# WP4 : Software Tools

**Deliverable 4.2: Stress test of g-2 analysis framework with 10^11 simulated Muon samples (UCL, M12)**

- **MDC0 complete : 100 million events**

    Used for testing, validation and development of analysis algorithms

- **MDC1 underway : 100 billion events**

    Improvements have been made based on MDC0 :

    - Included coordinate system tool and trajectories art record

    - Now including detector packages (physics analysis codes have been improved and validated)

    - Using the latest version of art, Geant4 and ROOT

    - Improvements to the data processing speed

    Simulation has been validated and production should begin soon

- **MDC2 : 100 million events**

    Using the inflector gun (fully tracks the muon orbit)

    Including extra auxiliary detectors (fibre harps)

    Will be used for studies that require the full muon orbit (e.g. lost muons)