

AI Integration Checklist for CTOs

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A 15-point framework covering everything from infrastructure readiness to team training and ROI measurement. Use this checklist before, during, and after your AI adoption initiative.

1. Infrastructure Readiness

- Audit existing compute resources (CPU/GPU capacity, cloud budget)
- Confirm data pipeline can support model inputs/outputs at required throughput
- Evaluate latency requirements — real-time vs batch inference
- Review storage capacity for model weights and embeddings

2. Data Governance & Privacy

- Identify all data sources feeding AI systems and classify sensitivity levels
- Document data retention, deletion, and anonymisation policies
- Confirm GDPR / CCPA / SOC2 compliance posture for AI data flows
- Decide: cloud LLM vs private/on-prem deployment (see our Private LLM Guide)

3. Use Case Identification

- List top 10 repetitive engineering workflows by time cost
- Score each by feasibility, impact, and data availability
- Prioritise 2-3 high-impact, low-risk pilots for phase one
- Define success metrics for each pilot (time saved, error rate, throughput)

4. Build vs Buy Decision

- Evaluate SaaS AI tools (GitHub Copilot, Cursor, ChatGPT Enterprise, etc.)
- Assess open-source models (Llama 3, Mistral, Phi-3) for self-hosting
- Calculate total cost of ownership over 12 months for each option
- Factor in vendor lock-in risk and data egress costs

5. Team Readiness & Training

- Assess current AI literacy across engineering, product, and leadership teams
- Identify AI champions / internal advocates to drive adoption

- Schedule hands-on workshops for core engineering teams
- Create internal documentation and prompt libraries for common workflows

6. Implementation Roadmap

- Define phased rollout: Pilot → Limited rollout → Full deployment
- Assign ownership: who is responsible for each AI tool/workflow
- Set 30/60/90-day milestones with measurable outcomes
- Establish rollback plan if a pilot underperforms

7. ROI Measurement

- Baseline current metrics before AI introduction (hours, error rates, costs)
- Track velocity improvements post-deployment (PRs merged, tickets closed)
- Calculate developer hours saved × fully-loaded hourly cost
- Report monthly ROI to stakeholders with before/after comparisons

Need help executing this checklist? Terminal Velocity AI offers hands-on implementation engagements. Book a free consultation at terminalvelocityai.tech