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Case Study - *RoboMop*

Lucy, a young engineering student was at home one day when her mother came home from work and began to clean the floor. She complained that she was tired and did not have the time to do all the housework! Watching her mother, Lucy thought that it would be a good idea if there was a machine that could do some housework at night while everyone was asleep.

For a month Lucy thought hard about her idea and came up with a product she nicknamed *RoboMop*. As the name suggests, it is a machine that will automatically mop and polish the floor. Lucy envisaged a small device about the size of a remote controlled car that could be filled with a common household detergent diluted with water and that could be programmed to run at night.

You are required to investigate the viability of the *RoboMop* product. Your study should identify the appropriate steps Lucy will be required to undertake if the *RoboMop* product is to be a success. Your study should include investigating the following areas:

- Intellectual property
- Research and development
- Social and environmental impact
- Financial support
- Suitability of materials for manufacture
- Potential impact on the home, workplace and built environment

You can assume that *RoboMop* will be operating in normal working temperatures between the limits 7C° to 30C°.

RoboMop will be self-contained and is intended to be powered by sustainable energy. Consideration needs to be given to the corrosive properties of detergent and water used and the impact this may have on materials.

The product is intended to be environmentally friendly, low cost, strong and robust.

To ensure maximum marketability of the product consideration needs to be given to commercial and industrial applications of this product.

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