Workplace Risk Assessment for Manufacturing

> Built on practical HIRA/JSA methods, aligned to IOSH guidance and UAE expectations (MOHRE, OSHAD/ADPHC, Dubai Municipality) and supportive of ISO 45001. Part of NPM's Workplace Risk Assessment Services UAE portfolio.

Service Objectives

- Embed a defensible, repeatable process to identify, evaluate and control hazards integrated with the OSHMS and production planning.
- Map job steps and line configurations; verify engineering, administrative and PPE controls; close residual risk for people, product and plant.
- Issue a calibrated risk register with likelihood–severity ratings and ALARP, plus prioritised, time-phased action plans with accountable owners.
- Align priorities to criticality, downtime windows and maintenance strategies to minimise disruption and protect throughput/OEE.
- Strengthen competence deployment via clear safe work procedures, point-of-use visuals and line-clearance standards.
- Reinforce contractor interfaces (e.g., OEM technicians, forklift drivers) to prevent reintroduction of risk during servicing, changeovers or material moves.

Who This Service Is For

- Operations with machining/toolrooms (CNC/manual), welding/fabrication, die-casting/injection moulding, coating/curing, bottling/canning, pharma and FMCG packaging, heavy assembly/erection.
- Facility types across metals, plastics/rubber, food & beverage, pharmaceuticals, electronics, wood products, printing/packaging, building materials.
- Stakeholders: HSE managers/officers, plant/operations managers, production supervisors, maintenance and reliability leads, quality managers, warehouse/logistics leads, EHS coordinators.
- Key hazard vectors: rotating equipment/entanglement, hot work/ignition, chemical exposures (solvents, resins, coolants, adhesives), ergonomics/manual handling, MHE–pedestrian interfaces, electrical LOTO/arc-flash, work at height, compressed air/pressure systems.
- UAE context: shift handovers, multi-lingual crews, contracted service technicians and periodic OEM interventions across single or multi-site footprints.

> Evidence-based outputs include a risk register, prioritised action plan, annotated layouts, photographic log and upload-ready findings register for action tracking.

Duration & Process Overview

- Single-shift, single-hall: 2–3 on-site days + 2–4 off-site days for analysis and reporting.
- Multi-shift plants with multiple lines/utilities: 4–7 on-site days + 1–2 weeks for analysis, validation and final deliverables.
- Multi-site portfolios: hybrid model with remote document pre-reviews and targeted site visits; optional phasing by department to align with peaks, OEM visits or shutdowns.
- Cadence: kick-off, scheduled walkdowns and operator interviews, interim debriefs for quick wins, validation workshop and close-out.

Methodology

Scoping & Planning

Pre-engagement scoping aligned to takt times, shift rosters, OEM maintenance visits and planned changeovers.

Targeted Document Review

Procedures/SWPs, JSA/JHA, PTW, incident history, OEM manuals, chemical inventories/SDS, electrical single-lines and LOTO lists.

On-site Observations & HIRAs

Live (where safe) or simulated task observations; task- and area-based HIRA; validation of process/equipment safeguards.

Interfaces & Safeguards Verification

Pedestrian–vehicle segregation, ergonomics/manual handling, racking integrity, confined/hot work interfaces, LOTO strength, machine guarding, changeover methods.

Stakeholder Interviews

Focused, multi-lingual operator, maintainer and supervisor interviews to capture tacit knowledge and informal workarounds.

Risk Evaluation & Controls

Transparent, calibrated matrix; actionable controls (engineering, procedural, PPE, visuals, toolbox talks, monitoring).

Validation & Finalisation

Workshop to confirm practicality, ownership and timelines compatible with production schedules; close-out.

Phase	Objective	Deliverable
Scoping & Planning	Define scope and schedule around takt times, shifts and OEM windows.	Engagement plan and site schedule.
Targeted Document Review	Collect evidence and identify baseline gaps.	Document review log and gaps list.
On-site Observations & HIRAs	Observe tasks/areas during live or simulated cycles; run HIRAs.	HIRA records and initial findings.

Safeguards & Interfaces Verification	Validate LOTO, guarding, segregation, ergonomics, racking, hot/confined work controls.	Verification notes and photographic log.
Stakeholder Interviews	Capture tacit knowledge and workarounds from operators, maintainers and supervisors.	Interview insights integrated into causes/controls.
Risk Evaluation & Controls Definition	Risk-rank using a calibrated matrix; translate into practical controls.	Calibrated risk register (with ALARP) and prioritised, time-phased action plan.
Validation Workshop	Confirm practicality, ownership and timelines with cross-functional team.	Agreed actions with owners and due dates.
Reporting & Handover	Consolidate findings and integrate with OSHMS and audit readiness.	Executive summary; methodology/scope; annotated layouts; photographic log; before/after ratings; upload-ready findings register; suggested KPIs and verification checks.

Practicable measures are emphasised: retrofittable guards, standardised LOTO points and tags, resilient segregation (guardrails/bollards/markings), point-of-use SDS and labelling, ergonomic aids (lift assists, turntables, roller conveyors), and robust supervisory checks suitable for high-tempo environments.