Matsue College of Technology

R^3

Good morning everyone – Before I introduce the topic - allow me to introduce our team.
The topic of our presentation is R cubed.
Why R cubed? The story goes back a few years. When I was a second year student, I made a speech. The title was “Reduce, Reuse, Recycle.” I was proud of my speech. But if I was to make that speech again, my emphasis would be a bit different. Just like “Reduce, Reuse, Recycle.”

I think we’re consuming too much in daily life. Now we’re going to focus on each of the “R”s.

First, what about reuse? Reuse is good. We should use things again and again. But there’re some things like fossil fuels. We can’t reuse. So reuse is not the total solution.

Next, what about recycling? Is it viable? Is it practical? Is it economic? There’re many costs to recycle and some possible side effects.

We can recycle aluminum, other metals, paper, and plastics. But plastic isn’t recycled so well. Even when we recycle plastics, the end product can still end up in the garbage. So we must focus on how to solve the plastic problem.

But what is the solution? Well, there’s still one R… Reduce. To handle the plastic problem, reduction is the key and it is possible. We can make a big difference.

Don’t laugh – you would be amazed how significant they are. Recycling rates for plastic bags are extremely low. Only 1 to 3% of plastic bags end up getting recycled.

Also the economics of recycling plastic bags are not appealing.. If the economics don‘t work, recycling efforts don’t work. For example, it costs $4,000 to process and recycle 1 ton of plastic bags in California, which can then be sold on the commodities market for only $32. So, we must try. Now I’ll hand over to Mr. Hamada. He will explain what a big issue this simple item is.

You know, you wouldn't believe how many supermarket bags there are in the world.

Here are some examples. So how many supermarket bags do you use in a year? The estimates for the world as a whole are about one trillion a year.

If we calculate the total weight it is about 600 million kilograms – that's equivalent to about fifteen hundred Tokyo Towers.

We measured a normal supermarket bag. It was about 50 cm long. For fun I decided to calculate how far a year's supply of bags would stretch if I tied them end to end.. Here you are – around the world at the equator 1,250 times and from Tokyo to Matsue 400 000 times.

This is not very relevant but it does show how many supermarket bags are used every year. Every year – now that's a point. What has happened to last year's supermarket bags? Well if they went to the landfill we could go and find them. It takes about 500 years for a plastic bag to totally degrade. At least the bags in the landfill mostly stay there.– National Geographic estimates that about 3% of all bags escape the system – they are neither recycled nor are they in landfills. A problem with plastic bags is that they can fly.

Where do they fly to? Almost anywhere. But some end up along rivers, or into the countryside where they live in trees. They get caught up in drains. Did you know that plastic bags blocked the floodwater channels and caused the terrible floods in 1998? 1000 people died – all from the simple plastic bag.

They end up in the oceans and cause terrible damage to marine life. Hundreds of thousands marine animals and birds die every year because the oceans are a plastic garbage dump .That's all from me. But now for a solution.

My contribution to our presentation today is the eco shopping bag.
I designed this bag for Technical English last semester – I am very pleased to have this opportunity to show it to you.

We live in a consumer society. – We use too many resources. Many supermarkets encourage the use of shopping bags to reduce the number of plastic bags. These bags are not ideal – they are too small and don't meet shoppers' needs. So I decided to design an eco shopping bag. I thought it should be a bag that people would always want to take to the supermarket.

My design criteria were that it should be – easy to use; strong; compactable.
The size should be big enough for a 2 liter plastic bottle. The size can be changed.
It should fit into a normal supermarket basket. At the checkout – the operator can fit the bag inside a basket and fill the bag with items as they are scanned.

I designed the bag with special internal features. There is the side for normal items and a side for items that should be kept cool. Also I added a special pocket for eggs. I thought compacting the bag was important. It folds up to 10cm by 15cm – that's a convenient size.

The negative aspects are that the bag could be more expensive and heavier than other bags. Checkout operators need to cooperate and people need to get used to taking their own bag to the supermarket.

On the plus side – it's a much better bag and groceries will arrive home in better condition. Fewer plastic bags used – means less impact on the environment.
And - a big bonus – you will never have to pack your own groceries again!

10 minutes is not enough time for such an important topic. But to summarize.
We would ask you to recognize that reuse is good but opportunities are limited in daily life. Recycling is good but it uses resources. For example, if you use a supermarket bag for garbage, it will go to a landfill. When a plastic bucket is broken, it goes to a landfill.

The result of reuse and recycling is ultimately disposal. We just delay it. Reuse and recycle are just subsets of reduce. Well… the longest journey starts with a single step.
Please take that first step with us. Say "no" to bags at the supermarket. Thank you.