

Modeling Application Security Processes with *Work the System*, *Traction*, and *This Is Service Design Doing*

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At a Glance

- Section 1 – Why this document exists and what you can do with it.
 - Section 2 – How each book contributes to modeling AppSec processes.
 - Section 3 – A practical reading order tailored to AppSec work.
 - Section 4 – A sketch of your current AppSec pipeline as blueprints and SOPs.
 - Section 5 – How to combine these ideas into an iterative improvement loop.
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1 Purpose of This Document

This document has two goals:

1. To summarize how three books *Work the System* (Sam Carpenter), *Traction* (Gino Wickman), and *This Is Service Design Doing* can help with modeling Application Security (AppSec) processes.
2. To sketch how an existing AppSec pipeline—with CI/CD gates, GitHub Advanced Security (GHAS), secrets scanning, and related checks—can be modeled using:
 - Service blueprints (from *This Is Service Design Doing*),
 - Standard operating procedures (SOPs) in the style of *Work the System*.

The intent is to give you an actionable way to move from:

“We have tools and gates”

to

“We have a coherent, documented AppSec **system** that can be improved over time.”

Navigation tip. If you already know these books, you can skim Section 2 and jump straight to the AppSec-specific material in Sections 4 and 5.

2 How Each Book Helps with AppSec Process Modeling

We will briefly summarize how each of the three books contributes to AppSec process modeling:

- *This Is Service Design Doing* – Service blueprinting and journeys, especially from the developer's point of view.
- *Work the System* – Thinking in terms of systems and SOPs.
- *Traction* – Organizational structure, accountability, and execution.

2.1 *This Is Service Design Doing*

Core Idea

This Is Service Design Doing is a practical guide to service design. It emphasizes:

- Understanding users and stakeholders through research,
- Mapping **customer journeys**,
- Designing services using **service blueprints**,
- Prototyping and iterating based on feedback.

A **service blueprint** typically includes:

- Customer actions (what the user does),
- Frontstage actions (what the user sees),
- Backstage actions (what the organization does behind the scenes),
- Supporting processes and systems,
- Evidence (artifacts, communications, logs).

For AppSec

This book is most helpful if your goal is:

Design AppSec as a developer-centered service—with clear journeys, touchpoints, and support systems.

Navigation tip. Use Section 3 as a guide if you want to see everything applied directly to your AppSec pipeline.

2.2 *Work the System*

Core Idea

Work the System argues that every organization is a collection of **systems** and **subsystems**. To improve results, you should:

- Step outside of the “whirlwind” of daily operations,
- Identify key systems,
- Document them as simple written procedures,
- Improve those procedures incrementally.

The book emphasizes three core documents:

1. A **Strategic Objective** that defines what success looks like.
2. A set of **Operating Principles** that guide decisions.
3. A collection of **working procedures** that describe how recurring work is done.

Instead of viewing AppSec as a set of tools (GHAS, SAST, DAST, etc.), you define and document the **systems** that use those tools:

- Inputs (events, triggers, artifacts),
- Process (steps, decisions, owners),
- Outputs (approvals, tickets, metrics).

For AppSec

For AppSec, *Work the System* provides a way to:

- Treat each AppSec flow (e.g. “secure PR”, “secrets handling”, “vulnerability triage”) as a **system**,
- Write down clear, step-by-step procedures that reflect how the work is actually done today,
- Slowly improve these procedures as you learn more, instead of trying to design a “perfect” process up front.

In practice, this means you can:

- Create an AppSec **Strategic Objective** that describes what “good” looks like (e.g. “We detect and remediate critical application vulnerabilities before they are exploitable in production, with minimal friction for developers.”).

- Define a handful of **Operating Principles**, such as:
 - “We integrate security checks into existing developer workflows wherever possible.”
 - “We prioritize fixing the highest-risk issues first.”
 - “We document processes in simple language and keep them as short as possible.”
- Document **working procedures** for key AppSec systems:
 - “Secure Pull Request” procedure,
 - “Secrets Management” procedure,
 - “Vulnerability Triage” procedure,
 - “Incident Response for AppSec Findings” procedure.

This aligns strongly with AppSec process modeling because it forces you to:

- Be explicit about **who does what, when, and how**,
- Turn ad-hoc practices into repeatable, improvable systems,
- Keep the focus on outcomes (e.g. reduced risk, faster remediation) rather than on tools alone.

2.3 *Traction*

Core Idea

Traction introduces the Entrepreneurial Operating System (EOS), which focuses on:

- Vision (shared understanding of where the organization is going),
- People (right people in the right seats),
- Data (simple, objective metrics),
- Issues (identifying and solving root problems),
- Process (documented and followed systems),
- Traction (execution and accountability).

It is very operational and pragmatic, with tools such as:

- Accountability chart (who owns what),
- Rocks (90-day priorities),
- Scorecards (weekly metrics),
- Level 10 meetings (structured weekly meetings),
- Documented core processes.

How It Helps AppSec

For AppSec, *Traction* helps you:

- Clarify **who owns AppSec processes**:
 - Who owns the secure SDLC?
 - Who owns the CI/CD pipeline gates?
 - Who owns vulnerability management?
- Define AppSec-related **Rocks**:
 - “Implement secrets scanning across all repos”,
 - “Document and roll out SOP for vulnerability triage”,
 - “Reduce mean time to remediate critical vulns by 30%.”
- Create **scorecard metrics**:
 - Number of open critical vulnerabilities,
 - Mean time to remediate by severity,
 - Percentage of services passing security gates,
 - Percentage of repos with GHAS enabled.
- Embed AppSec into the **leadership cadence**:
 - AppSec metrics appear on the weekly scorecard,
 - AppSec issues are raised and resolved in L10 meetings,
 - AppSec Rocks are reviewed quarterly.

For AppSec

In short, *Traction* gives you an organizational frame so that AppSec is not “just a set of tools” but:

- Owned by specific people,
- Measured with specific metrics,
- Improved through a regular cadence of meetings and Rocks,
- Connected to the organization’s broader goals.

3 Recommended Reading Order for AppSec Modeling

If your specific goal is to model Application Security processes, a pragmatic order that also matches the navigation flow in Section 2 is:

1. *This Is Service Design Doing*

Start here to learn the tools for mapping journeys and services. Your first outcome can be one or two **service blueprints** for key AppSec flows (for example, “secure PR” or “secrets handling”). These blueprints give you a developer-centered view of how AppSec shows up in day-to-day work.

2. *Work the System*

Next, use *Work the System* to turn those blueprints into **SOPs**—clear, written procedures that can be followed and improved by the team. Here you move from “this is the journey” to “this is the system we run every time.”

3. *Traction*

Finally, use *Traction* to plug these SOPs into a broader organizational system (EOS):

- clarify who owns each AppSec system (secure PR, secrets management, vulnerability triage, etc.),
- ensure AppSec KPIs show up on scorecards,
- set Rocks and metrics around AppSec improvements,
- create a regular cadence for reviewing and refining the processes.

This sequence moves from:

1. **Understanding the experience** (service design) – see Section 2, *This Is Service Design Doing*,
2. **Documenting the system** (SOPs) – see Section 2, *Work the System*,
3. **Embedding it organizationally** (EOS / Traction) – see Section 2, *Traction*.

Navigation tip. Treat this section as your reading roadmap. As you work through the books, follow the order above and use the cross-references into Section 2 to jump straight to the summaries and AppSec-specific notes. If you just want the integrated view of how all three books combine into one AppSec modeling approach, you can also jump directly to Section 5.

4 Sketch: Modeling the Current AppSec Pipeline

This section gives a concrete sketch of how to model an existing AppSec pipeline—with CI/CD gates, GHAS scans, and secrets scanning—using:

- Service blueprints, and
- *Work the System*-style SOPs.

The goal is not to capture every technical detail, but to create a model that:

- Is easy to understand for both AppSec and engineering leadership,
- Makes responsibilities and handoffs visible,
- Can be iteratively improved.

4.1 High-Level View of the AppSec Pipeline

At a very high level, your AppSec pipeline might look like:

- Developer writes code and opens a PR,
- CI pipeline runs:
 - Unit tests,
 - Static analysis (SAST),
 - Dependency scanning (SCA),
 - Secrets scanning,
 - Other checks as needed.
- Results are surfaced on the PR (GHAS, CI status checks),
- If all checks pass, the PR can be merged,
- If there are issues, the developer must address them or request an exception,
- Critical findings and exceptions feed into a vulnerability management process.

This high-level view can be turned into:

- One or more **service blueprints** that show the developer journey and the supporting systems,
- One or more **SOPs** that describe the step-by-step flows in more procedural detail.

4.2 Service-Blueprint Perspective

From a service-design perspective, consider the flow “Secure Pull Request and GHAS Scans”.

Blueprint 1: Secure Pull Request and GHAS Scans

Customer (Developer) Actions

- Create feature branch,
- Implement changes,
- Commit and push,
- Open PR against main branch,
- Respond to feedback (including security feedback),
- Merge when approvals and checks pass.

Frontstage (Visible) Actions

- CI pipeline status on PR,
- GHAS alerts and annotations on PR,
- Comments from reviewers (including AppSec if applicable),
- Dashboard views (e.g. security overview in GitHub).

Backstage Actions

- CI jobs running tests and scans,
- GHAS running SAST and SCA checks,
- Secrets scanning jobs,
- Notification hooks to Slack/Teams or ticketing systems,
- Automation that creates tickets for certain findings.

Supporting Processes and Systems

- CI/CD platform configuration,
- GitHub repository settings and branch protections,
- GHAS configuration (enabled repos, rules),
- Secrets management policies,
- Vulnerability management tooling.

Evidence

- PR history,
- CI logs,
- GHAS alerts and resolution status,
- Tickets created for critical vulns,
- Audit trail of approvals.

Blueprint 2: Vulnerable Dependency Management

A second blueprint could focus on handling vulnerable dependencies:

Customer (Developer) Actions

- Introduce or update a dependency,
- See an alert about a vulnerable dependency,
- Decide whether to update, replace, or request an exception,
- Implement the chosen mitigation,
- Verify that alerts are resolved.

Frontstage Actions

- GHAS dependency alerts on PRs and in the repo,
- Notifications in dashboards or email,
- Ticket(s) for critical dependency issues,
- Documentation or guidance surfaced to developers.

Backstage Actions

- GHAS scanning dependency manifests,
- Jobs that aggregate dependency findings,
- Automation that opens tickets for high/critical issues,
- Periodic jobs that rescan repos.

Supporting Processes and Systems

- Dependency management tooling,
- Vulnerability database integrations,
- Ticketing system,
- Exception and risk-acceptance processes.

Evidence

- Dependency alert history,
- Ticket history,
- Records of exceptions and approvals.

4.3 *Work the System:* SOP for Secure Pull Request Flow

Once you have a blueprint for the secure PR flow, you can translate it into a *Work the System*-style SOP.

SOP: Secure Pull Request Flow

Purpose Ensure that all changes merged into the main branch have passed appropriate security checks (GHAS, tests, etc.) and that exceptions are handled consistently.

Scope Applies to all repositories using the standard CI/CD pipeline and GHAS integration.

Owner AppSec lead (or designated pipeline owner).

Procedure (Happy Path)

1. Developer creates a feature branch from the main branch.
2. Developer commits changes with appropriate tests.
3. Developer opens a Pull Request to the main branch.
4. CI pipeline triggers automatically:
 - Unit tests,
 - GHAS SAST and SCA scans,
 - Secrets scanning,

- Other configured checks.
- PR shows status checks:
 - All required checks must pass,
 - No blocking GHAS alerts for critical issues.
 - If all checks pass and required reviewers approve, the PR is merged.

Procedure (Exceptions)

- If GHAS finds a critical issue:
 - Developer investigates and attempts to fix,
 - If not fixable within acceptable time, developer or team lead requests an exception.
- Exception requests must include:
 - Description of the issue,
 - Justification for the exception,
 - Proposed mitigation and timeline.
- AppSec reviews and either:
 - Approves the exception (with conditions),
 - Rejects the exception and requires a fix.
- Approved exceptions are logged in the ticketing system and tracked until resolved.

Records and Evidence

- GHAS scan reports attached to PRs,
- CI logs,
- Tickets for critical findings and exceptions,
- Audit trail of approvals and merges.

Improvement Loop

- On a monthly or quarterly basis:
 - Review aggregate GHAS data,
 - Identify recurring issues,
 - Update the SOP and training materials.

Navigation tip. Treat Section 5 as your high-level implementation checklist; you can skim it first to get the big picture, then dive back into Sections 2 and 4 as needed.

5 Putting It All Together

In practice:

1. Use *This Is Service Design Doing* techniques to:
 - Map developer journeys,
 - Identify key AppSec touchpoints,
 - Build 1–3 service blueprints for your most important AppSec flows.
2. For each blueprint, write a *Work the System*-style SOP:
 - Clear purpose and scope,
 - Step-by-step procedures,
 - Owners and escalation paths,
 - Evidence and improvement loop.
3. Use *Traction* to:
 - Assign owners in an accountability chart,
 - Make AppSec-related improvements into Rocks,
 - Create scorecard metrics tied to your blueprints and SOPs,
 - Ensure AppSec is reviewed regularly at the leadership level.
4. Iterate:
 - Update blueprints as tooling or org structures change,
 - Refine SOPs based on real usage and incidents,
 - Adjust metrics and Rocks each quarter as needed.

The combination gives you:

- A **service view** of AppSec (developer experience, touchpoints),
- A **systems view** (SOPs and procedures you can improve),
- An **organizational view** (ownership, metrics, cadence).

Done well, this moves AppSec from a loose collection of tools and gates to a coherent, documented system that is easier to operate, explain, and improve.