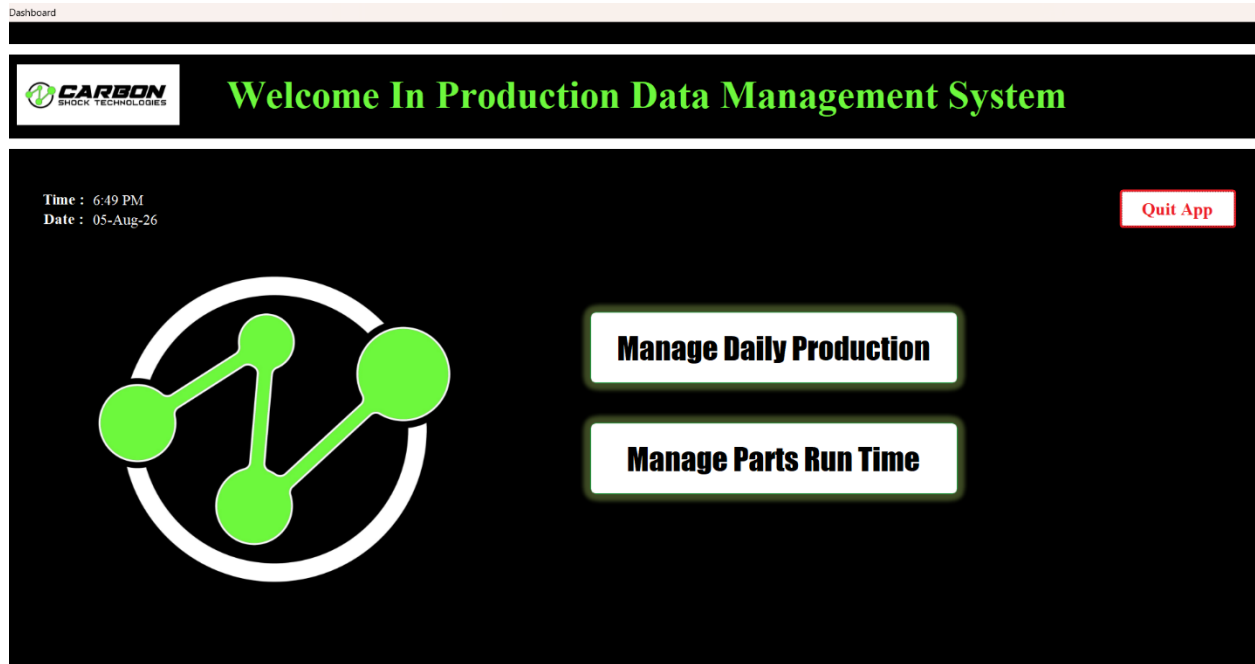


Industrial Production Data Management System

Admyon Systems

Building Smarter Business Solutions



Project Overview

The Industrial Production Data Management System is a specialized operational tracking tool designed for manufacturing plants and machining facilities. It records daily production output, tracks specific parts across multiple machine operations, and provides deep analytical visibility into machine utilization and manufacturing cycle times.

Business Problem

Manufacturing facilities often struggle to accurately calculate the true cycle time of their products. Relying on manual clipboards to track how many parts a specific machine produces leads to data entry delays and inaccurate efficiency metrics. Without real-time visibility into machine-specific outputs and moving averages, plant managers cannot identify production bottlenecks or accurately calculate raw material consumption.

Our Solution

Admyon Systems developed a high-precision production tracker that digitizes the shop floor. The system allows operators to log the exact number of completed parts per machine and operation phase. It automatically calculates production run times down to the second and visualizes the data through dynamic charts, enabling plant managers to track performance trends and optimize machine routing.

Key Features

- High-Contrast Industrial Dashboard
- Multi-Phase Operation Tracking (Routing parts through Operations 1, 2, 3, etc.)
- Automated Cycle Time Calculations (Seconds, Minutes, Hours)
- Raw Material Allocation per Part
- Advanced Visual Analytics (Moving Averages, Machine Comparisons)
- Bulk Data Import Capabilities

Technologies Used

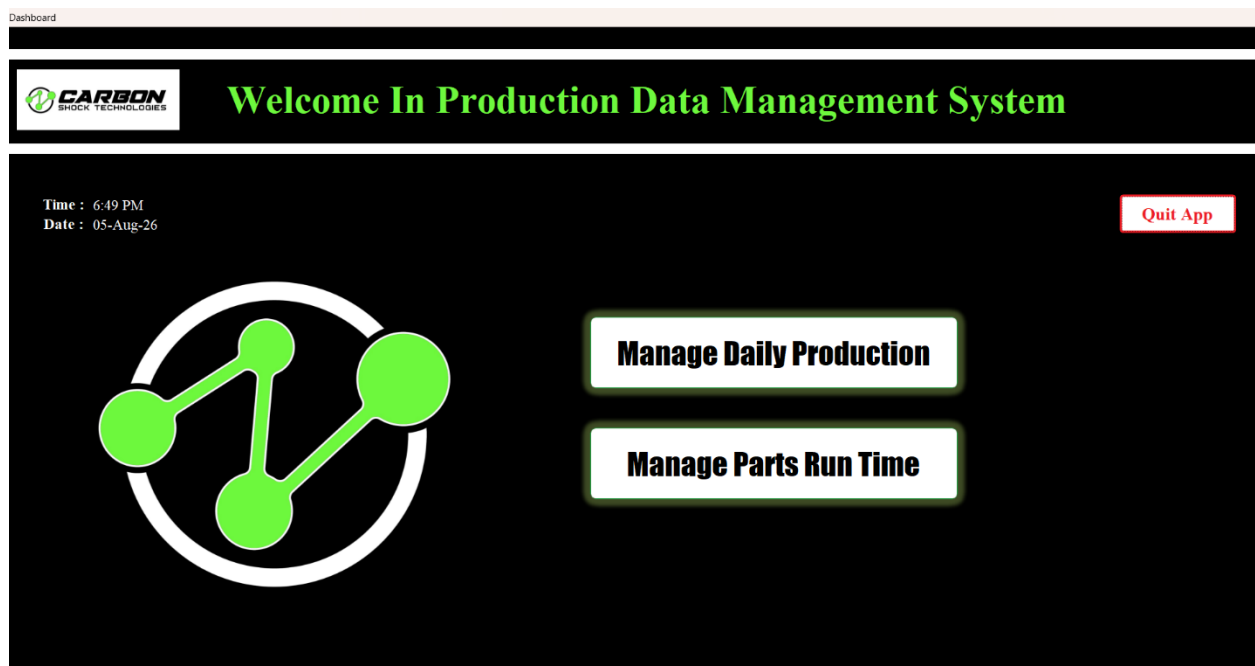
Technology	Used
Microsoft Access	
VBA (Visual Basic for Applications)	
SQL	

System Modules

- Main Production Dashboard
- Daily Production Logs & Import
- Parts Run Time Configuration
- Production Time Ledger
- Date-Range Data Filtering
- Analysis & Charting Engine

Screenshots

Industrial Dashboard



A high-contrast, dark-mode interface designed for shop floor environments, providing operators with clear, large buttons to access daily production logs and run times.

Add Production Data (Import Module)

Add Production Data

ID	Date	Part	Machine	Operation	Completed
1	4/16/2025	22 RE 10	230	2	204
2	4/16/2025	22 RE 10	Jeffrey	3	153
3	4/16/2025	Cylinders	Mori	1	8
4	4/16/2025	Cylinders	Mori	2	8
5	4/16/2025	Shafts	Lynx	1	24
6	4/16/2025	Shafts	Lynx	2	24
7	4/17/2025	BS BVP 100	Lynx	1	77
8	4/17/2025	BS BVP 100	250	2	50
9	4/17/2025	22 RE 10 4	230	2	38
10	4/17/2025	22 RE 10 4	Jeffrey	3	38
11	4/17/2025	Cylinders	Mori	1	4
12	4/17/2025	Cylinders	Mori	2	4
13	4/18/2025	Cylinders	Mori	1	12

Close Delete Save

A rapid-entry grid where staff can log daily output, specifying the exact part (e.g., Cylinders, Shafts), the machine used, the operation phase, and the total completed quantity.

Parts Run Time Allocation

Parts Run Time

Part	Machine	Operation	Time	Material
22 RE 16 02		2	199	RM A 25 R 6061
22 RE 16 03	230	1	90	RM A 25 R 6061
22 RE 16 03	230	2	166	RM A 25 R 6061
22 RE 16 03		3	206	RM A 25 R 6061
22 RE 16 03		3	186	RM A 25 R 6061
22 RE 16 04	230	1	90	RM A 25 R 6061
22 RE 16 04	230	2	260	RM A 25 R 6061
22 RE 16 04		3	193	RM A 25 R 6061
22 RISS 0050	230	1	35	RM A 125 R 6061
25 DC 01	230	1	105	RM A 25 R 6061
25 DC 01		2	75	RM A 25 R 6061
25 DC 01	250	3	20	RM A 25 R 6061
25 IFP 01	230	2	100	RM A 2375 R 6061

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A foundational configuration screen linking specific manufactured parts to their required machines, standard operational times, and precise raw materials.

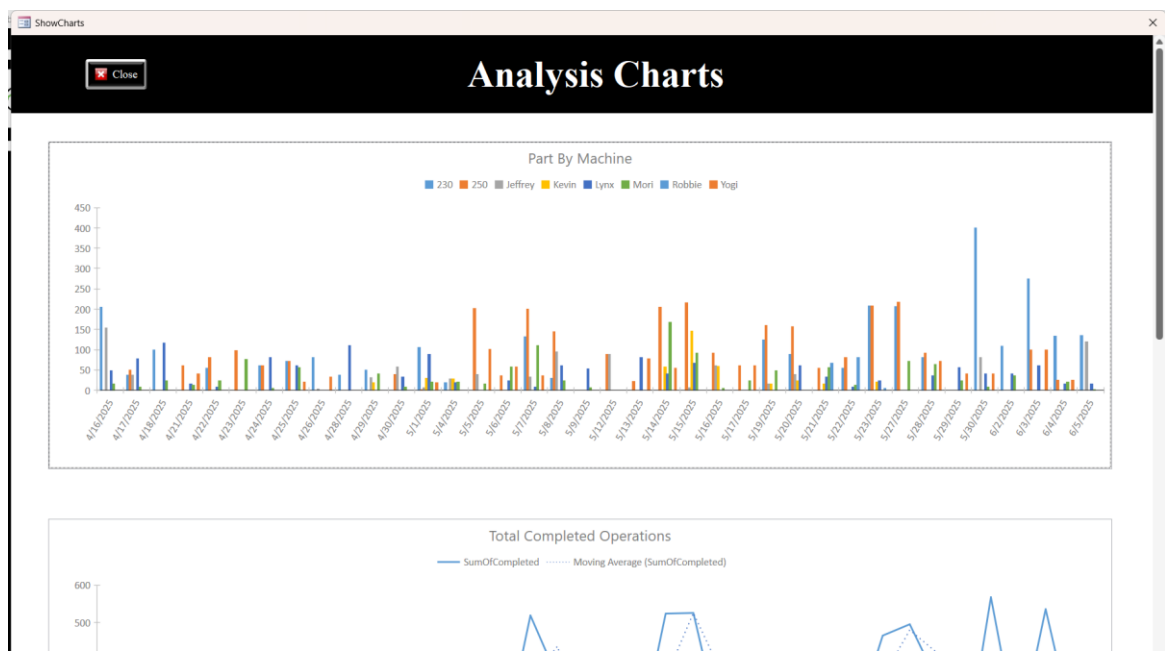
Production Time Calculator

Production Time								Show Chart
Date	Part	Machine	Operation	Completed	Seconds	Minutes	Hours	
4/26/2025	22 RE 16 03	230	1	40	3600	60.0	1.00	
4/29/2025	22 RE 16 03	230	2	37	6142	102.4	1.71	
4/26/2025	22 RE 16 04	230	1	1	90	1.5	0.03	
5/28/2025	22 RE 16 04	230	1	40	3600	60.0	1.00	
4/29/2025	22 RE 16 04	230	2	12	3120	52.0	0.87	
5/19/2025	22 RISS 0050	230	1	124	4340	72.3	1.21	
5/23/2025	25 IFP 01	250	2	208	3120	52.0	0.87	
5/30/2025	25 RCC 01	230	1	200	21000	350.0	5.83	
5/27/2025	25 RHC 01	230	1	206	12360	206.0	3.43	
5/27/2025	25 RHC 01	250	2	202	2020	33.7	0.56	
6/4/2025	25 SH 01	230	1	105	11025	183.8	3.06	
6/5/2025	25 SH 01	230	1	15	1575	26.3	0.44	
6/5/2025	25 SH 01	230	3	120	4320	72.0	1.20	

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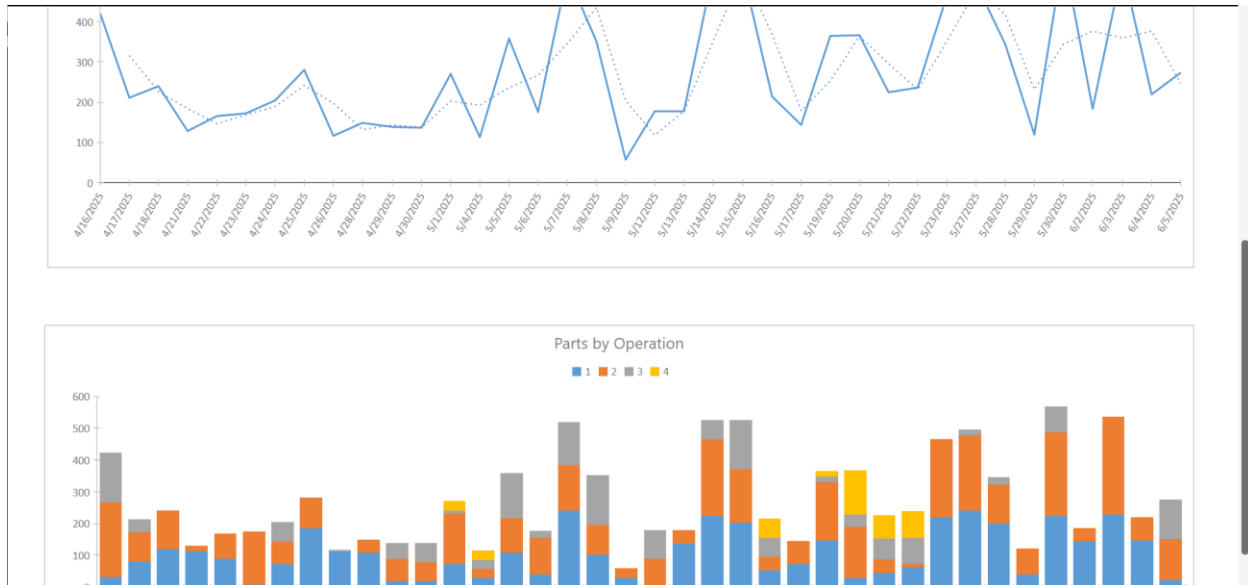
An automated ledger that converts raw completed quantities into exact production times, breaking data down into seconds, minutes, and hours for highly accurate cost accounting.

Machine Utilization Charts



A powerful visual analytics dashboard displaying total completed operations over time, overlaid with moving averages to identify production trends, alongside a breakdown of parts produced by specific machines (e.g., Lynx, Mori, Jeffrey).

Operational Bottleneck Analysis



A stacked bar chart visualizing the volume of parts currently moving through various operational phases (1, 2, 3, 4), allowing managers to spot bottlenecks on the factory floor instantly.

Business Benefits

- ✓ Identified factory floor bottlenecks by visualizing output across multiple operation phases
- ✓ Improved cost accounting by calculating production cycle times down to the exact second
- ✓ Streamlined data entry by allowing bulk imports of daily production logs
- ✓ Optimized machine scheduling through clear visual comparisons of individual machine outputs
- ✓ Ensured accurate raw material tracking by linking specific materials to designated parts

Project Highlights

- High-Contrast Shop Floor UI
- Automated Time Mathematics
- Dynamic Moving Average Charts
- Machine-Specific Routing
- Multi-Phase Tracking

Future Enhancements

Future versions of this system may include:

- Direct API integration with Programmable Logic Controllers (PLCs) to pull machine data automatically without manual entry
- Real-time OEE (Overall Equipment Effectiveness) dashboards displayed on large factory monitors
- Scrap and defect tracking modules to calculate precise material yield rates
- Automated shift-end reports emailed directly to plant managers

Project Summary

The Industrial Production Data Management System highlights Admyon Systems' ability to engineer robust, analytics-driven software for the manufacturing sector. By automating complex cycle time calculations and providing deep visual insights into machine performance, the application empowers industrial facilities to minimize downtime and maximize their operational efficiency.