AI for Building Sector: Presentation Summary

Here is a summary of the presentation's key points regarding the use of AI in the building sector, led by Brett Price of AIQ Consulting Group.

The Core Challenge: The Capacity Gap The building sector is currently facing a massive "capacity gap" driven by increasing permit volumes, complex new regulations (such as the 2024 BCBC and 2025 seismic updates), and the need to free up senior officials from clerical duties so they can focus on complex on-site problem-solving. AI serves as a crucial tool to bridge this gap by automating tedious tasks, expanding access to knowledge, ensuring consistency in technical interpretations, and identifying errors in complex submittals.

Understanding AI and Shifting Mindsets To effectively adopt AI, building professionals must shift from a "doing" mindset to a "supervisor" mindset. Price notes that AI is not magic; it is fundamentally a highly advanced "pattern matcher". As such, users must recognize several important realities about AI:

- **The "Human-in-the-Loop":** AI is excellent at summarizing but lacks human nuance and emotional intelligence (EQ). It should be viewed as an infinitely smart but inexperienced intern, meaning a human must always review and take accountability for its output.
- **Hallucinations**: AI can confidently invent facts, such as non-existent building code sections.
- **Privacy and Security**: Never upload Personally Identifiable Information (PII) to an AI tool. Users should only use paid, enterprise-grade tools (like Microsoft Copilot or Gemini Business) for work, as free versions may use proprietary data to train their public models.

The 5-Step Strategy for Implementing AI A major theme of the presentation is that strategy and workflow mapping must precede AI implementation so you don't end up with a "faster bad process". The recommended approach involves five steps:

1. Create an AI Use Policy: Organizations must assemble stakeholders (including IT and legal) to clearly define how AI can be used. This includes classifying what data is "Green-Lit" (like public building codes) versus "Off-Limits" (PII), and establishing strict human oversight requirements.

2. Map Workflows: Before using AI, clearly define the start and end points of a process (e.g., from application to permit issued). Break these down into logic gates, specific task lists (like verifying civic addresses), and task owners.

3. The "3R" Approach for Selecting Tasks: Do not substitute AI for human judgment; instead, use it for tasks that are **Repetitive** (high-frequency clerical work), **Rules-based** (logic-heavy code checks), and **Routine** (low-EQ tasks suitable for a pilot program).

4. Ground Your Data (Create a "Data Moat"): To prevent the AI from hallucinating or pulling from irrelevant US-centric building codes, you must "ground" the AI. This is achieved by creating a secure "moat" where the AI is only allowed to pull information from uploaded, verified local sources, such as clean PDFs of the 2024 BCBC, municipal bylaws, and policy memos.

5. Build Custom AI Assistants and Prompt Precisely: The industry is moving away from generic chatbots toward "Agentic AI"—custom bots that are specifically instructed on an individual's exact role and given access to specific software and grounded data. When instructing these agents or prompting standard AI, users should use the **CREATE** framework to avoid vague, useless results:

- **C - Context/Content:** Explain the situation (e.g., reviewing a residential permit).
- **R - Role:** Tell the AI who to act as (e.g., Senior BCBC Reviewer).
- **E - Expectation:** Define what you need (e.g., an email response).
- **A - Action:** Give a specific command (e.g., draft a detailed response citing BCBC sections).
- **T - Tone:** Set the voice (e.g., authoritative and professional).
- **E - Exclusions:** Detail what to ignore (e.g., do not reference National Building Code).

Practical AI Use Cases in the Building Sector When implemented correctly, AI can be heavily utilized for correspondence (automating FAQ email responses), translating complex code interpretations into plain language for homeowners, standardizing voice memos into structured reports, and summarizing massive, complex technical or geotechnical PDF submittals to quickly extract key trends and findings.