

# Review of: "Non-revenue Water Reduction"

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The implementation of a Demilitarized Zone (DMZ) in water companies involves several processes, each with its own set of challenges and potential areas for improvement:

## 1. Establishing Criteria for DMZ Selection and Prioritization:

- **Shortcoming:** Criteria may not adequately address all security concerns or may be too rigid, leading to inefficient allocation of resources.
- **Suggestion:** Develop dynamic, adaptable criteria that consider evolving security threats and technological advancements.

## 2. Field Survey Using Mobile Application Connected to GIS:

- **Shortcoming:** Reliance on mobile applications can be problematic in areas with poor connectivity or for staff not adept with technology.
- **Suggestion:** Ensure robust offline capabilities for the app and provide comprehensive training to field staff.

## 3. Specification of Equipment with Latest Communication Techniques:

- **Shortcoming:** Rapid technological advancements can quickly render equipment obsolete
- **Suggestion:** Implement a flexible procurement strategy that allows for regular updates and integration of new technologies.

## 4. Finalizing Hydraulic Model and GIS Maps for DMZs:

- **Shortcoming:** Models might not accurately reflect real-world scenarios or may become outdated (Nguyen and Liu, 2022).
- **Suggestion:** Regularly update models with real-time data and feedback from field operations.

## 5. Preparing GIS Maps for Stations:

- **Shortcoming:** GIS maps may not be updated frequently, leading to inaccuracies
- **Suggestion:** Implement a system for continuous updating of GIS maps based on real-time data.

## 6. Field Verification of GIS Maps:

- **Shortcoming:** Field verification can be time-consuming and resource-intensive **Suggestion:** Utilize automated tools and drones for initial verification to reduce the manual workload.

#### 7. Field Staff Using Internet-Connected Templates:

- **Shortcoming:** Internet connectivity issues can disrupt communication.
- **Suggestion:** Develop a backup communication plan, such as satellite communications, for areas with poor internet connectivity.

#### 8. Use of Satellite Images:

- **Shortcoming:** Satellite images may not be detailed enough for certain applications or may be outdated.
- **Suggestion:** Supplement satellite data with drone imagery for higher resolution and up-to-date information.

#### 9. Training Field Personnel on Mobile Application and Satellite Image Downloading:

- **Shortcoming:** Training might not be comprehensive or may not cater to varying skill levels.
- **Suggestion:** Offer tiered training programs and continuous learning opportunities to accommodate different skill levels and learning paces.

Overall, while these approaches are a step in the right direction for implementing DMZs in water companies, continuous evaluation and adaptation to technological advancements and changing security landscapes are crucial for their success. The author may enrich the discussion with the above points in mind.