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Utilizing BI and Analytics for Strategic Advantage in Construction

Carmel Wynkoop and Travis Christens



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Top 3 Construction Analytic Initiatives

1. Project Management
 - AI-driven scheduling and resource allocation
2. Estimations
 - Automated cost estimations and bids with AI
3. Procurement
 - Optimized ordering with predictive analytics



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Project Management

Streamline Project Management Process

- Outcome: Reduced project delays up to 20%, improved reporting accuracy by 30%, and reduced scheduling conflicts.

Data Points

- Data Integration
- Data Quality and Consistency
- Real-time Analytics
- AI Algorithms / Predictive Models



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Project Management Benefits

- Improved Scheduling and Planning
- Risk Management and Mitigation
- Resource Allocation Optimization
- Performance Monitoring





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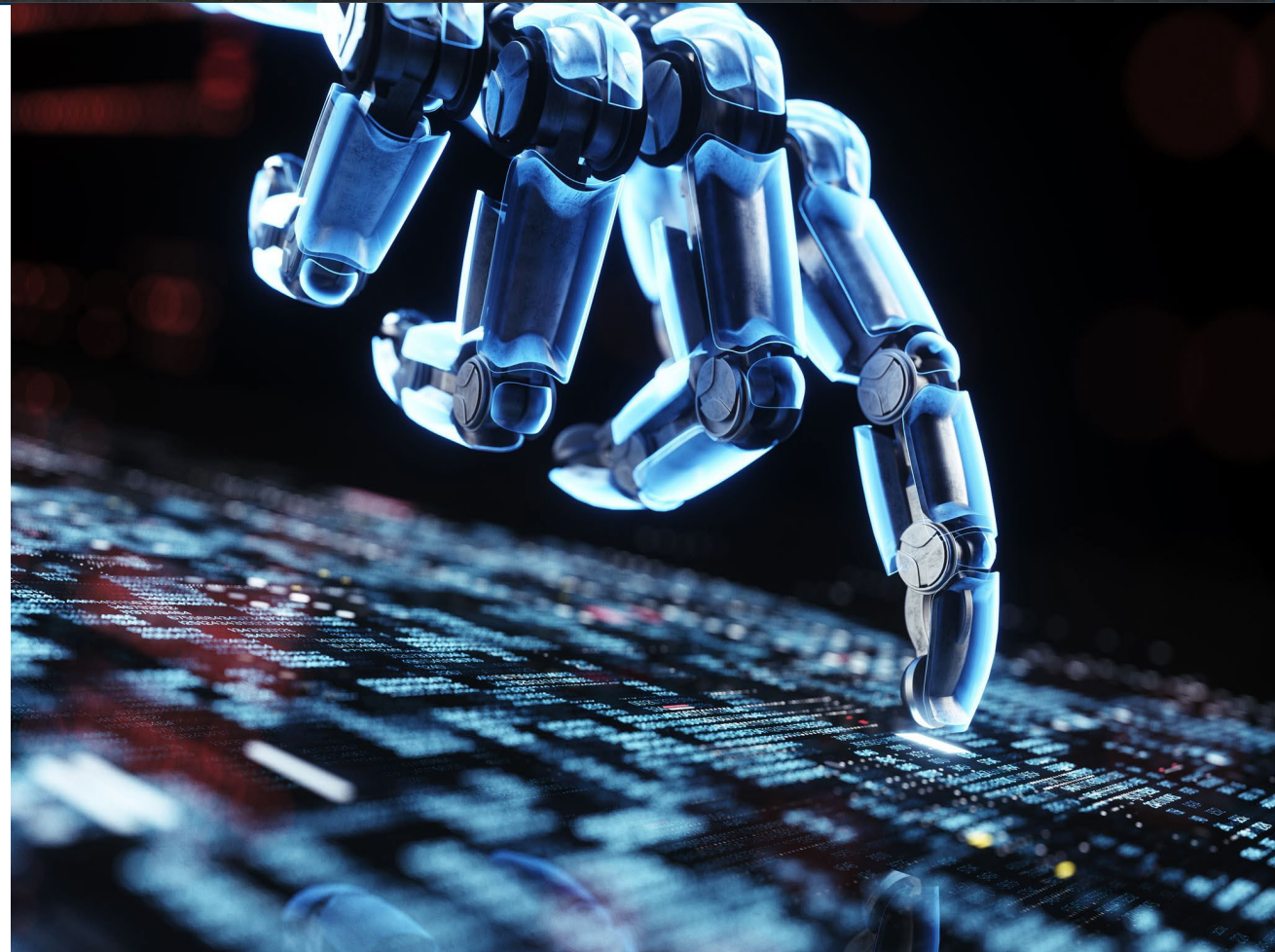
Estimation

Use AI to Assist in Estimation and Bids

- Outcome: Reduced estimation times by 30% and increased bid accuracy

Data Points

- Historical Pricing Analysis
- Automated Takeoffs
- Bid Comparison





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Estimation Benefits

- Accurate Cost Estimations
- Bid Preparations
- Time Estimations
- Scenario Analysis



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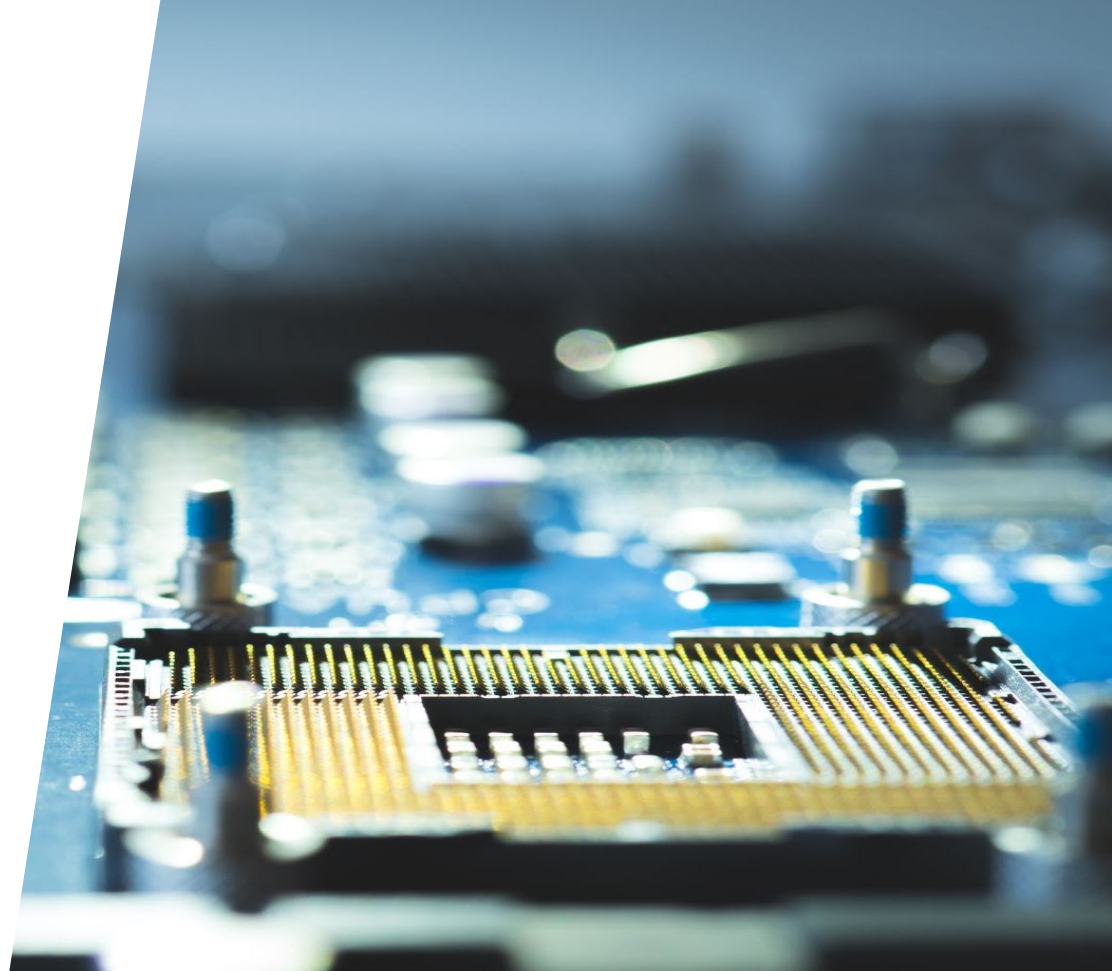
Procurement

Case Study: Use AI to Automate and Predict Procurement Processes

- Outcome: Reduced procurement errors by 25%, reduce material cost by 15%, and improved material availability.

Data Points

- Accurate material ordering and confirmation
- Procurement / Cost data analysis
- Predictive Ordering and optimization
- Supply chain integration





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Procurement Benefits

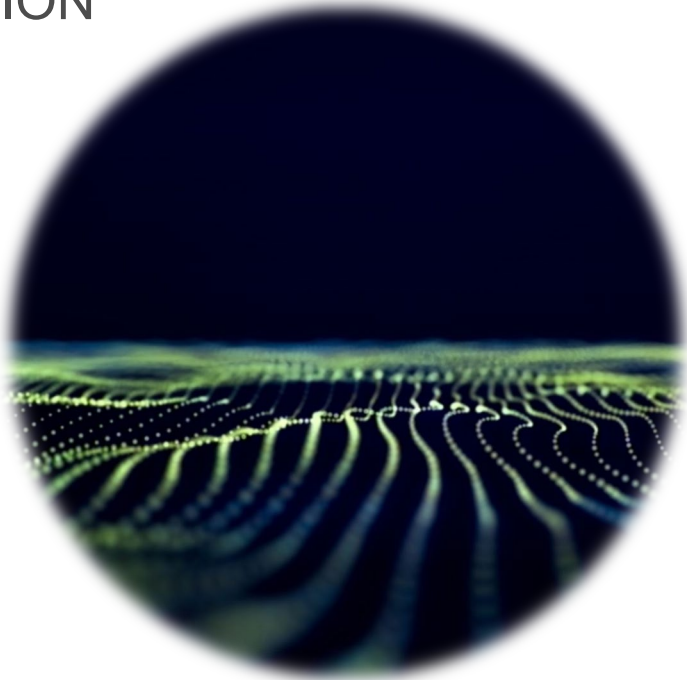
- Inventory Management
- Supplier Performance Analysis
- Cost Savings
- Supply Change Optimization



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Strategic Direction – Pillars

- OUR RECOMMENDED APPROACH FOR AI ADOPTION



START WITH THIRD
PARTY AI-ENABLED
SOLUTIONS



WORK TOWARD AN AI-
ENABLED
INTEGRATED
PLATFORM &
SOLUTIONS
ARCHITECTURE



ADD A DATA
WAREHOUSE AND
DATA GOVERNANCE
PROCESSES



DEVELOP ADVANCED
AI CAPABILITIES FOR
COMPETITIVE
DIFFERENTIATION



ESTABLISH
TECHNOLOGY
GOVERNANCE TO
EVALUATE AI
INITIATIVE BENEFITS
& PRIORITIES



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How BI and Predictive Analytics work together

- Data Driven Decision Making
- Real-Time Insights
- Continuous Improvements
- Data Governance
- Technology Adoption





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Summary



Top 3 Construction Analytic Initiatives

- Project Management
- Estimation
- Procurement

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