Innovation Intelligence™

James R. Scapa
Founder, Chairman & CEO

March 12, 2019

Safe Harbor Statement

The presentations today and the accompanying oral commentary contain "forward-looking" statements that are based on our beliefs and assumptions and on information available to us as of the date of today's presentations. All statements other than statements of historical facts contained in these presentations, including statements regarding our future results of operations and financial position, customer lifetime value, strategy and plans, market size and opportunity, competitive position, industry environment, potential growth opportunities and our expectations for future operations, are forward-looking statements. The words "believe," "may," "might," "objective," "ongoing," "will," "estimate," "continue," "anticipate," "design," "intend," "expect," "could," "plan," "potential," "predict," "project," "seek," "should," "would" or the negative version of these words and similar expressions are intended to identify forward-looking statements..

We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements. Forward-looking statements involve known and unknown risks, uncertainties, assumptions and other factors that may cause our actual results, performance, achievements or expectations to be materially different from any future results, performance, achievements or expectations expressed or implied by the forward-looking statements. Such risks are described in our most recent Annual Report on Form 10-K and other filings that we make with the SEC. Except as required by law, we assume no obligation to update these forward-looking statements publicly, or to update the reasons why actual results could differ materially from those anticipated in the forward-looking statements, even if new information becomes available in the future.

These presentations may also contains non-GAAP financial measures. We have provided a reconciliation of such non-GAAP financial measures to the most directly comparable measures prepared in accordance with U.S. GAAP in the Appendix to these presentations. For further information regarding our use of non-GAAP financial measures, please see our most recently filed Annual Report on Form 10-K.

Altair

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Agenda

Overview of the company

Technology and product review

Knowledge Works demonstrations

Financial overview

Altair

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About Altair

$396M
FY18
Revenue

$50M
FY18
Adjusted EBITDA

16%
FY18
Revenue Growth

20%
FY18
Software
Revenue Growth

8000+
Customer
Installations

A global technology company providing software and cloud solutions in the areas of product development, high-performance cloud computing and data intelligence.

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2018 Revenue

Balanced Globally, Software Drives the Business

Revenue by Region

35%	33%	32%
Americas	EMEA	APAC

Recurring Software License Rate: 89%

Software Product Revenue % of Total: 77%

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Our Vision

Altair transforms design and decision making by applying simulation, machine learning and optimization throughout product lifecycles.

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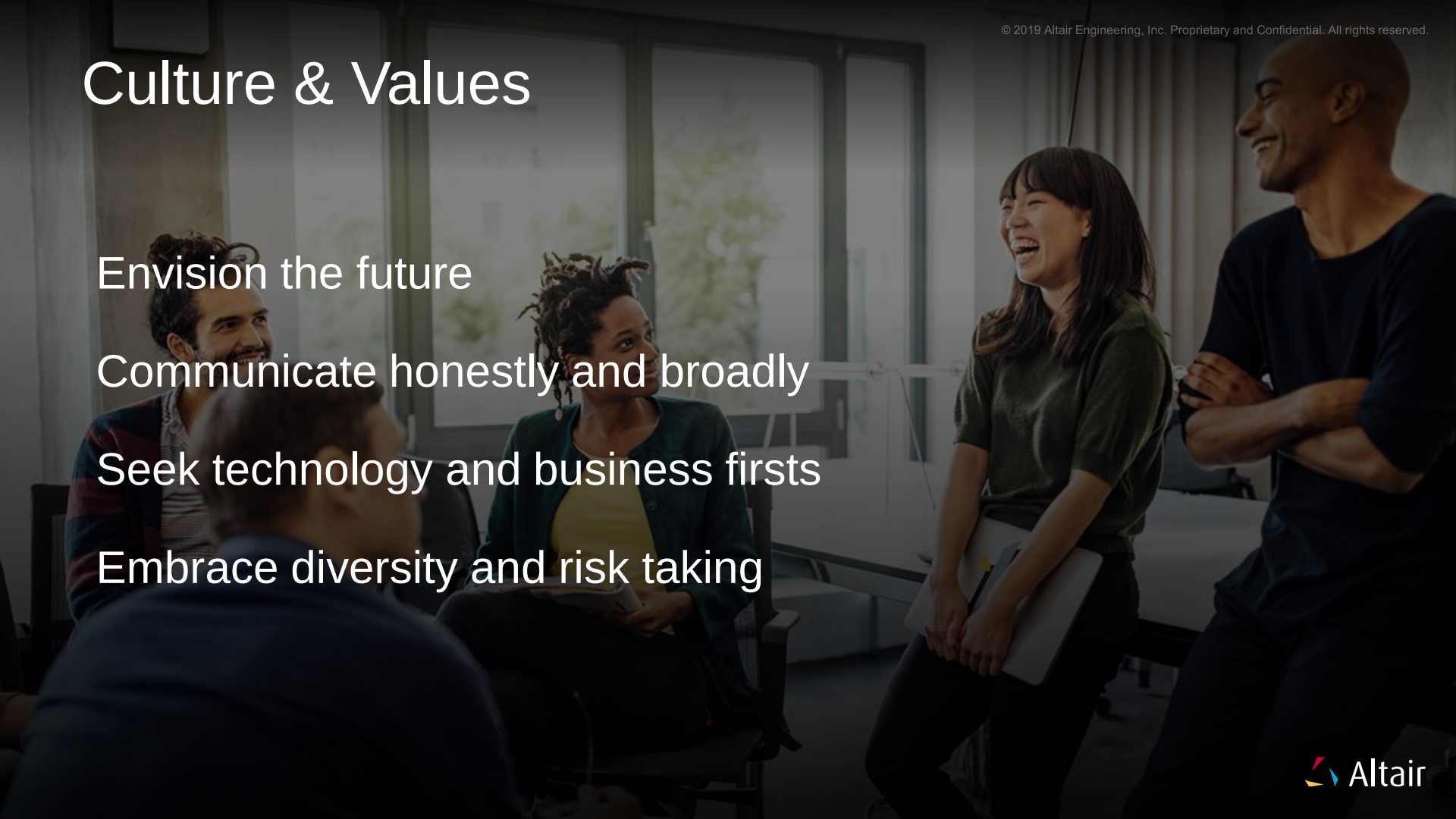
Culture & Values



Envision the future

Communicate honestly and broadly

Seek technology and business firsts

Embrace diversity and risk taking

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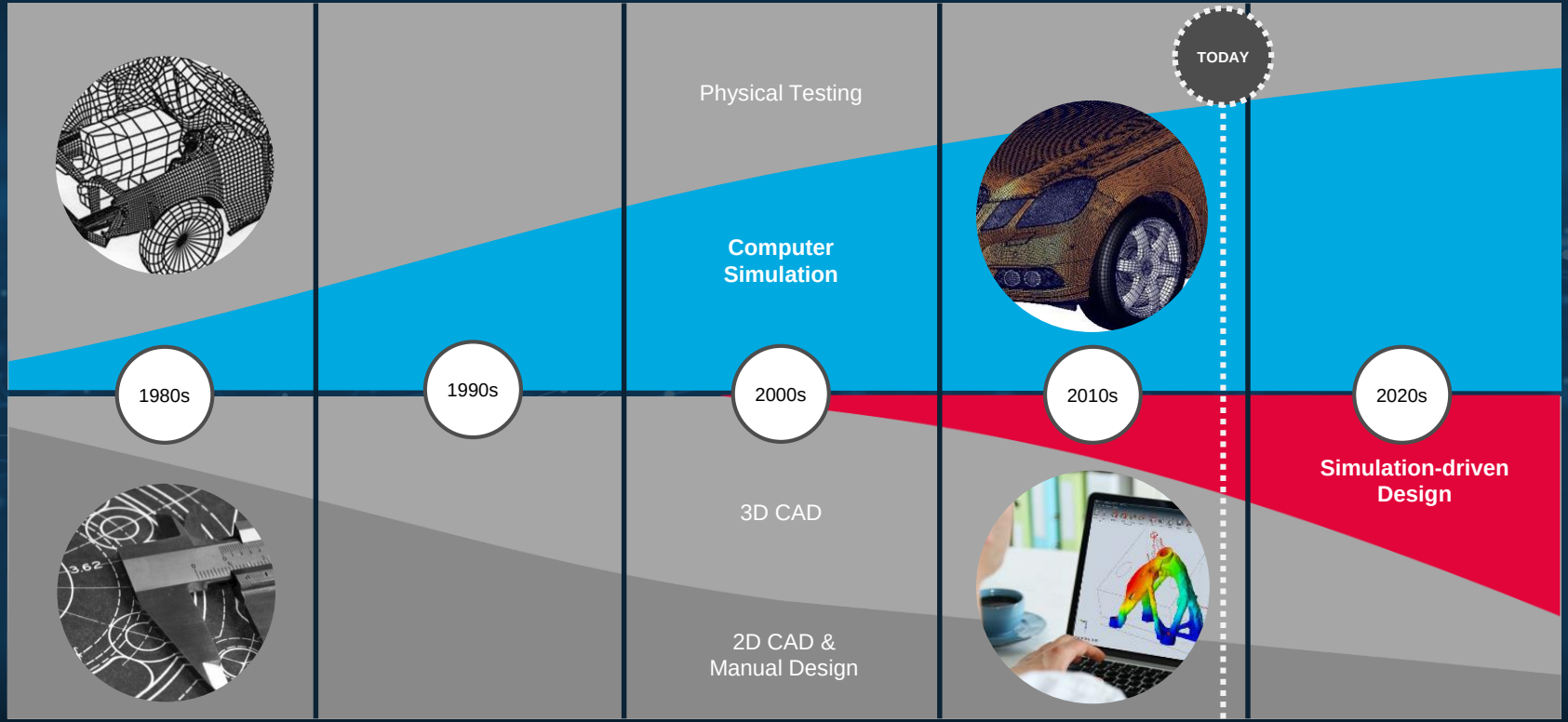
Evolution of Simulation-Driven Design



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Smart Business and Product Design

Global evolution toward smart, connected everything

Drive for increased variety of products with higher quality and better aesthetics

Massive exploration of ideas driving the need for advanced HPC and cloud

Simulation and data intelligence are converging

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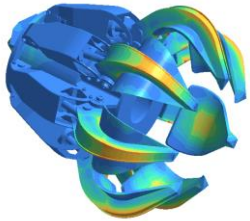
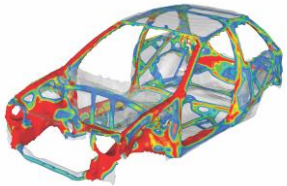
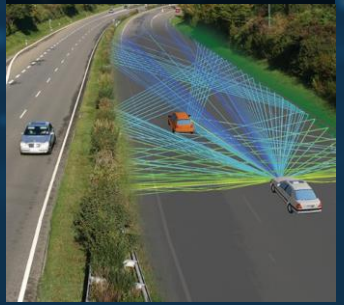
Altair Software

Comprehensive, open architecture solutions for simulation, data intelligence and cloud computing

Design, Modeling and Visualization	Physics Simulation	Data Intelligence	High-Performance Cloud Computing	Internet of Things
				

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One Comprehensive Platform

Altair Knowledge Works™

Altair solidThinking™ | Altair SmartWorks™ | Altair PBS Works™

Altair HyperWorks™

Design, Modeling, and Visualization	Physics Solvers	Simulation-driven Design	Data Intelligence	Internet of Things	High-performance Cloud Computing
HyperMesh	OptiStruct	WinProp	Inspire	Inspire Cast	Monarch Studio	SmartEdge	Professional
HyperCrash	Radioss	Flux	Inspire Extrude	Inspire Form	Knowledge Studio	SmartCore	Accelerator
HyperView	AcuSolve	HyperStudy	Compose	Activate	Knowledge Hub	SmartSight	Access
HyperGraph	Feko	MotionSolve	Embed	SimSolid			Allocator
MotionView	ultraFluidX	nanoFluidX	SimLab sT	Altair 365			Control
SimLab	Multiscale Designer						

+

Altair | Partner Alliance

PHOENIX INTEGRATION · Brüel & Kjær BEYOND MEASURE · Intelligent Light Advancing CFD, Advancing you · GRANTA MATERIAL INTELLIGENCE · AVL · GEONX · FLUIDON · FEMFAT software BY MAGNA POWERTRAIN

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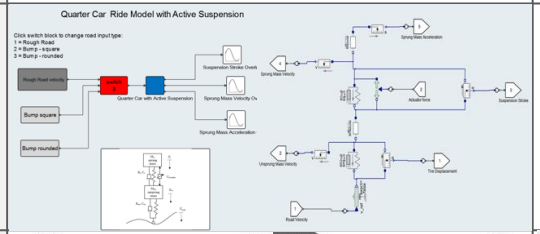
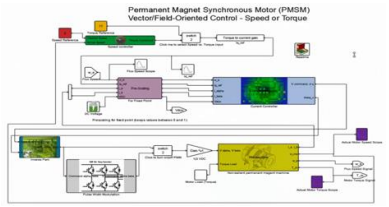
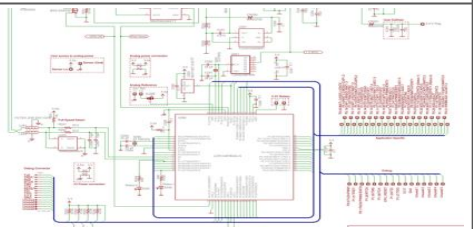
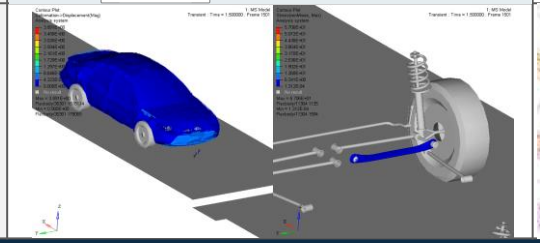
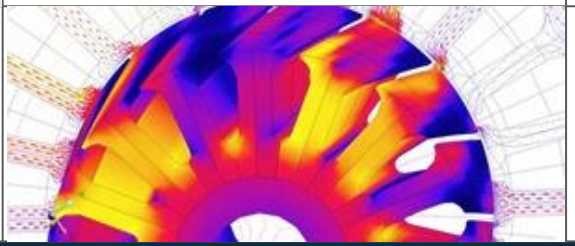
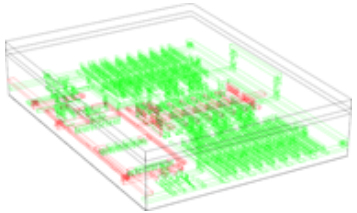
Models: From 0D to 3D

	Mechatronics	Power	Electronics
0D	$\begin{bmatrix} x \\ y \end{bmatrix} = \left[\begin{array}{c\|c} A & B \\ \hline C & D \end{array}\right] \cdot \begin{bmatrix} x \\ u \end{bmatrix}$	$\frac{\Theta(s)}{E_{in}(s)} = \frac{\alpha}{JRs^2 + (B_r R + \alpha^2)s}$	$\dot{x} = f(x,u,t)$ $y = g(x,u,t)$
1D			
3D			

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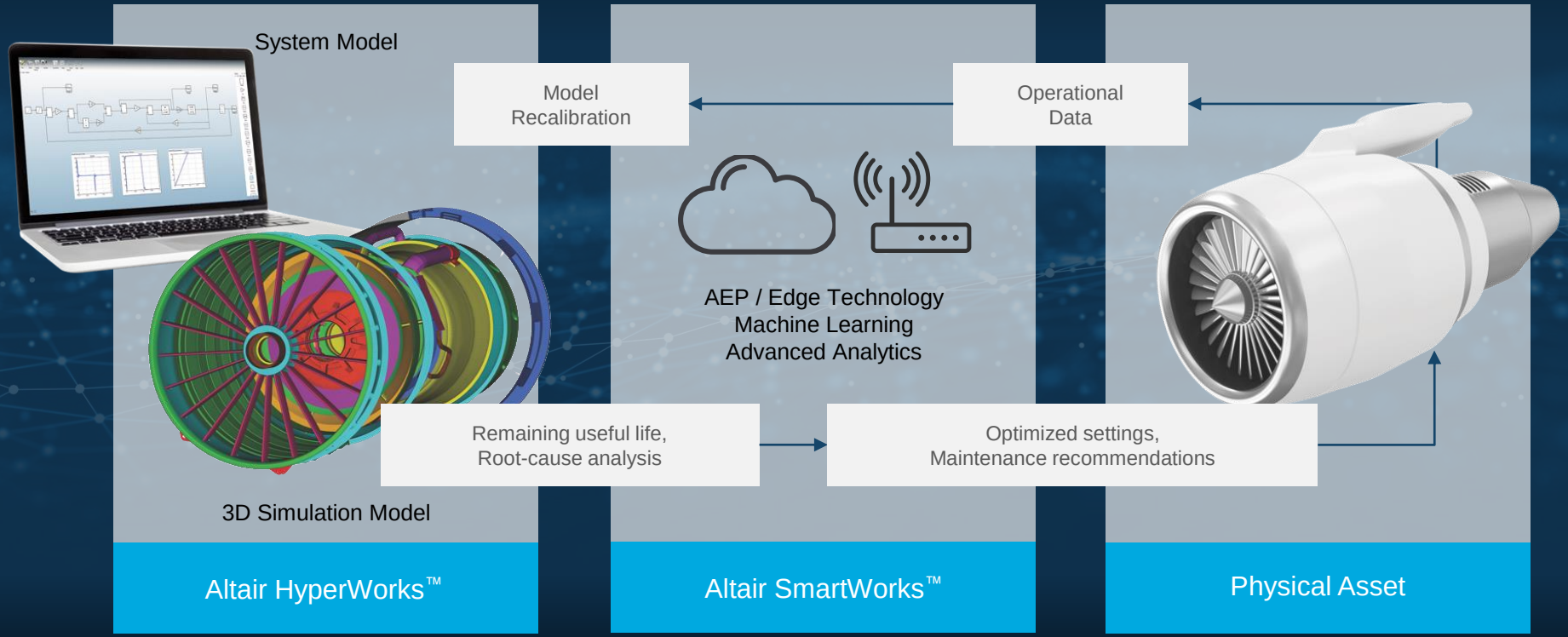
Altair Unified Digital Twin



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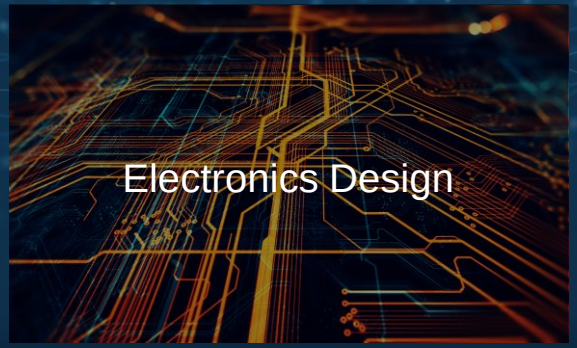
Altair’s Technology Focus



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Technology: Organic and Acquired

1990s

HyperMesh
OptiStruct
MotionView
HyperGraph
HyperForm
HyperStudy
HyperXtrude

Computational Mechanics

2000s

HyperView
MotionSolve
HyperCrash,
RADIOSS
PBS Professional
HiQube
Evolve

HiQube

solidThinking

Inspire
PBS Cloud, PBS Access
AcuSolve, uFx, NFx
Simlab
Weight Analytics

Vissim

SimLab

FluiDyna

2010s

Compose, Activate, Envision
Embed, Click2Cast, MDS
FEKO, FLUX, WinProp,
TheaRender, Modeliis, Carriots,
ESAComp, Runtime, ElectroFlo,
Candi, SimSolid, Monarch, Swarm,
KnowledgeSTUDIO, Panopticon

CLICK2CAST

MODELiiS

ElectroFlo

carriots®

CANDI

Componeering

SIMSOLID

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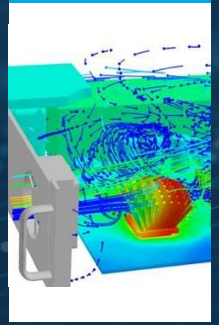
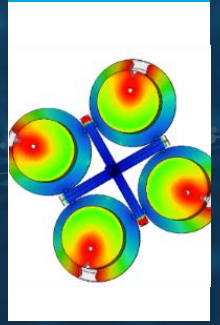
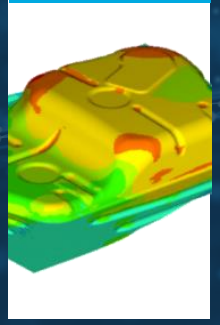
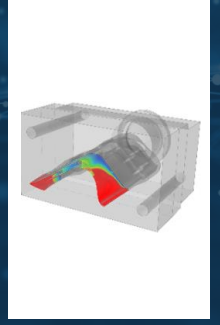
Altair Simulation-Driven Design

Studio	Structures	Motion	Fluids	Casting	Injection Molding	Forming	Extrusion	Print3D
								

Altair Inspire™

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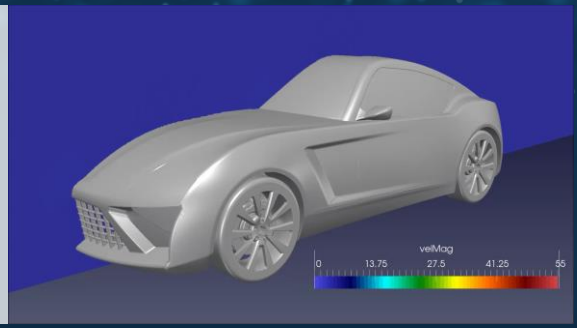
Recent Acquisitions

Runtime

High throughput job scheduling and mission critical dependency management. Mainly targets EDA software applications with potential in financial modeling.

ultraFluidX and nanoFluidX

GPU based CFD solvers for external aerodynamics and oiling simulation.



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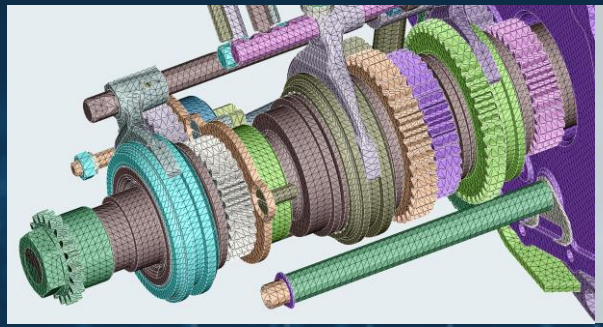
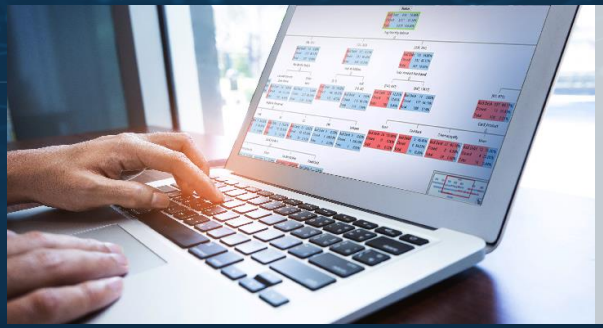
Recent Acquisitions



SimSolid

Structural analysis software developed specifically for design engineers. It eliminates geometry simplification and meshing, the two most time-consuming and expertise-extensive tasks done in traditional FEA, enabling the analysis of fully-featured CAD assemblies in minutes without meshing.



Datawatch

Solutions give you the ability to work with more data, that you can trust and believe in, and that empowers you to win minds and transform your business.

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Well-Established and Growing Global Customer Base

Automotive	Aerospace	Financial Services	Government	Heavy Equipment
Life/Earth Sciences	Retail	Consumer Goods	Energy	Architecture

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Software Growth Opportunities

Grow market share for solvers and high-performance cloud computing products

Disrupt traditional markets with simulation and AI-driven design and digital twins

Grow market share for data intelligence across broad industry sectors

Invest with the emerging connected devices market to deliver IoT solutions

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Software Growth Strategies

Increase software usage within our existing customer base

Invest in our direct sales force and indirect sales channels

Continue to invest in R&D

Selectively pursue acquisitions and strategic investments

Why We Win

Breadth and leading performance of the product portfolio

Strong customer engagement and deeply loyal and sticky user base

Units based subscription licensing model

Open architecture and innovation DNA

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Altair Leadership

James R. Scapa
Founder, Chairman & CEO

Howard N. Morof
Chief Financial Officer

Brett Chouinard
President & COO

Nelson Dias
Chief Revenue Officer

Amy Messano
Chief Marketing Officer

James Dagg
Chief Technical Officer

Dr. Uwe Schramm
Chief Technical Officer

Sam Mahalingam
Chief Technical Officer

Martin Nichols
Chief Information Officer

David Simon
Chief Administrative Officer

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Lunch Break

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ALTAIR TECHNOLOGY OVERVIEW

James Dagg, CTO Design and Simulation Solutions, March 2019

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INTERCONNECTED SYSTEMS

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INTERCONNECTED PHYSICS

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PHYSICS

topology optimization
nonlinear materials
crash
controls
multi-physics
hyperelasticity
Navier-Stokes
linear statics
size optimization
heat transfer
FSI
large displacement
antennas
nonlinear transient
transient response
electromagnetics
normal modes
frequency response
topography optimization
rotor dynamics
additive
fatigue
inertia relief
acoustics
buckling
wave-propagation
casting
composites
multi-body
airbags
shape optimization
contact
random vibration
radiation
Lattice-Boltzmann
multi-scale materials
e-motors

> 12 Years | 5-12 Years | < 5 Years

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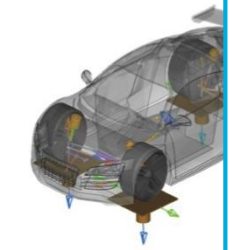
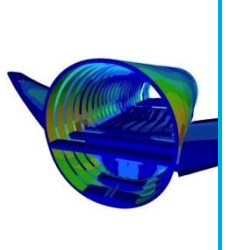
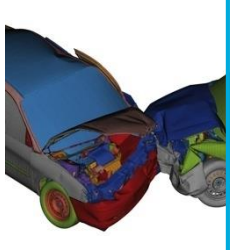
ALTAIR SOLVER TECHNOLOGIES



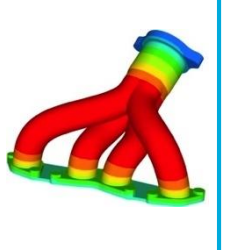
Systems Simulation



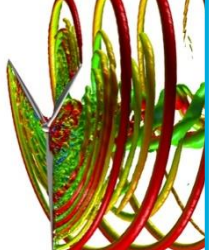
Structural Analysis



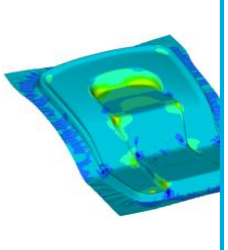
Crash, Safety, Impact & Blast



Thermal Analysis



Fluid Dynamics



Manufacturing Simulation

Electro-Magnetics

Multiphysics Simulation and Optimization

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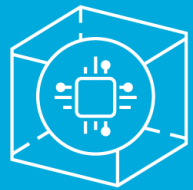
OUR SOLVER DIFFERENTIATORS

High-Fidelity Multiphysics

Computational Performance



Pervasive Optimization

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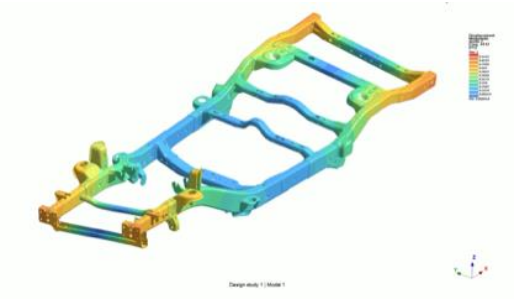
STRUCTURAL SIMULATION

Altair SimSolid

Revolutionary New Structural Simulation

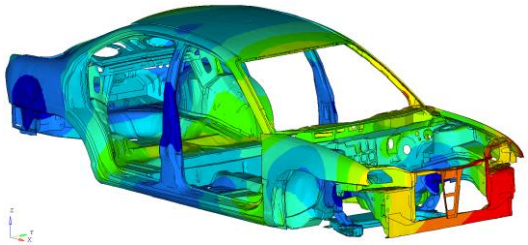
Ultra fast, accurate and works directly on CAD



Altair OptiStruct

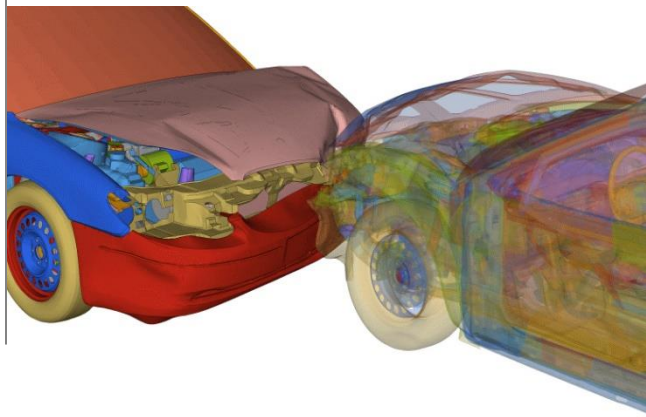
Industry Standard, Comprehensive Structural Simulation

World Leader in Optimization



Altair Radioss

Advanced Multiphysics Simulation



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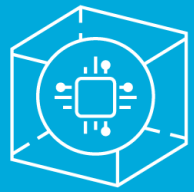
STRUCTURAL SOLVERS OPPORTUNITIES

Revolutionary Paradigm Shift With Simsolid

Growth in Traditional FE and Design Market



Multiphysics

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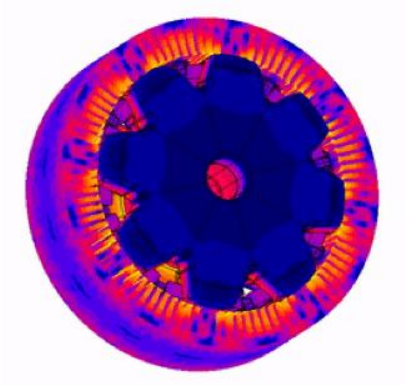
ELECTROMAGNETIC SIMULATION

Altair Flux

Low-frequency

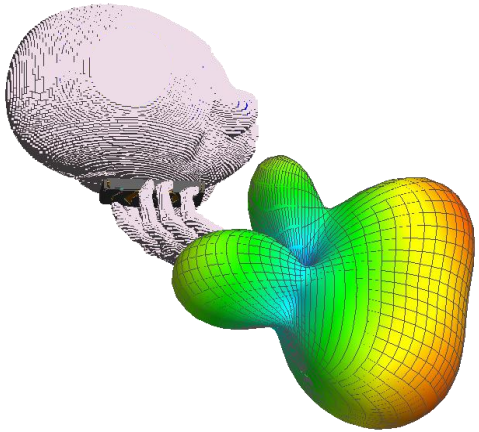
Motors, Transformers, Induction Heating, Power Electronics, EMC



Altair Feko

High-frequency

Antennas, RCS, EMC, SI, PI, Cables, Bio-EM



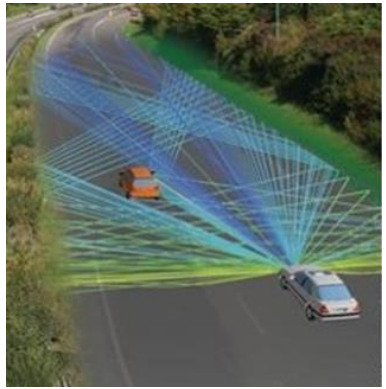
Altair WinProp

Wave Propagation

Ray tracing

Network planning, car-to-car,

Virtual test drive



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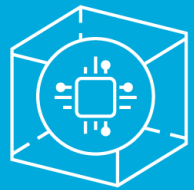
ELECTROMAGNETIC SOLVERS OPPORTUNITIES

Shift to e-mobility, autonomy, ADAS

Growth in EM market



Multiphysics

MULTIDISCIPLINARY OPTIMIZATION of ELECTRIC MACHINES

Presented by Porsche at the SIMVEC, Baden Baden, Germany, Nov. 2018

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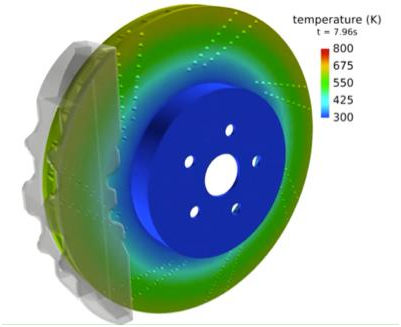
CFD SIMULATION

Altair AcuSolve

Finite Element Based

Incompressible, Transient, Multi-phase, Thermal, Fluid-Structure Interaction

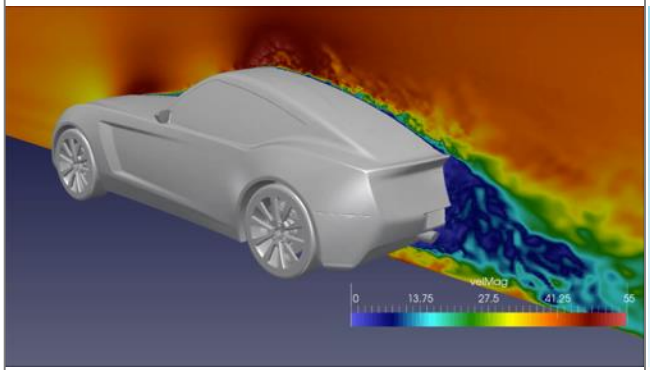


Altair ultraFluidX

Grid Based

Build for GPU

External Aerodynamics, Aero-acoustics



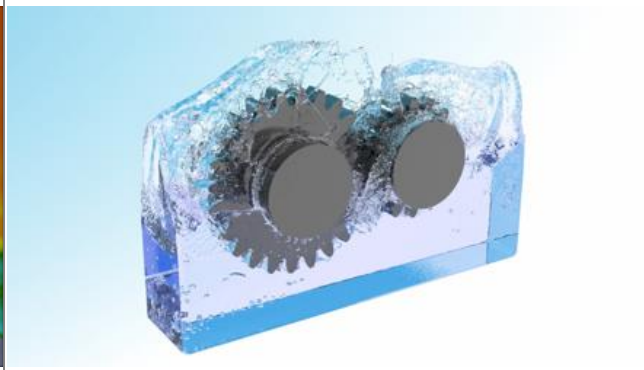
Altair nanoFluidX

Particle-Based

Built for GPU

Oiling Simulation, Sloshing,

High-Deformation Flow



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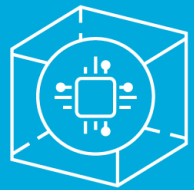
CFD SOLVERS OPPORTUNITIES

Ground Transportation Aerodynamics

Industry Shift to GPU Computing



Multiphysics

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BUILDING DESIGN SOLUTIONS AROUND SIMULATION

Crash
Safety
Blast
Gravity
Springback

Radioss
Structural Explicit

OptiStruct SimSolid
Structural Implicit

Durability
Vibrations
Acoustics
Buckling
Heat Transfer

HPC Cloud

Forming
Extrusion
Additive
Casting
Molding

Inspire
Manufacturing

Activate
Systems

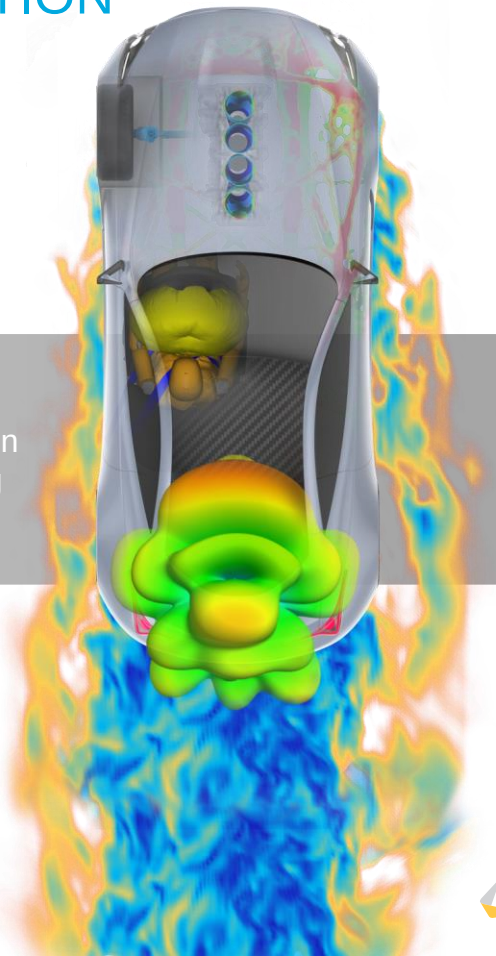
AcuSolve FluidX
CFD and Thermal

Design Optimization
Machine Learning

Electric Machines
Sensors
Antennas
EMC
Networks

Flux Feko
Electromagnetism

MotionSolve
Multi-body



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SIMULATION DRIVEN DESIGN

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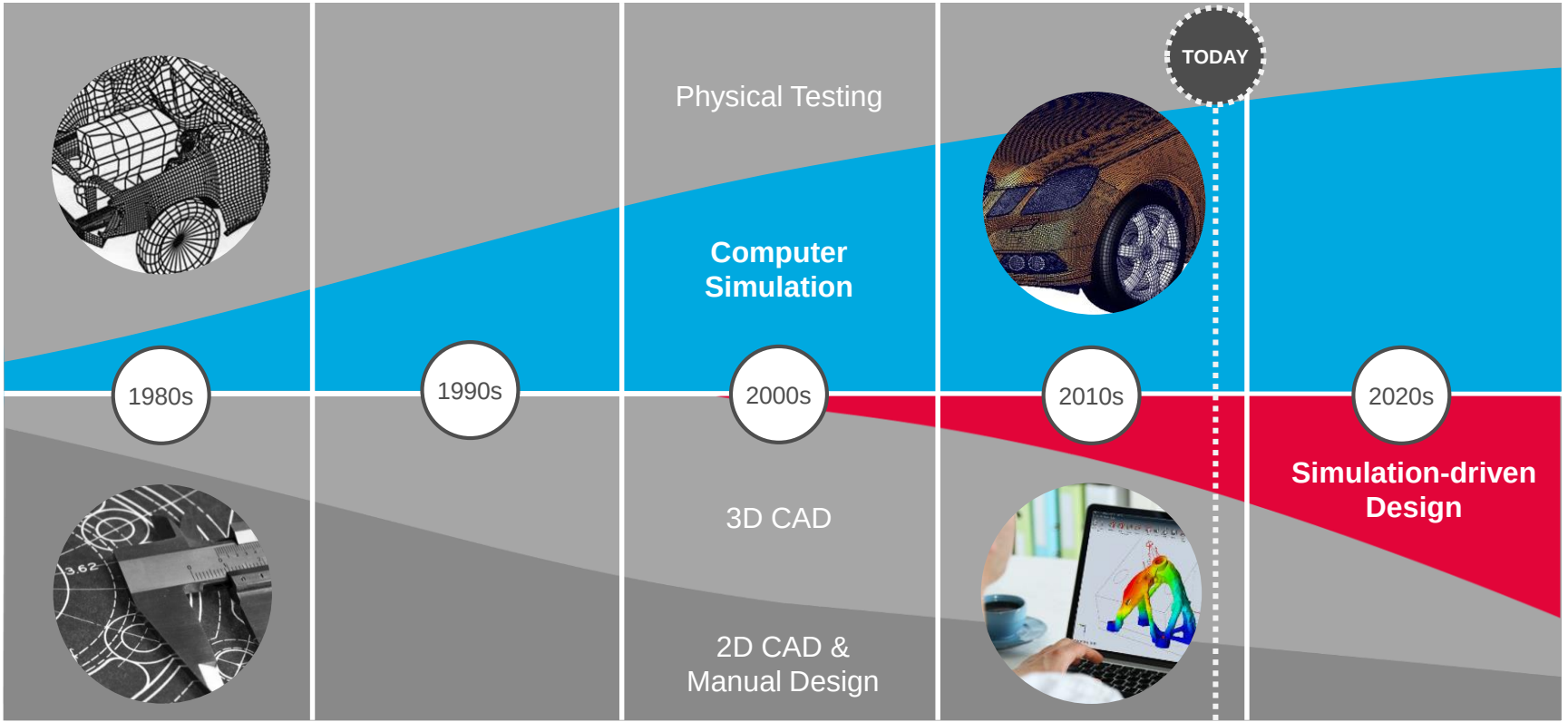
EVOLUTION OF SIMULATION-DRIVEN DESIGN



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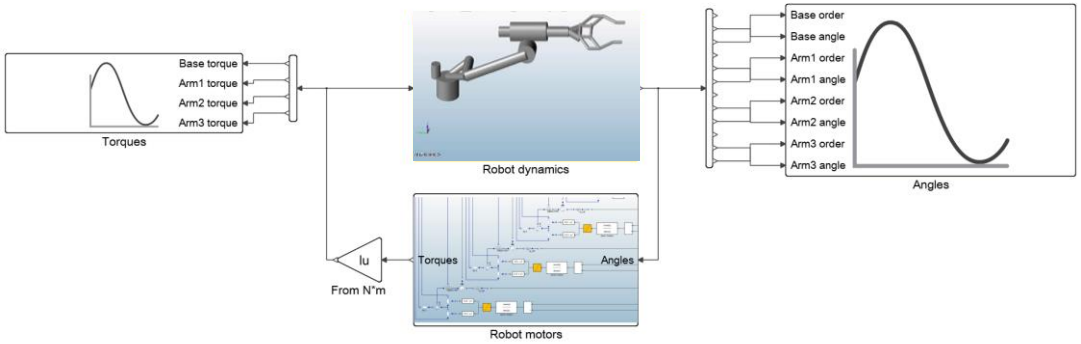
SIMULATION-DRIVEN DESIGN

2020s

Simulation-driven Design

SYSTEM MODELING



EARLY 3D CONCEPT

MANUFACTURING

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SIMULATION-DRIVEN DESIGN

2020s

Simulation-driven Design

SYSTEM DESIGN

EARLY 3D CONCEPT

MANUFACTURING

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SIMULATION-DRIVEN DESIGN

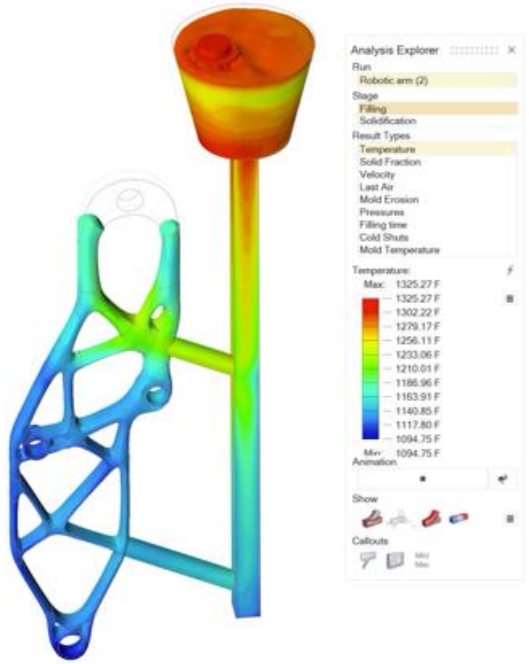
2020s

Simulation-driven Design

SYSTEM DESIGN

EARLY 3D CONCEPT

MANUFACTURING



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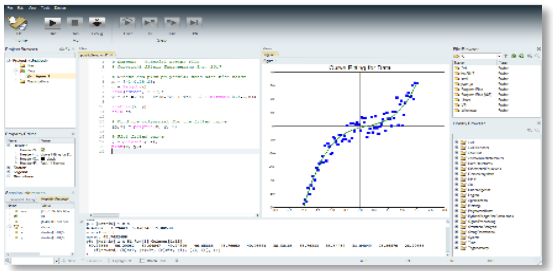
ALTAIR SYSTEM MODELING PRODUCTS

Altair Compose

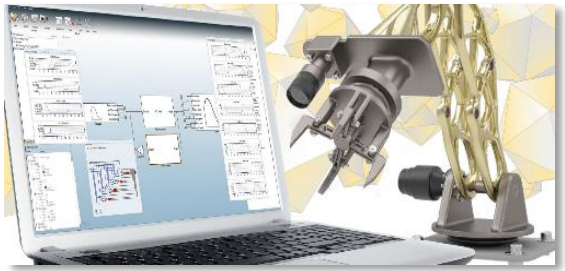
Math Programming Environment
Open Matrix Language
Python



Altair Activate

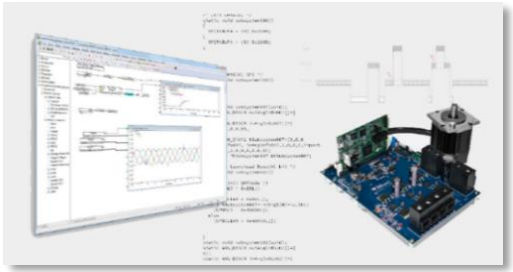
Block-Based System Design and Simulation

Multidisciplinary Integration Platform



Altair Embed

Embedded code generation for programming micro controllers



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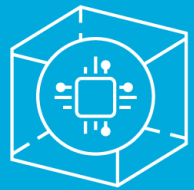
SYSTEM MODELING OPPORTUNITIES

Growth in system modeling market

Demand for alternatives to incumbent products



Uptake by non-traditional users

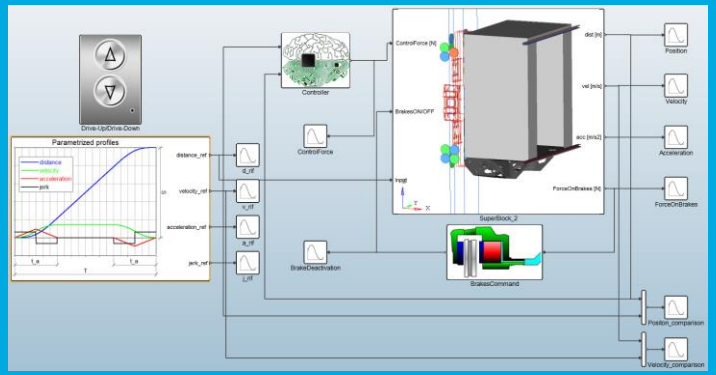
Significant user base in the Structures Group at aircraft OEM

CAE users leveraging Compose to replace Patran and Excel.

ThyssenKrupp created MULTI

An innovative elevator that uses electric drive motors instead of cables

Cars travel on network of horizontal and vertical tracks



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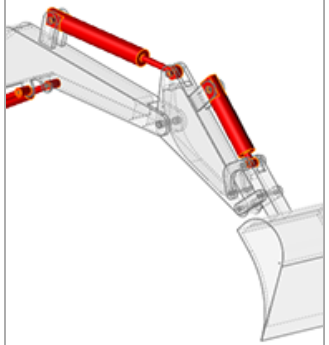
ALTAIR INSPIRE - FROM STUDIO TO MANUFACTURING

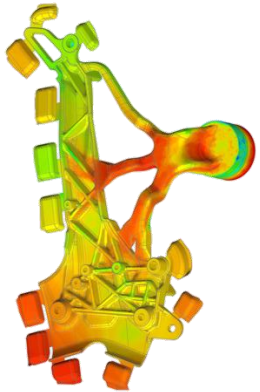
Studio

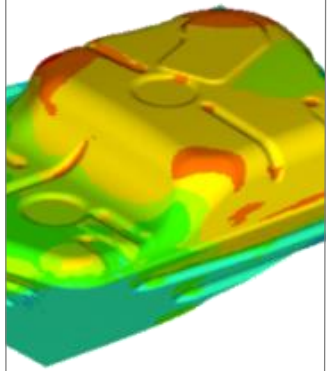
Structures

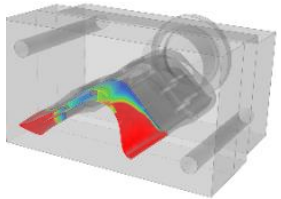
Motion



Manufacturing Processes







The industry’s most powerful and intuitive solution for design engineers to create high performing and manufacturable products.

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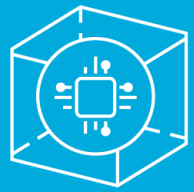
INSPIRE OPPORTUNITIES

Demand for simulation & optimization early in design process

Design for additive manufacturing



Single solution for design and manufacturing simulation

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SELLING SIMULATION DRIVEN DESIGN SOLUTIONS

WHAT WE SELL

solidThinking Units
HyperWorks Units
Desktop and Cloud

TARGET USERS

Product designers
Design engineers
Structures/motion
Manufacturing analysts

STRENGTHS

User experience
Best optimization
Analyze assemblies
Manufacturing

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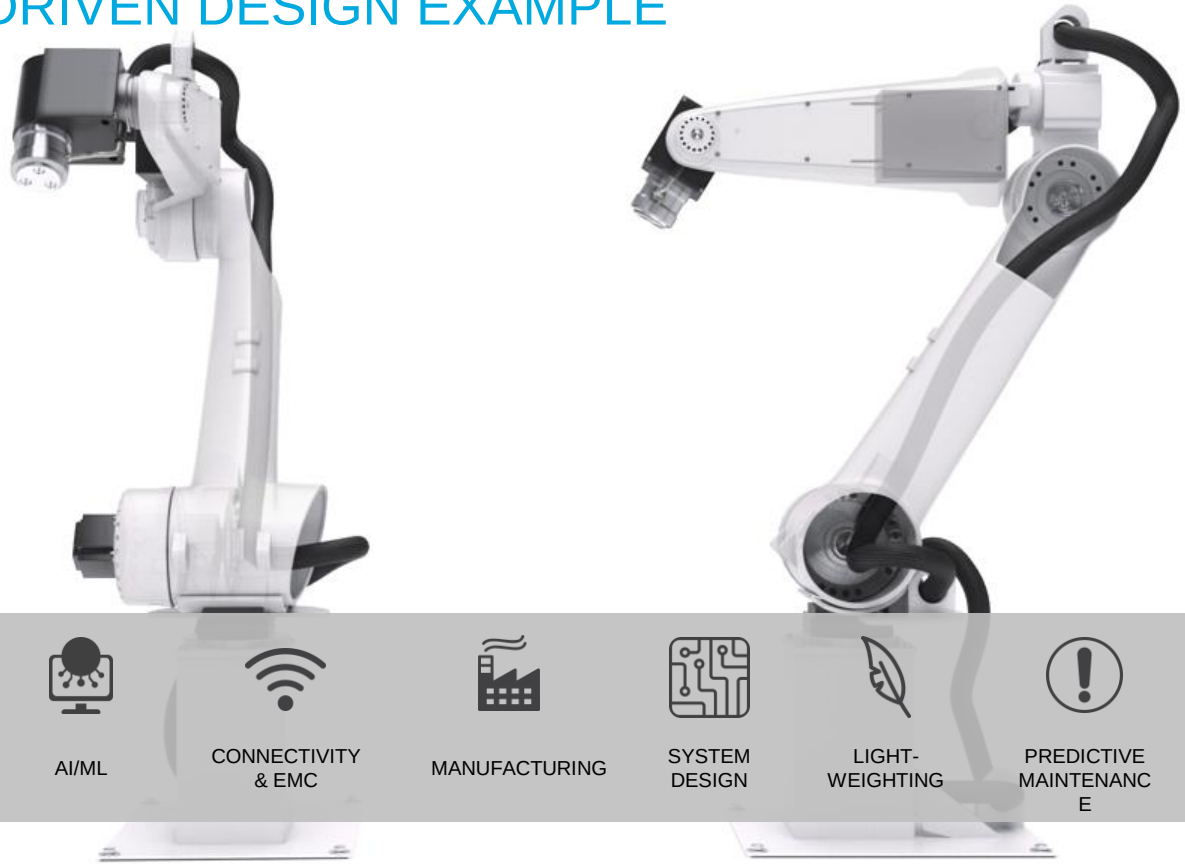
SIMULATION DRIVEN DESIGN EXAMPLE



ID/STYLING

3D PRINTIN G

AI/ML

CONNECTIVITY & EMC

MANUFACTURING

SYSTEM DESIGN

LIGHT-WEIGHTING

PREDICTIVE MAINTENANC E

MOTION DYNAMICS

ROBOT

ID/STYLING

3D PRINTIN G

AI/ML

CONNECTIVITY & EMC

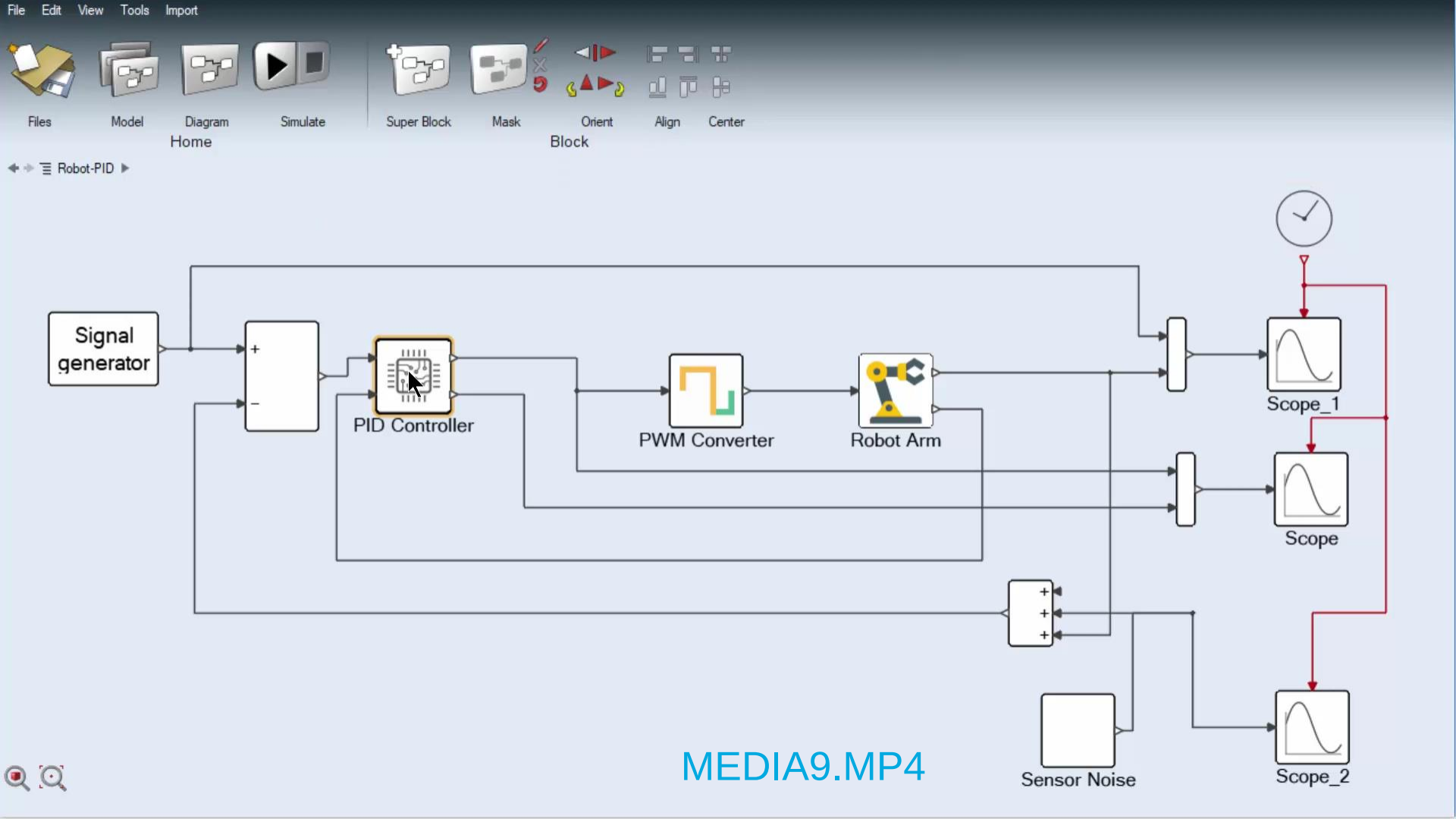
MANUFACTURING

SYSTEM DESIGN

LIGHT-WEIGHTING

PREDICTIVE MAINTENANC E

MOTION DYNAMICS


File Edit View Tools Import
Files
Model
Diagram
Simulate
Home
Super Block
Mask
Orient
Align
Center
Block
Robot-PID
Signal generator
PID Controller
PWM Converter
Robot Arm
Scope_1
Scope
Sensor Noise
Scope_2
MEDIA9.MP4

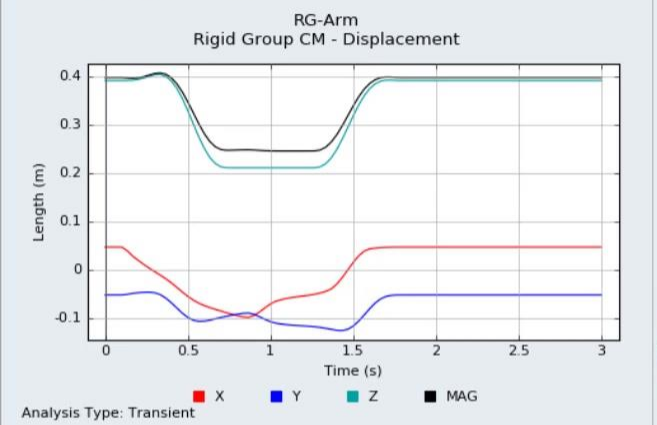
File Edit View Geometry Structure Motion Manufacture

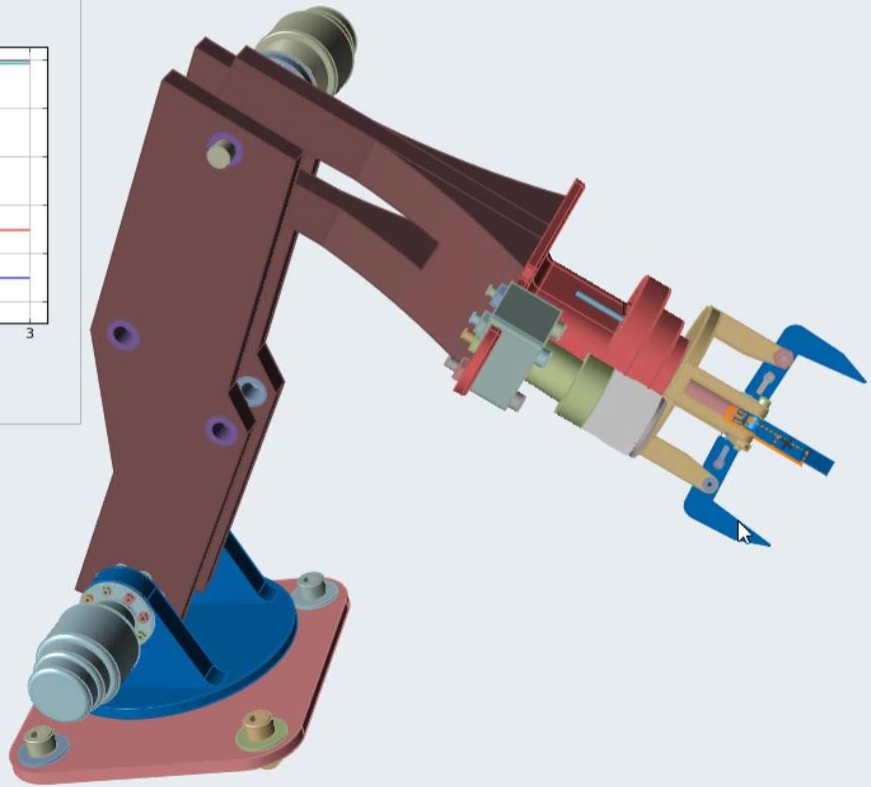
Files | Measure | Move | Ground | Rigid Groups | Joints | Motors | Actuators | Springs | Contacts | Gravity | Analyze Motion | Analyze Part | Optimize Part | Tracers

Home | Connections | Forces | Run

Click an object to plot results.

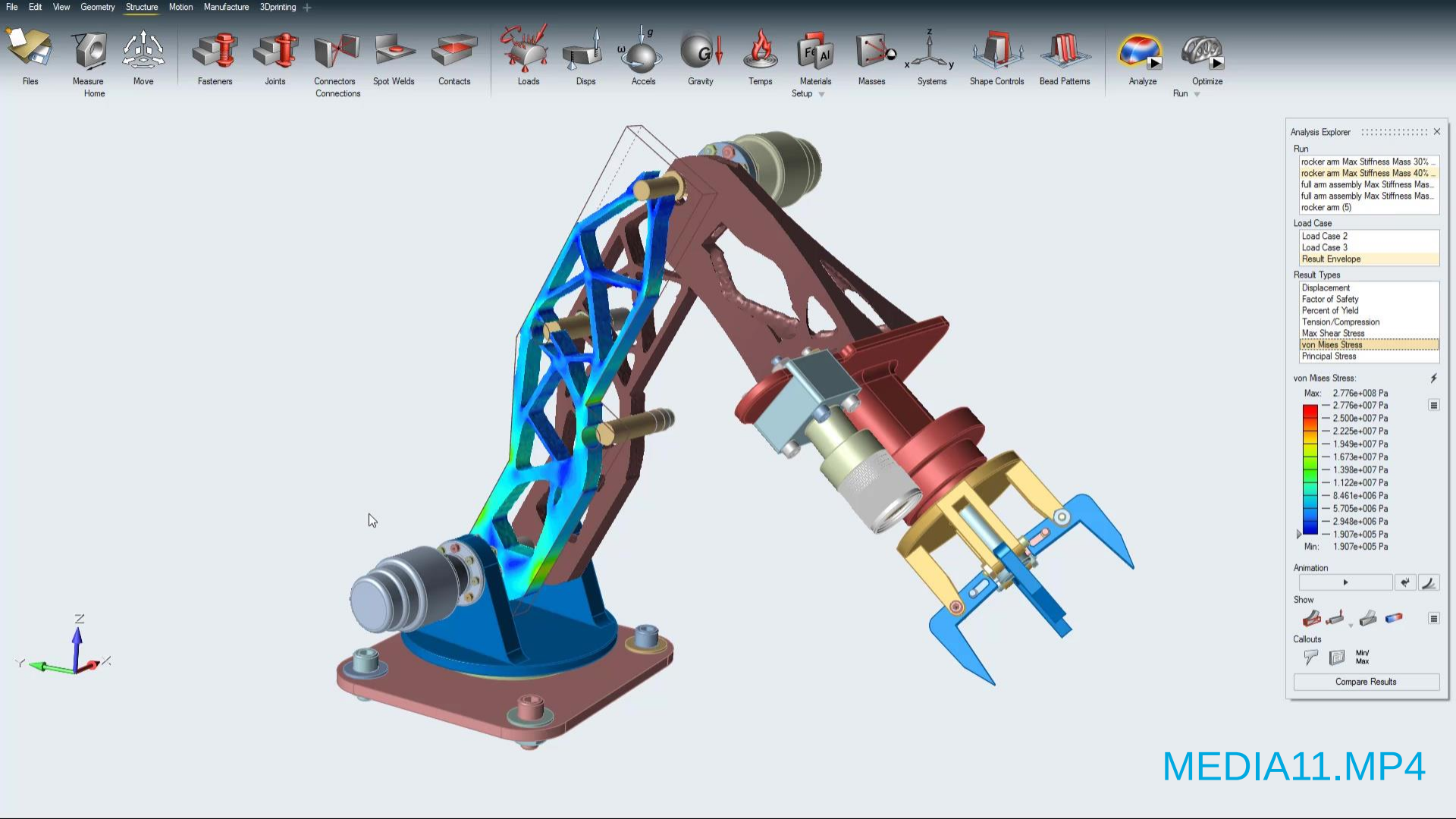
RG-Arm : Rigid Group CM - Displacement





Z

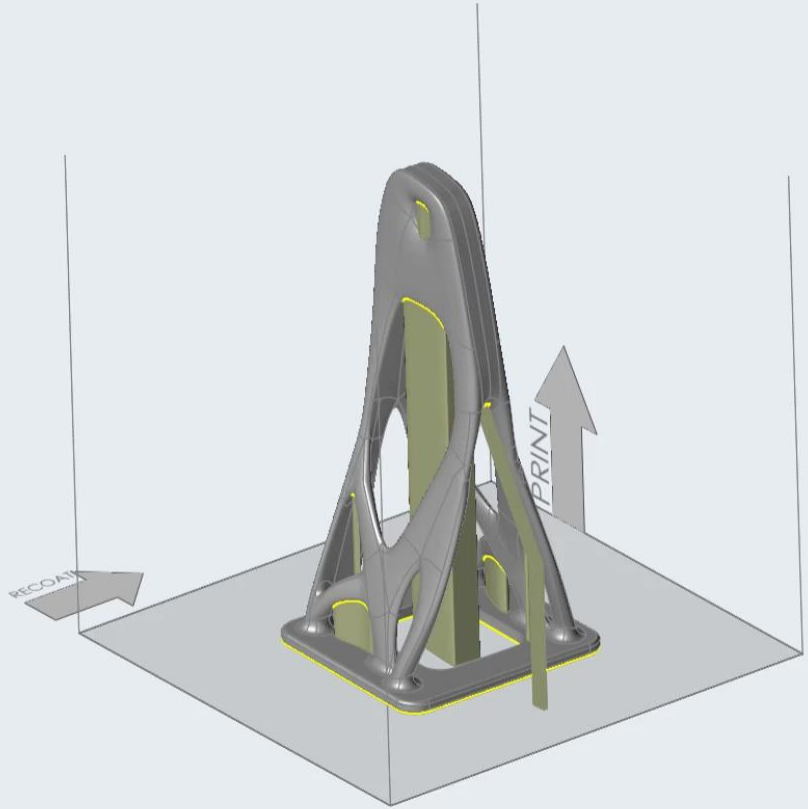
MEDIA10.MP4


File
Edit
View
Geometry
Structure
Motion
Manufacture
3Dprinting
Files
Measure
Home
Move
Fasteners
Joints
Connectors
Connections
Spot Welds
Contacts
Loads
Disps
Accels
Gravity
Temps
Materials
Setup
Masses
Systems
Shape Controls
Bead Patterns
Analyze
Optimize
Run
Analysis Explorer
Run
rocker arm Max Stiffness Mass 30% ...
rocker arm Max Stiffness Mass 40% ...
full arm assembly Max Stiffness Mas...
full arm assembly Max Stiffness Mas...
rocker arm (5)
Load Case
Load Case 2
Load Case 3
Result Envelope
Result Types
Displacement
Factor of Safety
Percent of Yield
Tension/Compression
Max Shear Stress
von Mises Stress
Principal Stress
von Mises Stress:
Max: 2.776e+008 Pa
2.776e+007 Pa
2.500e+007 Pa
2.225e+007 Pa
1.949e+007 Pa
1.673e+007 Pa
1.398e+007 Pa
1.122e+007 Pa
8.461e+006 Pa
5.705e+006 Pa
2.948e+006 Pa
1.907e+005 Pa
Min: 1.907e+005 Pa
Animation
Show
Callouts
Min/
Max
Compare Results
Z
Y
X

MEDIA11.MP4

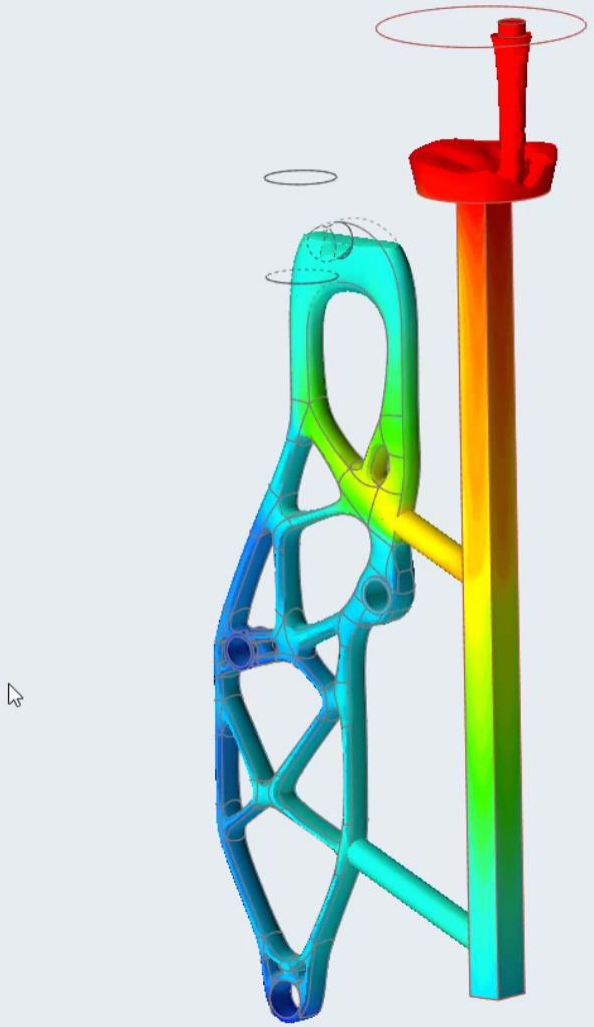
File Edit View Geometry Structure Motion Manufacture 3Dprinting

Files | Measure Home | Move | Prepare | Orientation | Support 3D | Slice | Export



Z
Y
X

MEDIA12.MP4



Analysis Explorer

Run

Martin_Robotic arm2 (1)

Stage

Filling

Solidification

Result Types

Temperature

Solid Fraction

Velocity

Last Air

Mold Erosion

Pressures

Filling time

Cold Shuts

Mold Temperature

Temperature:

Max: 992.24 K

992.24 K

976.87 K

961.50 K

946.13 K

930.76 K

915.39 K

900.03 K

884.66 K

869.29 K

853.92 K

838.55 K

Min: 838.55 K

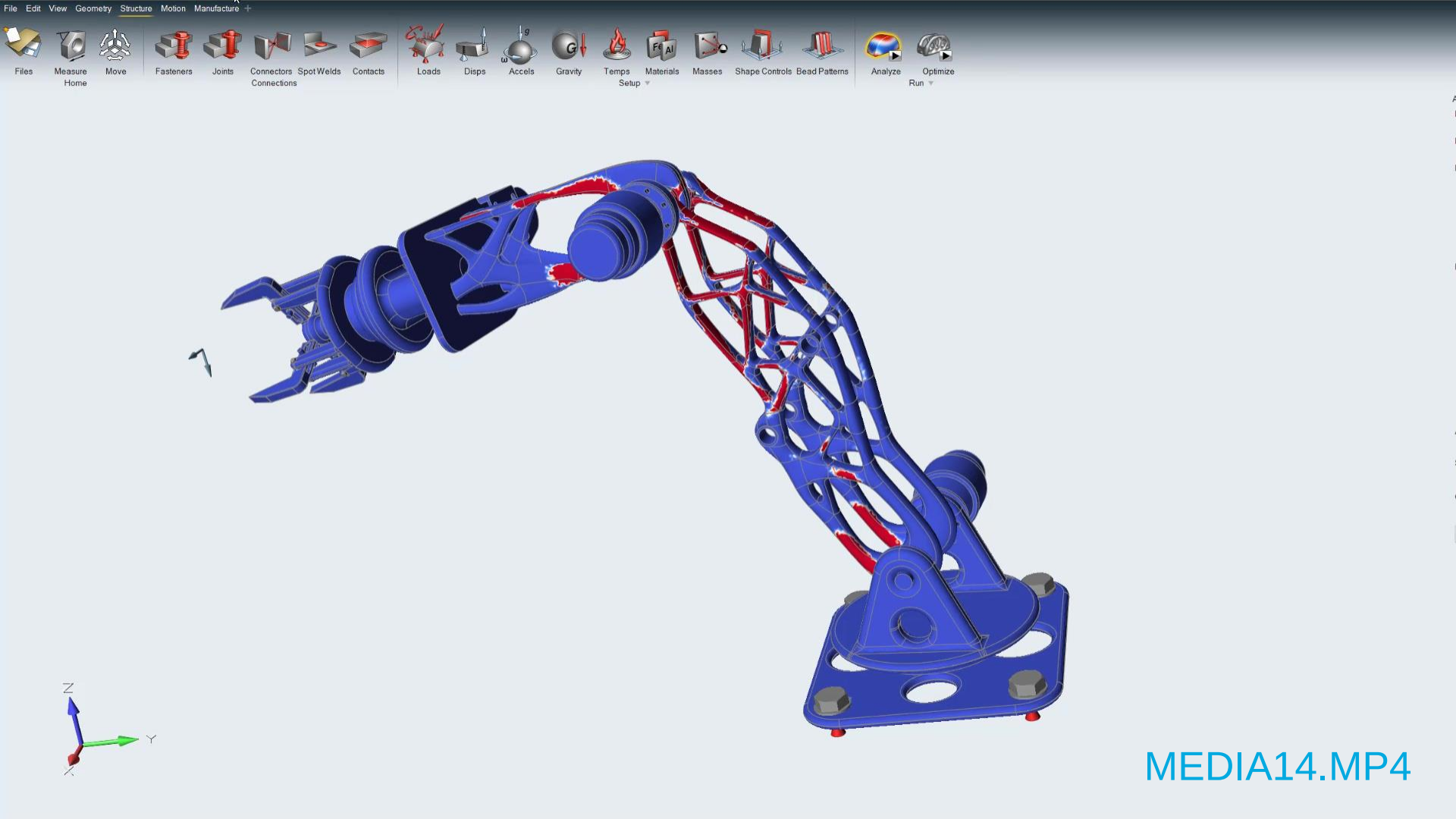
Animation

Show

Callouts

Min/
Max

MEDIA13.MP4


File
Edit
View
Geometry
Structure
Motion
Manufacture
Files
Measure
Move
Home
Fasteners
Joints
Connectors
Spot Welds
Contacts
Connections
Loads
Disps
Accels
Gravity
Temps
Materials
Masses
Shape Controls
Bead Patterns
Setup
Analyze
Optimize
Run
Z
Y
MEDIA14.MP4

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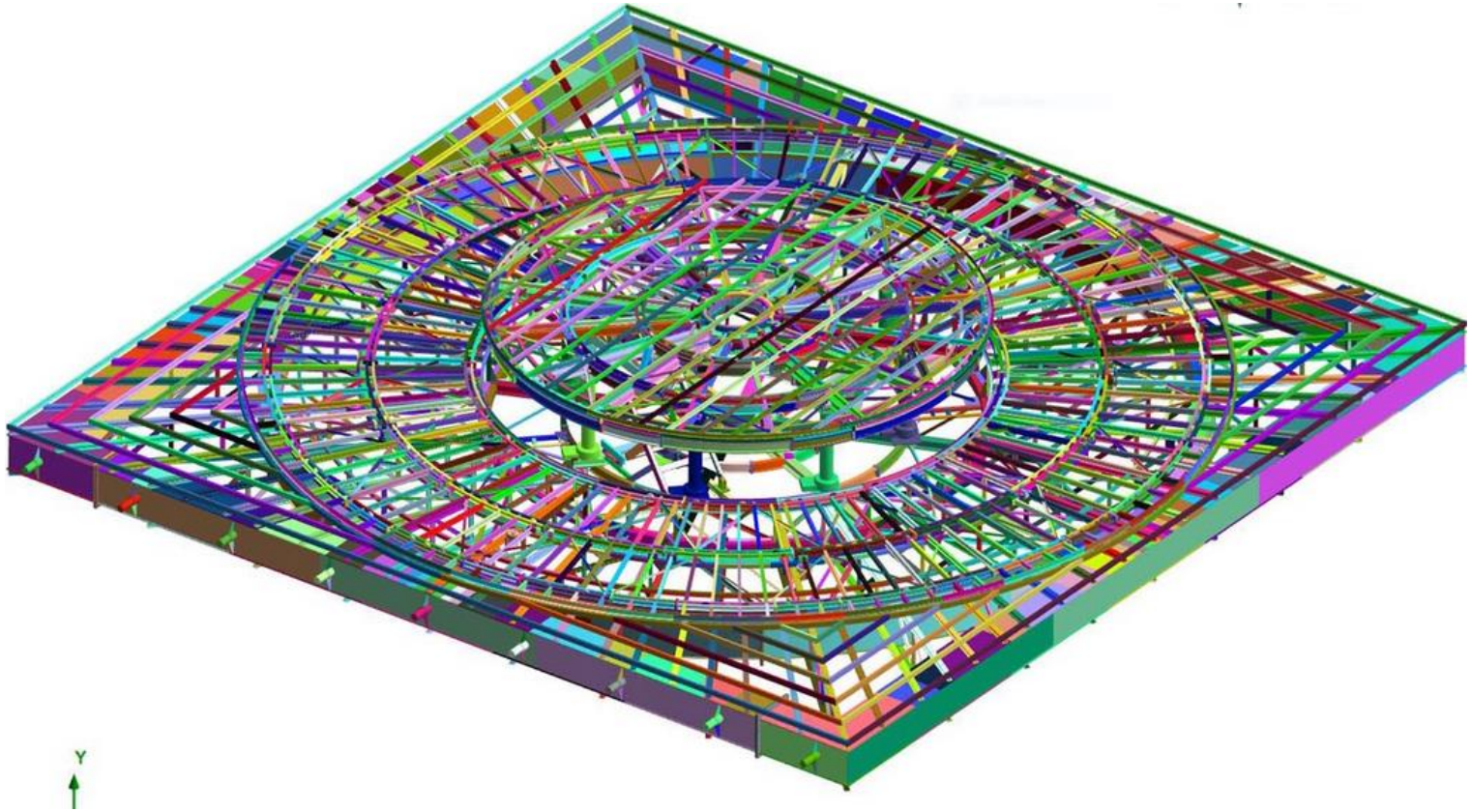
WHAT IF THIS IS YOUR CAD MODEL?



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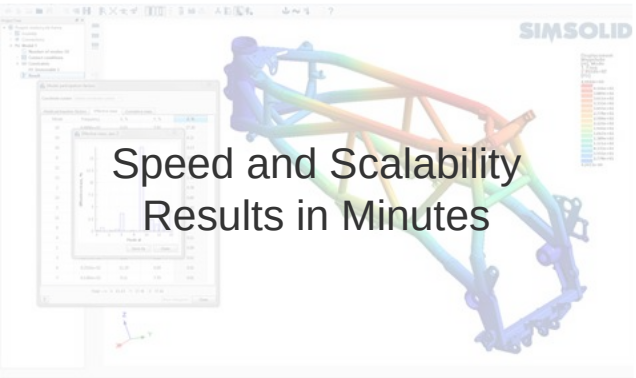
THE SIMSOLID REVOLUTION

Design Faster



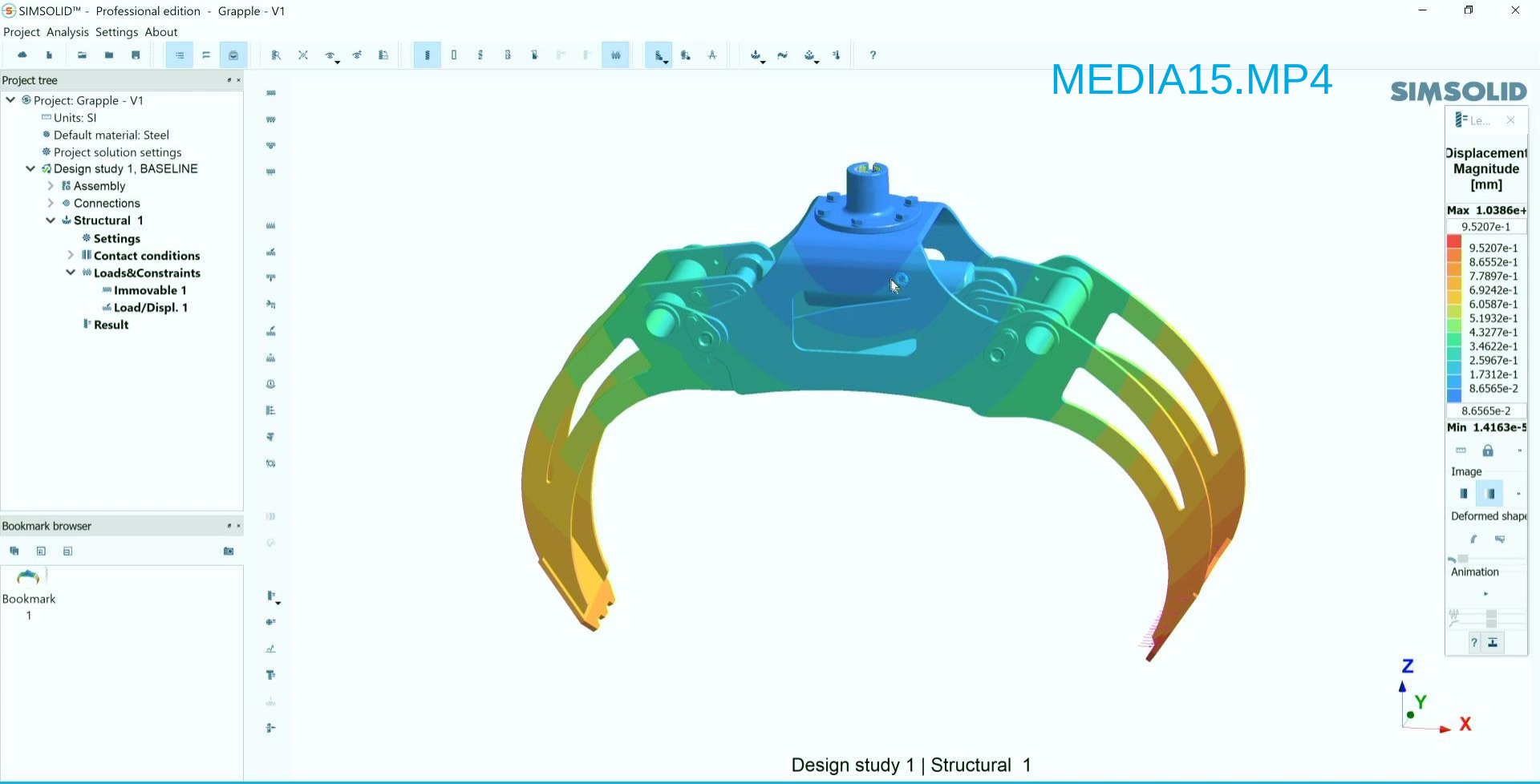
Speed and Scalability
Results in Minutes

Complexity is No Problem

Large Assemblies
Complex Parts

Boost Productivity

Accurate Results
Simple Workflow



Embedded post-processing

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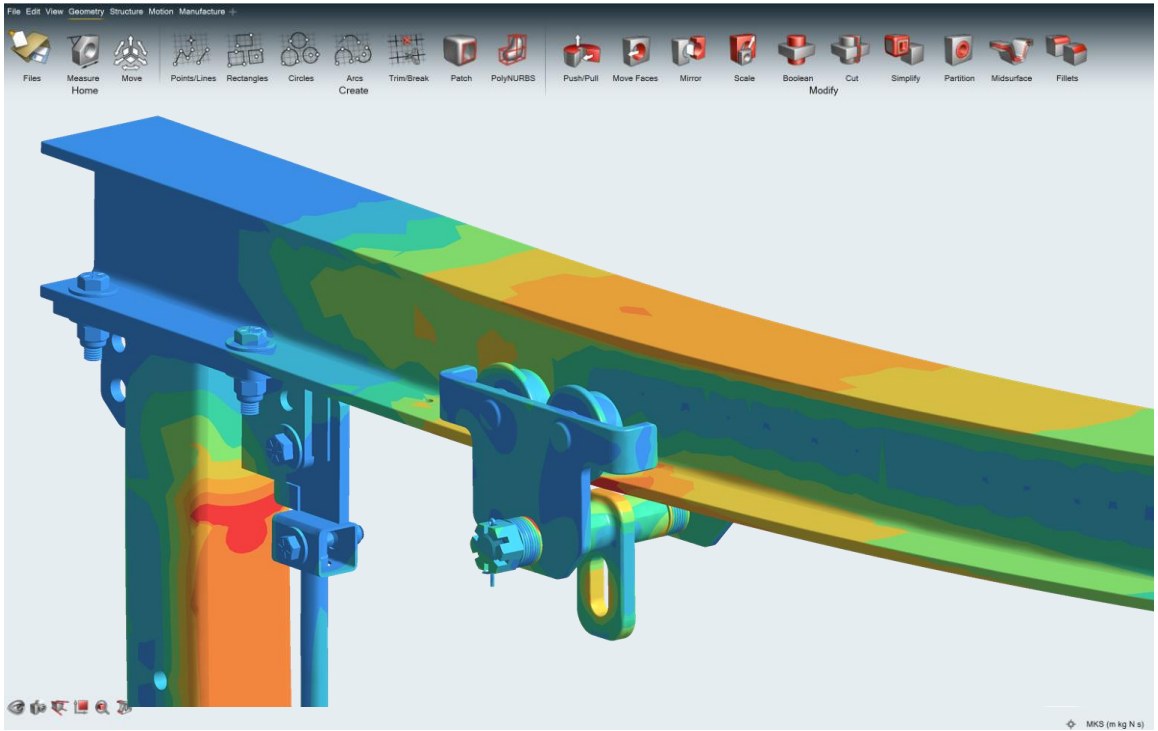
INTEGRATING SIMSOLID INTO INSPIRE



SimSolid solver within Inspire will be bring unprecedented design simulation and optimization technology into one product.

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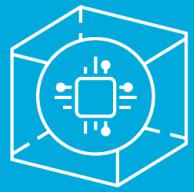
SIMSOLID OPPORTUNITIES

First to deliver meaningful simulation of full systems at the design stage

Addresses vast designer market



Advanced simulation capabilities possible

Can disrupt traditional CAE

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SELLING SIMSOLID

WHAT WE SELL

HyperWorks Units
Standalone license
Desktop and cloud

TARGET USERS

Product Designers
Design Engineers
CAD Users

STRENGTHS

Large assemblies
Complex geometries
Works directly on CAD
Speed and accuracy


SERAPID
RIGID CHAIN TECHNOLOGY

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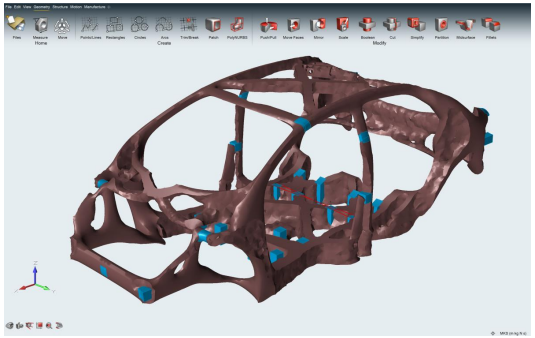
ALTAIR MODELING PRODUCTS

Altair Inspire

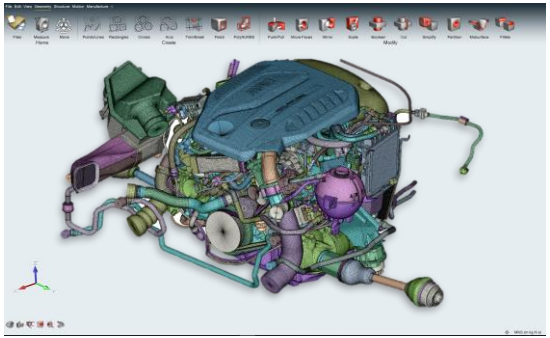
Concept Design
Manufacturing Simulation



Altair Simlab

Advanced Multiphysics Solutions

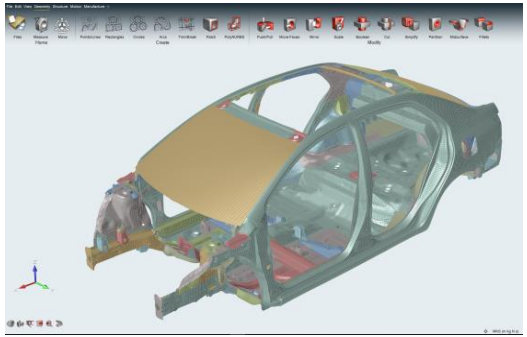
Complex Solid Models



Altair HyperMesh

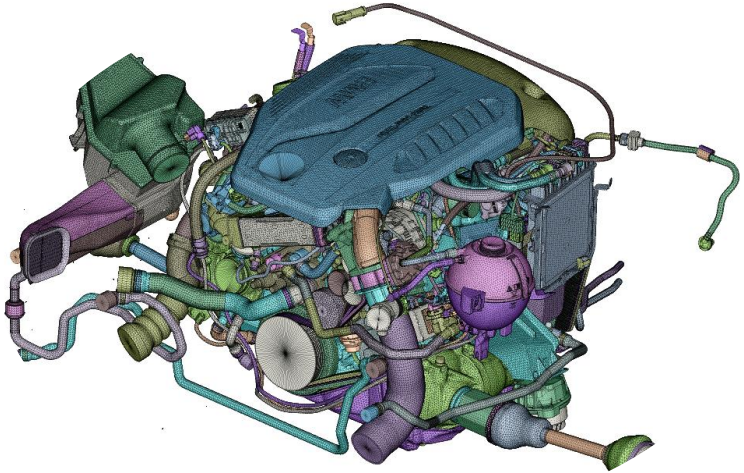
Advanced FE Model System

Complex Sheet Metal & Thin Solid Models



ALTAIR SIMLAB – MULTIPHYSICS SIMULATION SOLUTIONS

- Simple set-up of sophisticated multiphysics solutions
- Handles highly complex assemblies
- Industry leading solid meshing capabilities



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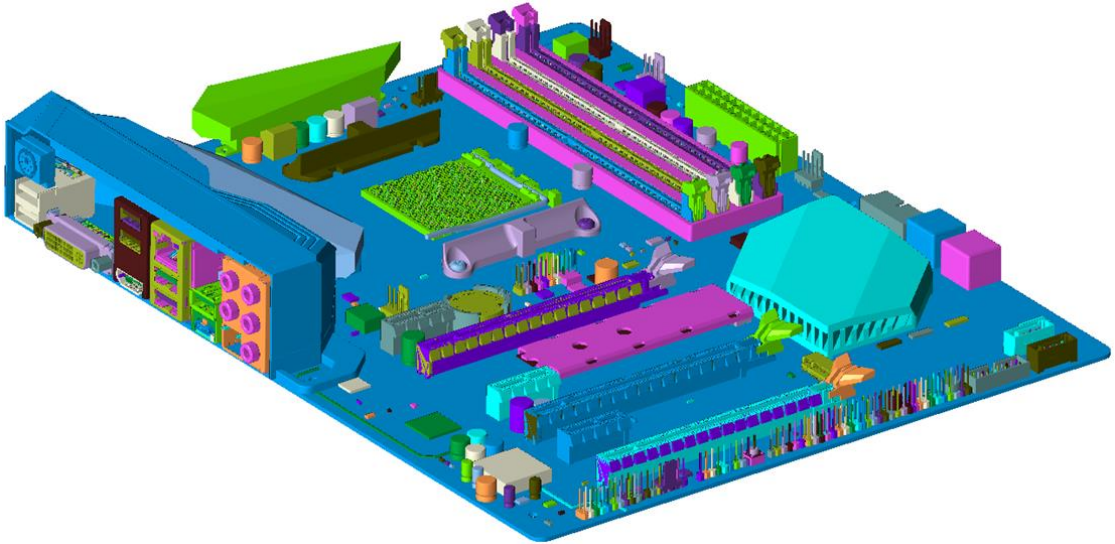
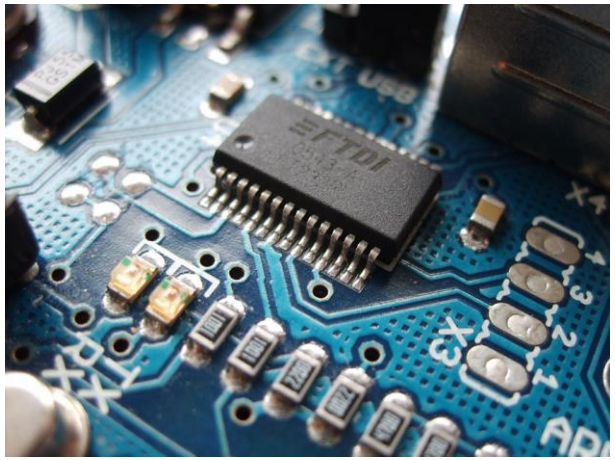
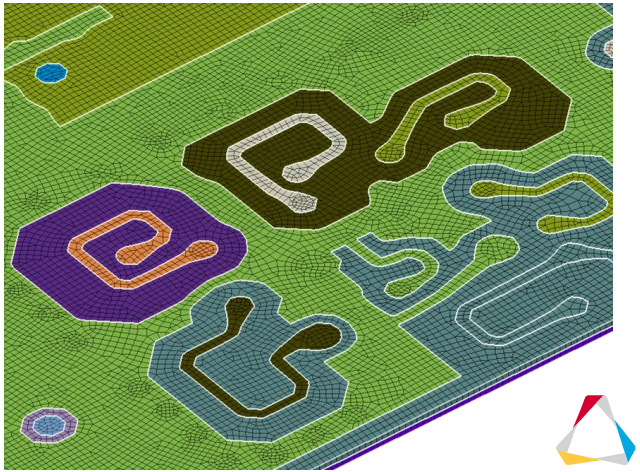
ALTAIR SIMLAB – ELECTRONICS MODELING







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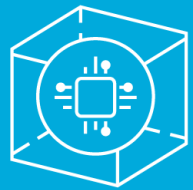
SIMLAB OPPORTUNITIES

Complex multiphysics solutions increasing

Complex solid model automation



Electronics applications

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SELLING SIMLAB

WHAT WE SELL

HyperWorks Units
solidThinking Units
Desktop only

TARGET USERS

Product engineers
CAE analysts
EDA engineers

STRENGTHS

Automated processes
Coupled solutions
Feature-based FEM

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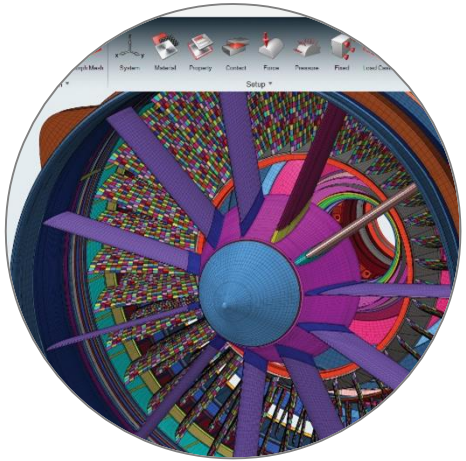
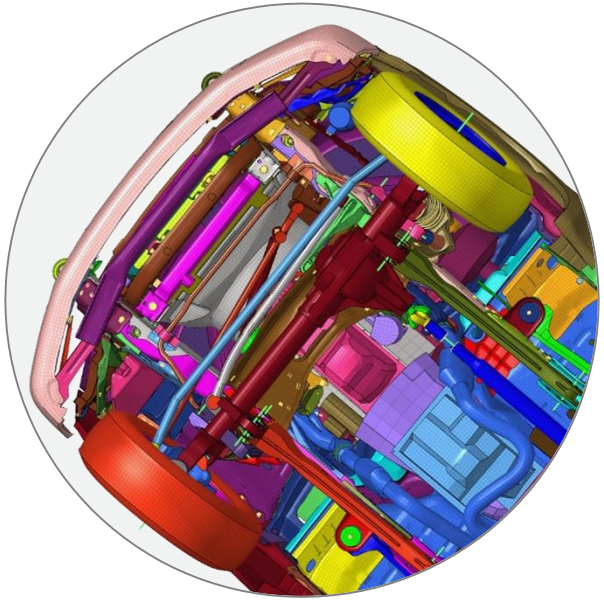
ALTAIR HYPERMESH – MARKET-LEADING FEA MODELER

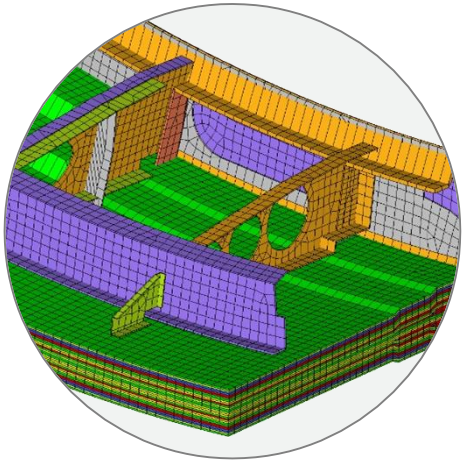
High-performance finite-element modeler for the most complex CAE models.

Interfaces to all commercial CAD and CAE systems

Rich toolset for meshing, model assembly and automation







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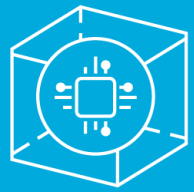
HYPERMESH OPPORTUNITIES

Increased automation, especially thin walled structures

New UX broadens market access



New vertical solutions in automotive, aerospace and other

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BUT WHAT ABOUT STYLING AND SIMULATION?

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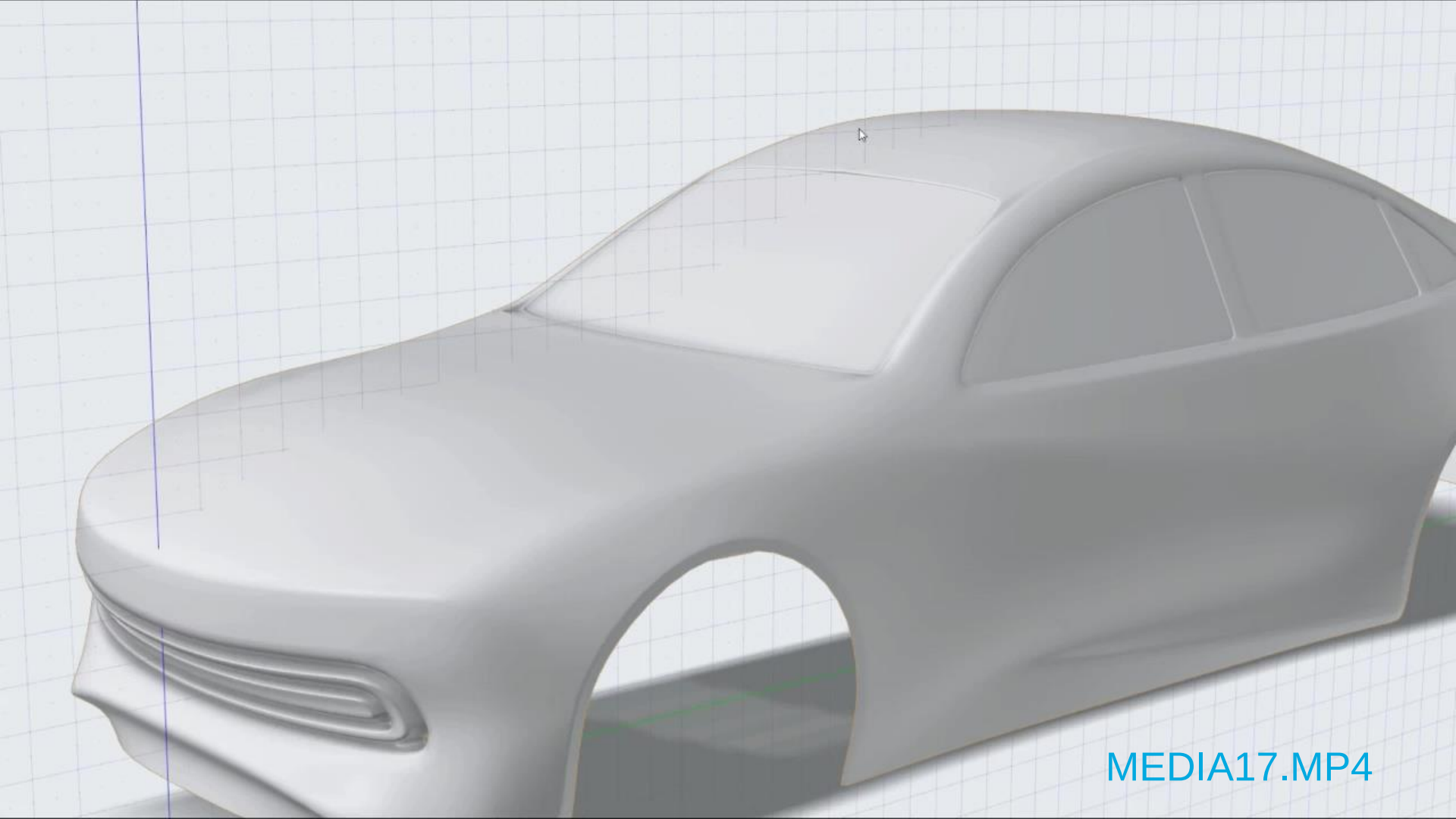
COMING SOON: INSPIRE STUDIO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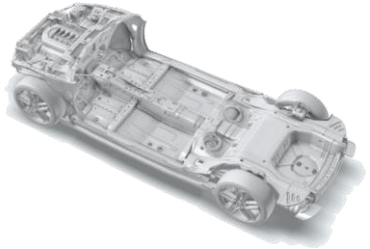
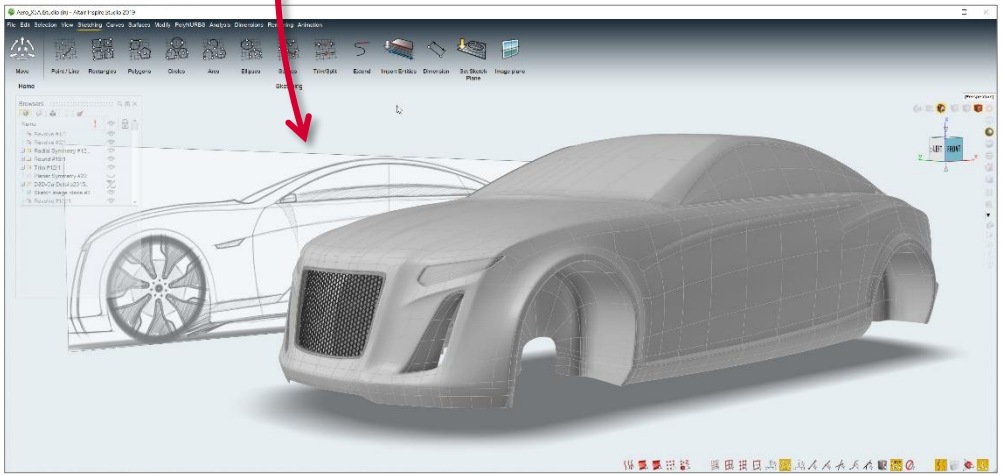
DESIGN AND SIMULATE WITH INSPIRE STUDIO AND VIRTUAL WINDTUNNEL

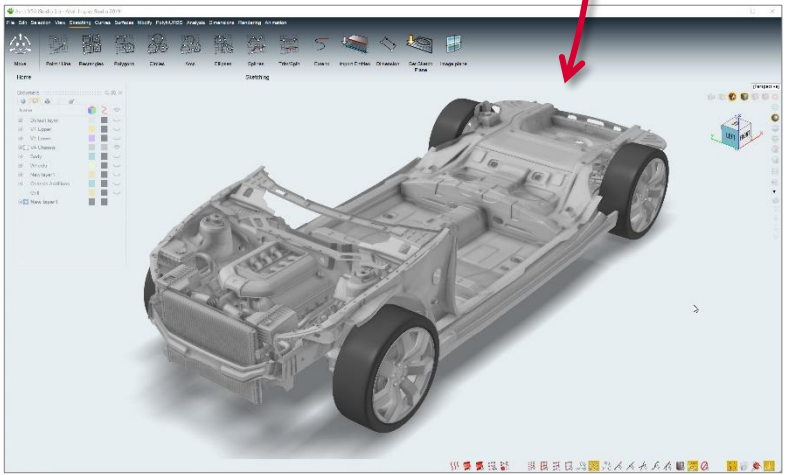
Ideas sketched or scanned



Carryover under body CAD



Upper body modeled with PolyNURBS



Under body mesh prep

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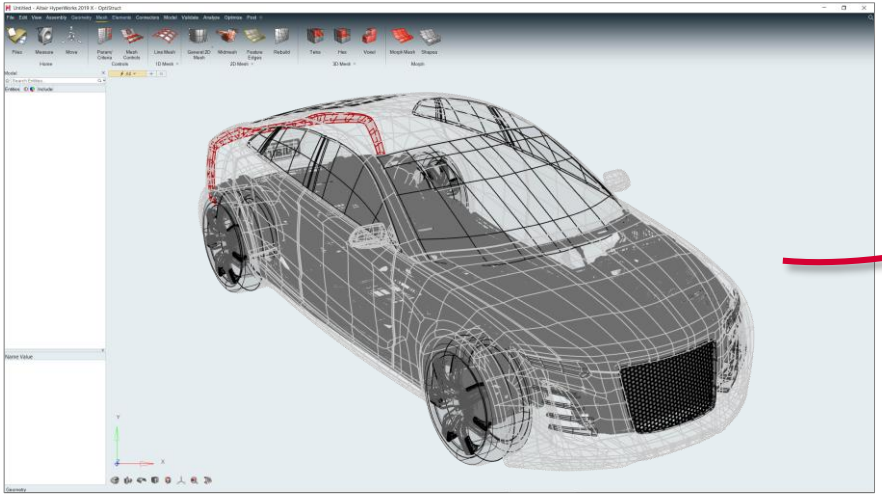
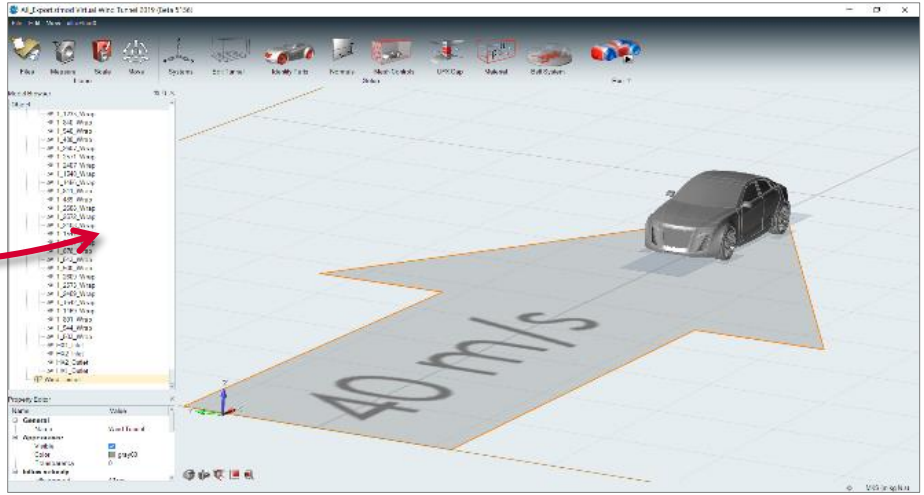
VIRTUAL WIND TUNNEL: ITERATIONS IN HOURS, NOT DAYS



Upper and under body meshing



Virtual Wind Tunnel Simulation

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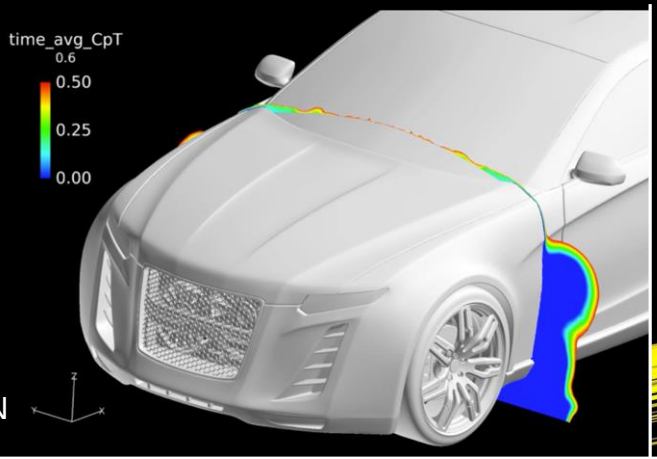
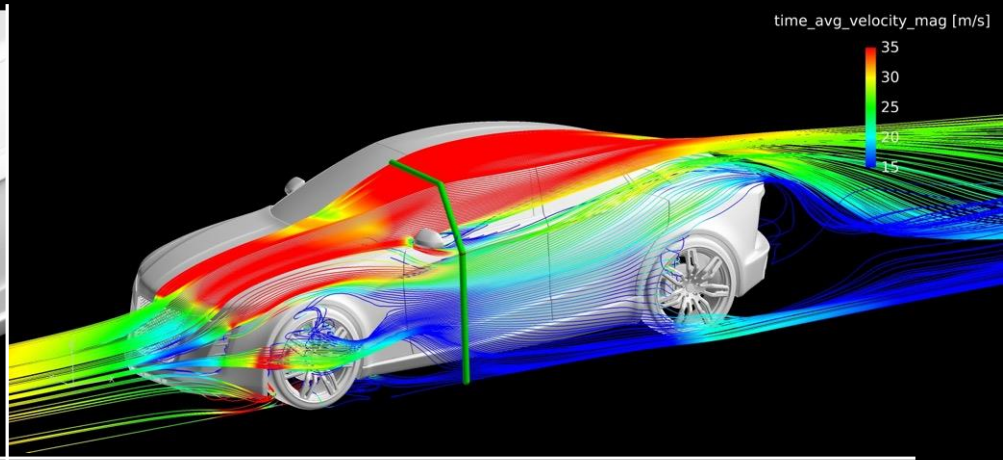
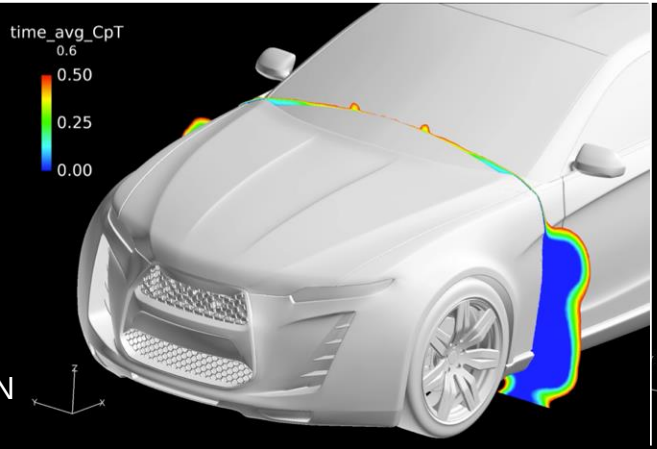
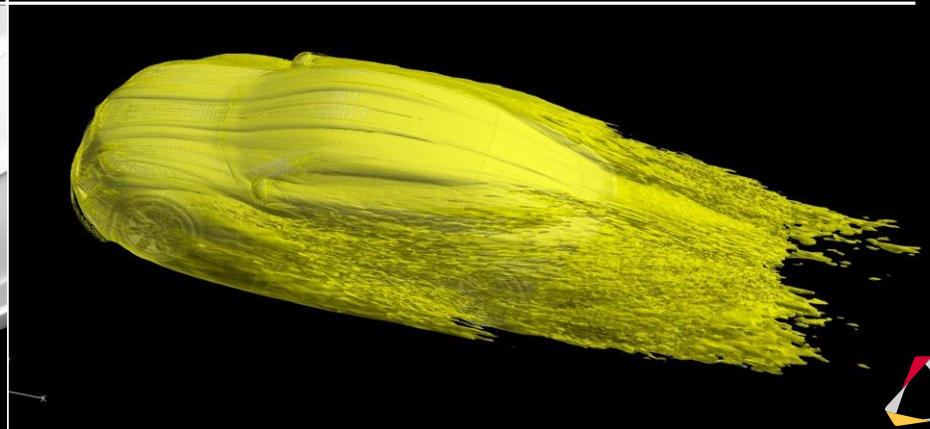
ULTRAFLUIDX RUNNING ON GPU





1ST ITERATION





3RD ITERATION

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RAPID DESIGN ITERATION INFORMED BY SIMULATION

Animation by Inspire Render

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APPLICATIONS OF MACHINE LEARNING

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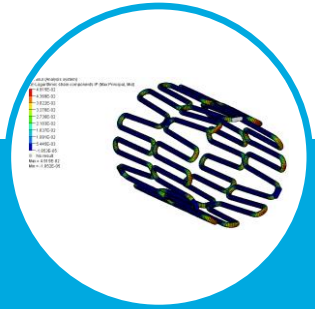
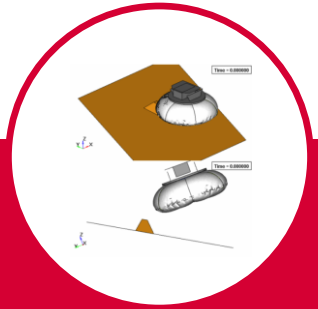
ALTAIR HYPERSTUDY – MULTI-DISCIPLINARY OPTIMIZATION & ML



Improve Design Performance and Quality

Reduce Development Time and Costs



Increase Productivity and Return-On-Investment

Medtronic

Unilever

EADS

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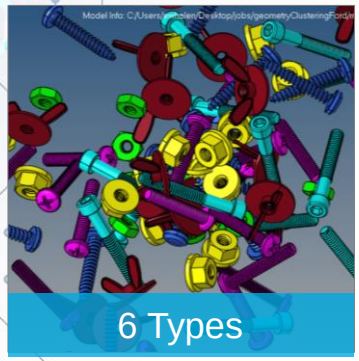
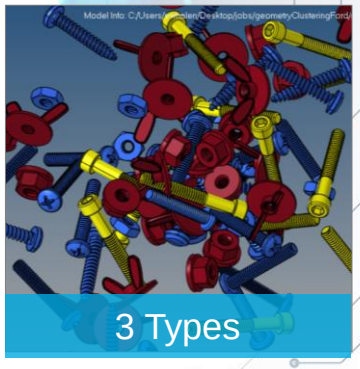
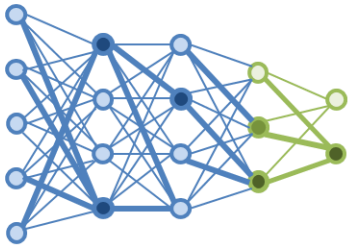
MACHINE LEARNING : PART CLASSIFICATION AND IDENTIFICATION







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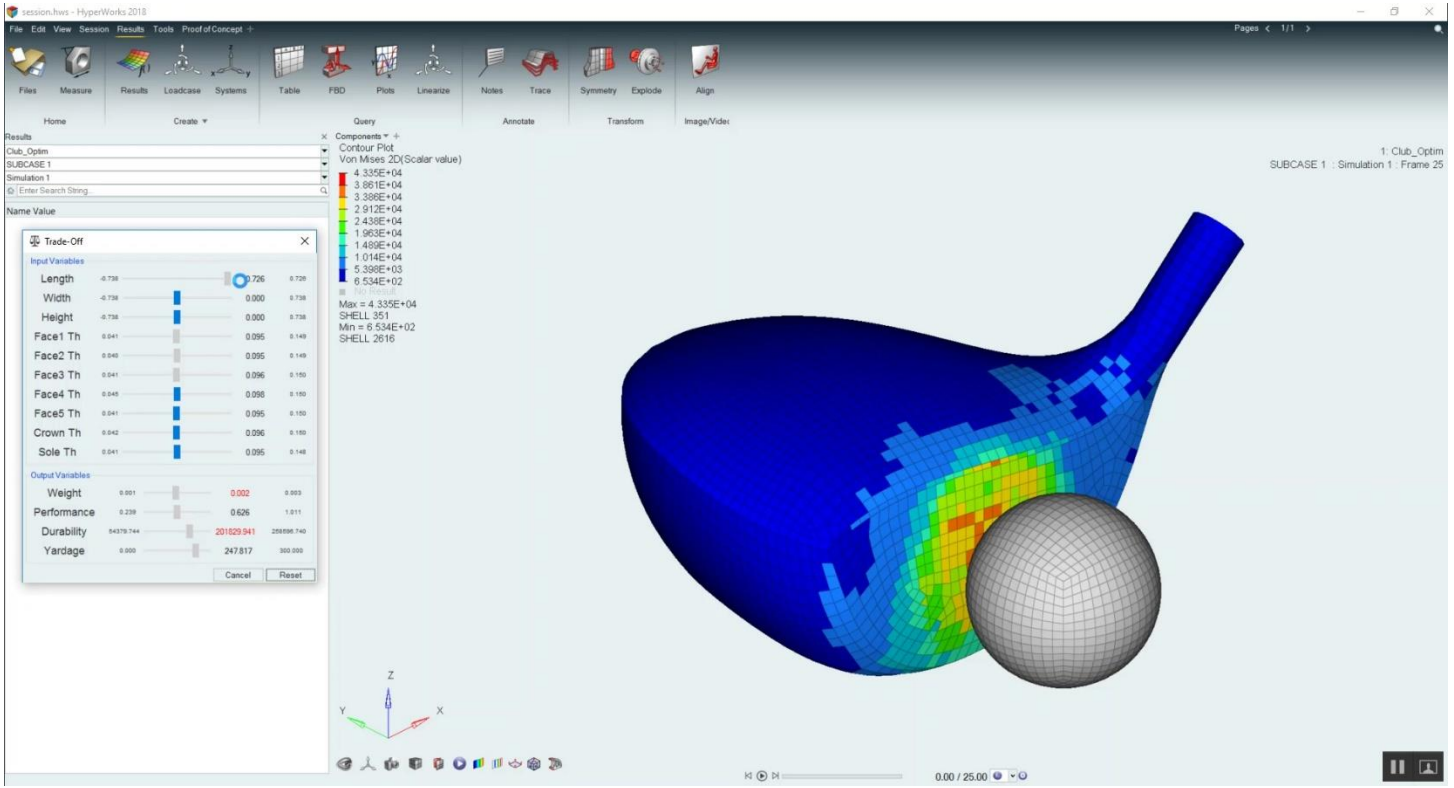
MACHINE LEARNING: DESIGN EXPLORATION



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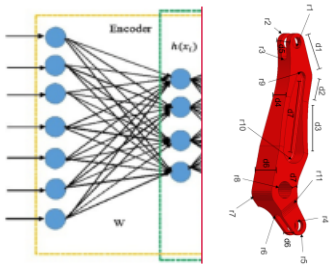
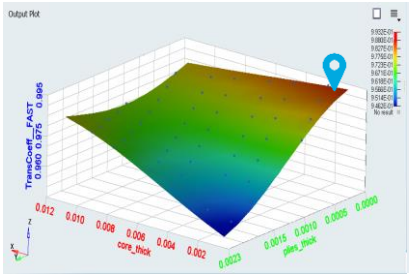
MACHINE LEARNING: SHAPE DESIGN

Database of previous designs

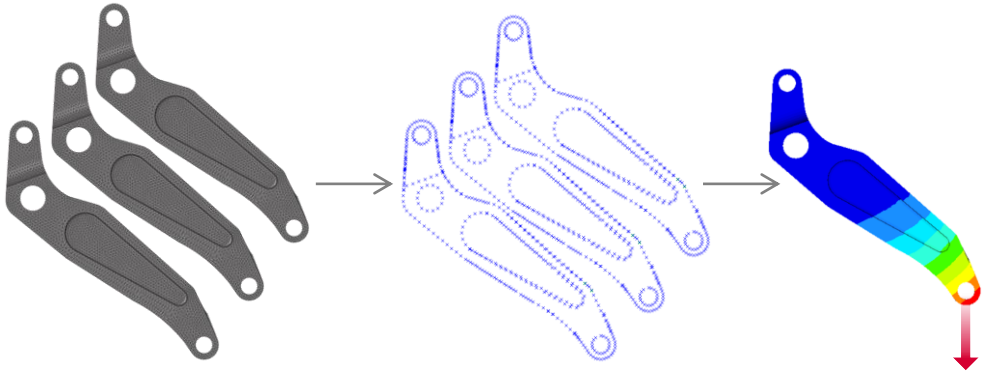


Use Principle Component Analysis (PCA) to extract features



Run optimization on KPIs and features

Optimal design achieved by morphing to point cloud



Target Displ. = 1.160 mm
Final Displ. = 1.151 mm

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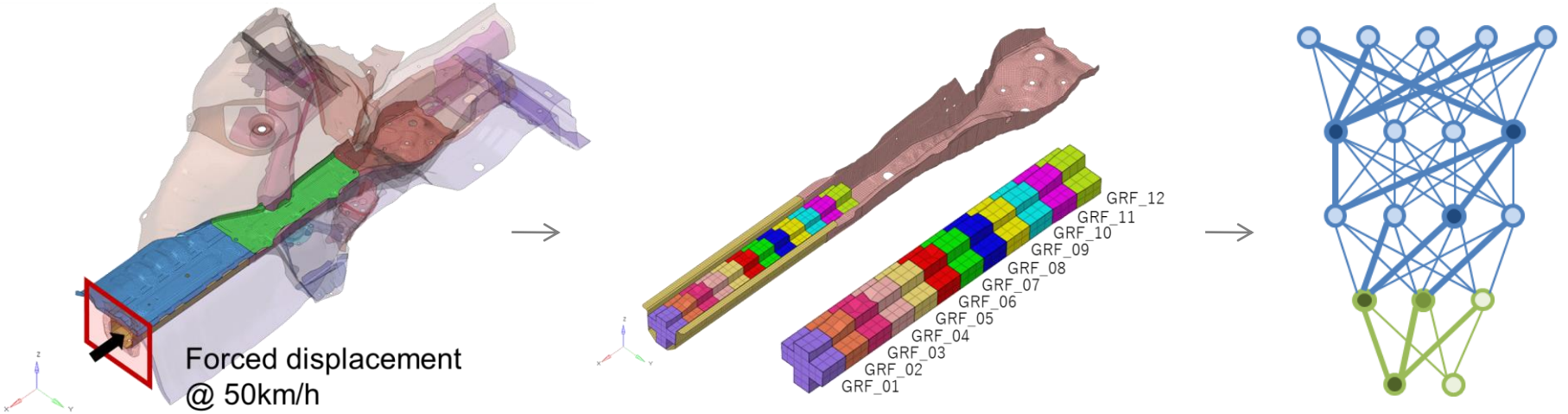
MACHINE LEARNING: CRASH SIMULATION



Deep Learning applied to BIW Reinforcement design considering post-buckling

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HPC, CLOUD AND DATA SCIENCE

Sam Mahalingam, CTO

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ALTAIR PBS WORKS™

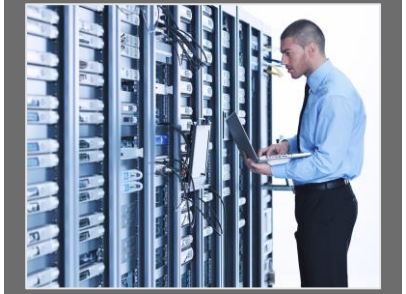
ENGINEERS & SCIENTIST

ACCESS HPC resources naturally (no IT expertise): run solvers, view progress, manage data, and use 3D remote visualization

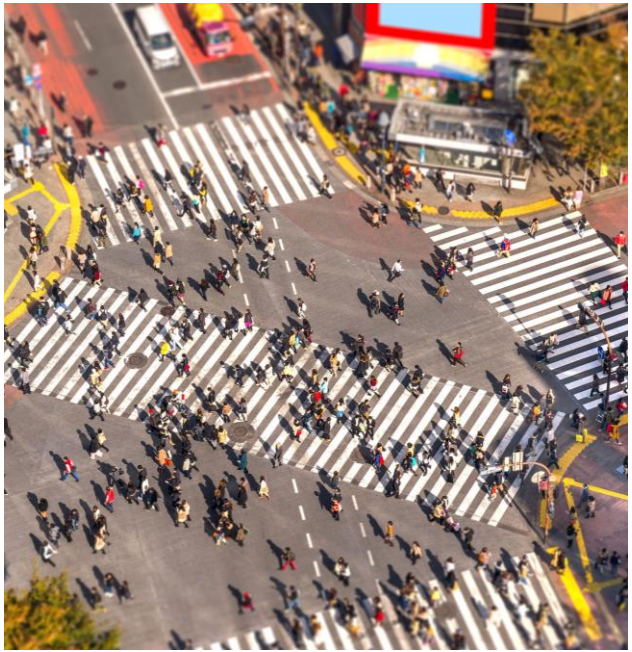
CLUSTERS & CLOUDS

OPTIMIZE HPC resources on clusters and clouds: schedule jobs, manage policies, speed turnaround, maximize utilization, ensure availability, maintain security

ADMIN & MANAGERS



CONTROL HPC resources and provide 360º visibility and agility: configure, deploy, cloud burst, monitor, report, simulate, analyze, tune, stay within budget



COMPREHENSIVE PRODUCT SUITE FOR ALL HPC NEEDS

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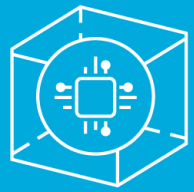
PBS WORKS OPPORTUNITIES

Growing demand for high-performance data analytics

Accelerate shift of HPC workloads between on-prem and any cloud



Grow market share in EDA and penetrate FINTECH

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ALTAIR SMARTWORKS™

Simple but powerful framework for combining real-time data with simulation, machine learning and optimization to accelerate innovation and improve operational efficiency.

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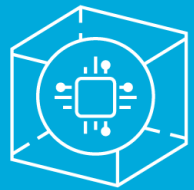
SMART WORKS OPPORTUNITIES

Growing demand to manage connected devices

Drawing insights from manufacturing and operational data



Strong interest in predictive and prescriptive analytics

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ALTAIR KNOWLEDGE WORKS

Deliver best-in-class data intelligence platform to unlock business value by business users leveraging machine learning.

Data Prep	Data Science	Model Deployment	Data Discovery
Self service enterprise data prep platform	Create and manage predictive models	Data governance and automation platform	Discover through data visualization and monitoring

UNIFIED PLATFORM FOR DATA SHAPING, ANALYSIS, VISUALIZATION AND PREDICTION

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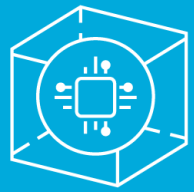
KNOWLEDGE WORKS OPPORTUNITIES

Growing data preparation market for business analysts and data engineers

Increasing use of data science to solve business problems



Emerging opportunities to apply data science to engineering

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KNOWLEDGE WORKS LIVE DEMONSTRATION

Mamdouh Refaat – Chief Data Scientist
Doug Ellis – VP Global Solution Architects

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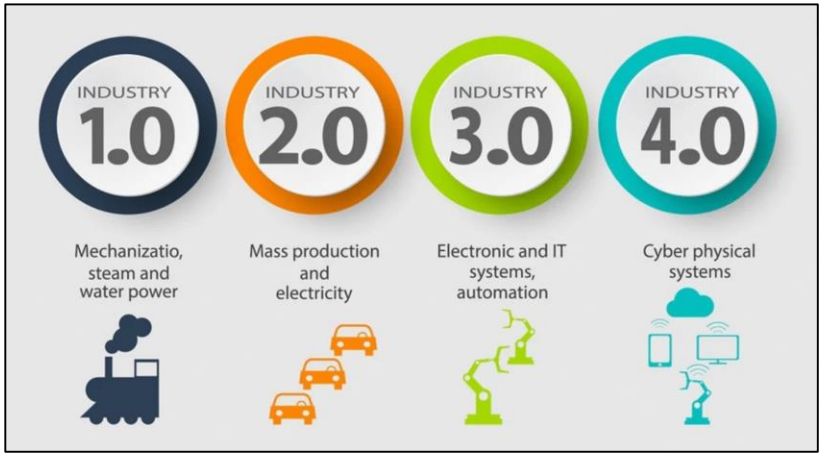
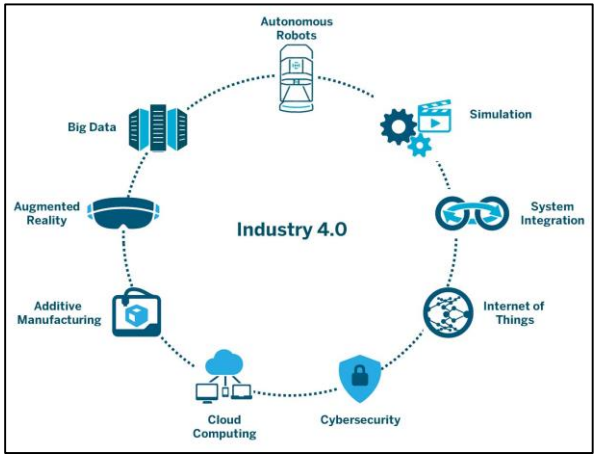
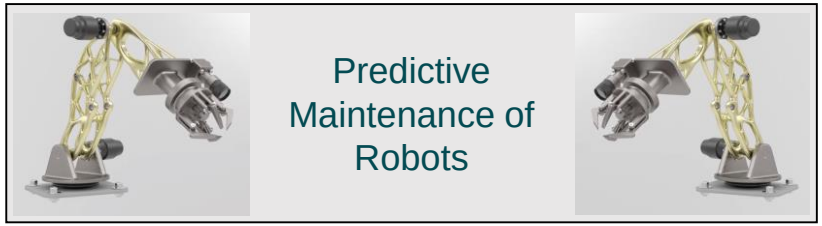
Machine Learning In Predictive Maintenance







Predictive Maintenance

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The Business Problem

A Large Automotive Manufacturing Company

- 16,000+ Robot Arms used in production (Assembly, Painting, Welding)
- When a robot arm breaks down before its maintenance cycle, it stops production
- 23% of deployed robot arms experienced breakdown before maintenance cycle
- Total cost of production delays **$44 millions**

Objective: Use **Altair Knowledge Works** platform to find which robot arms will breakdown before maintenance and prevent production delays

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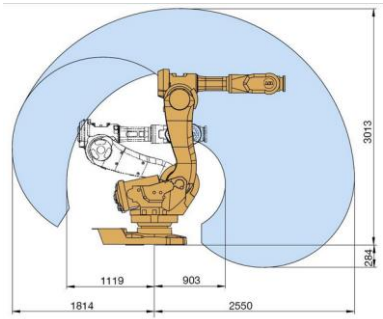
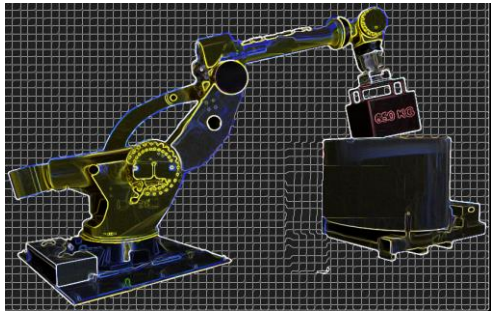
The Raw Data (1) - Robot Arm Characteristics

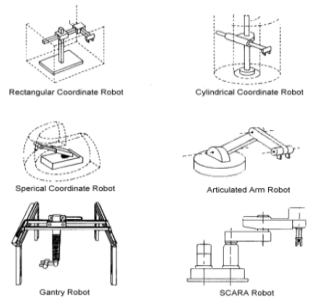
Robot Arm characteristics
Robot ID
Rach (cm)
Robot arm type
Power drive
Payload
Base Type
Supplier



Reach

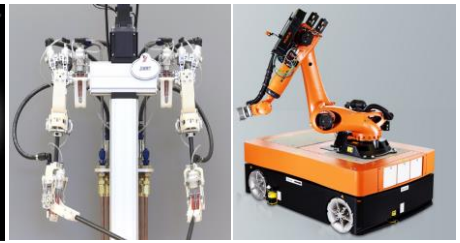


Payload



Type

Power Drive



Base

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Raw Data (2) - Usage

- **Usage**
- Robot ID
- Hours in operation
- Usage
- Payload utilization

Usage: Painting

Usage: Welding

Usage: Assembly

Payload utilization

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Raw Data (3) – Maintenance Cost And EC Of Product Delay

Maintenance and cost

Robot ID

Break down

Cost of breakdown

Robot_ID	Cost of breakdown	DV_Breakdown
AIH - 32001	5772.58	No
AIH - 32002	4983.27	No
AIH - 32003	3286.94	Yes
AIH - 32004	4371.35	Yes
AIH - 32005	2555.53	No
AIH - 32006	9167.95	No
AIH - 32007	2735.47	No
AIH - 32008	2724.98	Yes
AIH - 32009	3543.57	No
AIH - 32010	6017.59	No
AIH - 32011	5027.23	Yes
AIH - 32012	3278.16	No
AIH - 32013	5201.33	No
AIH - 32014	3303.13	No
AIH - 32015	3623.67	Yes
AIH - 32016	4383.45	Yes
AIH - 32017	4285.27	No
AIH - 32018	3624.78	No

Estimated Cost (EC) of delay

Actual cost

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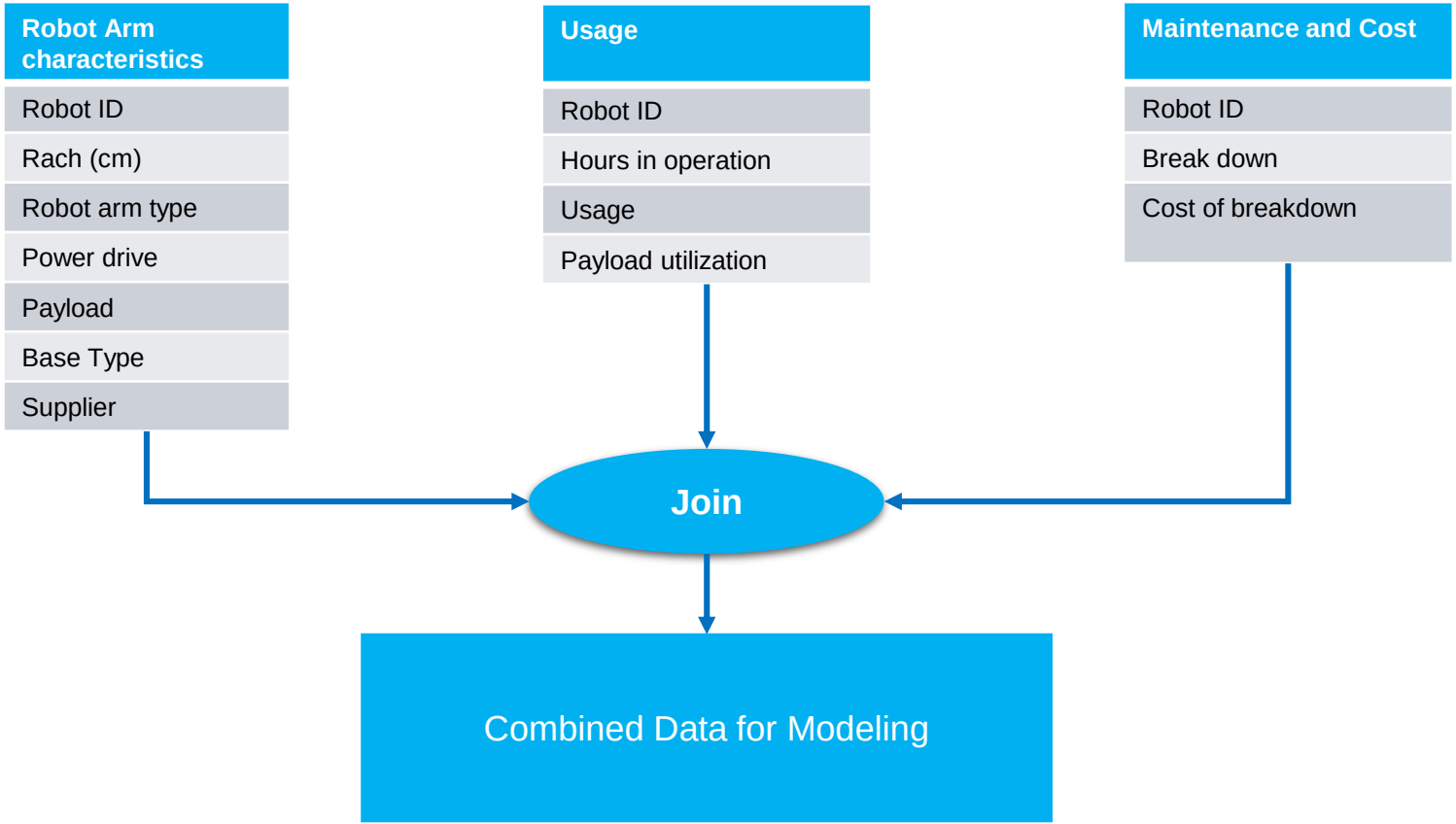
Data Preparation



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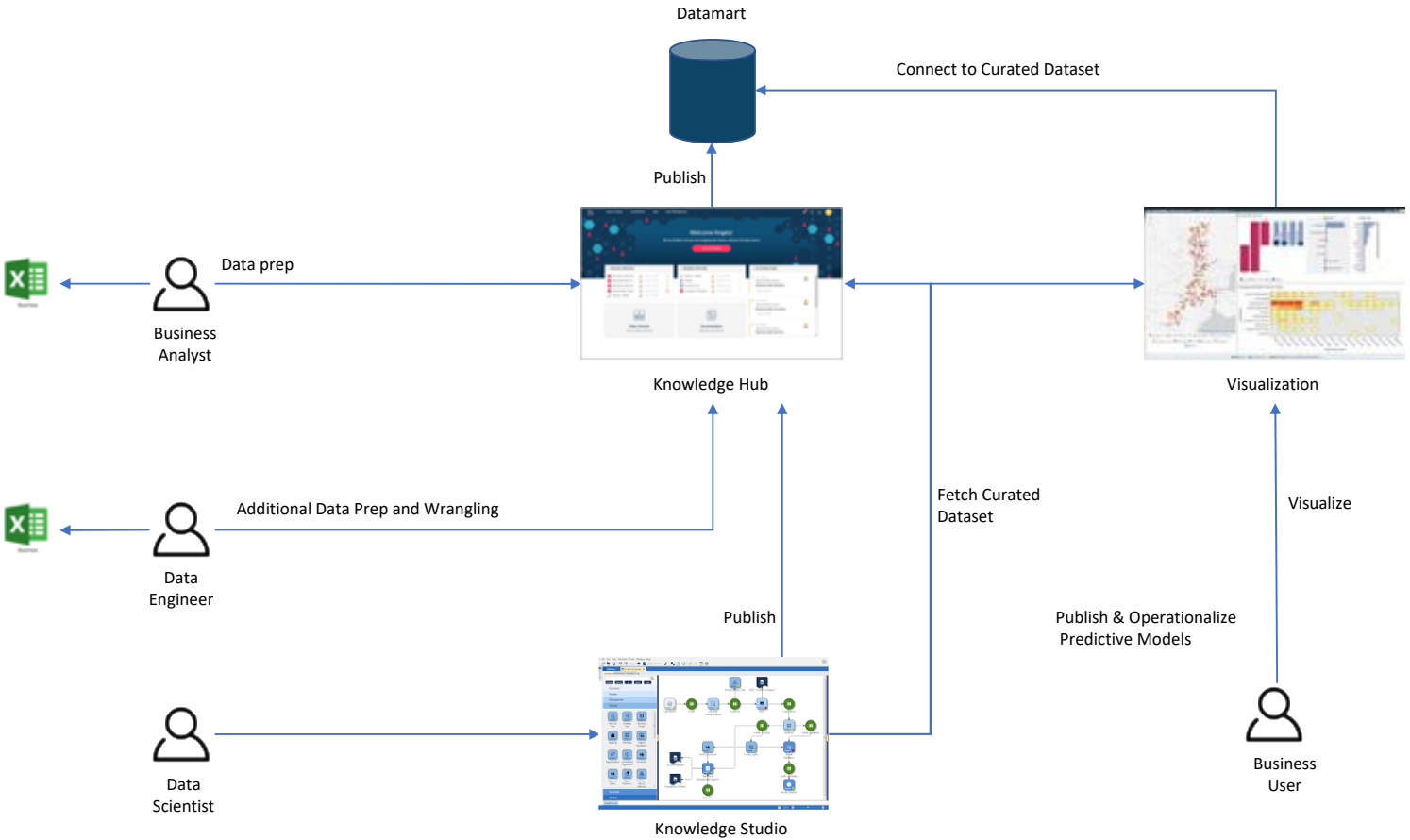
The Workflow



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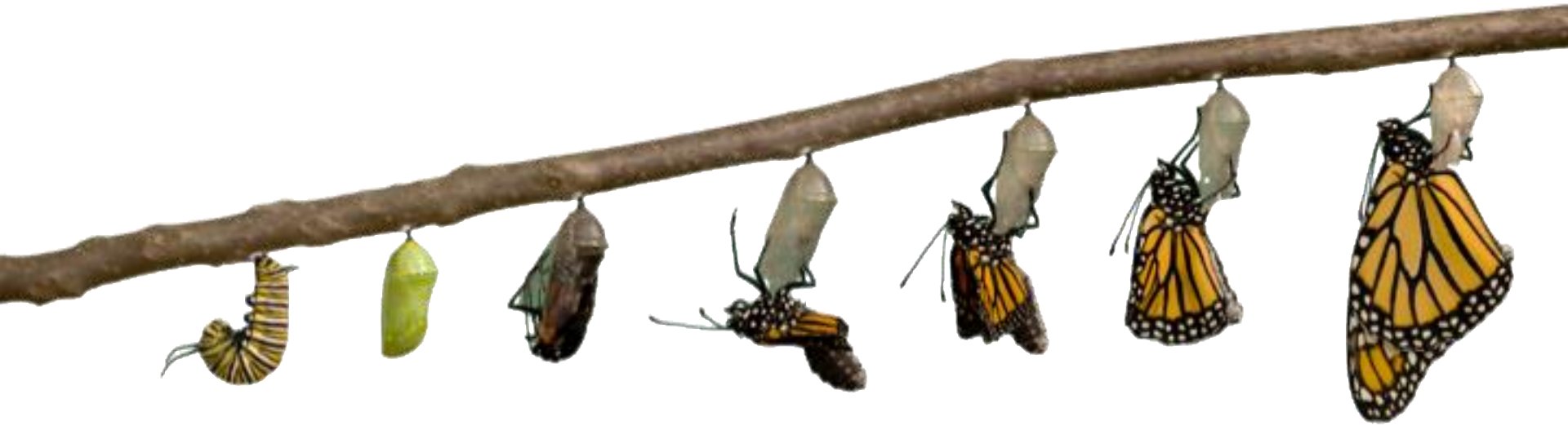
Live Demonstration



DRIVING TRANSFORMATIVE INNOVATION

Altair

Financial Update

Howard N. Morof
Chief Financial Officer

March 12, 2019

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Safe Harbor Statement

The presentations today and the accompanying oral commentary contain "forward-looking" statements that are based on our beliefs and assumptions and on information available to us as of the date of today's presentations. All statements other than statements of historical facts contained in these presentations, including statements regarding our future results of operations and financial position, customer lifetime value, strategy and plans, market size and opportunity, competitive position, industry environment, potential growth opportunities and our expectations for future operations, are forward-looking statements. The words "believe," "may," "might," "objective," "ongoing," "will," "estimate," "continue," "anticipate," "design," "intend," "expect," "could," "plan," "potential," "predict," "project," "seek," "should," "would" or the negative version of these words and similar expressions are intended to identify forward-looking statements..

We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements. Forward-looking statements involve known and unknown risks, uncertainties, assumptions and other factors that may cause our actual results, performance, achievements or expectations to be materially different from any future results, performance, achievements or expectations expressed or implied by the forward-looking statements. Such risks are described in our most recent Annual Report on Form 10-K and other filings that we make with the SEC. Except as required by law, we assume no obligation to update these forward-looking statements publicly, or to update the reasons why actual results could differ materially from those anticipated in the forward-looking statements, even if new information becomes available in the future.

These presentations may also contains non-GAAP financial measures. We have provided a reconciliation of such non-GAAP financial measures to the most directly comparable measures prepared in accordance with U.S. GAAP in the Appendix to these presentations. For further information regarding our use of non-GAAP financial measures, please see our most recently filed Annual Report on Form 10-K.

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Financial Profile

Scaled business with global presence and attractive revenue growth

Recurring model with high visibility and predictability

Powerful **“retain, expand, and land”** strategy

Strong free cash flow generation

Proven profitability with **significant operating leverage** opportunities

Altair

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2018 Highlights

Strong software product revenue growth driving adjusted EBITDA and Free Cash Flow

FY18 Revenue	FY18 Adjusted EBITDA	Adjusted EBITDA Margin	Software Product Revenue Growth	Software Product Revenue to Total Revenue	Free Cash Flow
$396M	**$50M**	**12.7%**	**20%**	**77%**	**$29.6M**

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Powerful “Retain, Expand, And Land” Strategy

Large, attractive base

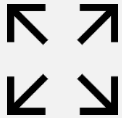
Retain

89%+ Recurring Software License Rate

Maintain usage

Listen and respond to user requirements

Support, development



Expand

~60% of New Software Growth

Grow usage

More engagement, new users, new products

Training, support, consulting, units-based model

New customers & markets

Land

~40% of New Software Growth

New customers

New verticals, high impact solutions

New channels and delivery models

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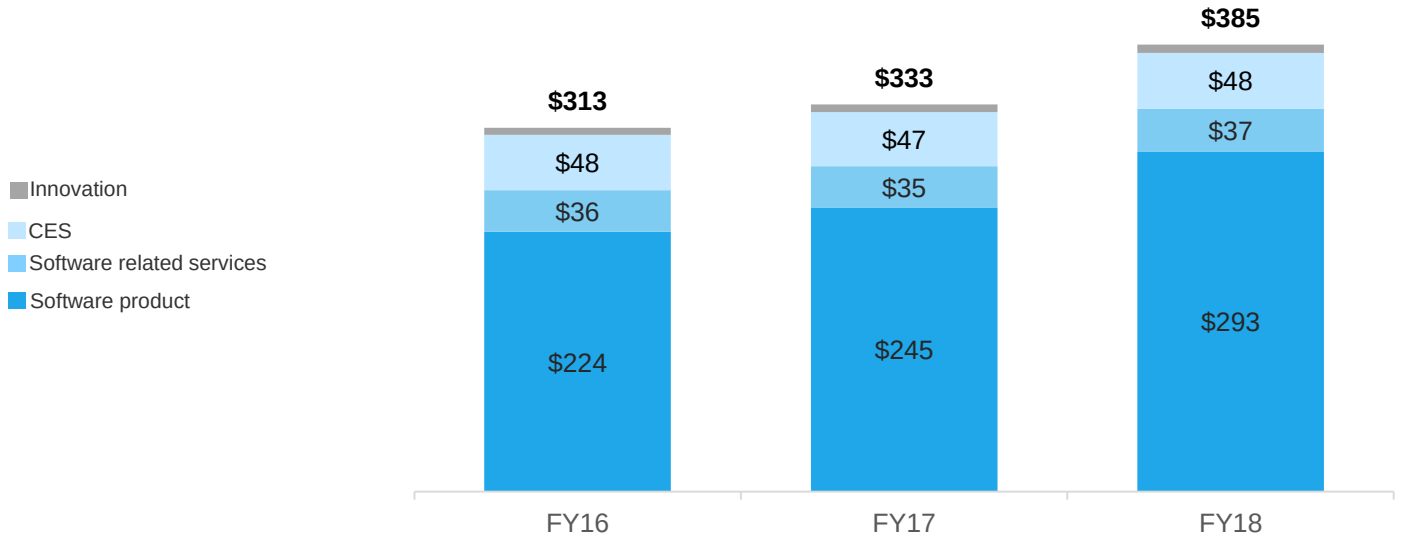
Excellent Revenue Growth (605)

	FY16 to FY17	FY17 to FY18
Total Growth	6%	16%
Software Product Growth	9%	20%



$ in millions

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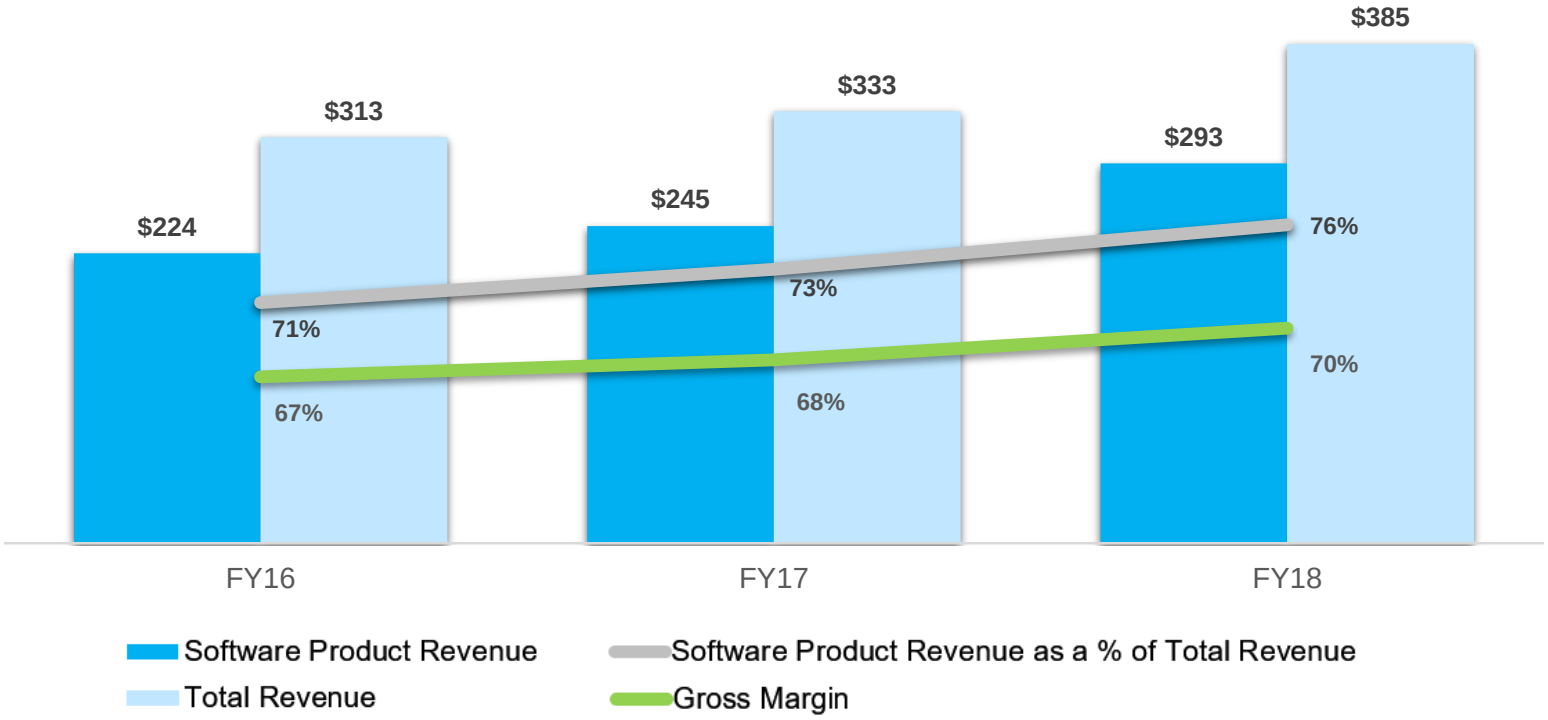
Software Product Driving Gross Margins (605)



$ in millions

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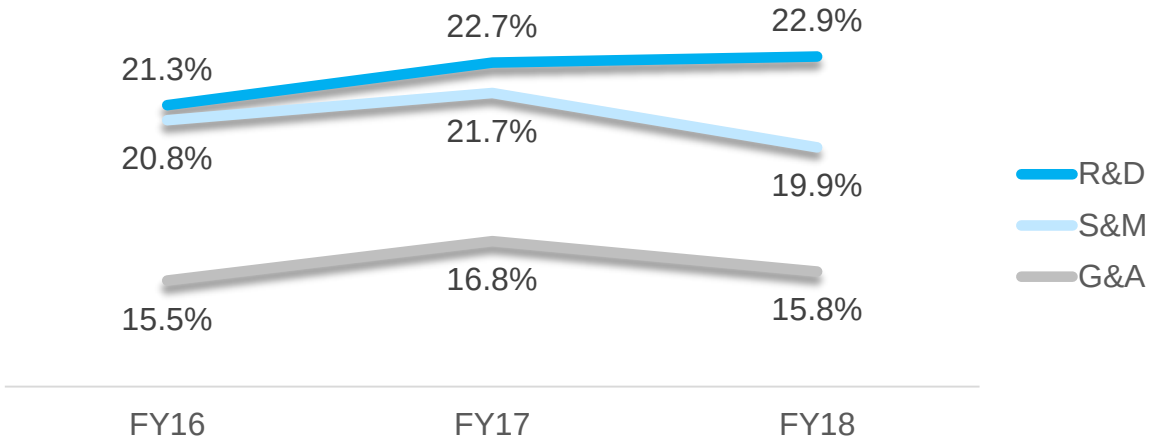
Non- GAAP Operating Expense Leverage



Operating Expenses as % of Revenue	FY16	FY17	FY18 (606)
Research and Development	21.3%	22.7%	22.9%
Sales and Marketing	20.8%	21.7%	19.9%
General and Administrative	15.5%	16.8%	15.8%

Expenses Exclude: SBC, Depreciation & Acquisition Costs

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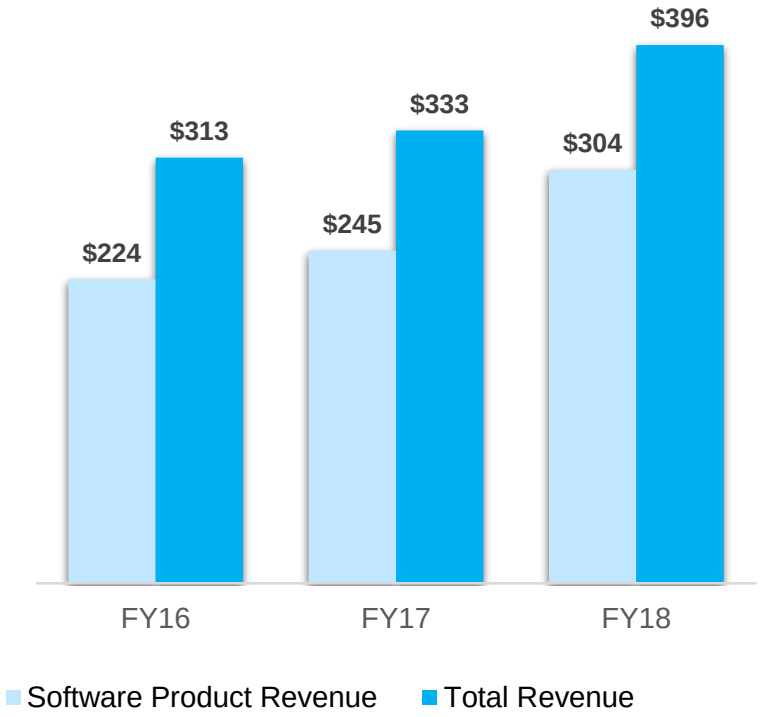
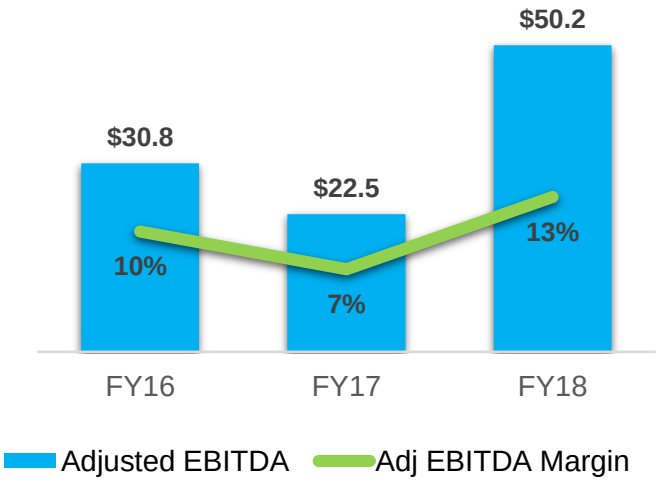
Revenue & Adjusted EBITDA





$ in millions

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Impact Of 606 – 2018 Quarterly Results

	Three months ended				
	Mar 31, 2018	Jun 30, 2018	Sep 30, 2018	Dec 31, 2018	FY18
Software product revenue	$ 89.7	$ 70.6	$ 64.2	$ 79.9	$ 304.4
Total revenue	$ 113.3	$ 93.4	$ 86.8	$ 103.0	$ 396.4
Adjusted EBITDA	$ 29.6	$ 5.3	$ 2.4	$ 12.9	$ 50.2

Revenues will more closely track actual seasonal billings, strongest in Q1 and Q4

Quarterly results skewed to renewals, expansions and new licenses

Quarterly results to exhibit greater variability

Negligible impact to costs

No significant impact to cash flows

Reduction of deferred revenue on balance sheet

$ in millions

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Balance Sheet - Key Items

	Dec 31, 2018	Dec 31, 2017
Cash and cash equivalents	$ 35.3	$ 39.2
Accounts receivable, net	$ 96.8	$ 86.6
Deferred revenue	$ 66.5	$ 139.8
Long-term debt	$ 31.8	$ 0.4

Cash flow strongest in Q1 and early Q2 due to seasonal license renewal schedules

Approximately $169 million available at year end under revolving credit agreement, including $50 million accordion option

$ in millions

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Free Cash Flow

Free cash flow positively impacted by software momentum and strong collections in Q4 18

$ in millions

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Long-term Target Progress

	FY16	FY17	FY18	LONG-TERM
Software Product % of total revenue	71.5%	73.4%	76.8%	75%+
Total Gross Margin	67.2%	68.0%	70.7%	71-73%
Adjusted EBITDA Margin	9.8%	6.8%	12.7%	20%+

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Foreign Exchange Headwinds

Fx relatively neutral in impact for 2018 on revenue and adjusted EBITDA

Current Fx rates present headwinds for 2019, potentially $7 to $10 million in revenue and $2 to $3 million in adjusted EBITDA

	USD to International Currency				2/28/2019 Change from 12/31/2017
	12/31/2017	3/31/2018	12/31/2018	2/28/2019	
Euro	$ 1.200	$ 1.232	$ 1.146	$ 1.138	-5.1%
GBP	$ 1.350	$ 1.401	$ 1.276	$ 1.328	-1.7%
Rupee	$ 0.016	$ 0.015	$ 0.014	$ 0.014	-9.9%
Yen	$ 0.009	$ 0.009	$ 0.009	$ 0.009	2.7%
CNY/RMB	$ 0.154	$ 0.159	$ 0.145	$ 0.149	-5.4%

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Effective Tax Rate

ETR expected to be 40%

Altair U.S. in Valuation Allowance position due to value of NSO option driven tax deductions creating U.S. tax NOLs

Unable to recognize value of U.S. tax attributes for foreign tax credits and U.S. R&D tax credits

Inherited additional NOL deductions from Datawatch, also subject to annual usage limitations

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2019 Summarized Guidance

Continuing growth in software product revenues, with stable services revenue

Balanced approach between continuing investments supporting top line growth opportunities through R&D and Sales and Marketing with continued progress growing Adjusted EBITDA and Free Cash Flow

Substantial acquisition cost synergies already effectuated

	1Q19			FY19		
Software Product Revenue	$ 99.0	to	$ 101.0	$ 373.0	to	$ 377.0
Total Revenue	$ 123.0	to	$ 125.0	$ 470.0	to	$ 474.0
Net Income	$ 10.5	to	$ 12.5	$ 18.0	to	$ 22.0
Adjusted EBITDA	$ 23.0	to	$ 25.0	$ 61.0	to	$ 65.0
Free Cash Flow				$ 34.0	to	$ 36.0

$ in millions

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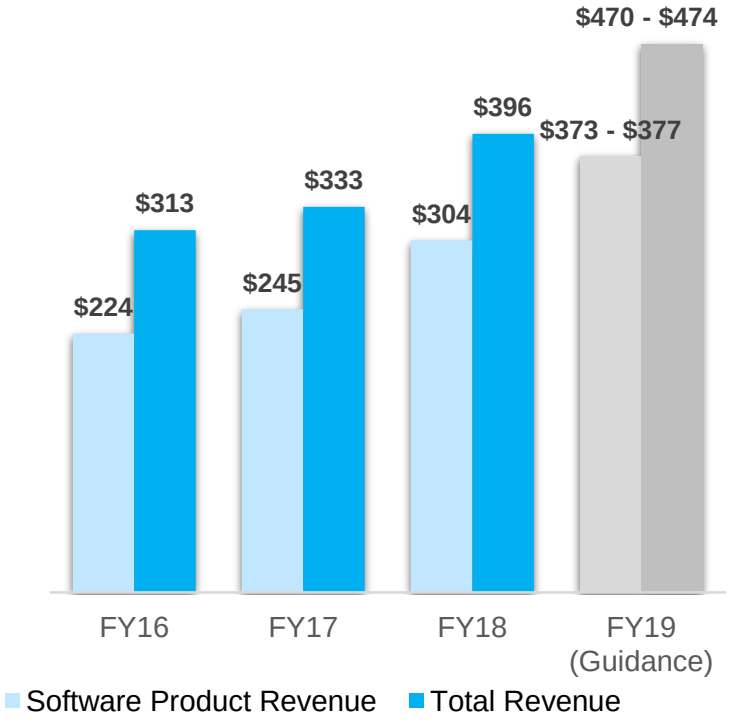
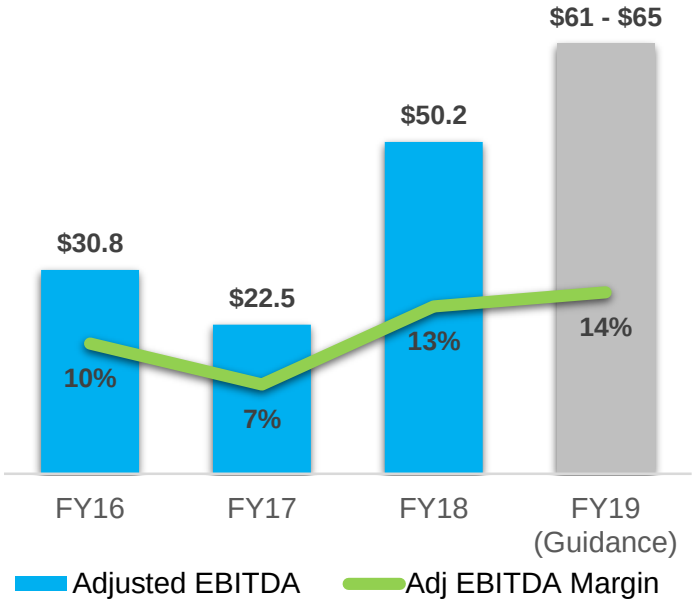
2019 Guidance





$ in millions

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In Summary

Well positioned in large, growing markets

- Broad, differentiated product suite
- Levered to strong secular drivers

Attractive financial profile

- Scaled, global and diversified
- Proven profitability with significant operating leverage

Unique business model

- High retention, visibility and recurring revenues
- “Retain, expand and land” global blue chip customer base

Significant organic and inorganic growth opportunities

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Questions

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Appendix

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GAAP To Non-GAAP Reconciliation

$ in millions

	FY16	FY17	FY18
Net income (loss)	$10.2	($99.4)	$13.7
Income tax expense (benefit)	$3.5	$63.0	$13.3
Stock-based compensation	$5.1	$47.3	$3.3
Interest expense	$2.3	$2.2	$0.2
Interest income and other	($0.3)	($2.3)	$5.0
Depreciation and amortization	$10.0	$11.7	$14.7
Adjusted EBITDA	$30.8	$22.5	$50.2

	FY16	FY17	FY18
Net cash provided by operating activities	$21.4	$19.1 [1]	$36.2
Capital expenditures	($9.5)	($5.5) [2]	($6.6)
Free cash flow	$11.9	$13.6	$29.6

[1] Includes a $3.0mm non-recurring adjustment for R&D tax credit
[2] Adjusted for Modeliis asset acquisition of $2.0mm

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Operating Expense Reconciliation

$ in millions	FY16	FY17	FY18
Research and development	$71.3	$93.2	$97.6
Less: SBC	($1.4)	($12.5)	($0.7)
Less: Depreciation	($0.4)	($0.5)	($0.7)
Less: Refundable tax credits & Other	($2.7)	($4.7)	($5.3)
Non GAAP Research and development	$66.8	$75.5	$90.9
% R&D margin	*21.3%*	*22.7%*	*22.9%*
Sales and marketing	$66.1	$80.0	$80.3
Less: SBC	($0.8)	($7.7)	($0.9)
Less: Depreciation	($0.2)	($0.1)	($0.2)
Less: Acquisition costs	-	-	($0.4)
Non GAAP Sales and marketing	$65.1	$72.2	$78.8
% S&M margin	*20.8%*	*21.7%*	*19.9%*
General and administrative	$57.2	$88.0	$79.8
Less: SBC	($3.0)	($26.7)	($1.7)
Less: Depreciation	($5.7)	($5.4)	($5.8)
Less: Acquisition costs	-	-	($9.7)
Non GAAP General and administrative	$48.5	$55.9	$62.6
% G&A margin	*15.5%*	*16.8%*	*15.8%*

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