

# SUSTAINABLE SMART CITY DESIGN IN KSA BASED ON A NATIONWIDE SURVEY OF PEOPLES' AWARENESS FROM A WASTE MANAGEMENT PERSPECTIVE

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## Summary

Waste management has been a problem for all countries since the birth of humans. As the number of humans on the planet is increasing then we have more waste to handle. We don't only have to manage the waste only but we also need to dispose of it off carefully so we don't pollute the environment. Many countries are trying to go towards more and more eco-friendly and sustainable solutions. Because sustainability will help us to save this planet from all the adverse effects of climate change in the future. So this sustainable approach is also being used in the disposal of waste. In the paper, we have discussed that what are the major challenges for the countries in the past for waste management and specifically, we have focused on the fact that how countries used to manage waste then as compared to the present days. We have also kept in mind how we can use sustainability to improve the existing methods which are currently used or were used in the past. We have covered different countries in related works with examples and then focused more on the middle eastern areas and specially Saudi Arabia.

Saudi Arabia is one of the world's third largest exporters of oil and the whole world is dependent on them for the import of oil. So because of this, they have several different facilities where they extract crude oil from fossil fuels and during this process a large number of waste is produced. This waste is very dangerous for the environment and keeping in mind Saudi Arabia's Vision for 2030 they need to have a clean environment. A clean environment can be achieved by suitable procedures for waste management and disposal. In the paper first, we have discussed that what are the existing challenges of waste management in Saudi Arabia and then we have given our solution to the proposed Smart city which will use Artificial intelligence (AI) and the Internet of things to measure the number we are generating and the amount of emission we will get it or we will dispose of it. Also, we are emphasizing using less plastic and more paper bags so we can also save the sea as well. In the end, we concluded the paper with a discussion and surveys that which effective techniques of waste management we can implement and what positive effect they will have on the planet and a cleaner environment.