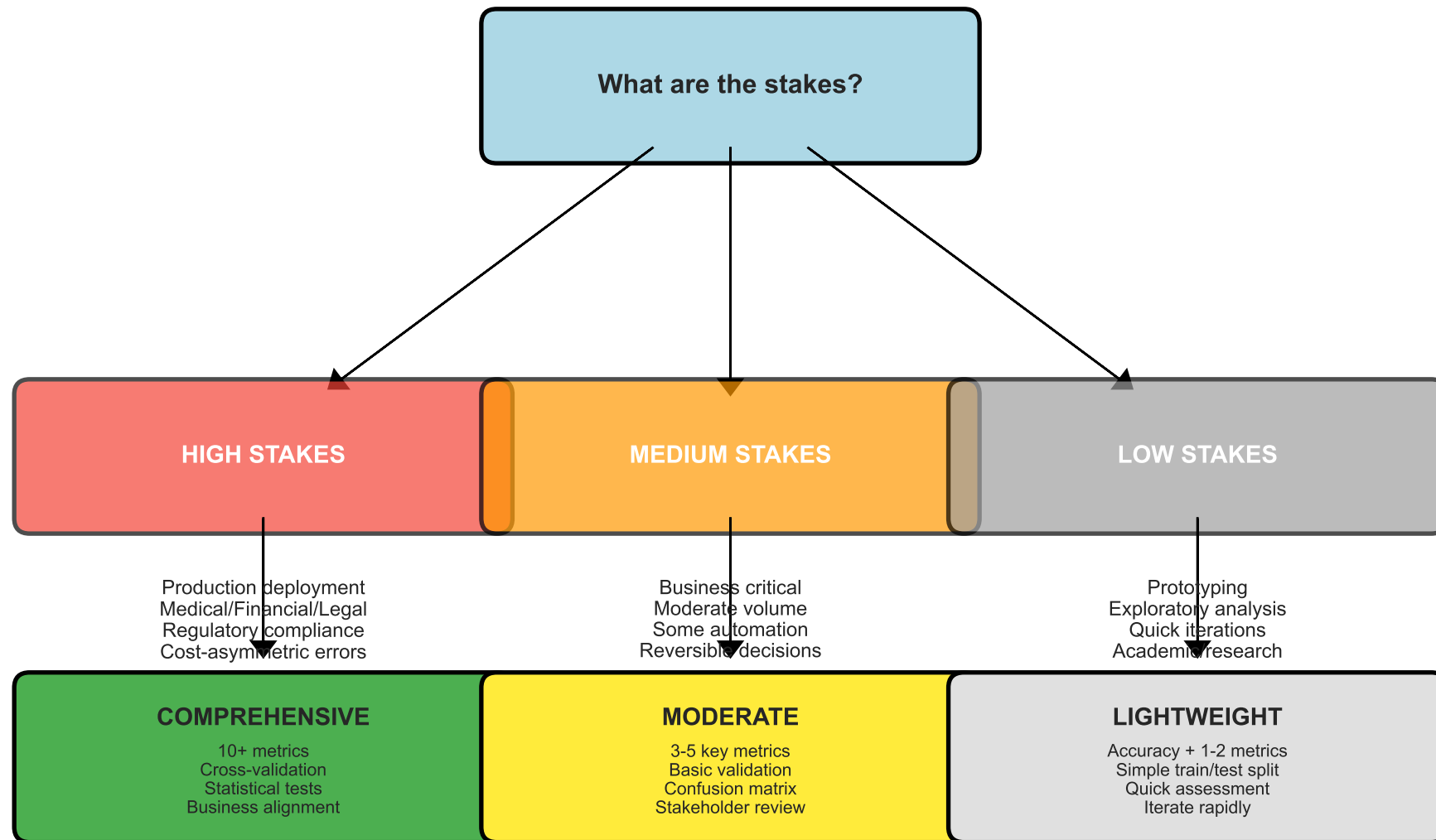


When to Use Multi-Metric Validation: Decision Framework



Additional Considerations

Volume: High volume (1000+/day) → More rigorous validation needed
Regulation: FDA, SEC, GDPR compliance → Mandatory comprehensive validation
Cost Asymmetry: If FN costs >> FP costs → Multi-metric essential (optimize recall vs precision)
Class Imbalance: Severe imbalance (>95:5) → Accuracy alone completely insufficient
Stakeholders: Multiple non-technical stakeholders → Business metric translation critical
Time Constraints: Tight deadlines → May need lightweight first, then iterate to comprehensive

Principle: Match validation rigor to decision consequences - comprehensive for production, lightweight for exploration