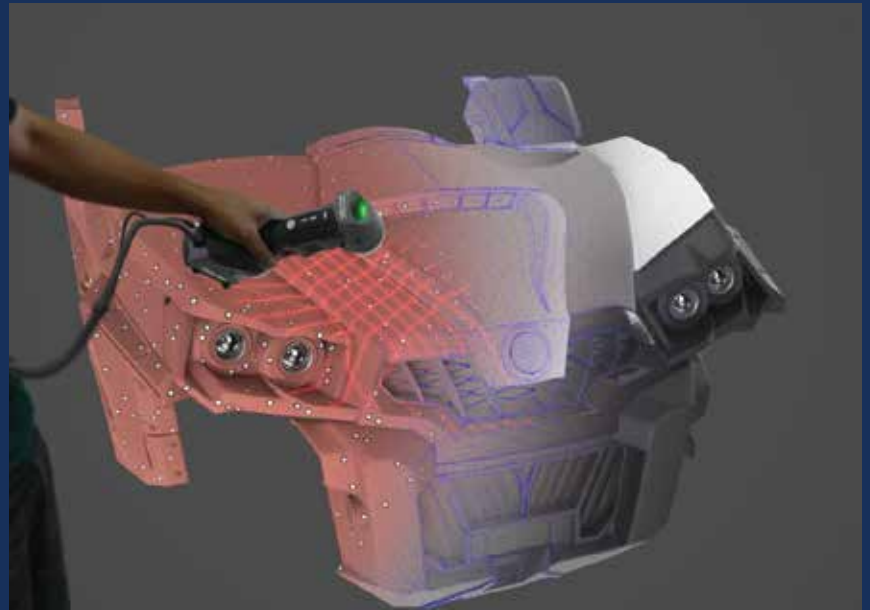


Developing the opportunities presented by Industry 4.0 in the best possible way..

# INTRODUCTION

## Industry 4.0

PROMECH Group is looking forward to playing a vital role in implementing the industry 4.0 technologies in Egypt and all across the Middle East. Our goal is to transform Egypt and the Middle East into a leading industrial powerhouse and a global logistics hub in promising growth sectors (with focus on Industry 4.0), which will enhance the trade balance, stimulate economic growth, create job opportunities, maximize local content and boost our exports.



## Our Plan for bringing the future to Egypt and the Middle East Includes:

- 1- Bringing industrial technologies to the Middle East.
- 2- Enabling companies to understand the industry 4.0 technologies and identify the opportunities of benefitting from the Industry 4.0 by providing live demos, training courses and consultation services.
- 3- Training the engineers (both students and graduates) that will be responsible for designing and developing the transformation plans for the Industry 4.0 in companies.
- 4- Helping existing factories implement the industry 4.0 technologies and the operational excellence principles.
- 5- Eliminate the obstacles to the smooth transition to Industry 4.0 and provide all the needed information.



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## INDUSTRY 4.0

The industry 4.0 is based on implementing a group of modern technologies on the production value chains that would increase production efficiency and establish new business models that are consistent with the targeted transformational achievements.

Egypt and the Middle East with their respectable industrial base, combined with our company's specialization in Industry 4.0 technologies, can create favorable growth conditions and environment to enable vital sectors to achieve rapid growth in the coming years and meet our aspirations by enabling leading industrial businesses to use modern technologies that will assist them to increase competitiveness and productivity.

## INDUSTRY 4.0 ADVANTAGES

Applying the industry 4.0 technologies is expected to lead to:

- Generating an economic impact on the Egyptian's industrial sectors.
- Expected improvement in the annual income.
- Research quality and outputs improvement
- Saving costs by Automating the process and minimizing human mistake.
- Providing highly-skilled and special jobs that shall attract national talents and increase women's participation in the labor market.

## INDUSTRY 4.0 CHALLENGES

Our purpose is to handle the major challenges obstruct the industry 4.0 transformation of Egypt and the Middle East. These challenges are:

- Lack of knowledge among companies /individuals about industry 4.0 opportunities.
- Lack of awareness of Industry 4.0 effectiveness and benefits for industrial sector.
- High cost for system upgrade from current conventional production equipment to the level of the industry 4.0.
- Limitation of human resources that are qualified to deal with industry 4.0 technologies.

# OUR EFFORTS

With the industrial sector fast growth rate, we are honored to play the role of the enabler and facilitator in order to:

- Increase the competitive advantage for existing industries.
- Expand existing value chains and developing new ones.
- Develop the environmental system for industry 4.0 technologies.
- Create the need for new high-skill jobs that attract the national labor force.



# OUR INDUSTRIAL STRATEGY

We are working on implementing the technologies of the industry 4.0 in multiple sectors including:



Educational



Aerospace and Defense



Oil & Gas



Automotives



Machinery and Equipment



Medical Supplies



Food Processing



Energy and Power Utilities

As a result of industry 4.0 replacing the traditional mechanisms that are currently being on the production value chains, Industrial companies should move forward upgrade their work implementation methodology to meet the new prospects of operational efficiency. Our aim is to encourage companies to adopt Industry 4.0 technologies, and offer solutions to leading companies in different industry sectors who seek new opportunities for a better performance.

# TECHNICAL STRATEGY

Our Strategy is based on providing a complete Industry 4.0 lab for all Industry 4.0 enthusiasts in Egypt, is one of our motivational factors.

These factors are:

1- Complete Industry 4.0 Technology Lab: For exploring and experiencing by employing the industry 4.0 technologies. We want to facilitate the use of the industry for those who prefer renting the service instead of buying the hardware. Any businesses and individuals in Egypt and the Middle East can now develop and produce using our available technology in each and every field of the industry 4.0

2- Training Center for both theoretical and practical education: Providing trainings at various levels that suit beginner and the advanced levels in various industry 4.0 technologies.





3- Licenses for advanced computer software for product lifecycle management: Including CAD, CAM and CAE softwares.

4- Production machinery and hardware that are compatible with the industry 4.0: Including sheet metal machinery, cnc machine centers, tube processing machines, 3D printers and 3D scanners.



# OUR INDUSTRY 4.0 TECHNOLOGIES

The industry 4.0 focuses on future sectors and includes a wide group of advanced technologies, PROMECH Group realized the benefits of 4th industrial revolution for the future of Production in Egypt and the Middle East and focused on the most prominent industrial and technology pillars, which are:

 <p><b>3D Scanning and Printing</b></p>	<ol style="list-style-type: none"> <li>1. 3D printed products</li> <li>2. 3D printing tooling</li> <li>3. 3D scanning of parts</li> <li>4. Reverse Engineering</li> <li>5. Inspection and Quality Control</li> </ol>
 <p><b>Machinery/ automation</b></p>	<ol style="list-style-type: none"> <li>6. Multi Axis Machines (CNCs)</li> <li>7. Tube processing Machines</li> <li>8. Laser Cutting Machines</li> <li>9. Sheet Metal Machinery</li> <li>10. Automation</li> <li>11. Tools</li> </ol>
 <p><b>Advanced Analytics</b></p>	<ol style="list-style-type: none"> <li>12. Predictive maintenance</li> <li>13. Remote Monitoring and control</li> <li>14. Virtual reality (VR) and Augmented reality (AR)</li> <li>15. Digital Performance management</li> <li>16. Digital quality management</li> </ol>
 <p><b>Digital Management</b></p>	<ol style="list-style-type: none"> <li>17. Product Lifecycle Management and Digital Simulations</li> <li>18. Computer Aided Design (CAD) Software</li> <li>19. Computer Aided Manufacturing (CAM) Software</li> <li>20. Smart energy consumption</li> <li>21. Scheduling and Shift Planning</li> </ol>

Aiding industry leaders move in to Industry 4.0!



# 3D SCANNING

With the increasing adoption to industry 4.0 in Egypt and the Middle East, it became an essential need to increase the inspection quality and maximize throughput, whilst reducing costs right down the production line.

Our 3D Scanning solutions make your manufacturing processes faster and more accurate than ever before. We know that in order for this to happen old metrology solutions are no longer enough to seize the maximum potential of your production line, instead we brought you integration of autonomous processes and easy-to-use top international quality hardware to fully embrace manufacturing of the future.

In order to move forward into Industry 4.0, manufacturers need to implement intelligent manufacturing practices with the best approaches and equipment we can provide!

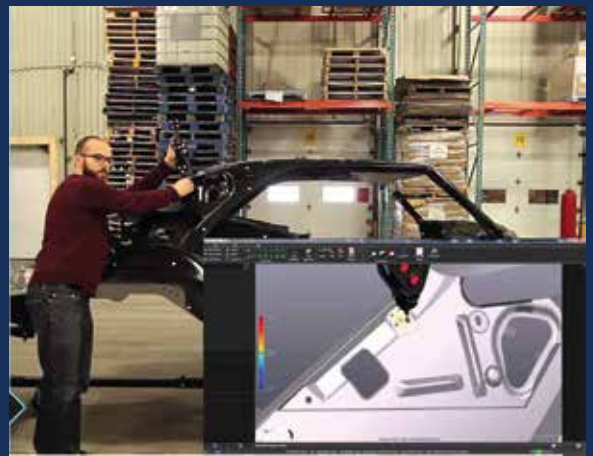
Our wide range of metrology and 3D scanning solutions include:

- Fastest Turnkey Coordinate Measuring Machines (CMM).
- High Accuracy Portable 3d Scanners.
- Shop Floor 3d Scanning And Probing System. Large-Scale Metrology Solutions.
- 3d Scanning Services.
- Reverse Engineering Services.
- Quality Control and Inspection services.
- Calibration Services.
- Personalized Application Development.
- Training And Consultation.
- Closed-Loop Operation.
- Cloud Monitoring.
- 

High accuracy portable 3D scanners



Easy 3D scanning in the lab, on the shop floor, or out in the field



Premium horizontal arm CMM

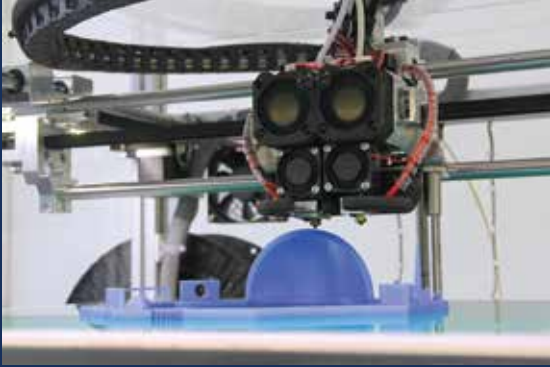


Large scale metrology solution





# 3D PRINTING



High Precision Plastic 3D printing



Metal 3D Printing



Colored 3D printing



Rapid Prototyping: 3D Printed Jet Engine

Our 3D printing Solutions includes the main areas where you can explore opportunities based on future trends. Concurrent growth in supporting industries, alongside thriving new technologies, will place 3D printing as one of the most demanded technologies worldwide. Being one of the first leading companies who brought this technology to Egypt and the Middle East, we have both the experience and the resources to bring the latest, highest quality 3D printers to Egypt and the Middle East to support industries across the region and guiding you to the most suitable 3D printing solution for you that will accelerate your productivity growth.

Our aim is to help sectors in the future to implement 3D printing technologies across the value chain; and ease their industry 4.0 adoption. Our High-end wide range of 3D printing solutions will help you address current challenges and improve your business!

Our 3D printing Solutions include:

- Establishing and acquiring 3D printing technology.
- High quality Metal and Plastic 3D printers.
- Wide range in 3D printing machine sizes (from 12 x 12 x 12 cm printing area to 100 x 100 x 100 cm printing area)
- Local maintenance and consultation service.
- Available consumables and wide range of printing materials.
- 3D printing training sessions.
- Metal and Plastic 3D printing service.

# MACHINERY

From our Knowledge that industry 4.0 is based on implementing a group of modern technologies on the production value chains that would increase production efficiency, and with the industrial sector continuous growth in Egypt and the Middle East, we were keen to provide modern, high quality, advanced, Industry 4.0 compatible machinery.

Having worked within the industry for over 16 years, our experience and expertise covers most of production industries.

PROMECH group machinery solutions will help you invest in the future of your business by providing reliable diversified solutions in both machinery types and ranges for your specific needs! With our innovative approach, we help businesses get their production line moving forward and achieving their business goals.

Our Machinery Solutions include:

Intelligent productivity CNC Machine Center :

- Milling Machines
- CNC Lathes
- Tube and Bar Processing Machines

High-Tech CNC Sheet Metal Machining Centers:

- Laser & Plasma Cutting Machines
- Press Brake Machines
- Shear Machines
- CNC Punch Press Machines

Precise and High-Tech CNC  
Sheet Metal Machining Centers



Heavy Duty CNC Lathes



High Speed 5-axis CNC Milling Machine



CNC Tube + Pipe Benders  
and Tube cutting machines



## DIGITAL MANAGEMENT

Industry 4.0 technological advances have led to a radical transformation of our working methods. Greater productivity, reduced costs, continuous search for quality and improvement. We were up to the challenge and brought the most innovative solutions to help you in your development and in maintaining an optimum level of productivity and efficiency.

PROMECH group provides companies with a different economic model driven by new technologies through systematic digitalization that help them explore new production approaches and thrive and survive market transformations. Major companies and institutes in Egypt and the Middle East, that are considering industry of the future, can benefit from our wide range of digital solutions. Which Includes:

- Product Lifecycle Management (PLM).
- Computer Aided Design (CAD).
- Computer Aided Manufacturing (CAM).
- Computer Aided Engineering (CAE).
- Digital Simulations.
- Business Experience Platform.
- Collaboration Software.
- Information Intelligence.

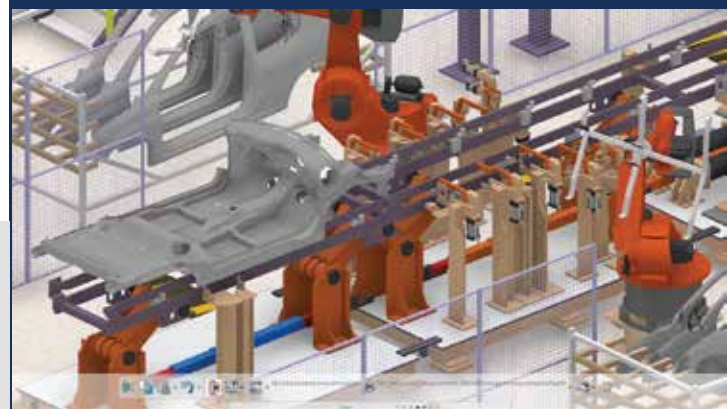
Jet Engine CAD Model



Product and Environment Simulation



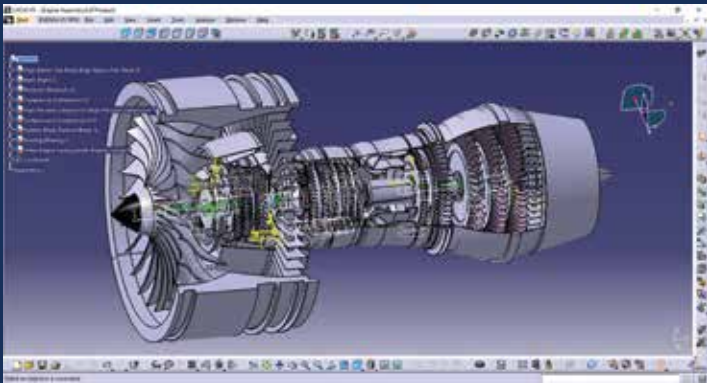
Digital Manufacturing



Product Life Cycle Management (PLM)



# ADVANCED ANALYTICS



High performance CAD software



Fully manage the product lifecycle



Digital Twin



Augmented reality (AR)

Driving Innovation with knowledge-driven Decisions.

Businesses today are swamped with data. Valuable insights are hidden among these data, leading to inefficiencies across the entire organization. Organizations therefore need a scalable framework. Our Solutions support you through the whole process from accessing and aggregating data to advanced analytics, modeling and reporting. We will help you get the most of your data without the need for experts! PROMECH group made the best of analytics applicable to PLM while leveraging the richness and the full potential of product design and manufacturing processes.

Our PLM Analytics solution reveals, measures and analyzes PLM data to deeply understand and improve product development processes in all PLM areas.

Our PLM Analytics solutions include:

- Fully manage the product lifecycle, from design to traceability of changes, cost, quality and issue analytics.
- Real-time PLM status to executives.
- Automate the blending and preparation of data for analysis
- Easily implement advanced analytics and machine learning models into end-to-end workflows.
- Develop powerful applications in a graphically-based, code-free environment.
- Creation of digital twin for digital manufacturing and simulation.

# SERVICES

## ENGINEERING SERVICES

PROMECH provides expert engineering services to an ever-growing customer base from all over the region. Our team of experienced engineers and technicians has earned a reputation for effectiveness and professionalism and are recognized for their commitment to meet our customers' requirements with responsiveness and adaptability.

Our team is a multidisciplinary team of experts, thriving on any challenge. After more than 16 years in business, PROMECH has built a solid track record as a trustworthy engineering services provider to major companies from many industries, such as aerospace, mass transportation, recreational products, oil & gas and consumer products.

- 3D Printing Services
- Reverse Engineering Services
- 3D Scanning Services
- Engineering Analysis Services
- Quality Inspection Services
- CNC Maintenance Services

## TRAINING SERVICES

Custom comprehensive technical training services are your hassle-free solution to not only sustainably address your human capital training challenges but also improve your overall engineering productivity.

Whether you are an SME's or multi-national company, count on our experts to train your staff on a variety of topics, including:

- Basic Mechanical Design modeling.
- Advanced Mechanical Design modeling.
- Reverse Engineering and Inspection.
- Engineering Analysis (FEA).
- Computational fluid dynamics (CFD).





# PROMECH Group

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