulma)

[\[Hugo Summary\]](#)

(Chroma + Bootstrap)

## Hexo Article Series

[\[Hexo Overview\]](#) (EJS + Bulma)

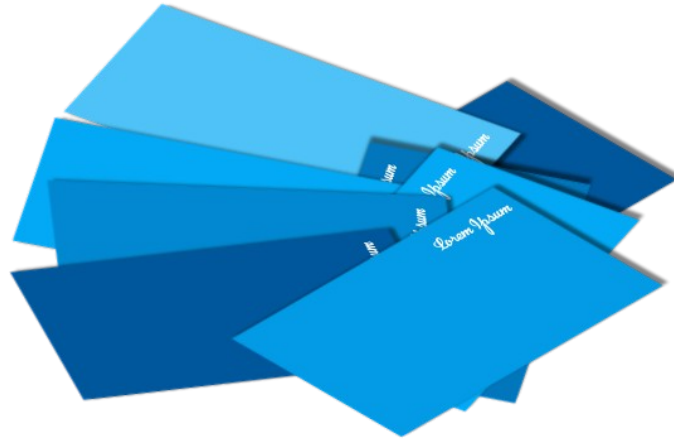
## Custom

Make your own case,  
and share!

More examples on Repository (11ty, Jekyll, Pelican).

# Markdown

# Why Markdown?

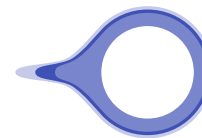


## More on Writing Content!

# Issue with HTML Content

## Time spent, on doing formatting

Wasted time = Less creativity.



## Easily get lost, of concentration in writing

Dammit, my article is sucks!

## Reformatting

Whenever design changes.



## Error prone

Dad, I forget to close the tag again.

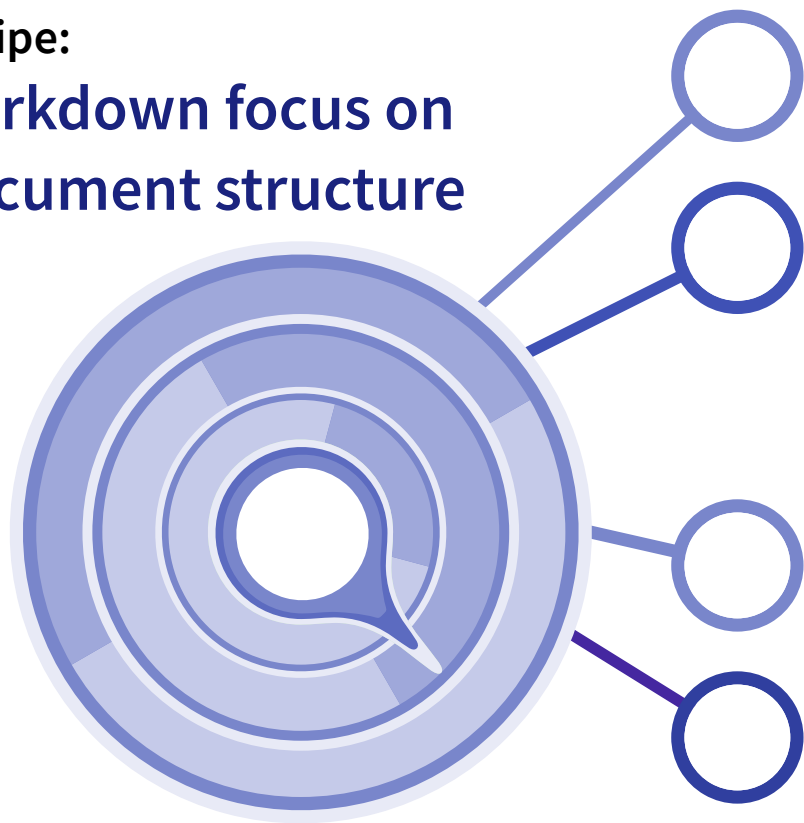
In short:

**Markup focus on document formatting**

# Markdown Content

Recipe:

**Markdown focus on document structure**



## Easier to write content

Plain Text = Painless Text

## Taking care of

HTML formatting by Markdown engine

Significantly reduce formatting time while writing content.

Consistent formatting, by not doing manually.

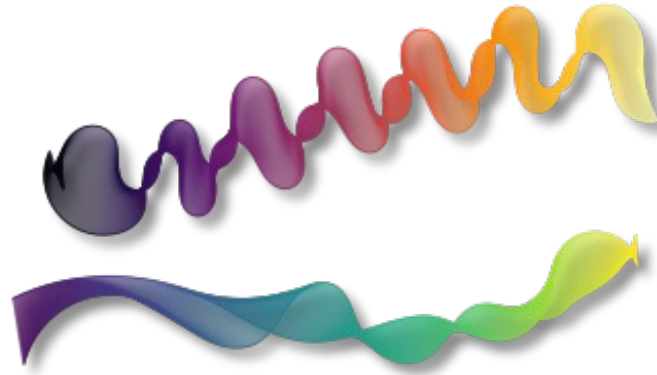
## Inline Code

Parsed, auto format with nice color

## Text editor is sufficient

No need for sophisticated tools

# Markdown Engine



Implementation may vary

Each static site,  
have their own markdown engine.

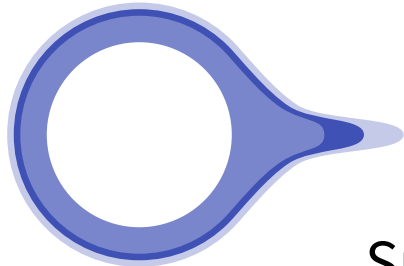
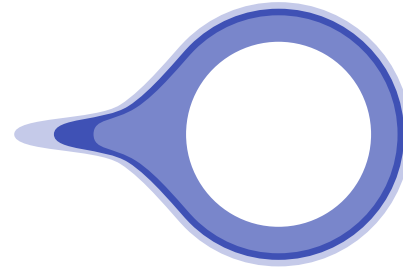
Be aware of slight difference.

# HTML Content

When you need special formatting

## HTML Page:

Such as landing page content.



## Embedded Content:

in Markdown Page

Such as nice looks table of content.



# Repository

# Track Changes

## Use Git!

Friendly neighbourhood backup platform.

## No weird file naming

My-revision-content  
.rev1.final.revagain.txt

## Time travelling is possible

OMG. I deleted my great idea last month!

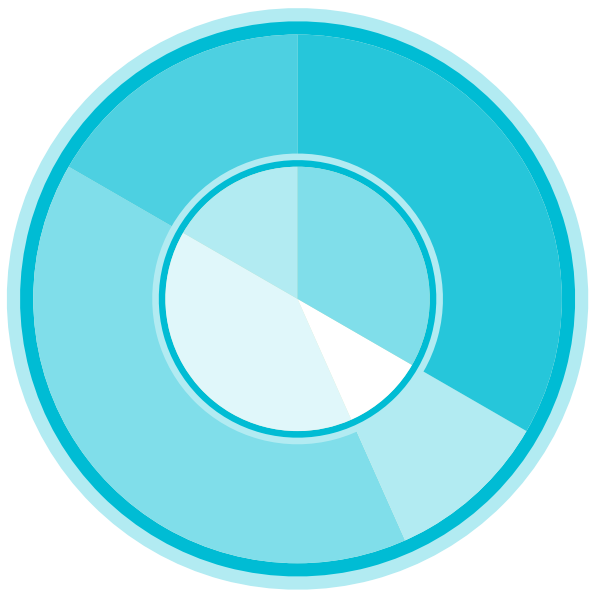
## Multiple branch

while making themes enhancement

branch: Master, development, bootstrapv4, bulma

# Deploy!

# Deploying Choices



## Simple setup for CI/CD

Or a complex one if you wish.



## Repository and Host

Gitlab, Github, Bitbucket



## 3<sup>rd</sup> Party CI/CD

Travis, Circle-CI, Pipelines, Gitlab-CI

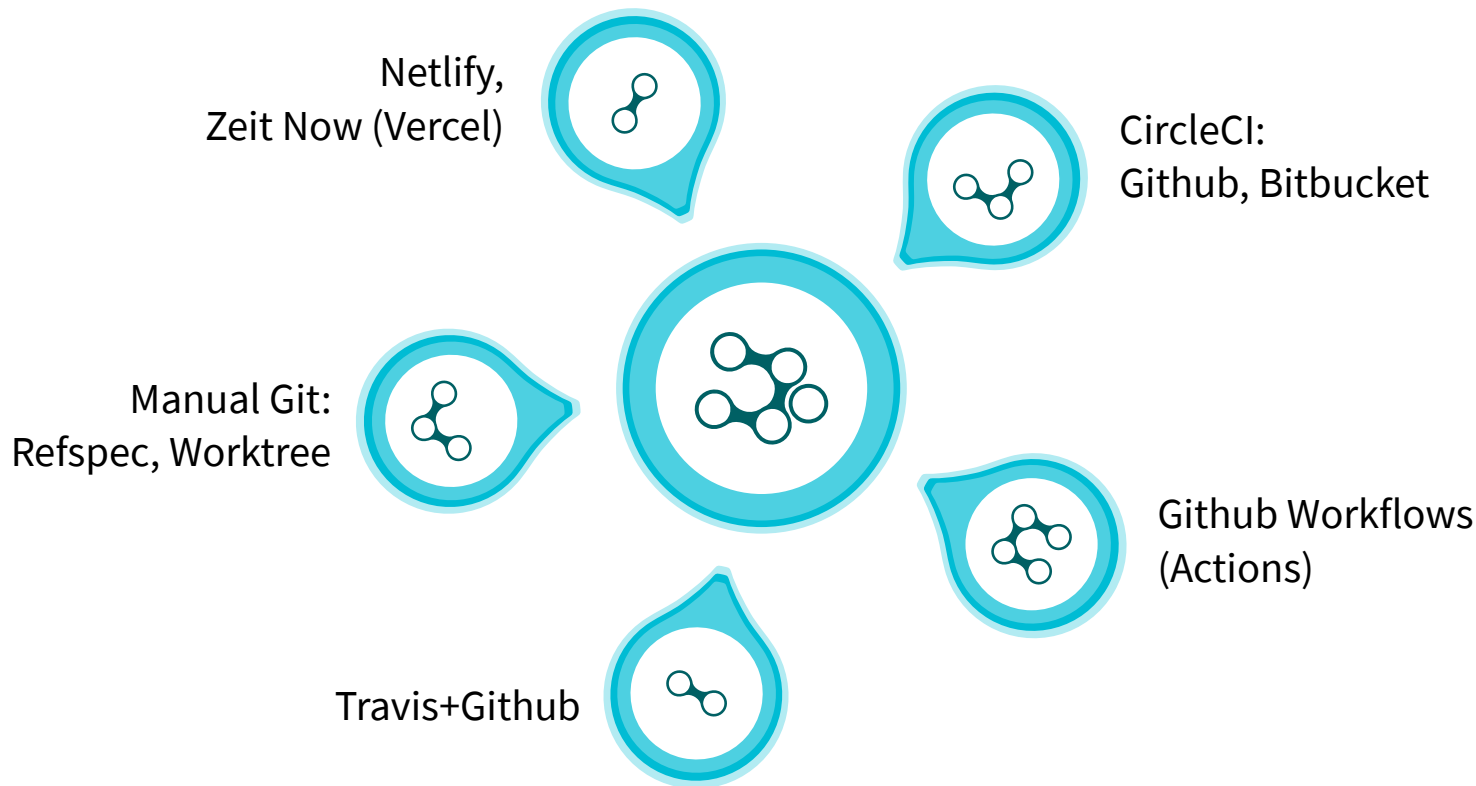


## Host and CI/CD

Netlify, Vercel, Firebase

# Configuration Examples

[CI/CD - Deploy Overview]



# Repositories

Repositories that can  
directly utilize any SSG.



github.io



gitlab.io

Repositories that  
require 3<sup>rd</sup> party.

bitbucket.io



# Issues!

# Issues with **Static Site**?

## **No commenting system**

Except embedded



## **No internal search**

## **Local build time**

For site with many articles, or theme design with poor logic.

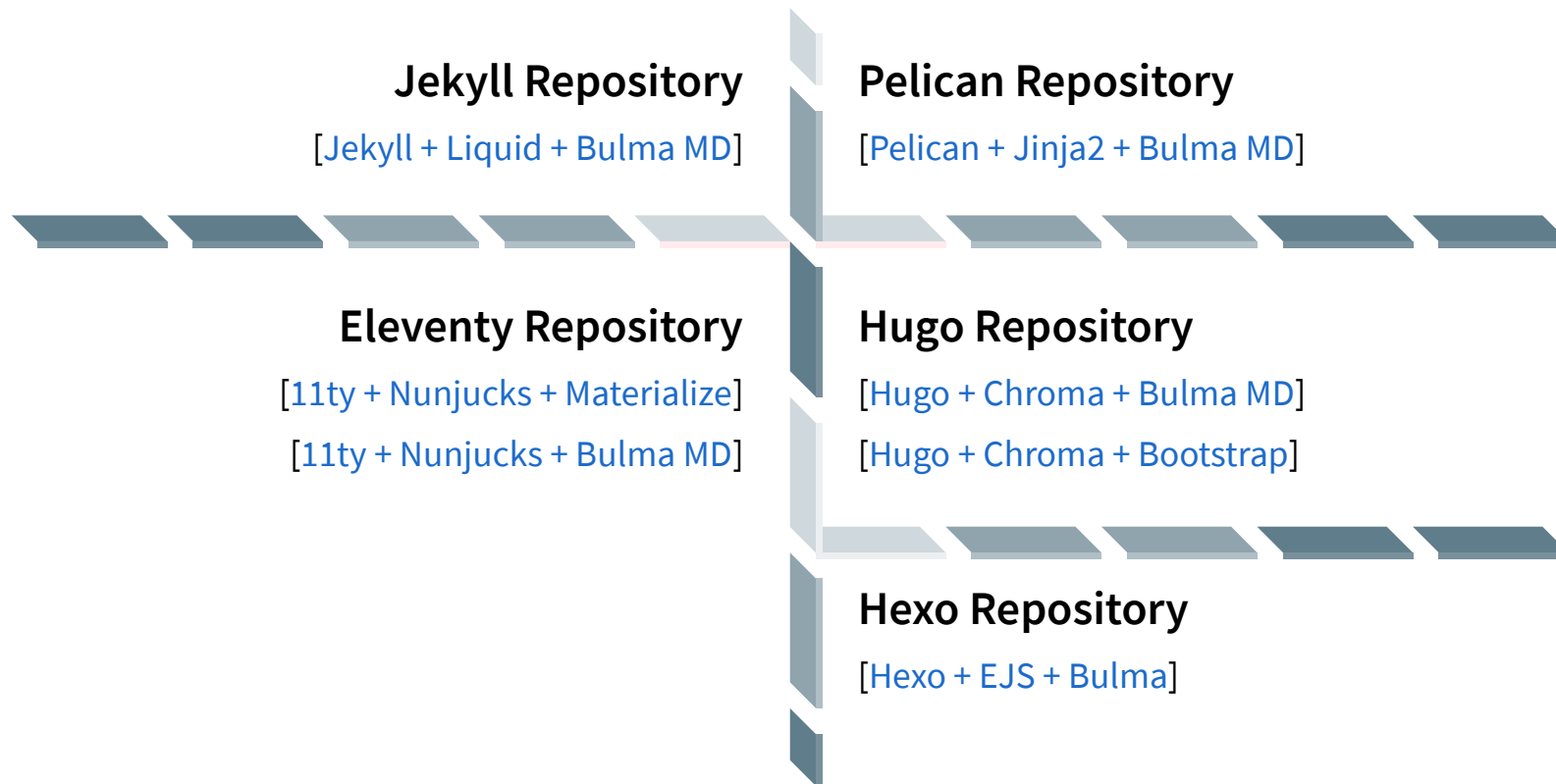




# Again, Free Tutorials?

# Step by Step Examples?

## Revisited in Repository Fashioned



# In Need of a Technical Material?



**Eleventy**

[\[Yet Another Presentation\]](#)



**Jekyll**

[\[Yet Another Presentation\]](#)



**Hexo**

[\[Yet Another Presentation\]](#)

# Summary

# Summary?

Along with local communities.

## Static Site Generator:

[[Hugo](#)], [[Jekyll](#)], Pelican,  
[[Eleventy \(11ty\)](#)], [[Hexo](#)], [[Gatsby](#)].

## Template Engine:

Nunjucks, Jinja2, EJS, Liquid, Chroma.  
Local Community: [[JAMstackID](#)].

## Text:

Markdown, reStructured Text.

## Deploy:

CVS: Git, Mercurial: [[@freekelasgithub](#)].  
Repository: Gitlab, Github, Bitbucket.  
CI/CD: Travis, Circle-CI: [[IDDevOps](#)].  
Static Host: Netlify, Render, Zeit Now.

# Looking for the right tools?

A real world example require complete stack.

## Do Your Own Research!



[Practical Blog Development Cycle]

Learning The Hard Way.



# What is Next?

## Leverage to JAM stack!

[[staticgen.com](https://staticgen.com)]

[[@JAMstackID](#)]

# Questions?

Don't be shy!



# The End

## Thank You for Your Time.