

Predict Soldier Performance Before Physical Testing.

SoldierSim is a physics-based digital human engineering platform built on Santos. It enables defense organizations and equipment manufacturers to configure soldiers, import and evaluate equipment, simulate operational tasks, quantify biomechanics and human performance, compare alternatives, and generate decision-ready engineering insight.

PROCUREMENT

Compare options

EQUIPMENT DESIGN

Engineer better gear

HUMAN PERFORMANCE

Quantify readiness



CORE CAPABILITIES

- Warrior configuration across male/female anthropometries
- Equipment library (~130 models)
- CAD/3D equipment import and attachment
- Simulation Builder with built-in operational tasks
- Extended Load Carriage for terrain, slope, speed and environment
- Guided comparison and trade-study workflows
- Automatic reports and exportable engineering results

ENGINEERING ANALYSES

- Joint torques
- Center of mass
- Support region
- Ground reaction forces
- Spine shear & compression
- Eye relief & visibility
- Bounding box & cocoon envelope
- Load distribution
- Energy expenditure
- VO₂ / metabolic response
- Hydration & fatigue
- Thermal assessment

WHY SOLDIERSIM

- Physics-based Predictive Dynamics
- Built on the Santos human digital twin
- Evaluate before building physical prototypes
- Compare equipment across anthropometries and tasks
- Quantitative, repeatable engineering metrics
- Standalone, node-locked desktop deployment
- No cloud connection required
- Maintenance releases included during active license term

VALIDATED. TRUSTED. PROVEN.

23+

Years of development

180+

Peer-reviewed publications

Hundreds

Soldiers & Marines in data/validation

Used by

US, Singapore & UK military

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REQUEST A DEMONSTRATION

DESIGN BETTER EQUIPMENT. PROTECT SOLDIERS. MAKE BETTER DECISIONS.