BUILDING CAPACITY

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Building Capacity by Considering a Futurist's View

Editor's Note: A need exists within environmental health agencies to increase their capacity to perform in an environment of diminishing resources. With limited resources and increasing demands, we need to seek new approaches to the practice of environmental health. Acutely aware of these challenges, the *Journal* publishes the Building Capacity column to educate, reinforce, and build on successes within the profession using technology to improve efficiency and extend the impact of environmental health agencies.

Column contributors are guest authors. The conclusions of this column are those of the author(s) and do not necessarily represent the views or policies of NEHA, nor does it imply endorsement of any products, services, or resources mentioned.

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Years ago, I was invited to participate in a fun skit at an annual conference put on by the National Environmental Health Association. The skit showed what a food safety inspection might look like in the future. The presentation team was excited, and their ideas ranged from almost practical to fantastic.

My part was to procure and set up a new, low-cost convertible tablet computer, the kind where the screen rotated away from the keyboard and collapsed back to form a tablet. This technology was before other tablets or smartphones. From my barely operational, underpowered device, I started a Skype call (essentially a FaceTime call) with the inspector on the stage. This online call was to demonstrate how easily inspectors might consult their program managers from the field.

Another element of the skit involved a simulated ray-gun pointed at food items, instantly (pretend) measuring whether pathogens were present. As I recall, we finished by tossing the "discovered" *Shigella* and *Campylobacter* plushies into the audience.

I enjoy listening to a futurist's perspective, taking cues from the present day, and projecting what the world might look like years from now.

Consider a few predictions made in 2000 about 2020:

- Life expectancy should exceed 100 years
- Books will no longer exist
- Personal movement tracking will be ubiquitous
- Self-driving cars will be commonplace

Some hits, some misses.

The world continues to change quite rapidly in 2026. So, let us go on record with a set of predictions related to the practice of environmental health.

Health Permits by Subscription

Today, many health departments spend considerable time generating invoices, mailing them, and collecting funds. In the future, permits will follow a subscription model. Operators will place a payment method on file, and the agency will collect its fees on a recurring basis, similar to common subscription services.

This notion is borrowed from common commercial practices (think Netflix, Office 365) requiring subscriptions. The process improves cash flow, reduces costs, and addresses collections problems. It is becoming the commercial norm, but it will obviously require local ordinances to catch up.

AI Agents Responding to Routine Requests

As trust in AI grows within each jurisdiction, AI agents will increasingly be used to address public records requests, operational questions, and general inquiries. These agents will go beyond simple chatbots. They will operate continuously, reading and processing emails, interpreting the requests, generating responses, and even participating in voice interactions. These agents will be localized to reflect jurisdiction-specific requirements.

Agents, too, can be tasked with transferring information between systems, such as county accounting and environmental health systems. Today, data exchanges require tightly coordinated integrations. Like a marriage,

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these exchanges are long-term and can be fragile. Error handling is particularly challenging today.

In the near future, systems from different departments will communicate dynamically and on an as-needed basis. AI-enabled platforms will simply request and receive information conversationally, transforming data formats as needed without rigid format constraints.

Consolidating Regional Variances

Regulatory variation between regions has been a source of some friction. As businesses increasingly operate across jurisdictions, pressure for standardization will continue, particularly where there is no public health justification for variations (just across the road). Consider a mobile food operator or a septic installer working across several counties.

Photographs and Video Informing the Inspection Narrative

Inspectors already use their mobile phones to capture photos. As we march forward, images and video will not just supplement inspection reports, they will define and generate them. This change also includes audio files that can capture conversations.

Wearables and Autonomous Devices Supporting Inspectors

Data from wearables such as glasses, watches, rings, and more will be integrated into inspection workflows. These devices will detect conditions worth noting or could even suggest to the inspector areas of the operation requiring deeper study. Similarly, autonomous devices will increasingly be deployed to inspect hard-to-reach or hazardous areas.

Workforce Development and Training

AI is already reshaping how we learn. In environmental health, virtual training and AI-assisted study will become the baseline. Training for regulated operators will also become more accessible, available in multiple languages and tailored to any learning style.

Procurement Becoming Automated

The procurement lifecycle, from drafting requests for proposals (RFPs) to evaluating vendor responses, will become increasingly automated. Agencies will generate requirements from existing documents or systems. Vendors will generate tailored responses. Evaluation, scoring, and even elements of negotiation will be partially automated. To some degree, this process is happening already.

Self-Service Configuring and Development

Configuring your data systems, such as creating reports, defining fields, adjusting fees, or even introducing new functionality, can be complex and resource-intensive. Sometimes it is costly. Systems will soon allow users to describe desired changes in plain language, upload documents, and then rely on AI to implement, evaluate, and present those changes for approval. This process will reduce dependence on specialized technical staff.

What Stays the Same?

Despite these changes and others not yet conceived, the fundamentals in each program area remain the same. The science of public health will not change. The risks, interventions, and physical practices that protect our communities now must remain. Equally enduring are the human elements of empathy, education, and the role of professionals as stewards of community well-being. The question is not whether these changes will happen, but whether we will shape them or react to them.

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