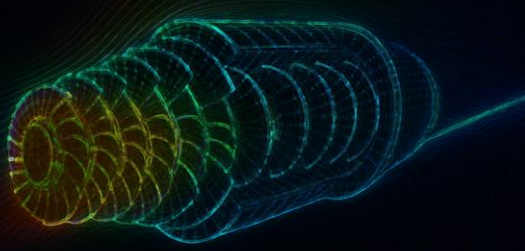
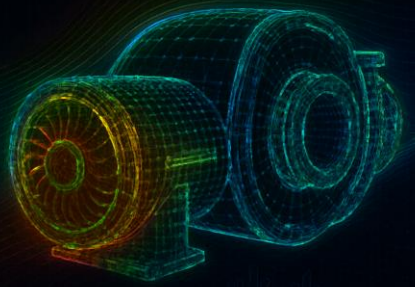
ELITE ENGINEERS

Accelerating Innovation
with Advanced Engineering

ParthSarthi
Elite Engineers





Outlines

- About us
- Vision & Mission
- Company Core Values
- PSEE Spectrums
- Strategic Engineering Solutions
  - Virtual Prototyping
  - Advanced Engineering Expertise
  - Core Competencies
- Industry Focus
- Operating Models
- Engineering Excellence Programs
- Connect us

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About Us

- **ParthSarthi Elite Engineers** offers specialization in advanced engineering simulation, new product development, data-driven engineering for **Rotating machines (Turbines, Pumps, Fans, Compressors, Blowers) , Pressure Vessels, Filtration systems (Separators, Filters) and material handling equipment's.**
- We brings together domain experts with Advanced engineering capabilities FEA, CFD, Multiphysics simulation, turbomachinery design & Validation and process optimization to deliver high-impact engineering inline with code compliance.
- We empower clients design smarter, innovate faster, and solve complex challenges through domain expertise, digital engineering, and simulation-driven decision-making.

Capabilities:

- CAD & CAE Workflows
- FEA | CFD | Multiphysics
- Material Modelling
- Data-Driven Engineering

Differentiators:

- **Senior Domain Experts**
- **Skilled Analysts**
- **Client Focus Solutions**
- **Agile Delivery**

Deliver engineering excellence through accuracy, innovation, and value creation.

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Vision & Mission

VISION

Engineering innovation for a sustainable Future

To be the trusted global partner in engineering innovation, delivering sustainable solutions that empower industries to build safer, smarter, efficient, and sustainable products and systems.

Deliver Innovate, Reliable, Cost-Effective solutions through collaboration and Advanced Engineering excellence

Our mission is to solve complex challenges, enhance operational efficiency, and build long-term partnerships that drive measurable impact for clients and communities.

MISSION

Strategic Objectives:

Reduce Client Time to Prototype | Improve Design Performance KPIs (Weight, Efficiency, Reliability) | Standardize best Practices and Automation across client Team | Accelerate talent Up-Skilling with modular and outcome-based training

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Core Values

Our core values include innovation, quality and reliability, sustainability, and a customer-centric approach.

Integrity

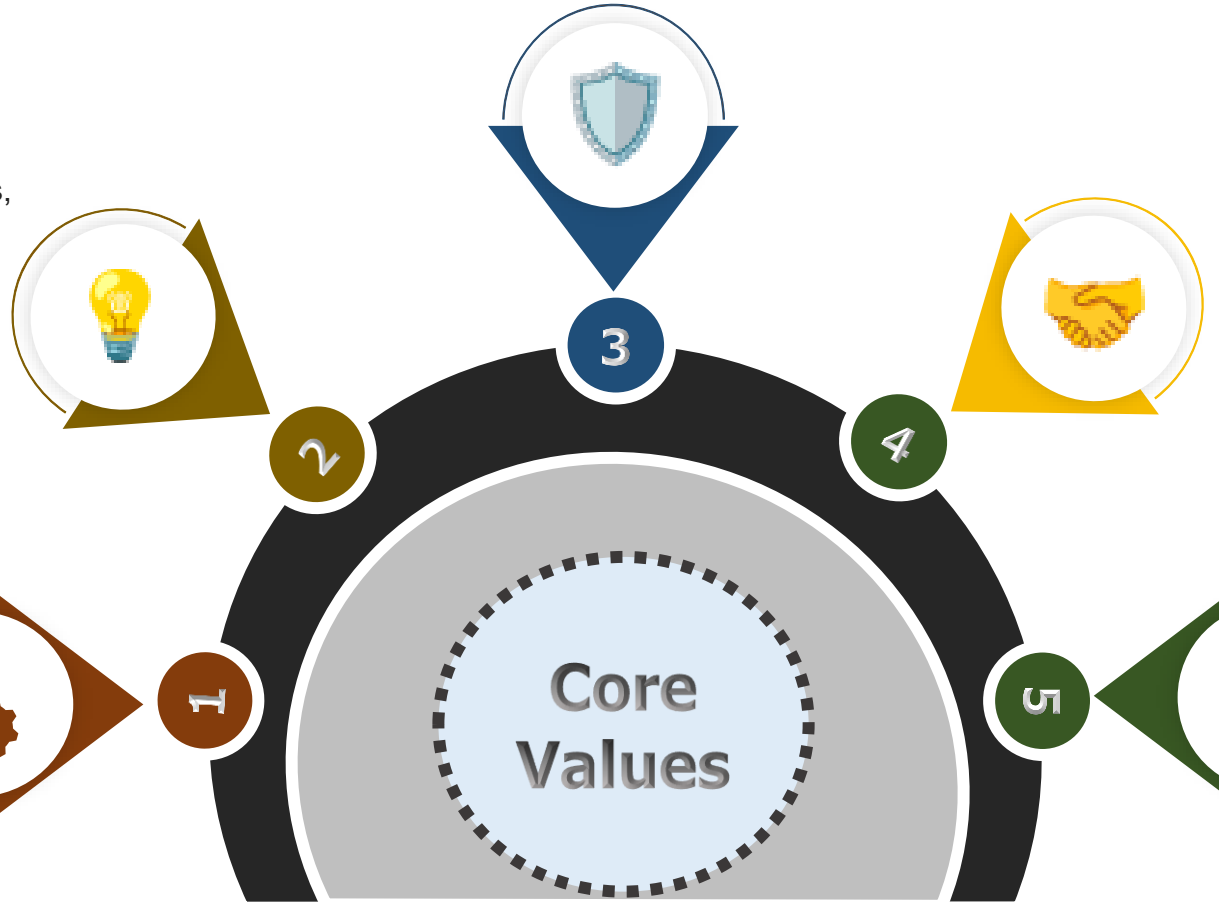
Commitment to honesty, transparency, and responsibility in every collaboration.

Innovation

embrace new ideas, technologies, and methods to transform challenges into opportunities.

Collaboration

working together across teams, clients, and partners to achieve outstanding results and success.



Engineering Excellence

Striving highest standards of engineering accuracy, quality, and performance in services.

Sustainability

engineer solutions that support long-term environmental, economic, and societal well-being

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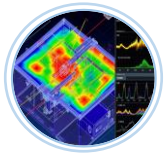
PSEE Spectrums

Strategic Engineering Solutions

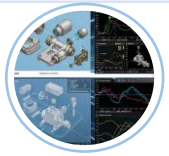
Virtual Prototyping



Advanced Engineering

Research & Innovation

Failure Analysis



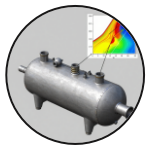
Innovate to Value (i2V)

Life Cycle Engineering

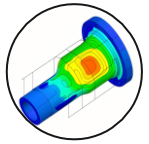
Engineering Excellence Programs

- Institutional Training Programs
- Corporate Training Programs
- Individual Training Programs
- Career Development Guidance

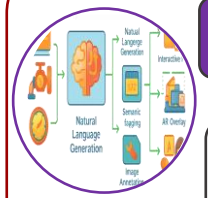
Process Engineering



Process Equipment Design & Analysis



Process Piping Design & Analysis



Technical Publications

Manual Creation, Translation, Rendering, Technical Articles etc.

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Strategic Engineering Solutions

Virtual Prototyping Services

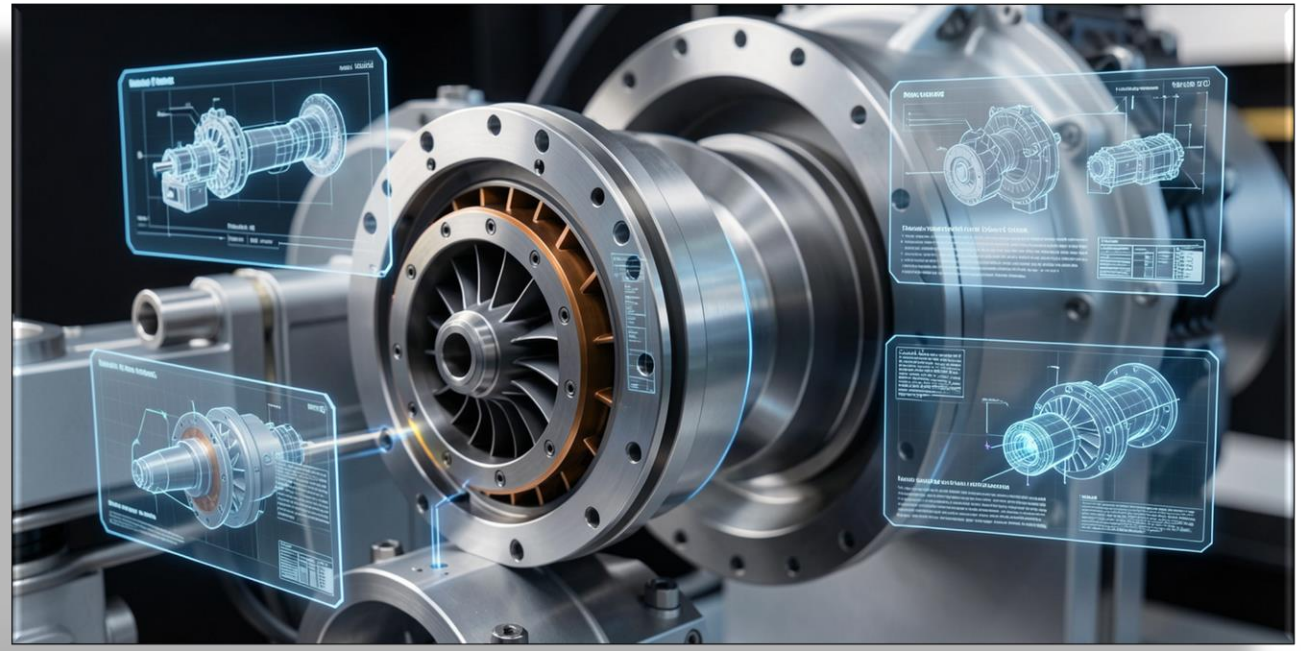
Concept to digital Prototype ◘ CAD/CAE Integration ◘ Digital Twin

Accurate • Intelligent • Ready for Simulation • Rapid Prototype

High-quality 3D models for components, assemblies, and systems—built for design validation, simulation workflows, and digital twins.

SERVICES OVERVIEW

- Concept-to-Digital Prototype Workflows
- Parametric & Generative CAD Modeling
- Digital Integration for Product and Process
- Rapid Iteration & Design Space Exploration



BENEFITS

- Fewer Physical Prototypes and Rework
- Shorter Development Cycle and Faster Decision
- Early Risk Identification and Optimization

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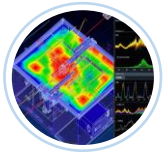
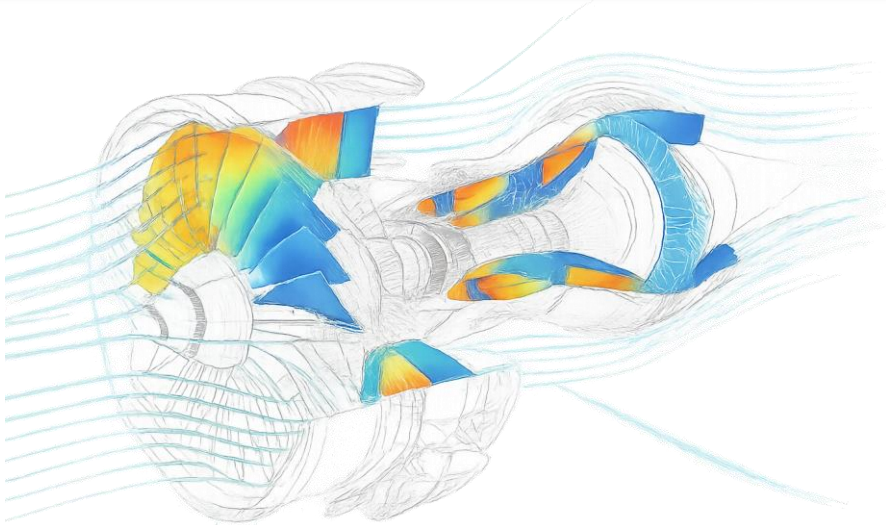
Strategic Engineering Solutions



Advanced Engineering Simulation Expertise

End-to-end Engineering Simulation and Design Optimization Support

Domain Expert & engineering simulation support in FEA, CFD, Thermal, multi-physics analysis to help industries design smarter, safer, and more efficient systems.



FEA Finite Element

Structural Linear/Non-Linear, Thermal, Fatigue, Vibration, Rotor-Dynamics, Transient, Multi-body Dynamics

CFD Flow Dynamics

Internal/External Flow, CHT, MPF, Multiphysics, Aero/hydro Compressible/Incompressible Turbo-Machinery

TH Thermal

Steady/Transient, Conduction, Convection, Radiation

MP Multiphysics

FSI (Fluid-Structure) Thermo-Mechanical, Pre-Stress Modal Vibro-Acoustics

OPT Optimization

DOE, MDO, Parametric, Topology, Sensitivity

Benefits & ROI

- **Cost Reduction –** Reduce cost of Prototyping & Testing
- **Speed to Market –** Faster Design Cycles & Product Launches
- **Reliability –** Early Detection of Failures & Safer Design
- **Innovation –** Freedom to explore new ideas virtually
- **Optimization –** Maximize performance and durability
- **Risk Mitigation –** Predict behavior under real-world scenario
- **Sustainability -** Reduce Waste & Energy efficient designs
- **Competitive edge –** Superior Product & Strong Market hold

International Code Proficiency: ASME B&PV, API (610, 611, 612, 617, 616, 684), HIS, IEC, ISO, ASTM, DIN , ASCE-7 etc.

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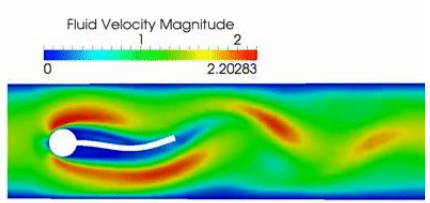
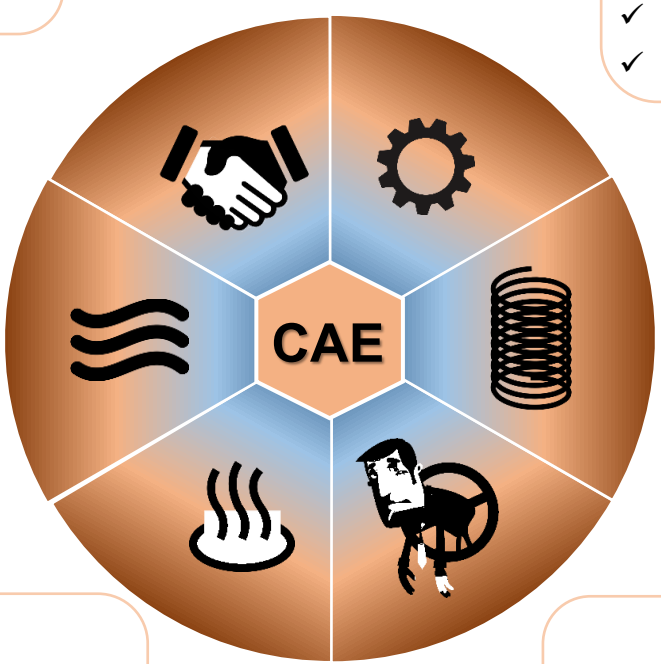
Strategic Engineering Solutions



Coupled Field Analysis

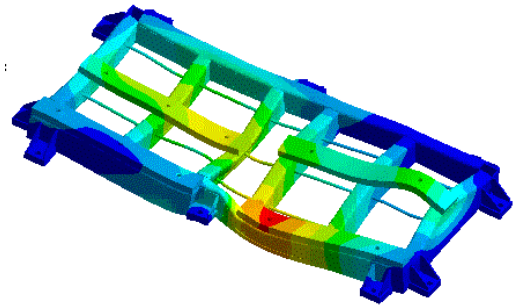
- ✓ Sub-modelling techniques
- ✓ Fluid structure interactions
- ✓ Prestress-state
- ✓ Thermo-structural

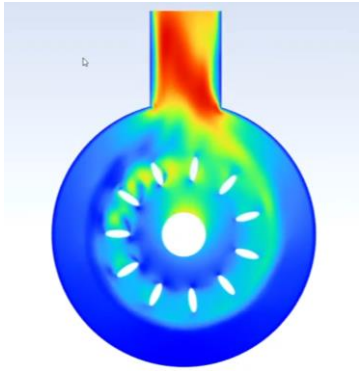
Core Competency



Structural Analysis

- ✓ Linear Analysis (Elastic)
- ✓ Non-linear Analysis
- ✓ Transient Analysis
- ✓ Hyper-elastic Analysis
- ✓ Wear & Leakage Analysis



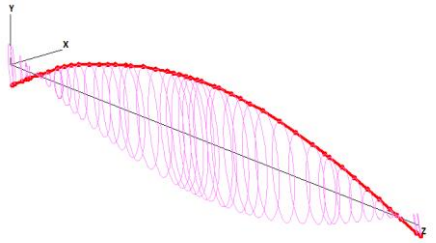


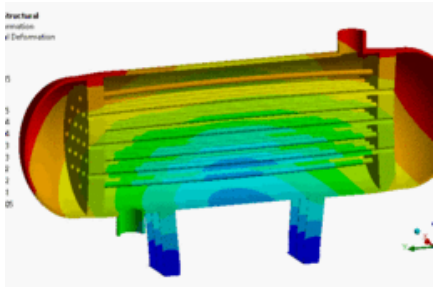
Fluid Analysis

- ✓ Fluid (Liquid or Gas) flow
- ✓ Turbomachinery CFD
- ✓ Internal & External flow
- ✓ Compressible flow
- ✓ Incompressible flow
- ✓ Turbulence modelling
- ✓ Multiphase flow
- ✓ Heat Transfer

Dynamic Analysis

- ✓ Modal Analysis
- ✓ Harmonic Analysis
- ✓ Random Vibration
- ✓ Random Fatigue
- ✓ Rotor dynamics
- ✓ Explicit dynamics



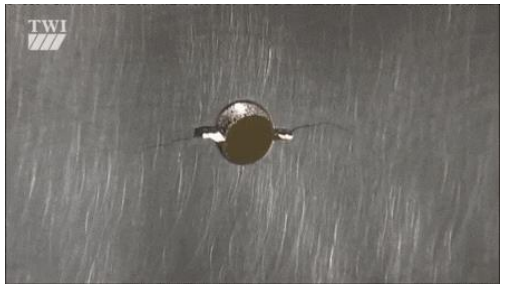


Thermal Analysis

- ✓ Steady & Transient
- ✓ Conduction| Convection| Radiation
- ✓ Temp-Dependent Material

Fatigue Analysis

- ✓ Buckling Analysis
- ✓ Non-linear Buckling Analysis
- ✓ Fatigue Analysis (stress based life prediction)



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Industry Focus

Industrial Machinery

Static Equipment's : Heavy Machines**,** Pressure Vessels, Tanks, Heat Exchangers, Separators, Transformers

Rotating Machines: Hydraulic Pumps, Industrial Fans, Rotary & Dynamic Compressors, Vacuum Pump, PD Blowers, Gearbox, Reciprocating Machines

Energy & Power Generation

Turbomachinery Design & Analysis, Hydraulic Turbine, Gas Turbines, Steam Turbines, Wind Turbines Turbo-expanders, Motor & Generators,

Mining Equipment's (Vibrating Feeders, Conveyors, Cyclone Separators etc.)

Automotive & Transportation

Engineering for Roads, rail, marine, heavy-transport, and mobility systems including Structural analysis (SKID Analysis, Lifting, Random Vibration, Shock, Impact Test, Aerodynamic assessment, thermal systems, and safety engineering.

Oil & Gas

Engineering support across upstream, midstream, and downstream operations—including flow assurance, rotating machinery, pressure systems, reliability analysis, and safety evaluations.

Structural & Plant Engineering

Civil Structure design, Ventilation and Thermal comfort studies

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Operating Models

Project Based Alignment

Scoped and priced based on specific project requirements.

Key Features:

- Quote to project specific need
- Flexible, one-off engagements
- Clear deliverables & timelines
- Opportunity to Showcase expertise
- Exploring niche applications domain

Client Value:

✓ Cost Transparency
✓ Custom solutions to project goals
✓ Ideal for Specialized or Critical Projects Scenario

Fixed Alignment (Monthly/Yearly)

Clients commit to a fixed budget for services over a defined period.

Key Features:

- Unlimited engagements within agreed scope.
- Predictable monthly or yearly billing.
- Long-term partnership model.
- Improved resource planning
- Strengthened Client Relationships

Client Value:

✓ Budget stability and predictability.
✓ Continuous support and faster turnaround.
✓ Stronger collaboration and knowledge retention.

Revenue / Profit Sharing

Collaboration on new development/ innovation or optimization of existing design to improve product margin.

Key Features:

- % of benefits or shavings per year
- Focus on measurable outcomes
- Risk and reward shared.
- Strong growth alignment with client success
- collaborate as performance driven extended technology partner

Client Value:

✓ Lower upfront investment.
✓ Pay only when measurable value is delivered.
✓ Encourages innovation and optimization.

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Engineering Excellence Programs

Tailored Advanced Engineering Training Programs

Institutional ◘ Corporate ◘ Individuals

Delivery Formats: Virtual, On-site, Batch-wise

- *PSEE offer specialized training programs designed to build deep expertise in engineering simulation, modelling, and analysis aligning with modern industry needs.*
- *Our programs cater to academic institutions, corporate engineering teams, and individuals seeking to upgrade or advance their engineering simulation skills.*

Institutional

Tailored programs to strengthen academic capability in simulation and advanced engineering tools.

- ✓ *Curriculum development aligned with industry standards*
- ✓ *Hands-on workshops on FEA, CFD, CAD/CAE integration*
- ✓ *Faculty development training*
- ✓ *Student project guidance and simulation labs*

Corporate

Customized training modules designed for engineering teams skill uplifting aligned to specific industry products.

- ✓ *Specific Role-based skill development*
- ✓ *Product Application-focused training*
- ✓ *Real-world case studies from industrial projects*
- ✓ *Onsite, remote, and hybrid delivery options*

Individual

Personalized training for students, early-career engineers, and professionals looking to advance their technical capabilities in engineering simulation.

- ✓ *Beginner to advanced simulation modules*
- ✓ *Project-based learning with mentorship*
- ✓ *Flexible schedules (Weekends/Online)*
- ✓ *Portfolio creation for career advancement*

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Let’s Engineer Together

Domain SMEs and Engineering Simulation Expertise that drives the decisions & helps to improve the product design life cycle.

Why Choose Us

- **Quality you can Trust**
- **Speed at Scale**
- **Actionable Outcomes**
- **Partnership model**

Contact Us

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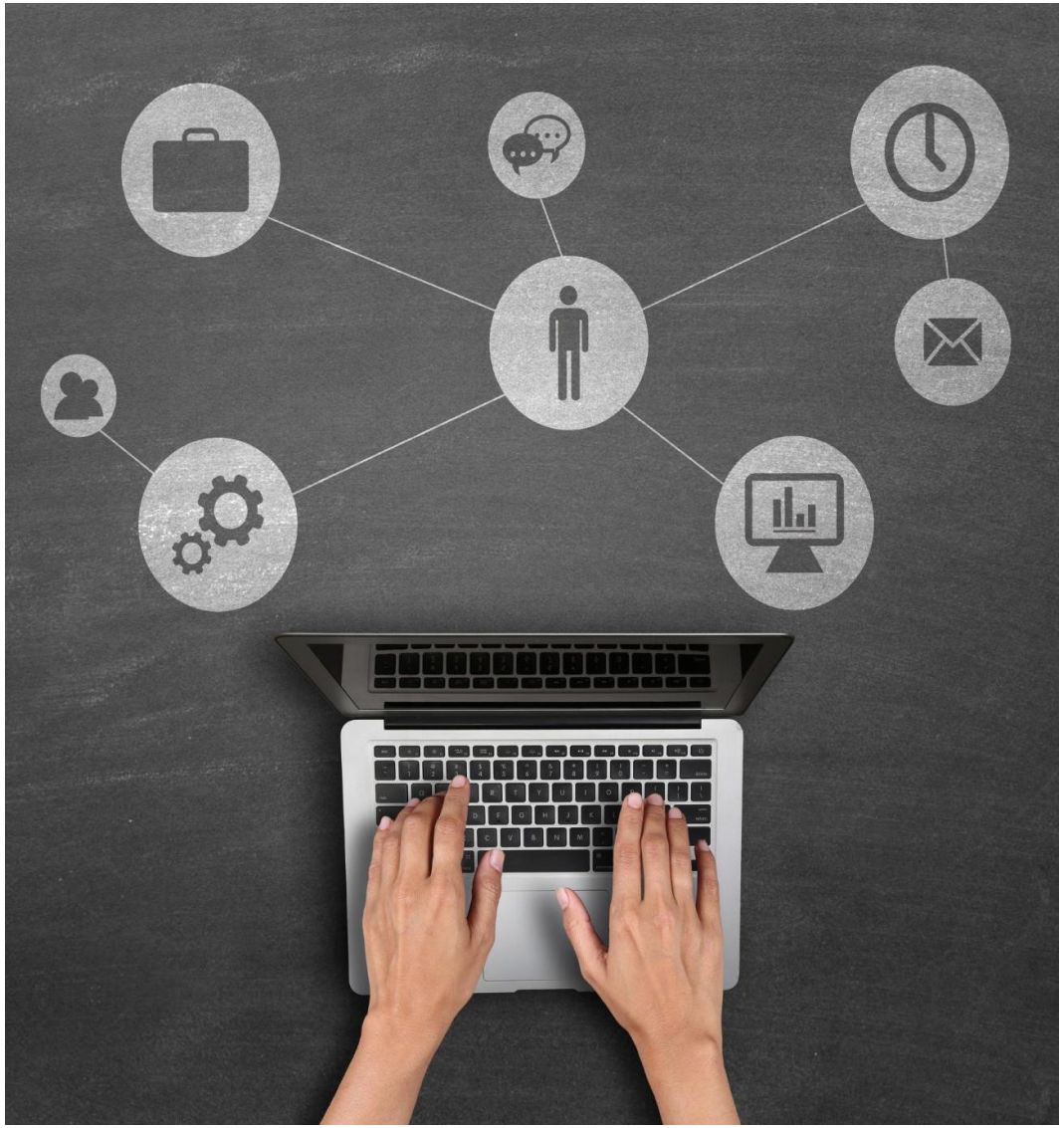
Coming soon



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Thank You !!!