

Workshop

State of Washington

3 session agenda

Session #1 - learning session

↪ Overview, methods, and goals

Session #2 - small group work session

↪ Product vision, roadmap review, and decision points

Sessions #3 - small group work session

↪ QASP review + agile contract format

Session #3 agenda

1

QASPs

2

Agile contract
format

Quality Assurance Surveillance Plans (QASPs)



**Who's excited to
talk about QASPs?**

Not me, actually.

Uh...

1/ What's the goal?



What's the goal?

- **Quality** - How good is the thing?
- **Assurance** - How confident are we? What are the risks?
- **Surveillance** - How are we watching?
- **Plan** - How will we do it?



What's the goal?

The ultimate goal is not documentation. It's not tested code, multiple deployment environments, or any kind of automation. It's none of the stuff in the QASP.



What's the goal?

**The goal is a product that
serves users' needs.**

**So what's this part
of the workshop
about, exactly?**

2/ Getting what you need



Getting what you need

- A product that serves users' needs...



Getting what you need

- A product that serves users' needs...
- ...requires conducting research with users to understand their needs...



Getting what you need

- A product that serves users' needs...
- ...requires conducting research with users to understand their needs...
- ...requires rapid feedback on ideas to see how the product is meeting or missing their needs...



Getting what you need

- A product that serves users' needs...
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- ...requires rapid iteration on the product design and implementation

You need a **skilled, empowered team** that directly demonstrates its progress; and **observable metrics** that reflect health and sustainability.

You need a skilled, empowered team that directly demonstrates its progress; and **observable metrics** that reflect health and sustainability.

3/ The traditional way



Paper deliverables

- Governance quality management plan
- Integration/architecture plan
- Communication management plan
- Risk/issues management plan
- Testing plan
- Change and configuration management plan
- Post-implementation review plan
- Performance reporting summary
- Training plan

Paper deliverables



“Historically, **all our contracts paid for paper**, which I never understood. [...] When we talked to other states, they had rooms of binders worth millions of dollars. **Those binders never pay claims!**”

4/ The QASP





The QASP

- A collection of “performance standards” that define metrics, minimum standards, and how they’ll be measured
- These should be quantitative metrics that can effectively translate to a checklist
- The QASP is only a tool for gauging product quality and adherence to team processes.
- The performance standards are not a replacement for having conversations



The QASP: 18F's standard elements

- Tested code
- Properly-styled code
- Accessible user interface
- Deployed code
- Documentation
- Secure code
- User research
- Accepted features



Reminder: Getting what you need

- A product that serves users' needs...
- ...requires conducting research with users to understand their needs...
- ...requires rapid feedback on ideas to see how the product is meeting or missing their needs...
- ...requires rapid iteration on the product design and implementation

The QASP doesn't give you any of that.

The QASP doesn't give you any of that. It's a framework you can use to measure progress on those things.

**If you want good outcomes, it's
still **your responsibility** to make
sure you're getting them.**



The QASP: tested code

- **Standard:** Code delivered under the order must have substantial automated test coverage.
- **Acceptable level:** Minimum of 90% of code covered by automated tests. All areas of code are meaningfully tested.
- **Method of assessment:** Combination of manual review and execution of the automated tests.








The QASP: tested code

- **A product that serves users' needs...**
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The QASP: tested code

How to assess it day-to-day

- Automated test outputs will let you know if any tests are failing
- Test outputs should also report on code coverage
- Code reviews will verify that tests are meaningful

| @@ Coverage Diff @@ | | | |
|---|--|--------|--------|
| ## | main | #3859 | +/- ## |
| ===== | | | |
| - Coverage | 83.29% | 83.28% | -0.01% |
| ===== | | | |
|  Some checks were not successful 3 successful and 1 failing checks | | | +3 |
| | | | +3 |
| ===== | | | |
| ✓  | Deploy Storybook / storybook-deploy (pull) | | +2 |
| ✗  | test, build, and deploy Failing after 6m — | | +1 |
| ✓  | license/snyk (MACPRO-eAPD [MACPRO]) | | |
| ✓  | security/snyk (MACPRO-eAPD [MACPRO]) | | |



The QASP: tested code

DISCUSSION:

**Who will do the
assessment?**



The QASP: properly-styled code

- **Standard:** Code conforms to [link to a code style guide, such as the [18F engineering style guide](#)].
- **Acceptable level:** Zero linting errors and zero valid warnings.
- **Method of assessment:** Combination of manual review and execution of the automated tests.



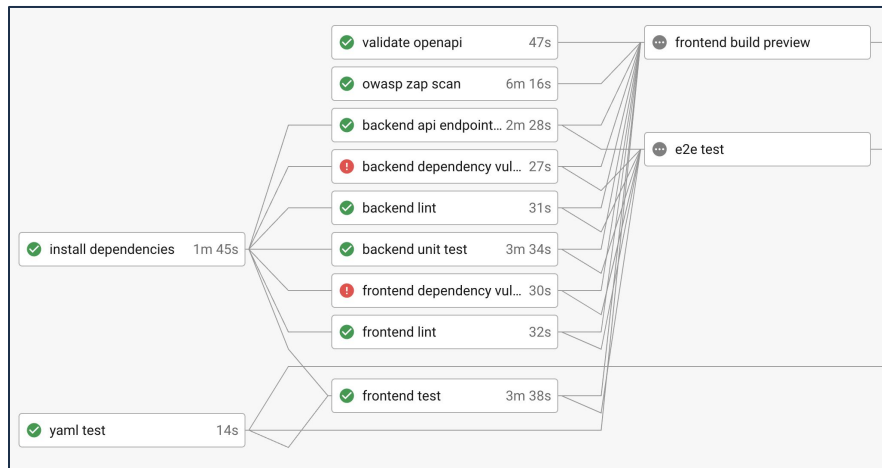
The QASP: properly-styled code

- **A product that serves users' needs...**
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The QASP: properly-styled code

How to assess it day-to-day

- Automated code scans will show most deviations from your approved code style
- Code reviews will provide visibility into the kinds of things automated tools can't catch





The QASP: properly-styled code

DISCUSSION:

**Who will do the
assessment?**



The QASP: accessible user interface

- **Standard:** Web Content Accessibility Guidelines (WCAG) 2.1 AA.
- **Acceptable level:** Zero errors reported by automated scanners and zero errors reported in manual testing. Agency-required documentation of accessibility status is completed.
- **Method of assessment:** Combination of automated and manual testing with tools equivalent to [insert example tools acceptable to the agency, such as [Accessibility Insights](#) or the [DHS Trusted Tester](#) program].



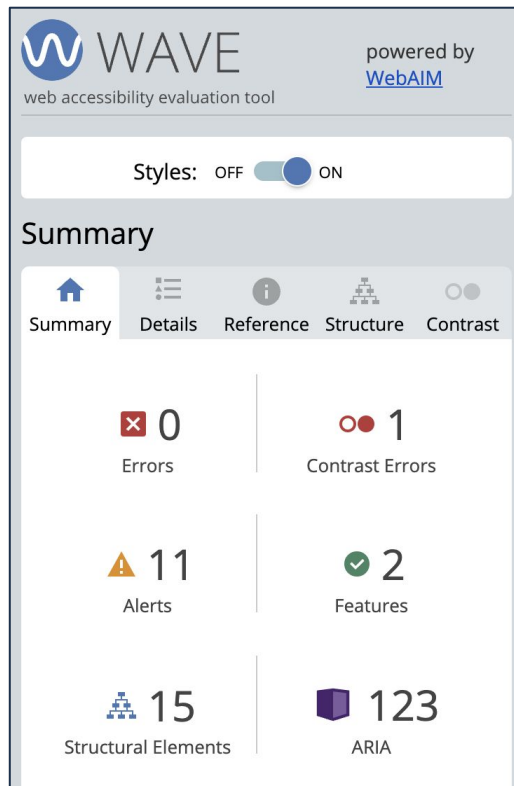
The QASP: accessible user interface

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The QASP: accessible user interface

How to assess it day-to-day

- Automated accessibility tools can test about 40% of potential accessibility concerns
- Manual accessibility testing is necessary to check the rest





The QASP: accessible user interface

DISCUSSION:

**Who will do the
assessment?**



The QASP: deployed code

- **Standard:** Code must successfully build and deploy into [define which environments exist] environments.
- **Acceptable level:** Deployment from version control of a successful build should be automated using industry standard tooling.
- **Method of assessment:** Combination of manual review and automated testing.



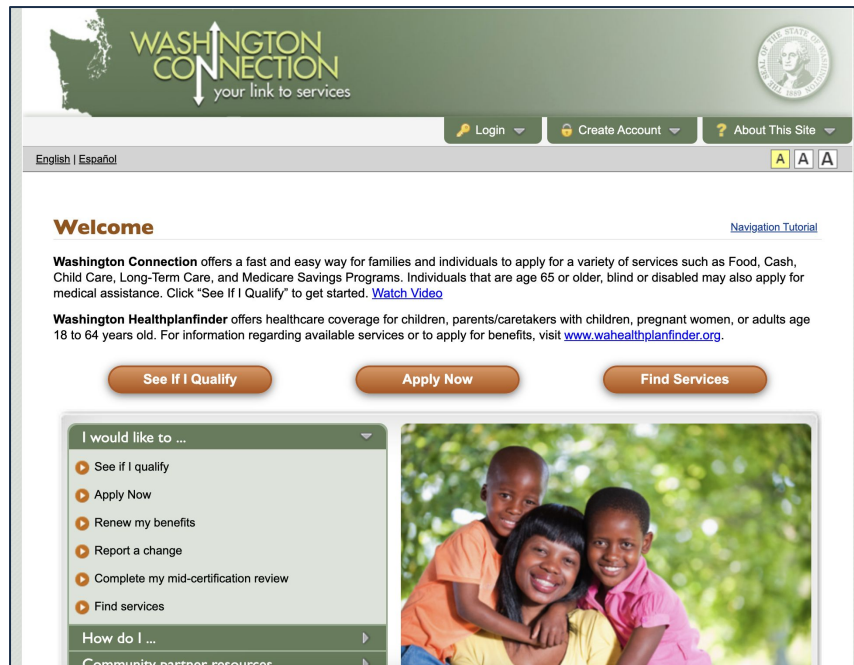
The QASP: deployed code

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The QASP: deployed code

How to assess it day-to-day

- Automated deployments will report if they fail
- Manual testing will verify that the latest version deployed and new features are working as expected





The QASP: deployed code

DISCUSSION:

**Who will do the
assessment?**



The QASP: documented decisions

- **Standard:** Summary of stories is maintained, dependencies are listed, major functionality is documented, security and compliance controls are documented and maintained.
- **Acceptable level:** All required documentation exists and is maintained.
- **Method of assessment:** Manual review.



The QASP: documented decisions

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The QASP: documented decisions

How to assess it day-to-day

- Manual review will ensure that changes are documented appropriately to prevent duplicative work in the future

| eAPD documentation | Technical documentation |
|--|---|
| <ul style="list-style-type: none">• Glossary of acronyms• APDs 101• Design iterations archive• Budget calculations | <ul style="list-style-type: none">• Developer info• Development deployment• Infrastructure Architecture• Tech 101• Authentication• Resetting an Environment• Hardware Software List• Deploying Staging Production Instances Using Scripts• Terraform 101 for eAPD• Provisioning Infrastructure with Terraform• WebSocket basics |
| Design documentation <ul style="list-style-type: none">• UX principles• User research process• Visual styling• Content guide• User research findings• eAPD pilot findings• User needs | |



The QASP: documented decisions

DISCUSSION:

**Who will do the
assessment?**



The QASP: secure code

- **Standard:** Code is free of known static and runtime vulnerabilities.
- **Acceptable level:** Code submitted must be free of medium- and high-level static and dynamic security vulnerabilities. False positives are documented.
- **Method of assessment:** Automated testing using a static testing tool (e.g., Snyk, npm audit, etc.), dynamic testing tool (e.g., OWASP ZAP), and manual code review informed by security standards and testing results.








The QASP: secure code

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The QASP: secure code

How to assess it day-to-day

- Automated tests will identify a wide range of typical security issues and vulnerabilities
- Manual review will ensure that any false positives identified by the automated tests are appropriately documented

| | | |
|--|---|---|
|  | | Some checks were not successful 3 successful and 1 failing checks |
| ✓ |  | Deploy Storybook / storybook-deploy (pull request) |
| ✗ |  | test, build, and deploy Failing after 6m — |
| ✓ |  | license/snyk (MACPRO-eAPD [MACPRO]) |
| ✓ |  | security/snyk (MACPRO-eAPD [MACPRO]) |



The QASP: secure code

DISCUSSION:

**Who will do the
assessment?**



The QASP: researched needs

- **Standard:** Usability testing and other methods are conducted at regular intervals throughout the product development process.
- **Acceptable level:** Research plans and artifacts from testing/other methods are available at the end of relevant sprints, in accordance with the vendor's research plan.
- **Method of assessment:** Manual review.

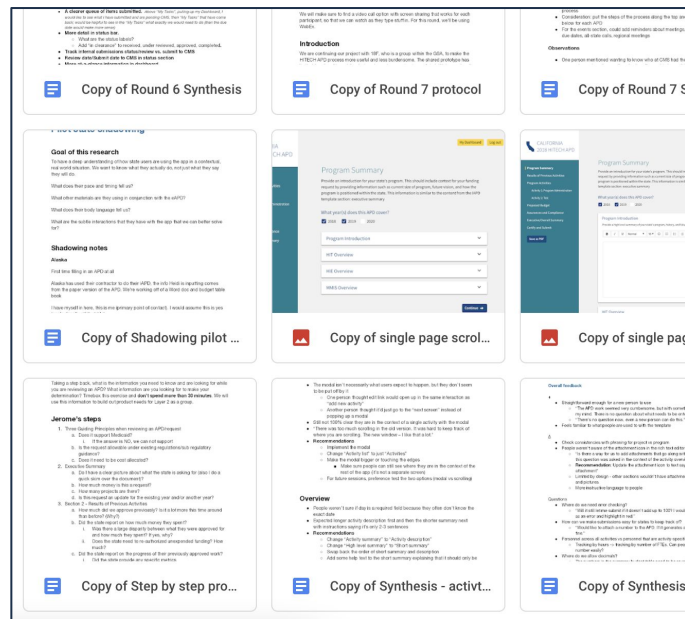


The QASP: researched needs

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- **...requires conducting research with users to understand their needs...**
- **...requires rapid feedback on ideas to see how the product is meeting or missing their needs...**
- **...requires rapid iteration on the product design and implementation**

The QASP: researched needs How to assess it day-to-day

- Manual review will ensure that research artifacts have been generated and captured





The QASP: researched needs

DISCUSSION:

**Who will do the
assessment?**



The QASP: accepted features

- **Standard:** At the beginning of each sprint, the product team will collaborate to define a set of user stories grounded in user research to be completed. The development team will deliver functionality to satisfy these user stories. Code is continuously available in a version-controlled source code repository owned by the State.
- **Acceptable level:** Delivered code meets the acceptance criteria of each user story. Incomplete stories will be considered for the next sprint.
- **Method of assessment:** Manual review.



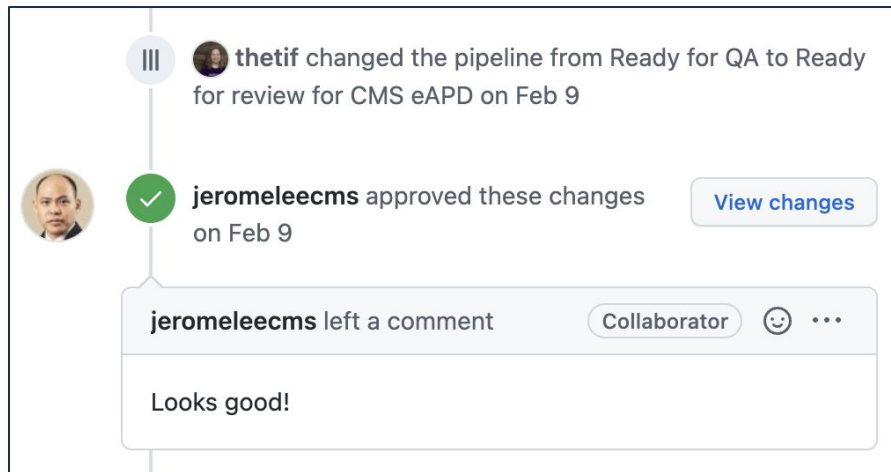
The QASP: accepted features

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The QASP: accepted features

How to assess it day-to-day

- Automated tests will identify a wide range of typical security issues and vulnerabilities
- Manual review will ensure that any false positives identified by the automated tests are appropriately documented





The QASP: accepted features

DISCUSSION:

**Who will do the
assessment?**

The QASP is **a framework** you can use to roughly measure the **quality, health, and sustainability** of your product, team, and processes.

Agile contract format

Agile Contract Format

STATEMENT OF OBJECTIVES (SOO) ←

descriptive instead of *prescriptive*

Background & purpose

Scope & objectives

Contract period of performance (PoP),
place of performance, and contract type

Operating constraints

Instruction & evaluation

Agile Contract Format

STATEMENT OF OBJECTIVES (SOO)

Background & purpose

self-explanatory

Scope & objectives

Contract period of performance (PoP),
place of performance, and contract type

Operating constraints

Instruction & evaluation

Agile Contract Format

STATEMENT OF OBJECTIVES (SOO)

Background & purpose

Scope & objectives

Contract period of performance (PoP),
place of performance, and contract type

Operating constraints

Instruction & evaluation

product vision, draft user stories
(if available), quality assurance
and surveillance plan (QASP)

(We did this part on Monday)

Agile Contract Format

STATEMENT OF OBJECTIVES (SOO)

Background & purpose

Scope & objectives

Contract period of performance (PoP),
place of performance, and contract type

Operating constraints

Instruction & evaluation

Under 3 years duration,
distributed place of performance
where possible, time & material
with a not-to-exceed ceiling
mechanism

Agile Contract Format

STATEMENT OF OBJECTIVES (SOO)

Background & purpose

Scope & objectives

Contract period of performance (PoP),
place of performance, and contract type

Operating constraints

Instruction & evaluation

← infrastructure, security
parameters, data clauses, etc

Agile Contract Format

STATEMENT OF OBJECTIVES (SOO)

Background & purpose

Scope & objectives

Contract period of performance (PoP),
place of performance, and contract type

Operating constraints

Instruction & evaluation

← (1) technical approach, (2)
staffing approach, (3) similar
experience, and (4) price

Questions & discussion