

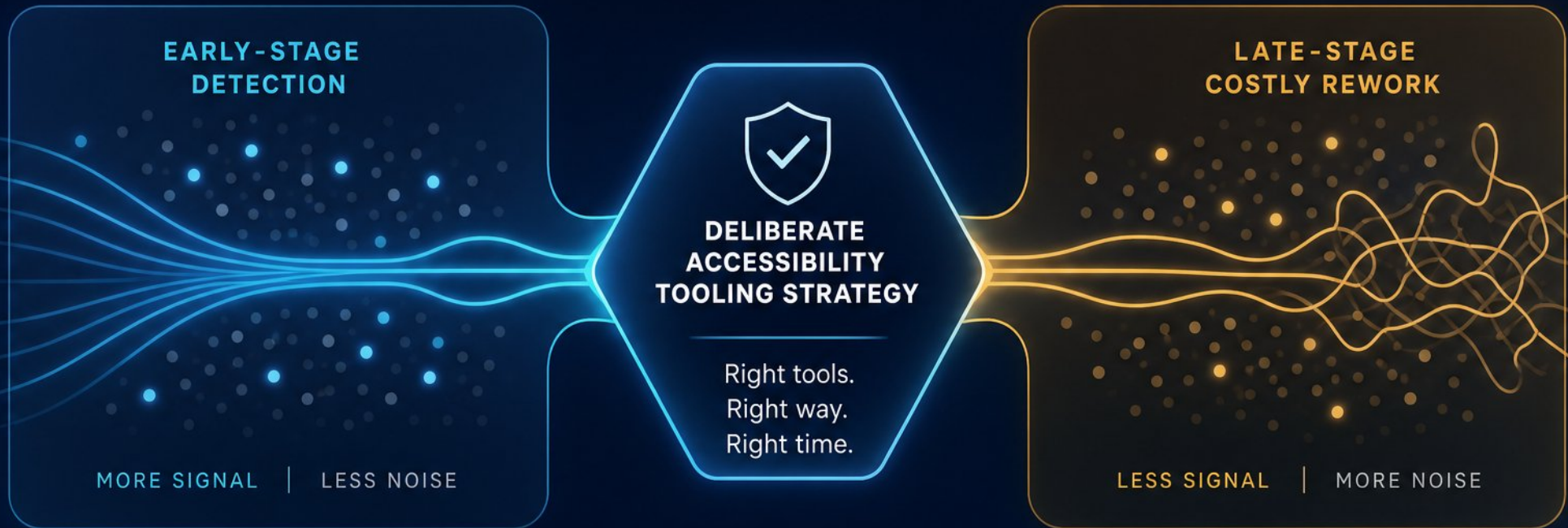
Digital Accessibility Testing Tools:

Selection and Workflow Design

- Accessibility is a shared responsibility across design, development, and content roles
- This course covers tool selection, evaluation criteria, and workflow integration—not deep WCAG auditing
- Goal: link tools to tangible outcomes—quality, legal risk reduction, inclusive UX
- Key mental model: automation catches a bounded subset; human judgment closes the gap



Why Accessibility Testing Needs a Deliberate Tooling Strategy



- Ad hoc or late-stage checks create unreliable quality and costly rework; a deliberate strategy shifts catching issues earlier.



- Automated tools catch roughly 25–57% of issues by volume, depending on what you count; manual review remains indispensable.



- Understanding what scanners can and cannot detect is the foundation for choosing and combining tools.



- Common failure patterns: treating a green scan as compliance, trusting scores blindly, and letting tooling drive process instead of the reverse.

The Real Limits of Automated Scanners



DETERMINISTIC

Scanner-Detectable Issues

- Reliably detect deterministic issues: missing alt text, contrast failures, invalid ARIA



HUMAN-DEPENDENT

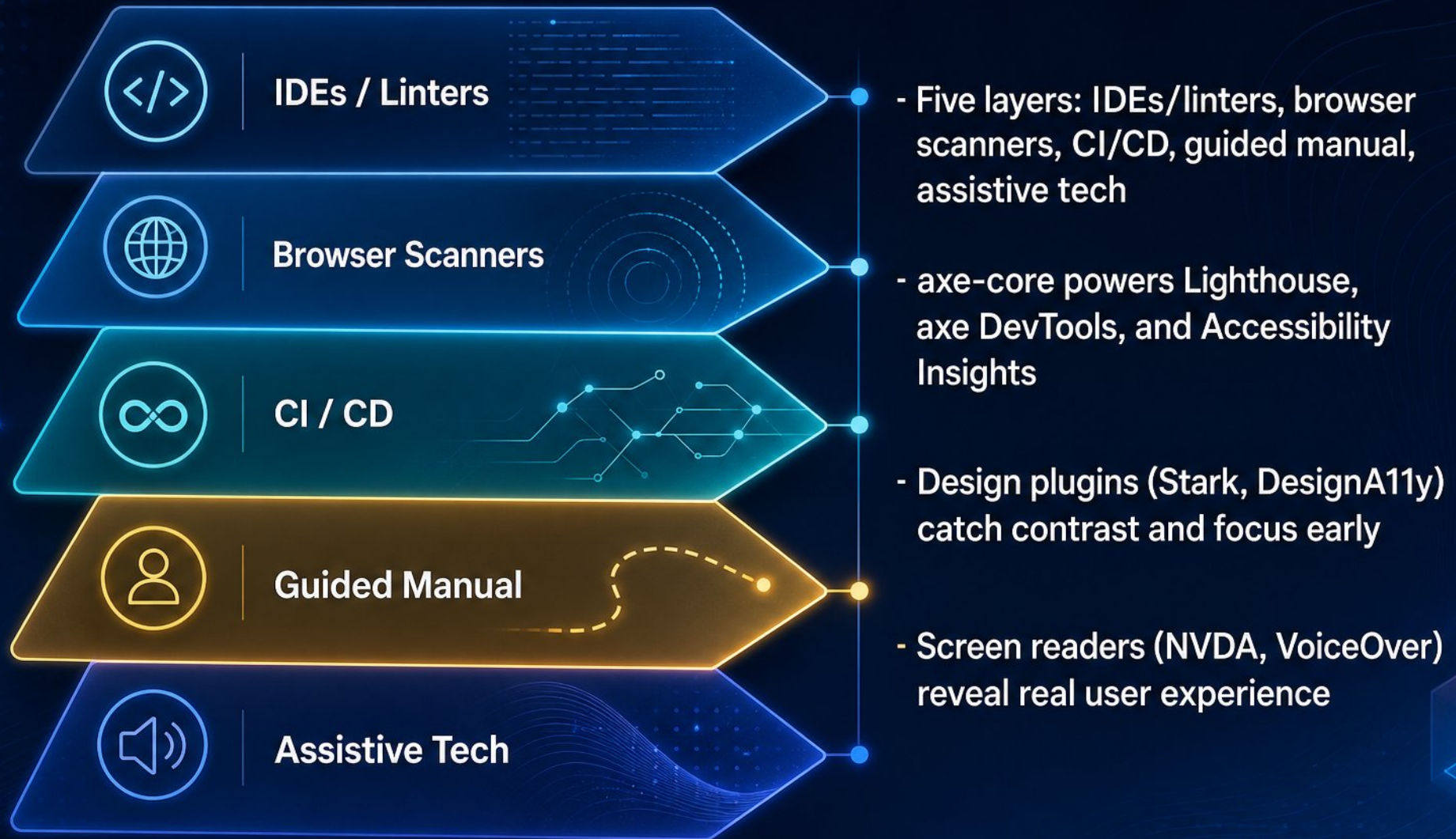
WCAG 2.2 AA Criteria

- Cannot judge alt text quality, focus order, keyboard traps, or cognitive clarity
- Automation clears ~57% of bug volume but only ~13% of WCAG 2.2 AA criteria reliably



- Passing scan is a signal, not conformance—
W3C requires knowledgeable human evaluation

Tool Categories and What Each One Actually Checks



Evaluation Criteria for Selecting Accessibility Tools



- 评估覆盖度：WCAG 2.2 版本与具体准则



- 考察 workflow 集成与报告质量、误报率



- 区分检测工具、修复平台与治理看板



- 警惕仅具覆盖层、不修复源码的方案



- 起步优选免费高信号组合：
axe-core + Lighthouse + 屏读器



- 规模或报告需求明确后，再引入付费工具



Questions to Ask Vendors



Which WCAG 2.2 success criteria and techniques are covered?



How does it integrate into our workflow and toolchain?



What is the report quality and how are false positives handled?



What types of issues can it fix and how?



How does it support ongoing governance and accountability?

Map of Tool Categories



Detection Tools



Remediation Platforms



Governance Dashboards

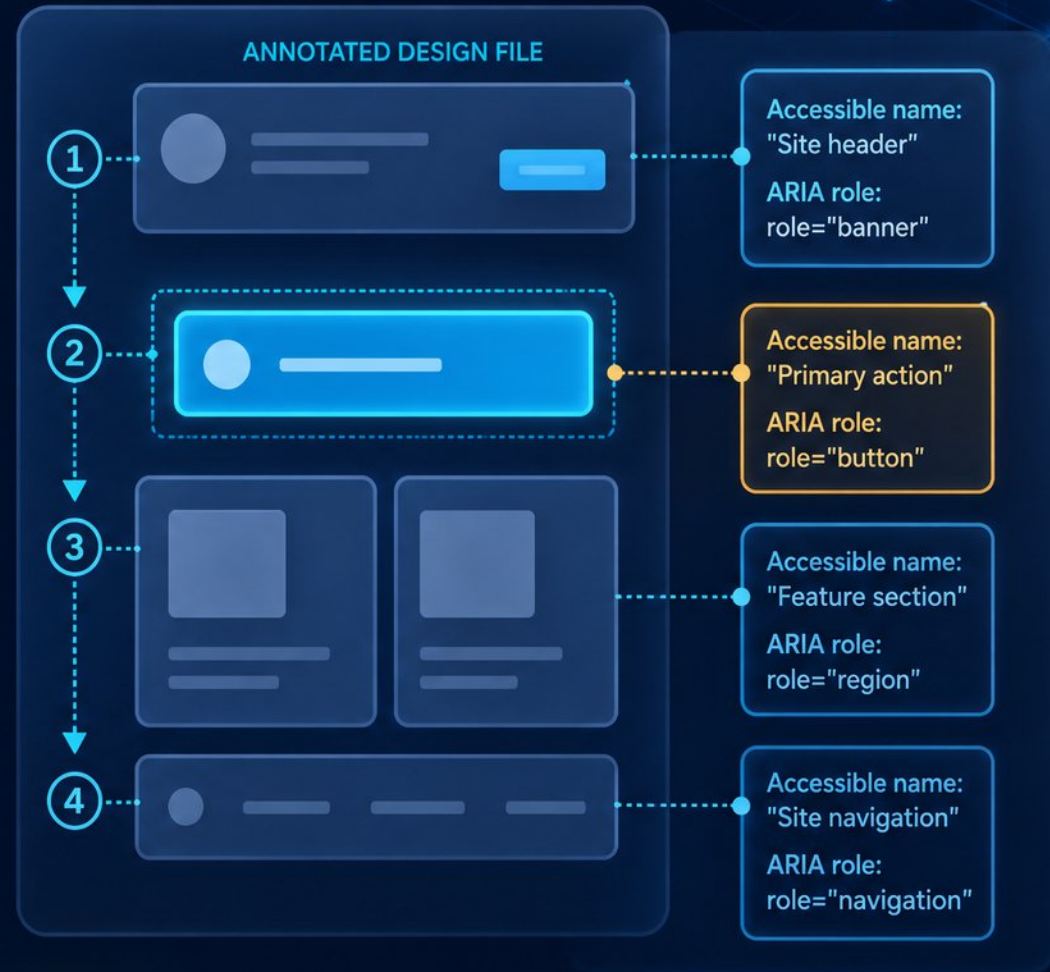
Building a Lifecycle-Wide Testing Workflow



- **Shift-left accessibility:** embed checks from design to publishing
- **Layered workflow:** linting, component tests, E2E scans, full-site audits
- **Scheduled manual screen-reader and keyboard passes**
- **Clear ownership and handoff points** across design, development, content, QA
- **Practical quality gates:** block regressions first, then tighten

Design-Stage Accessibility Checks

- Design plugins check contrast, focus, headings, target sizes
- Annotations document focus order, aria roles, accessible names
- Design systems: fix a component once, propagate conformance everywhere
- Explicit decisions help developers implement correctly, not guess



Design Decisions

Intentional, documented, accessible by design

Human Judgment



Correct Implementation

Clear guidance enables accurate, accessible code

Development-Stage and CI/CD Accessibility Testing



- 在 pre-commit 钩子、Pull Request 与 CI 管道中集成测试



- 三层漏斗：pre-commit 静态检查 → PR 组件测试 → 部署前全站审计



- 采用渐进式策略：先监控、再基线对比、最后仅阻断严重违规



- 避免常见误区：误报禁用检查、扫描陈旧构建、绿灯误认为合规

Content and Publishing Workflow Accessibility Checks

- ▶ - Pre-publication CMS checks for headings, links, alt text, captions, and documents
- ▶ - Publishing gates enforce standards without requiring editor expertise
- ▶ - Accessibility review beside branding and legal approval
- ▶ - Broad coverage: templates, navigation, media, and linked documents
- ▶ - Automated checks support, not replace, manual review



Turning Tool Reports into Prioritized Action



- Prioritize by user-journey reach, blocking harm, fix cost, and blast radius



- Group findings by component or template, not page



- Use priority bands (P1/P2/P3) with named owners



- Track findings to WCAG criteria in a triage system



- Separate backlog triage from CI gating to block new violations



TOOL REPORTS
& FINDINGS



HUMAN JUDGMENT
BRIDGE



PRIORITIZED ACTION
& QUALITY GATE

Measuring Progress and Avoiding Common Pitfalls



- Track prevention and remediation separately: new violations near zero; backlog shrinks



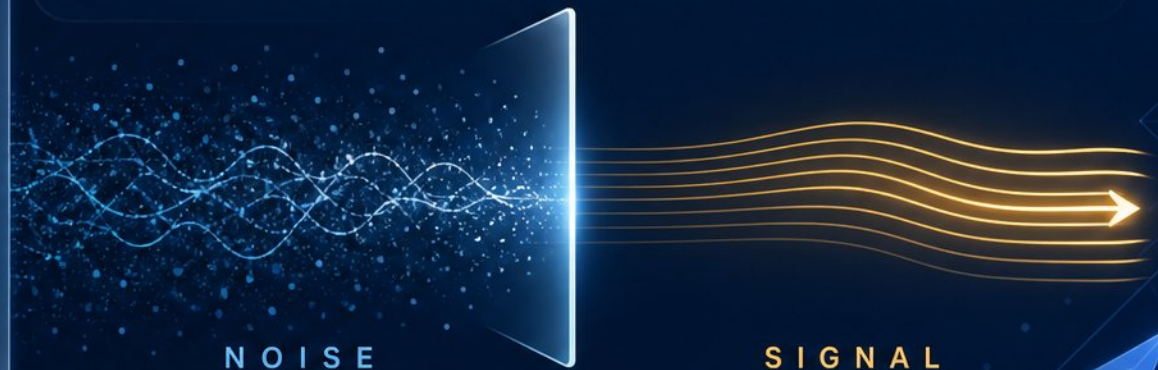
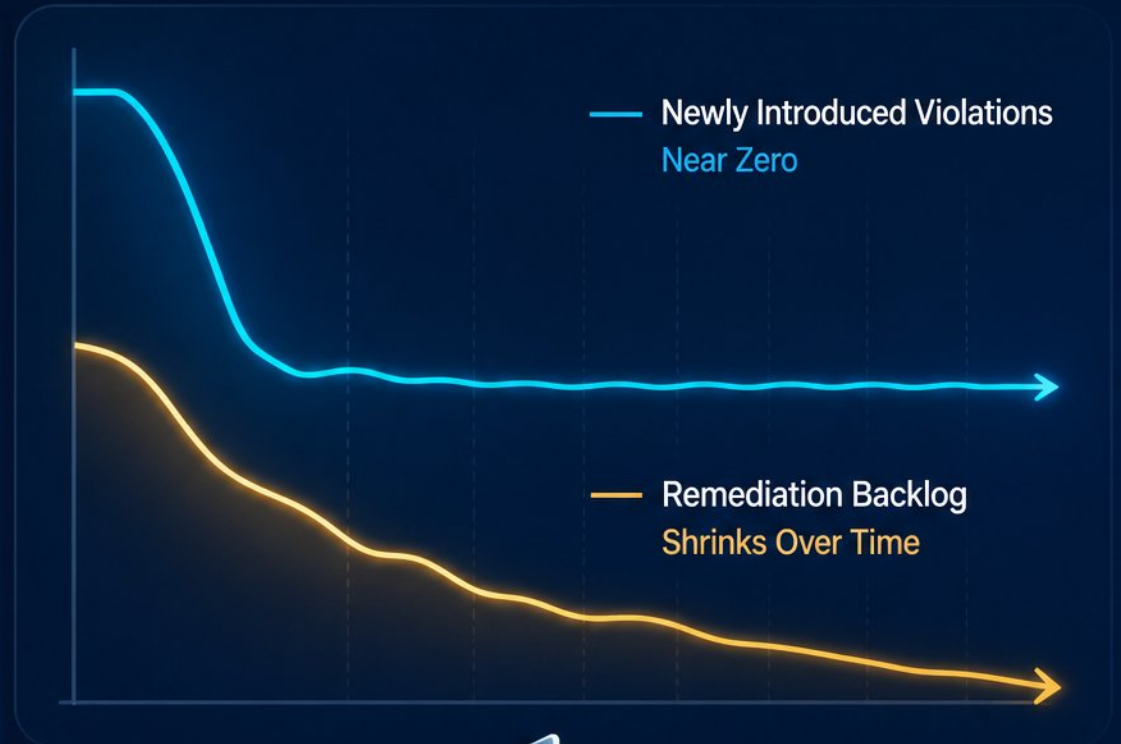
- Key metrics: violation trend, PR block rate, time-to-fix, ignore-list size



- Avoid pitfalls: green Lighthouse $\neq$ compliance, overlay widgets, false-positive distrust



- Treat false positives as process issues: document ignore-lists, review quarterly



From Selection to Adoption: Practical Next Steps

- - Run a hands-on comparison of two tools on the same page
- - Build a minimum viable workflow: design check, CI/CD gate, screen reader pass
- - Immediate actions: designers install a contrast plugin; developers add axe to one pipeline; content leads add a publishing checklist
- - Roll out warning-only checks first, then enforce over 2-3 quarters



Designers

Install a
contrast
plugin.



Developers

Add axe to
one pipeline.



Content Leads

Add a publishing
checklist.



Roll out warning-only checks first,
then enforce over 2-3 quarters

Governance, Training, and Sustainable Accessibility



- Conformance is never one-time; every content update or plugin change can introduce regressions
- Governance needs clear ownership, policy, periodic audits, and continuous trend monitoring
- Training builds lasting capacity: developers learn semantics, designers learn contrast and focus, authors learn alt text and headings
- Prevent new debt while remediating old: procurement controls, accessible templates, and publishing guardrails stop inaccessible content at the source

Key Takeaways and Recommended Resources



- Automation is a scalable floor; human evaluation is the ceiling



- Minimal viable stack: axe-core, visual scanner, screen reader, manual workflow



- Move from tool adoption to process discipline with clear ownership



- Stay current with W3C-WAI, WCAG updates, and ACT rules implementations

MINIMAL VIABLE STACK



LAYERED AUDIT STACK

PersonWise.

PersonWise • AI digital-human course platform



Scan the code or click anywhere to watch this course live, with voice Q&A

personwise.ai/t/209a6f32/public