# Key Points

- Research suggests AI will automate 30-40% of routine "taking off" tasks by 2027, but human oversight remains essential.
- It seems likely that trainee numbers could decrease from 5 to 4 per year, given constant workflow, due to AI efficiency gains.
- The evidence leans toward AI enhancing, not replacing, quantity surveyors, with controversy around job impacts still debated.
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**AI's Expected Contribution**
AI tools, like those from Kreo Software, are set to automate significant parts of the "taking off" process, such as measuring and counting elements from drawings. By 2027, it's estimated that 30-40% of routine tasks could be handled by AI, reducing manual effort and speeding up workflows. However, complex or bespoke projects will still need human expertise for accuracy and decision-making.

**Impact on Trainee Recruitment**
With AI taking on routine tasks, the demand for trainees might decrease slightly. If "taking off" is a key training area, and AI automates part of it, we might see a reduction from 5 to around 4 trainees per year by 2027, assuming constant workflow. This is a rough estimate, as other factors like project growth could maintain demand.

**Considerations and Uncertainty**
While AI offers efficiency, its adoption depends on data quality, training needs, and industry uptake. The construction sector's slow adoption rate and the need for human oversight suggest a balanced approach, with potential for trainees to focus on higher-value skills instead.

# Report: The Role of AI in the "Taking Off" Process for Quantity Surveyors and Its Impact on Trainee Recruitment

In the UK, the "taking off" process is a fundamental task for quantity surveyors, involving the analysis of planning documents and architectural drawings to list all materials and work needed for a construction project, which is crucial for cost estimation. With artificial intelligence (AI) advancing rapidly, particularly in machine learning and

computer vision, there is significant potential for AI to enhance this process. This report, prepared on June 19, 2025, assesses the expected contribution of AI to the "taking off" process within the next two years (by 2027) and evaluates its implications for trainee recruitment, given a constant workflow where we currently onboard 5 trainees annually.

**Current Landscape of AI in Quantity Surveying**

AI technologies are increasingly integrated into quantity surveying, especially for automating repetitive and data-intensive tasks. Tools such as Kreo Software utilize AI to automatically detect and classify elements like rooms, doors, windows, and walls from drawings in real time, significantly reducing manual effort. Specific capabilities include Auto Measure, which defines areas or elements in one click, and Auto Count, which locates and counts objects, leveraging machine learning to predict measurements and suggest scales. These tools streamline the generation of bills of quantities (BoQs) and cost plans, enhancing accuracy and efficiency.

However, AI's effectiveness is currently limited to standardized drawings and projects with consistent data. For complex or bespoke designs, human expertise remains essential for interpretation, quality assurance, and handling exceptions. Industry reports, such as those from Measure Manage, highlight that AI improves cost estimation and risk management by analyzing historical data, but challenges like data accuracy and training needs persist.

**Expected AI Contributions by 2027**

By 2027, AI is expected to moderately enhance the "taking off" process, particularly by automating routine tasks. Based on current trends and available tools, research suggests that AI could handle approximately 30-40% of routine "taking off" tasks, such as measuring standard components (e.g., windows, doors) and generating preliminary BoQs from 2D or 3D drawings. This estimate is supported by insights from Clearnorth, which notes AI's potential to automate time-consuming tasks like quantity take-offs, freeing up surveyors for higher-level analysis. However, full automation is unlikely within this timeframe due to several factors:

- **Complexity of Drawings**: Unique or intricate designs may exceed AI's current interpretive capabilities, as noted in discussions from Kingsmead Consultants.
- **Data Quality**: AI requires consistent, high-quality data; incomplete or varied planning documents limit its effectiveness, as mentioned in Measure Manage.
- **Adoption Challenges**: The construction industry's slow uptake of new technology, coupled with the need for training and investment, will delay widespread integration, as highlighted in Altus Group Insights.
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Despite these limitations, AI tools are demonstrating significant efficiency gains. For instance, Kreo Software offers benefits like instant generation of accurate quantities from plans and simplified BoQ updates, reducing time spent on drawings and improving collaboration through cloud access.

**Implications for Trainee Recruitment**

With a current intake of 5 trainees per year to sustain a constant workflow, AI's partial automation of "taking off" could reduce the demand for trainees. To estimate this impact, we need to consider the proportion of a quantity surveyor's workload dedicated to "taking off." While specific data is limited, industry insights suggest that "taking off" constitutes a significant but not sole part of their duties, estimated at 30-40% based on the importance of cost estimation in the role.

If AI automates 30-40% of the "taking off" process, and assuming "taking off" is 30-40% of the total workload, the overall reduction in manual work might be around 10-16% (0.3 * 0.3 to 0.4 * 0.4). This suggests a potential decrease in trainee numbers from 5 to around 4 per year by 2027, as fewer trainees may be needed for routine tasks. However, several factors nuance this estimate:

- **Broader Skill Set**: Trainees also develop skills in cost management, contract administration, and client relations—areas less impacted by AI, as noted in career guides from Prospects.ac.uk and National Careers Service.
- **Upskilling Needs**: Existing staff will require training to use AI tools, possibly necessitating temporary support from trainees, as mentioned in Measure Manage.

- **Project Variability**: As AI tackles routine tasks, trainees may shift to more complex projects, maintaining demand for skilled personnel, as discussed in Clearnorth.
- **Industry Dynamics**: Growth in construction volume or increased project complexity could offset AI-driven efficiencies, as suggested by general AI impact reports from GOV.UK.

Thus, while a reduction to 4 trainees is plausible, flexibility in recruitment planning is advisable. Additionally, AI's role in enhancing productivity means that trainees may need to focus on mastering higher-value skills, such as strategic cost planning and risk management, to complement AI capabilities, as recommended in RICS.

**Conclusion and Recommendations**

Within two years, AI tools should contribute meaningfully to the "taking off" process by automating up to 30-40% of routine quantity extractions from standardized drawings. Human expertise will remain vital for complex designs, accuracy checks, and non-standard projects. For trainee recruitment, assuming a constant workflow, we anticipate a modest decrease from 5 to approximately 4 trainees per year by 2027. This reflects AI's efficiency gains balanced against ongoing needs for oversight and diverse skills.

To leverage AI effectively and optimize staffing, we propose:

- **Invest in AI Tools**: Acquire and integrate AI software (e.g., Kreo Software) alongside training for current Quantity Surveyors.
- **Adjust Recruitment**: Plan for 4 trainees per year starting in 2027, with readiness to adjust based on AI adoption rates and project demand.
- **Refocus Trainee Roles**: Emphasize training in higher-value areas like cost management, risk assessment, and strategic planning to complement AI capabilities.

By embracing AI while retaining human expertise, we can enhance efficiency and maintain our firm's competitive edge in quantity surveying.

**Key Citations**


- What Impact Will AI Have on Quantity Surveying
- Kreo Software AI Tools for Quantity Takeoff
- Will AI Replace Quantity Surveyors?
- The Future of AI in Quantity Surveying

- AI and Future of Quantity Surveying Sector
- Potential Impact of AI on UK Employment
- Quantity Surveyor Job Profile UK
- Quantity Surveyor Career Guide UK
- Cracking Code AI Transform Quantity Surveying