Smart Freight Centre
Annual Report 2018
Leading the way to efficient and zero-emissions freight and logistics
It’s urgent. We only have a few years left to keep global temperatures within Paris targets and we can’t do this without the freight sector. That is why I started Smart Freight Centre in 2013.

Smart Freight Centre has since its foundation inspired companies to report, reduce and collaborate. One of the enablers we developed is the GLEC Framework that is rapidly becoming the norm for companies to calculate and report emissions in one way. We are excited to launch the new version in July this year!

I thank all companies and partners who support this journey to zero emissions freight, and urge others to connect to our global network. With strong collaboration we can realize our joint mission.

I invite you to read our Annual Report on 2018 and take note of our achievements and plans for the future.

Sophie Punte
Executive Director

Achievements in numbers 2018

9 multinationals were recognized for Smart Freight Leadership
26 multinationals adopted the GLEC Framework to calculate and report their global logistics emissions
80 Smart Truck Managers were trained across 40 road freight carriers in China
Contributed to 75,000 tonnes of CO2e reductions by GLEC Framework adopters based on their publicly reported emissions
Freight and logistics: the orphan of sustainability

Freight transportation and logistics delivers goods to millions of customers around the world, and demand for freight transportation is expected to triple by 2050 according to the International Transport Forum. The sector accounts for 8-10% of global greenhouse gas emissions today and growing. Freight transportation is also a major contributor to air pollution, noise and congestion. We cannot meet our climate and sustainability goals without efforts in this sector.

Yet, it is not high enough on the sustainability agenda of government and business. Key reasons are that the sector is fragmented, freight transportation is largely an outsourced service, and harmonized approaches and policies are lacking.

The good news is that solutions already exist for many stakeholders, sectors and countries. These solutions combined can reduce emissions by >80% by 2050.

Multinationals hold the key to change

Only through the collaboration of businesses, governments, research and civil society can a sector transformation be realized. However, in this highly commercial sector, the trigger lies predominantly with businesses, especially multinationals with global brands and value chains. As buyers (shippers) or suppliers (carriers) of freight transport and logistics services, they have the power to take action and consider climate and sustainability in their business decisions.

By acting as leaders, they both inspire others and set the norm for industry while society also benefits from the improvement in climate and health. This is called Smart Freight Leadership© which was developed by Smart Freight Centre with our SFC Advisory Council of leading experts. Companies can act in three ways: report and set targets; implement solutions as buyers and/or suppliers that reduce emissions; and collaborate and advocate for sector-wide uptake.

Smart Freight Leadership

1. **Report**
   - Credible emissions and set science-based reduction targets

2. **Reduce**
   - Emissions by implementing solutions as buyer and/or supplier

3. **Collaborate**
   - and advocate for sector-wide uptake and supportive policy

Companies that take action can benefit as they
- Contribute to the Paris Climate Agreement and Sustainable Development Goals
- Improve operational efficiency and reduce associated costs
- Improve customer service and value
- Reduce exposure to climate and air quality-related risks and regulations

Smart Freight Centre. Solutions based on Alan McKinnon ‘Decarbonizing Logistics’ 2018
The role of Smart Freight Centre

Our vision, mission and goal

Smart Freight Centre (SFC) was established in 2013 as a global non-profit organization. Our vision is ‘Smart Freight’: an efficient and zero-emissions global logistics sector.

Our mission is to bring together and work with the global logistics community towards this vision – contributing to Paris Climate Agreement targets and Sustainable Development Goals.

We believe that increased transparency and collaboration will mobilize companies to reduce the climate and pollution impact arising from global freight. Our goal is that 100+ multinationals reduce at least 30% of logistics emissions by 2030 compared to 2015 across their global logistics supply chains and decarbonize (reach zero emissions) by 2050.

How we work

At the foundation of our work lies our theory of change and ‘Smart Freight Leadership’. Our role is to provide multinationals and their logistics partners with clear global standardized guidelines for emission reporting and reduction, advocate for their adoption together with partners, and recognize leaders.

We put this into practice through three programs:

- Global Logistics Emissions Council (GLEC): global industry guidelines for calculation, reporting and reduction
- Smart Truck Fleet Management: enabling implementation of road freight transport solutions
- Smart Freight Alliances in China and other growth markets: translating global corporate commitments to local action

In addition, we recognize companies who report, reduce and collaborate for Smart Freight Leadership.
Power to drive change

Industry uptake at scale

Who we work with

Our people

Driven, professional and collaborative – the people behind SFC are all propelled by a belief in what we do. Our team, Board, SFC Advisory Council and China Expert Council share a sense of urgency that the global freight transport and logistics sector must make a bigger contribution to the climate and sustainability movement.

SFC’s dedicated purpose is to reduce emissions resulting from freight transportation. The SFC team is comprised of technical and sector experts, skilled moderators and networkers. This enables us to bring the right parties to the table and collaborate deeply across sectors.

The Board of Directors oversees and supports the management and strategic direction of the organization. On 31 December 2018, the Board consisted of seven members: Mirko Buining (Chair), Adrian Weiler, Jiangyan Wang, José Viegas, Sam Parker, Simon Ng and Sophie Punte (Executive Director).

Our funders and partners

To scale our impact we partner with organizations and initiatives worldwide. We have formal partnerships with BSR, CDP, World Business Council for Sustainable Development, and take part in various councils, including the WEF Global Future Council on Mobility, the UN-led Global Green Freight Action Plan, and the ALICE European technology platform for logistics.

SFC is a non-profit organization for the benefit of society as a whole. Charitable funds therefore continue to be essential for us to develop global standardized guidelines and advocacy work where the sector and society as a whole benefits. Our current funders are Shell Foundation, Hewlett Foundation, Trafigura Foundation, UPS Foundation, Oak Foundation, China Energy Foundation, WeMeanBusiness and the European Commission.

Companies and organizations co-fund projects and pay for support services that benefit them directly, such as advice, assessments, training and events. These are provided by SFC or our accredited and licensed partners.

Bringing the global logistics community together

It is the limited pace and scale of change that is the biggest threat to achieving Paris Climate Agreement goals, and the logistics sector is no exception. Companies must collaborate and advocate for sector-wide uptake and there are various ways to do this: through Green Freight Programs, broader climate and sustainability initiatives, sectoral standards, and supportive public policy.

As part of our value proposition we support multinationals to collaborate and advocate together with their peers and partners to shape a future of sustainable freight and logistics.

<table>
<thead>
<tr>
<th>Power to drive change</th>
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<tbody>
<tr>
<td>Shippers (“Buyers”)</td>
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<tr>
<td>Logistics Service Providers</td>
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<td>Carriers (“Suppliers”)</td>
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<tr>
<td>Research</td>
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<td>Expertise and technology</td>
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<td>Smart Freight Centre</td>
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<td>Governments</td>
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<tr>
<td>Private sector</td>
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<td>Industry associations</td>
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<tr>
<td>Programs &amp; Initiatives</td>
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<tr>
<td>International institutions</td>
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<tr>
<td>Investors</td>
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<tr>
<td>Industry uptake at scale</td>
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Recognizing Leaders

To celebrate the efforts of leading multinationals, we recognized nine multinationals, including shippers, logistics service providers and carriers, who are demonstrating leadership. Each of these Smart Freight Leaders has adopted the GLEC Framework and moved beyond reporting to implement solutions that reduce emissions, while collaborating and advocating for sector-wide change. Our ambition is to reach 20 by end 2019 and at least 50 by end 2021.

Together, we mobilize a sector transformation building on practical best practices from a growing group of multinationals and their partners. Find out how each of these companies is putting Smart Freight Leadership into practice.

DB Schenker
“Smart and sustainable transport is the future of the logistics business. At the heart of our global strategy is the development of innovative technology and its impact on the environment and society.” - Andrea Dorothea Schoen, Sr Mgr Carbon Controlling & Consulting, Sustainability, DB Schenker.

Deutsche Post DHL Group
“We aim for zero logistics-related emissions by 2050. Technologies will emerge, scale and pave the way. But we can only go this way together, collaborating with our customers, suppliers and peers.” - Birgit Hensel, Vice President Shared Value, Deutsche Post DHL Group

The Dow Chemical Company
“The GLEC Framework is the building block the industry needs to begin measuring and managing our transportation emissions with an overall goal to reduce our impact.” - Colleen Milster, Integrated Supply Chain Sustainability Specialist, The Dow Chemical Company.

GEODIS
“Building on existing expertise and best practices such as the ones in place at GEODIS, the Smart Freight Centre helps accelerate the transition to a low-carbon world by ensuring that, in any region of the world, the industry and particularly shippers can make decision the environmental impact of their supply chains”. - Cécile Bray, Climate and Carbon Accounting Expert, GEODIS.

HEINEKEN
“Smart Freight Centre helps HEINEKEN to be efficient and sustainable in our logistics operation, which for us is a license to operate in the coming years.” - Maarten Cuipers, Global Lead Logistics and Sustainability, HEINEKEN.

HP Inc.
“Environmental associations like the Smart Freight Centre help HP Inc. accomplish our long term goals to reduce greenhouse gas emissions 10% by the year 2025 across our global supply chain. This partnership also supports HP’s strategy to reinvent industry standards to drive lasting improvements to the planet, people and communities where we live, work and do business.” - William Long, Global Head of Supply Chain Network and Logistics, HP Inc.

Maersk
“Collaboration with our customers, but also with academia, technology developers, investors and legislators is essential to reach Maersk’s zero carbon target by 2050. Maersk aims to work together with Smart Freight Leaders to accelerate the development of carbon-neutral solutions.” - Kaisa Helena Tikk, Senior Global Sustainability Advisor, Maersk.

Trafigura
“Trafigura is supporting the sectoral implementation of the GLEC Framework. When we introduced the methodology we extended the scope of our emissions data collection, and our reported emissions increased, but a standardized methodology for reporting the emissions from all our logistical activities will help us manage emissions strategically.” - Richard Head, Global Head of HSEC, Trafigura.

Volkswagen
“Having transparency about emissions in the supply chain is fundamental for decisions and improvements. Using credible calculation and reporting schemes which are widely accepted and adopted by our supply chain partners is key for us. Also, Smart Freight Centre will help us to increase even more the important approach of collaboration.” - Daniele Saba, Senior Manager Green Logistics, Volkswagen Konzernlogistik
The Global Logistics Emissions Council (GLEC) was established in 2014 as a voluntary partnership and has grown to consist of more than 50 companies, industry associations and green freight programs, backed by experts, governments and other stakeholders. Together, we develop and implement global guidelines to calculate, report and reduce logistics emissions that work for industry.

The first is the GLEC Framework – the only globally-recognized, harmonized method for calculating and reporting emissions across the multi-modal logistics supply chain. It is consistent with the higher-level GHG Protocol that most companies already follow, effectively providing a logistics sector annex, and has been included in the reporting guidance of CDP, green freight programs, calculation tools and several industry associations as well as the UN-led Global Green Freight Action Plan.

Our 2021 ambition is to reach 100 GLEC Framework adopters who publicly disclose their logistics emissions data as well as reductions against targets.

Why was the GLEC Framework needed?

To manage and improve something you need a performance indicator. For many companies, comparing greenhouse gas emissions across different modes of transport used to be like comparing apples to oranges because so many methodologies exist. The GLEC Framework combines existing methodologies, filling gaps and harmonizing approaches where needed. More reliable and consistent calculations combined with a clear layout and set of KPIs improve reporting, business decisions and efforts to reduce emissions.

- Alan Lewis, Technical Development Director, Smart Freight Centre

Key achievements in 2018

- 26 companies have adopted the GLEC Framework (up from 16 end 2017); they are aligning their supply chain carbon accounting to the harmonized GLEC method, and another 60+ companies are exploring it.
- Testing in the EU LEARN Project by over 30 companies found that the GLEC Framework works for business. Experiences were also used to improve the framework and develop public policy and research recommendations.
- Development of the GLEC Declaration that standardizes how logistics emissions information is reported to customers and to the public and other external stakeholders.
- Contributed to the transport guidance of Science Based Targets Initiative (SBTI), which helps companies to set emission reduction targets in a way that is consistent with the GLEC Framework.

Looking ahead

- An updated GLEC Framework will be released in mid-2019 that fills gaps and incorporates the practical experiences of companies. It will be the basis for the development of an ISO standard in coming years.
- Launch of the GLEC Accreditation for logistics emission calculation tools and green freight programs. Companies then know for sure that their calculated and reported emissions are in conformance with the GLEC Framework.
- We will launch guidelines on Smart Freight Procurement practices, together with the World Business Council for Sustainable Development, and supported by examples.
- We will work with companies on the implementation of concrete emission reduction measures, such as alternative fuels, and develop guidelines to help companies make the right choices as well as inform policy.

Benefiting from the GLEC Framework

BDP International, a logistics service provider, approached FMC, who create synthetic and biological crop protection products, to take part in a pilot of the EU LEARN project. Using the GLEC Framework, greenhouse gas emissions were calculated for select routes and compared with alternative routes. FMC determined that switching to a more carbon efficient trade route could realize emission reductions of up to 38%. FMC plans to expand this study to additional routes and BDP has adopted the GLEC Framework to provide similar value to other customers.

Read more here.
Road freight represents two-thirds of global freight emissions and we cannot reach our climate goals without looking at road freight. Due to its fragmented nature, improving energy efficiency and reducing emissions from trucks is difficult. It requires drive and support from shippers but even more efforts from the carriers themselves. However, operators often don’t have the knowledge or capacity to improve efficiency.

That’s why in 2016 we developed Smart Truck Fleet Management (STFM), together with existing road freight initiatives and experts from around the world – the STFM Council. This is a holistic approach to energy management of truck fleets structured around 5 pillars. Given the global nature of logistics supply chains, a harmonized approach can help to convince multinational shippers to support trucking initiatives worldwide.

**Smart Transport Managers Training**

We translated the STFM approach into an operational training. During a Smart Transport Managers Training, fleet managers learn practical steps for energy and emissions reduction in road transport and are supported in creating a tailored emissions reduction plan for their business. Aside from cost savings for carriers and emission reductions for their customers, trained fleet managers and drivers improve their skills and have a safer and cleaner work environment.

Our aim is that by 2021 at least 400 road freight carriers have certified Smart Transport Managers and have taken action to optimize operational efficiency and reduce emissions.

**Key achievements in 2018**

- 80 Smart Truck Managers were trained across 40 road freight carriers in China, up from 12 trained in 2017. The involvement of their customers, 5 multinational shippers that operate in China contributed to the success of the training because the main motivation of carriers (apart from fuel savings) is mainly to get more and larger or longer contracts.
- Capacity created to deliver Smart Transport Manager training on the ground in South Africa, Ireland and Australia through our training delivery partners.

**Looking ahead**

- Continue to roll-out training out where we have existing partners and build communities of fleet managers. To support trained fleet managers with implementing their action plans, we organize in-depth workshops on specific technologies and measures that also involve technology suppliers and OEMs.
- Expand our network of training delivery partners to other countries and regions, in particular Latin America.
- Begin work to leverage online learning technology to reach fleet managers in markets worldwide and maximize our opportunity to share and scale our knowledge.

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“The STFM Council allows us to benchmark good truck efficiency efforts and develop tools that will be used to improve the operations in countries across the whole globe.”

- Mike Roeth, Executive Director, North American Council for Freight Efficiency (NACFE)

“I was amazed at the value gained by local transport operators who attended the STMT course. We take it for granted that everyone involved in transport understands the basics of running a fleet at the lowest possible whole life cost. I realized that the STMT course will add great value in giving operators the basic skills they require to run a sustainable business.”

- Adrian van Tonder, Senior Technical Manager, Barloworld Transport, South Africa
In growth markets, where many western-based multinationals have large supply chains, there is a gap between corporate ambition, national policy and local carrier action or capacity. This is why from the outset we have been active in growth economies.

Efforts to date have focused on China as a significant and growing contributor to global freight emissions. Together with experts from industry, government and research, SFC set up the SFC China Expert Council in 2015 to give advice on how to apply SFC’s guidelines to China and exchange knowledge and experiences.

We found that the most effective way to mobilize action is by providing companies or ‘shippers’ with a platform to collaborate with each other, subcontracted logistics partners, and interact with government and other stakeholders and remove barriers to report and reduce emissions.

Our aim is to have Smart Freight Alliances of multinationals and key stakeholders in China and at least one other growth markets by 2021. Where relevant we work with local green freight programs and other initiatives.

**Key achievements in 2018**

- **Smart Freight Alliance** established in China including 8 multinationals (H&M, Heineken, IKEA, Lenovo, NIKE and Scania) and Chinese shippers and their logistics partners. In doing so, we seek links with existing programs: the China Green Freight Initiative, Star Fleet Program of the China Federation of Logistics and Purchasing, and Green Freight Asia.
- Held two **Smart Freight Forums** where we brought over 50 representatives from industry, government and research together to align on what is needed to reduce logistics emissions at scale. Topics included collaboration between companies and stakeholders and shifting freight transport from trucks to rail.
- We are strengthening the existing alliance of companies through the **Brazilian Green Logistics Program** that SFC helped establish. Access to global guidelines and experiences helps to accelerate local action.

**Looking ahead**

- In 2019, hold 5 **Smart Freight Forum events in China** on priority issues for business and government policy: logistics emissions calculation, urban freight, China’s standards for freight vehicles, intermodal infrastructure, and road fleet management and technologies.
- Explore whether establishing a similar platform is feasible in **other markets**, starting with India.
- We will collect and facilitate sharing of examples of concrete technologies and measures that were proven to work locally. Other companies can much more quickly build the business case to invest and develop local action plans that work in practice.

**How the Smart Freight Forums are having an impact**

By bringing companies together with other stakeholders, they are better able to overcome barriers to reducing logistics emissions. At the Smart Freight Forum on multi-modal freight, companies shared their plans. IKEA, H&M and Walmart are all exploring how to shift road freight to rail on major routes, such as from Shanghai to Guangzhou and Beijing, or use inland waterways. Early results are promising: IKEA, for example, is reducing 69% CO₂ on one of its routes by using rail instead of trucking. Companies are also looking into low emissions fuels and using electric vehicles in cities, and equipping subcontracted truck fleets with transport management systems. Collaboration is absolutely essential to work towards efficient and sustainable freight in China.

- Boyong Wang,
  Director Strategic Relations,
  Smart Freight China
The project Logistics Emissions Accounting and Reduction Network (LEARN) aimed to mobilize companies to reduce their carbon footprint across the global logistics supply chains through improved emissions calculation and reporting. SFC led the project with 13 partners who worked closely with related organizations, initiatives and already existing networks, including the GLEC. The LEARN project built on and sought to improve the GLEC Framework. Watch the video with highlights.

Calculate emissions
- Guide for Greenhouse Gas Emissions Accounting at Logistics Sites and online calculation tool as a complementary module to the GLEC Framework.
- Test cases for 32 companies confirmed that emissions accounting using the GLEC Framework is practically possible and brings benefits.
- Q&As for five different challenges that companies encounter together with case study examples.
- An overview of core characteristics of 7 logistics emissions calculation tools currently available on the market.
- Training and education package for road freight operators in English, Romanian and Spanish.

Report emissions
- GLEC Declaration that companies can use to report to different users. It provides a standardized menu of information at two levels: at the logistics service level for reporting to customers, and at the company level for reporting to the external stakeholders, such as the public, governments, investors, programs/initiatives and product labels.

Policy and research
- Research and Development Agenda that recommends five areas of further research that are most needed to help companies to calculate emissions and use result for reporting and reduction efforts.
- Policy Recommendations for Logistics Emissions Accounting and Reporting that aim to help the development of supportive policies at four levels of government: city, national, EC, and international government forums.
- Support for the development of an ISO standard based on the GLEC Framework that will be combined with the updating of the European standard EN16258.

Growing network
- LEARN International Workshops helped grow an international network and create an event of 100+ participants to share the latest research, policy developments, programs and initiatives and practical examples of what companies are doing to calculate, report and reduce emissions.

Smart Freight Centre was established in 2013 as a global non-profit organization. SFC is registered in The Netherlands as a foundation, recognized as a Dutch Public Benefit Organization and is certified as an equivalent to a US public charity. Our consolidated accounts cover our operations globally and in China.

### Consolidated Balance Sheet

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<th>31-12-2018</th>
<th>31-12-2017</th>
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<tbody>
<tr>
<td><strong>Assets</strong></td>
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<tr>
<td>Tangible fixed assets (equipment)</td>
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<td>Current assets</td>
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<td>Accounts receivable</td>
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<td>Other receivables</td>
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<td>Prepayments and accrued income</td>
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<td><strong>Cash and cash equivalents</strong></td>
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<td><strong>Total</strong></td>
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<tr>
<td><strong>Liabilities</strong></td>
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<td><strong>Equity</strong></td>
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<td>Non-restricted reserve</td>
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<td>43,919</td>
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<td>Earmarked funds</td>
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<td>Legal reserves</td>
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<td>12,961</td>
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<td><strong>Total</strong></td>
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<td>237,840</td>
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<tr>
<td><strong>Short-term liabilities (&lt;1 year)</strong></td>
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<td>Accounts payable</td>
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<td>Taxes and social premiums</td>
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<td>Accruals and deferred income</td>
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<td>237,840</td>
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<tr>
<td><strong>Total</strong></td>
<td>495,319</td>
<td>164,032</td>
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### Consolidated Income and Expenses

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<td><strong>Income</strong></td>
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<tr>
<td>Grants</td>
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<td>Other operating income</td>
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<td><strong>Total</strong></td>
<td>1,785,567</td>
<td>1,960,417</td>
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<tr>
<td><strong>Expenses</strong></td>
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<td>Employee expenses</td>
<td>825,676</td>
<td>711,476</td>
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<td>General expenses</td>
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<td>Cost of services SFC Asia Ltd</td>
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<td>Depreciation</td>
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<td><strong>Total</strong></td>
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<td><strong>Financial income and expenses</strong></td>
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This project has received funding from the European Union’s Horizon 2020 research and innovation program under grant agreement No 723984. LEARN partners included: SFC, CLECAT, Connekt, DLR, Energy Saving Trust, European Shippers’ Council, Fraunhofer IML, IRU Projects, IRL, NLM, TNO, UNTRR and Zaragoza Logistics Center. The European Technology Platform ALICE was a partner in our international workshops.