



AI in Construction

Opportunity Overview

site selection

Optimising construction site opportunities efficiently

Rapid Research

AI compresses weeks of desktop research into hours, enabling informed decisions that enhance project viability and significantly reduce time spent on initial evaluations.

Automated Analysis

AI parses planning documents, zoning codes, and overlays automatically, ensuring compliance and providing critical insights that guide strategic site selection for construction projects.

design & engineering

Innovative solutions for construction challenges

Generative Tools

Generative tools enable rapid creation of diverse layout options, allowing teams to explore design possibilities while adhering to real-world constraints and specifications.

Multimodal Models

Multimodal models utilise advanced algorithms to analyse 2D drawings efficiently, identifying potential clashes and discrepancies before they lead to costly rework on-site.

Prompt-to-Design

Prompt-to-design tools seamlessly convert natural language requests into Building Information Modeling (BIM) formats, streamlining the design process and enhancing collaboration among stakeholders.

estimating & bids

Streamlining processes with AI technology

Tender Scanning

Continuous scanning of tender portals allows teams to surface relevant opportunities efficiently, saving valuable time and ensuring that the best projects are not missed.

Drawing Interpretation

AI technology interprets complex drawings and automatically generates bills of quantities, reducing human error and increasing accuracy in project cost estimation and budgeting.

Proposal Generation

The automation of proposal generation, including executive summaries and compliance matrices, enhances the speed and quality of submissions, giving businesses a competitive edge in the bidding process.

project management

Enhancing efficiency through AI integration

Real-Time Tracking

AI technology links on-site activities and RFIs directly to the programme, ensuring that project managers have access to data as it occurs.

Progress Monitoring

Vision systems provide continuous tracking of project progress, alerting teams to deviations from the schedule and enabling timely responses to potential delays.

Predictive Modelling

By modeling weather patterns, labor availability, and site constraints ahead of time, AI helps mitigate disruptions before they impact project timelines.

field productivity

Enhancing construction efficiency in real time

Real-Time Access

Field copilots empower workers by providing **immediate access** to essential drawings and specifications without disrupting workflow or leaving the workface.

Voice Integration

Voice agents streamline communication by capturing inspection reports and progress updates as work happens, ensuring that **vital information** is documented accurately and promptly.

Documentation Systems

Automated systems enhance site documentation by drafting RAMs, method statements, inspection reports, progress updates and issue logs from a description of the task or activity, pulling in relevant data based on site conditions, and routing documents for approval

safety & risk

Enhancing site safety through technology

Vision Monitoring

Continuous vision monitoring ensures compliance by detecting **missing PPE** and potential hazards, creating a safer environment for all workers on site.

Real-Time Reporting

Real-time hazard and near-miss reporting via mobile and voice streamlines communication, allowing teams to address safety concerns **instantly** and effectively.

Pattern Identification

By analysing patterns across projects by trade and time of day, we can proactively identify risks and improve safety standards throughout the organisation.

quality verification

Ensuring excellence in every project

Vision AI

Vision AI technology enables real-time **comparisons** of on-site imagery against detailed drawings and specifications, ensuring **accurate execution** during construction.

Continuous Quality

Continuous quality verification processes provide **assurance** before project sign-off, effectively identifying issues early and maintaining high standards throughout the construction phase.

Progress Tracking

Verified progress is seamlessly linked to **schedule** and cost systems, facilitating earned value tracking and ensuring projects remain on track and within budget.

materials & procurement

Streamlining supply chains for efficiency

Supplier Catalogues

Takeoff requirements are seamlessly mapped directly to **supplier catalogues and live inventory**, ensuring that material needs are met promptly and accurately, minimising delays on-site.

Three-Way Matching

Implementing a **three-way matching process** across quotes, purchase orders, delivery tickets, and invoices enhances accuracy and reduces discrepancies, leading to smoother procurement operations and financial clarity.

Predictive Models

Utilising **predictive models**, we can recommend optimal order timing and quantities based on site readiness, thereby aligning procurement processes with project timelines and reducing waste.

contracts & commercials

Streamlining Contract Management and Compliance

Critical Clause Extraction

AI technology extracts essential clauses from complex contracts, creating a commercial playbook to streamline understanding and improve compliance across construction projects.

Real-Time Monitoring

By continuously monitoring RFIs, daily logs, and correspondence, AI identifies entitlement events as they emerge, ensuring timely actions and reducing potential disputes.

Automated Prompts

Teams receive immediate prompts with the correct notice templates and evidence requirements, facilitating prompt compliance and reducing administrative burden in contract management.

equipment insights

Enhancing performance with intelligent monitoring

Engine Performance

Telematics technology allows for real-time monitoring of engine performance, ensuring optimal operation and early detection of issues to prevent costly downtime.

Predictive Maintenance

Machine learning models forecast component failures, enabling proactive maintenance strategies that extend asset lifespan and reduce unexpected failures during critical operations.

Fleet Optimisation

Location and utilisation analytics enhance fleet management decisions, ensuring resources are allocated efficiently and effectively to meet project demands and minimise waste.

sustainability

A deep dive into carbon management

Automated Assessments

Our tools **automate the creation** of Environmental Product Declarations (EPDs) and lifecycle assessments, ensuring compliance and efficiency throughout the construction process.

Material Tracking

We continuously **track whether specified materials** were actually procured and installed, enhancing accountability and reducing waste in every project phase.

Carbon Analysis

Implementing **portfolio-level carbon analysis** allows prioritisation of retrofit investments, helping businesses minimise their environmental impact while maximising resource efficiency.

handover

Ensuring seamless transition and efficiency

Asset Inventories

Normalising construction records allows for structured asset inventories, making it easier to access critical information about each component and its specifications.

Queryable Documents

Drawings, manuals, and commissioning logs become easily queryable in plain language, enabling teams to find essential details without sifting through dense documentation.

Predictive Insights

By combining asset data with sensor data, potential component failures can be anticipated before they happen, ensuring timely maintenance and reducing downtime significantly.

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