APACHE SLING & FRIENDS TECH MEETUP
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Pattern Lab for Sling – Atomic Design approach for building Sling based websites

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Presentation plan

1. Importance of website style guides.
2. Atomic Design methodology.
3. Pattern Lab for Sling.

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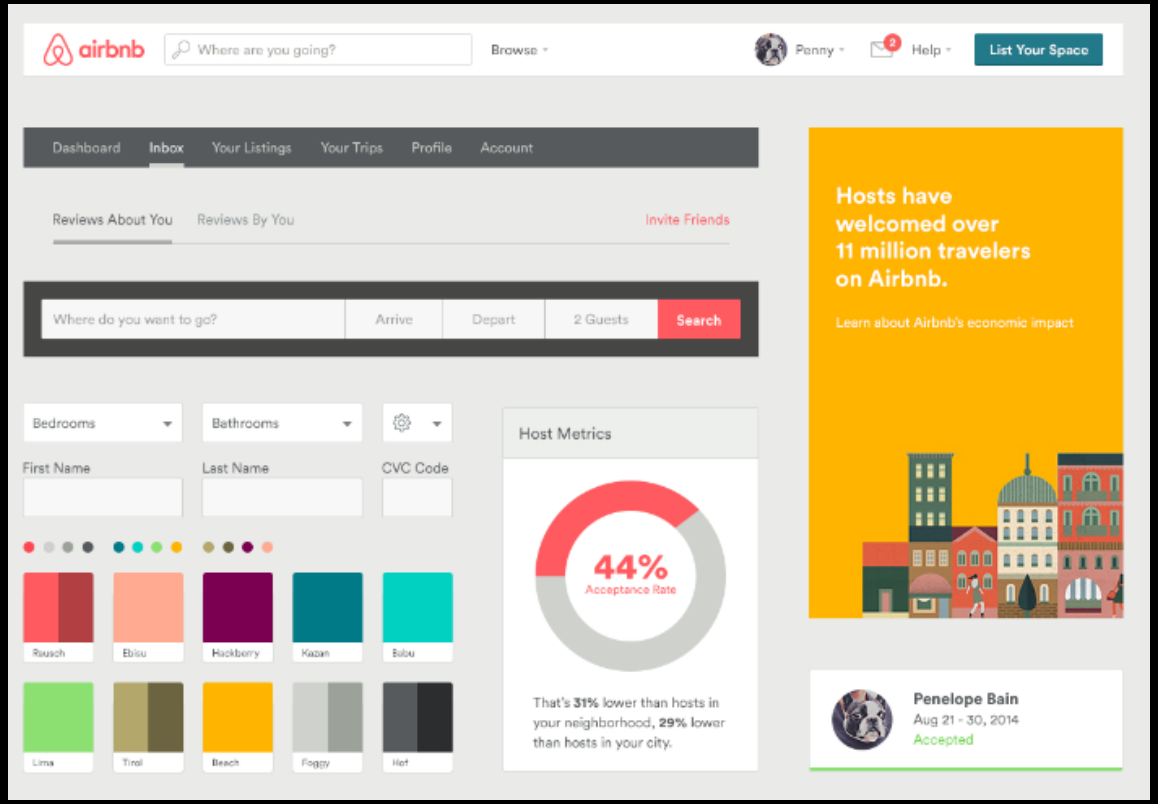
Importance of website style guides

Why do we need website style guides?



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Why do we need website style guides?

„Education is as important as documentation. A style guide can show clients that websites are systems rather than collections of pages.”

Anna Debenham, „ Front-End Style Guides”

Why do we need website style guides?

- keep information about design language
- promote consistency and cohesion across a user interface
- allow fast prototyping and validation of designs
- help to keep neatness in FE code structure

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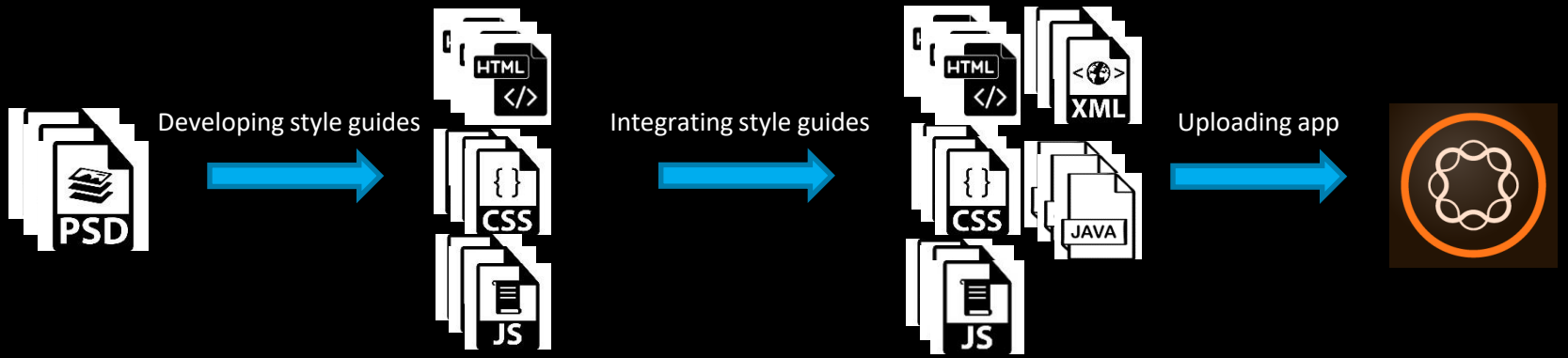
Style guides in website integration process

Website integration process

Designers	FE Developers	AEM Developers	QA, Designers, PO
Site designs	**Style guides**	**AEM package**	**AEM integration**



Website integration process – feedback loop

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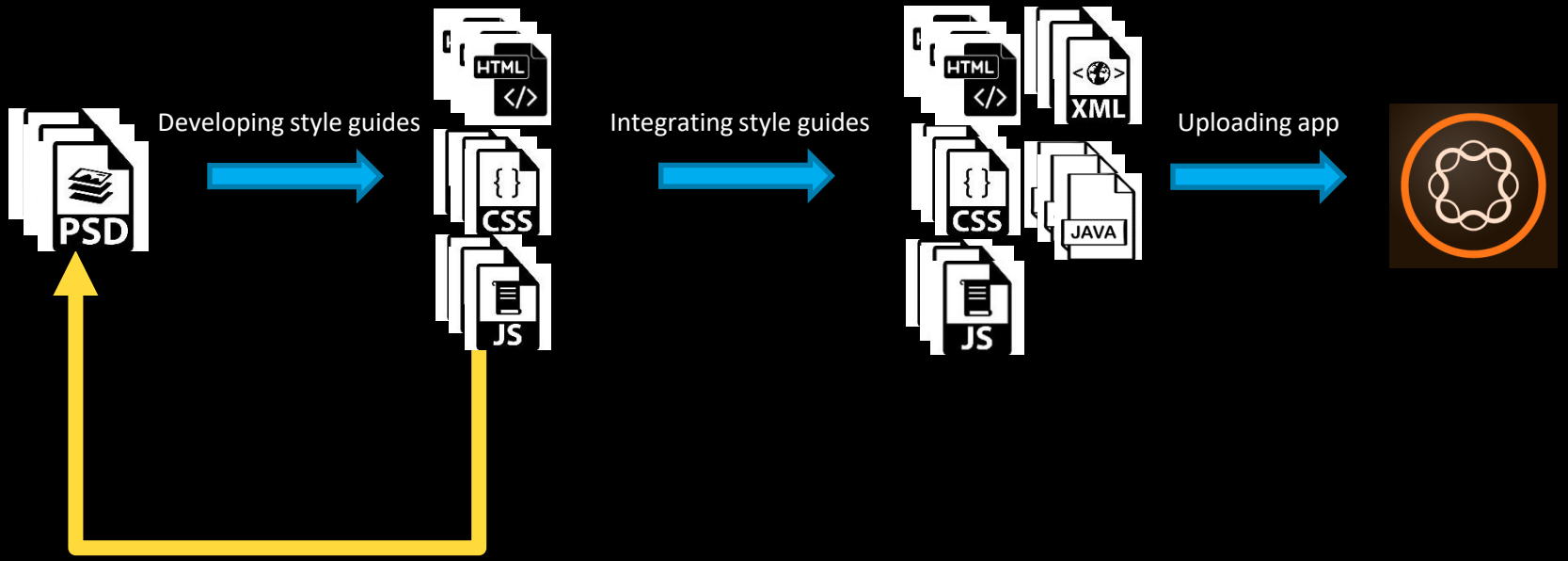

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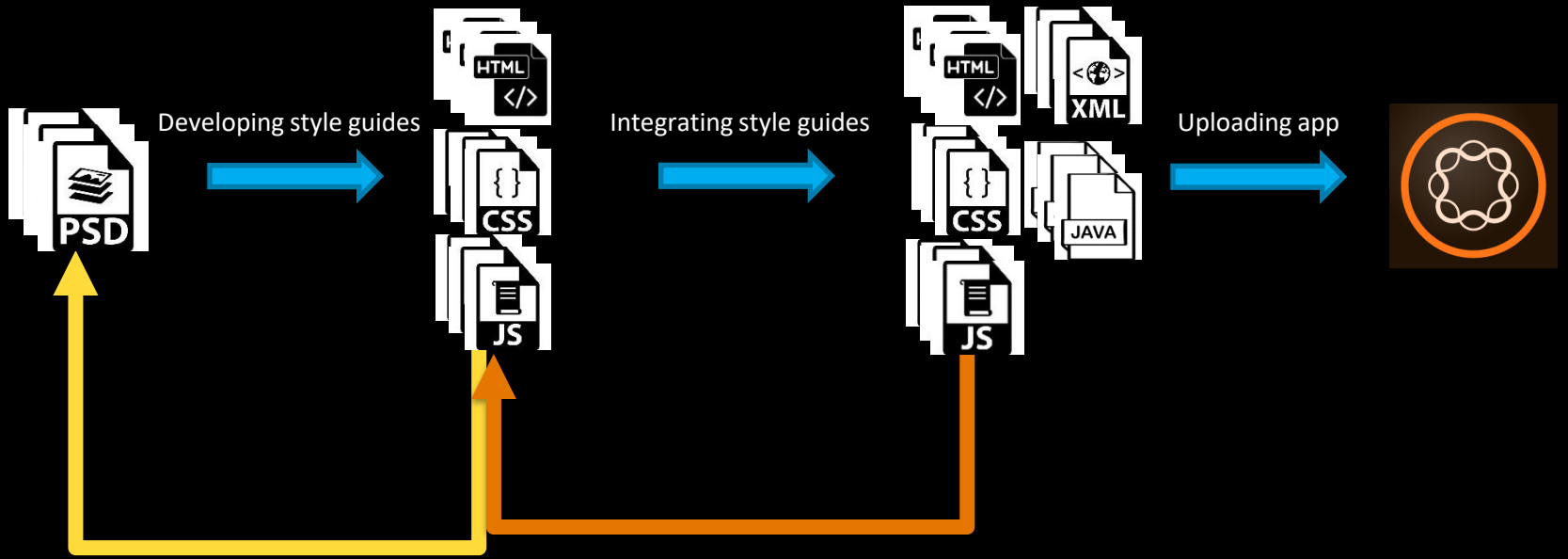

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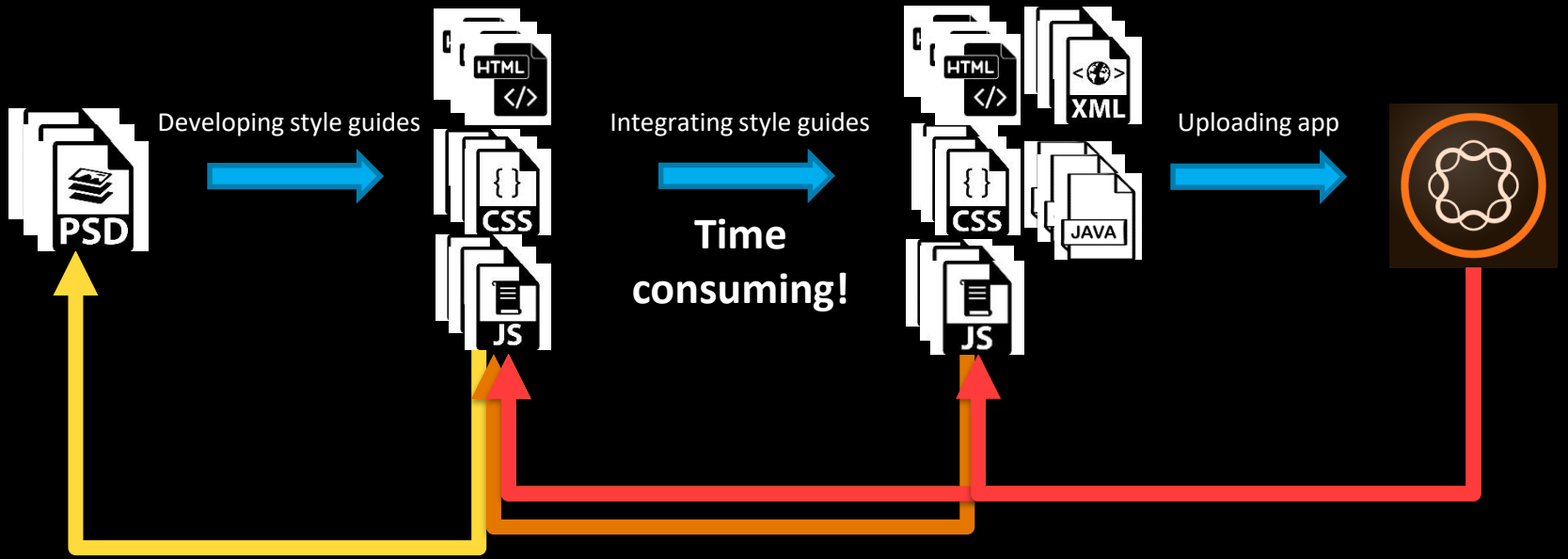


Abandoning style guides

Site designs

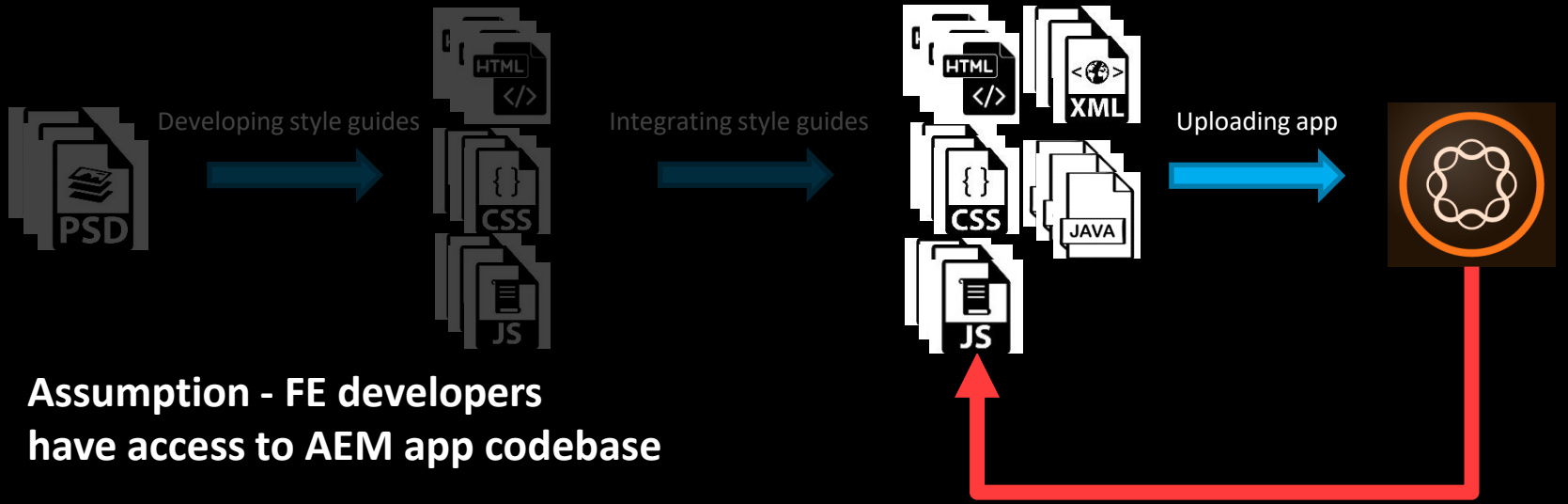
Style guides

FE and AEM Developers

AEM package

QA, Designers, PO

AEM integration



Assumption - FE developers have access to AEM app codebase

What about new website features?

Usual AEM site integration process

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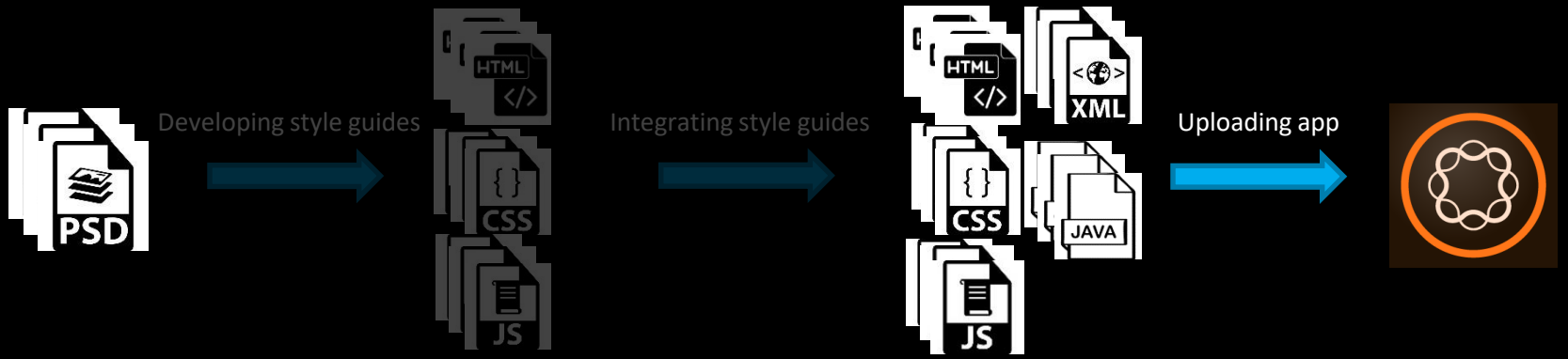
Site designs	**Style guides**	**AEM package**	**AEM integration**



Style guides regression

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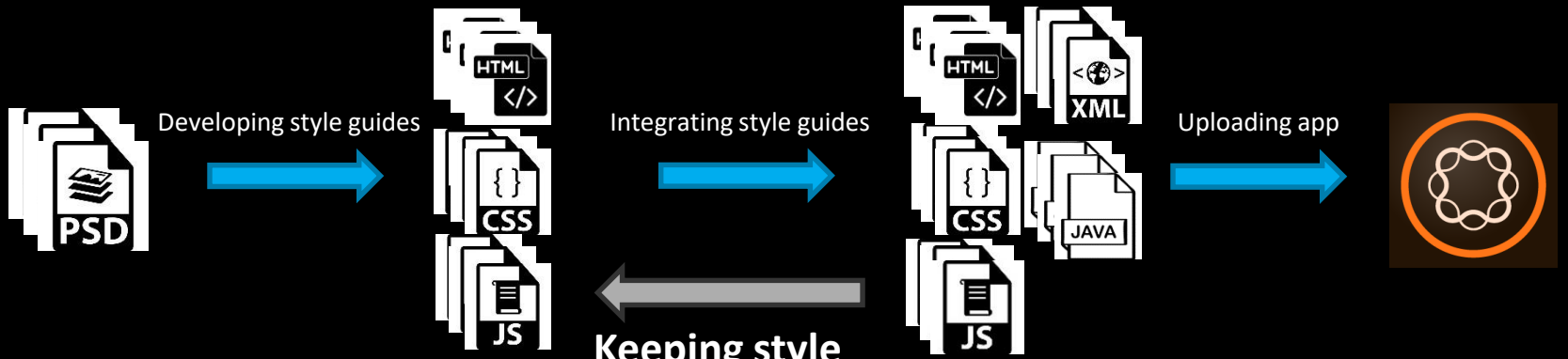

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Style guides integration challenges

- present only few content scenarios
  - no readiness for dynamic content
  - features for design authoring not taken into account
- lack of components modularity
  - dependencies between components
- aligning with authoring features
- manual rewriting of HTML examples into HTL scripts
- considered as auxiliary project rather than designs foundation
- lack of clear methodology

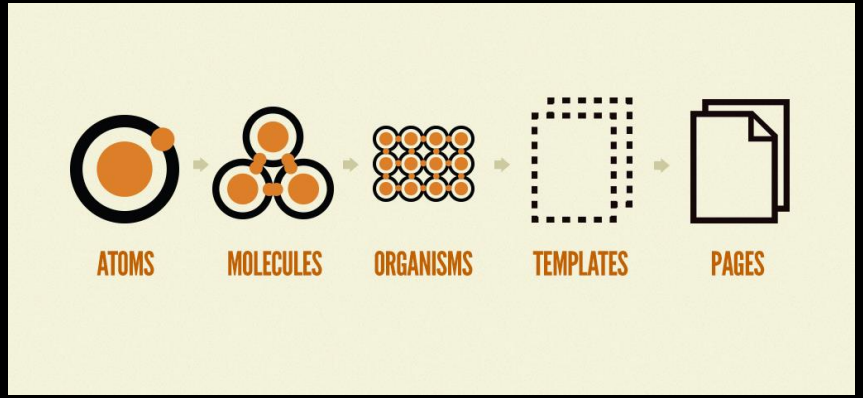
Website style guides integration improvements

- designs sessions to produce content more examples
- sharing information about authoring features
- testing style guides separately
- style guides integration automation – requires additional assumptions:
  - AEM application and style guides integrated with templating language – dependency on custom solutions
  - rendering website client-side
- introducing modularity to style guides components – building pattern libraries

Atomic Design
methodology for building living style guides

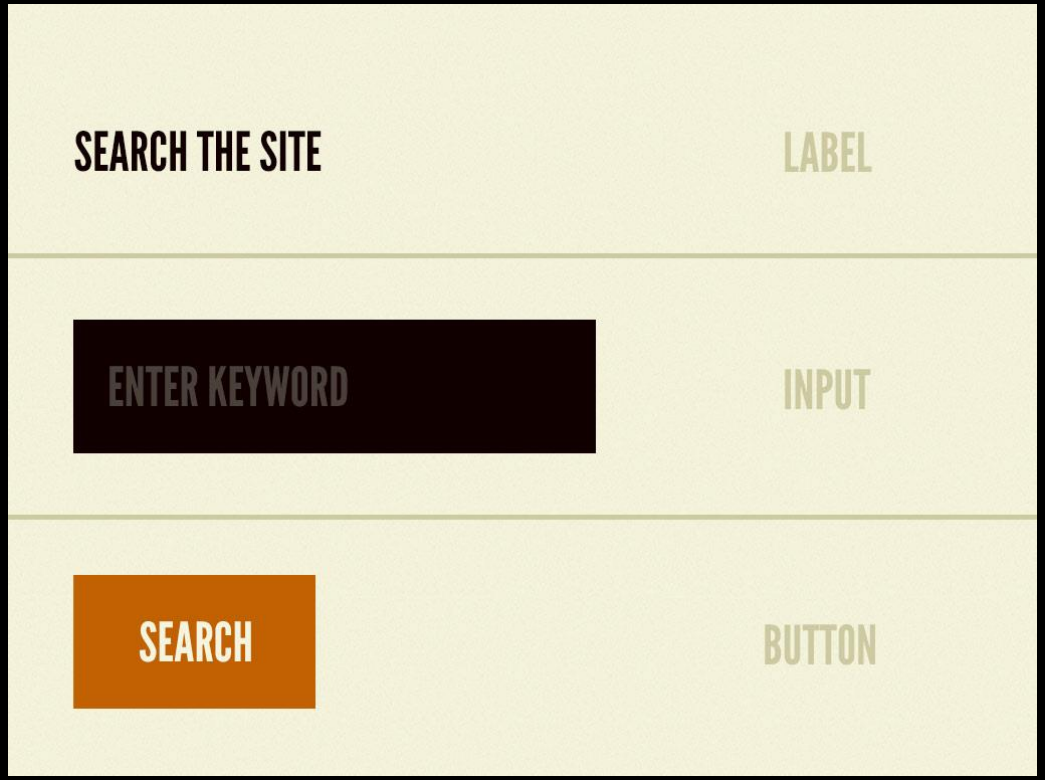
Introduction to Atomic Design

„Atomic design is a methodology composed of five distinct stages working together to create interface design systems in a more deliberate and hierarchical manner.”

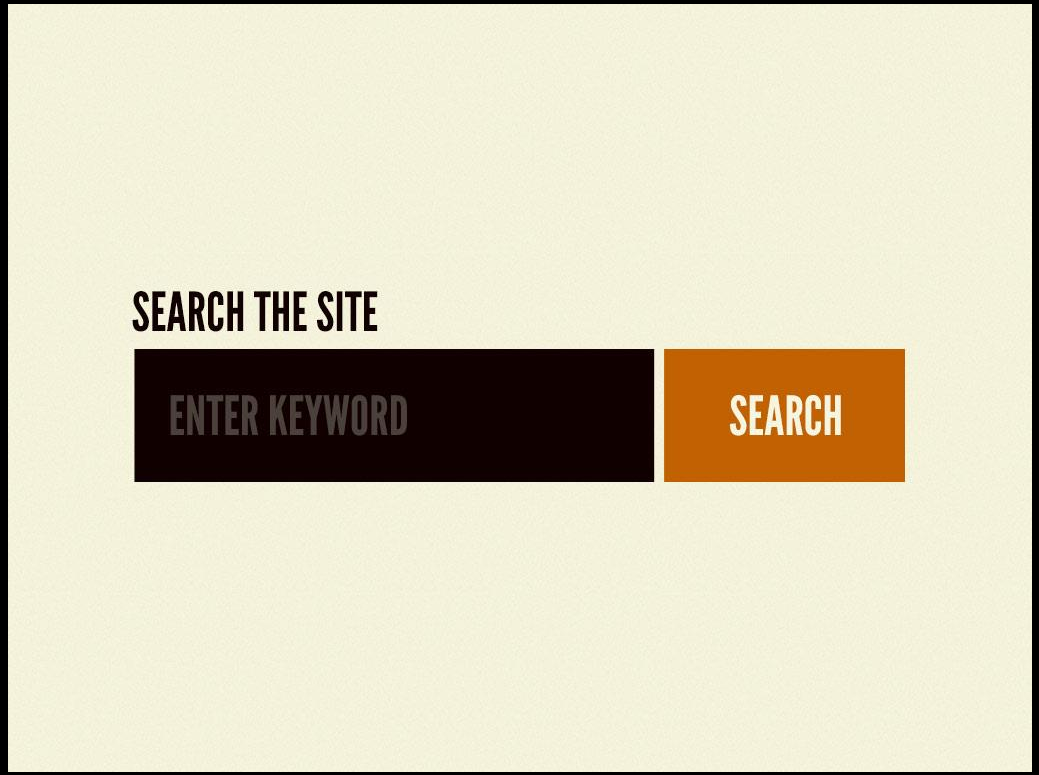


Brad Frost

Atomic Design patterns - atoms

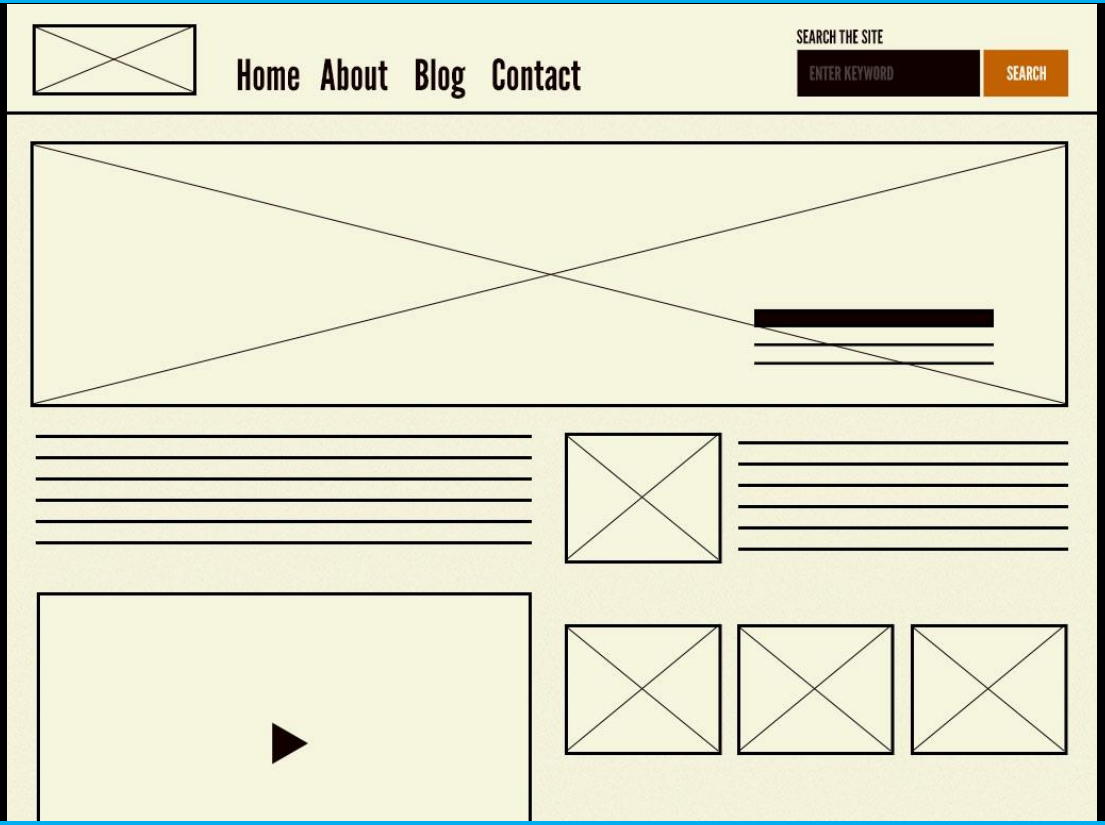


Atomic Design patterns - molecules

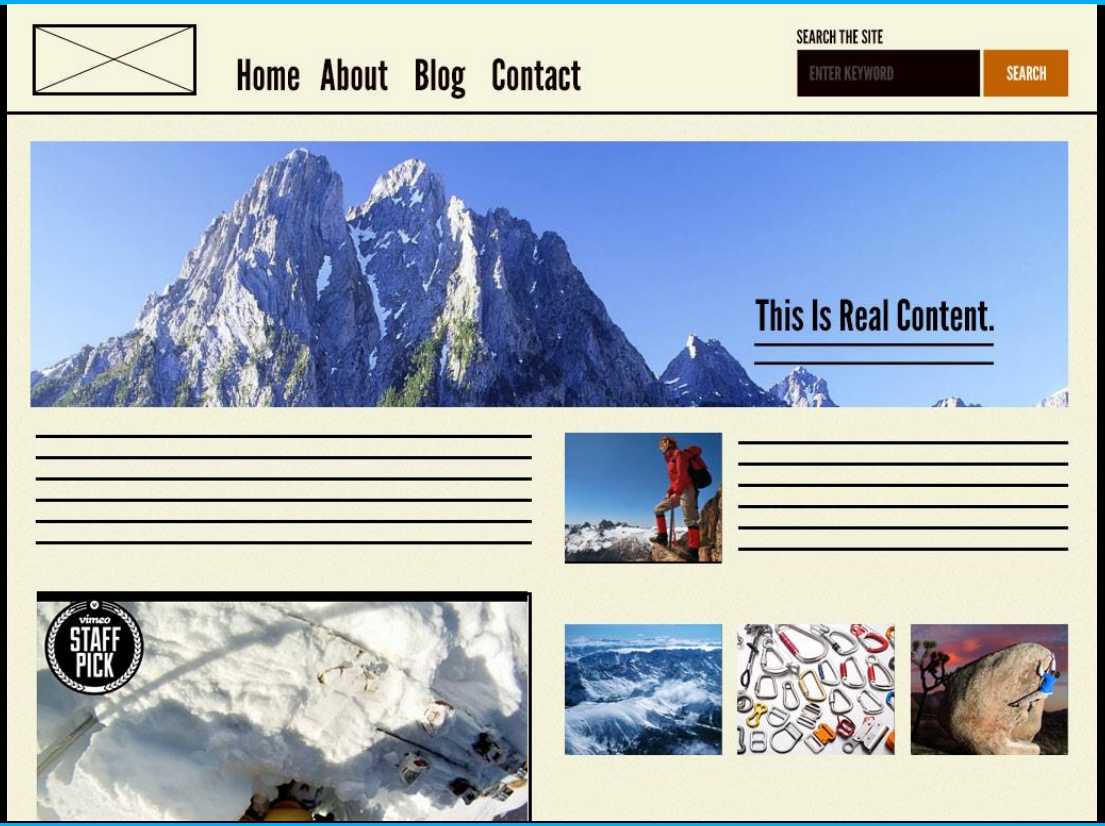


Atomic Design patterns - organisms

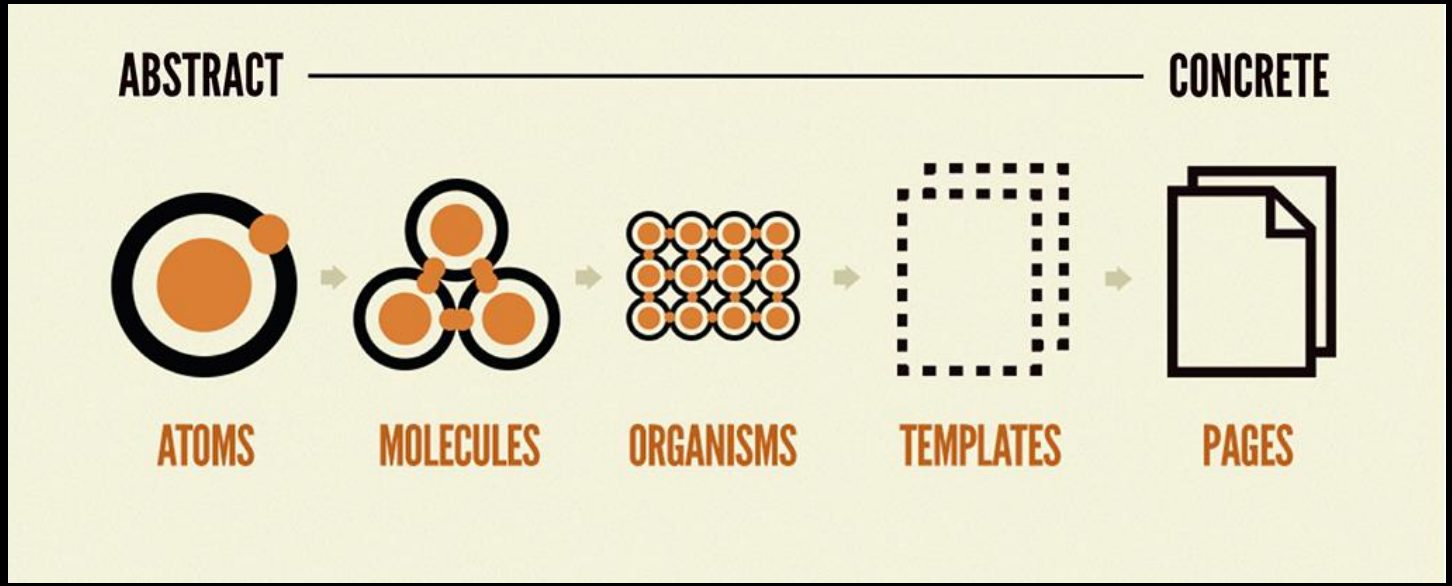
Atomic Design patterns - templates



Atomic Design patterns - pages



Atomic Design patterns = AEM components?



Pattern Lab - tool for building atomic design systems

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Atomic Design for WCM project development

- patterns are suitable for WCM:
  - modular
  - dynamic content ready
  - adaptable to different (also future) channels
  - reusable in different contexts
- nesting of patterns increases code reusability and reduces time needed to apply design changes
- Pattern Lab allows to build easily and quickly modular patterns
- but still, patterns require FE integration with AEM application

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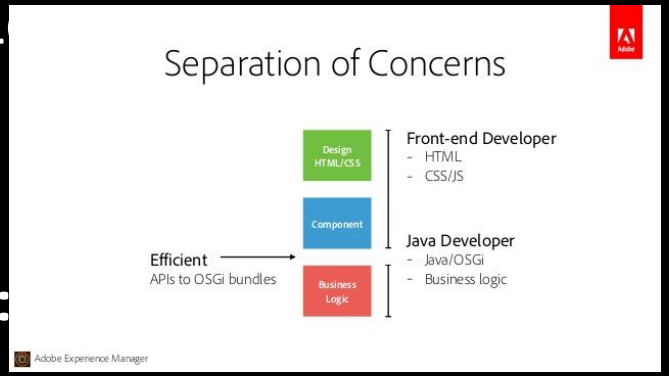
Developing FE in AEM vs developing style guides

Developing FE straight in AEM

- thanks to HTL and JS Use API, possibl
  to build view without authoring logic
- easier with tools supporting content
  repository sync and HTL development:
  - Plugins for IDEs: Eclipse, IntelliJ, Brackets
  - Slang - Gulp module
- integration of FE build systems with AEM application
  - front-end-maven plugin
  - AEM Sass compiler



Developing FE straight in AEM - challenges

- more time consuming than building style guides
  - dependency on components, templates and content creation
- difficult to validate HTL scripts with different data examples
  - dependency on authoring development or script rework required
- less visibility of design dependencies between components
  - might enforce developing new components styles and scripts separately, to reduce impact on the rest of them
- AEM component libraries might not keep enough data about design language to build new features

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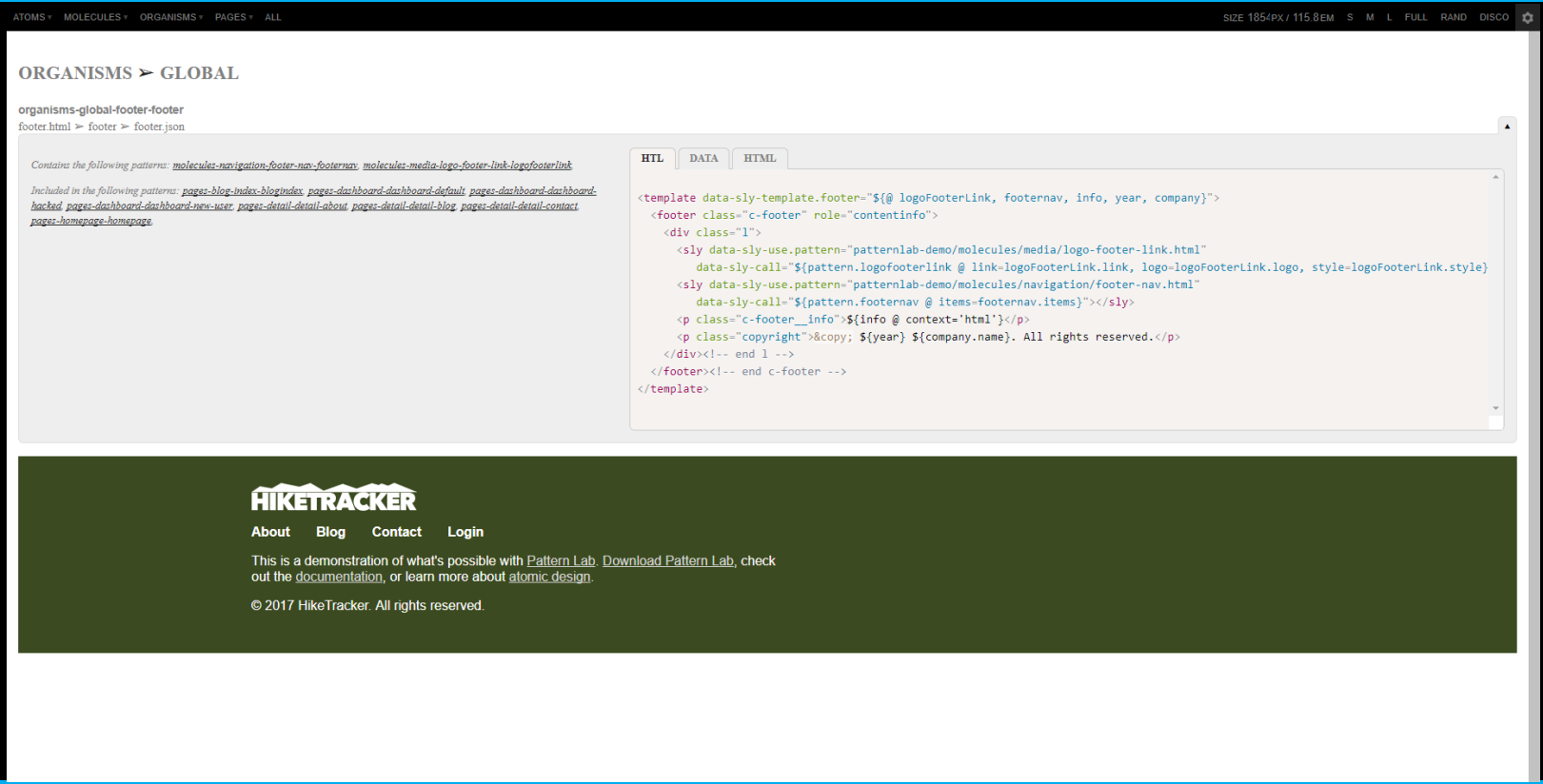
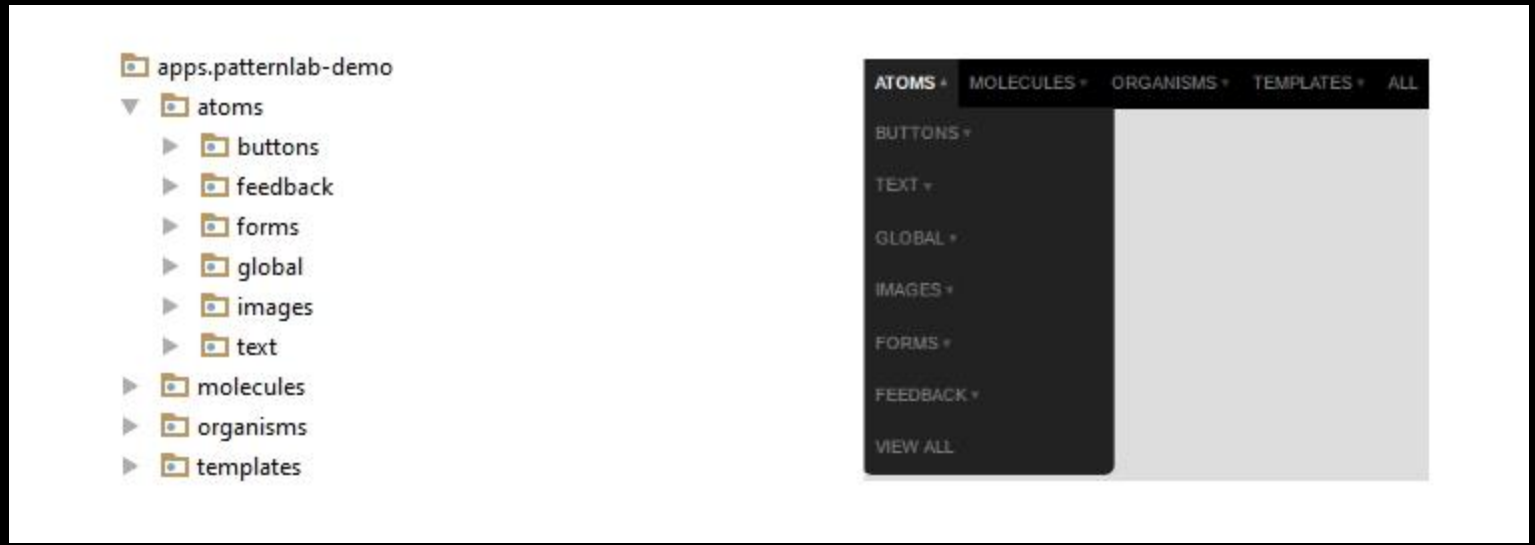
~~Developing FE in AEM vs developing style guides~~

Style guides within Sling/AEM!

Pattern Lab for Sling



Pattern Lab for Sling



Demo

Simplified workflow with Pattern Lab for Sling

Designers

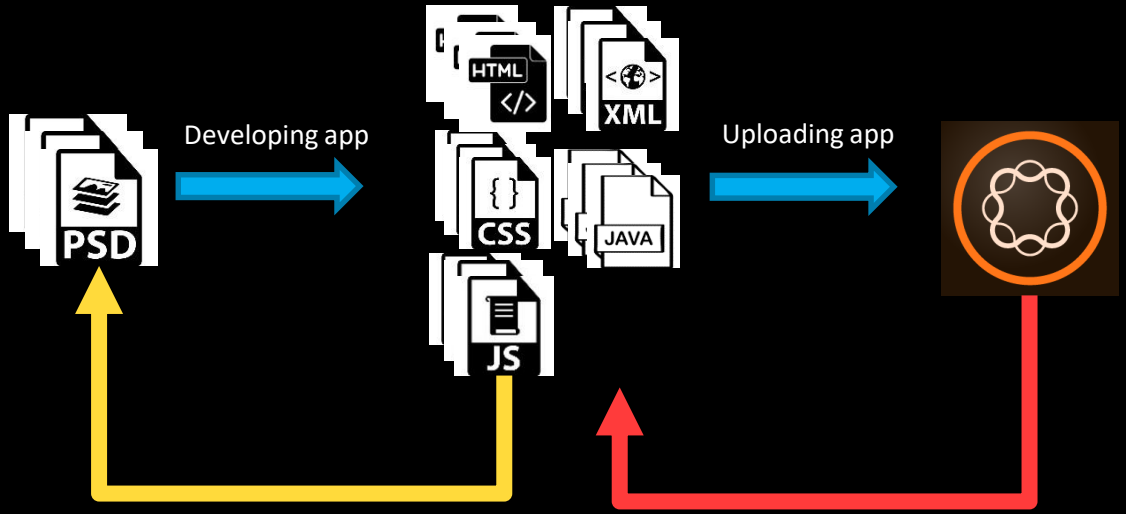
Site designs

FE and AEM Developers

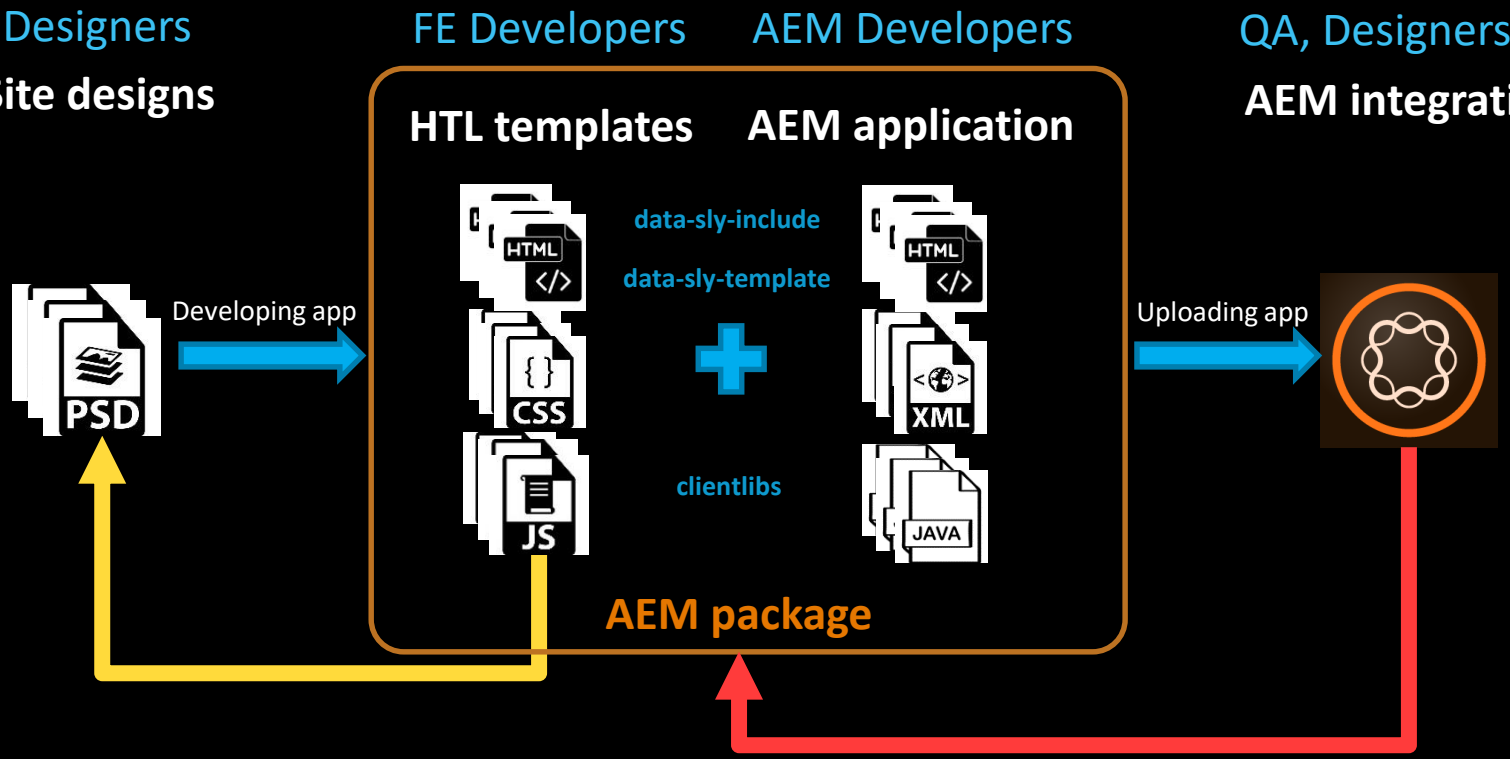
AEM package with Pattern Lab

QA, Designers, PO

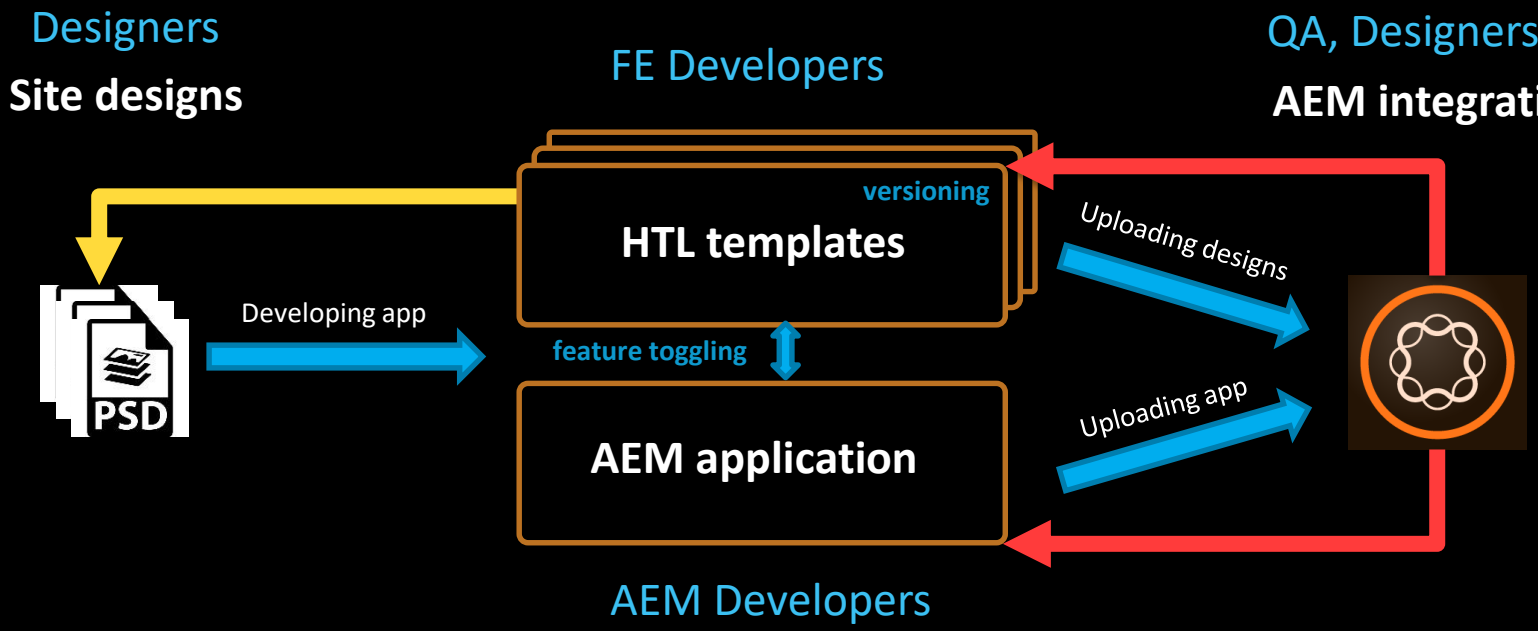
AEM integration



Simplified workflow – segregation of duties



Simplified workflow – view and logic separation



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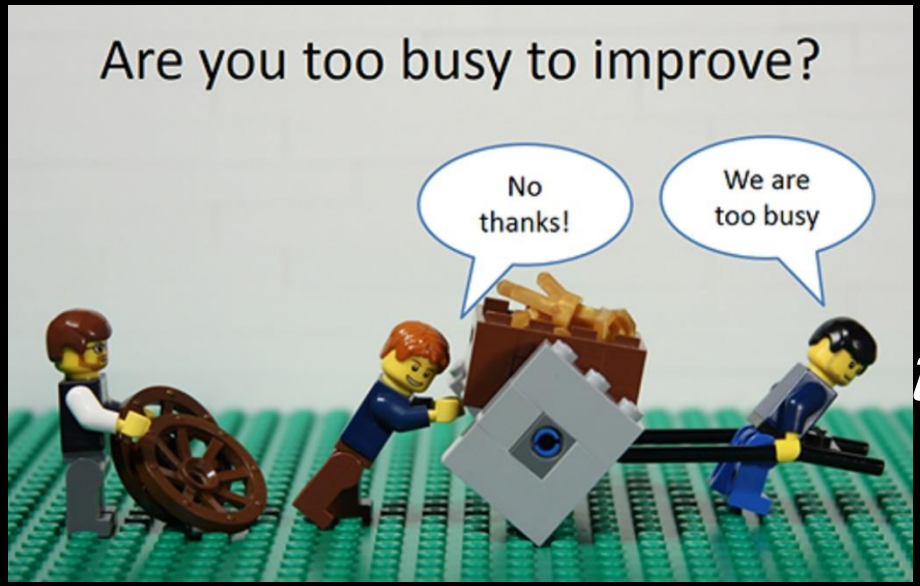
Pattern Lab for Sling – benefits

- no more style guides integration
- style guides are not only auxiliary projects anymore
  - design language embedded in codebase
- true separation of view and business logic
  - testing view without logic using *raw* patterns
- segregation of duties
  - FE and AEM developers can do their best in what they love
  - flexibility on organizing developers workflow
- fast designs prototyping and validation straight on Sling/AEM instance
- no dependency on custom solutions or client side rendering

Future work

- Integration with AEM
  - Pattern Lab Template
  - Pattern component
  - AEM Annotations
  - AEM projects - tasks
- Patterns presenting different Sling context
  - mocking Sling bindings like resource, request

Are you ready for your next project? ☺



„The hard part is building the machine that builds the product.”

Dennis Crowley, Foursquare CEO

Appendix

References

- Atomic Design: http://atomicdesign.bradfrost.com/
- Pattern Lab: http://patternlab.io/
- Pattern Lab for Sling: https://github.com/deepthinkit/patternlab-for-sling
- Pattern Lab for Sling – demo content: https://github.com/deepthinkit/patternlab-for-sling-demo
- Front end style guides: http://maban.co.uk/projects/front-end-style-guides/

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Useful tools for building FE in AEM

- Gulp Slang: https://www.npmjs.com/package/gulp-slang
- AEM Developer Tools: https://eclipse.adobe.com/aem/dev-tools/
- AEM Brackets Extension: https://docs.adobe.com/docs/en/aem/6-3/develop/dev-tools/aem-brackets.html
- Frontend-maven-plugin: https://github.com/eirslett/frontend-maven-plugin
- AEM Sass Compiler: https://github.com/mickleroy/aem-sass-compiler

Images used in presentation

- Slide 3 - https://1.bp.blogspot.com/-XeE07u3bQRU/WBvCieou3DI/AAAAAAAAC2I/WPdjk6hRwHUR2WNxbphb3mG453ft8YM8wCK4B/w1200-h630-p-k-no-nu/airbnb.png
- Slide 18-25 - http://bradfrost.com/blog/post/atomic-web-design/
- Slide 28 - https://image.slidesharecdn.com/aem-best-practices-150904054458-lva1-app6891/95/aem-best-practices-for-component-development-6-638.jpg?cb=1441617960
- Slide 38 - https://fernandofranzini.files.wordpress.com/2017/01/too-busy-to-improve.png