Disassembly and Study of a Single-Use Camera

a. List of Functional Components
i. Lens
ii. Shutter Mechanism
iii. Film
iv. Viewfinder
v. Film transport and counter mechanism
vi. Electronic Flash
vii. Energy cell
viii. Housing and frame

b. How parts and components function together
A person first looks through the viewfinder to simulate their image. They then choose whether or not to engage the flash on the camera by holding down the electronic flash trigger. They then press the button to snap the picture. This button sets off the shutter mechanism which opens and allows light to go through the lens, then closes back up. The image is then translated onto the film strip and the film transport and counter mechanism spins the film so that the next picture taken is on an empty strip.

c. Materials used for parts
In order to improve the recycling process, single plastic is used for all parts except for the photographic lens and the flash panel. The parts are put together in such a way that they can be easily assembled, and disassembled for recycled usage.

d. Which parts are reused?
The flash unit and the lens can be reused, if they pass a quality test. If not, they will be recycled along with the other plastic in the camera to make new ones. Overall 85% of flash units and lenses can be reused. Batteries are either reused or donated.

e. Suggested Redesign
We would as a whole like to make the camera smaller, and thinner. To do this, the circuit board and flash unit could be redesigned to be powered by a smaller AAA battery instead of a AA. Building off of that, the camera could use a lot less plastic than it already does. This camera is large and bulky, and can certainly be slimmed down, making it easier to transport for consumers.
f. Parts grouped by subsystems/functions

- Housing and Frame
- Film
- Battery
- Shutter
- Circuit board, Flash
- Lens, Viewfinder
- Gears, Springs, and other components