Principal Engineer

A senior individual contributor providing high-level technical leadership across systems and teams, shaping architecture, engineering practices, and lifecycle reliability. Demonstrates deep expertise across software, data, and DevOps domains while providing technical leadership without direct management authority.

Candidates should use the **STAR method** (Situation, Task, Action, Result). This assessment is about demonstrated experience, not theoretical understanding.

A - Technical Leadership

00:10 *- SFIA ARCH / METL / SLEN Level 5–6*

Leading technical direction across teams, owning key architectural decisions, and governing how systems are engineered throughout their lifecycle.

What to look for:

- Took ownership of a cross-team or cross-system architecture and guided it to adoption
- Set or significantly influenced technical direction (patterns, reference architectures, guardrails)
- Led decisions balancing strategic direction with short-term delivery constraints
- Provided technical leadership in lifecycle practices
- Acted as a go-to technical authority, enabling others rather than centralising all decisions
- Established governance approaches that enable teams rather than block them
- Drove consistency across systems while allowing appropriate variation
- Demonstrated measurable improvements in system quality or team velocity from architectural decisions

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B - Engineering Best Practice

00:15 *- SFIA PROG / DATM / SLEN Level 5–6*

Defining, improving, and enforcing robust engineering practices across software, data, and lifecycle/reliability disciplines.

What to look for:

- Led the introduction or evolution of coding standards, branching strategies, or review practices
- Defined or improved data models, data quality standards, retention, or lineage practices
- Drove adoption of DevOps/SRE-style lifecycle practices (automation, observability, resilience) across teams
- Demonstrated improvements in reliability, performance, or operability as a result of these practices
- Used metrics and feedback loops (DORA, performance, data quality) to refine engineering practices
- Established or evolved CI/CD pipelines and deployment practices
- Championed test automation strategies (unit, integration, contract, end-to-end)
- Balanced pragmatism with engineering excellence, knowing when to enforce standards vs. allow flexibility

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C - Problem Solving & Systems Thinking

00:20 *- SFIA DESN / ARCH Level 5–6*

Diagnosing complex system-level problems and designing solutions that balance constraints, risks, and long-term maintainability.

What to look for:

- Tackled complex, ambiguous technical problems spanning multiple services or domains
- Showed clear evaluation of options and trade-offs (cost, risk, performance, complexity, data implications)
- Used models, diagrams, or other abstractions to reason about large systems and dependencies
- Anticipated downstream consequences (operability, extensibility, data quality, integration impacts)
- Delivered solutions that proved robust in production rather than fragile “point fixes”

- Applied systems thinking to understand second-order effects and feedback loops
- Prototyped and validated approaches before committing to full implementation
- Documented architectural decisions and rationale (ADRs, RFCs, design docs)

D - Continuous Learning & Professional Standards

00:25 *- SFIA PDSV Level 5–6*

Maintaining professional currency and actively supporting the development of others in line with organisational requirements.

What to look for:

- Demonstrates deliberate, ongoing development of their own skills aligned with organisational needs
- Has concretely supported others' growth (mentoring, coaching, structured learning plans, internal talks)
- Has helped define or refine capability frameworks, learning paths, or communities of practice
- Links professional standards (safety, security, ethics, compliance, quality) to day-to-day engineering decisions
- Uses retrospectives, feedback, or post-incident reviews to improve both personal and organisational practice
- Shares knowledge effectively through documentation, presentations, or open source contributions
- Stays current with industry trends and evaluates their applicability critically
- Role models continuous learning and intellectual humility

E - Communication & Influence

00:30 *- SFIA RLMT Level 5–6*

Communicating complex technical ideas clearly and influencing stakeholders to achieve mutually beneficial outcomes through structured engagement.

What to look for:

- Translates complex technical and architectural issues into clear language for non-engineers
- Builds and maintains trust with key stakeholders (product, business, operations, clients)
- Handles conflict or disagreement constructively (e.g. pushback on scope, constraints, or standards)
- Uses structured engagement (workshops, decision records, DACI/RACI, ADRs) to reach decisions
- Demonstrates influence beyond their direct line authority (e.g. shaping roadmaps, standards, or investment)
- Tailors communication style and level of detail to different audiences
- Represents engineering perspective in strategic cross-functional initiatives
- Manages stakeholder expectations transparently, especially when delivering difficult messages

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Scoring Matrix

Thresholds: *20+* is a pass

Competency	1	2	3	4	5
A - Technical Leadership					
B - Engineering Best Practice					
C - Problem Solving & Systems Thinking					
D - Continuous Learning & Professional Standards					
E - Communication & Influence					