



# CREO CAPABILITIES FOR STARTUPS



## CORE CREO CAPABILITY

**Parametric Design** Power to model any geometry regardless of shape, size or complexity

**Real-time Rendering** Use real-time rendering to visualize realistic products rendering real world conditions (i.e., materials, lights, reflections, shadows)

**2D Detailing (Drawings)** Simplified creation and documentation of detailed manufacturing requirements

**Assembly Design & Performance Management** Easily create and manage complex assemblies using tools to manage and improve system performance

**Design Reuse & Automation** Rapidly create and reuse standardized components, features and geometry (i.e., sketches)

**Freestyle Design** Rapidly manipulate primitive shapes to create high quality freeform and stylized geometry

**Model Check** Automatically evaluate parts, assemblies and drawings to validate modeling best practices and compliance with defined company standards

## CORE CREO CAPABILITY

**AR Design Share** Easily create, publish and securely share Augmented Reality experiences managing models and viewer access

**Design Animation** Create detailed animations to visually illustrate product details and procedural product information

**Design for Additive Manufacturing** OOTB support for Stratasys and 3D Systems printers, supporting tools to enable model preparation, print validation, printer tray positioning, etc.

**Import Data Doctor** Easily repair imported data using tools to repair, modify and featurize imported geometry

**Mechanism Design** Define assemblies using true mechanical constraints to visualize and analyze kinematic motion analysis

**Parametric Surfacing** Create free-form and analytical surfaces using parameters, constraints and calculations to capture design intent

**Plastic Part Design** Specialized functionality to speed the creation of plastic part design (i.e., rib, draft)

**Sheetmetal Design** Fast creation of complex sheet metal parts and associated flat patterns (manufacturing)

**Unite Technology** Directly open and import common CAD formats. Easily integrate, edit and work with multi-CAD data from any CAD source to improve collaboration.

**Weld Design** Rapidly define and document weld fabrication and process requirements

**3D Annotations** Define a single source of truth using 3D annotations to support model-based definition (MBD)



## INTEGRAL APPS AND EXTENSIONS

**Additive Manufacturing** Rapidly create and optimize lattice structures and define printer tray setup

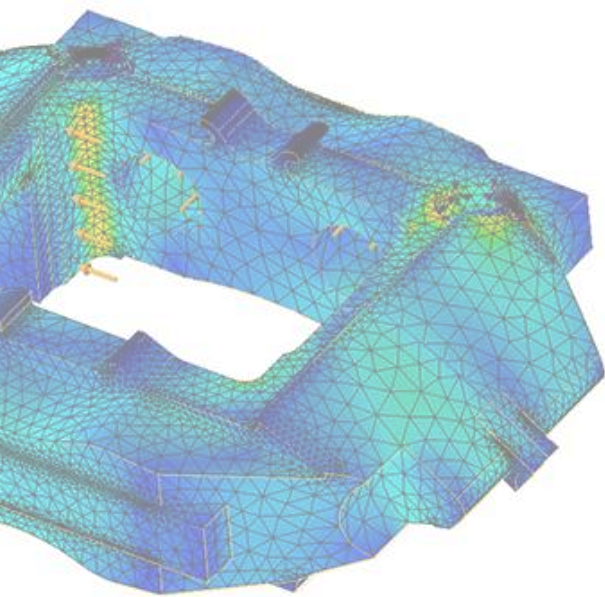
**Advanced Framework** Speed design and improve the accuracy of structural framework assemblies

**Advanced Simulation** Advanced simulation capabilities to support nonlinear materials, large deformation, dynamic and prestress analysis, transient and non-linear thermal

**Ansys Simulation** Creo-embedded high-fidelity linear static structure, modal and thermal analysis powered by Ansys solver and meshing technology

**Behavioral Modeling** Rapidly optimize geometry solving for design goals and engineering objectives

**Computer Aided Verification** Digital inspection and verification of machined parts and assemblies using CMM and first article inspection



**Design Exploration** Rapidly explore, evaluate and review design alternatives using checkpoints to manage files and capture design history

**Direct Modeling (Flexible Modeling)** Make fast, flexible edits to any 3D geometry in Creo

**Fatigue Advisor** Analyze cycle fatigue to determine the number of load cycles components can sustain before failure

**Flow Analysis** Analyze computational fluid dynamics (CFD) to improve the functional performance and quality

**GD&T Advisor** Wizard-like dashboard simplifies and guides the user in the correct application of GD&T

**Generative Topology Optimization** Rapidly generate the optimal design solving for functional objectives, constraints, loads and manufacturing process criteria

**Human Factors Analysis** Analyze human-workplace interactions to validate conformance with health, safety and workplace standards

## INTEGRAL APPS AND EXTENSIONS

**Human Factors Design** Visualize, simulate and optimize human-product interactions to support human-centric design

**Intelligent Fastener** Automated creation of fastener clearance geometry and assembly placement of fastener hardware

**Interactive Surface Design** Combine the power of parametric modeling and flexibility of freeform surfacing

**Layout** Maximize productivity using integral 2D layout and 3D detailed design

**Legacy Data Migration** Support legacy data migration and CAD consolidation efforts

**Mathcad Professional** Document design intent and use engineering calculations to support analysis driven design, verification and validation

**Mechanism Dynamics** Analyze and optimize the dynamic performance of mechanism designs

**Mold Analysis Extension** Analyze and optimize design geometry and mold conditions to avoid part defects and costly rework

**Multi-CAD Collaboration** Easily integrate and work with data from CATIA V4/V5, SolidWorks, Siemens NX and Inventor

**Options Modeler** Build configurable products, assign option choices to configurable modules, and build product variants

**Piping & Cabling** Rapidly create and optimize the routing of 3D cable and piping systems

**Product Insight** Design for connectivity to capture relevant data streams and return real-world data

**Render Studio** Create photorealistic images for design review, sales and marketing

**Schematics** Rapidly create 2D schematics and automate the routing of 3D cable and piping systems

**Creo Simulation Live Plus** Includes the functionality of CSL and adds real-time fluid flow simulation

**Tolerance Analysis** Analyze and understand geometric tolerance stackup and gap analysis

**Tool Design** Accelerate the design of high-quality production mold and cast tooling

**Top-Down Design & Concurrent Engineering** Facilitate and support concurrent design and development using top-down design and publish geometry. Simplify complex assembly designs, streamline the flow of information from design to manufacturing.