Automation Pyramid for Mining and Minerals Processing



Management Level



Planning Level



Supervisory Level

Level 4
Business &
Logistics

Level 3
Manufacturing
Operation Planning

Level 2 Monitoring & Supervising Enterprise Resource Planning (ERP)

Manufacturing Execution Systems (MES) – Source Data Integration & Centralisation, Data Quality Control and Validation, Asset Digital Twins, Process Digital Twins, Data Warehouse, Data Analytics and Visualisation Tools, Mine Planning Systems

> Data Historians, Laboratory Information Management Systems (LIMS), Weighbridge Systems, Dispatch Systems etc



Level 1
Sensing & Manipulating
the Production Process

Supervisory Control and Data Acquisition (SCADA) and Control Systems



Level 0
Physical
Production Process

PLC on Pumps, Tanks etc, Sensors, Drone/Vehicle Instrumentation, Automated Sampling