



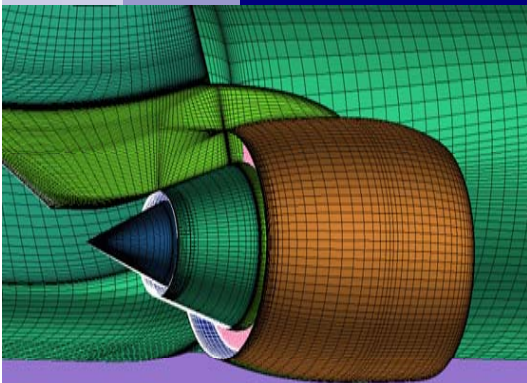
# ADVANCED ENGINEERING SOLUTIONS INC.

*Innovative Steps to Excellence...*



Engineering Solutions  
Through CAD / CAE / CFD

**Company Overview**





# ADVANCED ENGINEERING SOLUTIONS INC.

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## Corporate Overview

### Vision

Aiming to be the 'Most Admired Global Company'  
providing Advanced Engineering Services & Solutions



### Mission

Globally Delivering value added engineering  
Services and Solutions to its Customers



### Core Values

- ✓ Establish good relationship with clients
  - Through Expertise in latest Technologies & commitment to Quality
- ✓ Provide More Value to relationships
  - By exceeding the client expectation





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## History of AES

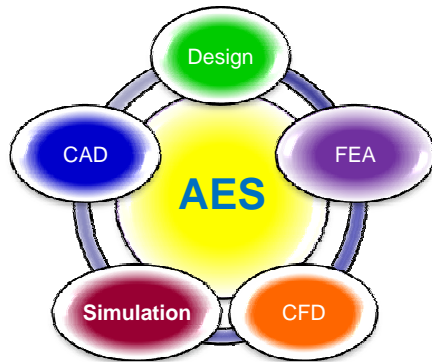
- Founded in June 2004 as an engineering services business.
  - ❖ Corporate office located in San Jose, CA
  - ❖ Regional Offices
    - India – Delhi, Bangalore & Chennai
- Partnered with the leading Industry majors in INDIA, USA, Europe & SA.
- AES is a US based company and abide by California Laws.



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## Core Capabilities



- **AutoCAD**
- **CATIA V5**
- **PDMS**
- **Inventor**
- **Framework**
- **Pro-E**
- **Unigraphics**
- **Solid Works**



### Piping Design

- Preparation of Design and Technical specification
- Preparation of Plot plan, Equipment Layouts, Piping GADs & Isometrics
- Nozzle Orientation and Support Drawings
- Pipe Size Calculation, Stress analysis
- BOM



### Structural

- Structure Layout and sizing
- Design calculation and documentation
- 3D Models in PDS framework
- Preparation of Fabrication & general arrangement drawings.
- Design of Crane Grinder
- Conveyor support structures

### Electrical & Instrumentation

- Design and Control philosophy
- Preparation of instrumentation design
- Generation of instrumentation drawings
- Cable schedules
- Instrumentation loop diagrams
- BOM



### HVAC

- Design and drafting of HVAC systems
- Duct Design

The Spirit of Innovation, Value addition and Cost effectiveness





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## FEA

Static & Dynamic, Linear & Non-Linear in steady state/Transient

### Structural

Static, Transient, Modal, Harmonic, Transient Dynamic, Spectrum, Buckling, Acoustic and Electromagnetic Interaction Analysis

### Thermal

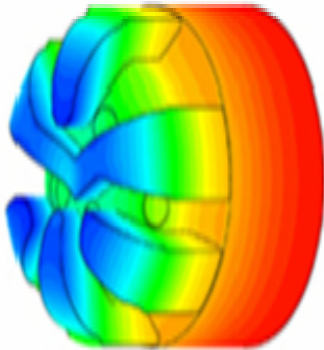
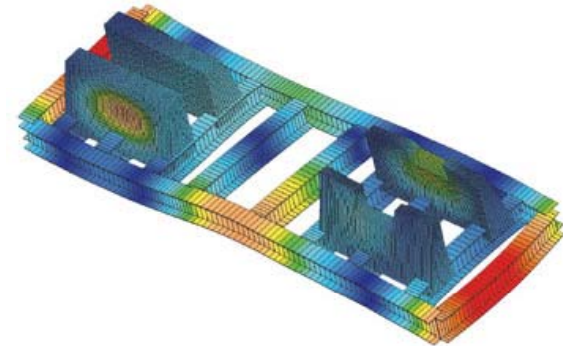
Steady state and Transient, Conduction, Convection, Radiation

### Coupled Physics

Thermal-structural, Fluid-Structural, Thermal-electric, Piezoelectric



- Ansys /ABAQUS/LS-DYNA
- Hypermesh



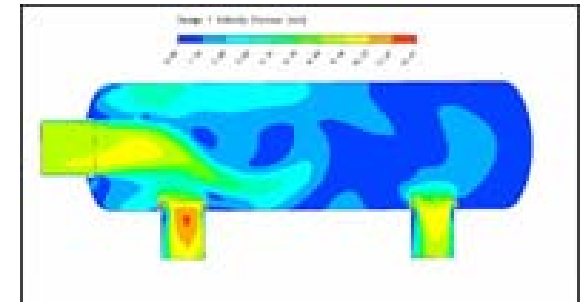
## CFD

CFD service offers solutions to different types of flow simulations with conjugate heat transfer and fluid structure interaction

- Steady/Transient
- Rotating Flow
- Multi phase
- Combustion
- Conjugate Heat Transfer
- Radiation



- CFX
- Fluent
- Star CD
- ICEM CFD

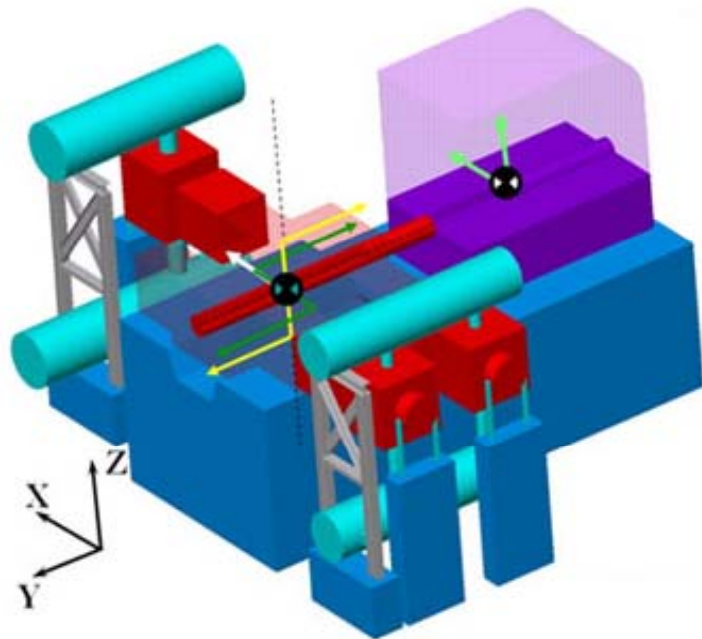


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## Simulation

End to End service in BIW Automotive Industry including

- Processing
- Process validation
- Design Validation
- Robotic Simulation
- Offline Programming of various Robots (E.g.: Fanuc, ABB, KUKA, NACHI etc)
- Design of Jigs and Fixtures



- Rob CAD
- IGrip

## CAD

Service includes

- 3D Parametric solid and surface modeling
- Fully constrained assembly modeling
- Associative 2D Manufacturing Drawing
- Fixing GD&T
- CAD conversion
- Piping and Routing
- Manual Creation
- Assembly Procedure (OMS)
- ECO/DCI (Product Release)
- BOM



- AutoCAD
- CATIA V5
- PDMS
- Inventor
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- Unigraphics
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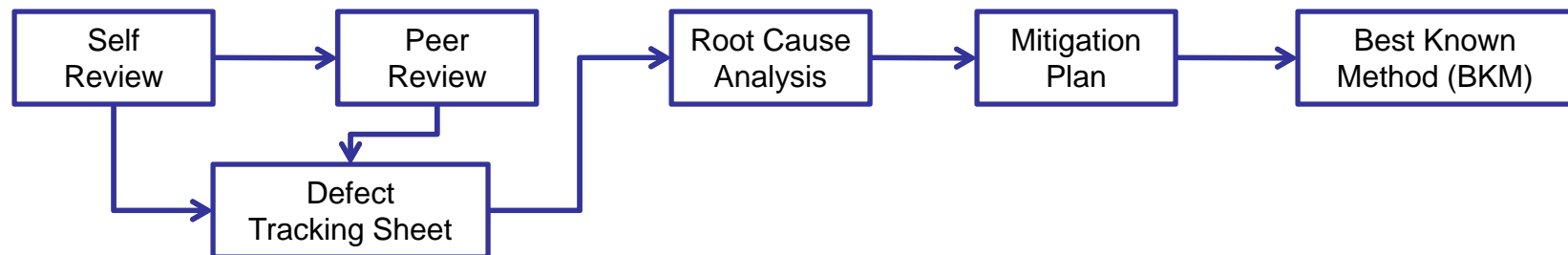
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## Quality Policy & Process

### Quality Policy

“AES delights customers by supply of Innovative and quality services on time at optimum cost through continual improvement by using appropriate technology and reviewing the effectiveness of quality management system and quality objectives.”

### Quality Process



## Unique Features of AES

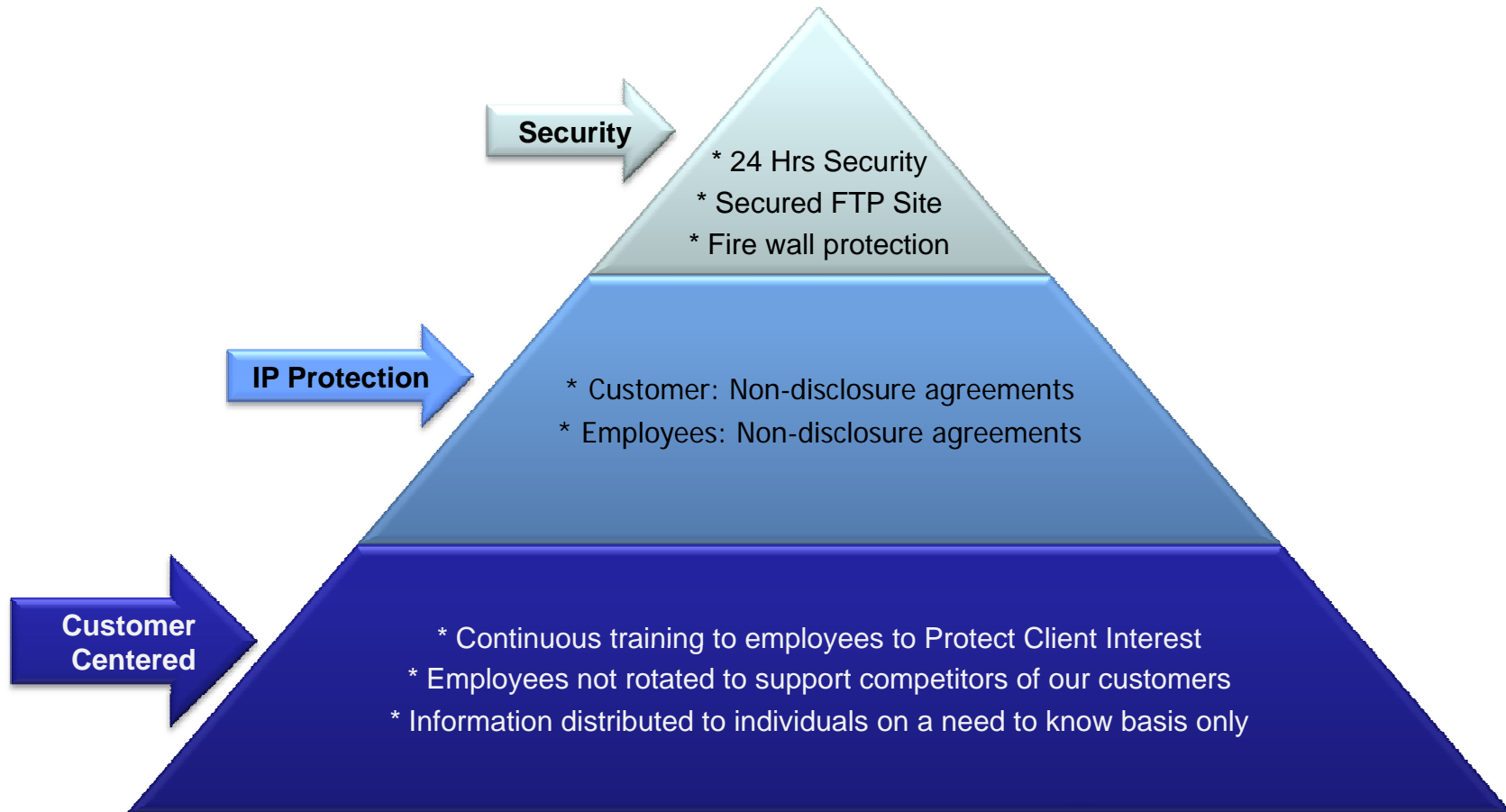
- Global Engineering Presence with convenient delivery models.
- 24/7 support with best Quality
- Excellent Domain expertise and industry knowledge
- Total commitment of Management



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## Protection of Intellectual Property (IP)







**ADVANCED ENGINEERING SOLUTIONS INC.**

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**Thank You**