Algoryx offers an efficient solution for solving challenges in bulk and granular material handling using simulations driven by AgX Dynamics inside a powerful 3D-CAD editor. The software can be used to evaluate and optimize industrial mining processes with materials such as mineral ore, iron pellets or rocks, based on new or existing CAD-models.

FEATURES
✓ Bulk material simulations directly in your CAD-models.
✓ Material flow optimization.
✓ Strong dynamic coupling with other rigid multibody systems, e.g., machines, vehicles, conveying systems.
✓ Very fast due to extensive multicore processor parallelization.
✓ Journal system for recording, playback and analysing simulation data.

BACKGROUND
When handling materials such as iron pellets, medicine pills, rocks or other bulk materials, simulation is a powerful tool for optimizing and increasing understanding of the process. Parallel computing and optimized data structures allow for fast and scalable simulations with millions of particles even on conventional desktop computers.

The 3D editor is based on SpaceClaim Engineer, the world's leading direct modeling tool for engineers, which provides interoperability with all major CAD systems.

The simulations utilize a non-smooth DEM with Hertzian contacts, dry friction, rolling resistance and adhesion. The methods are based on years of research from UMIT/Umeå University and have been used extensively in industry grade applications.

BULK SIMULATION
 ✓ VEHICLES, HEAVY EQUIPMENT
 ✓ MINING
 ✓ IRON PELLETS
 ✓ MINERAL ORE
 ✓ ROCKS

BENEFITS INCLUDE
✓ Reduce overall risks.
✓ Reduce maintenance and retrofit costs.
✓ Predict and avoid production stops.
✓ Reduce wear and tear.
✓ Test new innovative solutions.
✓ Optimize for energy efficiency and quality.

Simulate bulk material with strong coupling to articulated rigid body systems.

Use post-processing tools for visual data analysis.