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Cleaner Drain

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Presenter Information

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PROBLEMS WITH THE CURRENT SYSTEMS

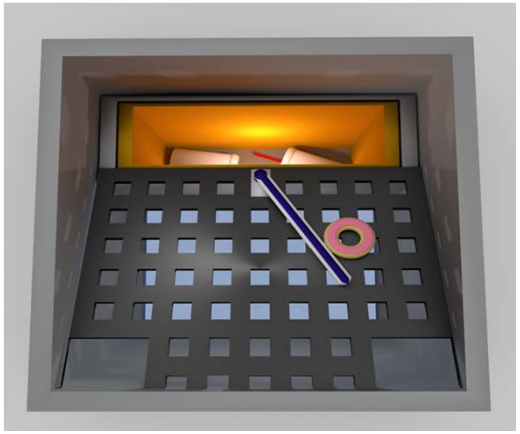
Water in streets causes several issues, both to our infrastructure and our emotions. The water can harm property by rotting wooden structures. If the water is high enough, it can even stall cars and flood into buildings.

Being forced to walk through or around a puddle can hurt someone's emotional state, which reduces productivity and this affect people around them.

It costs about 30 dollars to clean a drain, and there are about 15 thousand drains, which totals to to around$450,000 and if you add in other costs such as employees and street sweeping for a cleaning company it costs around 3.8 million a year.

Figure 1: DRAINS

Figure 2: VIRTUAL EXAMPLE



THE CLEANER DRAIN

The cleaner drain is made up of 3 parts. The opening is in the side of the curb. all other parts are under the side walk. There is a grate there, but the bars are spread wide to let everything in. The water then falls into the first chamber where it passes through a sloped filter. A mechanical arm sweeps the trash into a second chamber where it remains in a removable box. The water continues on to the drain system. The mechanical arm would function like a window-wiper, and would be powered off the main power grid. If their would be a huge flood then all of the flood would be trapped in the trash container or on the surface. Also there are no ugly iron grates, only steel on the curb.

RESULTS

The Cleaner Drain, would keep the streets safer, while saving money for companies. It would remove the stormwater tax from most people, and it would clean streams and keep waste from clogging drains. Cleaner streets would also improve productivity and people's emotions.

CONCLUSIONS

These results heavily outweigh the cost for electricity and for removing trash. They also improve on the old inlet systems. This new system will save millions of dollars, and thousands of hours spent cleaning. The best thing is that it improves the life of people affected, because emotions are priceless.

Figure 3: DESIGNS