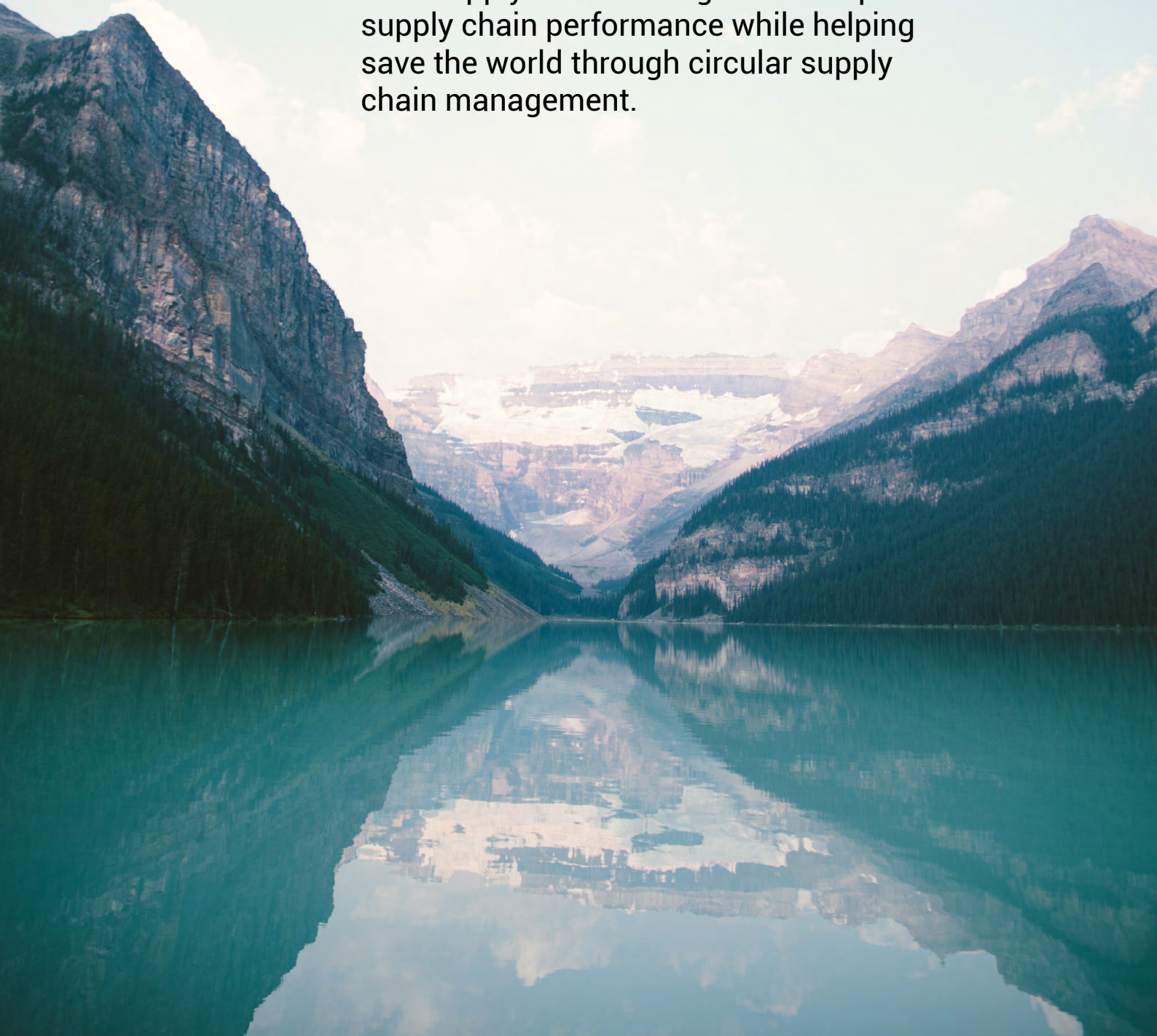




SAVE OUR SUPPLY CHAINS. AND THE WORLD.

How supply chain managers can improve supply chain performance while helping save the world through circular supply chain management.





THE PLANET NEEDS OUR HELP

We've heard the horror stories and seen the eerie video footage of vast floating dumps of marine debris. Plastic debris is now the most serious problem affecting the marine environment, and the scale is vast. Of more than 300 million tons of plastics produced each year, 8 million tons are dumped into the world's oceans as waste. And there's more.

5.25
trillion

5.25 trillion pieces of plastic debris are floating in the ocean or embedded in the ocean floor

269k
tons

Plastics floating on the surface of the world's oceans alone weigh a staggering 269,000 tons

4
billion

There are 4 billion plastic microfibers per square kilometer in the deep seas

We live in a world of finite resources. We breathe its air, drink its water, and grow our food in the world's soils and waterways. In the face of one of our world's most serious environmental challenges, we are urged to take action.

But these discarded products – most of which are a form of consumer and commercial goods packaging – didn't appear overnight. In this white paper we will briefly elaborate on this global issue and suggest some relatively quick and simple actions that supply chain managers can take to help alleviate this problem. ACSIS believes supply chain managers, too, can help save the world.

OUR TOP 5 ENVIRONMENTAL CHALLENGES

1. **Deforestation**
2. **Air Pollution**
3. **Global Warming**
4. **Water Pollution**
5. **Natural Resource Depletion**

It is not just the world's oceans that need our help. Unity College – a private college in Unity, Maine, that is dedicated to education based on sustainability science, emphasizing the study of the environment and natural resources – recently published its list of the 5 Biggest Environmental Issues of Our Time.

You can read the entire blog, including suggested ways in which all of us can help, **at this link**. Unity College is a small, independent, not-for-profit educational institution that offers a wide array of environmentally focused online degrees.

More here.

RE-ENVISIONING OUR SUPPLY CHAINS

For decades, the design and operation of linear economies and their attendant linear supply chains have ensured that materials in the supply chain, once they have fulfilled their purpose or otherwise reached the end of their useful lives, are discarded. There is no focus on returnable assets, and nowhere for discarded materials to go but to the world's refuse dumps.

It has caught up with us.

Fortunately, social, and governmental imperatives to recycle have arisen

(however imperfectly they may be implemented and managed in various parts of the world).

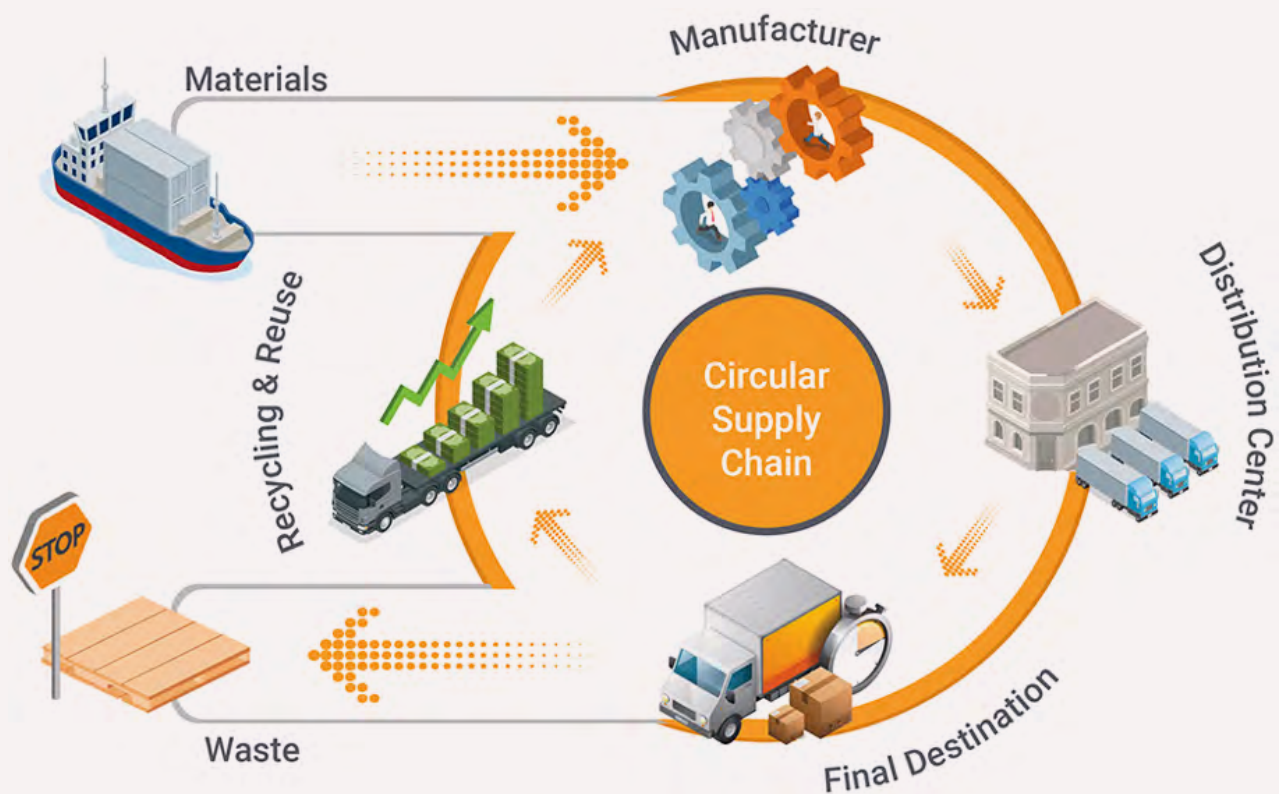
Today, serious actions are being taken by governments, consumers, industry groups, not-for-profit organizations, manufacturers, packagers, transportation companies, and distributors to transform supply chains from linear to circular. The collective impact as the world's supply chains become circular is potentially enormous.

CIRCULAR SUPPLY CHAIN PRINCIPLES

The principles of a circular economy are widely understood and simple. Here they are as ACSIS sees them:

- 1** Use materials as efficiently as possible through better designs and improved materials planning
- 2** Materials and packaging should be designed to be returnable and reusable, so they can remain in a value chain for much longer
- 3** Improve technologies and processes for recycling products as they finally end their productive lives

Of the three, #1 and #3 both rely heavily on an accurate, comprehensive, and real-time understanding of supply chain materials, goods, and packaging. In other words, on 100% supply chain visibility. Here's why.



KNOW WHAT YOU HAVE AND WHERE

It happens every day. Items of every description become lost, damaged, discarded, and even stolen on their journeys through the supply chain. Those items can include raw materials, assembly components, and returnable transport items (totes, trays, pallets, and other transportable racks that move materials from point to point).

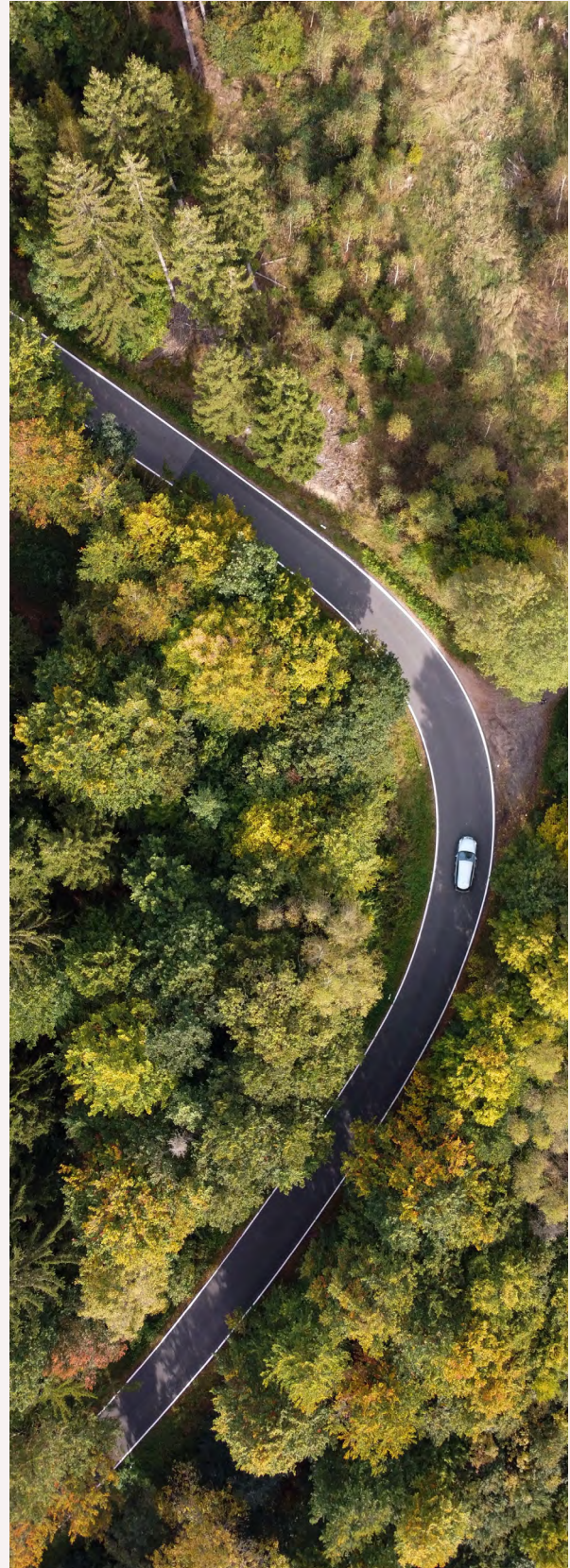
To make a meaningful first step towards a truly circular supply chain, ACSIS recommends a simple solution:

Serialize, track and trace returnable assets throughout the supply chain.

Together with its customers, ACSIS has provided solutions for tracking and tracing returnable assets ranging from auto part totes and racks, bakery trays, gas canisters, food packaging, returnable pallets... the list of potential items is nearly endless.

In every case, supply chain managers can achieve awareness of 100% of their returnable assets, knowing where they are and predicting where they will be and when. With this knowledge – gathered from a myriad of sources including edge devices, networks, cloud environments, and applications – supply chain managers can quickly spot problems and work out solutions before they occur.

Advanced analytics can also be performed to uncover trends and bottlenecks as returnable asset data is gathered in one place.





SAVING TIME AND MONEY AND THE WORLD

ACSIS customers who have implemented supply chain visibility solutions have achieved these results.



The accuracy of returnable supply chain asset inventory increased from **15% to 30%**.



20% to 30% reductions in the cost of replacing returnable assets



They have also realized reduced annual operating expenses; increased productivity through higher and more accurate availability of returnable assets; and reduced expediting costs due to late or missed shipments caused by assets that simply were not returned in time.

These results represent a step forward towards a circular supply chain – and they stem solely from implementing a proven visibility solution on returnable supply chain assets. And this can be your quick and easy first step towards a circular supply chain.



JOINING THE GLOBAL COMMUNITY

Establishing a true circular economy is ultimately a community action, as successful measures rely on consumer cooperation, in addition to the cooperation of manufacturers, suppliers, packagers, transporters, and distributors. In fact, much like the staggering numbers of discarded plastics in the oceans of the world, the scope and scale of actions needed to circularize the world's supply chains is of heroic dimensions.

It won't happen overnight.

There are basic steps that must be taken now to prepare manufacturers and the world's supply chain managers for the good work of better sustaining our world. And ACSIS believes a key step is supply chain visibility.

Additional resources:

"Sustainability in Supply Chains," McKinsey & Company

"A More Sustainable Supply Chain," Harvard Business Review

"Circular Production to Transform Supply Chains," Accenture

OTHER WAYS TO HELP

Consider a donation to an environmental organization such as the Blue Ocean Society, a 501(c)(3) not-for-profit that is dedicated to better environmental stewardship through beach cleanups, adopt-a-beach programs, fishing line recycling, preservation of marine life, and providing educational programs for schools and the public. **Learn more.**

WHY ACSIS?

For over 20 years, ACSIS has been successfully delivering innovation supply chain execution solutions with actionable results to valued customers such as The Coca-Cola Company, DuPont, The Hershey Company, AmerisourceBergen, Cintas, Ashland and more. ACSIS Traceability Solutions for the Extended Supply Chain provide a real-time view of supply chain execution – connecting legacy systems, partner networks, and assets on the edge for better insight and smarter forecasting.

To learn more about supply chain visibility and how it can benefit your organization, visit acsisinc.com or contact us at info@acsisinc.com and an ACSIS Supply Chain Visibility Specialist can help you with your questions.

