Project

Design a new Toilet Bowl, equipped with a flapper to open/close the way for solid and liquid waste (replace current water trap)

Introduction:
Most WC bowls used in western countries are fitted with a water trap that prevents the odour from sewers travel back into the room.

This system is very much related with the water consumption of the toilet. Latests developments have proved that water flush cannot be reduced further (current market standards differ between 6/3 liters and 4.5/3 liters) using this system (that has not progressed since the very first invention of the toilet)

Project Brief:
Replace the water trap in the toilet with a mechanical trap system (flapper) that:
- Meets the same functions that the current water trap
- Provides an equally robust back odour prevention by keeping an equivalent water seal
- Allows a significant flush water reduction

The solution will be simple enough to be industrialised. It will be based on mechanics and hydraulics and it will not rely on electricity or external sources of power.

The team must find creative ways for solving this brief, analyse each of them and choose the most adequate. The solution will be conceptualised and engineered. Materials and other features must be clearly justified. The deliverables will include 3D and 2D of the components involved

Company
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Project team:
Number of students: 4 maximum
Students speciality:
- Business Management
- Mechanical engineering
- Electrical engineering
- Electronics engineering
- Chemical engineering
- Computer engineering.
- Telecommunications engineering.
- Design.
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