



DMAIC Project Management

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Data-Driven AI Solutions—*in Days*

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Use your data and see AI-generated solutions in a few days.

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A super fast way to see if AI can work for your organization

Current manual, disconnected processes...

Workflow Apps

Customer Form

Name: John "Glitch" Doe

Company: OmniCorp

Phone: 1-800-ERR-1234

Address: 1234 Memo

Email: corrupted_us@omnicorp.com

License Status: **LICENSE EXPIRED - C**

Processing...

Warning
CRITICAL_ERROR: FORM_DATA_STRUCT_CORRUPTION [0x7A4FD9C]
Heap allocation error. Memory block integrity failure.
Call stack for dump process: EAX=4F, EBX=01.
CONTACT ADMIN. UNDER INVESTIGATION.
Do you wish to attempt a recovery?
[OK] [Cancel]

Quality/Lean

MECHADYNAMICS
PRODUCT SPECIFICATION
DOC ID: MD-SP-G003A REVISION: 1.2 DATE: OCT 26, 2023

1. INTRODUCTION
Precision Precision Flange Gear Component for specific application

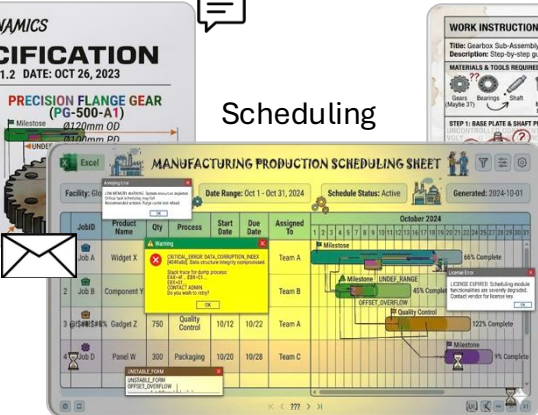
PRECISION FLANGE GEAR (PG-500-A1)
Ø120mm OD
Ø30mm ID

PROJECT ALPHA - BILL OF MATERIALS (BOM)

#	Part Number	Description	Material	Qty	Unit Cost	Total Cost	Supplier
1	101	A-001	Base Frame	1	\$85.50	\$85.50	ACME Metalworks
2	102	B-002	Steel	4	\$12.75	\$51.00	TechFab Inc.
3	103	C-110	Harden Steel	2	\$45.00	\$90.00	Precision Parts
4	104	D-050	Nylon P66	2	\$19.99	\$39.98	Gear Dynamics
5	105	E-201	ERR_MAT	8	\$3.50	\$28.00	FastBearings
6	106	F-110	FR4	1	\$112.40	\$112.40	CircuitWorks
7	107	G-303	Harness Assy	1			
8			PVC/Copper				

Total Parts: 19 Total Cost: **ERR_422**

Scheduling



Work Ins. & SOPs

WORK INSTRUCTION: MECHANICAL ASSEMBLY (Part #1004-B)

Title: Gearbox Sub-Assembly (1004-B) Description: Step-by-step guide to assembling the primary drive components. New Date: 12/15/2023 (or maybe not?)

MATERIALS & TOOLS REQUIRED

- Gears: 375, 375, 375
- Shafts: 10, 10, 10
- Bolts: 10 (M8), 10 (M6)
- Grease: 100g
- Allen Key: 5mm
- Lubricant: 100ml
- Wrench: 10mm
- Socket: 10mm
- Flat Head Screwdriver: 10mm
- Hex Bolt: 10mm
- Safety Glasses

SAFETY WARNINGS Is this required? **NO**

STEP 1: BASE PLATE & SHAFT PREP STEP 2: INSTALL GEAR & KEYWAY STEP 3: SECURE ASSEMBLY & CAP STEP 4: TORQUE BOLTS & INSPECTION

PFMEA Record

Process Step: Your Plant Focus Element: Ship-To-... Function of: End User: Potential Failure-Mode: Potential Effect(s) of: Severity: 0 Occurrence: 0 Detectability: 0 RPN: 0

STRUCTURE ANALYSIS

Process Step: Your Plant Focus Element: Ship-To-... Function of: End User: Potential Failure-Mode: Potential Effect(s) of: Severity: 0 Occurrence: 0 Detectability: 0 RPN: 0

FUNCTION ANALYSIS

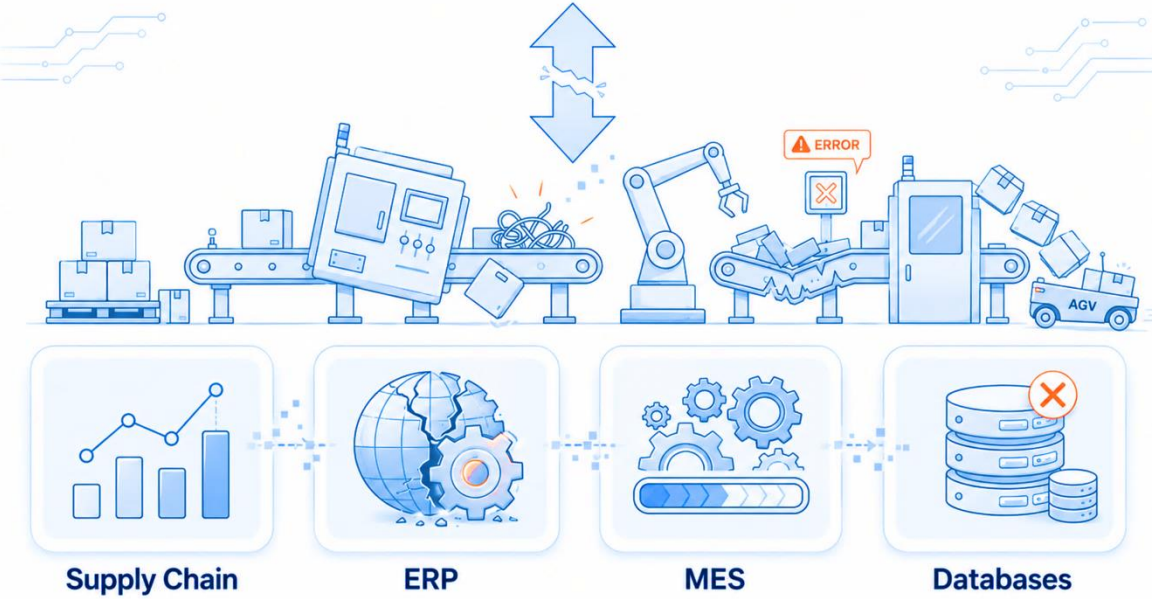
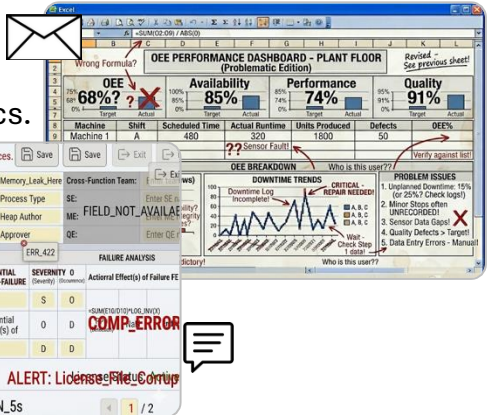
Process Step: Your Plant Focus Element: Ship-To-... Function of: End User: Potential Failure-Mode: Potential Effect(s) of: Severity: 0 Occurrence: 0 Detectability: 0 RPN: 0

FAILURE ANALYSIS

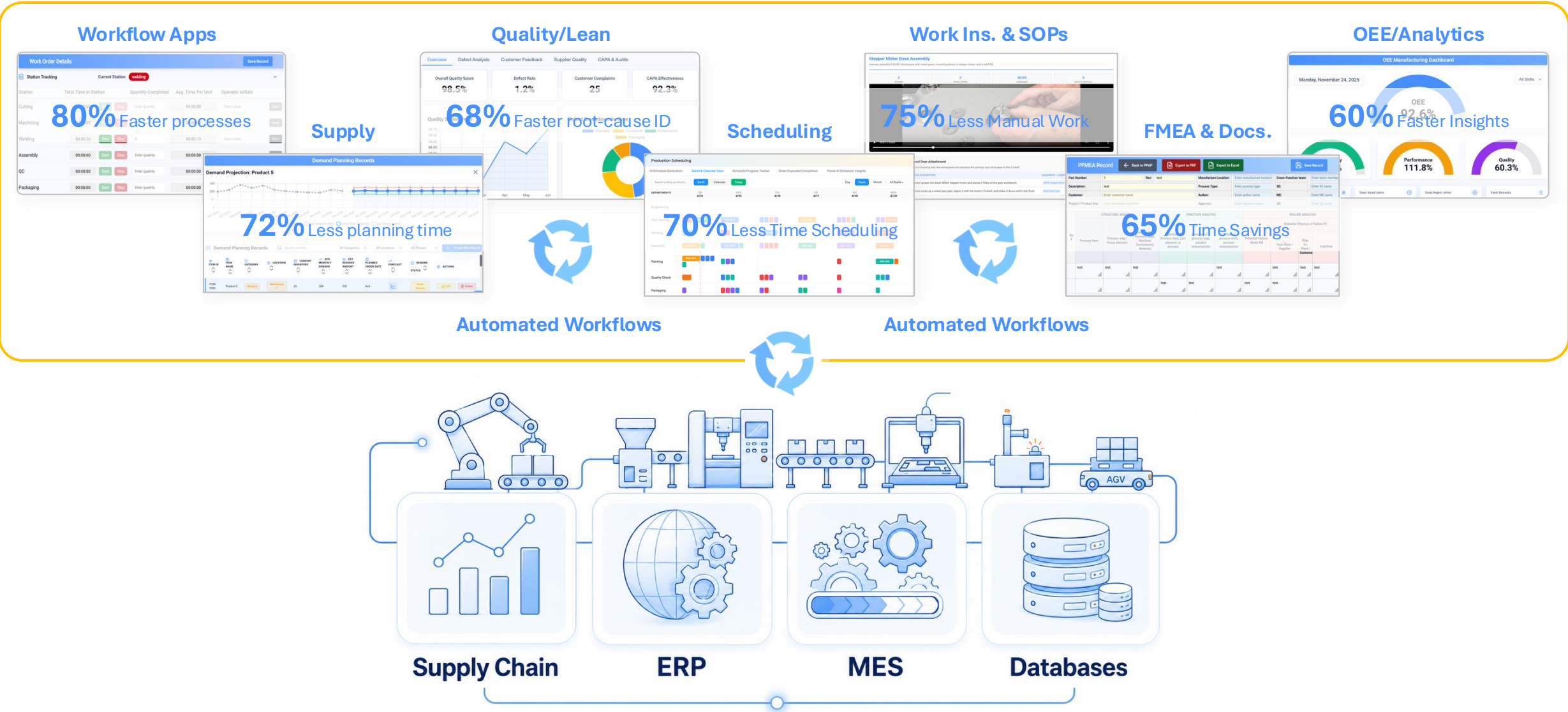
Process Step: Your Plant Focus Element: Ship-To-... Function of: End User: Potential Failure-Mode: Potential Effect(s) of: Severity: 0 Occurrence: 0 Detectability: 0 RPN: 0

ALERT: Licenses File Corrupt

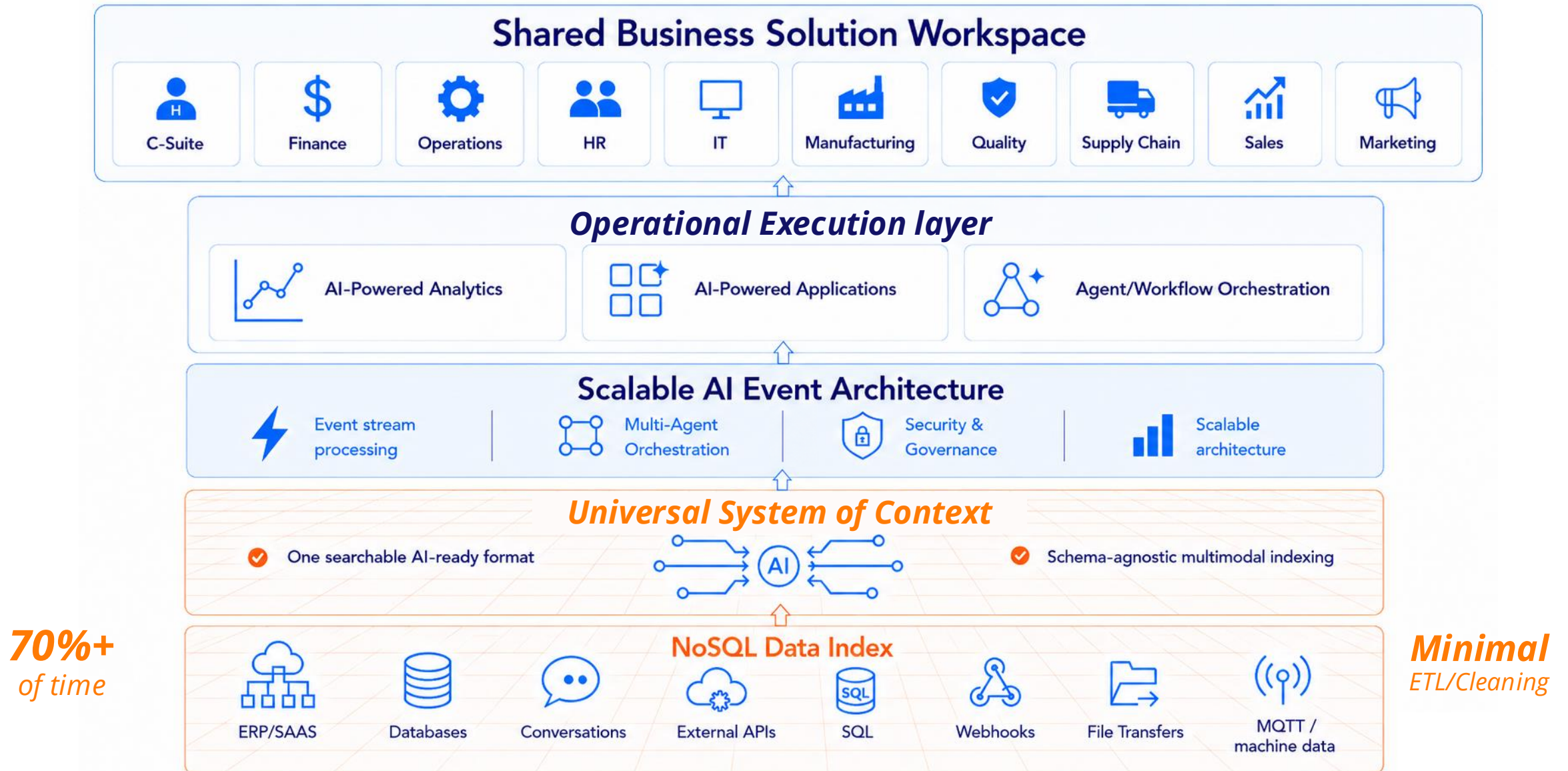
FMEA & Docs.



AI Applications, Orchestrated Workflows & Automations

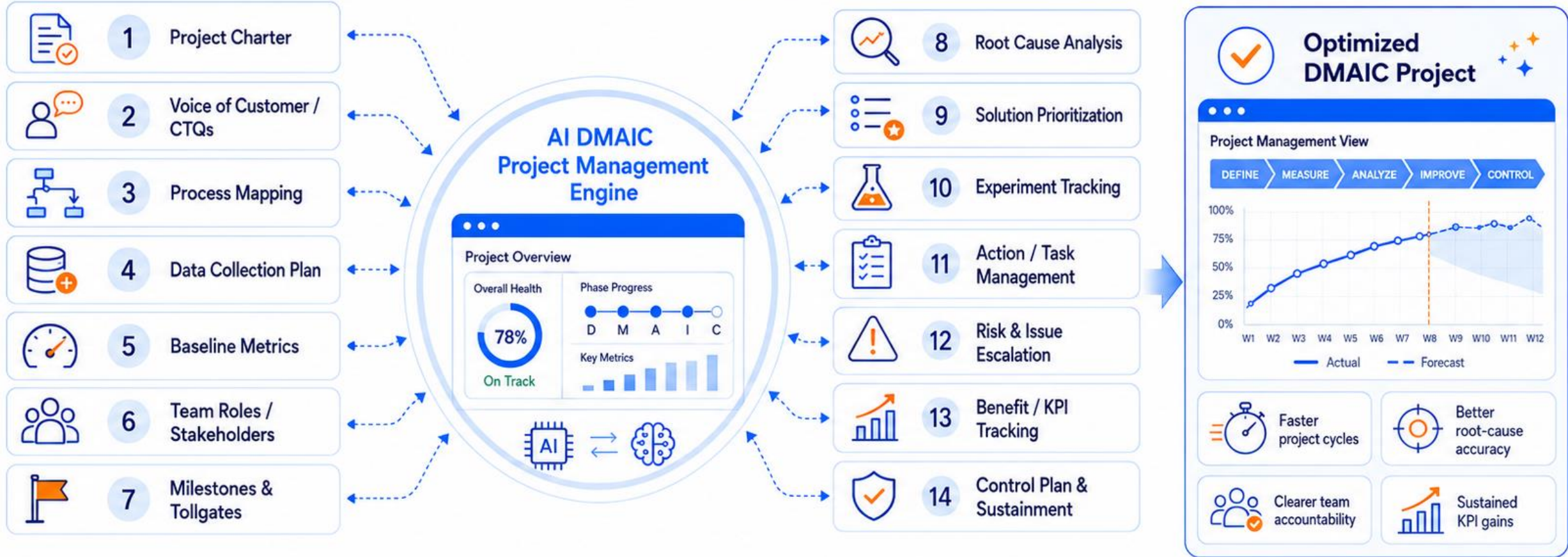


What's Different: *Speed of Data to AI Value*



Why DMAIC Project Management Is Complex

A DMAIC project must coordinate data, analysis, collaboration, and execution across every phase.



Why it's difficult



Many tools and artifacts must connect



Decisions evolve as data changes



One delay can ripple across phases



Cross-functional teams must stay aligned

ROI of AI-Powered DMAIC Project Management

How organizations reduce manual project work, improve cross-functional visibility, accelerate analysis, and drive better improvement outcomes.



1 Traditional DMAIC Project Management



1. Manual project tracking
spreadsheets, slide decks, and email updates



2. Disconnected data
metrics, process data, and documents live in silos



3. Slow analysis cycles
teams spend time gathering data before solving problems



4. Inconsistent execution
tollgates, actions, and follow-up vary by team

2

Transition to AI-Powered DMAIC



Project charters & VOC



Operational data



Tasks & workflows



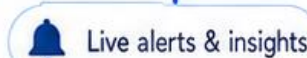
Systems & APIs



Documents & forms



Stage gates & business rules



Live alerts & insights

Connected project data + AI guidance + workflow + analytics

3

AI-Powered DMAIC Project Management



1. AI project workspaces
structured Define, Measure, Analyze, Improve, and Control execution



2. AI-guided workflows
faster follow-up, task routing, and tollgate management



3. AI analytics
root-cause insights, trends, summaries, and decision support



4. Smarter project decisions
better visibility, speed, accountability, and control

Key ROI Elements



50% Less Admin Work
less time updating project status and chasing actions



35% Faster Project Completion
shorter DMAIC cycles and quicker problem resolution



30% Better Visibility
one live view across phases, actions, data, and results



25% More Workflow Efficiency
fewer handoff delays and stronger accountability



Less Rework & Better Control
standardized execution across teams and projects



Faster Adoption & Scale
repeatable DMAIC practices with AI-powered support



Business Impact: faster improvement cycles, better project outcomes, stronger governance, and more scalable continuous improvement execution.

The Many Tools of the DMAIC Process

A practical toolkit across Define, Measure, Analyze, Improve, and Control

D — DEFINE



- Project Charter
- Voice of the Customer (VOC)
- SIPOC Diagram
- CTQ Tree
- Stakeholder Analysis
- Problem Statement
- Business Case
- High-Level Process Map



M — MEASURE



- Data Collection Plan
- Check Sheets
- Detailed Process Map
- Value Stream Map
- MSA / Gage R&R
- Baseline Metrics
- Process Capability (Cp, Cpk)
- Histogram / Run Chart



A — ANALYZE



- Fishbone Diagram
- 5 Whys
- Pareto Analysis
- Scatter Plot
- Regression Analysis
- Hypothesis Testing
- FMEA
- Root Cause Verification



I — IMPROVE



- Brainstorming
- Solution Selection Matrix
- DOE
- Pilot Test
- Kaizen
- Poka-Yoke
- Future-State Process Map
- Implementation Plan



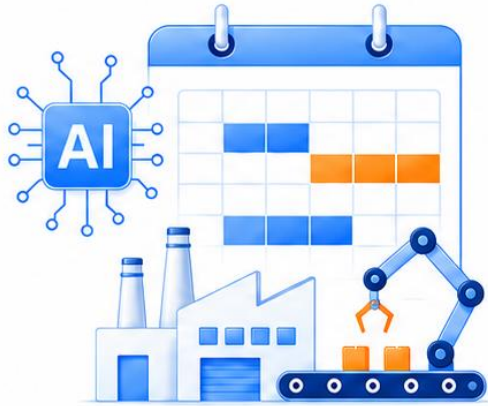
C — CONTROL



- Control Plan
- SPC / Control Charts
- Standard Work
- Visual Management
- Training Plan
- Response Plan
- Audit Checklist
- Dashboard & Monitoring

“We’ll Prove it” Special Offer

Give us sample data and we'll build a tailored AI-powered demo - **At no Cost**



AI Scheduling



AI Documentation



AI Analytics



We’ll demonstrate AI on your own data — before you commit.

→ See your own use case in action.