AI-CATCH for Statistics

People Led, AI-Powered Change

AI-CATCH: Reflections Series #1

From Framework to Action: AI-Supported Quality Management in Official Statistics

Prepared by Mogens Grosen Nielsen and Lars Thygesen

Email: contact@ai-catch.com Web: ai-catch.com

From Framework to Action: AI-Supported Quality Management in Official Statistics

National Statistical Organizations (NSOs) depend on quality to maintain public trust. They follow rigorous standards like the United Nations National Quality Assurance Framework (UN NQAF), which lays out exhaustive guidelines (19 principles and 87 requirements) to assure quality across an entire statistical system. But the real challenge is putting those principles into everyday practice. Staff juggle tight budgets, new data sources, evolving technologies, and growing user demands. Even with manuals on the shelf, turning *"best practices"* into routine operations is hard. NSOs often ask: *Are we embedding quality into our processes, or just ticking boxes?*

Challenges with Traditional Approaches

Traditional quality assurance methods (audits, reports, checklists, etc.) raise awareness but often don't drive lasting change. For example:

- Static and reactive: Quality guidelines are static and many checks happen only *after* problems occur. Staff can follow the book and still miss emerging errors, learning lessons too late.
- One-off improvements: Improvements are often one-off or siloed. A report or workshop yields recommendations,

but if they aren't woven into daily work, people revert to business as usual once the spotlight moves on.

These issues make it hard to sustain quality gains. Quality management can feel like a periodic project rather than an ingrained culture. As Lars and Mogens of AI-CATCH say, real improvement happens when new ideas become everyday habits – not just documents gathering dust.

What AI Brings to Quality Management

Artificial intelligence – especially generative AI – can make quality management more proactive, adaptive, and integrated:

Turn frameworks into advice: Generative AI can digest all your frameworks and guidelines and pinpoint what matters for your situation. It's like having a consultant who knows the UN NQAF by heart and can highlight gaps and suggest practical fixes tailored to your organization.

In short, AI acts as an ever-alert assistant that reads everything and never gets tired. Crucially, it works best with human experts in the loop. The biggest benefits come from combining AI's strengths with human judgment, as the next example shows.

Case in Point: From Problem to Initial Plan Using UN-NQAF

Imagine your NSO has a chosen to use the UN NQAF framework and possibly has a self-assessment report. Instead of letting it sit on a shelf, you use an AI tool like AI-CATCH to turn that checklist of findings into an improvement plan. Here's how it might work in four steps:

1. Define the problem: The team describes the issue in plain language (e.g. "coordination of admin data collection"). The AI maps this to UN NQAF concepts and asks for clarification if something doesn't align with the framework.
2. Clarify context: The AI summarizes the situation and asks a few clarifying questions to fill any information gaps (perhaps about missing procedures or unclear roles). The team responds, ensuring the issue is well-defined before moving on.
3. Generate options: The AI produces three improvement options aligned with relevant NQAF requirements – typically one small fix, one moderate change, and one major overhaul. Each option documents the problem, the chosen solution, which NQAF requirements it satisfies – turning the assessment findings into a concrete initial plan.
4. Team selects an option: The team chooses an option, based on discussions and evaluations. This plan will be used in apps for detailed planning, where the team provide constraints on cost, resource and scope.

This process quickly bridges the gap between assessment and action. What might have taken months of deliberation can happen in days, and every recommendation comes with clear justification (tied to the framework).

The Hybrid Advantage: AI + Human Expertise

Why combine AI and human insight? Because it lets each do what they do best. AI brings breadth and speed – it can sift through all the rules and data – while humans bring depth and context, knowing which solutions will work on the ground. Together, they come up with ideas that are both innovative and feasible.

The AI might propose something novel from the framework, and the experts refine it to fit local realities. This collaboration also builds ownership: staff are more likely to embrace changes they helped shape, rather than having a "black box" dictate solutions. Plus, the AI can log the reasoning behind decisions, so knowledge isn't lost. In short, a human–AI partnership makes quality management a continuous improvement process, not just a box-checking exercise.

Conclusion

Quality improves when frameworks translate into daily habits, not when you simply add more checklists. AI can help make that translation by bridging frameworks with practical actions on the ground. And when AI is paired with human judgment, quality management becomes a proactive, ongoing process instead of a periodic compliance exercise.

For NSOs and quality managers, the takeaway is to consider AI an ally in your quality journey. Tools like AI-CATCH combine AI insights with expert knowledge, making frameworks like NQAF a catalyst for improvement rather than a paperwork exercise.

Call to Action

If your agency is wrestling with quality challenges, let's discuss a pilot workshop. Follow AI-CATCH for monthly insights, and share your questions—we're building this journey together.

Contact and get started

Request a Demo

Email us to schedule a personalized walkthrough. We'll introduce and show how AI-CATCH approaches various challenges.

Email: contact@ai-catch.com
Suggested subject: Demo Request – [Your Organization]

Pilot Study Invitation

Benefit: Contribute by shaping AI-CATCH to fit your needs through direct feedback.
Offer: A pilot workshop applying AI-CATCH to one of your real challenges.

How to join: Email us your interest.
Email: contact@ai-catch.com
Suggested subject: Pilot Interest – [Your Organization]

General Contact

Email: contact@ai-catch.com
Web: www.ai-catch.com

Mogens Grosen Nielsen: LinkedIn and Website
Lars Thygesen: LinkedIn and Website