Background

Commercial freight transportation is at the beginning of a transition. Clean fuels and related technologies are increasingly critical to business success for fleets, logistics service providers, and even cargo owners. But which clean technologies can be delivered by suppliers today and how will they be scaled over the next few years?

On April 30, 2018, BSR's Future of Fuels convened 50 people, including fleet owners, logistics buyers, OEMs, and fuel providers for an action-oriented clean road freight buyer-supplier roundtable with three key objectives:

1. Assess the current situation and challenges to scaling low emission fuels and vehicles
2. Identify solutions to help lower the barriers to adoption and scaling
3. Identify opportunities for collaboration between buyers and suppliers

This brief presents BSR's synthesis of the implications and innovative ideas gleaned from the conversation, with the goal to inform and provide direction for future buyer-supplier engagement. BSR will use many of these insights to drive our Future of Fuels agenda and we invite other stakeholders to do the same.

What We Heard

The following insights capture important ideas on challenges, solutions, and collaboration heard at this meeting.

» Challenge. Current regulatory landscape makes it difficult to commit nationally: Lack of clarity around national policy and a patchwork of state policies make it difficult for companies to confidently invest in new technologies for national distribution. California’s leadership supports companies committed to ambitious emissions goals and technology suppliers offering solutions, but the significant incentives available in California can make it difficult to invest in and access clean fuels and trucking technologies outside of the state.

» Challenge. Investment requirements to test and scale emerging technologies: Though all businesses recognize the need for significant infrastructure and R&D investment to scale alternative technologies, most want someone else to pay for it. Even companies that are willing to proactively invest face significant barriers such as access to capital or internal hurdle rates. Moreover, the proliferation of different fuel and trucking technologies for different applications, vehicle classes, and geographies give pause to fleets new to the market who struggle to identify the right technology to invest in to meet their specific needs.

» Solution. Technology standardization within fuel categories: Technological evolution outpaces the development of supporting systems. Standardization will be increasingly important as fleets and fuel suppliers start to make bigger investments in the infrastructure required to fuel alternative fuel vehicles. For example,
there is demand from fleet owners for EV charging standardization (e.g. plugs and docking formats). Solving this would unlock investment from fleets who could make big purchases without being married to a single manufacturer.

» **Solution. New procurement and financing mechanisms to spur investment**: Traditional procurement policies and typical ROI calculations can unintentionally discourage investment in new technology. Modified approaches would stimulate progress. For example, agreeing to a longer-term contract can give suppliers the revenue certainty they need to secure financing for and justify investments in infrastructure and new alternative fuel vehicles. Furthermore, ROI analysis that considers lifetime cost of ownership and per-ton-mile-costs could more accurately demonstrate competitiveness of new technologies.

» **Solution. New approaches and markets for used vehicles**: Uncertainty over which technology will win in a given application and whether first generation technology will be successful at scale raises concerns over residual value of aging equipment. Some fleets have solved this challenge by refurbishing, retrofitting, and keeping trucks for longer than the typical vehicle turnover cycle. Other solutions, such as a dedicated marketplace, are needed for fleets whose business models require more frequent turnover and must capture an end-of-use resale value.

» **Collaboration. Innovation, investment, and partnership from the full value chain**: Full value chain participation in collaboration will help to signal demand to investors and suppliers, to facilitate development of innovative procurement mechanisms, and to encourage supportive policies. The pace of innovation and new entrants, especially fuel providers and OEMs, into cleaner technologies is exciting. But despite an overall increase in R&D, there was consensus that more leadership from incumbent technology providers is needed to develop and deploy alternative solutions at scale. More effective partnership and full value chain collaboration will be essential to accelerate momentum.

**What You Can Do**
As part of this meeting, participants identified actions that each segment of the value chain can take today to help accelerate adoption of clean technology. Three big ideas from each group are captured below:

**SHIPPERS**
- Make a public commitment to addressing transportation emissions
- Identify and address internal barriers to establishing procurement requirements
- Consider longer-term contracts and strategic partnerships with suppliers

**FLEETS**
- Publicly demonstrate demand for alternative fuels and vehicles
- Share results from pilot testing to help others better understand options
- Advocate for supportive public policy, incentives, and infrastructure

**OEMS**
- Help customers to choose the right alternative for their specific needs
- Collaborate with the value chain in efforts to develop industry standards
- Work with your investor relations team to articulate value of R&D to investors

**FUEL PROVIDERS**
- Educate customers on how to evaluate costs and benefits of technology choices
- Help to convene industry partners in an infrastructure standardization effort
- Participate in policy development process by sharing technical knowledge