

Speech of Mr. Akihiko Sakai, Executive Officer, Corporate Strategy Office, Seiko Epson Corporation

Good afternoon ladies and gentlemen.

My name is Akihiko Sakai, the Executive Officer of the Corporate Strategy Office at Epson Headquarters. Thank you for taking time out of your busy schedules to join us here today.

As the home of the European Union, a global leader in setting environmental policy, Brussels is a logical choice to announce Epson's new environmental vision.

We are facing an environmental crisis that has the potential to seriously alter the earth and our way of life. If CO₂ emissions continue on their current trend the effect on the climate will be catastrophic.

The environmental and socio-economic impacts which Dr. Salerno warned us of will soon become a reality. What should a corporation do in this situation?

Before I move on to that issue I would first like to tell you about what Epson has already been doing with regard to the environment.

Epson's Corporate Headquarters are surrounded by the natural wonders of Nagano, approximately 200 km west of Tokyo. Our company grew up here, on the shores of Lake Suwa.

Here you can see our latest R&D facility, source of many innovations found in our latest products.

It has also been acclaimed for its sustainable architectural design.

Nice pictures.

I am sure you would agree, but the real point I would like to make is that nature has never been very far from our door, and protecting and preserving the environment has never been very far from our minds.

From our earliest beginnings, we have always carried out our business with an eye on environmental protection and sustainability, long before it became a CSR requirement to do so.

Here you can see some of our environmental initiatives:

You may remember when CFCs were found to be damaging the earth's atmosphere.

Initially, various environmental experts and groups were discussing to what level we should cut CFC use.

I'm happy to say that discussion soon ended when Epson announced it would simply eliminate all of them, 100%.

Sure there were doubters, and we even doubted ourselves sometimes as we struggled with the technology to remove them, but no one was doubting us just five years later when we achieved this goal on a global basis.

More recently, we have limited other harmful materials from our products, beyond the RoHS directives for the EU market. In addition, we also enlisted the cooperation of the World Wildlife Fund to establish a more sustainable paper procurement policy.

Another major aspect of Epson's environmental initiatives is our reforestation and forest protection programs. For over ten years these have been carried out in many locations, such as Indonesia, the Philippines and Germany. At Epson, we believe that we have an important corporate responsibility to protect forests and other valuable ecosystems that help preserve biodiversity.

Technological improvements and advances will be the key when it comes to mitigating environmental impact.

You may not know it, but Epson produced the world's first quartz wrist watch. This was an amazing achievement, as previous quartz timing equipment had required an entire room to hold all the necessary parts and power supply unit. By today's standards, you might think it is not so sophisticated. But in terms of the amount of materials used and power consumption, and thus the overall environmental impact, it was a quantum leap forward.

Epson's strong heritage of reducing environmental impact through technological innovation continues to this day. The truth is that our mainstay printer and projector products do require electricity. However, technological advances have allowed us to make great strides in reducing energy consumption. As you can see, for our projectors, energy usage has been reduced by nearly 90% over the past ten years.

This graph shows similar power-savings for our inkjet printers over the last four years. Total energy consumption has been reduced by a remarkable 73%.

Speaking of printers, the unique Micro Piezo technology found in every Epson inkjet printer not only reduces their environmental impact, it also has great potential to seriously reduce the environmental impact of many other industrial production processes.

Micro Piezo inkjet technology places the exact amount of material; precisely at the exact location and time it is needed.

It also does this without requiring any heat, and is therefore extremely versatile and can be applied to a wide-variety of materials and processes. Micro Piezo inkjet technology has numerous environmental benefits, including less waste, energy savings, less chemical usage, shortened and simplified manufacturing processes, and smaller production machinery.

Epson inkjet printers produce outstanding print quality and this has resulted in a dramatic shift to digital printing and a corresponding reduction in the damaging chemicals used in conventional film processing. Our large format printers are ideal for print on demand scenarios, which allow local printing of large documents and eliminate the need for huge printing presses and transportation.

Micro Piezo inkjet technology can also be applied to industrial manufacturing processes to achieve amazing reductions in the energy and materials used.

Here you can see an example of just how environmentally friendly this technology is. This small LCD panel is installed in each Epson projector.

Epson has succeeded in using Micro Piezo inkjet technology to deposit a thin layer of organic material known as the alignment layer to the LCD panel.

This in-house application has minimized the environmental impact by achieving materials, energy and emission reductions of about 75%.

Another current application of Micro Piezo inkjet technology can be seen in this video.

It shows how color filters for large LCDs are now being manufactured by one large maker in Japan. This has resulted in significant space, energy, waste, and material savings.

Thanks to this technology, the large- screen TV that you enjoy today may have been made with much less environmental impact. In the future, we hope to further expand the applications of Micro Piezo inkjet technology.

Here you can see an example of how the environmental impact of circuit board production may be revolutionized by such technology.

Desktop factories armed with Micro Piezo inkjet technology have the potential to form the patterns on custom made circuit boards or other precise patterning applications.

With a very small physical footprint and a huge reduction in the materials and energy required, the environmental advantages represent a monumental shift from conventional manufacturing methods.

If Micro Piezo inkjet technology enables us to realize this type of factory it may be the technology source for a TV wall installed in you home. Up to now, I've talked about Epson's strong belief in environmental protection and sustainability and how our technology and products are developed with this theme in mind.

As a company this all might sound like an impressive record, however, the drastic situation which we are now facing calls for drastic measures. In spite of how ingenious or resilient we have been, we believe that an extension of the efforts we have made to date will simply not be enough to solve this problem.

11 billion tons

Some of you may know what this number represents, but for those of you who don't, it is the total amount of CO2 the earth can absorb. It sounds like a lot, but I think many of you already know that we have far exceeded this limit and the environmental effects are already starting to appear.

In addition to CO2, resource depletion is the second major issue we face today.

Here you can see how the price of many of the key metals used today have jumped over the last five years due to increased demand.

This slide is a little detailed so it may seem a little difficult.

The main point is that science does clearly show that by 2050, deposits of such key materials as copper, zinc, silver and gold will be depleted.

The next two slides provide a summary of the situation we are now facing. If nothing changes and current CO2 emissions continue, temperatures will rise two degrees by 2050, and four degrees by 2100.

Under either scenario, biodiversity will be severely affected and up to one quarter of all species could disappear. Food and water crises may also appear.

To stop this from happening, overall emissions need to be halved.

This means that developed countries will need to limit their CO2 emissions by 70% or more.

The depletion of energy and mineral resources is continuing at an alarming rate.

Metal and energy prices are rising dramatically as current consumption rates quickly deplete the available supply. There is no choice but to limit the amount of material used in our products, and reuse and recycle waste products.

Global warming and resource depletion are the two most pressing issues we face today and as such, Epson has decided to focus its environmental efforts around these two major problems.

The next question to answer is; how do we move from scientific facts to establishing corporate direction.

This graph shows our history of environmental strategy development.

As you can see, 2008 marks the start of our third, ten-year plan. If we continue our environmental strategy as business as usual, we would follow the dotted line. However, the magnitude of current environmental problems forces us to improve our environmental performance.

Instead of forecasting strategy based on past achievements, we need to develop strategy based on back casting from where we want to be in 2050.

Based on our understanding of the earth's current situation, we have established this vision to help chart the course of the company's environmental activities through to the year 2050.

Let me read it for you.

Recognizing that the Earth's carrying capacity is limited and believing that everyone must share responsibility for reducing environmental impacts equally, Epson is aiming to reduce CO2 emissions by 90% across the lifecycle of all products and services by the year 2050.

At the same time, as a member of the ecosystem Epson will continue to work towards restoring and protecting biodiversity together with local communities.

In order to work towards achieving our vision, Epson has set four key conditions:

- * Reducing CO2 emissions by up to 90% throughout the product lifecycle
- * Intensifying reuse and recycling efforts
- * Reducing direct CO2 emissions by 90% and eliminating emissions of global warming gasses other than CO2
- * Cooperating with local communities to preserve biodiversity

You may be wondering where a 90% reduction came from?

As you can see here, a few calculations based on emission limits and population ratios, reveal that such drastic cuts are indeed necessary.

This calculation is based on data for Japan, as it is a good representative for the situation facing all industrialized nations.

Challenging goals require a whole new approach to solving problems and Epson is committed to doing whatever needs to be done.

Some changes span the entire company, such as reforming the management decision-making process to include an environmental advisory board.

Epson realizes that in-house resources will be insufficient to solve the severe problems we face. This board will allow outside experts and scientists to input their knowledge, experience and objective opinions to find the necessary solutions.

We will also greatly expand cooperation with all of our worldwide suppliers, contractors, and customers with regard to product life cycle.

From the day product ideas are born, until the day that product reaches the end of its useful life, across its entire life cycle, we will be searching together for ways to reduce the environmental burden.

We are very aware that we need to start focusing on our actions on the next ten years. We face some very serious challenges that require approaches and solutions that are entirely new. It will require some drastic changes within the organization, strong employee and management commitment, and the input of experts across a wide variety of fields.

Today, I would also like to issue an invitation; an invitation for all industry to join us in finding concrete ways to tackle the problems of global climate change and resource depletion.

We are all aware that this is not a problem facing only certain parts of society. It is a fact for all of us, and we ask for increased cooperation and the sharing of resources and knowledge to find real solutions to these very real problems.

Other changes are also necessary and more details of our actions over the next ten years will follow in the next presentation.

I would like to close by saying that we are taking brave new steps, not simply extending any existing environmental plans.

In addition, I'd like to point out that it is not a matter of whether we can or cannot achieve these goals. We all know that failure would have grave consequences and is simply not an option. Success will require cooperation; cooperation among companies, even competitors. We must cooperate across industries, and across continents. The private sector alone will not be able to succeed; dialogue and cooperation among various public and governmental sectors will also be required.

This is not something Epson can do alone. But we believe that our long history of taking on extremely challenging goals, our continuous technological developments and our cooperation with all of our stakeholders worldwide, we will make steady progress and achieve the goals I have laid out before you here today.

We will exceed your vision! Thank you.