





Maintenance data of all the wire mesh bin cages within four states is now integrated onto a single platform.

#### Geospatial technology increased E-Idaman's operational efficiency, while reducing its paper usage.

The northern region of Peninsular Malaysia, which includes Perlis, Kedah, and Perak, acts as a busy land transportation hub for logistics, as well as tourists travelling to various neighbouring destinations.

At the forefront of waste management in the region is Environment Idaman, the flagship subsidiary of E-Idaman Sdn. Bhd. (EISB). Employing 6,000 people, it covers the waste management concession for the states of Perlis and Kedah, which consists of 13 local authorities and more than 300,000 premises. Since its establishment in 2004, EISB has identified and addressed several challenges in providing efficient waste management.

One ongoing issue was the lack of coordination between different government agencies within the four states when it came to data sharing. Agencies often worked in silos, leading to prolonged decision-making processes and duplication of tasks.

### A messy cleanup

EISB identified two key areas where processes were affected by this: bin distribution and wire-mesh cage maintenance.

The former still relied on paper forms that could be lost or accidentally duplicated, while the condition of the latter had to be tracked and updated manually, which usually meant extensive manhours coupled with outdated and inaccurate data.

This was an exponentially growing problem - in Perlis and Kedah, over a million pieces of paper were used for the paper bin forms. Not only was this wasting tremendous amounts of paper, it was also taking up excessive time and resources.

## Eliminating the paper trail

To combat these issues, EISB launched the E-Bin Form and E-Cage Maintenance system in 2018. Built using ArcGIS Enterprise, these platforms consolidated and integrated all related data, converting hardcopy to digital.

The E-Cage Maintenance system has reduced the need for staff to check on each and every cage - instead, problematic ones can be identified and targeted for quicker maintenance, reducing lead times and costs, and freeing up manpower for other tasks.

Reducing environmental impact tremendously, as well as eliminating the loss of hardcopy data, the E-Bin Form has made the bin distribution process completely paperless. Through a singular data source and dashboard, what used to take several months can now be accomplished in mere minutes.

# And the award goes to...

These accomplishments did not go unnoticed, with EISB receiving the GeoInnovation Award in November 2019. This annual accolade is conferred to organisations for using geospatial solutions to address real-world challenges in industries and communities.

Dashboard E-Bin Form 374,061 2.954 2,022 234.738 139,320 216 134.127

The records, statuses, and number of bins in the region are displayed at a glance in one dashboard view.



The e-Idaman team receive their GeoInnovation Award from Esri Malaysia's CEO, CS Tan.

Applauding their efforts and presenting the award at the 2019 Senior Leaders Forum, Esri Malaysia CEO CS Tan said that "through the use of geospatial technology, EISB has seen a marked improvement in time management, cost savings and lesser human error in its operations."

"Through a singular data source and dashboard, what used to take several months can now be accomplished in mere minutes."

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