SOCOFAM
MACHINERY

PFE BOOK
2025-2026

BUILDING TOMORROW'S INDUSTRY WITH TODAY'S PROJECTS

www.socofam.tn

SUMMARY

COMPANY OVERVIEW

ABOUT US

Founded in 2014, SOCOFAM is a leader in providing tailored industrial solutions, supporting clients in choosing the right equipment and optimizing their production processes.

MISSION

SOCOFAM aims to empower local industries through cutting-edge solutions, exceptional technical expertise, and a commitment to fostering local talent. Our goal is to create a future where Tunisian manufacturing sets the benchmark for excellence and innovation in the global market.

VISION

To be the leading catalyst for industrial development in Tunisia by empowering diverse sectors with the best solutions, services, and expertise. We envision a future where SOCOFAM is at the forefront of transforming industries and fostering sustainable growth.

SOCOFAM IN NUMBERS

10+ YEARS
DELIEVRING INDUSTRIAL EXCELLENCE

400+
SATISFIED CUSTOMERS ACROSS INDUSTRIES

100+
HIGH-PERFORMANCE MACHINES & INDUSTRIAL SOLUTIONS OFFERED

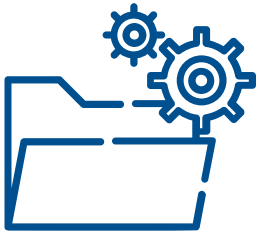
5 INTERNATIONAL
PARTNERS COLLABORATING WITH

20+ EMPLOYEES
SKILLS & EXPERIENCE AT YOUR SERVICE

3 STORES
ACROSS TUNISIA FOR BETTER ACESS & SERVICE



DEPARTMENTS FULL OF TALENTS & SKILLS



HR DEPARTMENT

IT DEPARTMENT

Technical DEPARTMENT

Marketing DEPARTMENT

After-Sales DEPARTMENT

Finance DEPARTMENT

PROJECTS OFFERS

Human Resources
DEPARTMENT

HRP #01

Remote Attendance Tracking App (with Geolocation) Integrated with ERP:

Create a mobile and web application allowing employees working remotely or on-site to clock in/out with geolocation tracking, ensuring accurate presence monitoring and work hour calculation.

Features:

- Real-time clock-in/out with GPS location capture.
- Calculation of total worked hours and overtime.
- Monthly dashboard for HR visualization.
- Notification alerts for anomalies (late arrival, location mismatch).
- Secure integration with ERP employee records.

HRP #02

Quality Meetings & Events Management Application:

Design a tool for planning, tracking, and archiving quality meetings (committee meetings, awareness sessions, weekly meetings) and events, ensuring traceability of decisions and follow-up actions.

Features:

- Automatic scheduling and invitations (email or internal notifications).
- Agenda, minutes, and decisions tracking.
- Follow-up system for assigned corrective actions.
- Performance indicators (meeting frequency, task completion rates).
- Historical record of meetings and actions.


Information Technology
DEPARTMENT

ITP #01

Machine Learning for Predictive Maintenance:

Develop a machine learning model capable of predicting maintenance needs or detecting anomalies in CNC, laser, or bending machine operations using data collected from machine logs or controllers.

Features:

- Data collection from machines (hours, temperature, vibration, alarms).
- Predictive model training to forecast breakdowns.
- Dashboard showing machine health and maintenance alerts.
- Visualization of performance trends and anomaly reports.

ITP #02

Connected Warehouse Prototype:

Design and implement a prototype of a connected warehouse system that monitors inventory status, product locations, and movement using sensors, IoT, or barcode/RFID technologies.

Features:

- RFID or barcode-based item tracking.
- Real-time stock level updates.
- Automatic alerts for restocking.
- Dashboard showing material movement and stock health.
- Integration with ERP inventory data.

ITP #03

Development of an Intelligent AI-Powered Global Supply Chain Control Tower for Real-Time Import Operations and Customer Pipe-

Design and develop a unified AI-driven dashboard that provides real-time visibility over all import operations and customer order pipelines.
The system includes live container tracking on a world map, automated data integration with shipping partners, predictive ETA calculation, smart delay alerts, and machine-learning–based delivery forecasting. It offers complete transparency for logistics and commercial teams through interactive KPIs, risk scoring, and scenario simulation.


Technical
DEPARTMENT

TCP #01

Advanced Experimental Investigation and AI-Assisted Quality Assessment of Fiber Laser Welding Parameters, Shielding Gas Effects, and Weld Integrity :

This project consists of a complete experimental study of fiber laser welding, focusing on how key process parameters and shielding gases influence weld quality. The student will perform controlled welding trials, analyze weld microstructure, evaluate defects using destructive and non destructive testing, and build a predictive model to classify weld quality. The final objective is to develop an optimized welding parameter map and an AI-assisted weld quality scoring system for industrial use.

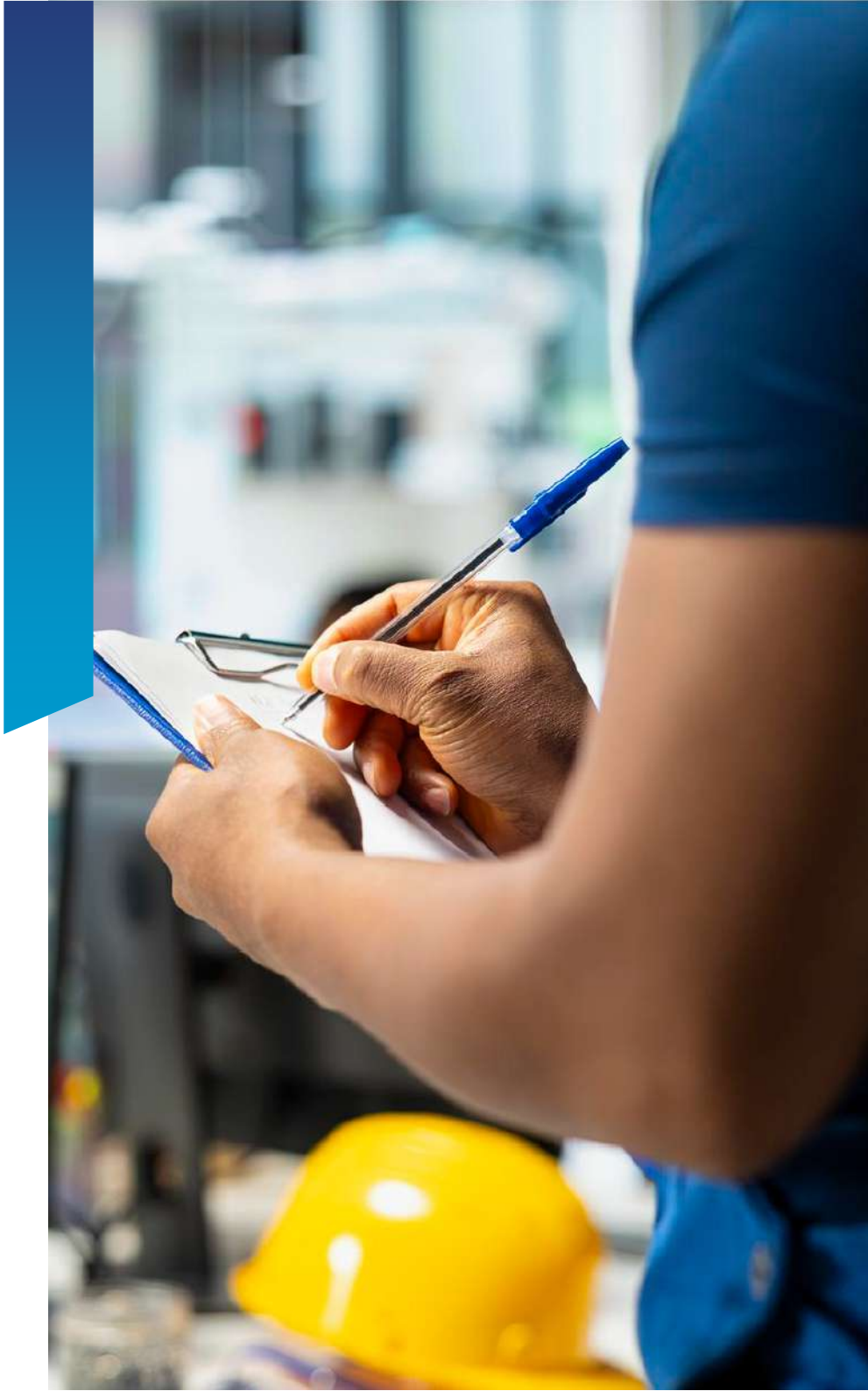
TCP #02

Security of CNC Machine Usage:

Develop or propose solutions to enhance the operational and digital security of CNC and laser cutting machines preventing unauthorized access, misuse, or unsafe operation.

Features:

- User authentication and role management (operator, technician, admin).
- Real-time monitoring of machine status (emergency stops, overheat, tool breakage).
- Automatic safety reports and anomaly logging.
- Integration with existing control panels or local network.



TCP #03

Advanced Experimental Study and AI-Based Quality Prediction System for Fiber Laser Cutting Optimization:

This project involves a complete experimental investigation of fiber laser cutting parameters and their effects on cut quality, combined with the development of an AI-assisted prediction tool. The student will perform cutting trials, analyze cut quality metrics, build a parametric database, and train a machine-learning model capable of recommending optimal cutting settings. The final output is an intelligent operator dashboard for quality prediction and process optimization.

TCP #04

Development of an Intelligent AI-Powered Maintenance Assistant for Diagnostic Automation, Predictive Failure Analysis, and Knowledge-Based Troubleshooting:

This project aims to develop a complete AI-driven maintenance assistant capable of diagnosing machine problems, predicting failures, guiding technicians, and learning continuously from historical data.
The system combines machine-learning models, natural language processing (NLP), sensor data analysis, and a knowledge-graph engine to build a unified intelligent maintenance platform.
The final solution acts as a maintenance diagnostic robot, capable of understanding operator reports, suggesting probable root causes, predicting remaining component life, and recommending preventive actions.

TCP #05

Design and Implementation of an Industrial Fiber Laser Welding System with 6-Axis Cobot Integration:

Design, develop, and deploy a fully automated industrial fiber laser welding system integrated with a 6-axis collaborative robot (cobot).
The solution is intended to automate welding operations for industrial components, ensuring high precision, repeatability, and process reliability, while reducing manual labor and operator exposure to hazards. The system will include robotic motion planning, vision-based part alignment, laser parameter control, real-time process monitoring, and an operator interface, delivering a professional grade turnkey solution suitable for customer manufacturing environments.

Marketing DEPARTMENT

MKP #01

Social Media Data Analytics Dashboard:

Develop a centralized dashboard that collects, analyzes, and visualizes data from SOCOFAM's social media platforms (LinkedIn, Facebook...) to measure performance, engagement, and growth over time.

Features:

- Real-time performance tracking (reach, engagement, growth).
- Hashtag and post-performance analytics.
- Content recommendation module based on engagement.
- Exportable monthly reports.


After-Sales
DEPARTMENT

ASP #01

Smart Spare Parts Inventory & Suggestion System:

Create a system that predicts the need for spare parts based on machine maintenance history and usage patterns.

Features:

- Spare part usage tracking by machine type/ model.
- Alerts for low stock or frequently replaced parts.
- Reorder suggestions based on history.
- Integration with ERP and maintenance logs.


Finance
DEPARTMENT

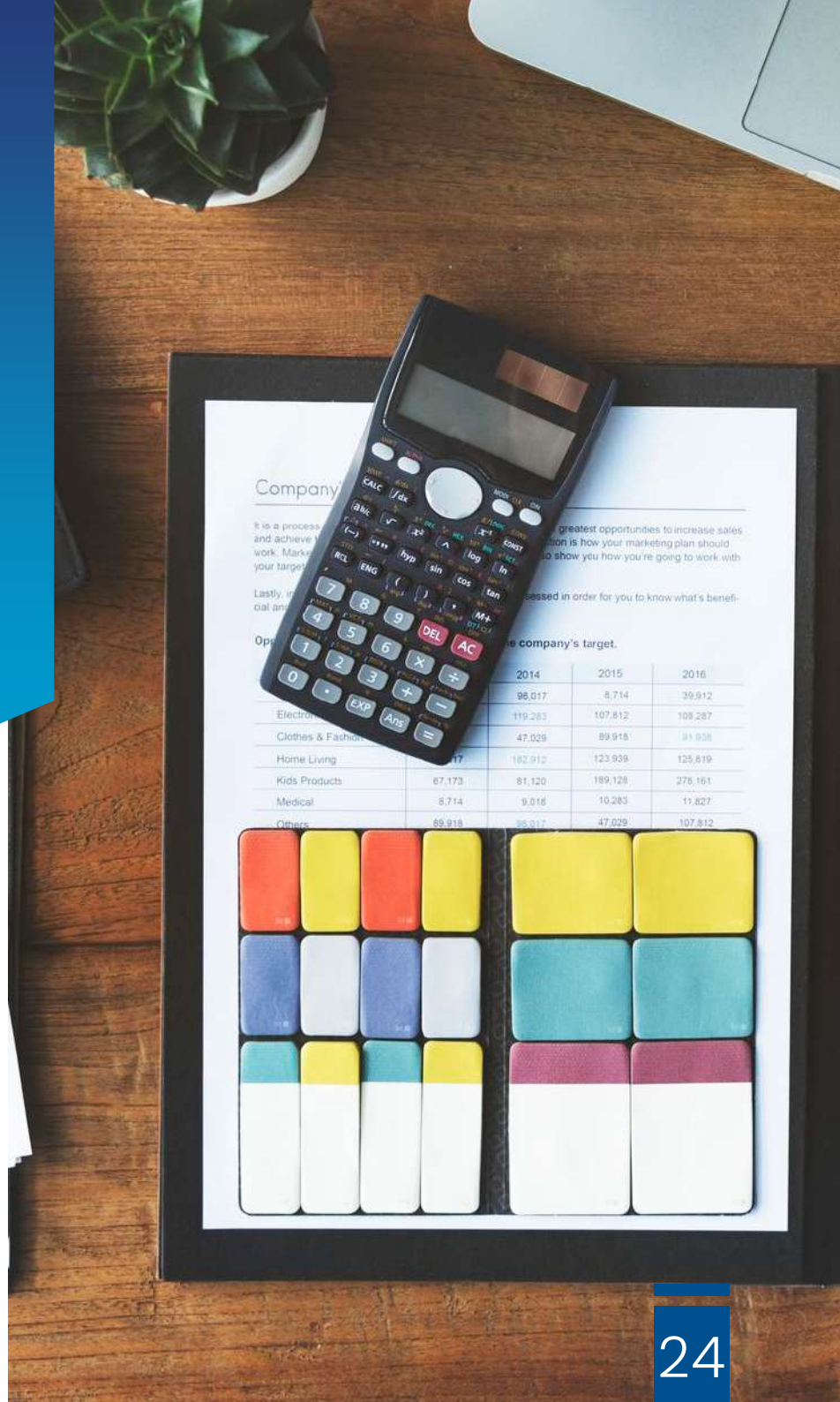
FNP #01

Financial Dashboard & Expense Tracker:

Develop a digital dashboard to centralize financial metrics (sales, costs, profit margins, etc...) and automate reporting.

Features:

- Automatic import of sales, cost, and profit data.
- Expense tracking by project or department.
- Monthly and annual report generation.
- Visual analytics (graphs, trends, key ratios).



HOW TO APPLY

WE OFFER INTERNSHIPS WITH CHANCES OF HIRING YOU RIGHT AFTER

CHOOSE YOUR PROJECT
SUGGESTIONS ARE WELCOME

SEND YOUR RESUME AND YOUR CHOSEN PROJECT **(GRH@SOCOFAM.TN)**

ATTEND YOUR INTERVIEW

WE'LL SELECT YOU

Send your email before 27/12/2025

Reply duration can be up to 10 days

SOCOFAM MACHINERY

Des Experts a Votre service!

CONTACT US FOR MORE INFORMATION ABOUT ALL TYPES OF INTERNSHIPS & PROPOSITIONS

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