Metrology Buying & Implementation Checklist

ZEISS Industrial Quality Solutions

Management & Leadership Team

Focus: Business case, risk, ROI, and long-term strategy

Strategic Alignment

- [ ] Does this system align with our long-term quality and manufacturing strategy?
- [ ] How does this investment support growth, capacity, or new product initiatives?
- [ ] What challenges does this solution address (scrap, rework, escapes, bottlenecks, downtime)?

Financial & ROI Considerations

- [ ] Total solution value assessed — including system performance, software capability, training, service support, upgrade path, and long-term operational confidence?
- [ ] Projected ROI calculated - cost of not doing anything vs. a new solution?
- [ ] Productivity gains or cost avoidance quantified where possible?
- [ ] Budget approved for both capital expense and ongoing operational costs?

Vendor & Risk Evaluation

- [ ] Vendor stability and long-term support assessed?
- [ ] Service coverage and response expectations understood?
- [ ] References or case studies reviewed from similar companies/industries?

Internal Readiness

- [ ] Executive sponsor identified for the project?
- [ ] Cross-functional alignment confirmed (Quality, Engineering, Operations, IT)?
- [ ] Success metrics defined for year 1 and beyond?

Quality Department

Focus: Measurement integrity, compliance, and daily usability

Measurement Requirements

- [ ] Accuracy, uncertainty, and repeatability requirements clearly defined?
- [ ] Applicable standards identified (ISO, AS9100, IATF, FDA, etc.)?
- [ ] System capability validated against current and future part requirements?

Workflow & Usability

- [ ] Inspection workflows mapped (incoming, first article inspection, in-process, final inspection)?
- [ ] Operator skill levels considered in system selection?
- [ ] Programming, reporting, and approval workflows understood?

Compliance & Documentation

- [ ] Calibration and traceability requirements understood?
- [ ] Audit documentation and reporting capabilities confirmed?

Training & Adoption

- [ ] Operator and quality engineer training needs identified?
- [ ] Ongoing training or refresher plans discussed?
- [ ] Internal ownership defined for system best practices?

Cross-Functional Implementation Milestones

Helpful for project planning and accountability

- [ ] Vendor demos & part studies completed
- [ ] Internal evaluation & scoring finalized
- [ ] Capital approval secured
- [ ] Purchase order issued
- [ ] Site readiness confirmed
- [ ] Installation scheduled
- [ ] Training completed
- [ ] Production release completed

Engineering & Technical Team

Focus: Technical fit, integration, and long-term flexibility

Technical Fit & Capability

- [ ] System meets current and future part complexity requirements?
- [ ] Material types, tolerances, and geometries fully supported?
- [ ] Cycle times aligned with production and inspection needs?

Software & Data Integration

- [ ] Compatibility confirmed with CAD software and file formats?
- [ ] Integration with SPC, QMS, MES, or data systems evaluated?
- [ ] Data outputs and reporting formats aligned with internal needs?

Facility & Infrastructure Readiness

- [ ] Floor space, layout, and environmental requirements reviewed?
- [ ] If required, power, air, temperature, and vibration requirements confirmed?
- [ ] IT and cybersecurity requirements reviewed (network access, data storage)?

Installation & Ramp-Up

- [ ] Installation timeline understood and aligned with production schedules?
- [ ] Internal resources identified for installation and setup support?
- [ ] Part programming and application support planned?

Long-Term Flexibility

- [ ] Upgrade paths and modular options understood?
- [ ] Automation or future expansion possibilities evaluated?
- [ ] Software roadmap and update policy reviewed?